

PDF's MES Pläne

BioWIN 2 / BioWIN / BioWIN XL / FireWIN / VarioWIN /
LogWIN Premium / LogWIN Klassik /
MES004 / MES KAS / EcoWIN / JetWIN /
Mira / MultiWIN Plus



1.1 Info



Bei Fragen:
markus.rossmann@windhager.com
bernhard.rothner@windhager.com

2.1 Drucken



!!! Achtung: Druckereinstellungen beachten !!!
Nicht gesamtes PDF sondern nur Aktuelle Seite Drucken.

2.2 Papiergrößen

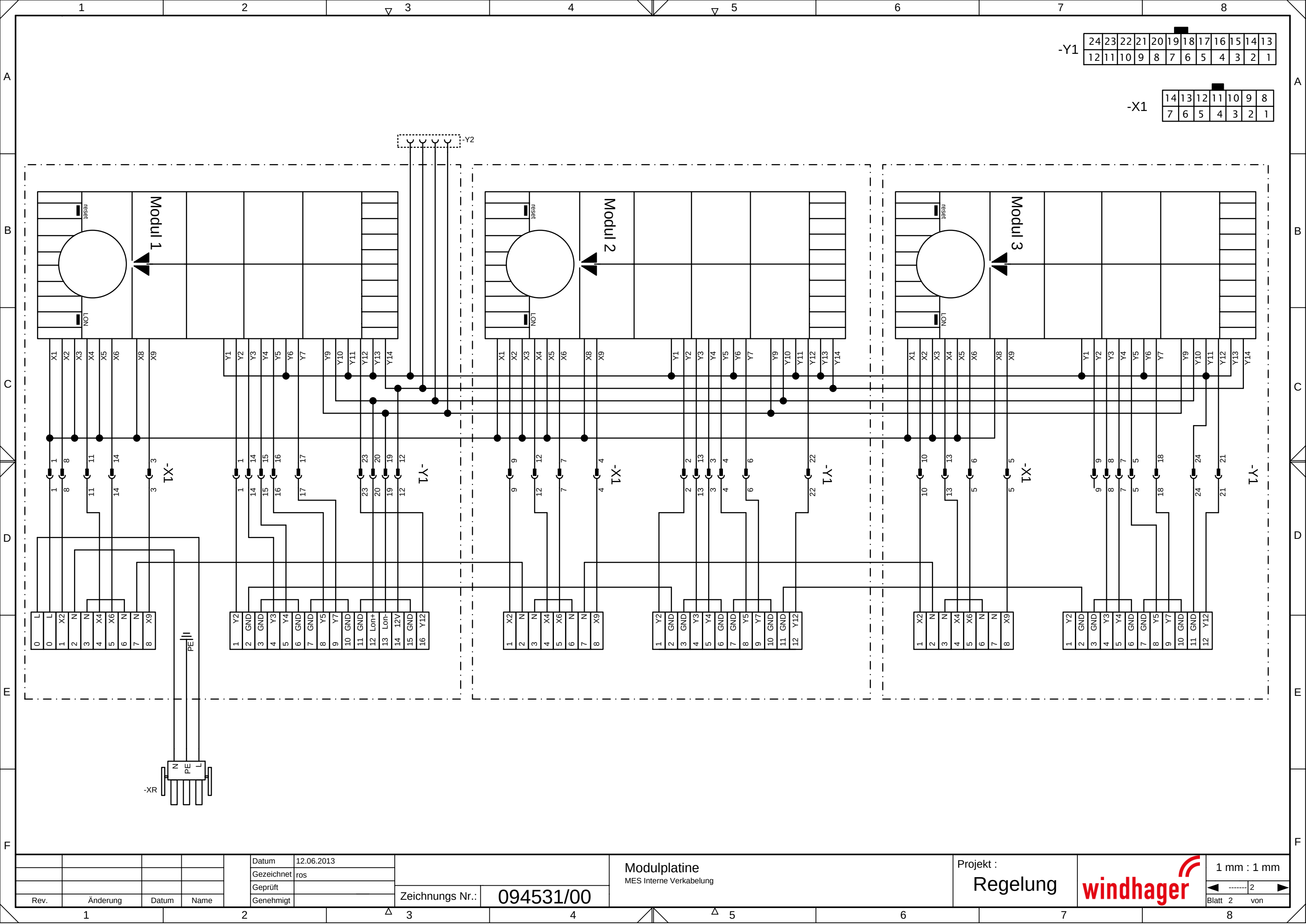


Pläne = DIN A4
SKE 3fach = MES allgemein (78x230)
SKE 1fach = MES Etikette (78x85)
SKE ZSP = MES Etikette (78x85)

3.1 Einzel PDF Ausgabe

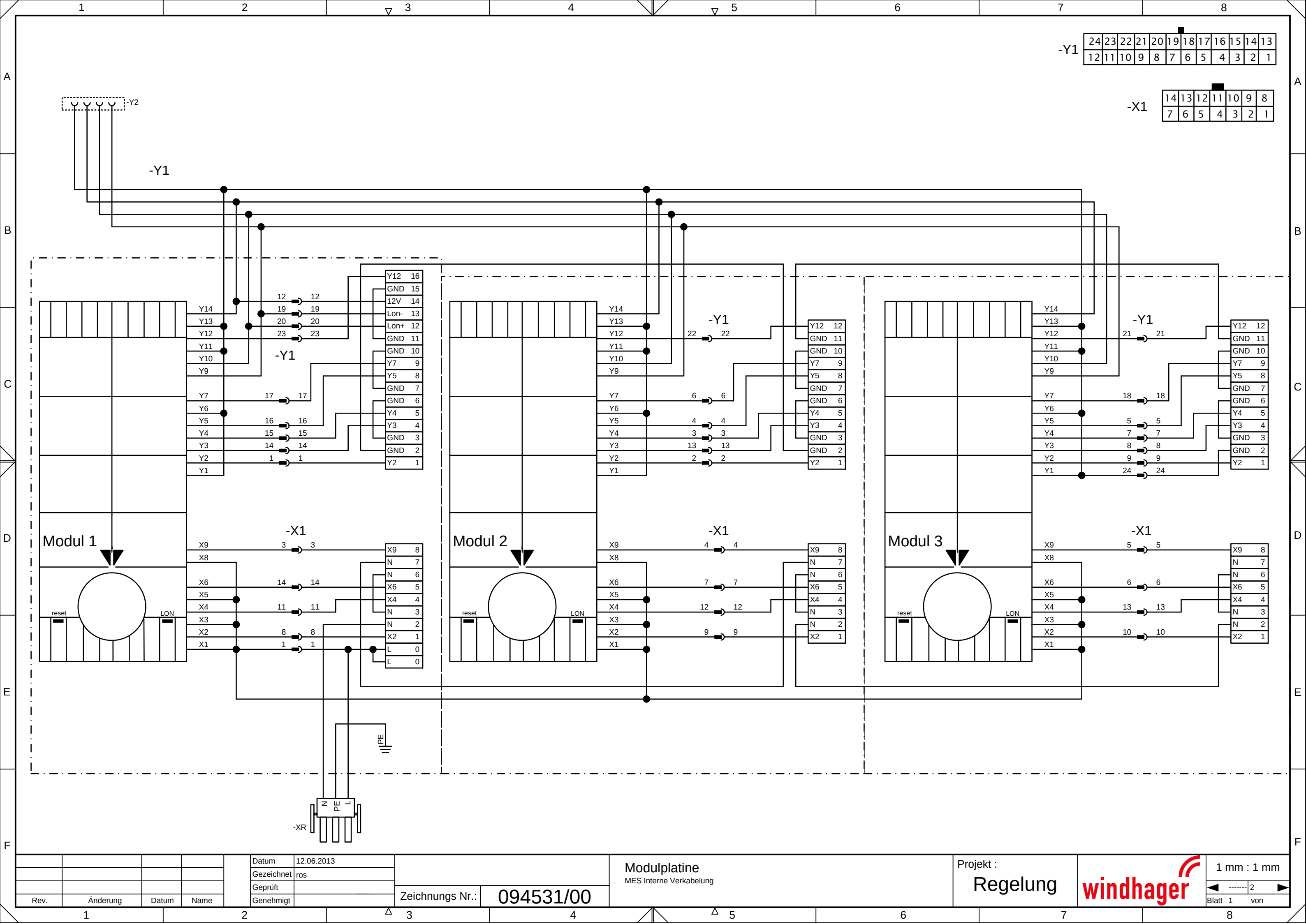


Nur möglich mit dem Drucker:
Microsoft XPS Documenten Writer (PDF Writer von Microsoft)
kann anschliessend wieder in PDF zurückgewandelt werden



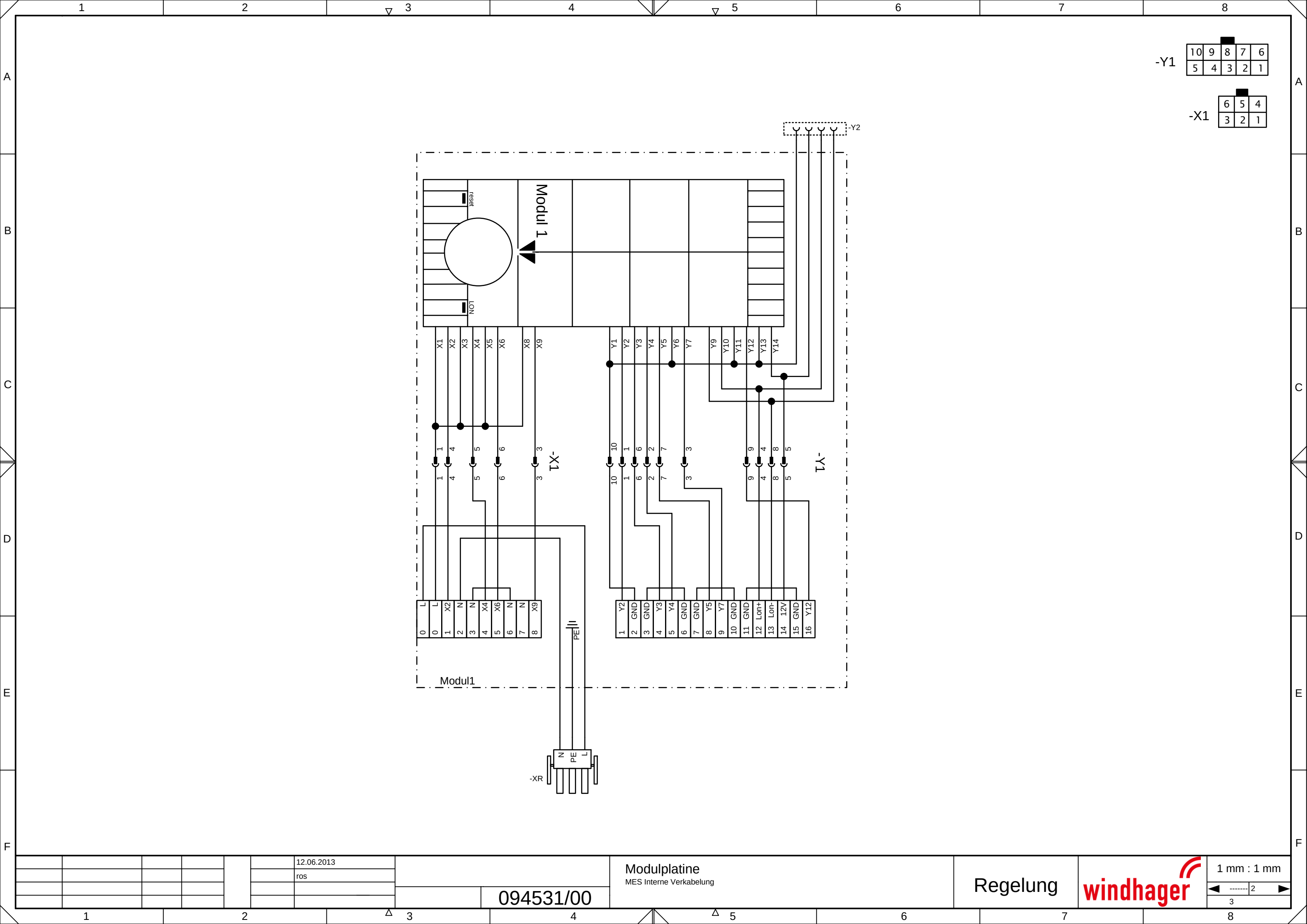
-Y1	24	23	22	21	20	19	18	17	16	15	14	13
	12	11	10	9	8	7	6	5	4	3	2	1

-X1	14	13	12	11	10	9	8
	7	6	5	4	3	2	1



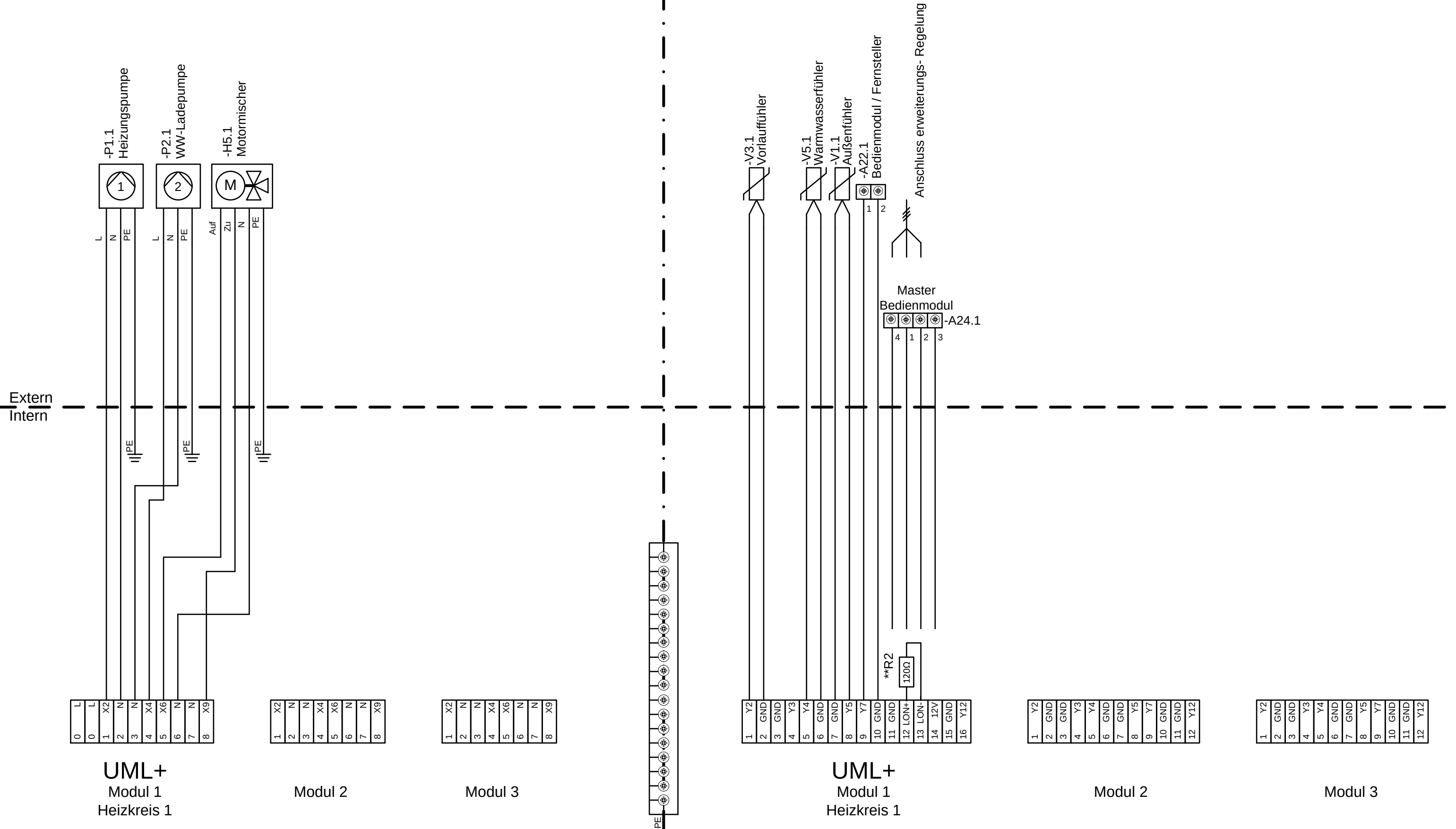
-Y1	24	23	22	21	20	19	18	17	16	15	14	13
	12	11	10	9	8	7	6	5	4	3	2	1

-X1	14	13	12	11	10	9	8
	7	6	5	4	3	2	1



Niederspannung 230 VAC

Kleinspannung - Fühler



UML+	Modul 1 Heizkreis 1
0 L	230 VAC
0 L	
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

Modul 2
1 X2
2 N
3 N
4 X4
5 X6
6 N
7 N
8 X9

Modul 3
1 X2
2 N
3 N
4 X4
5 X6
6 N
7 N
8 X9

094776/00

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

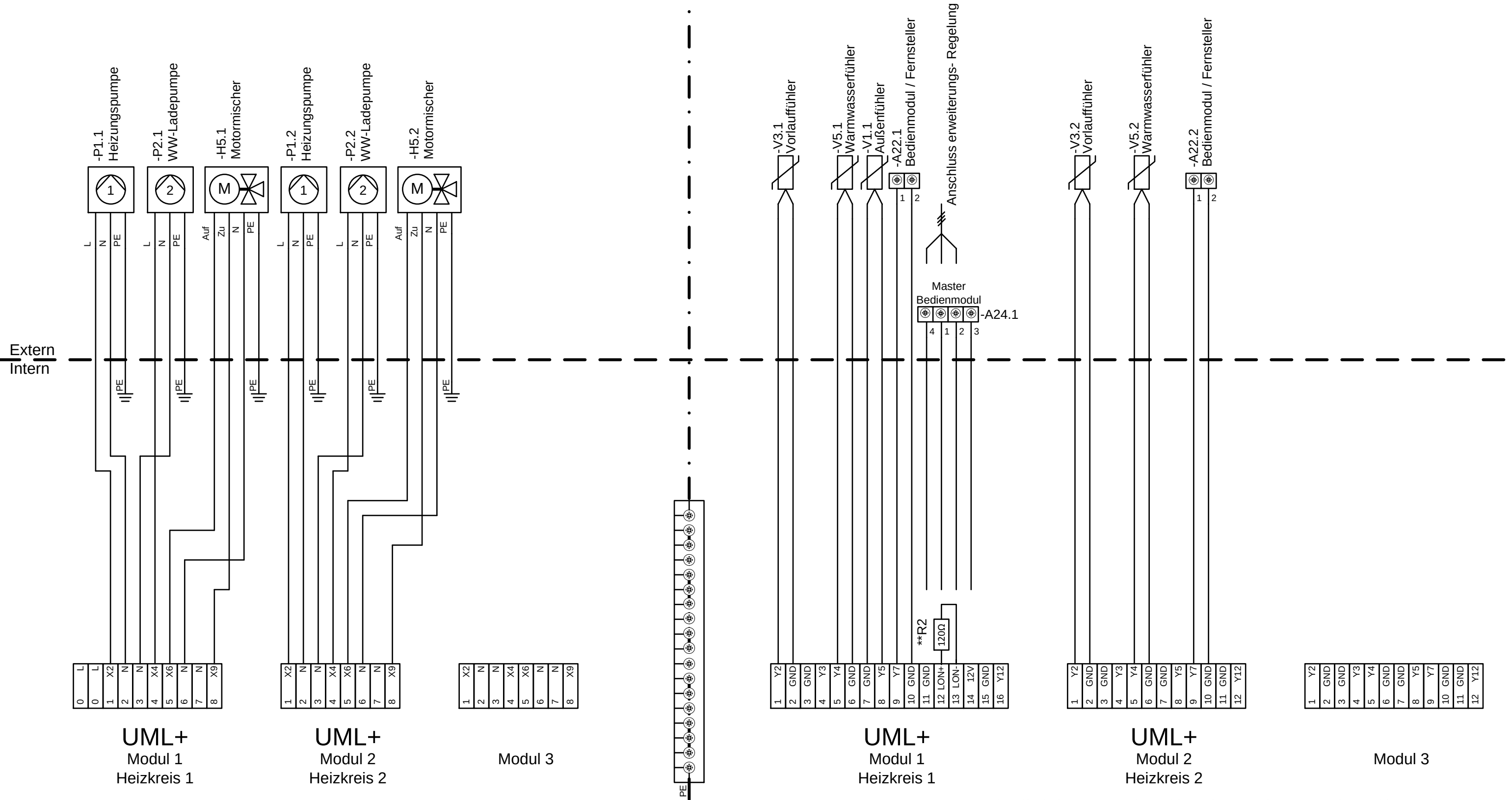
Modul 2
1 Y2
2 GND
3 GND
4 Y3
5 Y4
6 GND
7 GND
8 Y5
9 Y7
10 GND
11 GND
12 Y12

Modul 3
1 Y2
2 GND
3 GND
4 Y3
5 Y4
6 GND
7 GND
8 Y5
9 Y7
10 GND
11 GND
12 Y12

094776/00

Niederspannung 230 VAC

Kleinspannung - Fühler



UML+	Modul 1 Heizkreis 1
0 L	230 VAC
0 L	
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	HK 1
8 X9	Zu

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	HK 2
8 X9	Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094778/00

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

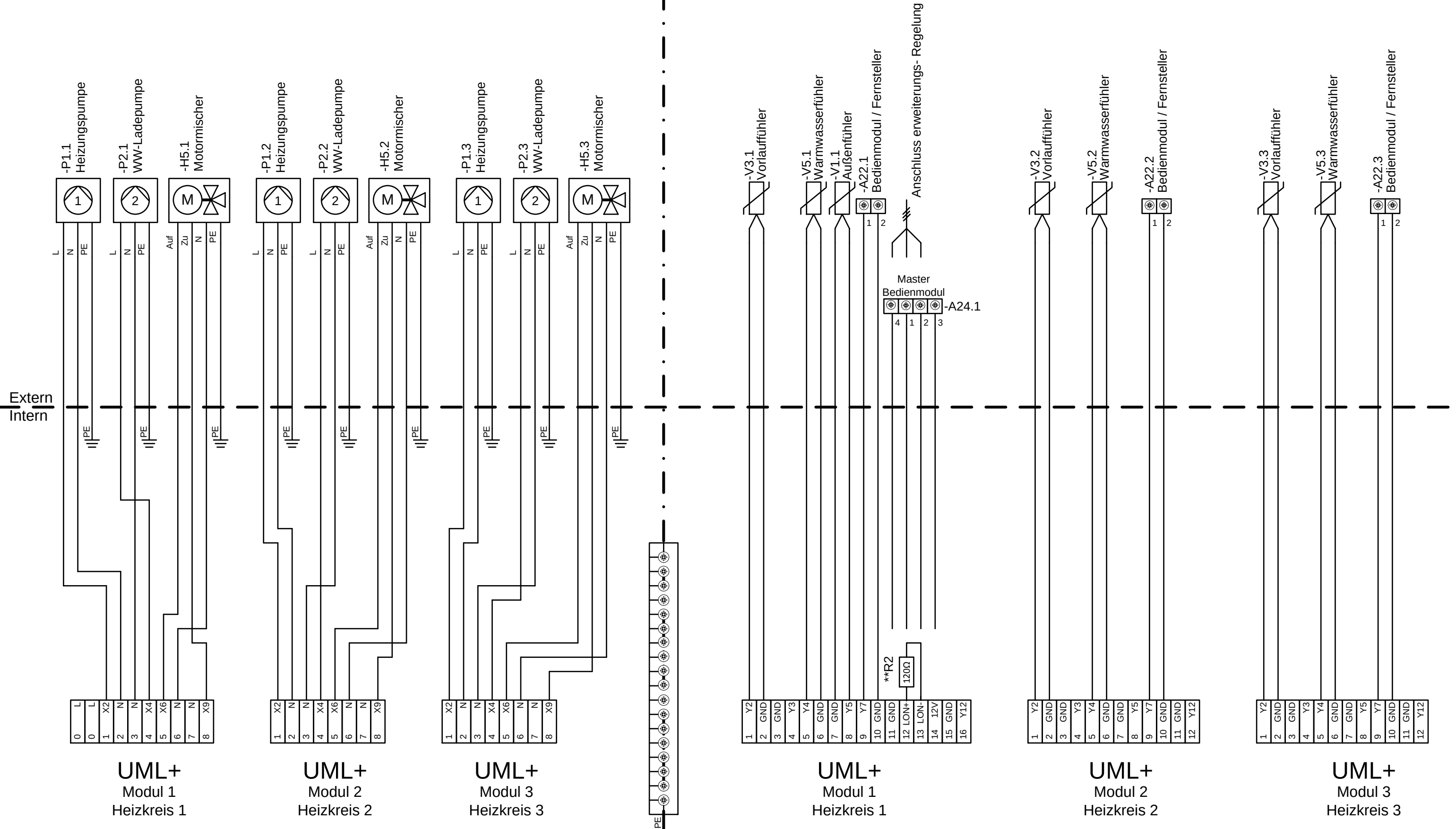
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094778/00

Niederspannung 230 VAC

Kleinspannung - Fühler



UML+	Modul 1 Heizkreis 1
0 L	230 VAC
0 L	
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 1 Zu
8 X9	

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 2 Zu
8 X9	

UML+	Modul 3 Heizkreis 3
1 X2	Heizungspumpe HK 3
2 N	
3 N	WW-Ladepumpe HK 3
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 3 Zu
8 X9	

094782/00

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

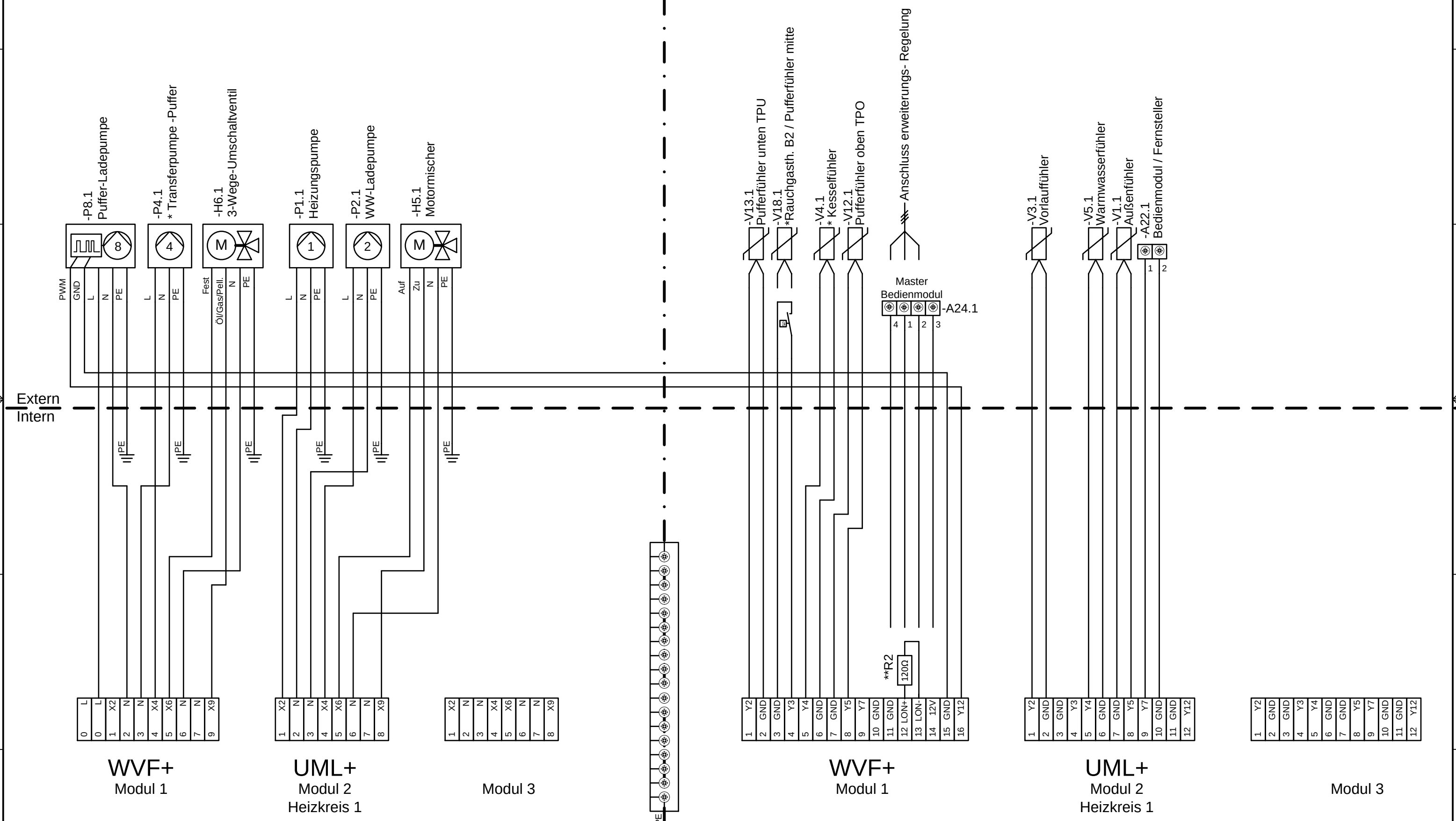
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 3
1 Y2	Vorlauffühler HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 3
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

094782/00

Niederspannung 230 VAC

Kleinspannung - Fühler



WVF+	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	
4 X4	
5 X6	Fest
6 N	3-Wege-Umschaltventil
7 N	Öl/Gas/Pell.
8 X9	

WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Rauchgasth. B2 Pufferfühler mitte
4 Y3	
5 Y4	*Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	
13 Lon-	Master Bedienmodul Anschluss erweiterungs- Regelung
14 12V	
15 GND	PWM Puffer- Ladepumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

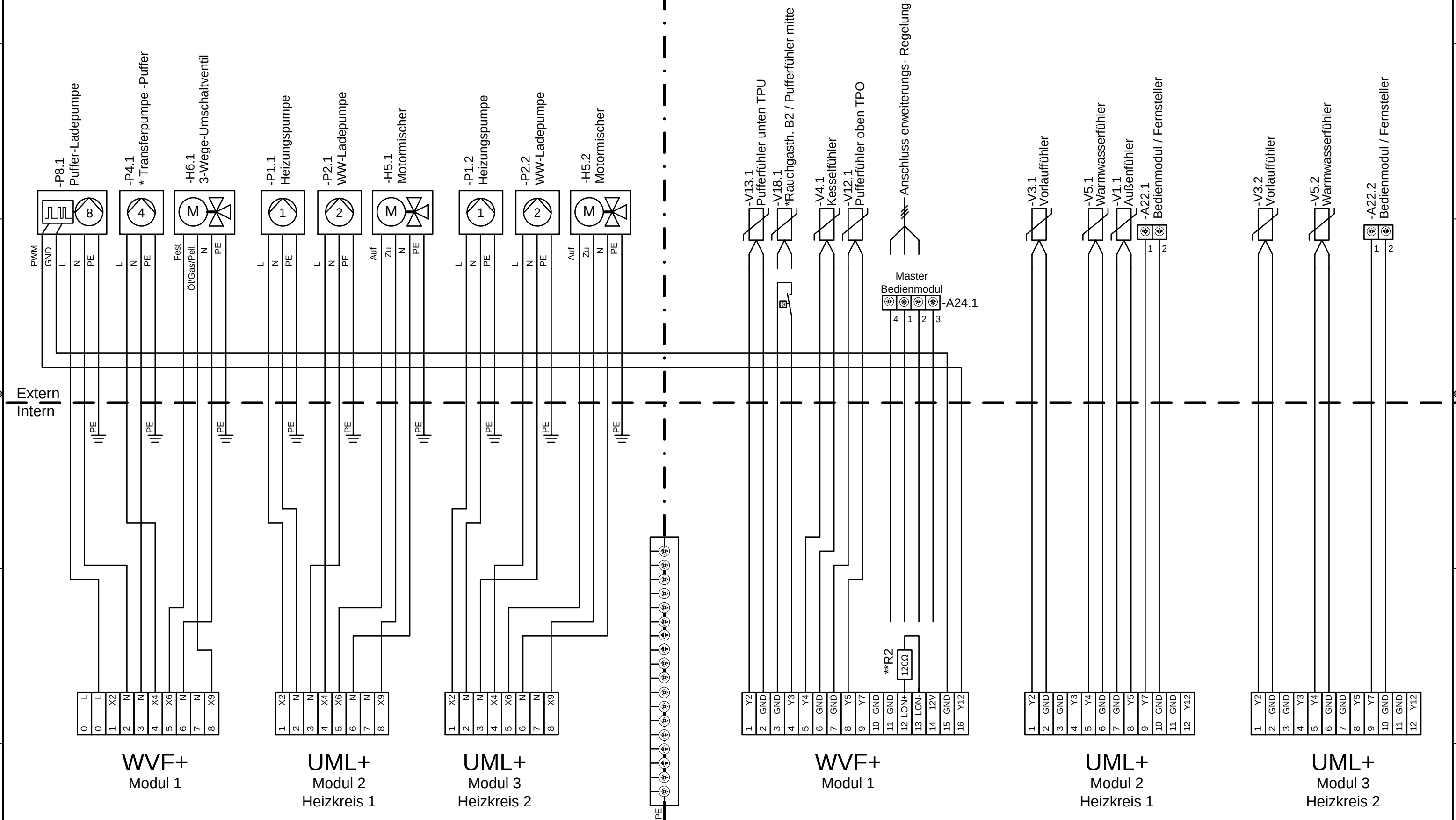
	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094787/00

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

WVF+	Modul 1
0 L	230 VAC
0 L	
1 X2	Fest 3-Wege-Umschaltventil Öl/Gas/Pell.
2 N	
3 N	
4 X4	
5 X6	Fest 3-Wege-Umschaltventil Öl/Gas/Pell.
6 N	
7 N	
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer HK 1 Zu
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer HK 2 Zu
6 N	
7 N	
8 X9	

094786/00

WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Rauchgasth. B2 / Pufferfühler mitte
4 Y3	
5 Y4	* Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	Master Bedienmodul Anschluss erweiterungs- Regelung
10 GND	
11 GND	
12 Lon+	
13 Lon-	14 12V
14 12V	
15 GND	PWM Puffer- Ladepumpe
16 Y12	

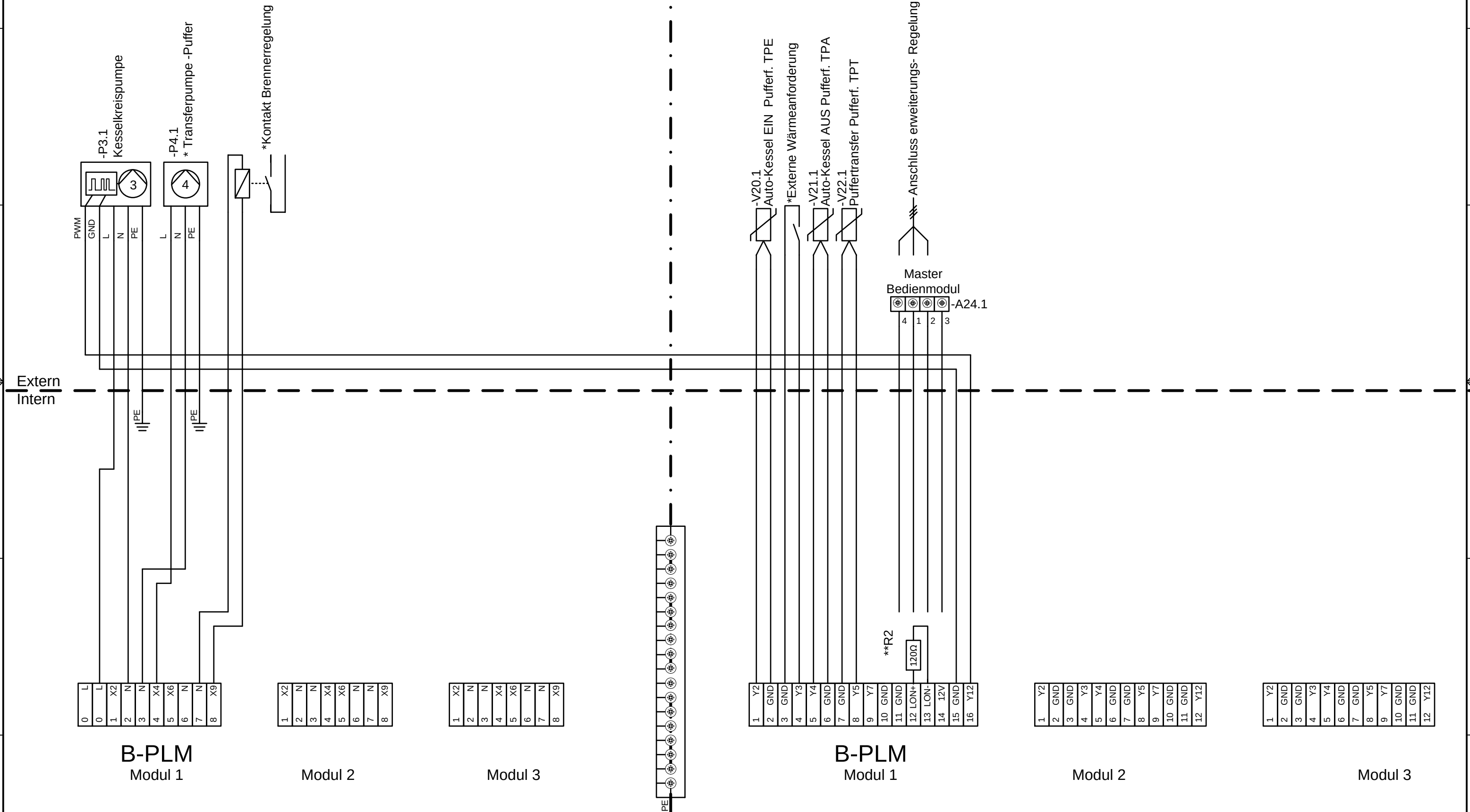
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	12 Y12
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	12 Y12
12 Y12	

094786/00

Niederspannung 230 VAC

Kleinspannung - Fühler



B-PLM	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* Transferpumpe Puffer
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094788/00

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

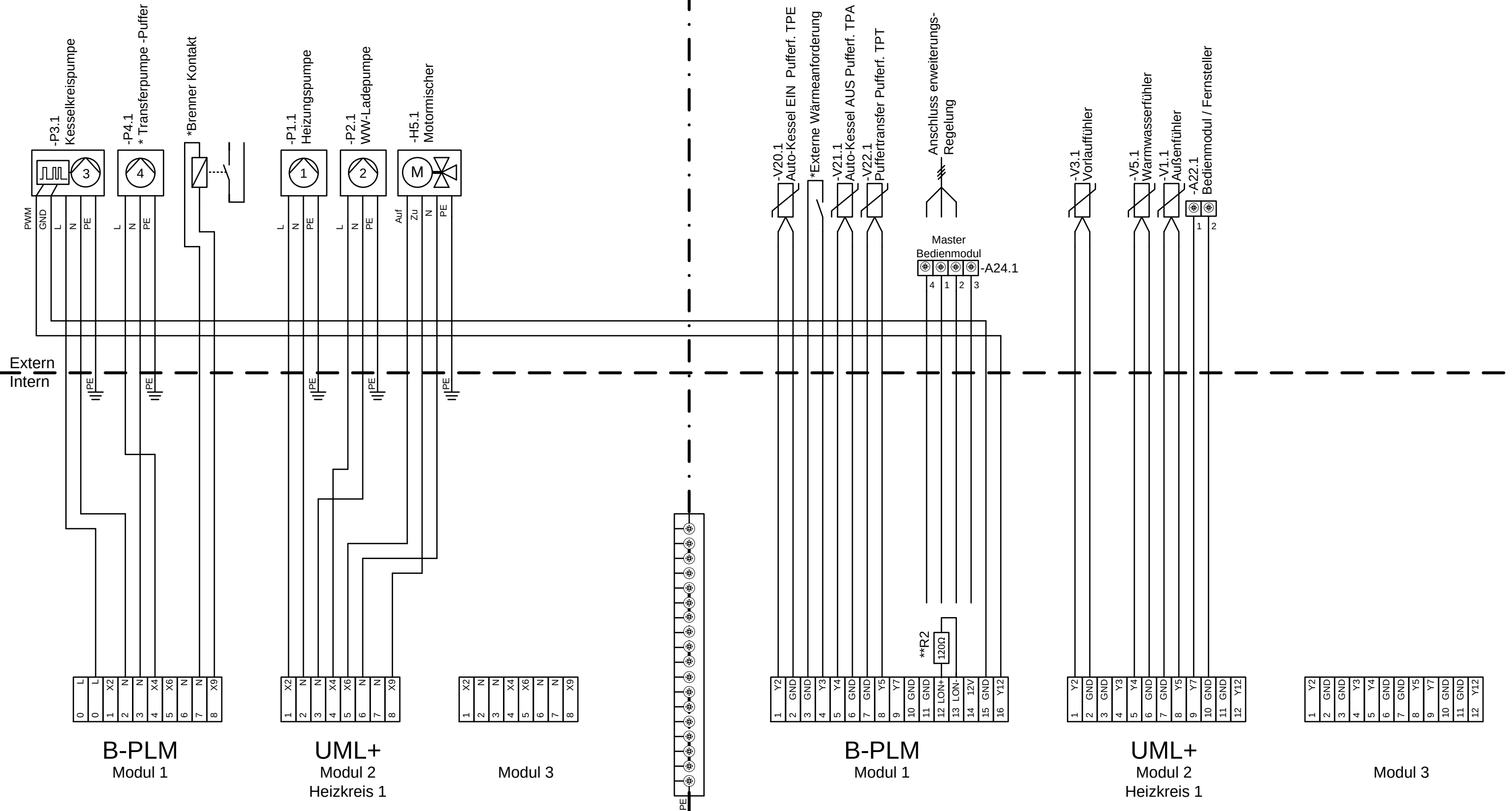
	Modul 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094788/00

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

B-PLM	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	
8 X9	*Brenner Kontakt

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094790/00

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	*Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

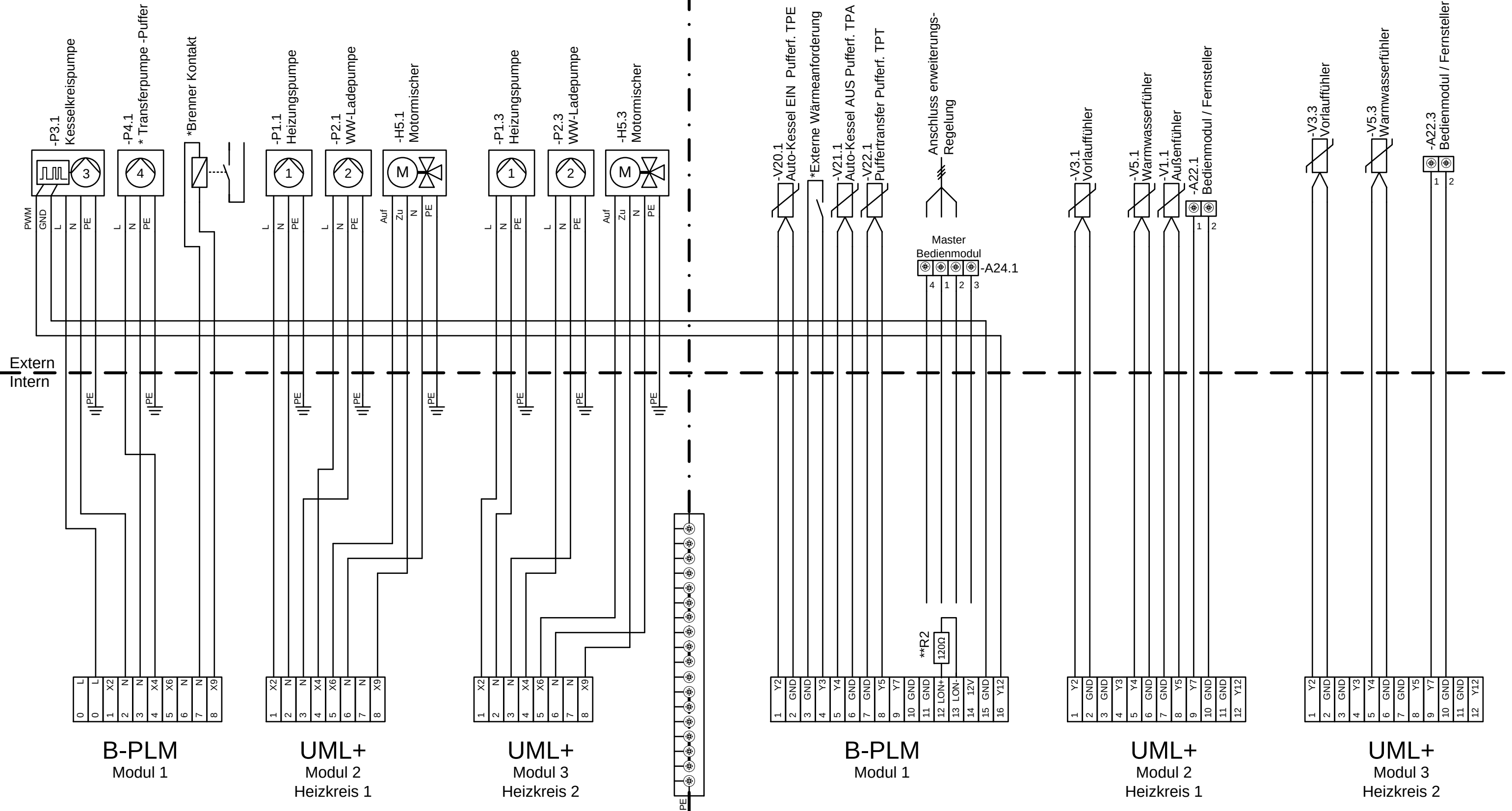
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserrühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094790/00

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

					Datum	04.07.2013	B-PLM/UML+/UML+	MES P042 + H021 + H024 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Brenner-/ Pufferspeichermodul B-PLM	Projekt : Regelung		1 mm : 1 mm	
					Gezeichnet	ros						
					Geprüft	rot						
Rev.	Änderung	Datum	Name		Genehmigt		Zeichnungs Nr.:	0944791/00				◀ ----- 2 ▶
												Blatt 094791/00

B-PLM	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	
8 X9	
	*Brenner Kontakt

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	HK 1 Zu

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	HK 2 Zu

094792/00

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	*Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

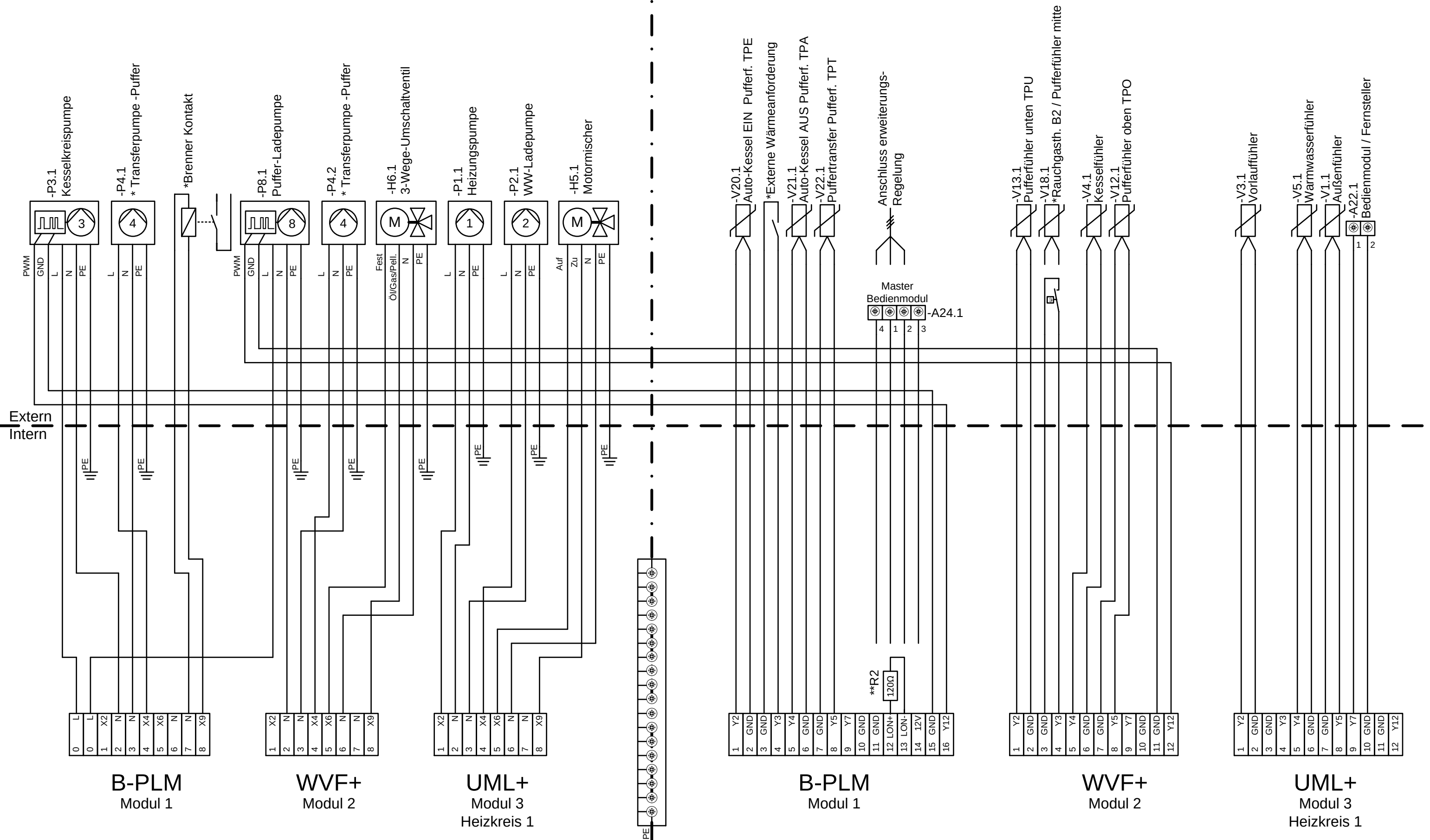
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

094792/00

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Festbrennstoff- Modul WVF+ und Pufferspeicher- Modul B-PLM		Projekt : Regelung				1 mm : 1 mm	
				Gezeichnet	ros									◀ ----- 2 ▶	
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094793/00							Blatt 094793/00	

B-PLM	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*Transferpumpe Puffer
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

WVF+	Modul 2
1 X2	Fest 3-Wege-Umschaltventil Öl/Gas/Pell.
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer HK 1 Zu
6 N	
7 N	
8 X9	

094794/00

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	*Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

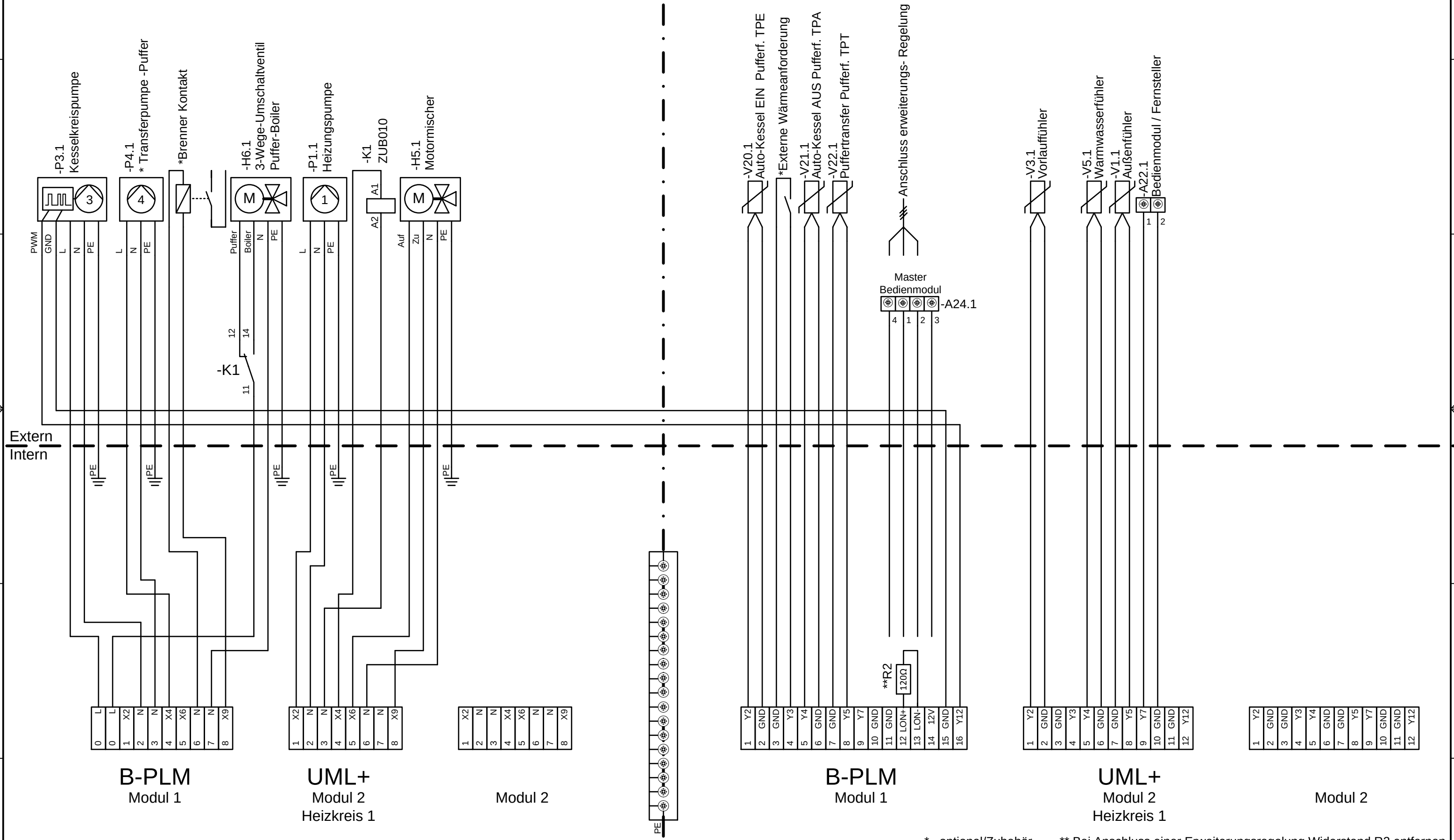
WVF+	Modul 2
1 Y2	Puffer unten TPU
2 GND	
3 GND	*Rauchgasth. B2 Pufferfühler mitte
4 Y3	
5 Y4	*Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM Puffer- Ladepumpe
12 Y12	

UML+	Modul 3 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

094794/00

Niederspannung 230 VAC

Kleinspannung - Fühler



B-PLM	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* Transferpumpe
4 X4	
5 X6	
6 N	
7 N	
8 X9	*Brennerkontakt

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	Schütz -K1 HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

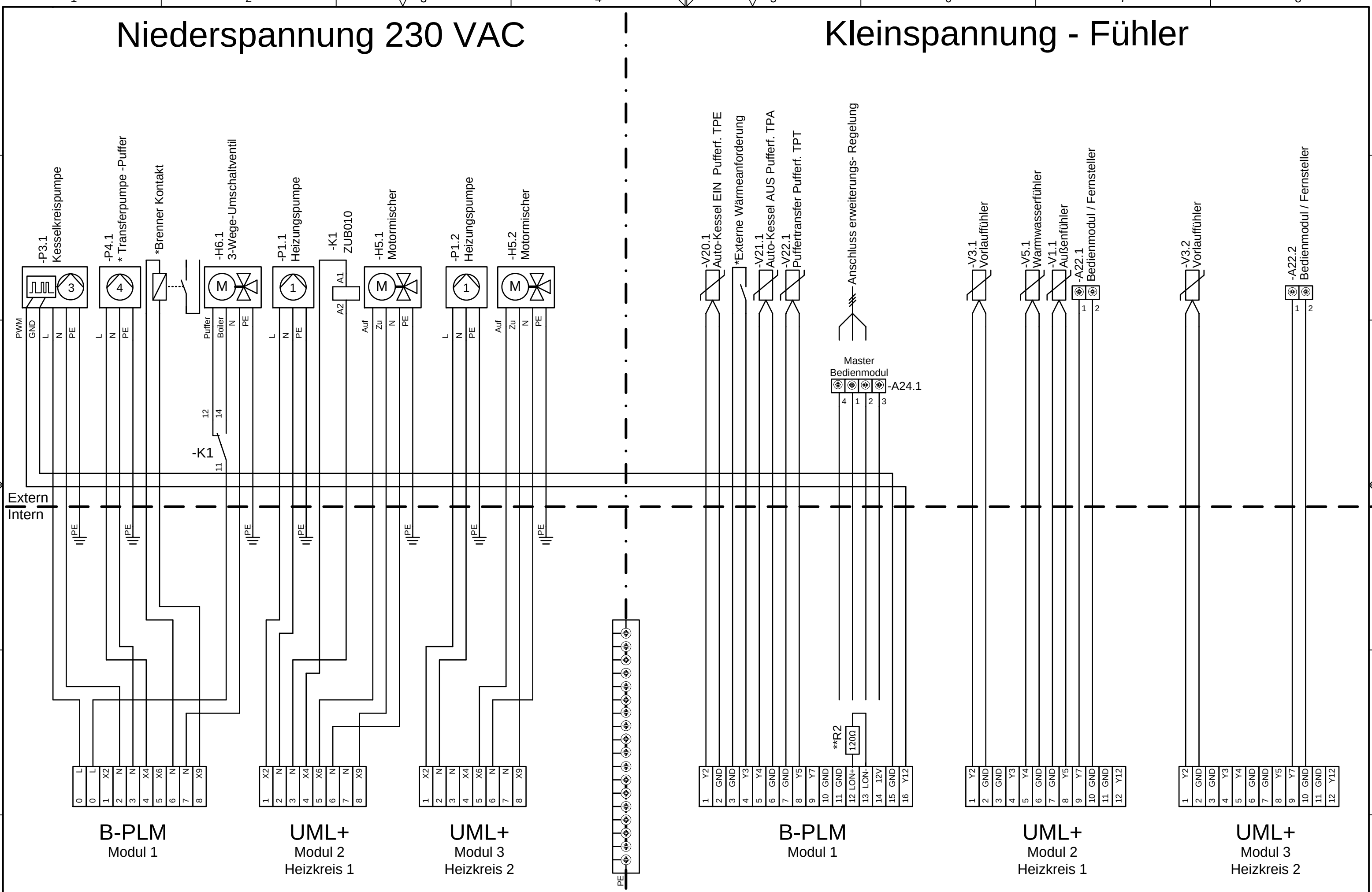
094796/00

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	* Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	Master Bedienmodul Anschluss
13 Lon-	
14 12V	erweiterungs- Regelung
15 GND	PWM Kesselkreispumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserrühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094796/00



B-PLM	Modul 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* Transferpumpe
4 X4	
5 X6	
6 N	
7 N	
8 X9	*Brennerkontakt

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	Schütz -K1 HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

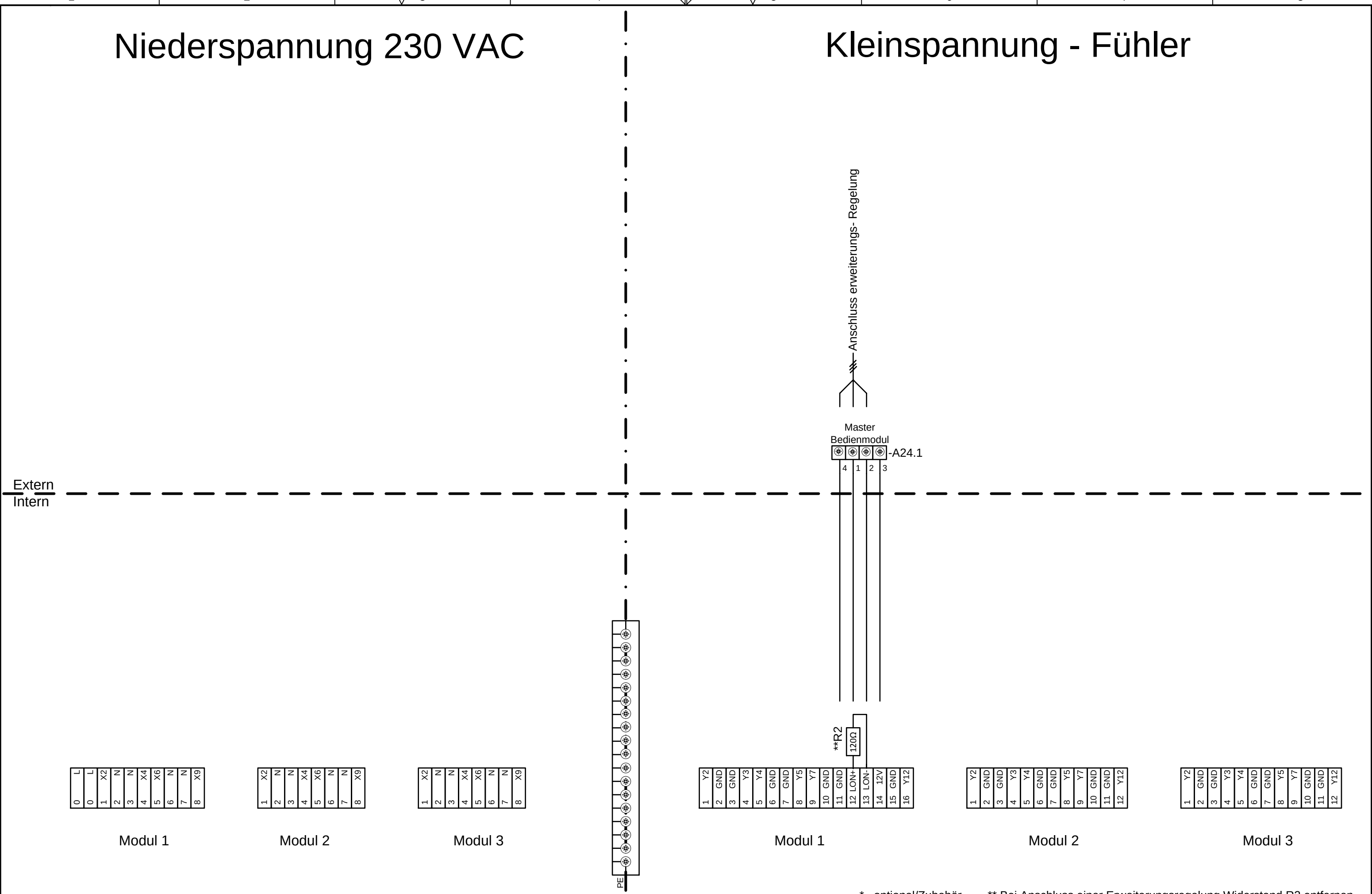
094799/00

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	* Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	Master Bedienmodul Anschluss
13 Lon-	
14 12V	erweiterungs- Regelung
15 GND	PWM Kesselkreispumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

094799/00



1	Modul 1
0 L 0 L	230 VAC
1 X2 2 N	X2
3 N 4 X4	X4
5 X6 6 N	X6
7 N 8 X9	X9

2	Modul 2
1 X2 2 N	X2
3 N 4 X4	X4
5 X6 6 N	X6
7 N 8 X9	X9

3	Modul 3
1 X2 2 N	X2
3 N 4 X4	X4
5 X6 6 N	X6
7 N 8 X9	X9

094801/00

1	Modul 1
1 Y2 2 GND	Y2
3 GND 4 Y3	Y3
5 Y4 6 GND	Y4
7 GND 8 Y5	Y5
9 Y7 10 GND	Y7
11 GND 12 Lon+ 13 Lon- 14 12V	Lon
15 GND 16 Y12	Y12

2	Modul 2
1 Y2 2 GND	Y2
3 GND 4 Y3	Y3
5 Y4 6 GND	Y4
7 GND 8 Y5	Y5
9 Y7 10 GND	Y7
11 GND 12 Y12	Y12

3	Modul 3
1 Y2 2 GND	Y2
3 GND 4 Y3	Y3
5 Y4 6 GND	Y4
7 GND 8 Y5	Y5
9 Y7 10 GND	Y7
11 GND 12 Y12	Y12

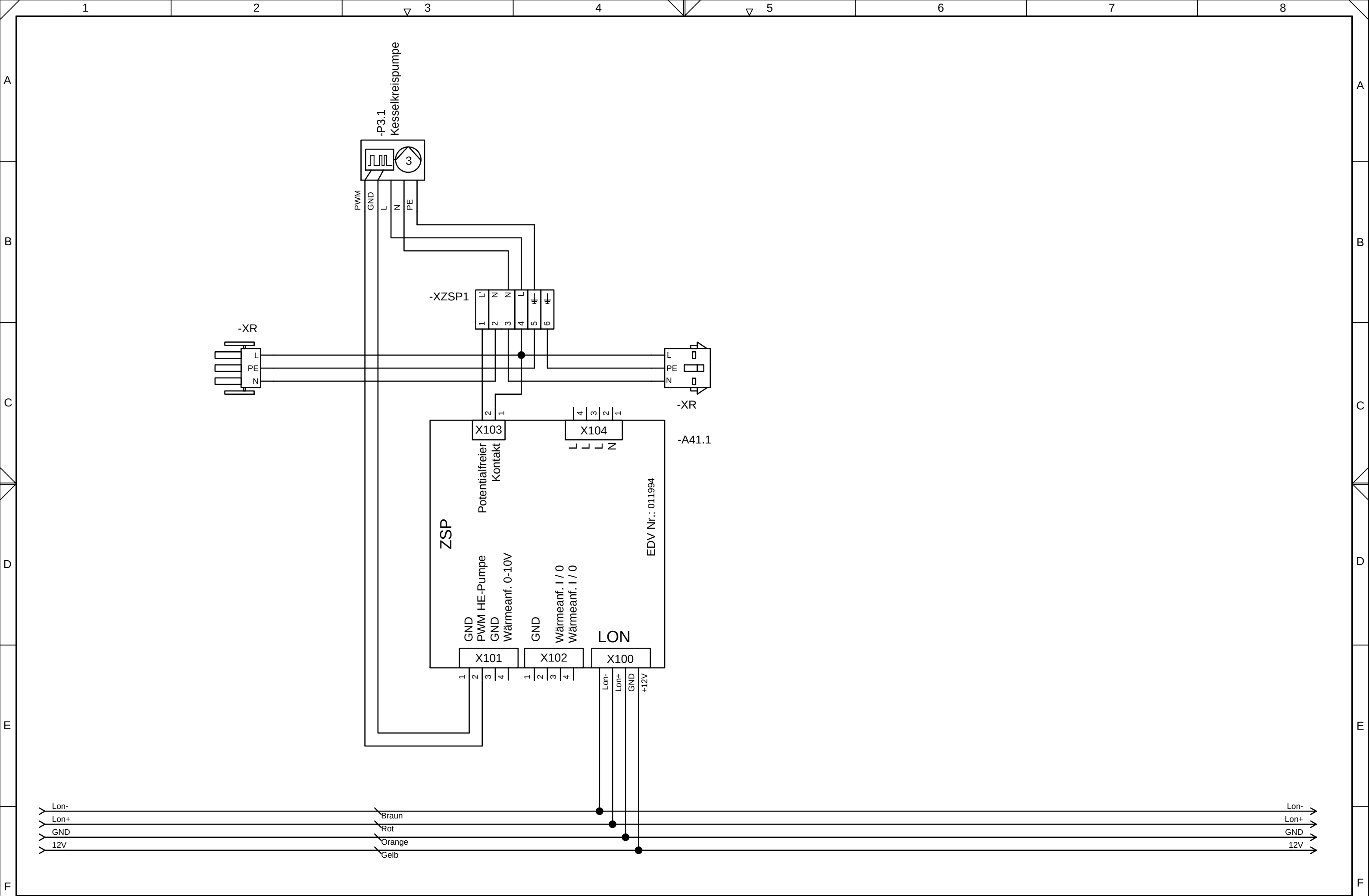
094801/00

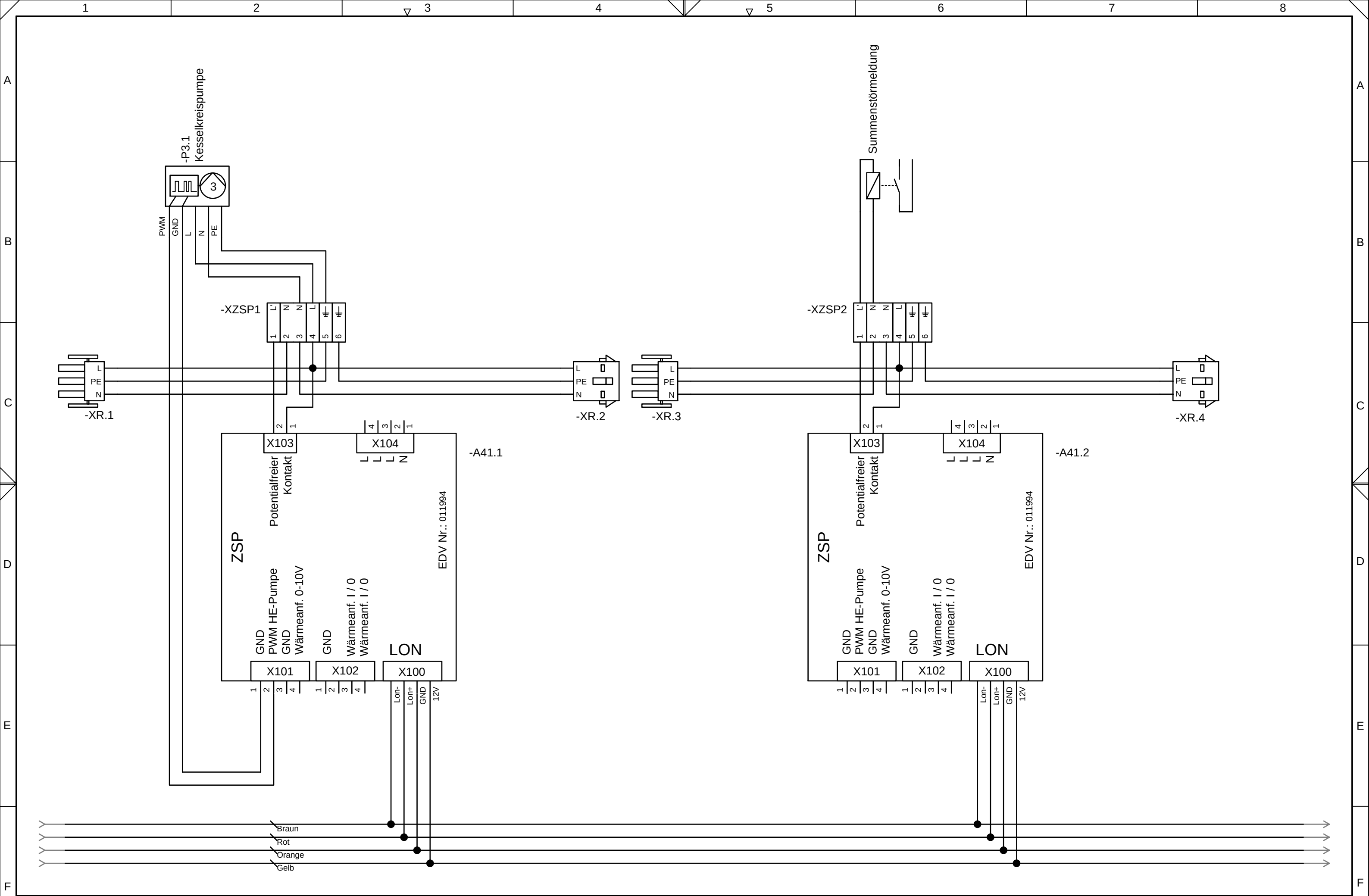
-XZSP	Zusatzprint
L'	
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	Zusatzprint
	PWM Kesselkreispumpe
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4





-XZSP	Zusatzprint
L' N	Summenstörmeldung
N L	Dauerphase
PE PE	PE

EDV Nr. 094808/00

-XSP	Zusatzprint
	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

-XZSP	Zusatzprint
L'	
N	
N	Dauerphase
L	
PE	PE
PE	

-XSP	Zusatzprint
	PWM Kesselkreispumpe
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

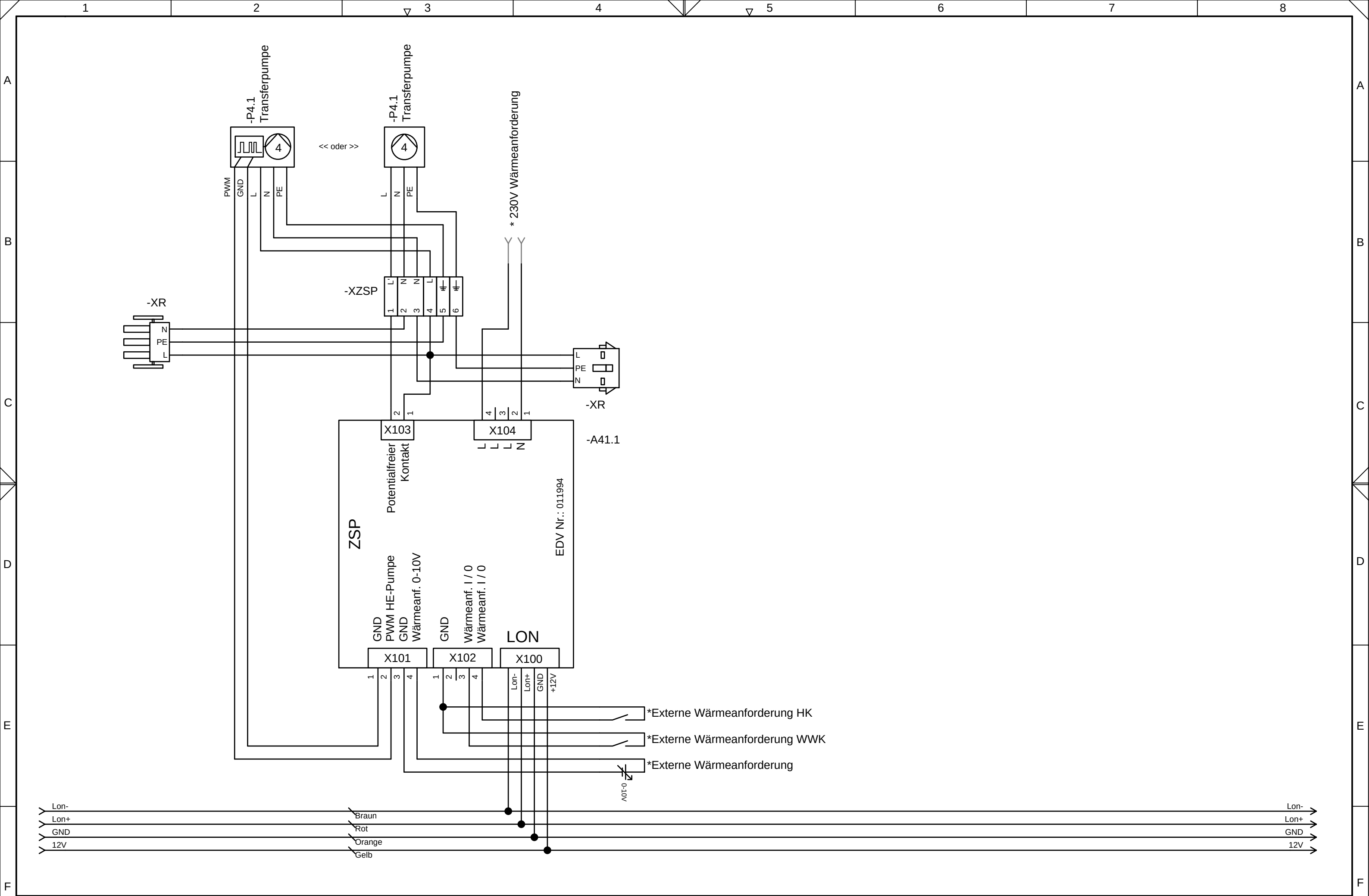
EDV Nr. 094512/00

-XZSP	Zusatzprint
L' N	Summenstörmeldung
N L	Dauerphase
PE PE	PE

EDV Nr. 094808/00

-XSP	Zusatzprint
	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4



-XZSP	Zusatzprint
L' N	Transferpumpe
N L	Dauerphase
PE PE	PE

EDV Nr. 094809/00

-XSP	Zusatzprint
PWM Transferpumpe	GND -X101 /2
Wärmeanforderung 0- 10V	GND -X101 /4

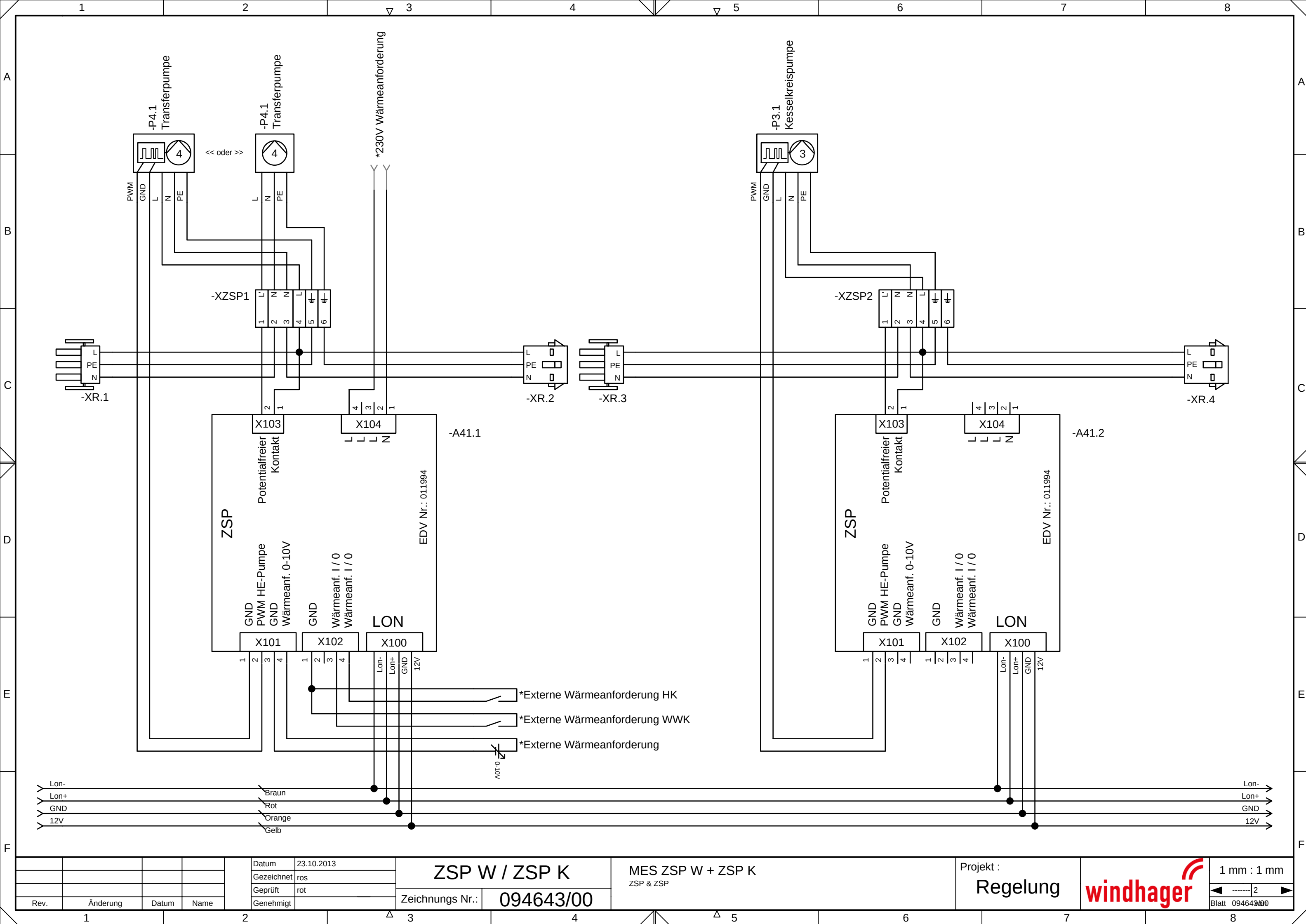
GND	-X102 /2
Externe-Wärmeanf. WWK	-X102 /3
Externe-Wärmeanf. HK	-X102 /4

-XZSP	Zusatzprint
L'	
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	Zusatzprint
	PWM Kesselkreispumpe
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

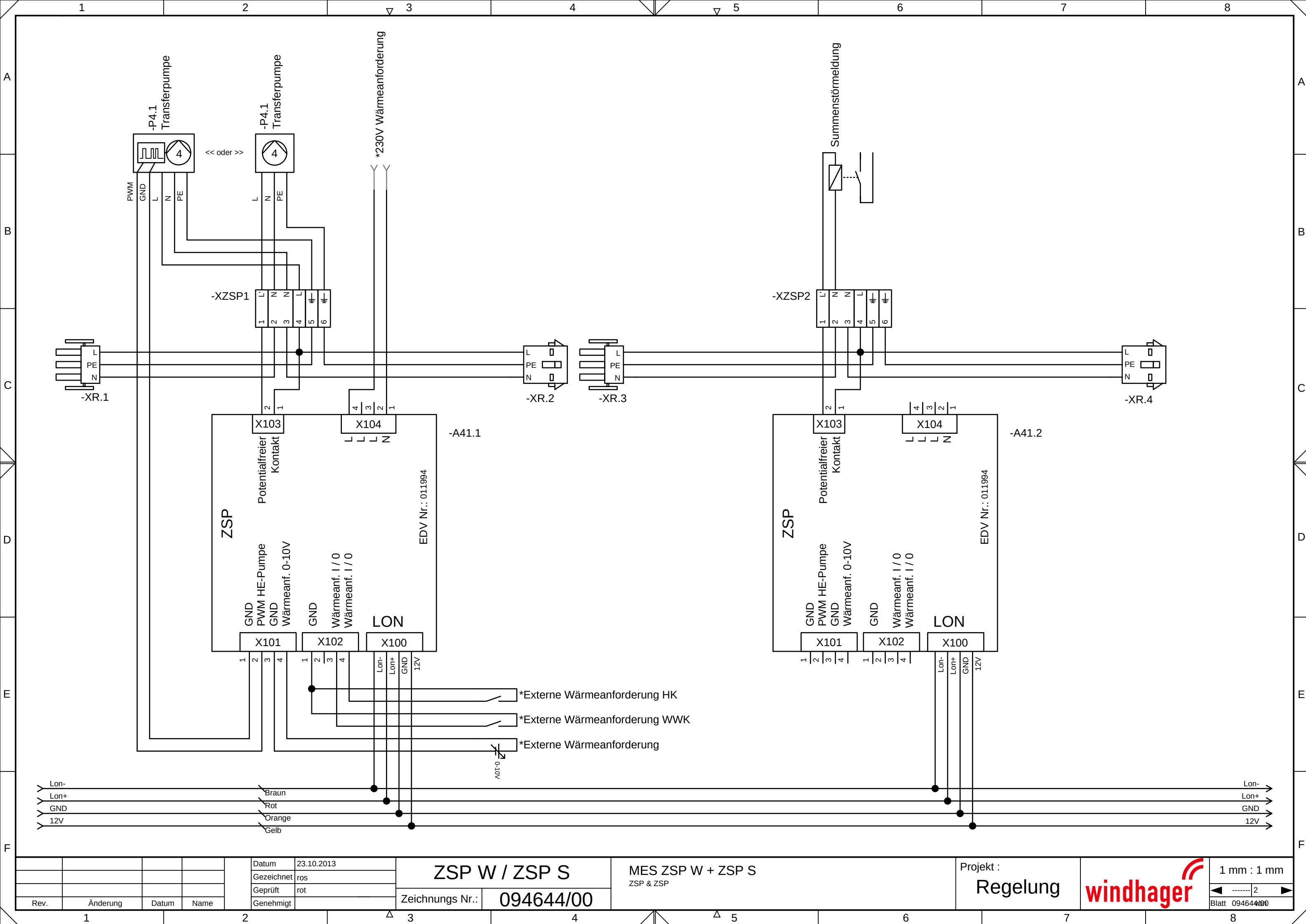


-XZSP	Zusatzprint
L' N	Transferpumpe
N L	Dauerphase
PE PE	PE

EDV Nr. 094809/00

-XSP	Zusatzprint
PWM Transferpumpe	GND -X101 /2
Wärmeanforderung 0- 10V	GND -X101 /4

GND -X102 /2	GND
Externe-Wärmeanf. WWK	-X102 /3
Externe-Wärmeanf. HK	-X102 /4



-XZSP	Zusatzprint
L' N	Summenstörmeldung
N L	Dauerphase
PE PE	PE

EDV Nr. 094808/00

-XSP	Zusatzprint
	GND -X101 /2
	GND -X101 /4

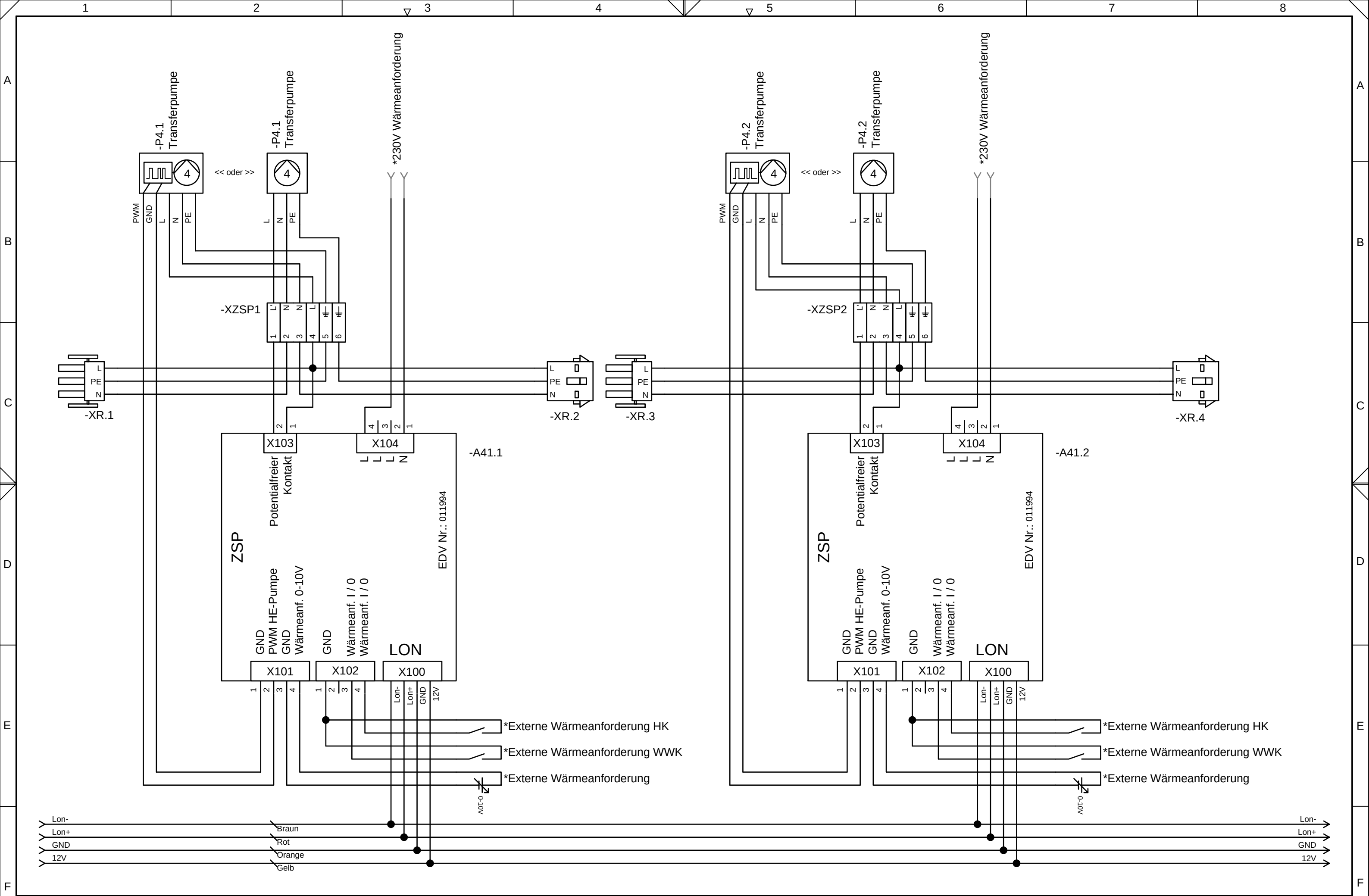
	GND -X102 /2
	-X102 /3
	-X102 /4

-XZSP	Zusatzprint
L' N	Transferpumpe
N L	Dauerphase
PE PE	PE

EDV Nr. 094809/00

-XSP	Zusatzprint
PWM Transferpumpe	GND -X101 /2
Wärmeanforderung 0- 10V	GND -X101 /4

GND -X102 /2	GND
Externe-Wärmeanf. WWK	-X102 /3
Externe-Wärmeanf. HK	-X102 /4



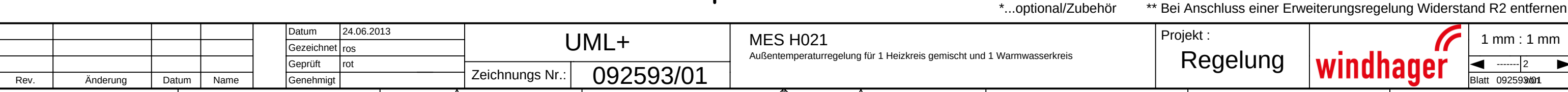
-XZSP	Zusatzprint
L' N	Transferpumpe
N L	Dauerphase
PE PE	PE

EDV Nr. 094809/00

-XSP	Zusatzprint
PWM Transferpumpe	GND -X101 /2
Wärmeanforderung 0- 10V	GND -X101 /4

GND -X102 /2	GND
Externe-Wärmeanf. WWK	-X102 /3
Externe-Wärmeanf. HK	-X102 /4

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	
8 RL	Motor- Umschaltseinheit
9 N	

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

UML+	Modul 1 Heizkreis 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

	Modul 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	Modul 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

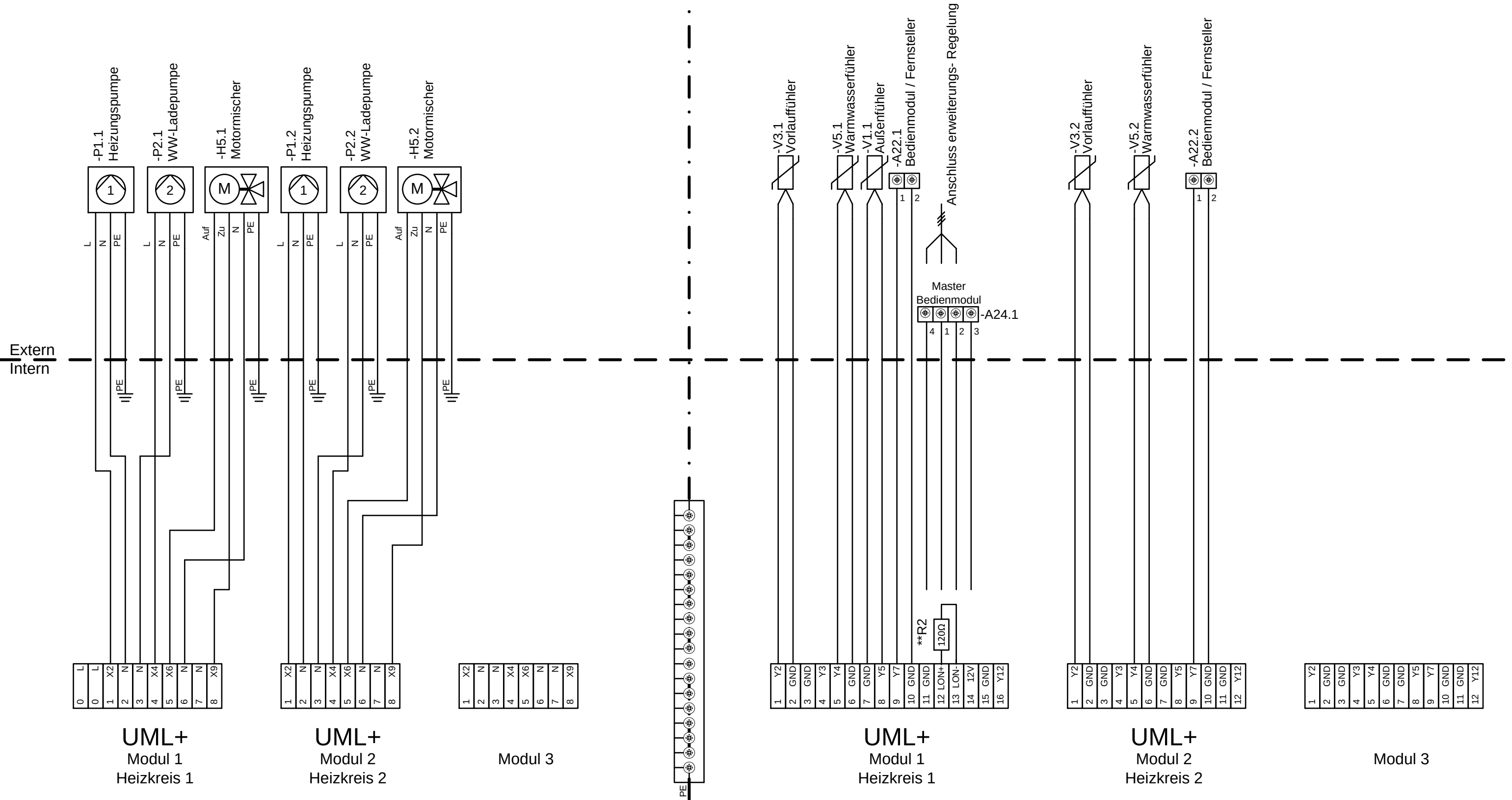
	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092595/01

092595/01

Niederspannung 230 VAC

Kleinspannung - Fühler



...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	UML+/UML+		MES H021 + H024 Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise	Projekt : Regelung		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092607/01					
												Blatt 092607/01

-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	
8 RL	Motor- Umschaltseinheit
9 N	

UML+	Modul 1 Heizkreis 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 1 Zu
8 X9	

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 2 Zu
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092608/01

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master Bedienmodul Anschluss- erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

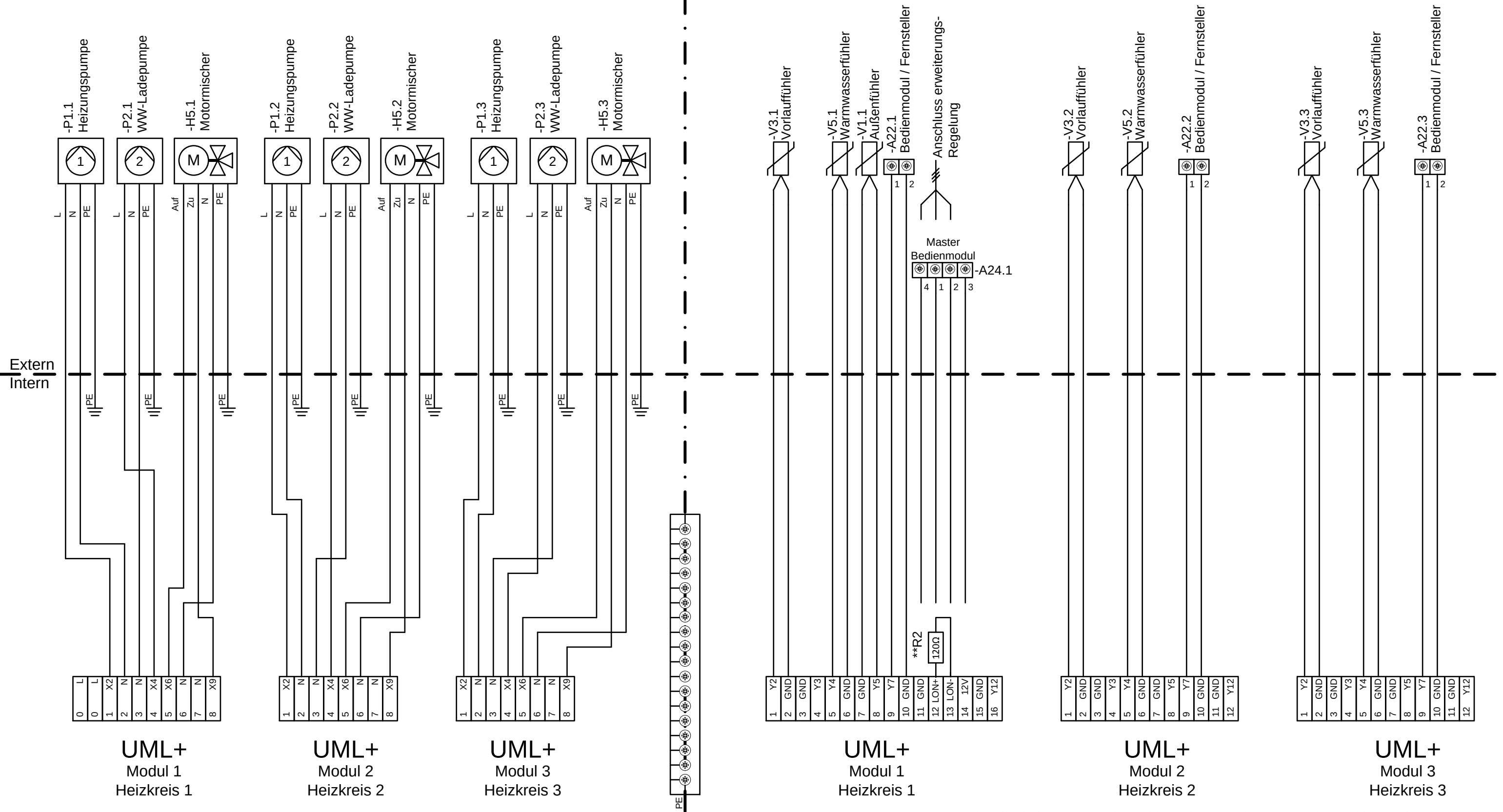
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092608/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 Außentemperaturregelung für 3 Heizkreise gemischt und Warmwasserkreise		Projekt : Regelung				1 mm : 1 mm	
				Gezeichnet	ros									◀ ----- 2 ▶	
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092610/01							Blatt 092610/01	

-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	Intern
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschaltseinheit
8 RL	
9 N	

UML+	Modul 1 Heizkreis 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 3
1 X2	Heizungspumpe HK 3
2 N	
3 N	WW-Ladepumpe HK 3
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

092611/01

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master Bedienmodul Anschluss- erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

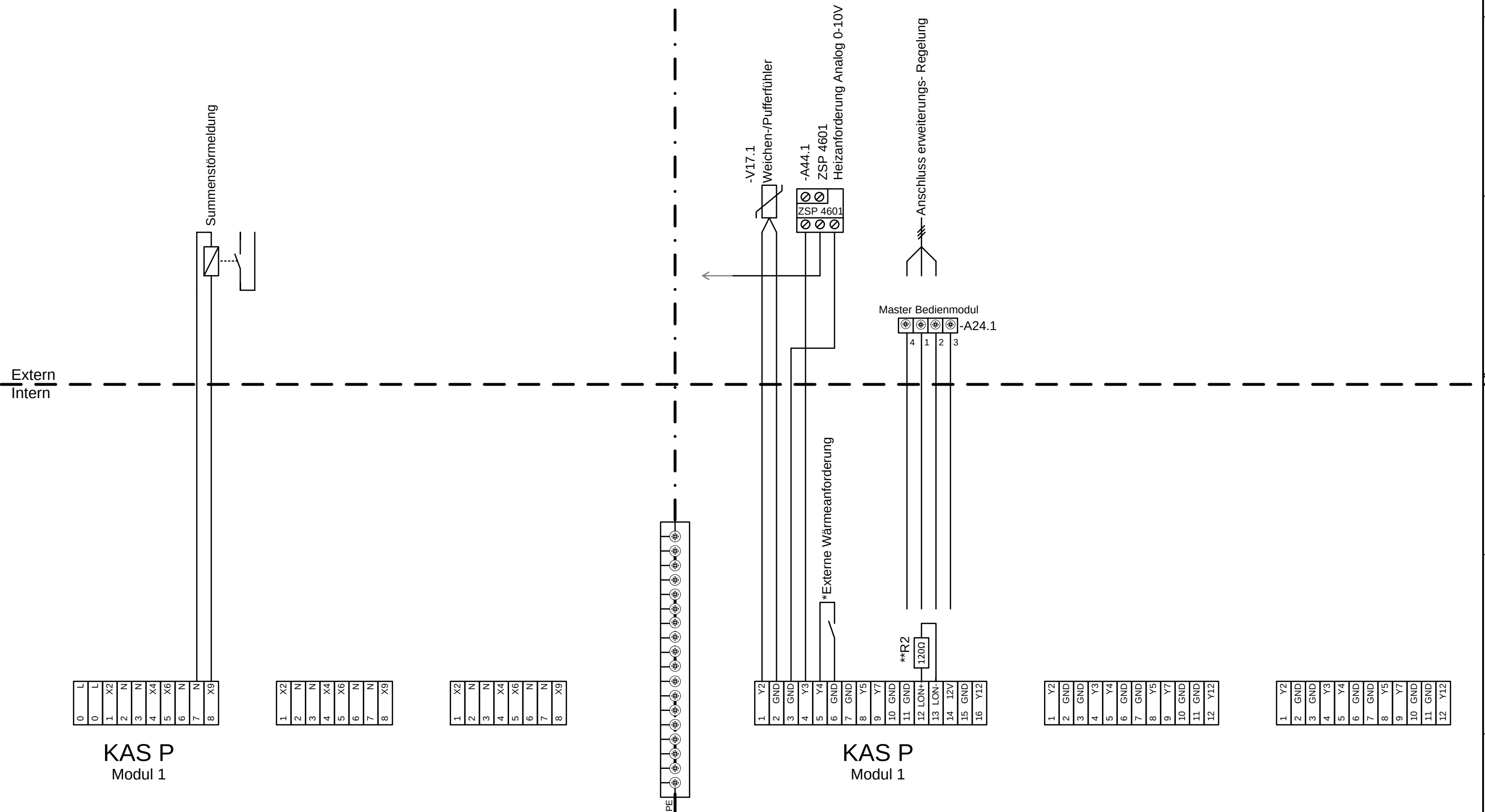
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 3
1 Y2	Vorlauffühler HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 3
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

092611/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	KAS P		MES KAS P Kaskade ohne Windhager MES- Regelung	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092621/01				◀ ----- 2 ▶ Blatt 092621/01

-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschalteneinheit
8 RL	
9 N	

KAS	Modul 1 Kaskade
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	Summenstörmeldung
8 X9	

	Modul 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092623/01

KAS	Modul 1 Kaskade
1 Y2	Weichen-/Pufferfühler
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	Externe Wärmeanforderung
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

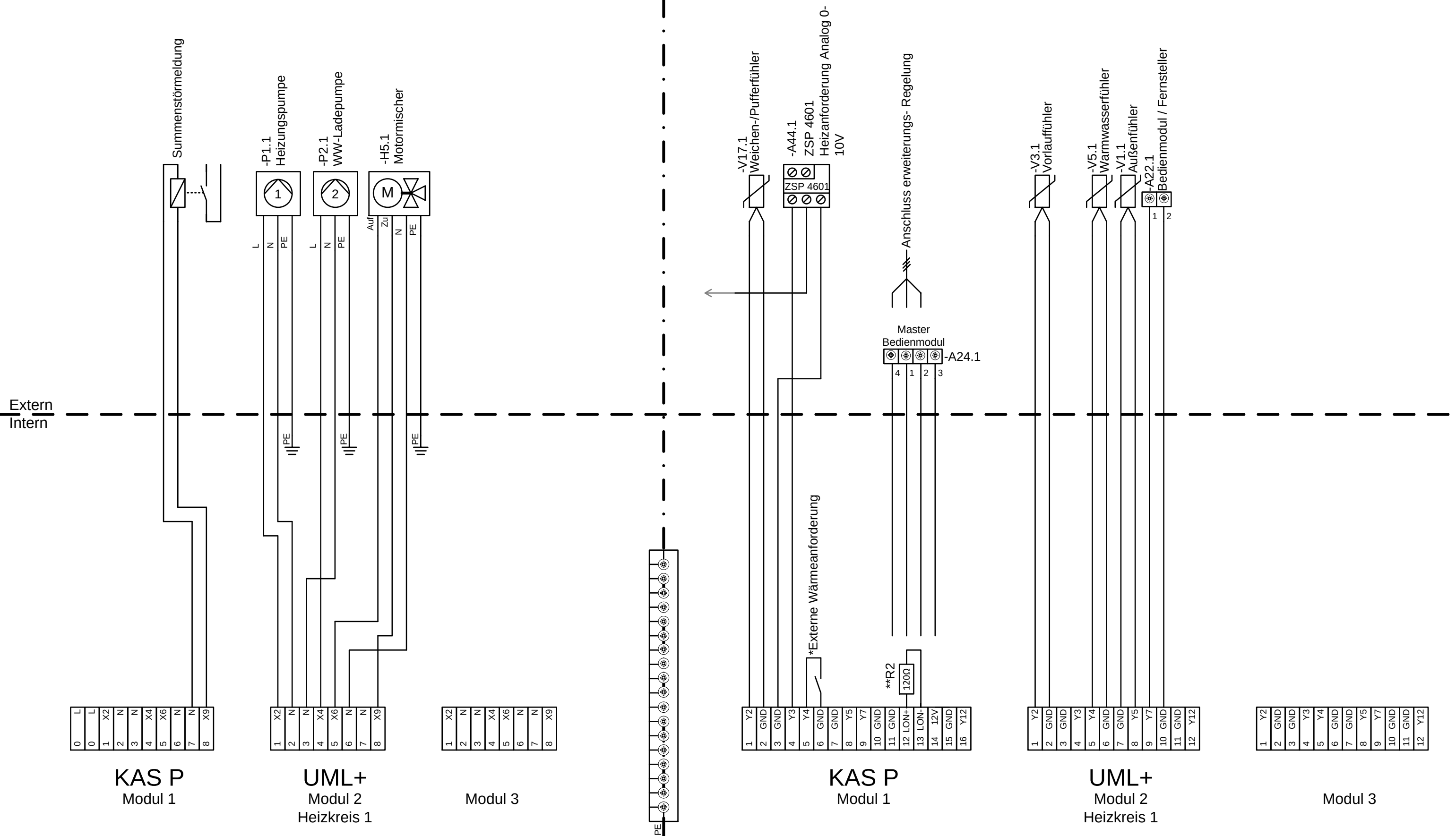
	Modul 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092623/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	
8 RL	Motor- Umschaltseinheit
9 N	

KAS P	Modul 1 Kaskade
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	Summenstörmeldung

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092626/01

KAS P	Modul 1 Kaskade
1 Y2	Weichen-/Pufferfühler
2 GND	
3 GND	
4 Y3	ZSP 4601
5 Y4	Externe
6 GND	Wärmeanforderung
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	
16 Y12	

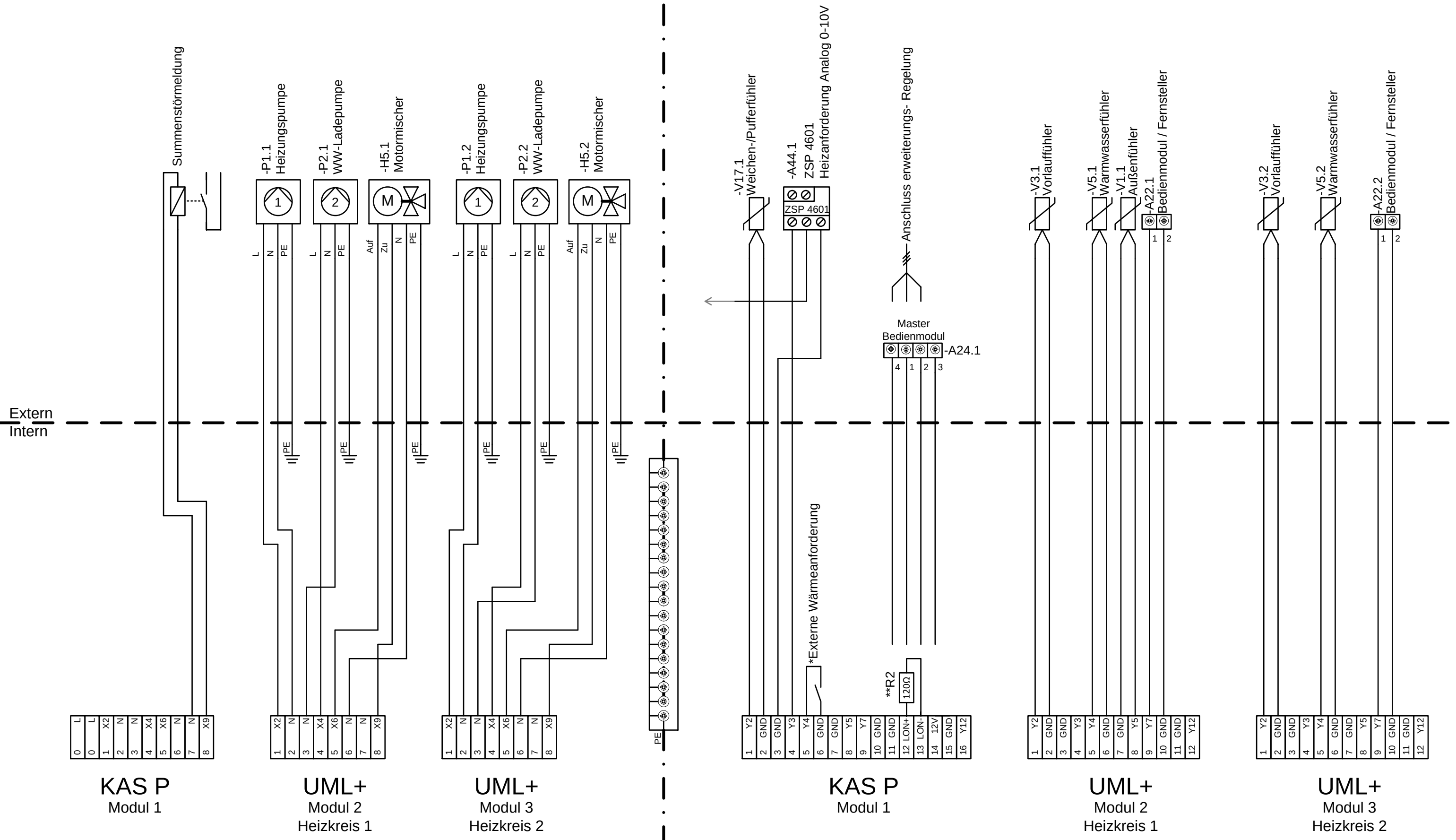
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	
8 Y5	Außenfühler
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092626/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	
8 RL	Motor- Umschaltseinheit
9 N	

KAS P	Modul 1 Kaskade
1 Y2	Weichen-/Pufferfühler
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	Externe
6 GND	Wärmeanforderung
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	
16 Y12	

KAS P	Modul 1 Kaskade
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	Summenstörmeldung

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

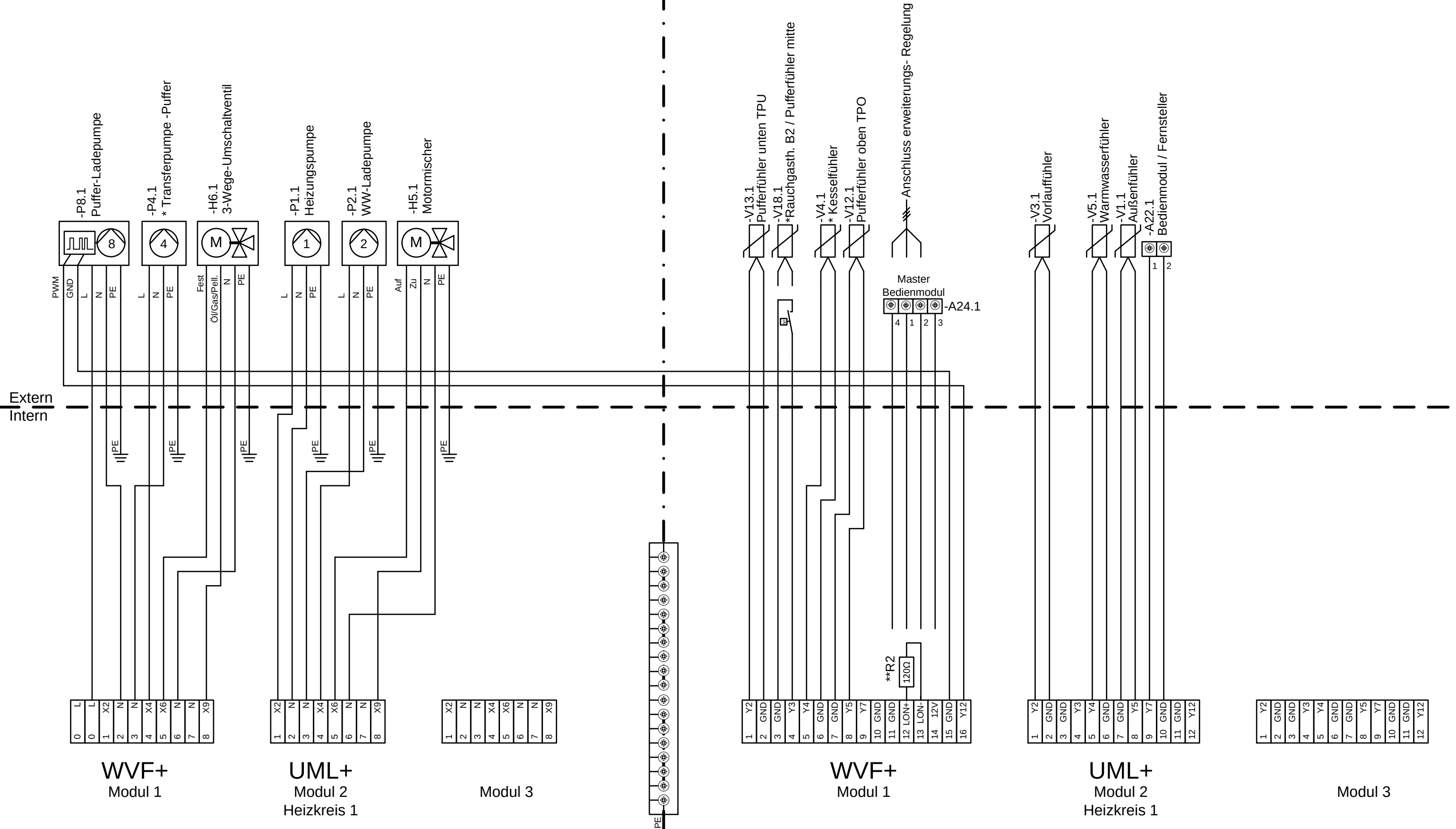
UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	Warmwasserfühler HK 2
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 2 Zu

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	
8 RL	Motor- Umschaltseinheit
9 N	

WVF+	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	*Transferpumpe Puffer
4 X4	
5 X6	Fest 3-Wege- Umschaltventil
6 N	
7 N	
8 X9	Öl/Gas/Pell.

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092804/01

WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Rauchgasth. B2 Pufferfühler mitte
4 Y3	
5 Y4	*Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss erweiterungs- Regelung
14 12V	
15 GND	PWM Puffer- Ladepumpe
16 Y12	

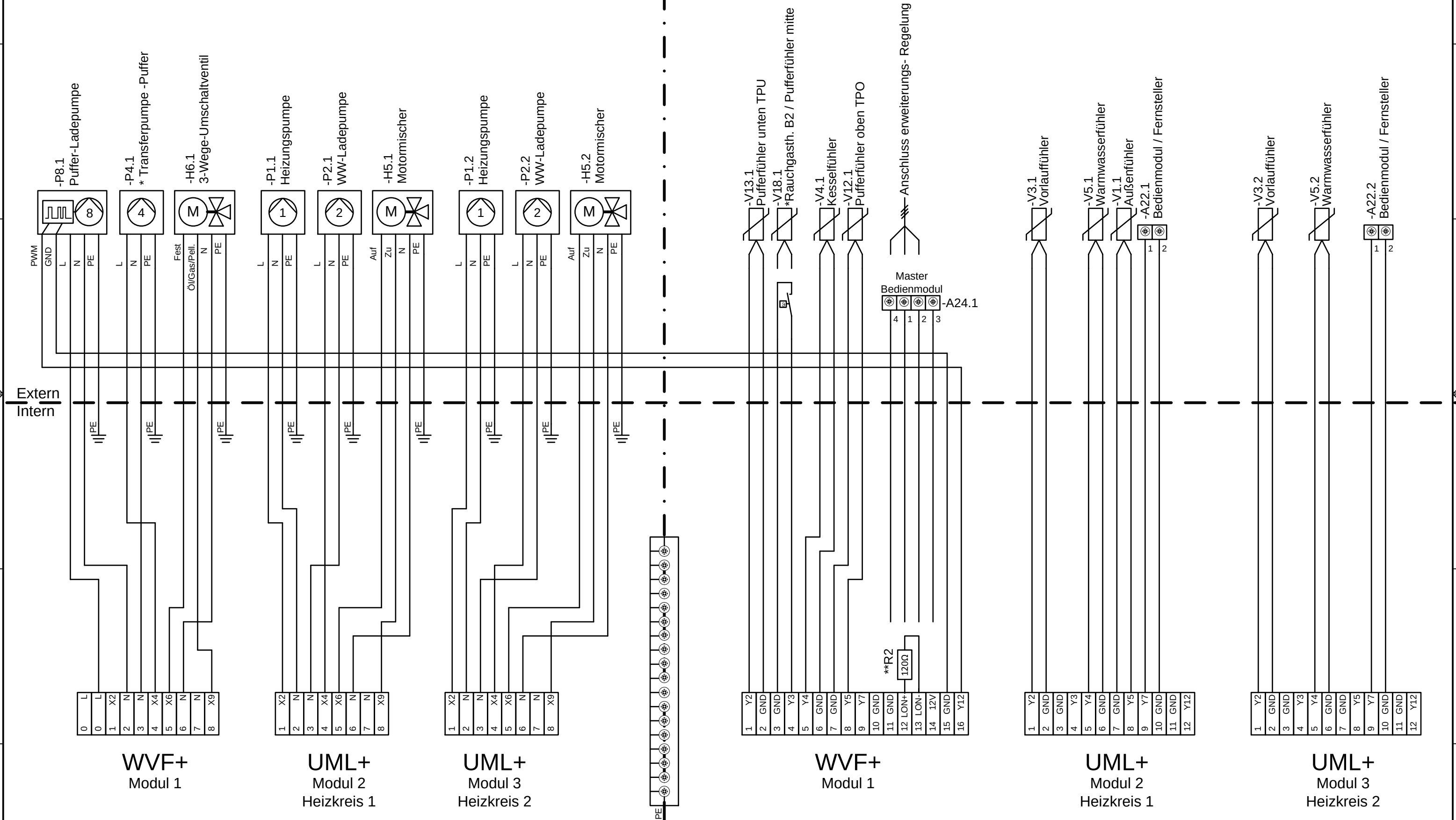
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserrühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092804/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	03.07.2013	WVF+/UML+/UML+		MES P041 + H021 + H024 Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise Automatische Festbrennstoffumschaltung mit Pufferladung	Projekt : Regelung		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092806/01				Blatt 092806/01	

-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot-Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot-Fluchtschalter
6 L'	
7 LL	
8 RL	Motor-Umschaltseinheit
9 N	

WVF+	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	Fest 3-Wege-Umschaltventil
6 N	
7 N	
8 X9	Öl/Gas/Pell.

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

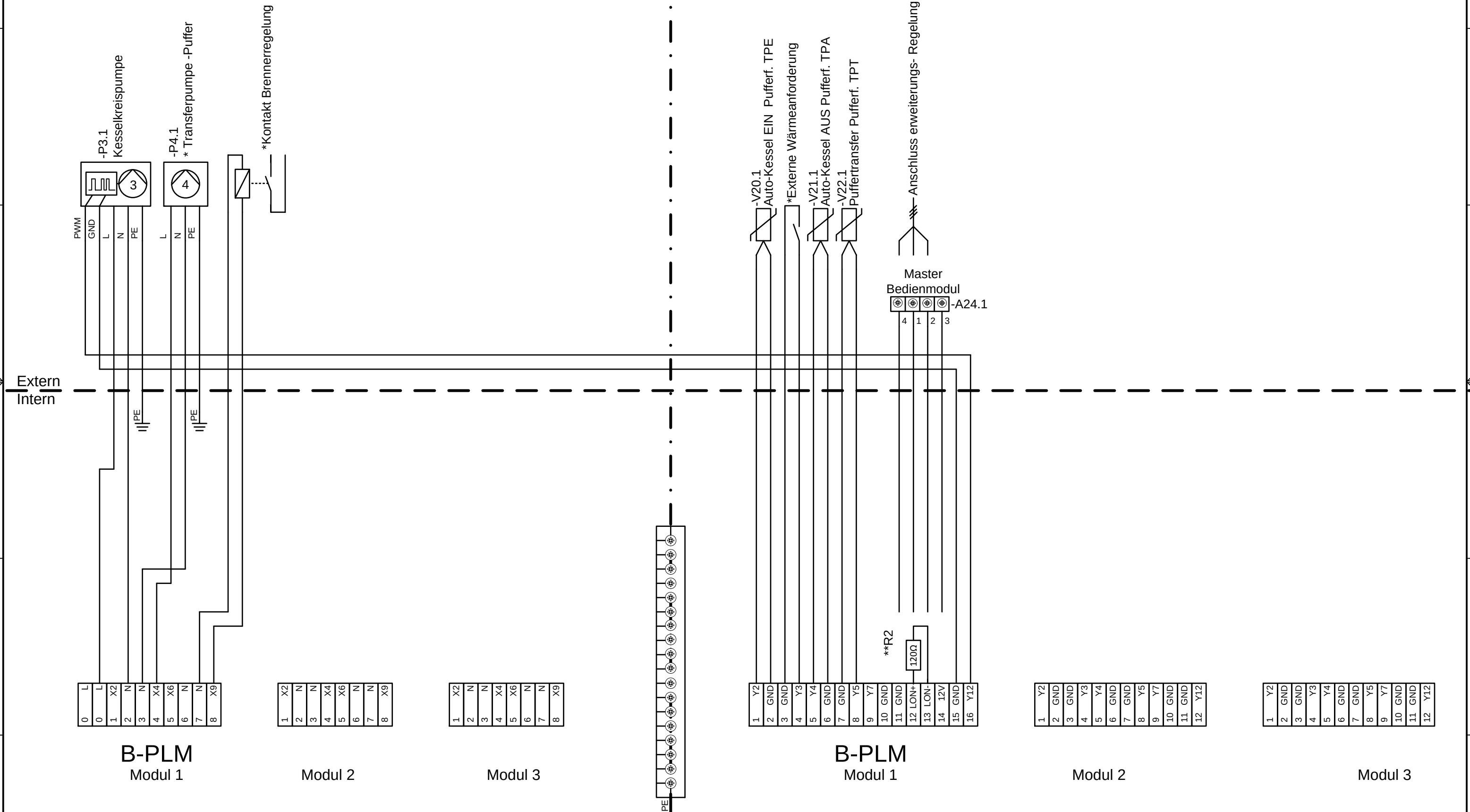
WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Rauchgasth. B2 / Pufferfühler mitte
4 Y3	
5 Y4	* Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Puffer- Ladepumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschalteneinheit
8 RL	
9 N	

B-PLM	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	* Transferpumpe Puffer
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

	Modul 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092744/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

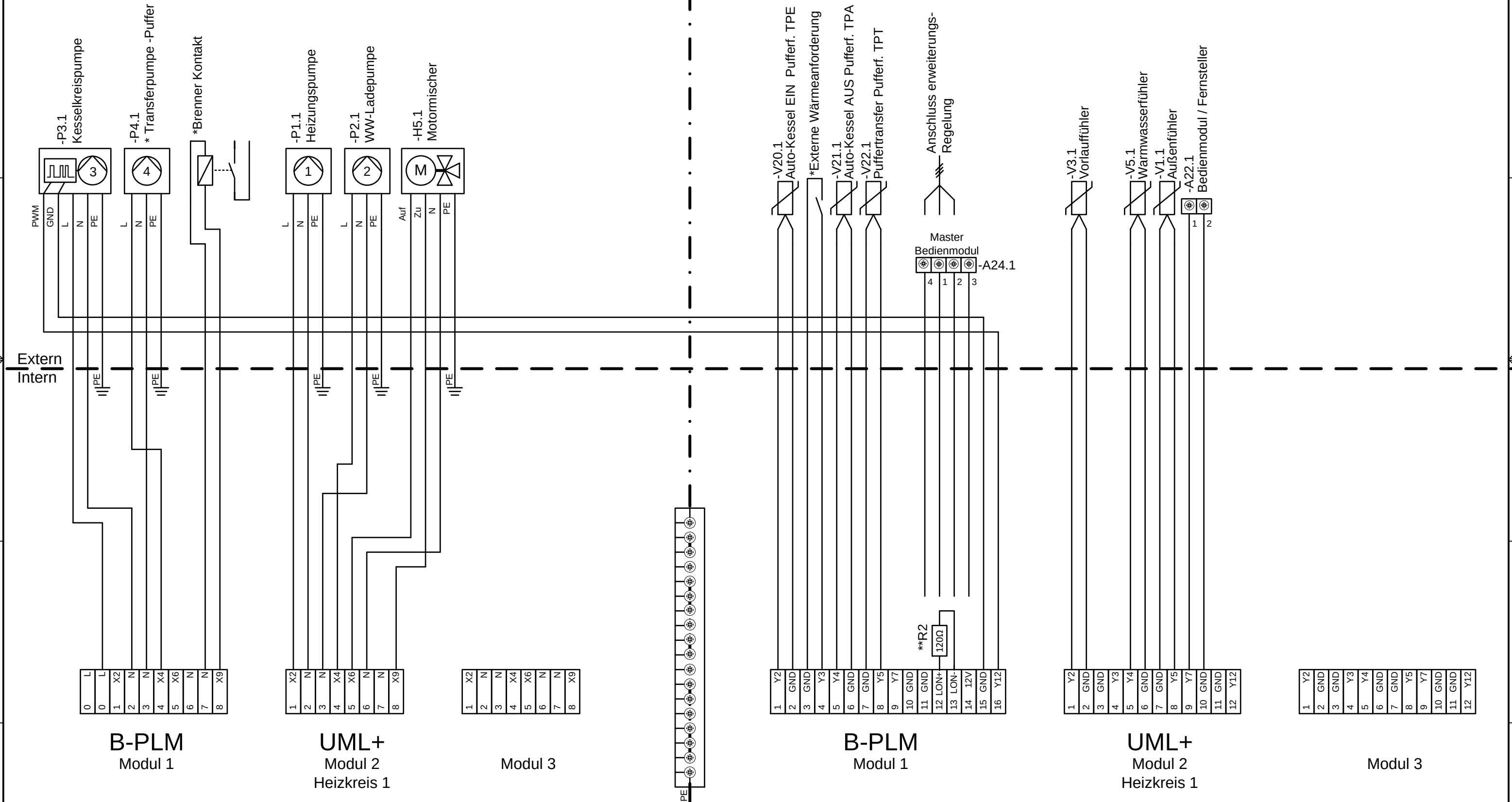
	Modul 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092744/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschaltseinheit
8 RL	
9 N	

B-PLM	Modul 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	HK 1 Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092798/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	*Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

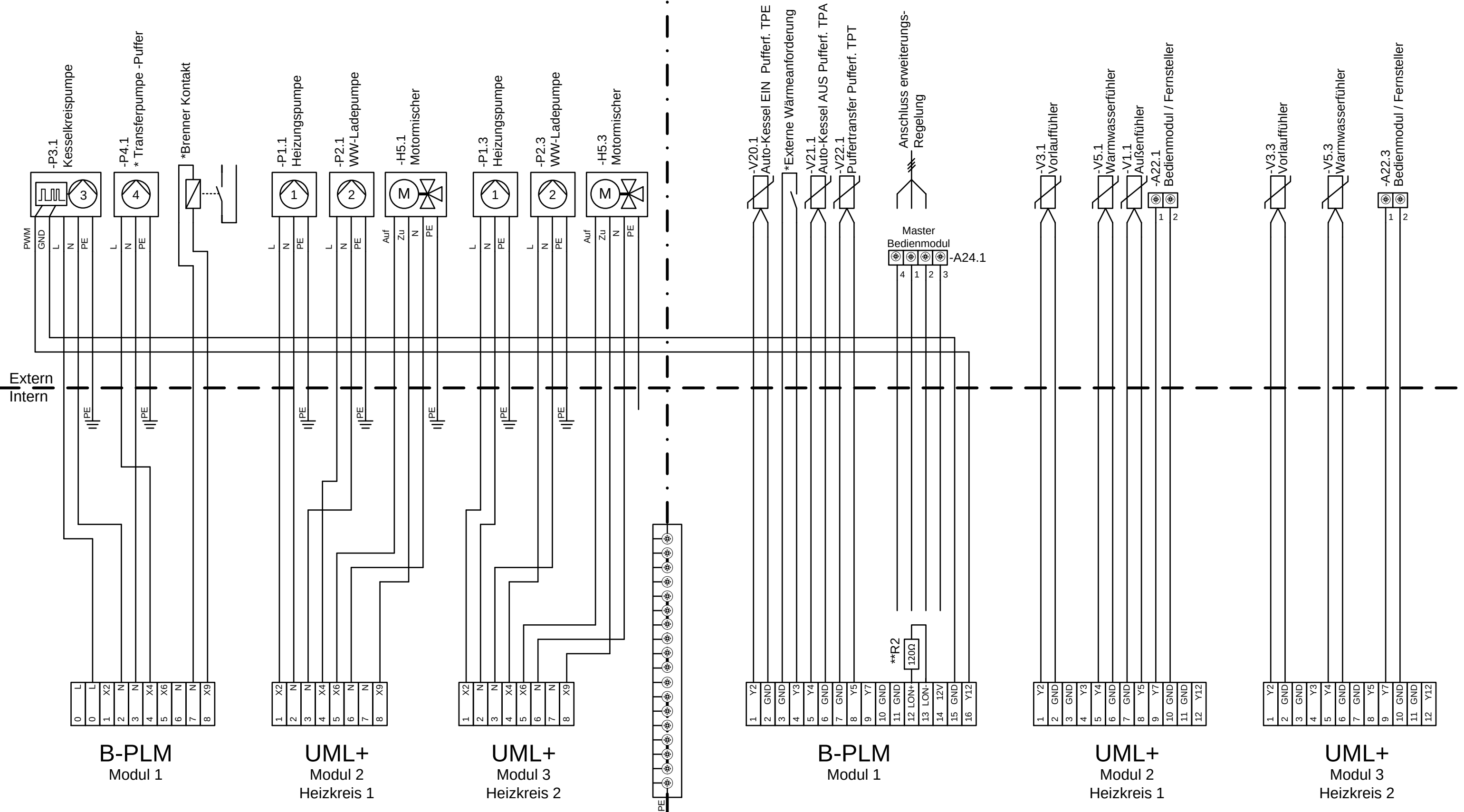
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092798/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	B-PLM/UML+/UML+		MES P042 + H021 + H024 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Brenner-/ Pufferspeichermodul B-PLM		Projekt : Regelung				1 mm : 1 mm Blatt 092797/01	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.: 092797/01									

-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschaltseinheit
8 RL	
9 N	

B-PLM	Modul 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

092798/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	*Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

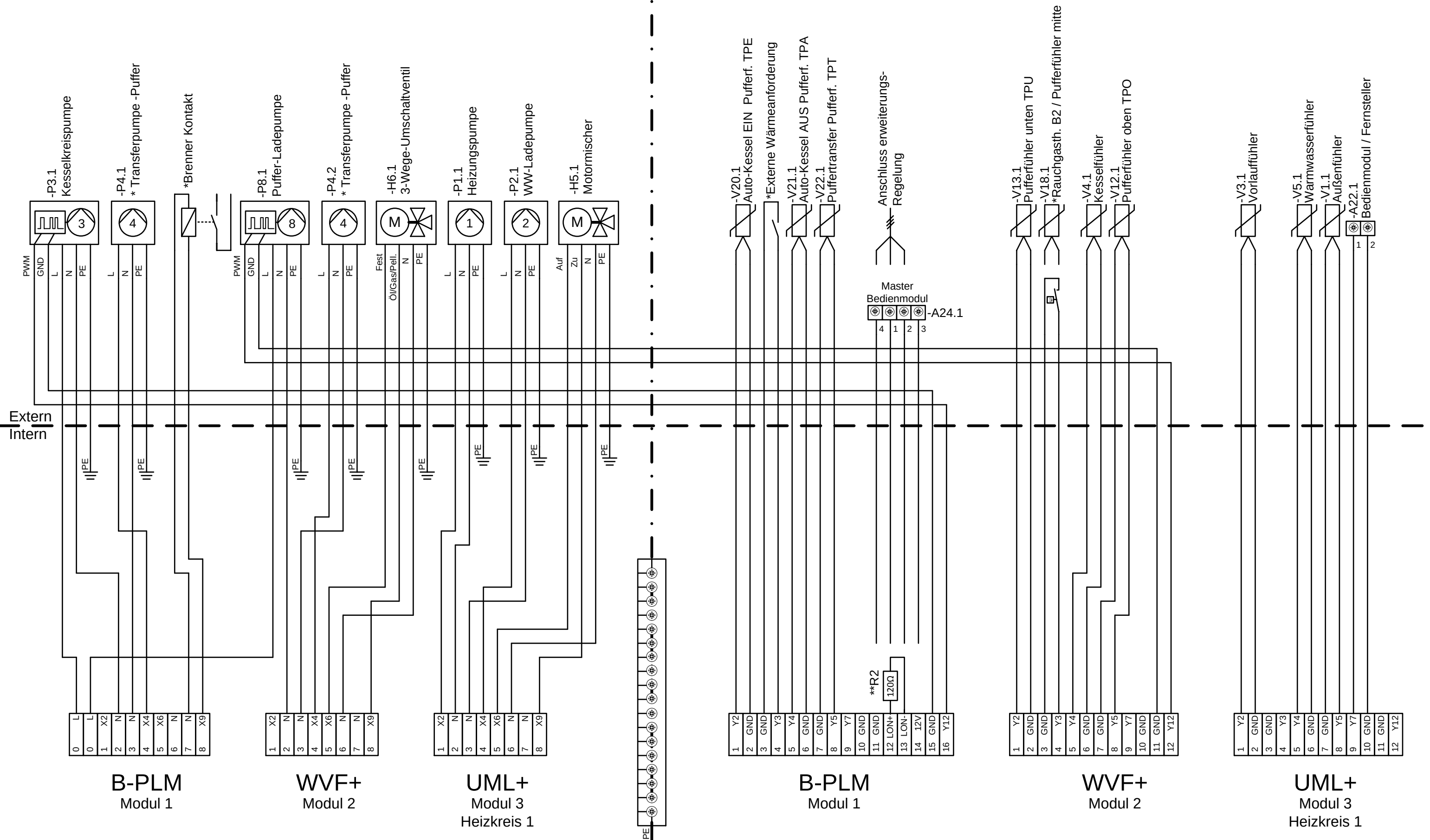
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

092798/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Festbrennstoff- Modul WVF+ und Pufferspeicher- Modul B-PLM		Projekt : Regelung				1 mm : 1 mm	
				Gezeichnet	ros									◀ ----- 2 ▶	
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:		092880/01						Blatt 092880/01	

-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschaltseinheit
8 RL	
9 N	

B-PLM	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	*Transferpumpe Puffer
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

WVF+	Modul 2
1 X2	
2 N	
3 N	*Transferpumpe Puffer
4 X4	
5 X6	Fest 3-Wege- Umschaltventil
6 N	
7 N	
8 X9	Öl/Gas/Pell.

UML+	Modul 3 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	HK 1 Zu

092881/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	*Externe Wärmeanforderung
4 Y3	
5 Y4	*Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

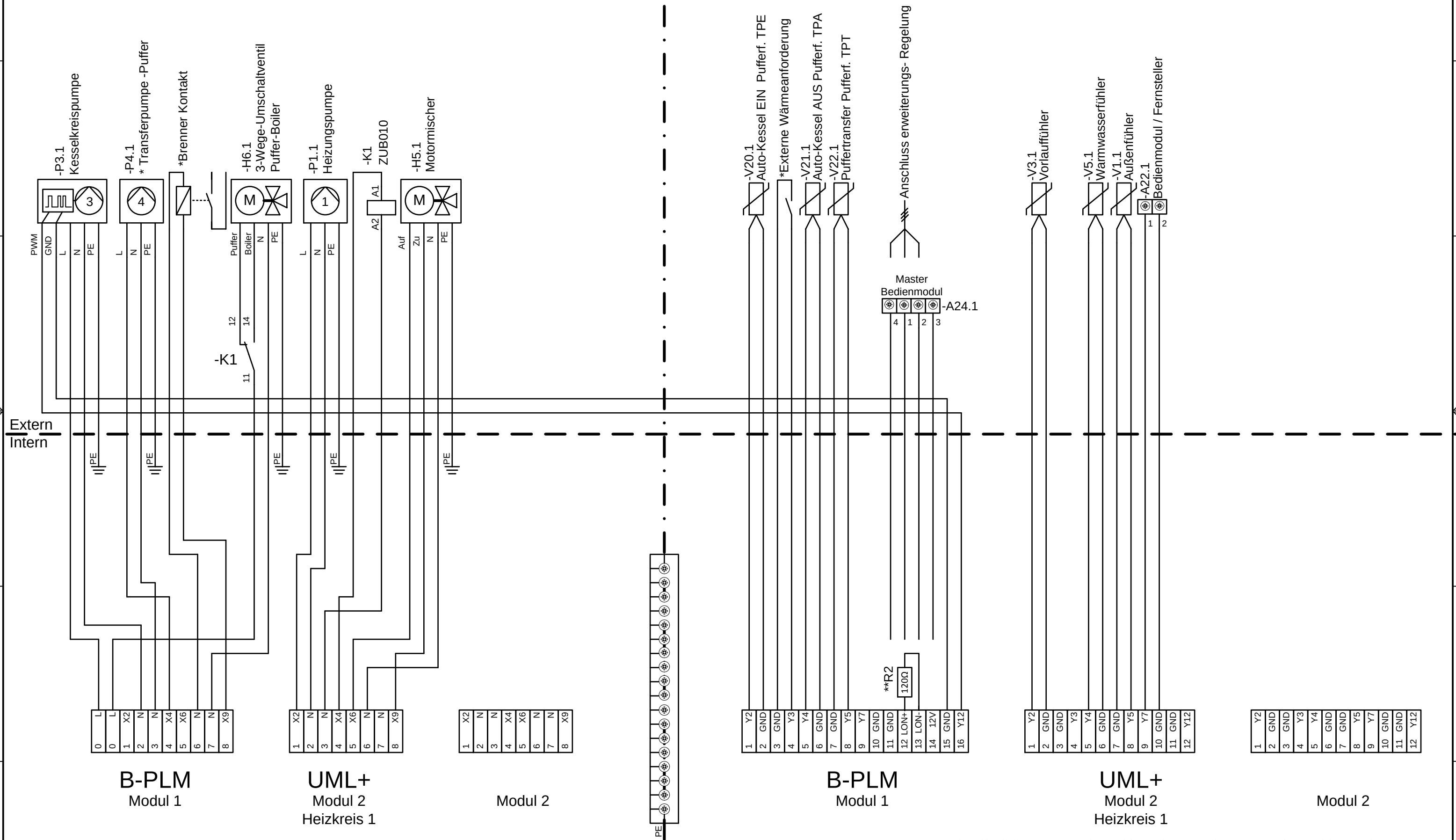
WVF+	Modul 2
1 Y2	Puffer unten TPU
2 GND	
3 GND	*Rauchgasth. B2 Pufferfühler mitte
4 Y3	
5 Y4	*Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM Puffer- Ladepumpe
12 Y12	

UML+	Modul 3 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwassfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

092881/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschaltseinheit
8 RL	
9 N	

B-PLM	Modul 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	
2 N	
3 N	* Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brennerkontakt
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	Schütz -K1 HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	HK 1 Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094547/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	* Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

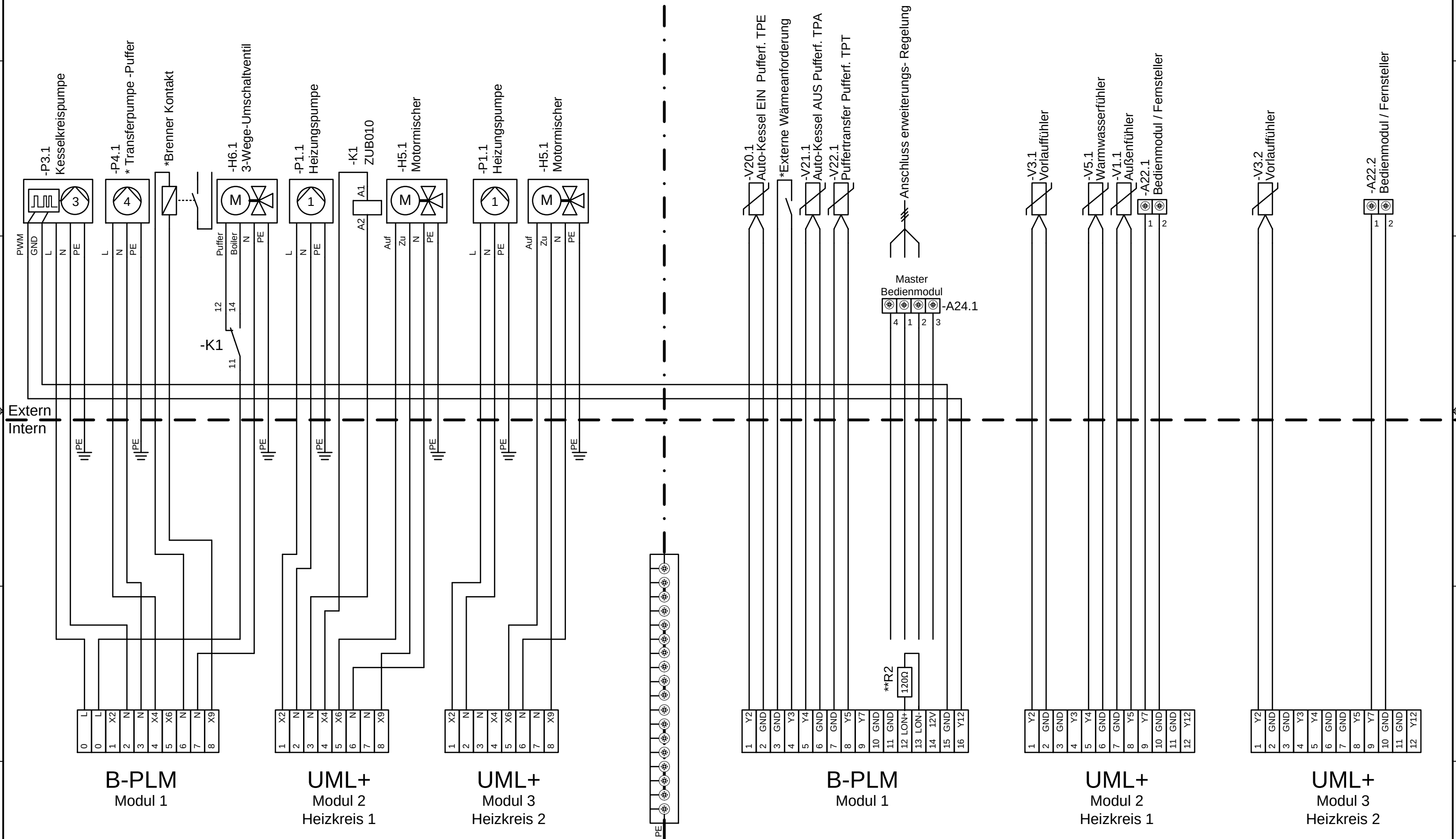
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094547/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	
5 L	Heizungsnot- Fluchtschalter
6 L'	
7 LL	Motor- Umschaltseinheit
8 RL	
9 N	

B-PLM	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	* Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brennerkontakt
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	Schütz -K1 HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	HK 1 Zu

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	HK 2 Zu

094548/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	* Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

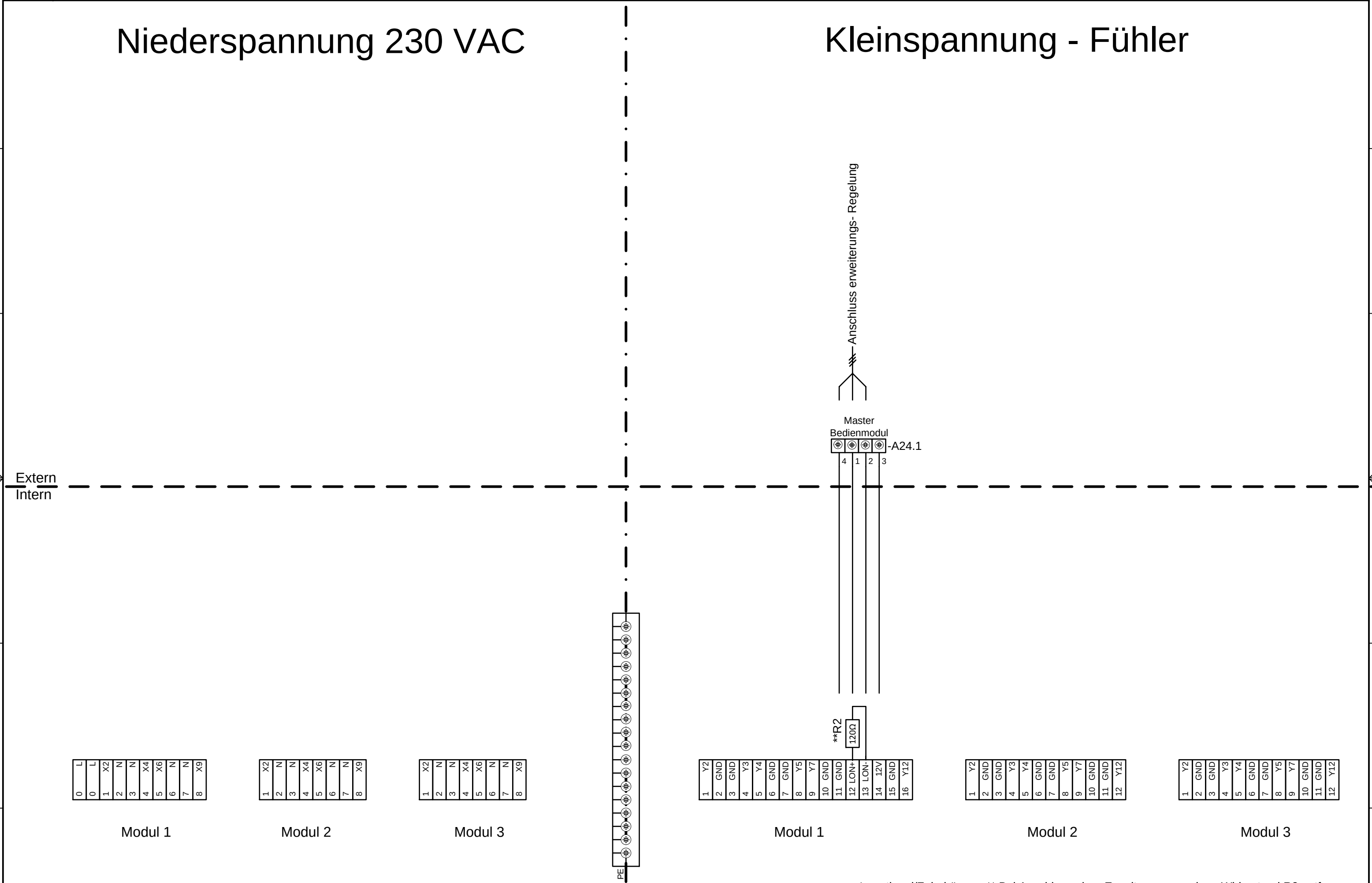
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

094548/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XS	Sicherheitseinrichtung
1 N	Intern
2 N	Heizungsnot- Fluchtschalter
3 N'	
4 L	Heizungsnot- Fluchtschalter
5 L	
6 L'	
7 LL	Motor- Umschalteneinheit
8 RL	
9 N	

1	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	Modul 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	Modul 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092634/01

1	Modul 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	Modul 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	Modul 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

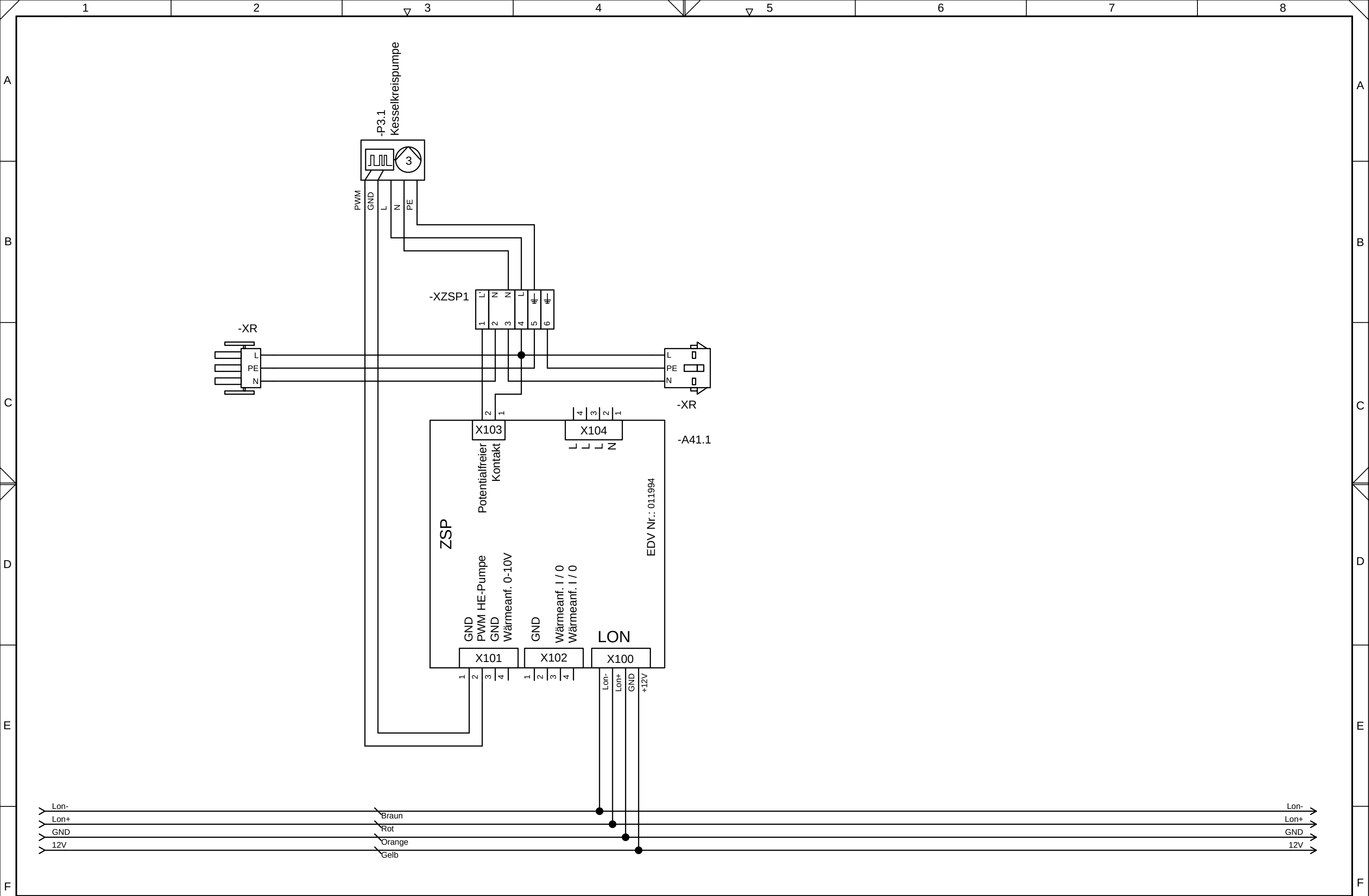
092634/01

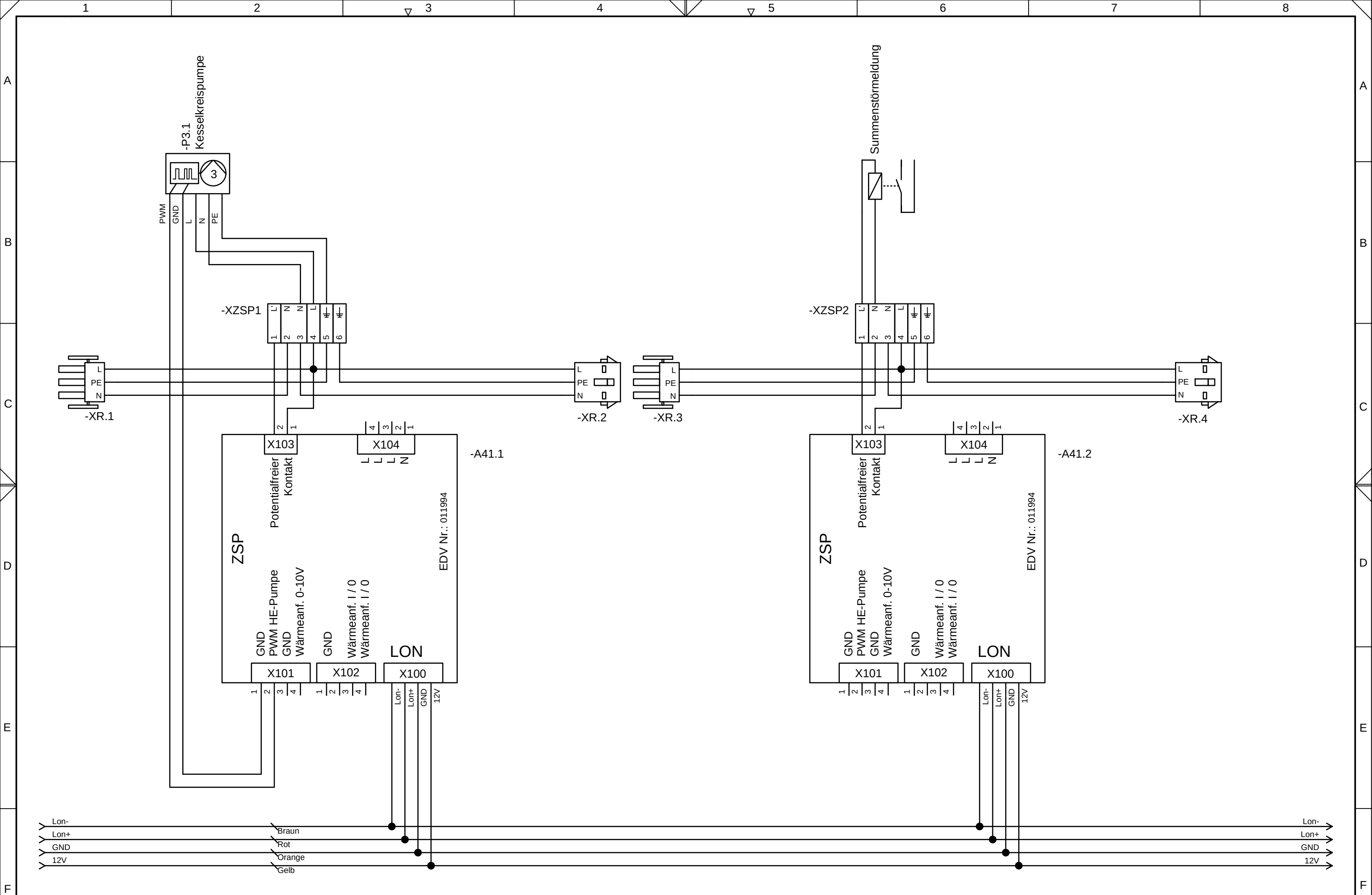
-XZSP	Zusatzprint
L'	
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094667/00

Zusatzprint	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM
GND	Kesselkreispumpe





				Datum	23.10.2013	ZSP K / ZSPS		MES ZSP K + ZSP S ZSP & ZSP	Projekt : Regelung		1 mm : 1 mm		
				Gezeichnet	ros								◀ ----- 2 ▶
Rev.	Änderung	Datum	Name	Gepprüft	rot						Zeichnungs Nr.:	094633/00	Blatt 094633/00
				Genehmigt									

-XZSP	Zusatzprint
L'	
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094667/00

Zusatzprint	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM
GND	Kesselkreispumpe

-XZSP	Zusatzprint
L'	Summenstörmeldung
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	Zusatzprint
-X102 /4	
-X102 /3	
-X102 /2	
GND	

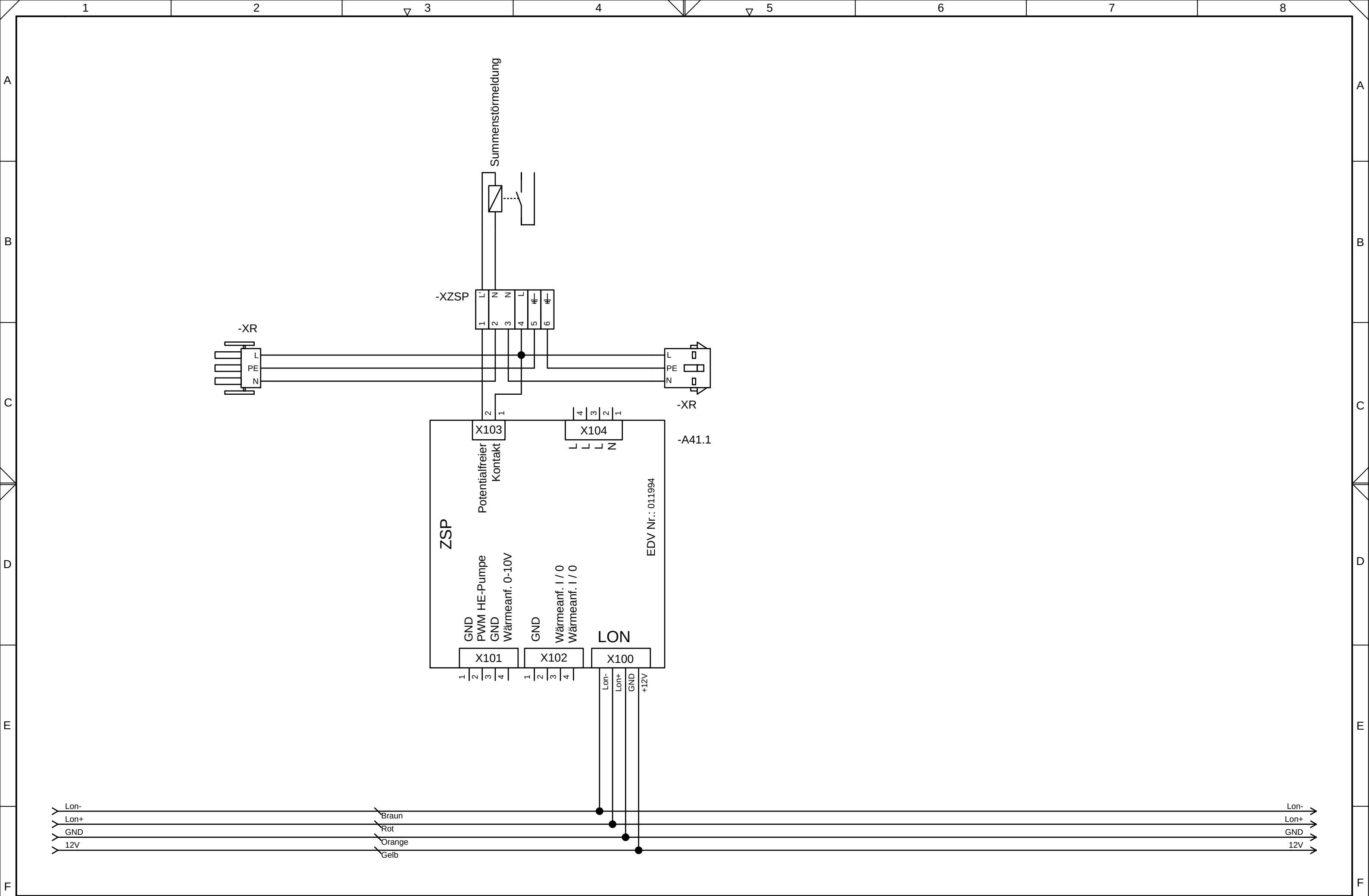
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	Zusatzprint
L'	Summenstörmeldung
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	Zusatzprint
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	
GND	

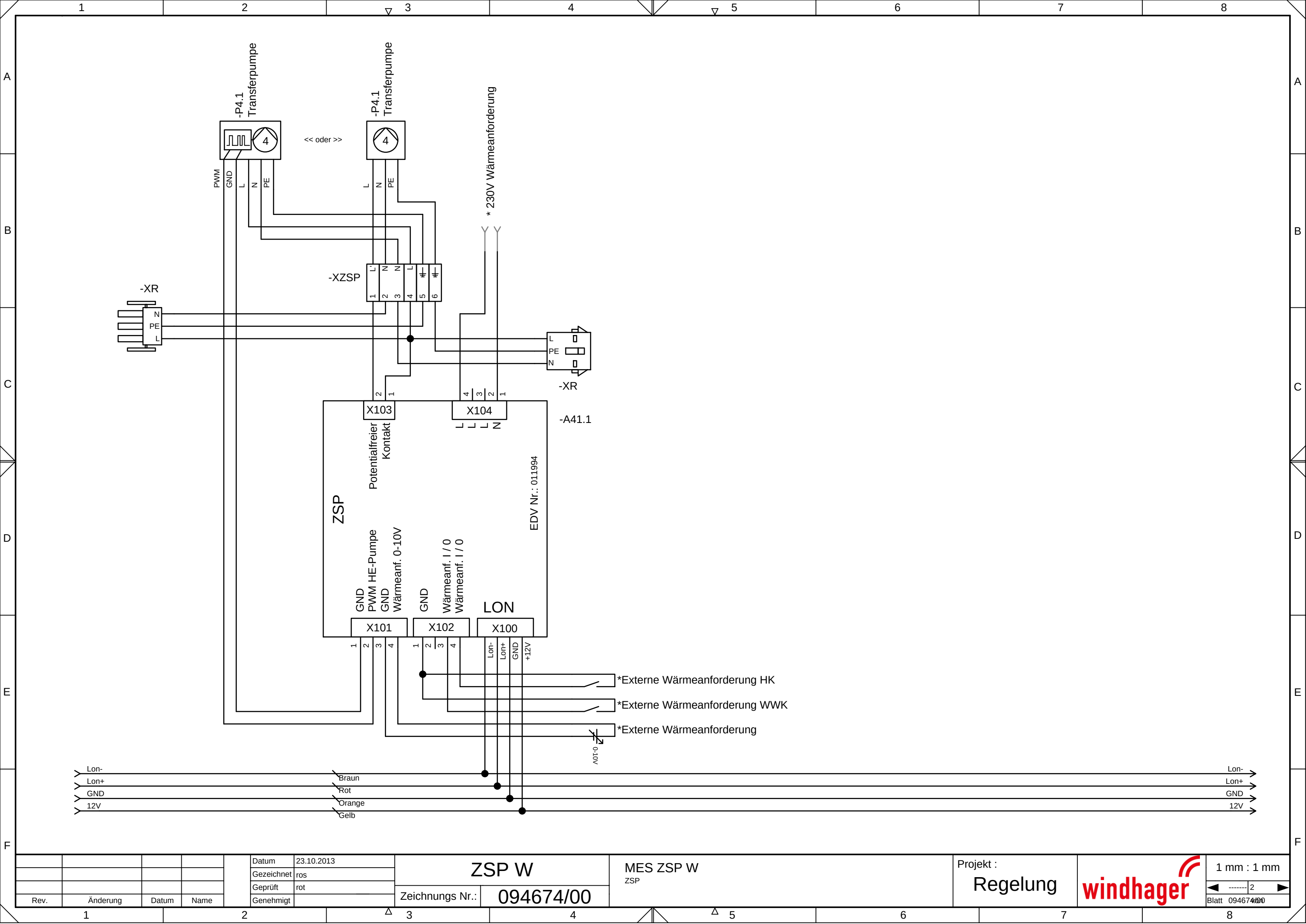


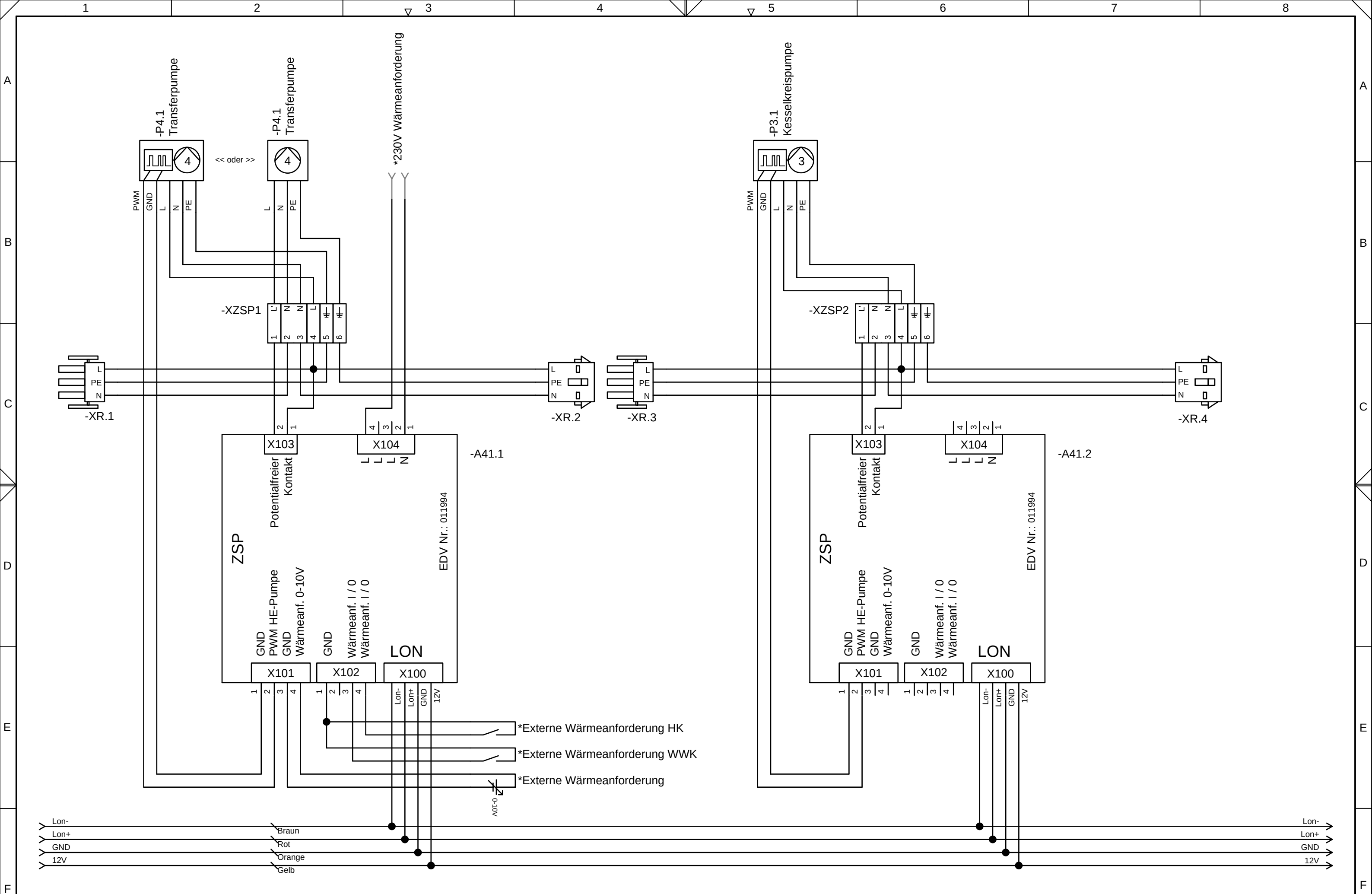
-XZSP	Zusatzprint
L'	Transferpumpe
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	Zusatzprint
-X102 /4	Externe-Wärmeanf. HK
-X102 /3	Externe-Wärmeanf. WWK
-X102 /2	
GND	

-X101 /4	Wärmeanforderung 0-10V
GND	
-X101 /2	PWM Transferpumpe
GND	





-XZSP	Zusatzprint
L'	
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094667/00

Zusatzprint	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

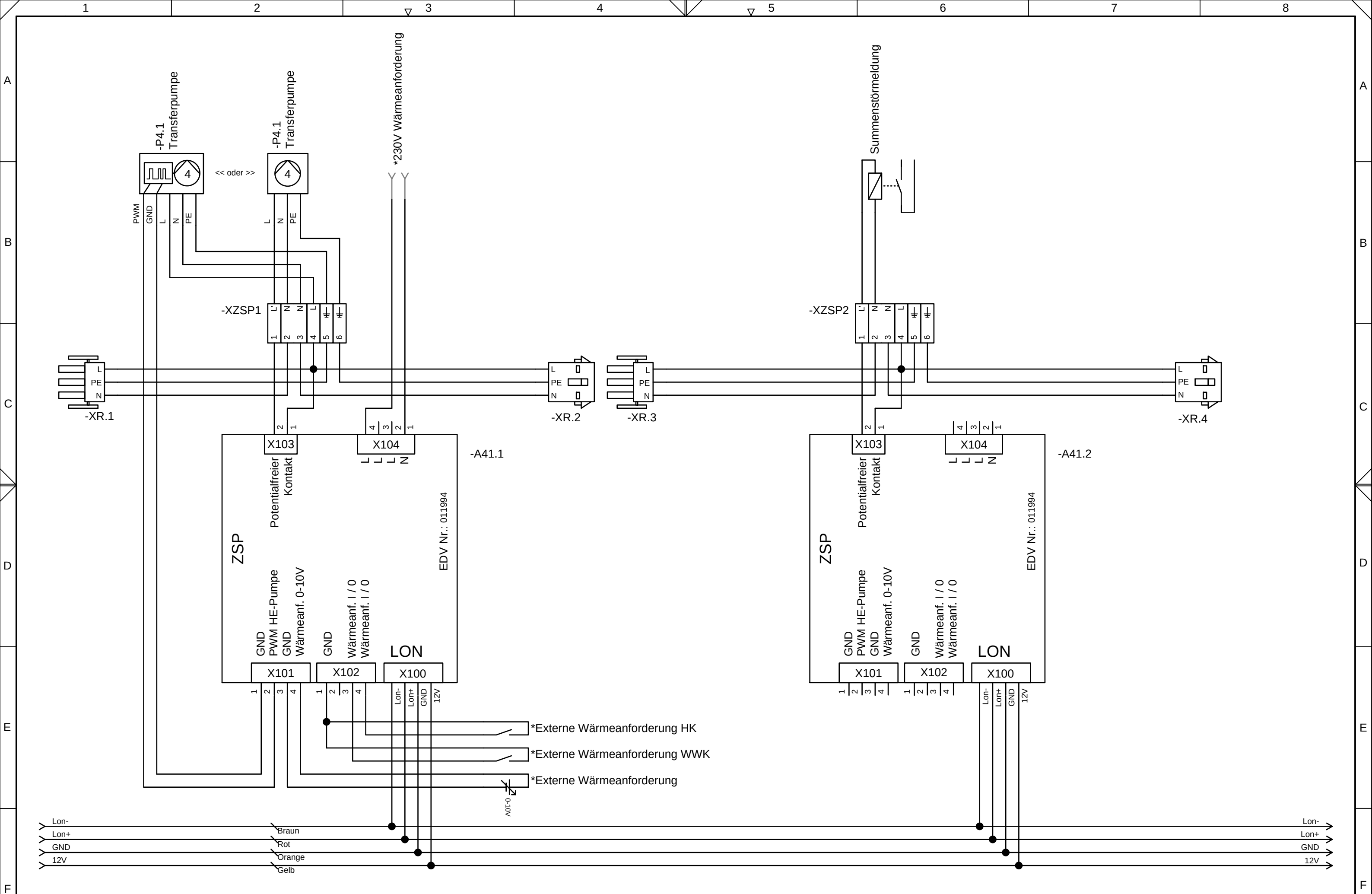
-X101 /4	
GND	
-X101 /2	PWM
GND	Kesselkreispumpe

-XZSP	Zusatzprint
L'	Transferpumpe
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	Zusatzprint
-X102 /4	Externe-Wärmeanf. HK
-X102 /3	Externe-Wärmeanf. WWK
-X102 /2	
GND	

-X101 /4	Wärmeanforderung 0-10V
GND	
-X101 /2	PWM Transferpumpe
GND	



-XZSP	Zusatzprint
L'	Summenstörmeldung
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	Zusatzprint
-X102 /4	
-X102 /3	
-X102 /2	
GND	

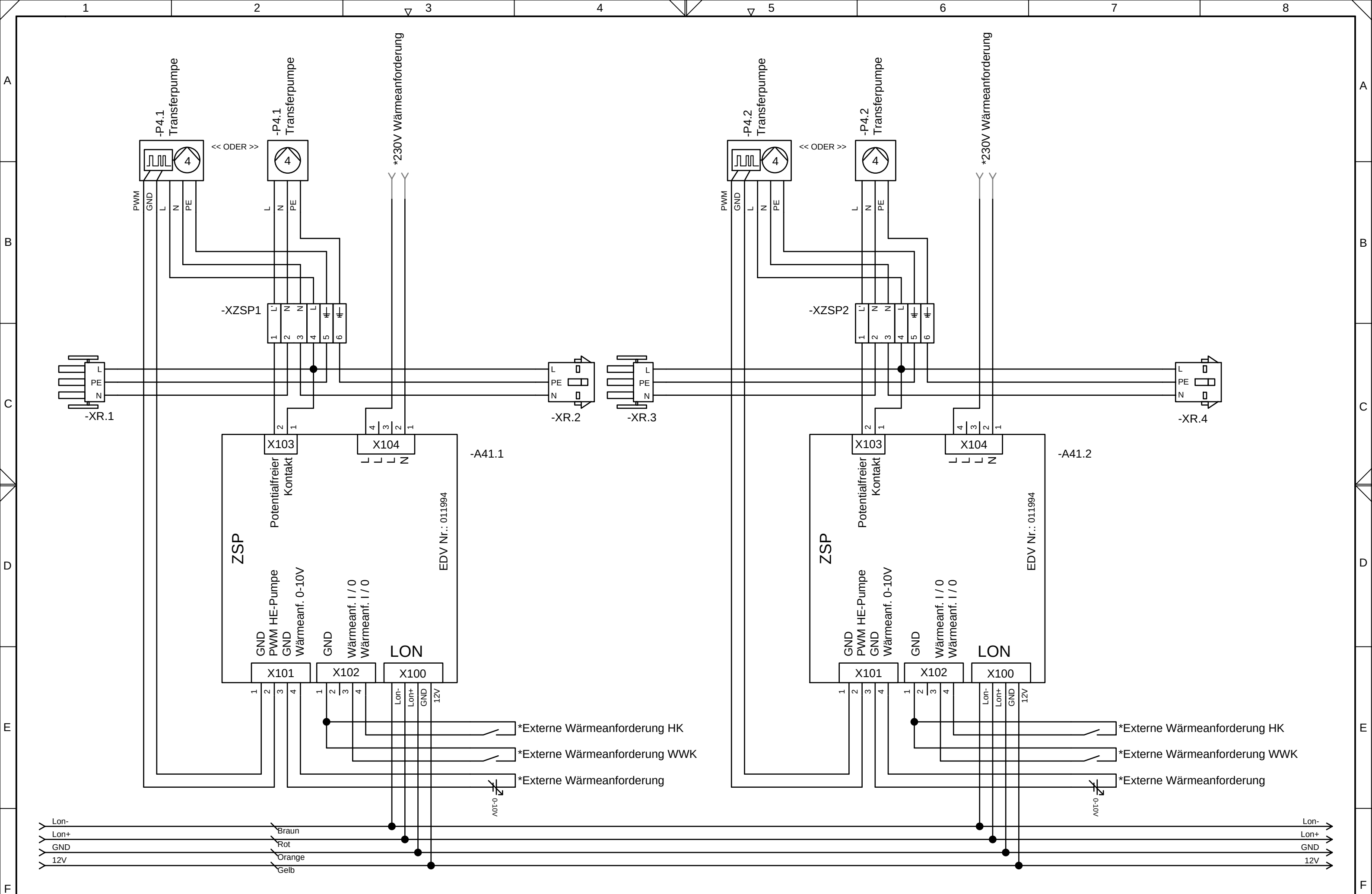
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	Zusatzprint
L'	Transferpumpe
N	
N	Dauerphase
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	Zusatzprint
-X102 /4	Externe-Wärmeanf. HK
-X102 /3	Externe-Wärmeanf. WWK
-X102 /2	
GND	

-X101 /4	Wärmeanforderung 0-10V
GND	
-X101 /2	PWM Transferpumpe
GND	



-XZSP	Zusatzprint
L'	Transferpumpe
N	
N	Dauerphase
L	
PE	PE
PE	

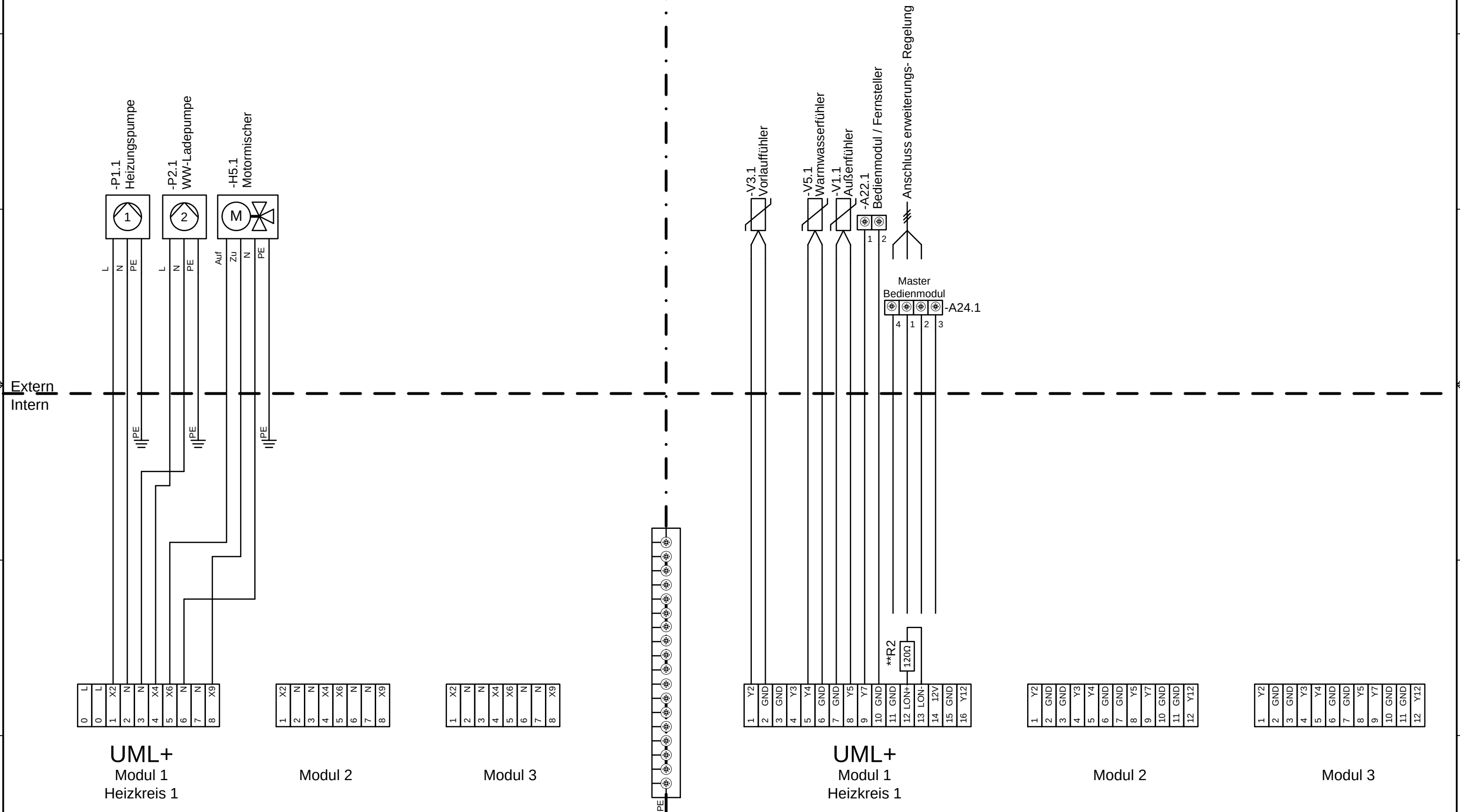
EDV Nr. 094672/00

-XSP	Zusatzprint
-X102 /4	Externe-Wärmeanf. HK
-X102 /3	Externe-Wärmeanf. WWK
-X102 /2	
GND	

-X101 /4	Wärmeanforderung 0-10V
GND	
-X101 /2	PWM Transferpumpe
GND	

Niederspannung 230 VAC

Kleinspannung - Fühler



UML+	Modul 1 Heizkreis 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	HK 1 Zu

	Modul 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092738/01

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Lon+	Master Bedienmodul Anschluss
13 Lon-	erweiterungs- Regelung
14 12V	
15 GND	
16 Y12	

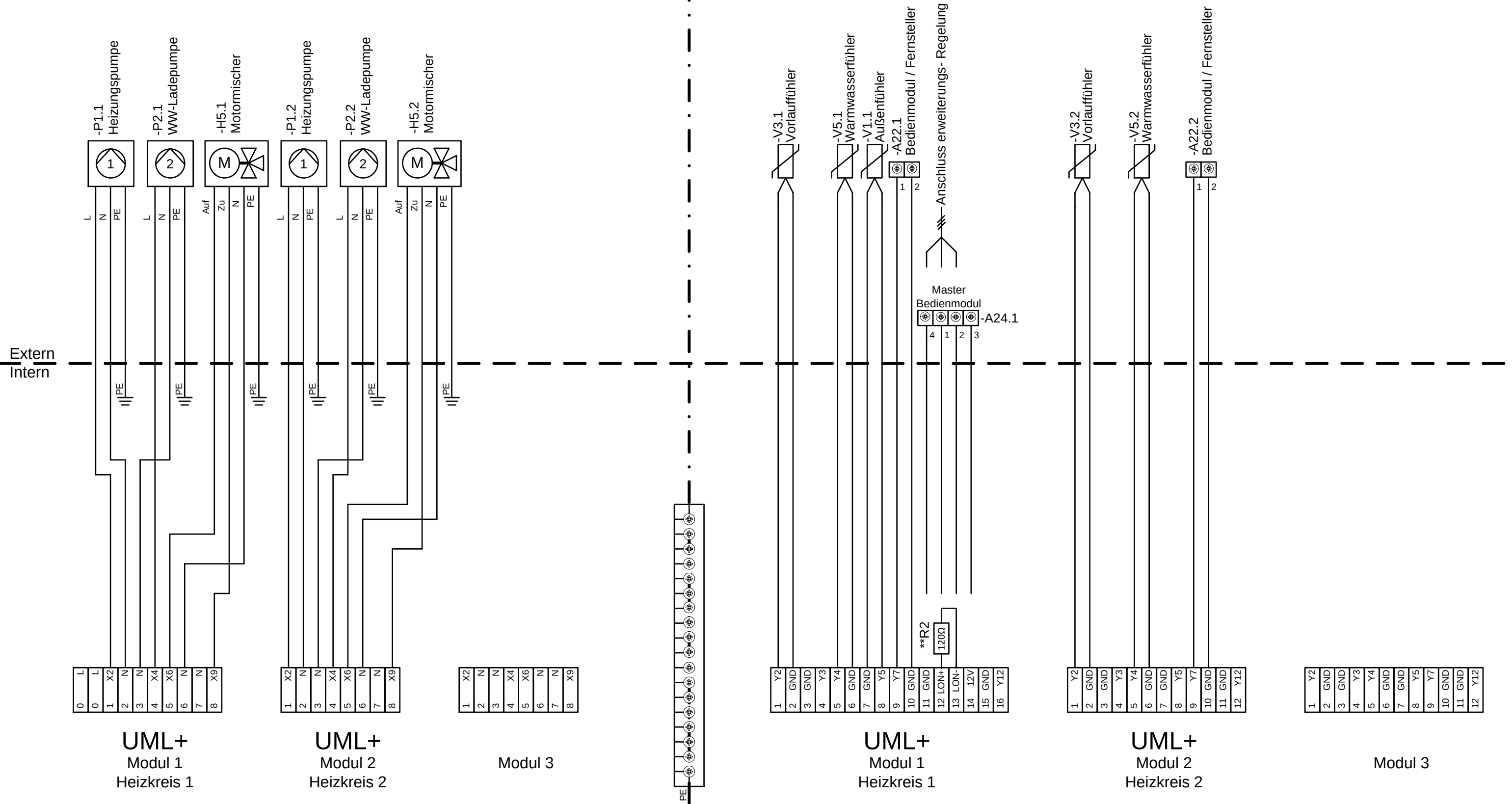
	Modul 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092738/01

Niederspannung 230 VAC

Kleinspannung - Fühler



...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	UML+/UML+		MES H021+H024 Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise		Projekt : Regelung				1 mm : 1 mm Blatt 092747/01	
				Gezeichnet	ros										
				Geprüft	rot										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092747/01									

UML+	Modul 1 Heizkreis 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	HK 1
8 X9	Zu

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	HK 2
8 X9	Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092748/01

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master
12 Lon+	Bedienmodul Anschluss
13 Lon-	erweiterungs- Regelung
14 12V	
15 GND	
16 Y12	

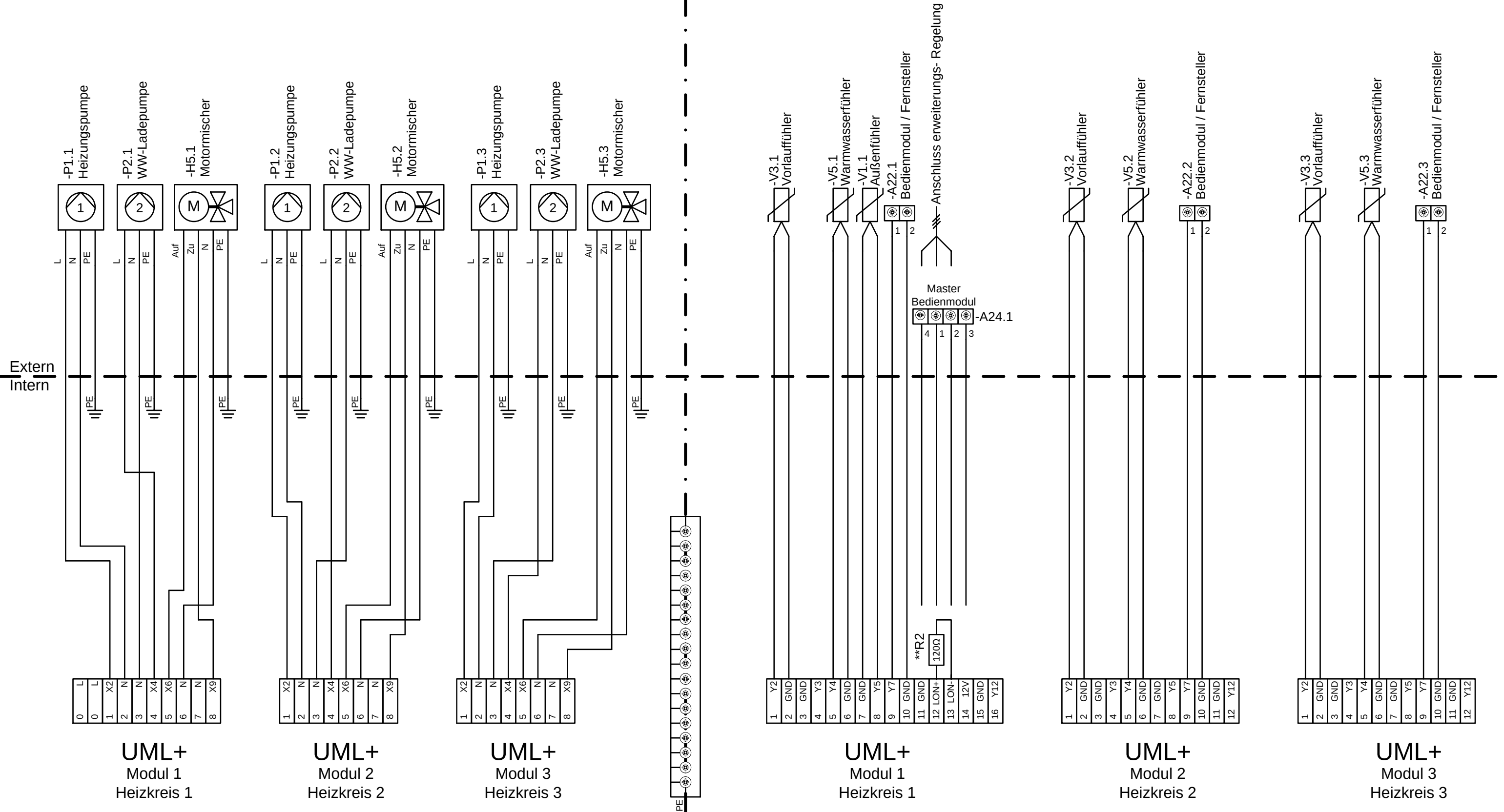
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092748/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

UML+	Modul 1 Heizkreis 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	Heizungspumpe HK1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	HK 1 Zu

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	HK 2 Zu

UML+	Modul 3 Heizkreis 3
1 X2	Heizungspumpe HK 3
2 N	
3 N	WW-Ladepumpe HK 3
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	HK 3 Zu

092751/01

UML+	Modul 1 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	
8 Y5	Außenfühler
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	Master
12 Lon+	Bedienmodul Anschluss
13 Lon-	erweiterungs- Regelung
14 12V	
15 GND	
16 Y12	

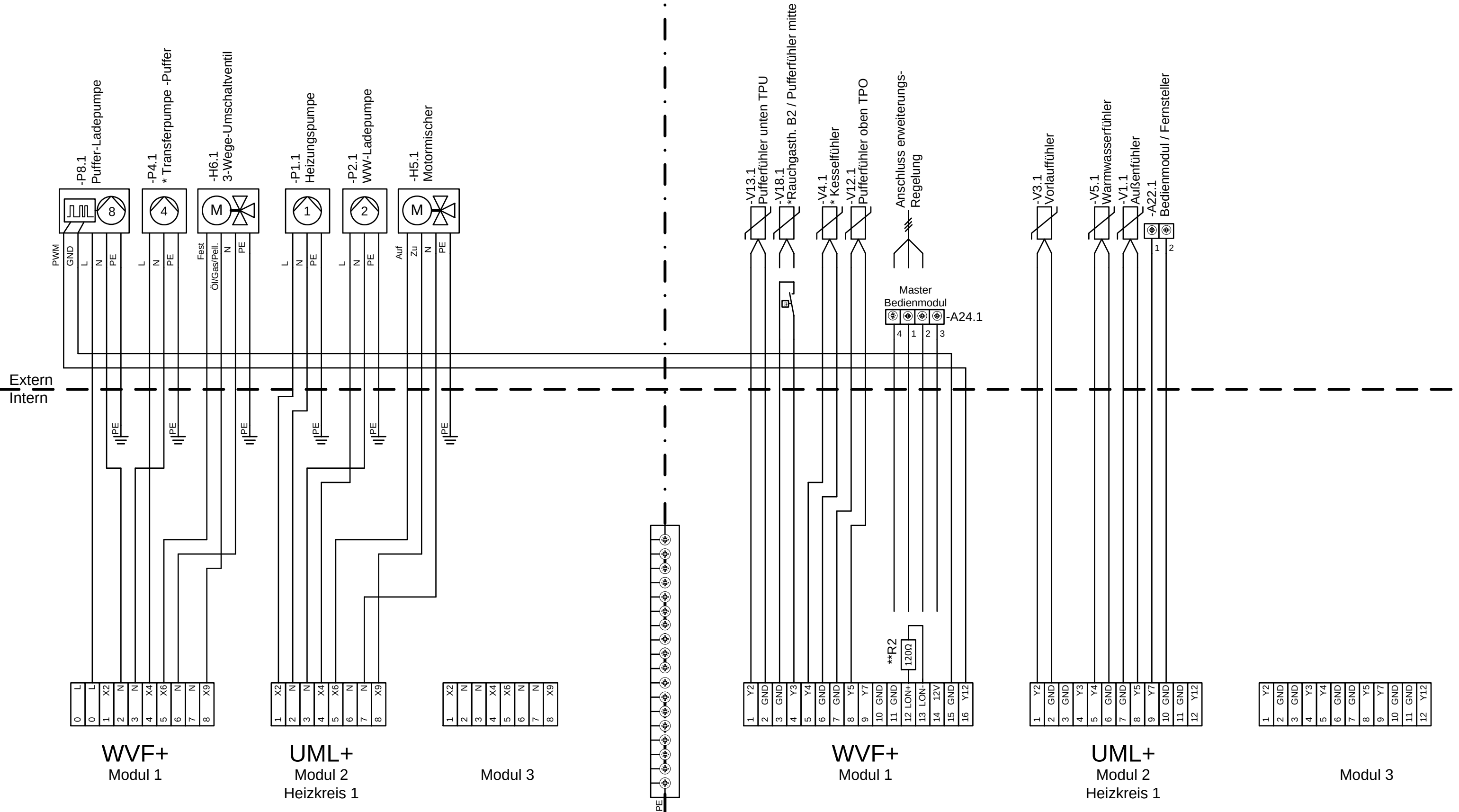
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 3
1 Y2	Vorlauffühler HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 3
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

092751/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

WVF+	Modul 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe Puffer
4 X4	
5 X6	Fest
6 N	3-Wege-
7 N	Umschaltventil
8 X9	Öl/Gas/Pell.

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092842/01

WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Rauchgasth. B2
4 Y3	Pufferfühler mitte
5 Y4	*Kesselfühler
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	PWM Puffer-
16 Y12	Ladepumpe

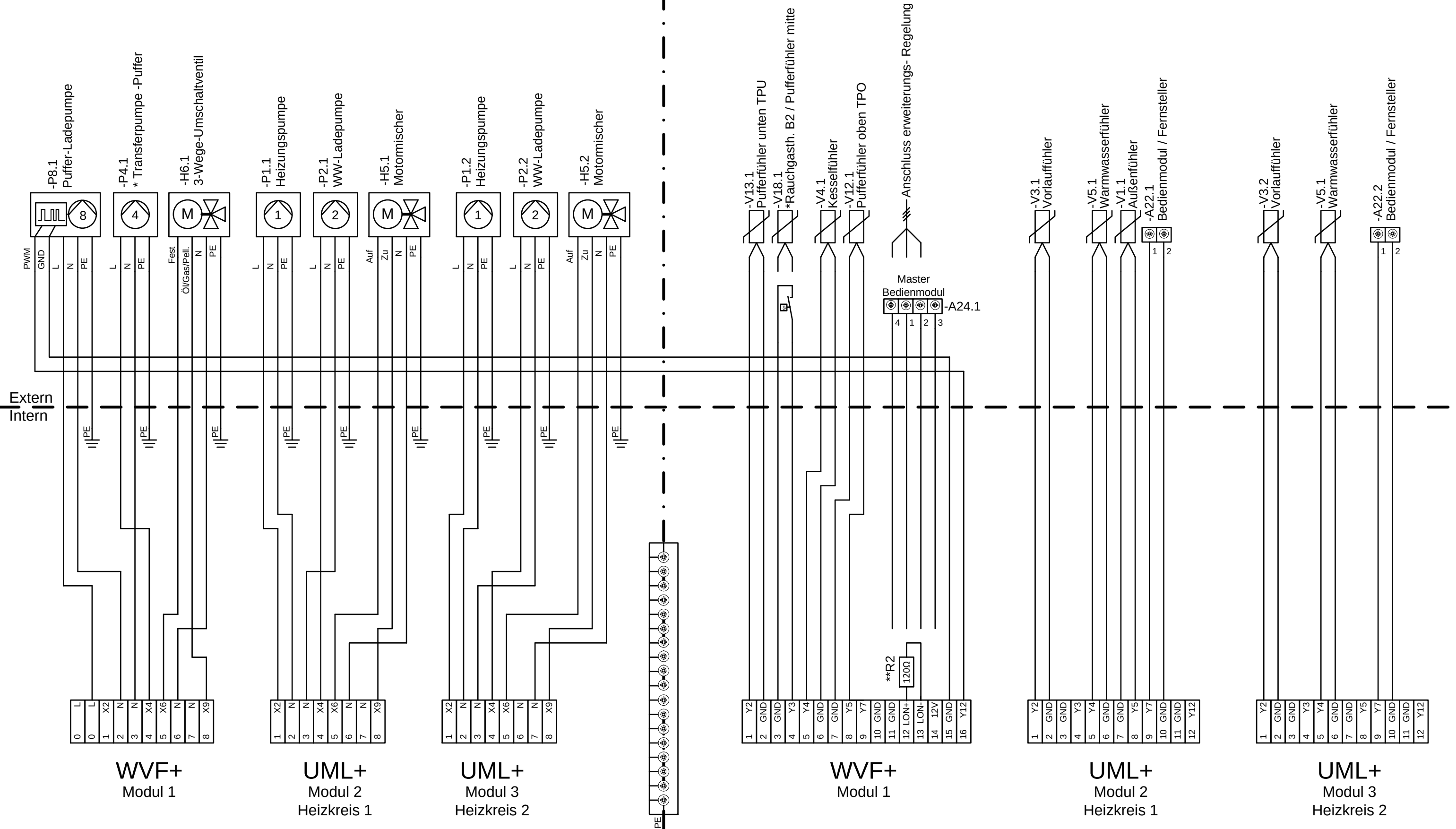
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092842/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

WVF+	Modul 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	Fest
6 N	3-Wege-
7 N	Umschaltventil
8 X9	Öl/Gas/Pell.

UML+	Modul 2 Heizkreis 2
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 2 Zu

092848/01

WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Rauchgasth. B2 /
4 Y3	Pufferfühler mitte
5 Y4	* Kesselfühler
6 GND	
7 GND	Pufferfühler oben
8 Y5	TPO
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	PWM Puffer-
16 Y12	Ladepumpe

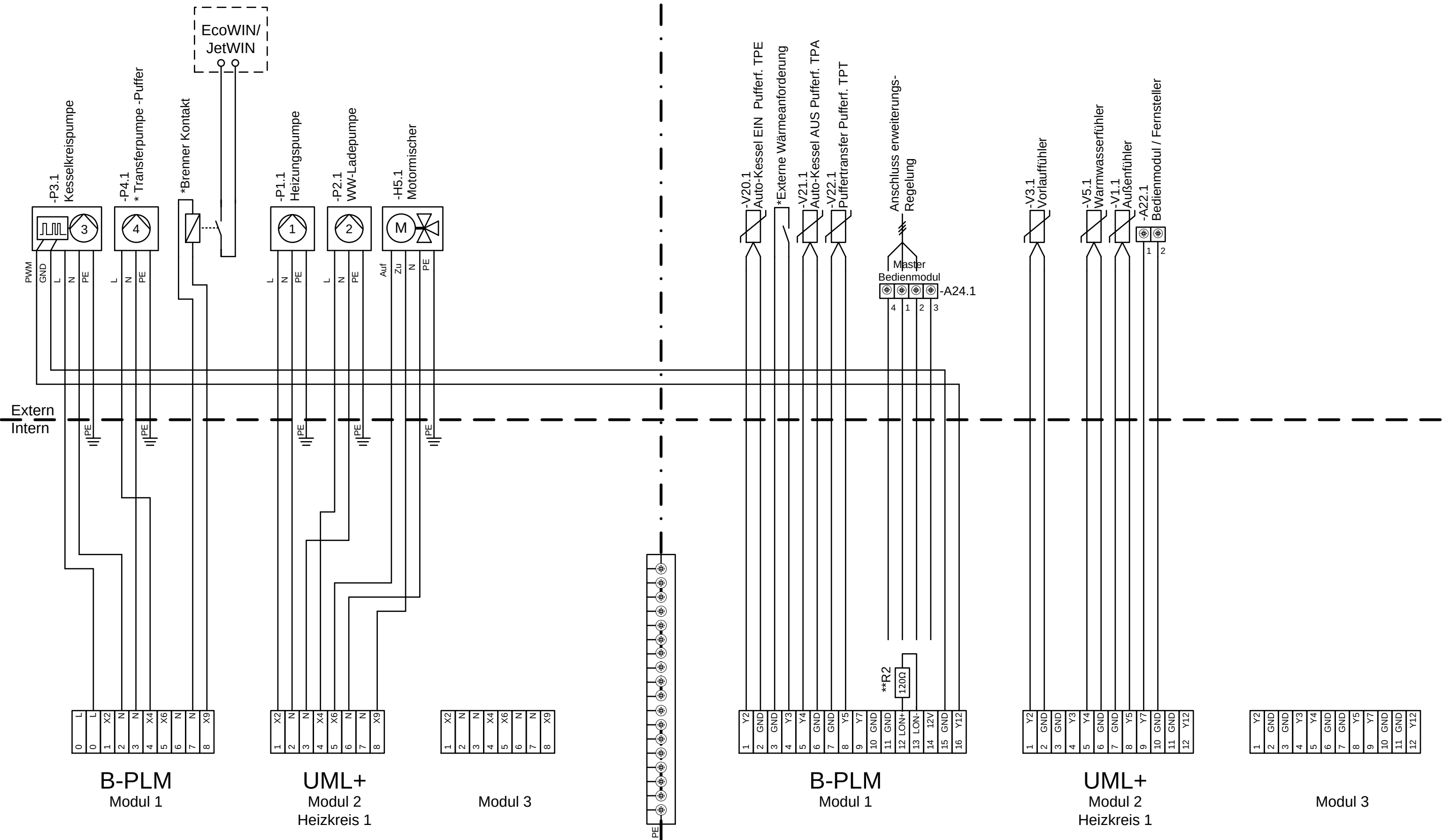
UML+	Modul 2 Heizkreis 2
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

092848/01

Niederspannung 230 VAC

Kleinspannung - Fühler



B-PLM	Modul 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

UML+	Modul 2
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092851/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN
2 GND	Pufferf. TPE
3 GND	*Externe
4 Y3	Wärmeanforderung
5 Y4	*Auto-Kessel AUS
6 GND	Pufferf. TPA
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	PWM
16 Y12	Kesselkreispumpe

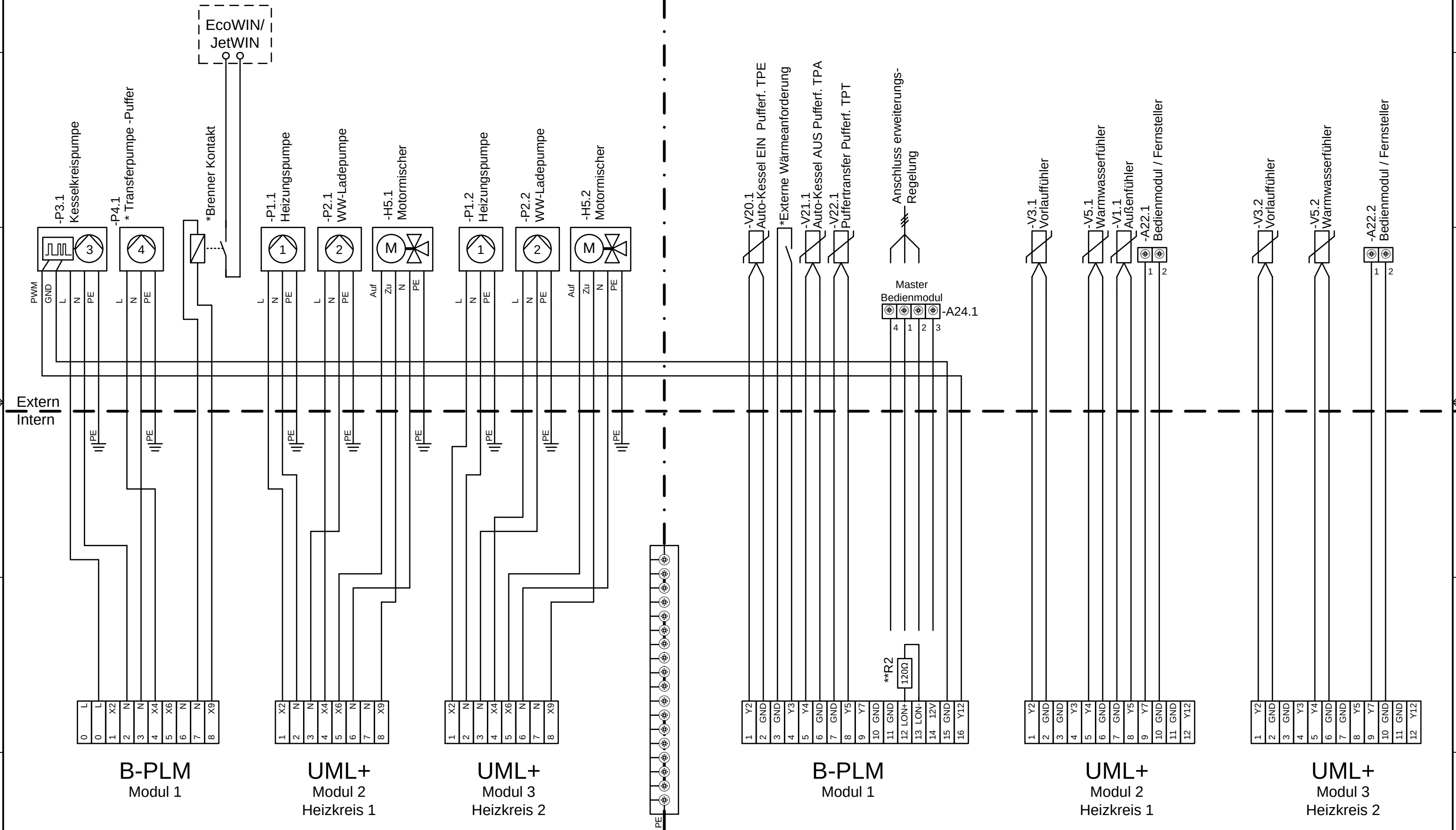
UML+	Modul 2
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092851/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 + H024 Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise und Pufferspeicher- Modul B-PLM	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092850/01				Blatt 092850/01



B-PLM	Modul 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 2 Zu

092851/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN
2 GND	Pufferf. TPE
3 GND	*Externe
4 Y3	Wärmeanforderung
5 Y4	*Auto-Kessel AUS
6 GND	Pufferf. TPA
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	PWM
16 Y12	Kesselkreispumpe

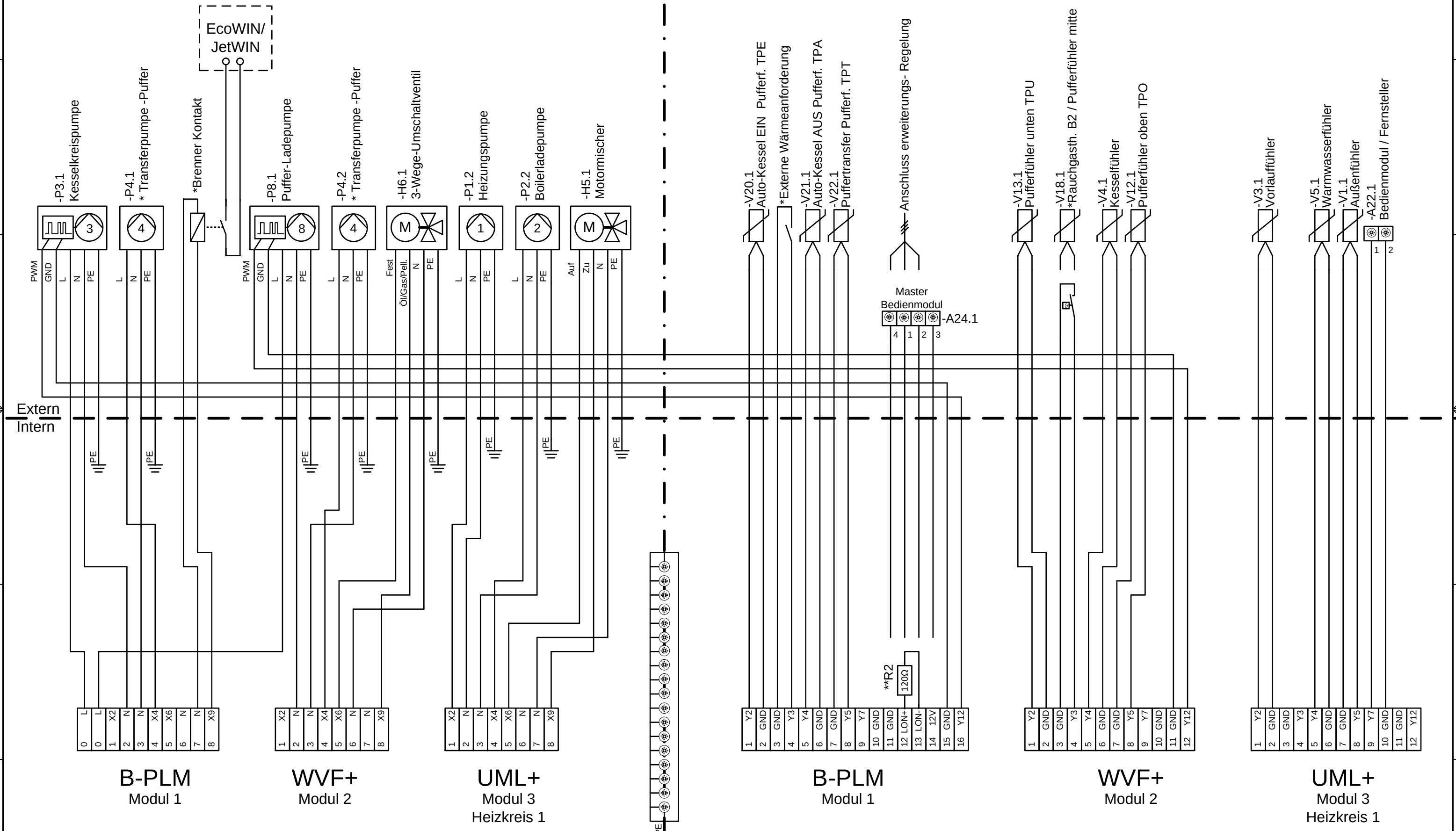
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauftfühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauftfühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

092851/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

B-PLM	Modul 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

WVF+	Modul 2
1 X2	
2 N	
3 N	*Transferpumpe Puffer
4 X4	
5 X6	Fest
6 N	3-Wege-Umschaltventil
7 N	
8 X9	Öl/Gas/Pell.

UML+	Modul 3 Heizkreis 1
1 X2	Heizungspumpei HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 1 Zu
8 X9	

092845/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN
2 GND	Pufferf. TPE
3 GND	*Externe
4 Y3	Wärmeanforderung
5 Y4	*Auto-Kessel AUS
6 GND	Pufferf. TPA
7 GND	*Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	PWM
16 Y12	Kesselkreispumpe

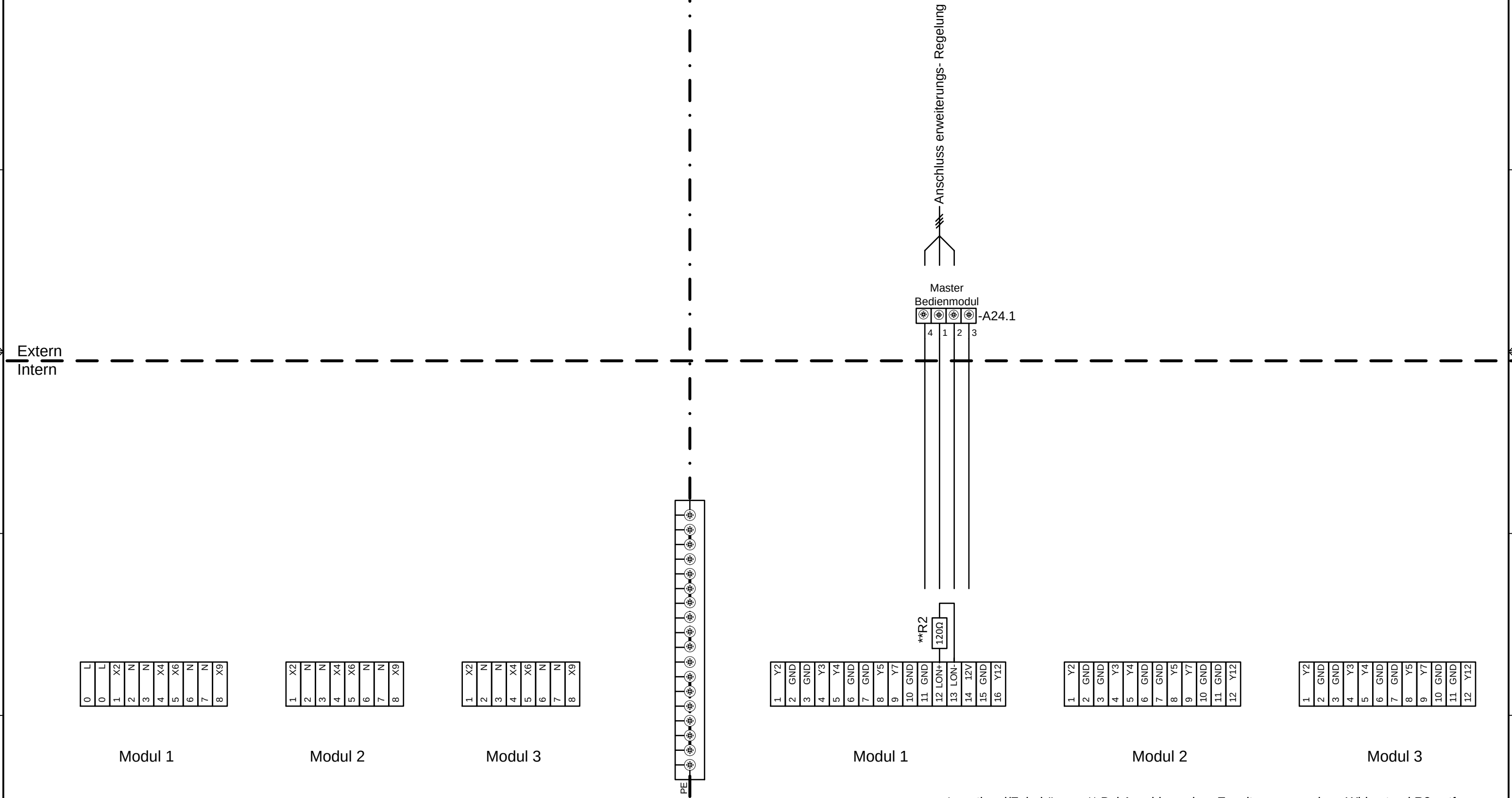
WVF+	Modul 2
1 Y2	Puffer unten
2 GND	TPU
3 GND	*Rauchgasth. B2
4 Y3	Pufferfühler mitte
5 Y4	*Kesselfühler
6 GND	
7 GND	Pufferfühler oben
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM Puffer-
12 Y12	Ladepumpe

UML+	Modul 3 Heizkreis 1
1 Y2	Vorlauffühler
2 GND	HK 1
3 GND	
4 Y3	
5 Y4	Warmwasserfühler
6 GND	HK 1
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

092845/01

Niederspannung 230 VAC

Kleinspannung - Fühler



1	Modul 1
0 L	PWM Dauerphase 1
0 L	PWM Dauerphase 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	Modul 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	Modul 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092735/01

1	Modul 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

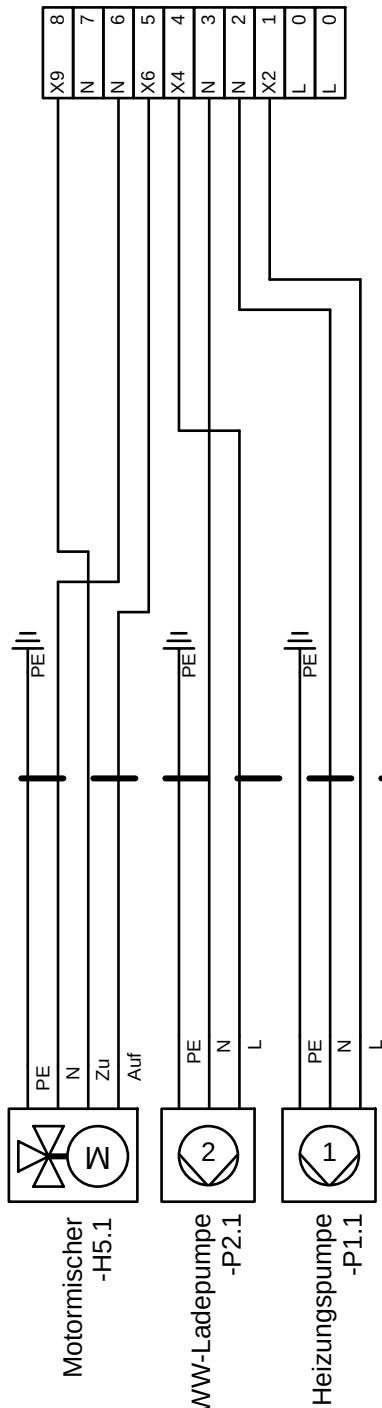
2	Modul 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	Modul 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092735/01

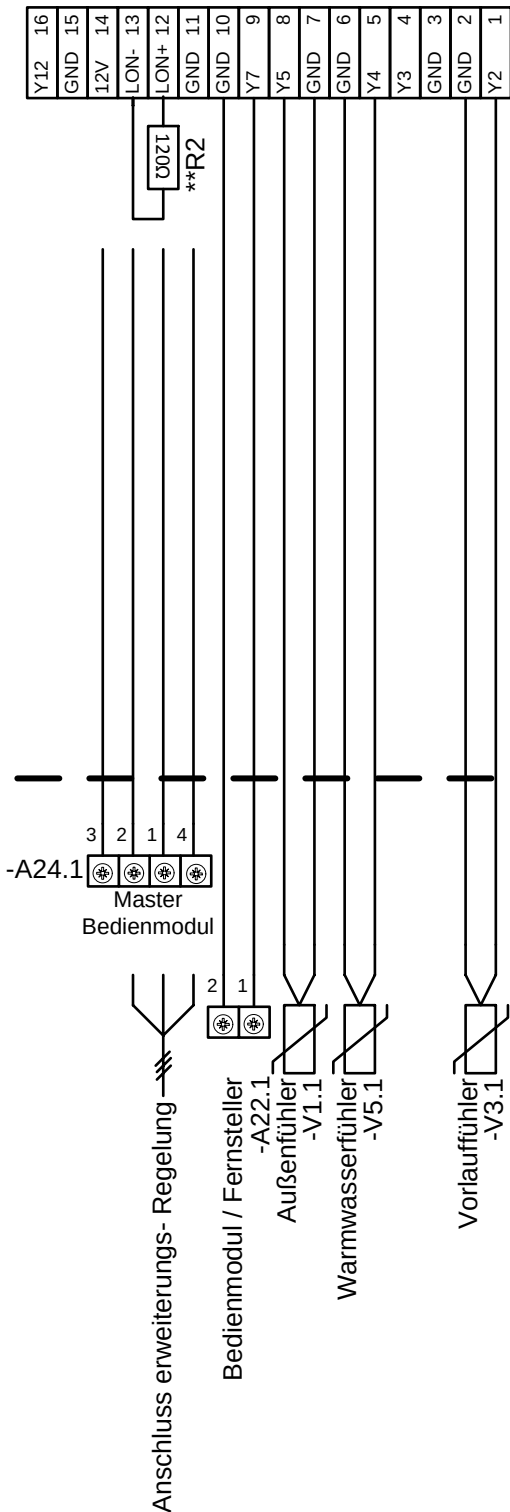
Niederspannung 230 VAC

UML+
Modul 1
Heizkreis 1



Kleinspannung - Fühler

UML+
Modul 1
Heizkreis 1



Extern Intern

UML+	Modul 1 Heizkreis 1
HK 1 Zu	8 X9
	7 N
Auf Motormischer	6 N
	5 X6
WW-Ladepumpe HK 1	4 X4
	3 N
Heizungspumpe HK 1	2 N
	1 X2
Dauerphase 2 Dauerphase 1	0 L
	0 L

092723/01

UML+	Modul 1 Heizkreis 1
	16 Y12
	15 GND
Master Bedienmodul Anschluss erweiterungs- Regelung	14 12V
	13 Lon-
	12 Lon+
	11 GND
Bedienmodul Fernsteller	10 GND
	9 Y7
Außenfühler	8 Y5
	7 GND
Warmwasserfühler HK 1	6 GND
	5 Y4
Vorlauffühler HK 1	4 Y3
	3 GND
	2 GND
	1 Y2

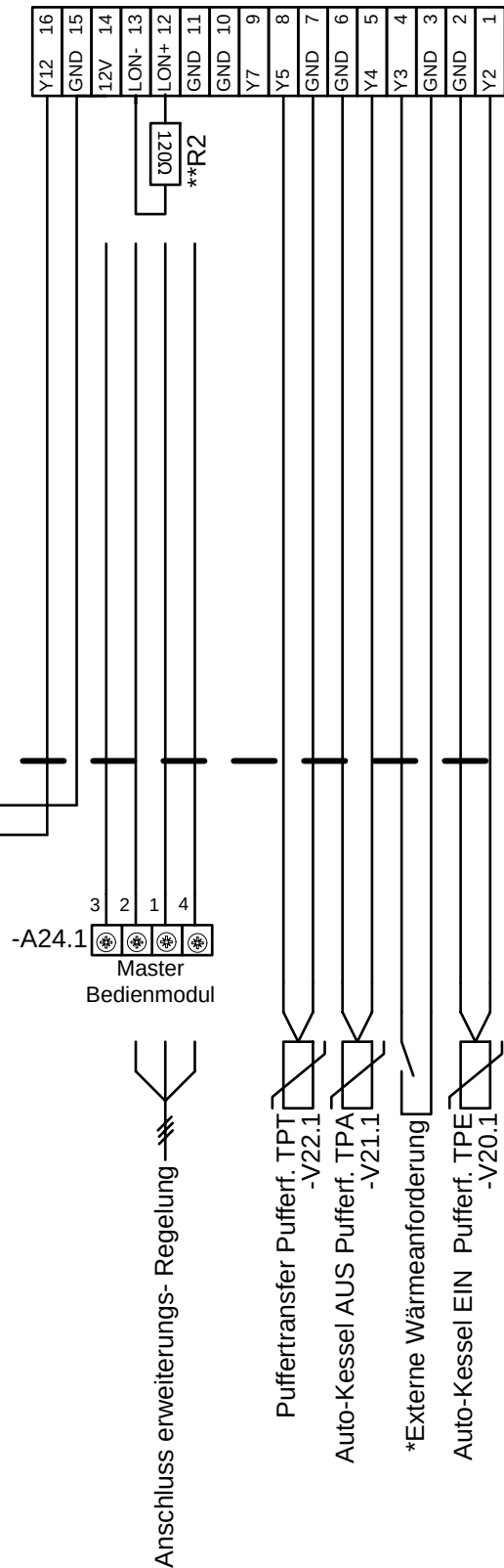
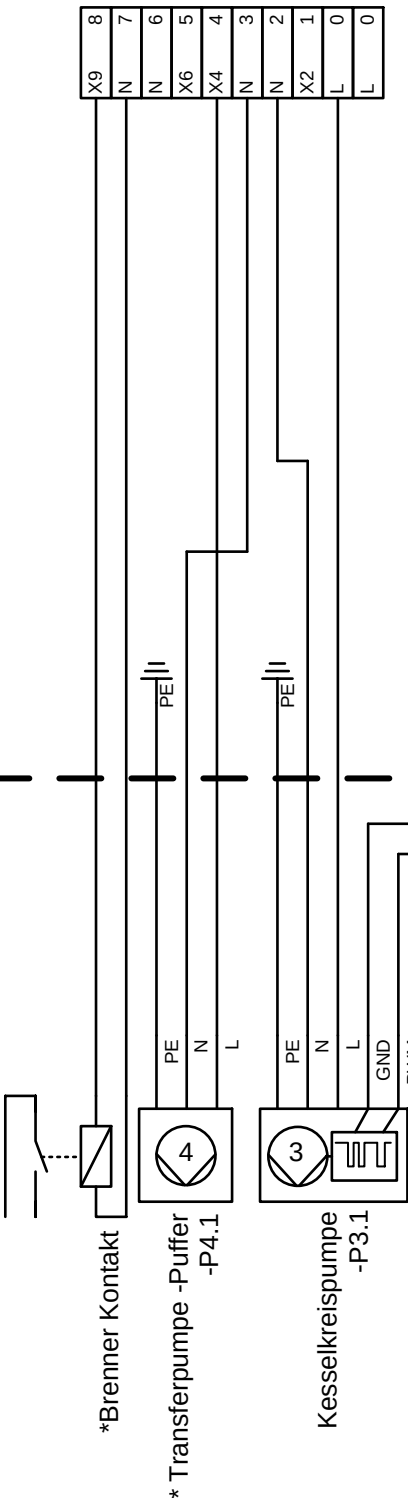
092723/01

Niederspannung 230 VAC

Kleinspannung - Fühler

B-PLM
Modul 1

B-PLM
Modul 1



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

B-PLM	Modul 1
*Brenner Kontakt	8 X9 7 N
	6 N 5 X6
Transferpumpe	4 X4 3 N
	2 N
	1 X2
Dauerphase 2	0 L
Dauerphase 1	0 L

092906/01

B-PLM	Modul 1
PWM Kesselkreispumpe	16 Y12 15 GND
Master Bedienmodul Anschluss erweiterungs- Regelung	14 12V 13 Lon- 12 Lon+ 11 GND
	10 GND 9 Y7
Puffertransfer Pufferf. TPT	8 Y5 7 GND
Auto-Kessel AUS Pufferf. TPA	6 GND 5 Y4
*Externe Wärmeanforderung	4 Y3 3 GND
Auto-Kessel EIN Pufferf. TPE	2 GND 1 Y2

092906/01

Niederspannung 230 VAC

Blindabdeckung

Modul 1

Heizkreis

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

Kleinspannung - Fühler

Blindabdeckung

Modul 1

Heizkreis

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

120Ω
**R2

3 2 1 4
-A24.1
Master
Bedienmodul

Anschluss erweiterungs- Regelung

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

1	Modul 1
X9	8 X9
	7 N
X6	6 N
	5 X6
X4	4 X4
	3 N
X2	2 N
	1 X2
	Dauerphase 2 0 L
	Dauerphase 1 0 L

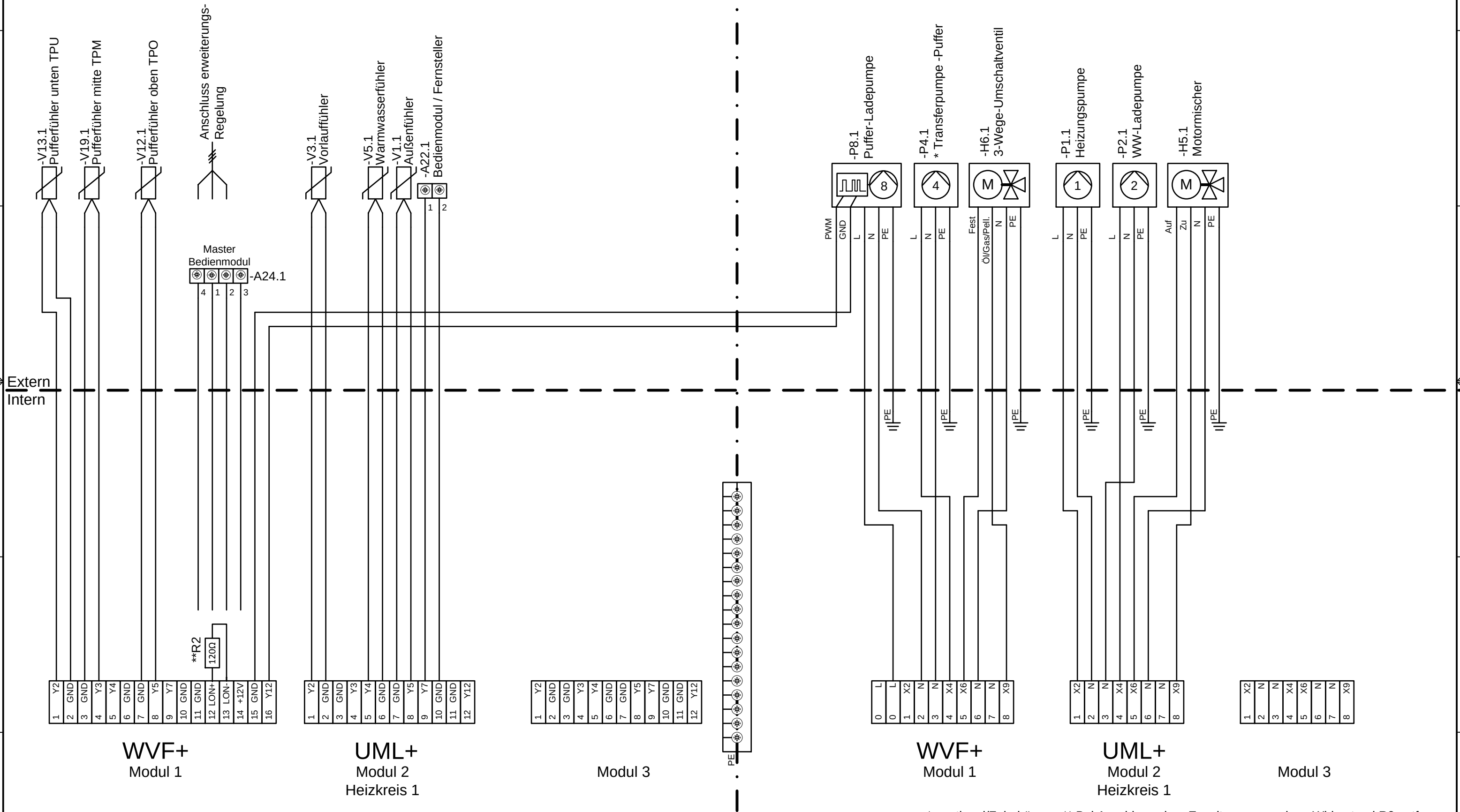
092726/01

1	Modul 1
Y12	16 Y12
	15 GND
Master Bedienmodul Anschluss erweiterungs- Regelung	14 12V
	13 Lon-
	12 Lon+
	11 GND
Y7	10 GND
	9 Y7
Y5	8 Y5
	7 GND
Y4	6 GND
	5 Y4
Y3	4 Y3
	3 GND
Y2	2 GND
	1 Y2

092726/01

Kleinspannung - Fühler

Niederspannung 230 VAC



-XS	Sicherheitseinrichtg.
L	Wassermangel-Sicherung (BRD)
L	
WVF+	Modul 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	Transferpumpe
2 N	
3 N	Fest 3-Wege-Umschaltventil
4 X4	
5 X6	Öl/Gas/Pell.
6 N	
7 N	
8 X9	
UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	
	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	092814/01
6 N	
7 N	
8 X9	

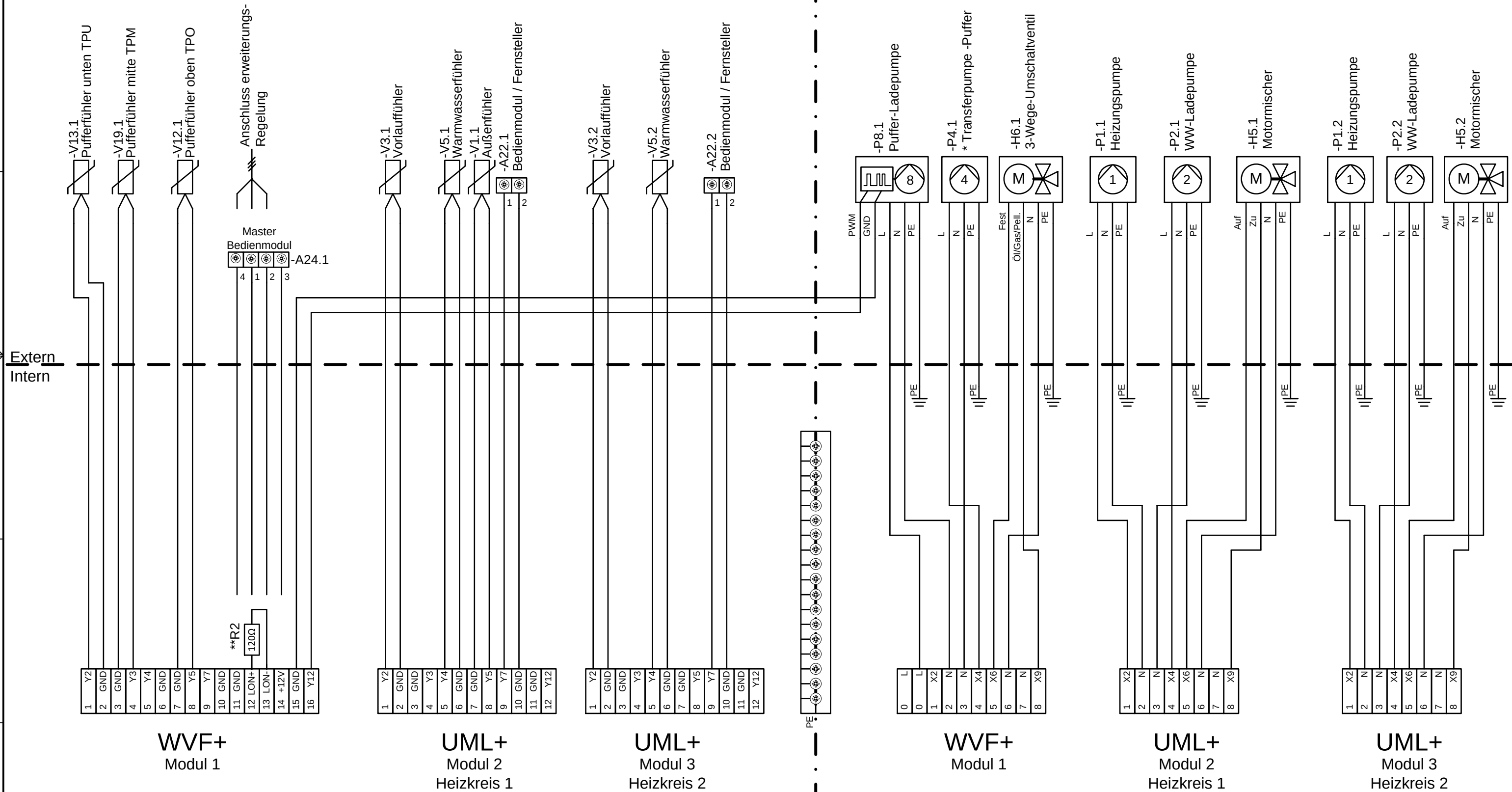
WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Pufferfühler mitte TPM
4 Y3	
5 Y4	Pufferfühler oben TPO
6 GND	
7 GND	
8 Y5	
9 Y7	Master Bedienmodul Anschluss erweiterungs-Regelung
10 GND	
11 GND	
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Puffer-Ladepumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

Kleinspannung - Fühler

Niederspannung 230 VAC



...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	WVF+/UML+/UML+		MES LW021 + H024 Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise Automatische Festbrennstoffumschaltung mit Pufferladung	Projekt : Regelung		1 mm : 1 mm	
				Gezeichnet	ros						◀ ----- 2 ▶	
				Geprüft	rot	Zeichnungs Nr.: 092816/01					Blatt 092816/001	
Rev.	Änderung	Datum	Name	Genehmigt								

-XS	Sicherheitseinrichtg.
L	Wassermangel-Sicherung (BRD)
L	
WVF+	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	*Transferpumpe-Puffer
4 X4	
5 X6	Fest
6 N	3-Wege-Umschaltventil
7 N	
8 X9	Öl/Gas/Pell.

WVF+	Modul 1
1 Y2	Pufferfühler unten TPU
2 GND	
3 GND	*Pufferfühler mitte TPM
4 Y3	
5 Y4	
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Puffer-Ladepumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	WW-Ladepumpe HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

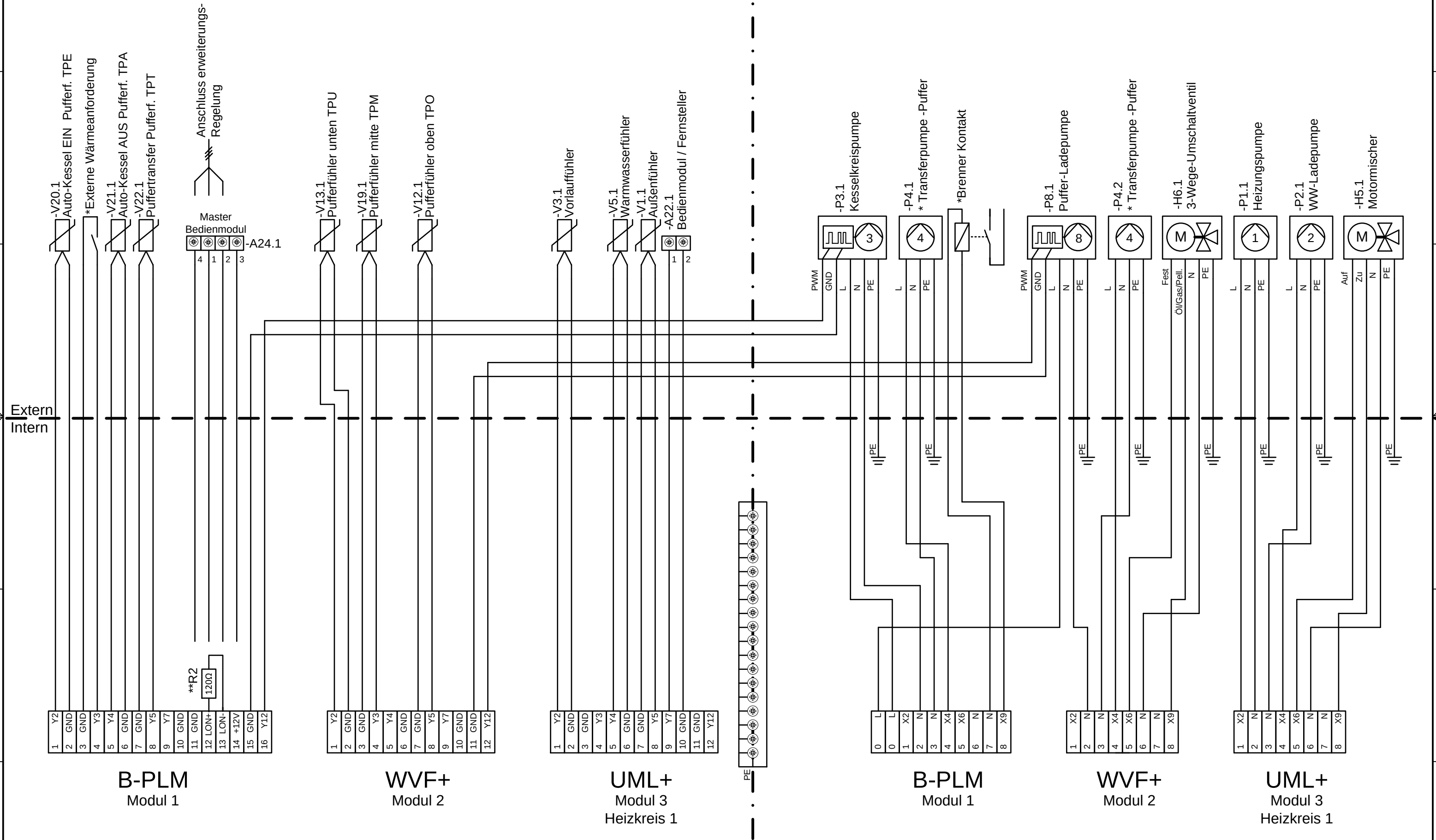
UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	WW-Ladepumpe HK 2
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	
8 X9	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

092817/01

Kleinspannung - Fühler

Niederspannung 230 VAC



-XS	Sicherheitseinrichtg.
L	Wassermangel-Sicherung (BRD)
L	
B-PLM	Modul 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	Puffer
5 X6	
6 N	
7 N	*Brenner Kontakt
8 X9	

B-PLM	Modul 1
1 Y2	*Auto-Kessel EIN
2 GND	Pufferf. TPE
3 GND	*Externe
4 Y3	Wärmeanforderung
5 Y4	*Auto-Kessel AUS
6 GND	Pufferf. TPA
7 GND	*Puffertransfer Pufferf.
8 Y5	TPT
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	Erweiterungsregelung
15 GND	PWM
16 Y12	Kesselkreispumpe

WVF+	Modul 2
1 X2	
2 N	
3 N	*Transferpumpe
4 X4	Puffer
5 X6	Fest
6 N	3-Wege-
7 N	Umschaltventil
8 X9	Öl/Gas/Pell.

WVF+	Modul 2
1 Y2	Pufferfühler unten
2 GND	TPU
3 GND	*Pufferfühler mitte
4 Y3	TPM
5 Y4	
6 GND	
7 GND	Pufferfühler oben
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM Puffer-Ladepumpe
12 Y12	

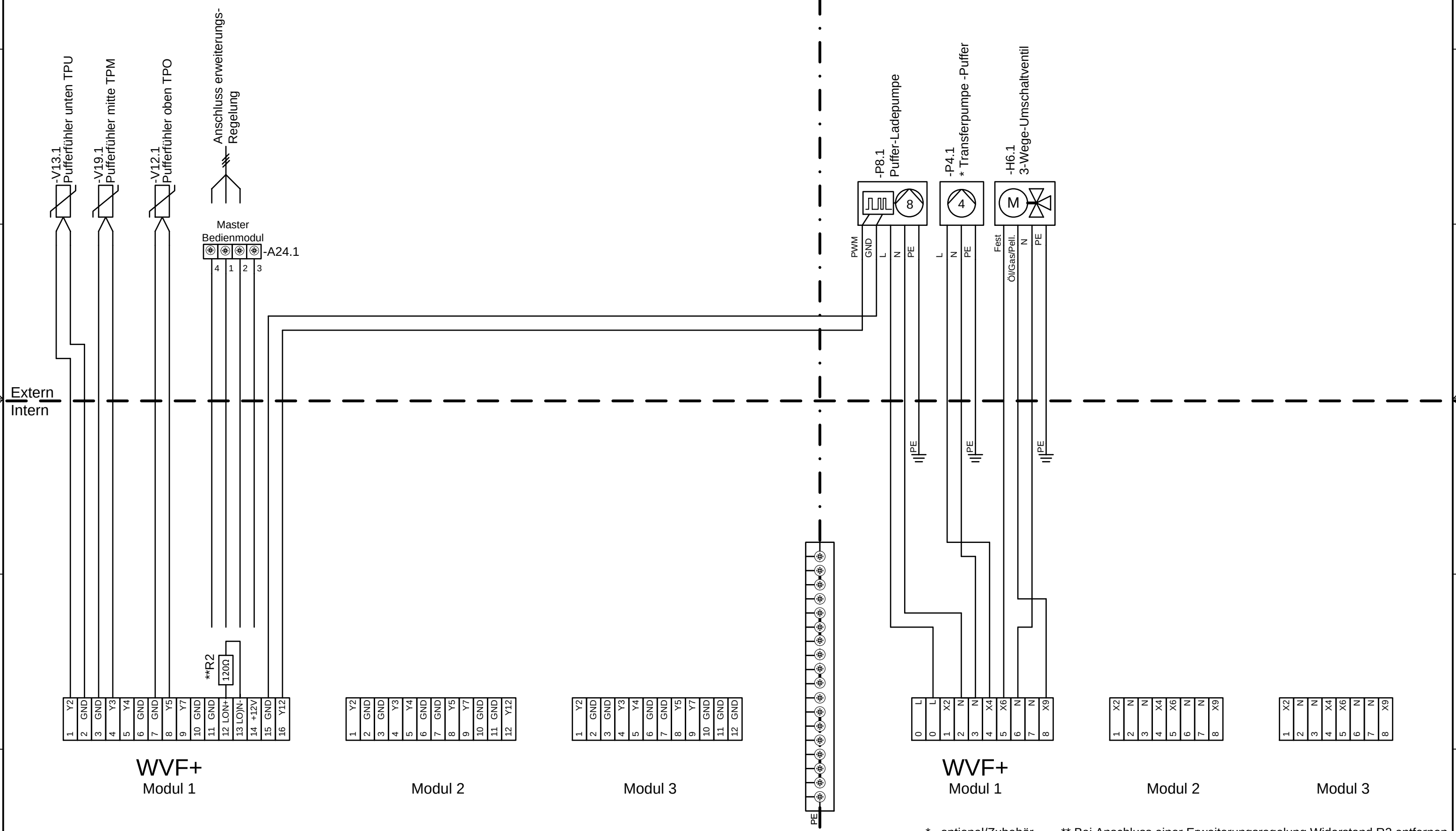
UML+	Modul 3 Heizkreis 1
1 X2	Heizungspumpe
2 N	HK 1
3 N	WW-Ladepumpe
4 X4	HK 1
5 X6	Auf
6 N	Motormischer
7 N	
8 X9	HK 1 Zu

UML+	Modul 3 Heizkreis 1
1 Y2	Vorlauffühler
2 GND	HK 1
3 GND	
4 Y3	
5 Y4	Warmwasserfühler
6 GND	HK 1
7 GND	
8 Y5	Außenfühler
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

092811/01

Kleinspannung - Fühler

Niederspannung 230 VAC



-XS	Sicherheitseinrichtg.
L	Wassermangel-Sicherung (BRD)
L	
WVF+	Modul 1
0 L PWM	Dauerphase 1
0 L PWM	Dauerphase 2
1 X2	Fest 3-Wege-Umschaltventil
2 N	
3 N	
4 X4	Öl/Gas/Pell.
5 X6	
6 N	
7 N	
8 X9	

	Modul 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092820/01

WVF+	Modul 1
1 Y2	Puffer unten TPU
2 GND	
3 GND	Pufferfühler mitte TPM
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	Pufferfühler oben TPO
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs-Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Puffer-Ladepumpe
16 Y12	

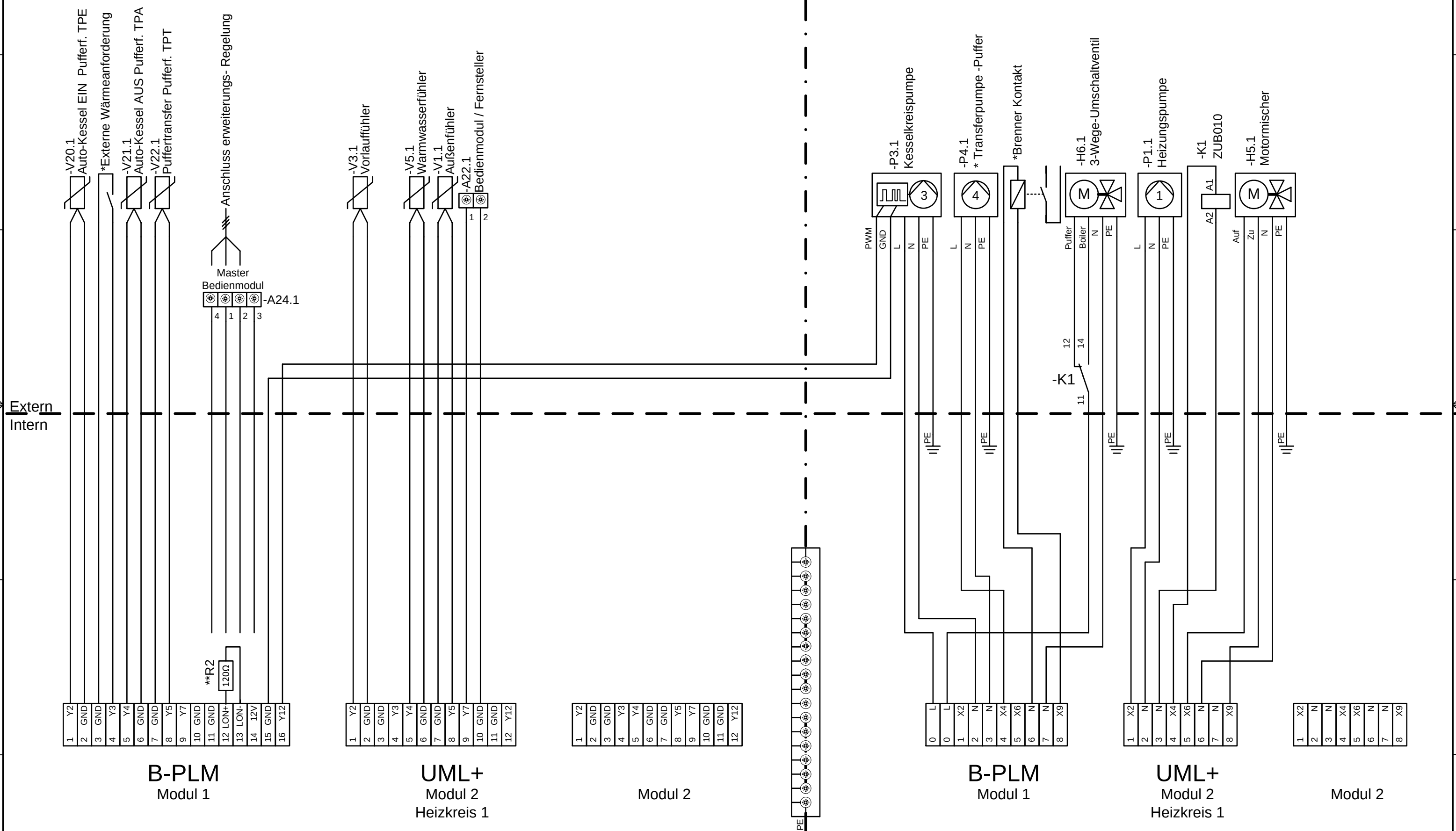
	Modul 2
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

	Modul 3
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

092820/01

Kleinspannung - Fühler

Niederspannung 230 VAC



	Sicherheitseinrichtung
L	Heizungsnot- Fluchtschalter
L	
B-PLM	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	* Transferpumpe
4 X4	
5 X6	
6 N	
7 N	* Brennerkontakt
8 X9	

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	Schütz -K1 HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 1 Zu
8 X9	

	Modul 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094550/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN Pufferf. TPE
2 GND	
3 GND	* Externe Wärmeanforderung
4 Y3	
5 Y4	* Auto-Kessel AUS Pufferf. TPA
6 GND	
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master Bedienmodul Anschluss erweiterungs- Regelung
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM Kesselkreispumpe
16 Y12	

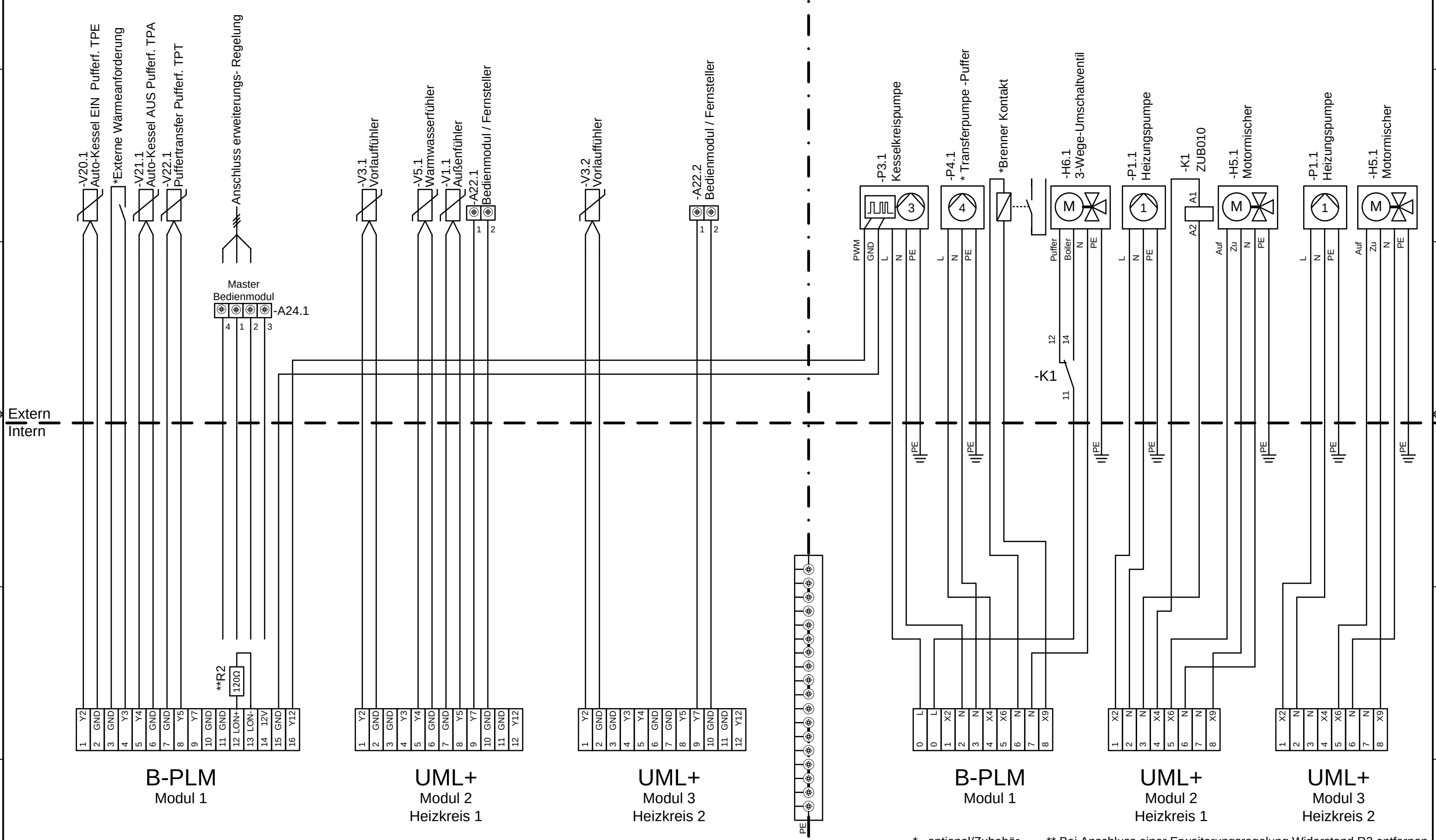
UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	Außenfühler
8 Y5	
9 Y7	Bedienmodul Fernsteller
10 GND	
11 GND	
12 Y12	

	Modul 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094550/01

Kleinspannung - Fühler

Niederspannung 230 VAC



	Sicherheitseinrichtung
L	Heizungsnot- Fluchtschalter
L	
B-PLM	Modul 1
0 L PWM Dauerphase 1	
0 L PWM Dauerphase 2	
1 X2	
2 N	
3 N	* Transferpumpe
4 X4	
5 X6	
6 N	
7 N	
8 X9	*Brennerkontakt

UML+	Modul 2 Heizkreis 1
1 X2	Heizungspumpe HK 1
2 N	
3 N	Schütz -K1 HK 1
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 1
8 X9	Zu

UML+	Modul 3 Heizkreis 2
1 X2	Heizungspumpe HK 2
2 N	
3 N	
4 X4	
5 X6	Auf Motormischer
6 N	
7 N	HK 2
8 X9	Zu

094553/01

B-PLM	Modul 1
1 Y2	Auto-Kessel EIN
2 GND	Pufferf. TPE
3 GND	* Externe
4 Y3	Wärmeanforderung
5 Y4	* Auto-Kessel AUS
6 GND	Pufferf. TPA
7 GND	* Puffertransfer Pufferf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	Master
12 Lon+	Bedienmodul
13 Lon-	Anschluss
14 12V	erweiterungs- Regelung
15 GND	PWM Kesselkreispumpe
16 Y12	

UML+	Modul 2 Heizkreis 1
1 Y2	Vorlauffühler HK 1
2 GND	
3 GND	
4 Y3	
5 Y4	Warmwasserfühler HK 1
6 GND	
7 GND	
8 Y5	Außenfühler
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

UML+	Modul 3 Heizkreis 2
1 Y2	Vorlauffühler HK 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	Bedienmodul
10 GND	Fernsteller
11 GND	
12 Y12	

094553/01

Kleinspannung - Fühler

Niederspannung 230 VAC

Anschluss erweiterungs- Regelung

Master
Bedienmodul
-A24.1

Extern
Intern

**R2

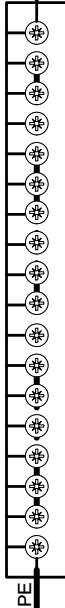
120Ω

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	+12V
15	GND
16	Y12

Modul 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12



0	L
0	L
3	X3
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Modul 1

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Rev.	Änderung	Datum	Name

Datum	24.06.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

LON Anschl.	
Zeichnungs Nr.:	092637/01

ohne Windhager MES- Regelung
ohne Windhager MES- Regelung

Projekt :
Regelung



1 mm : 1 mm
Blatt 092637/01

-XS	Sicherheitseinrichtg.	
L	Wassermangel- Sicherung (BRD)	
L		
1	Modul 1	
0 L PWM Dauerphase 1		
0 L PWM Dauerphase 2		
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		

2	Modul 2	
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		

3	Modul 3	
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		

092638/01

1	Modul 1	
1 Y2	Y2	
2 GND		
3 GND	Y3	
4 Y3		
5 Y4	Y4	
6 GND		
7 GND	Y5	
8 Y5		
9 Y7	Y7	
10 GND		
11 GND	Lon	
12 Lon+		
13 Lon-		
14 12V		
15 GND	Y12	
16 Y12		

2	Modul 2	
1 Y2	Y2	
2 GND		
3 GND	Y3	
4 Y3		
5 Y4	Y4	
6 GND		
7 GND	Y5	
8 Y5		
9 Y7	Y7	
10 GND		
11 GND	Y12	
12 Y12		

3	Modul 3	
1 Y2	Y2	
2 GND		
3 GND	Y3	
4 Y3		
5 Y4	Y4	
6 GND		
7 GND	Y5	
8 Y5		
9 Y7	Y7	
10 GND		
11 GND	Y12	
12 Y12		

092638/01

Niederspannung 230 VAC

Kleinspannung - Fühler

KAS+
Modul 1

Modul 2

Modul 3

KAS+
Modul 1

Modul 2

Modul 3

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Extern
Intern

*Brenner Kontakt
Zusatz Kessel

PWM
GND
L
N
PE
-P6.1
Zusatz Kesselkreispumpe

-A24.1
Master
Bedienmodul
Anschluss erweiterungs-
Regelung

-V23.1
Zusatz Kesselfühler TZK

-V21.1
Auto-Kessel AUS Puffer. TPA

Digitaler Eingang für Folgeschaltung

-V20.1
Auto-Kessel EIN Puffer. TPE

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

KAS+

Zeichnungs Nr.: 092682/00

MES KAS+
Kaskade

Projekt :
Regelung

windhager

1 mm : 1 mm
Blatt 092682/00

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

KAS+	Modul 1
PWM Zusatz Kessel Pumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

KAS+	Modul 1
Brenner Relais Zusatz Kessel	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1 PWM Dauerphase 2	L 0 L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

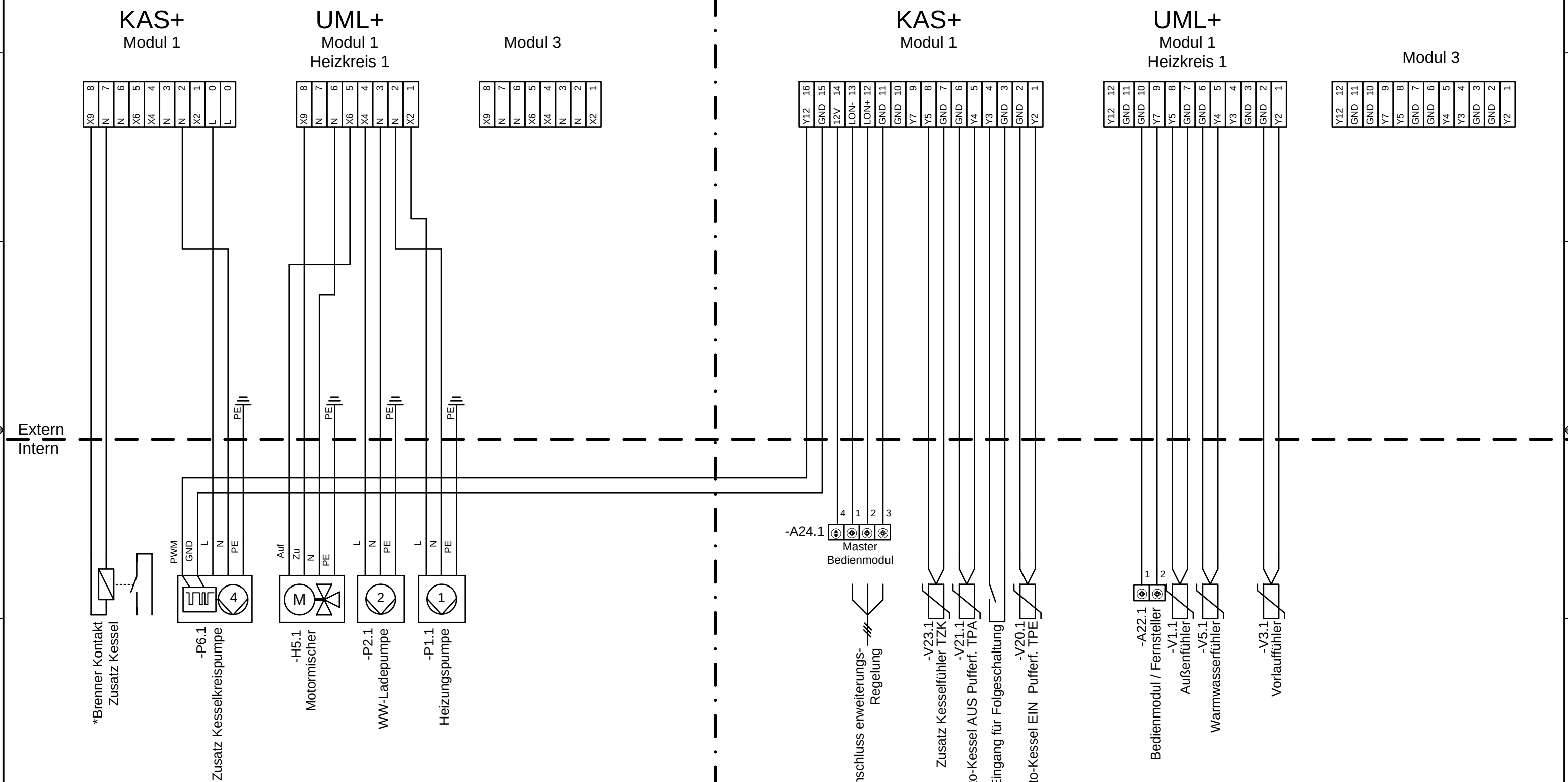
	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

Niederspannung 230 VAC

Kleinspannung - Fühler



-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

KAS+	Modul 1
PWM Zusatz Kessel Pumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

KAS+	Modul 1
Brenner Relais Zusatz Kessel	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1 PWM Dauerphase 2	L 0 L 0

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

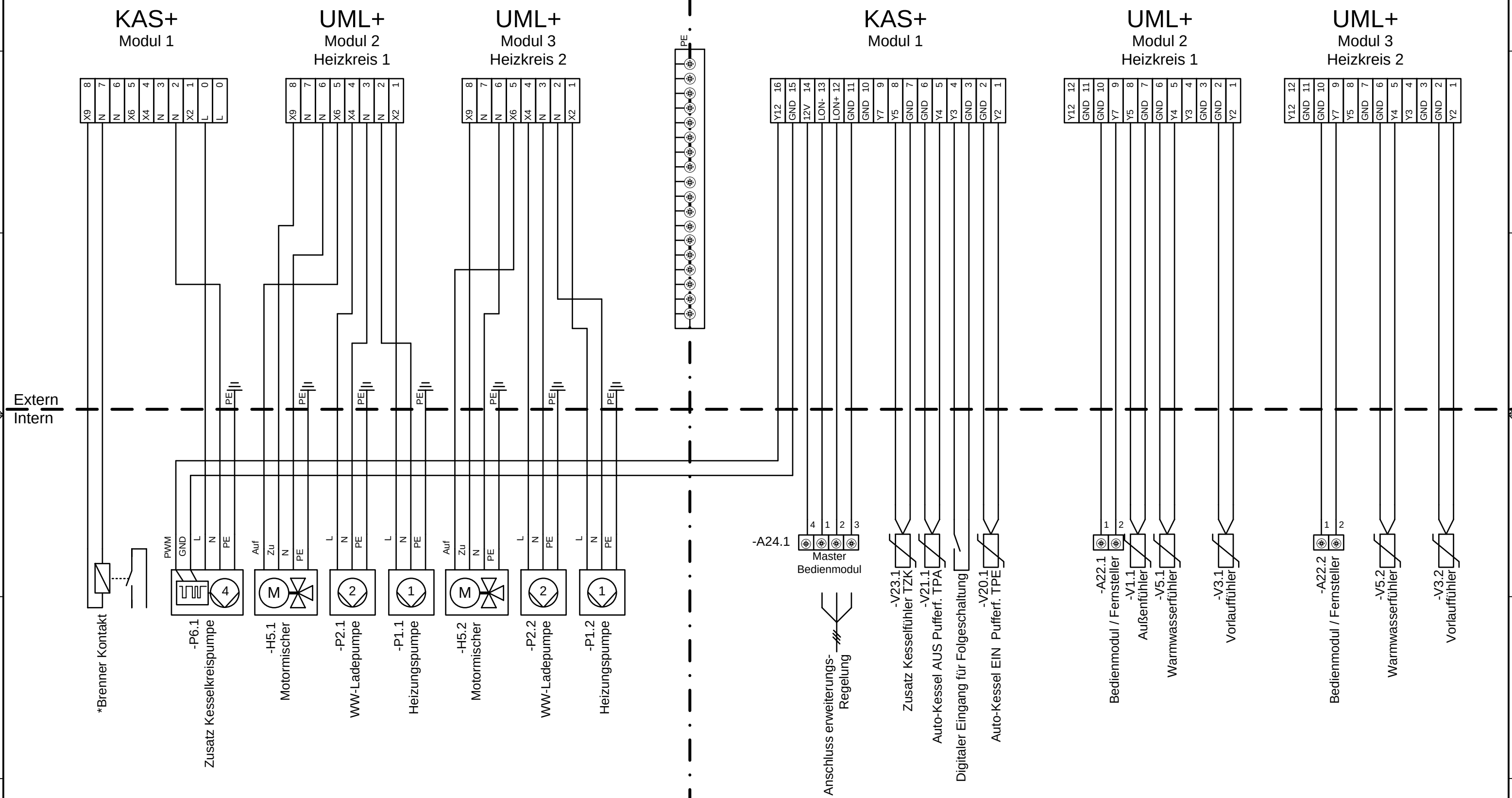
UML+	Modul 2 Heizkreis 1
Zu Motormischer	X9 8 N 7
HK 1 Auf	N 6 X6 5
WW-Ladepumpe	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

Niederspannung 230 VAC

Kleinspannung - Fühler



-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

KAS+	Modul 1
Brenner Relais Zusatz Kessel	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1 PWM Dauerphase 2	L 0 L 0

UML+	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

UML+	Modul 3 Heizkreis 2
Zu HK 2	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 2	X4 4 N 3
Heizungspumpe HK 2	N 2 X2 1

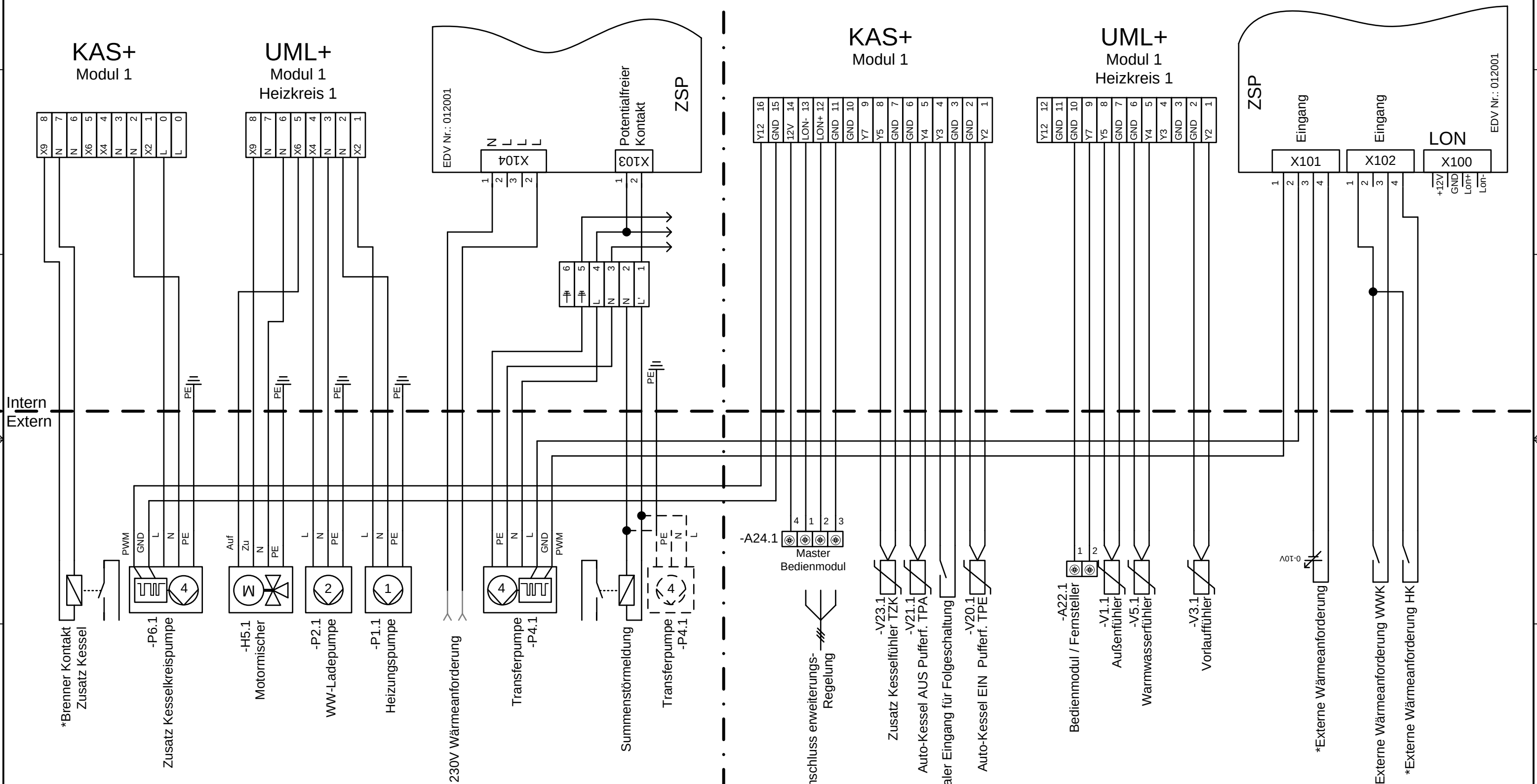
KAS+	Modul 1
PWM Zusatz Kessel Pumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Zusatz Kesselfühler	Y5 8 GND 7
Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

UML+	Modul 3 Heizkreis 2
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

KAS+	Modul 1
Brenner Relais Zusatz Kessel	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1 PWM Dauerphase 2	L 0 L 0

UML+	Modul 2 Heizkreis 1
Zu Motormischer	X9 8 N 7
HK 1 Auf	N 6 X6 5
WW-Ladepumpe	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	Modul 1
PWM Zusatz Kessel Pumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	Zusatzprint
PE	PE
PE	PE
Dauerphase	L N
Summenstörmeldung ODER Transferpumpe	N L'

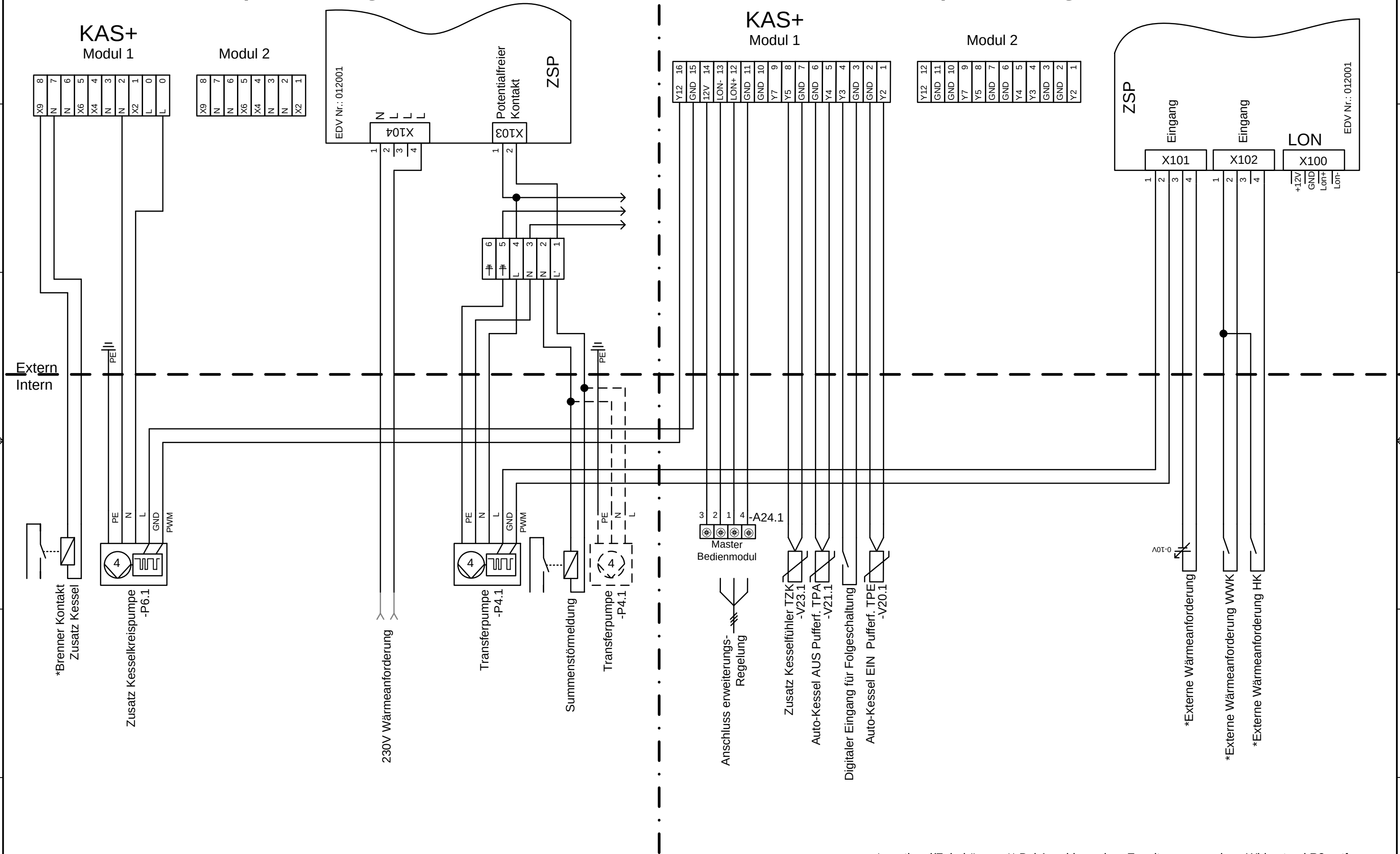
EDV Nr. 094512/00

-XSP	Zusatzprint
GND	PWM Transferpumpe
-X101 /2	
GND	Wärmeanforderung 0-
-X101 /4	10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	KAS+ / ZSP W		MES KAS + ZSP W mit Zusatzprint für Kaskade	Projekt : Regelung		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092682/00					
												Blatt 092682/00

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

KAS+	Modul 1
PWM Zusatz Kessel Pumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

KAS+	Modul 1
Brenner Relais Zusatz Kessel	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1 PWM Dauerphase 2	L 0 L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

-XZSP	Zusatzprint
PE	PE
PE	PE
Dauerphase	L N
Summenstörmeldung ODER Transferpumpe	N L'

EDV Nr. 094512/00

-XSP	Zusatzprint
GND	PWM Transferpumpe
-X101 /2	
GND	Wärmeanforderung 0-
-X101 /4	10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

Niederspannung 230 VAC

Kleinspannung - Fühler

UML+

Modul 1
Heizkreis 1

Modul 2

Modul 3

UML+

Modul 1
Heizkreis 1

Modul 2

Modul 3

Extern
Intern

-A24.1

Master
Bedienmodul

Anschluss erweiterungs- Regelung

Bedienmodul / Fernsteller
-A22.1

Außenfühler
-V1.1

Warmwasserfühler
-V5.1

Vorlauffühler
-V3.1

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	05.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

UML+

Zeichnungs Nr.: 092670/01

MES H021

Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis

Projekt :

Regelung

windhager

1 mm : 1 mm

2

Blatt 092670/01

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

UML+	Modul 1 Heizkreis 1
	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

UML+	Modul 1 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

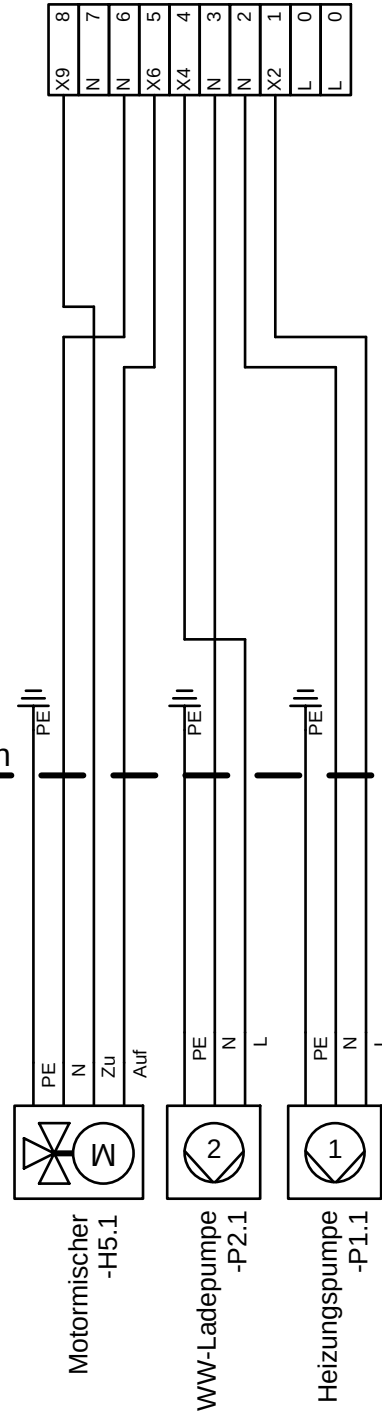
	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

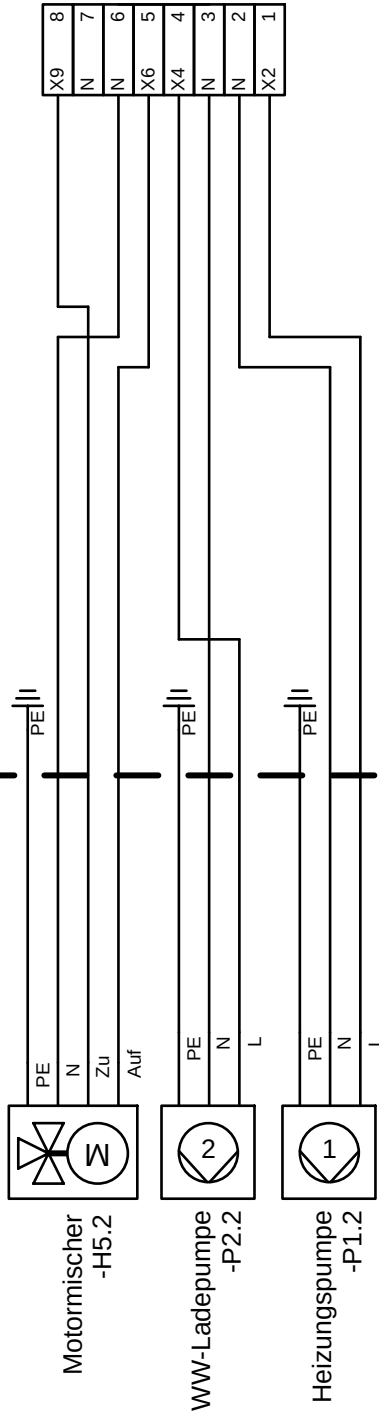
092671/01

Niederspannung 230 VAC

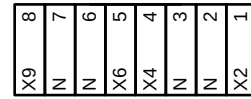
UML+
Modul 1
Heizkreis 1



UML+
Modul 2
Heizkreis 2

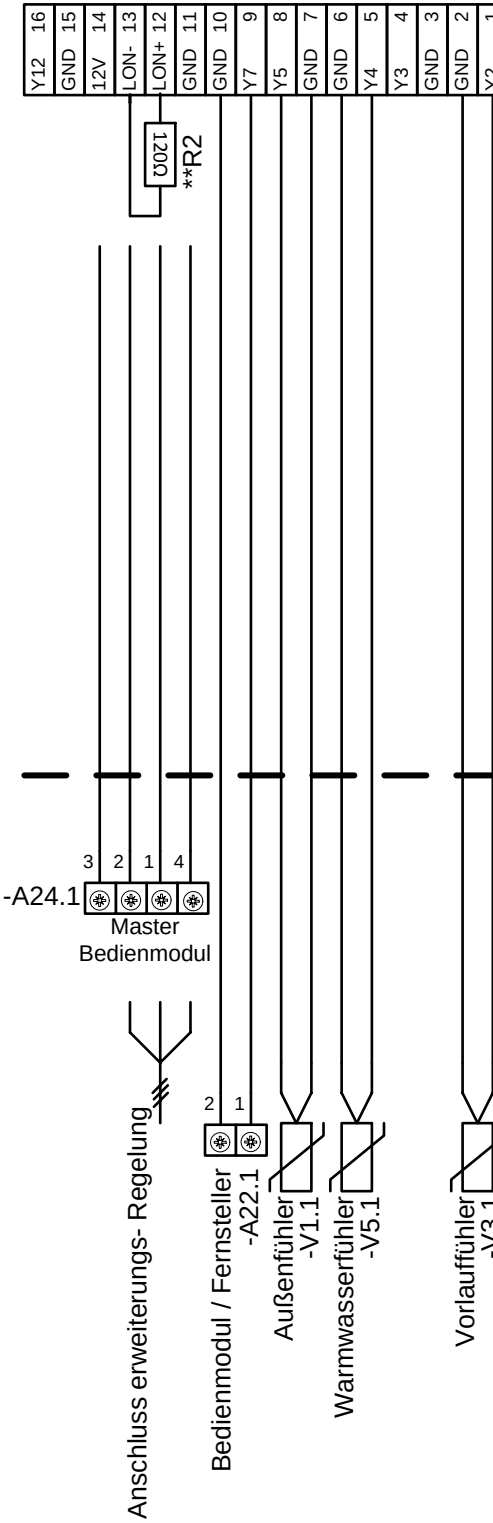


Modul 3

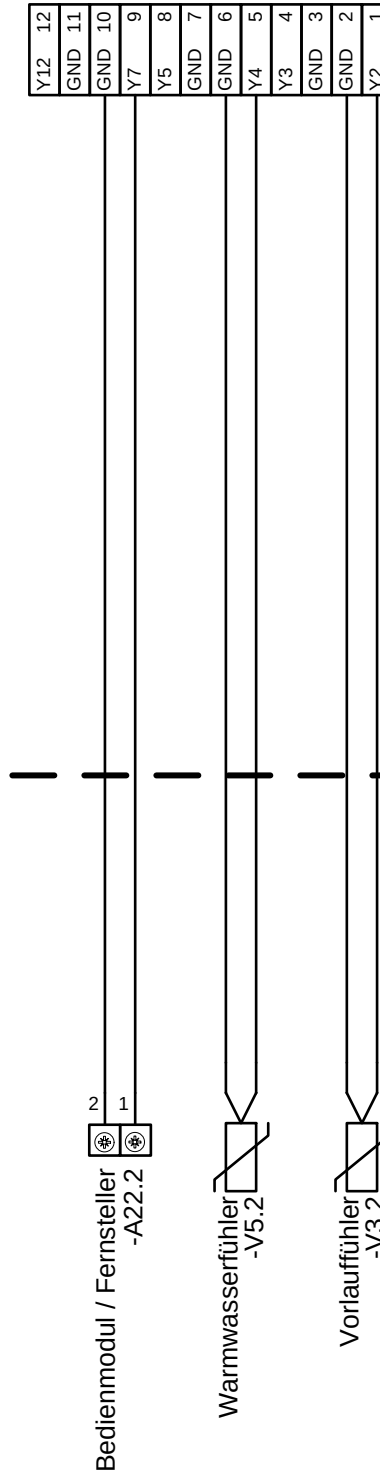


Kleinspannung - Fühler

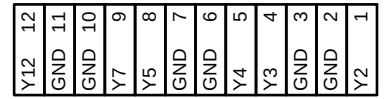
UML+
Modul 1
Heizkreis 1



UML+
Modul 2
Heizkreis 2



Modul 3



Extern
Intern

-A24.1
Master
Bedienmodul

Anschluss erweiterungs- Regelung

Bedienmodul / Fernsteller
-A22.1

Außenfühler
-V1.1

Warmwasserfühler
-V5.1

Vorlauffühler
-V3.1

Bedienmodul / Fernsteller
-A22.2

Warmwasserfühler
-V5.2

Vorlauffühler
-V3.2

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	05.07.2013	UML+/UML+		MES H021 + H024 Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise		Projekt : Regelung				1 mm : 1 mm Blatt 092674/01	
				Gezeichnet	ros										
				Geprüft	rot										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092674/01									

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

UML+	Modul 1 Heizkreis 1
Zu HK 1	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 1	X4 4
	N 3
Heizungspumpe HK 1	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 2
Zu HK 2	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 2	X4 4
	N 3
Heizungspumpe HK 2	N 2
	X2 1

	Modul 3
	X9 8
	N 7
	N 6
	X6 5
	X4 4
	N 3
	N 2
	X2 1

092675/01

UML+	Modul 1 Heizkreis 1
	Y12 16 GND 15
Master Bedienmodul Anschluss- erweiterungs- Regelung	+12V 14
	Lon- 13
	Lon+ 12
	GND 11
	GND 10
	Bedienmodul Fernsteller Y7 9
	Außenfühler Y5 8 GND 7
	Warmwasserfühler HK 1 GND 6 Y4 5
	Y3 4 GND 3
	Vorlauffühler HK 1 GND 2 Y2 1

UML+	Modul 2 Heizkreis 2
	Y12 12 GND 11
	Bedienmodul Fernsteller GND 10 Y7 9
	Y5 8 GND 7
	Warmwasserfühler HK 2 GND 6 Y4 5
	Y3 4 GND 3
	Vorlauffühler HK 2 GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092675/01

Niederspannung 230 VAC

Kleinspannung - Fühler

UML+
Modul 1
Heizkreis 1

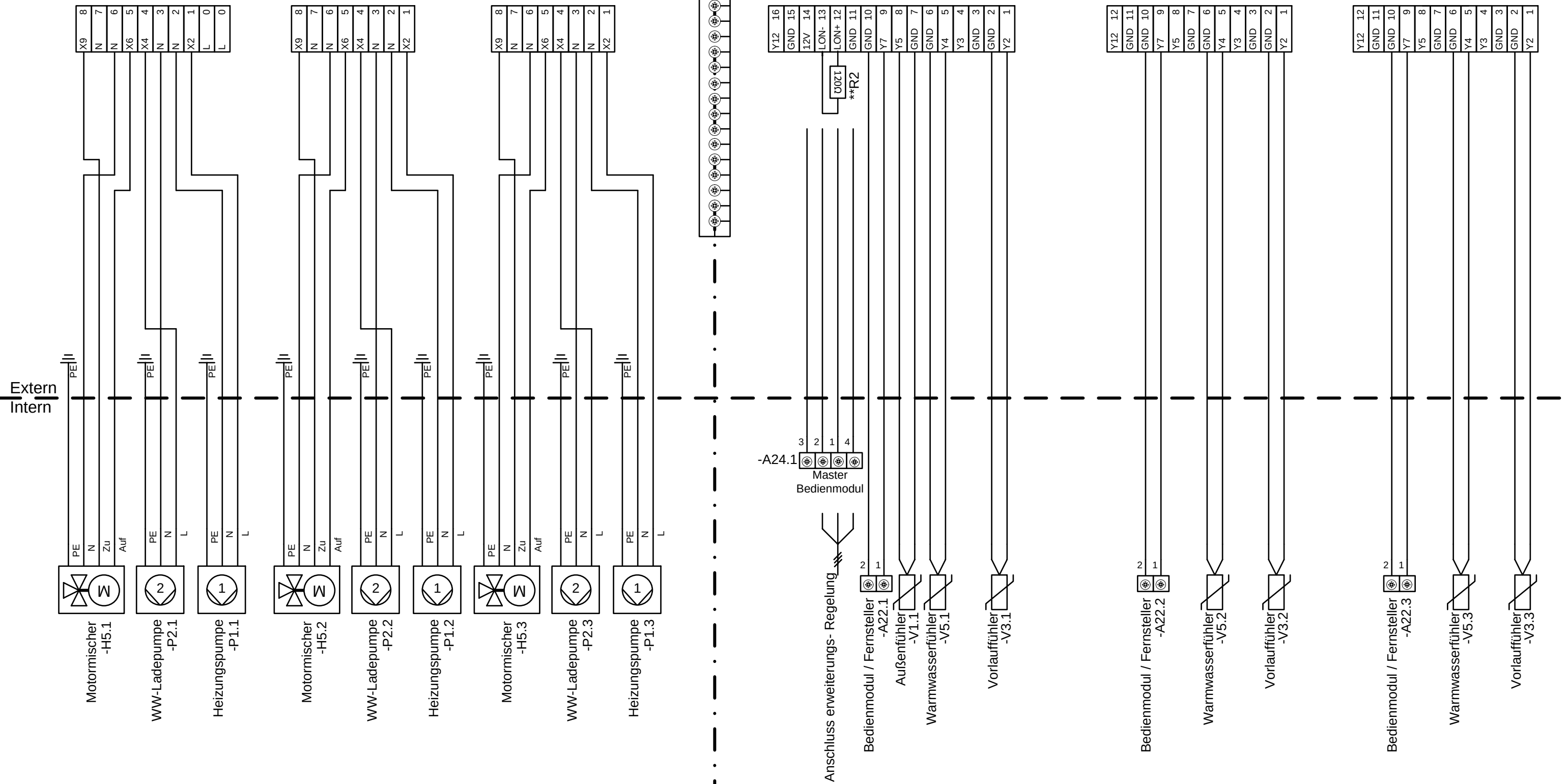
UML+
Modul 2
Heizkreis 2

UML+
Modul 3
Heizkreis 3

UML+
Modul 1
Heizkreis 1

UML+
Modul 2
Heizkreis 2

UML+
Modul 3
Heizkreis 3



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	05.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 Außentemperaturregelung für 3 Heizkreise gemischt und Warmwasserkreise		Projekt : Regelung				1 mm : 1 mm 2 Blatt 092680/01	
				Gezeichnet	ros										
				Geprüft	rot										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092680/01									

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

UML+	Modul 1 Heizkreis 1
Zu HK 1	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 1	X4 4
	N 3
Heizungspumpe HK 1	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 2
Zu HK 2	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 2	X4 4
	N 3
Heizungspumpe HK 2	N 2
	X2 1

UML+	Modul 3 Heizkreis 3
Zu HK 3	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 3	X4 4
	N 3
Heizungspumpe HK 3	N 2
	X2 1

092681/01

UML+	Modul 1 Heizkreis 1
Master Bedienmodul Anschluss- erweiterungs- Regelung	Y12 16
	GND 15
Bedienmodul Fernsteller	+12V 14
	Lon- 13
Bedienmodul Fernsteller	Lon+ 12
	GND 11
Außenfühler	GND 10
	Y7 9
Warmwasserfühler HK 1	Y5 8
	GND 7
Vorlauffühler HK 1	GND 6
	Y4 5
Vorlauffühler HK 1	Y3 4
	GND 3
Vorlauffühler HK 1	GND 2
	Y2 1

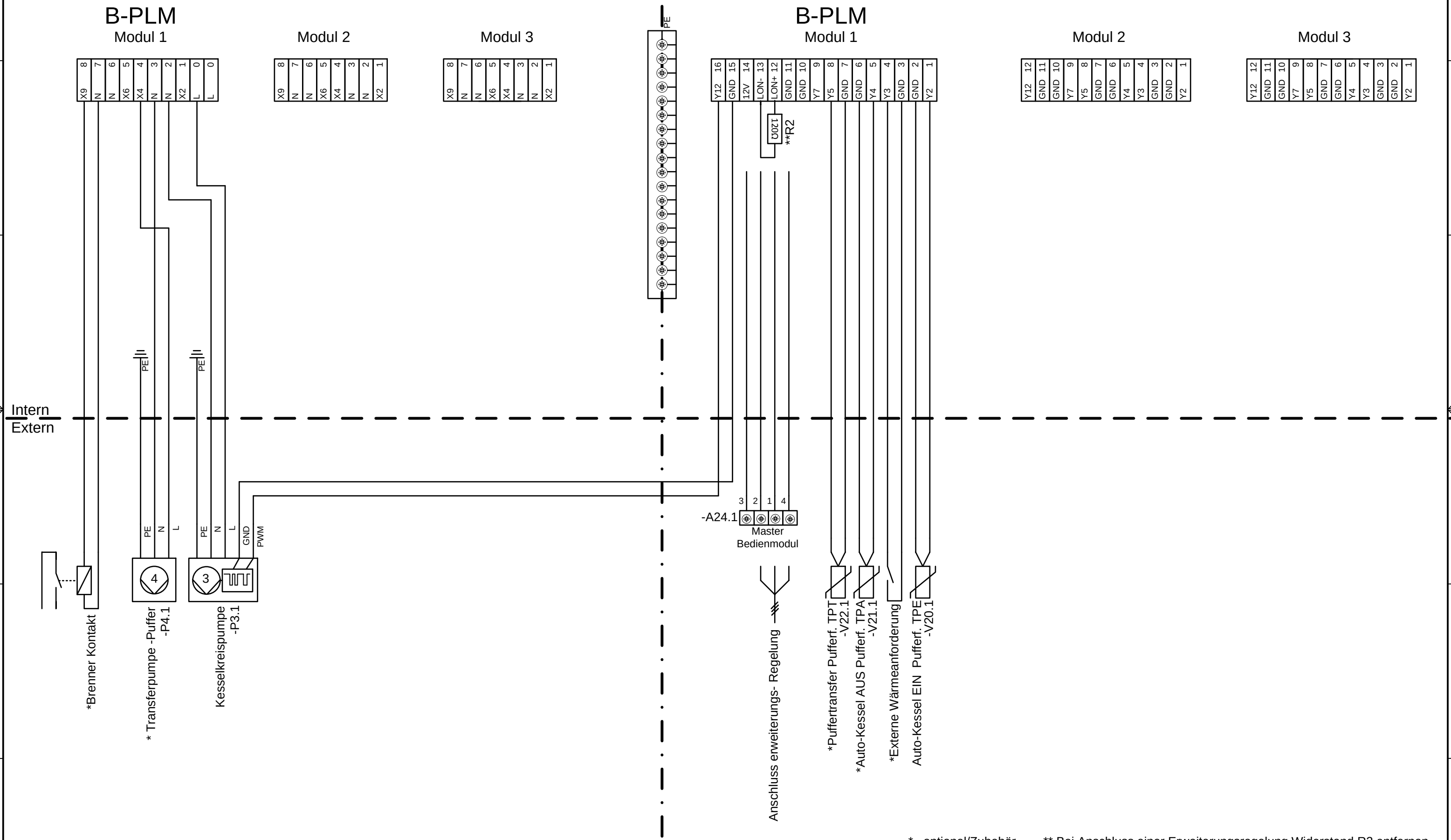
UML+	Modul 2 Heizkreis 2
Bedienmodul Fernsteller	Y12 12
	GND 11
Warmwasserfühler HK 2	GND 10
	Y7 9
Warmwasserfühler HK 2	Y5 8
	GND 7
Warmwasserfühler HK 2	GND 6
	Y4 5
Vorlauffühler HK 2	Y3 4
	GND 3
Vorlauffühler HK 2	GND 2
	Y2 1

UML+	Modul 3 Heizkreis 3
Bedienmodul Fernsteller	Y12 12
	GND 11
Bedienmodul Fernsteller	GND 10
	Y7 9
Warmwasserfühler HK3	Y5 8
	GND 7
Warmwasserfühler HK3	GND 6
	Y4 5
Vorlauffühler HK 3	Y3 4
	GND 3
Vorlauffühler HK 3	GND 2
	Y2 1

092681/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

B-PLM	Modul 1
*BrennerKontakt	X9 8 N 7 N 6 X6 5
*Transferpumpe Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

092864/00

Niederspannung 230 VAC

Kleinspannung - Fühler

B-PLM
Modul 1

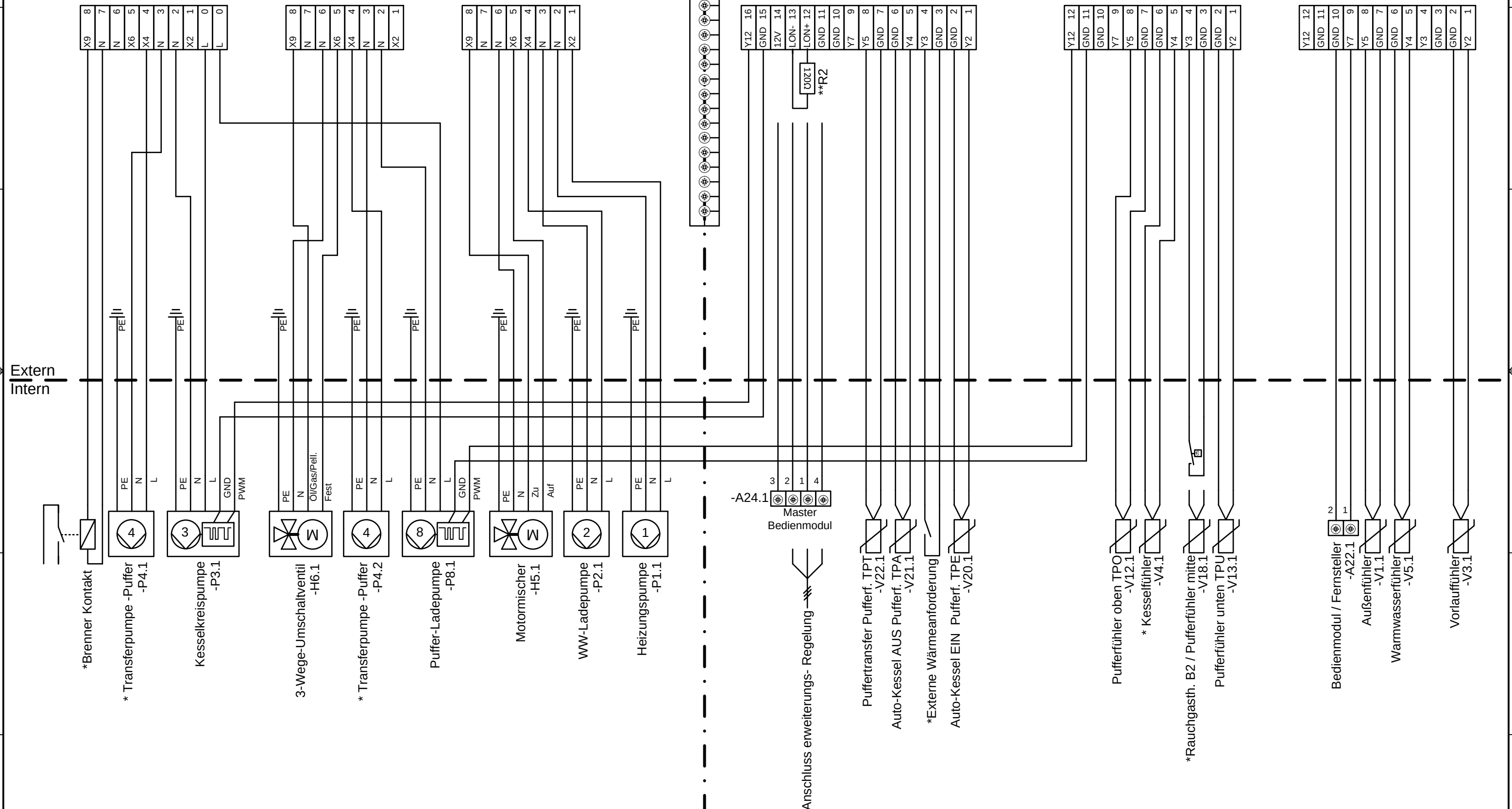
WVF+
Modul 2

UML+
Modul 3
Heizkreis 1

B-PLM
Modul 1

WVF+
Modul 2

UML+
Modul 3
Heizkreis 1



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	09.07.2013	B-PLM/WVF+/UML+		MES P030 + P041 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis mit Brenneransteuerung Öl/Gas/Pell. und Festbrennstoff- Modul WVF		Projekt : Regelung				1 mm : 1 mm Blatt 092866/01	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:		092866/01							

-XA	Anschlussblock
	230VAC L 1
	Intern L' 2 L' 3
	230VAC N 4
	Intern N' 5 N' 6

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpumpe Puffer	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

WVF+	Modul 2
Öl/Gas/Pell.	X9 8 N 7
3-Wege- Umschaltventil Fest	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2
	X2 1

UML+	Modul 3 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

092868/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10
	Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

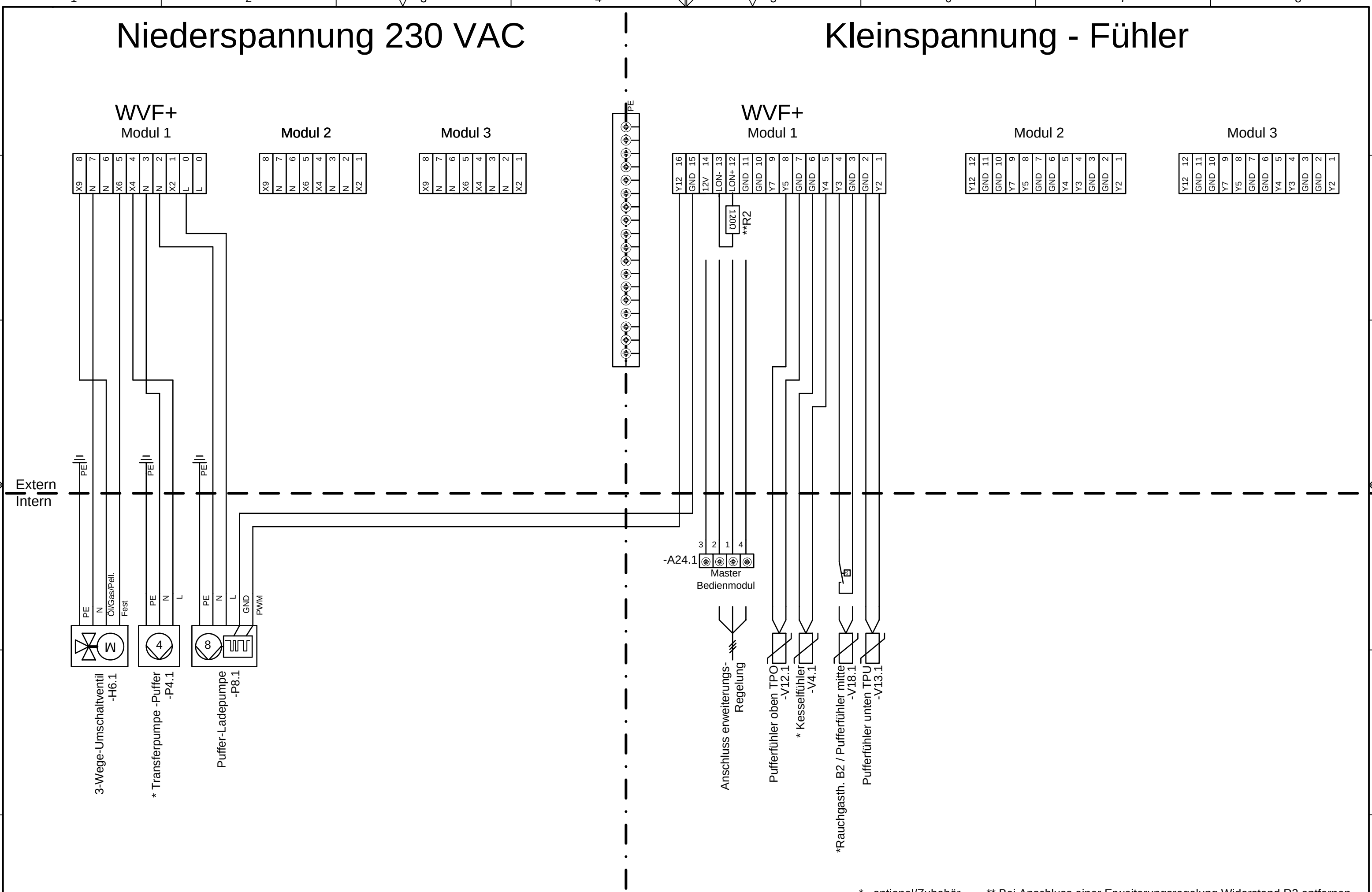
WVF+	Modul 2
PWM Puffer- Ladepumpe	Y12 12 GND 11
	GND 10
	Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

UML+	Modul 3 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

092868/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

WVF+	Modul 1
PWM Puffer-Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

WVF+	Modul 1
Öl/Gas/Pell.	X9 8 N 7
3-Wege-Umschaltventil Fest	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

092877/01

Niederspannung 230 VAC

Kleinspannung - Fühler

WVF+
Modul 1

UML+
Modul 2
Heizkreis 1

Modul 3

WVF+
Modul 1

UML+
Modul 2
Heizkreis 1

Modul 3

Extern
Intern

-A24.1
Master
Bedienmodul

Anschluss erweiterungs- Regelung

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	08.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

WVF+/UML+

Zeichnungs Nr.: 092870/01

MES P041 + H021

Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis
Automatische Festbrennstoffumschaltung mit Pufferladung

Projekt :

Regelung

windhager

1 mm : 1 mm

2

Blatt 092870/01

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

WVF+	Modul 1
PWM Puffer-Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

WVF+	Modul 1
Öl/Gas/Pell.	X9 8 N 7 N 6 X6 5
3-Wege- Umschaltventil Fest	
Transferpumpe Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

WVF+	Modul 1
PWM Puffer-Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

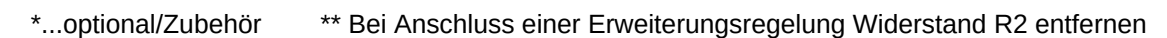
UML+	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

Kleinspannung - Fühler



1 mm : 1 mm	
◀ -----	2 ▶
Blatt 092879/01	

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

WVF+	Modul 1
Öl/Gas/Pell.	X9 8 N 7 N 6 X6 5
3-Wege-Umschaltventil Fest	
*Transferpumpe Puffer	X4 4 N 3
	N 2
PWM Dauerphase 1	X2 1
PWM Dauerphase 2	L 0 L 0

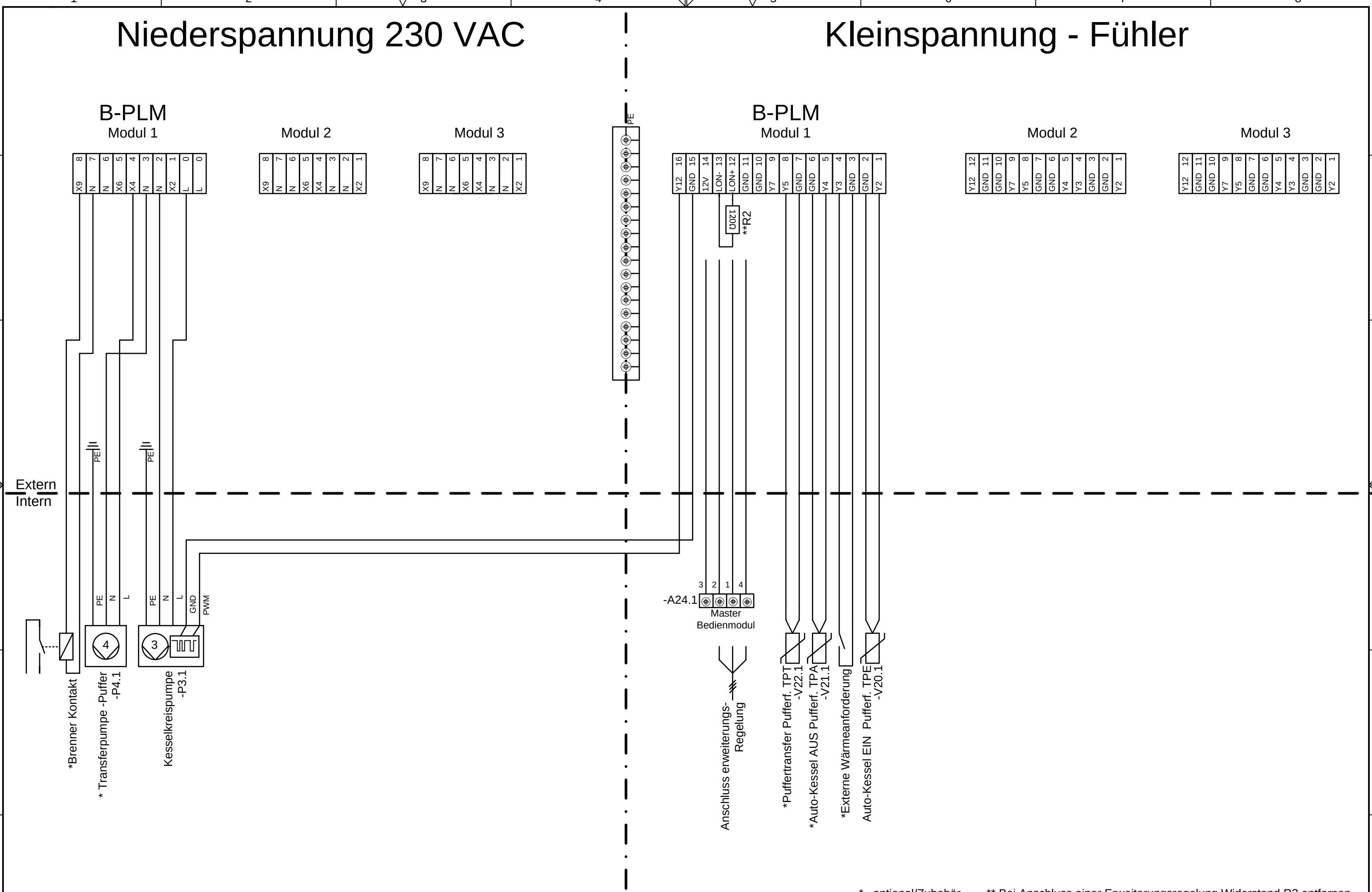
UML+	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

UML+	Modul 3 Heizkreis 2
Zu HK 2	X9 8 N 7 N 6 X6 5
Motormischer Auf	
WW-Ladepumpe HK 2	X4 4 N 3
Heizungspumpe HK 2	N 2 X2 1

WVF+	Modul 1
PWM Puffer-Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

UML+	Modul 3 Heizkreis 2
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
	Y5 8 GND 7
Warmwasserfühler HK 2	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 2	GND 2 Y2 1



-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

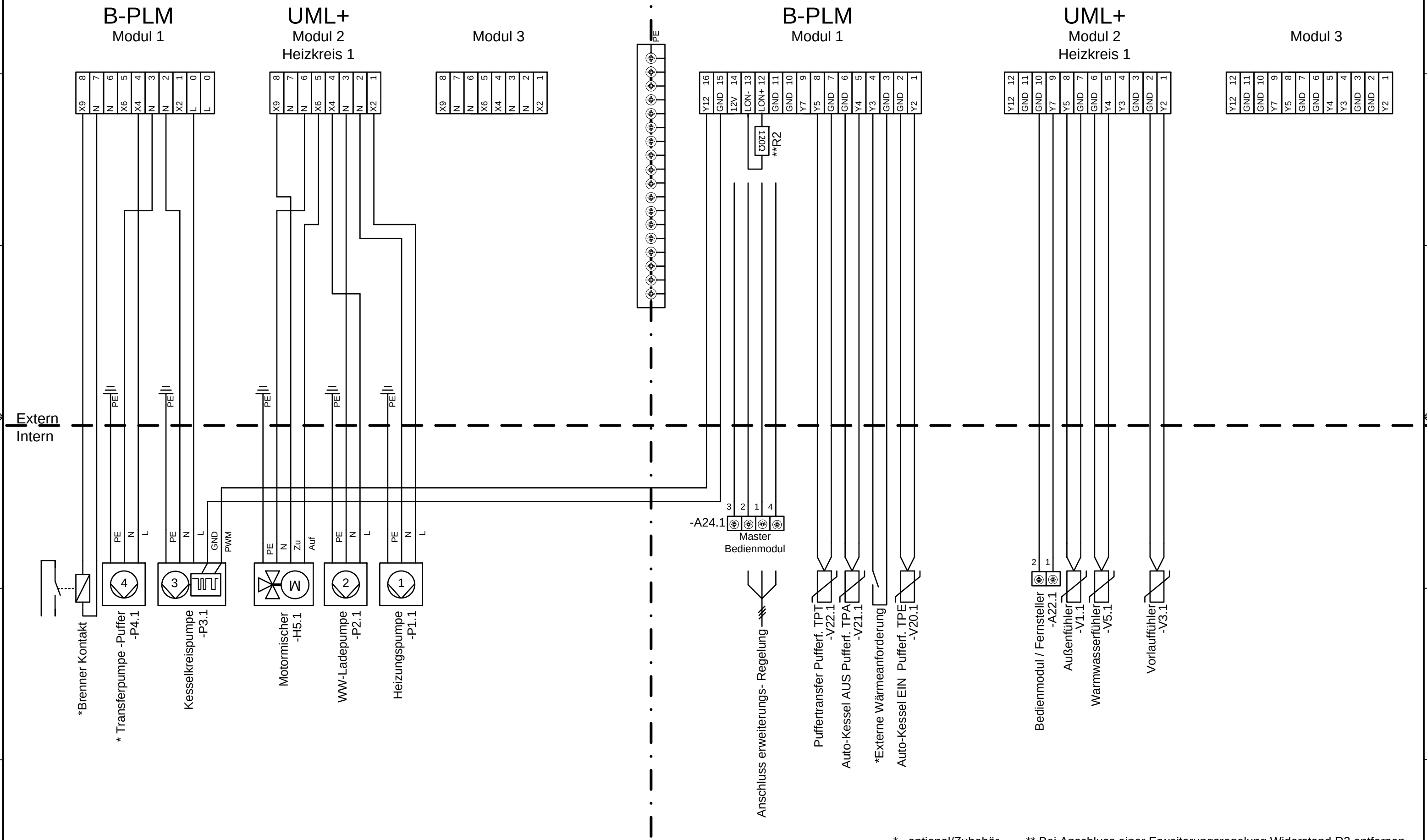
	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

092890/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpump-Puffer	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML +	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML +	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

Kleinspannung - Fühler



-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

UML+	Modul 3 Heizkreis 2
Zu HK 2	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 2	X4 4 N 3
Heizungspumpe HK 2	N 2 X2 1

092887/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

UML+	Modul 3 Heizkreis 2
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
	Y5 8 GND 7
Warmwasserfühler HK 2	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 2	GND 2 Y2 1

092887/01

Niederspannung 230 VAC

Kleinspannung - Fühler

B-PLM
Modul 1

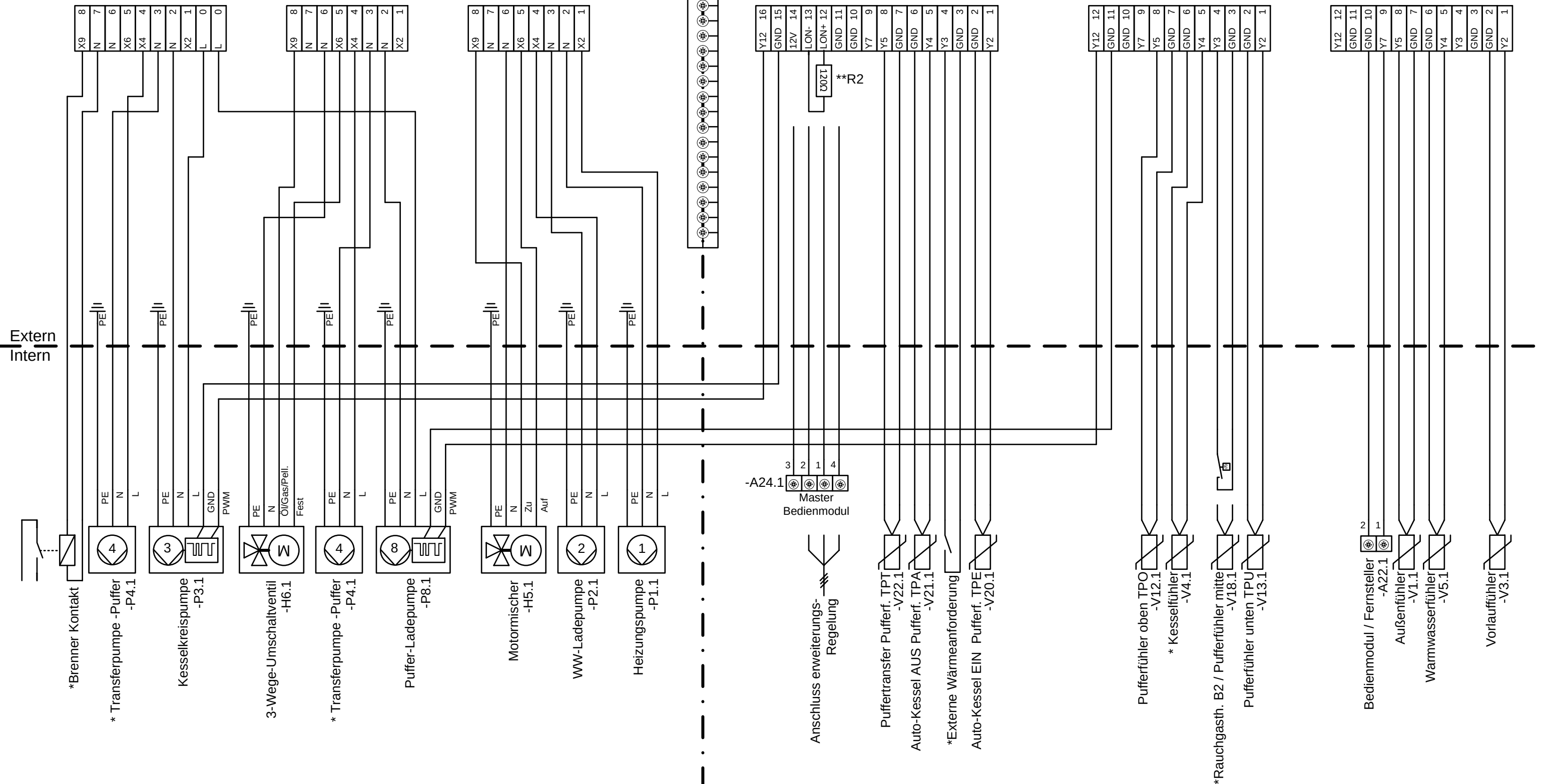
WVF+
Modul 2

UML+
Modul 3
Heizkreis 1

B-PLM
Modul 1

WVF+
Modul 2

UML+
Modul 3
Heizkreis 1



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	09.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Festbrennstoff- Modul WVF+ und Pufferspeicher- Modul B-PLM	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092892/01				Blatt 092892/01

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

WVF+	Modul 2
Öl/Gas/Pell.	X9 8 N 7
3-Wege-Umschaltventil Fest	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1

UML+	Modul 3 Heizkreis 1
Zu HK 1	X9 8 N 7 N 6 X6 5
Motormischer Auf	
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

092893/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

WVF+	Modul 2
PWM Puffer- Ladepumpe	Y12 12 GND 11
	GND 10 Y7 9
Pufferfühler oben	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Puffer unten TPU	GND 2 Y2 1

UML+	Modul 3 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

092893/01

Niederspannung 230 VAC

Kleinspannung - Fühler

B-PLM
Modul 1

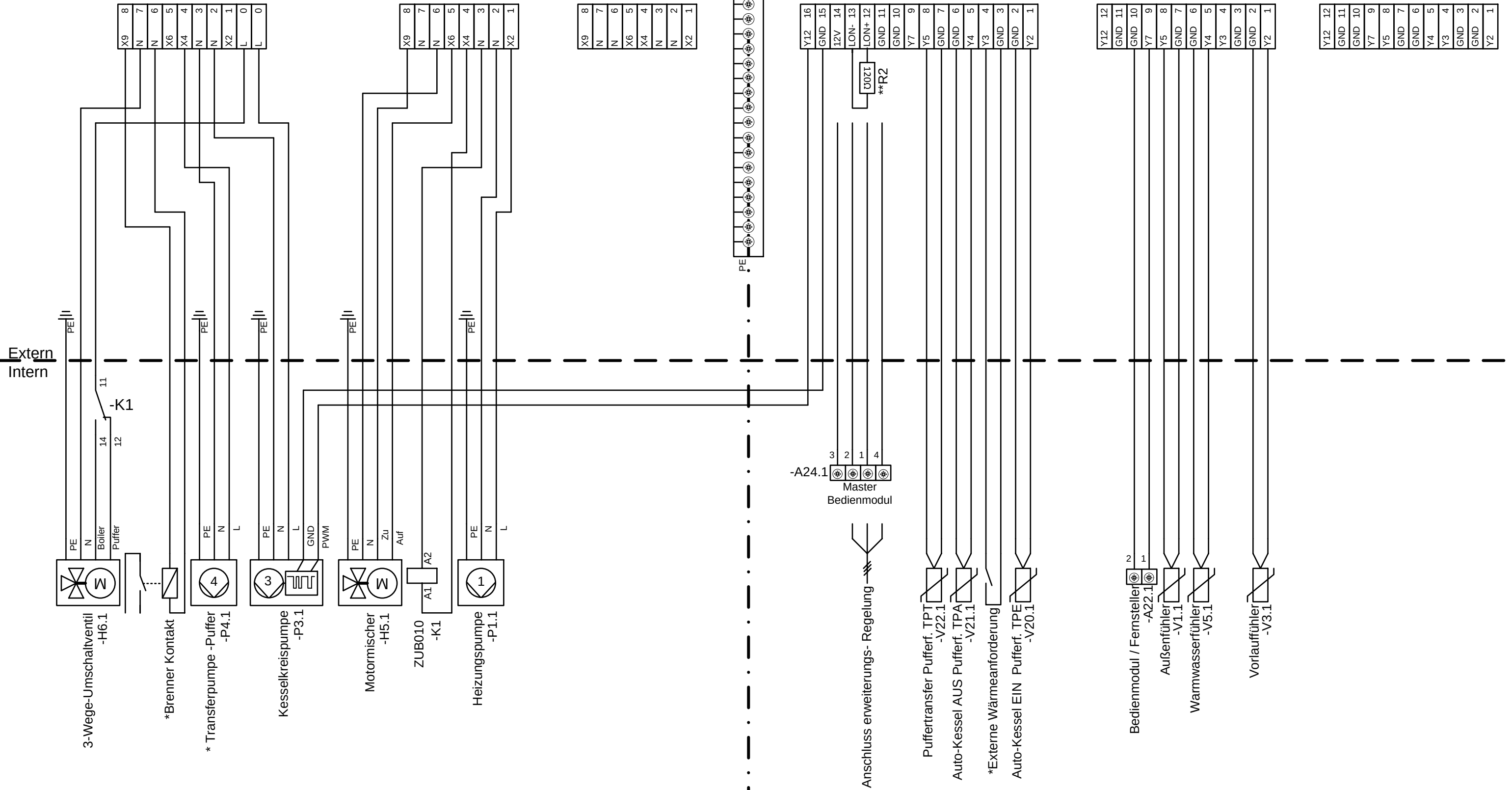
UML+
Modul 2
Heizkreis 1

Modul 3

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1

Modul 3



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	12.08.2013	B-PLM/UML+		MES ZUB010 ZUB010 SYS403 3-Wege-Umschaltventil Puffer - Boiler	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094554/01				

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brennerkontakt	X9 8 N 7
	N 6 X6 5
* Transferpumpe	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML +	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
Schütz -K1 HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* Puffertransfer Pufferf. TPT	Y5 8 GND 7
* Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
* Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML +	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

Niederspannung 230 VAC

Kleinspannung - Fühler

B-PLM Modul 1

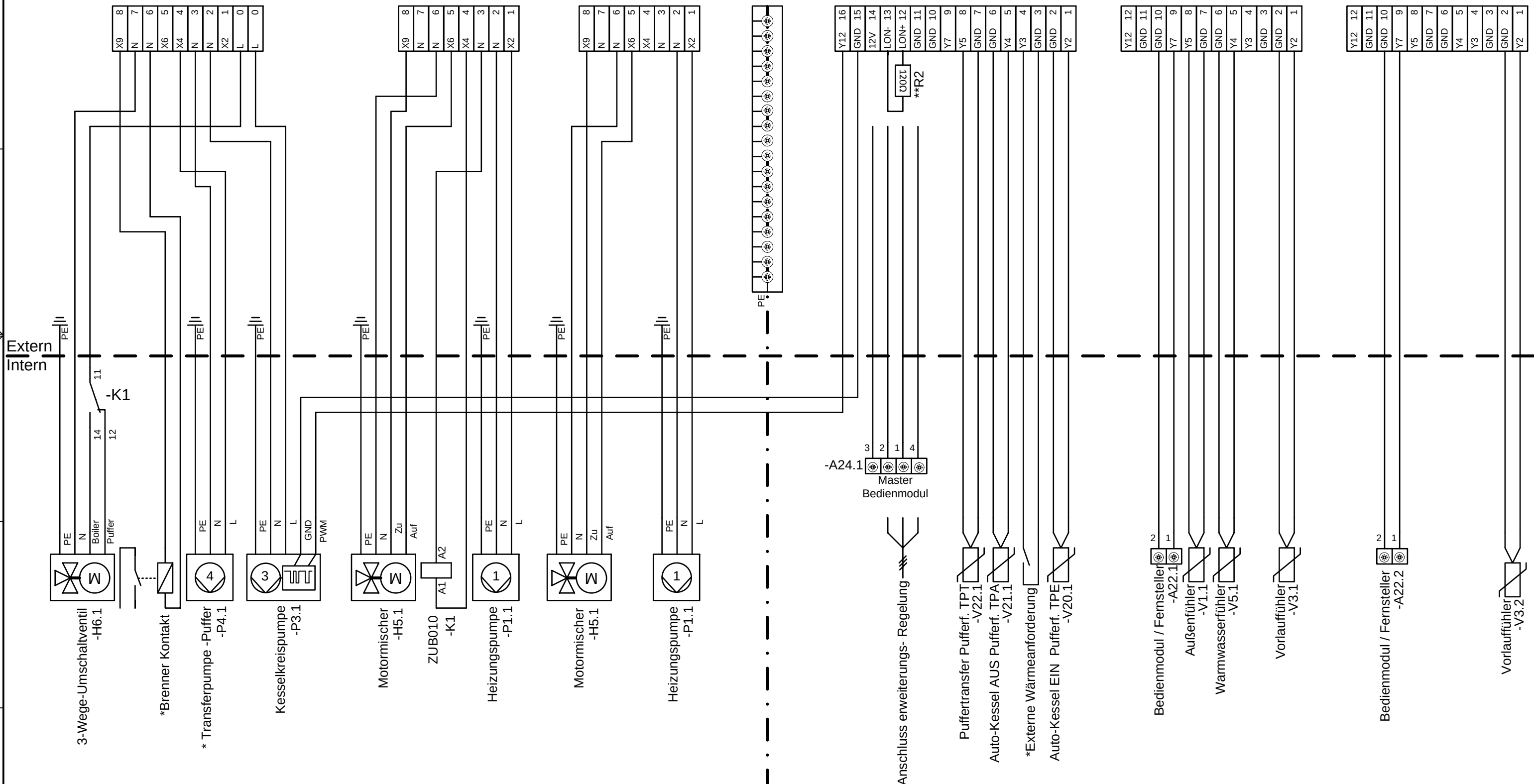
UML+ Modul 2 Heizkreis 1

UML+ Modul 3 Heizkreis 2

B-PLM Modul 1

UML+ Modul 2 Heizkreis 1

UML+ Modul 3 Heizkreis 2



...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brennerkontakt	X9 8 N 7
	N 6 X6 5
* Transferpumpe	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
Schütz -K1 HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

UML+	Modul 3 Heizkreis 2
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
	X4 4 N 3
Heizungspumpe HK 2	N 2 X2 1

094557/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* Puffertransfer Pufferf. TPT	Y5 8 GND 7
* Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
* Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

UML+	Modul 3 Heizkreis 2
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 2	GND 2 Y2 1

094557/01

-XA	Anschlussblock
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	Modul 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM Dauerphase 1 PWM Dauerphase 2	L 0 L 0

MES	Modul 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	Modul 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	Modul 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	Modul 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	Modul 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

UML+	Modul 1 Heizkreis 1
Zu HK 1	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 1	X4 4
	N 3
Heizungspumpe HK 1	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 2
Zu HK 2	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 2	X4 4
	N 3
Heizungspumpe HK 2	N 2
	X2 1

	Modul 3
	X9 8
	N 7
	N 6
	X6 5
	X4 4
	N 3
	N 2
	X2 1

092675/01

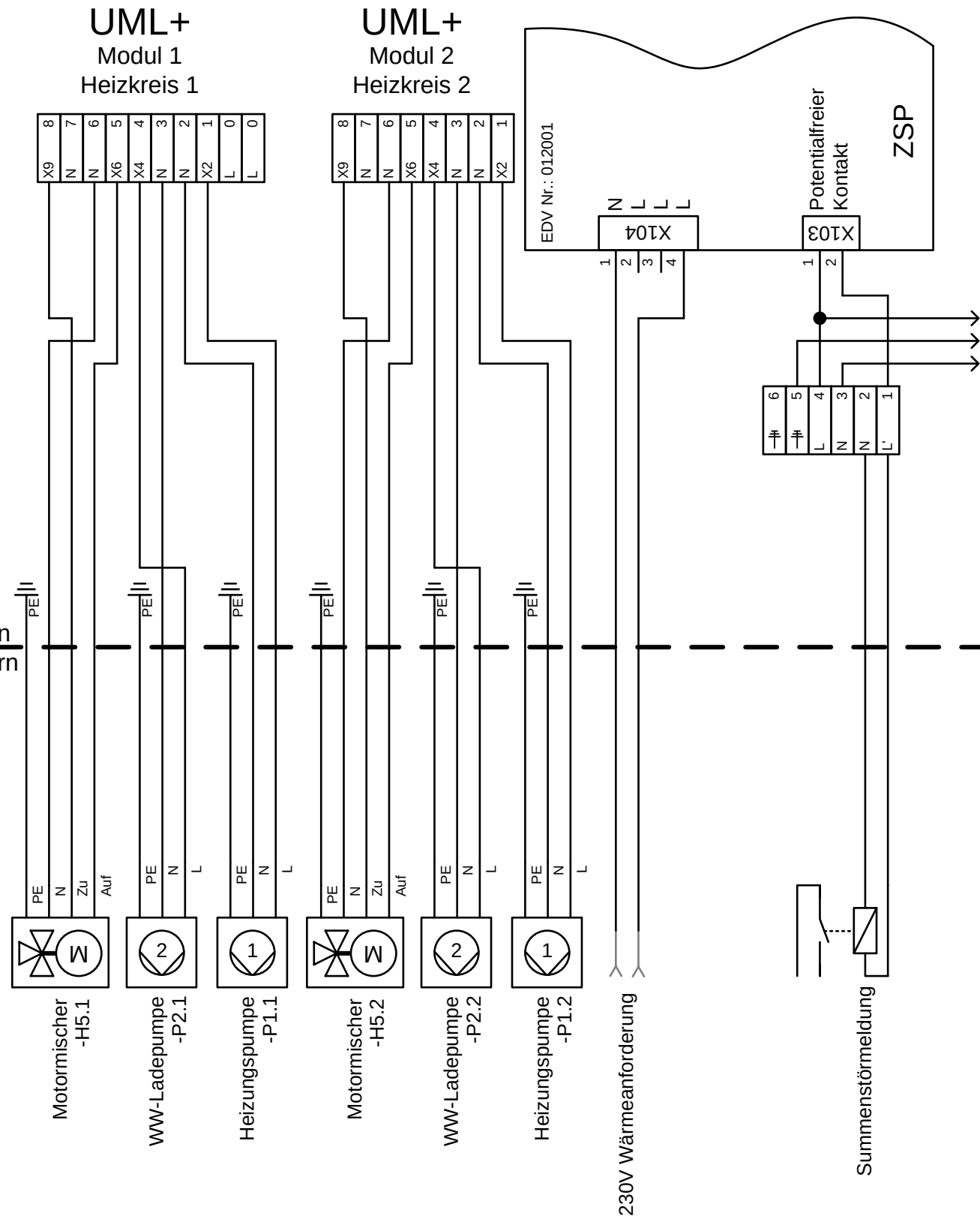
UML+	Modul 1 Heizkreis 1
	Y12 16 GND 15
Master Bedienmodul Anschluss- erweiterungs- Regelung	+12V 14
	Lon- 13
	Lon+ 12
	GND 11
	GND 10
	Fernsteller Y7 9
	Y5 8
	GND 7
	GND 6
	HK 1 Y4 5
	Y3 4
	GND 3
	GND 2
	Vorlauffühler HK 1 Y2 1

UML+	Modul 2 Heizkreis 2
	Y12 12 GND 11
	GND 10
	Bedienmodul Fernsteller Y7 9
	Y5 8
	GND 7
	GND 6
	HK 2 Y4 5
	Y3 4
	GND 3
	GND 2
	Vorlauffühler HK 2 Y2 1

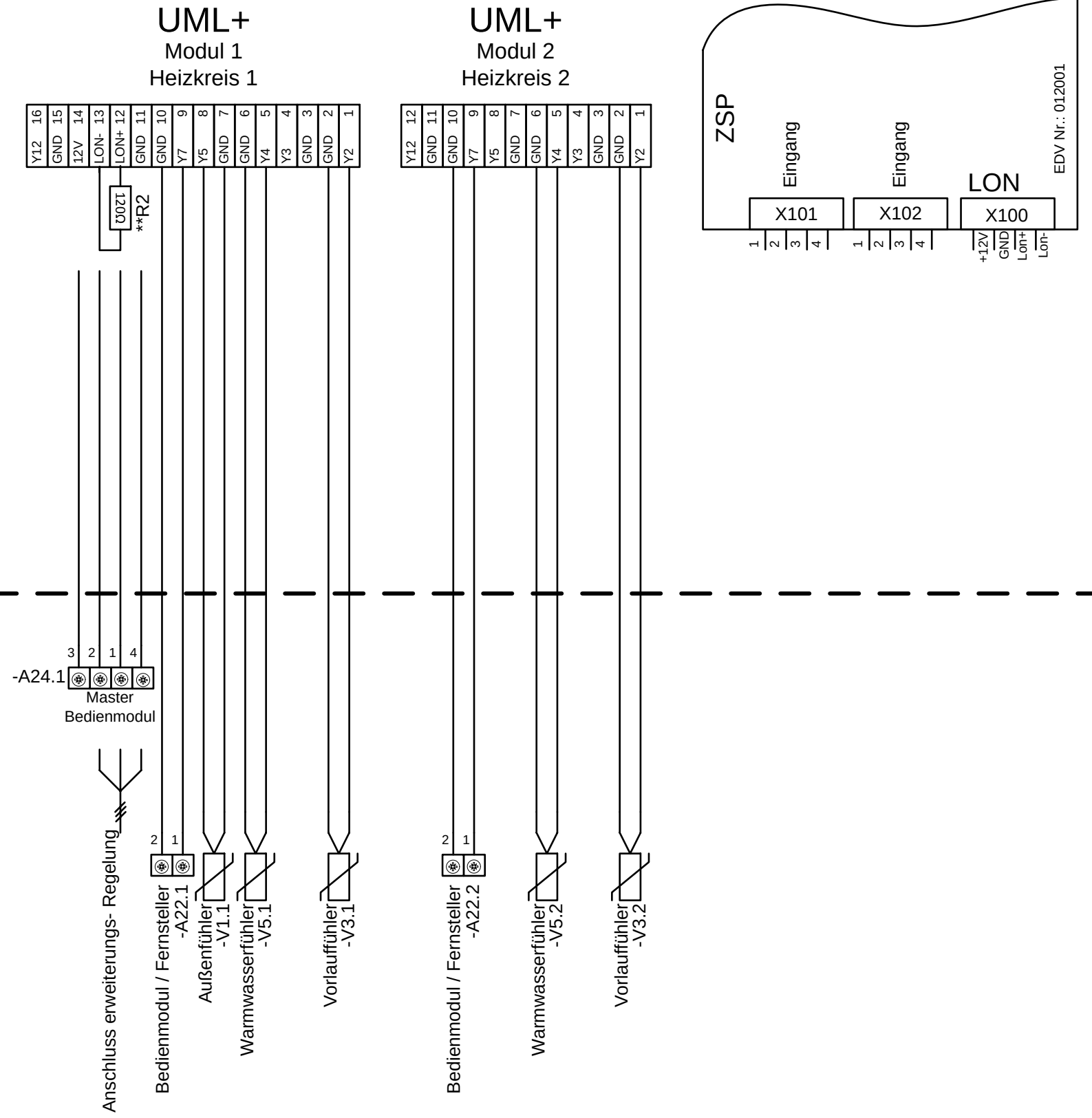
	Modul 3
	Y12 12 GND 11
	GND 10
	Y7 9
	Y5 8
	GND 7
	GND 6
	Y4 5
	Y3 4
	GND 3
	GND 2
	Y2 1

092675/01

Niederspannung 230 VAC



Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	UML+ /UML+ /ZSP S		MES H021 + H024 + ZSP S Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise und ZSP S	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094608/00				  2
											Blatt 094608/00

-XZSP	Zusatzprint
PE	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

UML+	Modul 1 Heizkreis 1
Zu HK 1	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 1	X4 4
	N 3
Heizungspumpe HK 1	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 2
Zu HK 2	X9 8
	N 7
Motormischer Auf	N 6
	X6 5
WW-Ladepumpe HK 2	X4 4
	N 3
Heizungspumpe HK 2	N 2
	X2 1

	Modul 3
X9 8	N 7
	N 6
X6 5	X4 4
	N 3
N 2	X2 1

092675/01

UML+	Modul 1 Heizkreis 1
Y12 16 GND 15	Master Bedienmodul
	+12V 14
Lon+ 12 GND 11	Anschluss erweiterungs- Regelung
	Lon- 13
GND 10 Y7 9	Bedienmodul Fernsteller
	GND 10
Y5 8 GND 7	Außenfühler
	Y5 8
GND 6 Y4 5	Warmwasserfühler HK 1
	GND 6
Y3 4 GND 3	Y3 4
	GND 3
GND 2 Y2 1	Vorlauffühler HK 1
	GND 2

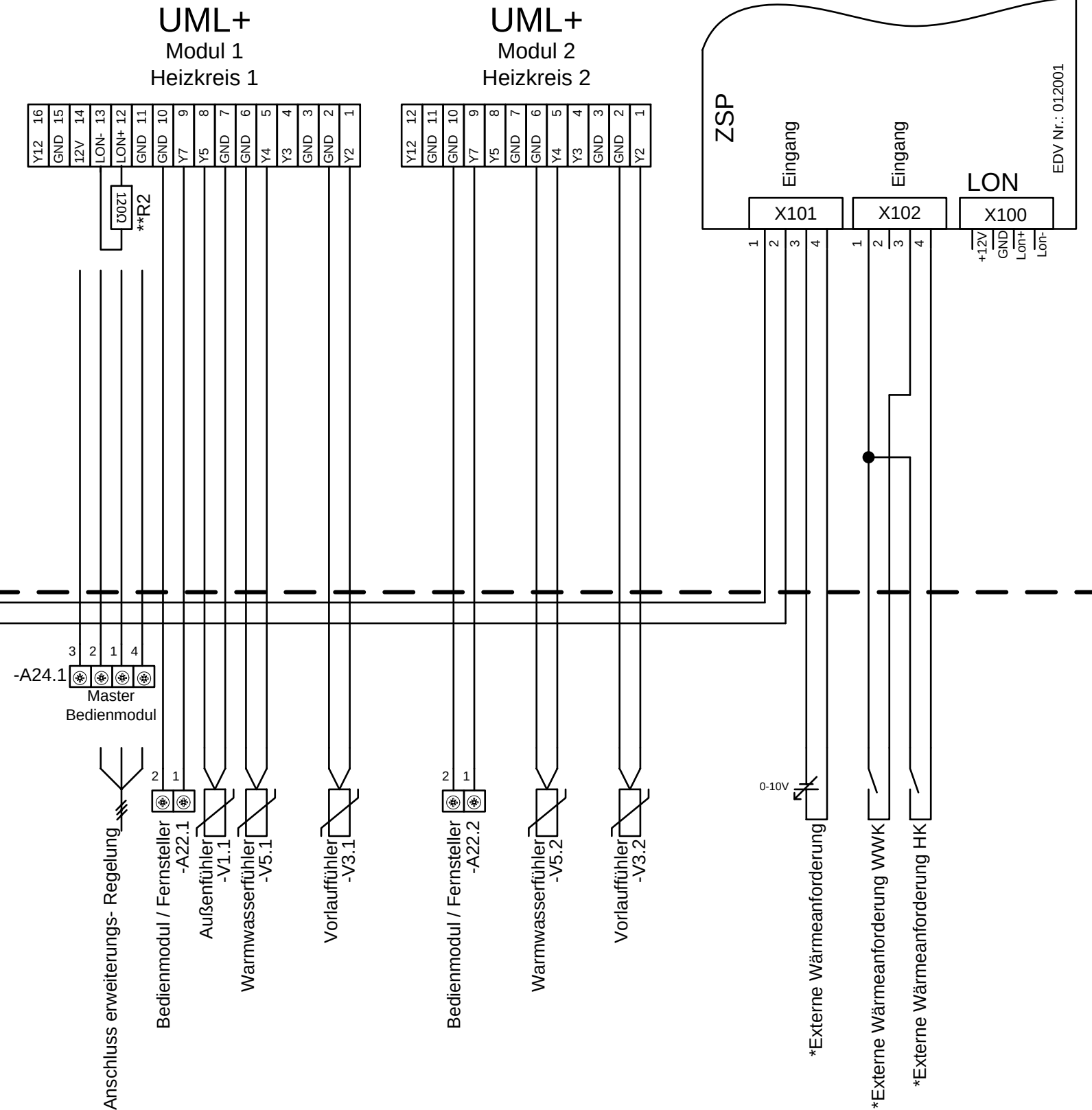
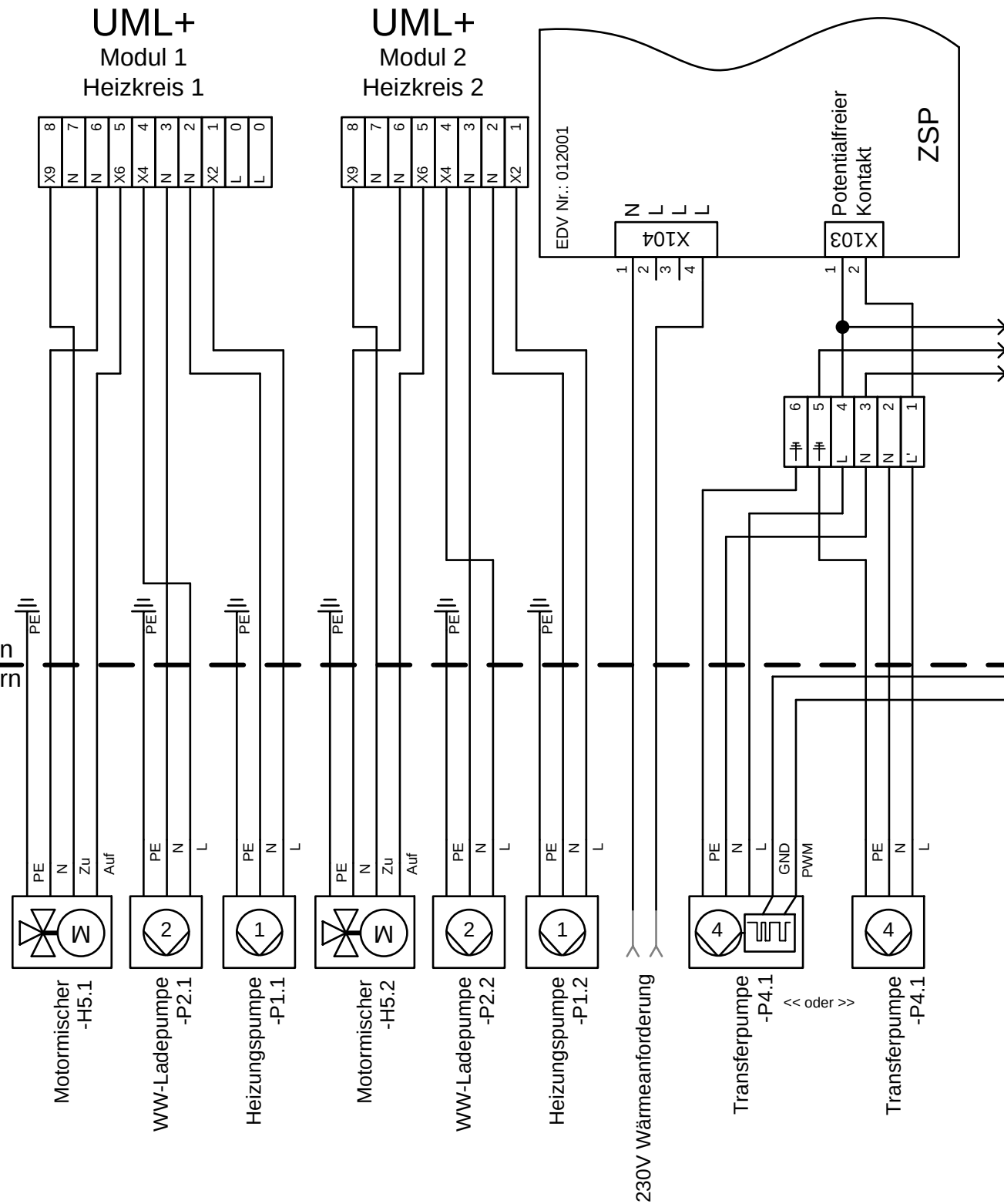
UML+	Modul 2 Heizkreis 2
Y12 12 GND 11	Y12 12
	GND 11
GND 10 Y7 9	Bedienmodul Fernsteller
	GND 10
Y5 8 GND 7	Y5 8
	GND 7
GND 6 Y4 5	Warmwasserfühler HK 2
	GND 6
Y3 4 GND 3	Y3 4
	GND 3
GND 2 Y2 1	Vorlauffühler HK 2
	GND 2

	Modul 3
Y12 12 GND 11	Y12 12
	GND 11
GND 10 Y7 9	GND 10
	Y7 9
GND 7 Y4 5	Y5 8
	GND 7
Y3 4 GND 3	GND 6
	Y4 5
GND 2 Y2 1	Y3 4
	GND 3
	GND 2
	Y2 1

092675/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	UML+/UML+/ZSP W		MES H021 + H024 + ZSP W Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise und ZSP W		Projekt : Regelung				1 mm : 1 mm Blatt 094610/00	
				Gezeichnet	ros										
				Geprüft	ros										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		094610/00									

-XZSP	Zusatzprint
PE	PE PE
Dauerphase	L N
Transferpumpe	N L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

UML+	Modul 1 Heizkreis 1
Zu HK 1 Motormischer Auf	X9 8
	N 7
	N 6
	X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

Modul 2
X9 8
N 7
N 6
X6 5
X4 4
N 3
N 2
X2 1

Modul 3
X9 8
N 7
N 6
X6 5
X4 4
N 3
N 2
X2 1

092671/01

UML+	Modul 1 Heizkreis 1
Master Bedienmodul Anschluss- erweiterungs- Regelung	Y12 16 GND 15
	+12V 14 Lon- 13 Lon+ 12 GND 11
	Bedienmodul Fernsteller
	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
	Warmwasserfühler HK 1
Vorlauffühler HK 1	GND 6 Y4 5 Y3 4 GND 3
	GND 2 Y2 1

Modul 2
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

Modul 3
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

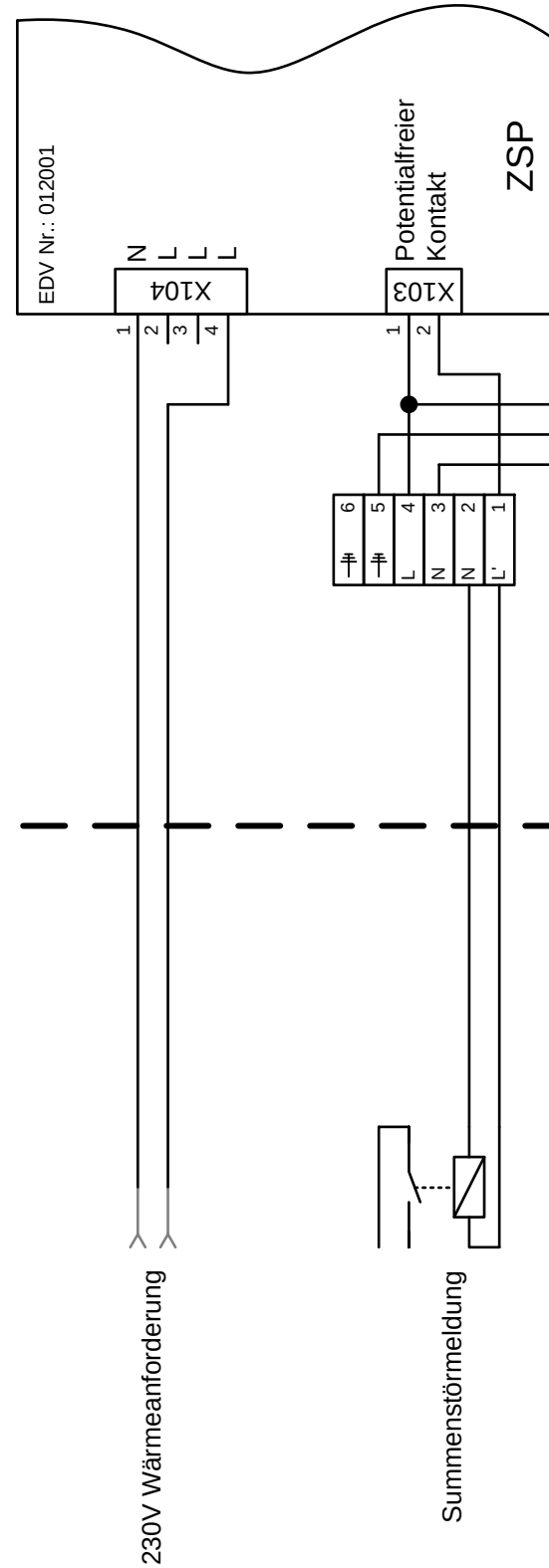
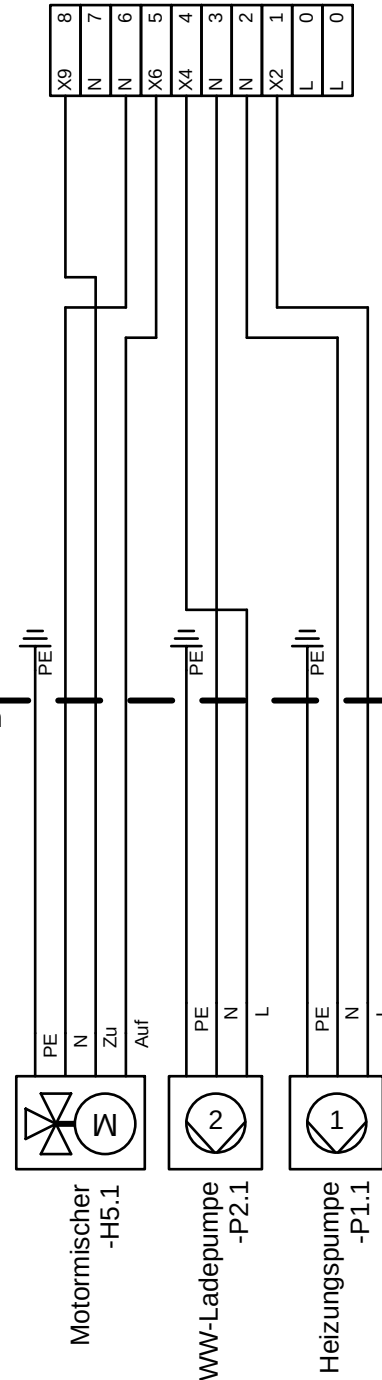
092671/01

Niederspannung 230 VAC

Kleinspannung - Fühler

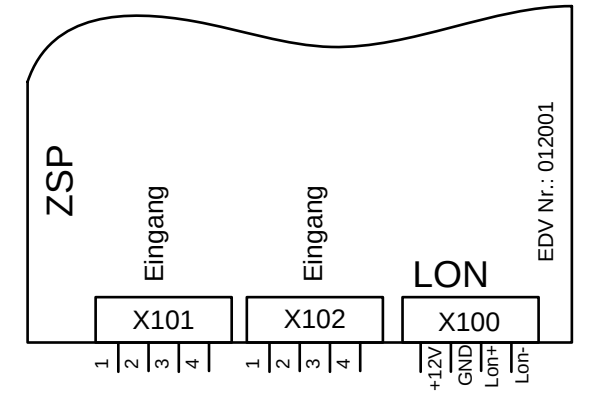
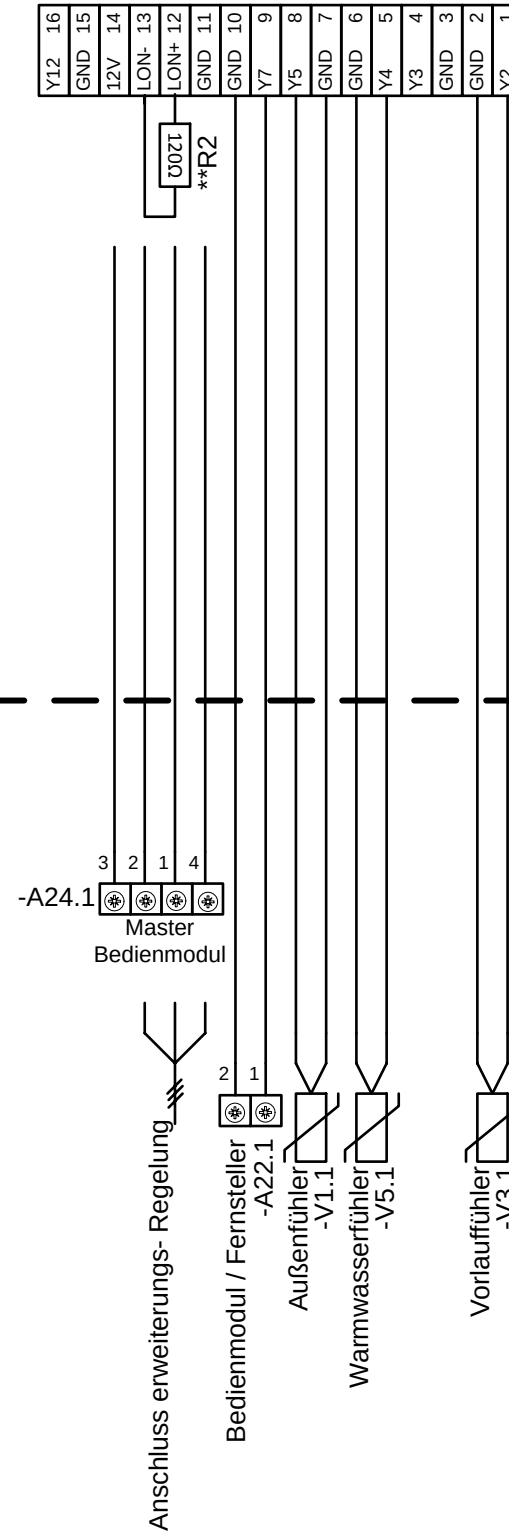
UML+
Modul 1
Heizkreis 1

Modul 2



UML+
Modul 1
Heizkreis 1

Modul 2



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ /ZSP S

Zeichnungs Nr.: 094611/00

MES H021 + ZSP S

Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und ZSP S

Projekt :

Regelung

windhager

1 mm : 1 mm

Blatt 094611/00

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
	230VAC L 1
	Intern L' 2 L' 3
	230VAC N 4
	Intern N' 5 N' 6

UML+	Modul 1 Heizkreis 1
	Y12 16 GND 15
	Master +12V 14 Bedienmodul Lon- 13 Anschluss Lon+ 12 erweiterungs- Regelung GND 11
	Bedienmodul GND 10 Fernsteller Y7 9
	Außenfühler Y5 8 GND 7
	Warmwasserfühler GND 6 HK 1 Y4 5
	Y3 4 GND 3
	Vorlauffühler GND 2 HK 1 Y2 1

UML+	Modul 1 Heizkreis 1
	Zu X9 8 HK 1 N 7
	Motormischer N 6 Auf X6 5
	WW-Ladepumpe X4 4 HK 1 N 3
	Heizungspumpe N 2 HK 1 X2 1
	PWM Dauerphase 1 L 0
	PWM Dauerphase 2 L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

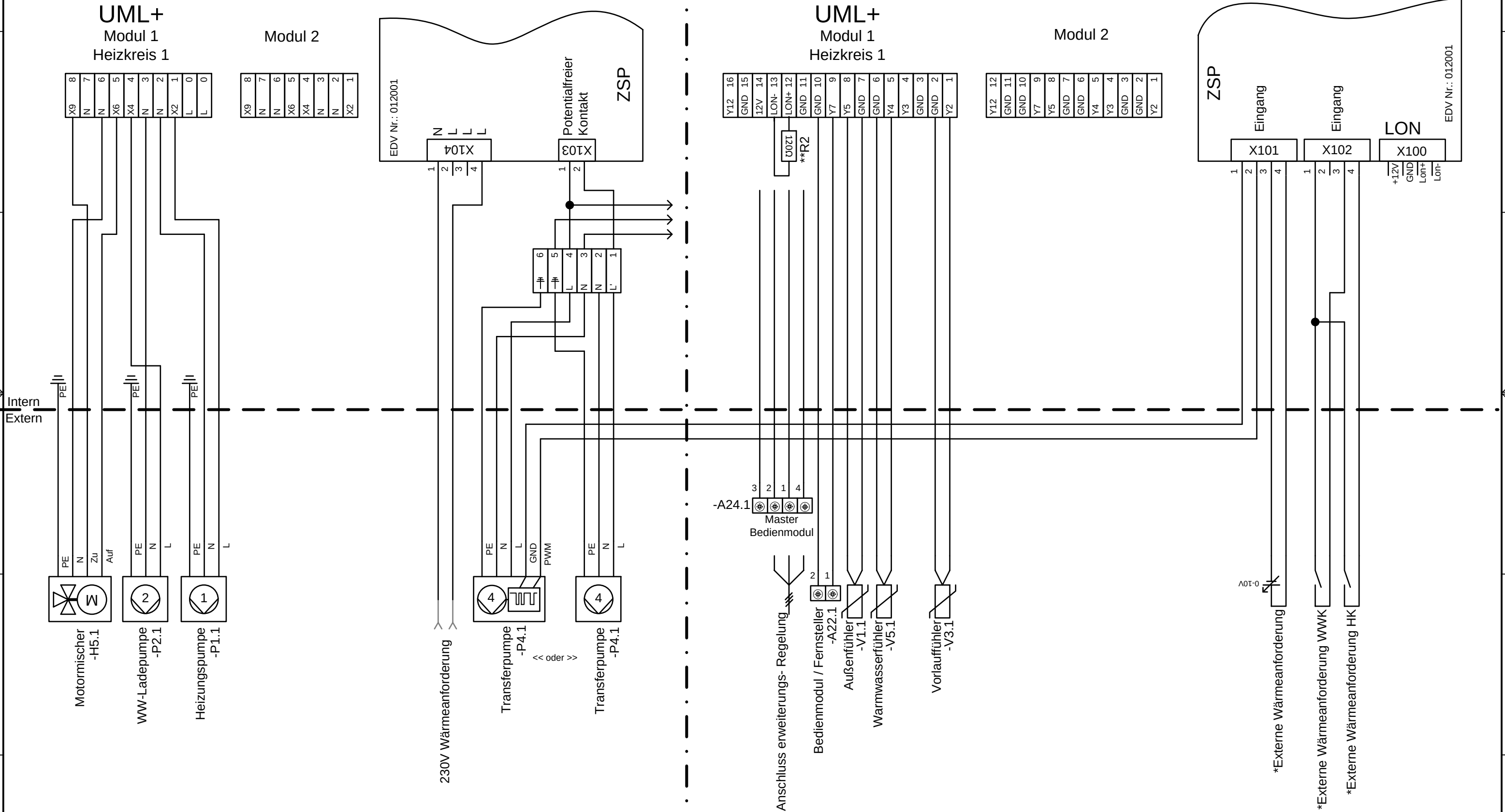
	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

092671/01

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Transferpumpe	N
	L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND -X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

B-PLM	Modul 1
*BrennerKontakt	X9 8 N 7 N 6 X6 5
*Transferpumpe Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

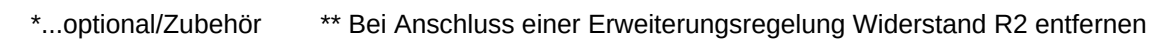
	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

092864/00

Kleinspannung - Fühler



				Datum	24.06.2013	B-PLM / ZSP S		MES P030 + ZSP S mit Brenneransteuerung Öl/Gas/Pell. und ZSP S	Projekt : Regelung		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094613/00					
Blatt 094613/00												

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

B-PLM	Modul 1
*BrennerKontakt	X9 8 N 7 N 6 X6 5
*Transferpumpe Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

092864/00

Niederspannung 230 VAC

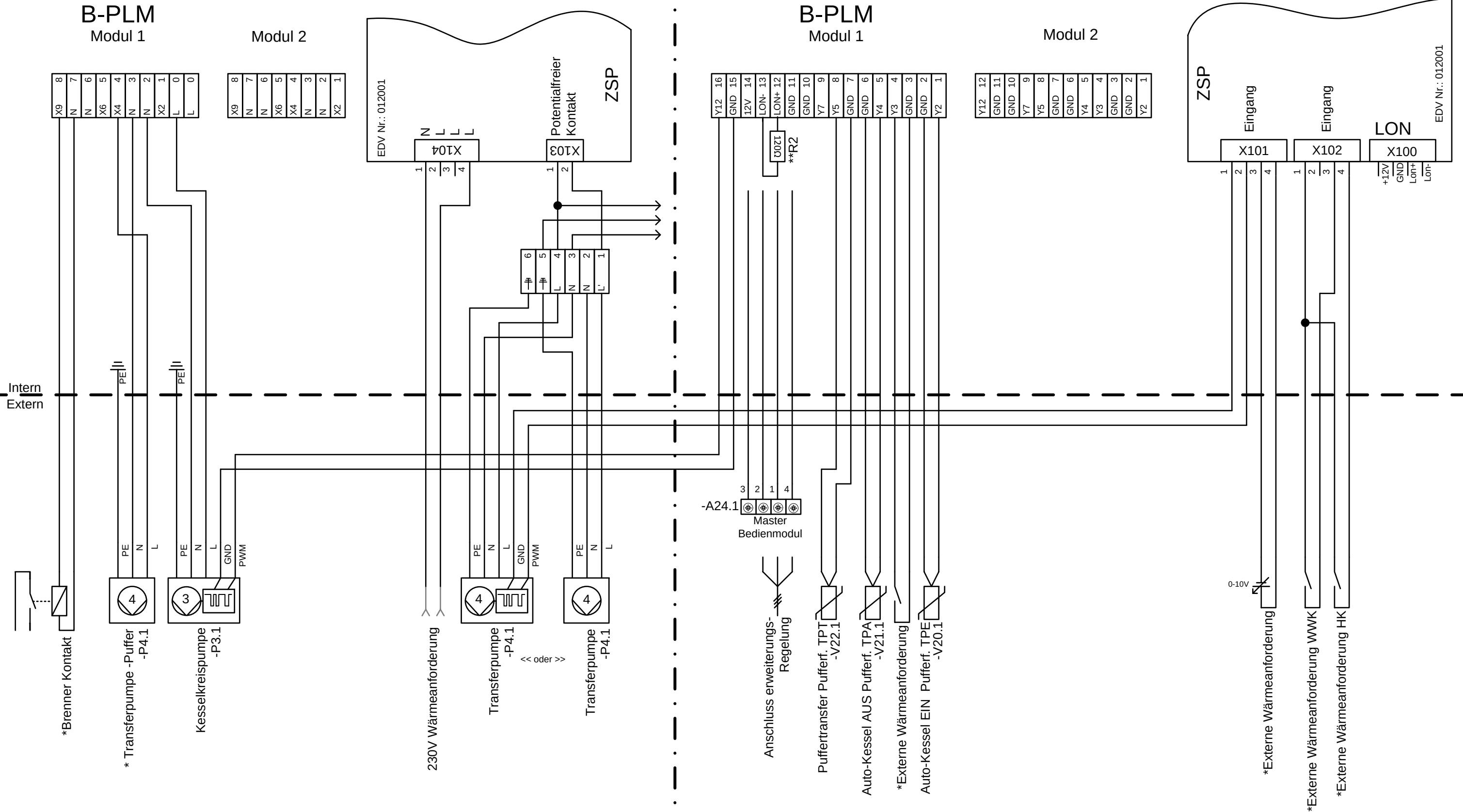
Kleinspannung - Fühler

B-PLM
Modul 1

Modul 2

B-PLM
Modul 1

Modul 2



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Transferpumpe	N
	L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND -X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

WVF+	Modul 1
Öl/Gas/Pell.	X9 8 N 7 N 6 X6 5
3-Wege- Umschaltventil Fest	
*Transferpumpe-Puffer	X4 4 N 3
	N 2
PWM Dauerphase 1	X2 1
PWM Dauerphase 2	L 0 L 0

UML+	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	Modul 1
PWM Puffer- Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

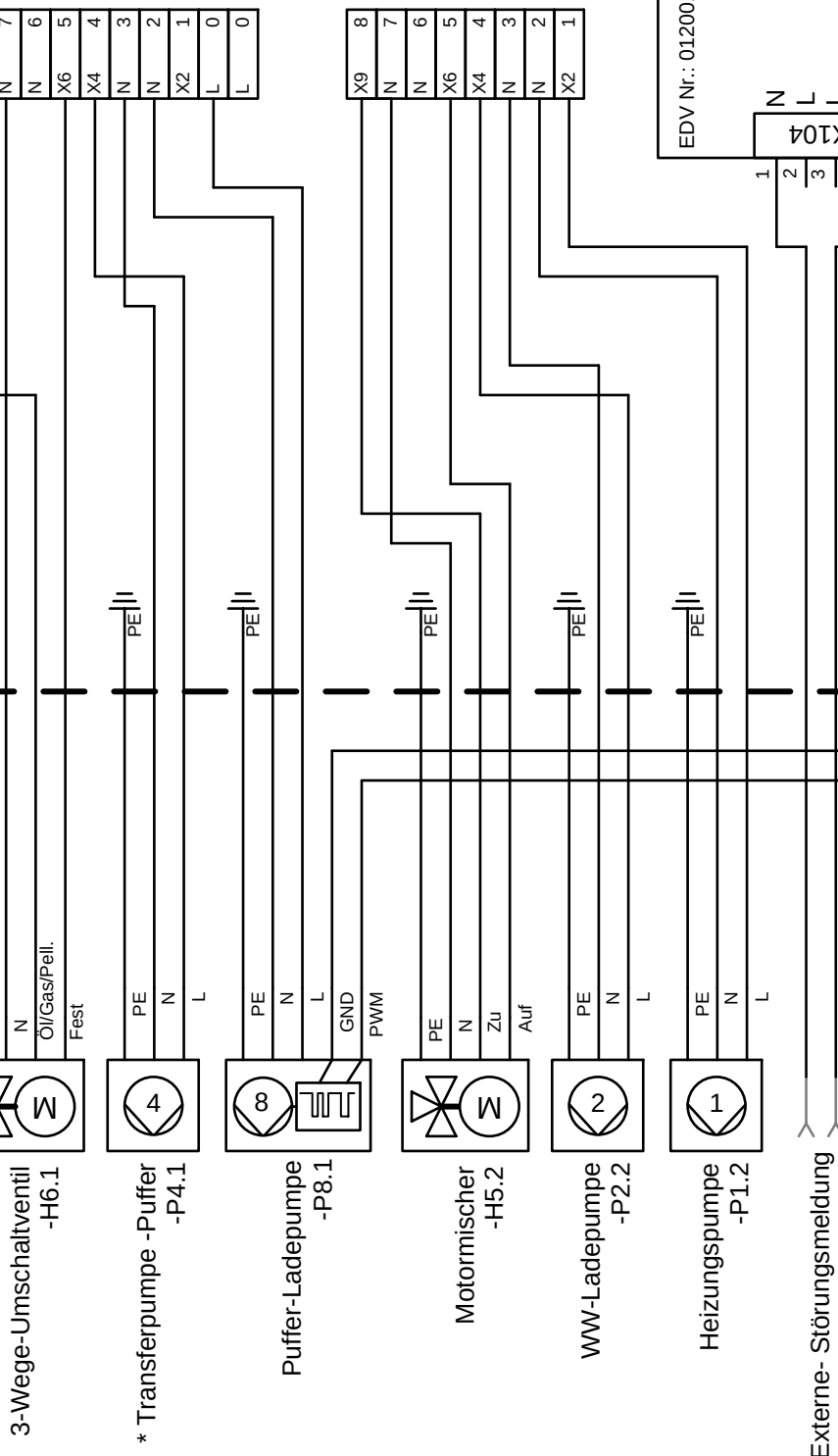
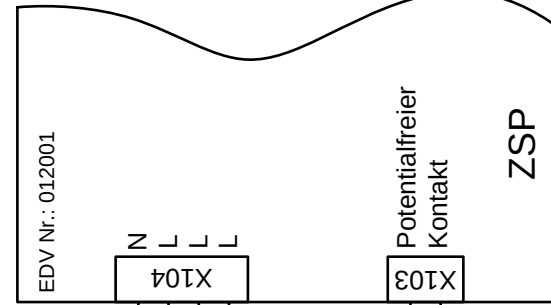
	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

Niederspannung 230 VAC

Kleinspannung - Fühler

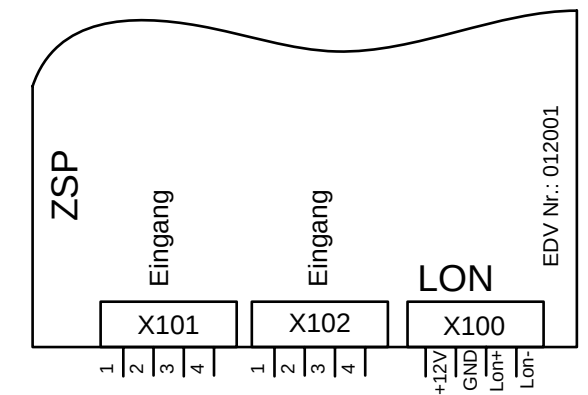
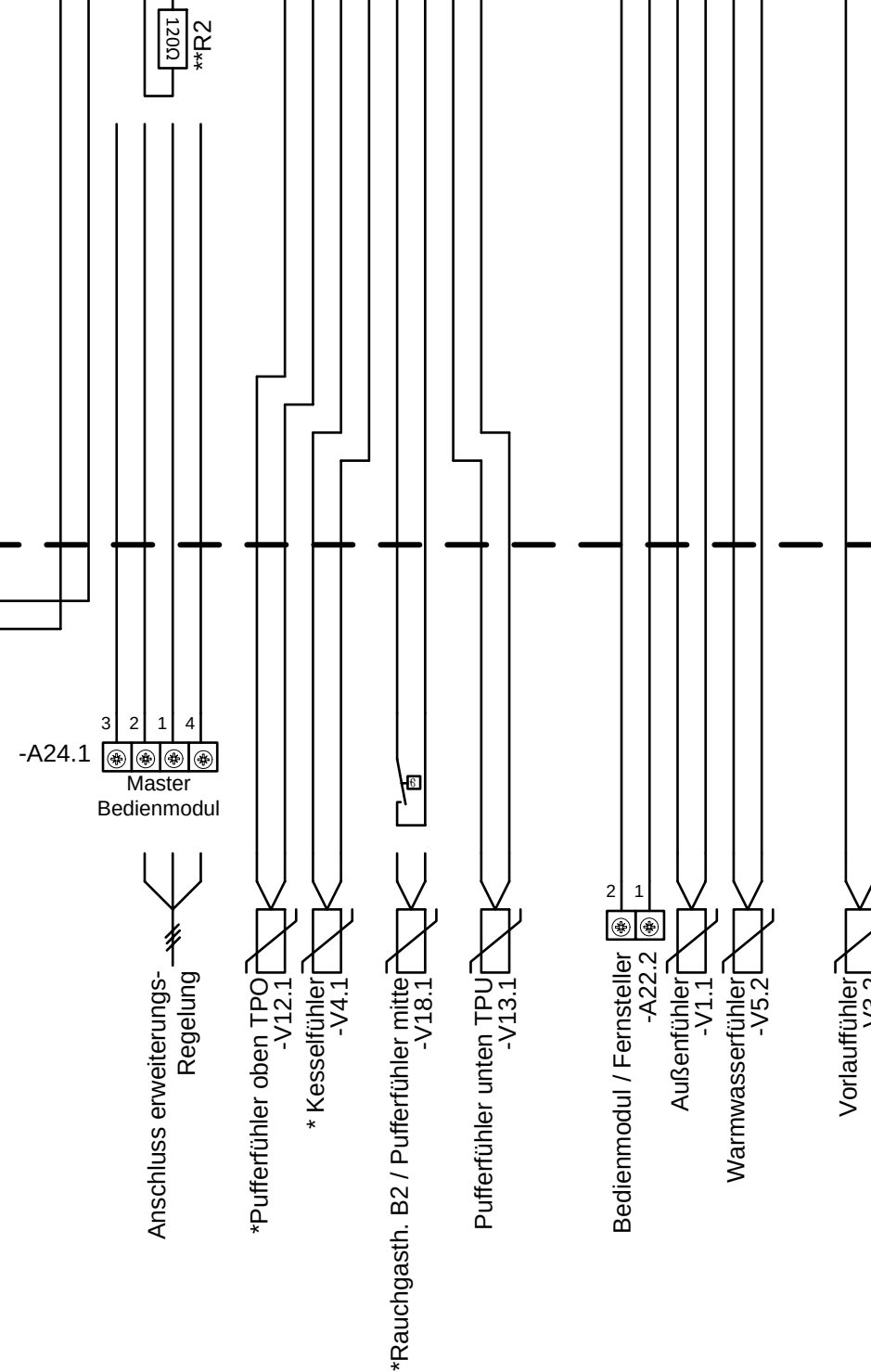
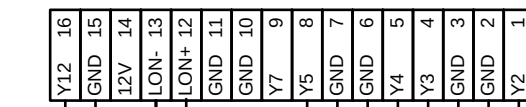
B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1



B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM/ UML+ / ZSP S

Zeichnungs Nr.: 094624/00

MES P041 + H021 + ZSP S

Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Pufferspeicher-Modul B-PLM und ZSP S

Projekt :
Regelung



1 mm : 1 mm

Blatt 094624/00

-XZSP	Zusatzprint
PE	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
	230VAC L 1
	Intern L' 2 L' 3
	230VAC N 4
	Intern N' 5 N' 6

WVF+	Modul 1
Öl/Gas/Pell. 3-Wege- Umschaltventil Fest	X9 8
	N 7
	N 6
	X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML+	Modul 2 Heizkreis 1
Zu HK 1 Motormischer Auf	X9 8
	N 7
	N 6
	X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

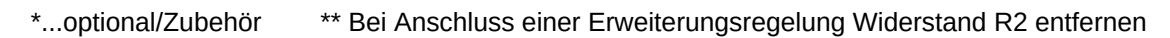
	Modul 3
X9 8 N 7 N 6 X6 5	
X4 4 N 3	
N 2 X2 1	

WVF+	Modul 1
PWM Puffer- Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14
	Lon- 13
	Lon+ 12
	GND 11
	GND 10
	Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

UML+	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
Y12 12 GND 11	
GND 10 Y7 9	
Y5 8 GND 7	
GND 6 Y4 5	
Y3 4 GND 3	
GND 2 Y2 1	

Kleinspannung - Fühler



				Datum	24.06.2013	WVF+ / UML+ / ZSP W		MES P041 + H021 + ZSP W Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis Automatische Festbrennstoffumschaltung mit Pufferladung und ZSP W	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094626/00				 
											Blatt 094626/00

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Transferpumpe	N
	L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND -X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

WVF+	Modul 1
PWM Puffer-Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

WVF+	Modul 1
Öl/Gas/Pell.	X9 8 N 7
3-Wege-Umschaltventil Fest	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

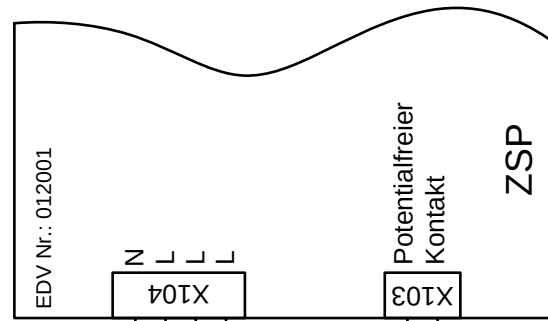
092877/01

092877/01

Niederspannung 230 VAC

WVF+
Modul 1

Modul 2



EDV Nr.: 012001

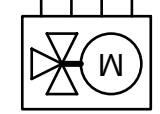
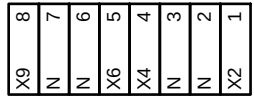


Potentialfreier Kontakt

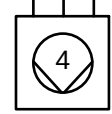
Summenstörungsmeldung

Externe- Störungsmeldung

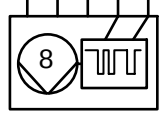
Intern
Extern



3-Wege-Umschaltventil
-H6.1



* Transferpumpe -Puffer
-P4.1

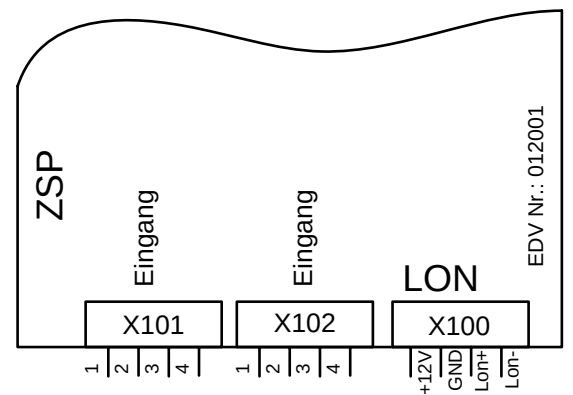
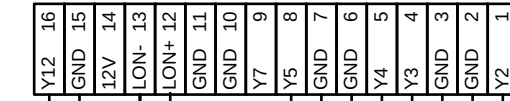


Puffer-Ladepumpe
-P8.1

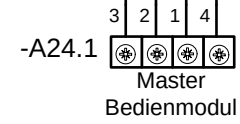
Kleinspannung - Fühler

WVF+
Modul 1

Modul 2



EDV Nr.: 012001



Anschluss erweiterungs-
Regelung

*Pufferfühler oben TPO
-V12.1

* Kesselfühler
-V4.1

*Rauchgasth. B2 / Pufferfühler mitte
-V18.1

Pufferfühler unten TPU
-V13.1

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

-XZSP	Zusatzprint
PE	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

WVF+	Modul 1
PWM Puffer-Ladepumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Pufferfühler oben TPO	Y5 8 GND 7
*Kesselfühler	GND 6 Y4 5
*Rauchgasth. B2 Pufferfühler mitte	Y3 4 GND 3
Pufferfühler unten TPU	GND 2 Y2 1

WVF+	Modul 1
Öl/Gas/Pell.	X9 8 N 7
3-Wege-Umschaltventil Fest	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

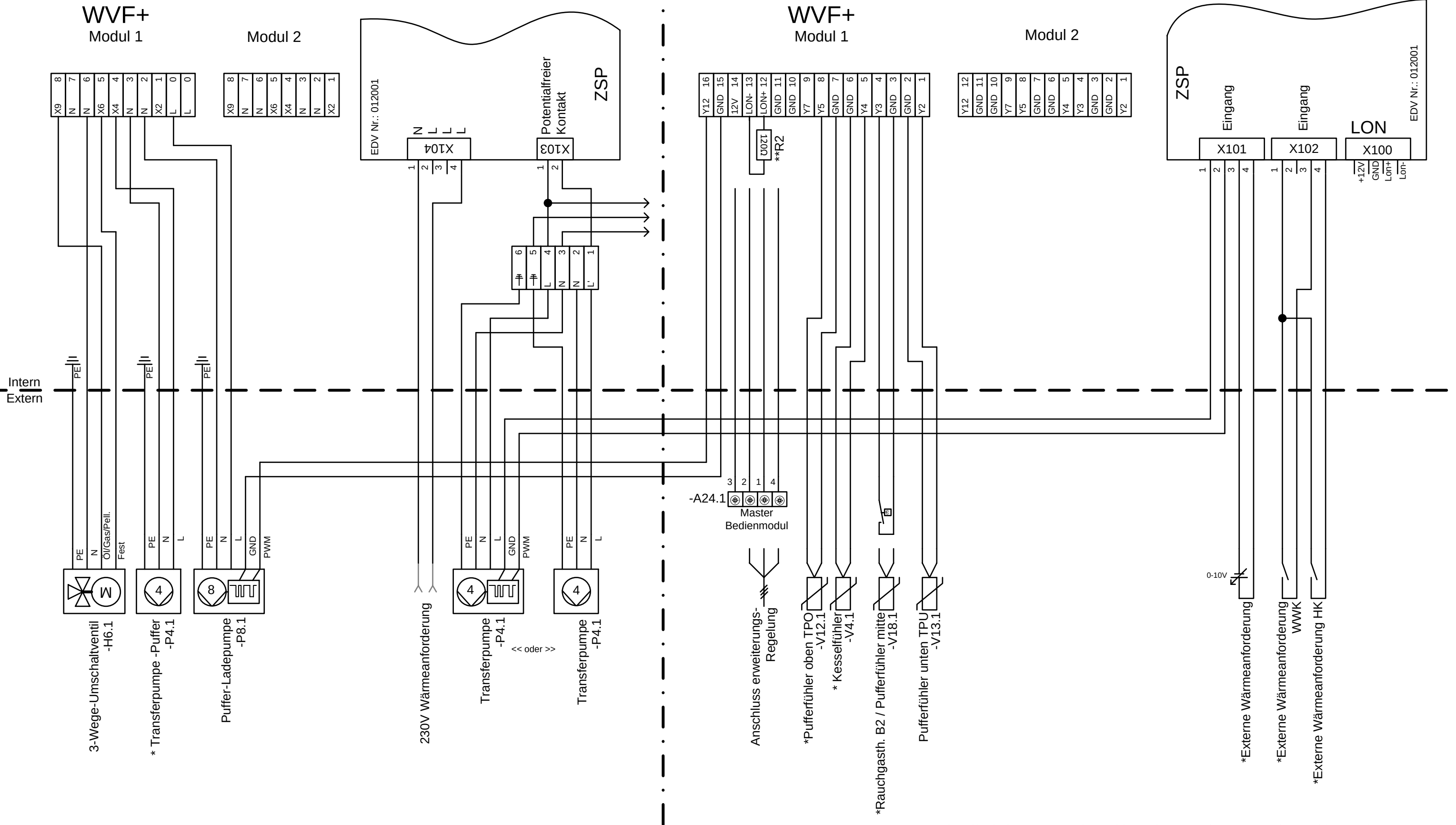
	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

092877/01

Niederspannung 230 VAC

Kleinspannung - Fühler



-XZSP	Zusatzprint
PE	PE PE
Dauerphase	L N
Transferpumpe	N L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpump-Puffer	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML +	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

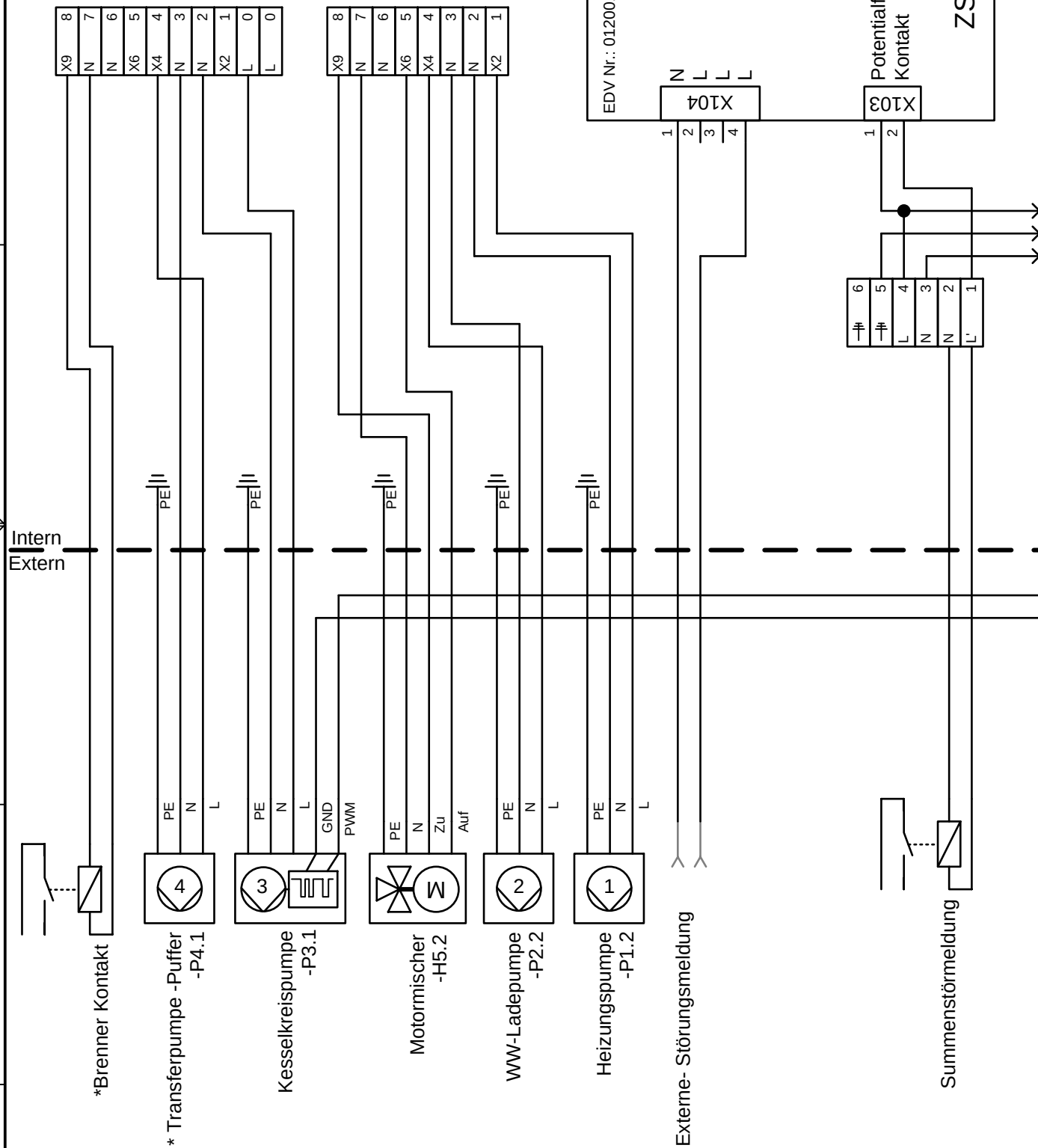
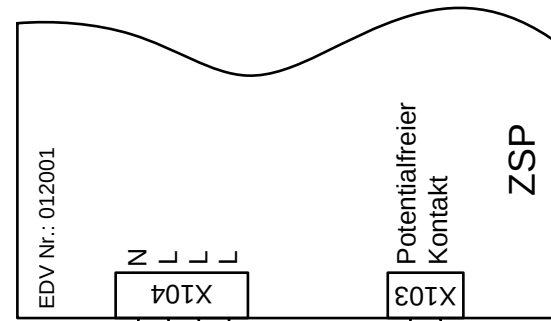
UML +	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

Niederspannung 230 VAC

B-PLM
Modul 1

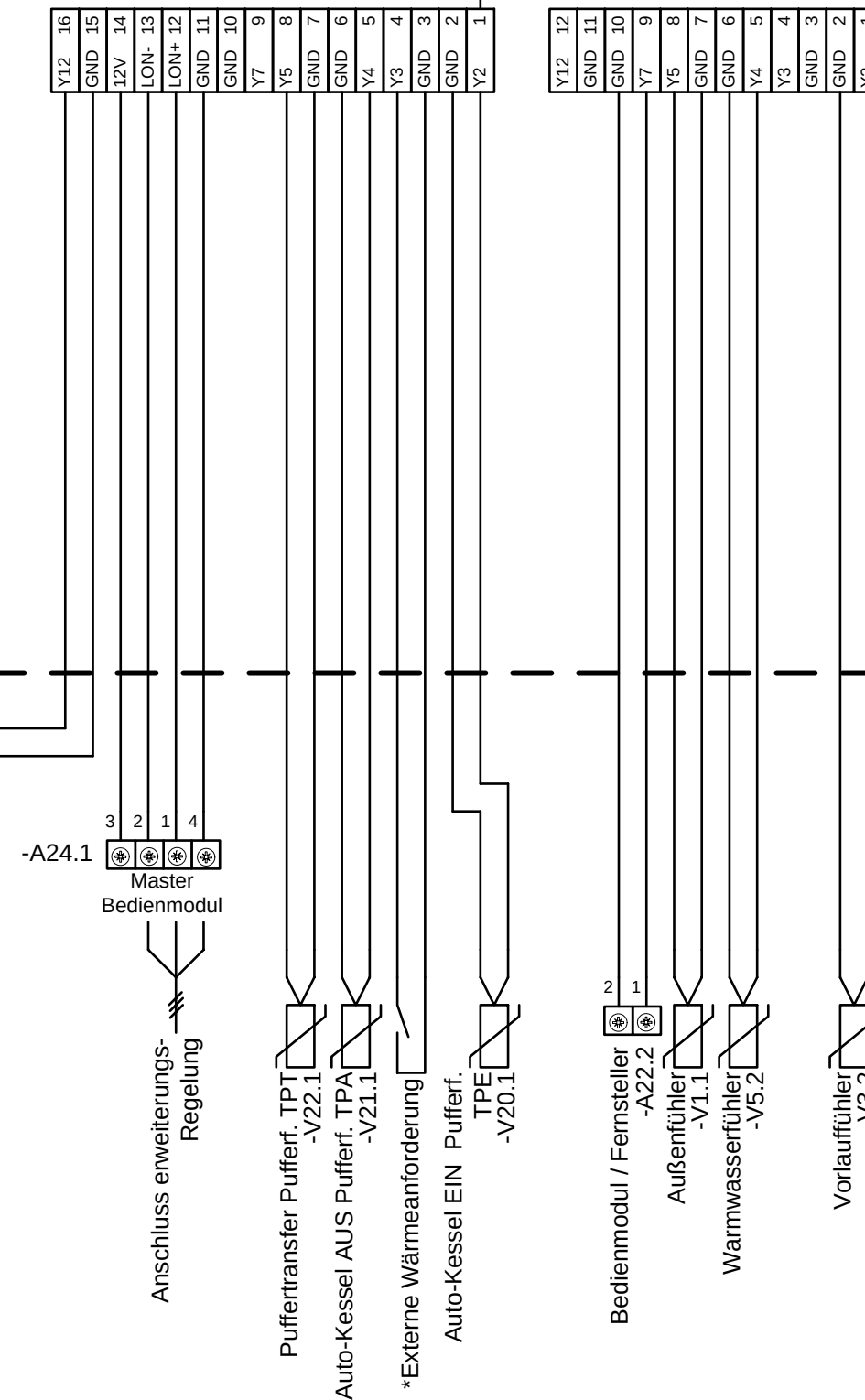
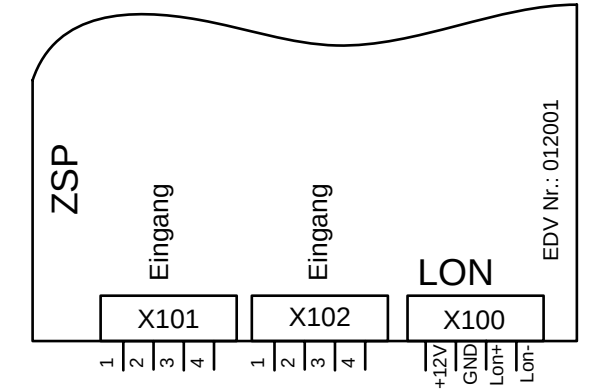
UML+
Modul 2
Heizkreis 1



Kleinspannung - Fühler

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / UML+ / ZSP S

Zeichnungs Nr.: 094620/00

MES P042 + H021 + ZSP S

Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Pufferspeicher-Modul B-PLM und ZSP S

Projekt :

Regelung



1 mm : 1 mm

2

Blatt 094620/00

-XZSP	Zusatzprint
PE	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpump-Puffer	X4 4 N 3
	N 2
	X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML +	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
WW-Ladepumpe HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML +	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

Niederspannung 230 VAC

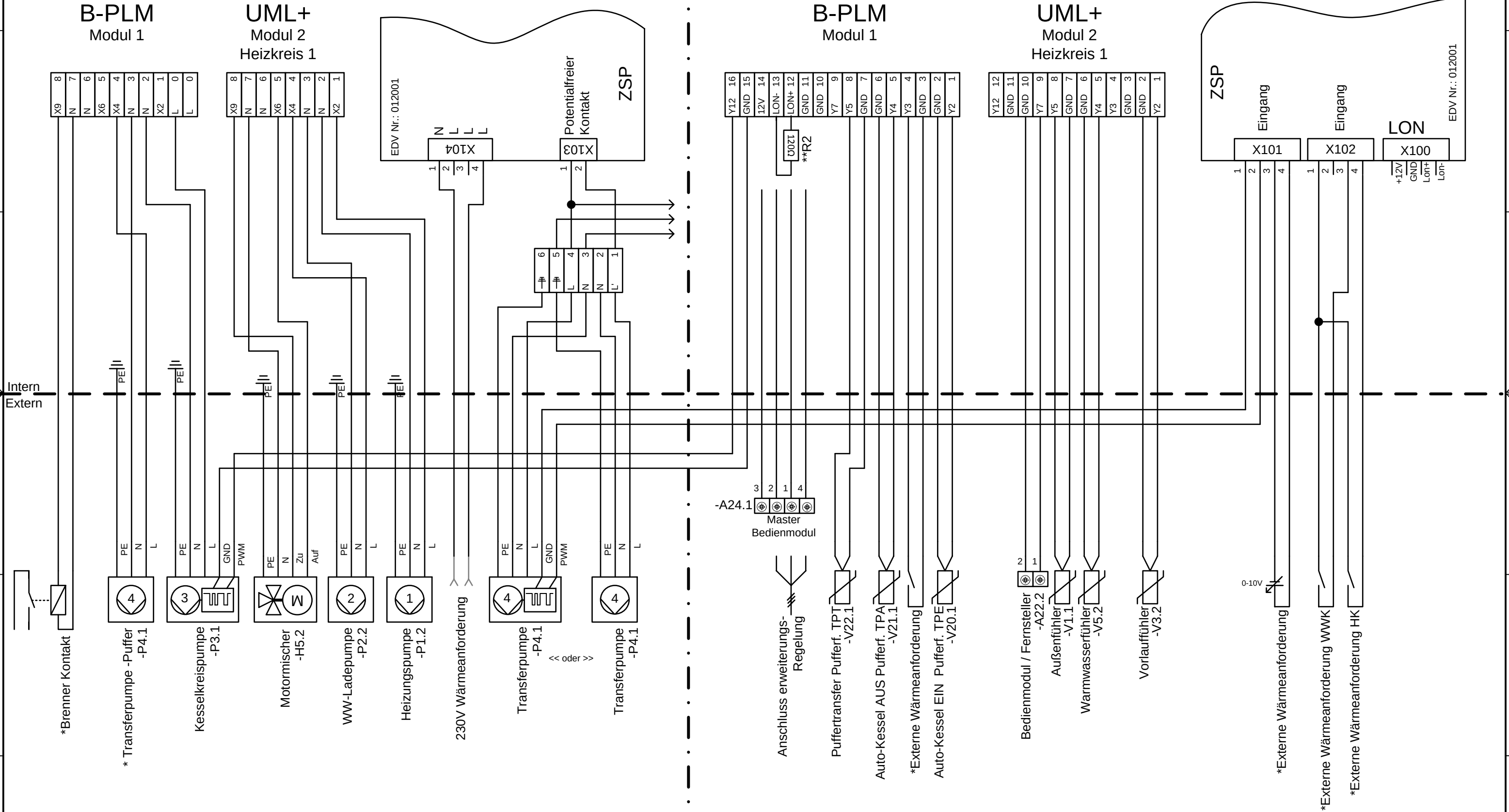
Kleinspannung - Fühler

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	B-PLM/ UML+ /ZSP W		MES P042 + H021 + ZSP W Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Pufferspeicher-Modul B-PLM und ZSP W		Projekt : Regelung				1 mm : 1 mm Blatt 094622/00	
Rev.	Änderung	Datum	Name	Gezeichnet	rot										
				Geprüft	ros	Zeichnungs Nr.:		094622/00							
				Genehmigt											

-XZSP	Zusatzprint
PE	PE PE
Dauerphase	L N
Transferpumpe	N L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

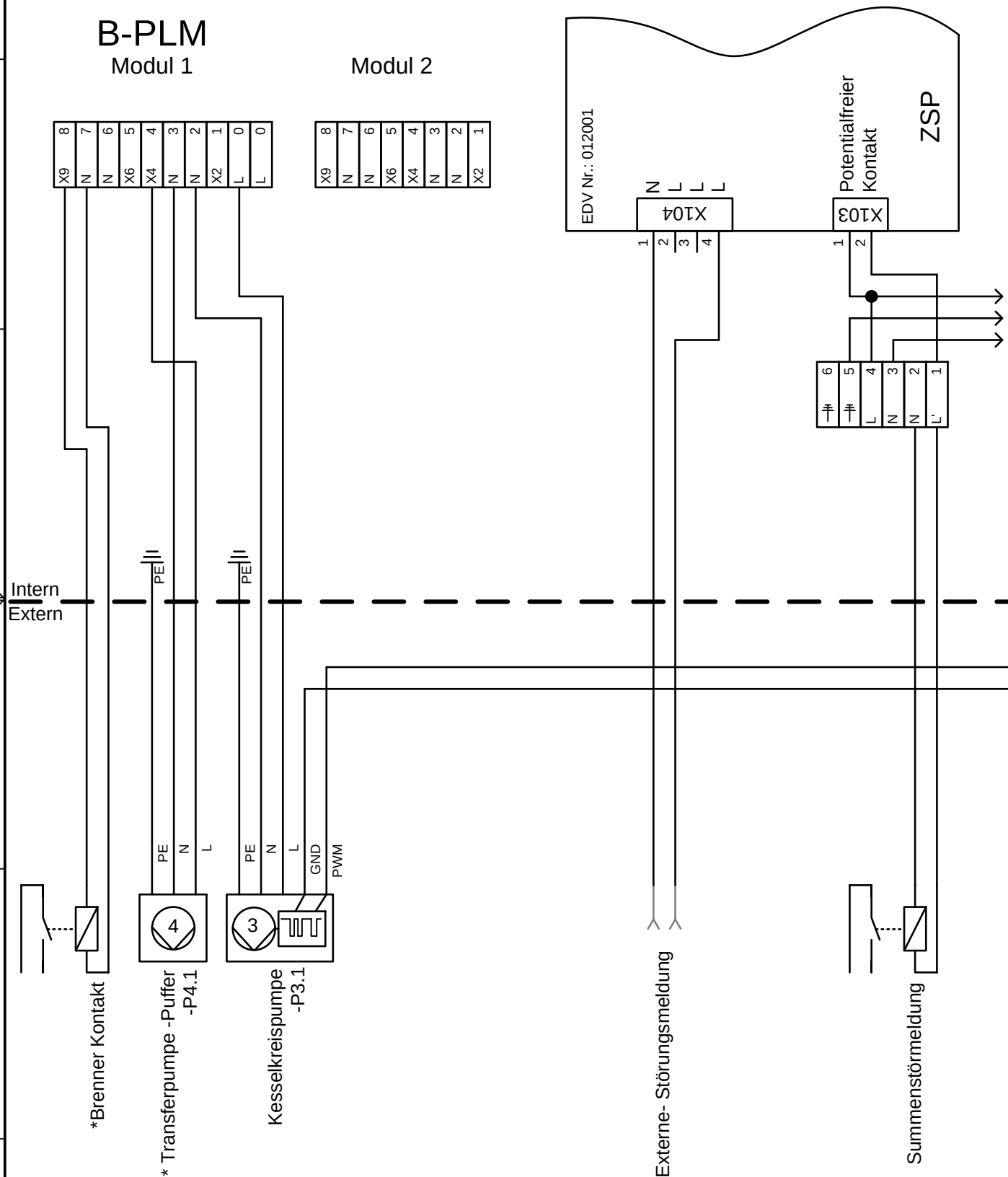
092890/01

Niederspannung 230 VAC

Kleinspannung - Fühler

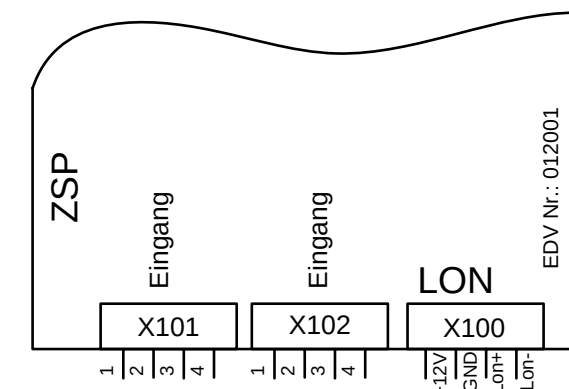
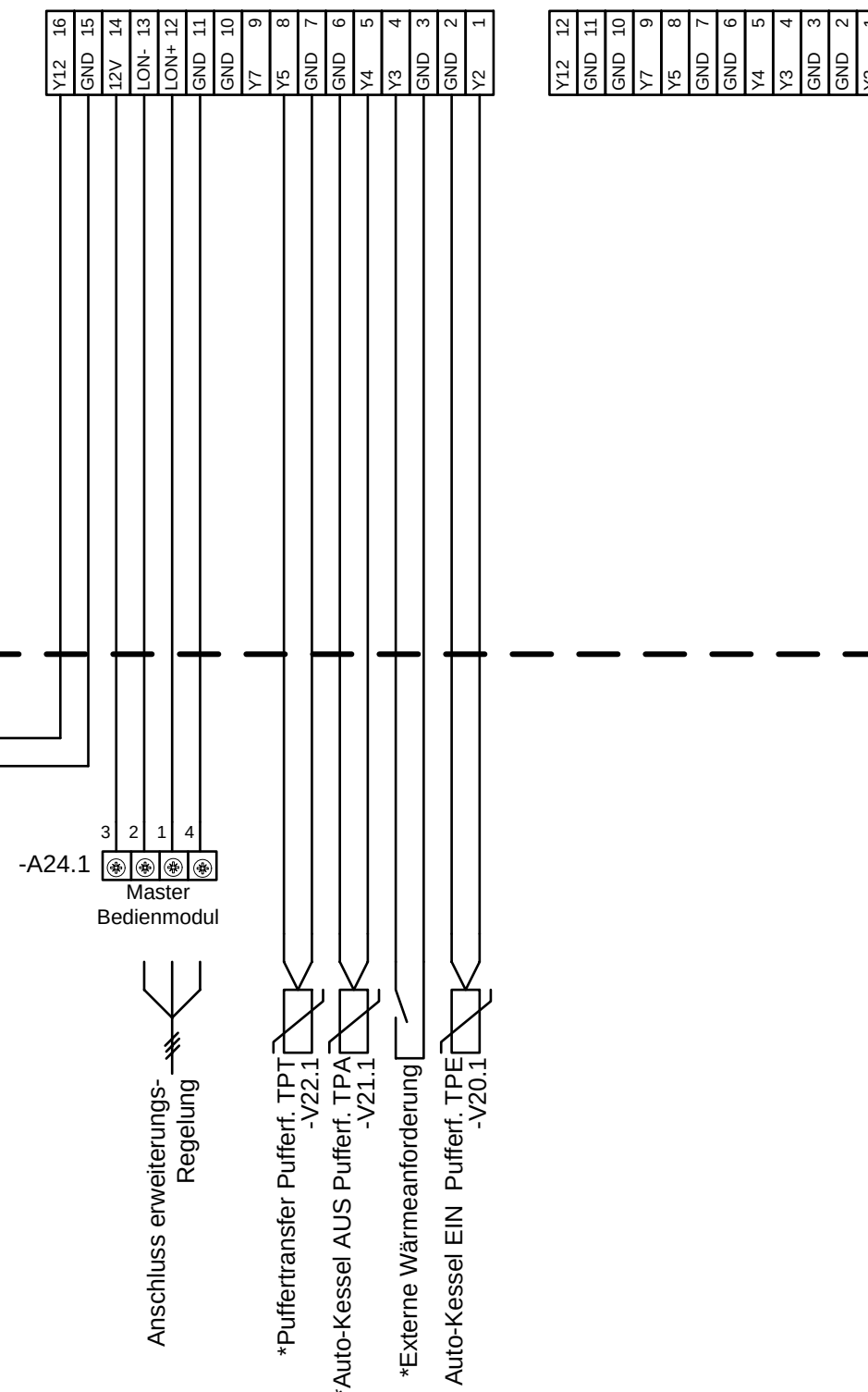
B-PLM Modul 1

Modul 2



B-PLM Modul 1

Modul 2



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	B-PLM / ZSP S		MES P042 + ZSP S Puffer Speicher B-PLM und ZSP S	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094618/00				Blatt 094618/00

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230VAC	L 1
Intern	L' 2 L' 3
230VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*Puffertransfer Pufferf. TPT	Y5 8 GND 7
*Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
*Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

B-PLM	Modul 1
*Brenner Kontakt	X9 8 N 7
	N 6 X6 5
*Transferpumpe-Puffer	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

092890/01

Niederspannung 230 VAC

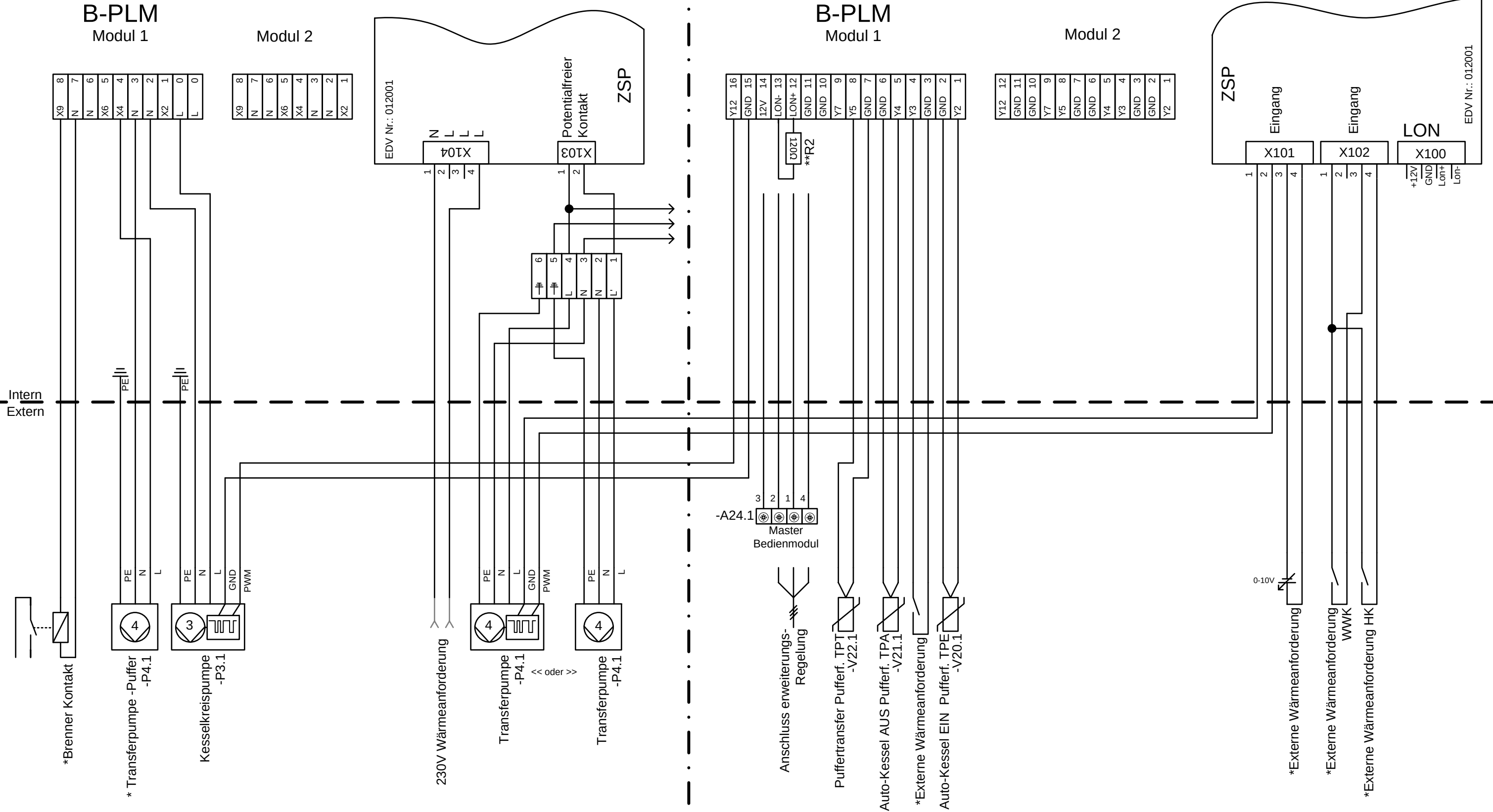
Kleinspannung - Fühler

B-PLM Modul 1

Modul 2

B-PLM Modul 1

Modul 2



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / ZSP W

Zeichnungs Nr.: 094619/00

MES P042 + ZSP W
Puffer Speicher Modul B-PLM
und ZSP W

Projekt :
Regelung

windhager

1 mm : 1 mm

2

Blatt 094619/00

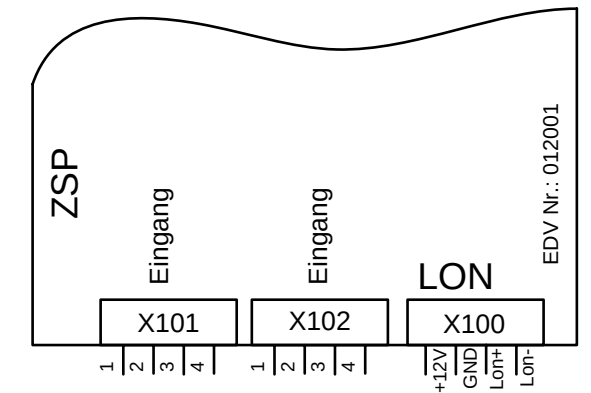
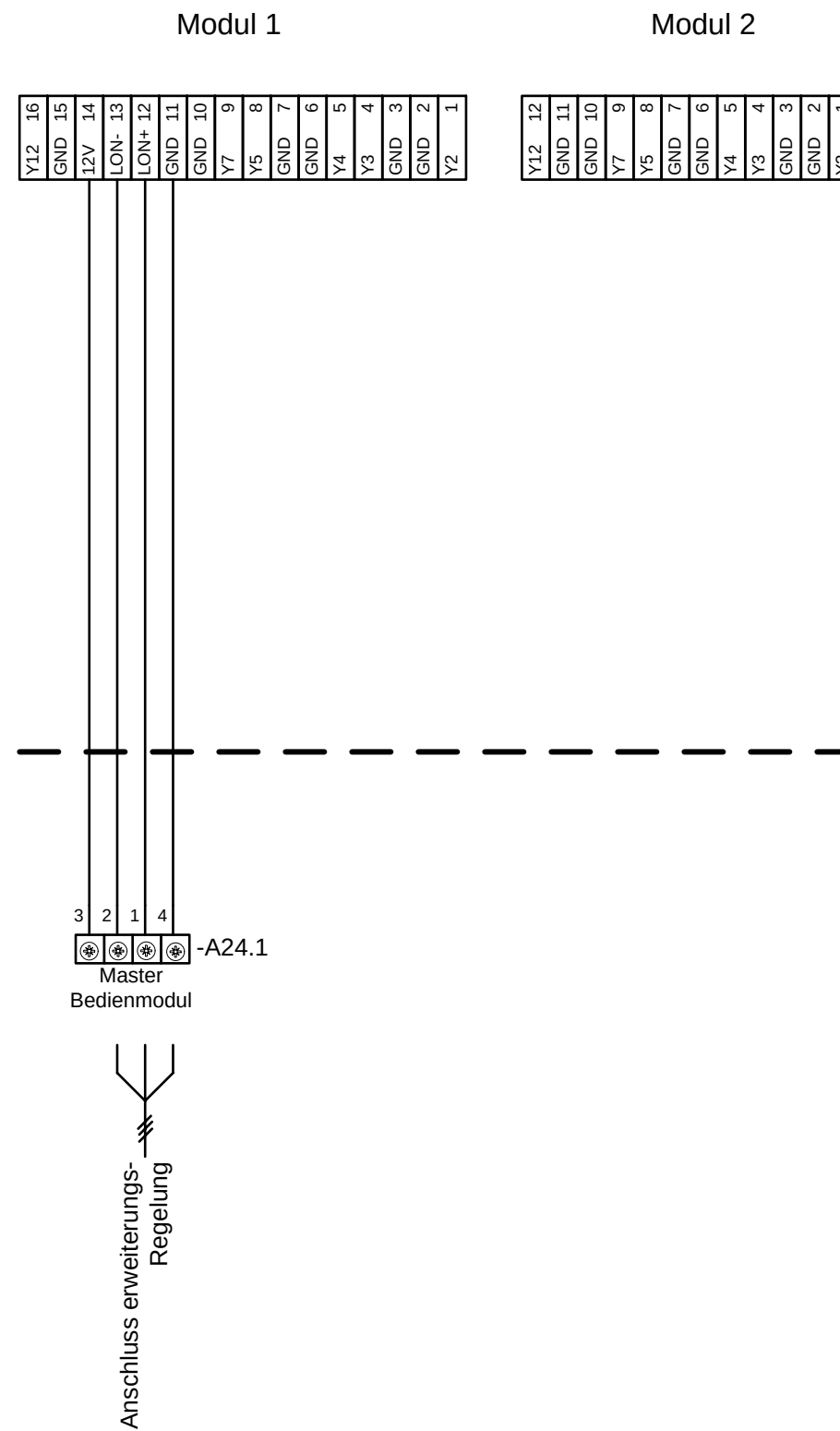
-XZSP	Zusatzprint
PE	PE PE
Dauerphase	L N
Transferpumpe	N L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

Kleinspannung - Fühler



** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	ZSP S		MES ZSP S Zusatzprint S	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros	Zeichnungs Nr.: 094627/00					
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	Modul 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

MES	Modul 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	Modul 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	Modul 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	Modul 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	Modul 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

Niederspannung 230 VAC

Kleinspannung - Fühler

Modul 1

Modul 2

Modul 1

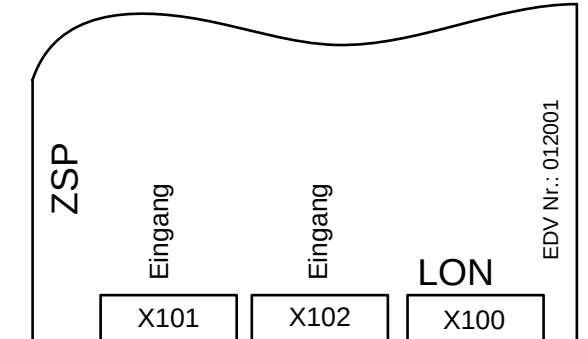
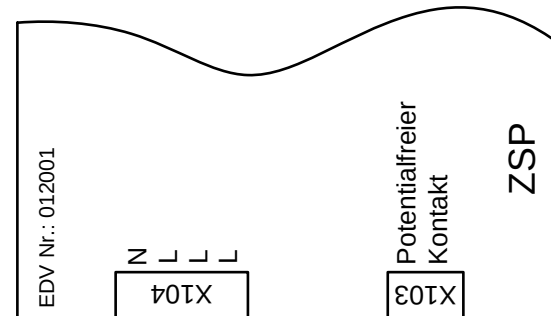
Modul 2

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

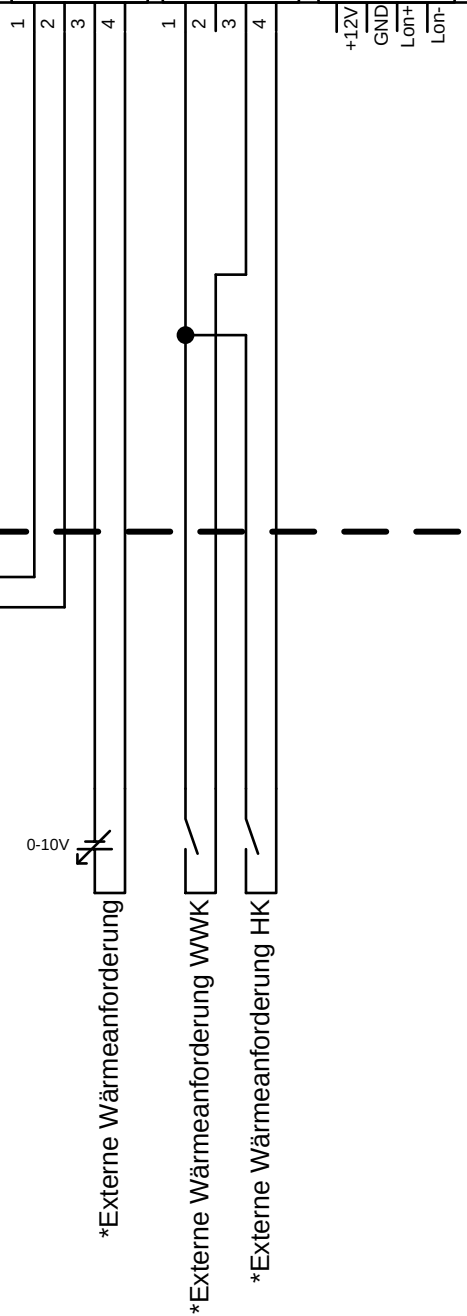
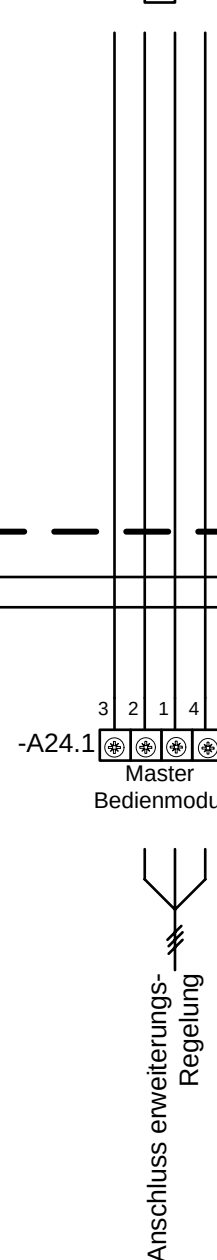
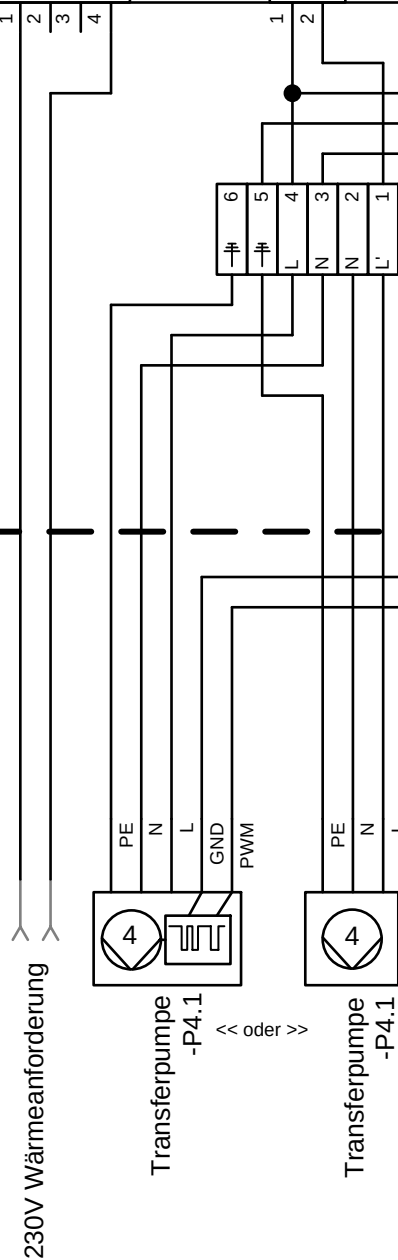
X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



Extern
Intern



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	24.06.2013	ZSP W		MES ZSP W Zusatzprint W	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						Zeichnungs Nr.:
				Geprüft	ros	Blatt 094628/00					
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	Zusatzprint
PE	PE
	PE
Dauerphase	L
	N
Transferpumpe	N
	L'

EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND -X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

-XA	Anschlussblock
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	Modul 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

MES	Modul 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	Modul 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	Modul 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	Modul 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	Modul 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brennerkontakt	X9 8 N 7
	N 6 X6 5
* Transferpumpe	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML +	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
Schütz -K1 HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* Puffertransfer Pufferf. TPT	Y5 8 GND 7
* Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
* Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML +	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

Niederspannung 230 VAC

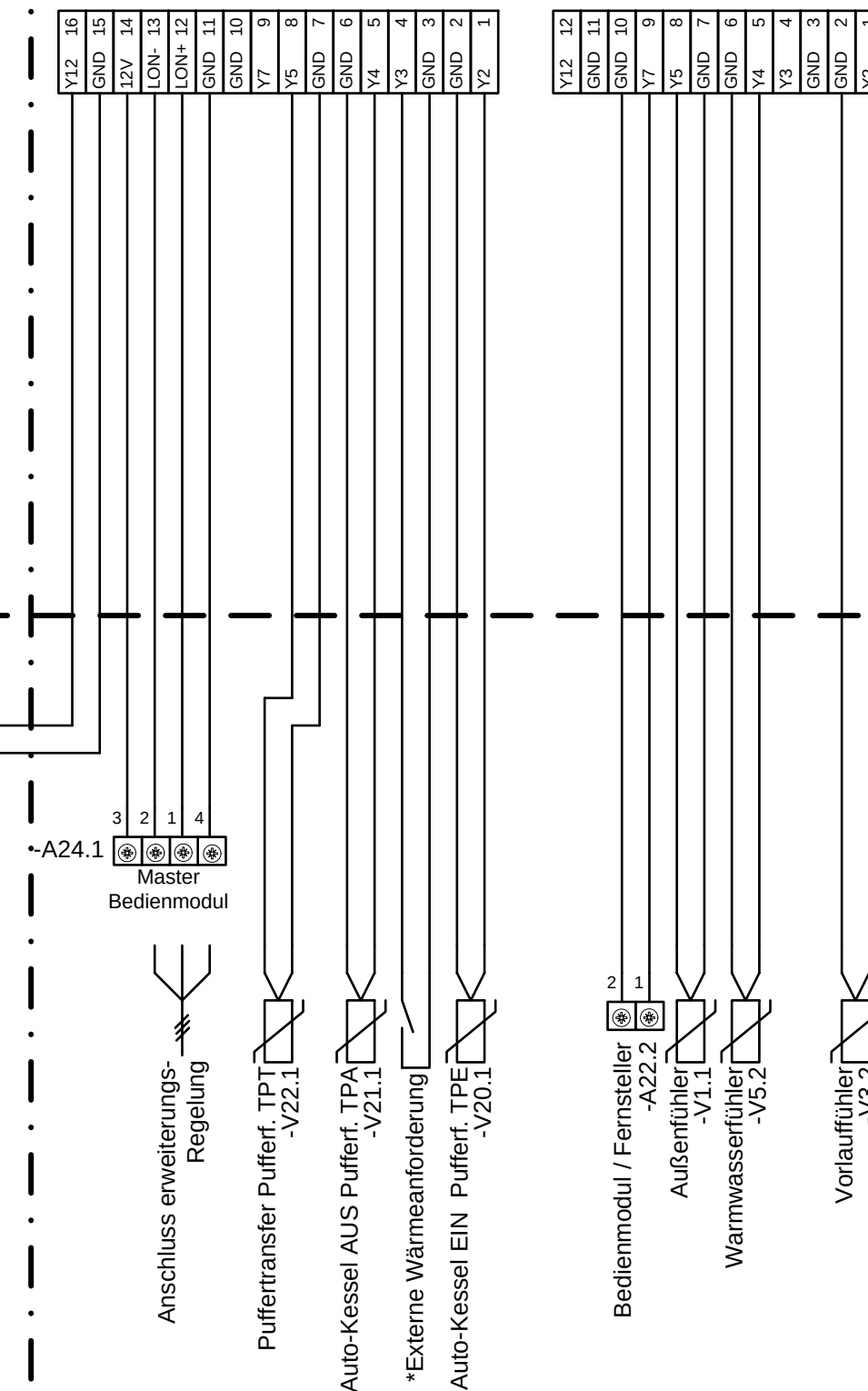
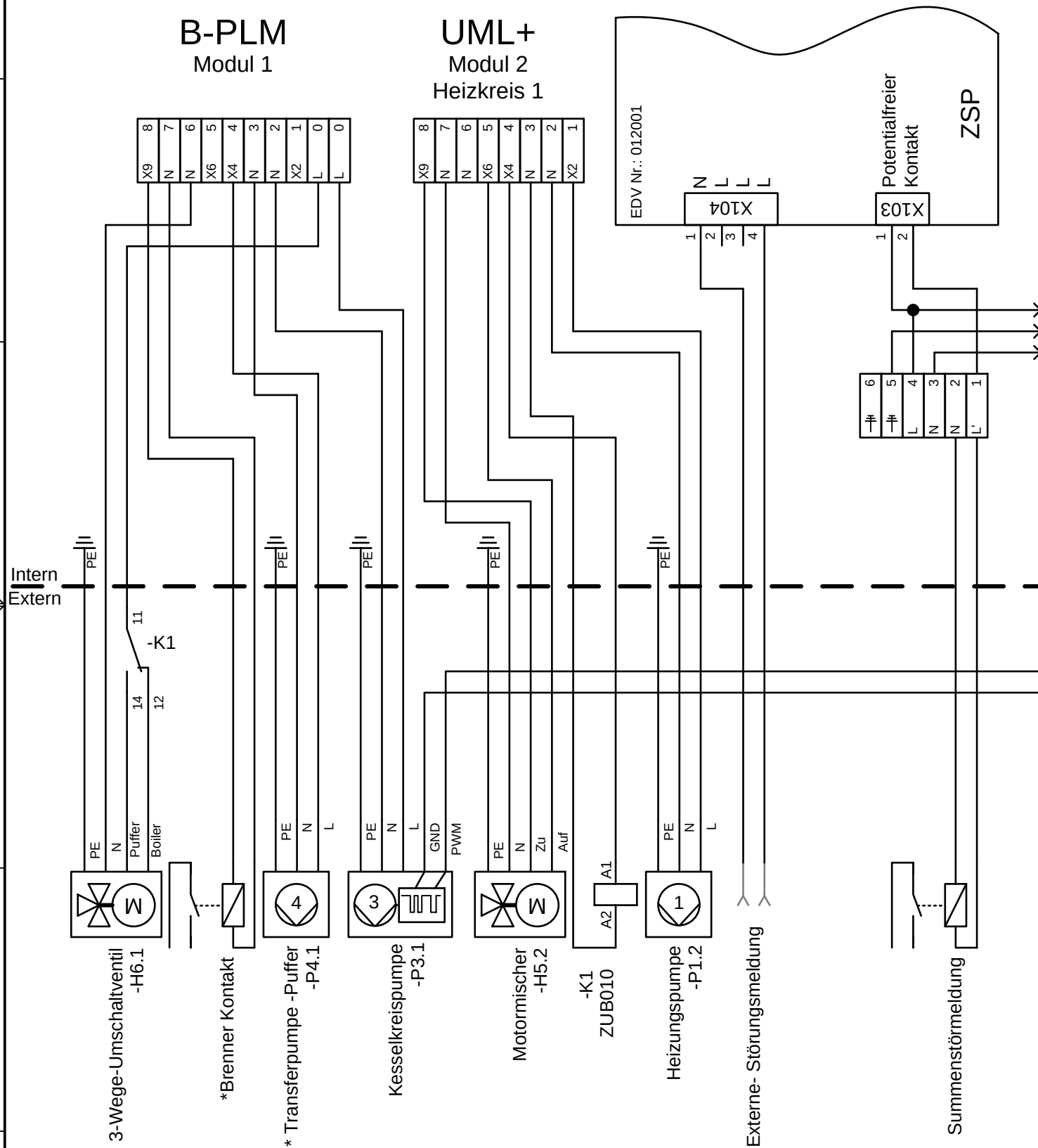
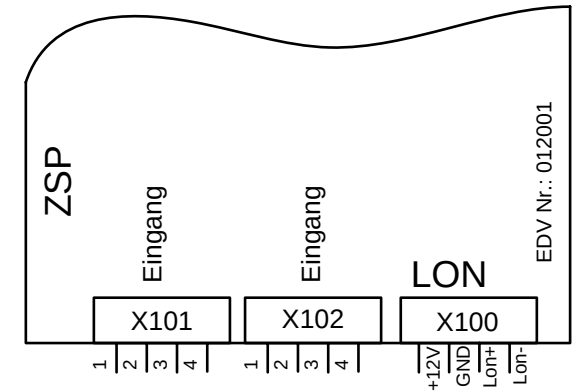
Kleinspannung - Fühler

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum 24.06.2013
Gezeichnet rot
Geprüft ros
Genehmigt

B-PLM/ UML+/ ZSP S

Zeichnungs Nr.: 094629/00

MES ZUB010 + ZSP S

ZUB010 SYS 3-Wege-Umschaltventil Puffer-Boiler und ZSP S

Projekt :

Regelung

windhager

1 mm : 1 mm

2

Blatt 094629/00

-XZSP	Zusatzprint
	PE
	PE
Dauerphase	L
	N
Summenstörmeldung	N
	L'

-XSP	Zusatzprint
GND	
	-X101 /2
GND	
	-X101 /4

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	Anschlussblock
230 VAC	L 1
Intern	L' 2 L' 3
230 VAC	N 4
Intern	N' 5 N' 6

B-PLM	Modul 1
*Brennerkontakt	X9 8 N 7
	N 6 X6 5
* Transferpumpe	X4 4 N 3
	N 2 X2 1
PWM Dauerphase 1	L 0
PWM Dauerphase 2	L 0

UML +	Modul 2 Heizkreis 1
Zu HK 1	X9 8 N 7
Motormischer Auf	N 6 X6 5
Schütz -K1 HK 1	X4 4 N 3
Heizungspumpe HK 1	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	Modul 1
PWM Kesselkreispumpe	Y12 16 GND 15
Master Bedienmodul Anschluss erweiterungs- Regelung	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* Puffertransfer Pufferf. TPT	Y5 8 GND 7
* Auto-Kessel AUS Pufferf. TPA	GND 6 Y4 5
* Externe Wärmeanforderung	Y3 4 GND 3
Auto-Kessel EIN Pufferf. TPE	GND 2 Y2 1

UML +	Modul 2 Heizkreis 1
	Y12 12 GND 11
Bedienmodul Fernsteller	GND 10 Y7 9
Außenfühler	Y5 8 GND 7
Warmwasserfühler HK 1	GND 6 Y4 5
	Y3 4 GND 3
Vorlauffühler HK 1	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

Niederspannung 230 VAC

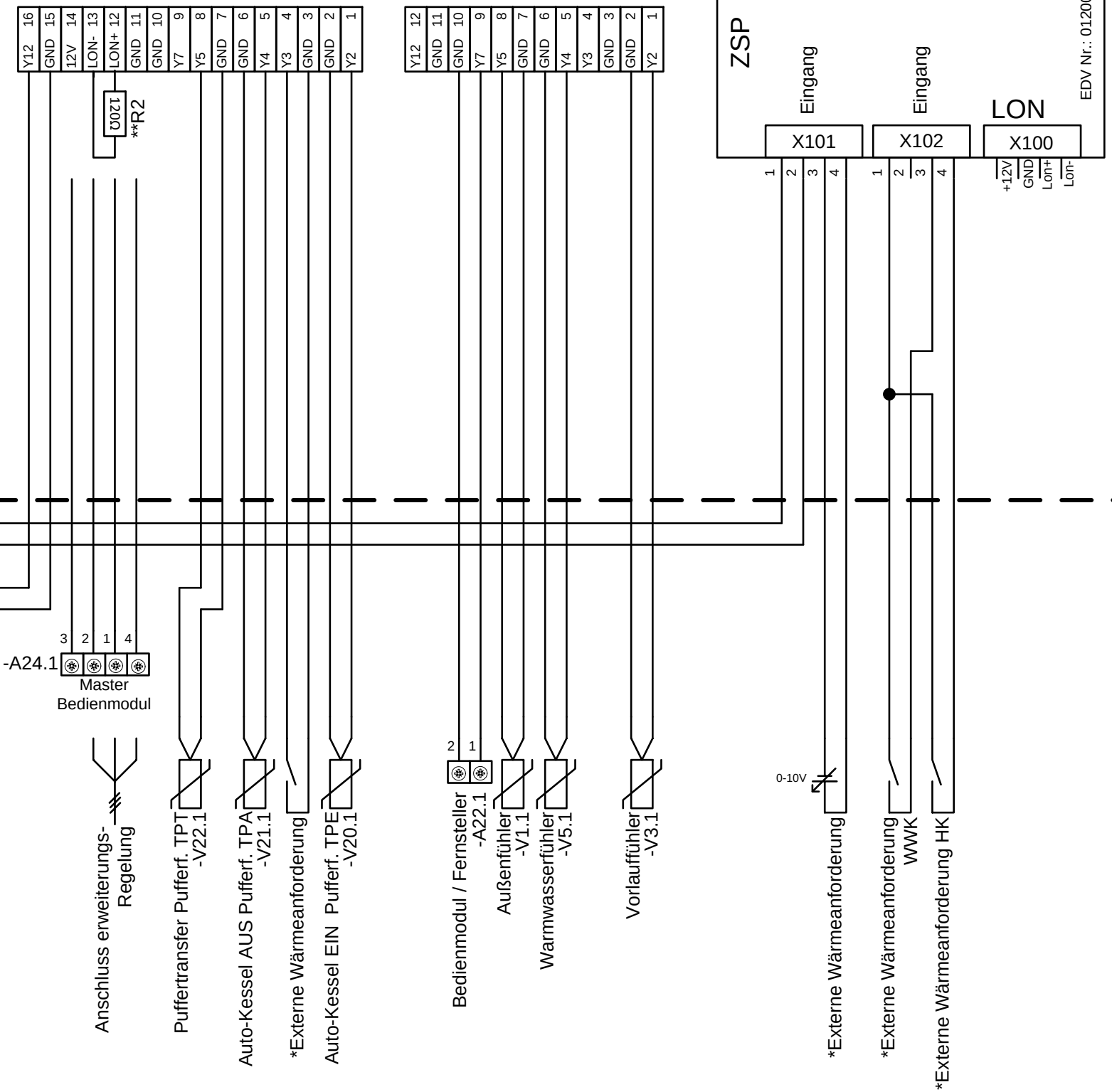
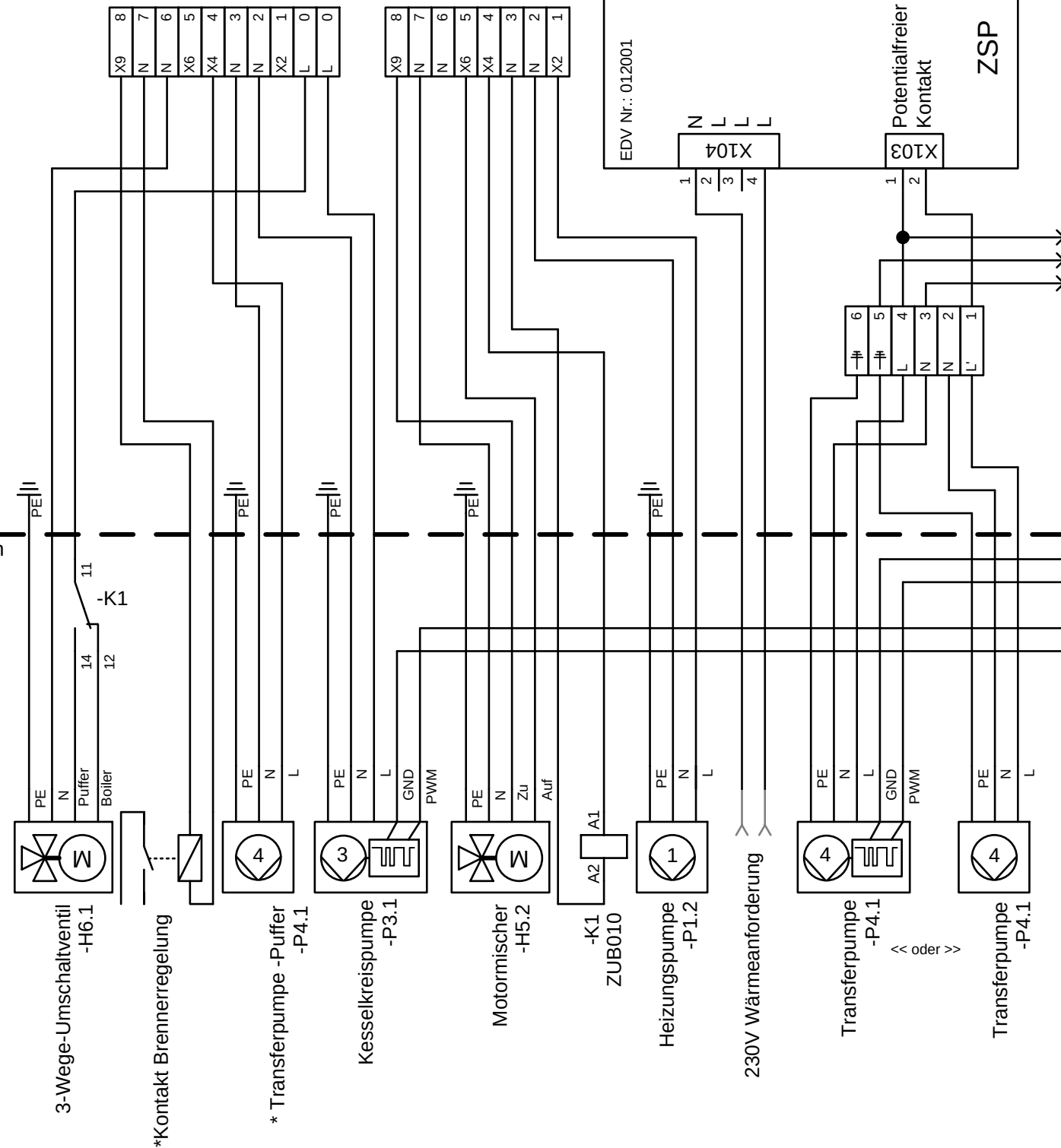
Kleinspannung - Fühler

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1

B-PLM
Modul 1

UML+
Modul 2
Heizkreis 1



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM/ UML+/ ZSP W

Zeichnungs Nr.: 094630/00

MES ZUB010 + ZSP W

ZUB010 3-Wege-Umschaltventil Puffer-Boiler und ZSP W

Projekt :

Regelung



1 mm : 1 mm

2

Blatt 094630/00

-XZSP	Zusatzprint
PE	PE PE
Dauerphase	L N
Transferpumpe	N L'

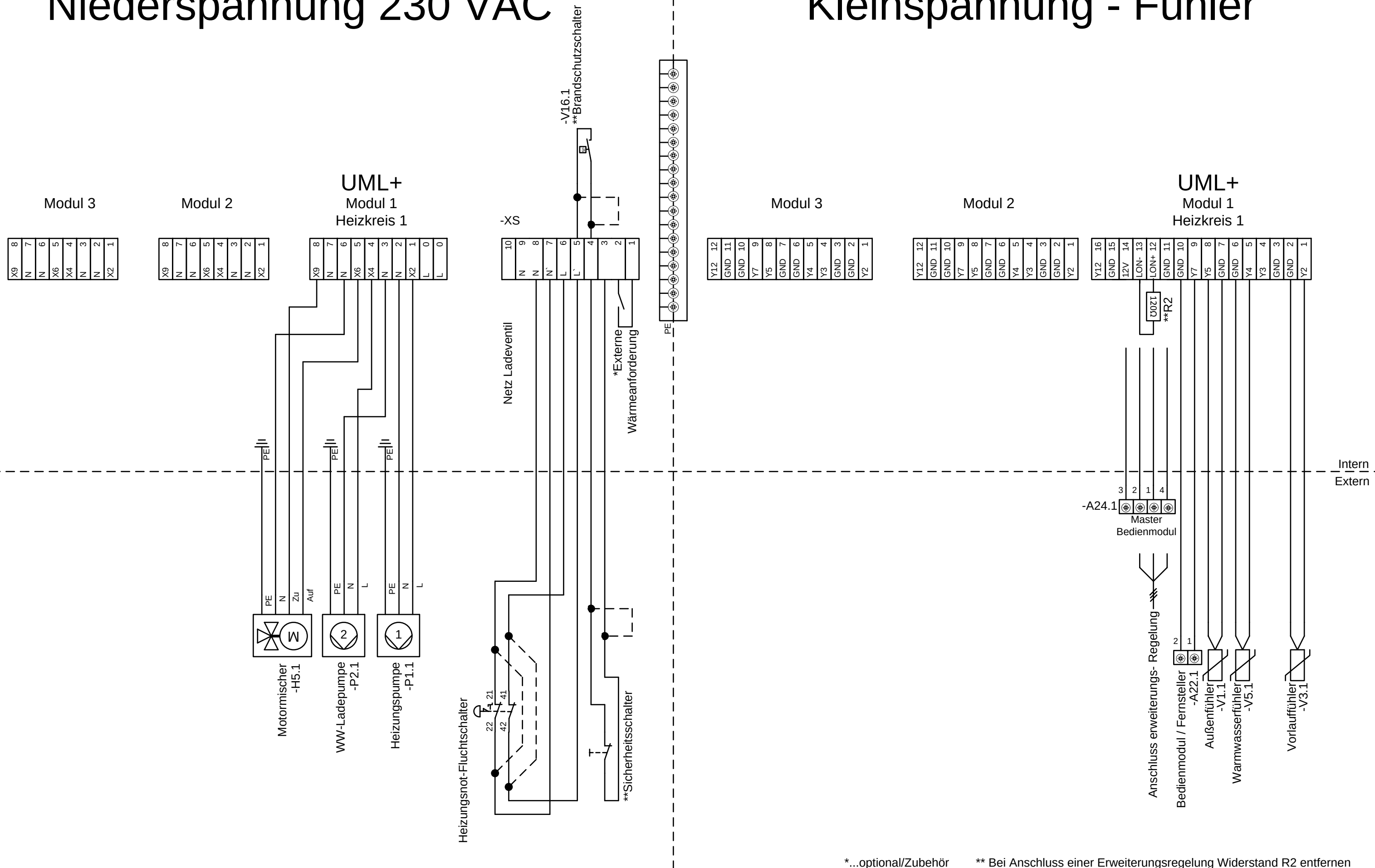
EDV Nr. 094812/00

-XSP	Zusatzprint
GND -X101 /2	PWM Transferpumpe
GND -X101 /4	Wärmeanforderung 0-10V

GND	
-X102 /2	
-X102 /3	Externe-Wärmeanf. WWK
-X102 /4	Externe-Wärmeanf. HK

Niederspannung 230 VAC

Kleinspannung - Fühler



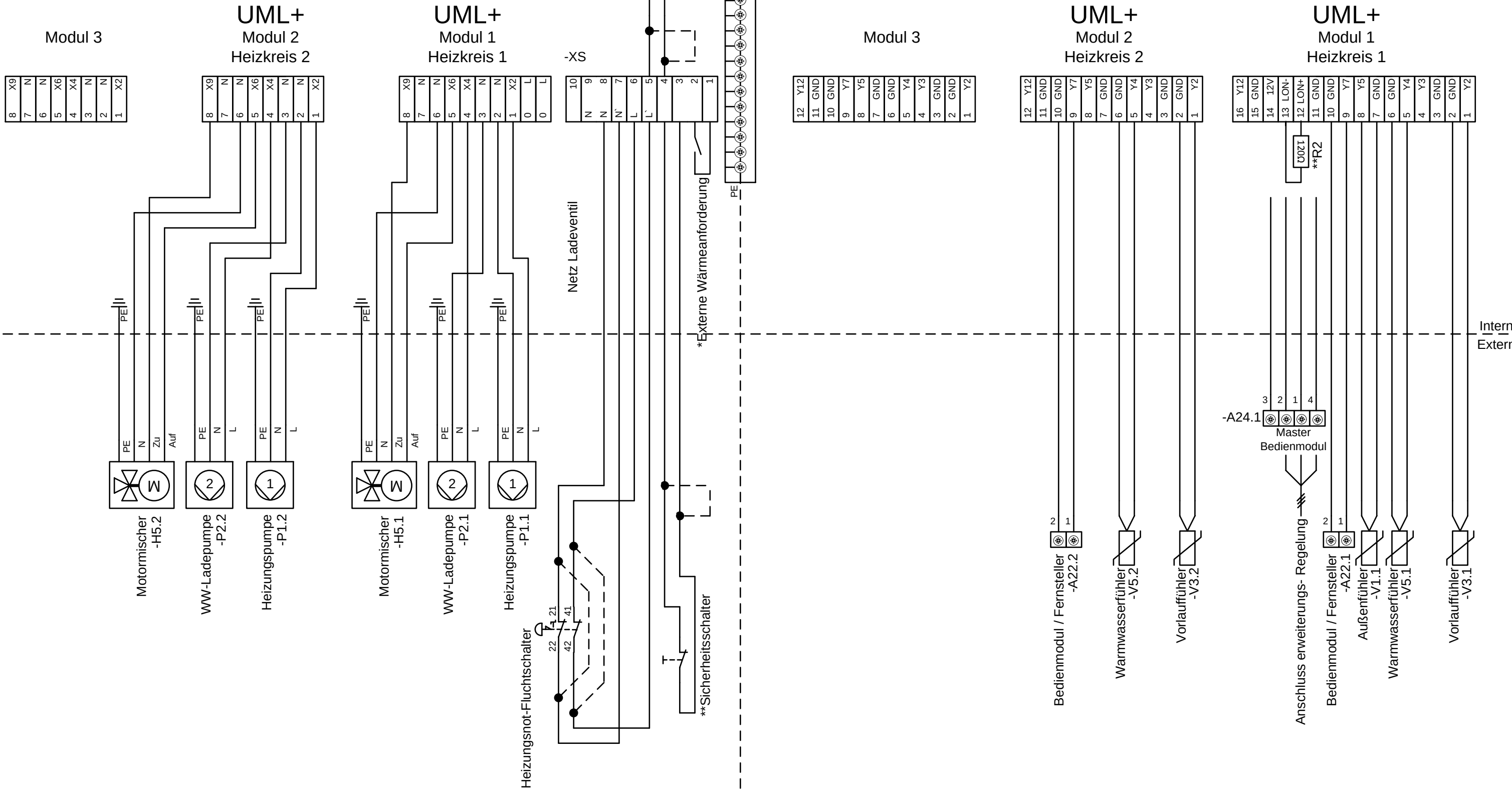
*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	07.08.2013	UML+		MES H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis		Projekt : Regelung				1 mm : 1 mm Blatt 092760/01	
				Gezeichnet	rot										
				Geprüft	ros										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092760/01									

Niederspannung 230 VAC

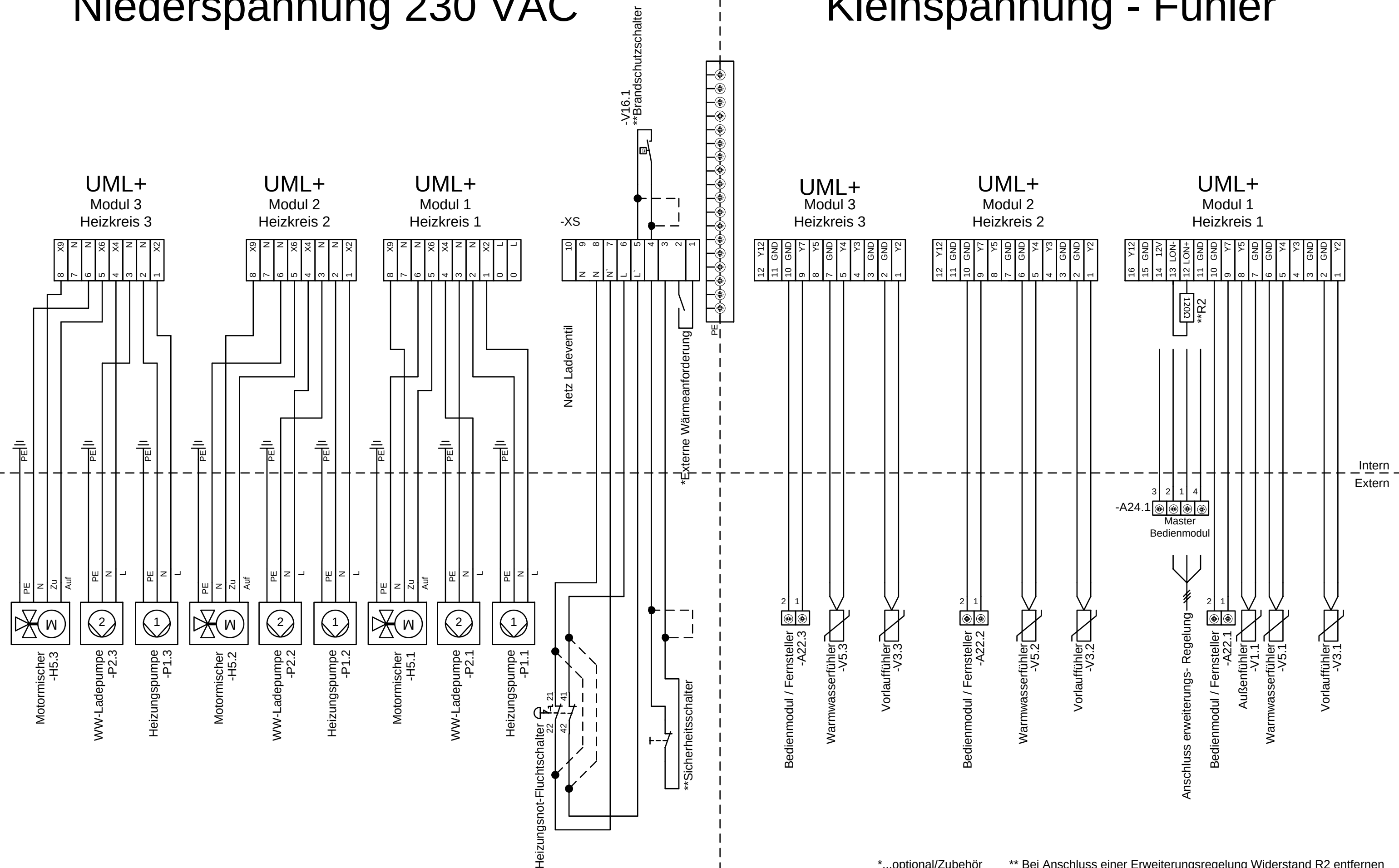
Kleinspannung - Fühler



*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

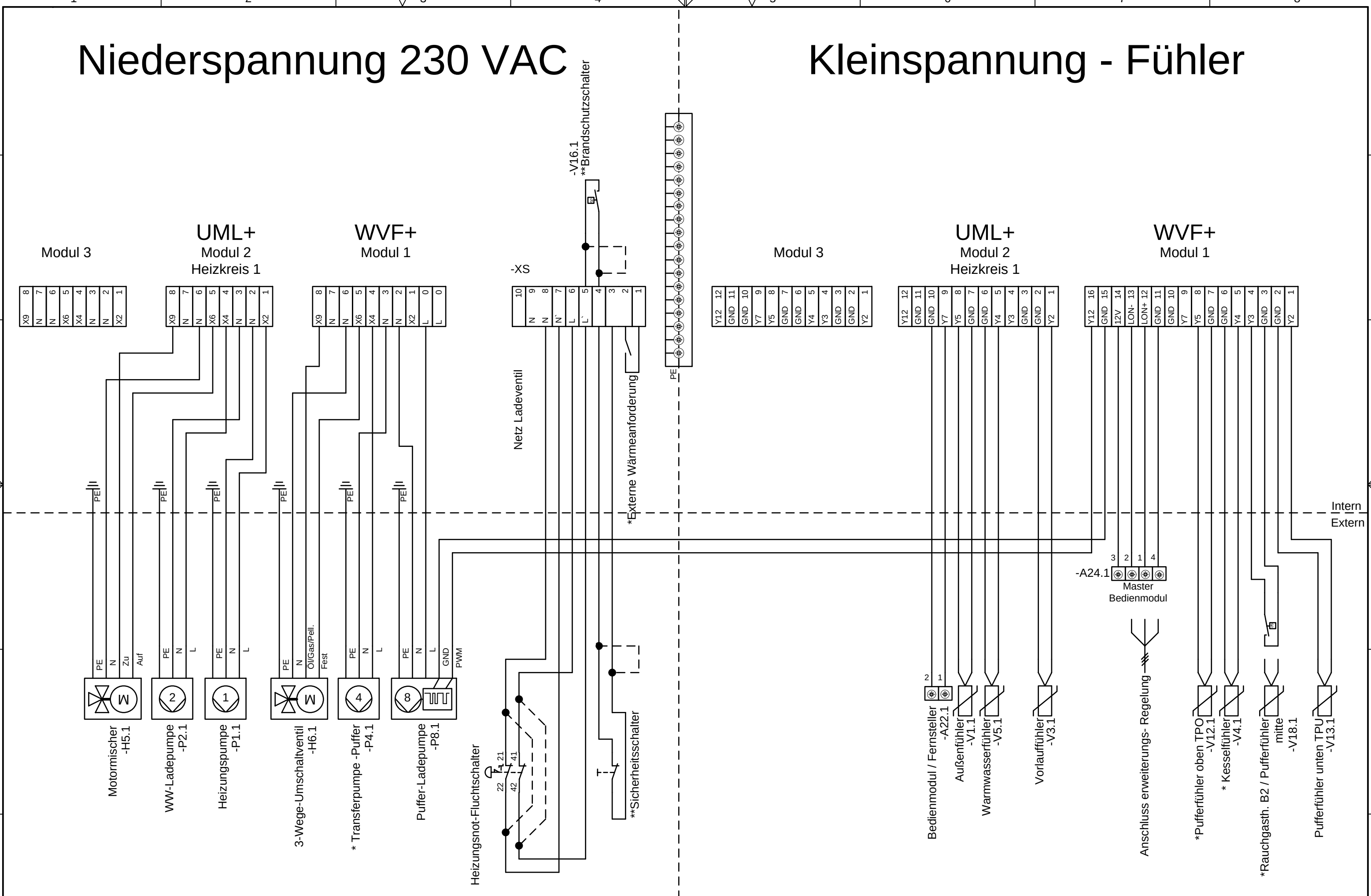
Niederspannung 230 VAC

Kleinspannung - Fühler



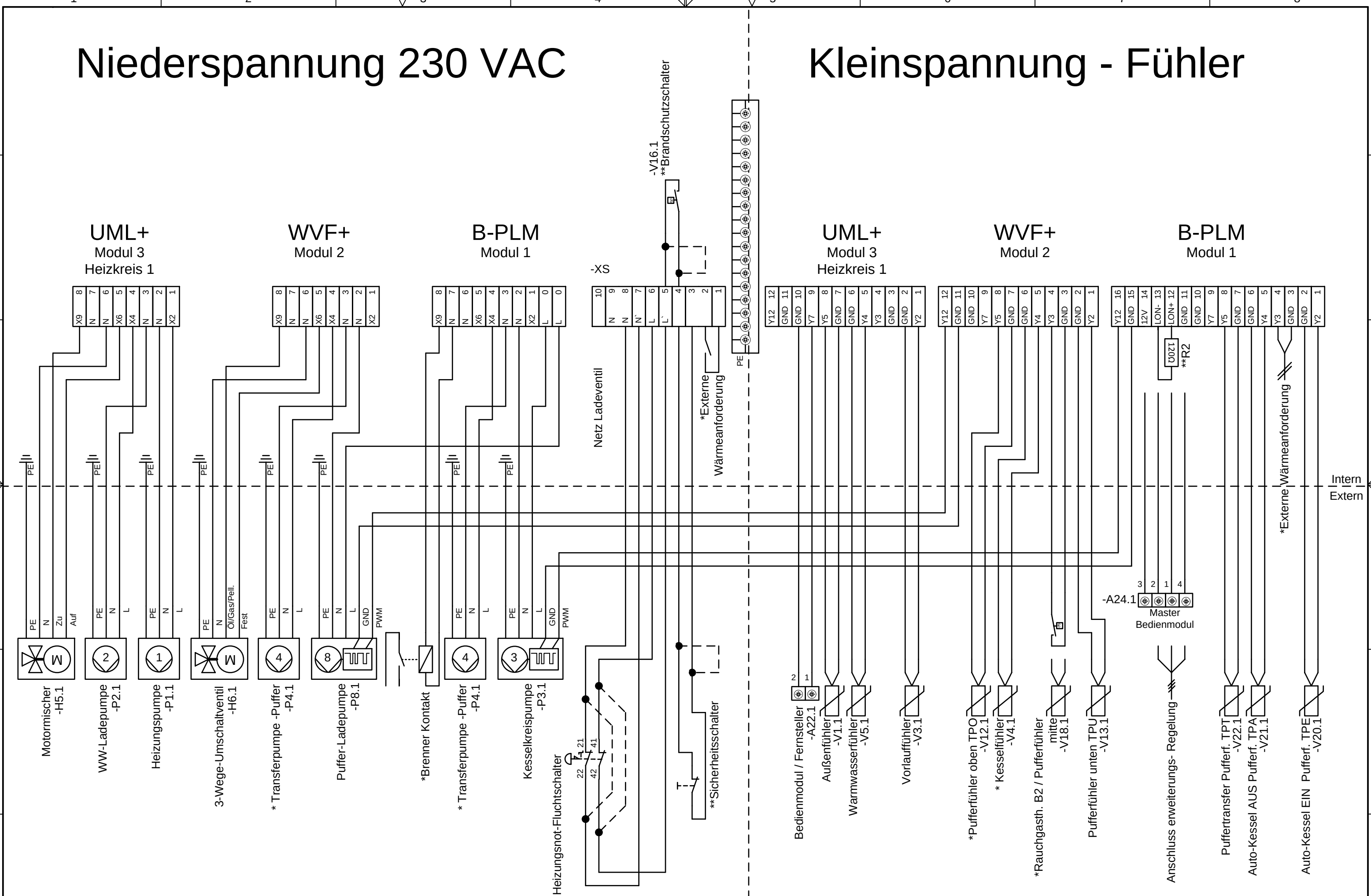
Niederspannung 230 VAC

Kleinspannung - Fühler



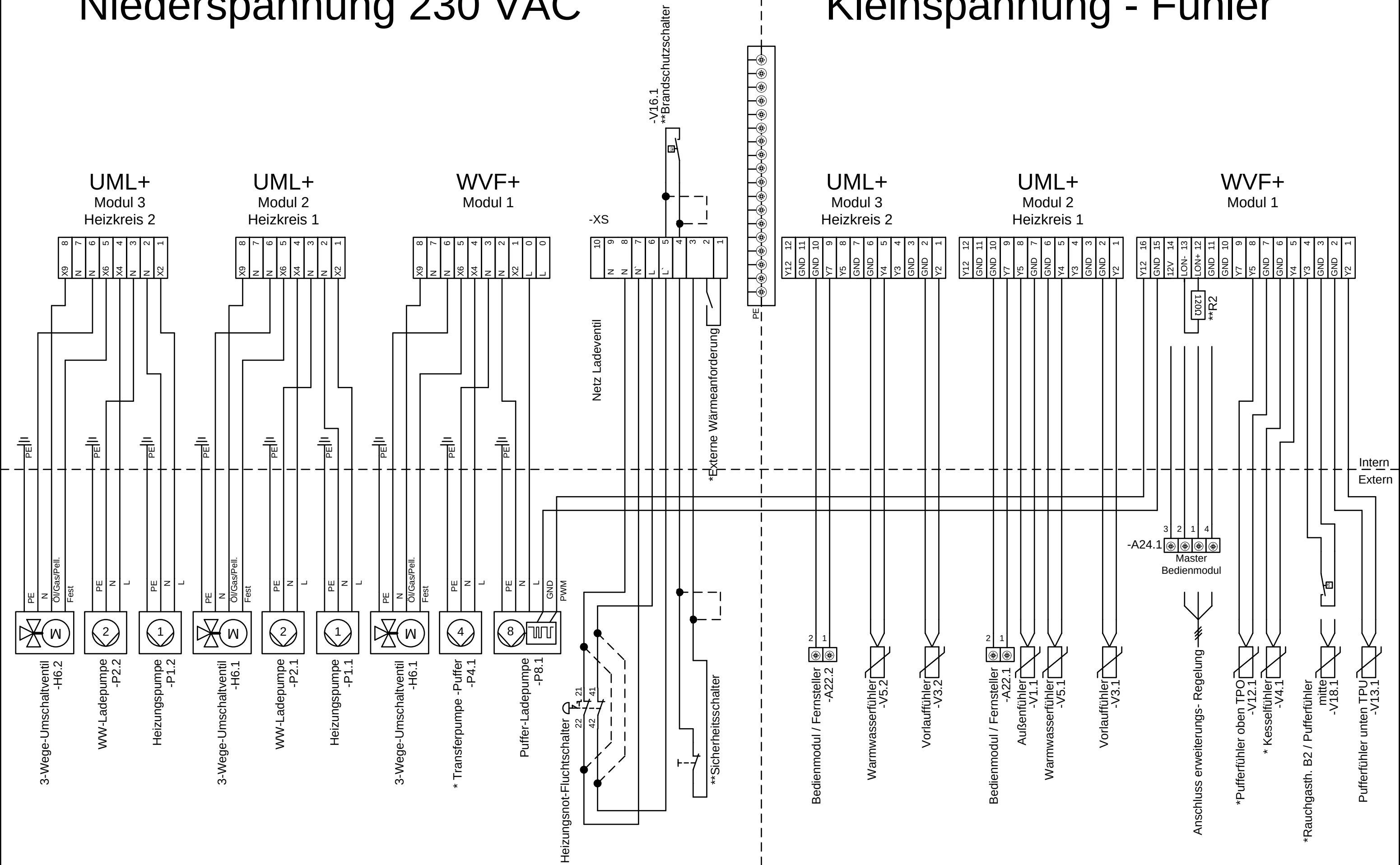
Niederspannung 230 VAC

Kleinspannung - Fühler



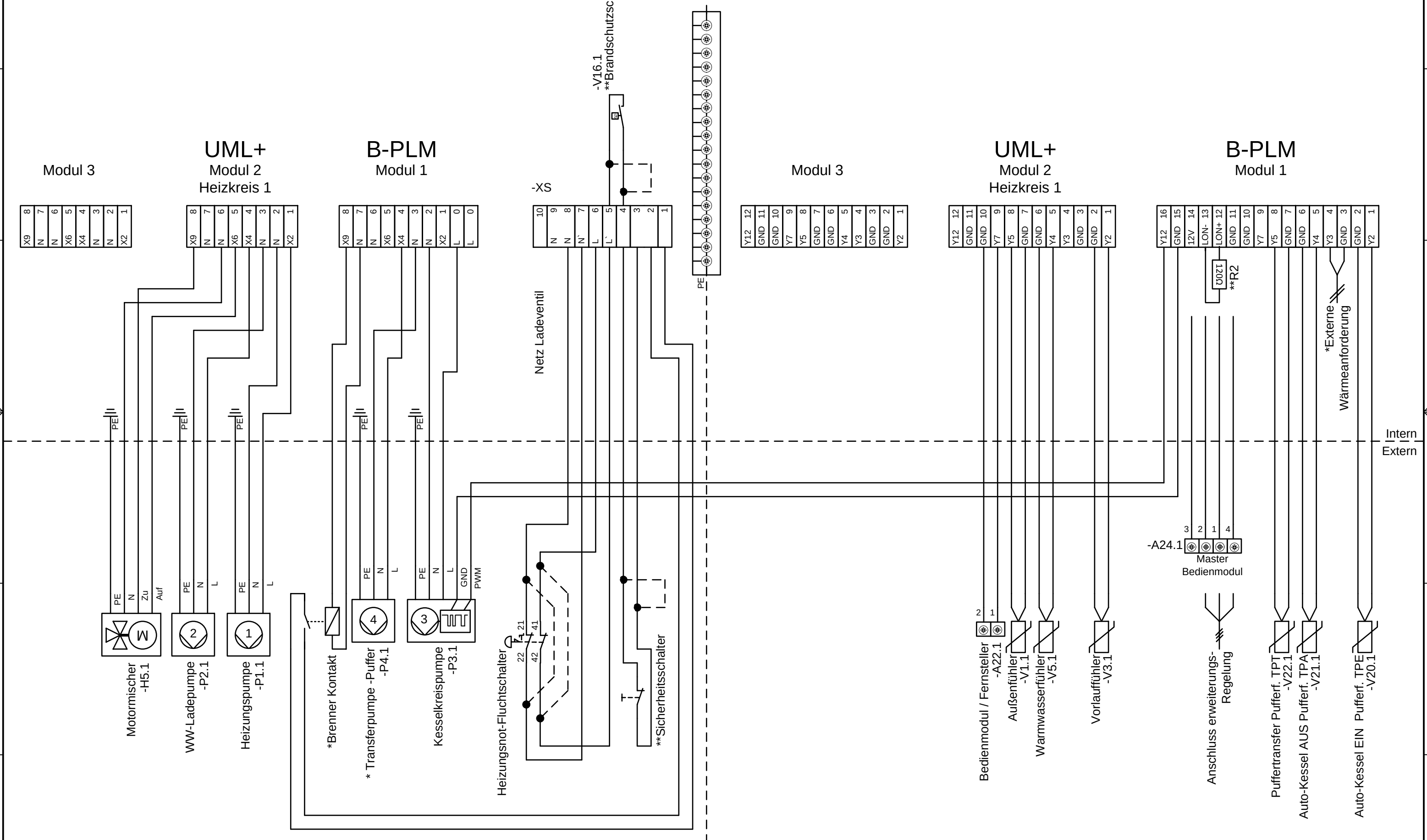
Niederspannung 230 VAC

Kleinspannung - Fühler



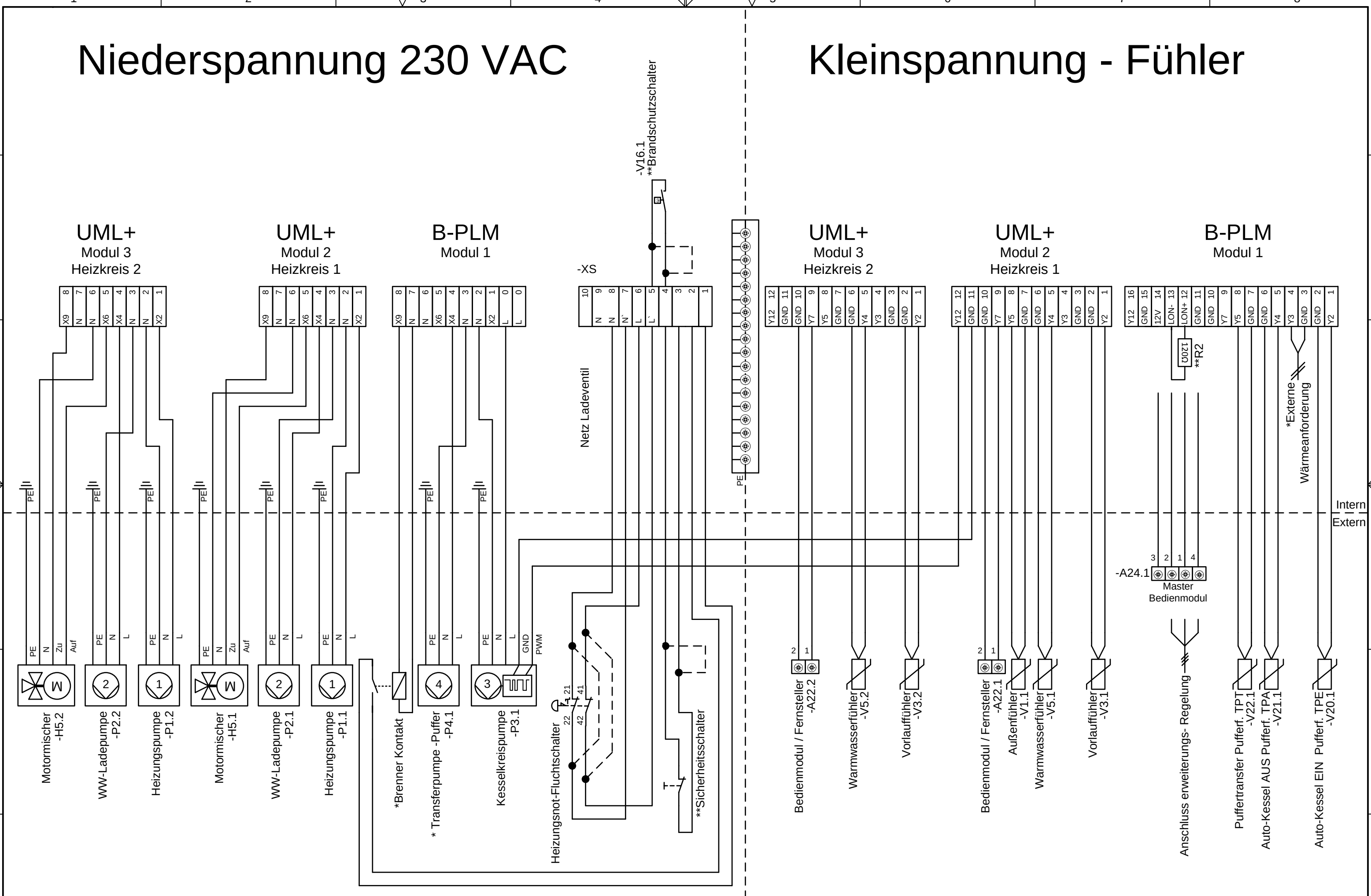
Niederspannung 230 VAC

Kleinspannung - Fühler



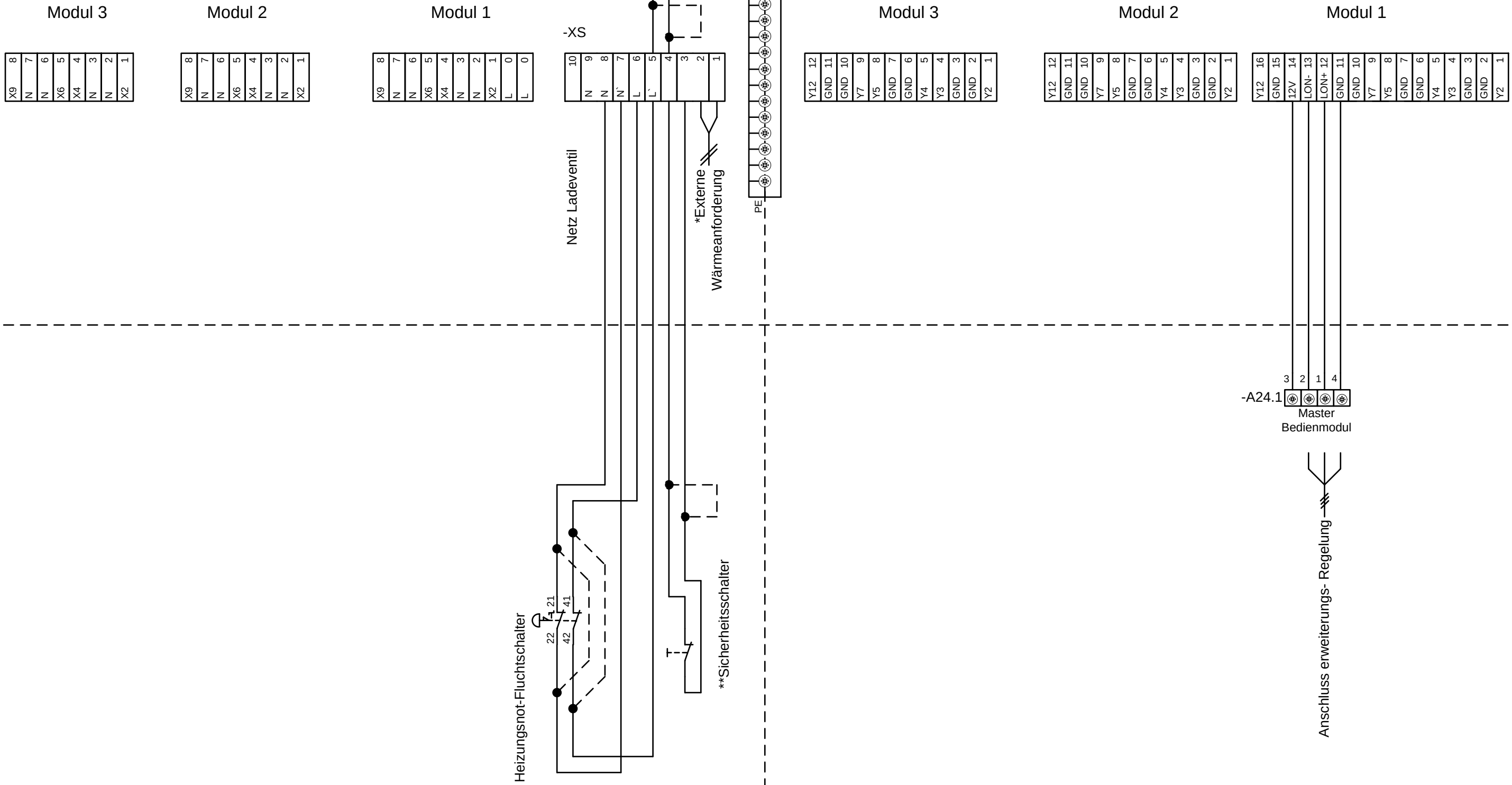
Niederspannung 230 VAC

Kleinspannung - Fühler



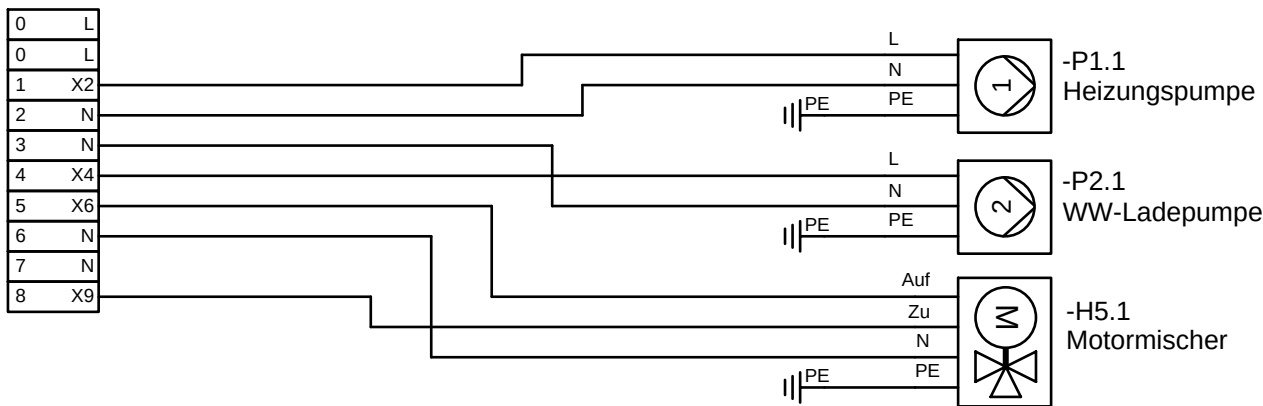
Niederspannung 230 VAC

Kleinspannung - Fühler



Niederspannung 230 VAC

UML+ Modul 1



Modul 2

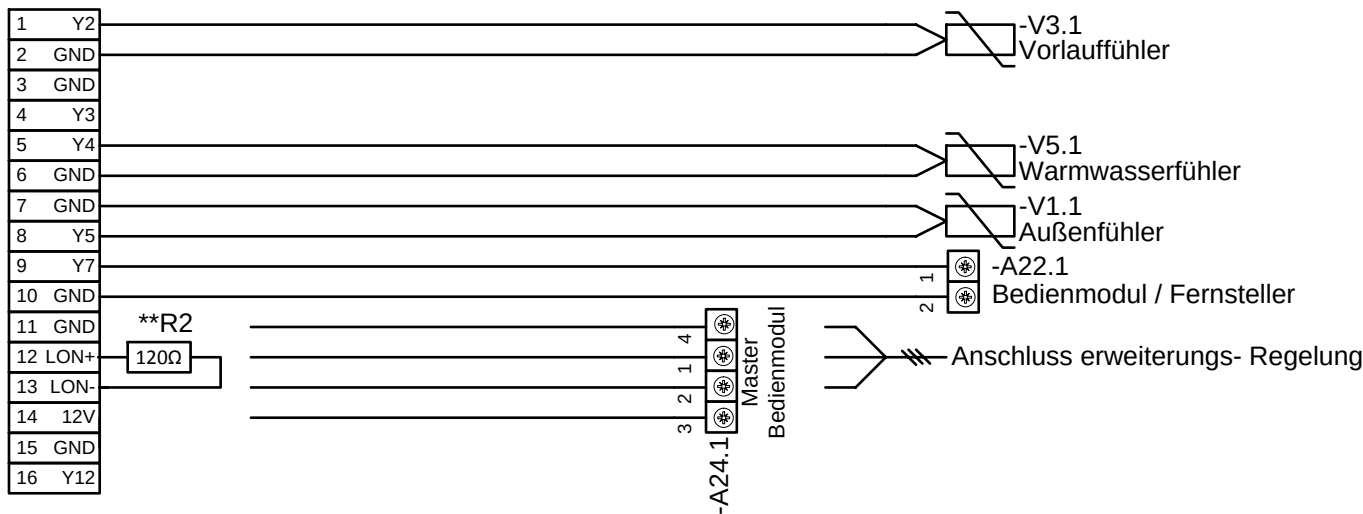
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Modul 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Kleinspannung - Fühler

UML+ Modul 1



Modul 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

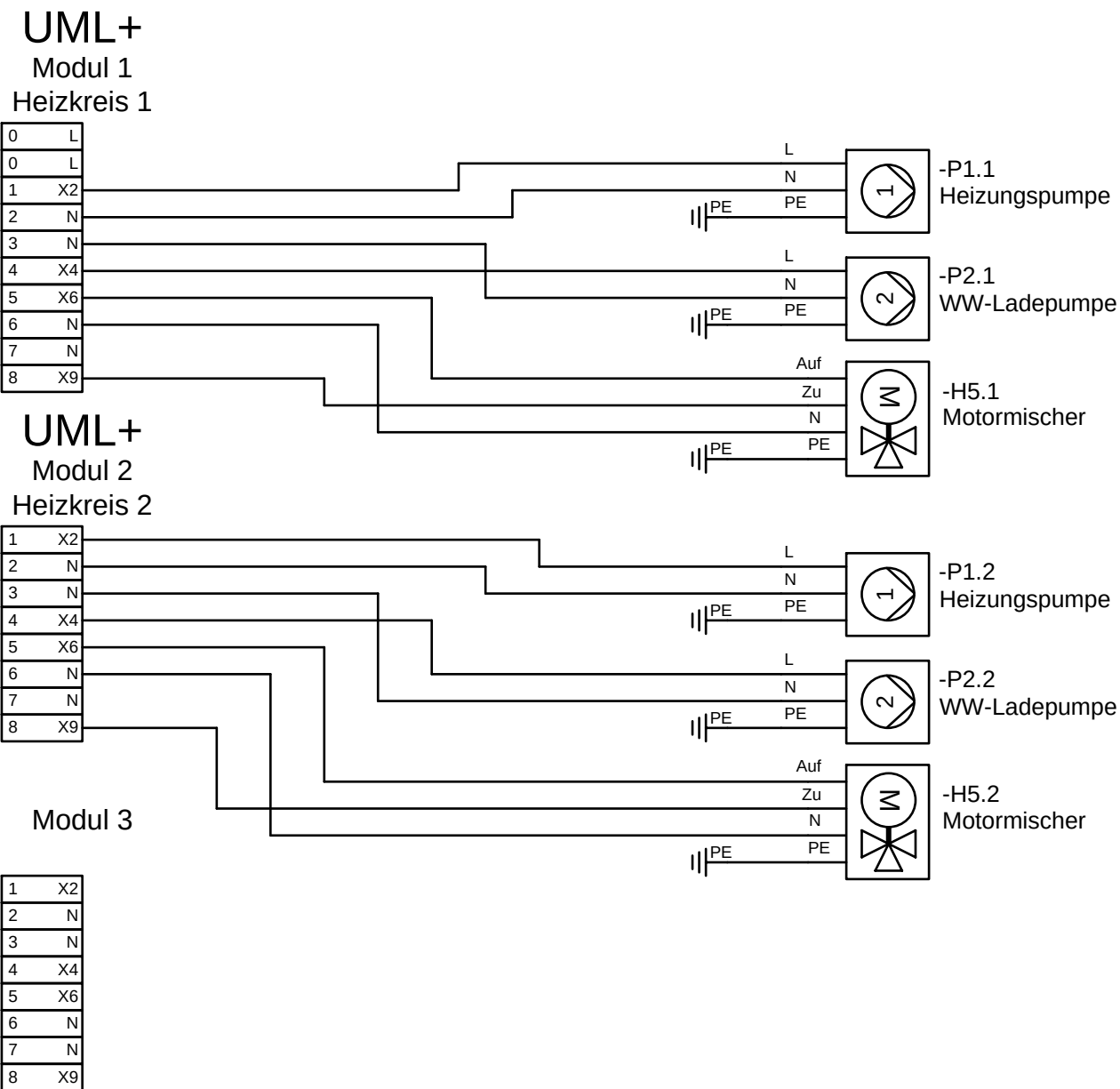
Modul 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

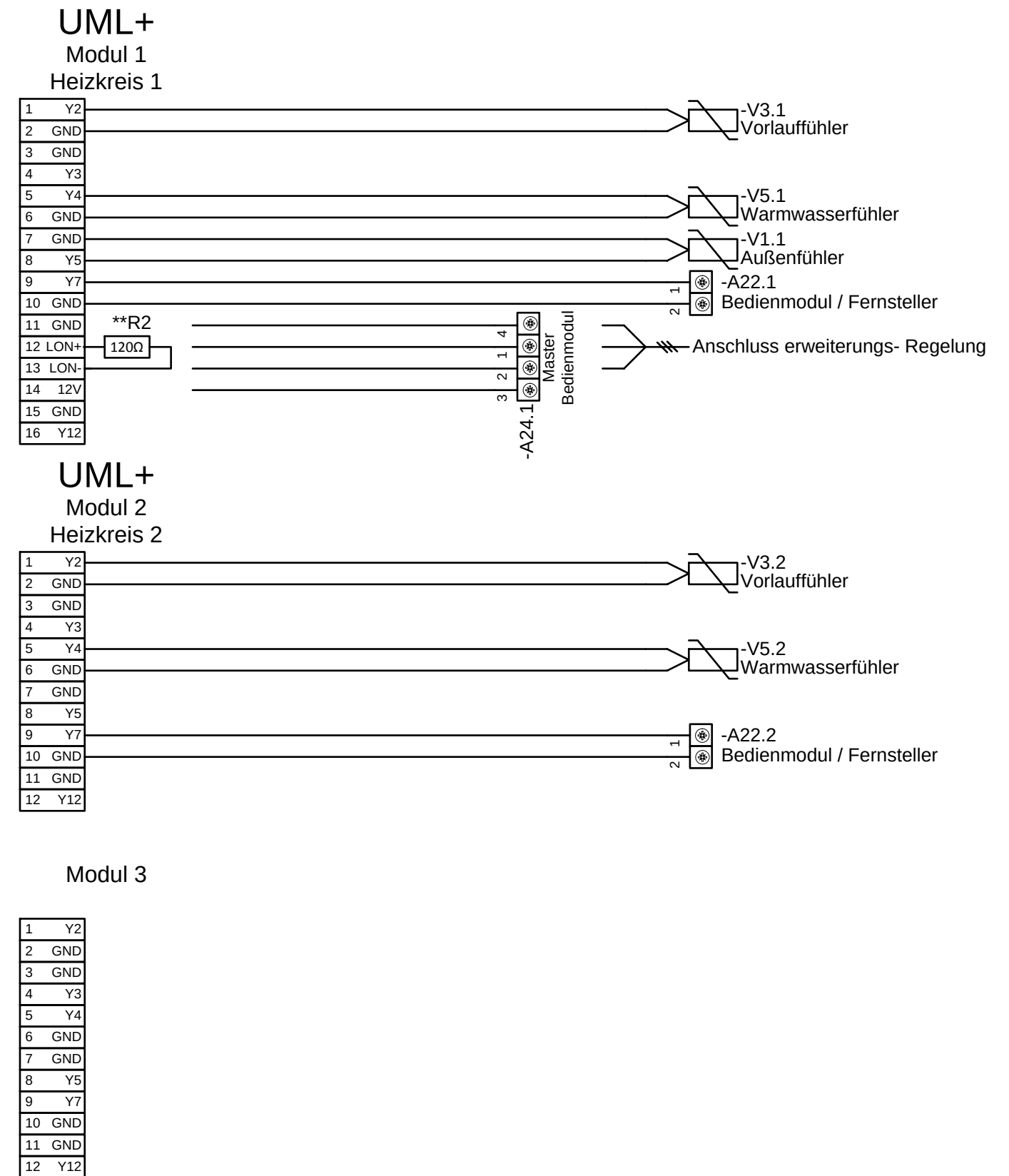
*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Niederspannung 230 VAC



Kleinspannung - Fühler

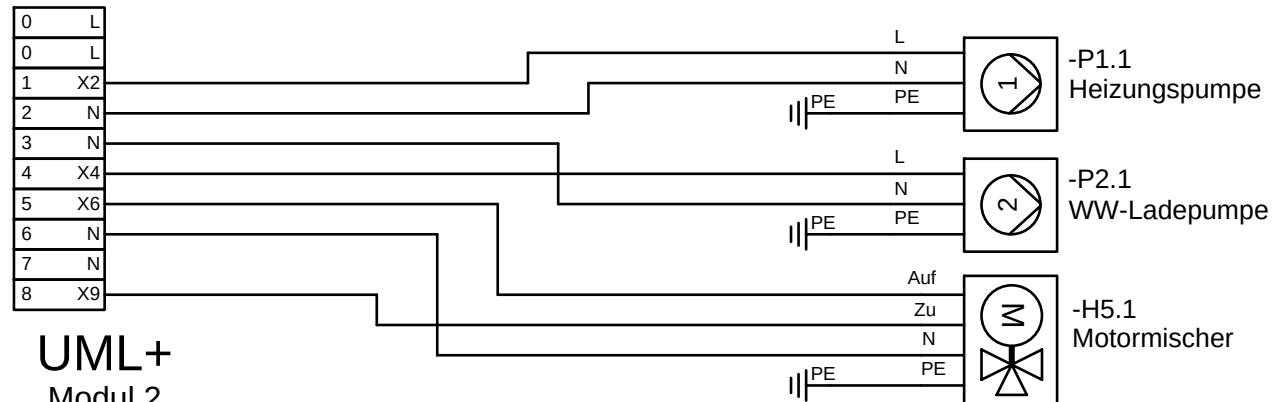


*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Niederspannung 230 VAC

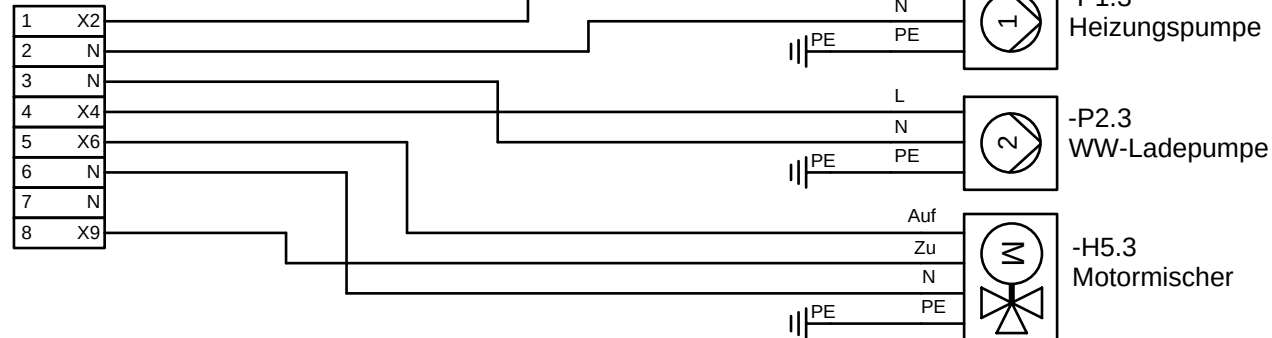
UML+ Modul 1 Heizkreis 1



UML+ Modul 2 Heizkreis 2

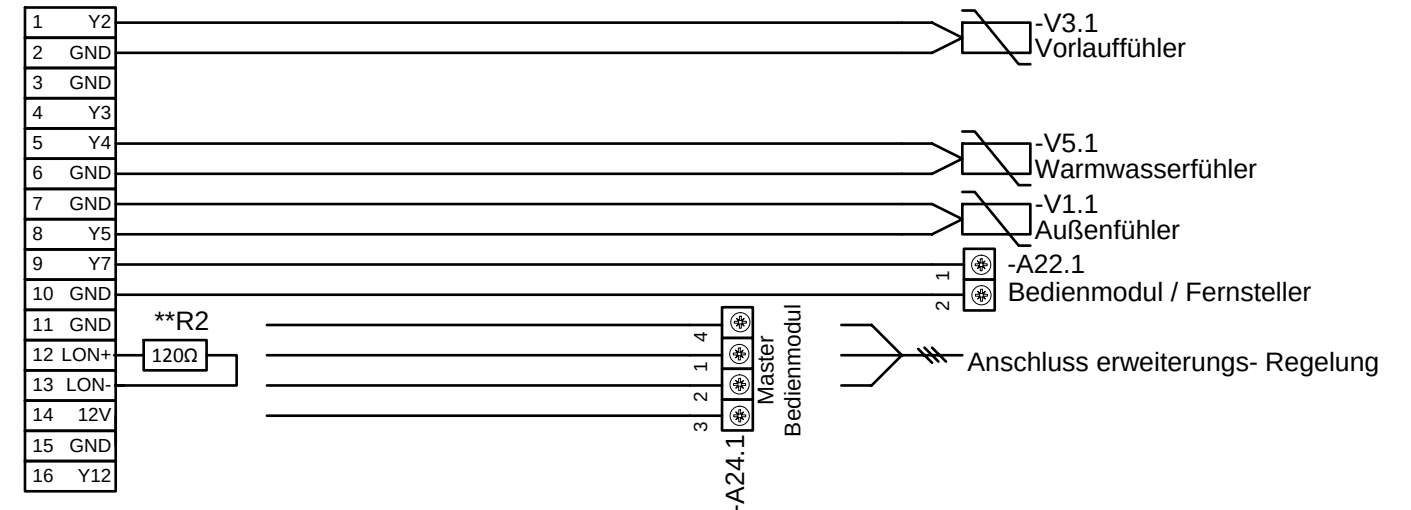


UML+ Modul 3 Heizkreis 3

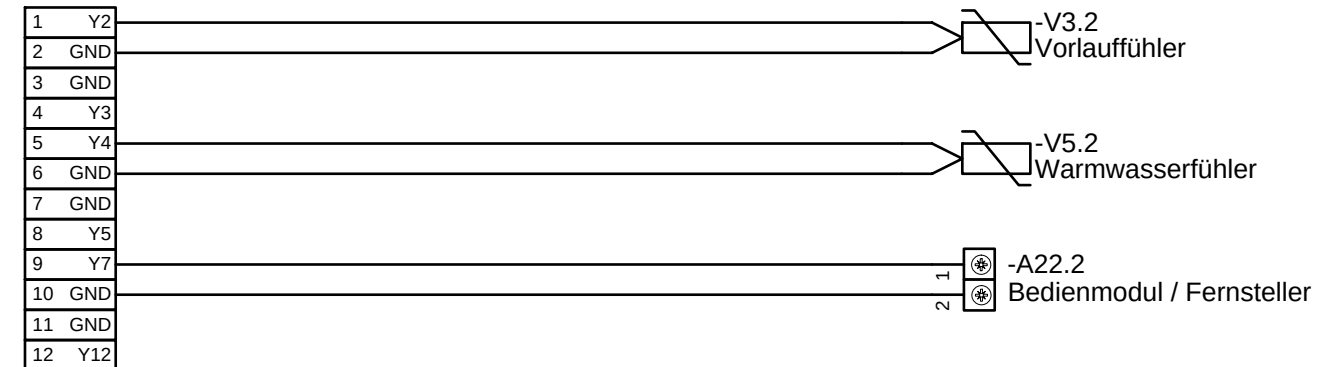


Kleinspannung - Fühler

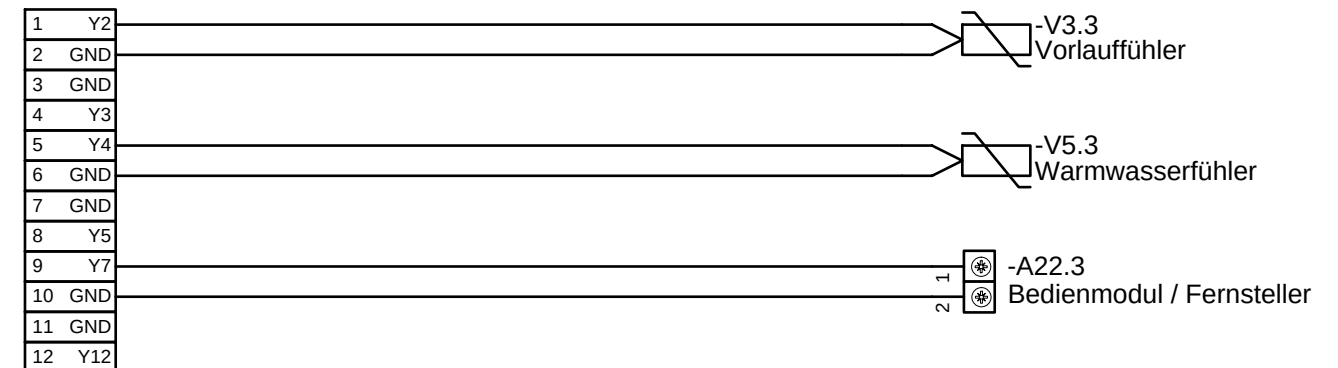
UML+ Modul 1 Heizkreis 1



UML+ Modul 2 Heizkreis 2



UML+ Modul 3 Heizkreis 3



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Rev.	Änderung	Datum	Name

Datum	06.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ / UML+ / UML+
Zeichnungs Nr.: 092700/01

MES H021 + H024 + H024
Außentemperaturregelung für 3 Heizkreise gemischt und Warmwasserkreise

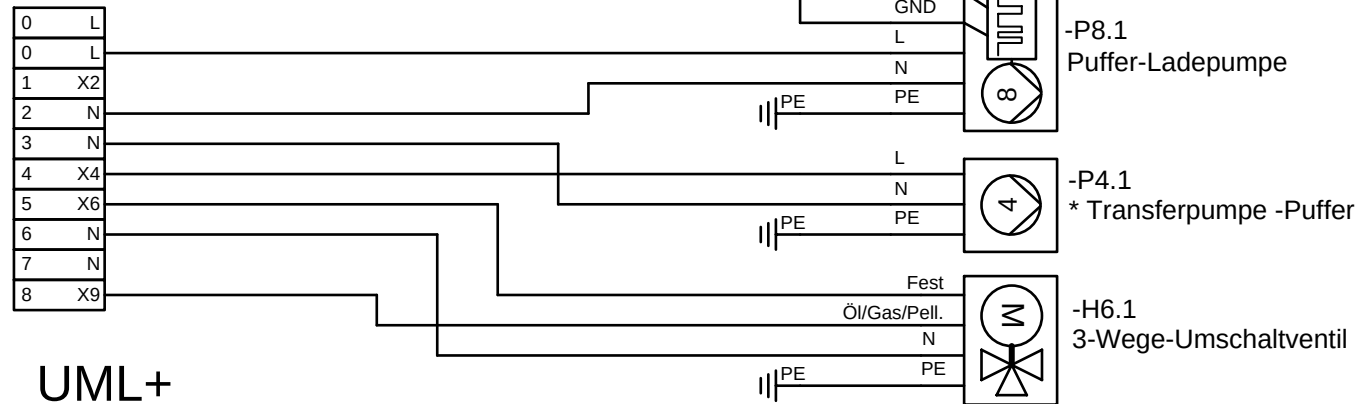
Projekt :
Regelung

windhager

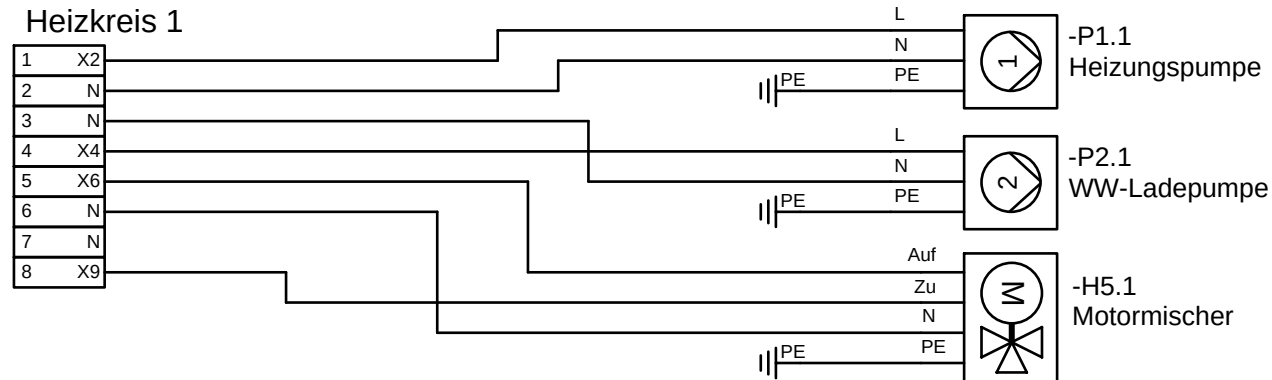
1 mm : 1 mm
Blatt 092700/01

Niederspannung 230 VAC

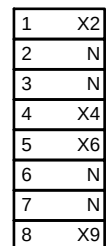
WVF+ Modul 1



UML+ Modul 2 Heizkreis 1

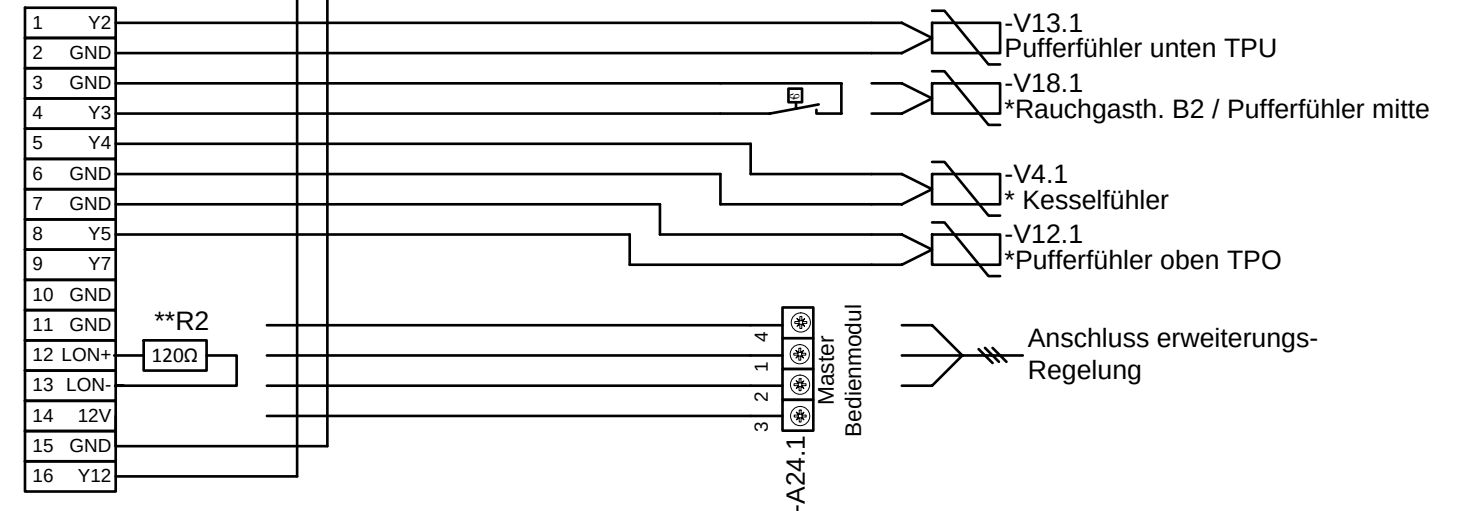


Modul 3

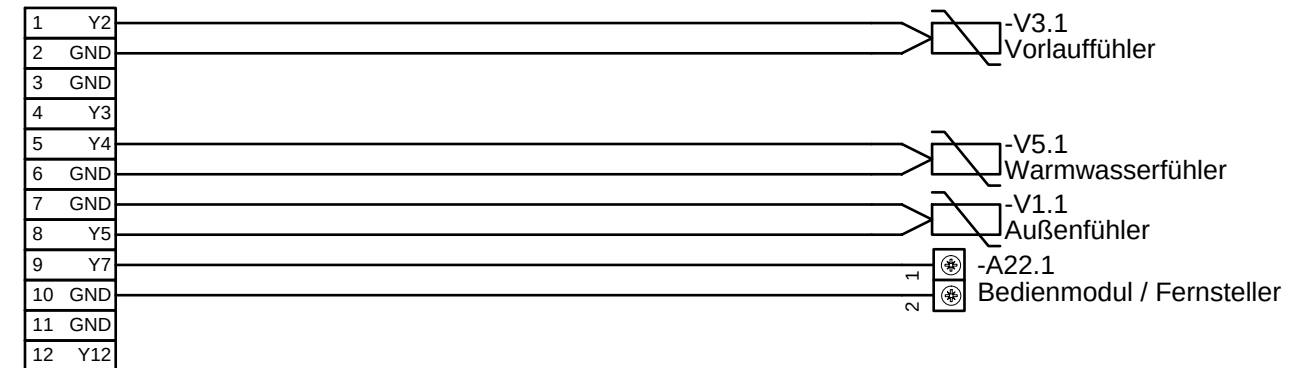


Kleinspannung - Fühler

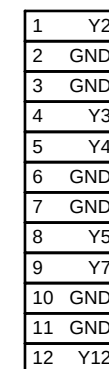
WVF+ Modul 1



UML+ Modul 2 Heizkreis 1



Modul 3

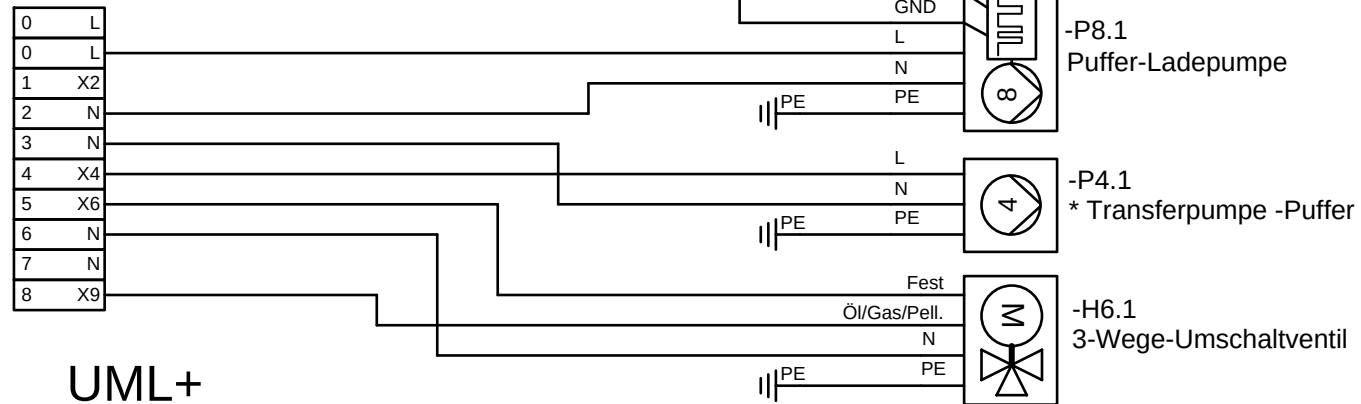


*...optional/Zubehör

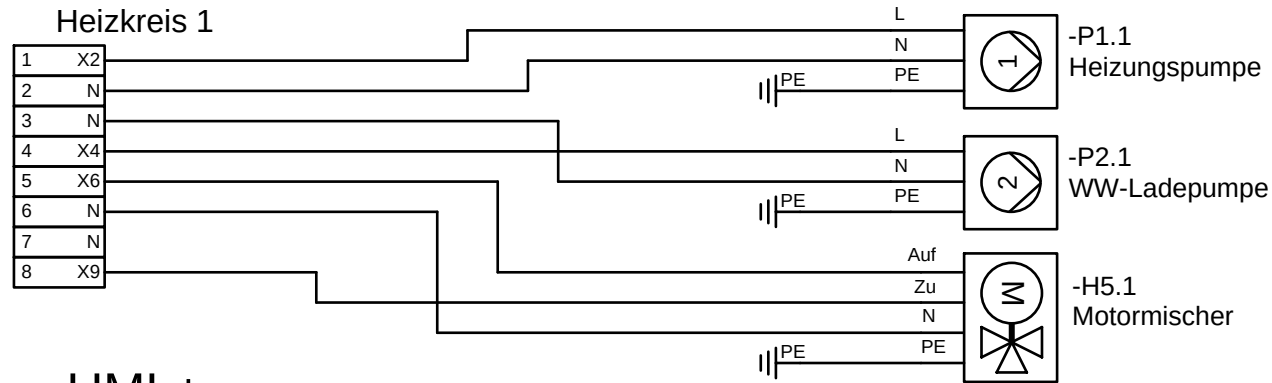
** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Niederspannung 230 VAC

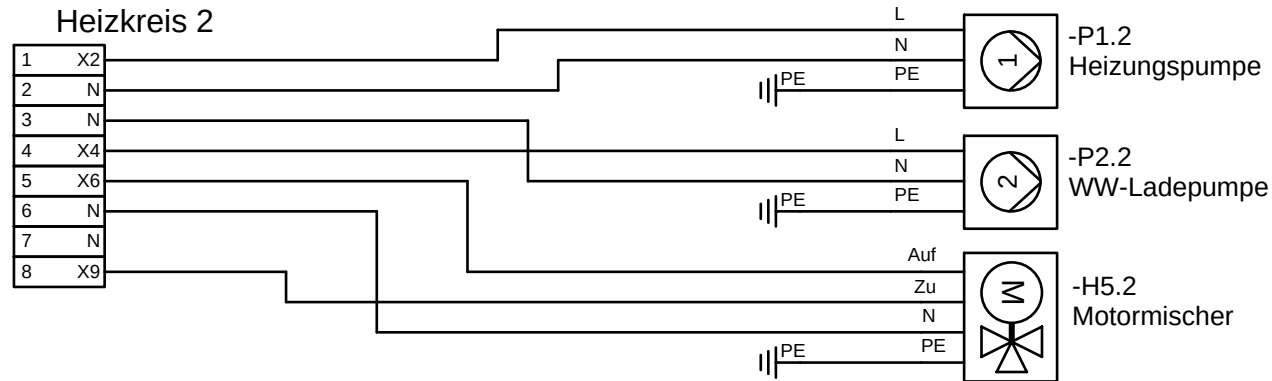
WVF+ Modul 1



UML+ Modul 2 Heizkreis 1

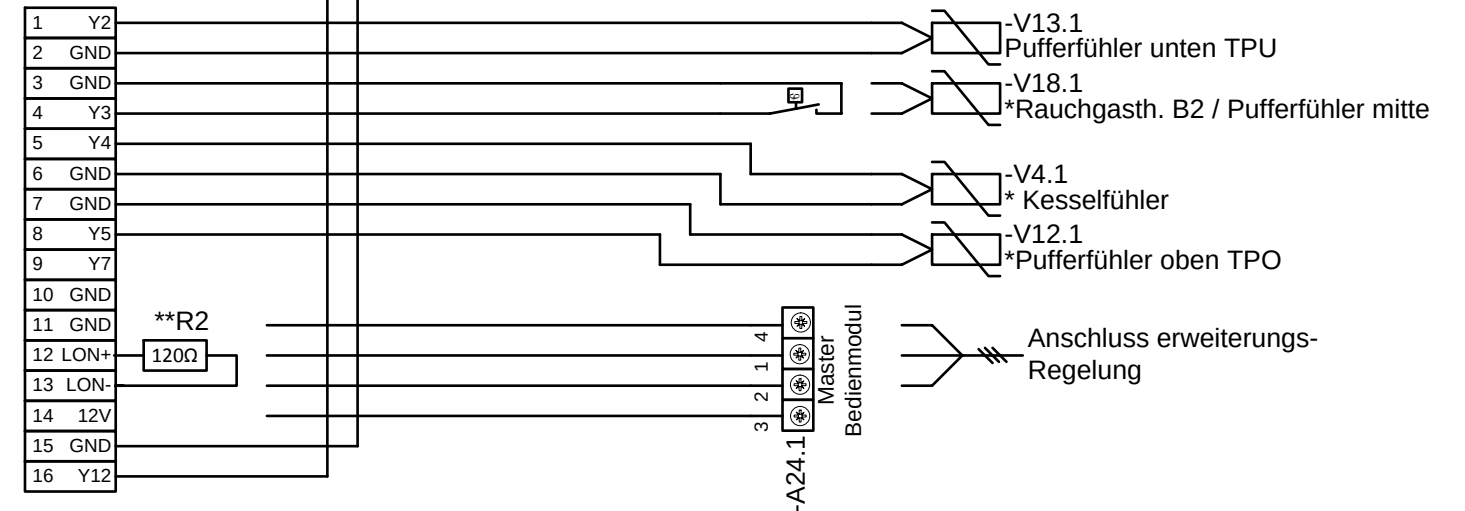


UML+ Modul 3 Heizkreis 2

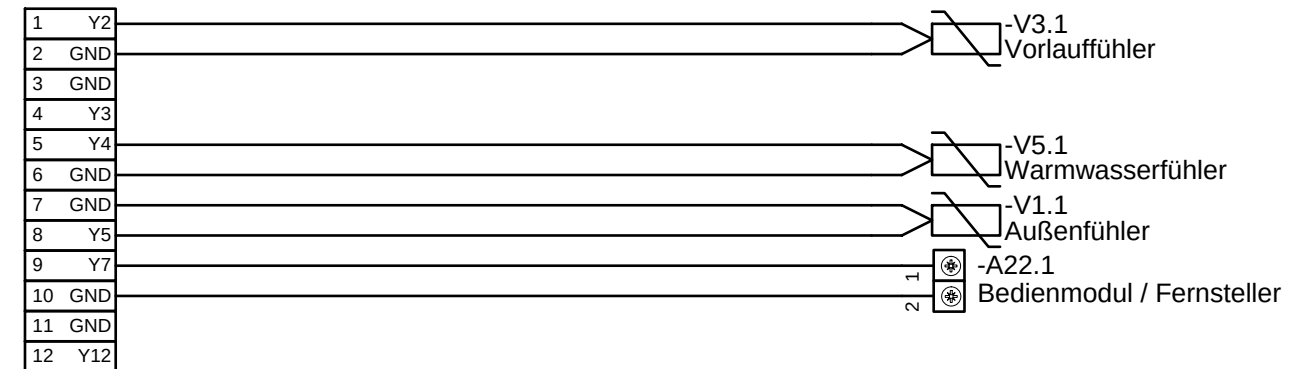


Kleinspannung - Fühler

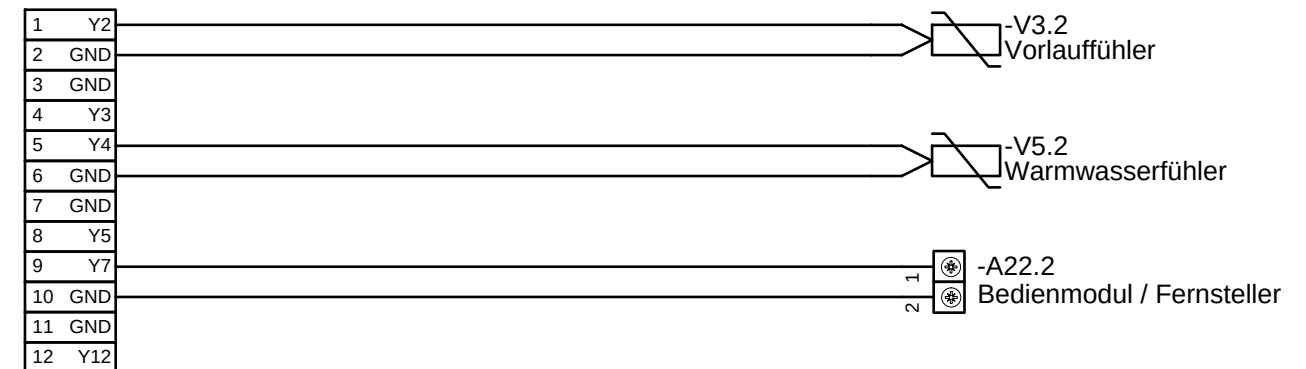
WVF+ Modul 1



UML+ Modul 2 Heizkreis 1



UML+ Modul 3 Heizkreis 2



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Datum 06.08.2013
Gezeichnet rot
Geprüft ros
Genehmigt

WVF+ / UML+ / UML+

Zeichnungs Nr.: 092837/01

MES P041 + H021 + H024

Außentemperaturregelung für 2 Heizkreise gemischt und Warmwasserkreise
Automatische Festbrennstoffumschaltung mit Pufferladung

Projekt :

Regelung

windhager

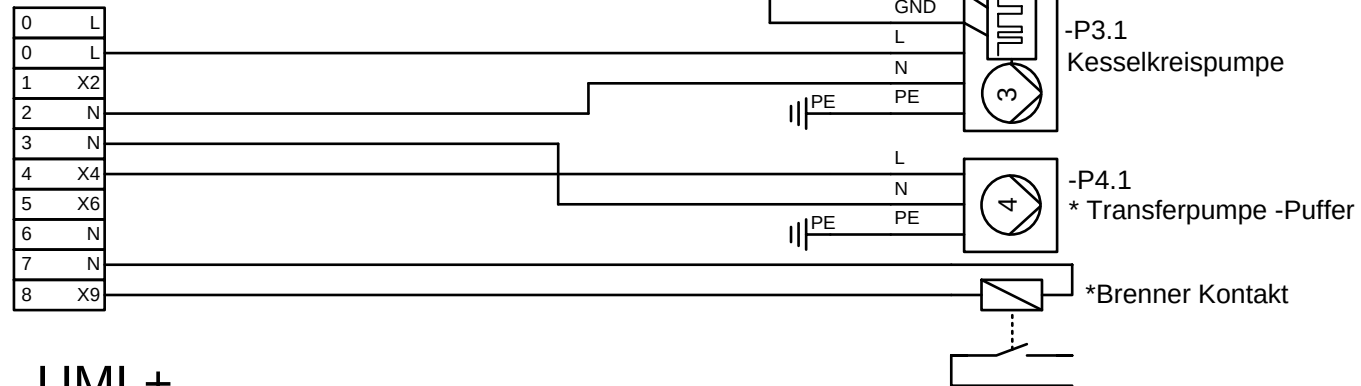
1 mm : 1 mm

2

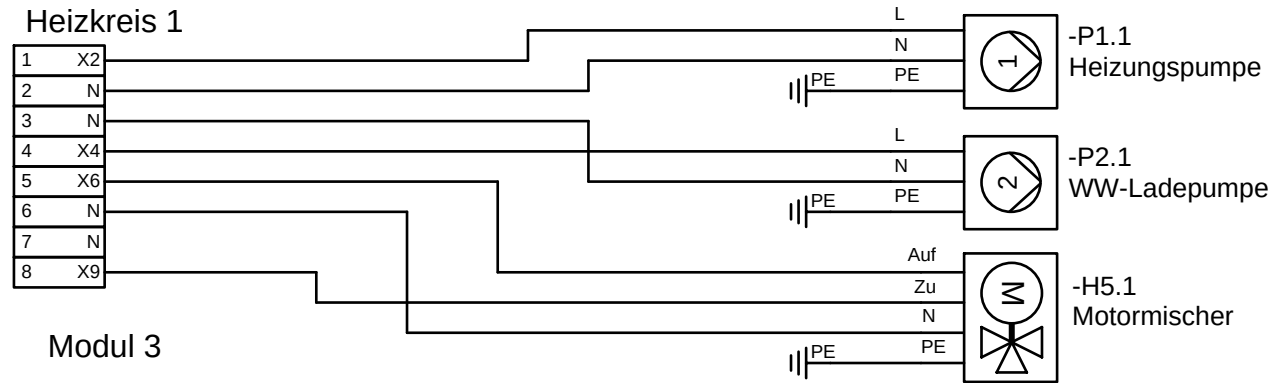
Blatt 092837/01

Niederspannung 230 VAC

B-PLM Modul 1



UML+ Modul 2 Heizkreis 1

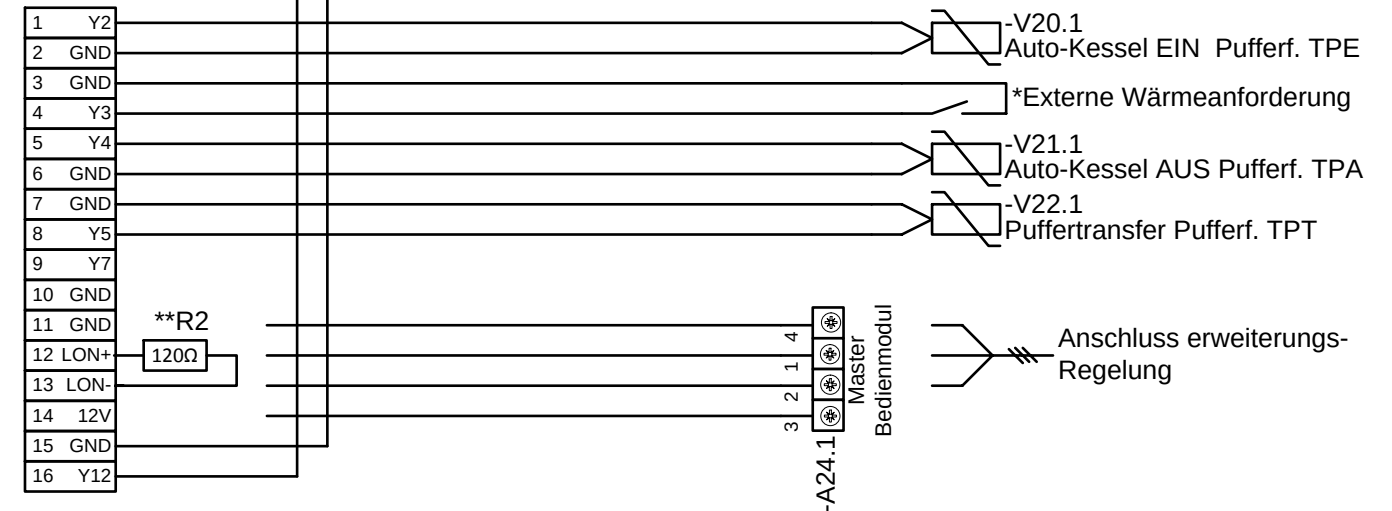


Modul 3

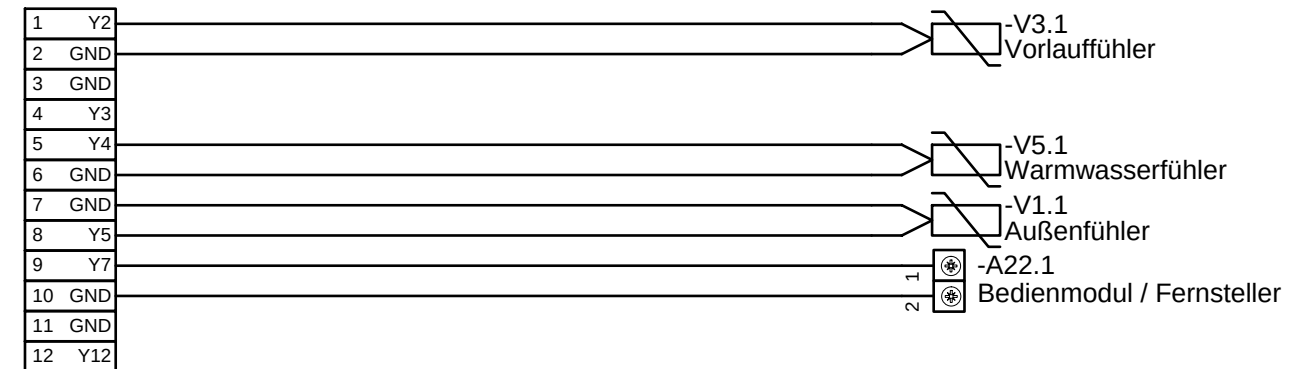
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Kleinspannung - Fühler

B-PLM Modul 1



UML+ Modul 2 Heizkreis 1



Modul 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	07.08.2013	B-PLM /UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Brenner-/ Pufferspeichermodul B-PLM	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros	Zeichnungs Nr.: 093120/01					Blatt 093120/01
Rev.	Änderung	Datum	Name	Genehmigt							

Niederspannung 230 VAC

B-PLM

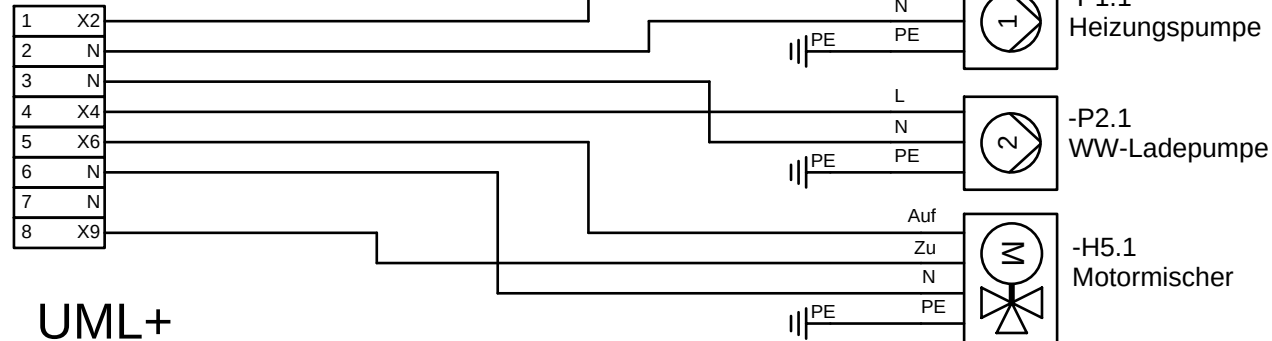
Modul 1



UML+

Modul 2

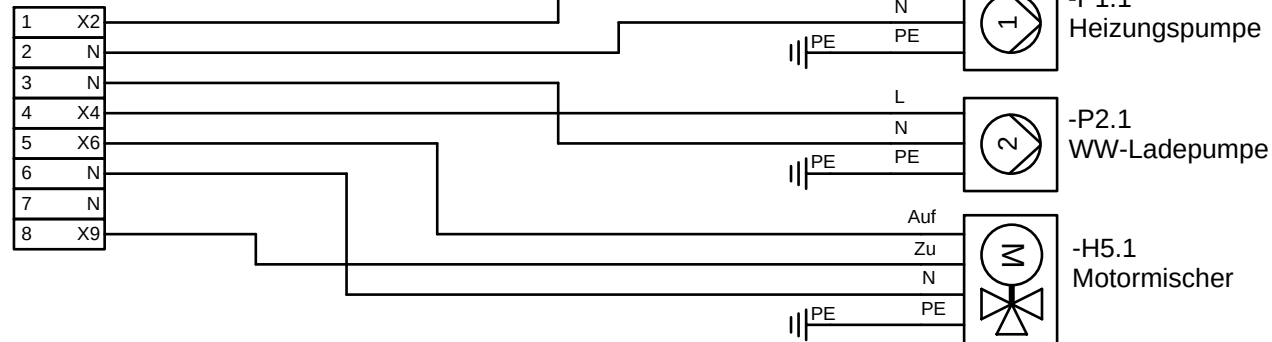
Heizkreis 1



UML+

Modul 2

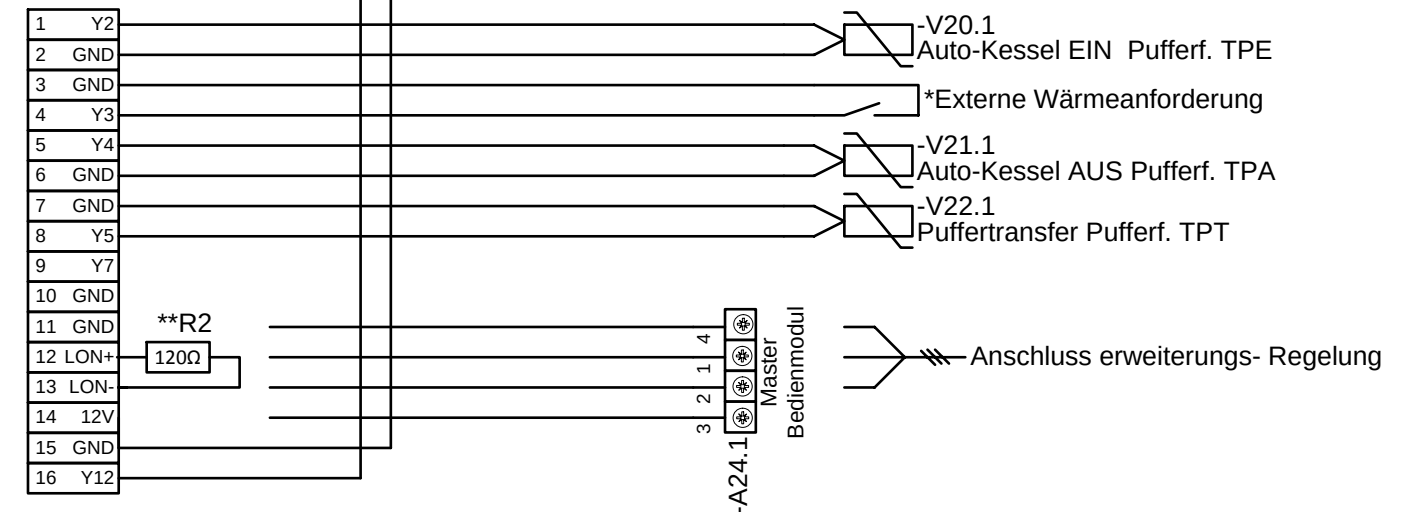
Heizkreis 2



Kleinspannung - Fühler

B-PLM

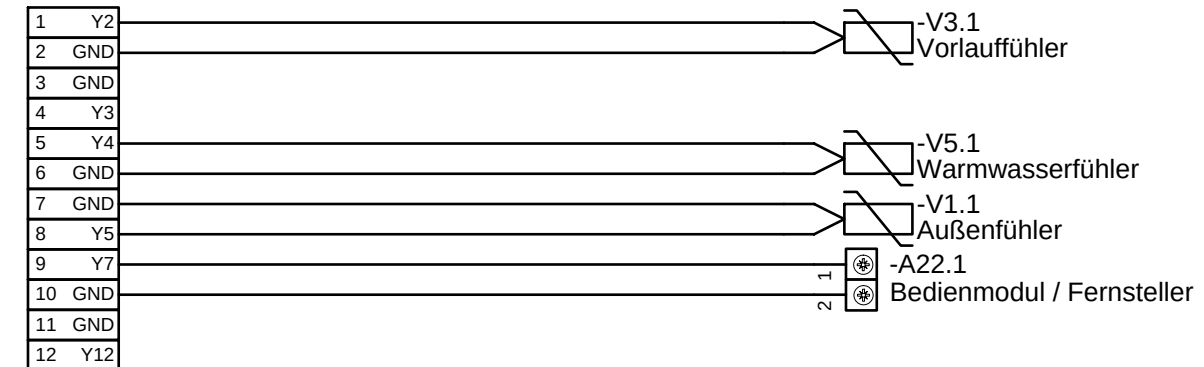
Modul 1



UML+

Modul 2

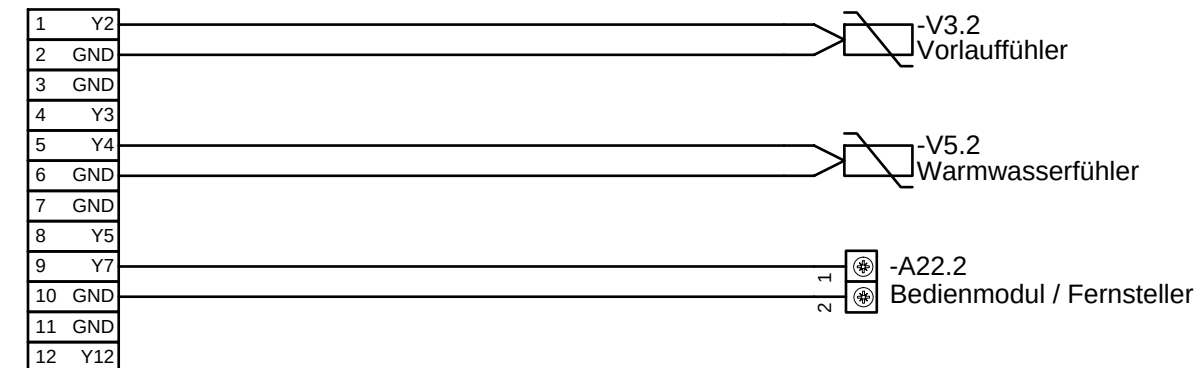
Heizkreis 1



UML+

Modul 3

Heizkreis 2

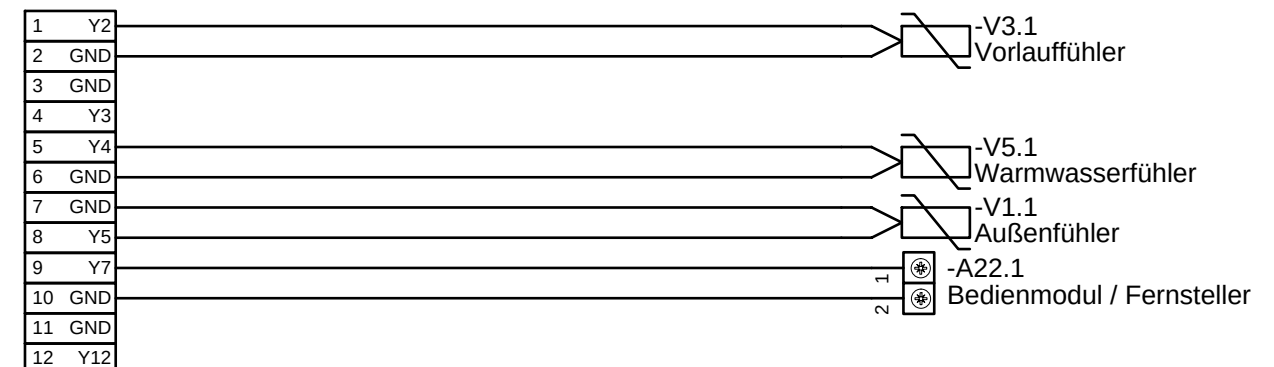
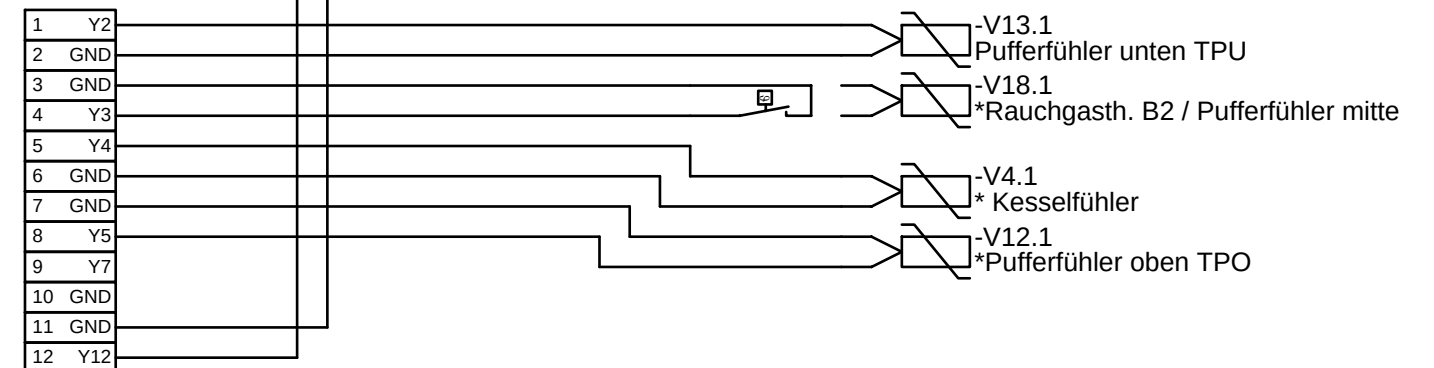
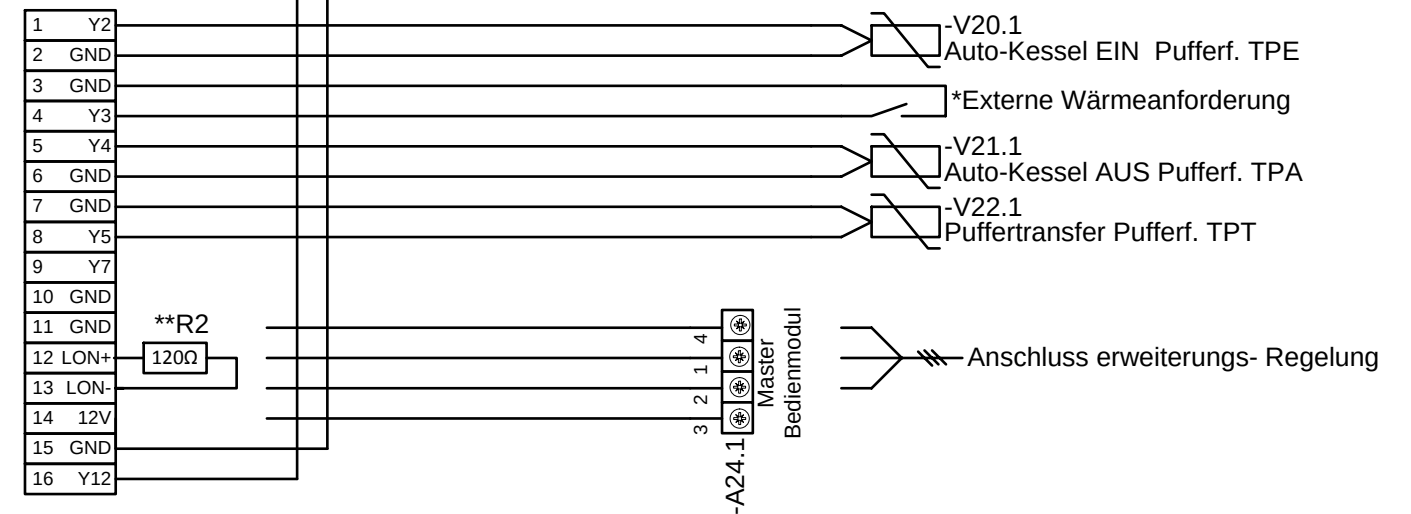
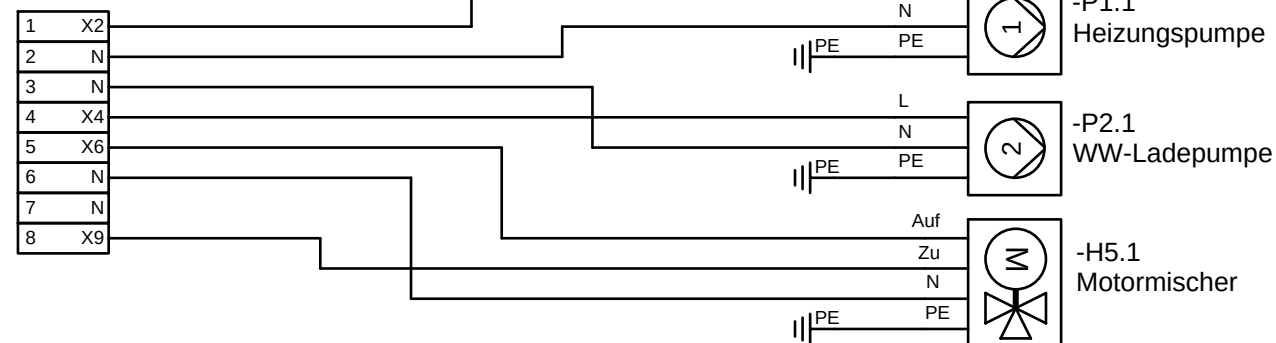
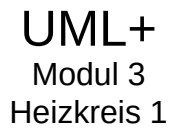
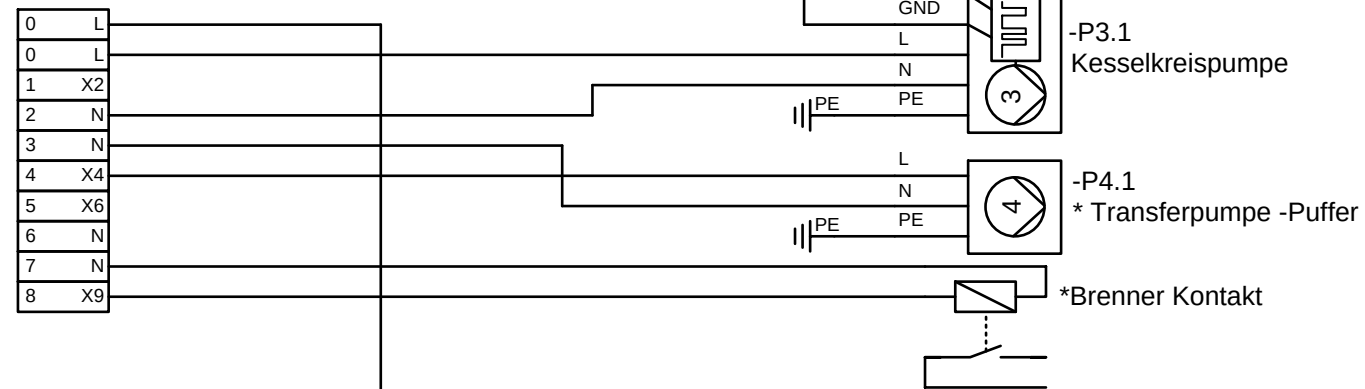


*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

Niederspannung 230 VAC

Kleinspannung - Fühler



*...optional/Zubehör

** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

				Datum	06.08.2013	B-PLM / WVF+ / UML+		MES P042 + P041+ H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis und Festbrennstoff- Modul WVF+und Brenner-/ Pufferspeichermodul B-PLM	Projekt : Regelung		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	093125/01				◀ -----2 ▶ Blatt 093125/01

Niederspannung 230 VAC

Modul 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Modul 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Modul 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

Kleinspannung - Fühler

Modul 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

**R2

120Ω

Modul 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

Modul 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

-A24.1
Master
Bedienmodul

Anschluss erweiterungs- Regelung

*...optional/Zubehör ** Bei Anschluss einer Erweiterungsregelung Widerstand R2 entfernen

OT-Schnittstelle

Y4.6 Master

Y4.5 BUML 1 / MW P

Y4.4

Slave BUML 2

Y4.3

Y4.2

Y4.1

Bus- Kommunikation:

S5 ☒ ON = Ein
☐ OFF = Aus

Mischerfunktion:

S4 ☒ ON = Ein
☐ OFF = Aus

Boilerladung:

S3 ☐ ON = Parallelladung
☒ OFF = Vorrangsschaltung

Boiler mit:

S2 ☒ ON = Ladeventil
☐ OFF = Ladepumpe

Kessel

Minimalthermostat

S1 ☐ ON = 35C° / 95 °F
☒ OFF = 20C° / 68 °F

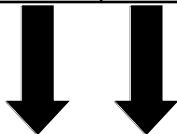
BUML-TTL	
Y2.6	RAM 850 RAM 786
Y2.5	
Y2.4	Außenfühler
Y2.3	
Y2.2	Boilerfühler
Y2.1	
Y1.6	Kesselfühler
Y1.5	
Y1.4	Vorlauffühler
Y1.3	
Y1.2	Frei
Y1.1	
X2.8 L	Dauerphase
X2.7 N	Boilerladepumpe
X2.6 L	Boilerladeventil
X2.5 N	Heizungspumpe
X2.4 L	
X2.3 L	Zu
X2.2 L	Auf
X2.1 N	Motormischer
X1.1 L	Netzanschluss 230VAC
X1.2 N	
X1.3 L"	
X1.4 L"	
X1.5 L'	Handschalter Boilerpumpe
X1.6 L'	Handschalter Heizungspumpe
EDV Nr.: 094505/00	

094517/00

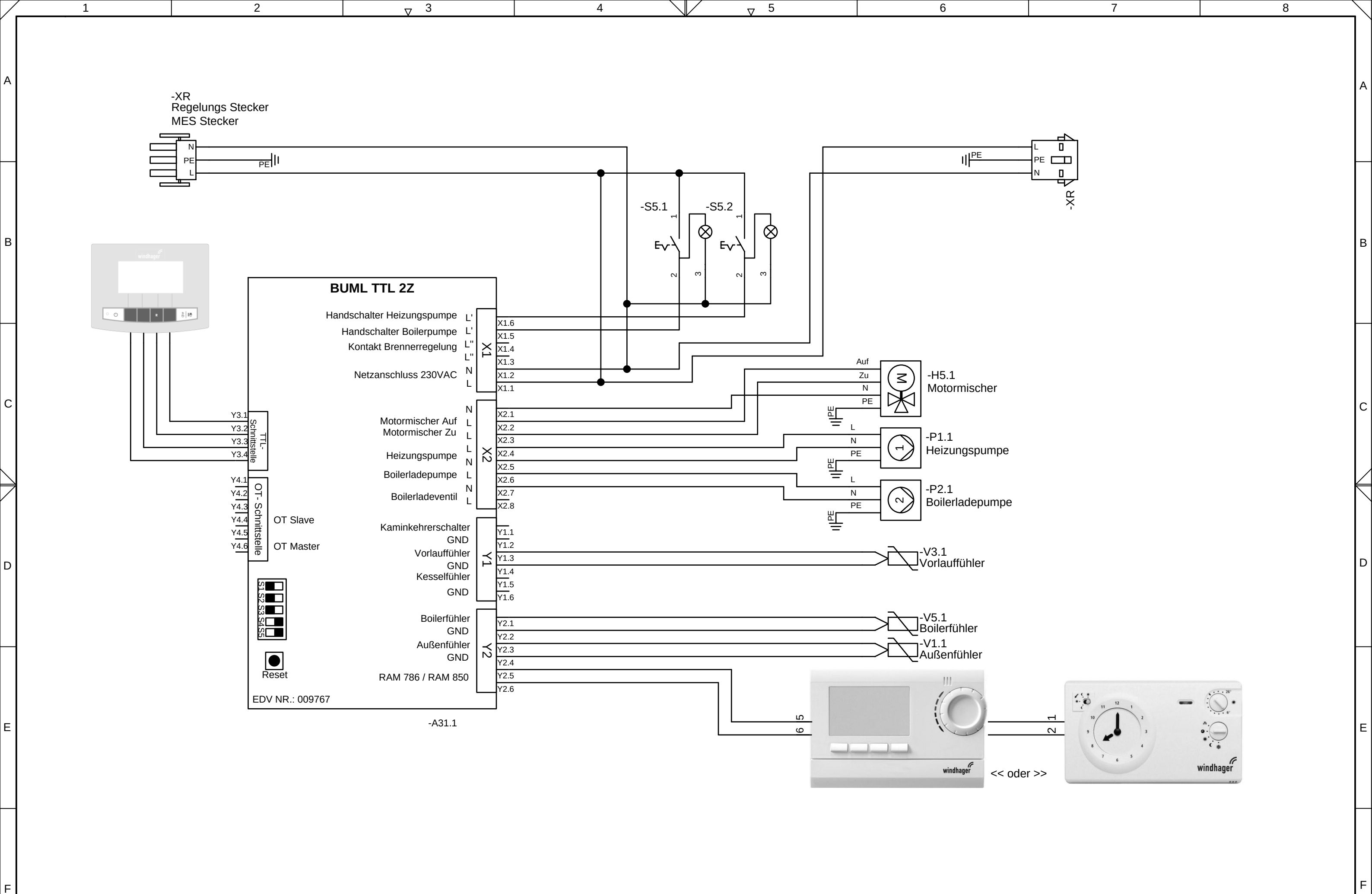
RESET	DIP	OT	Y4.6	Y4.5	Y4.4	Y4.3	Y4.2	Y4.1

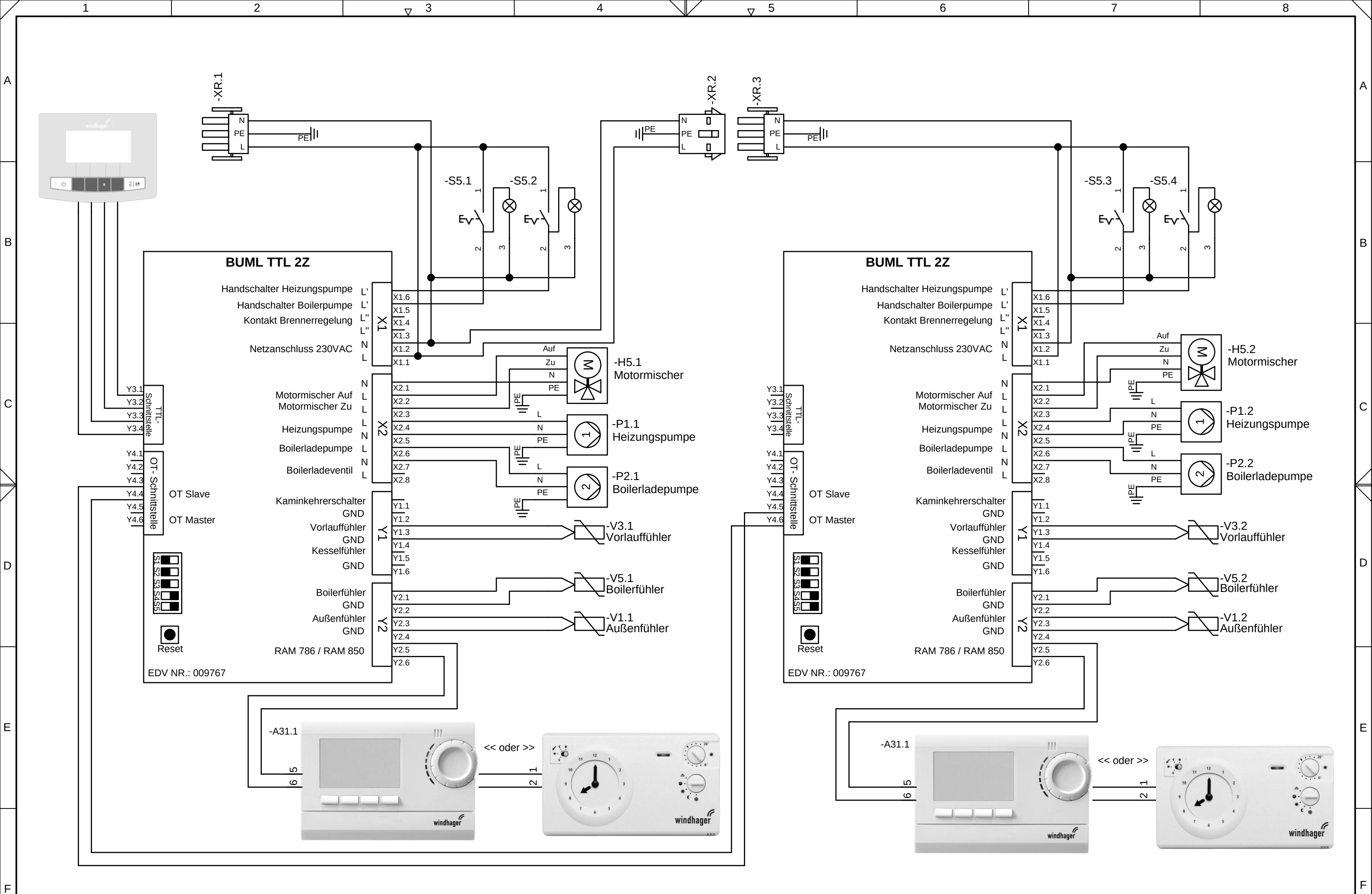
EDV Nr.: 094519/01	
Handschalter Heizungspumpe	X1.6 L'
Handschalter Boilerpumpe	X1.5 L'
	X1.4 L"
	X1.3 L"
Netzanschluss 230VAC	X1.2 N X1.1 L
Motormischer Auf	X2.1 N X2.2 L
Zu	X2.3 L
Heizungspumpe	X2.4 L X2.5 N
Boilerladeventil	X2.6 L
Boilerladepumpe Dauerphase	X2.7 N X2.8 L
Frei	Y1.1 Y1.2
Vorlauffühler	Y1.3 Y1.4
Kesselfühler	Y1.5 Y1.6
Boilerfühler	Y2.1 Y2.2
Außenfühler	Y2.3 Y2.4
RAM 850 RAM 786	Y2.5 Y2.6
BUML-TTL	

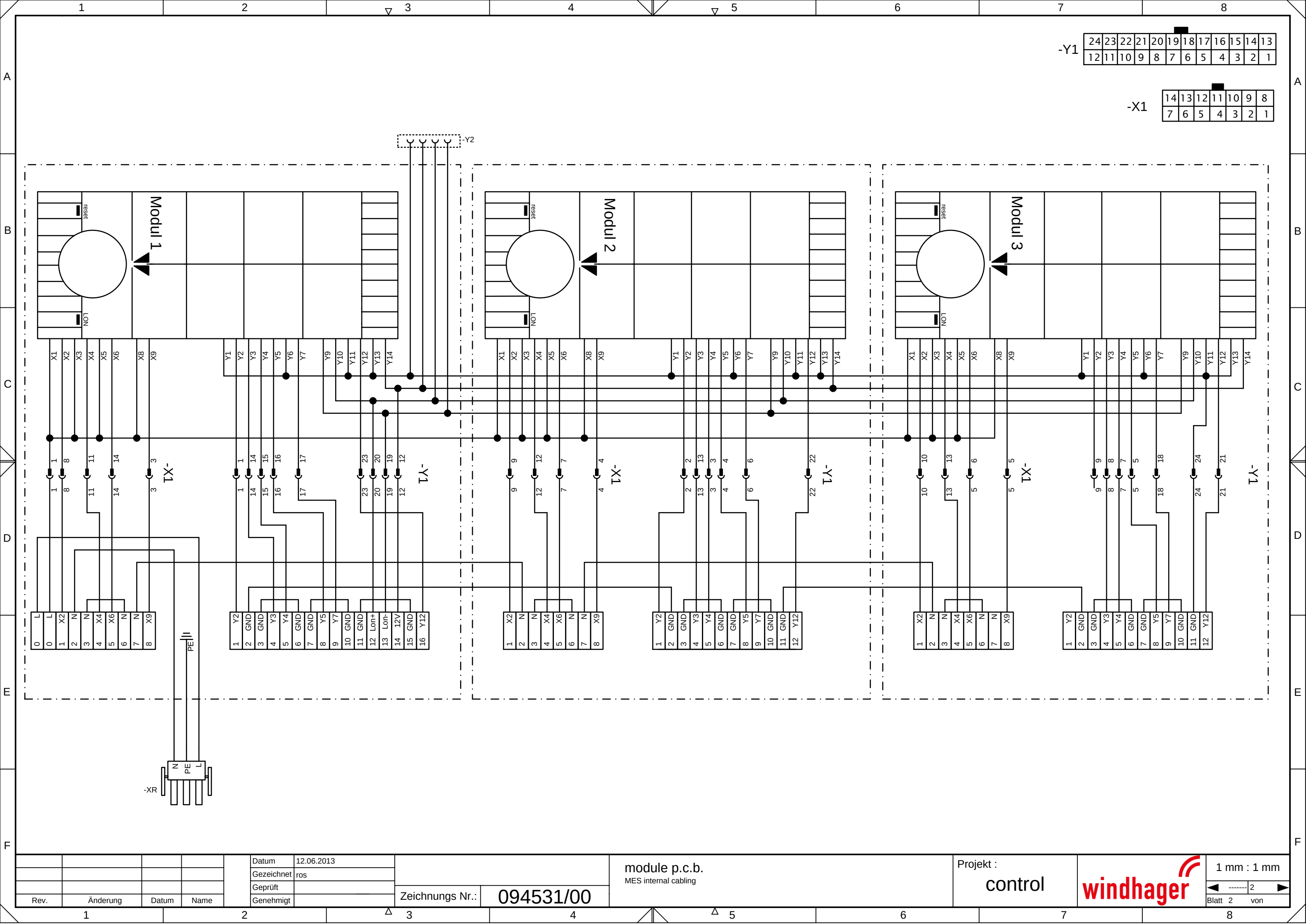
Kessel	
Minimalthermostat	
S1	☐ ON = 35C° / 95 °F ☒ OFF = 20C° / 68 °F
Boiler mit:	
S2	☐ ON = Ladeventil ☒ OFF = Ladepumpe
Boilerladung:	
S3	☐ ON = Parallelladung ☒ OFF = Vorrangsschaltung
Mischerfunktion:	
S4	☒ ON = Ein ☐ OFF = Aus
Bus- Kommunikation:	
S5	☒ ON = Ein ☐ OFF = Aus
Y4.1	
Y4.2	
Y4.3 Slave	
Y4.4 BUML 2	
Y4.5 Master	
Y4.6 BUML 1 / MWP	
OT-	
Schnittstellen	



094521/00

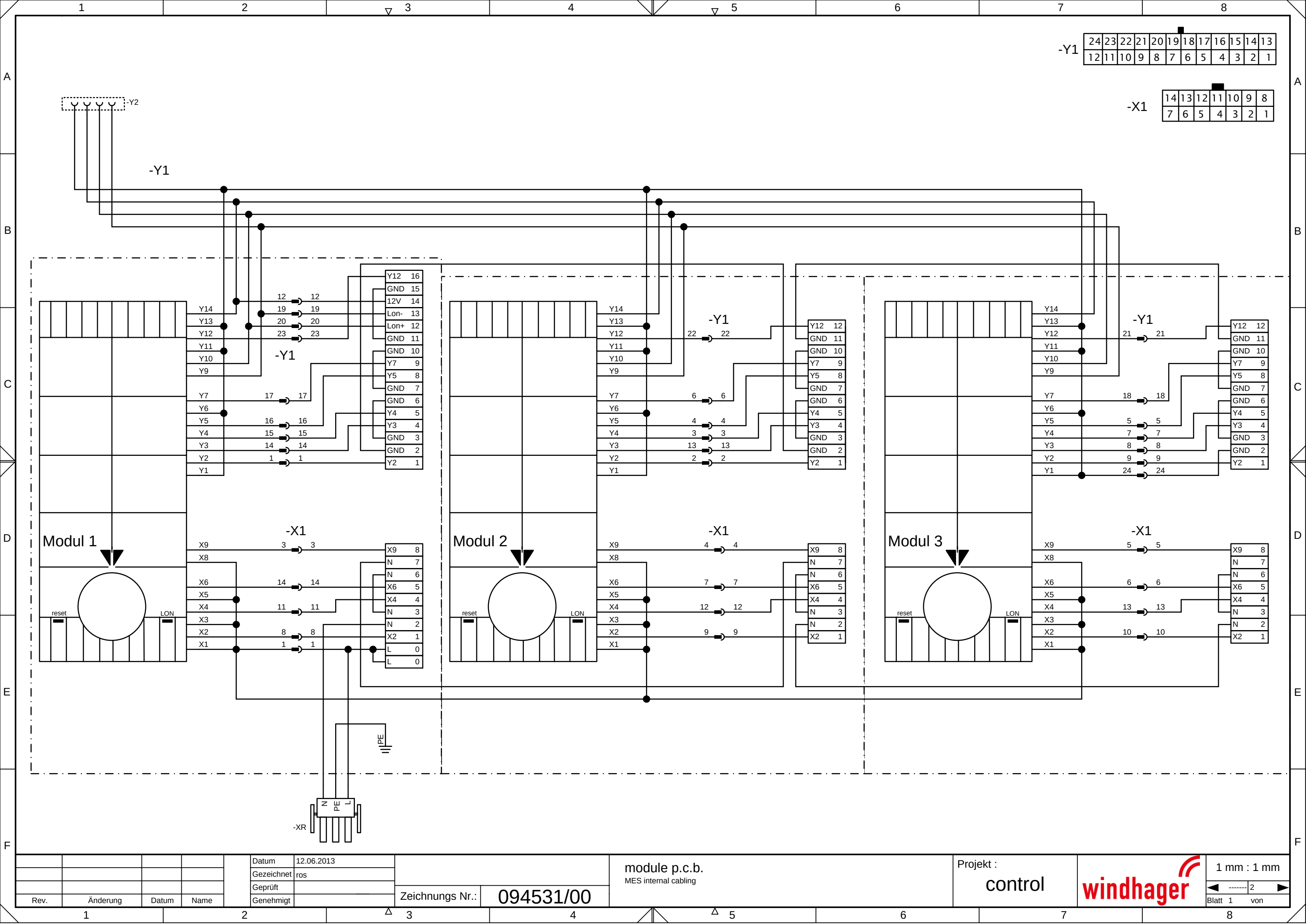






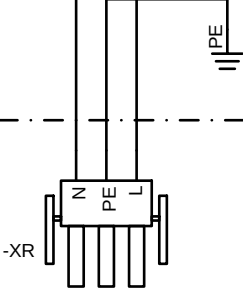
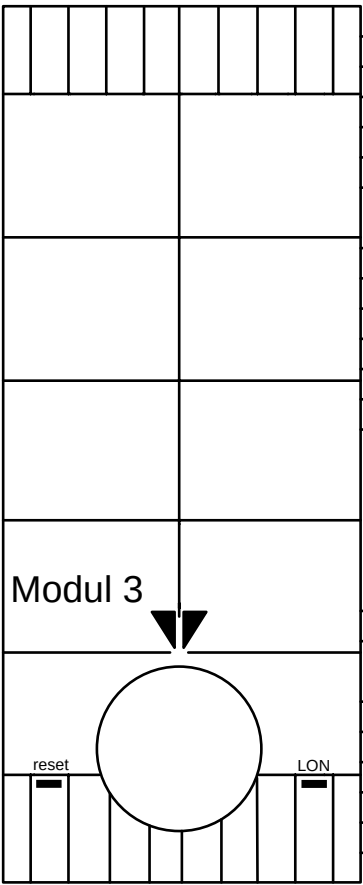
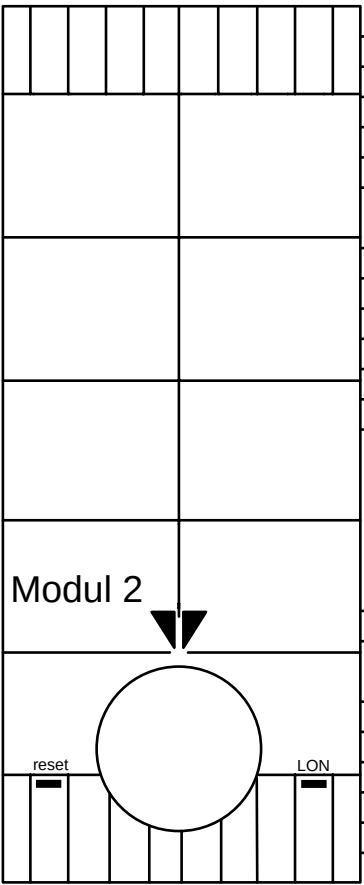
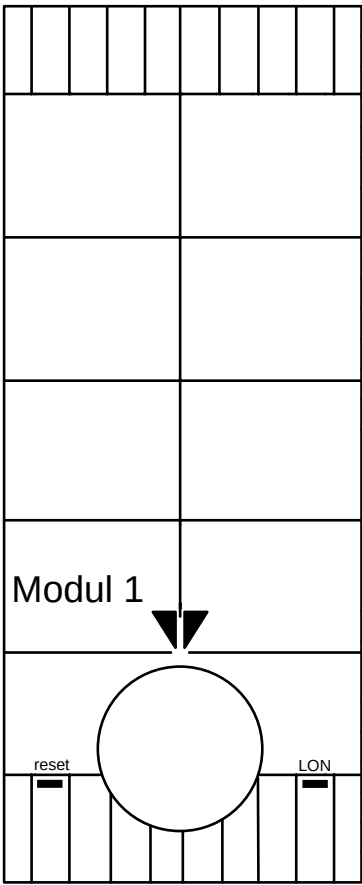
-Y1	24	23	22	21	20	19	18	17	16	15	14	13
	12	11	10	9	8	7	6	5	4	3	2	1

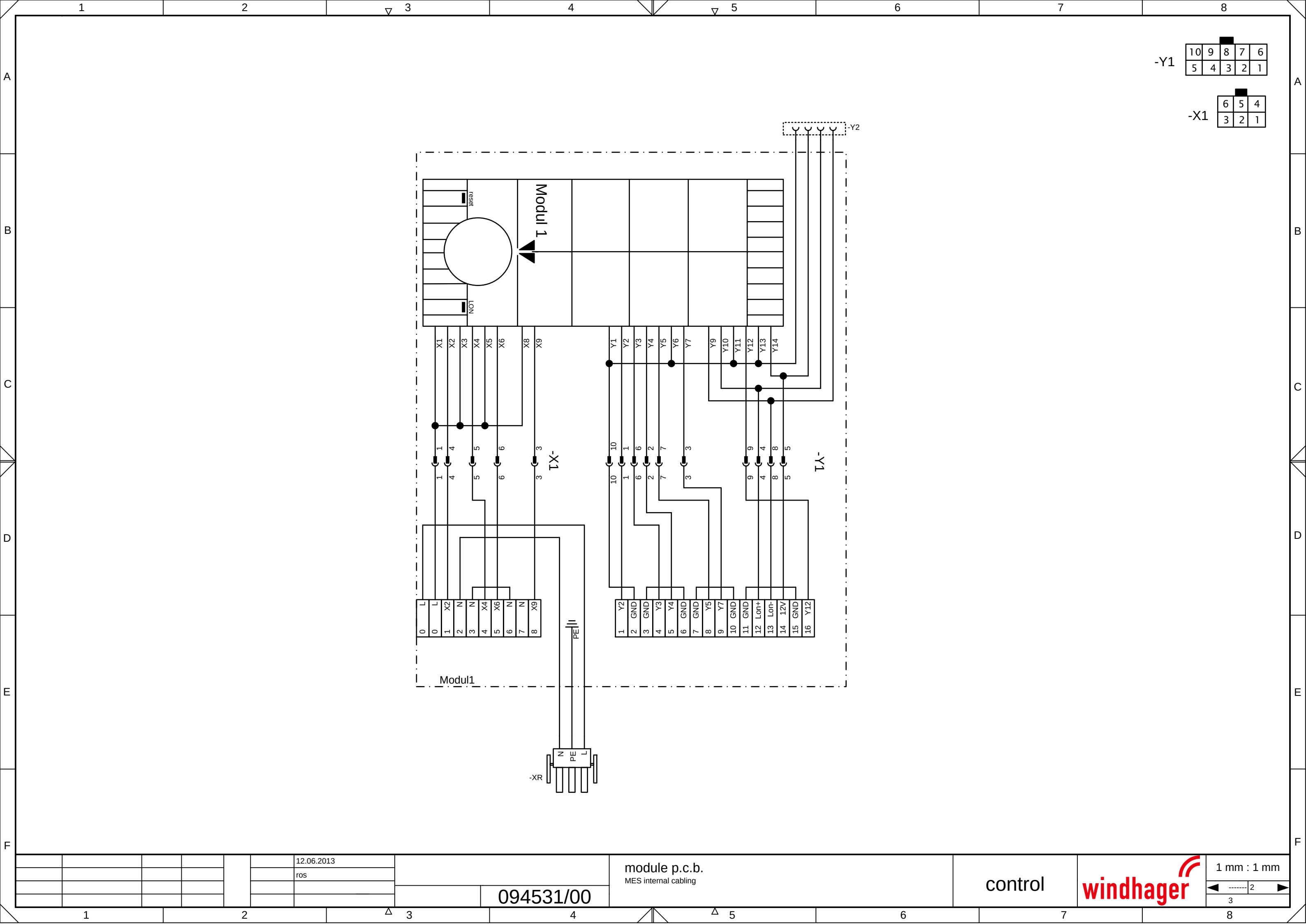
-X1	14	13	12	11	10	9	8
	7	6	5	4	3	2	1



-Y1	24	23	22	21	20	19	18	17	16	15	14	13
	12	11	10	9	8	7	6	5	4	3	2	1

-X1	14	13	12	11	10	9	8
	7	6	5	4	3	2	1





-Y1

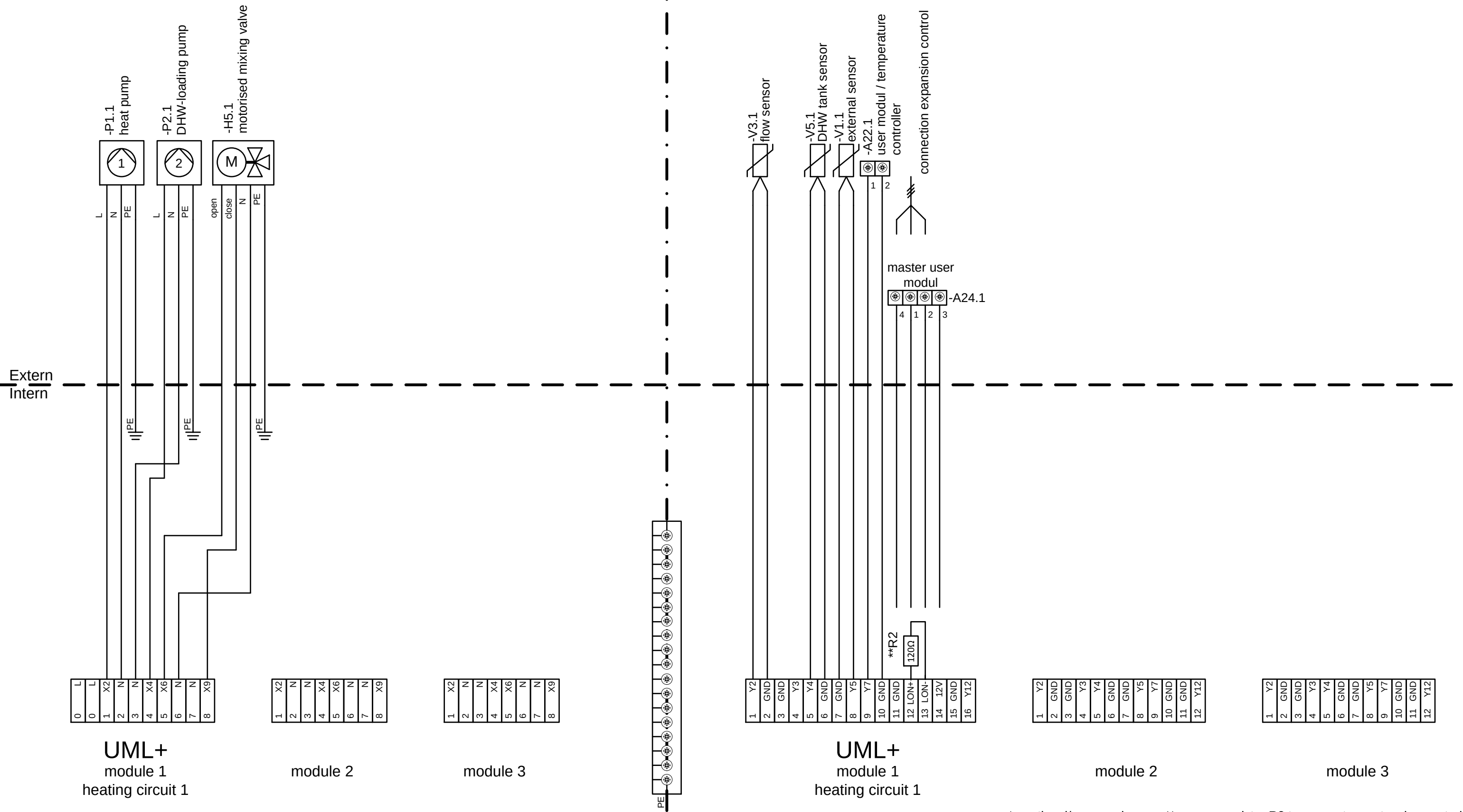
10	9	8	7	6
5	4	3	2	1

-X1

6	5	4
3	2	1

low voltage 230 VAC

extra low voltage - sensor



UML+	module 1 heating circuit 1
0 L	230 VAC
0 L	
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094776/00

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HK1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094776/00

extra low voltage - sensor

Blatt 094777/00

UML+	module 1 heating circuit 1
0 L	230 VAC
0 L	
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1
8 X9	close

UML+	module 2 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 2
8 X9	close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094778/00

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul
13 Lon-	connection expansion control
14 12V	
15 GND	
16 Y12	

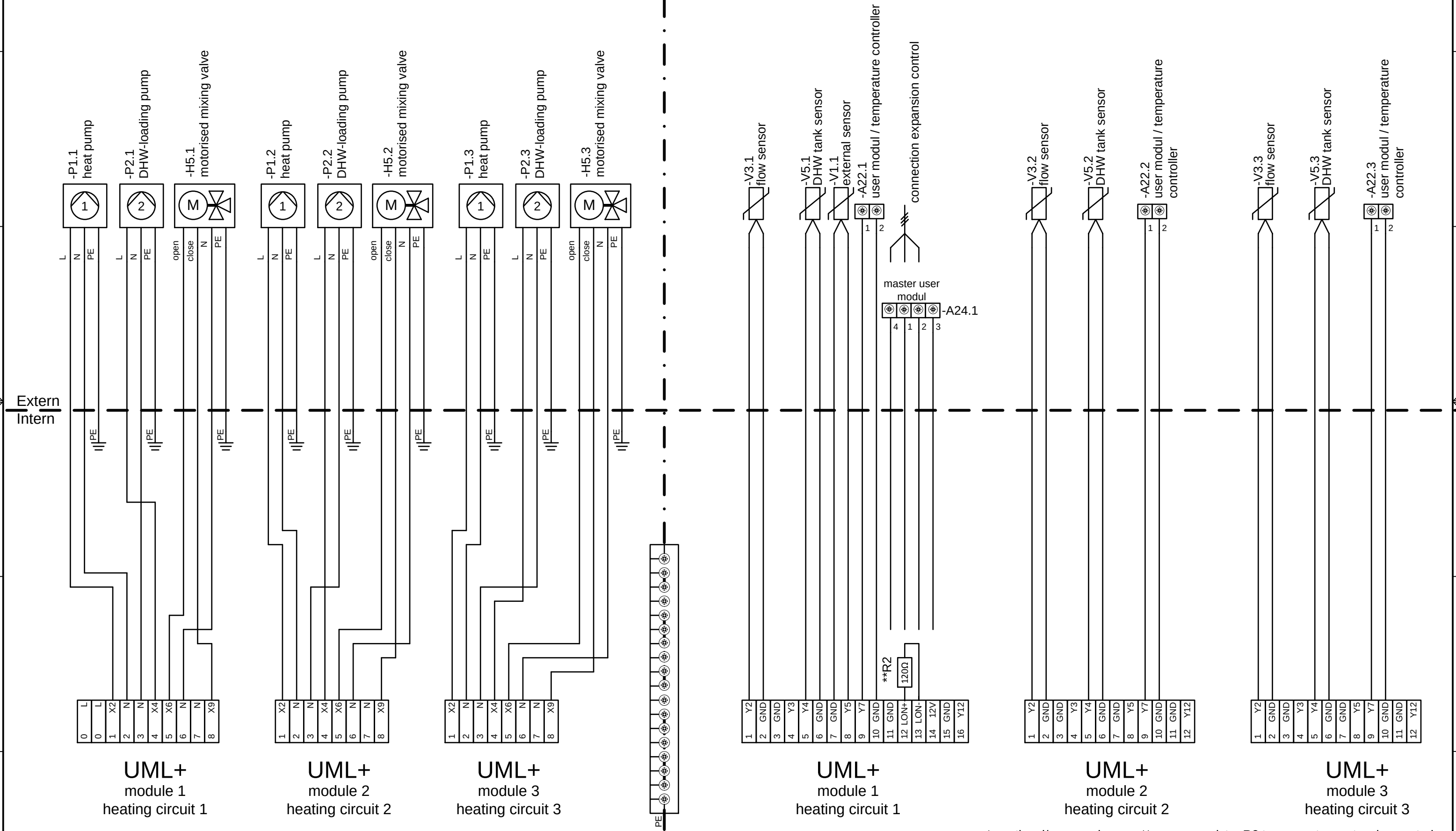
UML+	module 2 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094778/00

low voltage 230 VAC

extra low voltage - sensor



UML+	module 1 heating circuit 1
0 L	230 VAC
0 L	
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1
8 X9	close

UML+	module 2 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 2
8 X9	close

UML+	module 3 heating circuit 3
1 X2	heat pump HC 3
2 N	
3 N	DHW-loading pump HC 3
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 3
8 X9	close

094782/00

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul
13 Lon-	connection expansion control
14 12V	
15 GND	
16 Y12	

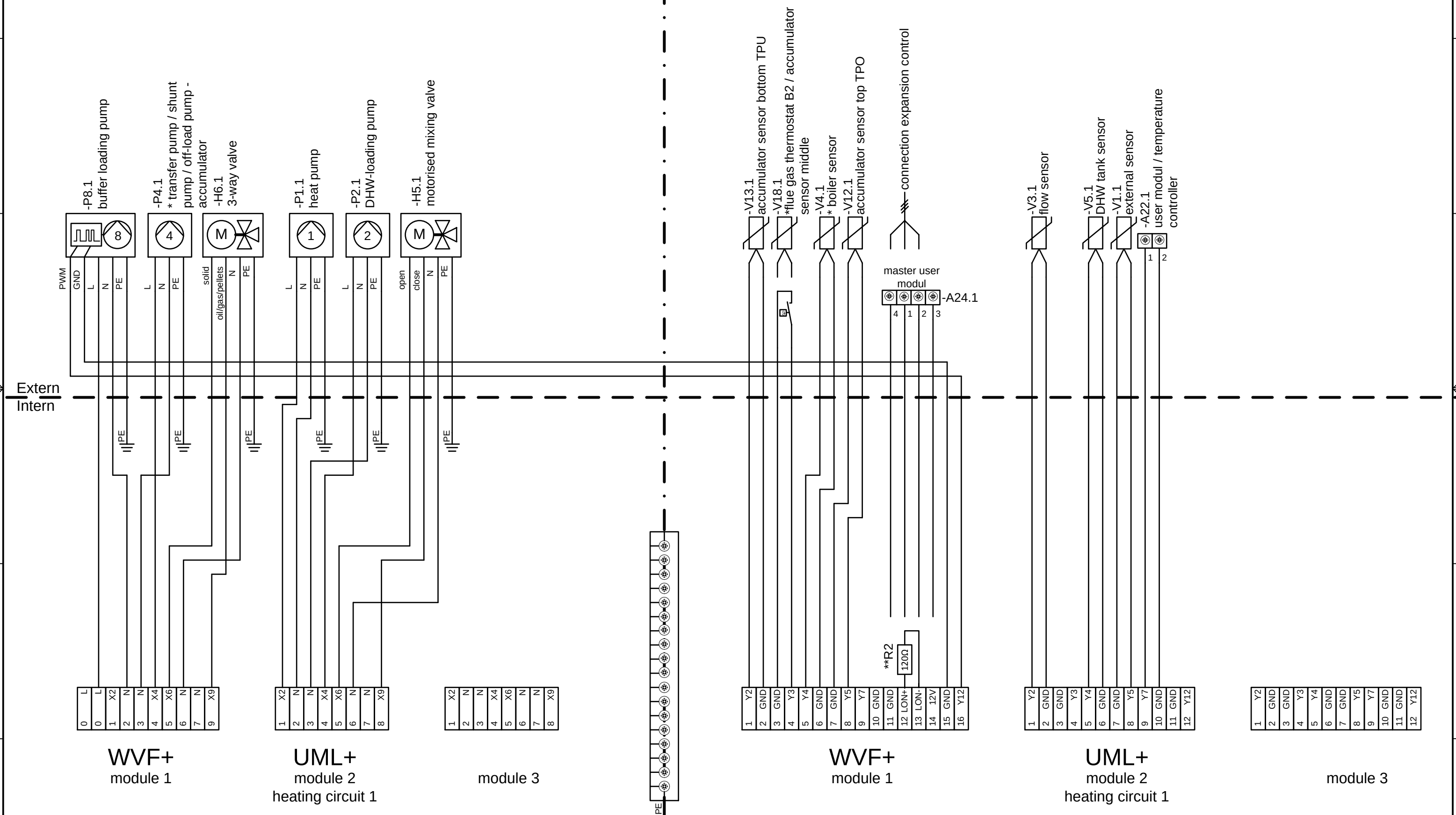
UML+	module 2 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 3
1 Y2	flow sensor HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 3
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

094782/00

low voltage 230 VAC

extra low voltage - sensor



WVF+	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	solid 3-way valve oil/gas/pellets
6 N	
7 N	
8 X9	

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*flue gas thermostat B2 accumulator sensor middle
4 Y3	
5 Y4	*boiler sensor
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM buffer loading pump
16 Y12	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

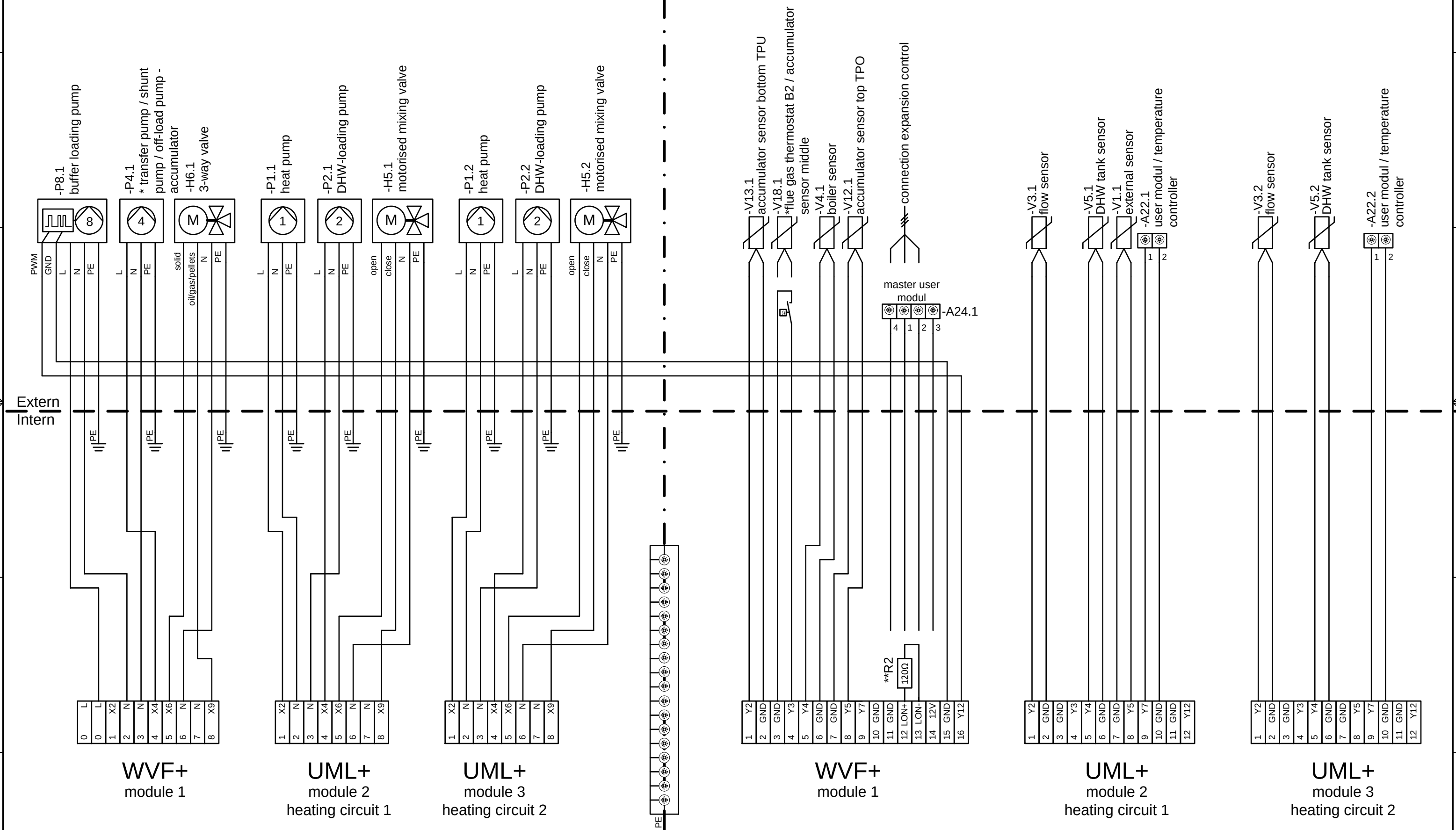
	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094787/00

low voltage 230 VAC

extra low voltage - sensor



WVF+	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	
4 X4	
5 X6	solid 3-way valve oil/gas/pellets
6 N	
7 N	
8 X9	

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*flue gas thermostat B2 / accumulator sensor middle
4 Y3	
5 Y4	* boiler sensor
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM buffer loading pump
16 Y12	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

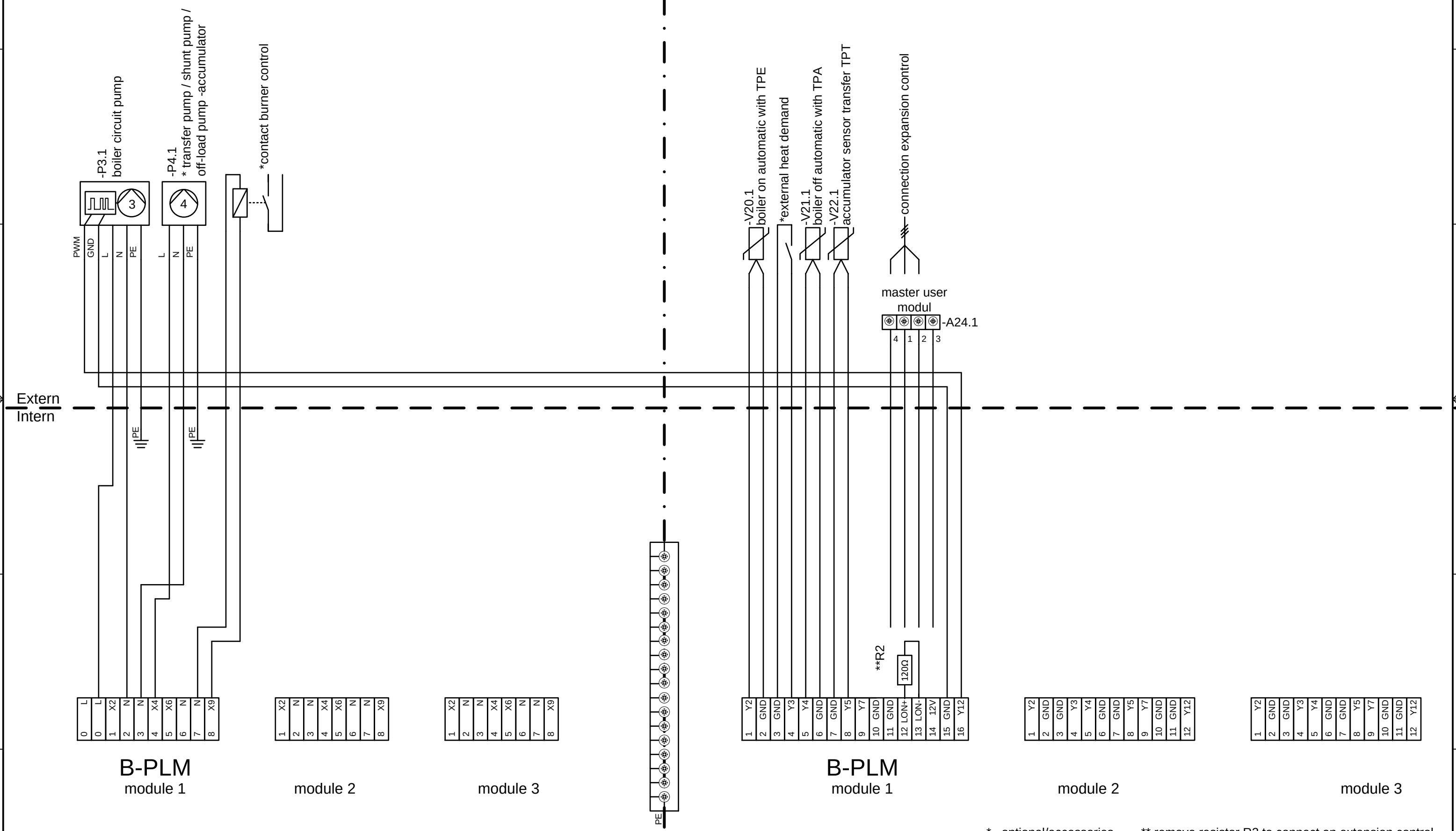
094786/00

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

094786/00

low voltage 230 VAC

extra low voltage - sensor



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* transfer pump / shunt pump / off-load pump accumulator
4 X4	
5 X6	
6 N	
7 N	
8 X9	*burner contact

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094788/00

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

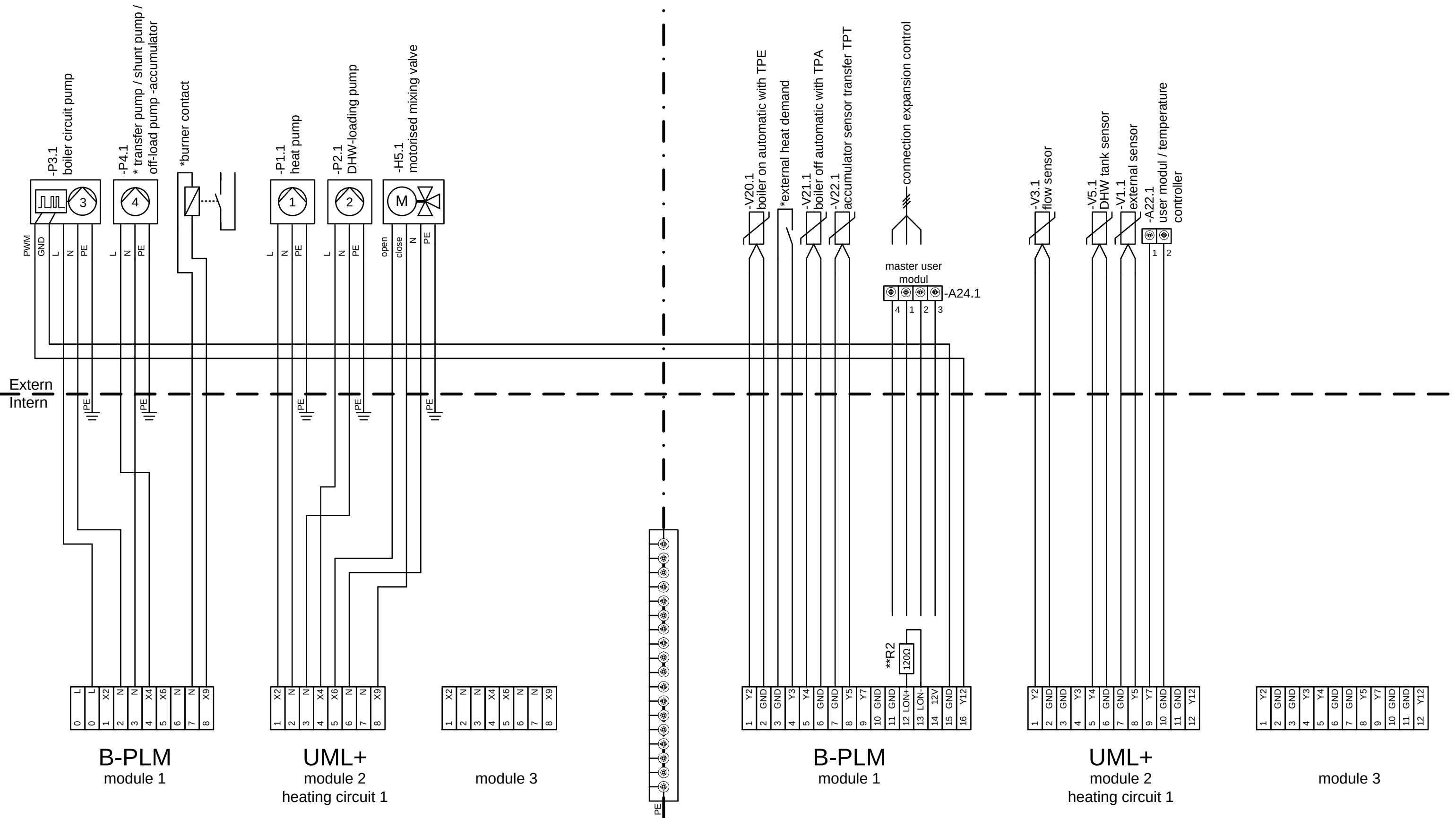
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094788/00

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis incl. burner- / accutank module B-PLM	Projekt : control		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094789/00					
												Blatt 094789/00

B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	
8 X9	
	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094790/00

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

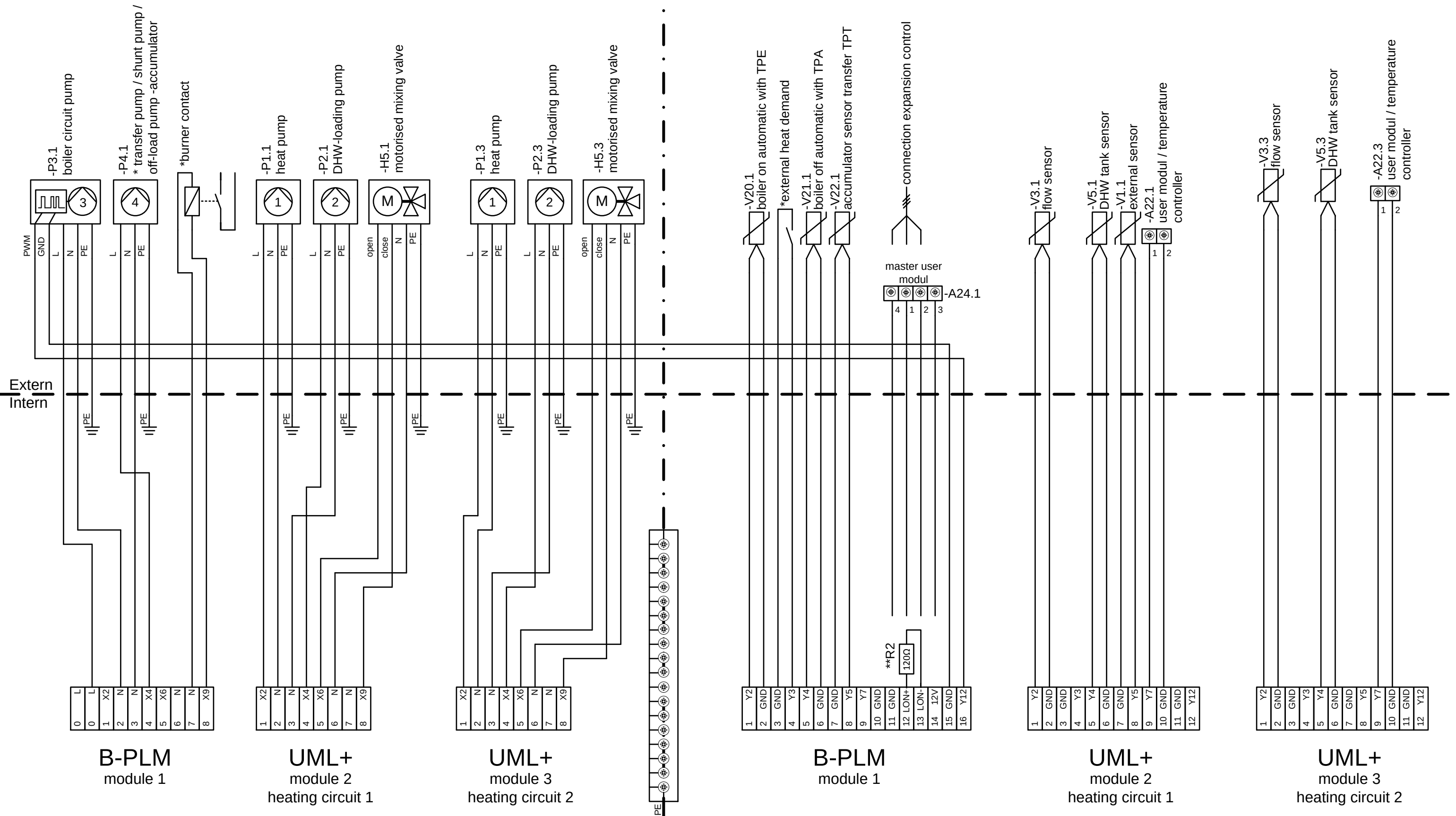
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094790/00

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	04.07.2013	B-PLM/UML+/UML+		MES P042 + H021 + H024 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis incl. burner- / accutank module B-PLM		Projekt : control		1 mm : 1 mm
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	0944791/00					Blatt 0944791/00

B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	
8 X9	
	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 2 close

094792/00

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	
13 Lon-	master user modul connection expansion control
14 12V	PWM boiler circuit pump
15 GND	
16 Y12	

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

094792/00

extra low voltage - sensor




 1 mm : 1 mm
 Blatt 094793/00

B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	
6 N	
7 N	
8 X9	*burner contact

WVF+	module 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	solid 3-way valve oil/gas/pellets
6 N	
7 N	
8 X9	

UML+	module 3 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open motorised mixing valve HC 1 close
6 N	
7 N	
8 X9	

094794/00

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	*accumulator sensor transfer TPT
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

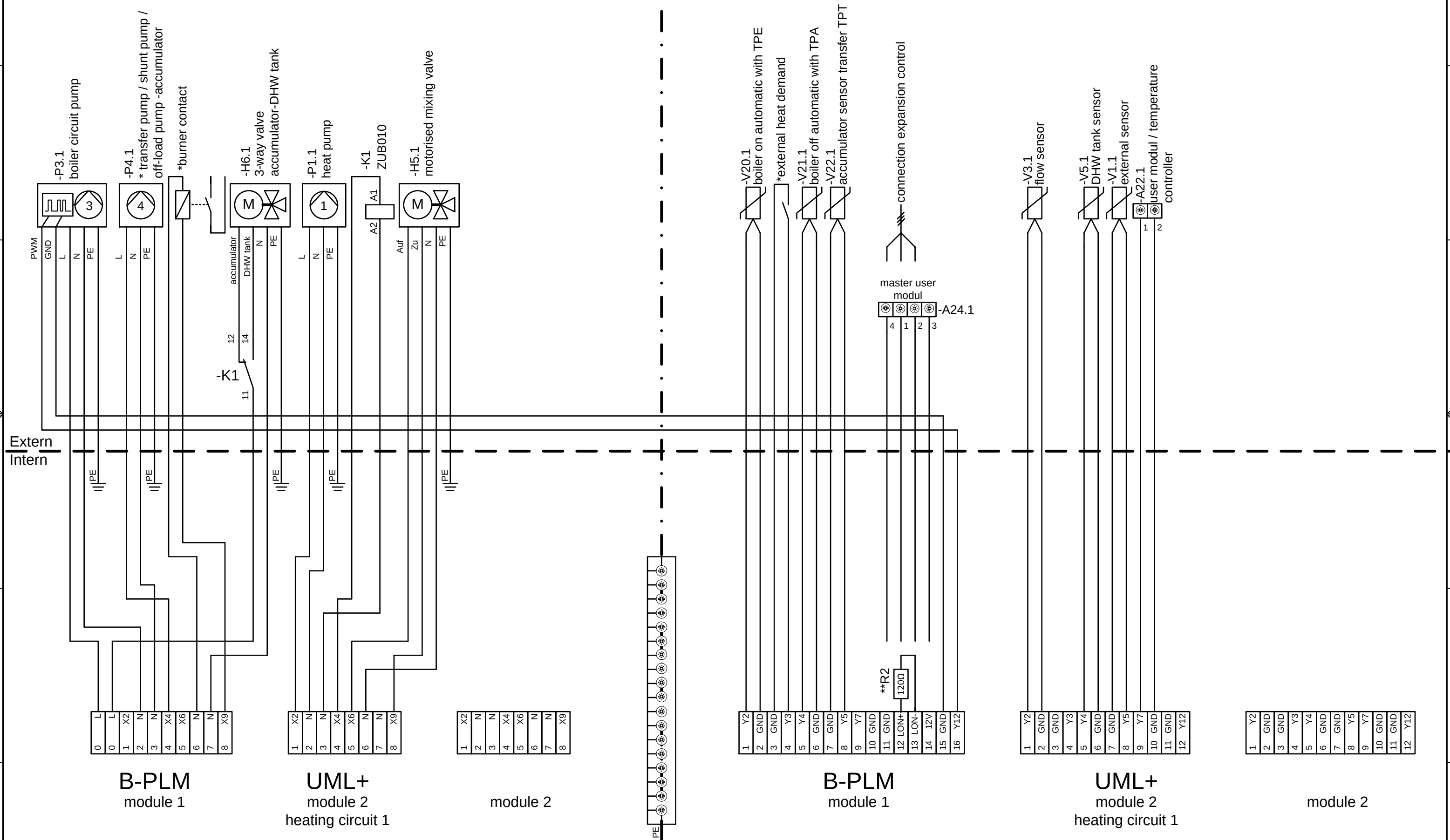
WVF+	module 2
1 Y2	accumulator bottom TPU
2 GND	
3 GND	*flue gas thermostat B2 accumulator sensor middle
4 Y3	
5 Y4	*boiler sensor
6 GND	accumulator sensor top TPO
7 GND	
8 Y5	
9 Y7	
10 GND	PWM buffer loading pump
11 GND	
12 Y12	

UML+	module 3 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor
6 GND	HC 1
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

094794/00

low voltage 230 VAC

extra low voltage - sensor



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	
8 X9	
	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	contactor -K1 HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094796/00

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	* external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

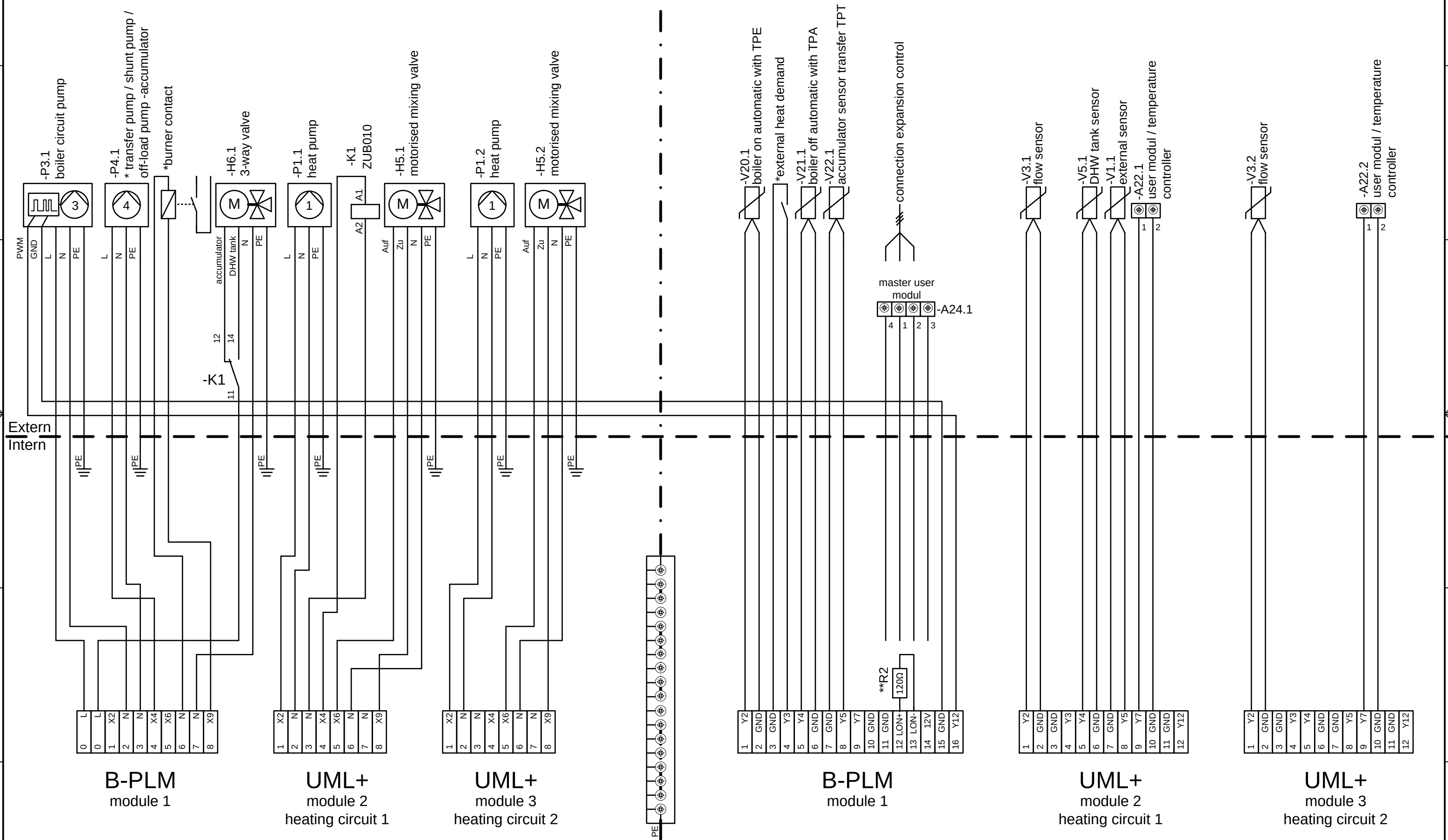
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094796/00

low voltage 230 VAC

extra low voltage - sensor



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	
8 X9	
	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	contactor -K1 HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 2 close

094799/00

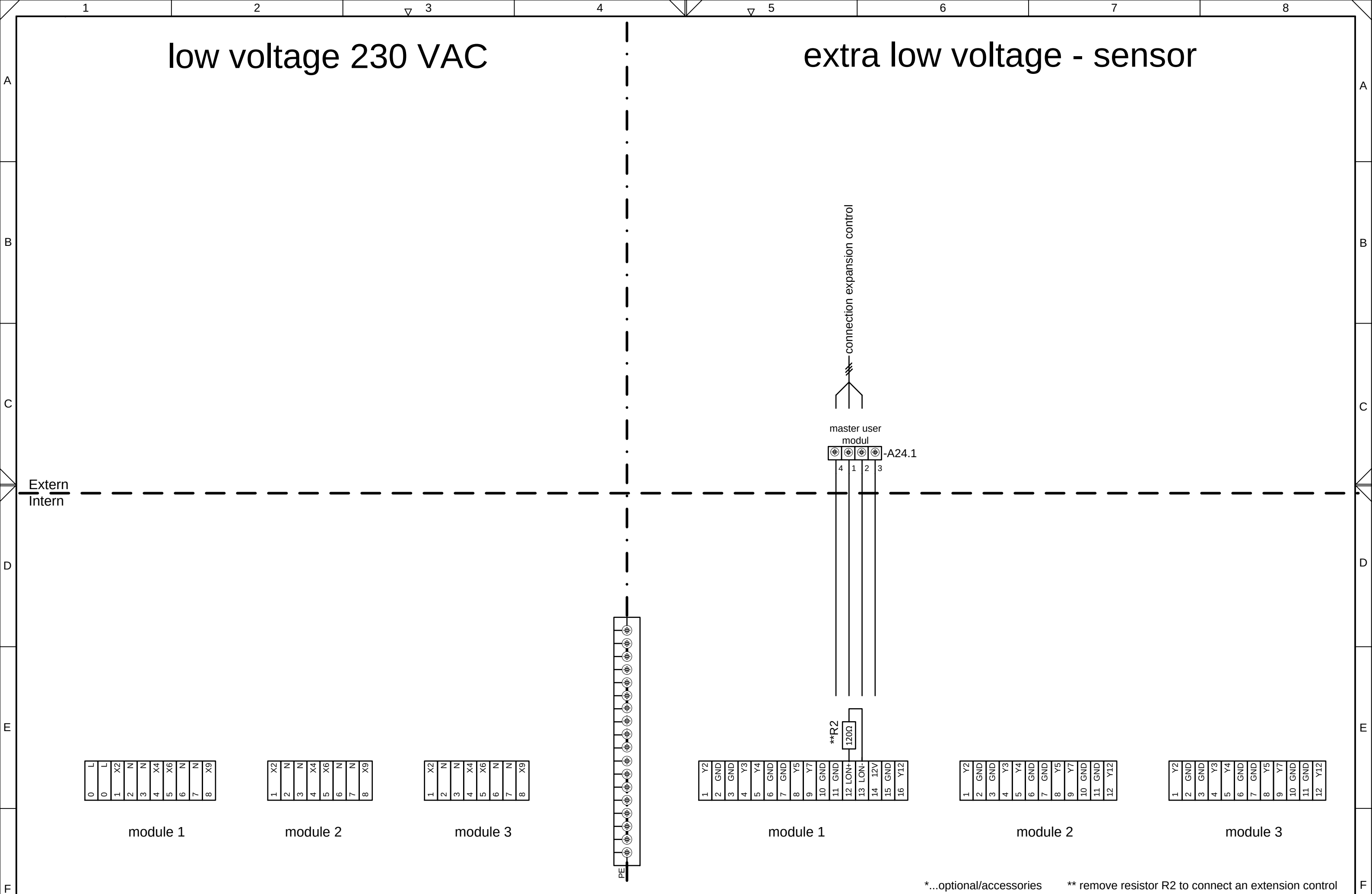
B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	* external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

094799/00

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	04.07.2013	-	without Windhager MES control without Windhager MES control	Projekt : control		1 mm : 1 mm		
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094800/00			Blatt 094800/00		

1	module 1
0 L	230 VAC
0 L	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

094801/00

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

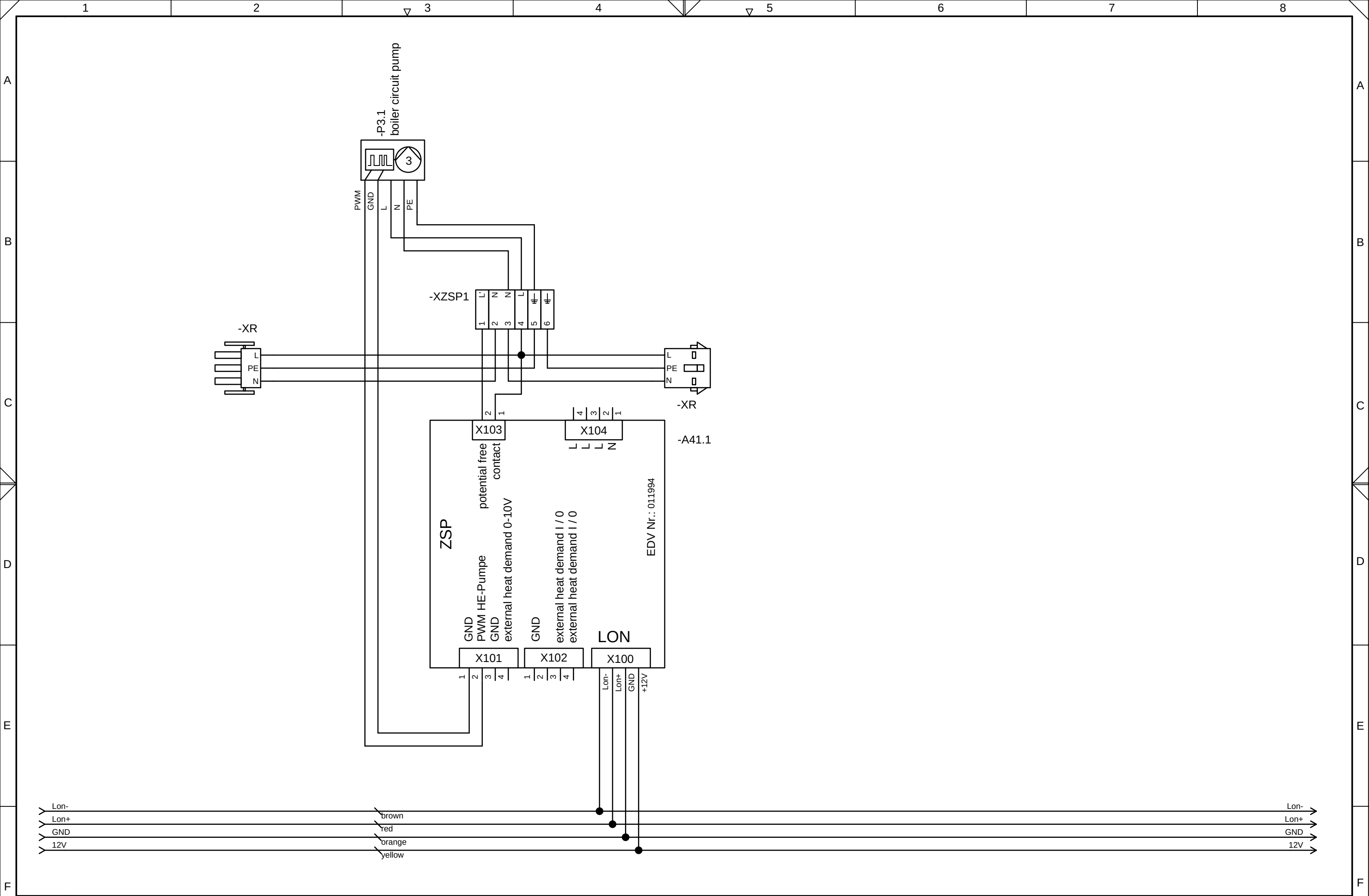
094801/00

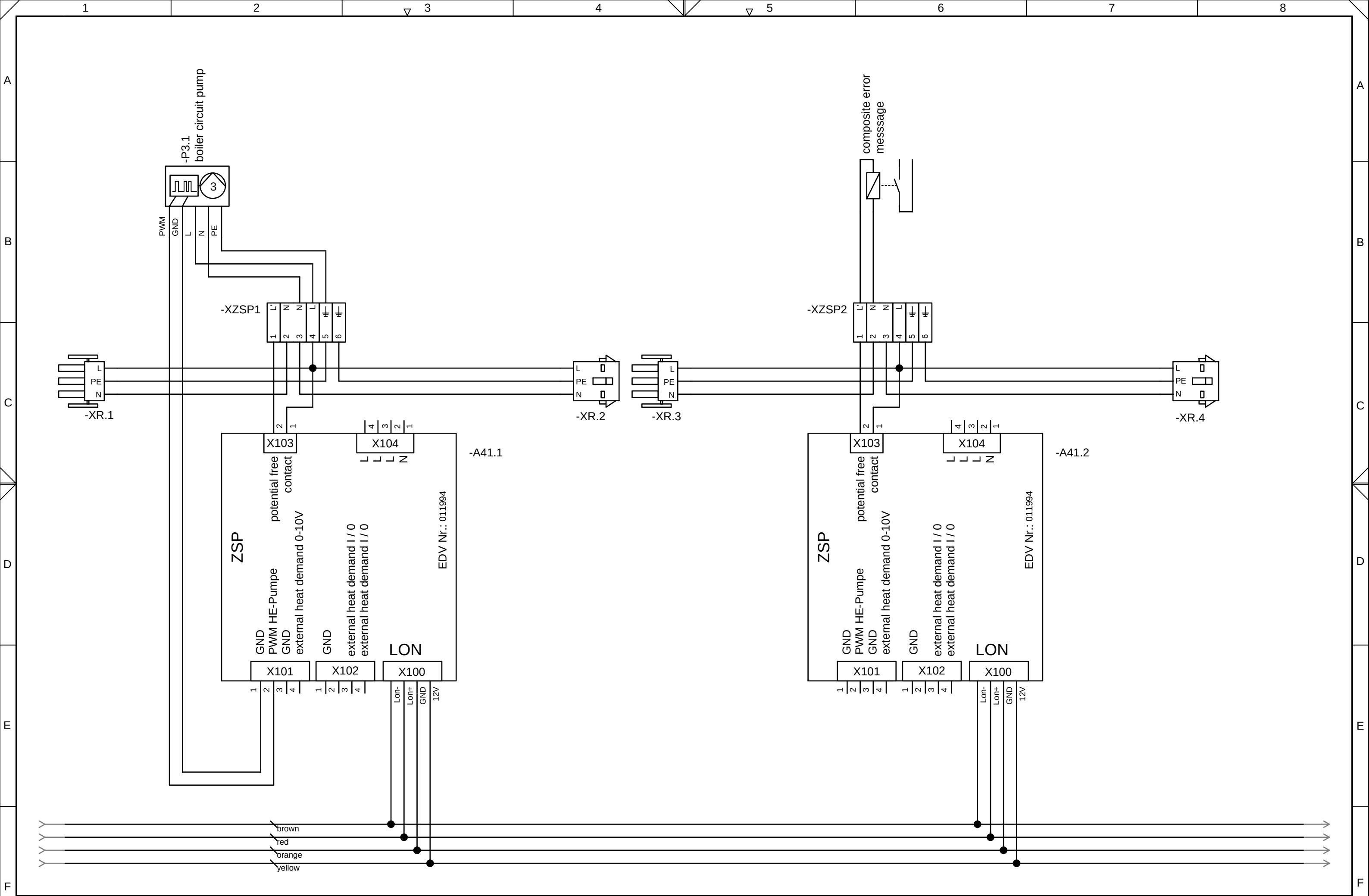
-XZSP	extra pcb
L'	
N	
N	permanent phase
L	
PE	PE
PE	

-XSP	extra pcb
PWM boiler circuit pump	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094512/00





-XZSP	extra pcb
L' N	composite error message
N L	permanent phase
PE PE	PE

EDV Nr. 094808/00

-XSP	extra pcb
	GND -X101 /2
	GND -X101 /4

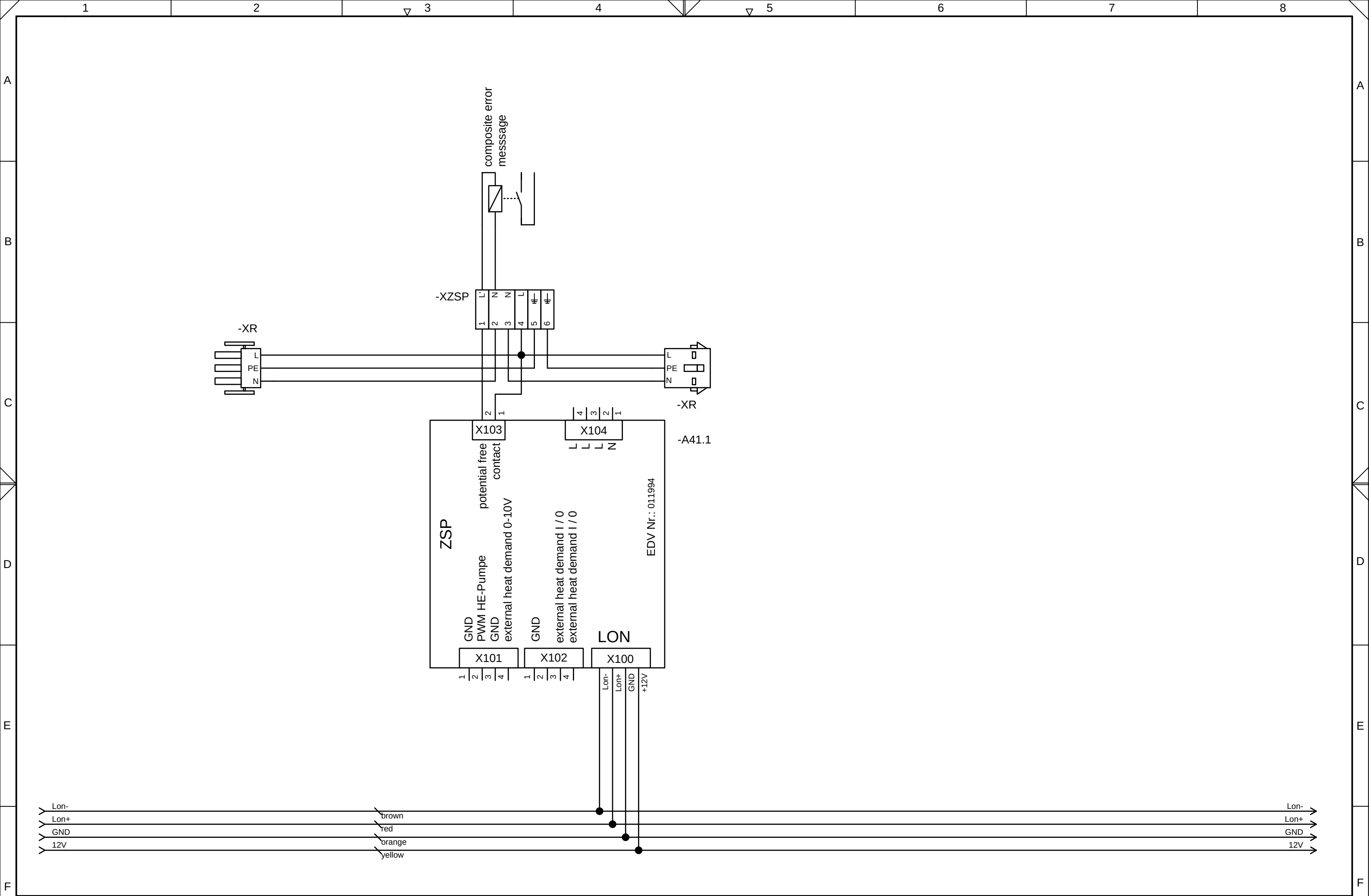
	GND -X102 /2
	-X102 /3
	-X102 /4

-XZSP	extra pcb
L'	
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	extra pcb
PWM boiler circuit pump	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

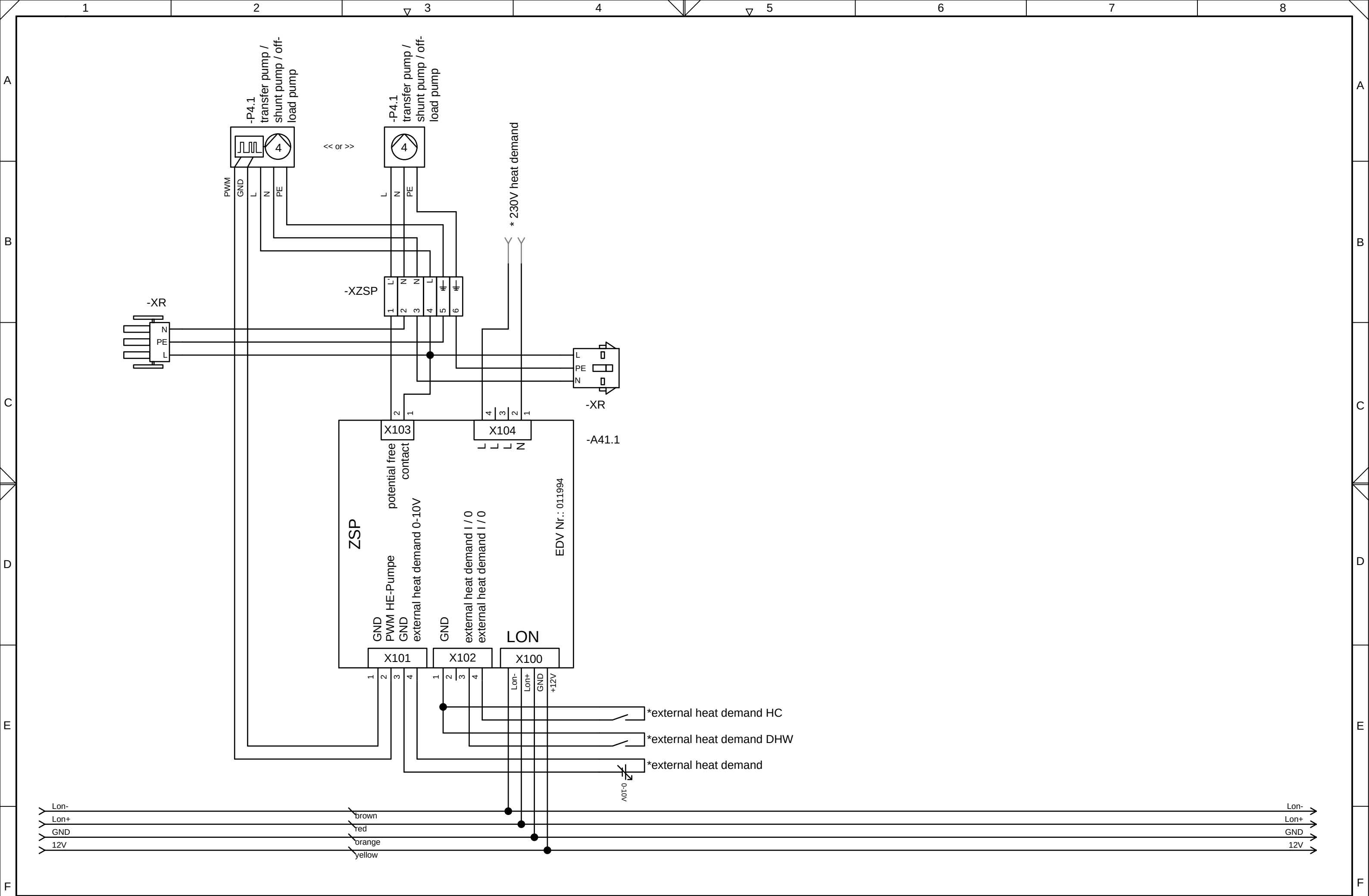


-XZSP	extra pcb
L' N	composite error message
N L	permanent phase
PE PE	PE

EDV Nr. 094808/00

-XSP	extra pcb
	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4



-XZSP	extra pcb
L' N	transfer pump / shunt pump / off-load pump
N L	permanent phase
PE PE	PE

EDV Nr. 094809/00

-XSP	extra pcb
PWM transfer pump / shunt pump / off-load pump	GND -X101 /2
heat demand 0-10V	GND -X101 /4

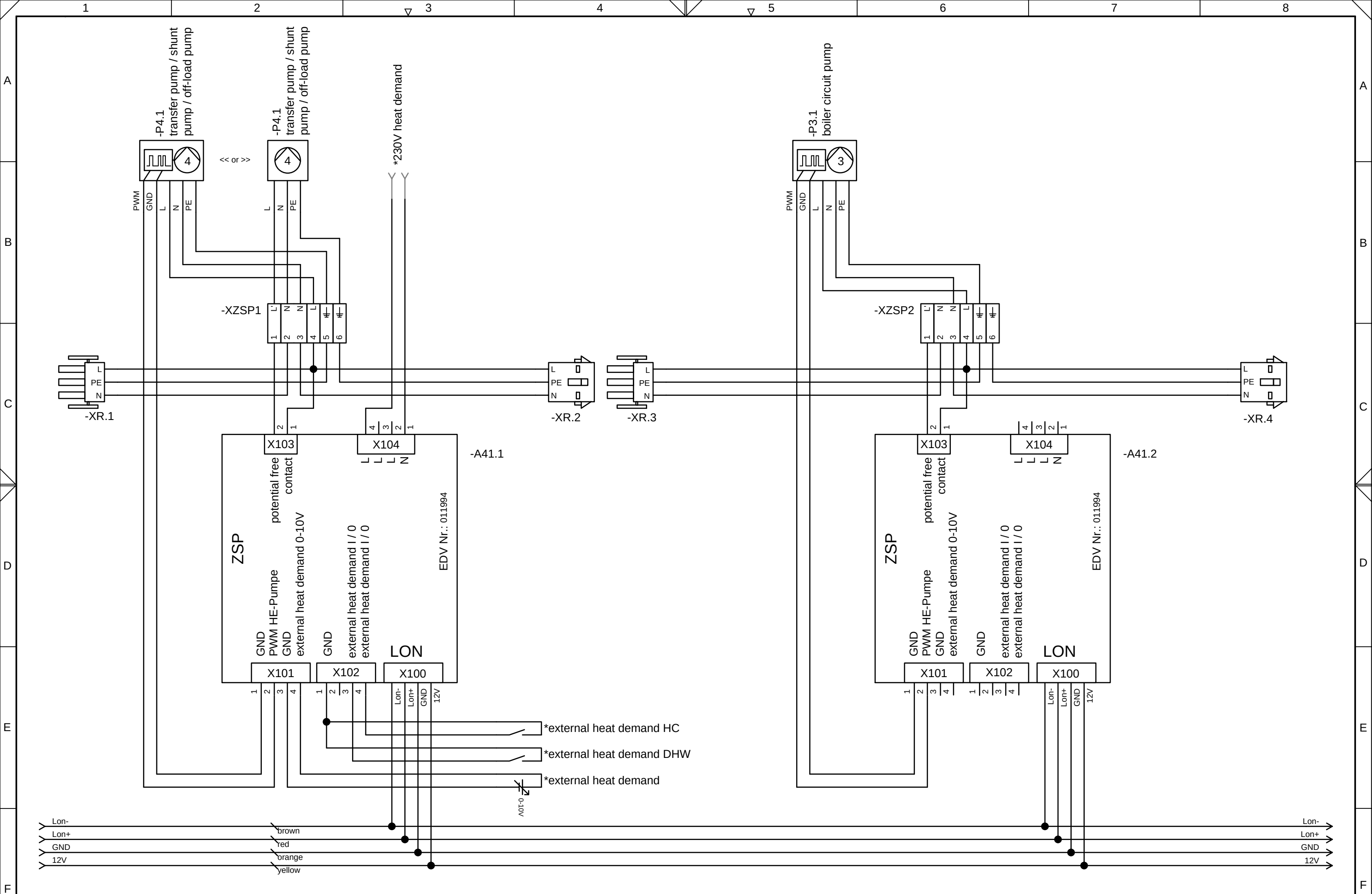
GND	GND
-X102 /2	-X102 /2
external heat demand DHW	-X102 /3
external heat demand HC	-X102 /4

-XZSP	extra pcb
L'	
N	
N	permanent phase
L	
PE	PE
PE	

-XSP	extra pcb
PWM boiler circuit pump	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094512/00

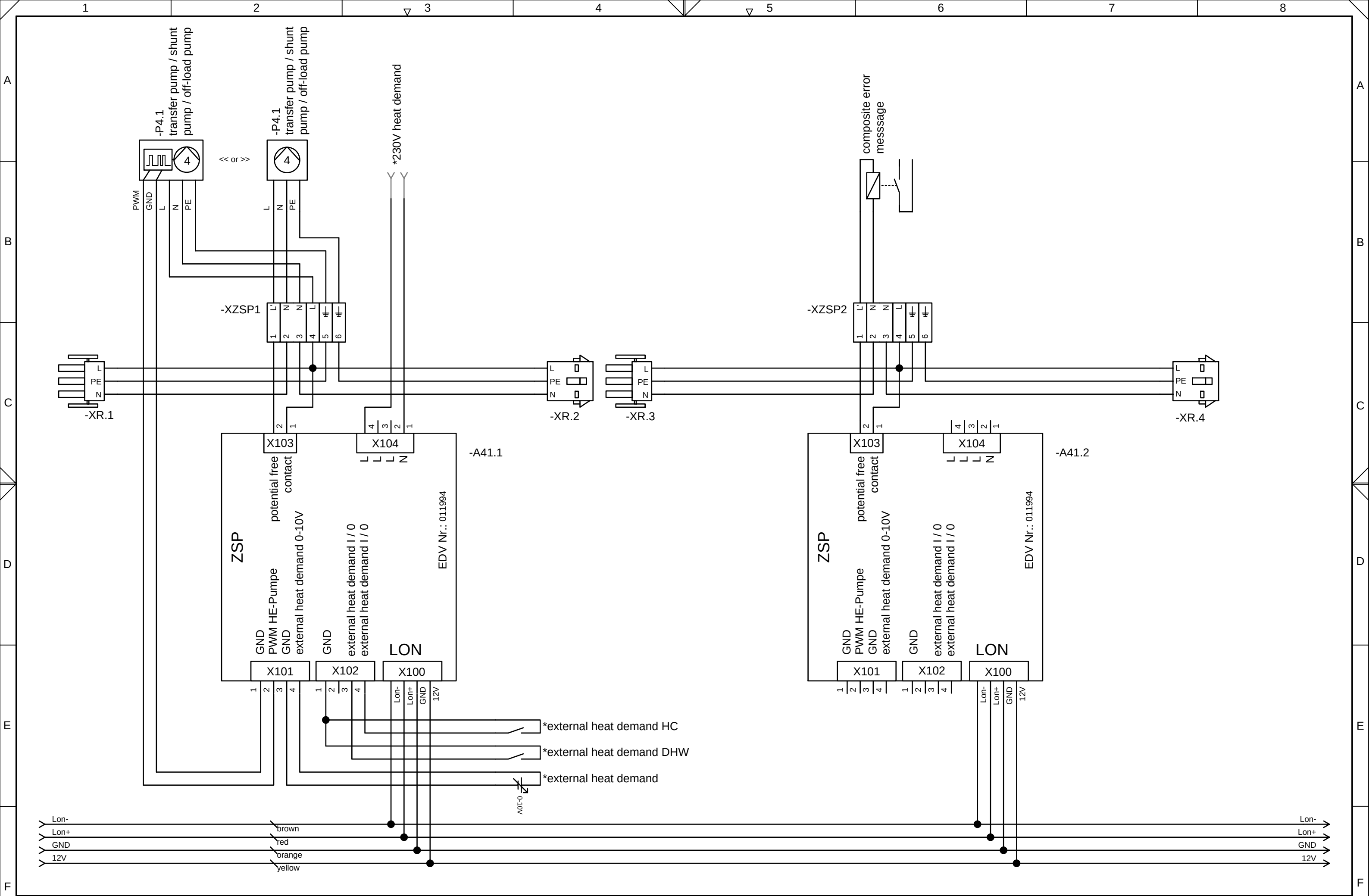


-XZSP	extra pcb
L' N	transfer pump / shunt pump / off-load pump
N L	permanent phase
PE PE	PE

EDV Nr. 094809/00

-XSP	extra pcb
PWM transfer pump / shunt pump / off-load pump	GND -X101 /2
heat demand 0-10V	GND -X101 /4

GND	-X102 /2
external heat demand DHW	-X102 /3
external heat demand HC	-X102 /4



-XZSP	extra pcb
L' N	composite error message
N L	permanent phase
PE PE	PE

EDV Nr. 094808/00

-XSP	extra pcb
	GND -X101 /2
	GND -X101 /4

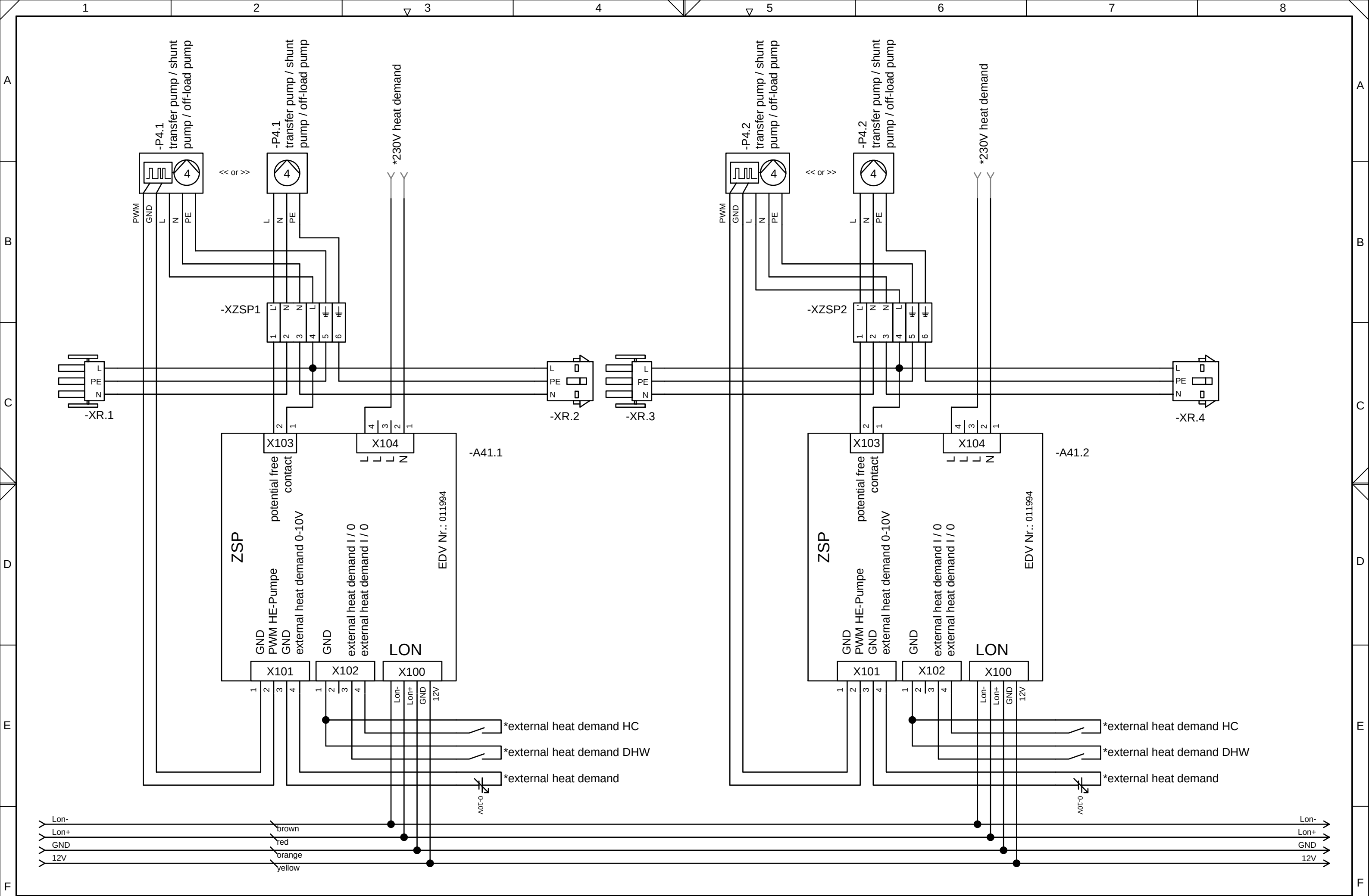
	GND -X102 /2
	-X102 /3
	-X102 /4

-XZSP	extra pcb
L' N	transfer pump / shunt pump / off-load pump
N L	permanent phase
PE PE	PE

EDV Nr. 094809/00

-XSP	extra pcb
	PWM transfer pump / shunt pump / off-load pump
	GND -X101 /2
	heat demand 0-10V GND -X101 /4

	GND -X102 /2
	external heat demand DHW -X102 /3
	external heat demand HC -X102 /4



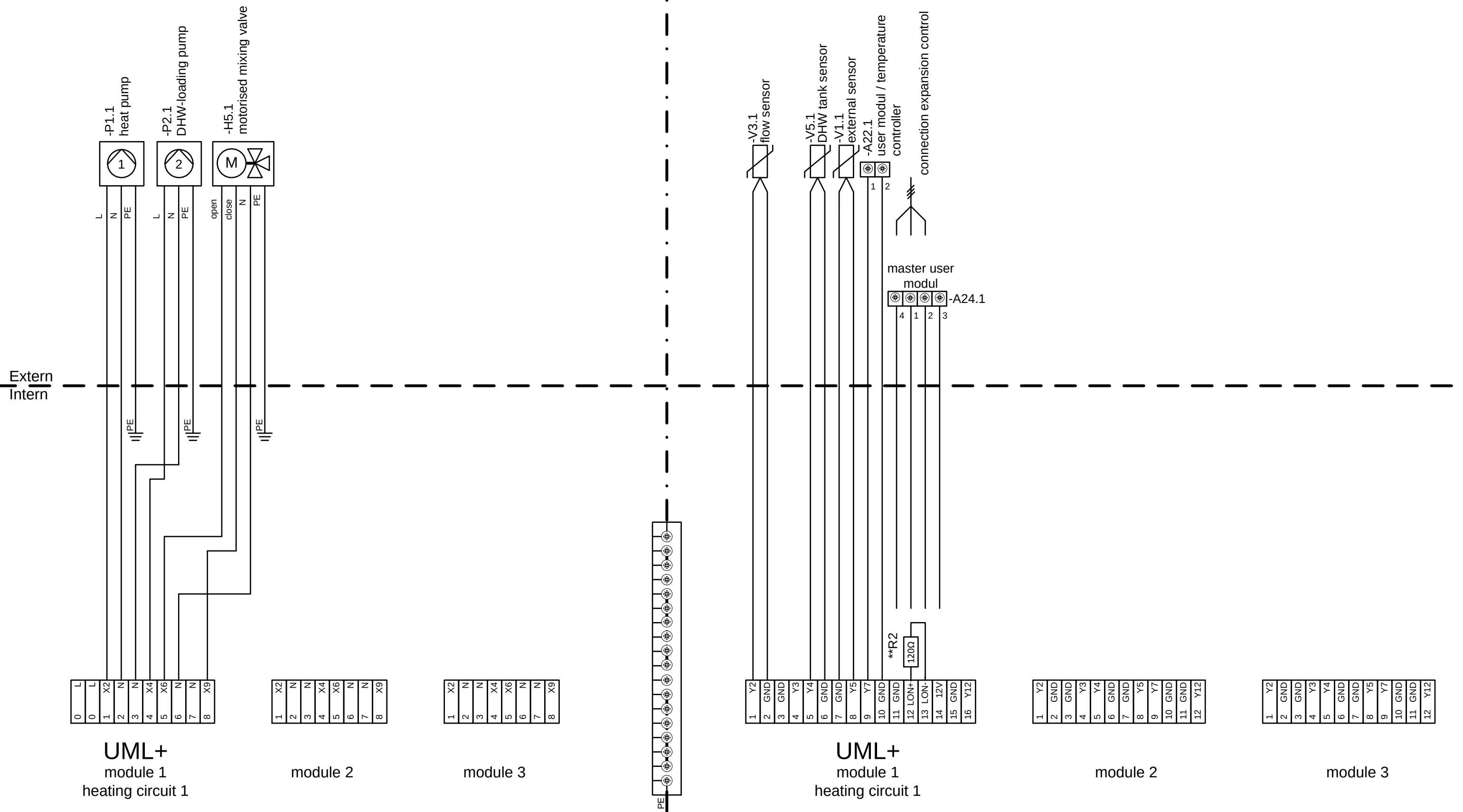
-XZSP	extra pcb
L' N	transfer pump / shunt pump / off-load pump
N L	permanent phase
PE PE	PE

EDV Nr. 094809/00

-XSP	extra pcb
PWM transfer pump / shunt pump / off-load pump	GND -X101 /2
heat demand 0-10V	GND -X101 /4
	GND -X102 /2
external heat demand DHW	-X102 /3
external heat demand HC	-X102 /4

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

UML+	module 1 heating circuit 1
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	HC 1
8 X9	close

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092595/01

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HK1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

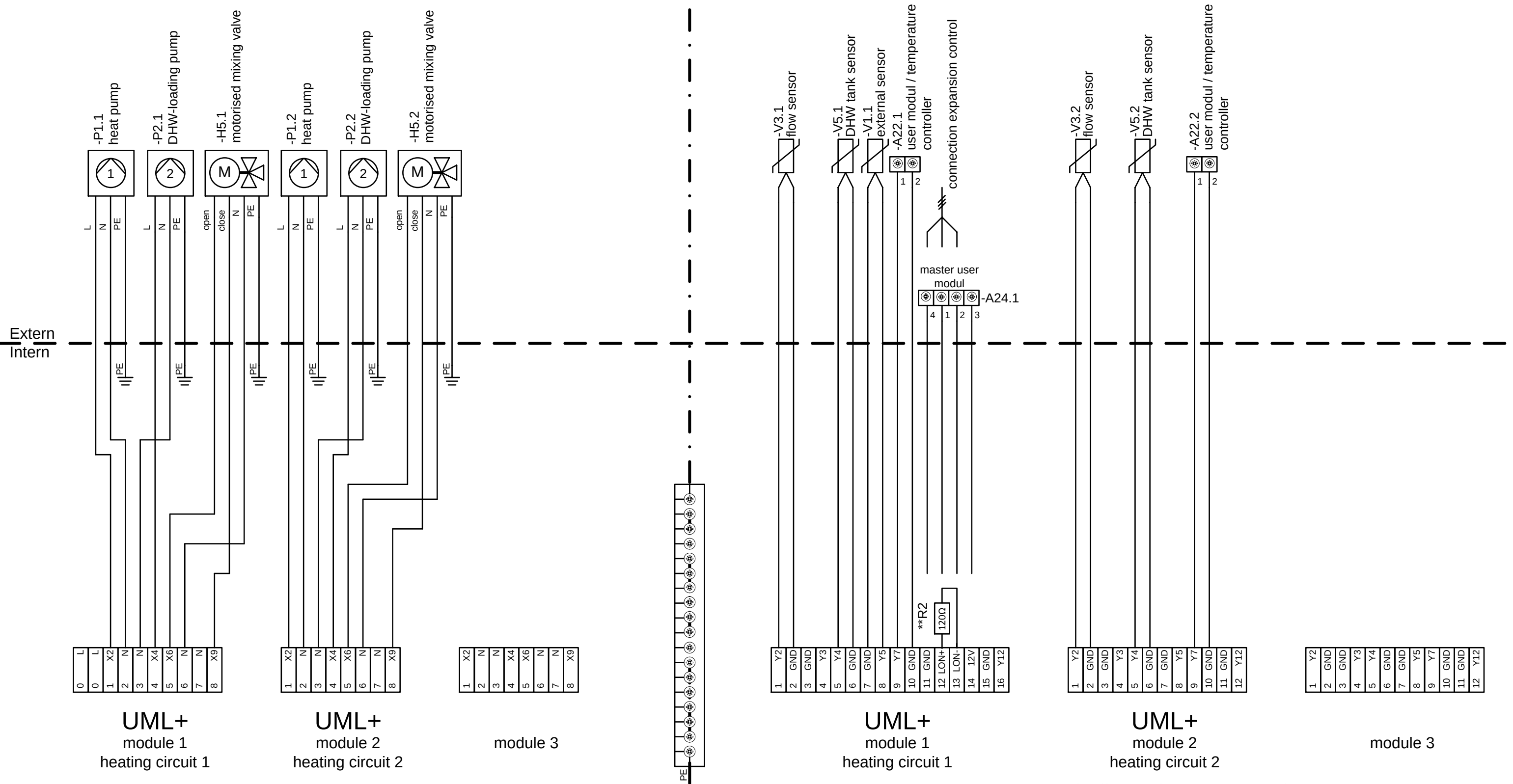
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092595/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XS	safety devices
1 N	internal
2 N	emergency
3 N'	heating off switch
4 L	
5 L	emergency
6 L'	heating off switch
7 LL	
8 RL	motor change
9 N	over unit

UML+	module 1 heating circuit 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	heat pump
2 N	HC 1
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1
	close

UML+	module 2 heating circuit 2
1 X2	heat pump
2 N	HC 2
3 N	DHW-loading pump
4 X4	HC 2
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 2
	close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092608/01

UML+	module 1 heating circuit 1
1 Y2	flow sensor
2 GND	HC 1
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC
6 GND	1
7 GND	
8 Y5	external sensor
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user
13 Lon-	modul
14 12V	connection
	expansion
	control
15 GND	
16 Y12	

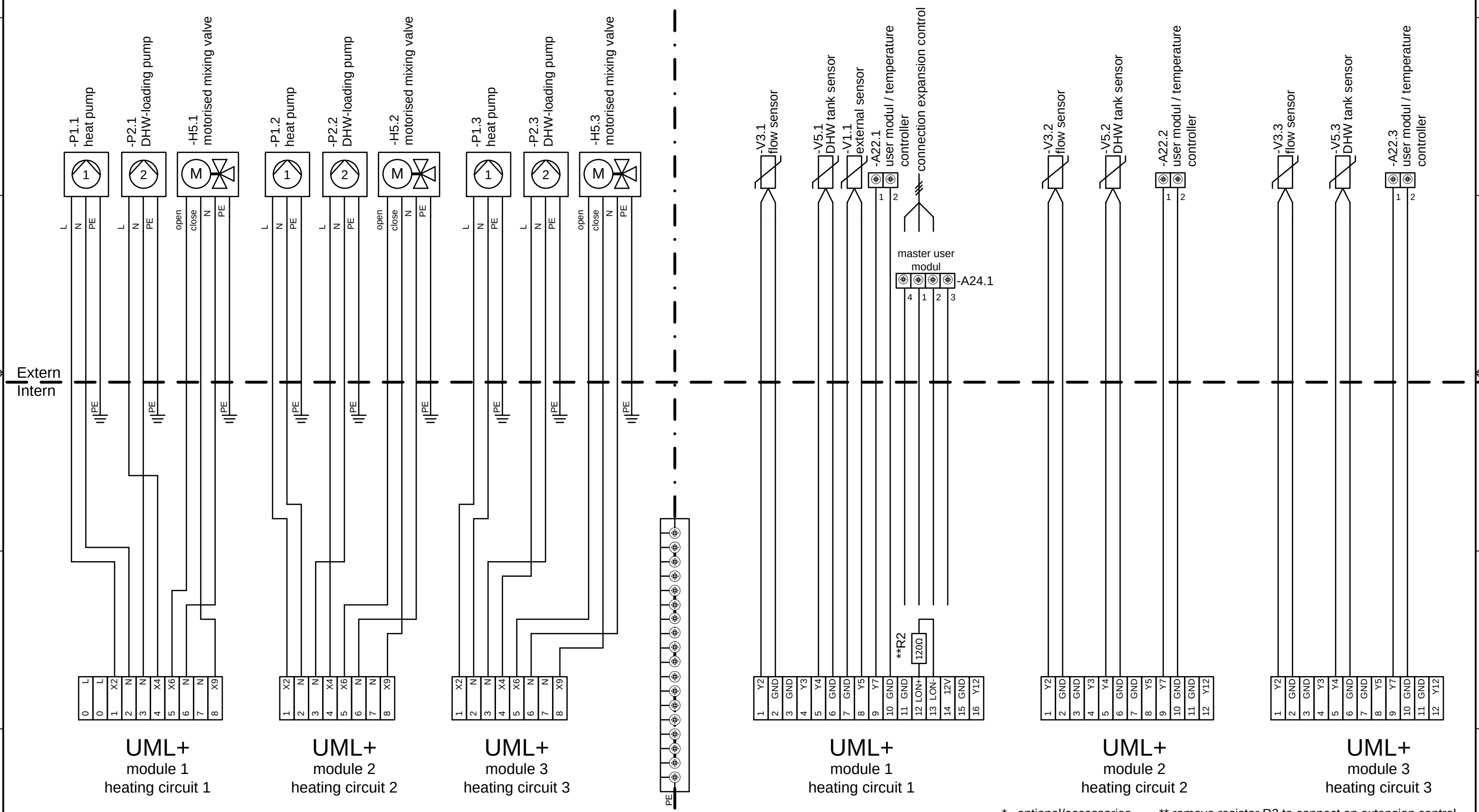
UML+	module 2 heating circuit 2
1 Y2	flow sensor
2 GND	HC 2
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC
6 GND	2
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092608/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	internal
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

UML+	module 1 heating circuit 1
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1 close
8 X9	

UML+	module 2 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 2 close
8 X9	

UML+	module 3 heating circuit 3
1 X2	heat pump HC 3
2 N	
3 N	DHW-loading pump HC 3
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 3 close
8 X9	

092611/01

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul
13 Lon-	connection expansion control
14 12V	
15 GND	
16 Y12	

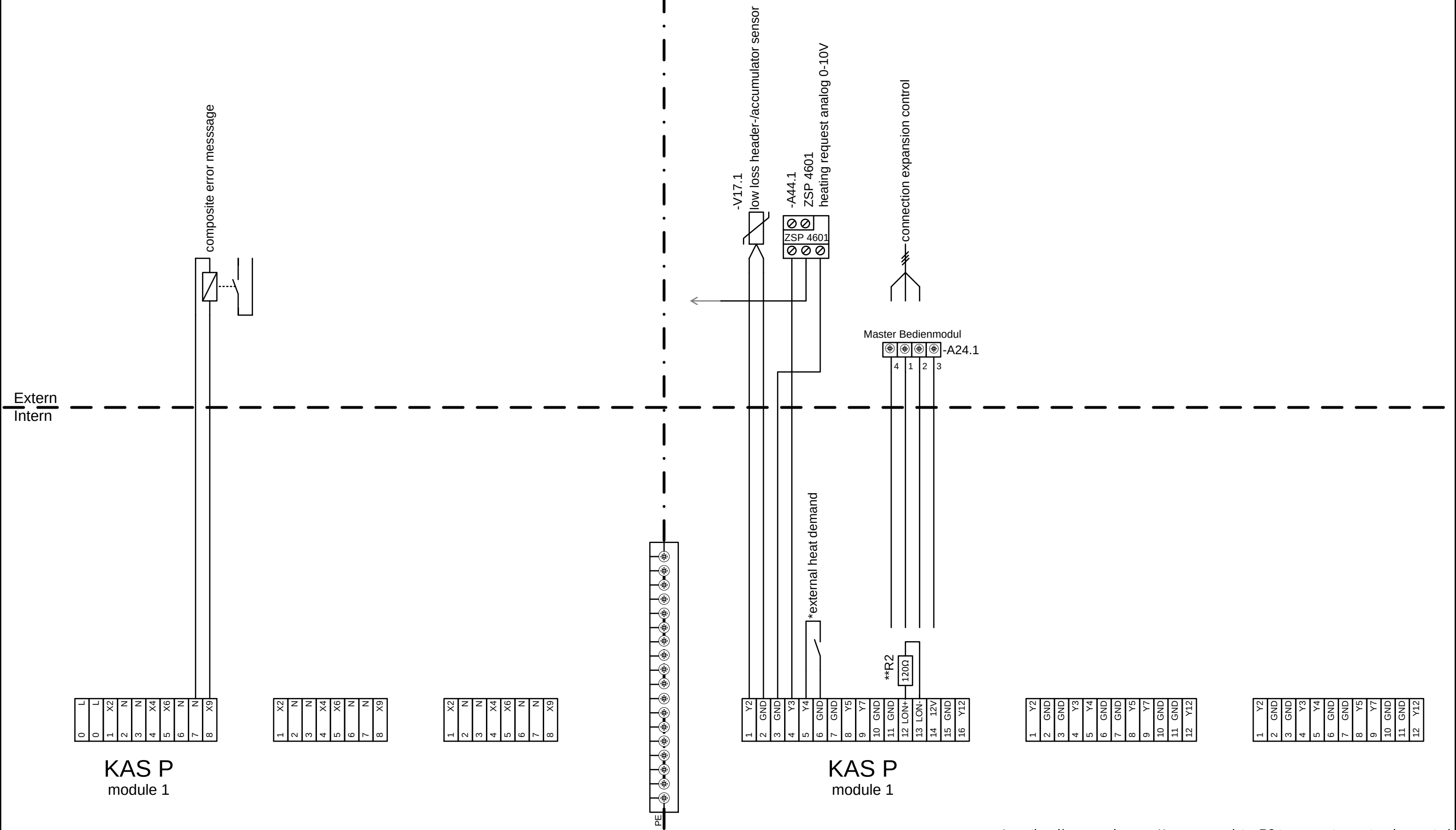
UML+	module 2 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 3
1 Y2	flow sensor HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 3
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092611/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

KAS	module 1 cascade
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	composite error message
8 X9	

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092623/01

KAS	module 1 cascade
1 Y2	low loss header-/accumulator sensor
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	external heat demand
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

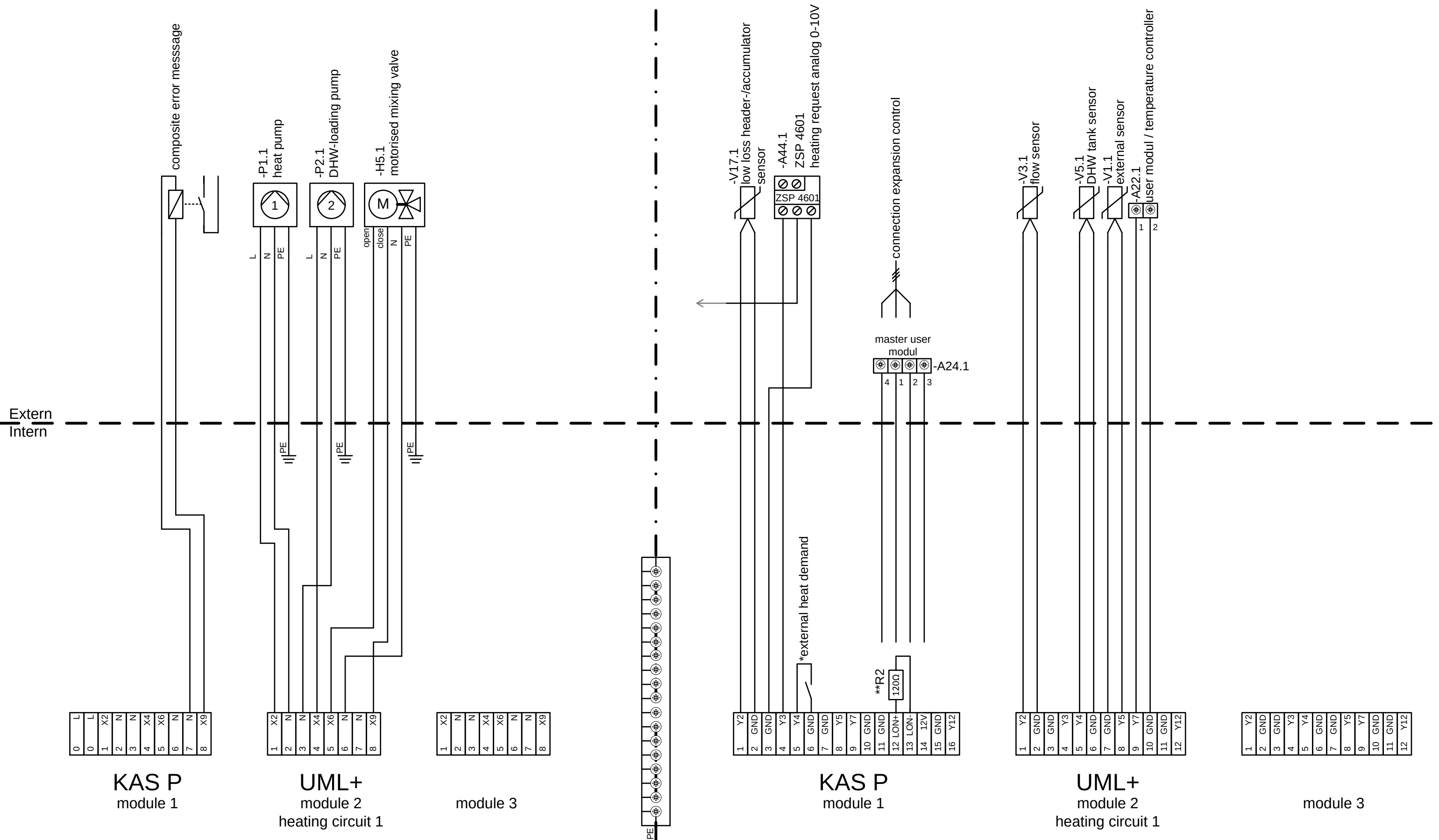
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092623/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

KAS P	module 1 cascade
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	composite error message
8 X9	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092626/01

KAS P	module 1 cascade
1 Y2	low loss header-/accumulator sensor
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	external heat demand
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

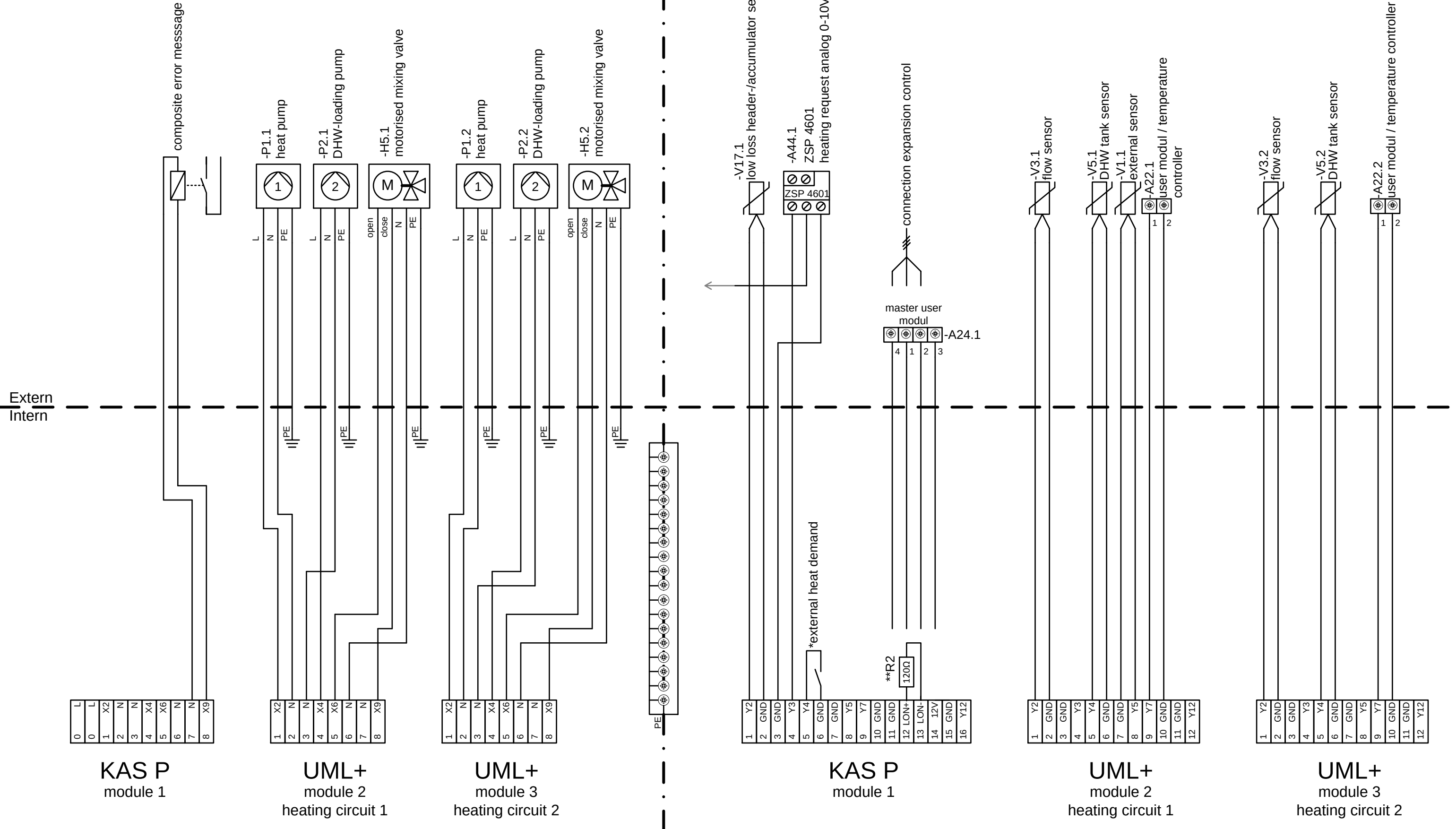
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092626/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

KAS P	module 1 cascade
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	composite error message
8 X9	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 2 close

092631/01

KAS P	module 1 cascade
1 Y2	low loss header-/ accumulator sensor
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	external heat demand
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

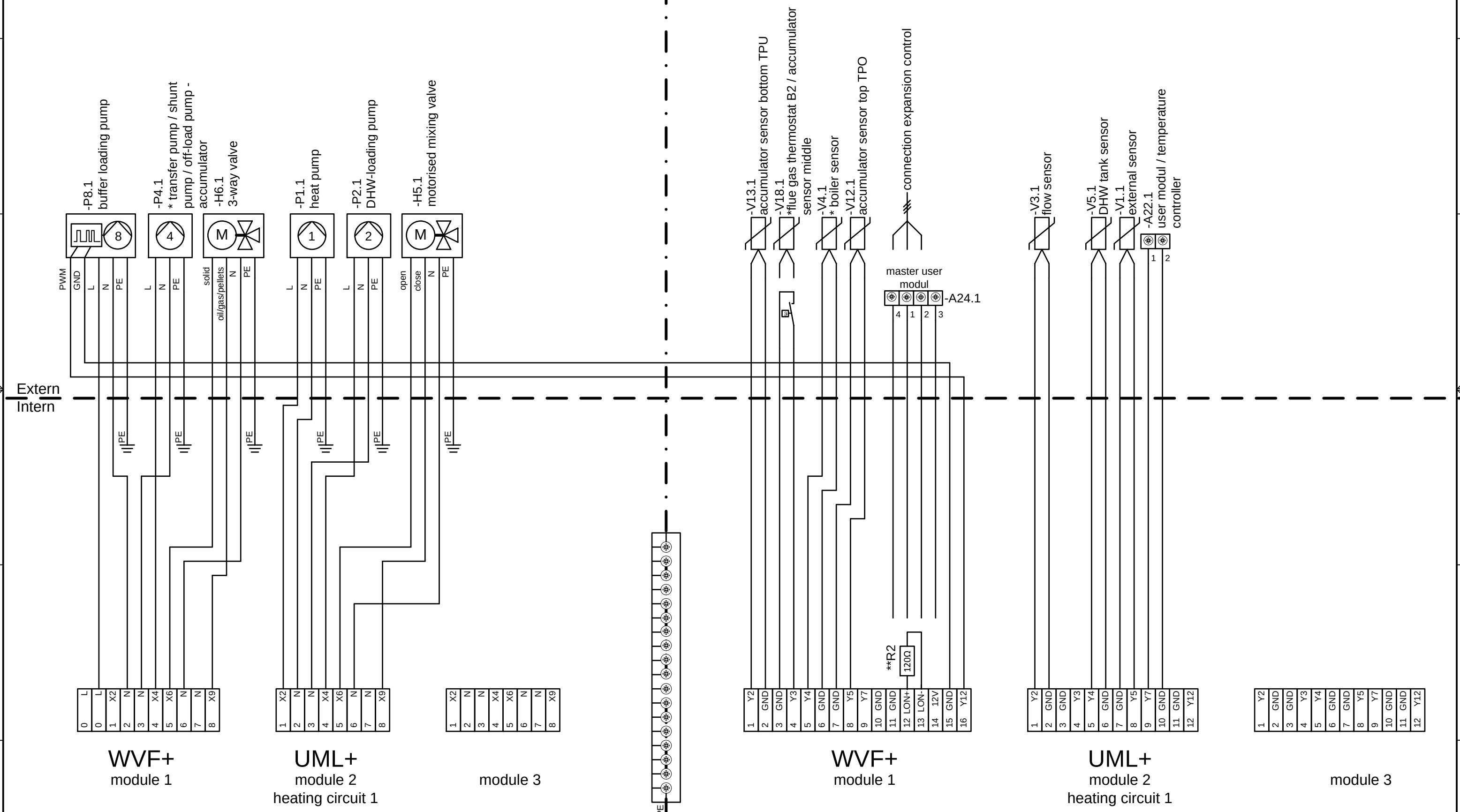
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	DHW tank sensor HC 2
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092631/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	motor change over unit
8 RL	
9 N	

WVF+	module 1
1 Y2	accumulator sensor bottom
2 GND	TPU
3 GND	*flue gas thermostat B2
4 Y3	accumulator sensor middle
5 Y4	*boiler sensor
6 GND	
7 GND	accumulator sensor top
8 Y5	TPO
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM buffer loading
16 Y12	pump

WVF+	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	solid 3-way valve
6 N	
7 N	
8 X9	oil/gas/pellets

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

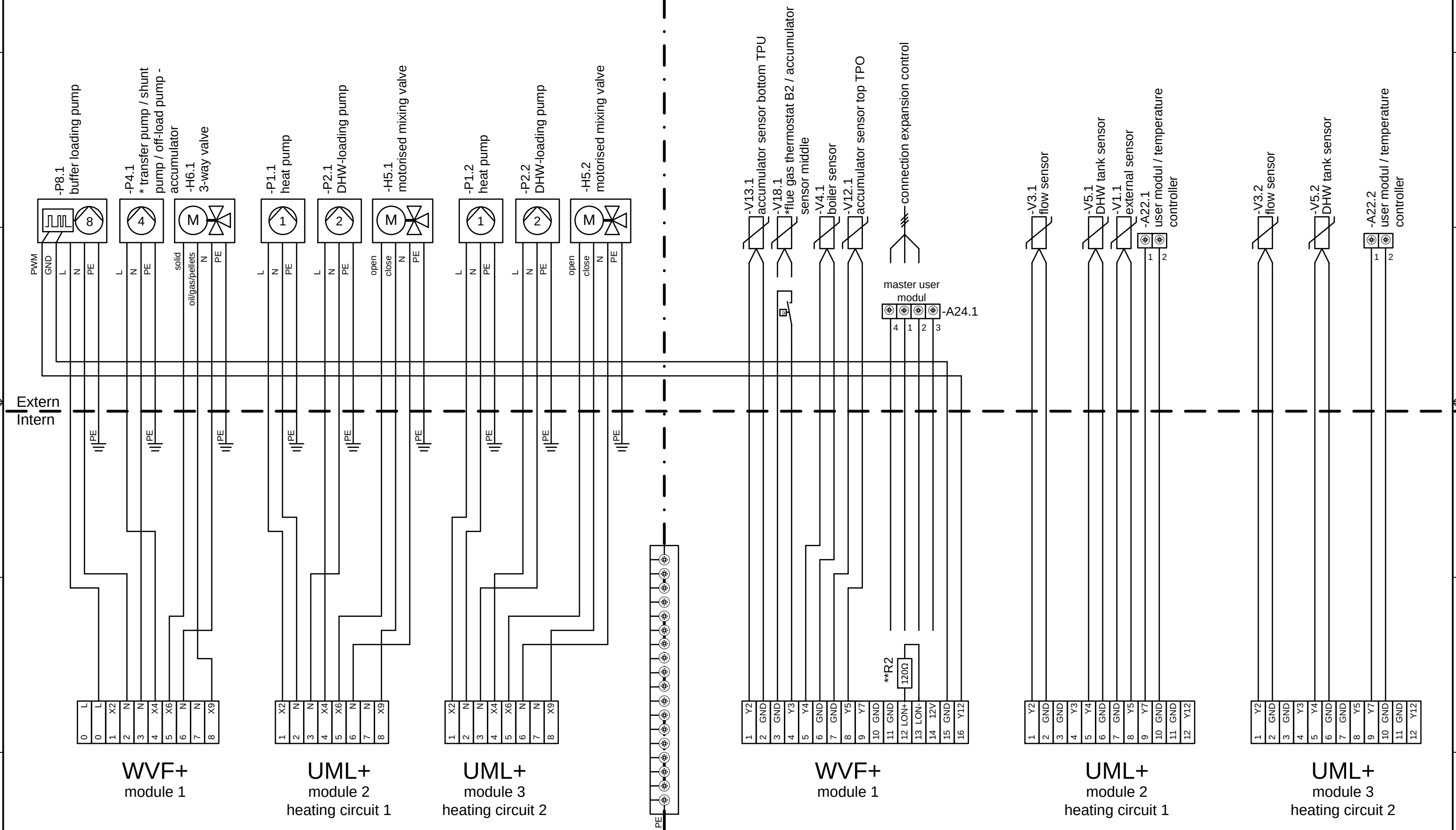
UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

WVF+	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	
5 X6	solid 3-way valve
6 N	
7 N	
8 X9	oil/gas/pellets

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	HC 2 close

092807/01

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND*	flue gas thermostat B2 / accumulator sensor middle
4 Y3	
5 Y4	* boiler sensor
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM buffer loading pump
16 Y12	

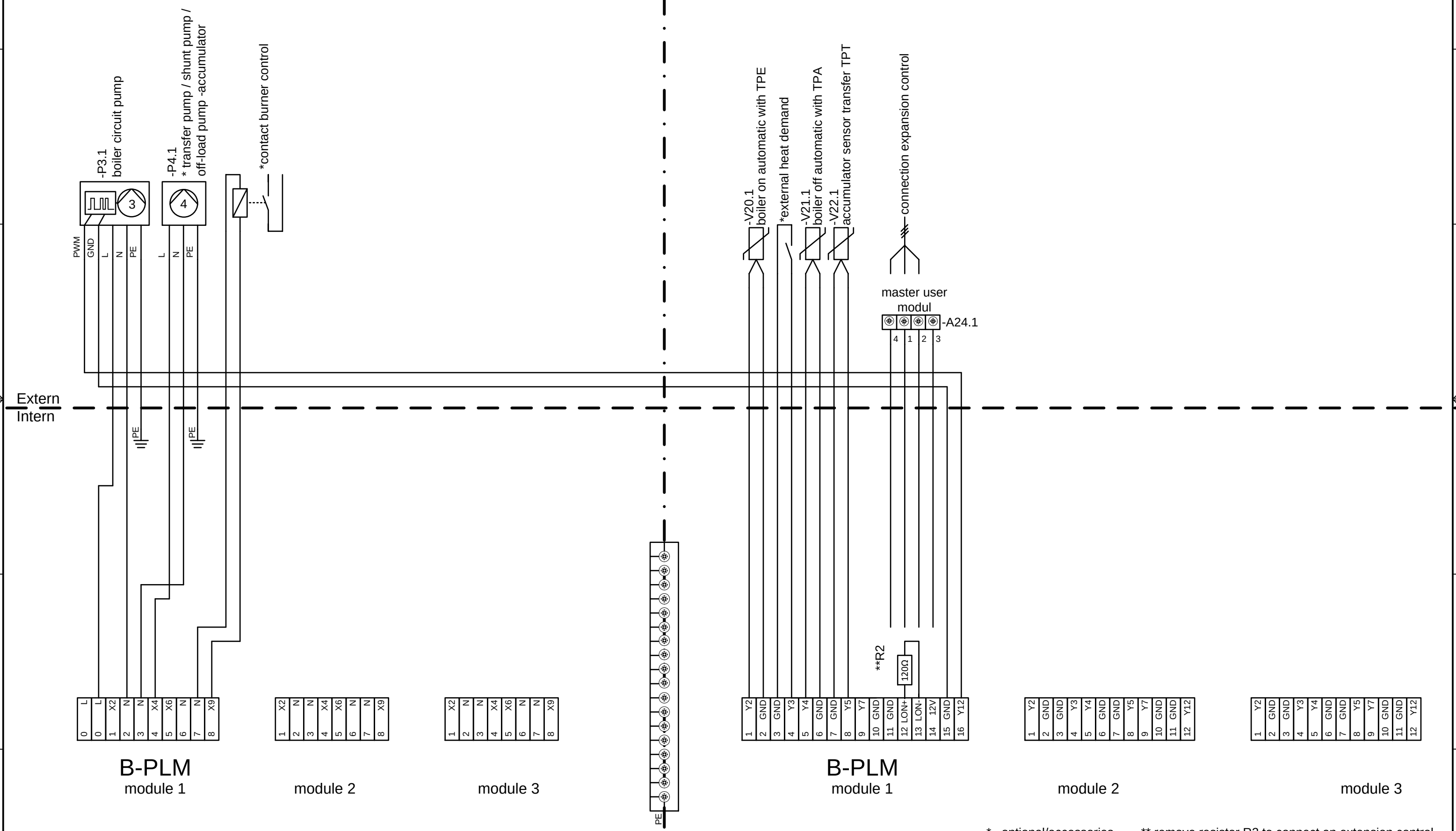
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

092807/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

B-PLM	module 1
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	
2 N	
3 N	* transfer pump / shunt pump / off-load pump accumulator
4 X4	
5 X6	
6 N	
7 N	*burner contact
8 X9	

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092744/01

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

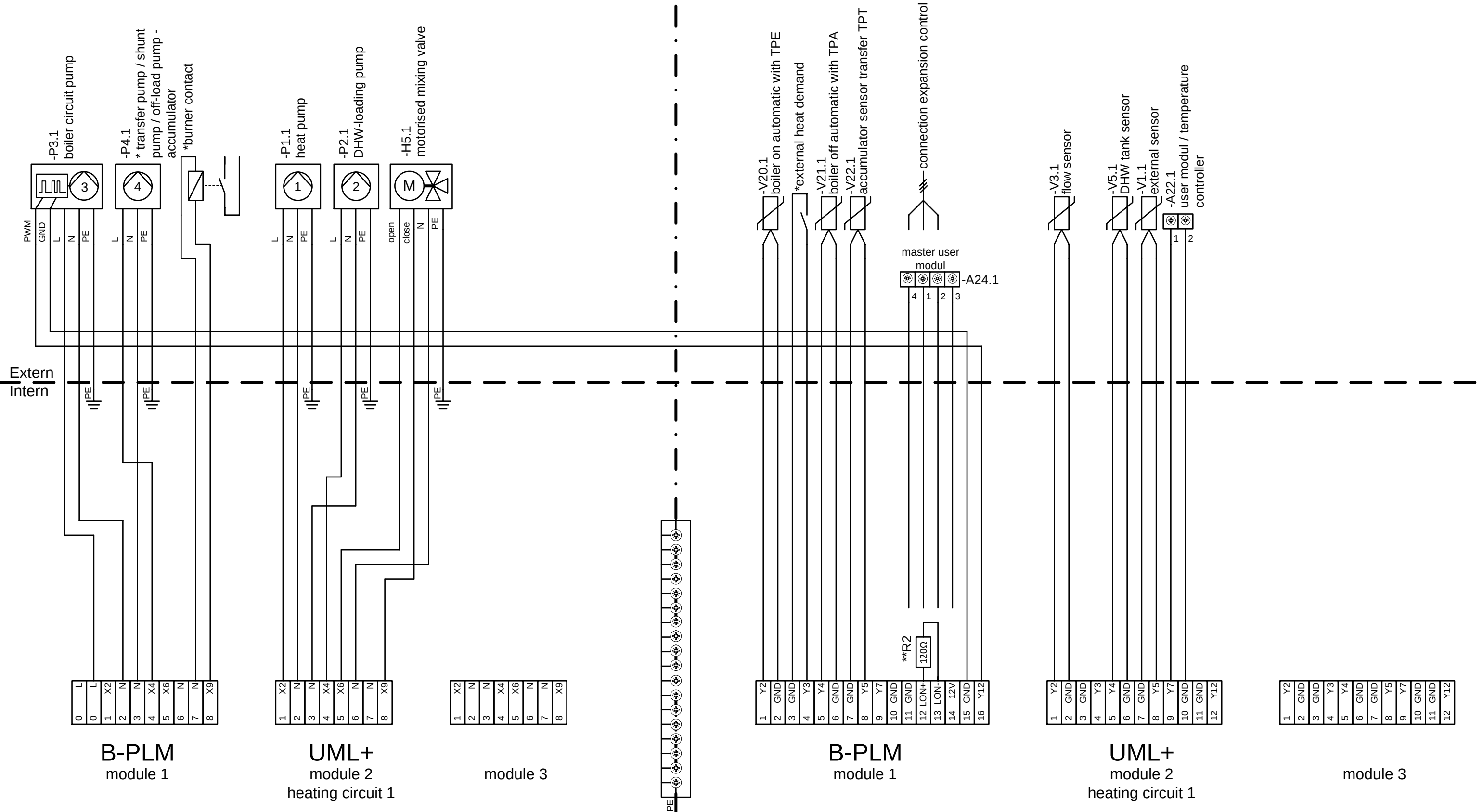
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092744/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis incl. burner- / accutank module B-PLM	Projekt : control		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092797/01				◀ ----- 2 ▶	
												Blatt 092797/01

-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

B-PLM	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	*burner contact
8 X9	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092798/01

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

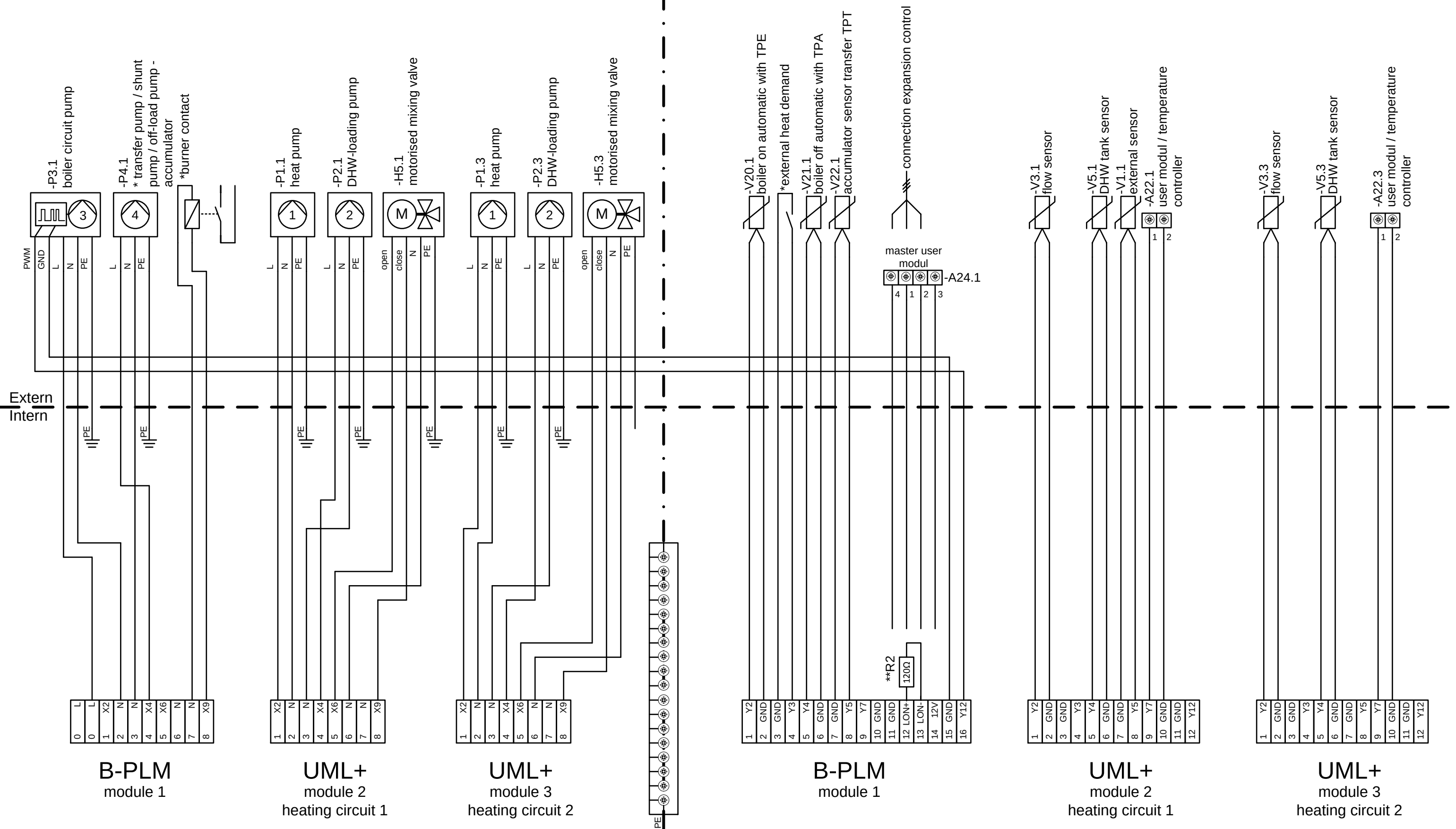
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092798/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

B-PLM	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	
8 X9	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 2 close

092798/01

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

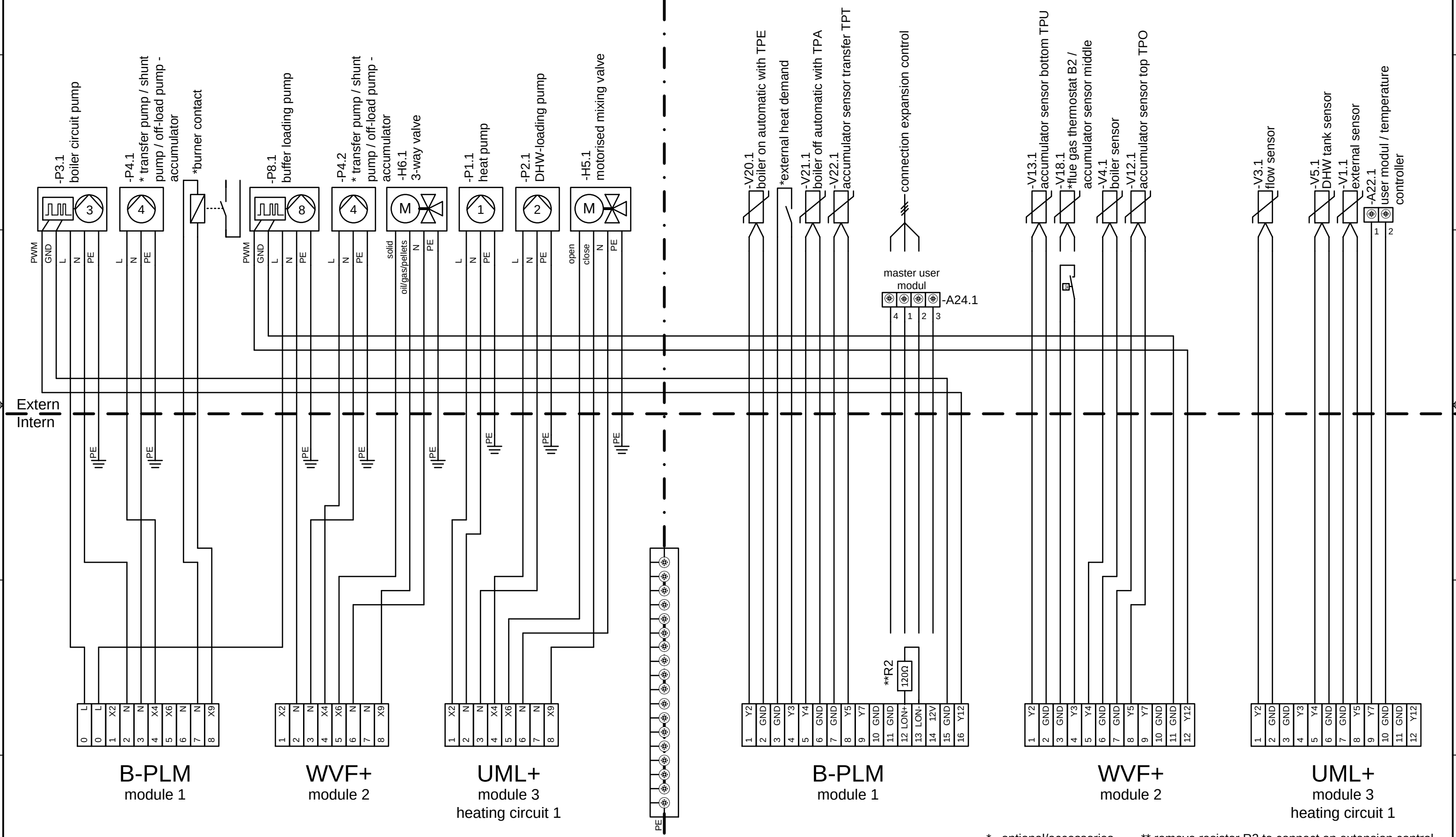
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092798/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	motor change over unit
8 RL	
9 N	

B-PLM	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump accumulator
4 X4	
5 X6	
6 N	
7 N	*burner contact
8 X9	

WVF+	module 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump accumulator
4 X4	
5 X6	solid
6 N	3-way valve
7 N	
8 X9	oil/gas/pellets

UML+	module 3 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

092881/01

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

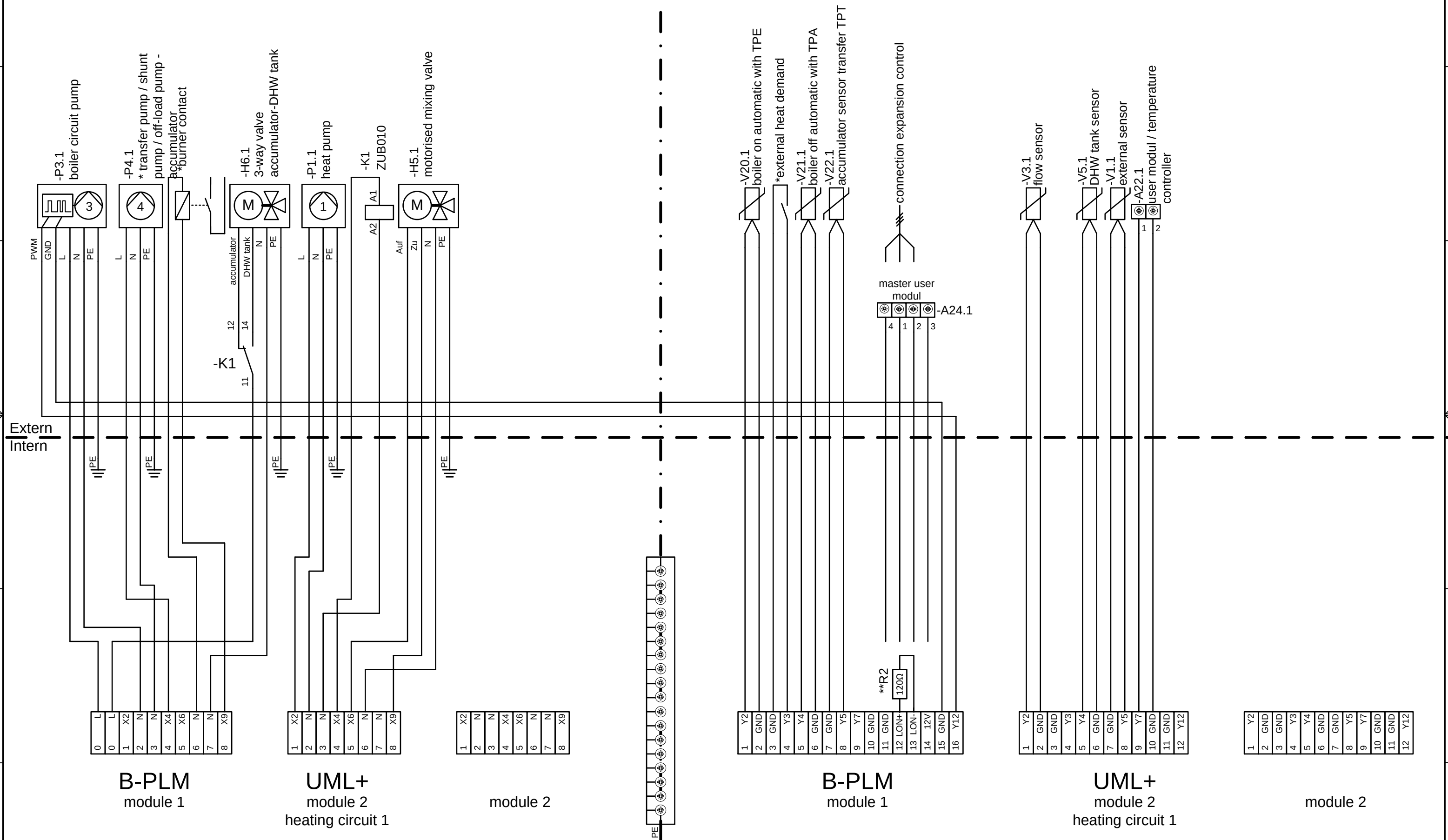
WVF+	module 2
1 Y2	accumulator bottom TPU
2 GND	
3 GND	*flue gas thermostat B2 accumulator sensor middle
4 Y3	
5 Y4	*boiler sensor
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM buffer loading pump
12 Y12	

UML+	module 3 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092881/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	
8 RL	motor change over unit
9 N	

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	* external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

B-PLM	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	* transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	*burner contact
8 X9	

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	contactor -K1 HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1
8 X9	close

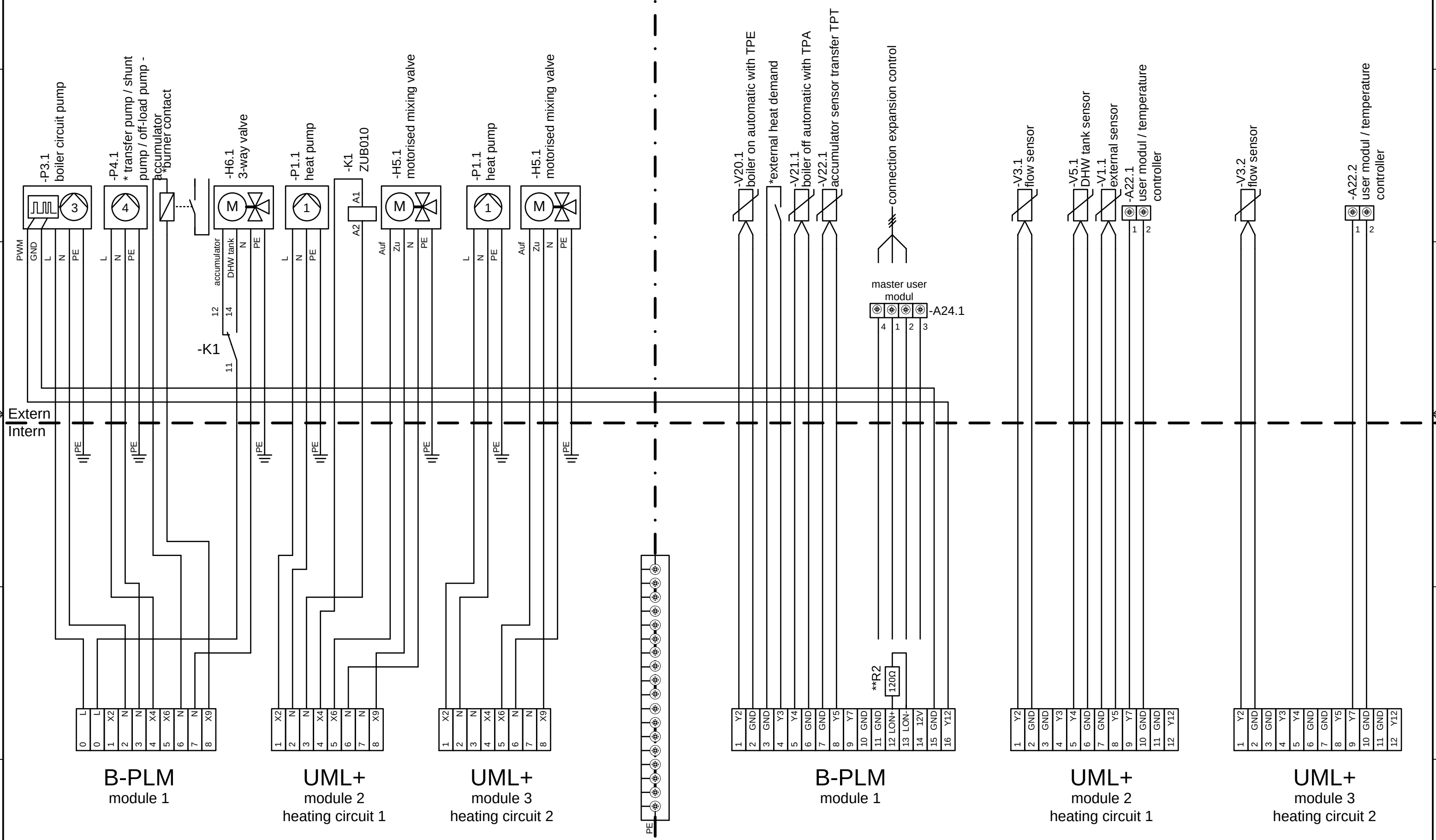
	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094547/01

low voltage 230 VAC

extra low voltage - sensor



-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	motor change over unit
8 RL	
9 N	

B-PLM	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	* transfer pump / shunt pump / off-load pump
4 X4	
5 X6	
6 N	
7 N	*burner contact
8 X9	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	contactor -K1 HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 2 close

094548/01

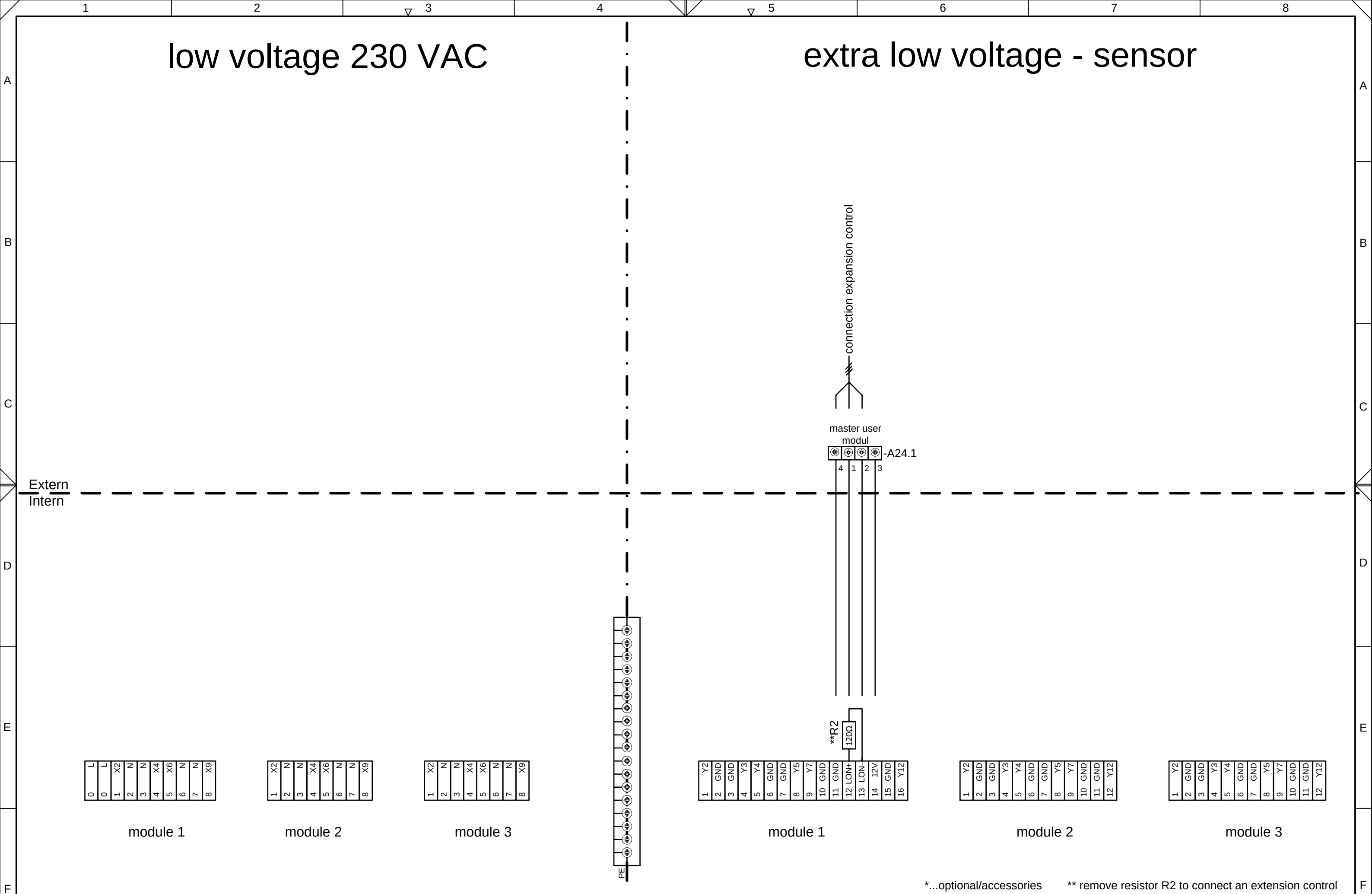
B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	* external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

094548/01

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	04.07.2013		without Windhager MES control without Windhager MES control	Projekt : control		1 mm : 1 mm
				Gezeichnet	ros					
				Geprüft	rot					
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092633/01			◀ ----- 2 ▶ Blatt 092633/01

-XS	safety devices
1 N	internal
2 N	emergency heating off switch
3 N'	
4 L	
5 L	emergency heating off switch
6 L'	
7 LL	motor change over unit
8 RL	
9 N	

1	module 1
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092634/01

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

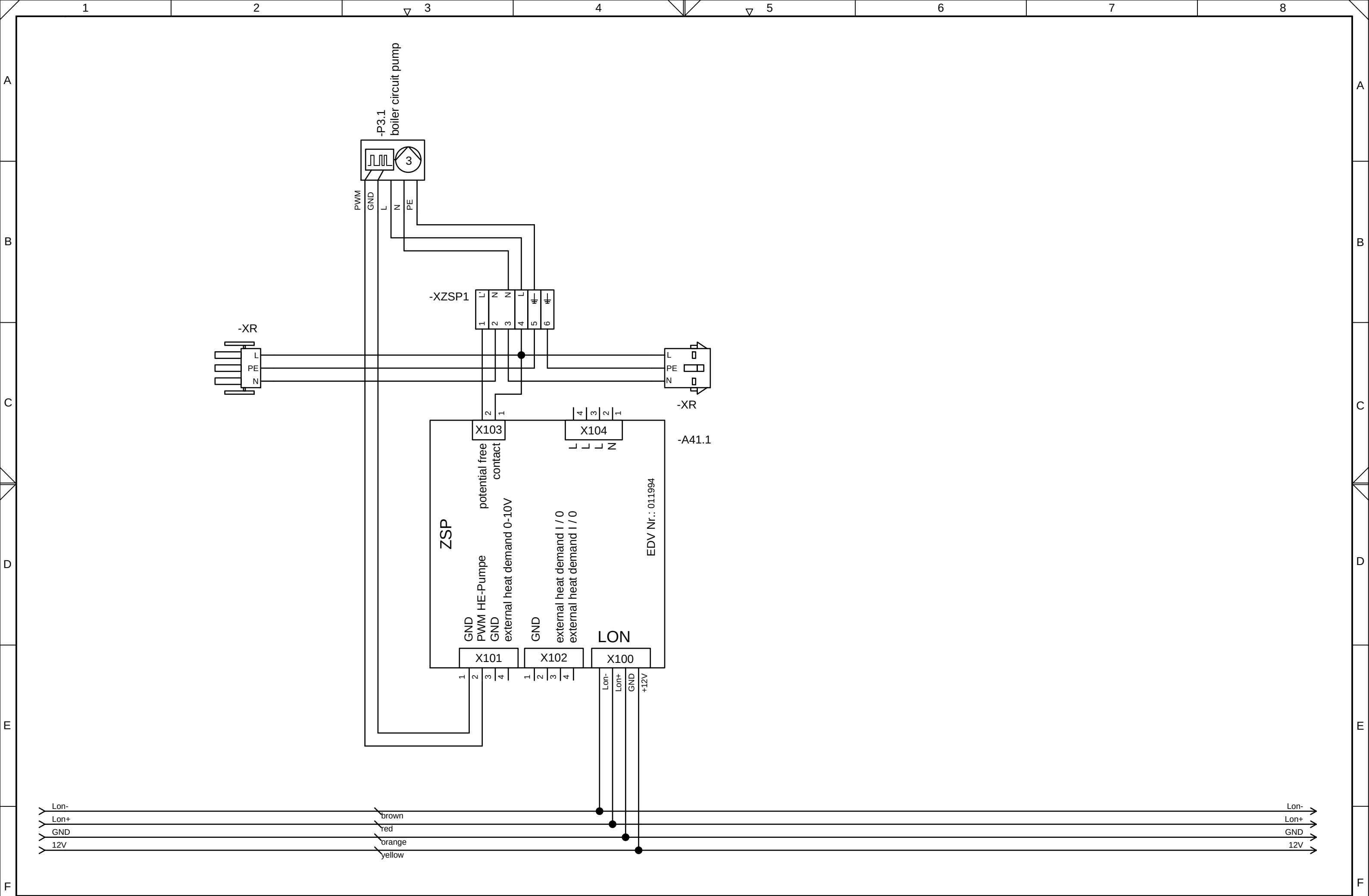
092634/01

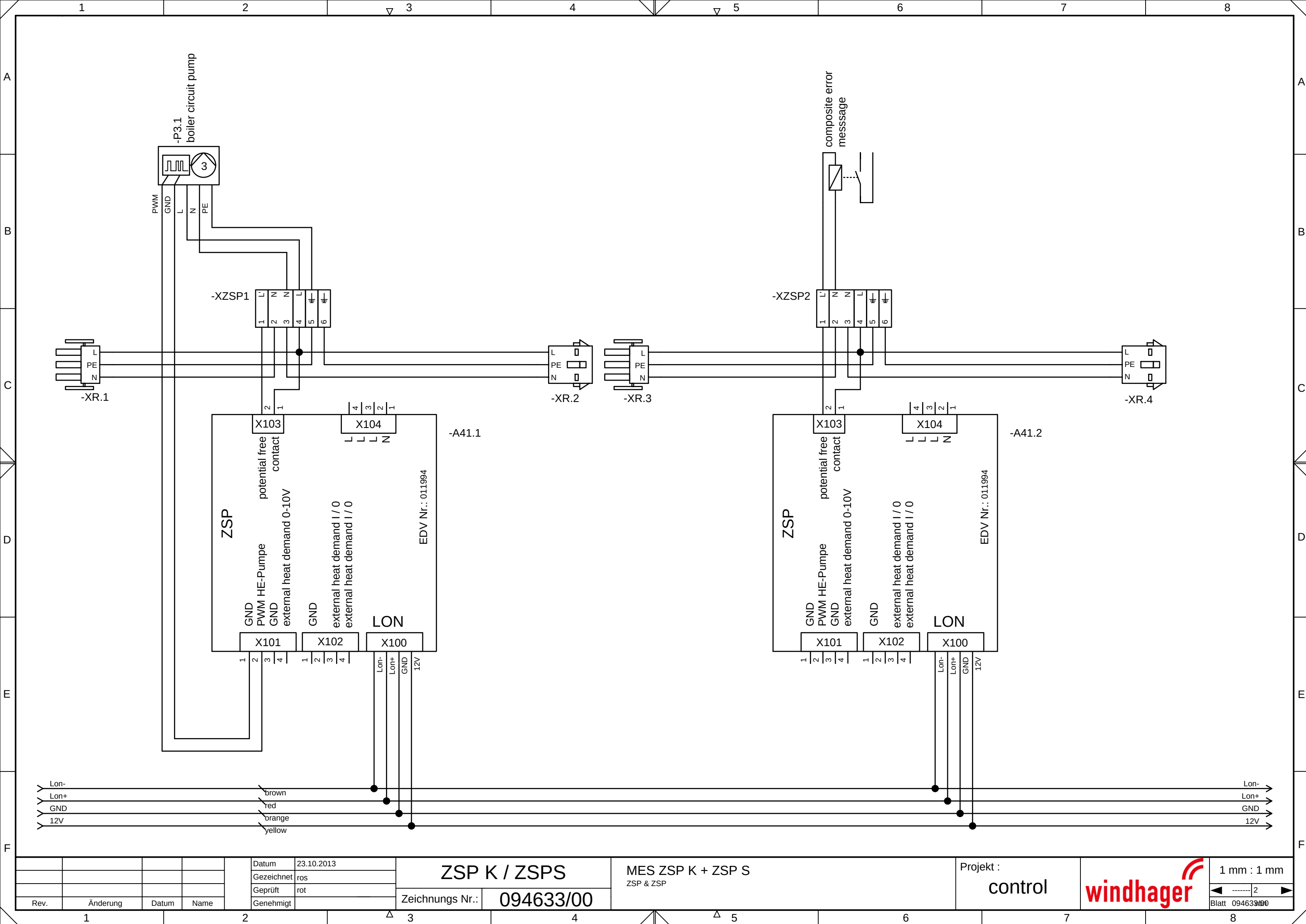
-XZSP	extra pcb
L'	
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094667/00

extra pcb	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM boiler circuit
GND	pump





-XZSP	extra pcb
L'	
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094667/00

extra pcb	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM boiler circuit
GND	pump

-XZSP	extra pcb
L'	composite error message
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	extra pcb
-X102 /4	
-X102 /3	
-X102 /2	
GND	

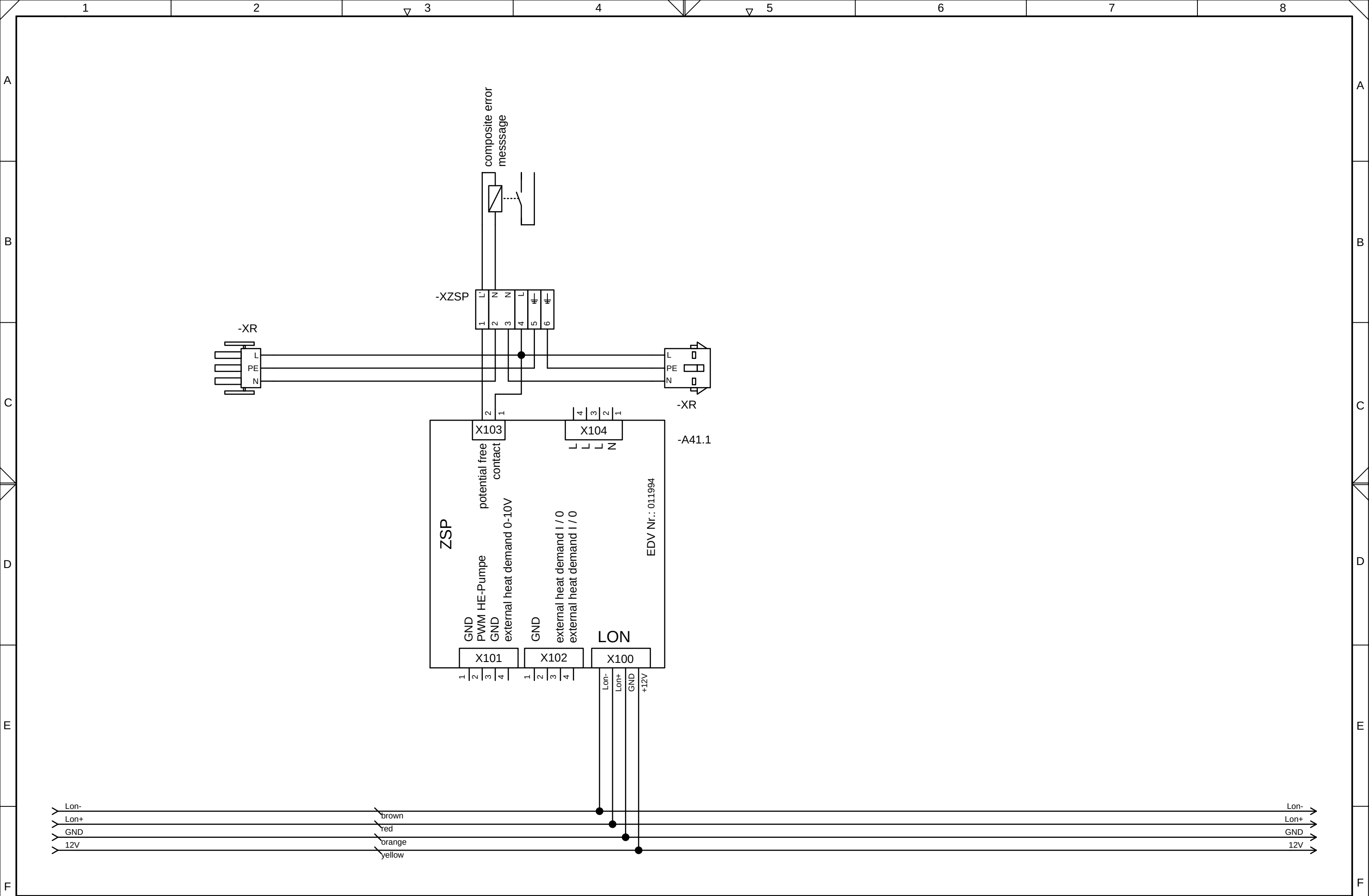
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	extra pcb
L'	composite error message
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	extra pcb
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	
GND	

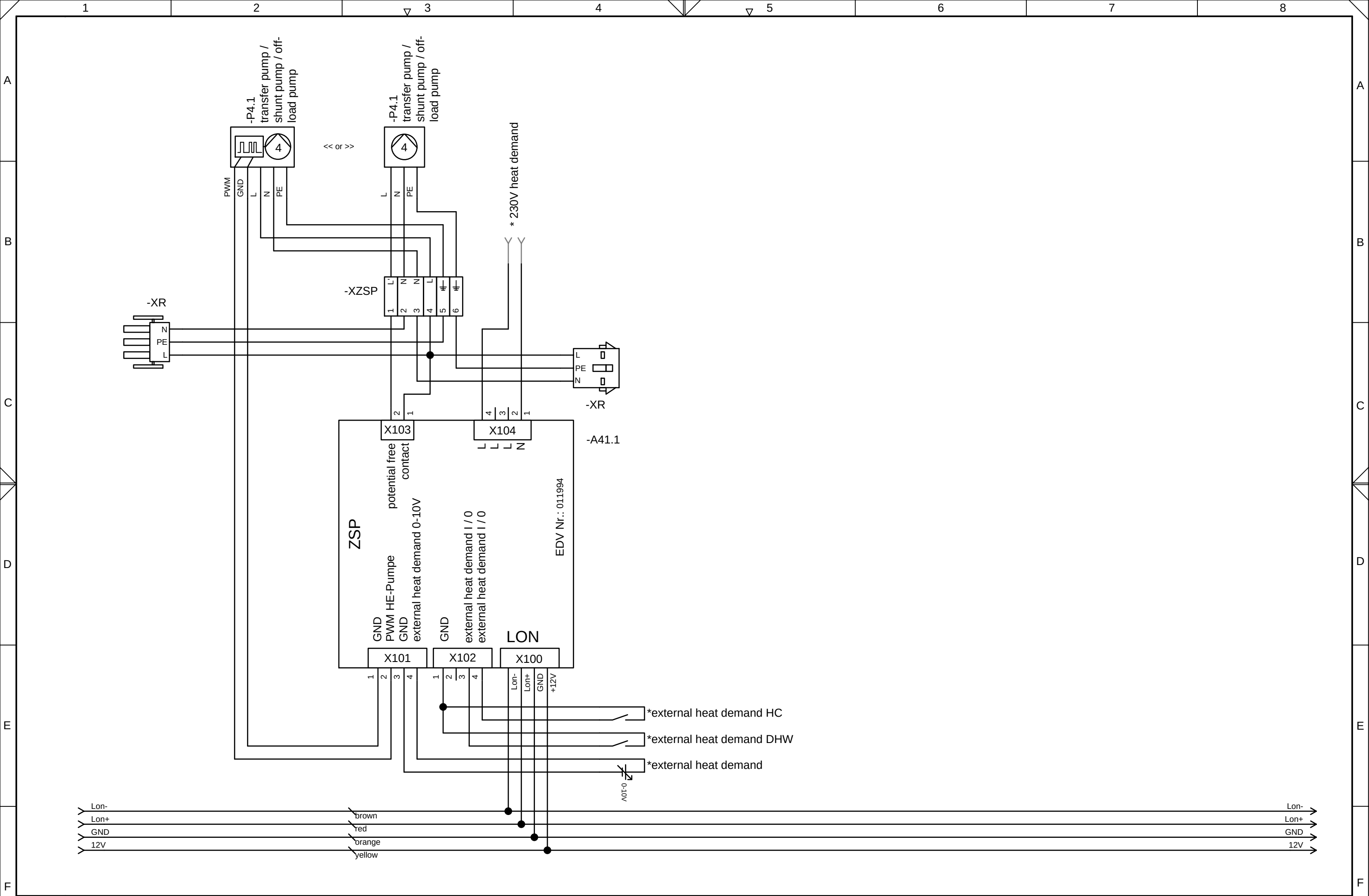


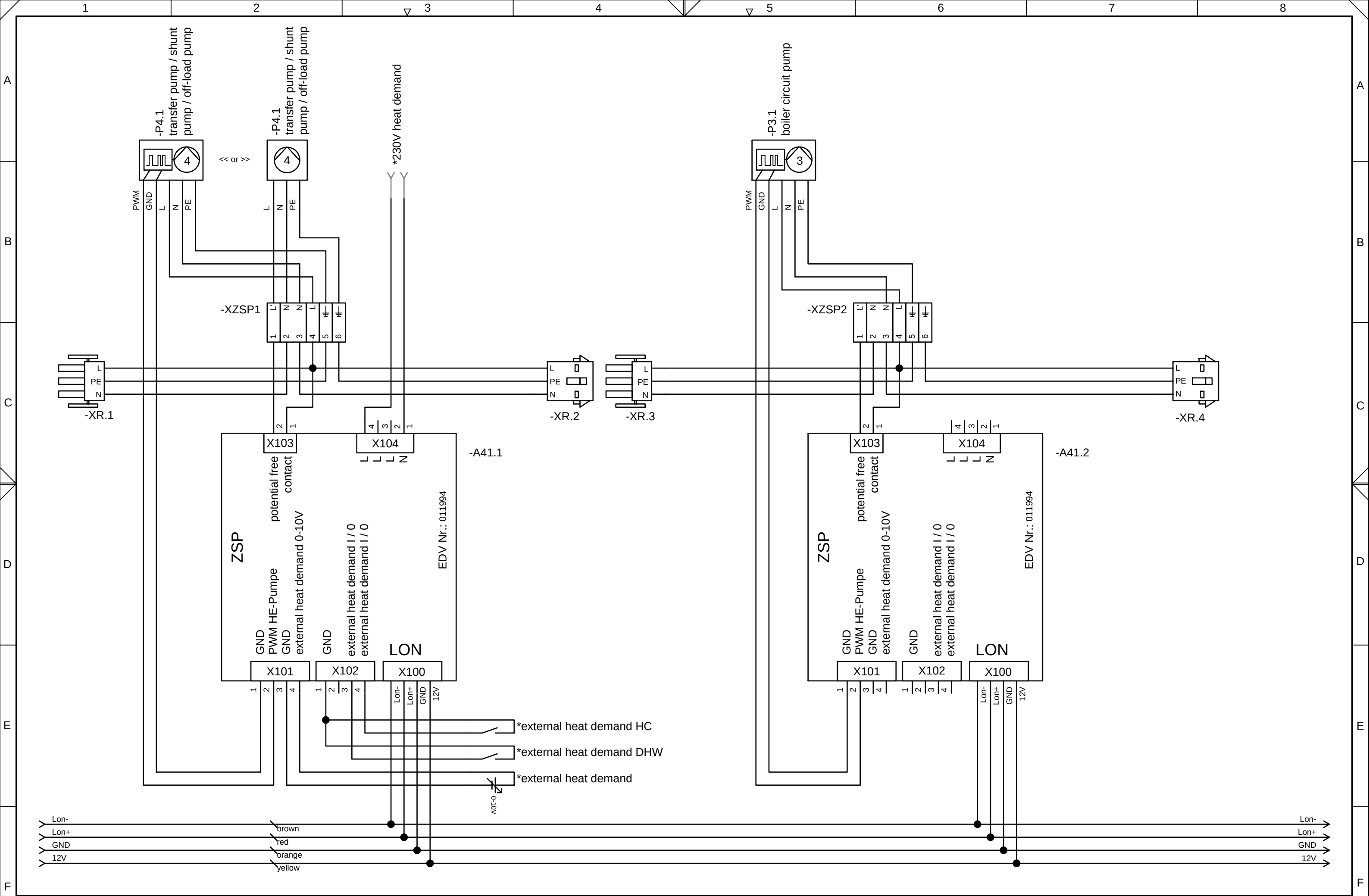
-XZSP	extra pcb
L'	transfer pump / shunt pump / off-load pump
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	extra pcb
-X102 /4	external heat demand HC
-X102 /3	external heat demand DHW
-X102 /2	
GND	

-X101 /4	heat demand 0-10V
GND	
-X101 /2	PWM transfer pump / shunt pump / off-load pump
GND	





-XZSP	extra pcb
L'	
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094667/00

extra pcb	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

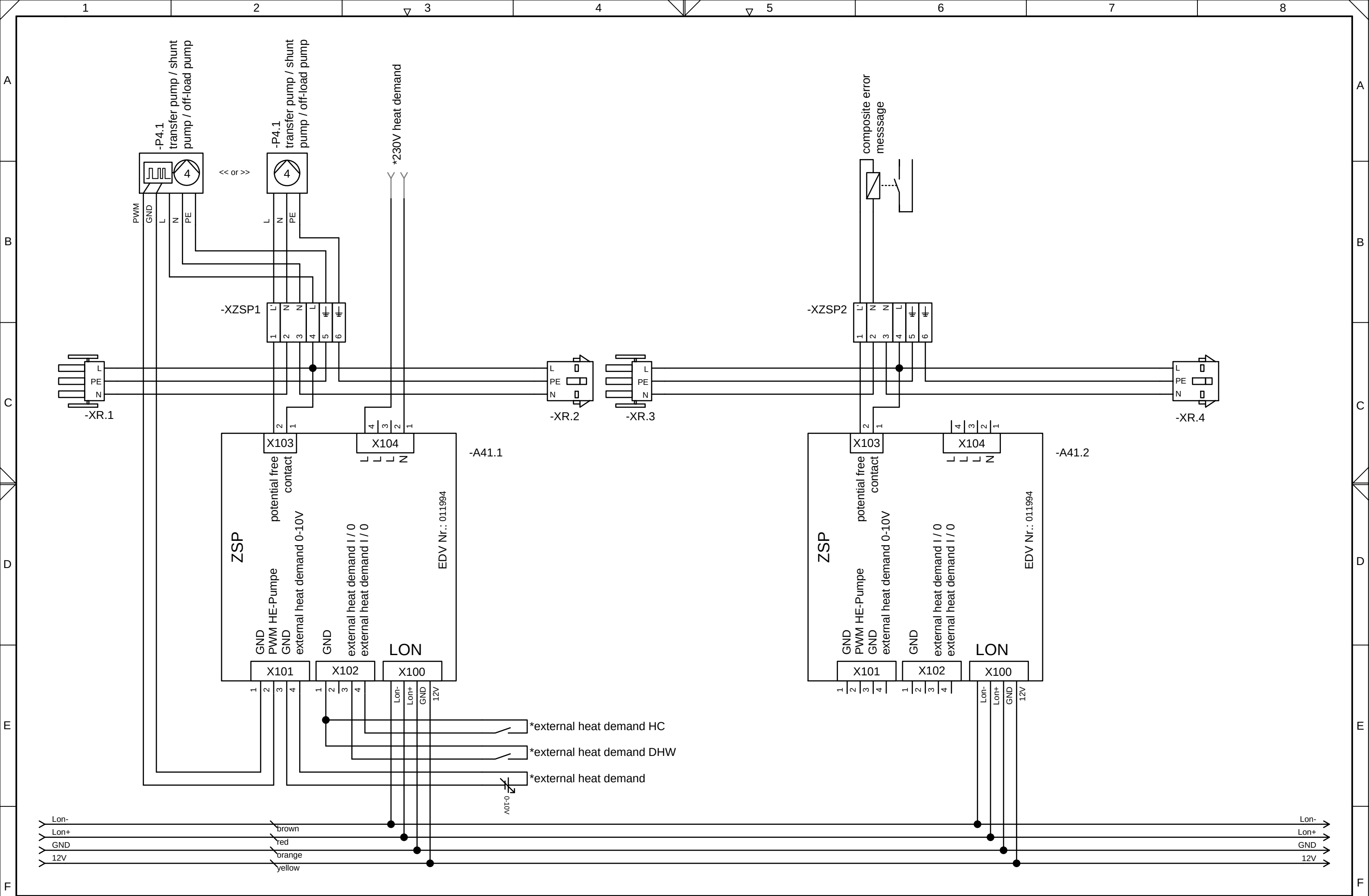
-X101 /4	
GND	
-X101 /2	PWM boiler circuit
GND	pump

-XZSP	extra pcb
L'	transfer pump / shunt pump / off-load pump
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	extra pcb
-X102 /4	external heat demand HC
-X102 /3	external heat demand DHW
-X102 /2	
GND	

-X101 /4	heat demand 0-10V
GND	
-X101 /2	PWM transfer pump / shunt pump / off-load pump
GND	



-XZSP	extra pcb
L'	composite error message
N	
N	permanent phase
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	extra pcb
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	extra pcb
L'	transfer pump / shunt pump / off-load pump
N	
N	permanent phase
L	
PE	
PE	PE

EDV Nr. 094672/00

-XSP	extra pcb
-X102 /4	external heat demand HC
-X102 /3	external heat demand DHW
-X102 /2	
GND	

-X101 /4	heat demand 0-10V
GND	
-X101 /2	PWM transfer pump / shunt pump / off-load pump
GND	

-XZSP	extra pcb
L'	transfer pump / shunt pump / off-load pump
N	
N	permanent phase
L	
PE	PE
PE	

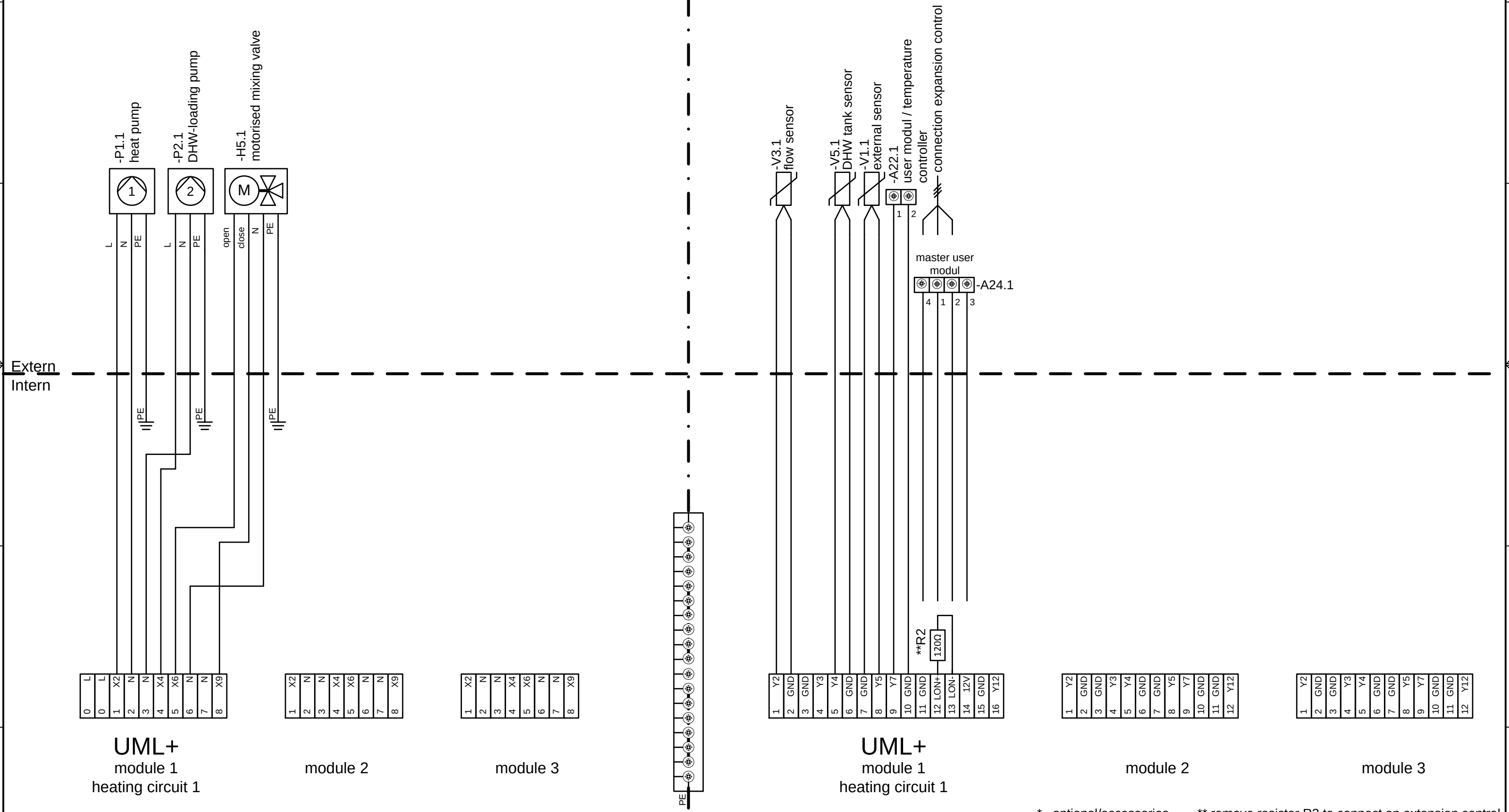
EDV Nr. 094672/00

-XSP	extra pcb
-X102 /4	external heat demand HC
-X102 /3	external heat demand DHW
-X102 /2	
GND	

-X101 /4	heat demand 0-10V
GND	
-X101 /2	PWM transfer pump / shunt pump / off-load pump
GND	

low voltage 230 VAC

extra low voltage - sensor



UML+	module 1 heating circuit 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	HC 1 close

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092738/01

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

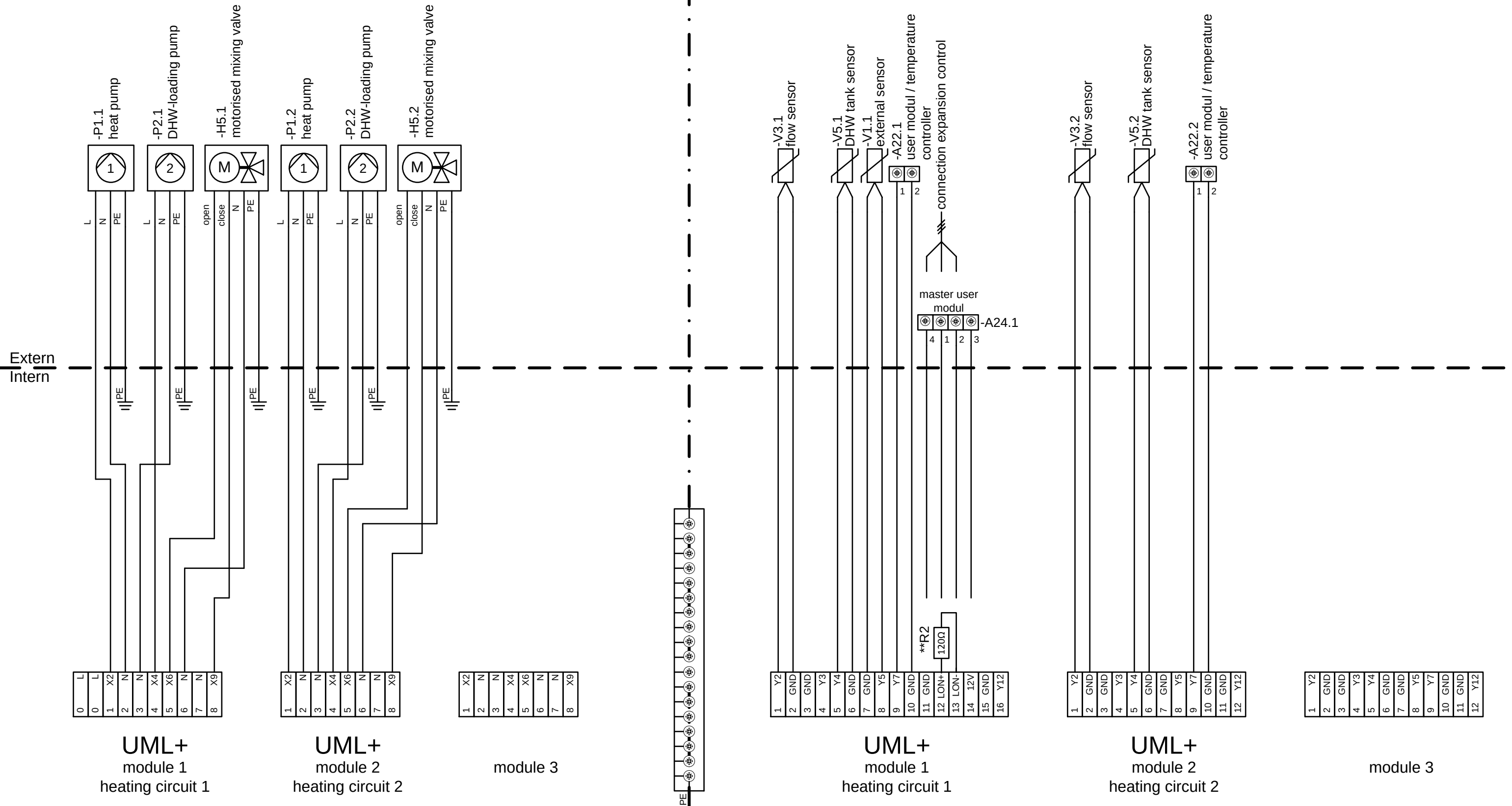
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092738/01

low voltage 230 VAC

extra low voltage - sensor



UML+	module 1 heating circuit 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1 close
8 X9	

UML+	module 2 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 2 close
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092748/01

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

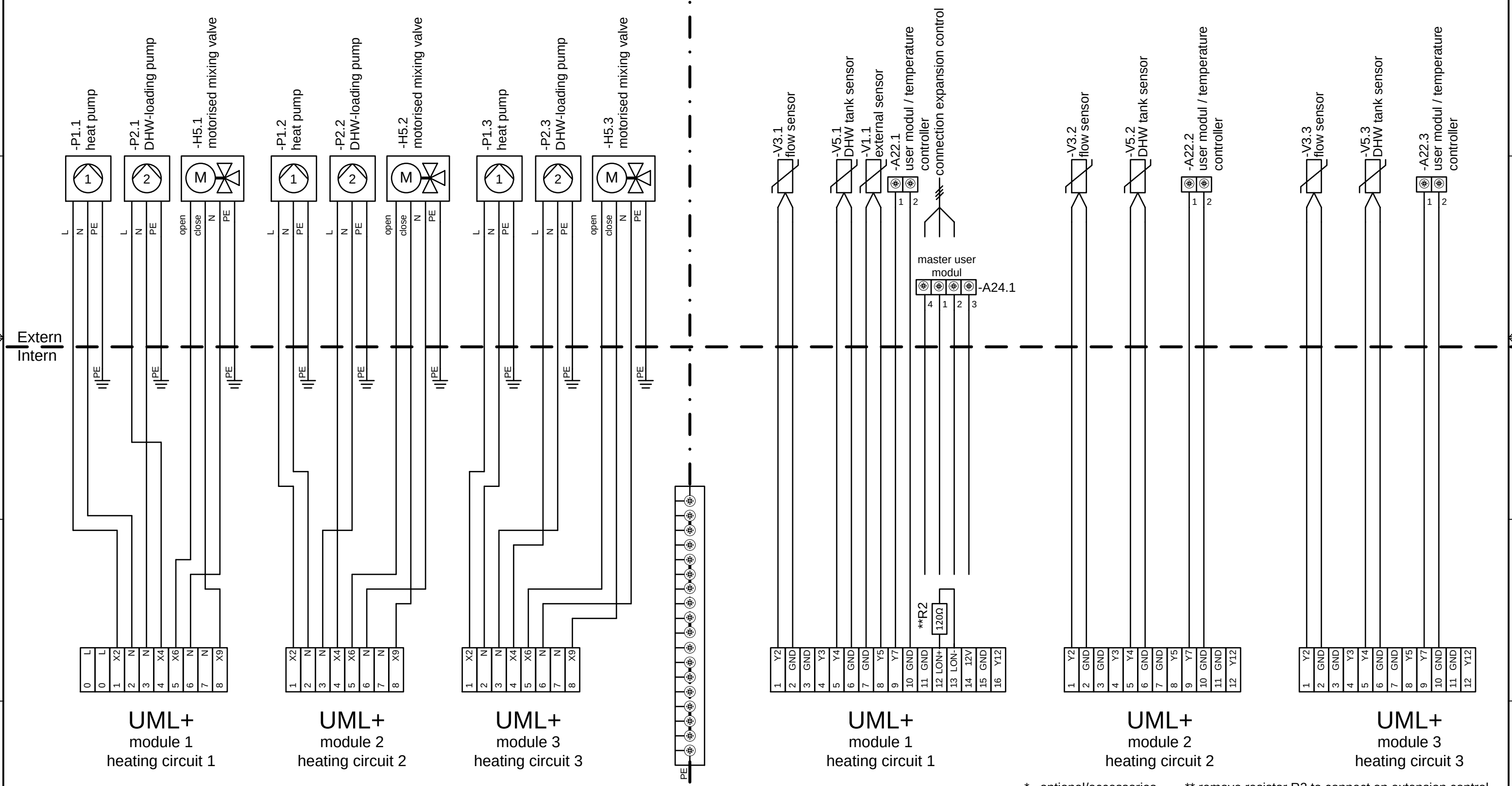
UML+	module 2 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092748/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

UML+	module 1 heating circuit 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	heat pump HC1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	HC 1 close
8 X9	

UML+	module 2 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	HC 2 close
8 X9	

UML+	module 3 heating circuit 3
1 X2	heat pump HC 3
2 N	
3 N	DHW-loading pump HC 3
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	HC 3 close
8 X9	

092751/01

UML+	module 1 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	
16 Y12	

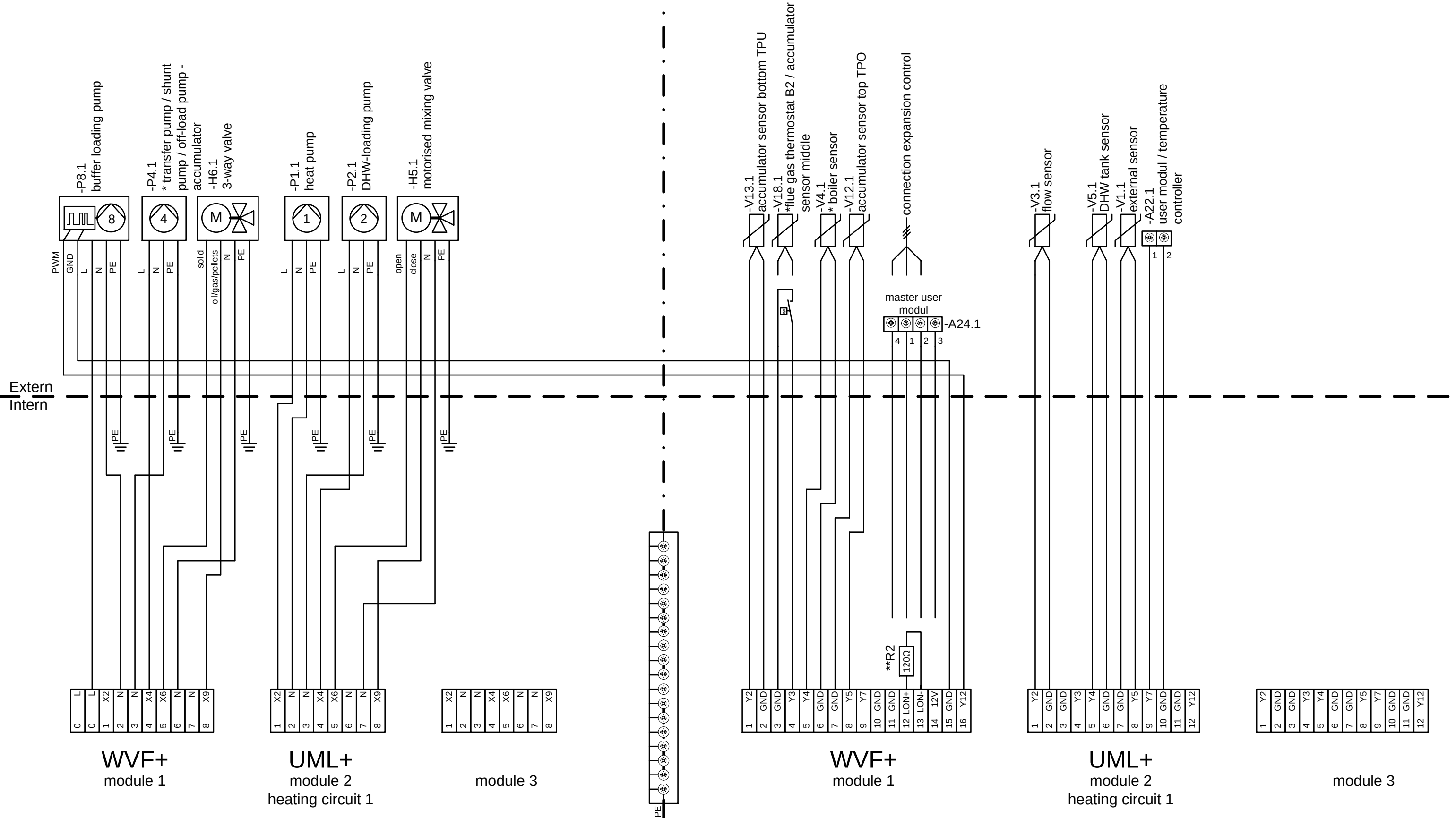
UML+	module 2 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 3
1 Y2	flow sensor HC 3
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 3
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092751/01

low voltage 230 VAC

extra low voltage - sensor



WVF+	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	solid
6 N	3-way valve
7 N	
8 X9	oil/gas/pellets

UML+	module 2 heating circuit 1
1 X2	heat pump
2 N	HC 1
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092842/01

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*flue gas thermostat B2
4 Y3	accumulator sensor middle
5 Y4	*boiler sensor
6 GND	
7 GND	accumulator sensor top
8 Y5	TPO
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM buffer loading
16 Y12	pump

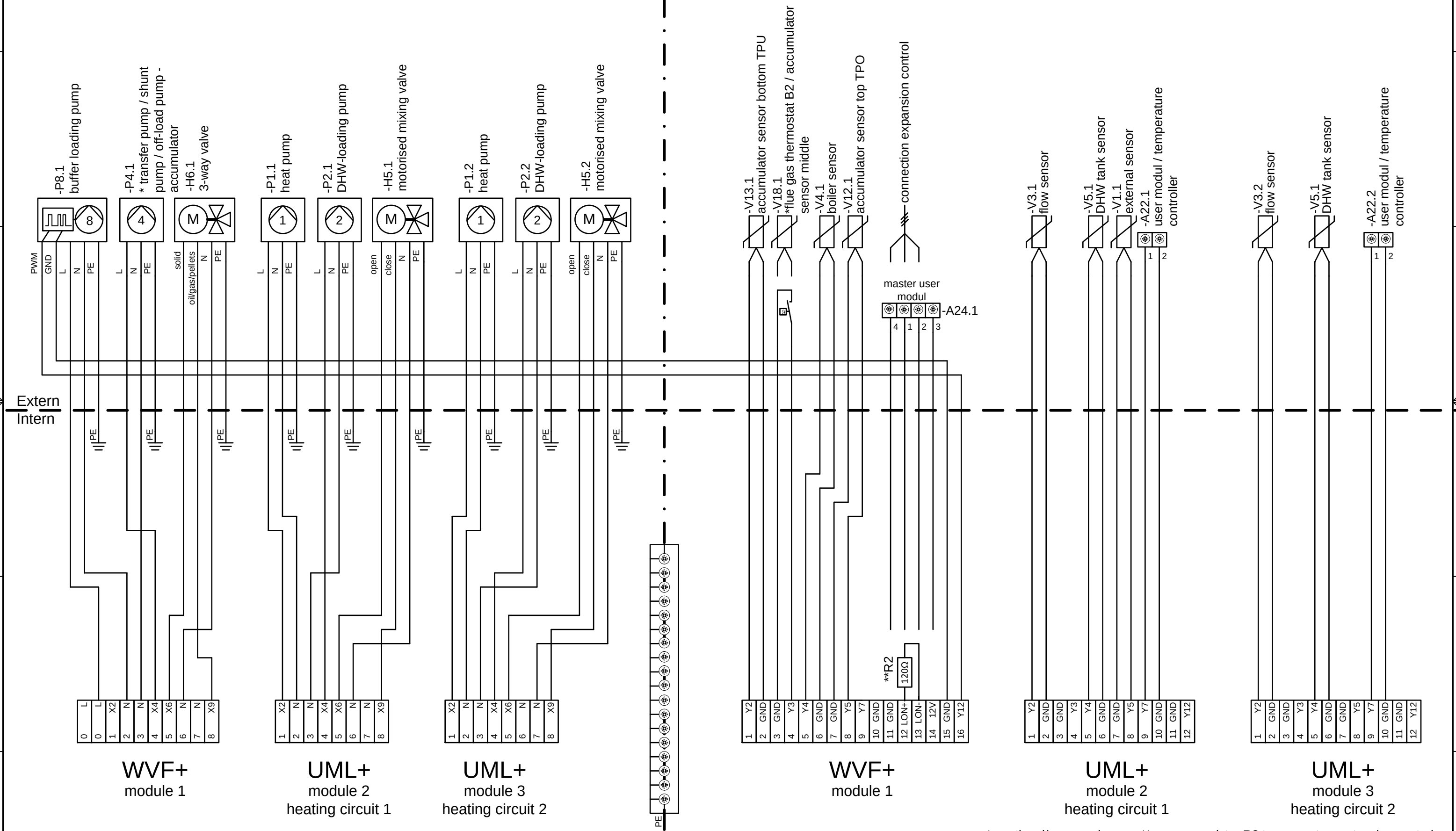
UML+	module 2 heating circuit 1
1 Y2	flow sensor
2 GND	HC 1
3 GND	
4 Y3	
5 Y4	DHW tank sensor
6 GND	HC 1
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092842/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

WVF+	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt
4 X4	pump / off-load pump
5 X6	solid
6 N	3-way valve
7 N	
8 X9	oil/gas/pellets

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*flue gas thermostat B2 /
4 Y3	accumulator sensor middle
5 Y4	* boiler sensor
6 GND	
7 GND	accumulator sensor top
8 Y5	TPO
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM buffer loading
16 Y12	pump

UML+	module 2 heating circuit 2
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

UML+	module 2 heating circuit 2
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

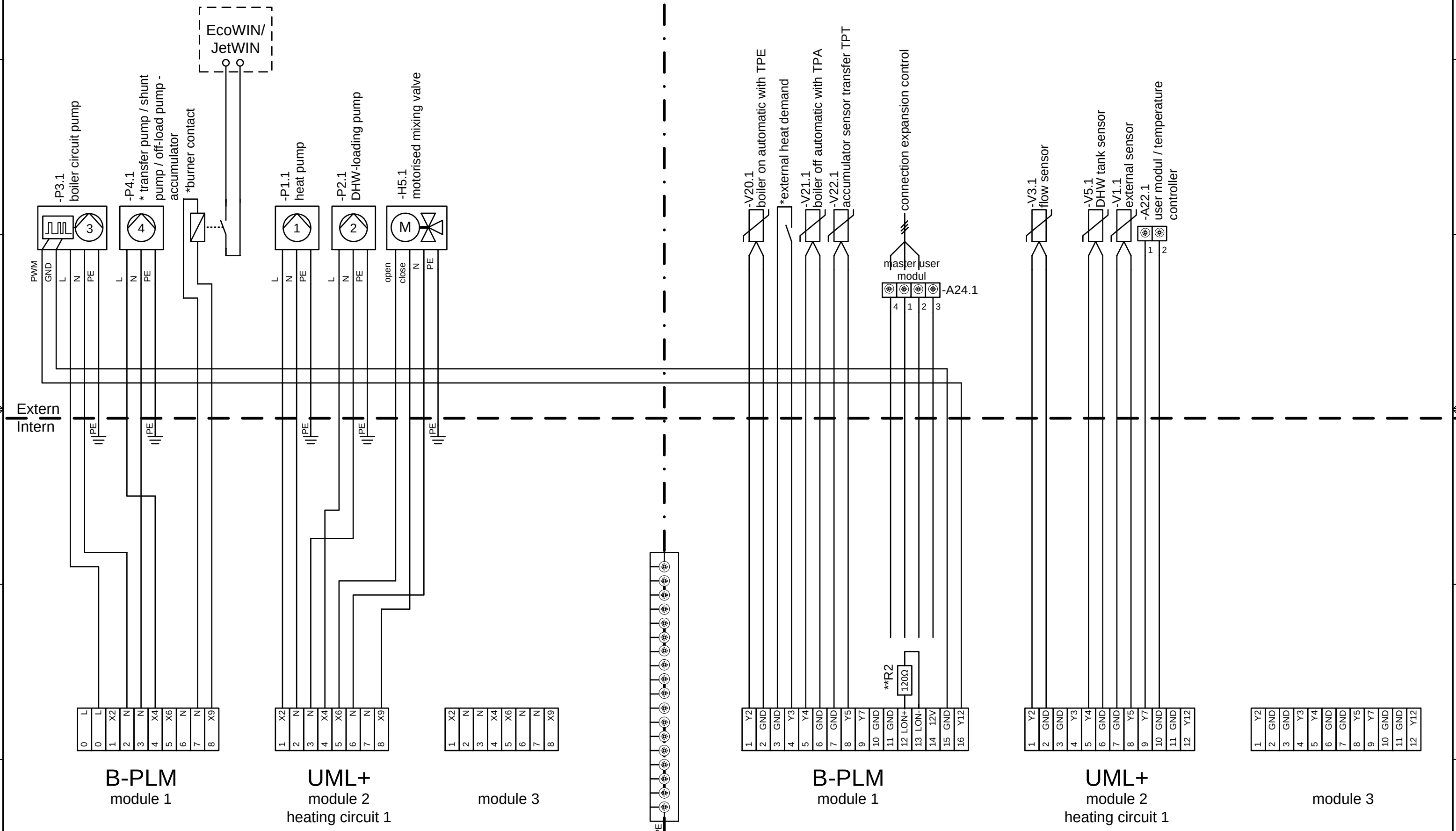
UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump
4 X4	HC 2
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 2 close

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092848/01

low voltage 230 VAC

extra low voltage - sensor



B-PLM	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt
4 X4	pump / off-load pump
5 X6	
6 N	
7 N	*burner contact
8 X9	

UML+	module 2
1 X2	heat pump
2 N	HC 1
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092851/01

B-PLM	module 1
1 Y2	boiler on automatic with
2 GND	TPE
3 GND	
4 Y3	*external heat demand
5 Y4	*boiler off automatic
6 GND	with TPA
7 GND	*accumulator sensor
8 Y5	transfer TPT
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul
13 Lon-	connection
14 12V	expansion control
15 GND	PWM boiler circuit
16 Y12	pump

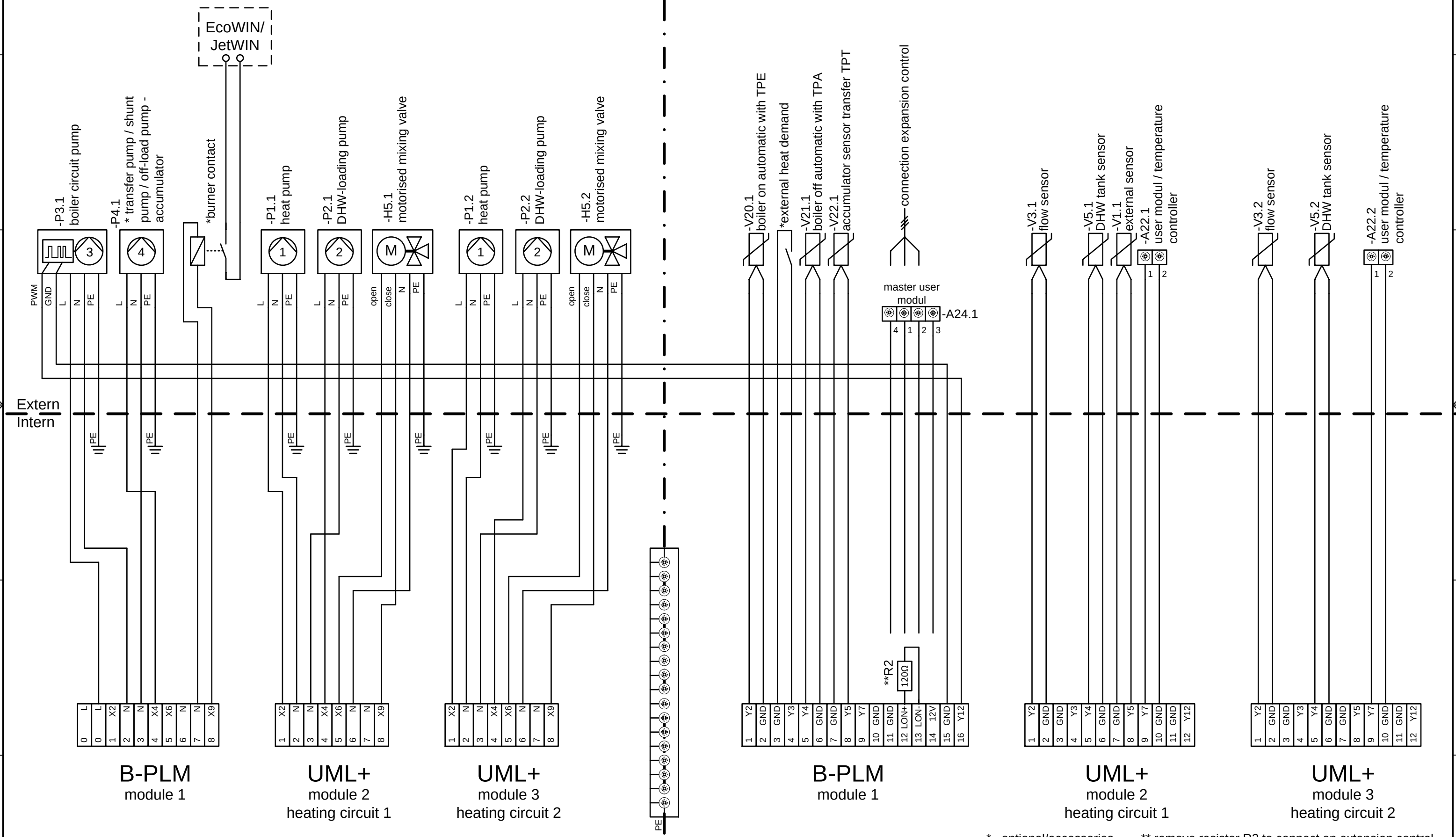
UML+	module 2
1 Y2	flow sensor
2 GND	HC 1
3 GND	
4 Y3	
5 Y4	DHW tank sensor
6 GND	HC 1
7 GND	
8 Y5	external sensor
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092851/01

low voltage 230 VAC

extra low voltage - sensor



B-PLM	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt
4 X4	pump / off-load pump
5 X6	
6 N	
7 N	*burner contact
8 X9	

UML+	module 2 heating circuit 1
1 X2	heat pump
2 N	HC 1
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump
2 N	HC 2
3 N	DHW-loading pump
4 X4	HC 2
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 2 close

092851/01

B-PLM	module 1
1 Y2	boiler on automatic with
2 GND	TPE
3 GND	
4 Y3	*external heat demand
5 Y4	*boiler off automatic
6 GND	with TPA
7 GND	*accumulator sensor
8 Y5	transfer TPT
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul
13 Lon-	connection
14 12V	expansion control
15 GND	PWM boiler circuit
16 Y12	pump

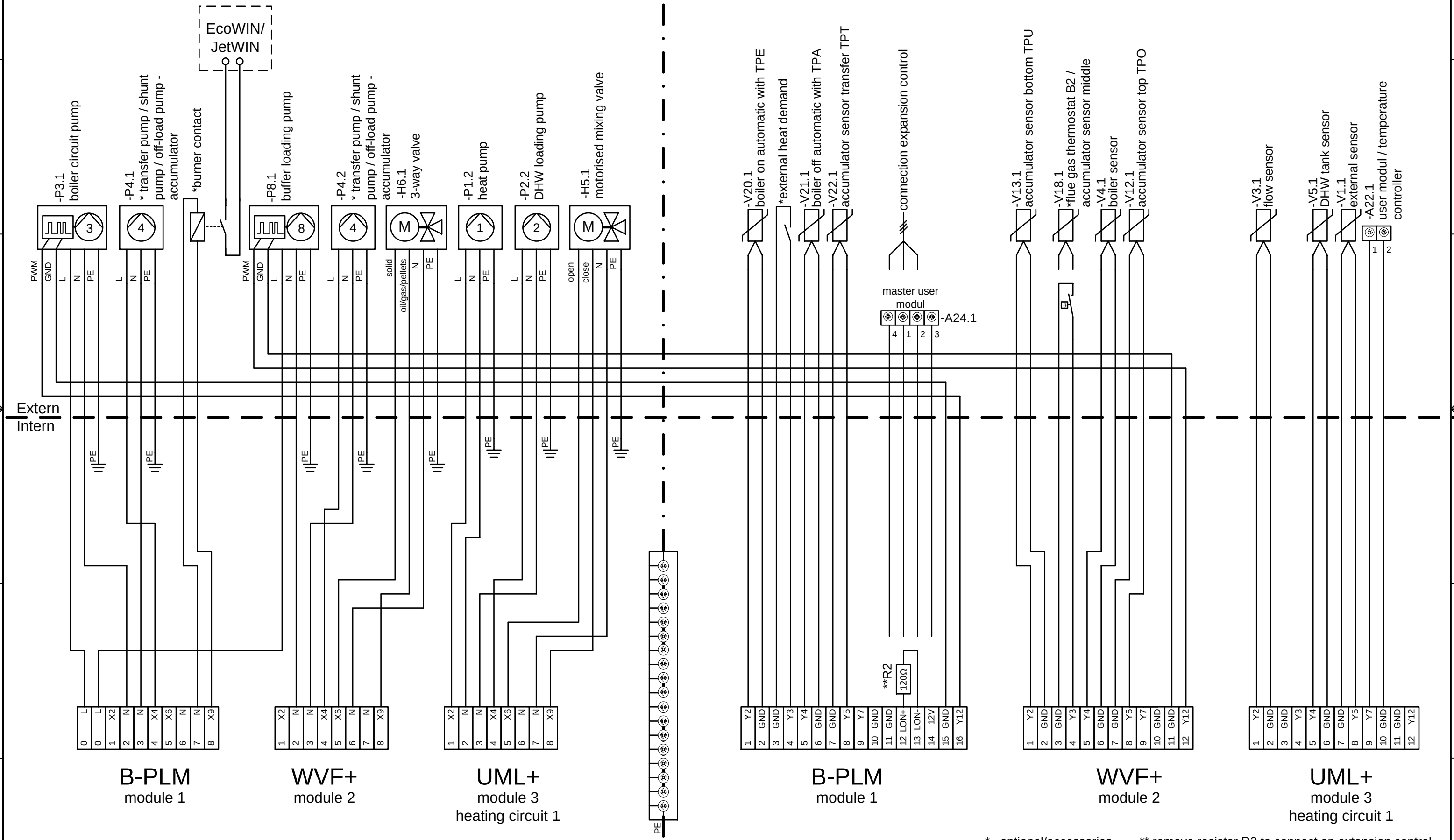
UML+	module 2 heating circuit 1
1 Y2	flow sensor
2 GND	HC 1
3 GND	
4 Y3	
5 Y4	DHW tank sensor
6 GND	HC 1
7 GND	
8 Y5	external sensor
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor
2 GND	HC 2
3 GND	
4 Y3	
5 Y4	DHW tank sensor
6 GND	HC 2
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092851/01

low voltage 230 VAC

extra low voltage - sensor



B-PLM	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt
4 X4	pump / off-load pump
5 X6	
6 N	
7 N	*burner contact
8 X9	

WVF+	module 2
1 X2	
2 N	
3 N	*transfer pump / shunt
4 X4	pump / off-load pump accumulator
5 X6	solid
6 N	3-way valve
7 N	
8 X9	oil/gas/pellets

UML+	module 3 heating circuit 1
1 X2	heat pumpi HC 1
2 N	
3 N	DHW-loading pump
4 X4	HC 1
5 X6	open
6 N	motorised mixing valve
7 N	
8 X9	HC 1 close

092845/01

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor
8 Y5	transfer TPT
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

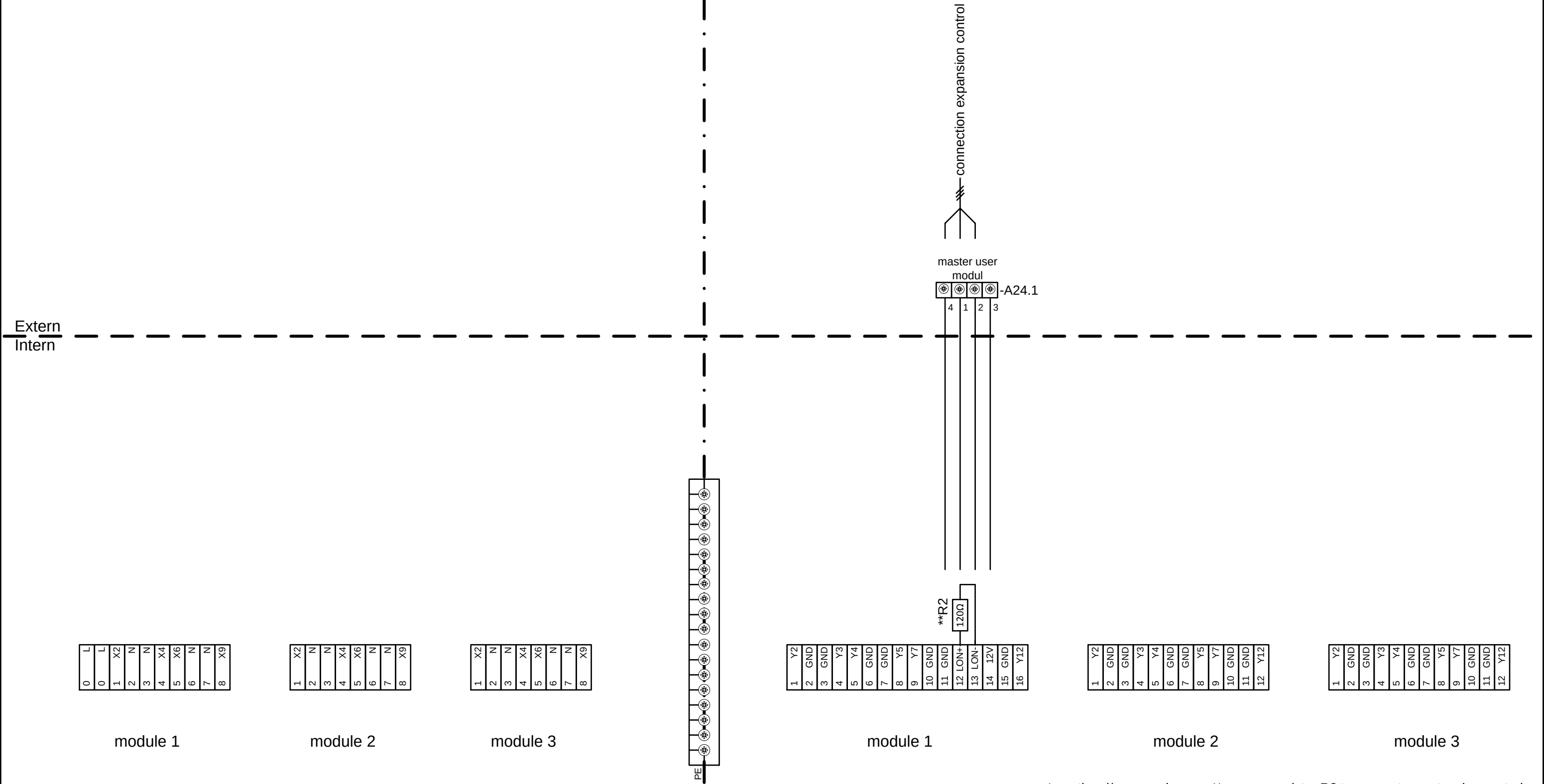
WVF+	module 2
1 Y2	accumulator bottom
2 GND	TPU
3 GND	*flue gas thermostat B2
4 Y3	accumulator sensor middle
5 Y4	*boiler sensor
6 GND	
7 GND	accumulator sensor top
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM buffer loading
12 Y12	pump

UML+	module 3 heating circuit 1
1 Y2	flow sensor
2 GND	HC 1
3 GND	
4 Y3	
5 Y4	DHW tank sensor
6 GND	HC 1
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

092845/01

low voltage 230 VAC

extra low voltage - sensor



1

2

3

4

5

6

7

8

1	module 1
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092735/01

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

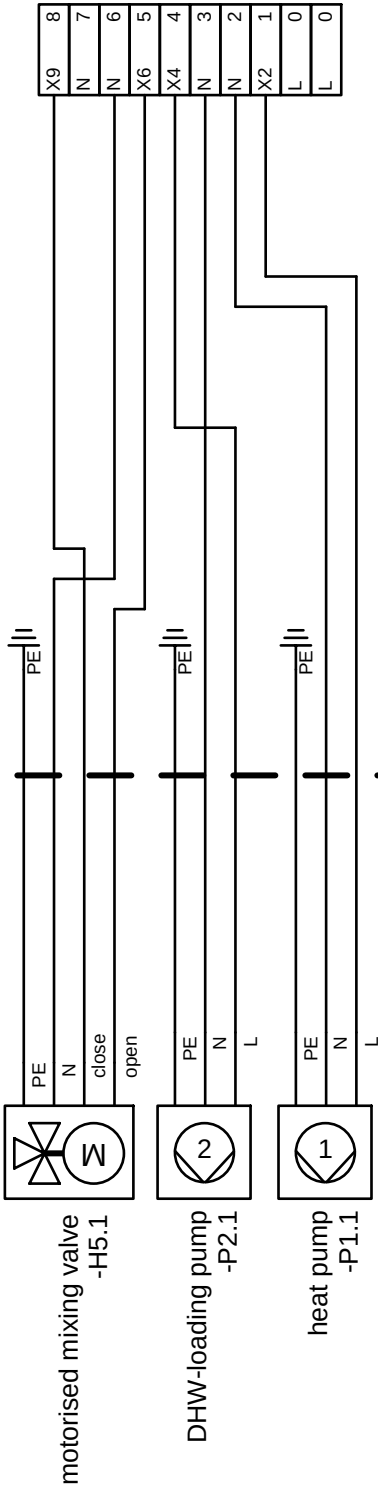
2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092735/01

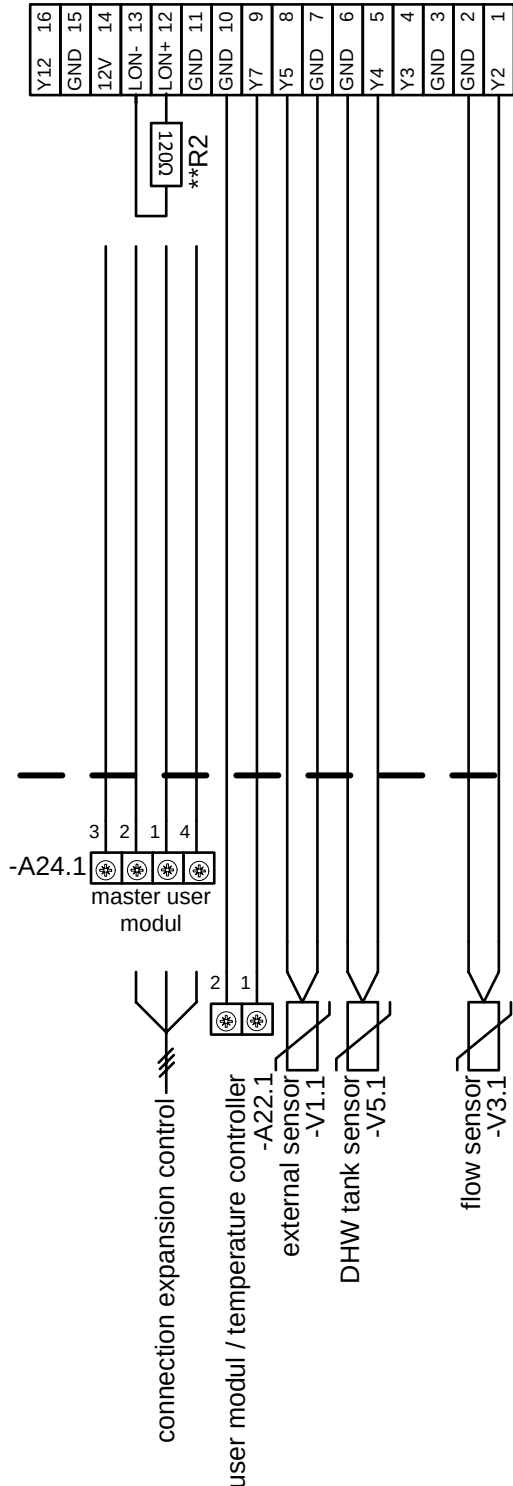
low voltage 230 VAC

UML+
module 1
heating circuit 1



extra low voltage - sensor

UML+
module 1
heating circuit 1



UML+	module 1 heating circuit 1
HC 1	8 X9
close	7 N
open	6 N
motorised mixing valve	5 X6
DHW-loading pump HC 1	4 X4 3 N
heat pump HC 1	2 N 1 X2
permanent phase 2	0 L
permanent phase 1	0 L

092723/01

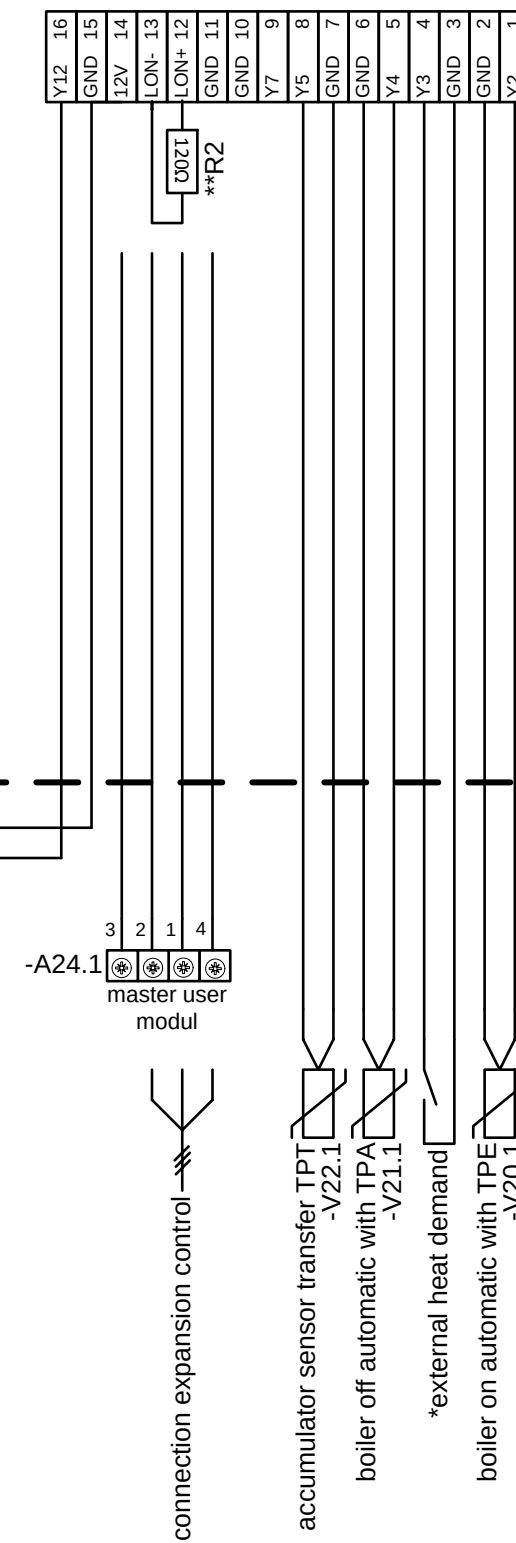
UML+	module 1 heating circuit 1
	16 Y12 15 GND
master user modul connection expansion control	14 12V 13 Lon- 12 Lon+
user modul temperature controller	11 GND 10 GND 9 Y7
external sensor	8 Y5 7 GND
DHW tank sensor HC 1	6 GND 5 Y4
	4 Y3 3 GND
flow sensor HC 1	2 GND 1 Y2

092723/01

extra low voltage - sensor

B-PLM

module 1



** remove resistor R2 to connect an extension control

				Datum	17.07.2013	B-PLM		MES P042 and accumulator module B-PLM	Projekt : control		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot	Zeichnungs Nr.: 092722/01					◀ ----- 2 ▶	
Rev.	Änderung	Datum	Name	Genehmigt								
Blatt 092905/01												

B-PLM	module 1
*burner contact	8 X9 7 N
	6 N 5 X6
transfer pump / shunt pump / off-load pump	4 X4 3 N
	2 N
	1 X2
permanent phase 2	0 L
permanent phase 1	0 L

092906/01

B-PLM	module 1
PWM boiler circuit pump	16 Y12 15 GND
master user modul connection expansion control	14 12V 13 Lon- 12 Lon+
	11 GND
	10 GND
	9 Y7
accumulator sensor transfer TPT	8 Y5 7 GND
boiler off automatic with TPA	6 GND 5 Y4
*external heat demand	4 Y3 3 GND
boiler on automatic with TPE	2 GND 1 Y2

092906/01

low voltage 230 VAC

dummy cover for MES-slot
module 1
heating circuit

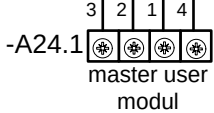
X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

extra low voltage - sensor

dummy cover for MES-slot
module 1
heating circuit

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

120Ω
**R2



connection expansion control

Extern
Intern

1	module 1
X9	8 X9
	7 N
X6	6 N
	5 X6
X4	4 X4
	3 N
X2	2 N
	1 X2
	permanent phase 2 0 L
	permanent phase 1 0 L

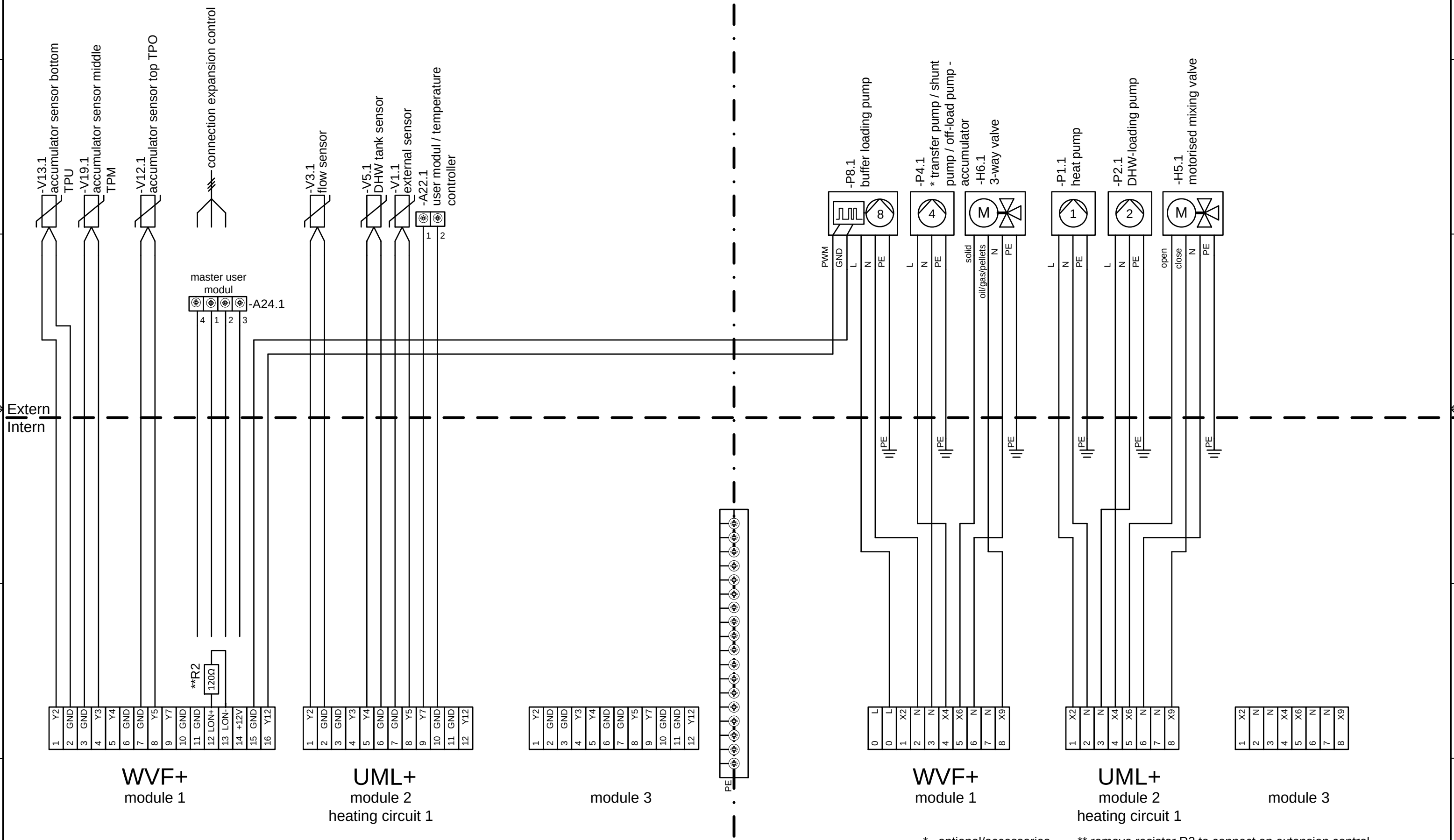
092726/01

1	module 1
Y12	16 Y12
	15 GND
	14 12V
	13 Lon-
	master user modul connection
	12 Lon+ expansion control
Y7	11 GND
	10 GND
Y5	9 Y7
	8 Y5
Y4	7 GND
	6 GND
Y3	5 Y4
	4 Y3
Y2	3 GND
	2 GND
	1 Y2

092726/01

extra low voltage - sensor

low voltage 230 VAC



-XS	safety devices
L	low water cut-off fuse (Germany)
L	
WVF+	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	transfer pump / shunt
4 X4	pump / off-load pump
5 X6	solid 3-way valve
6 N	
7 N	
8 X9	oil/gas/pellets

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*accumulator sensor middle TPM
4 Y3	
5 Y4	
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection expansion control
13 Lon-	
14 12V	
15 GND	PWM buffer loading pump
16 Y12	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	Open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 1
	close

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

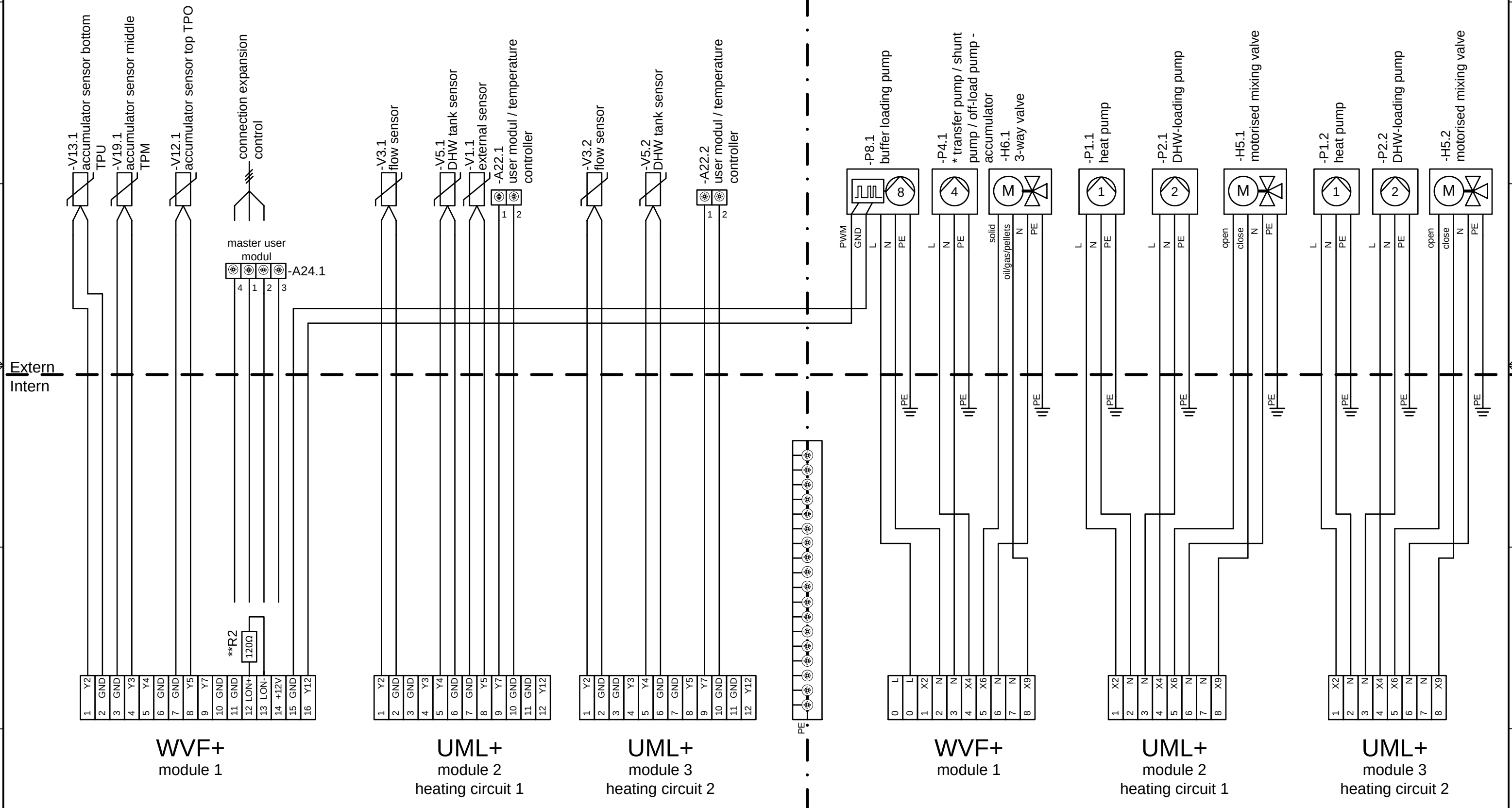
	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092814/01

092814/01

extra low voltage - sensor

low voltage 230 VAC



-XS	safety devices
L	low water cut-off fuse (Germany)
L	
WVF+	module 1
0 L PWM	permanent phase 1
0 L PWM	permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt
4 X4	pump / off-load pump- accumulator
5 X6	solid 3-way valve
6 N	
7 N	oil/gas/pellets
8 X9	

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 1 close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	DHW-loading pump HC 2
4 X4	
5 X6	open motorised mixing valve
6 N	
7 N	
8 X9	
	HC 2 close

092817/01

WVF+	module 1
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*accumulator sensor middle TPM
4 Y3	
5 Y4	
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master user modul connection expansion control
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM buffer loading pump
16 Y12	

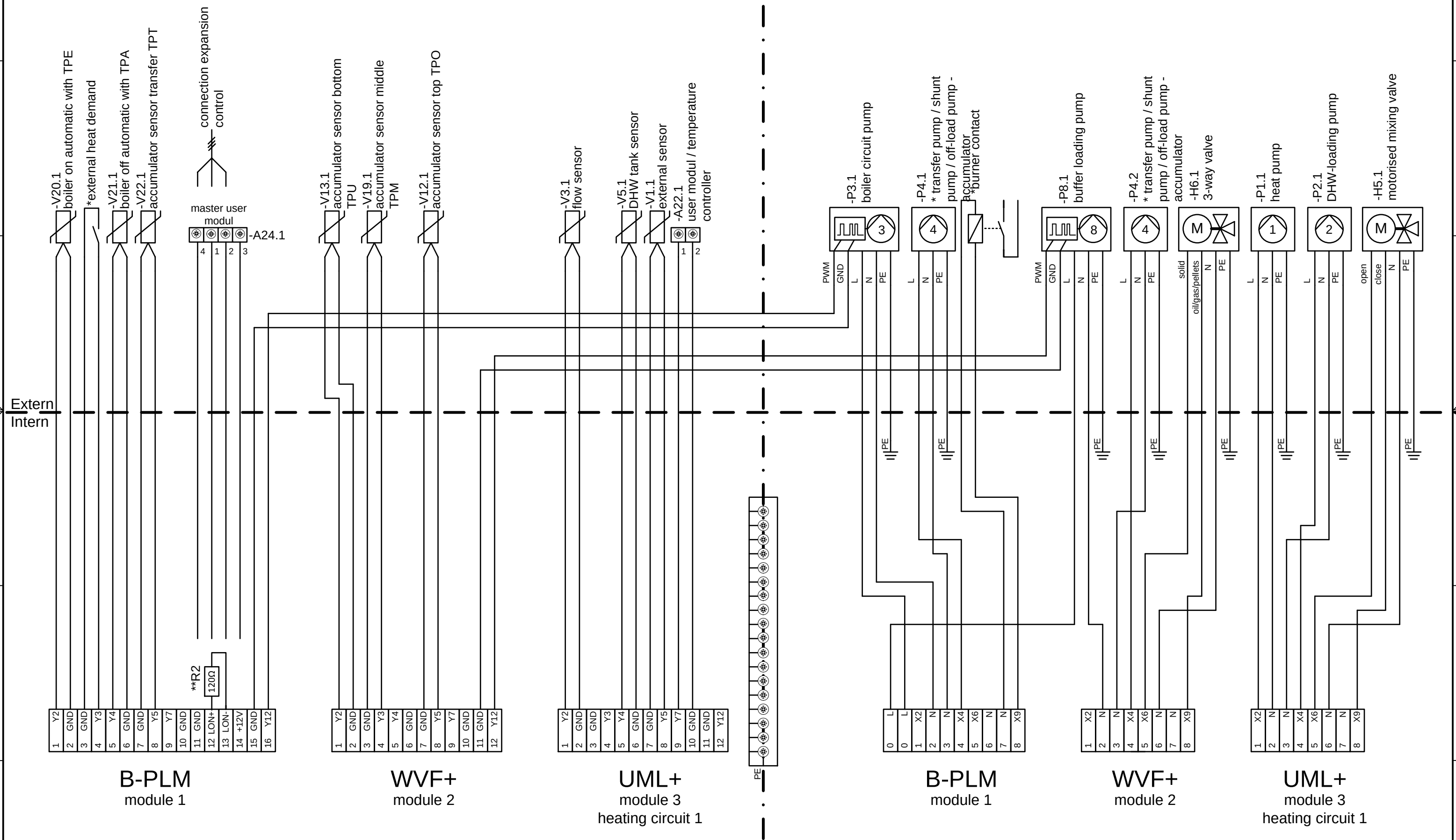
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 2
6 GND	
7 GND	
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

092817/01

extra low voltage - sensor

low voltage 230 VAC



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	B-PLM/WVF+/UML+		MES LW021 + P030 outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit with burner control oil/gas/pellets and solid fuel module WVF+		Projekt : control				1 mm : 1 mm Blatt 092810/01	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092810/01								

-XS	safety devices
L	low water cut-off fuse (Germany)
L	
B-PLM	Modul 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	
6 N	
7 N	
8 X9	*burner contact

WVF+	module 2
1 X2	
2 N	
3 N	*transfer pump / shunt pump / off-load pump
4 X4	accumulator
5 X6	solid 3-way valve oil/gas/pellets
6 N	
7 N	
8 X9	

UML+	module 3 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	DHW-loading pump HC 1
4 X4	
5 X6	open motorised mixing valve HC 1 close
6 N	
7 N	
8 X9	

092811/01

B-PLM	Modul 1
1 Y2	*boiler on automatic with TPE
2 GND	
3 GND	*external heat demand
4 Y3	
5 Y4	*boiler off automatic with TPA
6 GND	
7 GND	*accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection expansion control
13 Lon-	
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

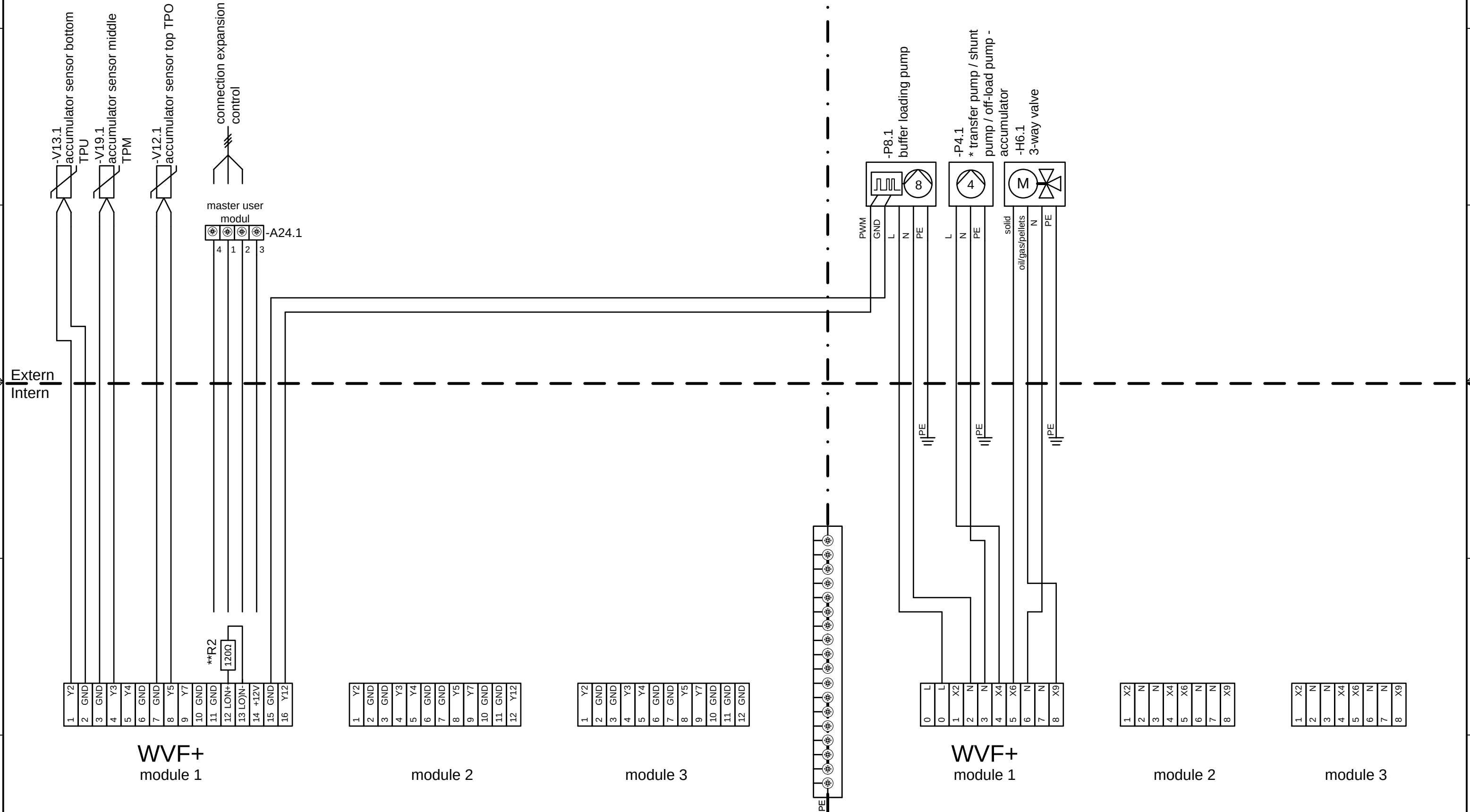
WVF+	module 2
1 Y2	accumulator sensor bottom TPU
2 GND	
3 GND	*accumulator sensor middle TPM
4 Y3	
5 Y4	
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM buffer loading pump
12 Y12	

UML+	module 3 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul temperature controller
10 GND	
11 GND	
12 Y12	

092811/01

extra low voltage - sensor

low voltage 230 VAC



-XS	safety devices
L	low water cut-off fuse (Germany)
L	
WVF+	module 1
0 L PWM permanent phase 1	0 L PWM permanent phase 2
0 L PWM permanent phase 2	
1 X2	solid 3-way valve
2 N	
3 N	
4 X4	oil/gas/pellets
5 X6	
6 N	
7 N	
8 X9	

WVF+	module 1
1 Y2	accumulator bottom TPU
2 GND	
3 GND	accumulator sensor middle TPM
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	accumulator sensor top TPO
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	
12 Lon+	master user modul connection expansion control
13 Lon-	
14 12V	
15 GND	PWM buffer loading pump
16 Y12	

	module 2
1 X2	2 N
2 N	
3 N	4 X4
4 X4	
5 X6	6 N
6 N	
7 N	
8 X9	

	module 2
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

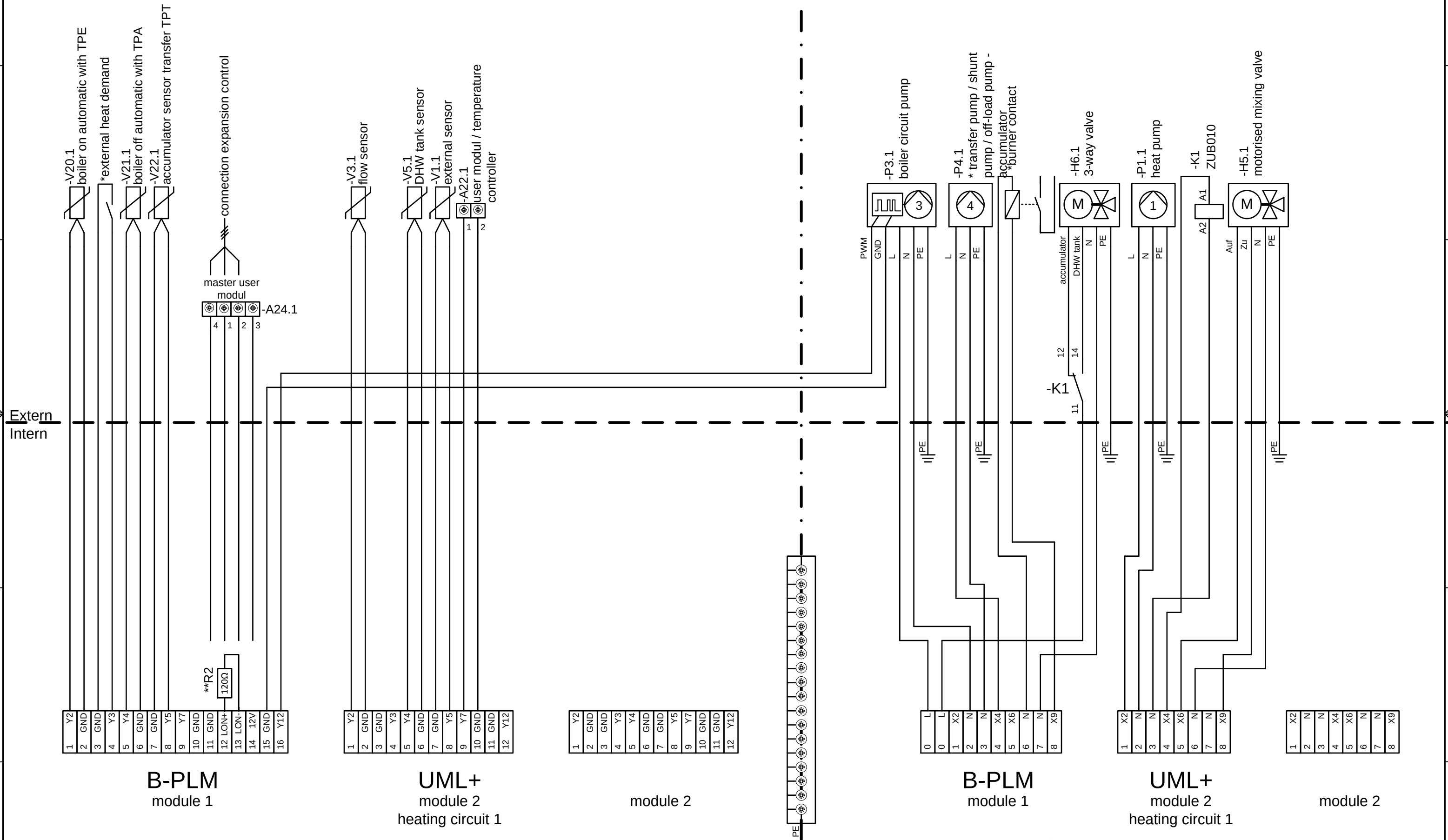
	module 3
1 X2	2 N
2 N	
3 N	4 X4
4 X4	
5 X6	6 N
6 N	
7 N	
8 X9	

	module 3
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

092820/01

extra low voltage - sensor

low voltage 230 VAC



...optional/accessories ** remove resistor R2 to connect an extension control

	safety devices
L	emergency heating off switch
L	
B-PLM	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	* transfer pump / shunt
4 X4	pump / off-load pump
5 X6	
6 N	
7 N	
8 X9	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	contactor -K1 HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1
8 X9	close

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094550/01

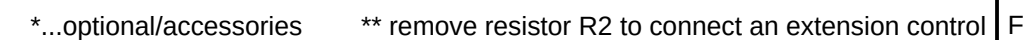
B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	* external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit
16 Y12	pump

UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094550/01

low voltage 230 VAC



1 mm : 1 mm	
◀ -----	2 ▶
Blatt 094551 von 1	

	safety devices
L	emergency heating off switch
L	
B-PLM	module 1
0 L	PWM permanent phase 1
0 L	PWM permanent phase 2
1 X2	
2 N	
3 N	* transfer pump / shunt
4 X4	pump / off-load pump
5 X6	
6 N	
7 N	
8 X9	*burner contact

UML+	module 2 heating circuit 1
1 X2	heat pump HC 1
2 N	
3 N	contactor -K1 HC 1
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 1
8 X9	close

UML+	module 3 heating circuit 2
1 X2	heat pump HC 2
2 N	
3 N	
4 X4	
5 X6	open
6 N	motorised mixing valve
7 N	HC 2
8 X9	close

094553/01

B-PLM	module 1
1 Y2	boiler on automatic with TPE
2 GND	
3 GND	* external heat demand
4 Y3	
5 Y4	* boiler off automatic with TPA
6 GND	
7 GND	* accumulator sensor transfer TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master user modul connection
13 Lon-	expansion control
14 12V	
15 GND	PWM boiler circuit pump
16 Y12	

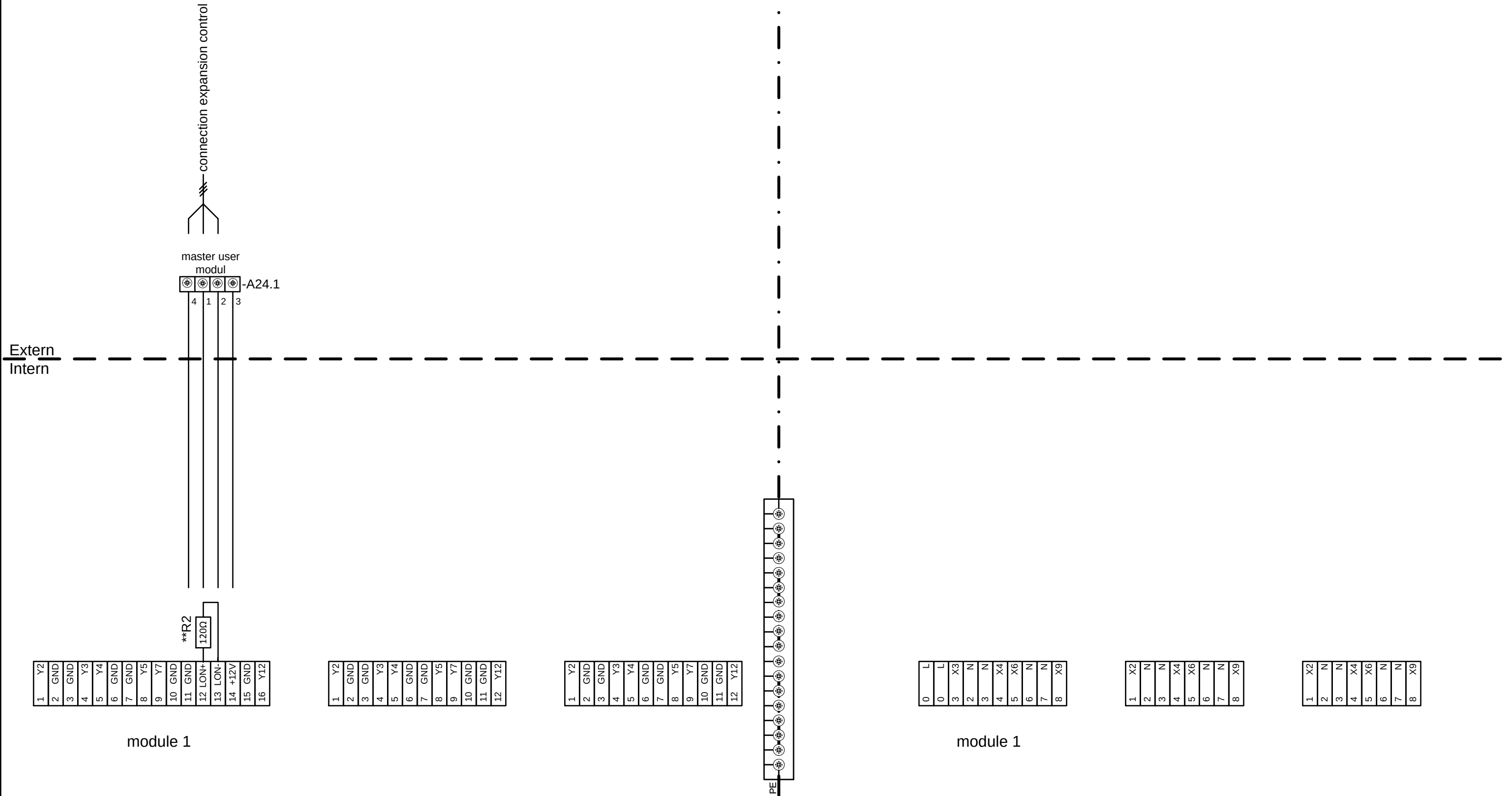
UML+	module 2 heating circuit 1
1 Y2	flow sensor HC 1
2 GND	
3 GND	
4 Y3	
5 Y4	DHW tank sensor HC 1
6 GND	
7 GND	external sensor
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

UML+	module 3 heating circuit 2
1 Y2	flow sensor HC 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	user modul
10 GND	temperature controller
11 GND	
12 Y12	

094553/01

extra low voltage - sensor

low voltage 230 VAC



*...optional/accessories

** remove resistor R2 to connect an extension control

				Datum	24.06.2013	LON conn.		without Windhager MES control without Windhager MES control	Projekt : control		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092637/01				 2	
Blatt 092637/01												

-XS	safety devices
L	low water cut-off fuse (Germany)
L	
1	module 1
0 L PWM permanent phase 1	
0 L PWM permanent phase 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	
2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	
3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092638/01

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092638/01

low voltage 230 VAC

extra low voltage - sensor

KAS+
module 1

module 2

module 3

KAS+
module 1

module 2

module 3

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

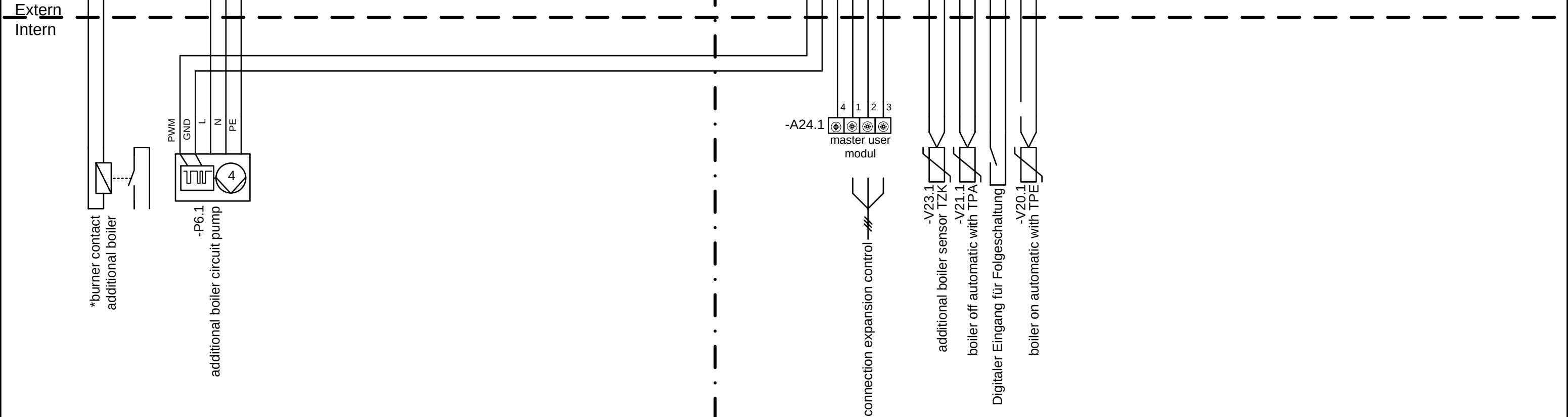
X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

KAS+	module 1
burner relay additional boiler	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

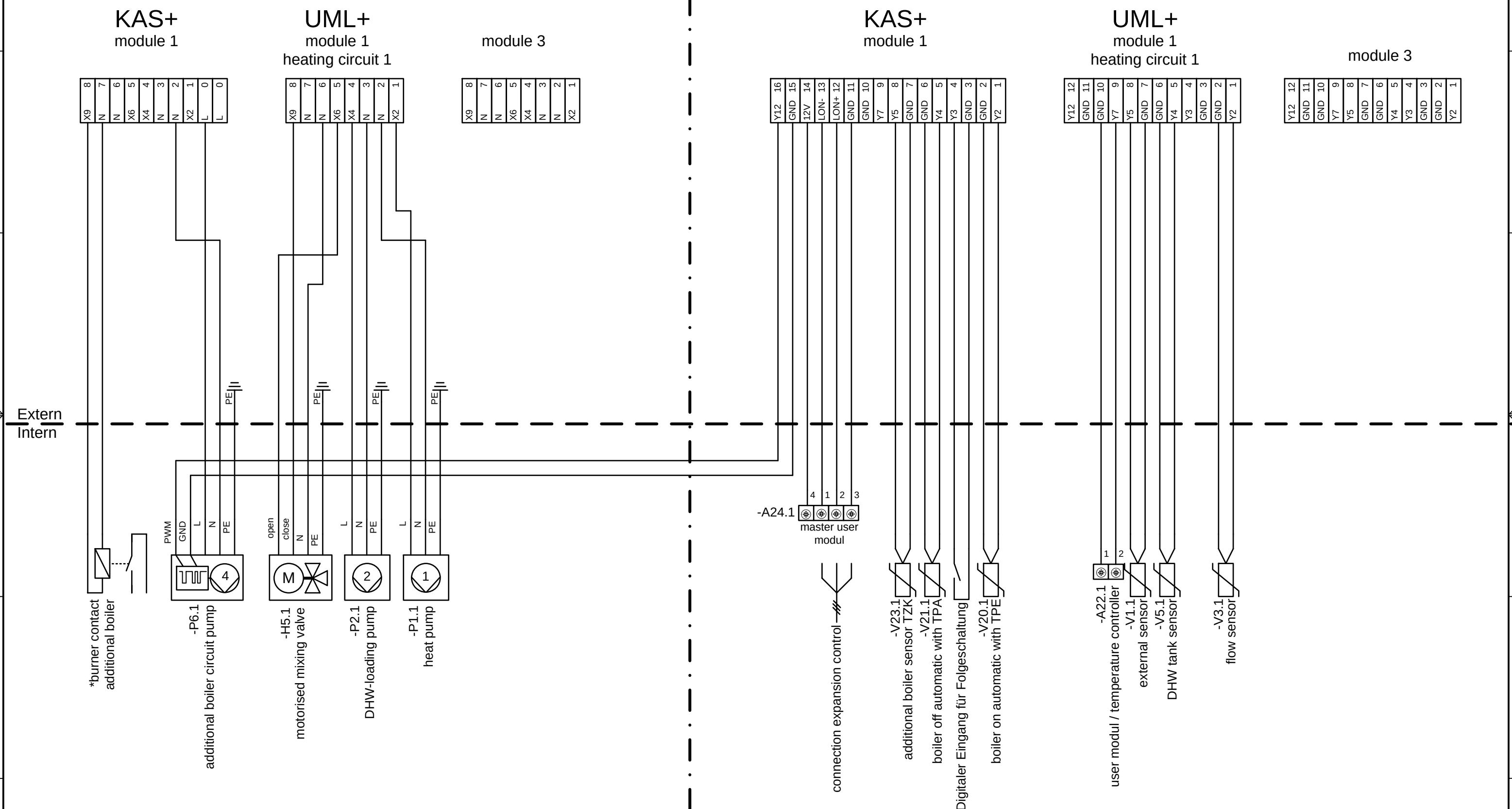
KAS+	module 1
PWM additional boiler Pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
boiler off automatic with TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

KAS+	module 1
burner relay additional boiler	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close motorised mixing valve	X9 8 N 7
HK 1 open	N 6 X6 5
DHW-loading pump	X4 4 N 3
heat pump HK 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

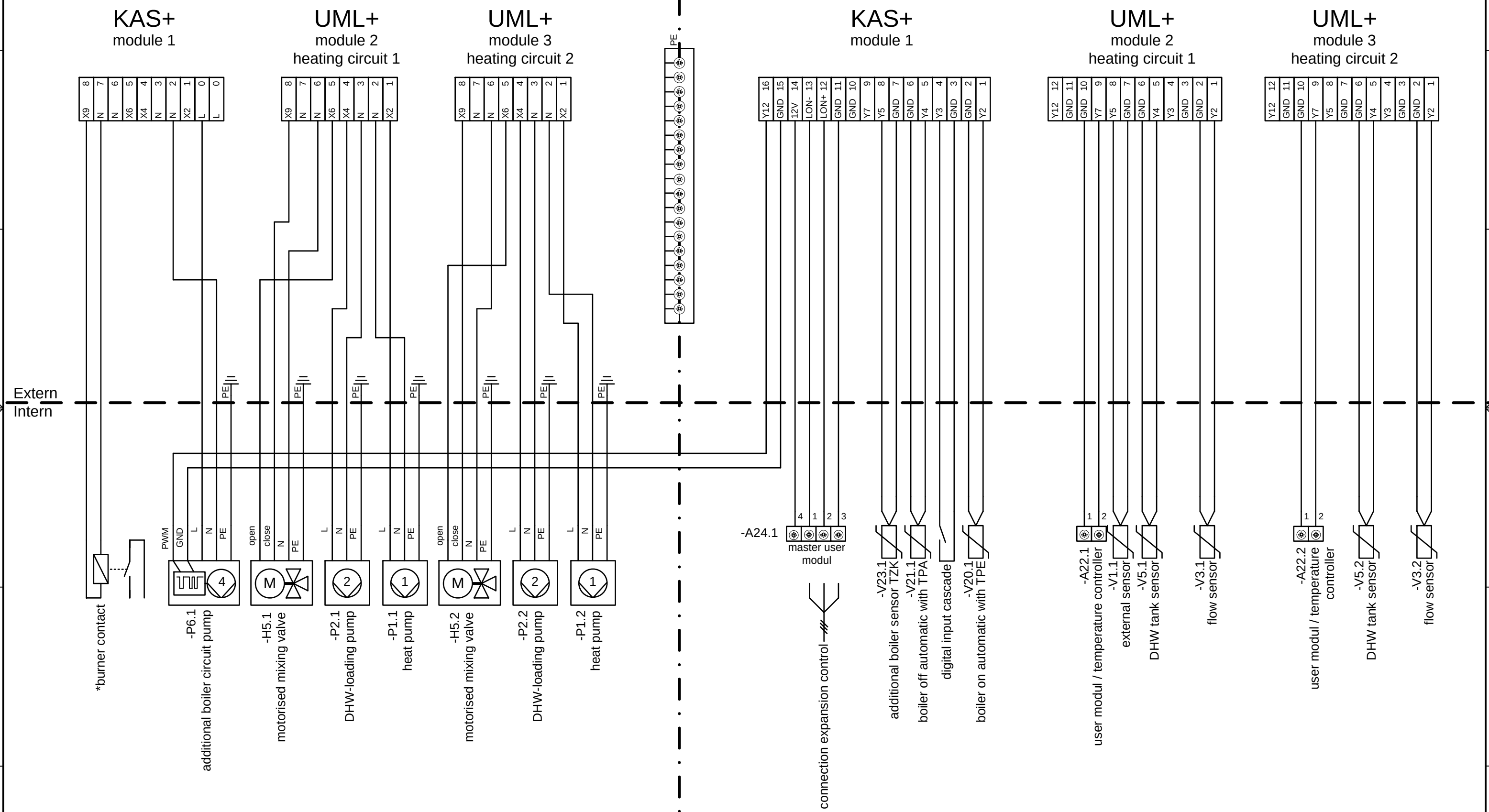
KAS+	module 1
PWM additional boiler Pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
boiler off automatic with TPA	GND 6 Y4 5
digital input cascade	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HK 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HK 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

KAS+	module 1
burner relay additional boiler	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HK 1	X4 4 N 3
heat pump HK 1	N 2 X2 1

UML+	module 3 heating circuit 2
close HK 2	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HK 2	X4 4 N 3
heat pump HK 2	N 2 X2 1

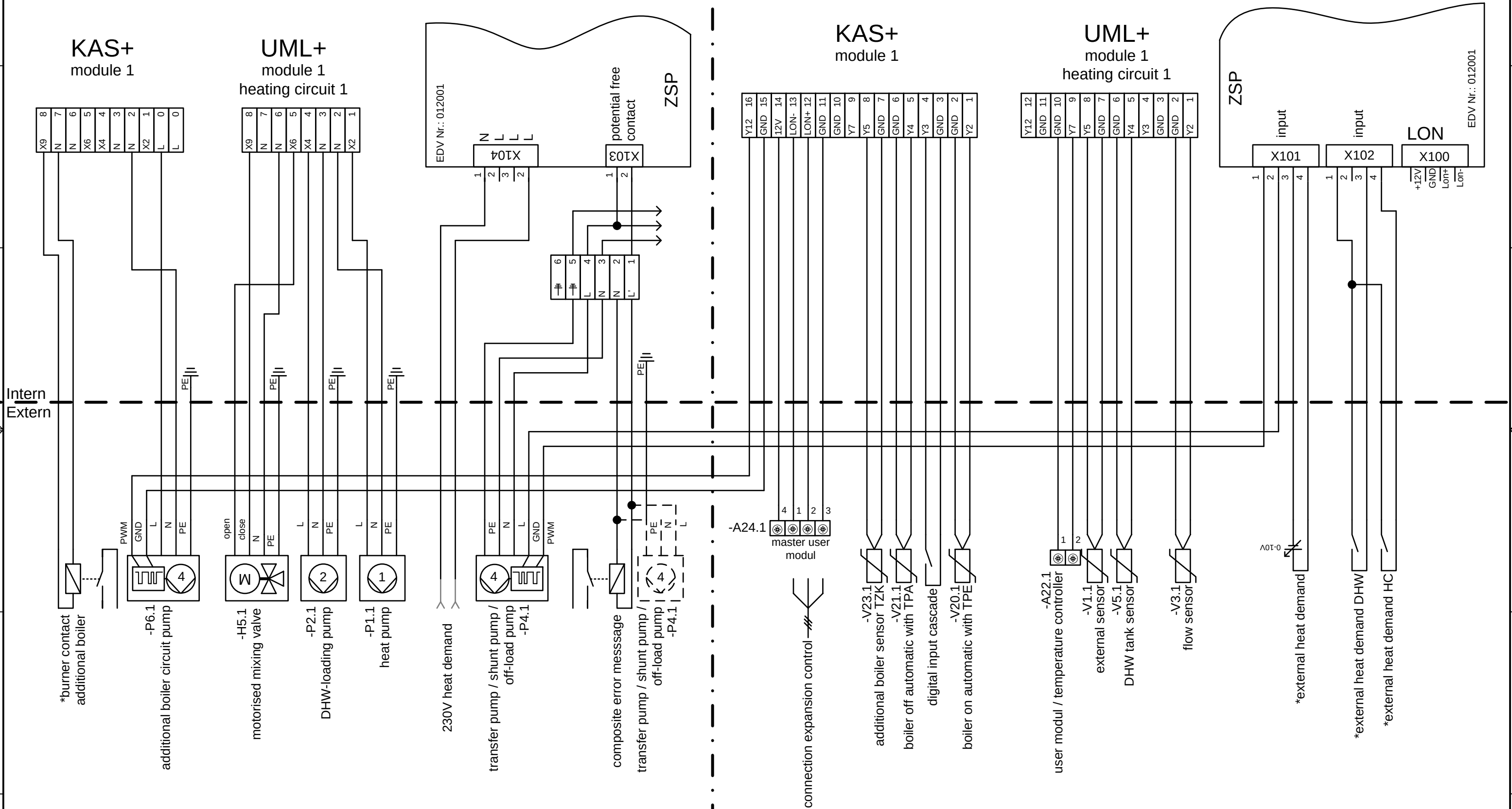
KAS+	module 1
PWM additional boiler Pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Zusatz Kesselfühler	Y5 8 GND 7
boiler off automatic with TPA	GND 6 Y4 5
digital input cascade	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HK 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HK 1	GND 2 Y2 1

UML+	module 3 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HK 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HK 1	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	KAS+/UML+/ZSP W		MES KAS + H021 + ZSP W	Projekt : control		1 mm : 1 mm		
				Gezeichnet	rot								
				Geprüft	ros	Zeichnungs Nr.: 092686/00							
				Genehmigt									
Rev.	Änderung	Datum	Name										
												Blatt	092686/00

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

KAS+	module 1
burner relay additional boiler	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close motorised mixing valve	X9 8 N 7
HK 1 open	N 6 X6 5
DHW-loading pump	X4 4 N 3
heat pump HK 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	module 1
PWM additional boiler Pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
boiler off automatic with GND 6 TPA	Y4 5
digital input cascade	Y3 4 GND 3
boiler on automatic with GND 2 TPE	Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HK 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HK 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message OR transfer pump / shunt pump / off-load pump	N L'

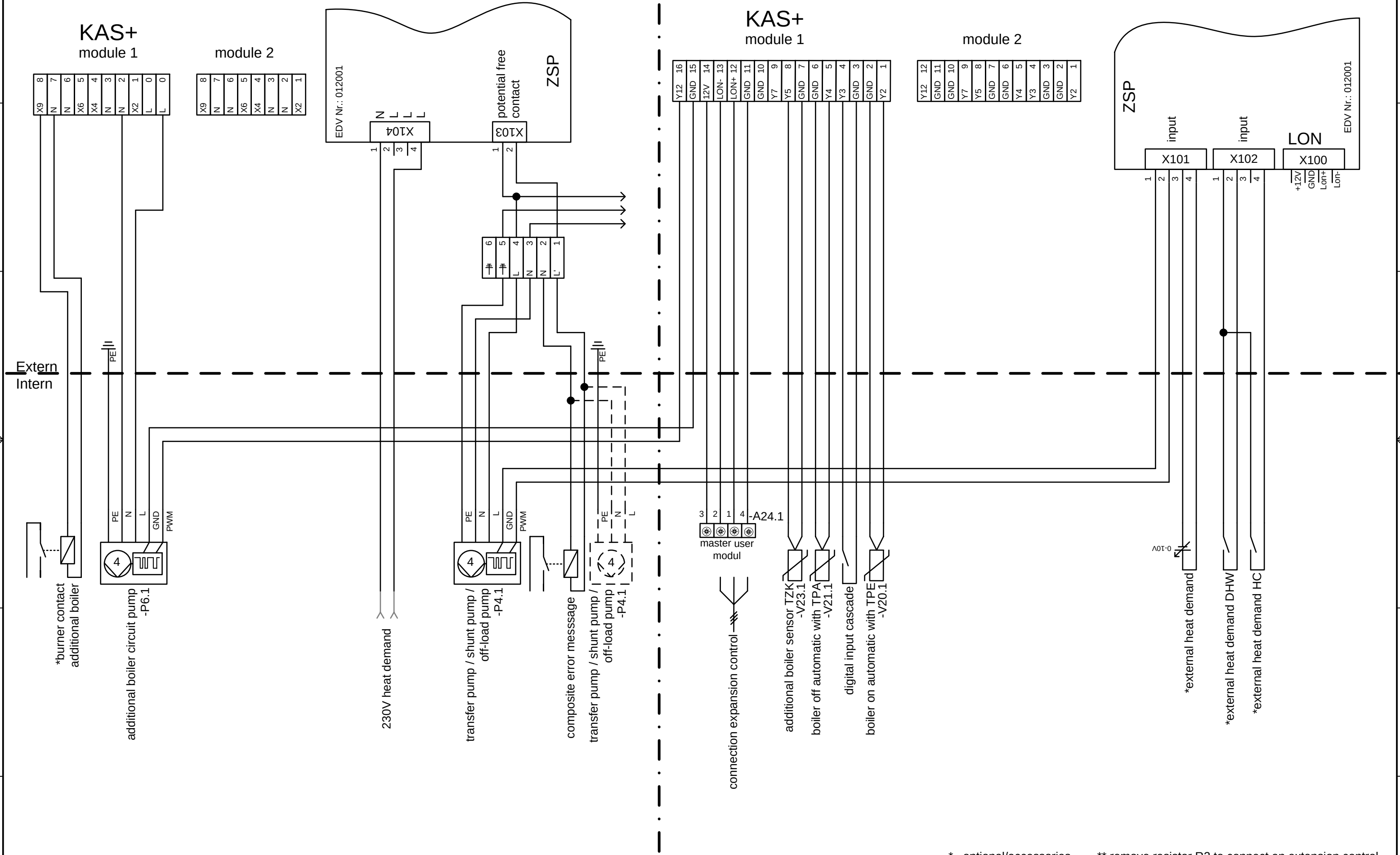
EDV Nr. 094512/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

KAS+	module 1
burner relay additional boiler	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	module 1
PWM additional boiler Pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
boiler off automatic with TPA	GND 6 Y4 5
digital input cascade	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message OR transfer pump / shunt pump / off- load pump	N L'

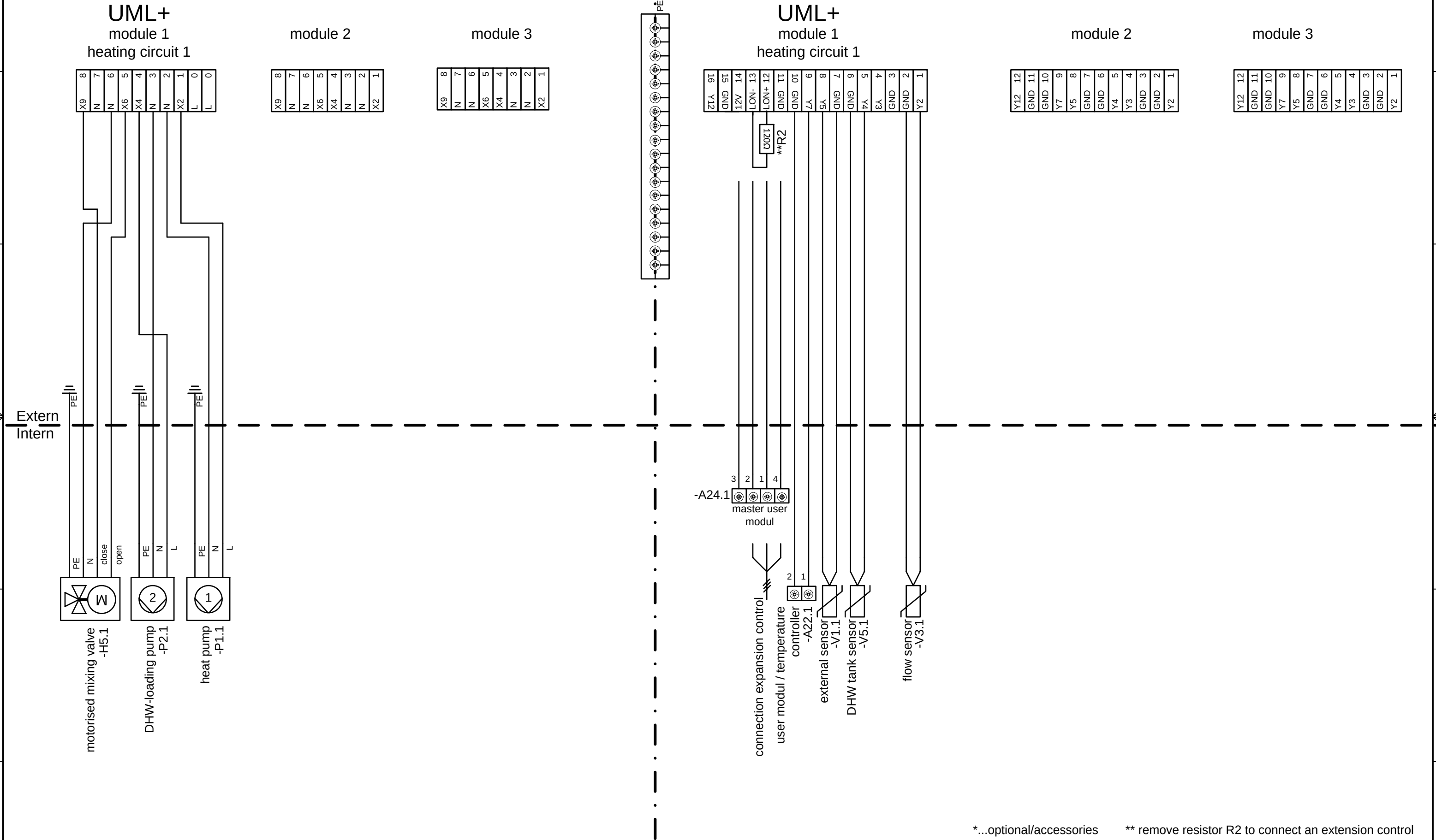
EDV Nr. 094512/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 1 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

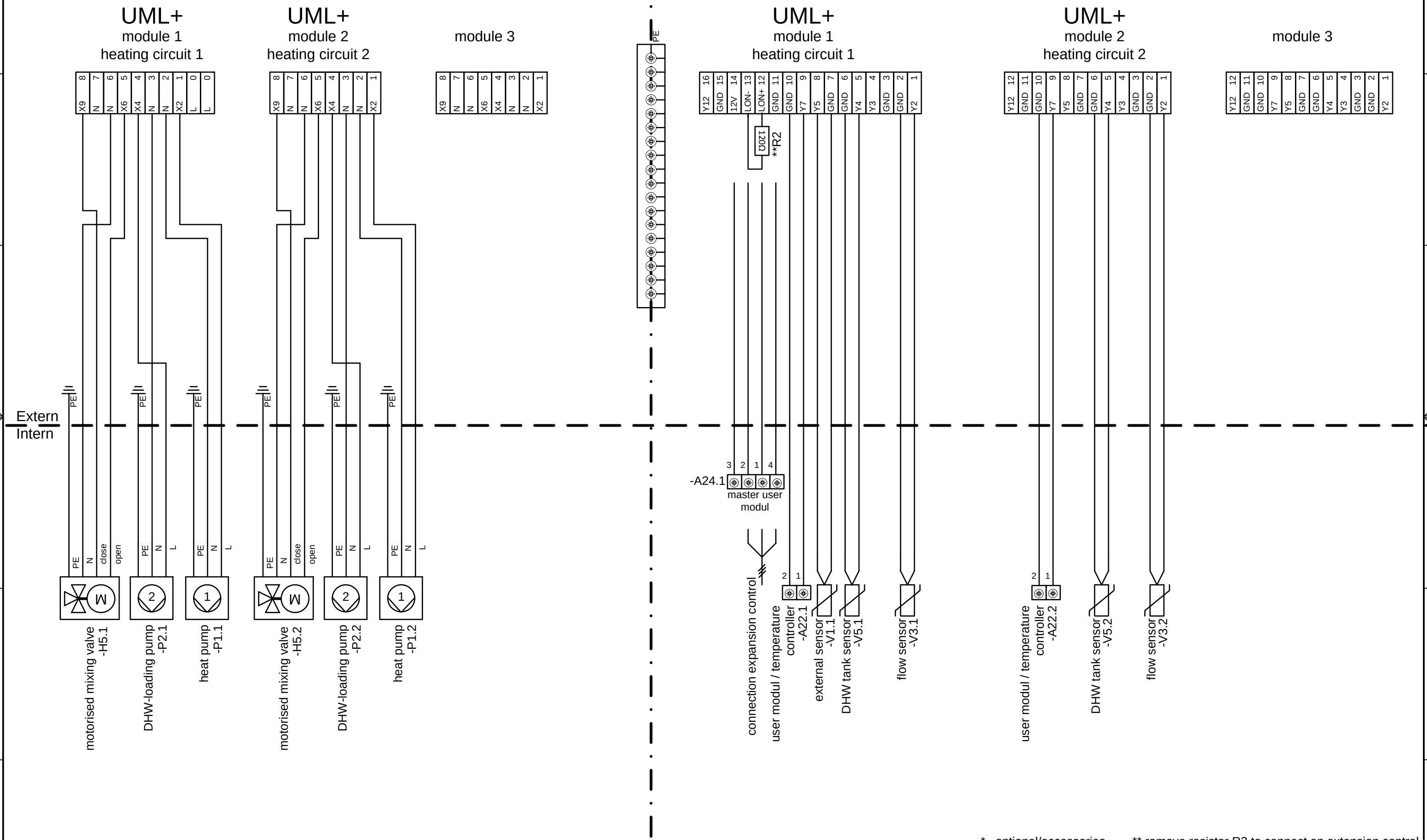
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

092671/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 1 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HC 2	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 2	GND 2 Y2 1

UML+	module 2 heating circuit 2
close HC 2	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 2	X4 4 N 3
heat pump HC 2	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

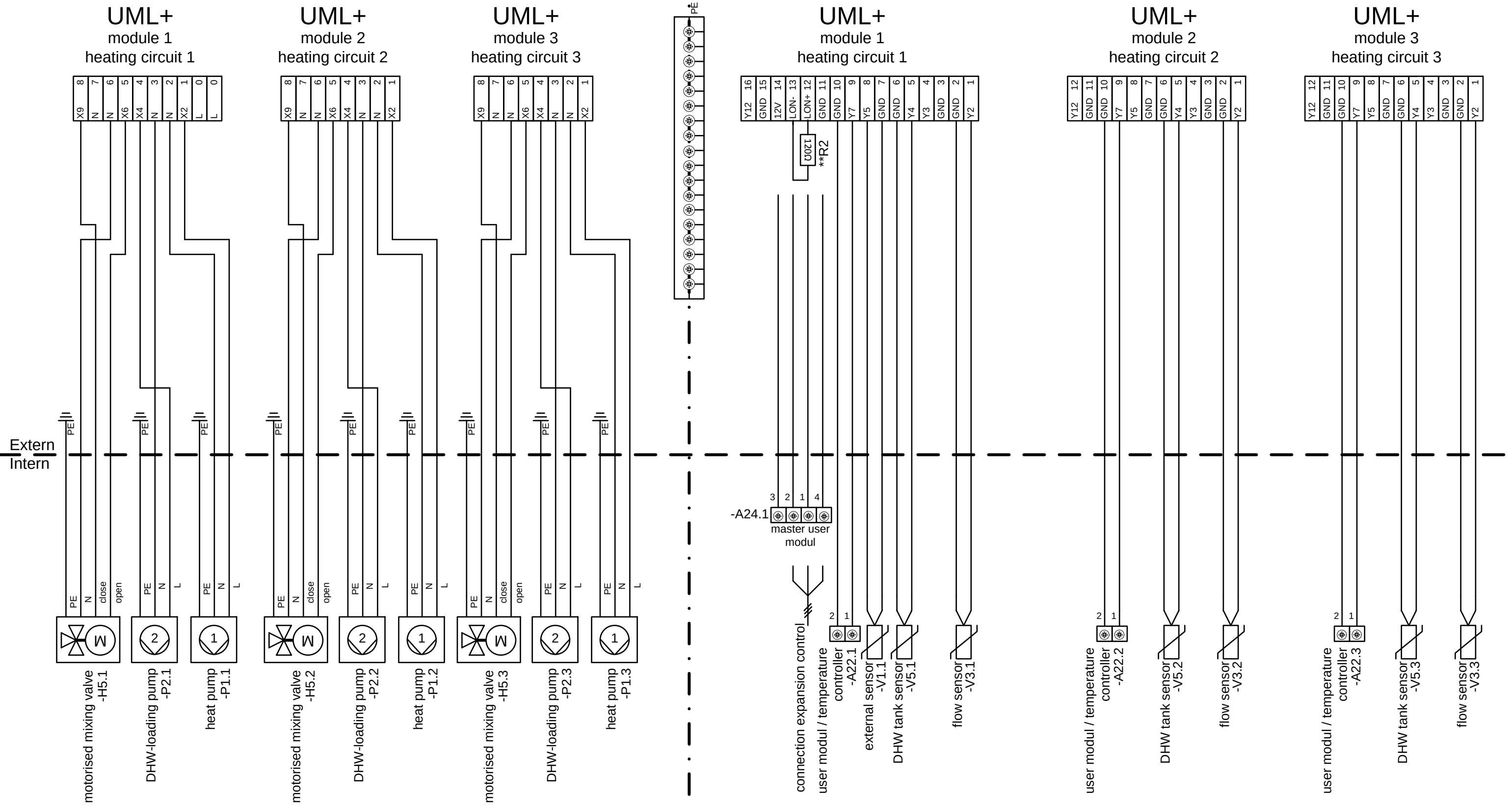
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories

** remove resistor R2 to connect an extension control

				Datum	05.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 outside temperature control for 3 mixed heating circuits incl. hot water circuits	Projekt : control		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092680/01				Blatt 092680/01

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5 Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 1 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HC 2	GND 6 Y4 5 Y3 4 GND 3
flow sensor HC 2	GND 2 Y2 1

UML+	module 2 heating circuit 2
close HC 2	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 2	X4 4 N 3
heat pump HC 2	N 2 X2 1

UML+	module 3 heating circuit 3
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HC3	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 3	GND 2 Y2 1

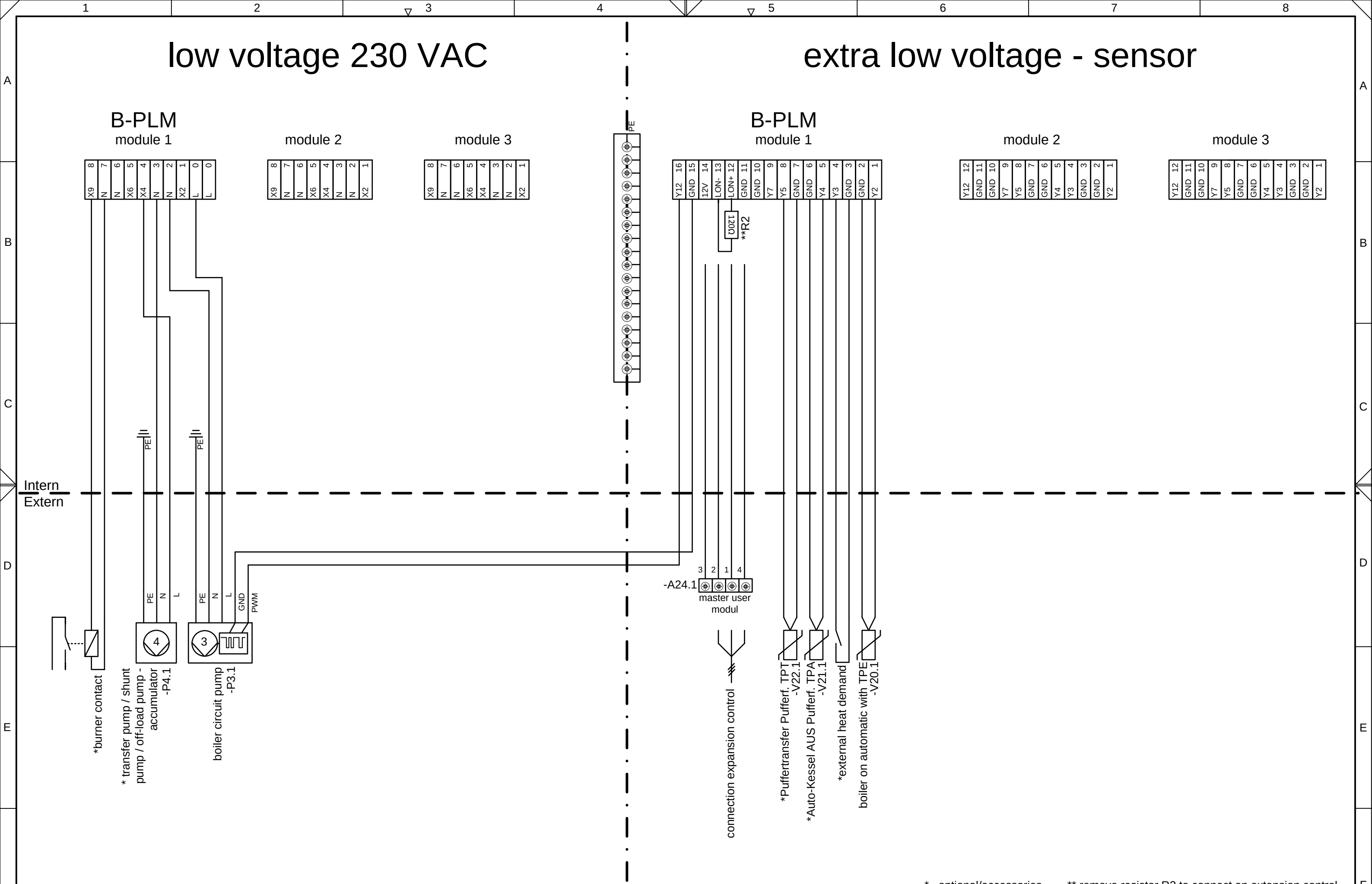
UML+	module 3 heating circuit 3
close HC 3	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 3	X4 4 N 3
heat pump HC 3	N 2 X2 1

092681/01

092681/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories

** remove resistor R2 to connect an extension control

				Datum	29.07.2013	B-PLM		MES P030 with burner control oil/gas/pellets	Projekt : control		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot	Zeichnungs Nr.: 092863/01					◀ ----- 2 ▶
Rev.	Änderung	Datum	Name	Genehmigt							
1			2			3	4	5	6	7	8

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burnercontact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	module 1
	PWM boiler circuit pump Y12 16 GND 15
	+12V 14 master user modul connection Lon- 13 Lon+ 12 expansion control GND 11
	GND 10 Y7 9
	*accumulator sensor transfer TPT Y5 8 GND 7
	*boiler off automatic with TPA GND 6 Y4 5
	*external heat demand Y3 4 GND 3
	boiler on automatic with GND 2 TPE Y2 1

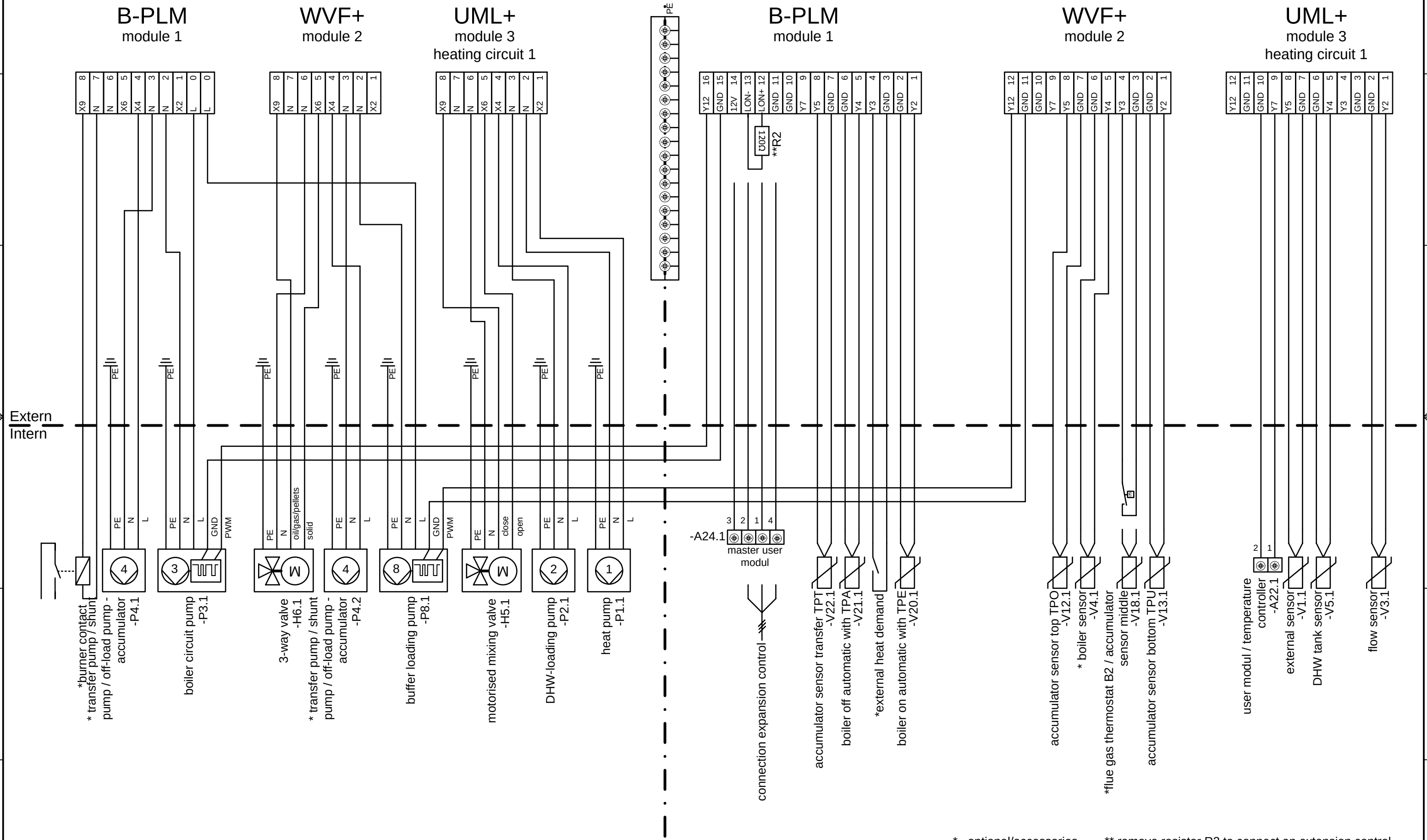
	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

WVF+	module 2
oil/gas/pellets	X9 8 N 7
3-way valve solid	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1

UML+	module 3 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

092868/01

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

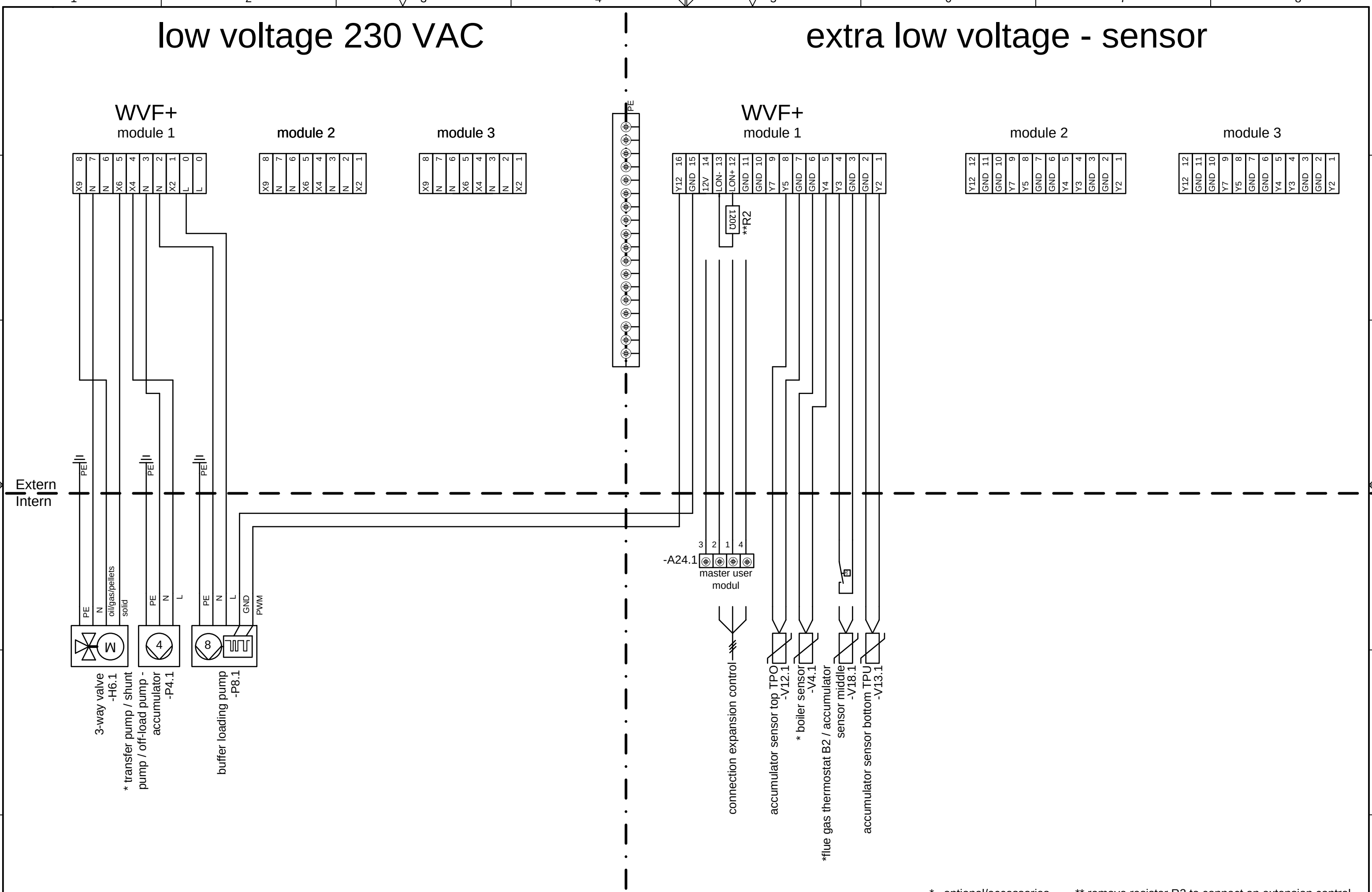
WVF+	module 2
PWM buffer loading pump	Y12 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

UML+	module 3 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

092868/01

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
oil/gas/pellets	X9 8 N 7 N 6 X6 5
3-way valve solid	
*transfer pump / shunt pump / off-load pump- accumulator	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

module 2
X9 8 N 7 N 6 X6 5
X4 4 N 3
N 2 X2 1

module 3
X9 8 N 7 N 6 X6 5
X4 4 N 3
N 2 X2 1

092877/01

WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

module 2
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

module 3
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

092877/01

low voltage 230 VAC

extra low voltage - sensor

WVF+
module 1

UML+
module 2
heating circuit 1

module 3

WVF+
module 1

UML+
module 2
heating circuit 1

module 3

Extern
Intern

-A24.1
master user
modul

*...optional/accessories

** remove resistor R2 to connect an extension control

Datum	08.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

WVF+/UML+

Zeichnungs Nr.: 092870/01

MES P041 + H021

outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit
automatic switching to solid fuel with accumulator loading

Projekt :

control

windhager

1 mm : 1 mm

2

Blatt 092870/01

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
oil/gas/pellets	X9 8 N 7
3-way valve solid	N 6 X6 5
transfer pump / shunt pump / off-load pump accumulator	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

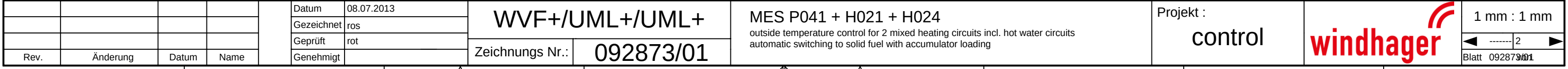
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor	GND 6 Y4 5
	Y3 4 GND 3
flow sensor	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

extra low voltage - sensor



-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
oil/gas/pellets	X9 8 N 7
3-way valve solid	N 6 X6 5
*transfer pump / shunt pump / off-load pump accumulator	X4 4 N 3
	N 2
PWM permanent phase 1	X2 1 L 0
PWM permanent phase 2	L 0

UML+	Modul 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

UML+	module 3 heating circuit 2
close HC 2	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 2	X4 4 N 3
heat pump HC 2	N 2 X2 1

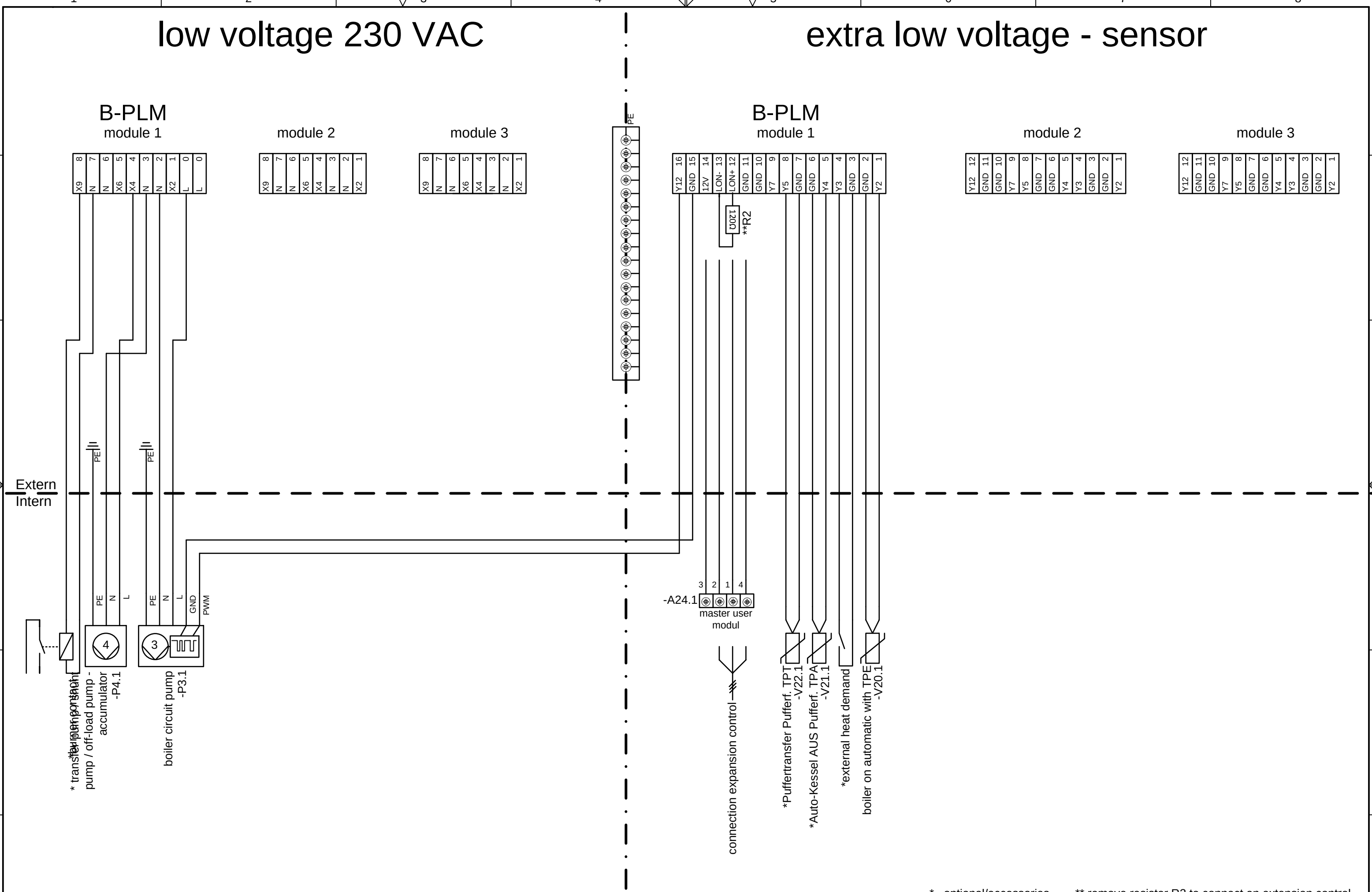
WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

UML+	Modul 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 3 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HC 2	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 2	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with GND 2 TPE	GND 2 Y2 1

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

092890/01

low voltage 230 VAC

extra low voltage - sensor

B-PLM module 1

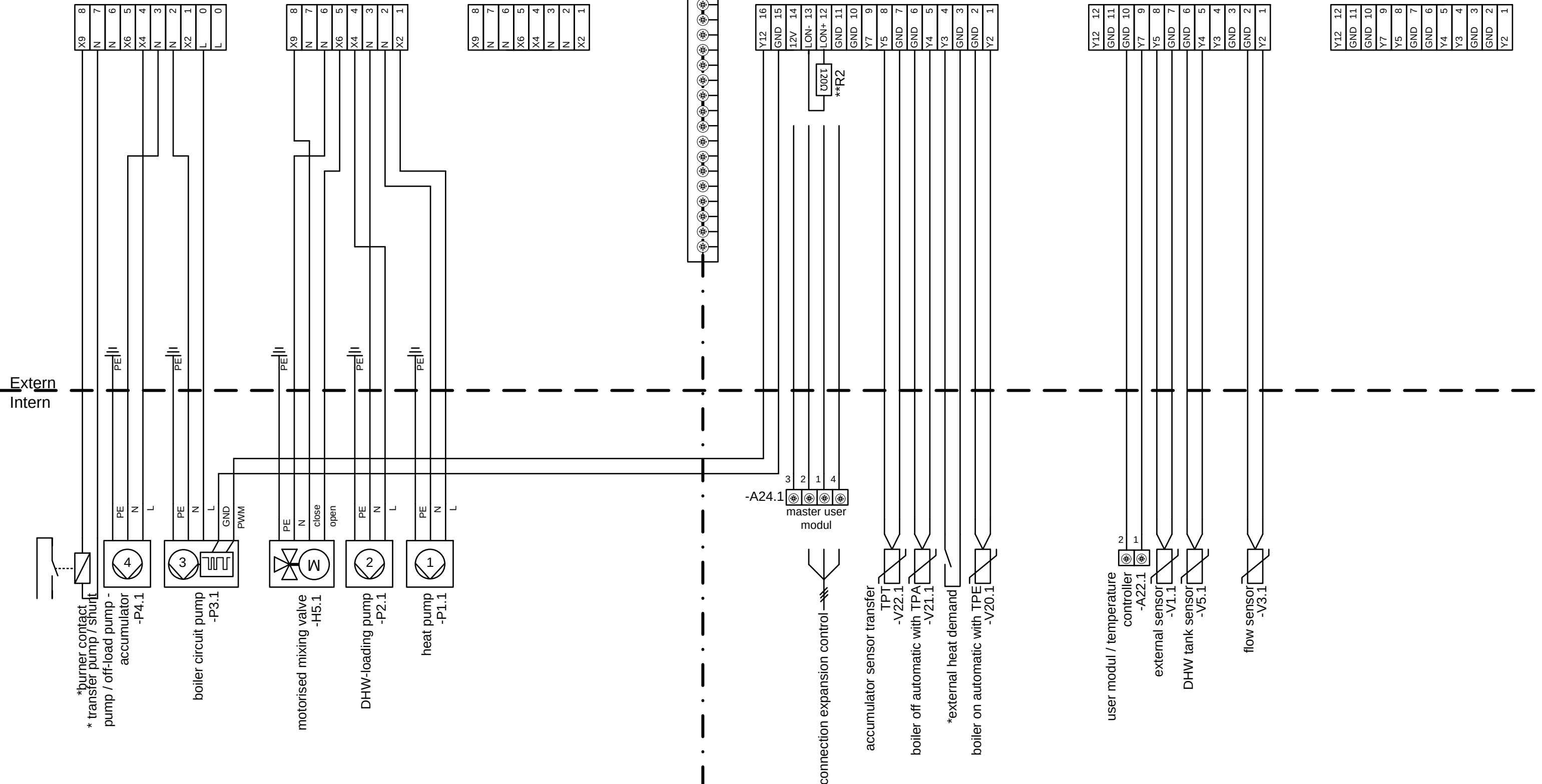
UML+ module 2 heating circuit 1

module 3

B-PLM module 1

UML+ module 2 heating circuit 1

module 3



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	09.07.2013	B-PLM/UML+		MES P042 + H021 outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit and accumulator module B-PLM	Projekt : control		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092883/01				
											Blatt 092883/01

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*Transferpump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

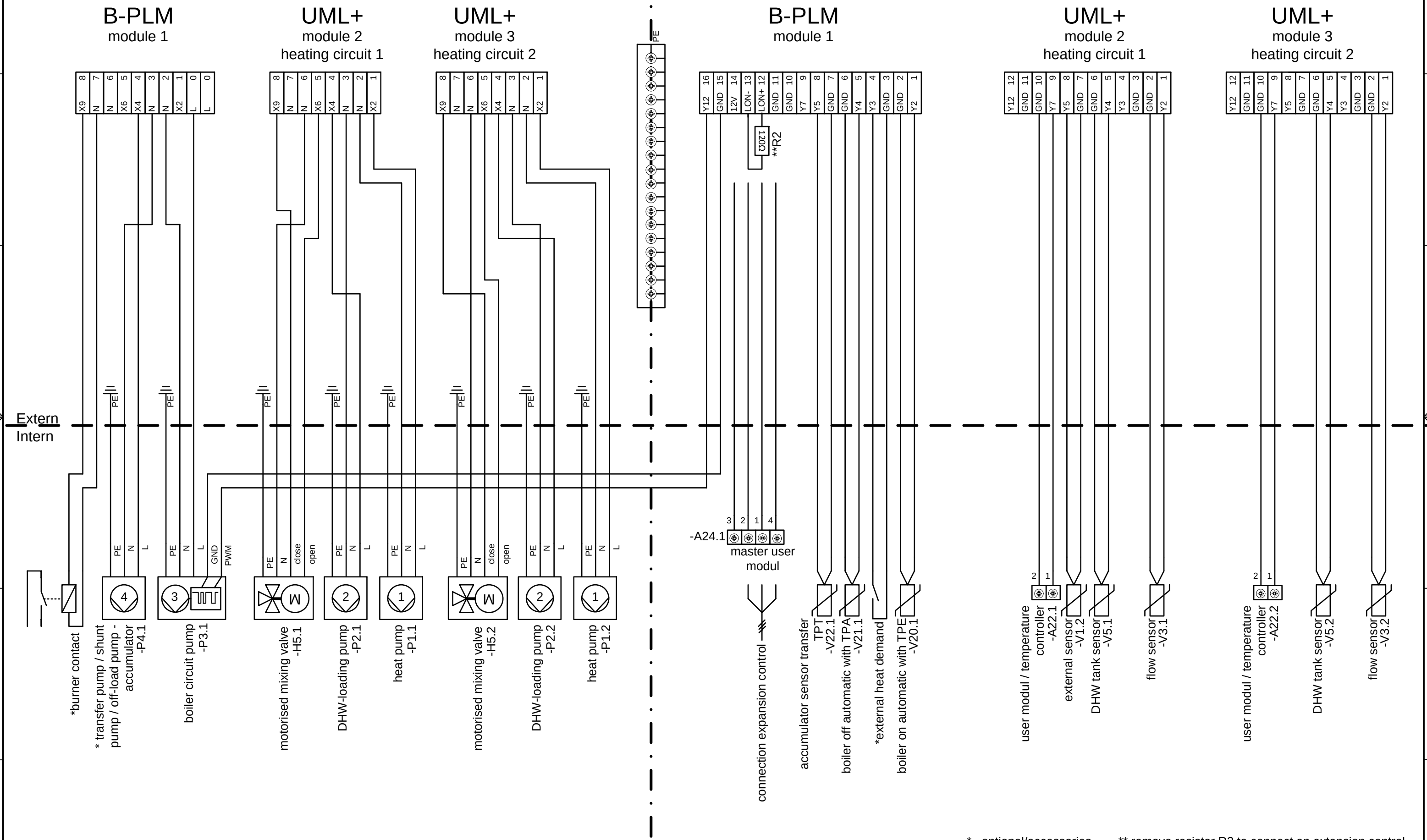
B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

UML+	module 3 heating circuit 2
close HC 2	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 2	X4 4 N 3
heat pump HC 2	N 2 X2 1

092887/01

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

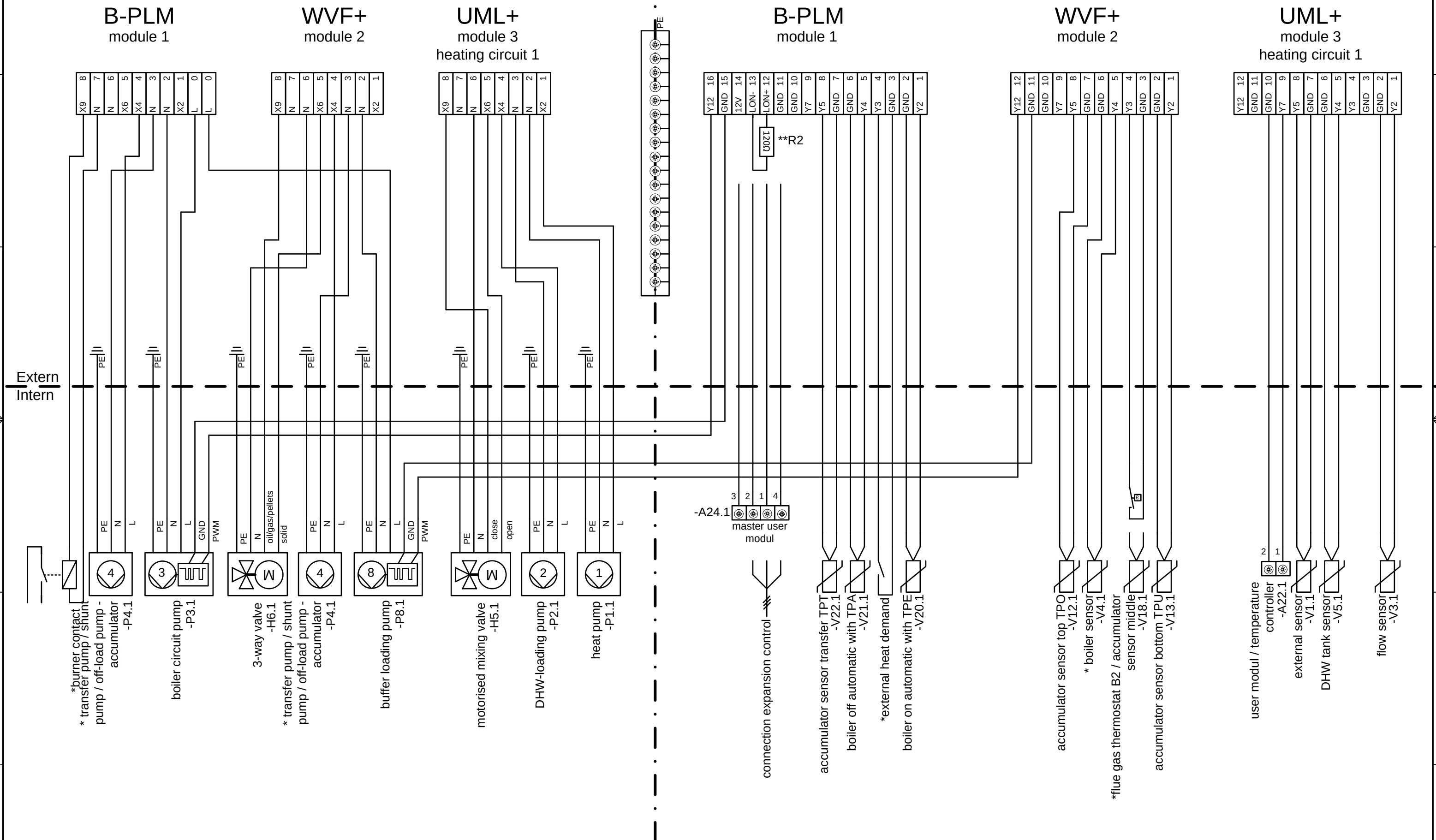
UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 3 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HC 2	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 2	GND 2 Y2 1

092887/01

low voltage 230 VAC

extra low voltage - sensor



-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

WVF+	module 2
oil/gas/pellets	X9 8 N 7
3-way valve solid	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1

UML+	module 3 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

092893/01

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

WVF+	module 2
PWM buffer loading pump	Y12 12 GND 11
	GND 10 Y7 9
accumulator sensor top	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator bottom TPU	GND 2 Y2 1

UML+	module 3 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

092893/01

low voltage 230 VAC

extra low voltage - sensor

B-PLM
module 1

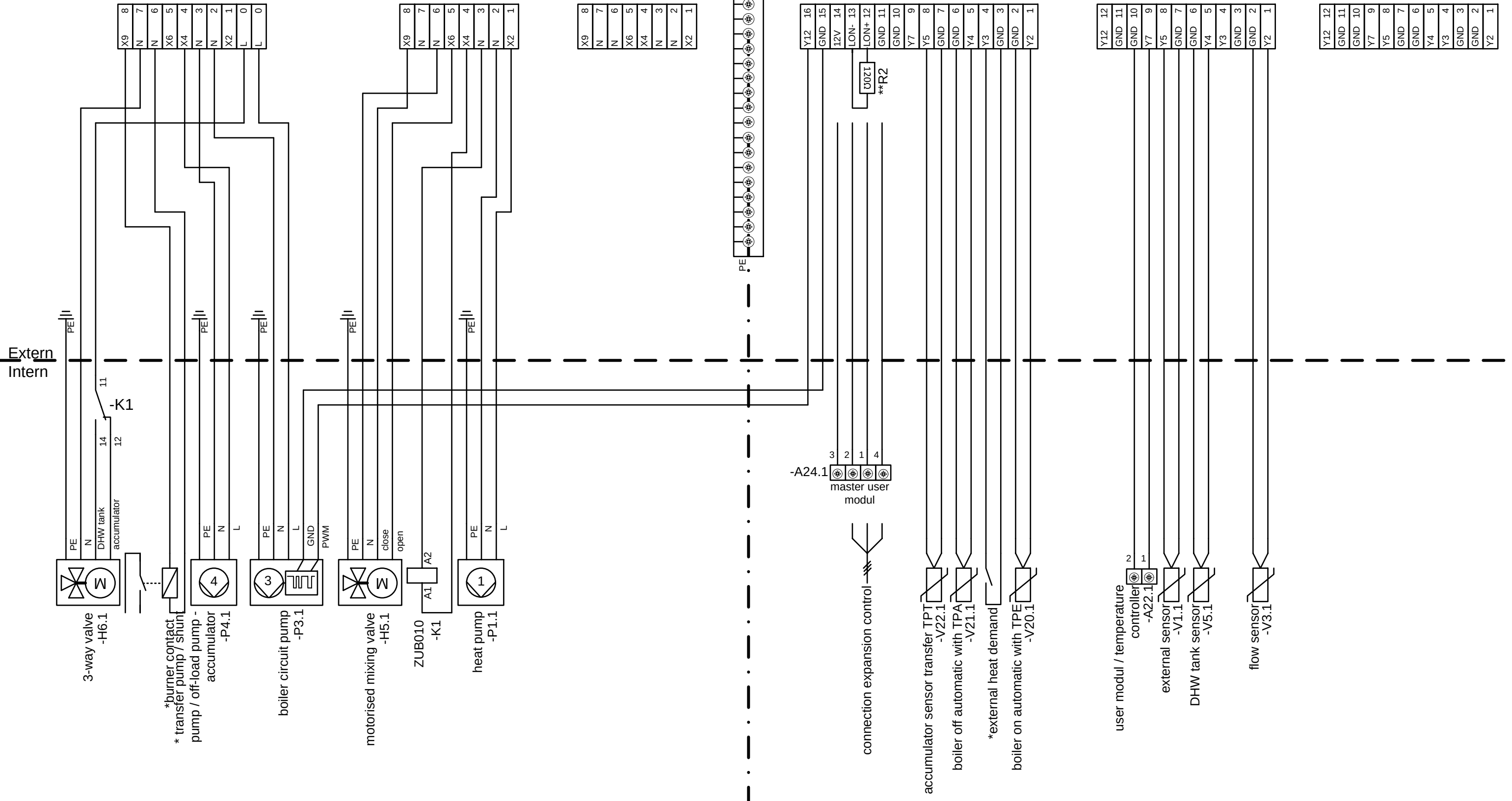
UML+
module 2
heating circuit 1

module 3

B-PLM
module 1

UML+
module 2
heating circuit 1

module 3



*...optional/accessories ** remove resistor R2 to connect an extension control

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* accumulator sensor transfer TPT	Y5 8 GND 7
* boiler off automatic with TPA	GND 6 Y4 5
* external heat demand	Y3 4 GND 3
boiler on automatic with GND 2 TPE	GND 2 Y2 1

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
* transfer pump / shunt pump / off-load pump	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
contactor -K1 HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

094555/01

low voltage 230 VAC

extra low voltage - sensor

B-PLM
module 1

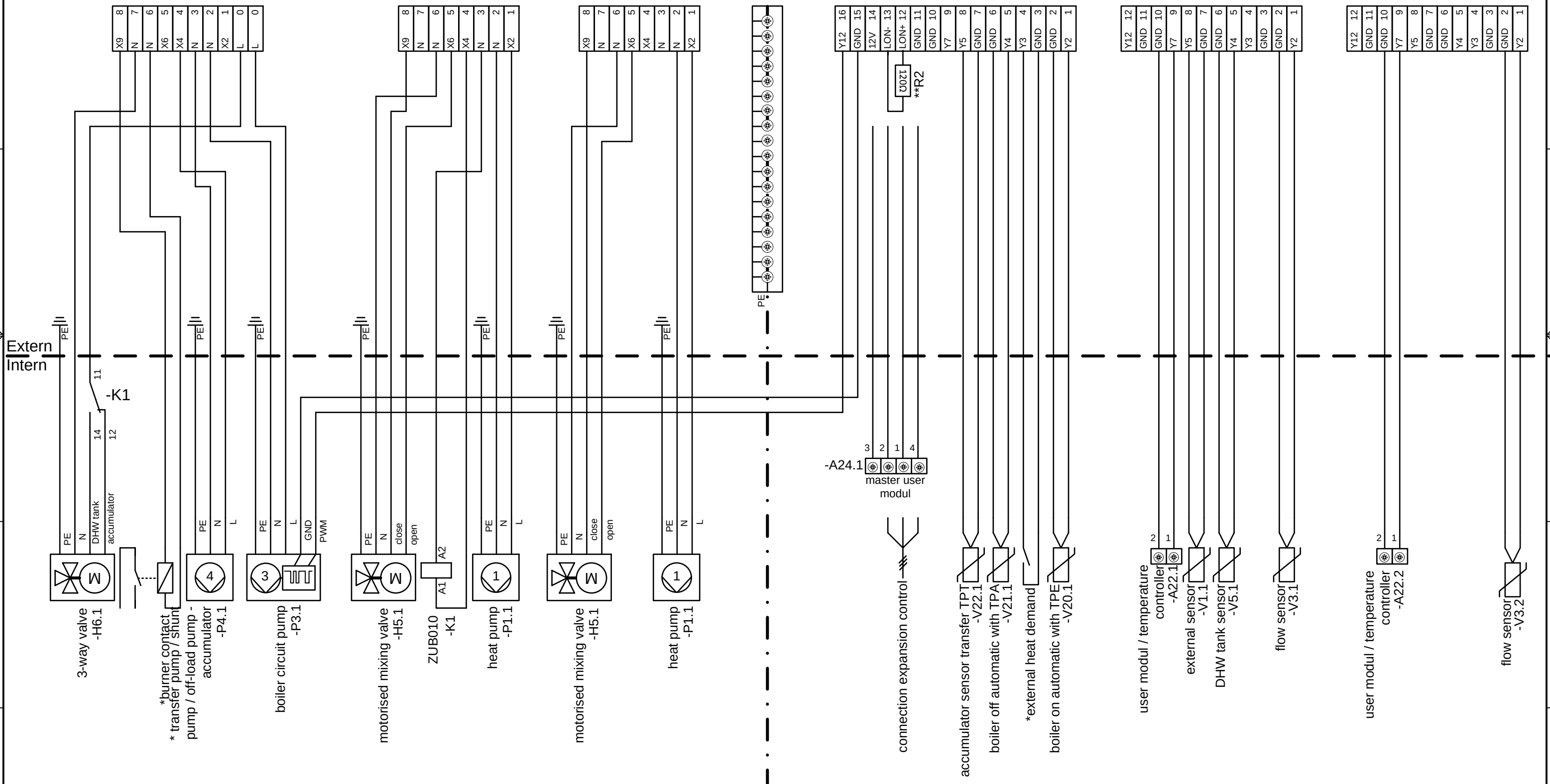
UML+
module 2
heating circuit 1

UML+
module 3
heating circuit 2

B-PLM
module 1

UML+
module 2
heating circuit 1

UML+
module 3
heating circuit 2



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	12.08.2013	B-PLM/UML+/UML+		MES ZUB010 + H024 ZUB010 SYS403 3-way valve accumulator - DHW tank		Projekt : control				1 mm : 1 mm	
				Gezeichnet	ros									◀ ----- 2 ▶	
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094556/01					Blatt 094556/01			

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
* transfer pump / shunt pump / off-load pump	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
contactor -K1 HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

UML+	module 3 heating circuit 2
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
	X4 4 N 3
heat pump HC 2	N 2 X2 1

094557/01

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* accumulator sensor transfer TPT	Y5 8 GND 7
* boiler off automatic with TPA	GND 6 Y4 5
* external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 3 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 2	GND 2 Y2 1

094557/01

-XA	connection block
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	module 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

MES	module 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	user modul temperature controller
	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

UML+	module 1 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 2
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
	Y5 8 GND 7
DHW tank sensor HC 2	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 2	GND 2 Y2 1

UML+	module 2 heating circuit 2
close HC 2	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 2	X4 4 N 3
heat pump HC 2	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

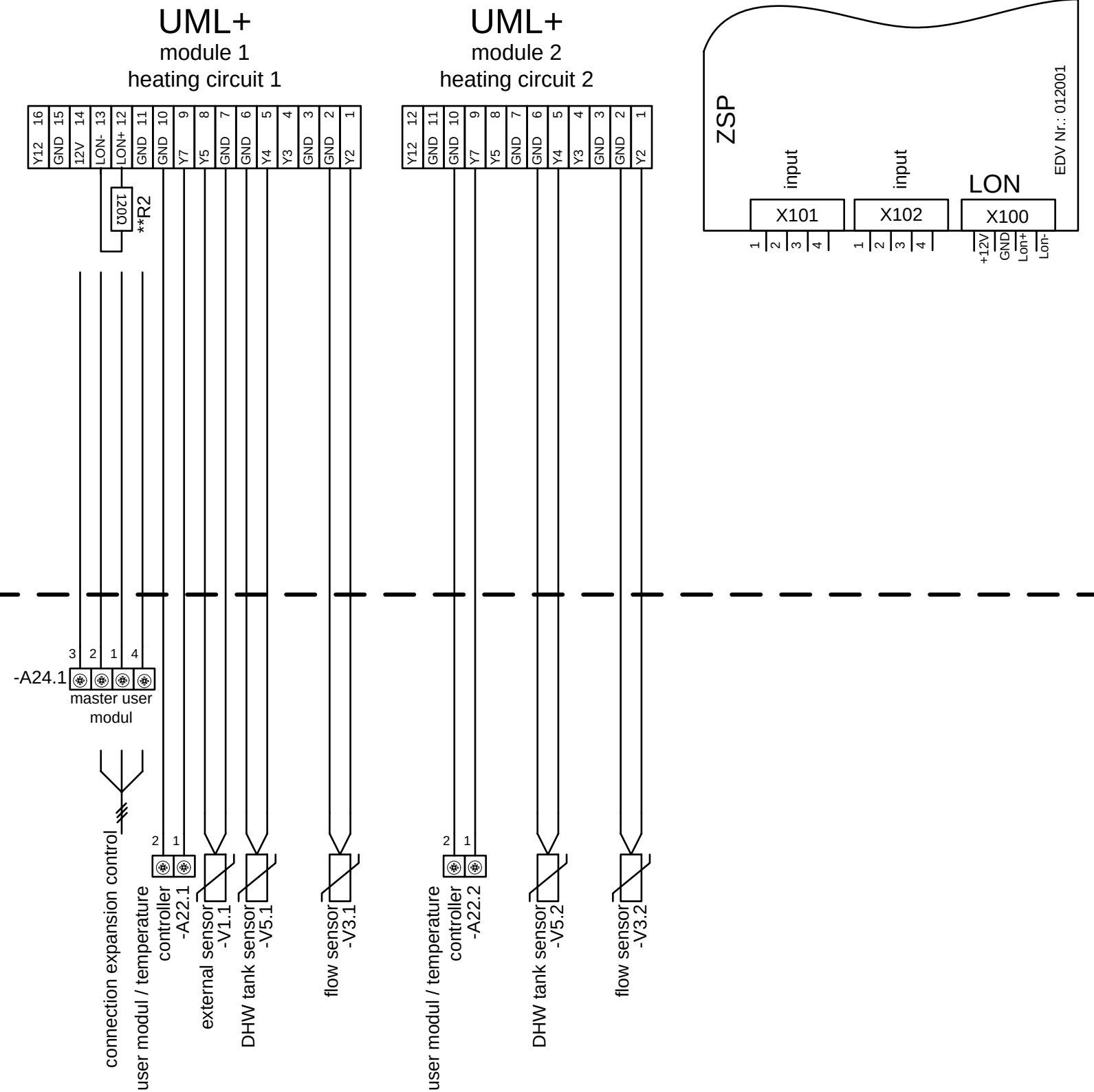
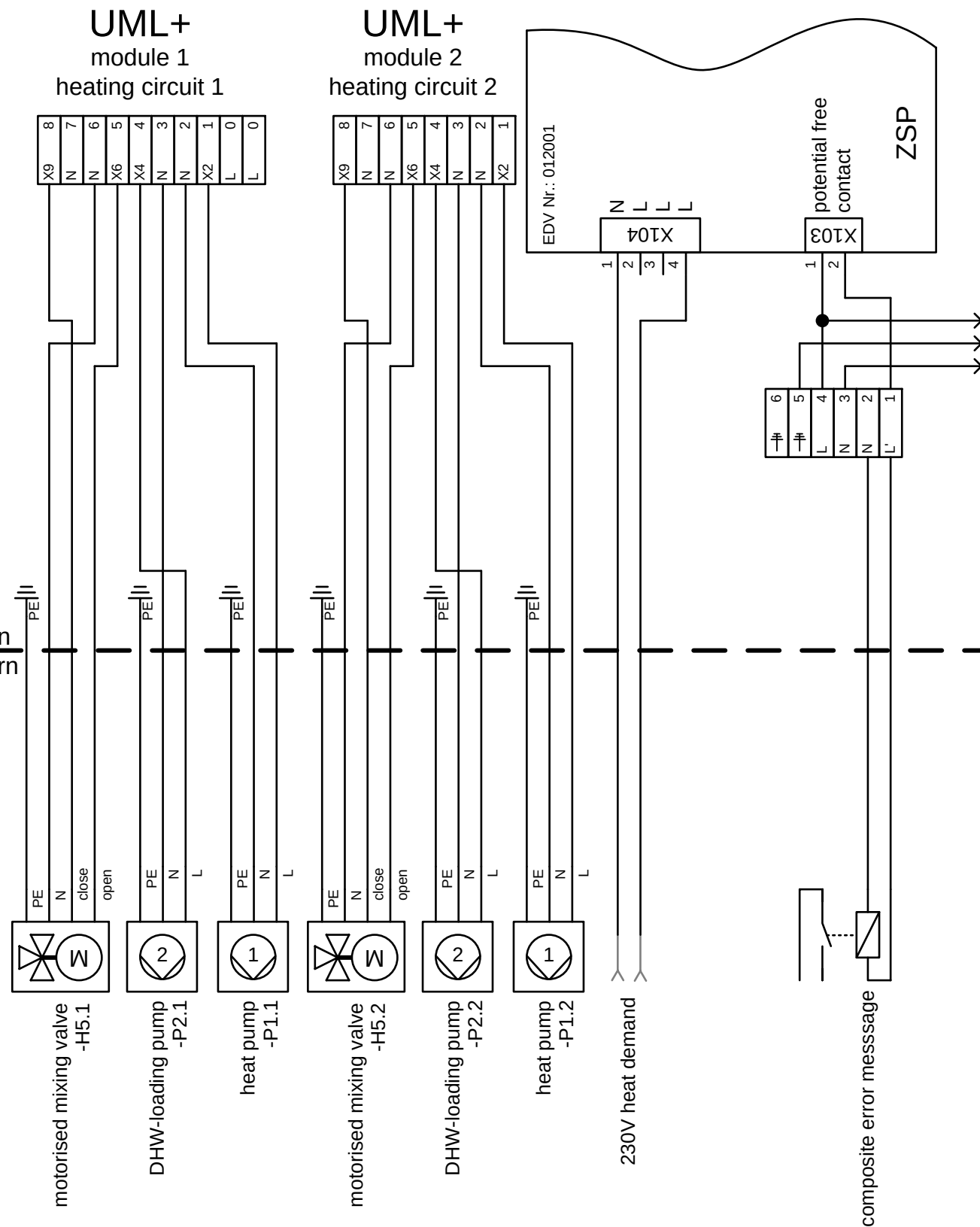
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	UML+ /UML+ /ZSP S		MES H021 + H024 + ZSP S outside temperature control for 2 mixed heating circuits incl. hot water circuits and ZSP S	Projekt : control		1 mm : 1 mm	
				Gezeichnet	rot						◀ ----- 2 ▶	
				Geprüft	ros	Zeichnungs Nr.: 094608/00					Blatt 094608/00	
Rev.	Änderung	Datum	Name	Genehmigt								

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
	230VAC L 1
	internal L' 2 L' 3
	230VAC N 4
	internal N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	user modul GND 10 temperature controller Y7 9
	external sensor Y5 8 GND 7
	DHW tank sensor HC 1 GND 6 Y4 5
	Y3 4 GND 3
	flow sensor GND 2 HC 1 Y2 1

UML+	module 1 heating circuit 1
	close X9 8 HC 1 N 7
	motorised mixing valve N 6 open X6 5
	DHW-loading pump X4 4 HC 1 N 3
	heat pump N 2 HC 1 X2 1
	PWM permanent phase 1 L 0
	PWM permanent phase 2 L 0

UML+	module 2 heating circuit 2
	Y12 12 GND 11
	user modul GND 10 temperature controller Y7 9
	Y5 8 GND 7
	DHW tank sensor HC 2 GND 6 Y4 5
	Y3 4 GND 3
	flow sensor GND 2 HC 2 Y2 1

UML+	module 2 heating circuit 2
	close X9 8 HC 2 N 7
	motorised mixing valve N 6 open X6 5
	DHW-loading pump X4 4 HC 2 N 3
	heat pump N 2 HC 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

extra low voltage - sensor



1 mm : 1 mm	
◀ -----	2 ▶
Blatt 094610/00	

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
	230VAC L 1
	internal L' 2 L' 3
	230VAC N 4
	internal N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	user modul GND 10 temperature controller Y7 9
	external sensor Y5 8 GND 7
	DHW tank sensor HC 1 GND 6 Y4 5
	Y3 4 GND 3
	flow sensor HC 1 GND 2 Y2 1

UML+	module 1 heating circuit 1
	close X9 8 HC 1 N 7
motorised mixing valve open	N 6 X6 5
	DHW-loading pump X4 4 HC 1 N 3
	heat pump N 2 HC 1 X2 1
	PWM permanent phase 1 L 0
	PWM permanent phase 2 L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

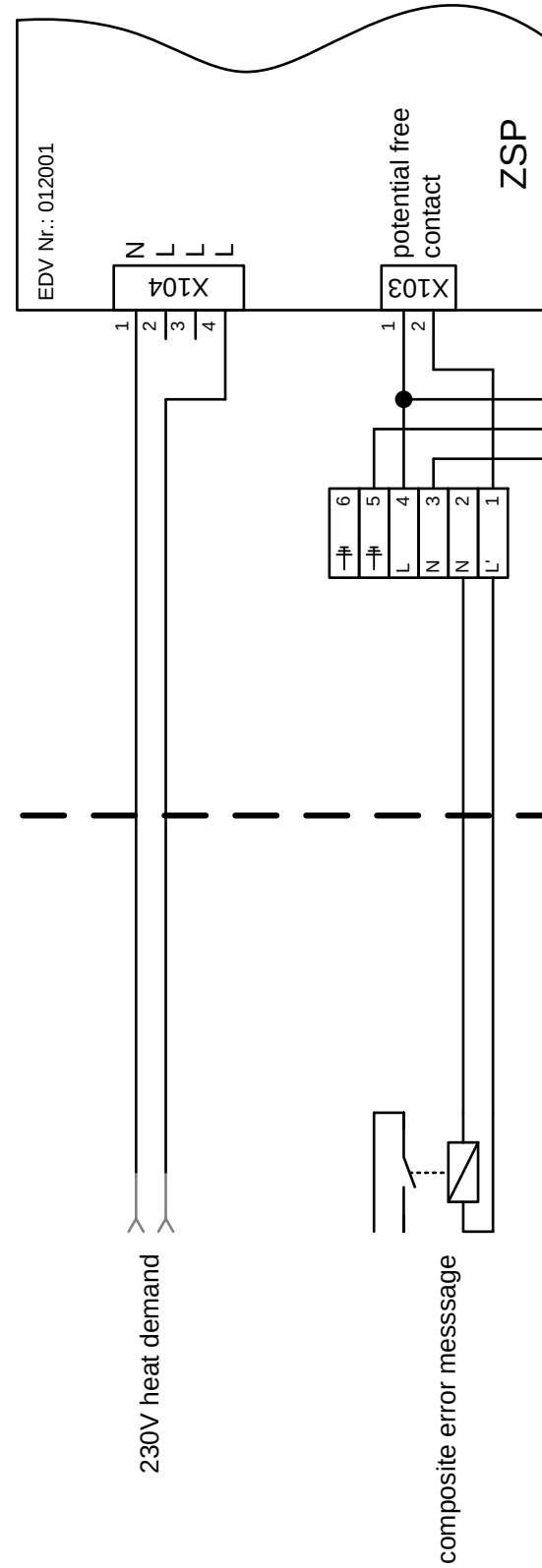
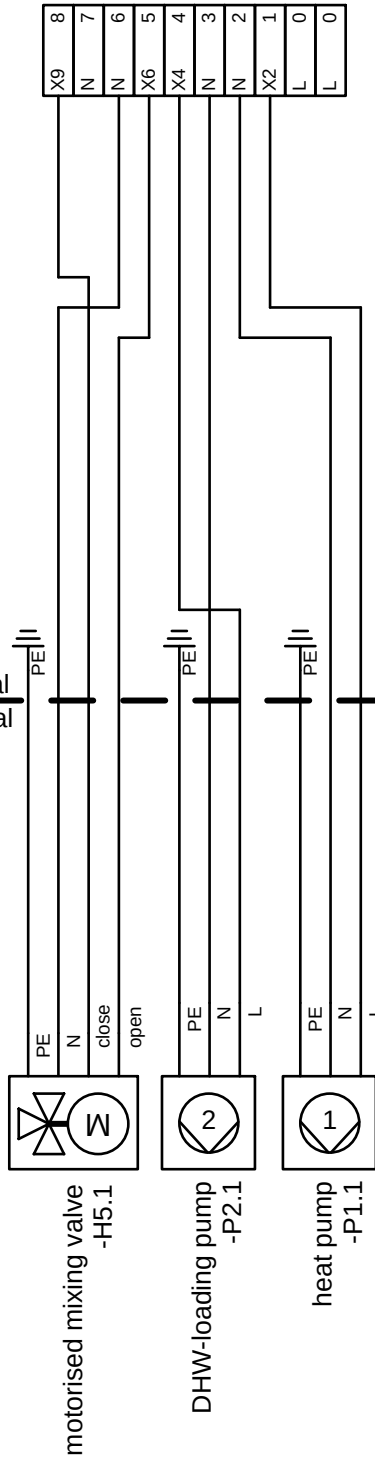
092671/01

low voltage 230 VAC

extra low voltage - sensor

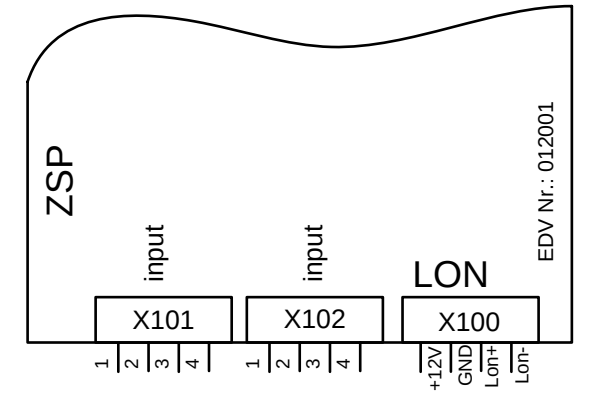
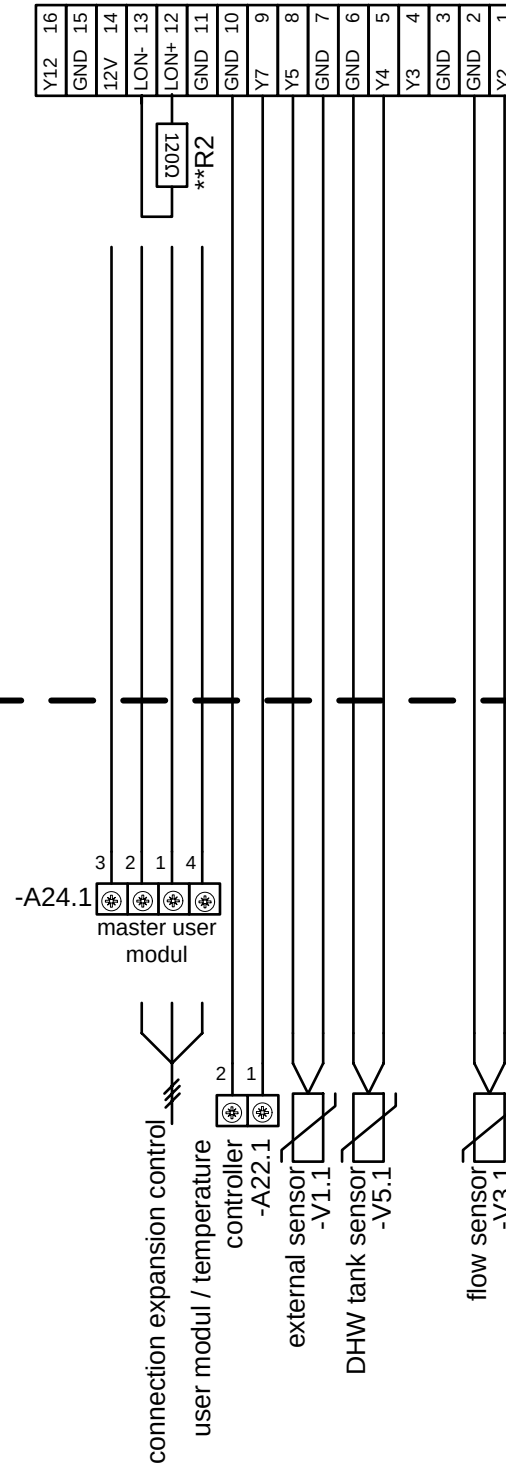
UML+
module 1
heating circuit 1

module 2



UML+
module 1
heating circuit 1

module 2



*...optional/accessories

** remove resistor R2 to connect an extension control

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ /ZSP S

Zeichnungs Nr.: 094611/00

MES H021 + ZSP S

outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit and ZSP S

Projekt :

control



1 mm : 1 mm

Blatt 094611/00

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
	230VAC L 1
	internal L' 2 L' 3
	230VAC N 4
	internal N' 5 N' 6

UML+	module 1 heating circuit 1
	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	user modul GND 10 temperature controller Y7 9
	external sensor Y5 8 GND 7
	DHW tank sensor HC 1 GND 6 Y4 5
	Y3 4 GND 3
	flow sensor HC 1 GND 2 Y2 1

UML+	module 1 heating circuit 1
	close X9 8 HC 1 N 7
	motorised mixing valve N 6 open X6 5
	DHW-loading pump X4 4 HC 1 N 3
	heat pump N 2 HC 1 X2 1
	PWM permanent phase 1 L 0
	PWM permanent phase 2 L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

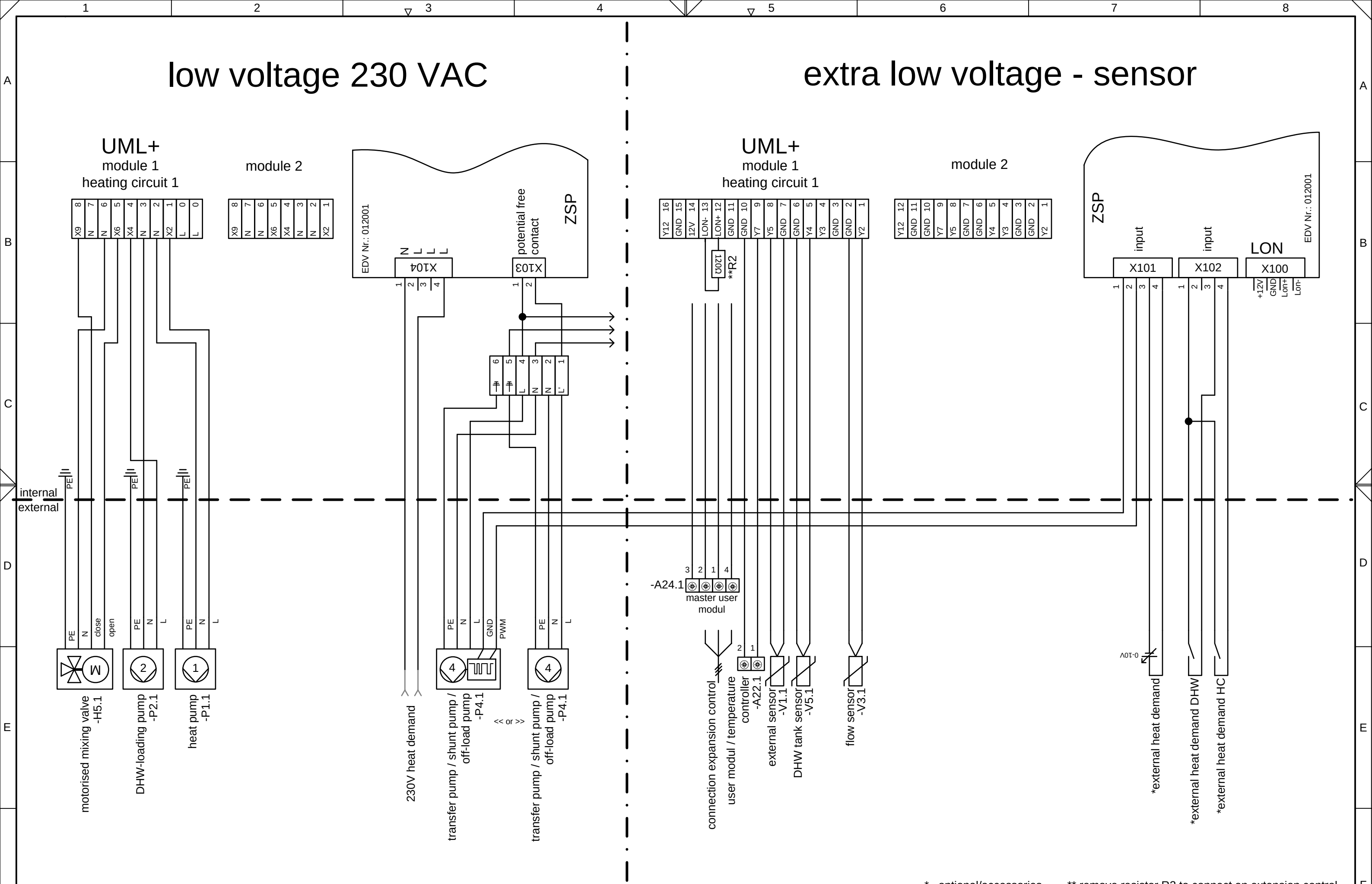
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

092671/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with GND 2 TPE	GND 2 Y2 1

B-PLM	module 1
*burnercontact	X9 8 N 7 N 6 X6 5
*transfer pump / shunt pump / off-load pump accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

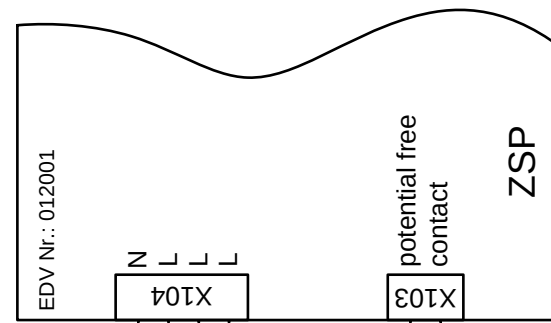
092864/00

low voltage 230 VAC

extra low voltage - sensor

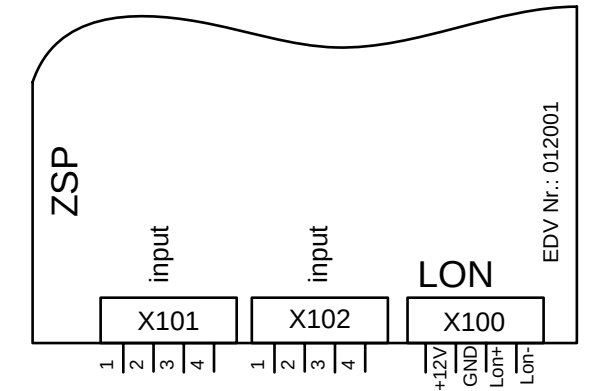
B-PLM
module 1

module 2

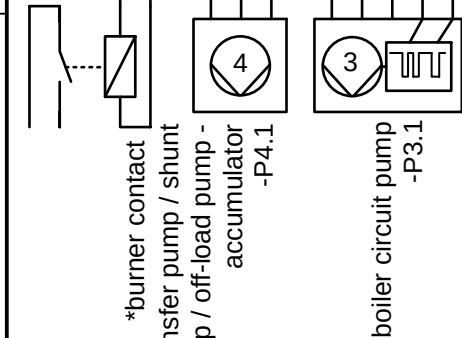


B-PLM
module 1

module 2

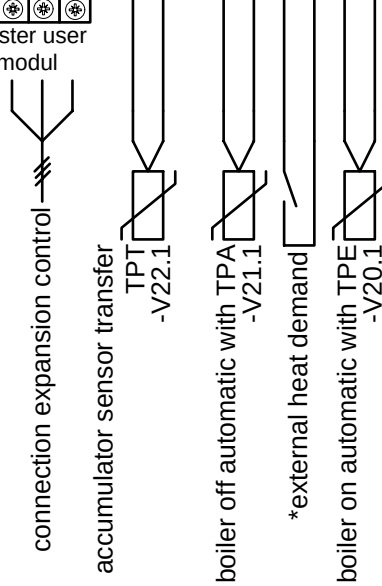
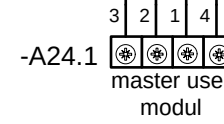


internal
external



external malfunction signal

composite error message



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burnercontact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with GND 2 TPE	GND 2 Y2 1

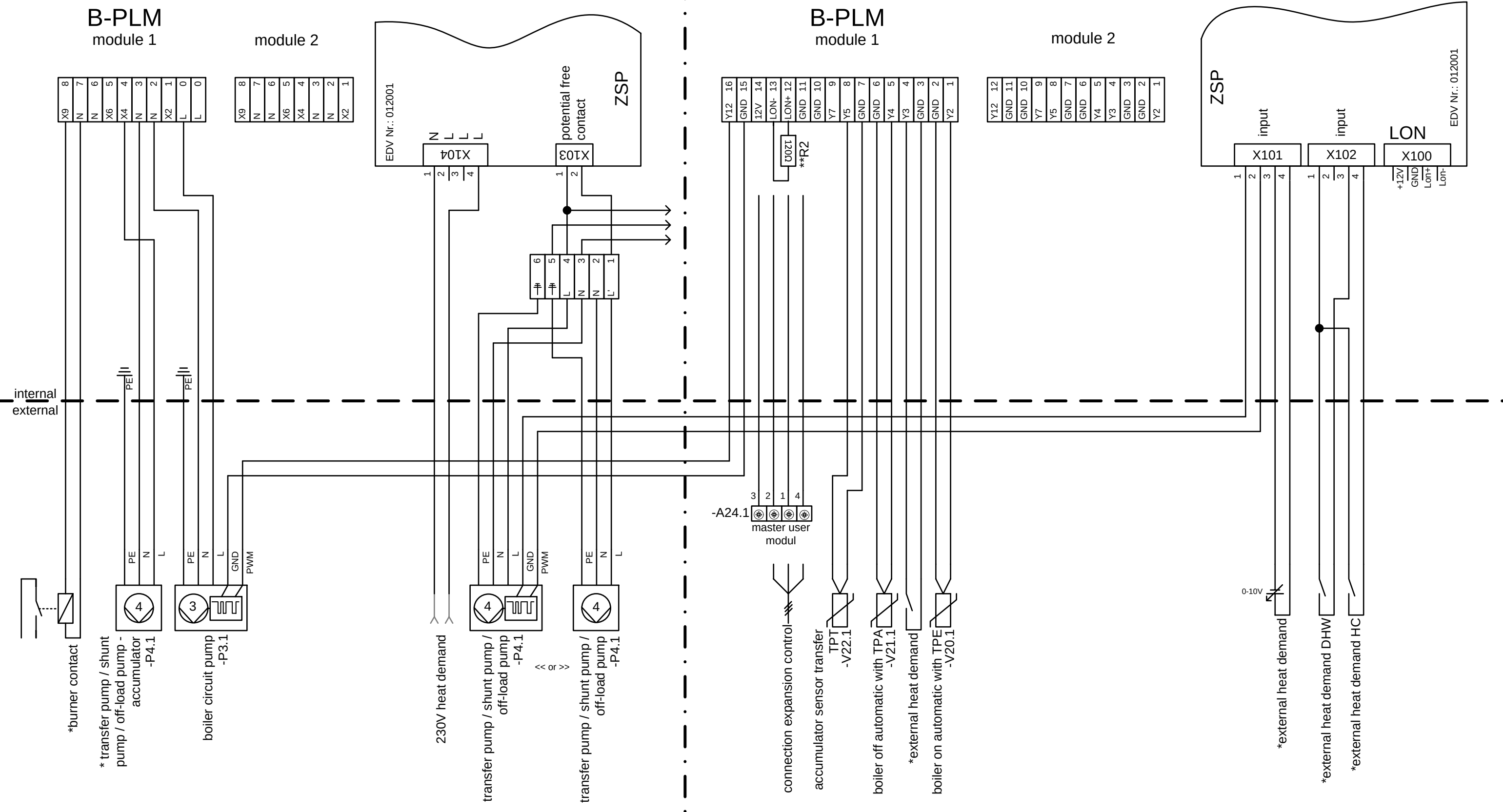
	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND -X101 /2	PWM transfer pump / shunt pump / off-load pump
GND -X101 /4	heat demand 0-10V

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
oil/gas/pellets	X9 8 N 7
3-way valve solid	N 6 X6 5
*transfer pump / shunt pump / off-load pump- accumulator	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

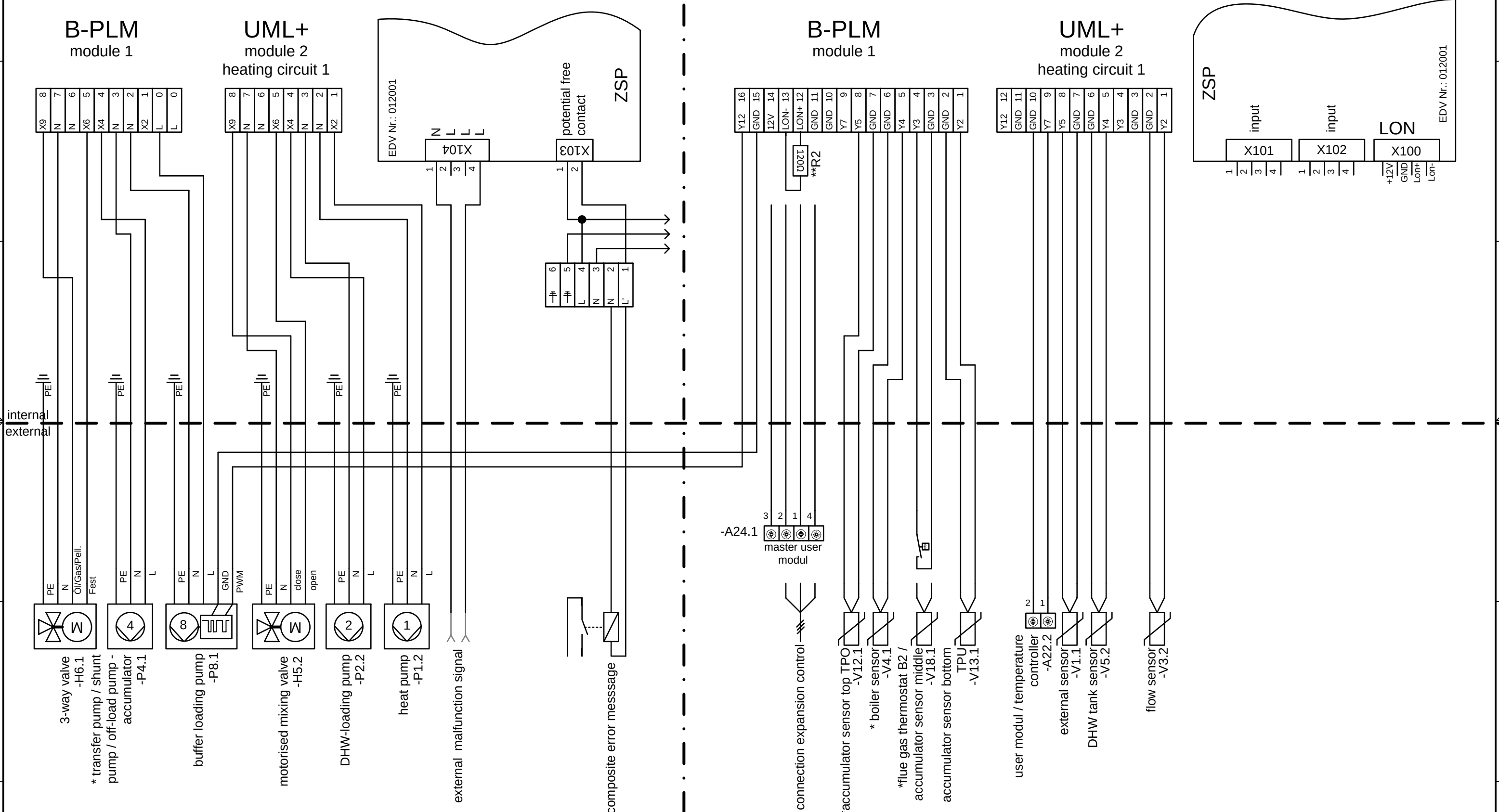
WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	B-PLM/ UML+ / ZSP S		MES P041 + H021 + ZSP S outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit and accumulator-module B-PLM and ZSP S		Projekt : control				1 mm : 1 mm	
				Gezeichnet	rot									◀ ----- 2 ▶	
				Geprüft	ros										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094624/00							Blatt 094624/00	

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

WVF+	module 1
oil/gas/pellets	X9 8 N 7
3-way valve solid	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

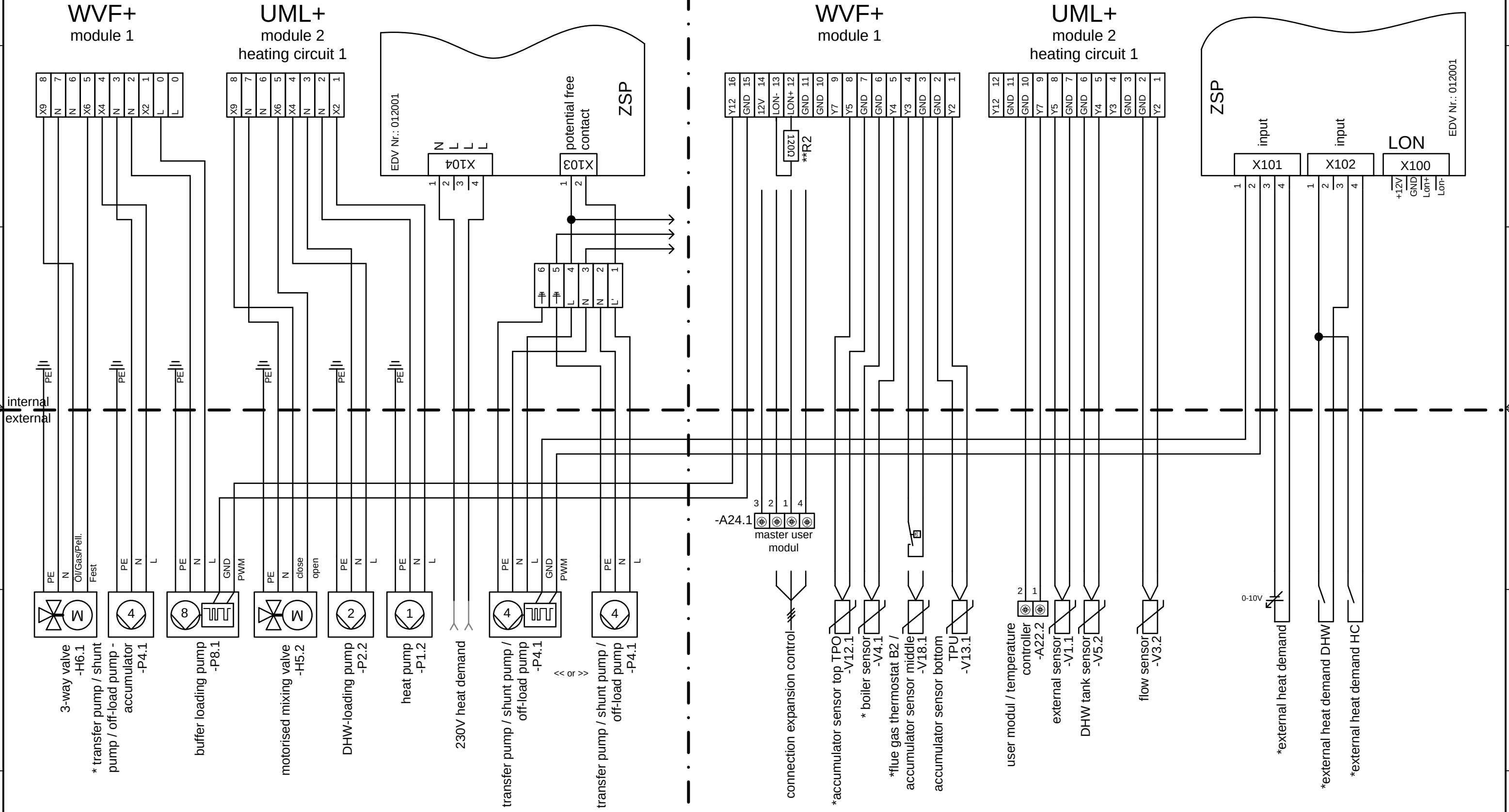
UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

WVF+	module 1
oil/gas/pellets	X9 8 N 7 N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

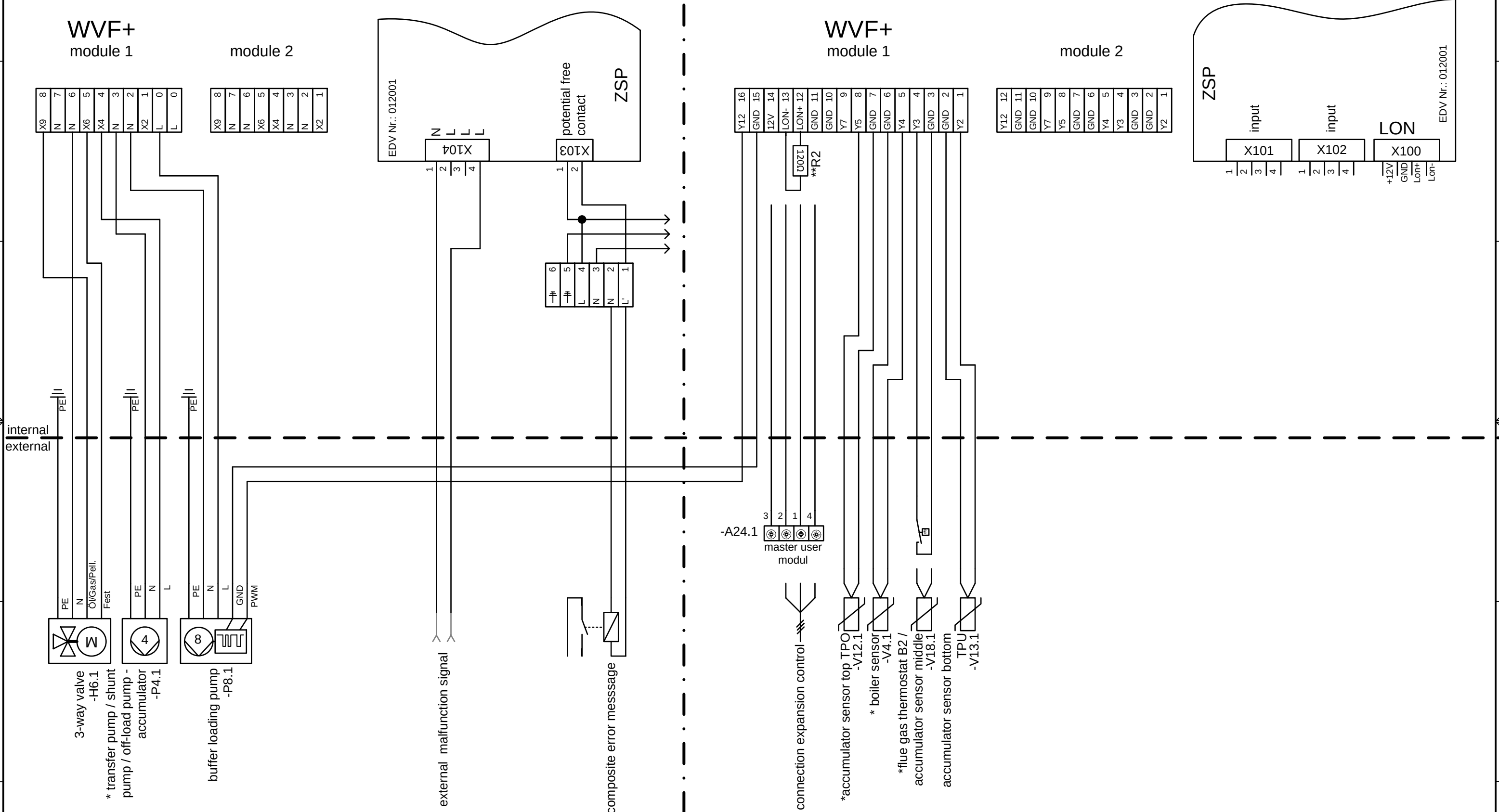
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

092877/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

WVF+	module 1
PWM buffer loading pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
accumulator sensor top TPO	Y5 8 GND 7
*boiler sensor	GND 6 Y4 5
*flue gas thermostat B2 accumulator sensor middle	Y3 4 GND 3
accumulator sensor bottom TPU	GND 2 Y2 1

WVF+	module 1
oil/gas/pellets	X9 8 N 7 N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

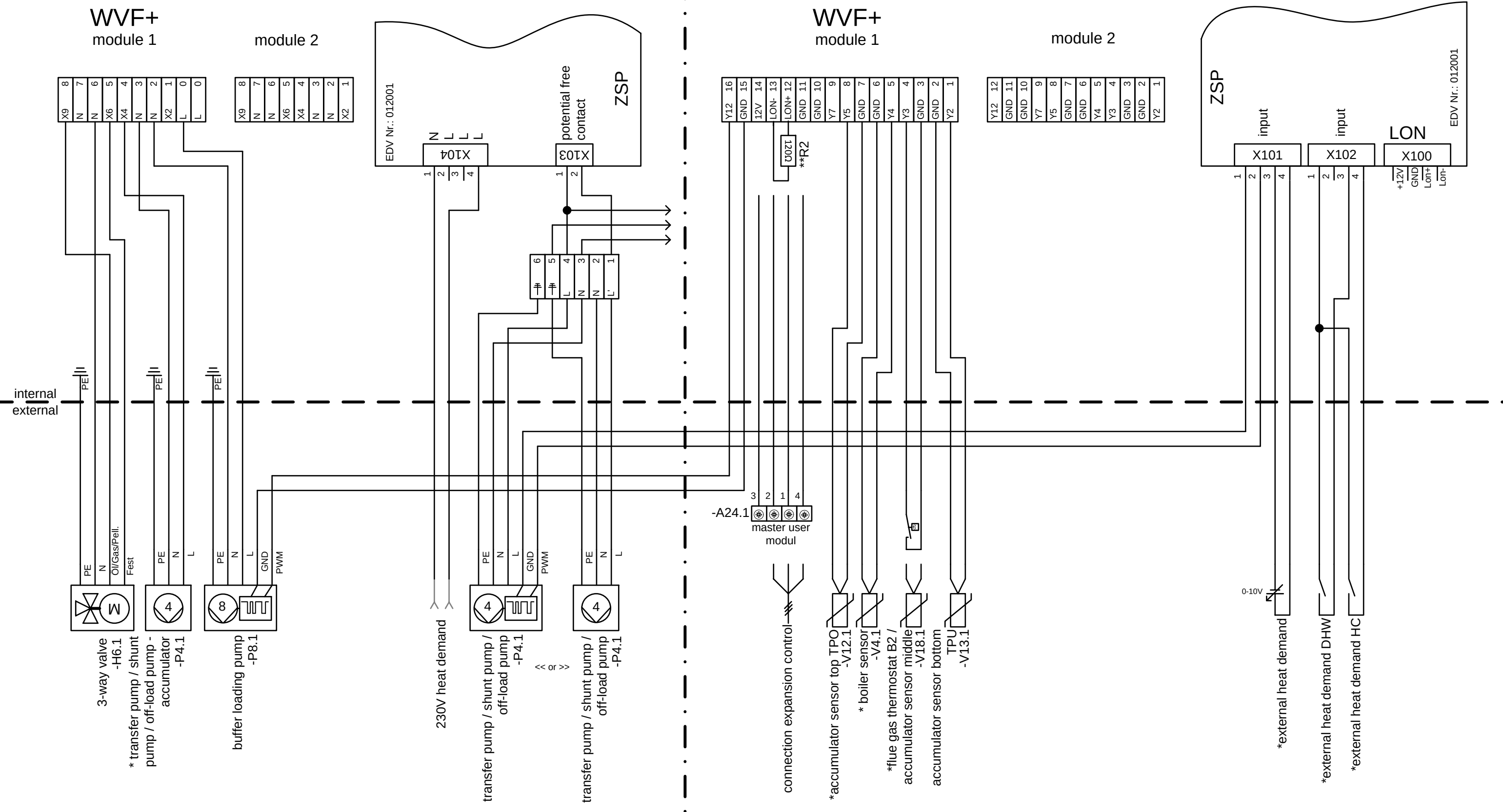
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

092877/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load -X101 /2 pump
GND	heat demand 0-10V -X101 /4

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*Transferpump-accumulator	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

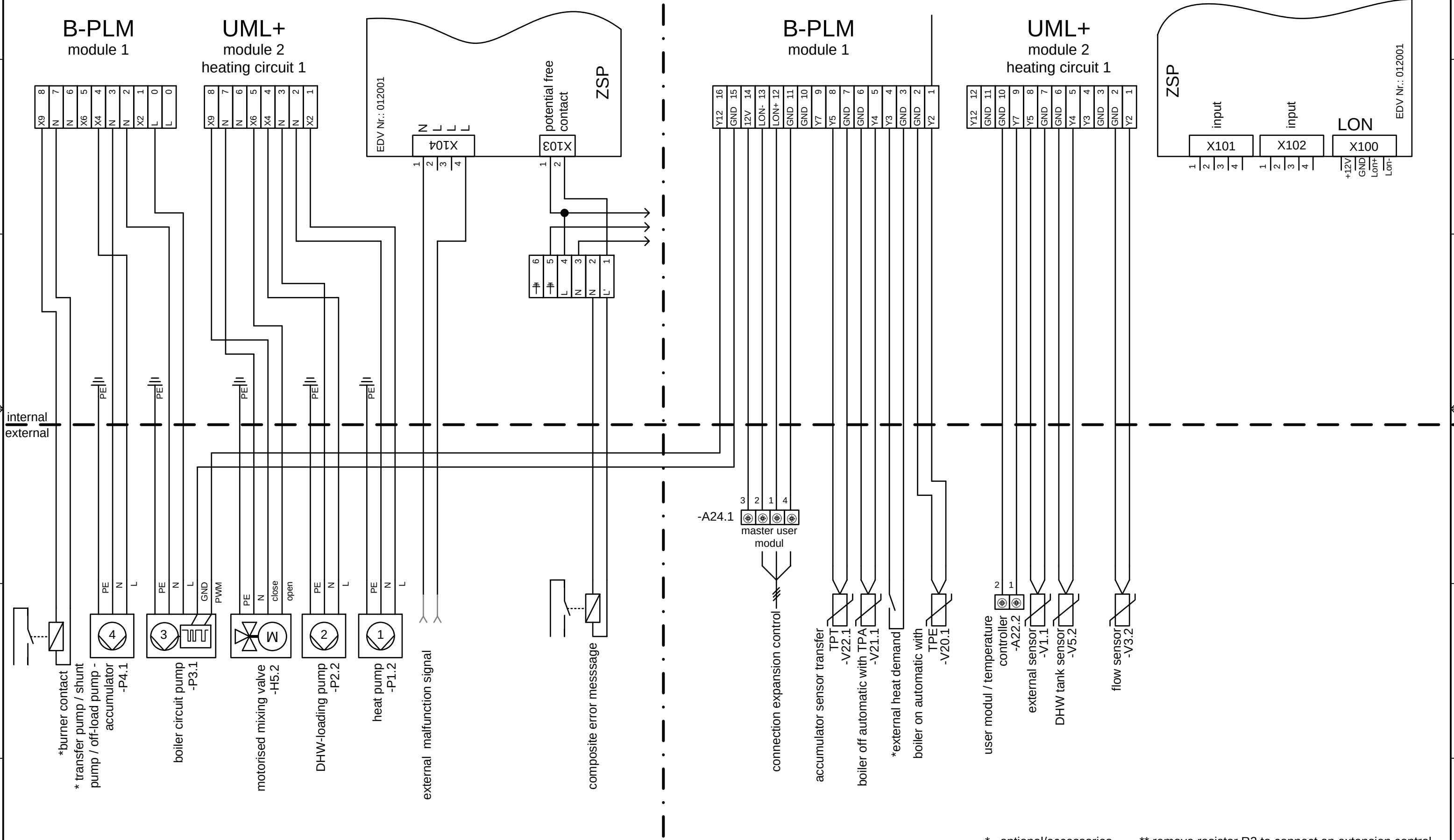
B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*Transferpump-accumulator	X4 4 N 3
	N 2
	X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
DHW-loading pump HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

extra low voltage - sensor



	1 mm : 1 mm	
	◀ -----	2 ▶
	Blatt 09462200	

-XZSP	extra pcb
PE	PE
	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with GND 2 TPE	GND 2 Y2 1

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

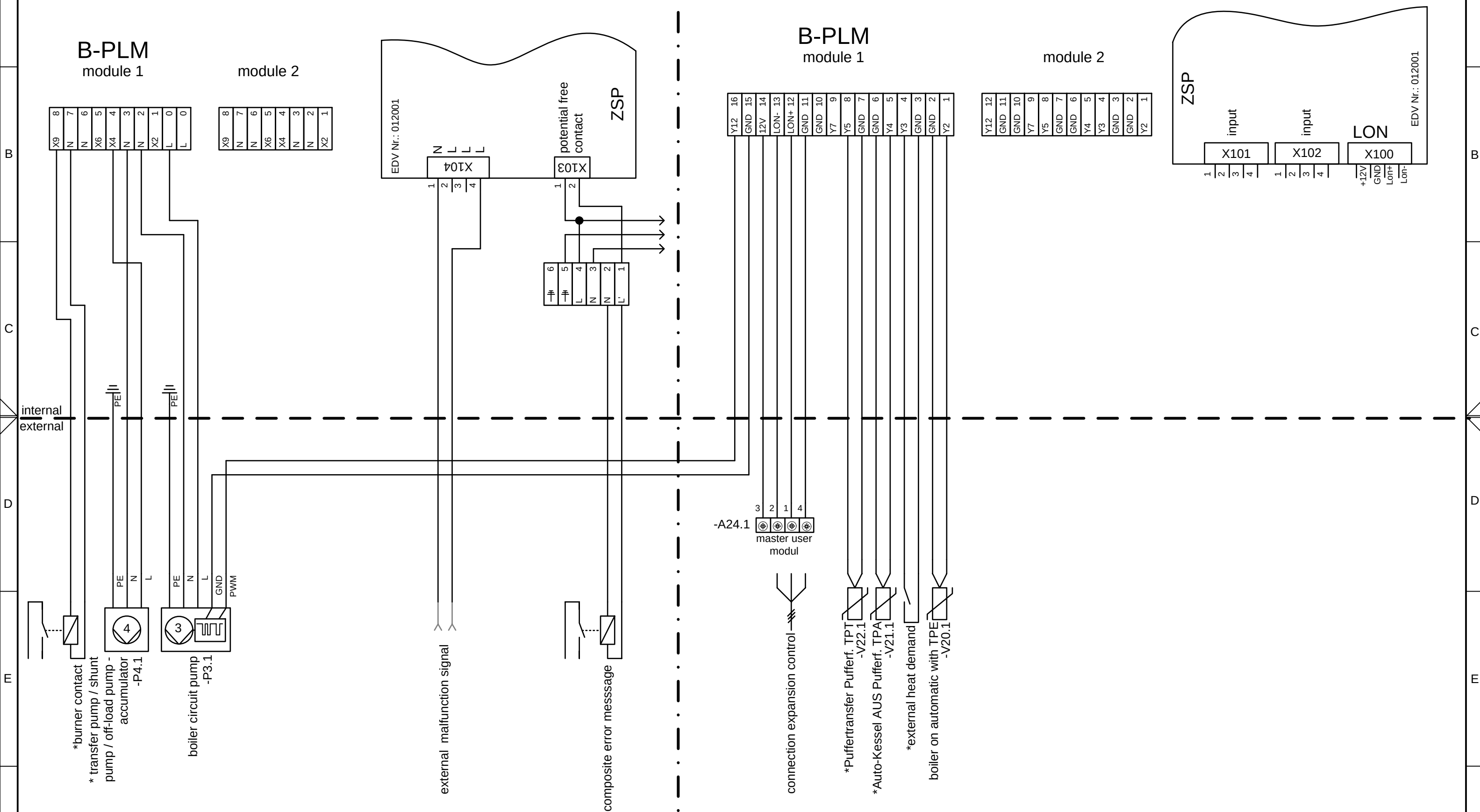
	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

092890/01

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories

** remove resistor R2 to connect an extension control

				Datum	24.06.2013	B-PLM / ZSP S		MES P042 + ZSP S buffer memory B-PLM and ZSP S	Projekt : control		1 mm : 1 mm
				Gezeichnet	rot						◀
				Geprüft	ros	Zeichnungs Nr.:	094618/00				Blatt 094618/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230VAC	L 1
internal	L' 2 L' 3
230VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*accumulator sensor transfer TPT	Y5 8 GND 7
*boiler off automatic with TPA	GND 6 Y4 5
*external heat demand	Y3 4 GND 3
boiler on automatic with GND 2 TPE	GND 2 Y2 1

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
*transfer pump / shunt pump / off-load pump-accumulator	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

092890/01

low voltage 230 VAC

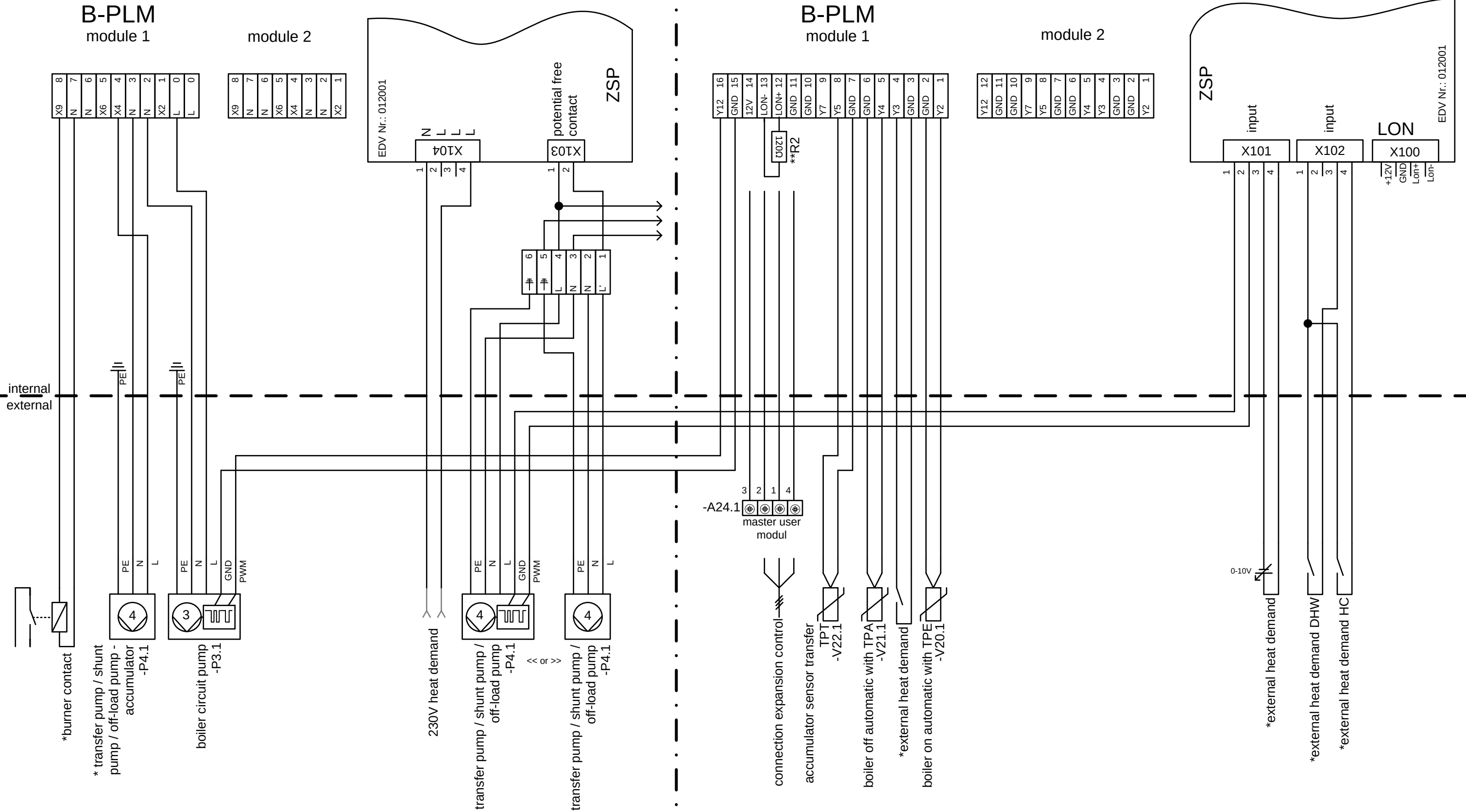
extra low voltage - sensor

B-PLM
module 1

module 2

B-PLM
module 1

module 2



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	B-PLM / ZSP W		MES P042 + ZSP W accumulator memory module B-PLM and ZSP W	Projekt : control		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094619/00				◀ ----- 2 ▶	
												Blatt 094619/00

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

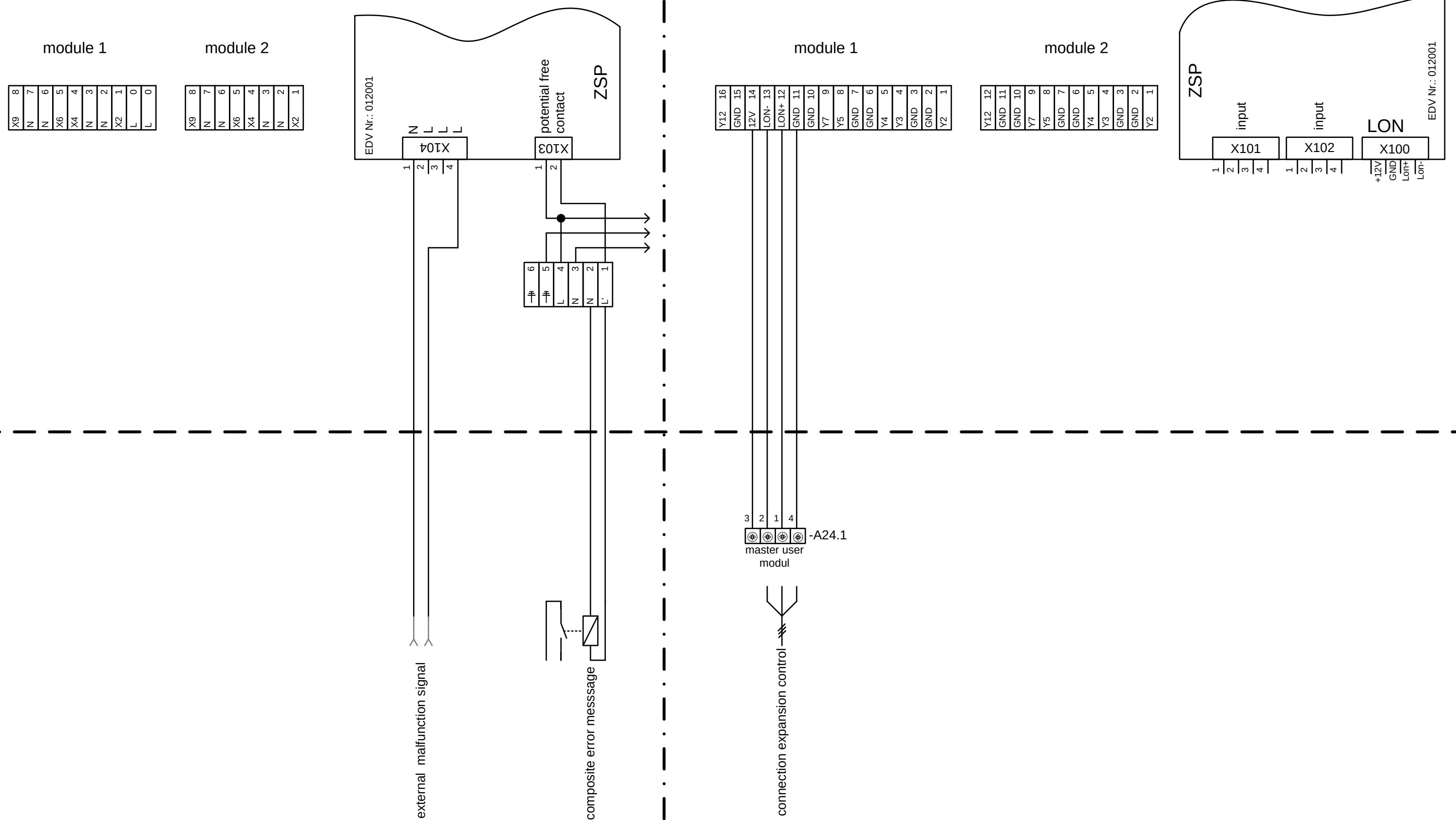
EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load pump
-X101 /2	
GND	heat demand 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	ZSP S		MES ZSP S extra pcb S	Projekt : control		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros	Zeichnungs Nr.:	094627/00				Blatt 094627/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	module 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

MES	module 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

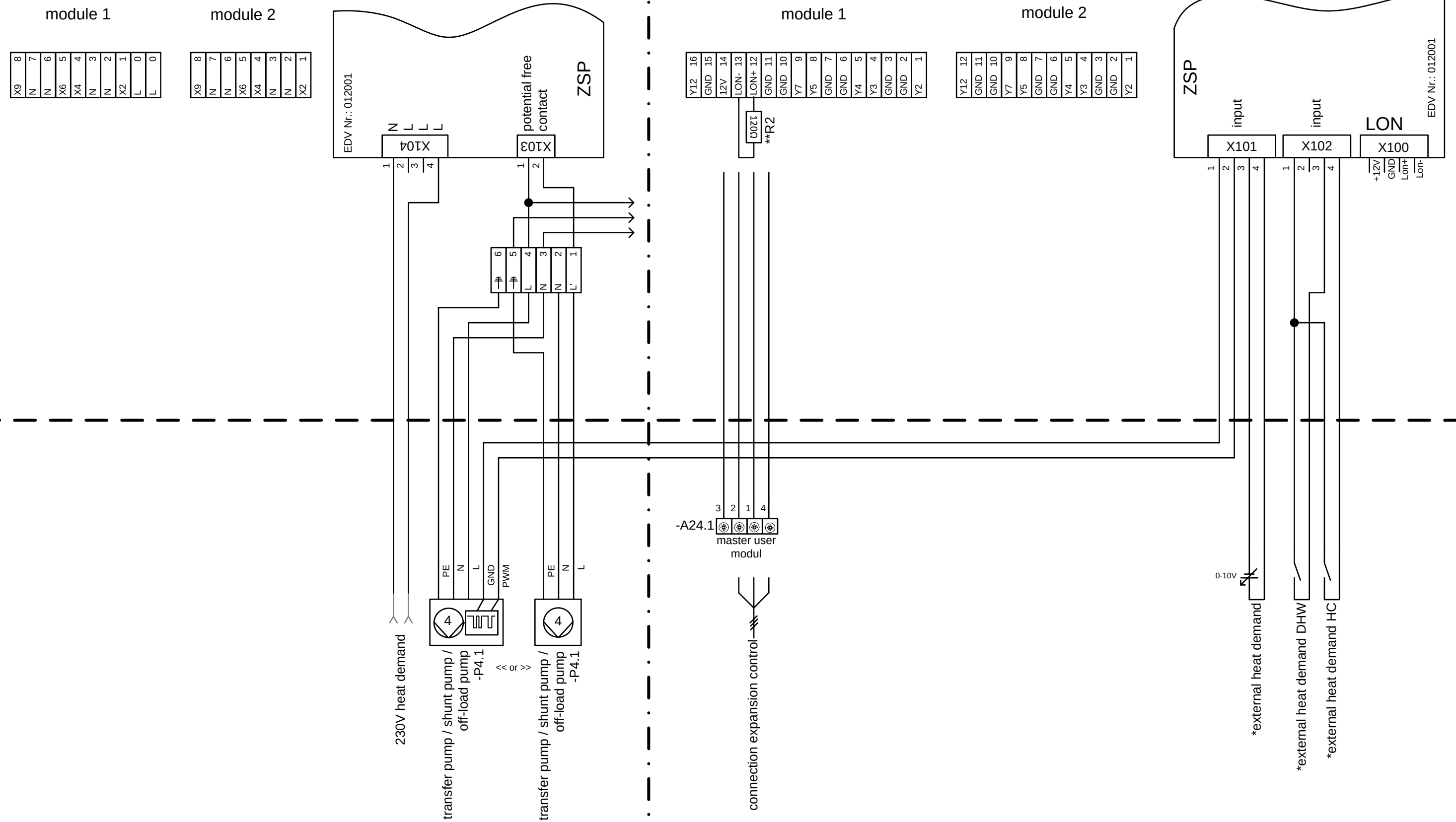
MES	module 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

low voltage 230 VAC

extra low voltage - sensor



*...optional/accessories

** remove resistor R2 to connect an extension control

				Datum	24.06.2013	ZSP W		MES ZSP W extra pcb W	Projekt : control		1 mm : 1 mm	
				Gezeichnet	rot						◀ ----- 2 ▶	
				Geprüft	ros	Zeichnungs Nr.: 094628/00					Blatt 094628/00	
Rev.	Änderung	Datum	Name	Genehmigt								

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

EDV Nr. 094812/00

-XSP	extra pcb
GND -X101 /2	PWM transfer pump / shunt pump / off-load pump
GND -X101 /4	heat demand 0-10V

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

-XA	connection block
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	module 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

MES	module 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
* transfer pump / shunt pump / off-load pump	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
contactor -K1 HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* accumulator sensor transfer TPT	Y5 8 GND 7
* boiler off automatic with TPA	GND 6 Y4 5
* external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

low voltage 230 VAC

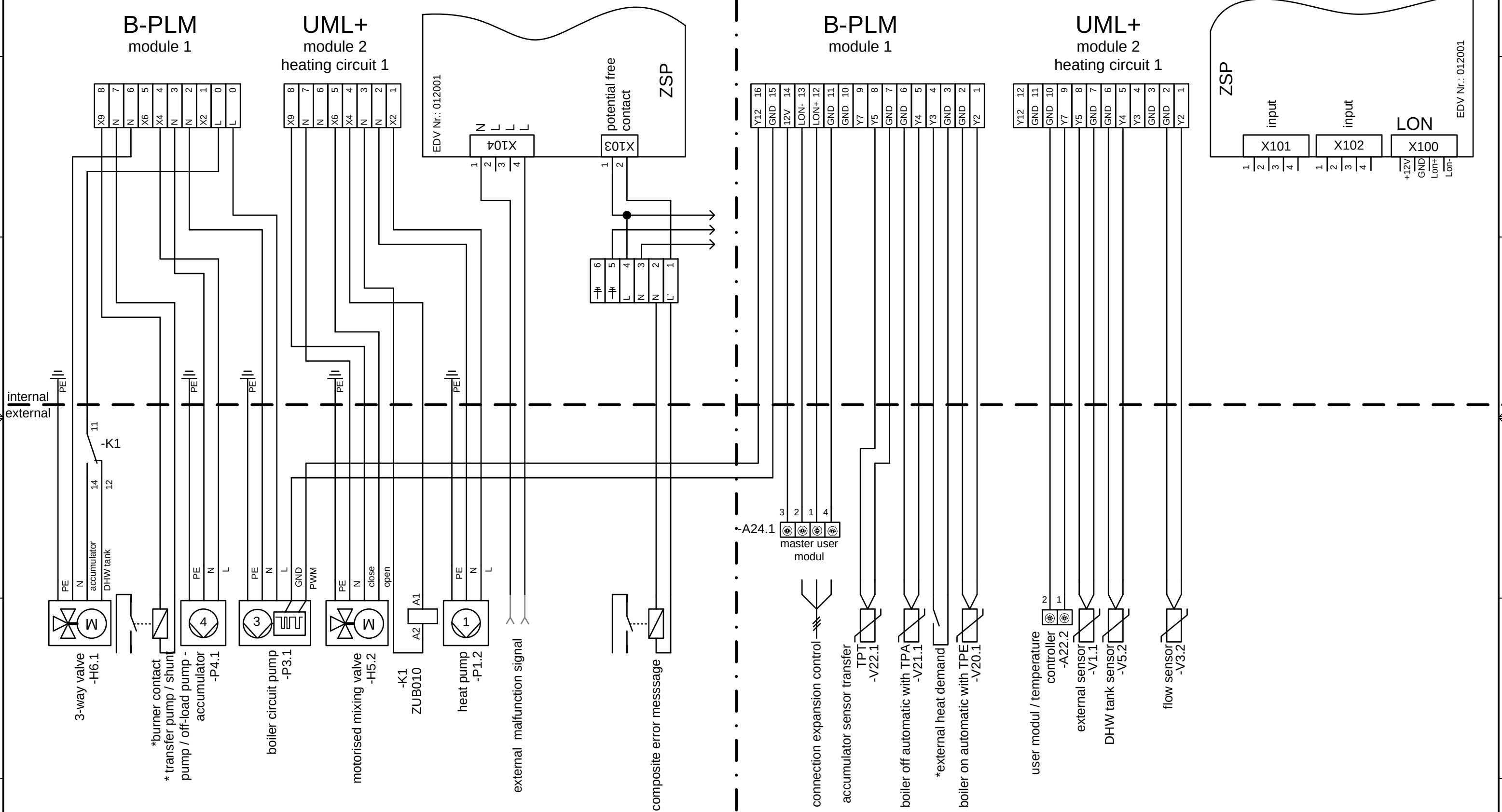
extra low voltage - sensor

B-PLM
module 1

UML+
module 2
heating circuit 1

B-PLM
module 1

UML+
module 2
heating circuit 1



*...optional/accessories ** remove resistor R2 to connect an extension control

Datum 24.06.2013				B-PLM/ UML+/ ZSP S				MES ZUB010 + ZSP S				Projekt :				1 mm : 1 mm			
Gezeichnet rot				Zeichnungs Nr.:				ZUB010 SYS 3-way valve accumulator-DHW tank and ZSP S				control				Blatt 094629/00			
Geprüft ros				094629/00															
Genehmigt																			
Rev.				Änderung				Datum				Name							



-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
composite error message	N L'

-XSP	extra pcb
GND	
-X101 /2	
GND	
-X101 /4	

GND	
-X102 /2	
-X102 /3	
-X102 /4	

EDV Nr. 094810/00

-XA	connection block
230 VAC	L 1
internal	L' 2 L' 3
230 VAC	N 4
internal	N' 5 N' 6

B-PLM	module 1
*burner contact	X9 8 N 7
	N 6 X6 5
* transfer pump / shunt pump / off-load pump	X4 4 N 3
	N 2 X2 1
PWM permanent phase 1	L 0
PWM permanent phase 2	L 0

UML+	module 2 heating circuit 1
close HC 1	X9 8 N 7
motorised mixing valve open	N 6 X6 5
contactor -K1 HC 1	X4 4 N 3
heat pump HC 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	module 1
PWM boiler circuit pump	Y12 16 GND 15
master user modul connection expansion control	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* accumulator sensor transfer TPT	Y5 8 GND 7
* boiler off automatic with TPA	GND 6 Y4 5
* external heat demand	Y3 4 GND 3
boiler on automatic with TPE	GND 2 Y2 1

UML+	module 2 heating circuit 1
	Y12 12 GND 11
user modul temperature controller	GND 10 Y7 9
external sensor	Y5 8 GND 7
DHW tank sensor HC 1	GND 6 Y4 5
	Y3 4 GND 3
flow sensor HC 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

low voltage 230 VAC

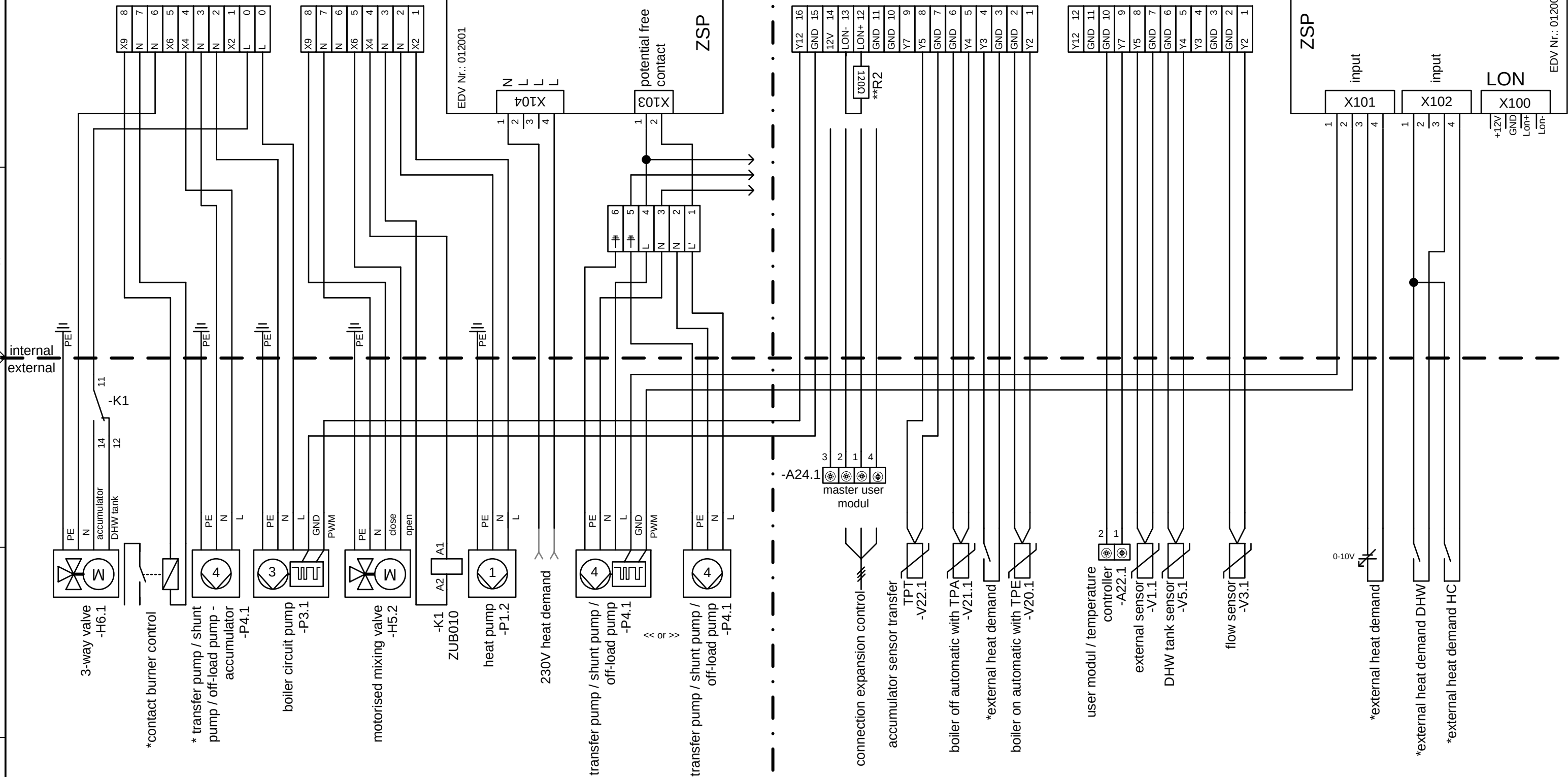
extra low voltage - sensor

B-PLM
module 1

UML+
module 2
heating circuit 1

B-PLM
module 1

UML+
module 2
heating circuit 1



*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	24.06.2013	B-PLM/ UML+/ ZSP W		MES ZUB010 + ZSP W ZUB010 3-way valve accumulator-DHW tank and ZSP W	Projekt : control		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094630/00				----- 2 Blatt 094630/00

-XZSP	extra pcb
PE	PE
PE	PE
permanent phase	L N
transfer pump / shunt pump / off-load pump	N L'

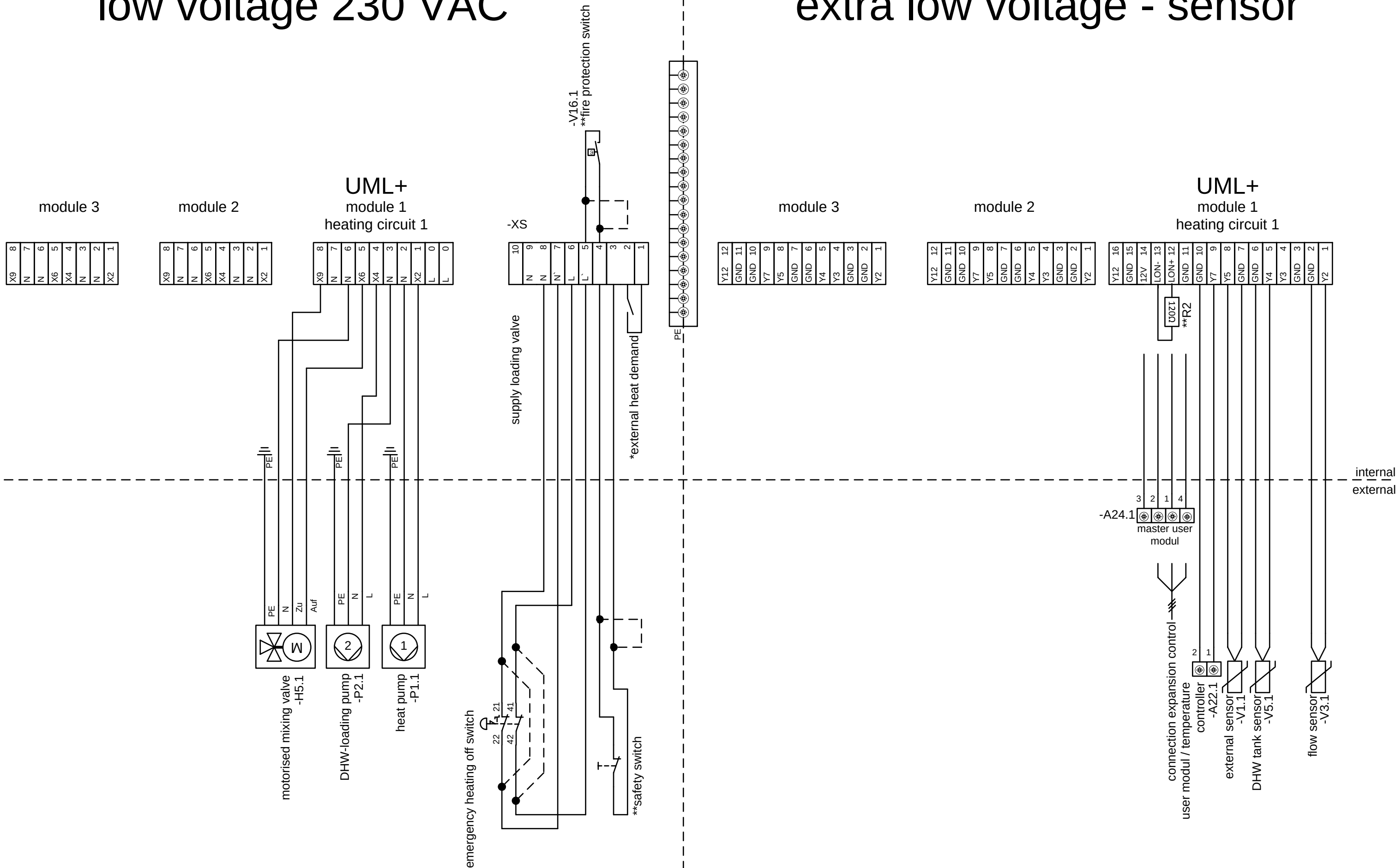
EDV Nr. 094812/00

-XSP	extra pcb
GND	PWM transfer pump / shunt pump / off-load -X101 /2 pump
GND	heat demand 0-10V -X101 /4

GND	
-X102 /2	
-X102 /3	external heat demand DHW
-X102 /4	external heat demand HC

low voltage 230 VAC

extra low voltage - sensor

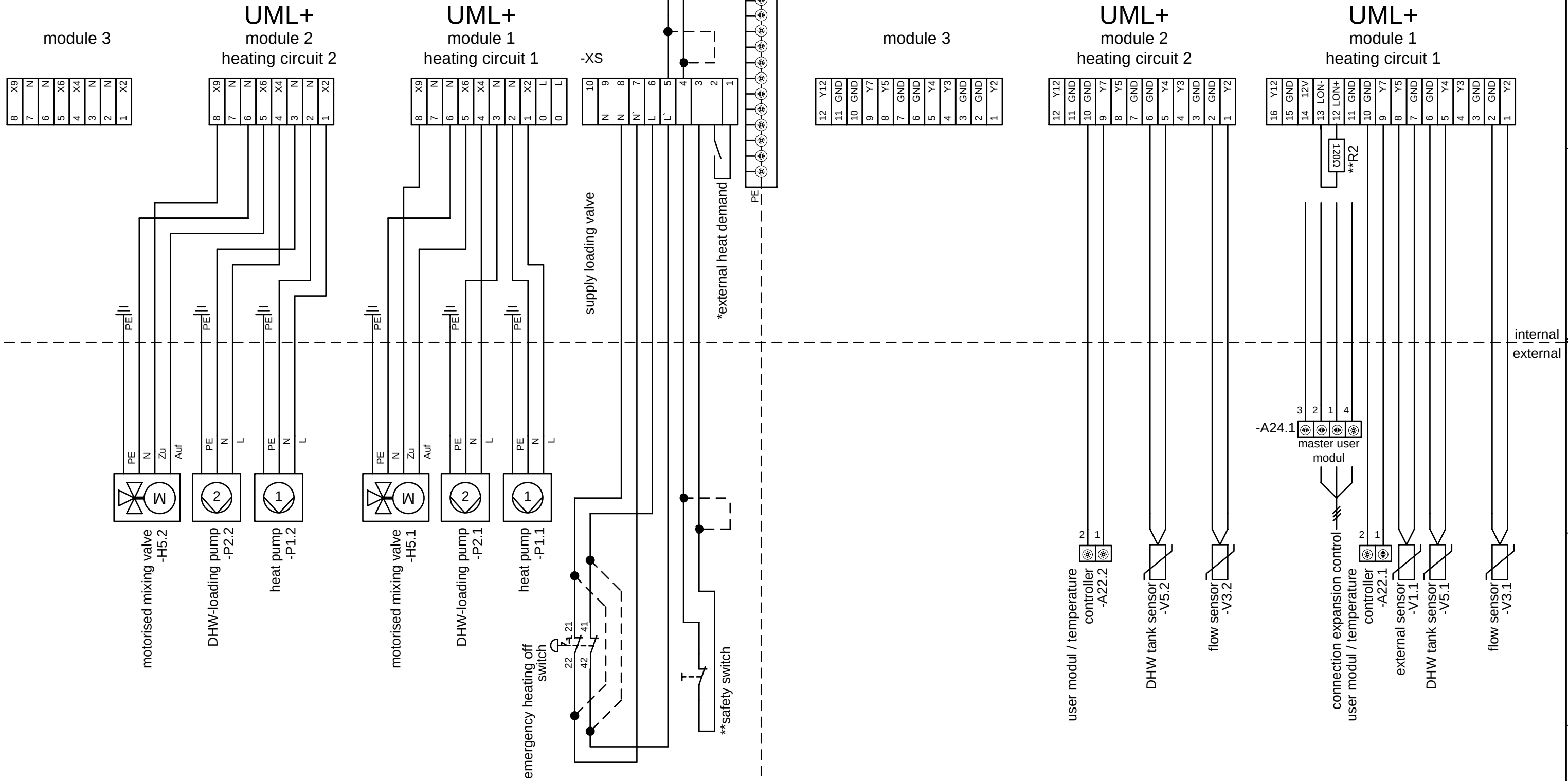


*...optional/accessories ** remove resistor R2 to connect an extension control

				Datum	07.08.2013	UML+		MES H021 outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit		Projekt : control				1 mm : 1 mm Blatt 092760/01	
				Gezeichnet	rot										
				Geprüft	ros										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092760/01									

low voltage 230 VAC

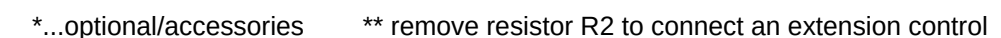
extra low voltage - sensor



*...optional/accessories ** remove resistor R2 to connect an extension control

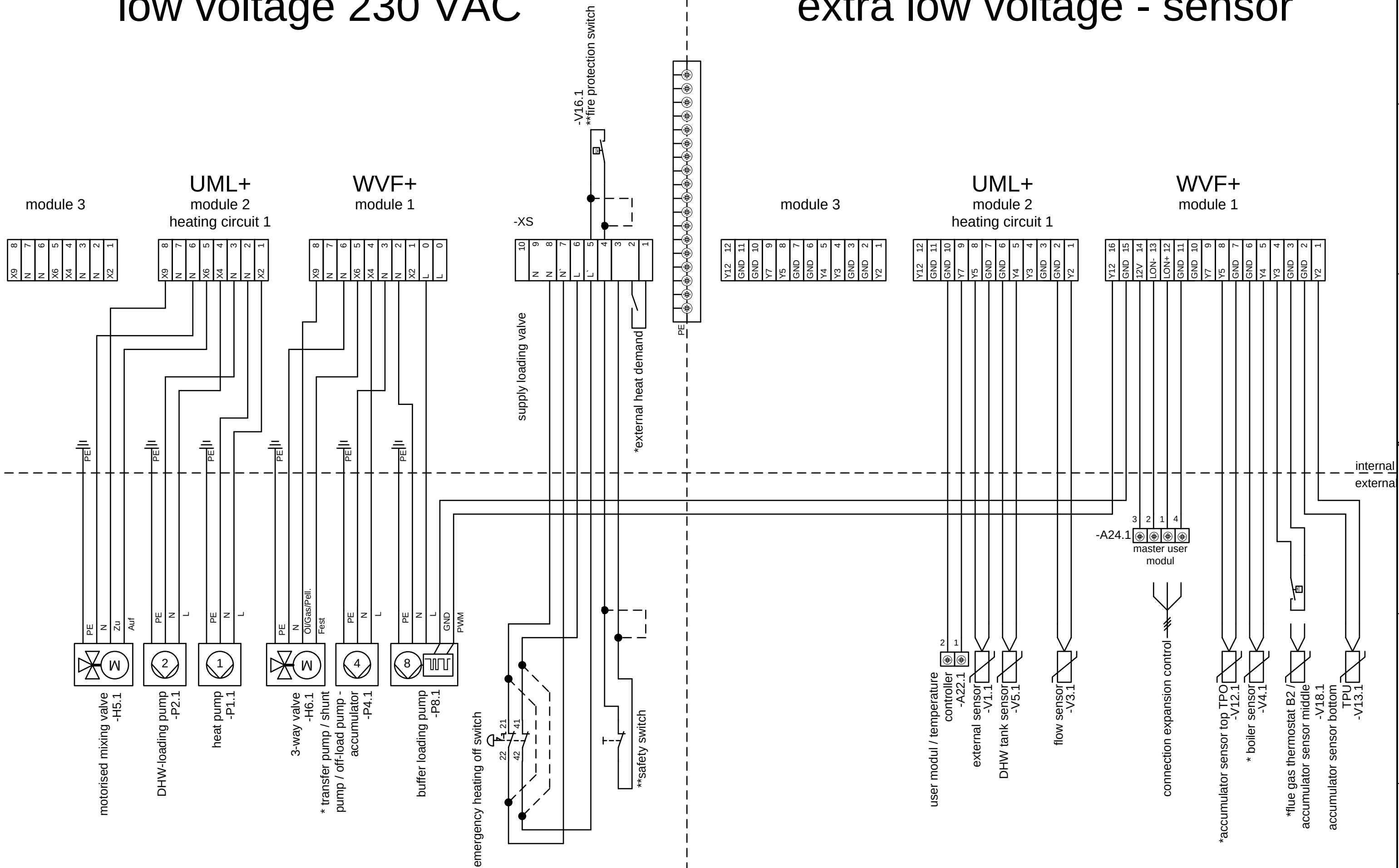
				Datum	07.08.2013	UML+ / UML+		MES H021 + H024 outside temperature control for 2 mixed heating circuits incl. hot water circuits	Projekt : control		1 mm : 1 mm ◀ ----- 2 ▶ Blatt 092771/01
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092771/01				

extra low voltage - sensor



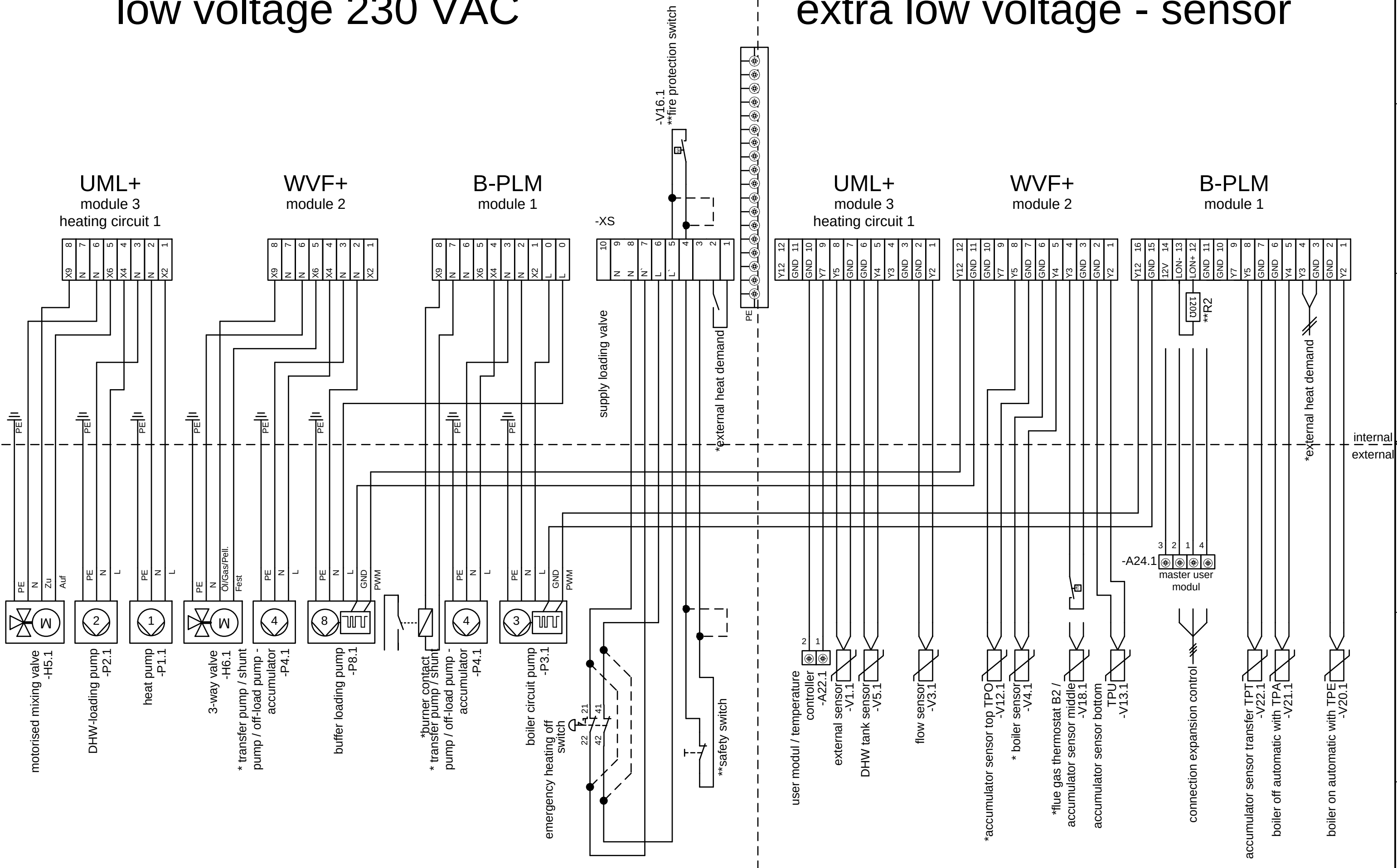
low voltage 230 VAC

extra low voltage - sensor



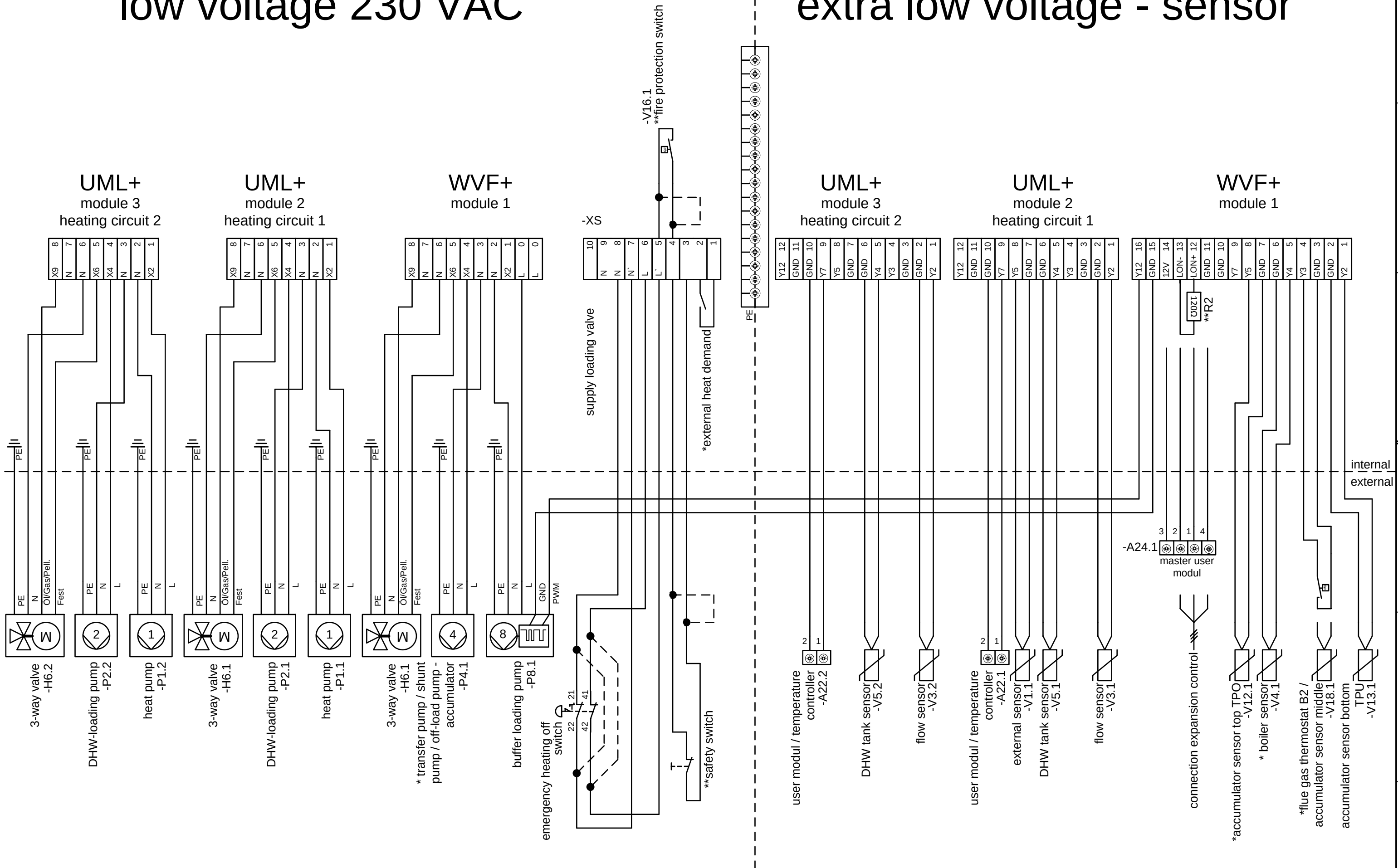
low voltage 230 VAC

extra low voltage - sensor



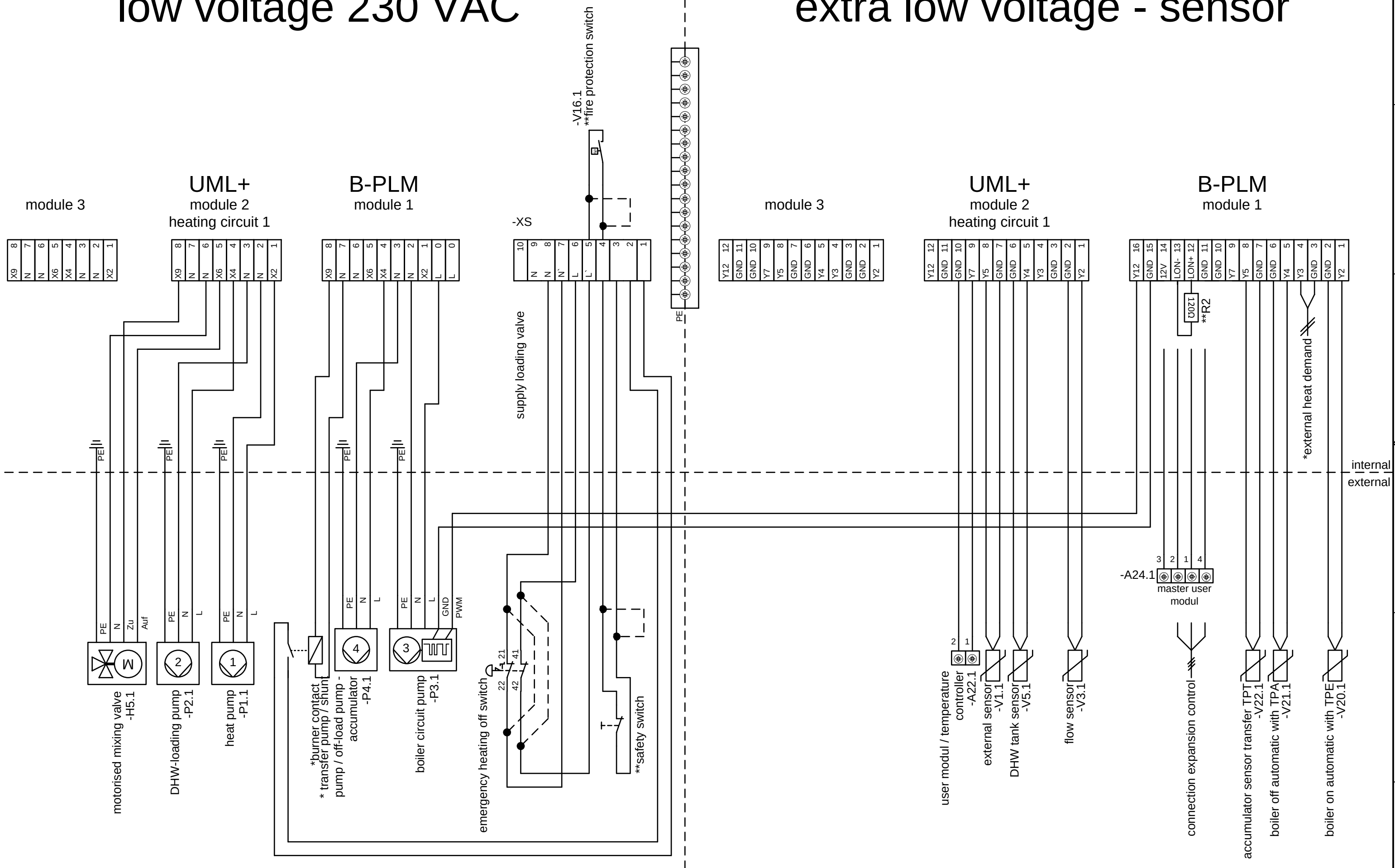
low voltage 230 VAC

extra low voltage - sensor



low voltage 230 VAC

extra low voltage - sensor



Datum	07.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / UML+

Zeichnungs Nr.: 093111/01

MES P042 + H021

outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit
incl. burner- / accutank module B-PLM

Projekt :

control



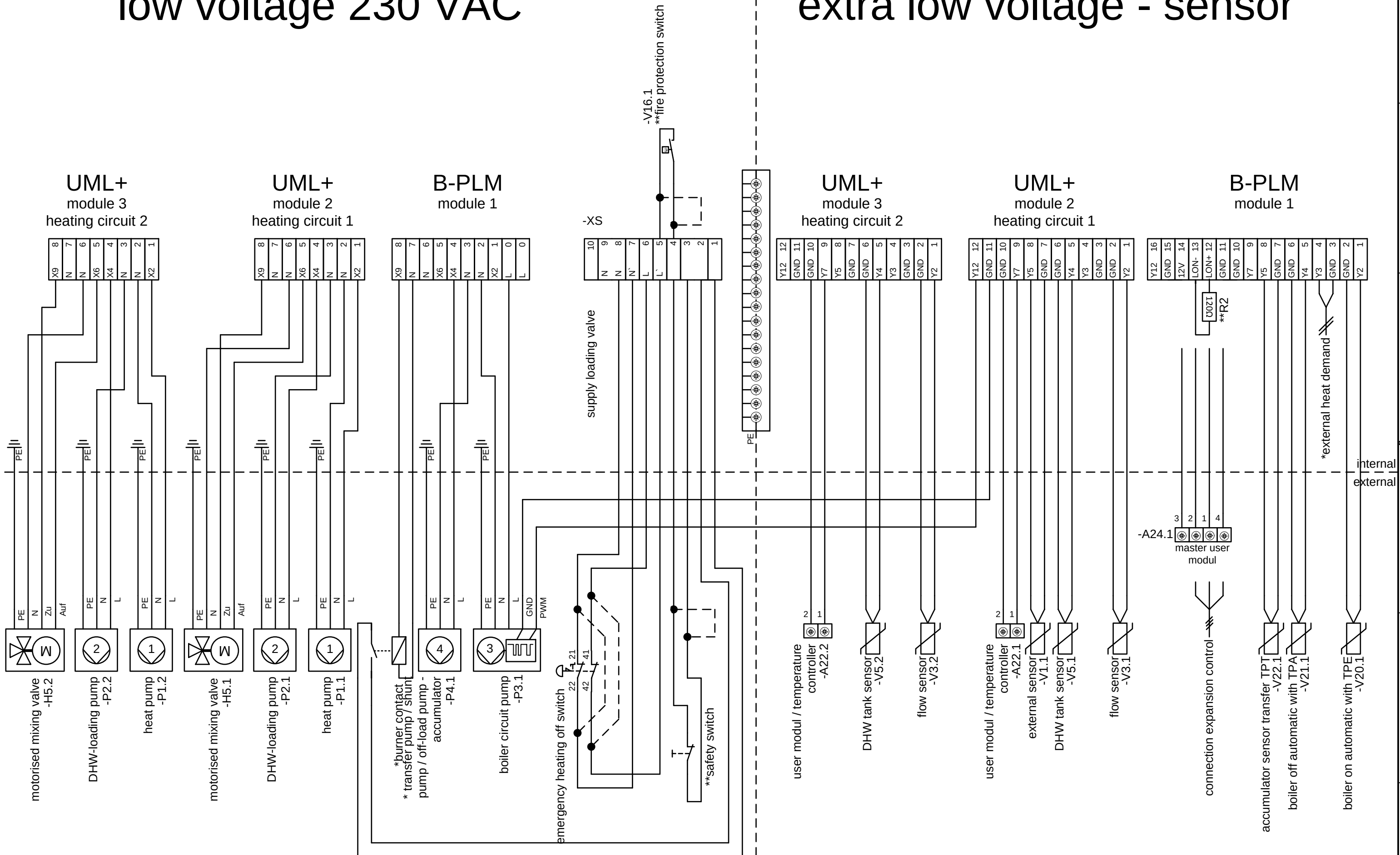
1 mm : 1 mm

2

Blatt 093111/01

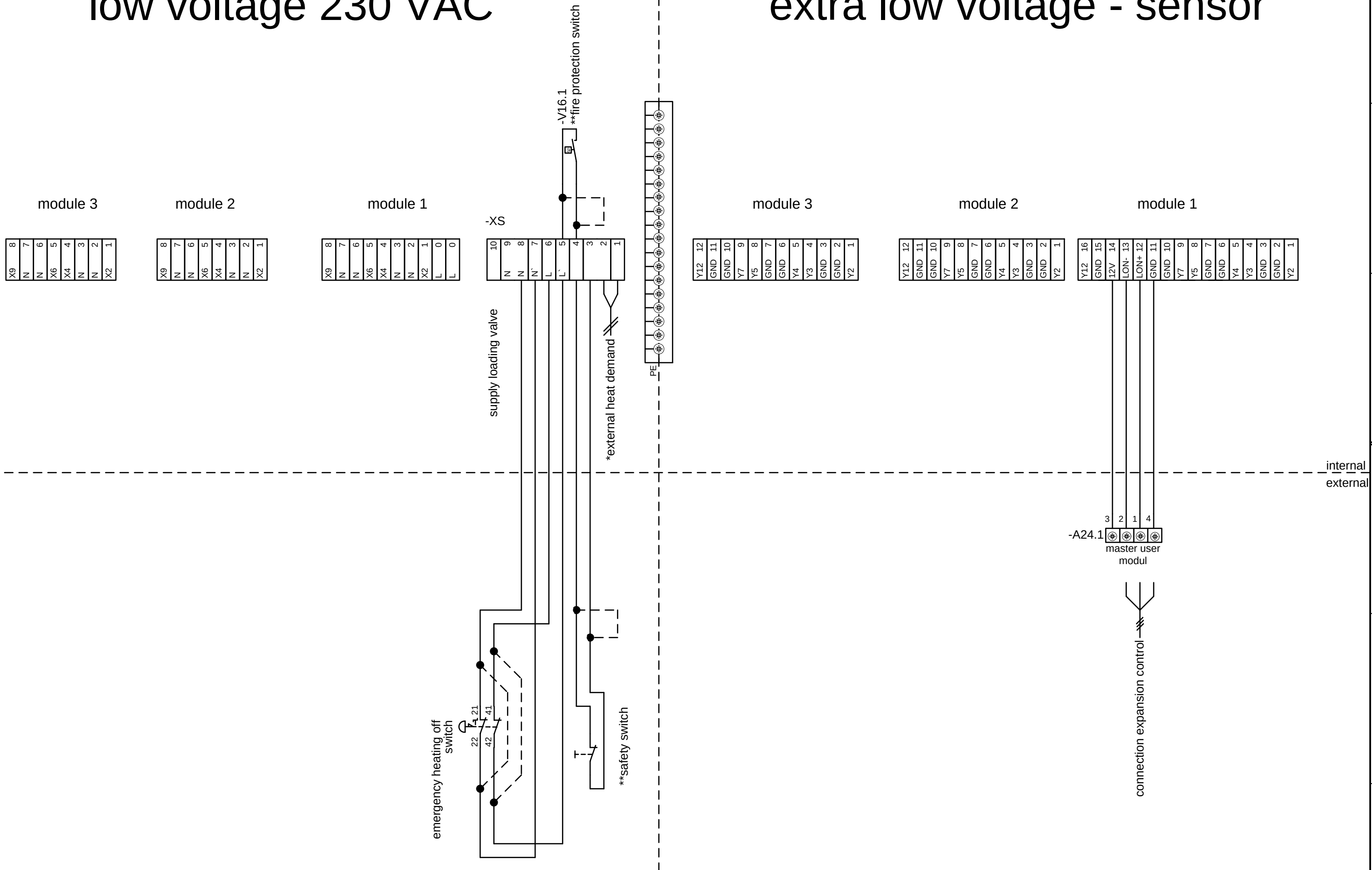
low voltage 230 VAC

extra low voltage - sensor



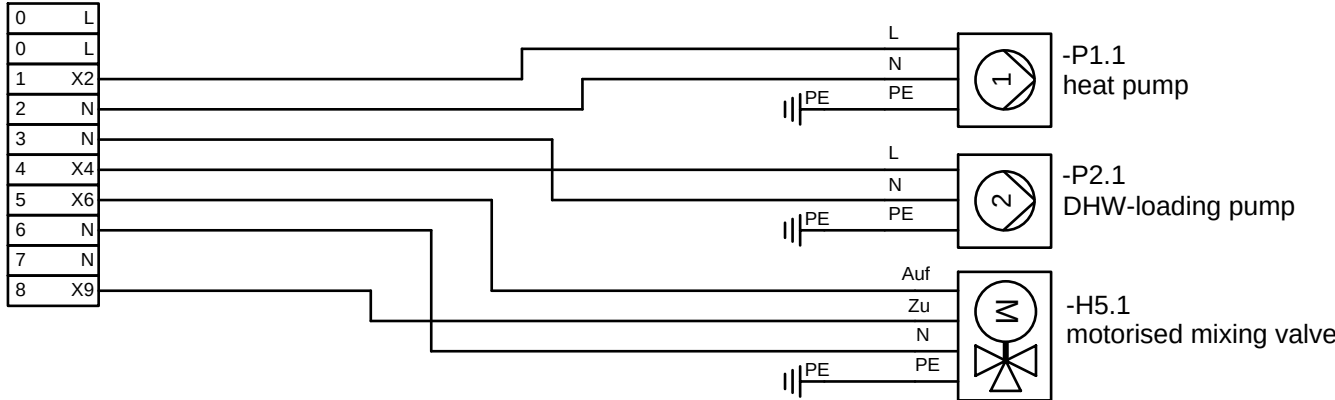
low voltage 230 VAC

extra low voltage - sensor



low voltage 230 VAC

UML+
module 1



module 2

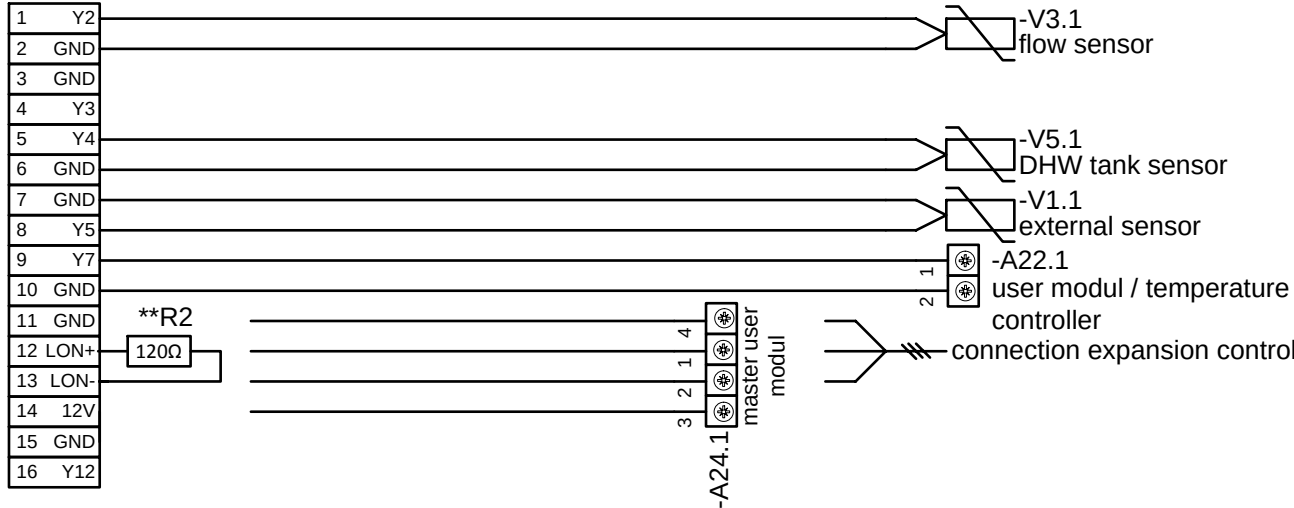
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

module 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

extra low voltage - sensor

UML+
module 1



module 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

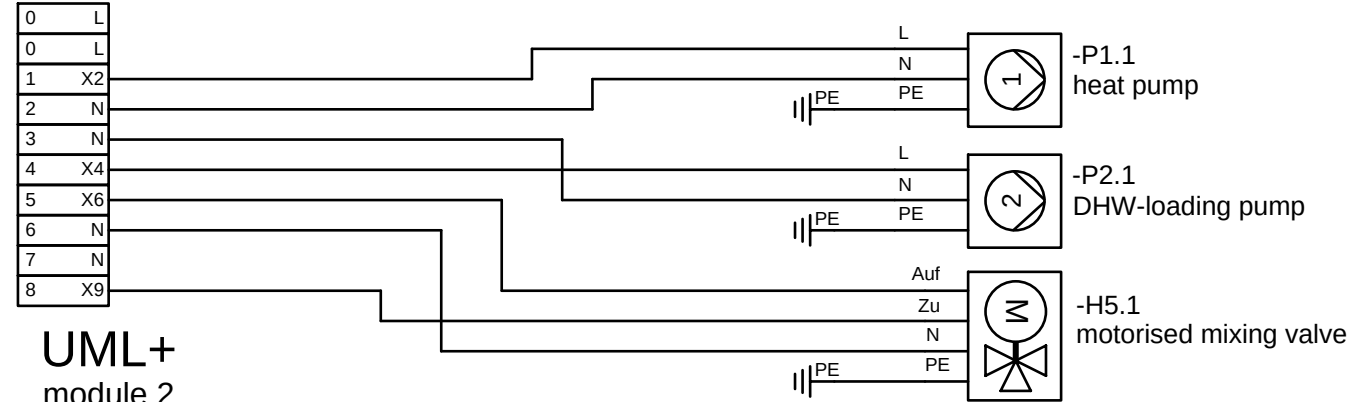
module 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

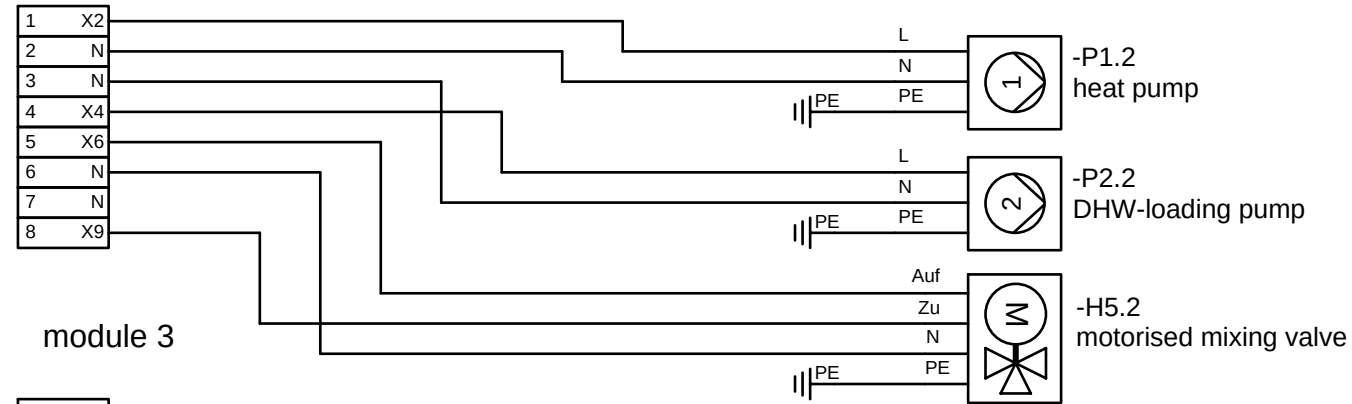
*...optional/accessories ** remove resistor R2 to connect an extension control

low voltage 230 VAC

UML+ module 1 heating circuit 1



UML+ module 2 heating circuit 2

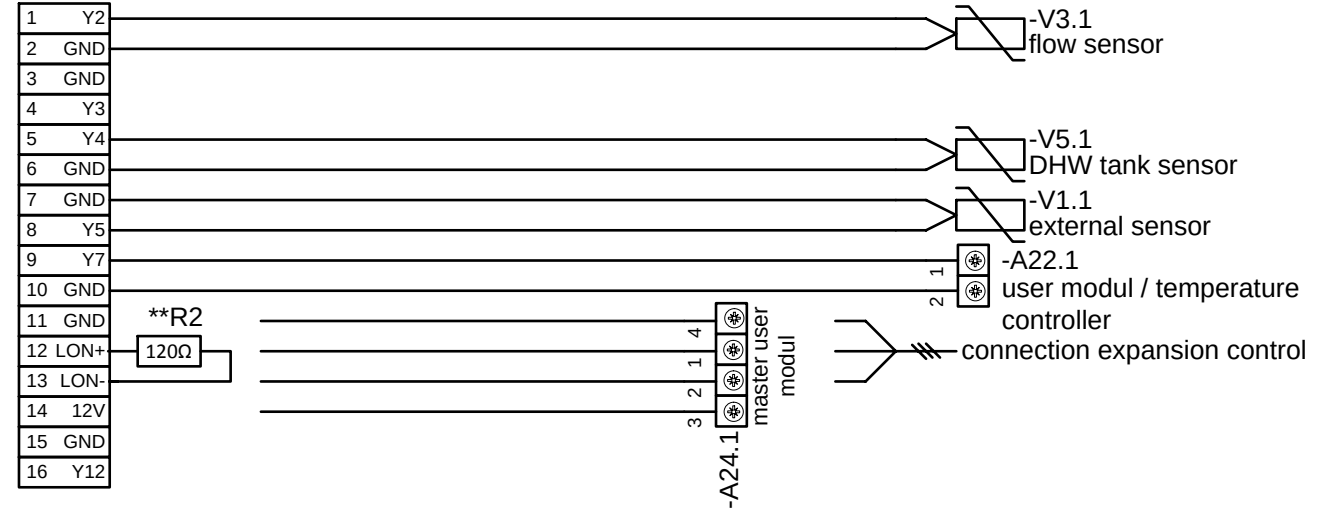


module 3

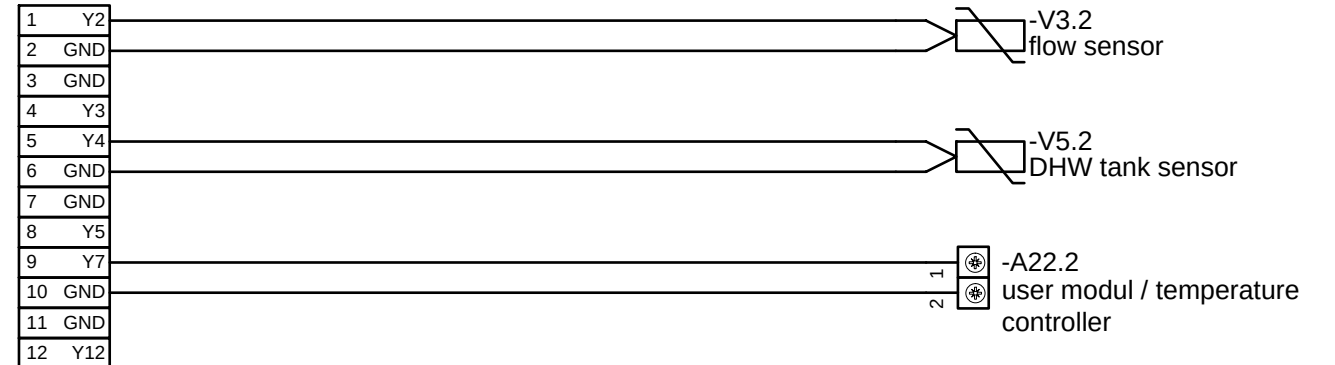
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

extra low voltage - sensor

UML+ module 1 heating circuit 1



UML+ module 2 heating circuit 2



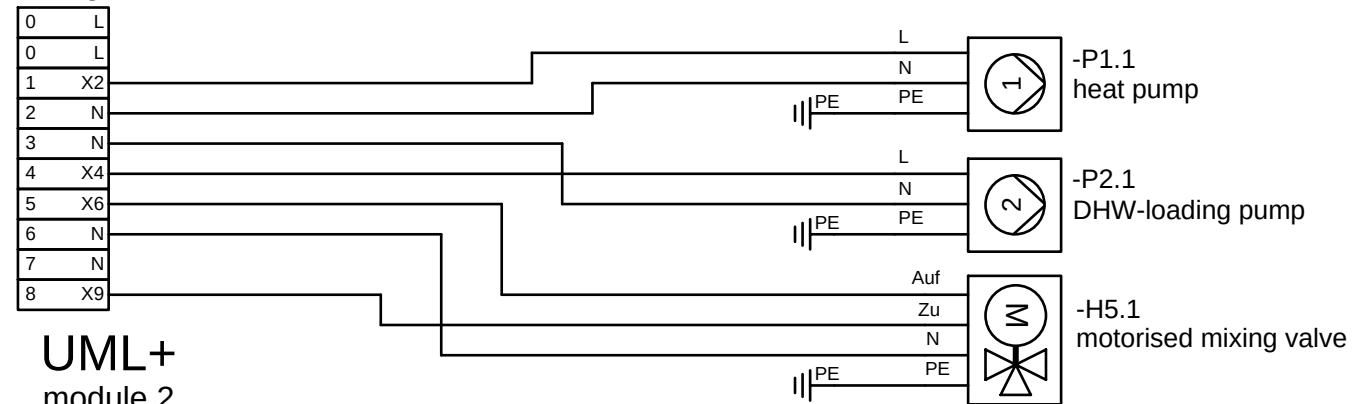
module 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

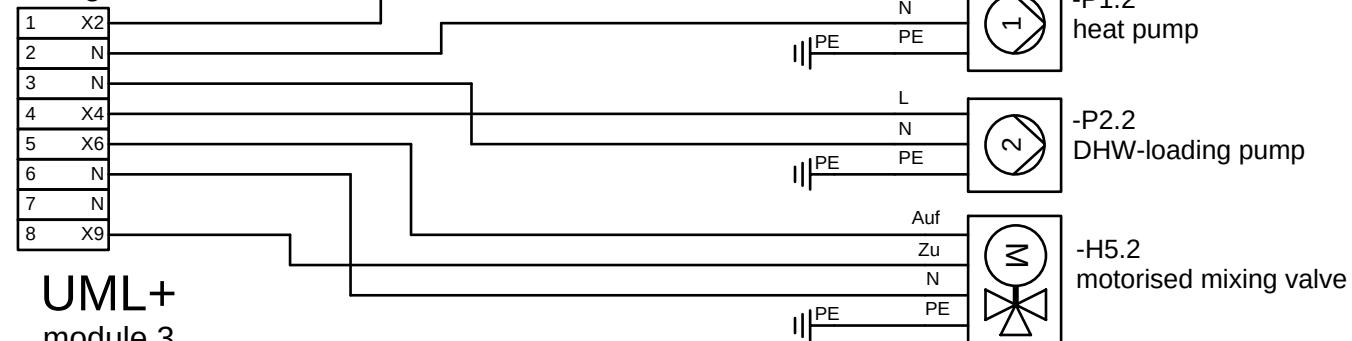
*...optional/accessories ** remove resistor R2 to connect an extension control

low voltage 230 VAC

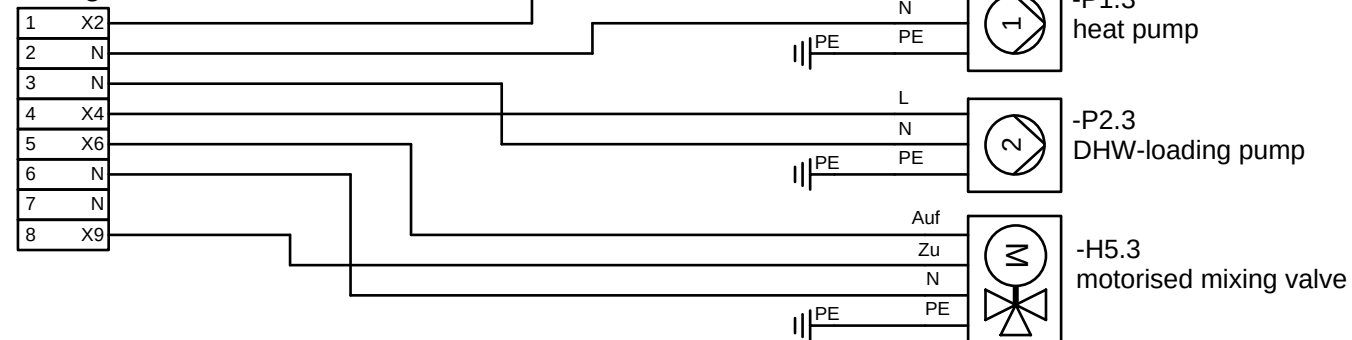
UML+ module 1 heating circuit 1



UML+ module 2 heating circuit 2

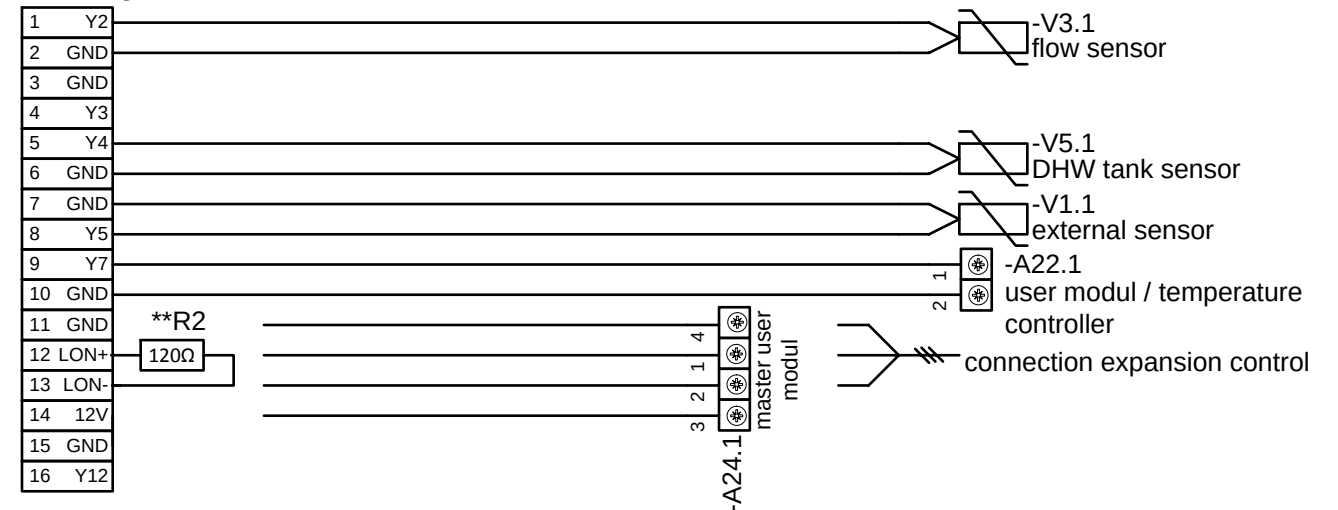


UML+ module 3 heating circuit 3

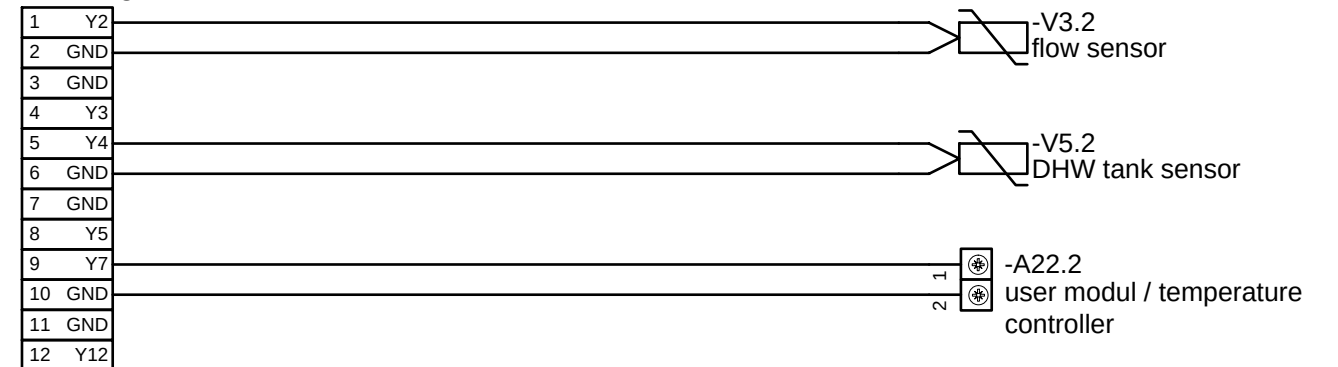


extra low voltage - sensor

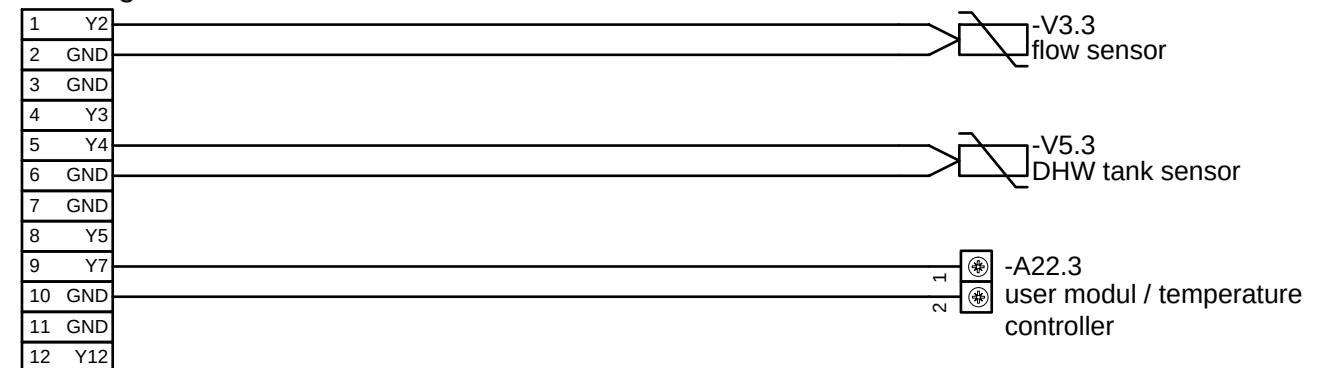
UML+ module 1 heating circuit 1



UML+ module 2 heating circuit 2



UML+ module 3 heating circuit 3



*...optional/accessories ** remove resistor R2 to connect an extension control

Datum	06.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ / UML+ / UML+	
Zeichnungs Nr.:	092700/01

MES H021 + H024 + H024
outside temperature control for 3 mixed heating circuits incl. hot water circuits

Projekt :
control

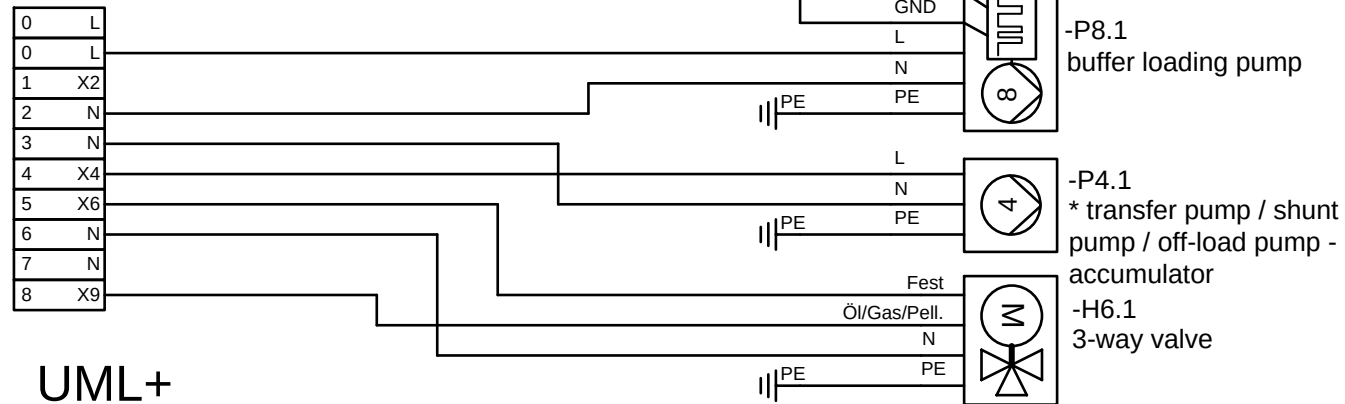
windhager

1 mm : 1 mm
Blatt 092700/01

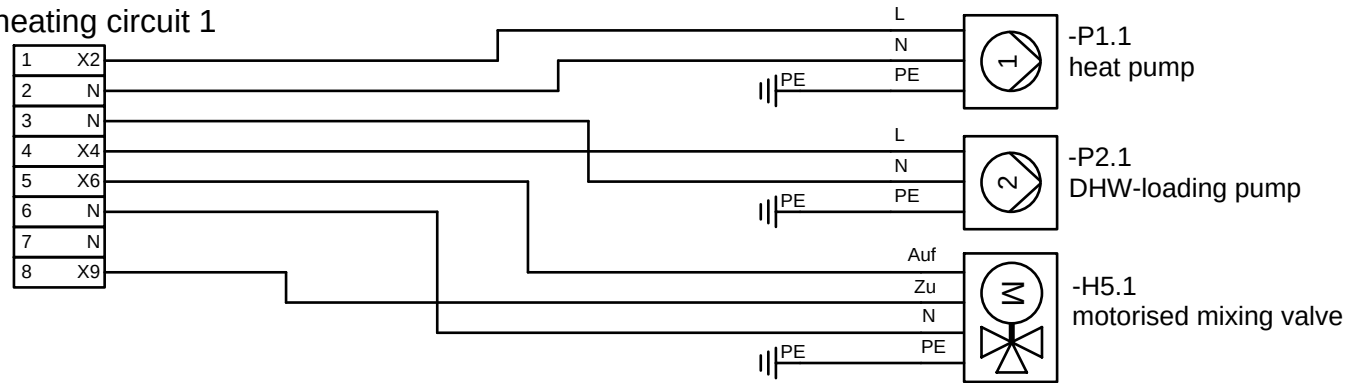
low voltage 230 VAC

extra low voltage - sensor

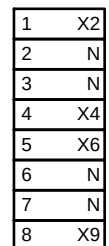
WVF+ module 1



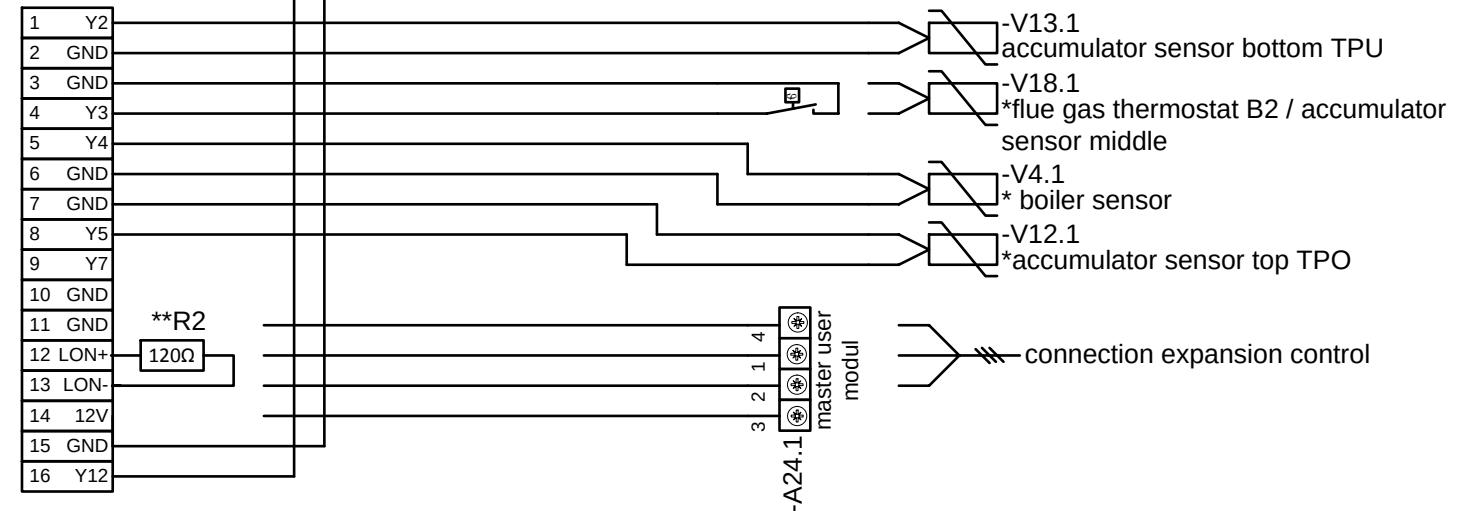
UML+ module 2 heating circuit 1



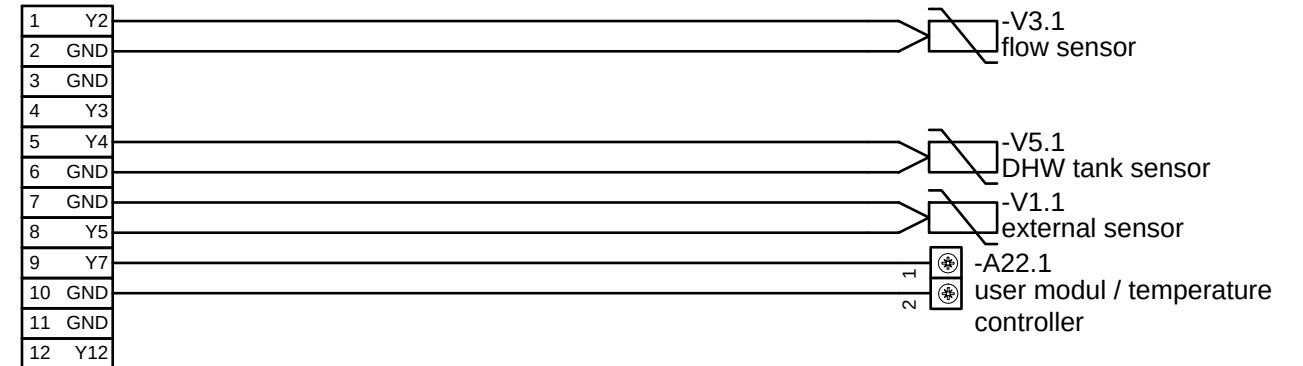
module 3



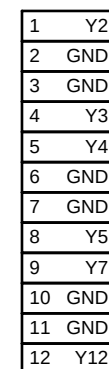
WVF+ module 1



UML+ module 2 heating circuit 1



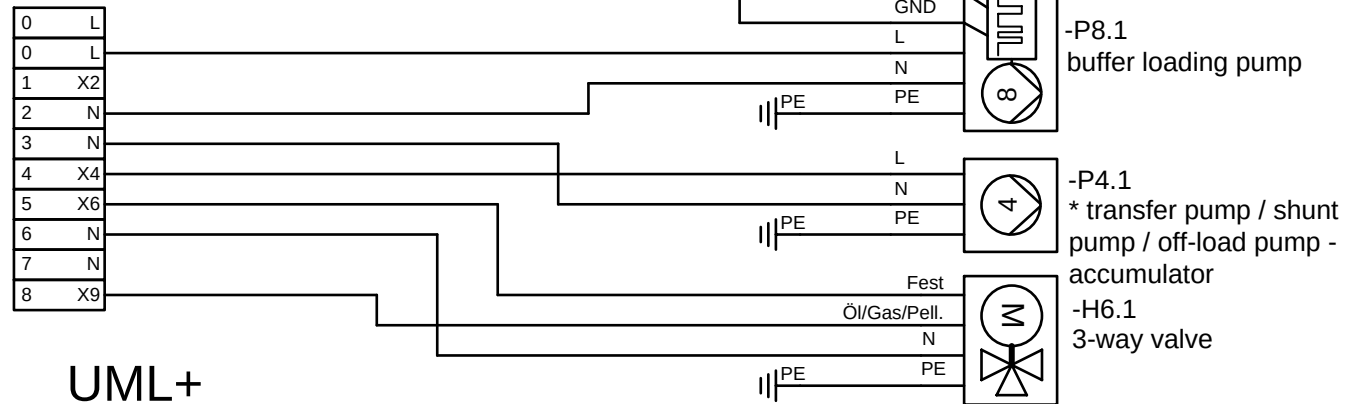
module 3



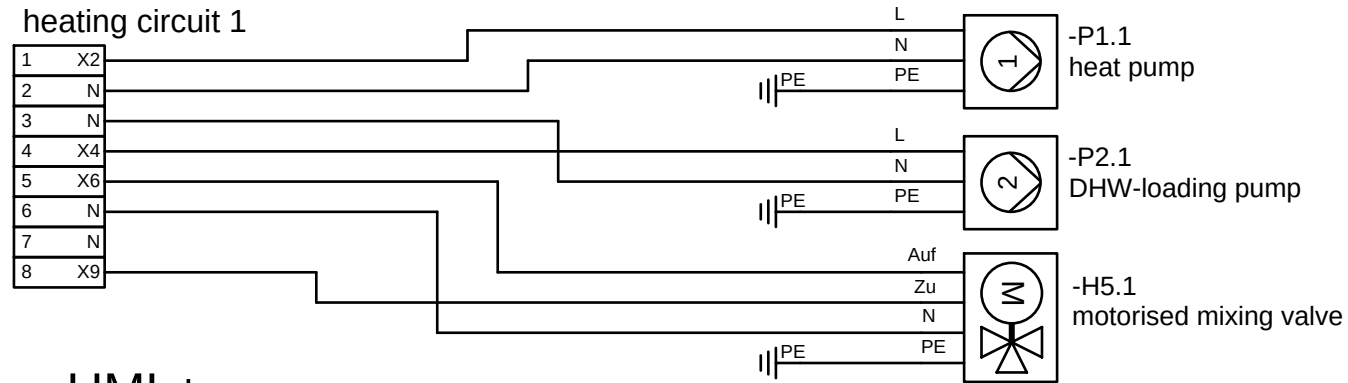
*...optional/accessories ** remove resistor R2 to connect an extension control

low voltage 230 VAC

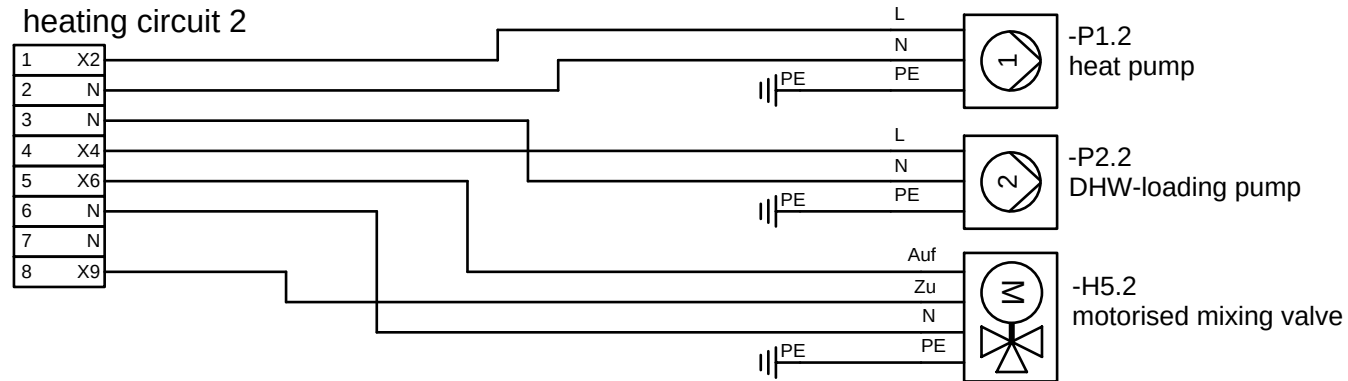
WVF+ module 1



UML+ module 2 heating circuit 1

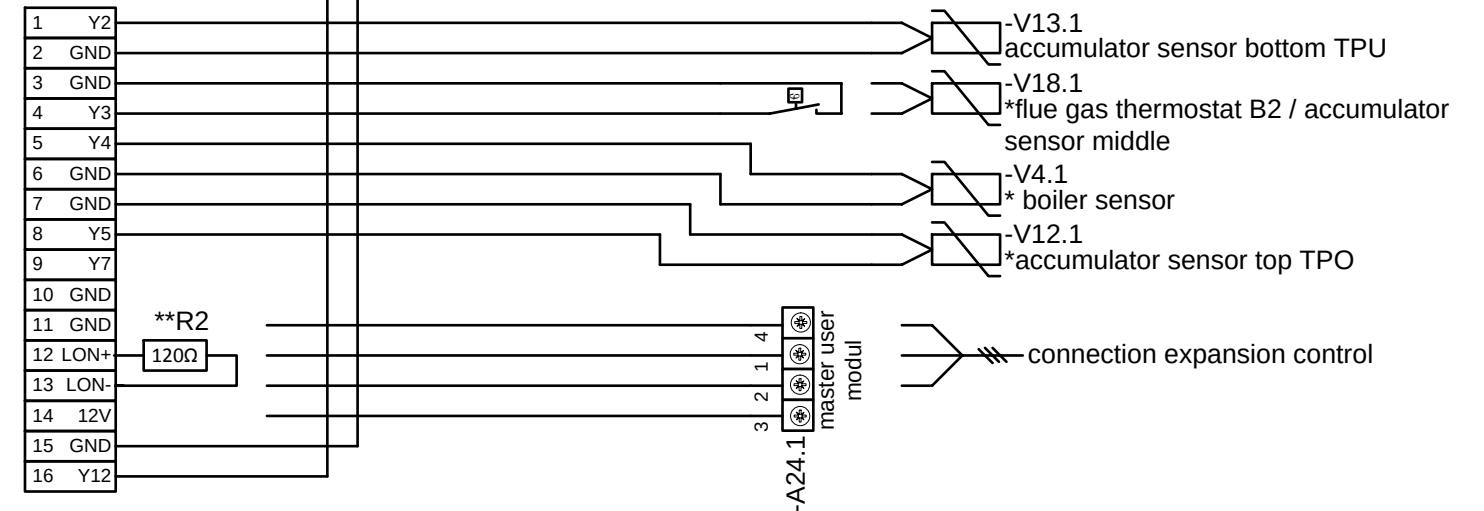


UML+ module 3 heating circuit 2

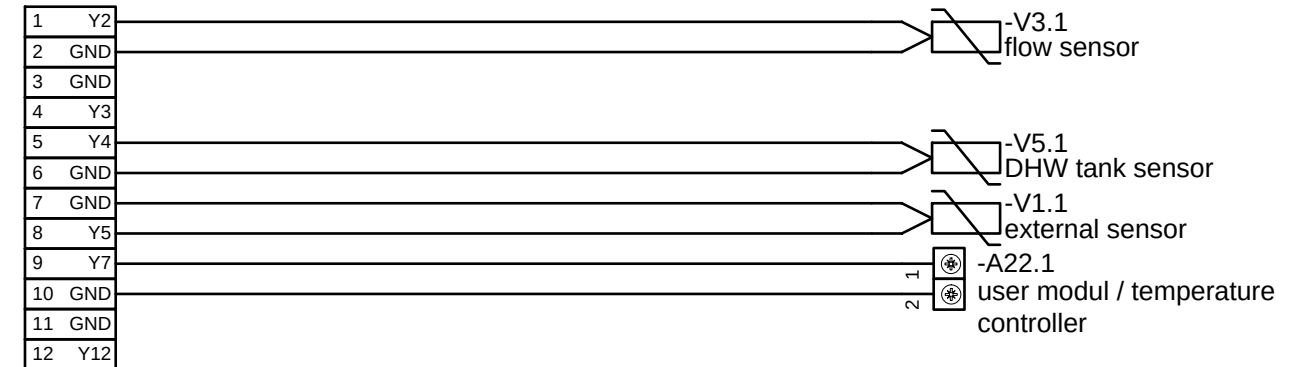


extra low voltage - sensor

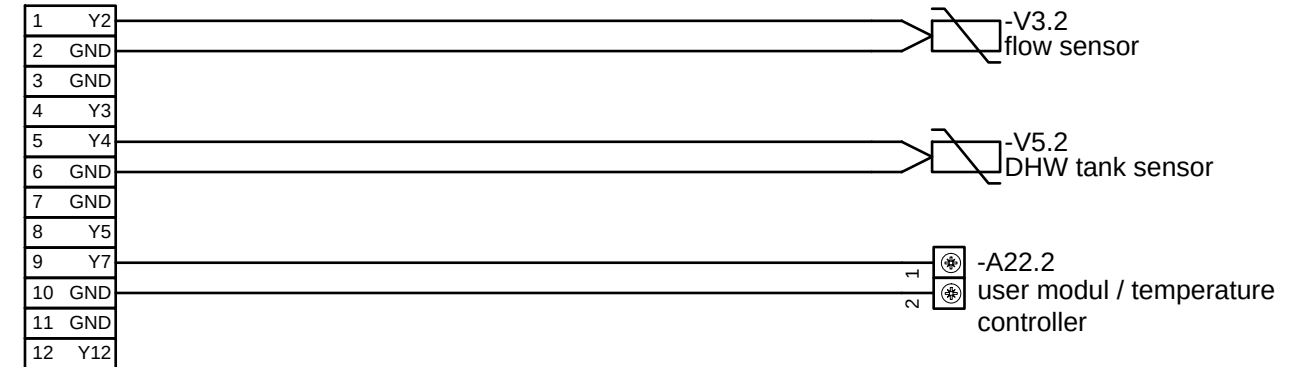
WVF+ module 1



UML+ module 2 heating circuit 1



UML+ module 3 heating circuit 2



*...optional/accessories ** remove resistor R2 to connect an extension control

Datum	06.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF+ / UML+ / UML+
Zeichnungs Nr.: 092837/01

MES P041 + H021 + H024
outside temperature control for 2 mixed heating circuits incl. hot water circuits
automatic switching to solid fuel with accumulator loading

Projekt :
control

windhager

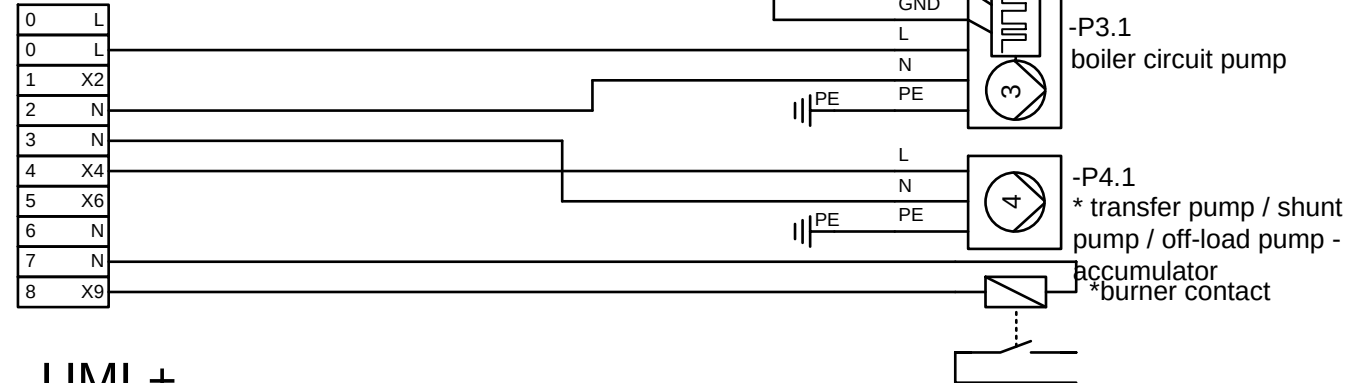
1 mm : 1 mm

Blatt 092837/01

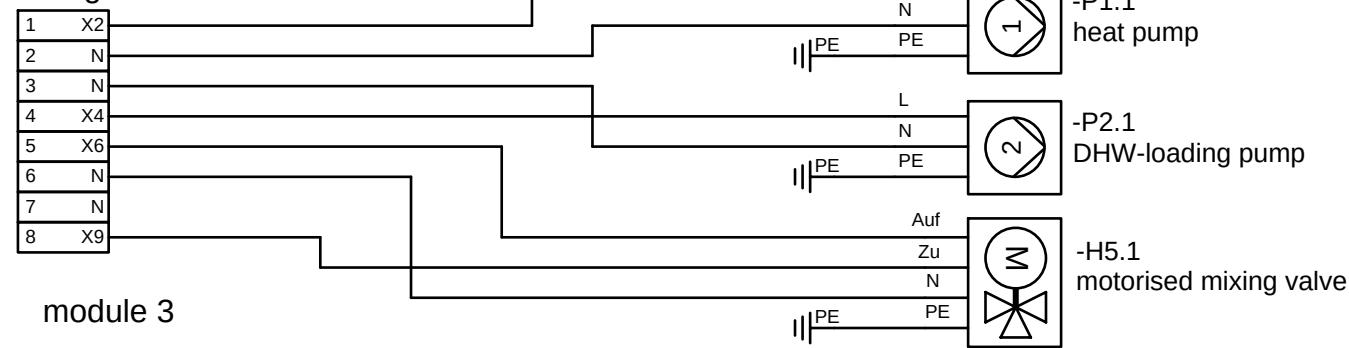
low voltage 230 VAC

extra low voltage - sensor

B-PLM module 1



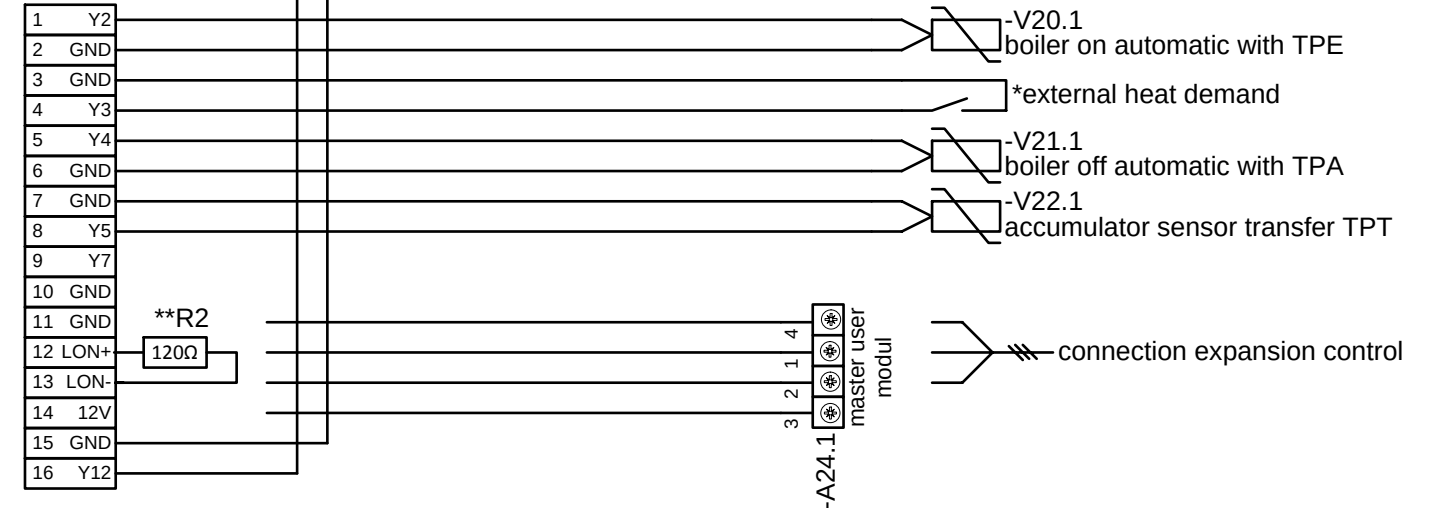
UML+ module 2 heating circuit 1



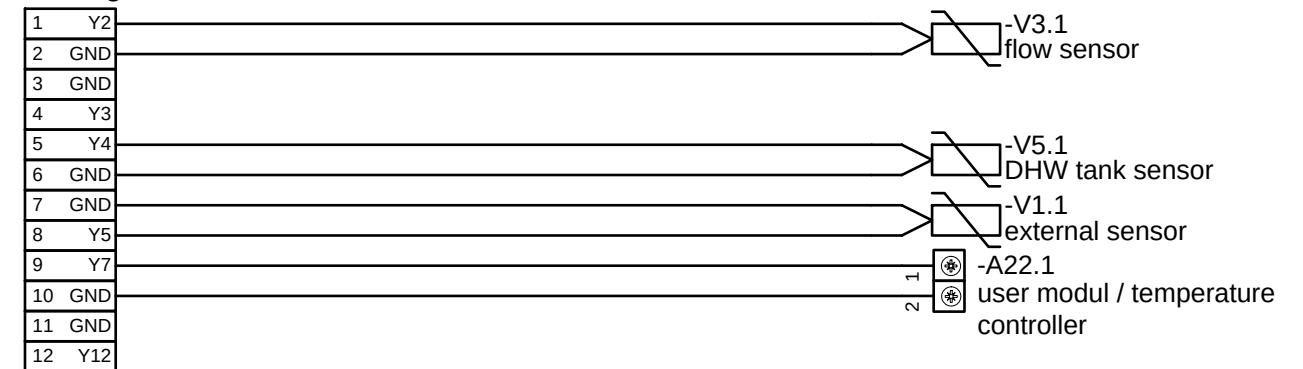
module 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

B-PLM module 1



UML+ module 2 heating circuit 1



module 3

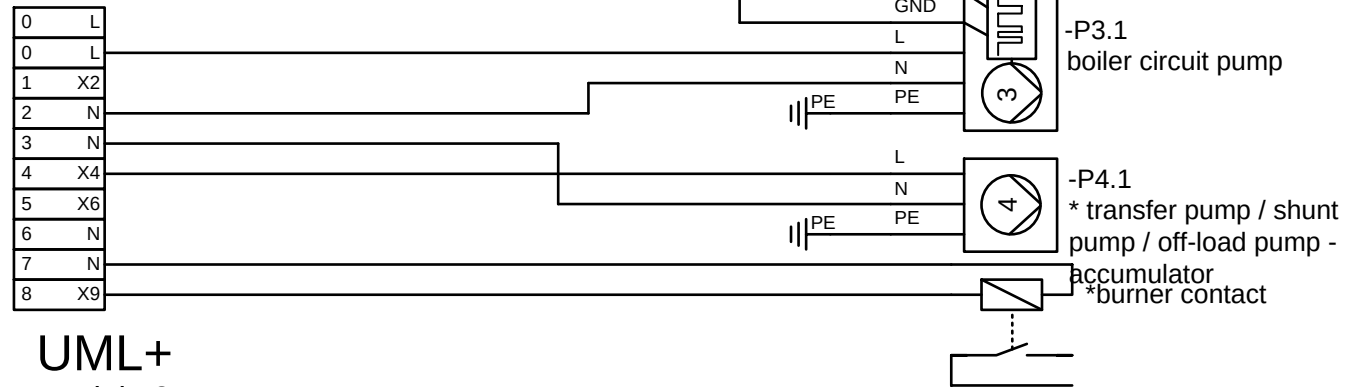
1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

*...optional/accessories ** remove resistor R2 to connect an extension control

low voltage 230 VAC

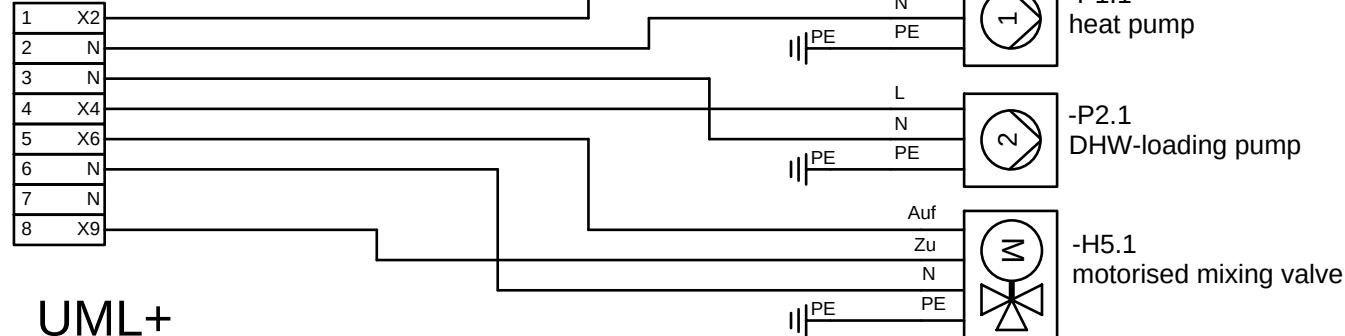
extra low voltage - sensor

B-PLM module 1



UML+ module 2

heating circuit 1

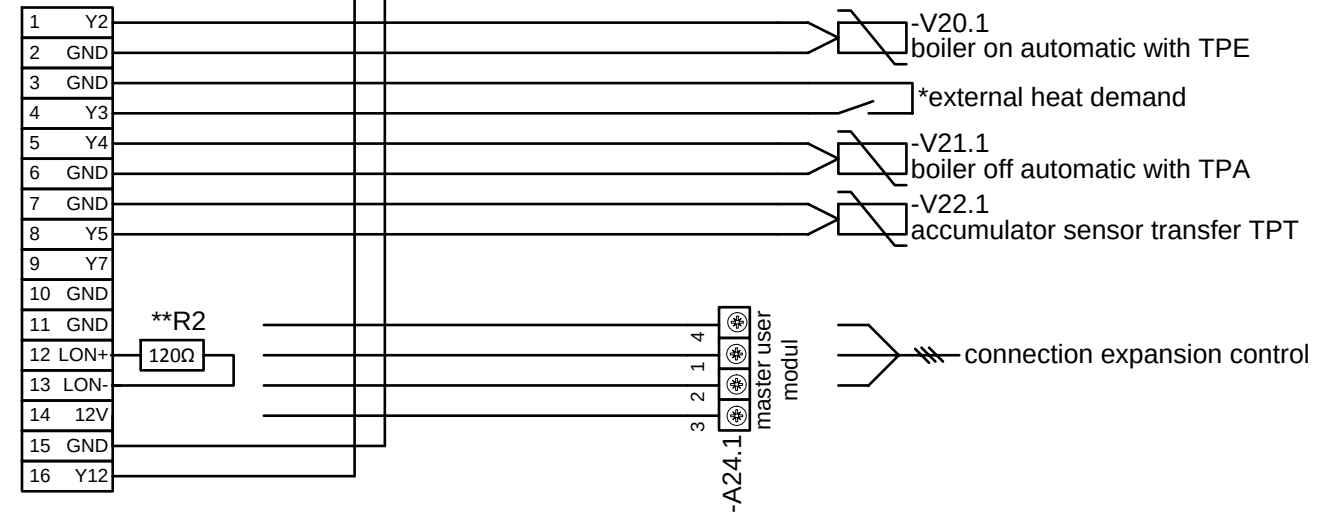


UML+ module 2

heating circuit 2

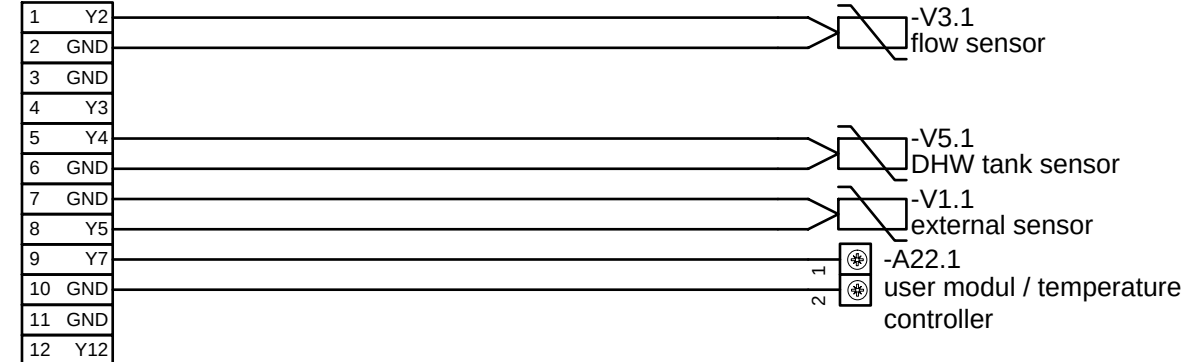


B-PLM module 1



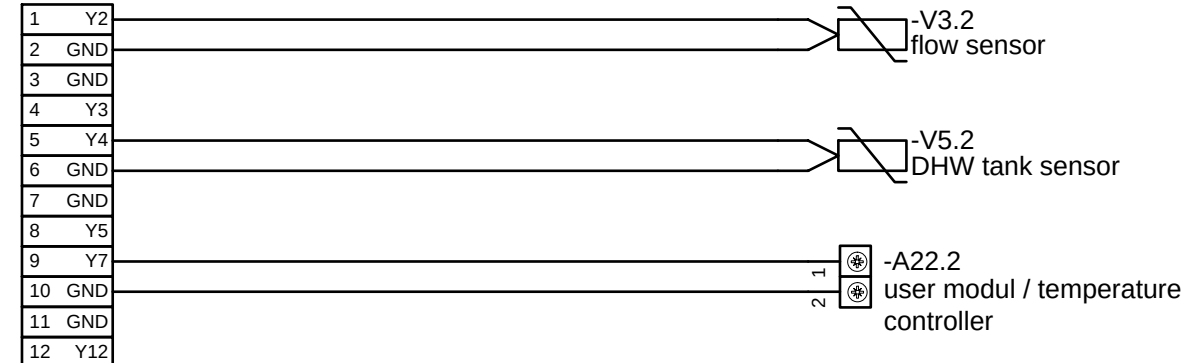
UML+ module 2

heating circuit 1



UML+ module 3

heating circuit 2



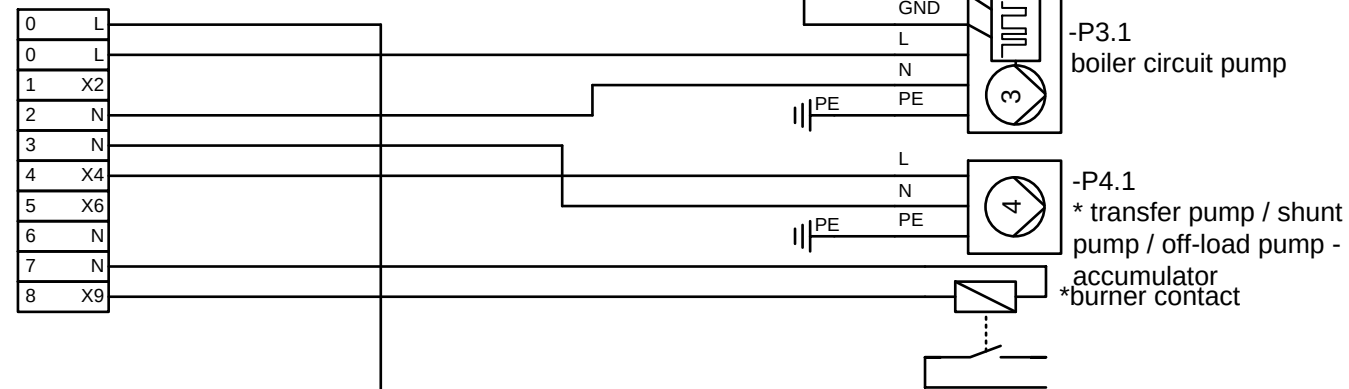
*...optional/accessories

** remove resistor R2 to connect an extension control

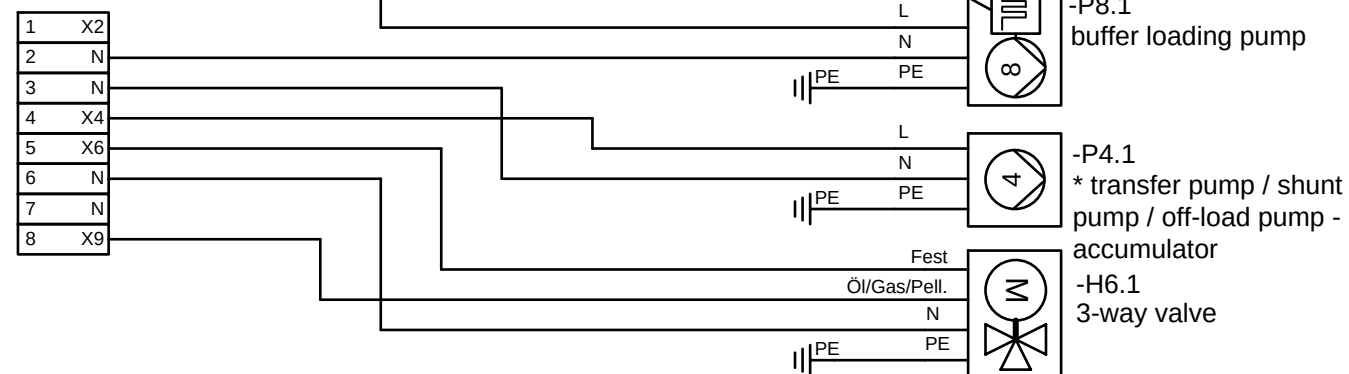
low voltage 230 VAC

extra low voltage - sensor

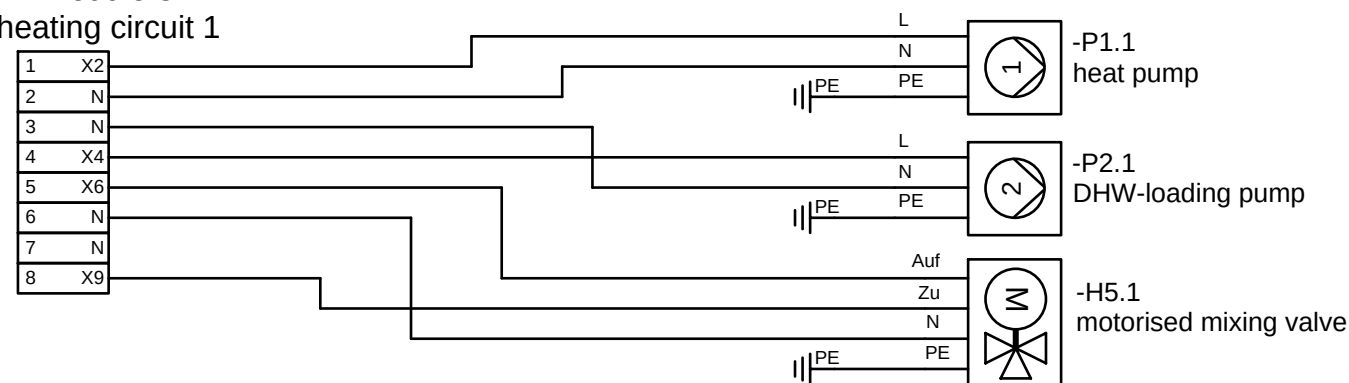
B-PLM
module 1



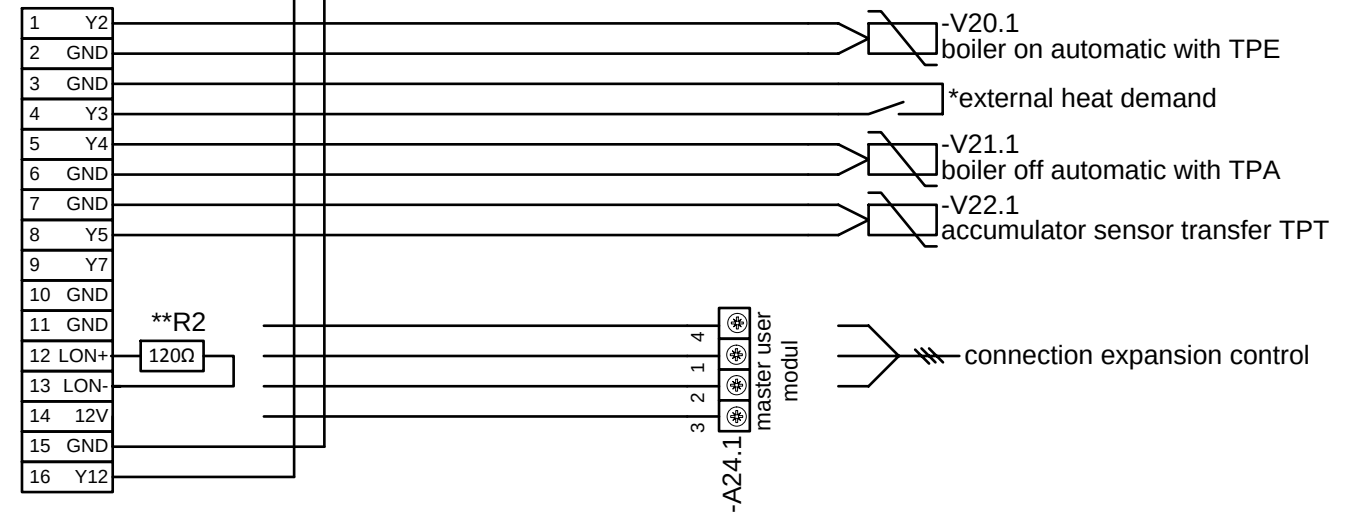
WVF+
module 2



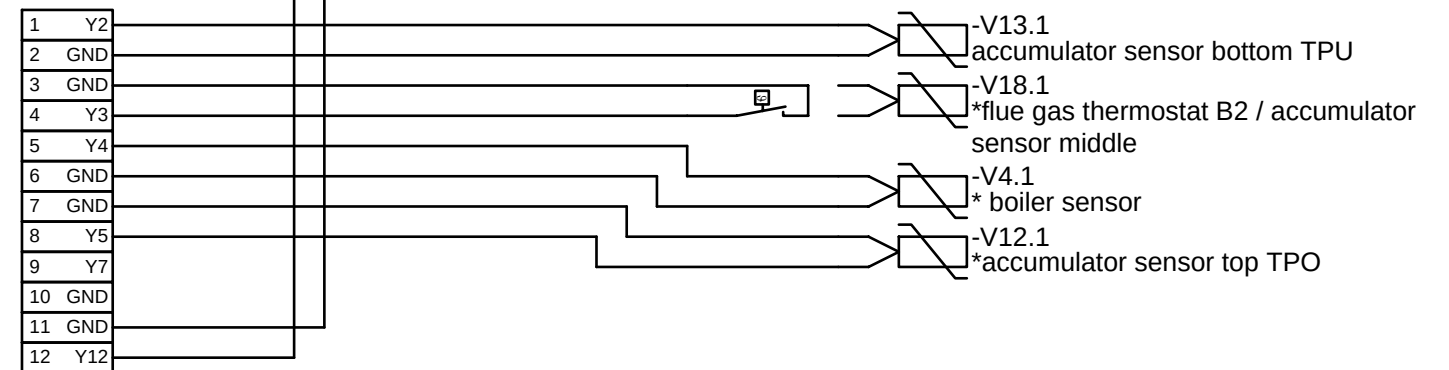
UML+
module 3
heating circuit 1



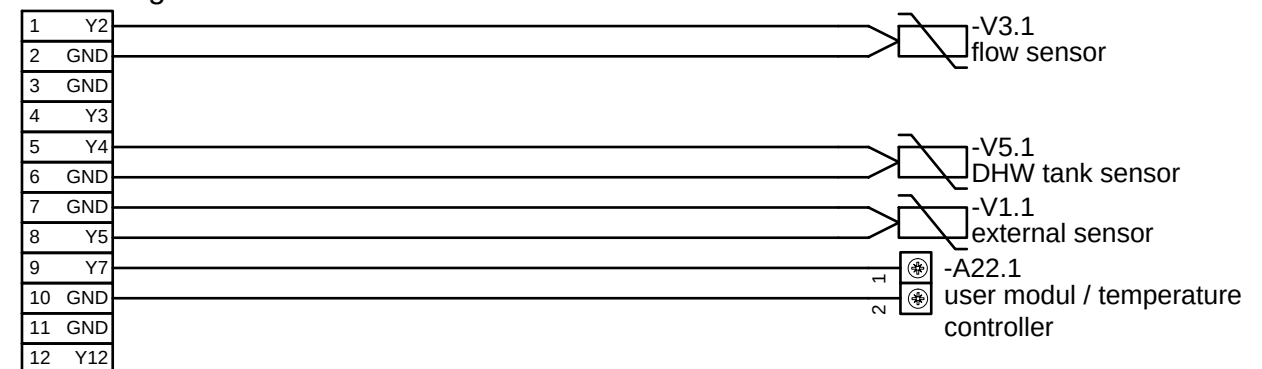
B-PLM
module 1



WVF+
module 2



UML+
module 3
heating circuit 1



*...optional/accessories

** remove resistor R2 to connect an extension control

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

B-PLM / WVF+ / UML+

Zeichnungs Nr.: **093125/01**

MES P042 + P041+ H021

outside temperature control for 1 mixed heating circuit incl. 1 hot water circuit and solid fuel module WVF+incl. burner- / accutank module B-PLM

Projekt :

control

windhager

1 mm : 1 mm

Blatt 093125/01

low voltage 230 VAC

module 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

module 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

module 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

extra low voltage - sensor

module 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

**R2

120Ω

module 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

module 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

-A24.1
master user
modul

connection expansion control

*...optional/accessories ** remove resistor R2 to connect an extension control

OT-interface

Y4.6 master

Y4.5 BUML 1 / MWLP

Y4.4

Slave BUML 2

Y4.3

Y4.2

Y4.1

Bus- Kommunikation:

☒ **S5**
ON = On
☐ OFF = Off

Mischerfunktion:

☒ **S4**
ON = On
☐ OFF = Off

Boilerladung:

☐ **S3**
ON = parallel connection
☒ OFF = priority switching

DHW tank with:

☐ **S2**
ON = loading valve
☒ OFF = loading pump

**boiler minimum
thermostat**

☐ **S1**
ON = 35C° / 95 °F
☒ OFF = 20C° / 68 °F

BUML-TTL	
Y2.6	RAM 850
Y2.5	RAM 786
Y2.4	external sensor
Y2.3	
Y2.2	DHW-tank sensor
Y2.1	
Y1.6	boiler sensor
Y1.5	
Y1.4	flow sensor
Y1.3	
Y1.2	not used
Y1.1	
X2.8 L	permanent phase
X2.7 N	DHW loading pump
X2.6 L	DHW loading valve
X2.5 N	heat pump
X2.4 L	
X2.3 L	close
X2.2 L	open
X2.1 N	motorised mixing valve
X1.1 L	connection power supply 230 VAC
X1.2 N	
X1.3 L"	
X1.4 L"	
X1.5 L'	manual switch hot water pump
X1.6 L'	manual switch heating pump
EDV Nr.: 094505/00	

094517/00

RESET	DIP	OT	Y4.6	Y4.5	Y4.4	Y4.3	Y4.2	Y4.1

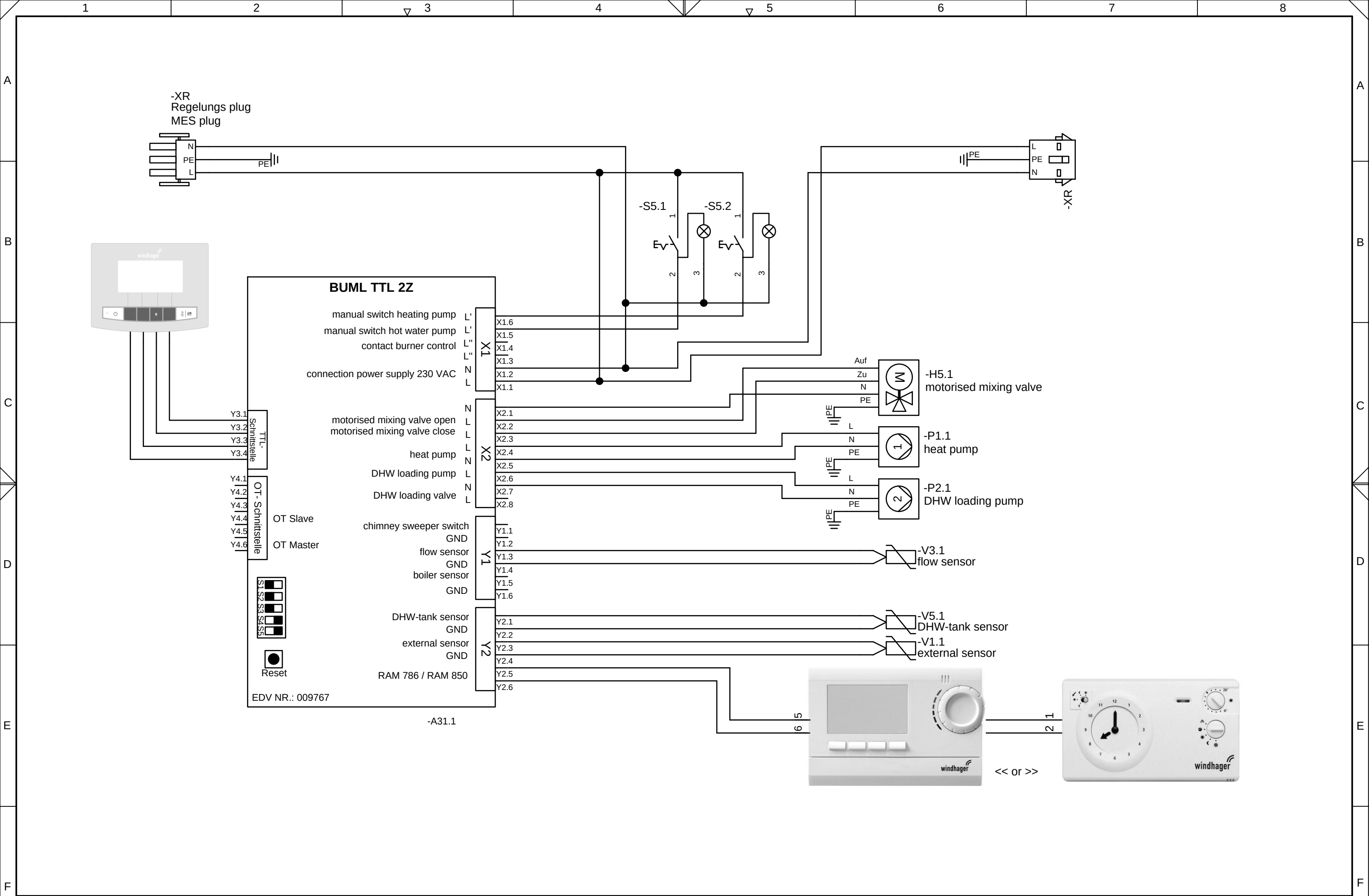
EDV Nr.: 094519/01	
manual switch heating pump	X1.6 L'
manual switch hot water pump	X1.5 L'
	X1.4 L"
	X1.3 L"
connection power supply 230 VAC	X1.2 N X1.1 L
motorised mixing valve open	X2.1 N X2.2 L
	X2.3 L
heat pump	X2.4 L X2.5 N
DHW loading valve	X2.6 L
DHW loading pump permanent phase	X2.7 N X2.8 L
not used	Y1.1 Y1.2
flow sensor	Y1.3 Y1.4
boiler sensor	Y1.5 Y1.6
DHW-tank sensor	Y2.1 Y2.2
external sensor	Y2.3 Y2.4
RAM 850 RAM 786	Y2.5 Y2.6
BUML-TTL	

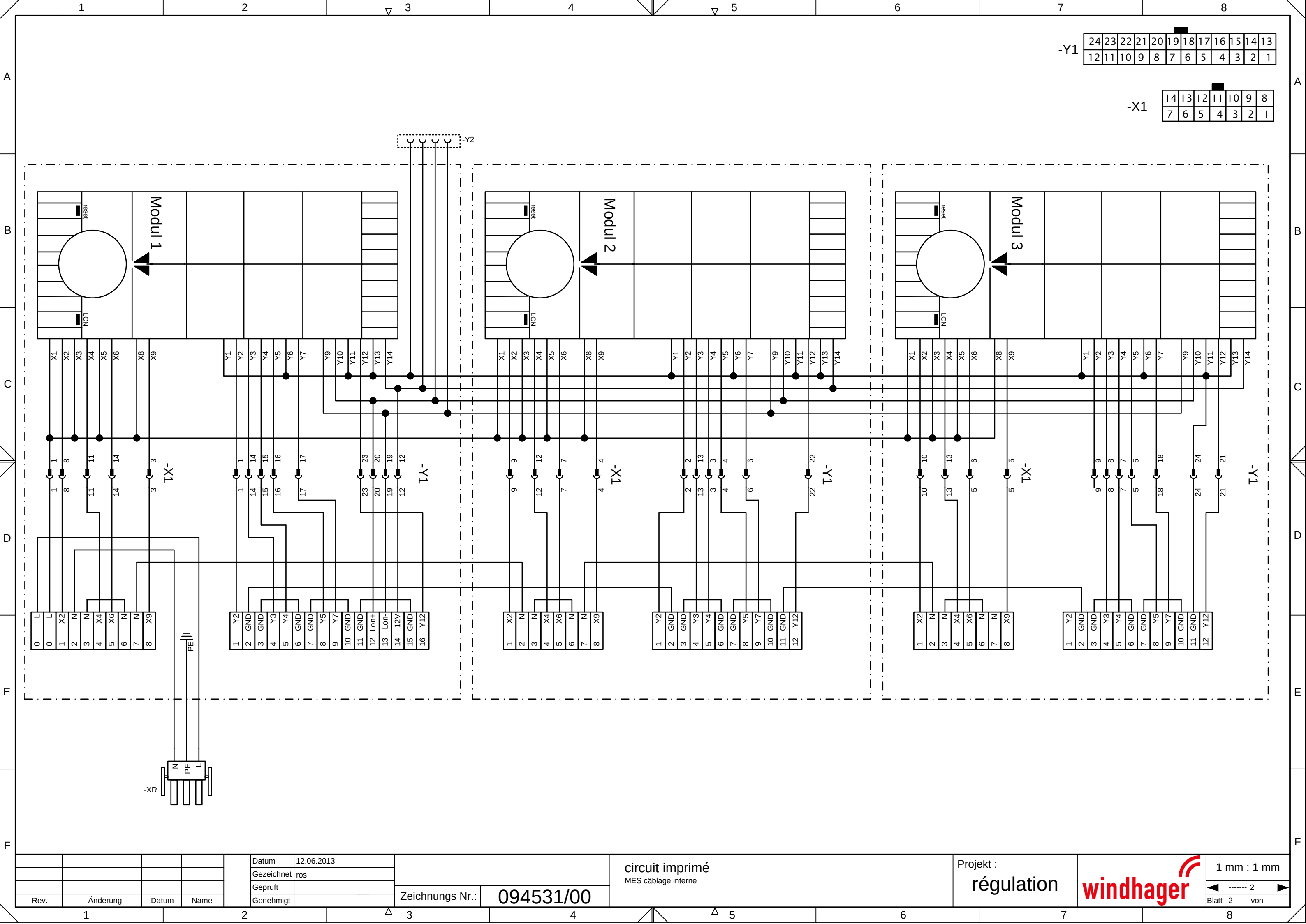
boiler minimum thermostat ☐ ON = 35C° / 95 °F ☒ OFF = 20C° / 68 °F S1	DHW tank with: ☐ ON = loading valve ☒ OFF = loading pump S2	Boilerladung: ☐ ON = parallel connection ☒ OFF = priority switching S3	Mischerfunktion: ☒ ON = On ☐ OFF = Off S4	Bus- Kommunikation: ☒ ON = On ☐ OFF = Off S5		Y4.1 Y4.2	Y4.3 Slave Y4.4 BUML 2	Y4.5 master Y4.6 BUML 1 / MWP	OT-interfaces

Y4.1	Y4.2	Y4.3	Y4.4	Y4.5	Y4.6	OT	DIP	RESET



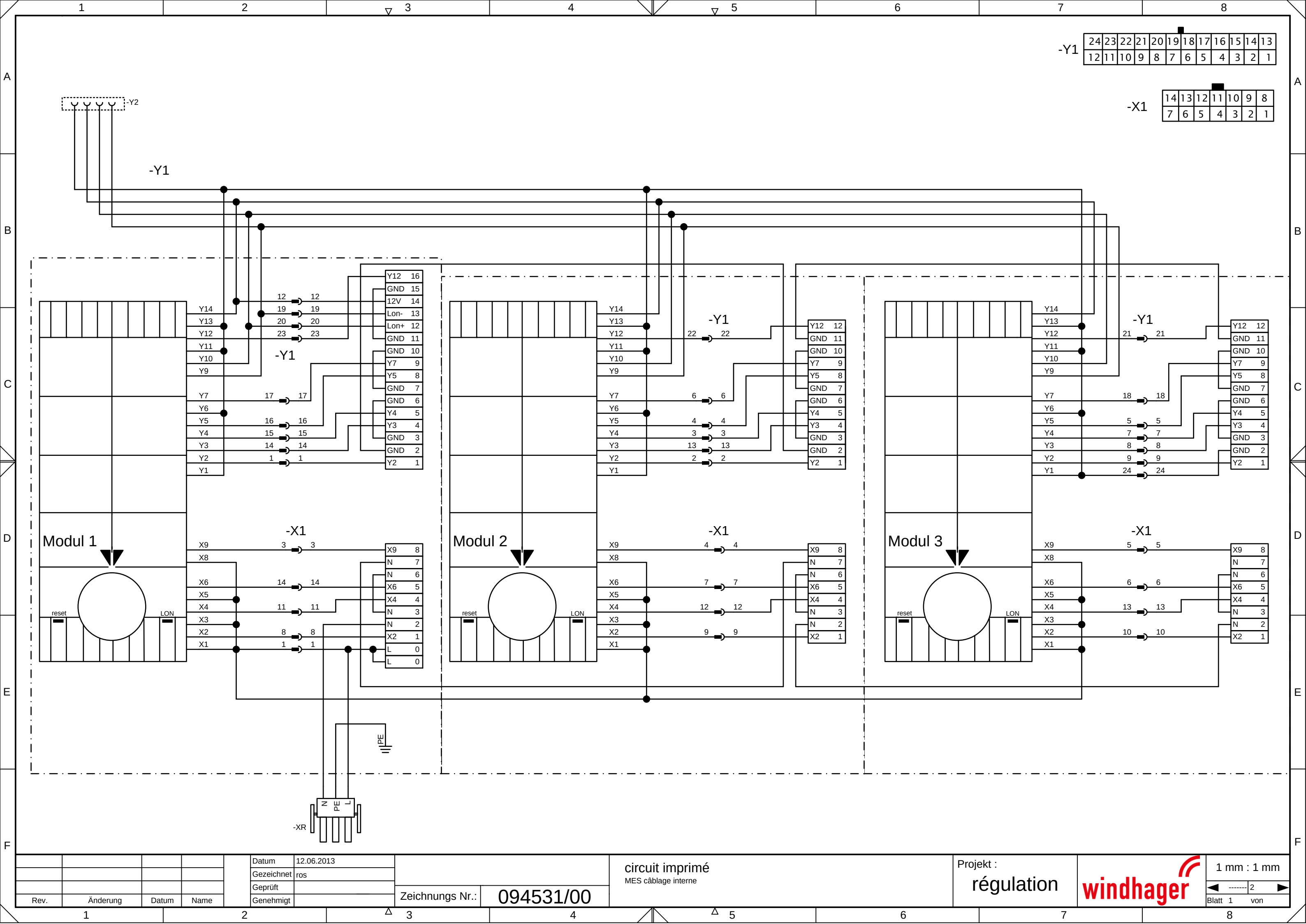
094521/00





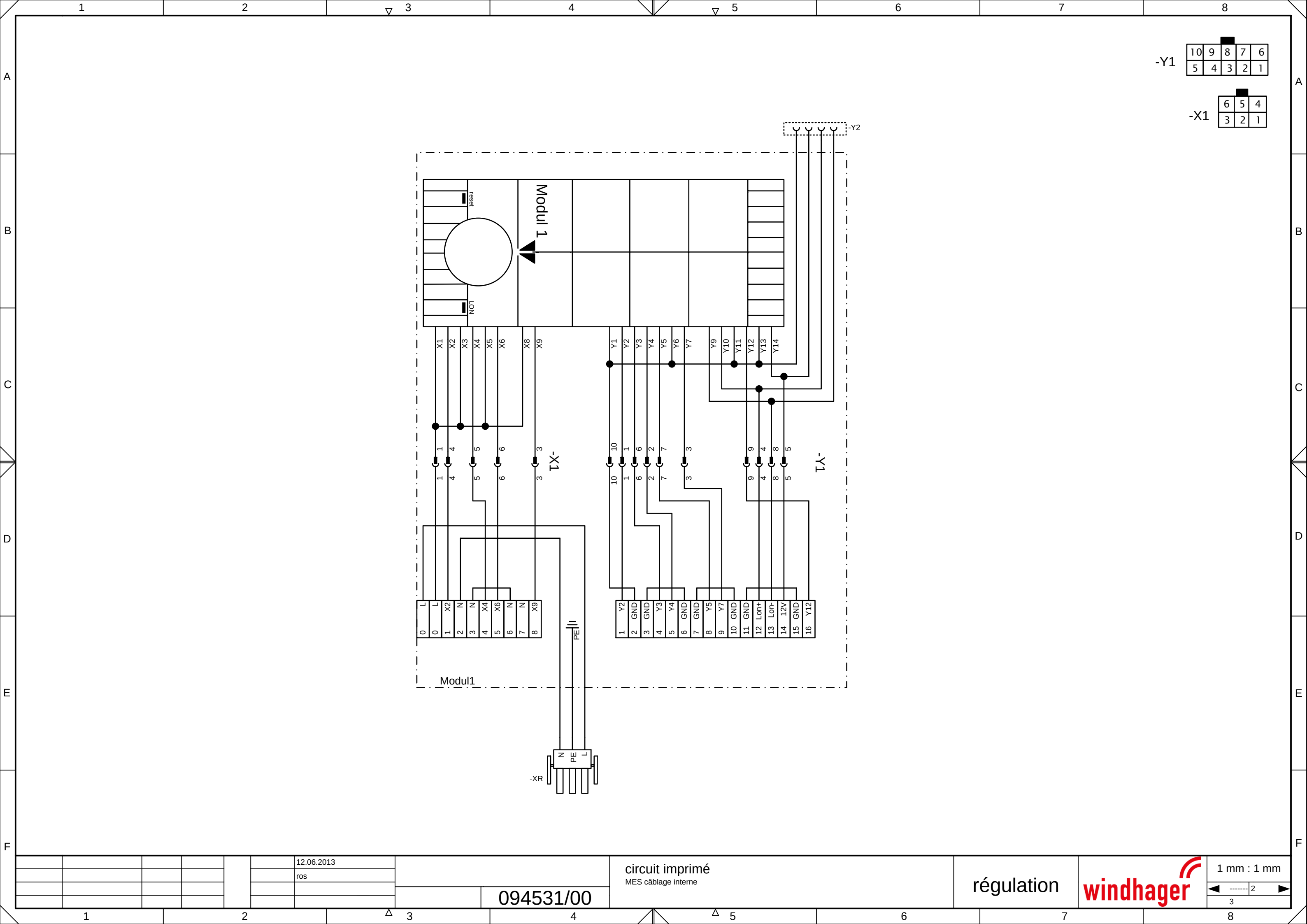
24	23	22	21	20	19	18	17	16	15	14	13
12	11	10	9	8	7	6	5	4	3	2	1

14	13	12	11	10	9	8
7	6	5	4	3	2	1



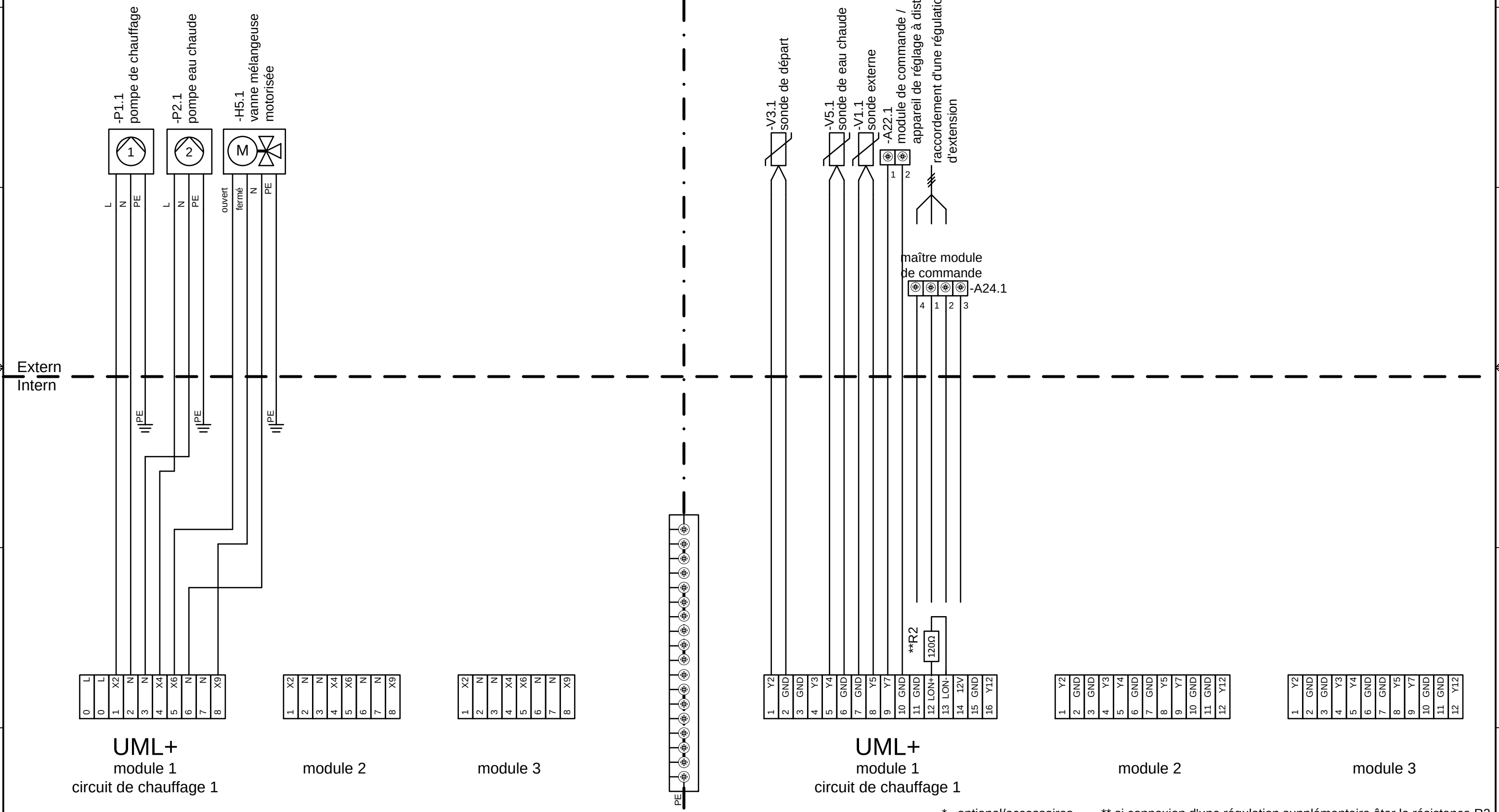
-Y1	24	23	22	21	20	19	18	17	16	15	14	13
	12	11	10	9	8	7	6	5	4	3	2	1

-X1	14	13	12	11	10	9	8
	7	6	5	4	3	2	1



tension 230 VAC

basse tension-sonde



UML+	module 1 circuit de chauffage 1
0 L	230 VAC
0 L	
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094776/00

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch.1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude HK1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

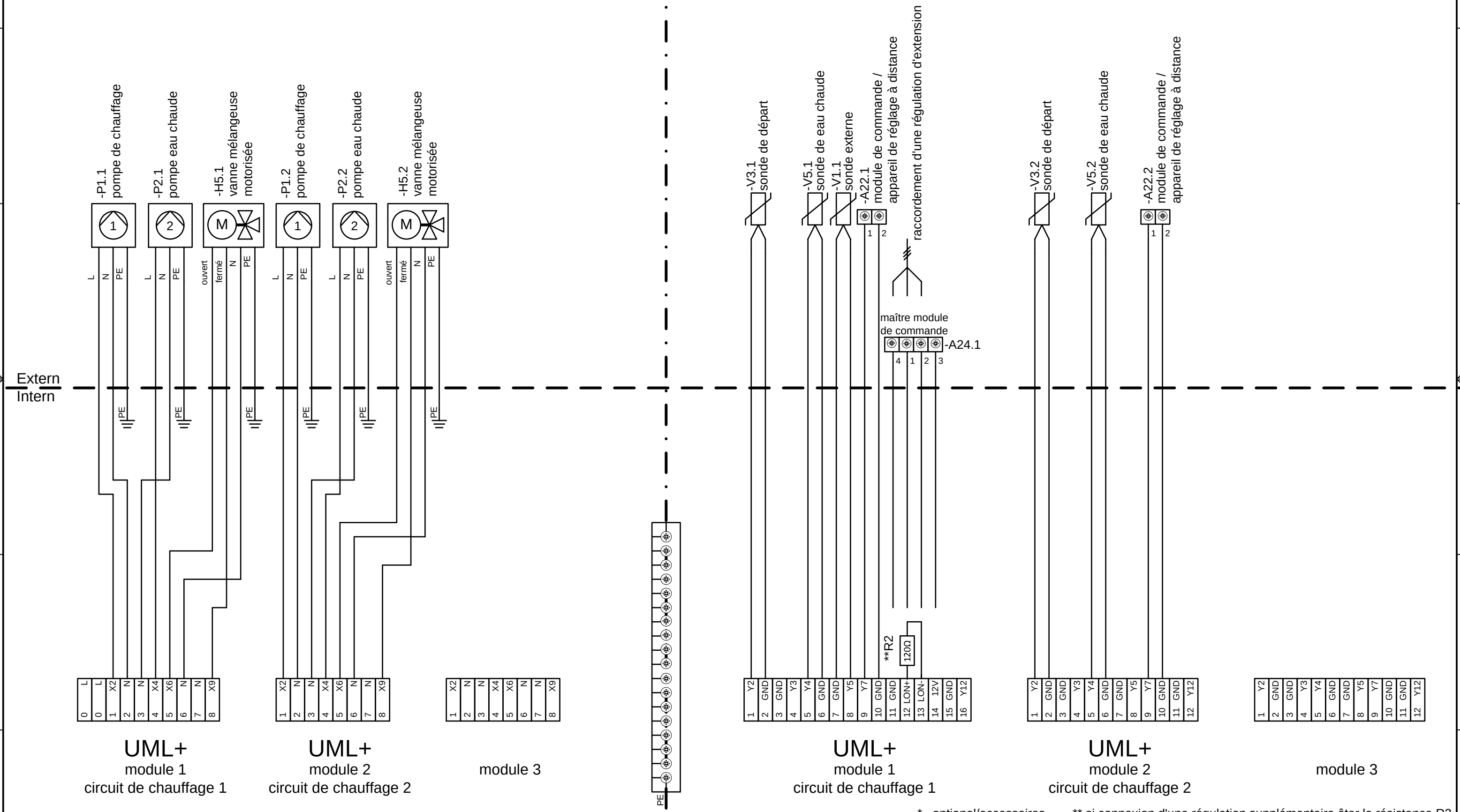
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094776/00

tension 230 VAC

basse tension-sonde



UML+	module 1 circuit de chauffage 1
0 L	230 VAC
0 L	
1 X2	pompe de chauffage
2 N	C.Ch. 1
3 N	pompe eau chaude
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse
7 N	motorisée
8 X9	C.Ch. 1 fermé

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	
11 GND	appareil de réglage à distance
12 Lon+	
13 Lon-	
14 12V	
15 GND	maître module de commande
16 Y12	

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage
2 N	
3 N	pompe eau chaude
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse
7 N	motorisée
8 X9	C.Ch. 2 fermé

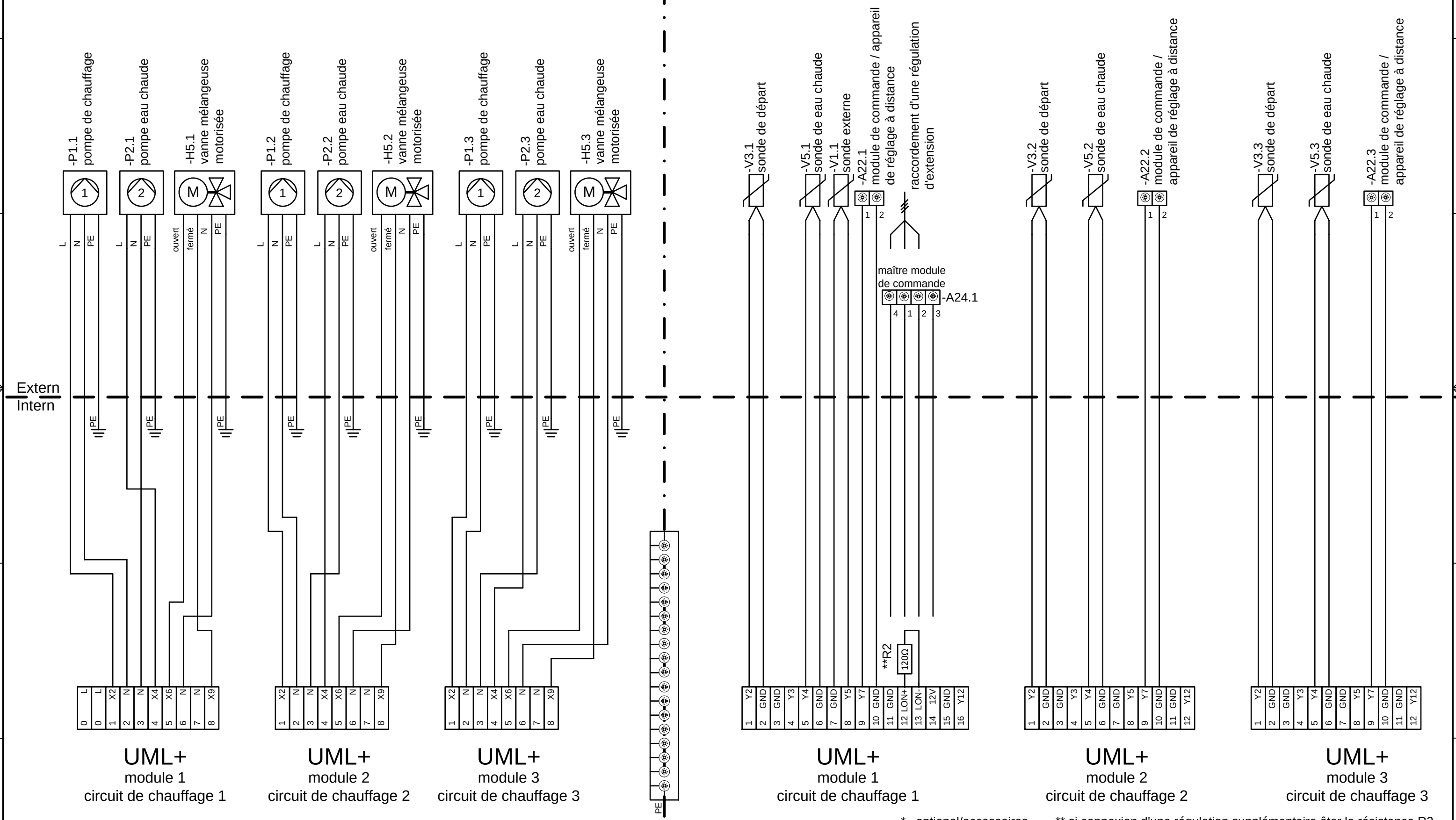
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude
6 GND	
7 GND	maître module de commande
8 Y5	
9 Y7	module de commande
10 GND	
11 GND	appareil de réglage à distance
12 Y12	

	module 3
1 X2	094778/00
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 Y2	094778/00
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	094778/00
10 GND	
11 GND	
12 Y12	

tension 230 VAC

basse tension-sonde



UML+	module 1 circuit de chauffage 1
0 L	230 VAC
0 L	
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 2 fermé
6 N	
7 N	
8 X9	

UML+	module 3 circuit de chauffage 3
1 X2	pompe de chauffage C.Ch. 3
2 N	
3 N	pompe eau chaude C.Ch. 3
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 3 fermé
6 N	
7 N	
8 X9	

094782/00

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

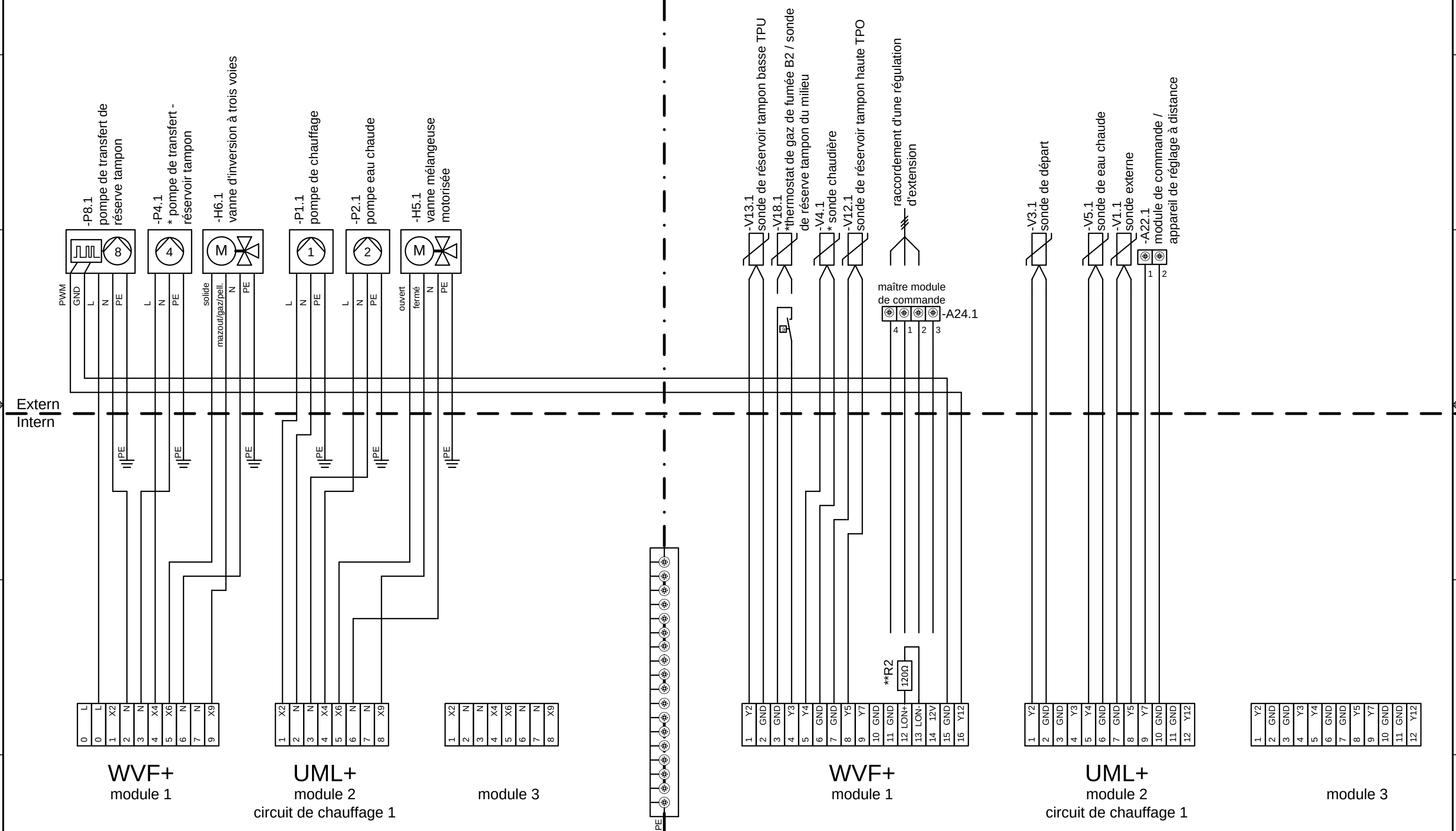
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 3
1 Y2	sonde de départ HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 3
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

094782/00

tension 230 VAC

basse tension-sonde



WVF+	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*pompe de transfert réservoir tampon
4 X4	
5 X6	solide vanne d'inversion à trois voies mazout/gaz/pell.
6 N	
7 N	
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

	module 3
1 X2	094787/00
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

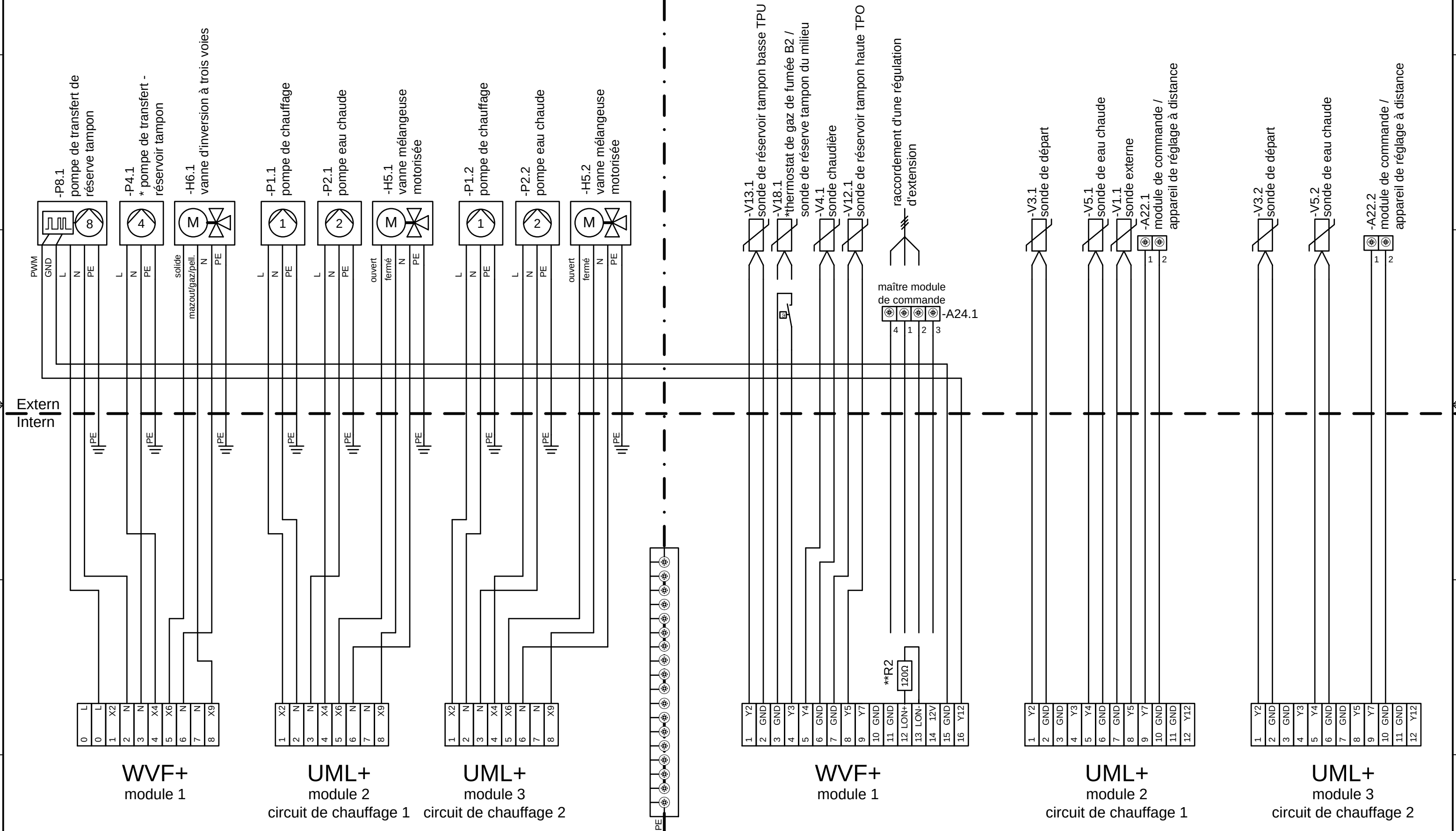
WVF+	module 1
1 Y2	sonde de réservoir tampon basse TPU
2 GND	
3 GND	*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu
4 Y3	
5 Y4	*sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe de transfert de réserve tampon
16 Y12	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	094787/00
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

tension 230 VAC

basse tension-sonde



WVF+	module 1
0 L	230 VAC
0 L	
1 X2	solide vanne d'inversion à trois voies mazout/gaz/pell.
2 N	
3 N	
4 X4	
*pompe de transfert	
5 X6	solide vanne d'inversion à trois voies mazout/gaz/pell.
6 N	
7 N	
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 2 fermé
6 N	
7 N	
8 X9	

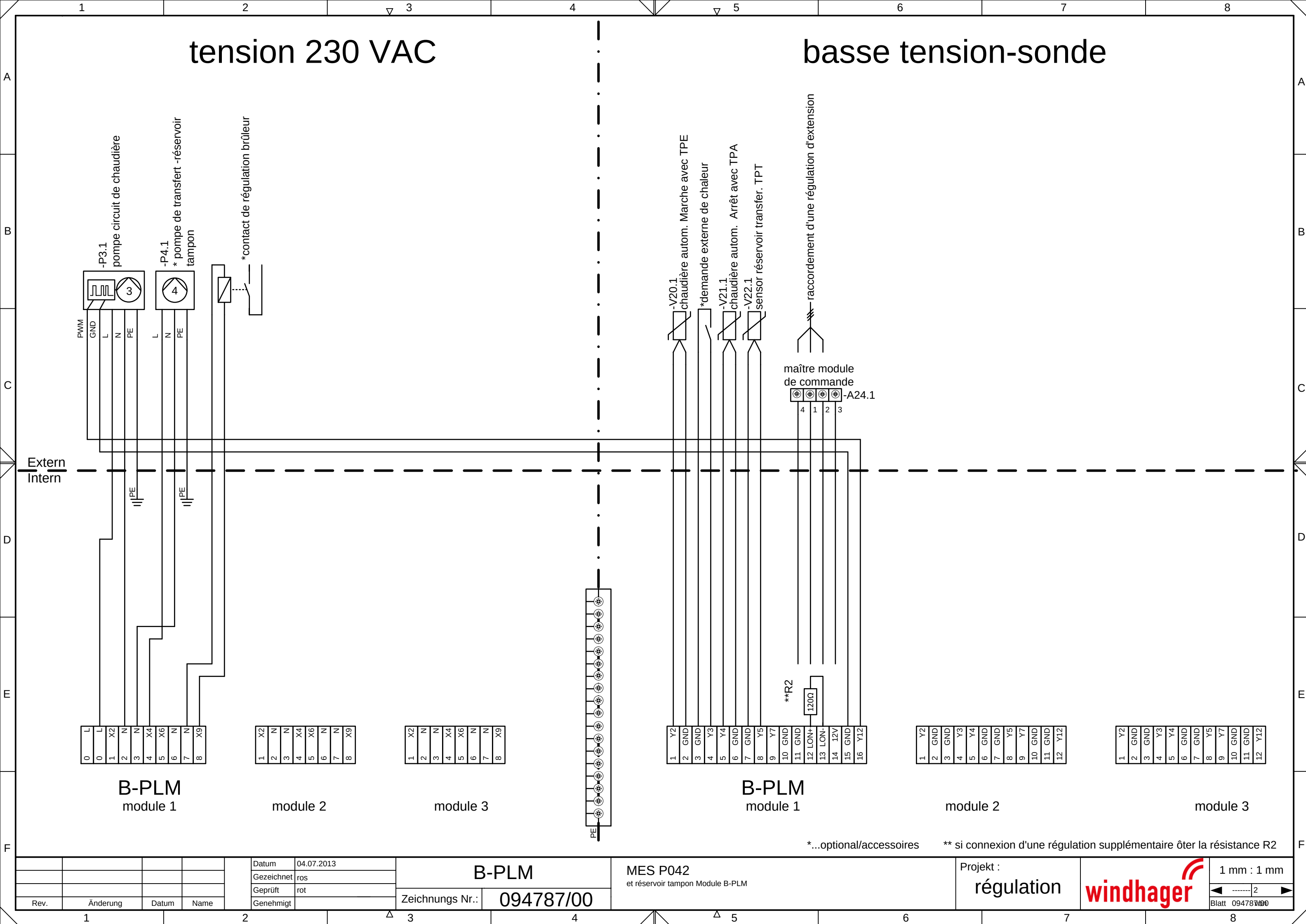
094786/00

WVF+	module 1
1 Y2	sonde de réservoir tampon basse TPU
2 GND	
3 GND	*thermostat de gaz de fumée B2/ sonde de réserve tampon du milieu
4 Y3	
5 Y4	* sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe de transfert de réserve tampon
16 Y12	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

094786/00



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* pompe de transfert réservoir tampon
4 X4	
5 X6	
6 N	
7 N	
8 X9	*brûleur contact

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094788/00

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	* chaudière autom. Arrêt avec TPA
6 GND	
7 GND	* sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	
13 Lon-	
14 12V	régulation d'extension
15 GND	
16 Y12	pompe du circuit chaudière

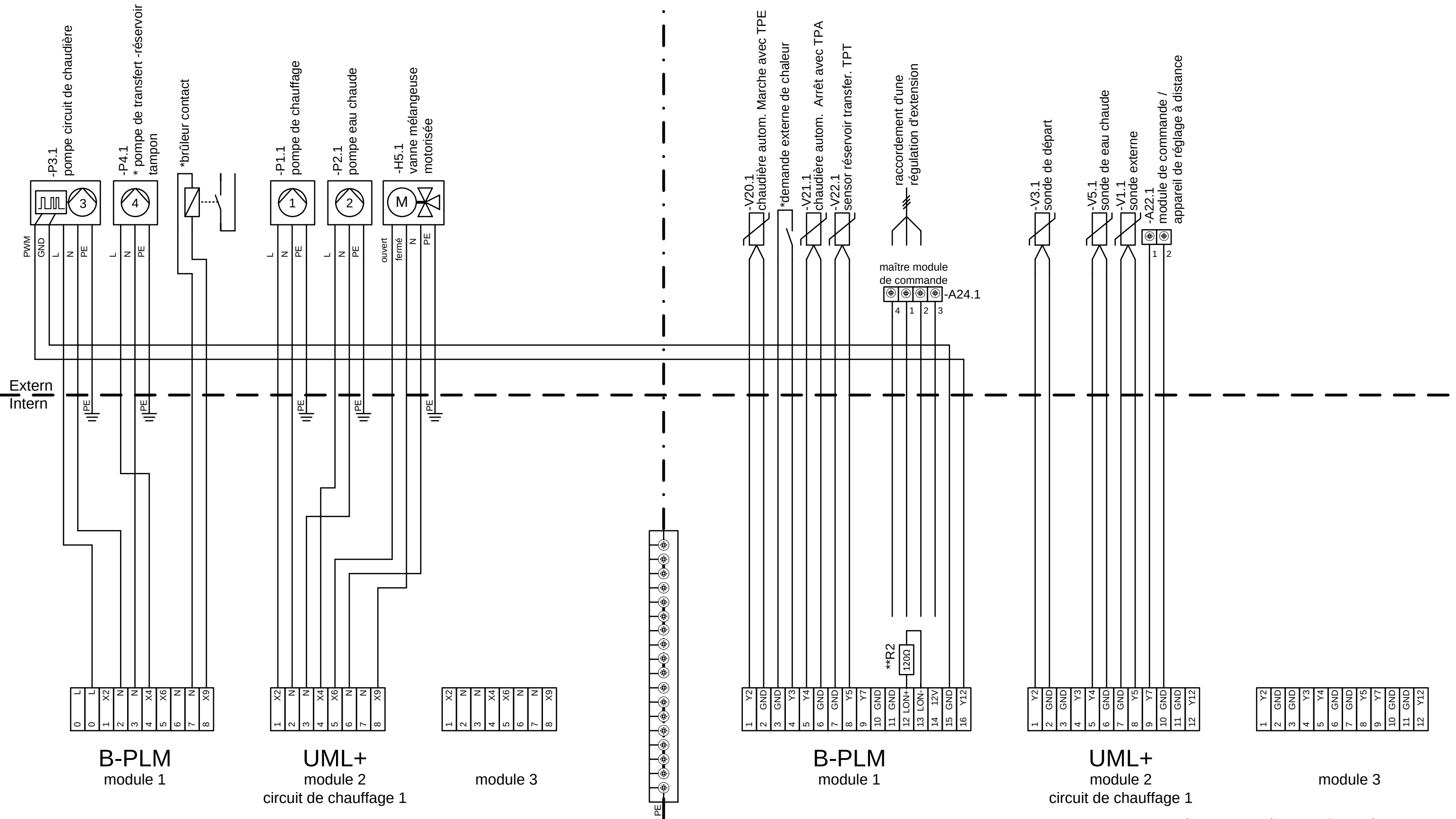
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094788/00

tension 230 VAC

basse tension-sonde



*...optional/accessoires

****** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis et brûleur/ module réservoir tampon B-PLM	Projekt : régulation		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094789/00				

B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	*pompe de transfert
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 1 fermé
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	094790/00
6 N	
7 N	
8 X9	

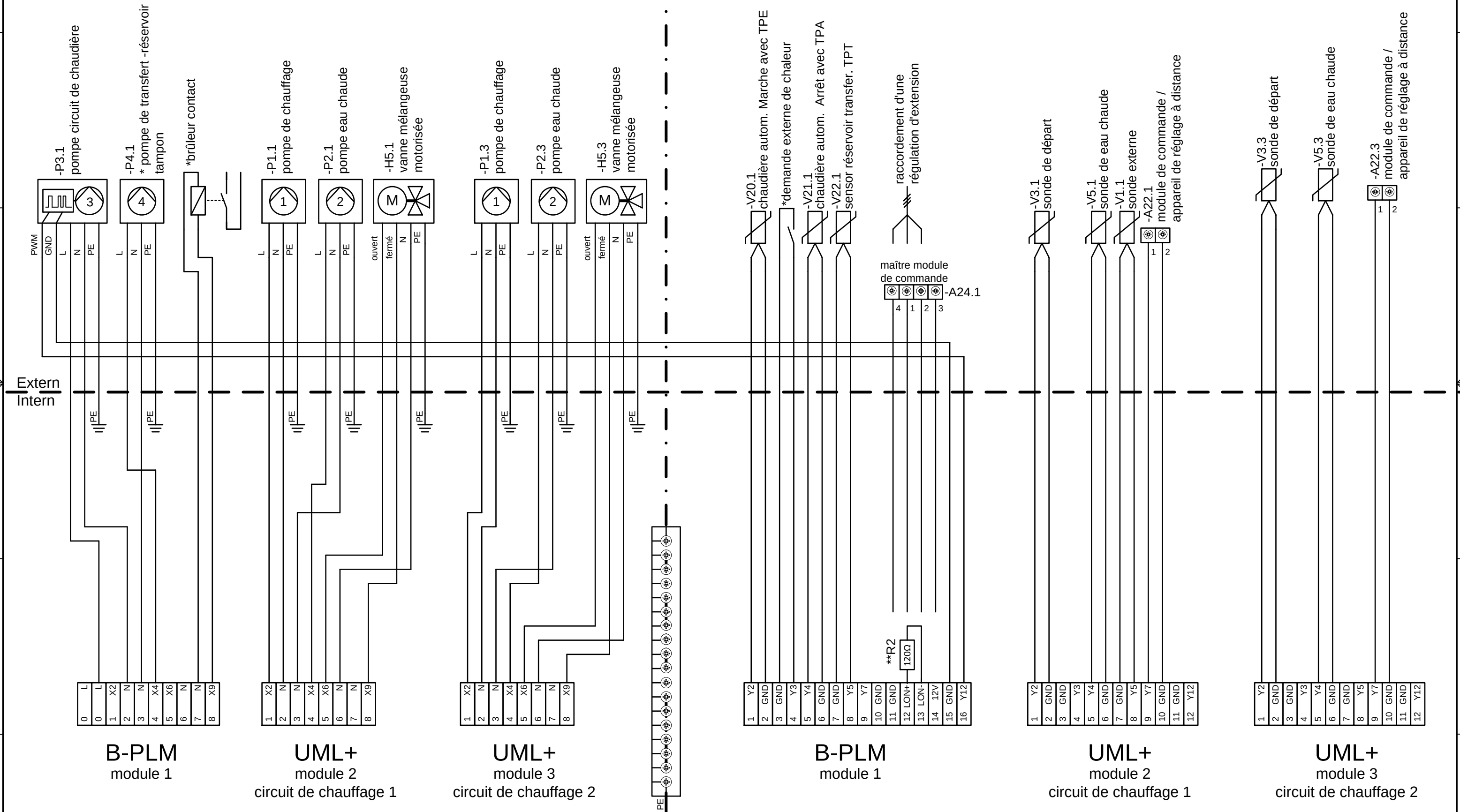
B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

tension 230 VAC

basse tension-sonde



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	*pompe de transfert
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 1 fermé
8 X9	

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 2 fermé
8 X9	

094792/00

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

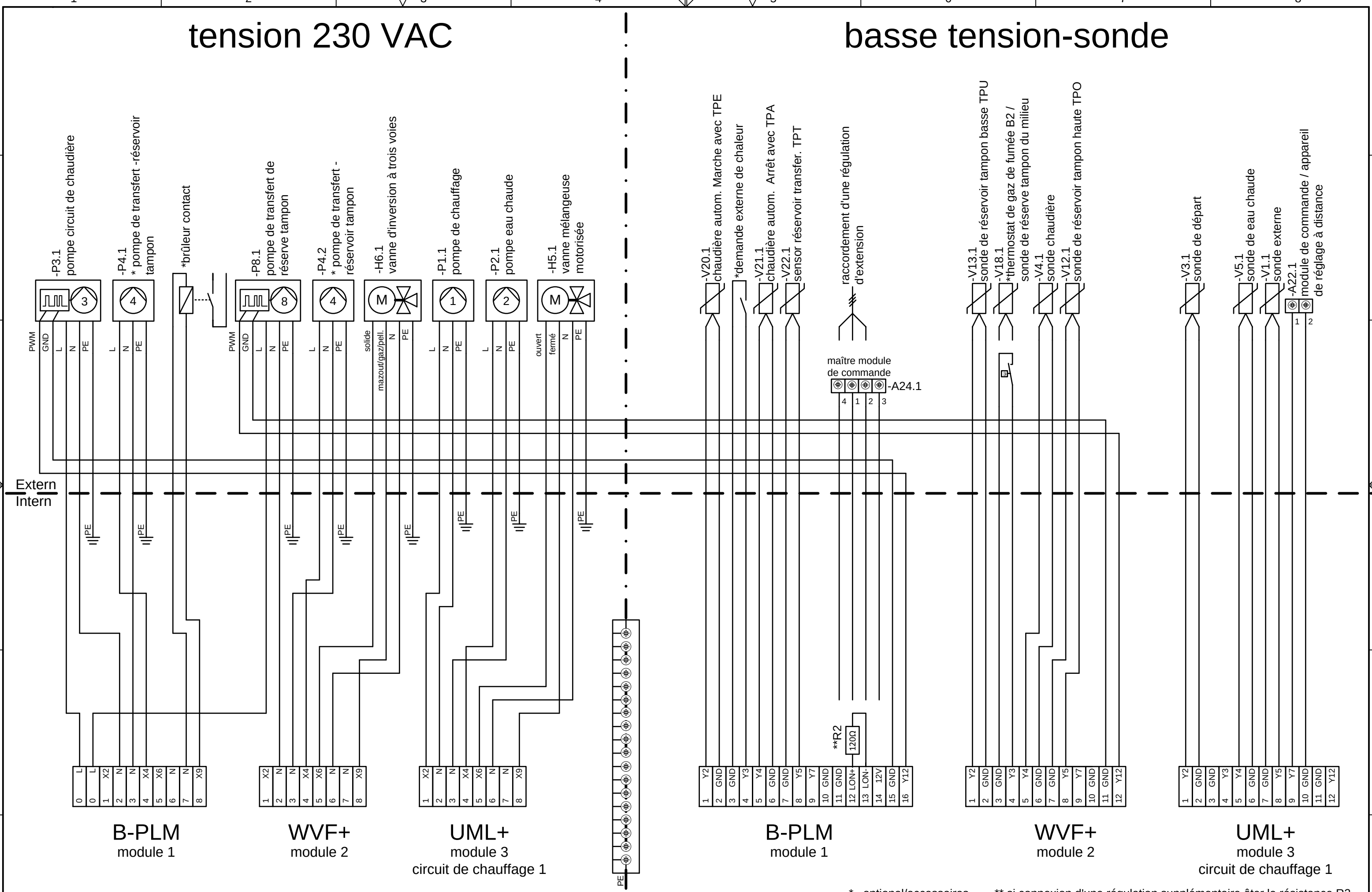
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

094792/00

tension 230 VAC

basse tension-sonde



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*pompe de transfert réservoir tampon
4 X4	
5 X6	
6 N	
7 N	
8 X9	

WVF+	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	solide vanne d'inversion à trois voies mazout/gaz/pell.
6 N	
7 N	
8 X9	

UML+	module 3 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 1 fermé
8 X9	

094794/00

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

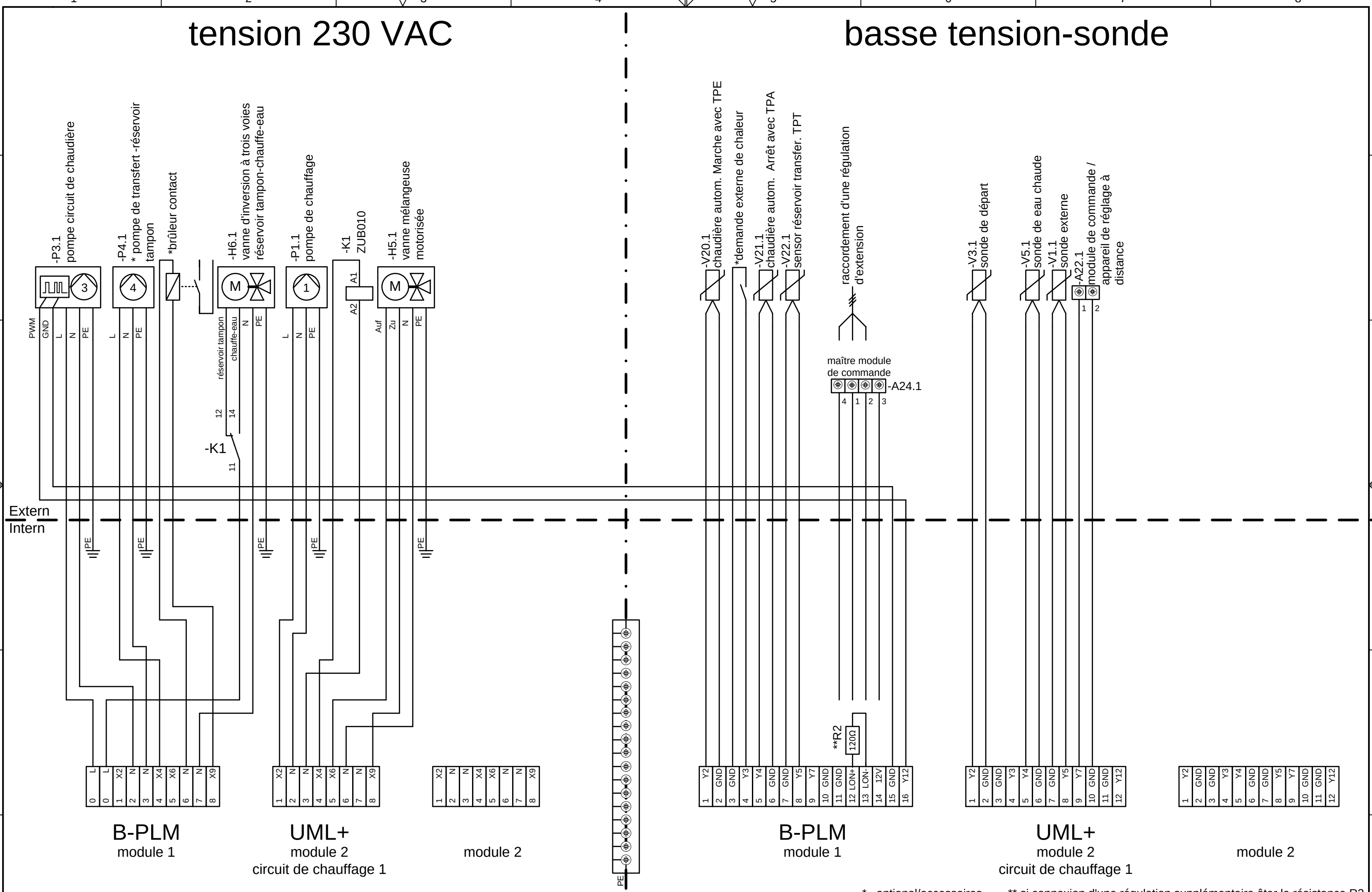
WVF+	module 2
1 Y2	réservoir tampon bas TPU
2 GND	
3 GND	*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu
4 Y3	
5 Y4	*sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM pompe de transfert de réserve tampon
12 Y12	

UML+	module 3 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

094794/00

tension 230 VAC

basse tension-sonde



B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	* pompe de transfert
2 N	
3 N	* pompe de transfert
4 X4	
5 X6	*contact brûleur
6 N	
7 N	
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	contacteur -K1 C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

	module 3
1 X2	094796/00
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

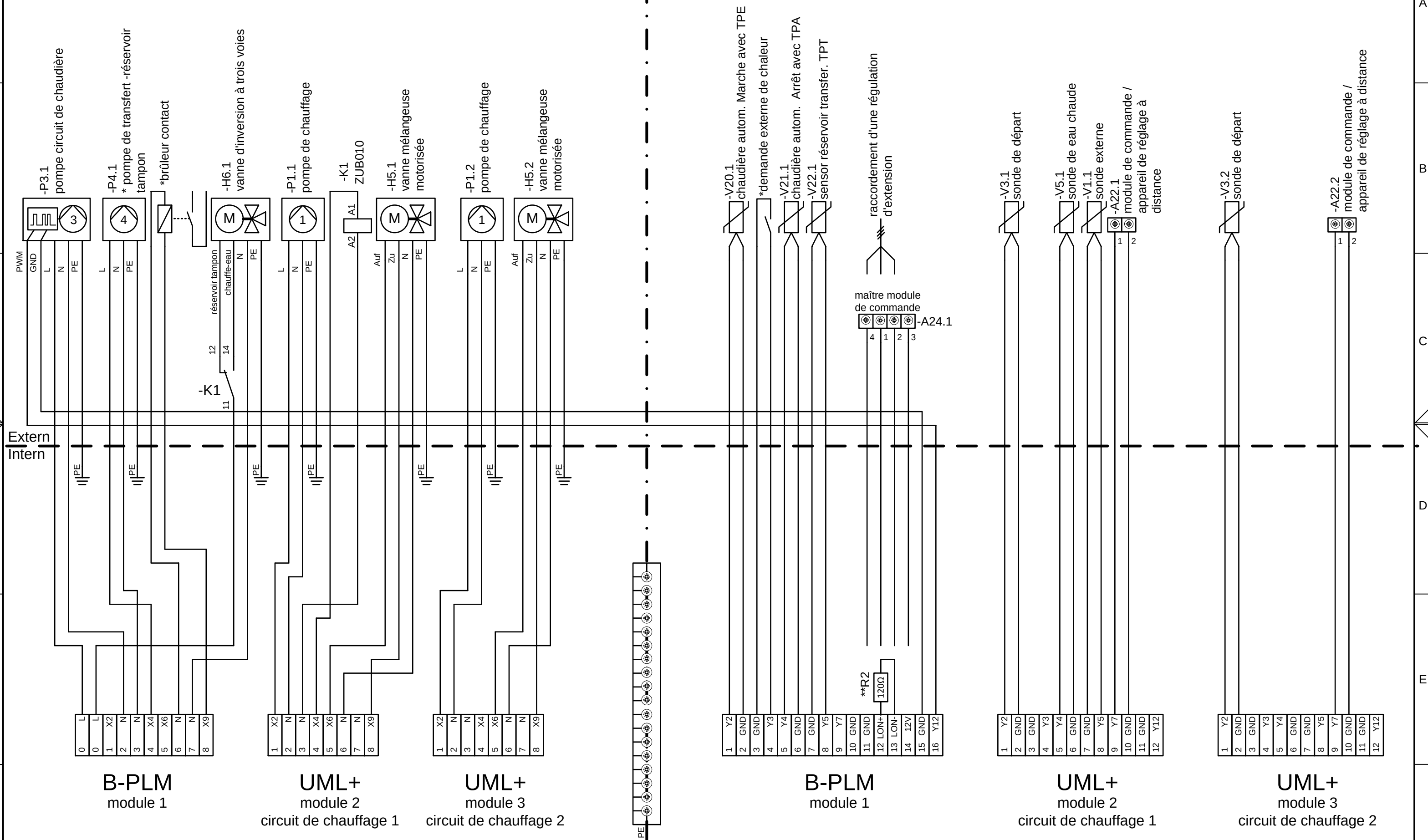
B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	* demande externe de chaleur
4 Y3	
5 Y4	* chaudière autom. Arrêt avec TPA
6 GND	
7 GND	* sensor réservoir transf. TPT
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	12 Y12
12 Y12	

	module 3
1 Y2	094796/00
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	
12 Y12	

tension 230 VAC

basse tension-sonde



				Datum	12.08.2013	B-PLM/UML+/UML+		MES ZUB010 + H024 ZUB010 SYS403 vanne d'inversion à trois voies réservoir tampon - chauffe-eau		Projekt : régulation		1 mm : 1 mm
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094797/00					Blatt 094797/00

B-PLM	module 1
0 L	230 VAC
0 L	
1 X2	* pompe de transfert
2 N	
3 N	* pompe de transfert
4 X4	
5 X6	*contact brûleur
6 N	
7 N	
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	contacteur -K1 C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	
8 X9	
	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	C.Ch. 2 fermé
8 X9	

094799/00

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	* demande externe de chaleur
4 Y3	
5 Y4	* chaudière autom. Arrêt avec TPA
6 GND	
7 GND	* sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	maître module de commande raccordement d'une régulation d'extension
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	module de commande appareil de réglage à distance
11 GND	
12 Y12	

094799/00

1	module 1
0 L	230 VAC
0 L	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

094801/00

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

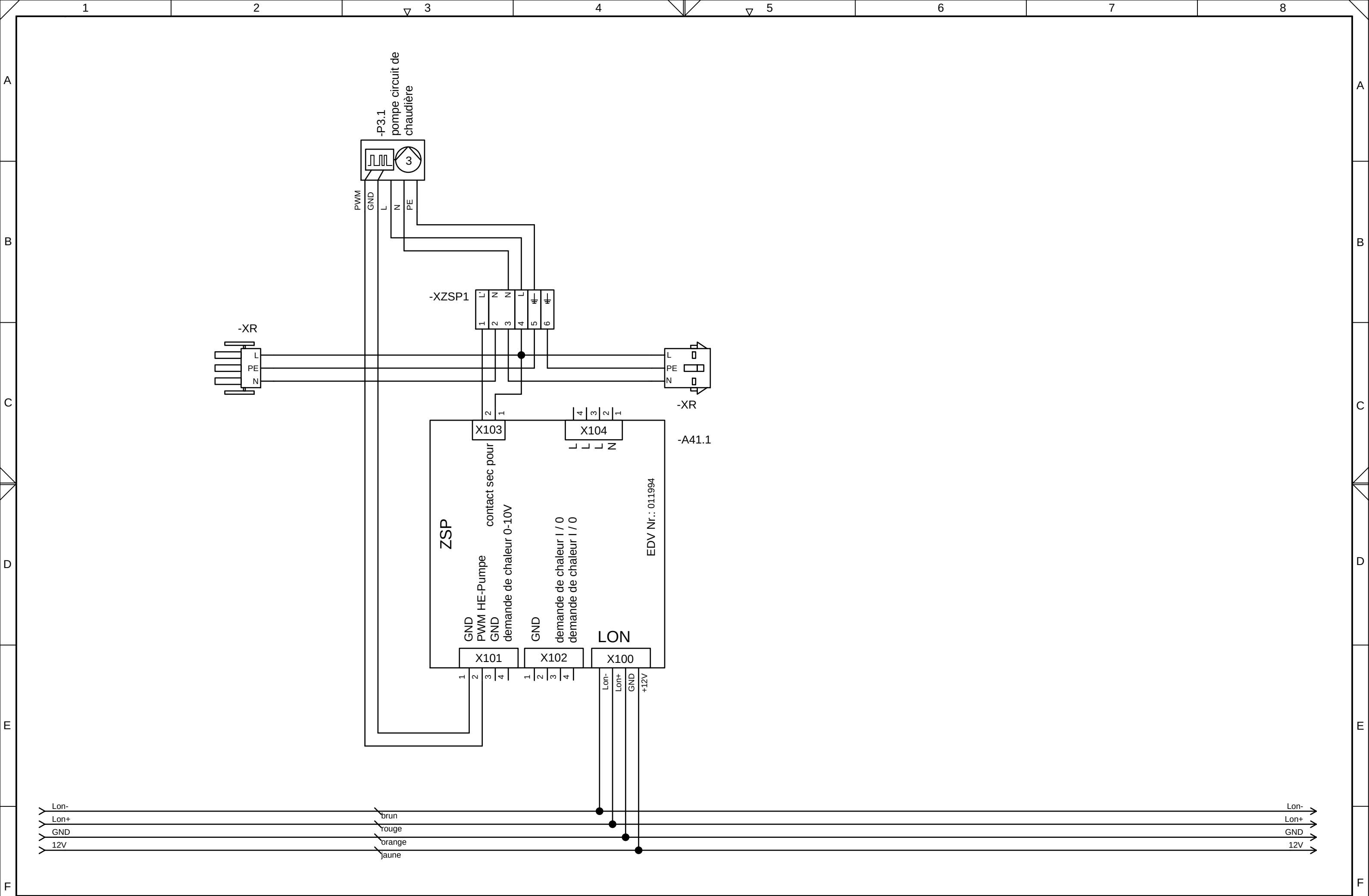
094801/00

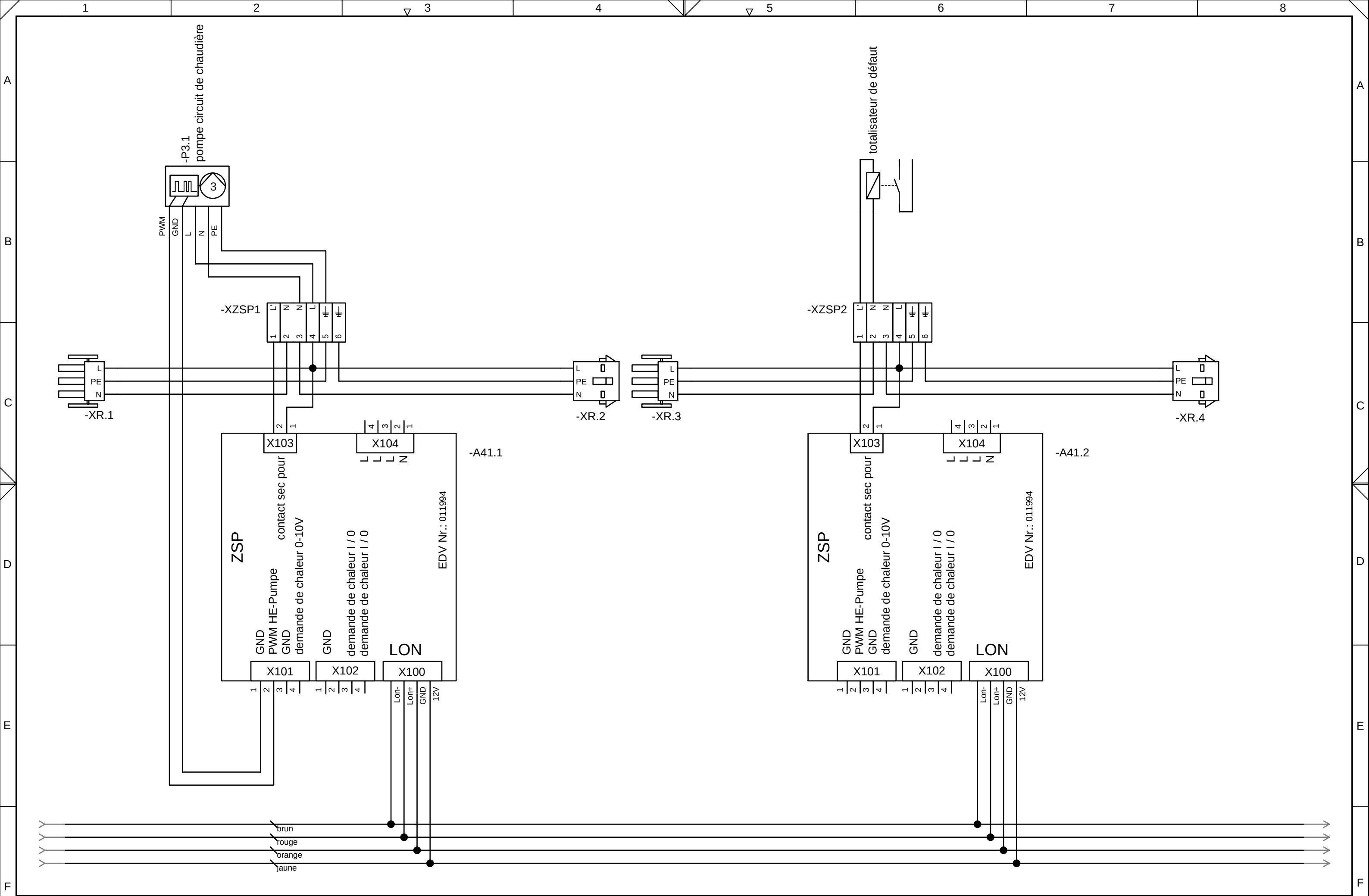
-XZSP	platine supplémentaire
L'	
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	platine supplémentaire
PWM pompe circuit de chaudière	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4





-XZSP	platine supplémentaire
L' N	totalisateur de défaut
N L	Phase permanente
PE PE	PE

EDV Nr. 094808/00

-XSP	platine supplémentaire
	GND -X101 /2
	GND -X101 /4

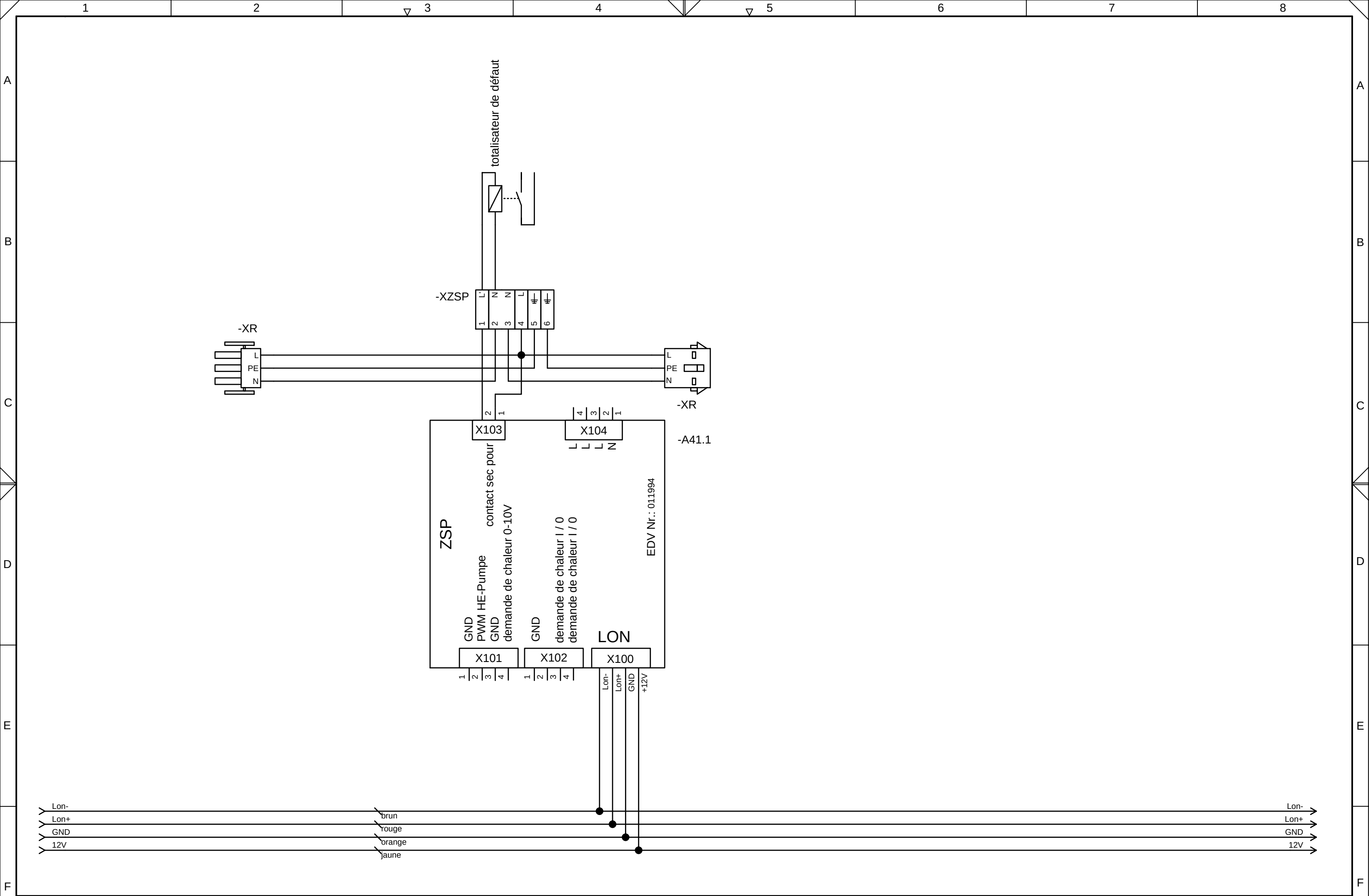
	GND
	-X102 /2
	-X102 /3
	-X102 /4

-XZSP	platine supplémentaire
L'	
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	platine supplémentaire
PWM pompe circuit de chaudière	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

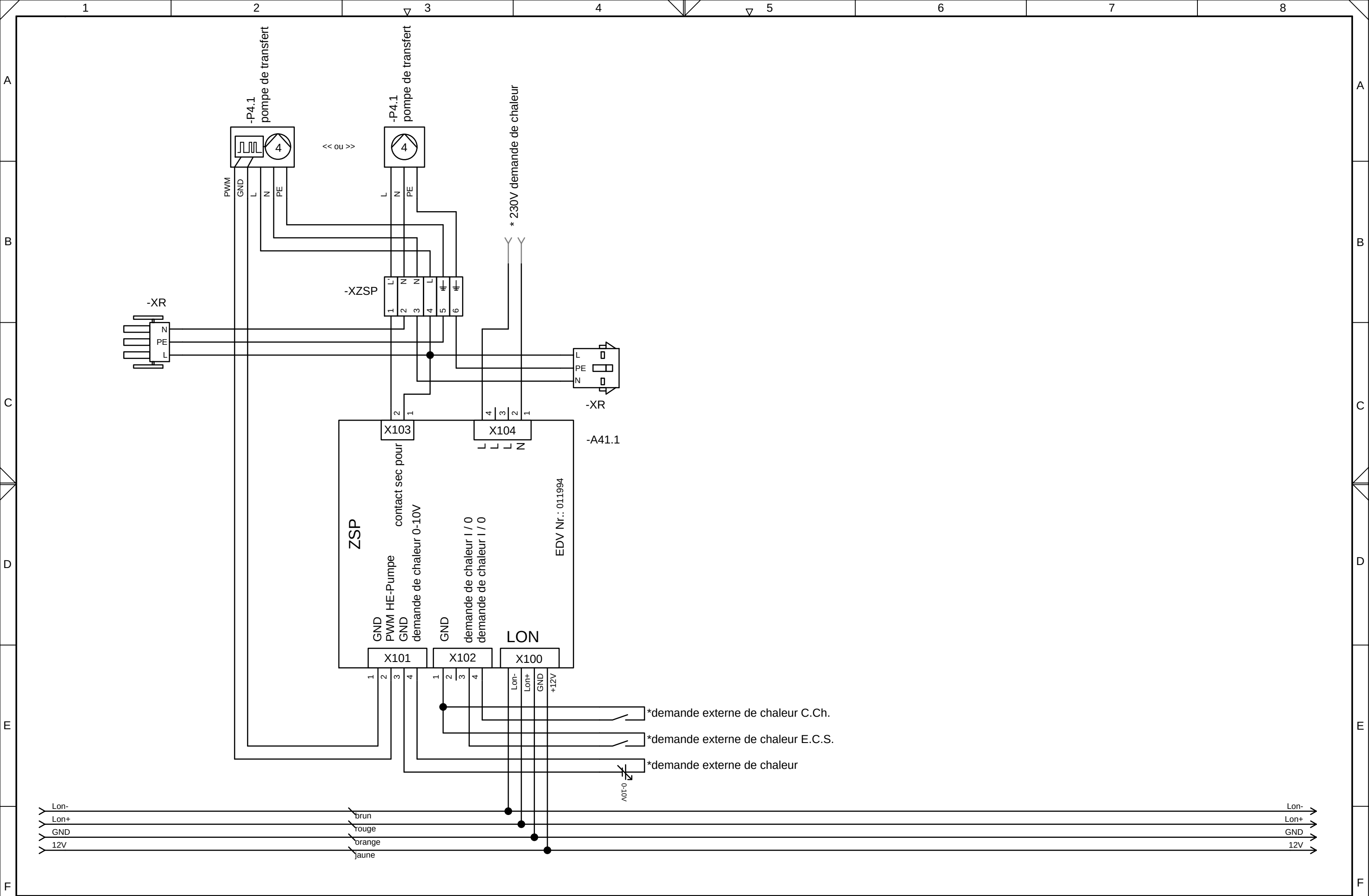


-XZSP	platine supplémentaire
L' N	totalisateur de défaut
N L	Phase permanente
PE PE	PE

EDV Nr. 094808/00

-XSP	platine supplémentaire
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4



-XZSP	platine supplémentaire
L' N	pompe de transfert
N L	Phase permanente
PE PE	PE

EDV Nr. 094809/00

-XSP	platine supplémentaire
PWM pompe de transfert	GND -X101 /2
demande de chaleur 0-10V	GND -X101 /4

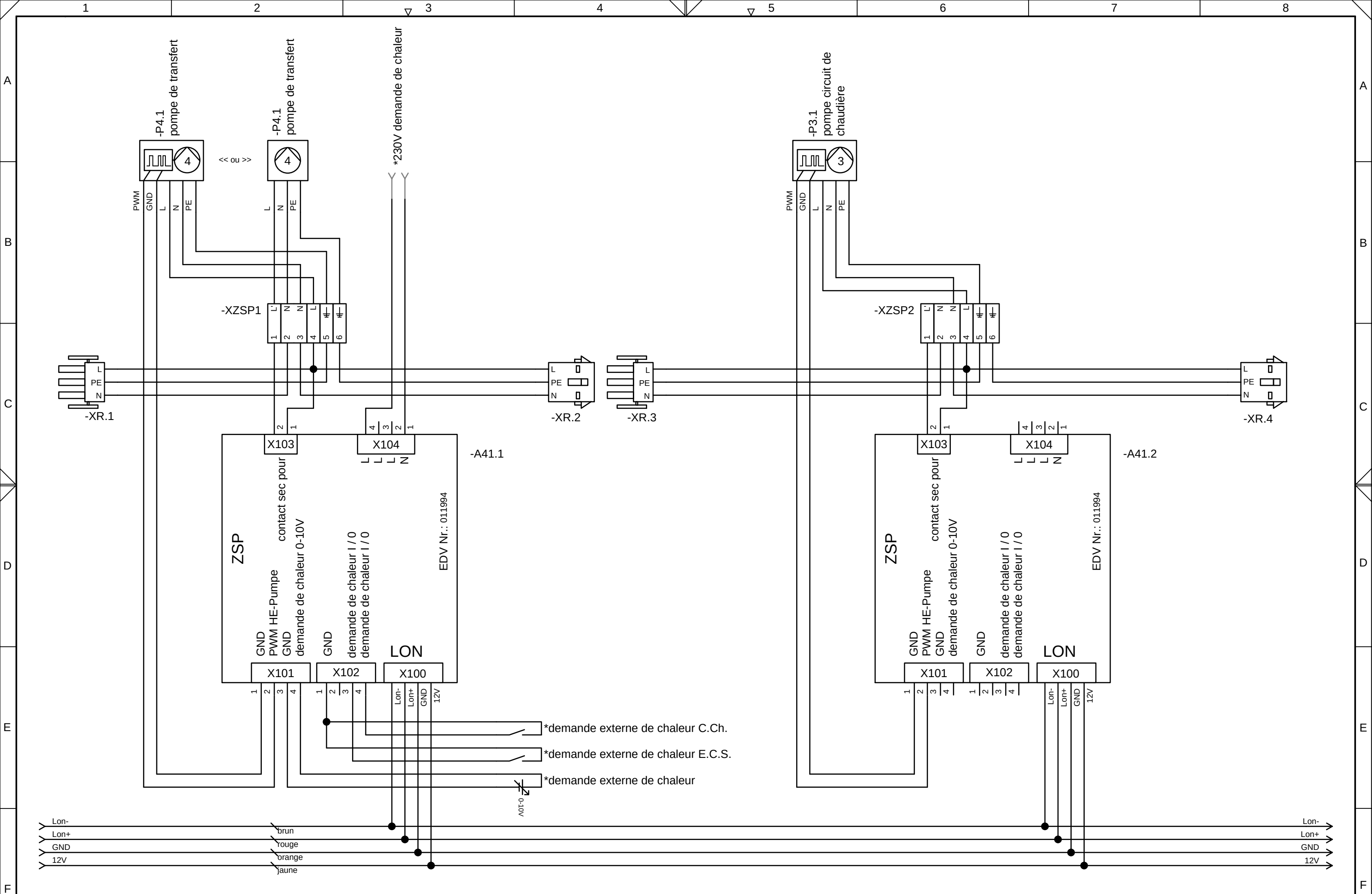
GND -X102 /2	GND
demande de chaleur externe E.C.S.	-X102 /3
demande de chaleur externe C.Ch.	-X102 /4

-XZSP	platine supplémentaire
L'	
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	platine supplémentaire
PWM pompe circuit de chaudière	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

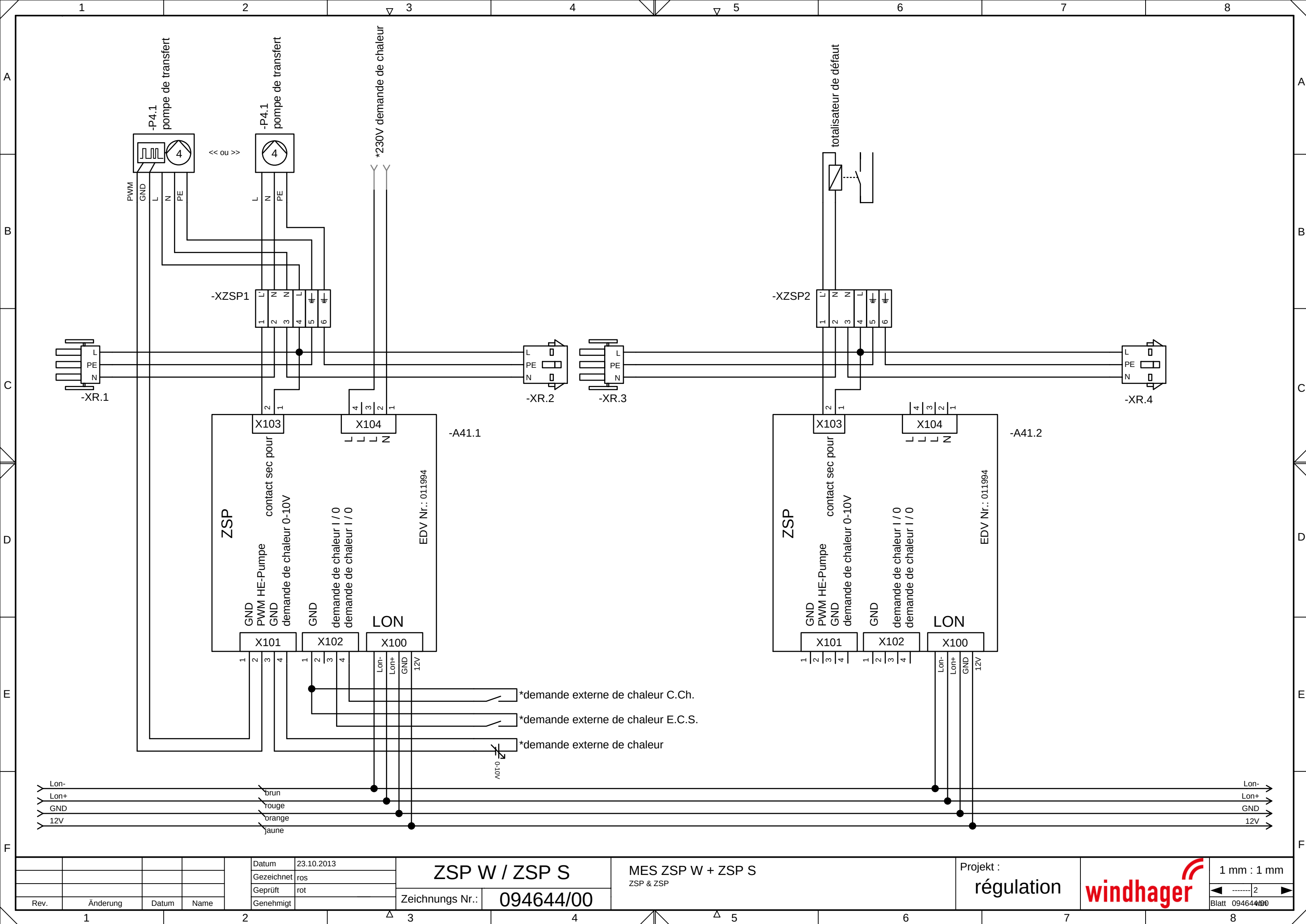


-XZSP	platine supplémentaire
L' N	pompe de transfert
N L	Phase permanente
PE PE	PE

EDV Nr. 094809/00

-XSP	platine supplémentaire
PWM pompe de transfert	GND -X101 /2
demande de chaleur 0-10V	GND -X101 /4

GND -X102 /2	GND
demande de chaleur externe E.C.S.	-X102 /3
demande de chaleur externe C.Ch.	-X102 /4



-XZSP	platine supplémentaire
L' N	totalisateur de défaut
N L	Phase permanente
PE PE	PE

EDV Nr. 094808/00

-XSP	platine supplémentaire
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

-XZSP	platine supplémentaire
L' N	pompe de transfert
N L	Phase permanente
PE PE	PE

EDV Nr. 094809/00

-XSP	platine supplémentaire
PWM pompe de transfert	GND -X101 /2
demande de chaleur 0-10V	GND -X101 /4

GND -X102 /2	GND
demande de chaleur externe E.C.S.	-X102 /3
demande de chaleur externe C.Ch.	-X102 /4

-XZSP	platine supplémentaire
L' N	pompe de transfert
N L	Phase permanente
PE PE	PE

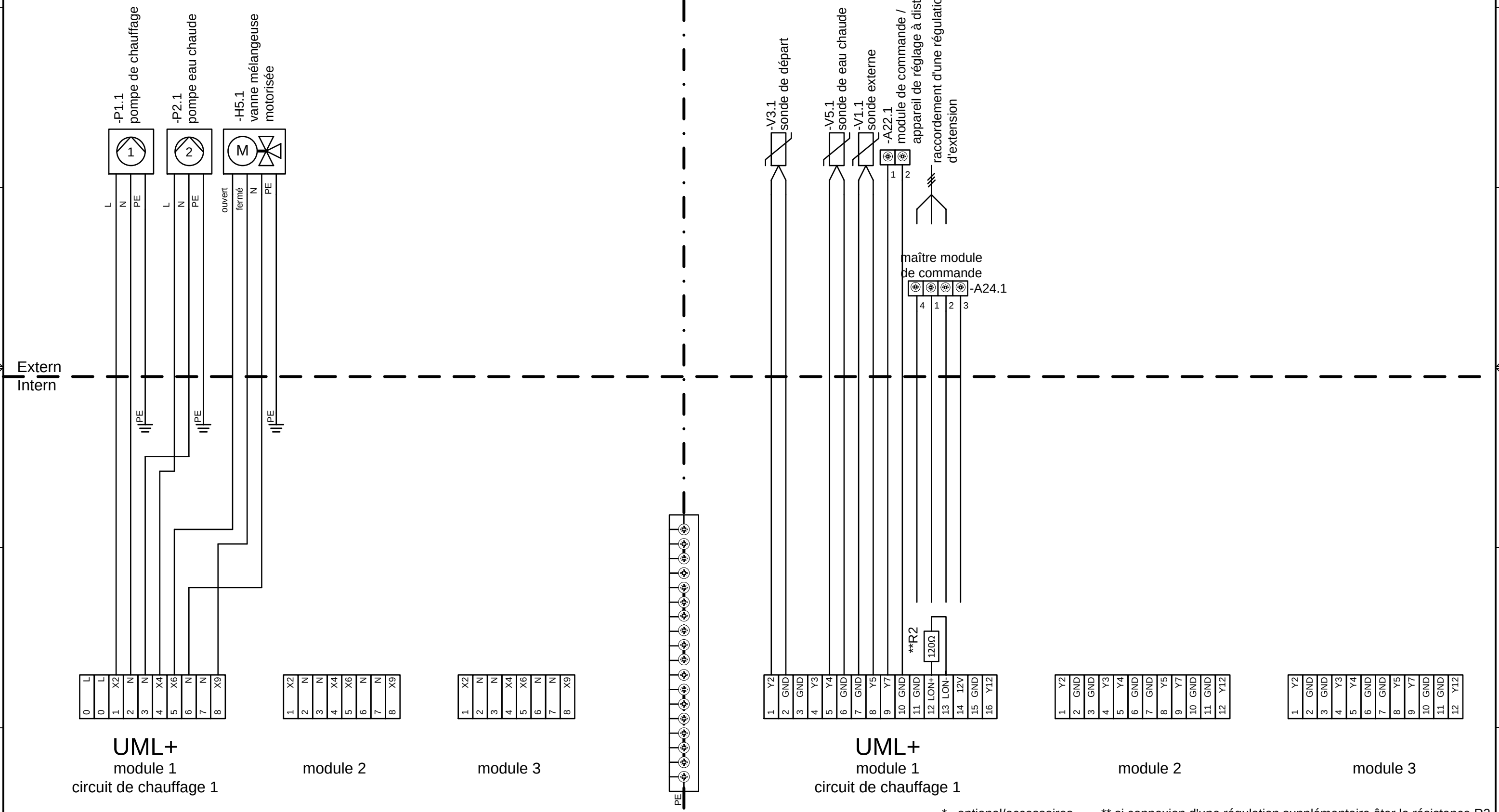
EDV Nr. 094809/00

-XSP	platine supplémentaire
PWM pompe de transfert	GND -X101 /2
demande de chaleur 0-10V	GND -X101 /4

GND -X102 /2	GND
demande de chaleur externe E.C.S.	-X102 /3
demande de chaleur externe C.Ch.	-X102 /4

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch.1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude HK1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	
16 Y12	

UML+	module 1 circuit de chauffage 1
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

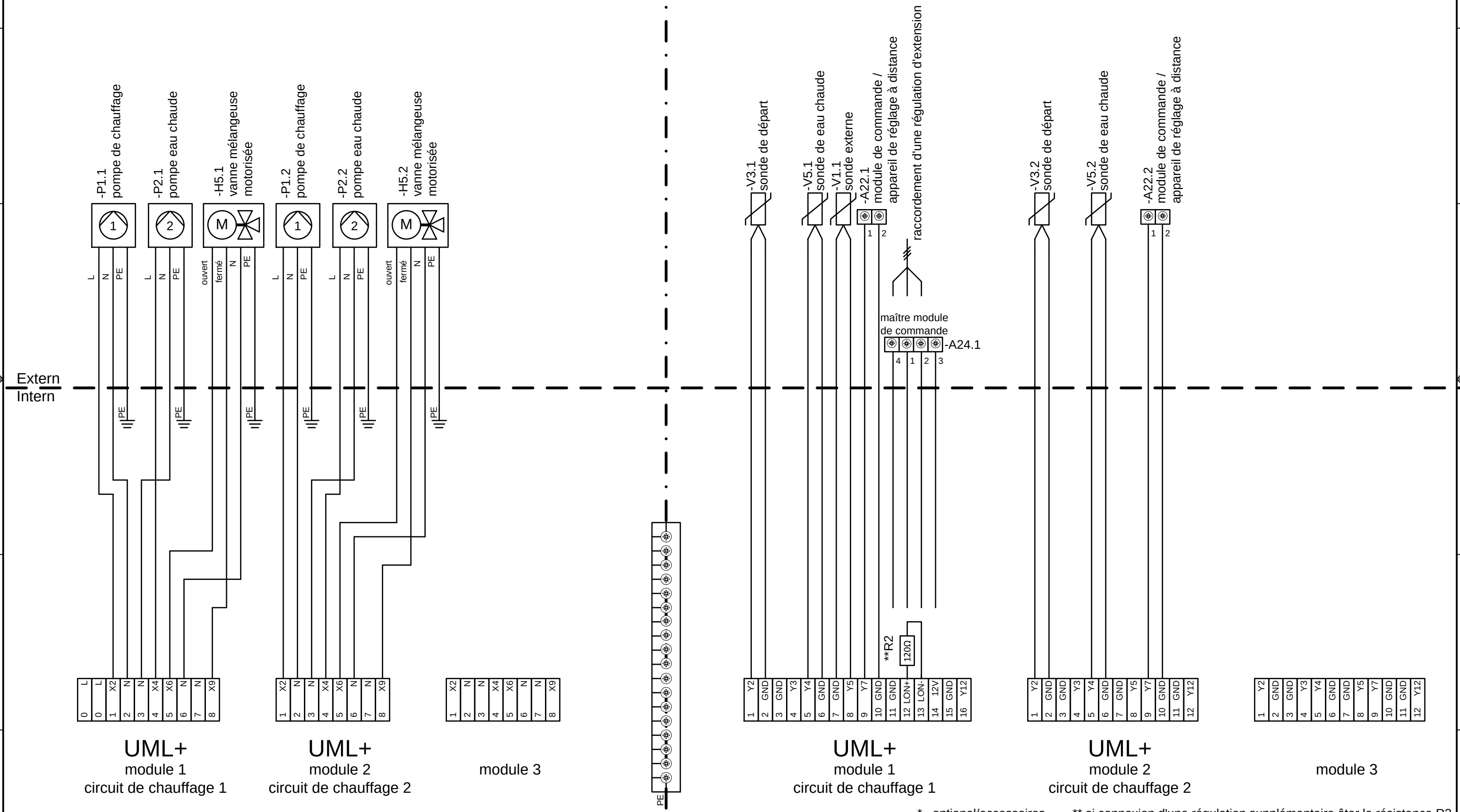
	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

UML+	module 1 circuit de chauffage 1
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 1 fermé
8 X9	

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 2 fermé
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092608/01

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

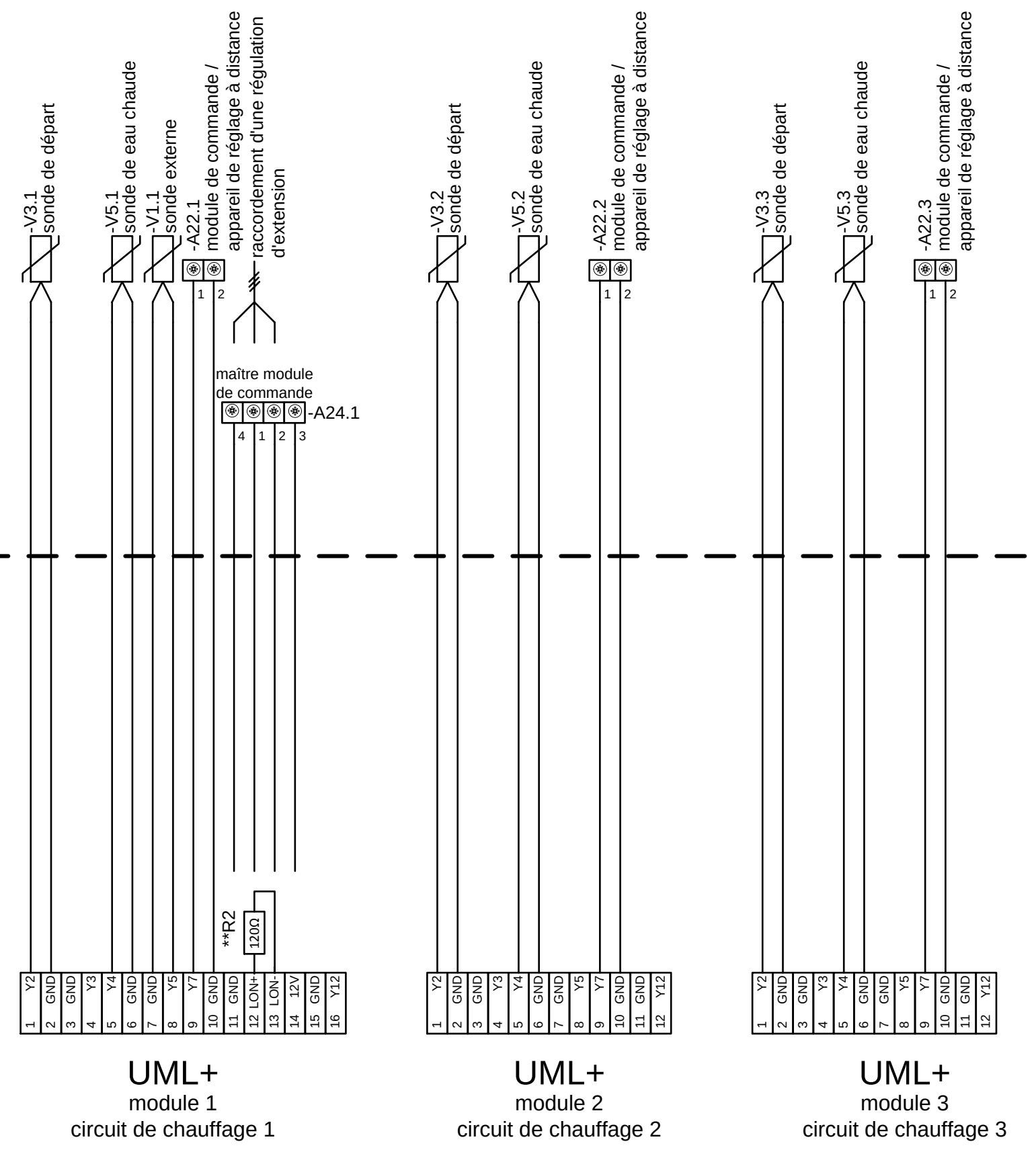
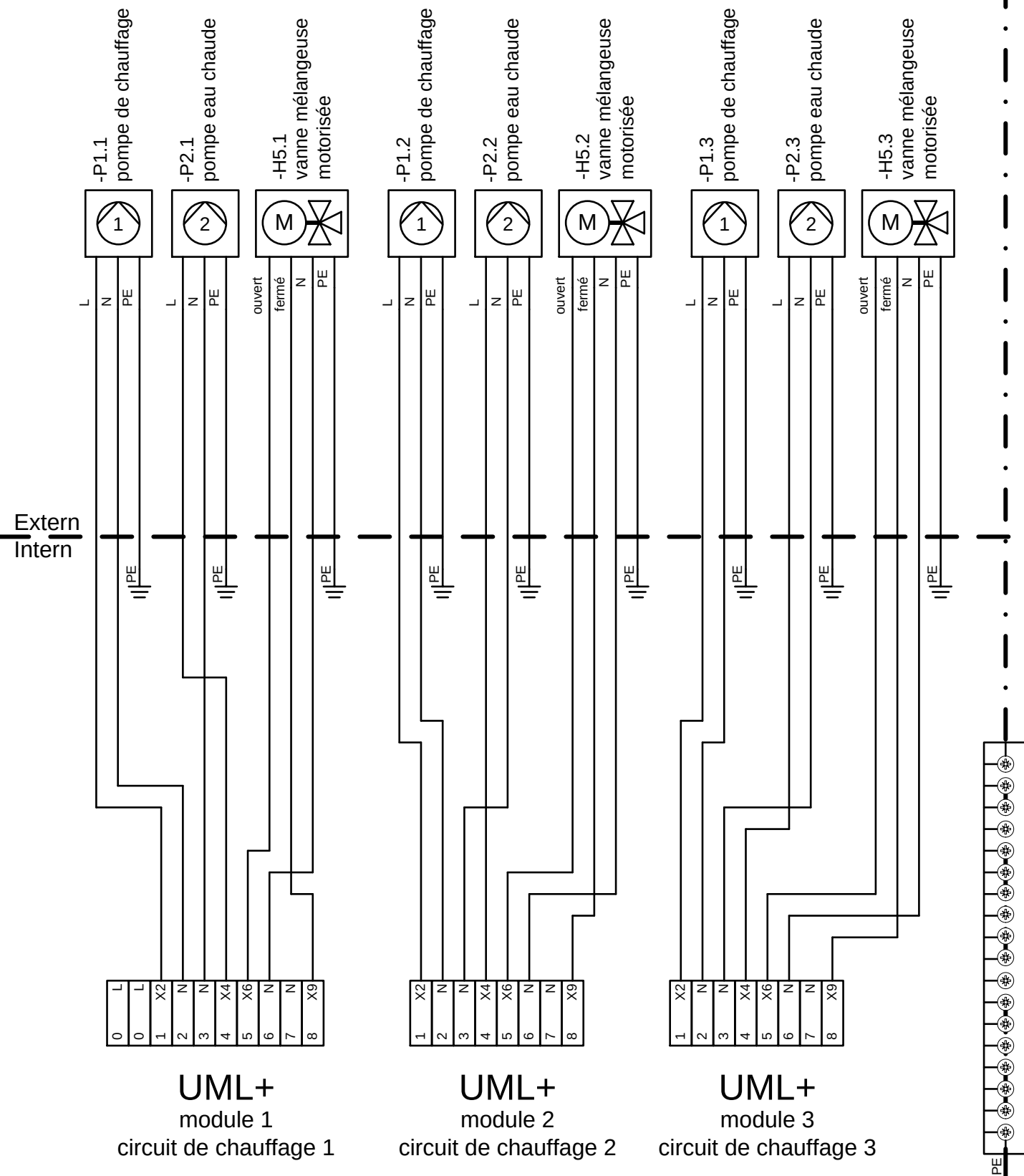
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092608/01

tension 230 VAC

basse tension-sonde



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

					Datum	04.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 régulation par température extérieure pour 3 circuits de chauffage mélangés et circuit d'eau chaude	Projekt : régulation		1 mm : 1 mm
					Gezeichnet	ros						
					Geprüft	rot	Zeichnungs Nr.: 092610/01					
Rev.	Änderung	Datum	Name		Genehmigt							

-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage
3 N'	interrupteur urgence
4 L	interne
5 L	arrêt chauffage
6 L'	interrupteur urgence
7 LL	
8 RL	moteur-unité de commutation
9 N	

UML+	module 1 circuit de chauffage 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	C.Ch. 1
8 X9	fermé

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	C.Ch. 2
8 X9	fermé

UML+	module 3 circuit de chauffage 3
1 X2	pompe de chauffage C.Ch. 3
2 N	
3 N	pompe eau chaude C.Ch. 3
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	C.Ch. 3
8 X9	fermé

092611/01

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	
16 Y12	

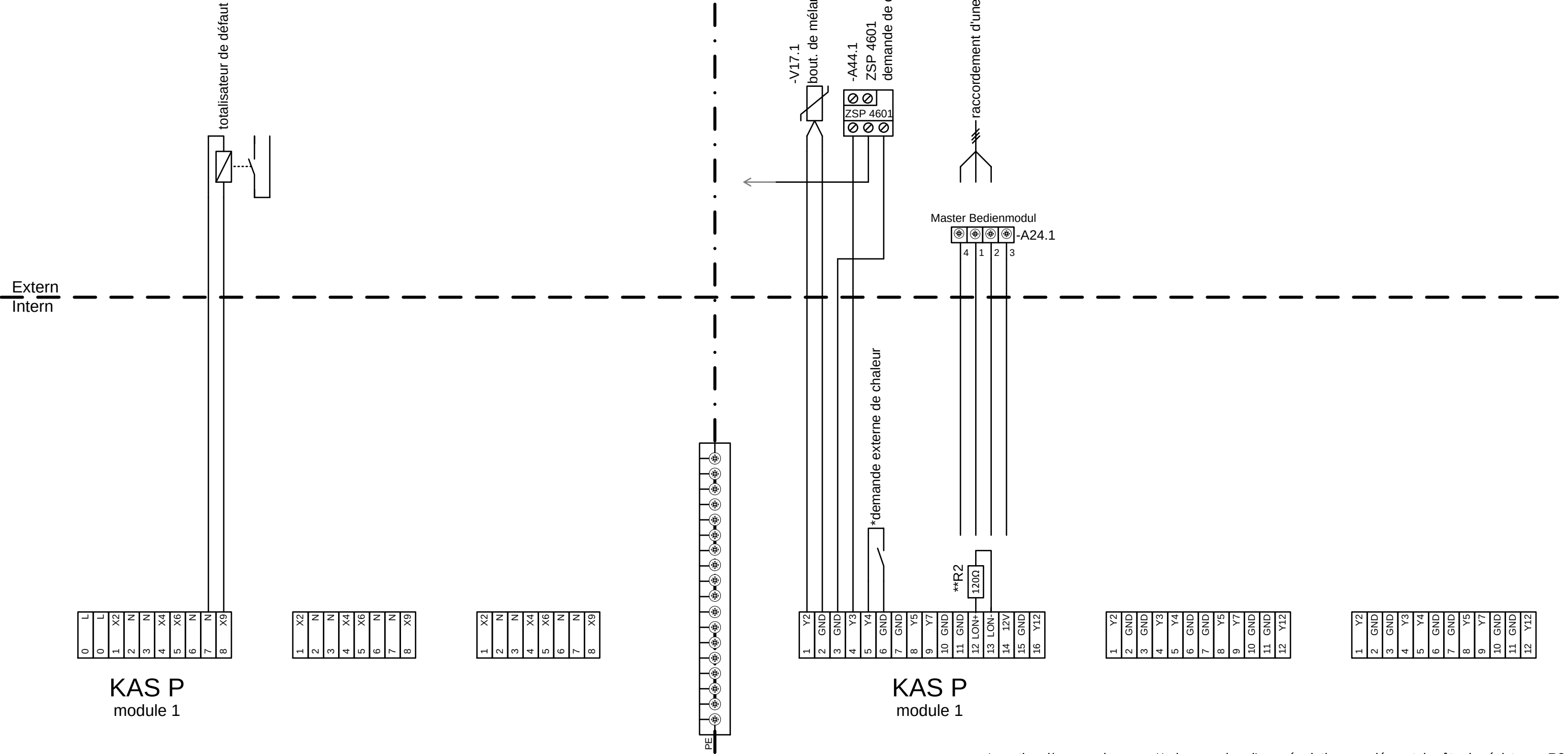
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 3
1 Y2	sonde de départ HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 3
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

092611/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

KAS	module 1 cascade
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	totalisateur de défaut

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092623/01

KAS	module 1 cascade
1 Y2	bout. de mélange-/Sonde de réservoir
2 GND	tampon
3 GND	
4 Y3	ZSP 4601
5 Y4	demande externe de chaleur
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	
16 Y12	

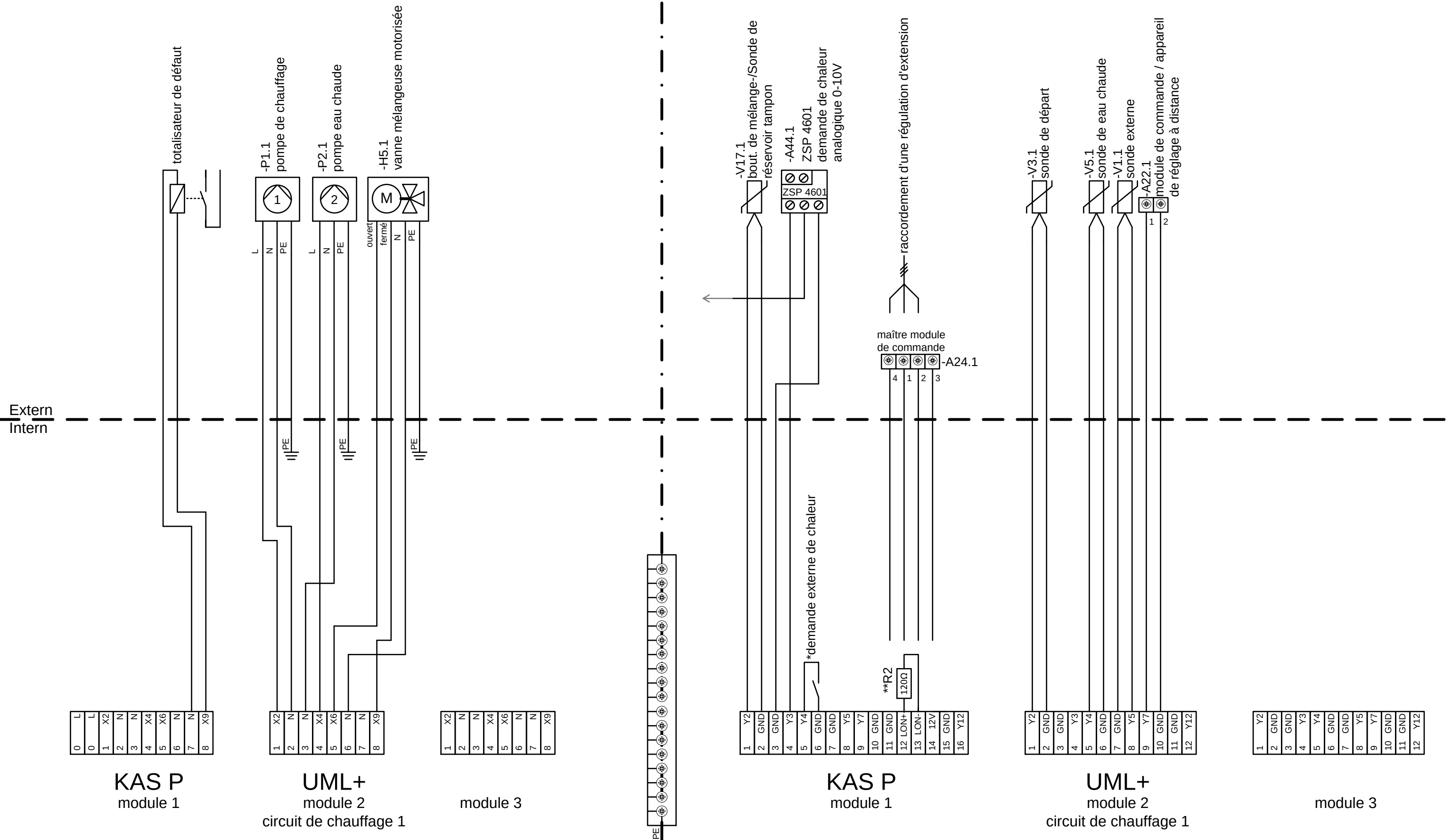
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092623/01

tension 230 VAC

basse tension-sonde



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	12.08.2013	KAS P/UML+		MES KAS + H021 cascade régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude	Projekt : régulation		1 mm : 1 mm	
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092625/01				Blatt 092625/01	

-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

KAS P	module 1 cascade
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	totalisateur de défaut

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092626/01

KAS P	module 1 cascade
1 Y2	bout. de mélange-/Sonde de réservoir
2 GND	tampon
3 GND	
4 Y3	ZSP 4601
5 Y4	demande externe de chaleur
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	
16 Y12	

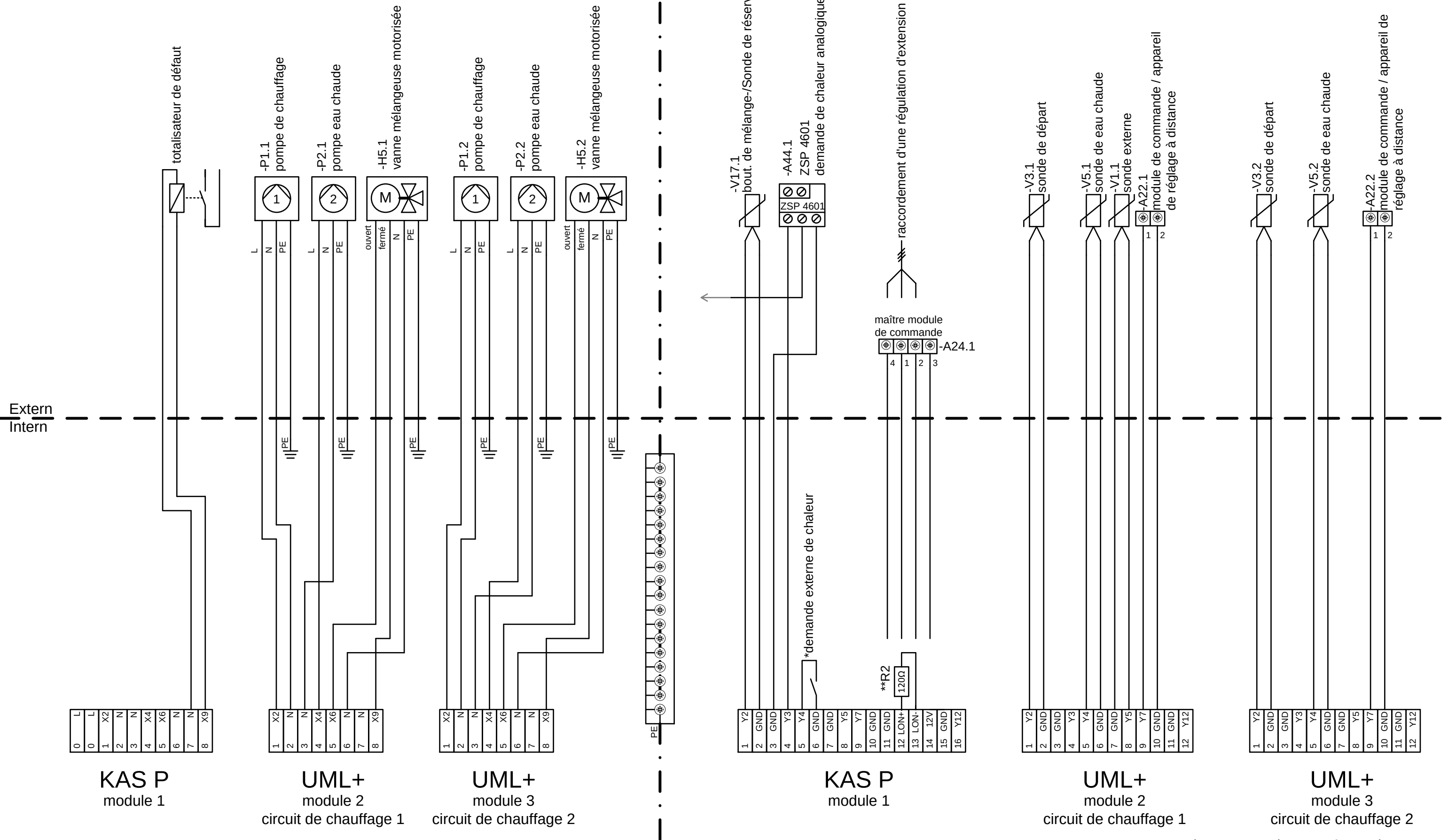
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092626/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

KAS P	module 1 cascade
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	totalisateur de défaut

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	C.Ch. 1
8 X9	fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	C.Ch. 2
8 X9	fermé

092631/01

KAS P	module 1 cascade
1 Y2	bout. de mélange-/Sonde de réservoir
2 GND	tampon
3 GND	ZSP 4601
4 Y3	
5 Y4	demande externe de chaleur
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	
16 Y12	

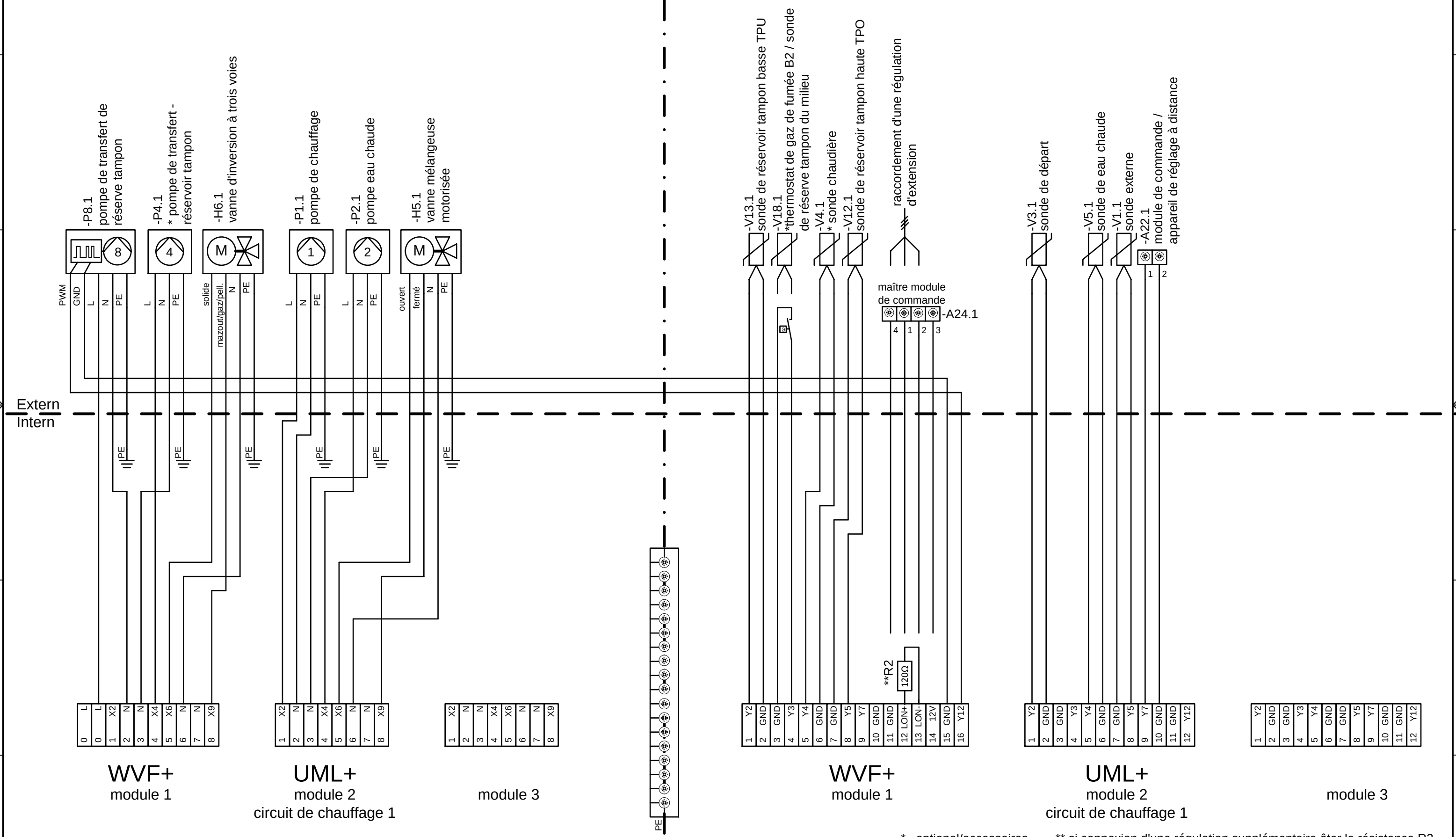
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	sonde de eau chaude C.Ch. 2
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

092631/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

WVF+	module 1
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	
2 N	
3 N	*pompe de transfert réservoir tampon
4 X4	
5 X6	solide vanne
6 N	d'inversion à trois voies
7 N	
8 X9	mazout/gaz/pell.

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092804/01

WVF+	module 1
1 Y2	sonde de réservoir tampon basse
2 GND	TPU
3 GND	*thermostat de gaz de fumée B2
4 Y3	sonde de réserve tampon du milieu
5 Y4	*sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute
8 Y5	TPO
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe de transfert de réserve
16 Y12	tampon

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092804/01

-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

WVF+	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	solide vanne d'inversion à trois voies
6 N	
7 N	
8 X9	mazout/gaz/pell.

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	
8 X9	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	
8 X9	C.Ch. 2 fermé

092807/01

WVF+	module 1
1 Y2	sonde de réservoir tampon basse TPU
2 GND	
3 GND	*thermostat de gaz de fumée B27
4 Y3	sonde de réserve tampon du milieu
5 Y4	* sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation d'extension
13 Lon-	
14 12V	
15 GND	PWM pompe de transfert de réserve tampon
16 Y12	

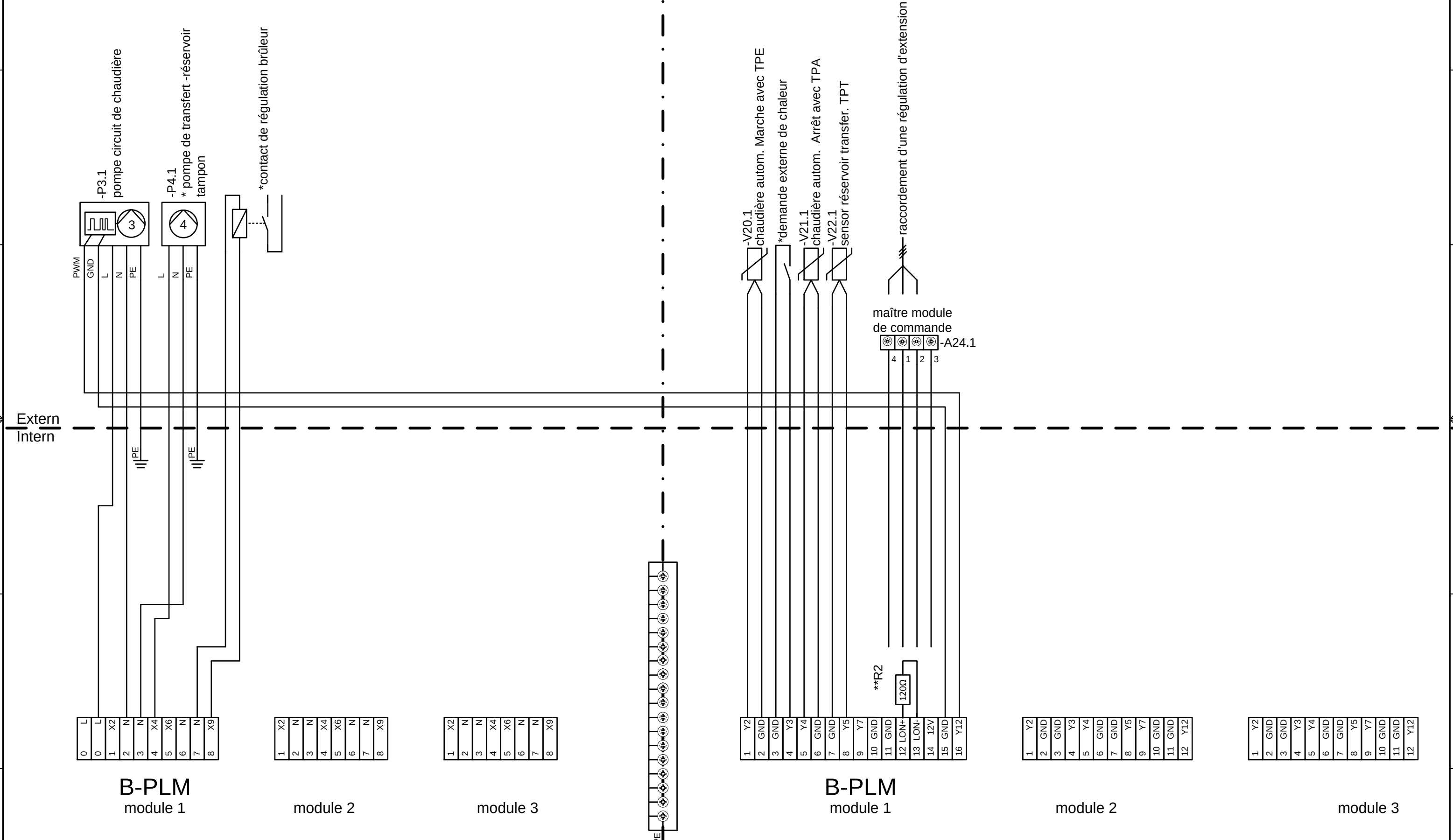
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

092807/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

B-PLM	module 1
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	
2 N	
3 N	* pompe de transfert
4 X4	réservoir tampon
5 X6	
6 N	
7 N	
8 X9	*brûleur contact

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092744/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	* chaudière autom. Arrêt avec TPA
6 GND	
7 GND	* sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe du circuit
16 Y12	chaudière

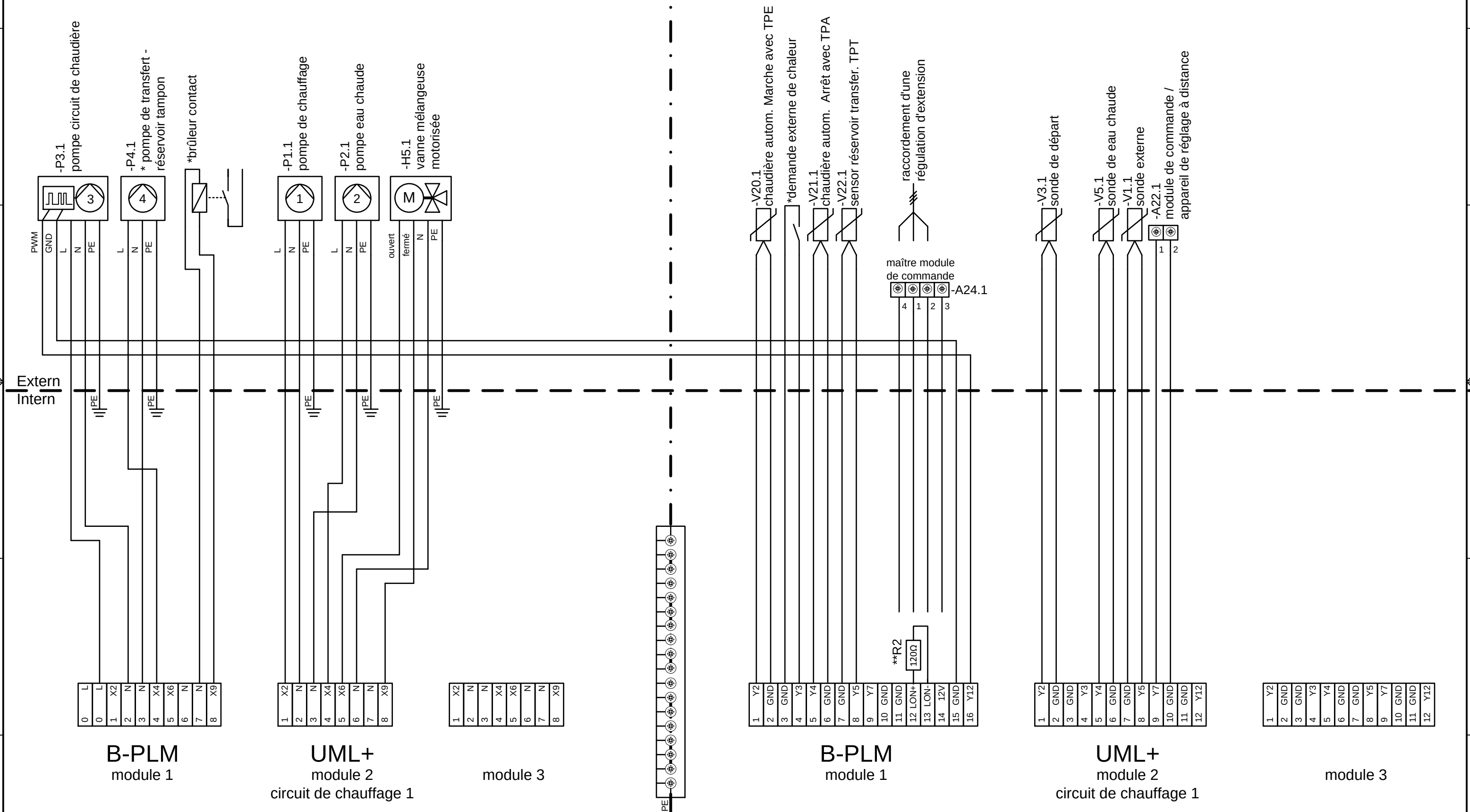
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092744/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

B-PLM	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	
8 X9	*brûleur contact

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092798/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe du circuit
16 Y12	chaudière

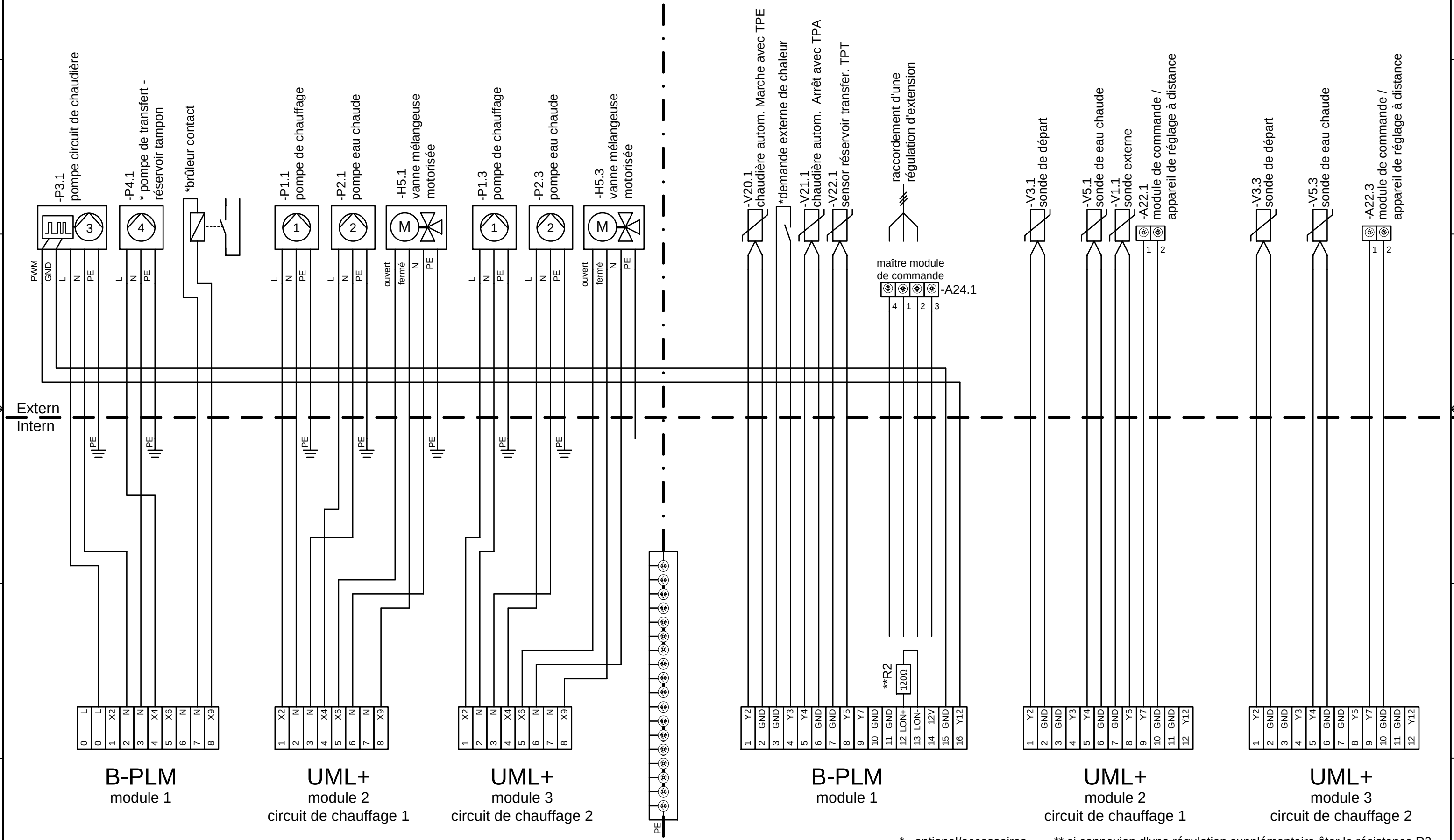
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092798/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

B-PLM	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

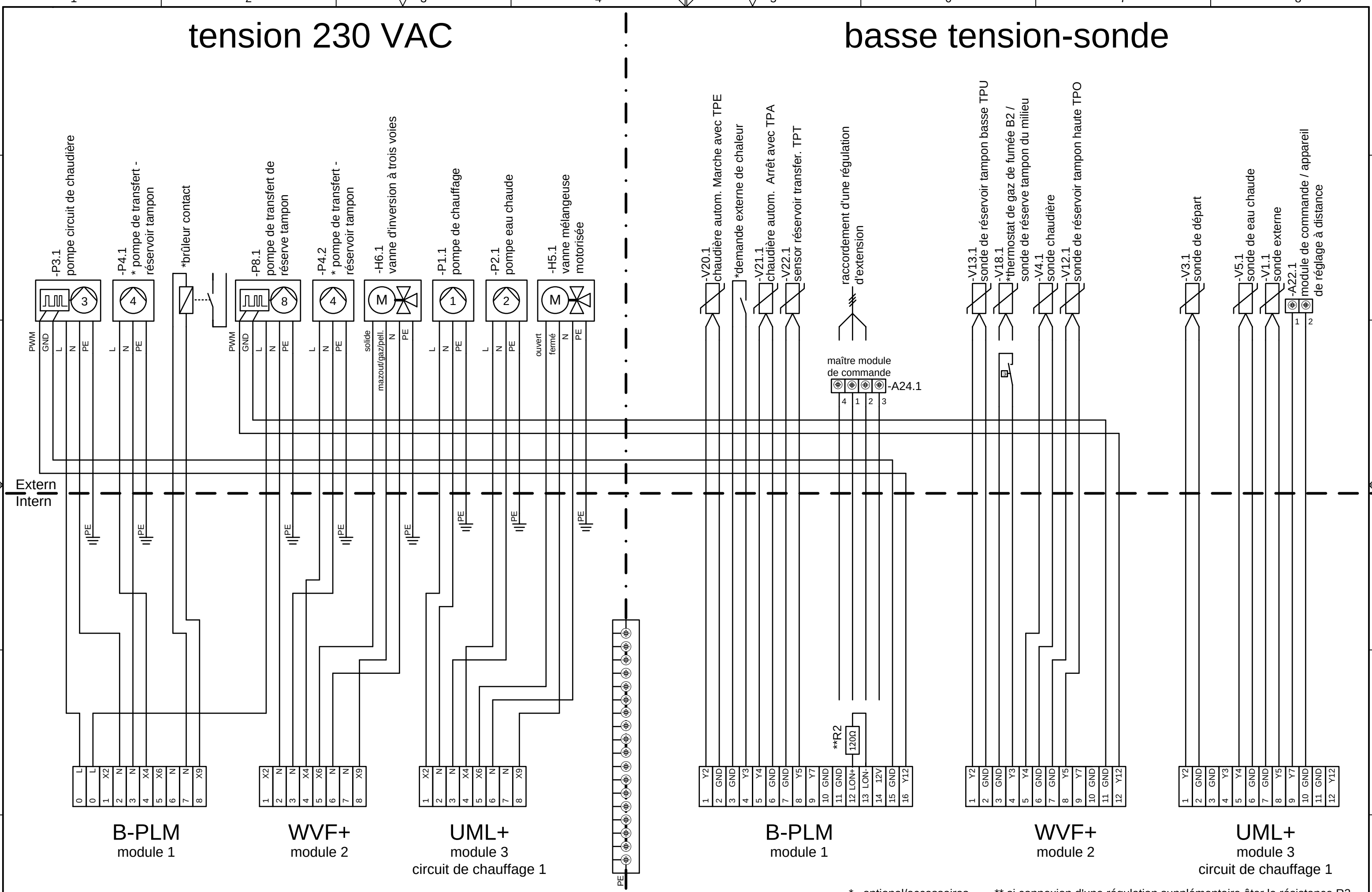
UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 2 fermé

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

B-PLM	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	réservoir tampon
5 X6	
6 N	
7 N	
8 X9	*brûleur contact

WVF+	module 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	réservoir tampon
5 X6	solide vanne
6 N	d'inversion à trois voies
7 N	
8 X9	mazout/gaz/pell.

UML+	module 3 circuit de chauffage 1
1 X2	pompe de chauffage
2 N	C.Ch. 1
3 N	pompe eau chaude
4 X4	C.Ch. 1
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

092881/01

B-PLM	module 1
1 Y2	chaudière autom.
2 GND	Marche avec TPE
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom.
6 GND	Arrêt avec TPA
7 GND	*sensor réservoir
8 Y5	transfer. TPT
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe du circuit
16 Y12	chaudière

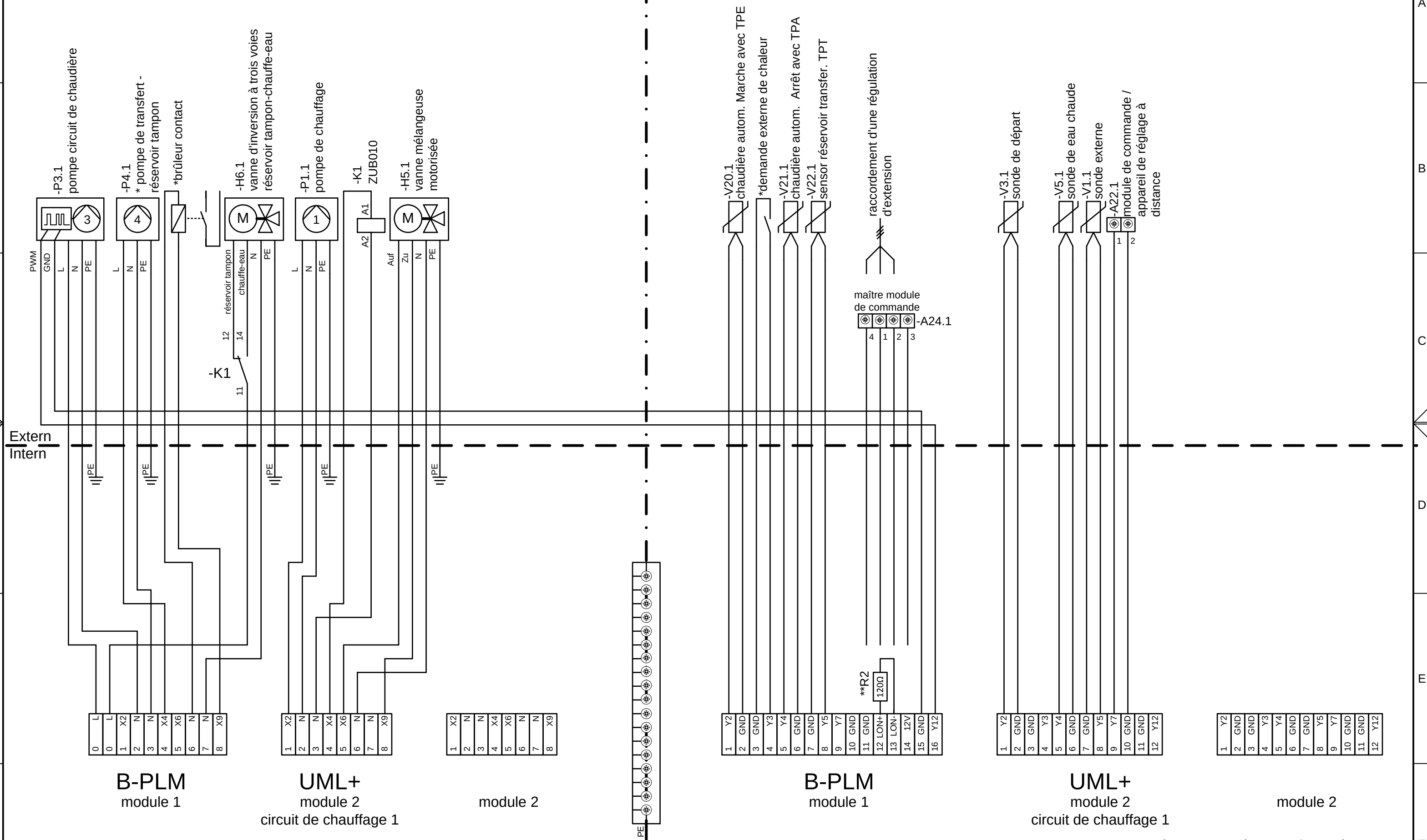
WVF+	module 2
1 Y2	réservoir tampon bas
2 GND	TPU
3 GND	*thermostat de gaz de fumée B2
4 Y3	sonde de réserve tampon du milieu
5 Y4	*sonde chaudière
6 GND	
7 GND	sonde de réservoir
8 Y5	tampon haute
9 Y7	TPO
10 GND	
11 GND	PWM pompe de
12 Y12	transfert de réserve tampon

UML+	module 3 circuit de chauffage 1
1 Y2	sonde de départ
2 GND	C.Ch. 1
3 GND	
4 Y3	
5 Y4	sonde de eau chaude
6 GND	C.Ch. 1
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

092881/01

tension 230 VAC

basse tension-sonde



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	12.08.2013	B-PLM/UML+		MES ZUB010 ZUB010 SYS403 vanne d'inversion à trois voies réservoir tampon - chauffe-eau	Projekt : régulation		1 mm : 1 mm
				Gezeichnet	ros						Zeichnungs Nr.:
Rev.	Änderung	Datum	Name	Geprüft	rot						Blatt 093239/01
				Genehmigt							

-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

B-PLM	module 1
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	
2 N	
3 N	* pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*contact brûleur
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	contacteur -K1 C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	C.Ch. 1
8 X9	fermé

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094547/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	* demande externe de chaleur
4 Y3	
5 Y4	* chaudière autom. Arrêt avec TPA
6 GND	
7 GND	* sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe du circuit
16 Y12	chaudière

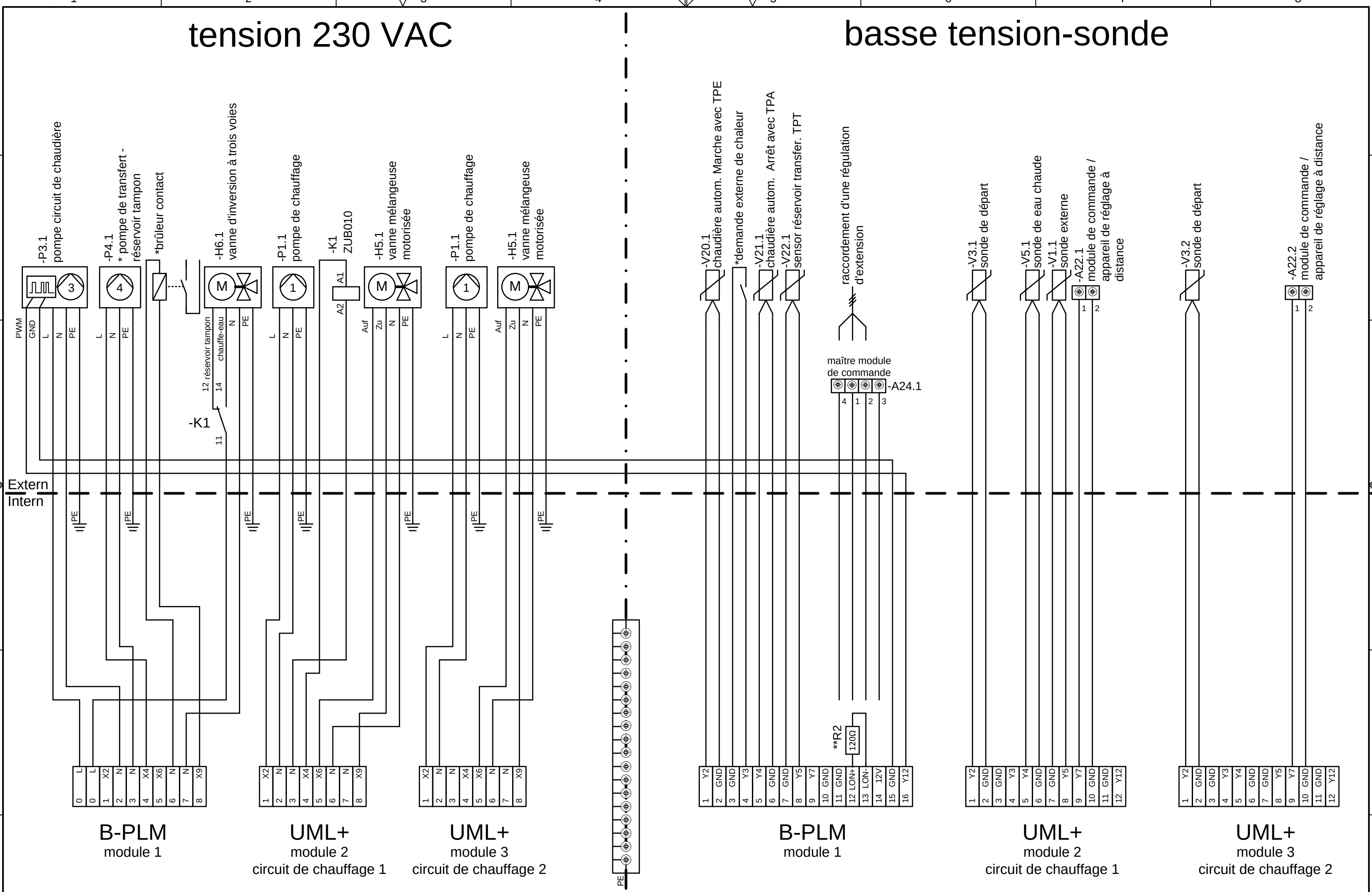
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094547/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage interrupteur urgence
3 N'	
4 L	
5 L	arrêt chauffage interrupteur urgence
6 L'	
7 LL	
8 RL	moteur-unité de commutation
9 N	

B-PLM	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	* pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*contact brûleur
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	contacteur -K1 C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse motorisée
7 N	
8 X9	C.Ch. 2 fermé

094548/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	* demande externe de chaleur
4 Y3	
5 Y4	* chaudière autom. Arrêt avec TPA
6 GND	
7 GND	* sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation
13 Lon-	d'extension
14 12V	
15 GND	PWM pompe du circuit
16 Y12	chaudière

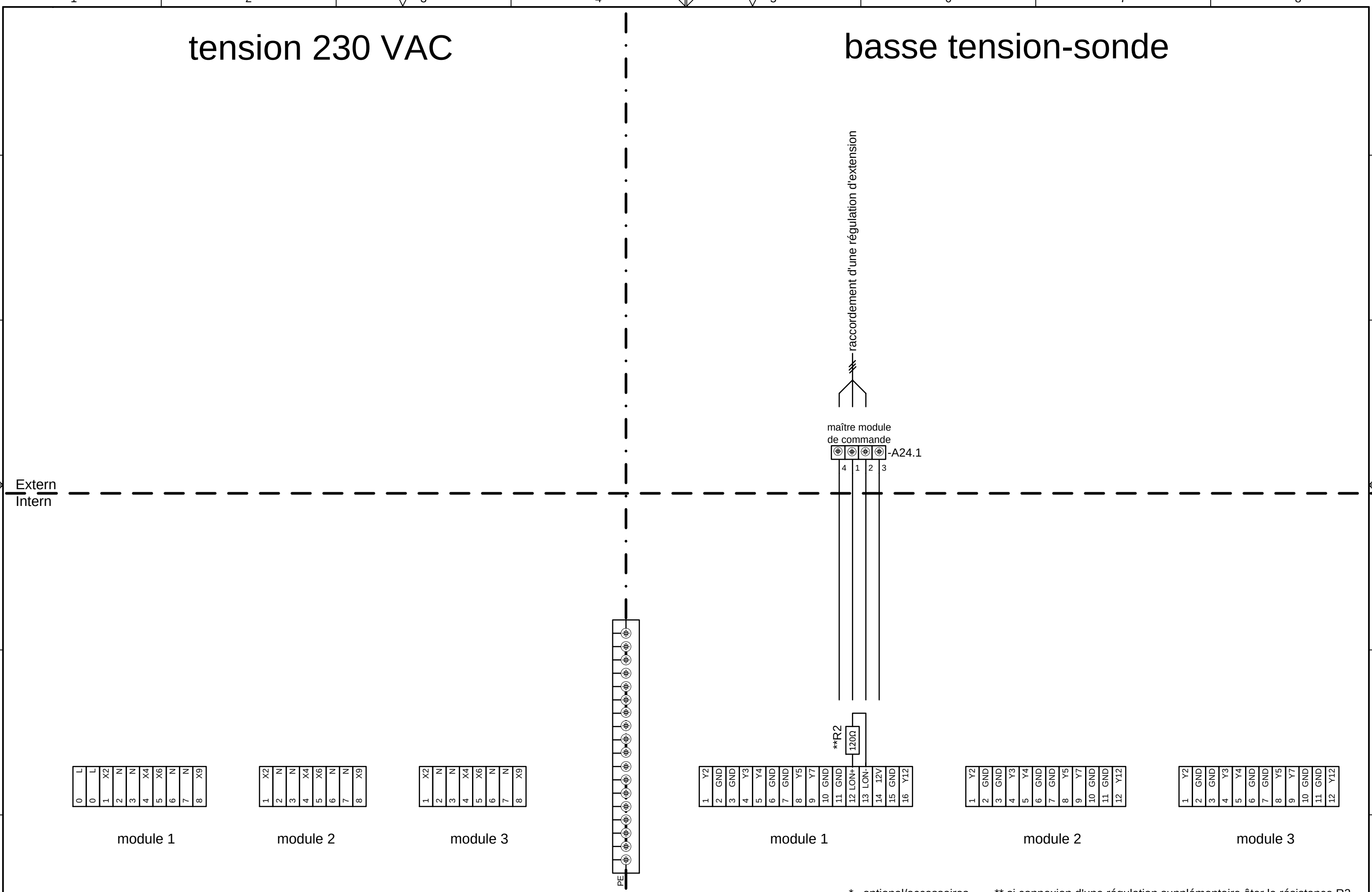
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à distance
11 GND	
12 Y12	

094548/01

tension 230 VAC

basse tension-sonde



-XS	dispositifs- de sécurité
1 N	interne
2 N	arrêt chauffage
3 N'	interrupteur urgence
4 L	
5 L	arrêt chauffage
6 L'	interrupteur urgence
7 LL	
8 RL	moteur-unité de commutation
9 N	

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une régulation d'extension
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

1	module 1
0 L PWM Phase permanente 1	
0 L PWM Phase permanente 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

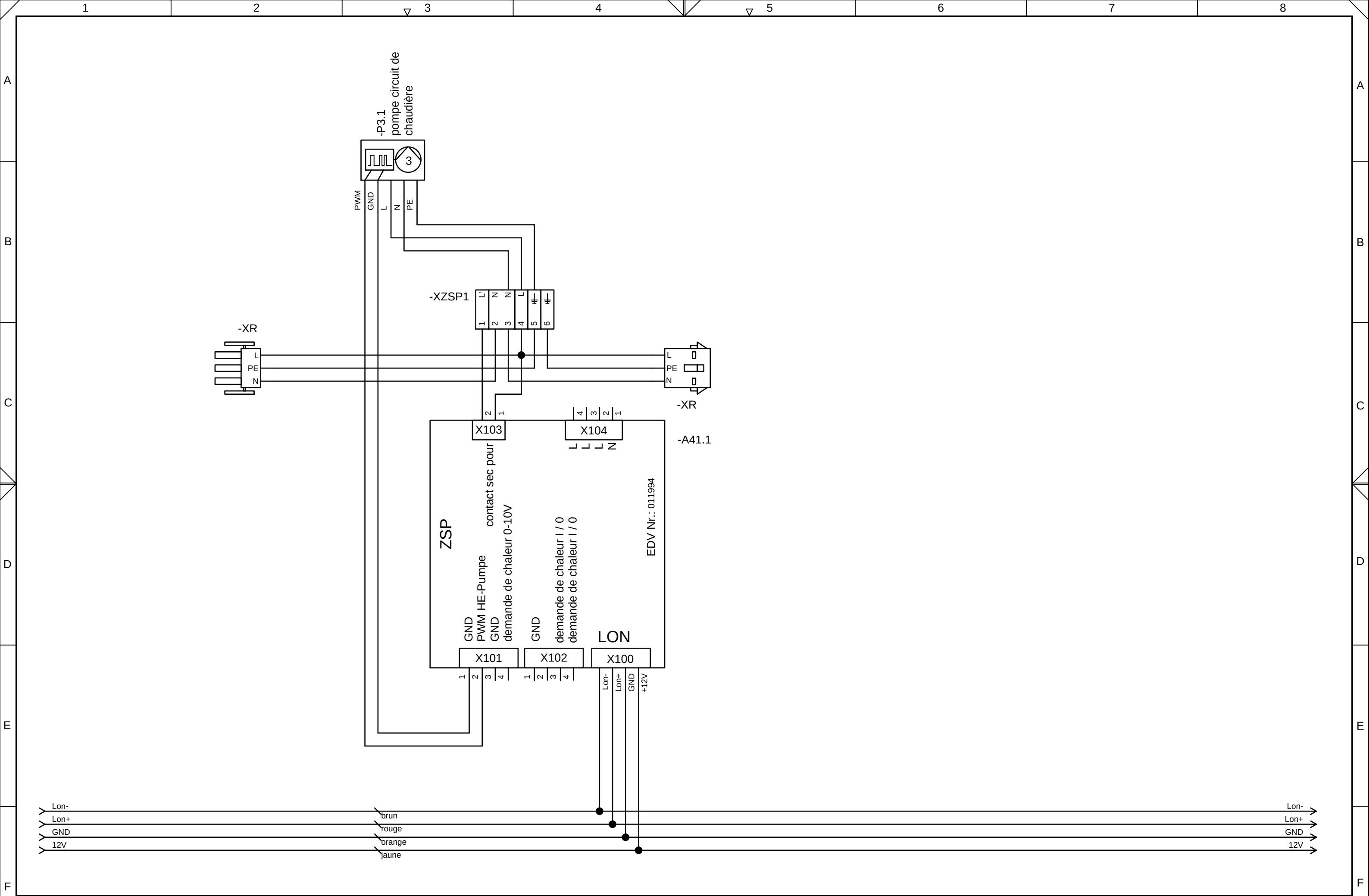
3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

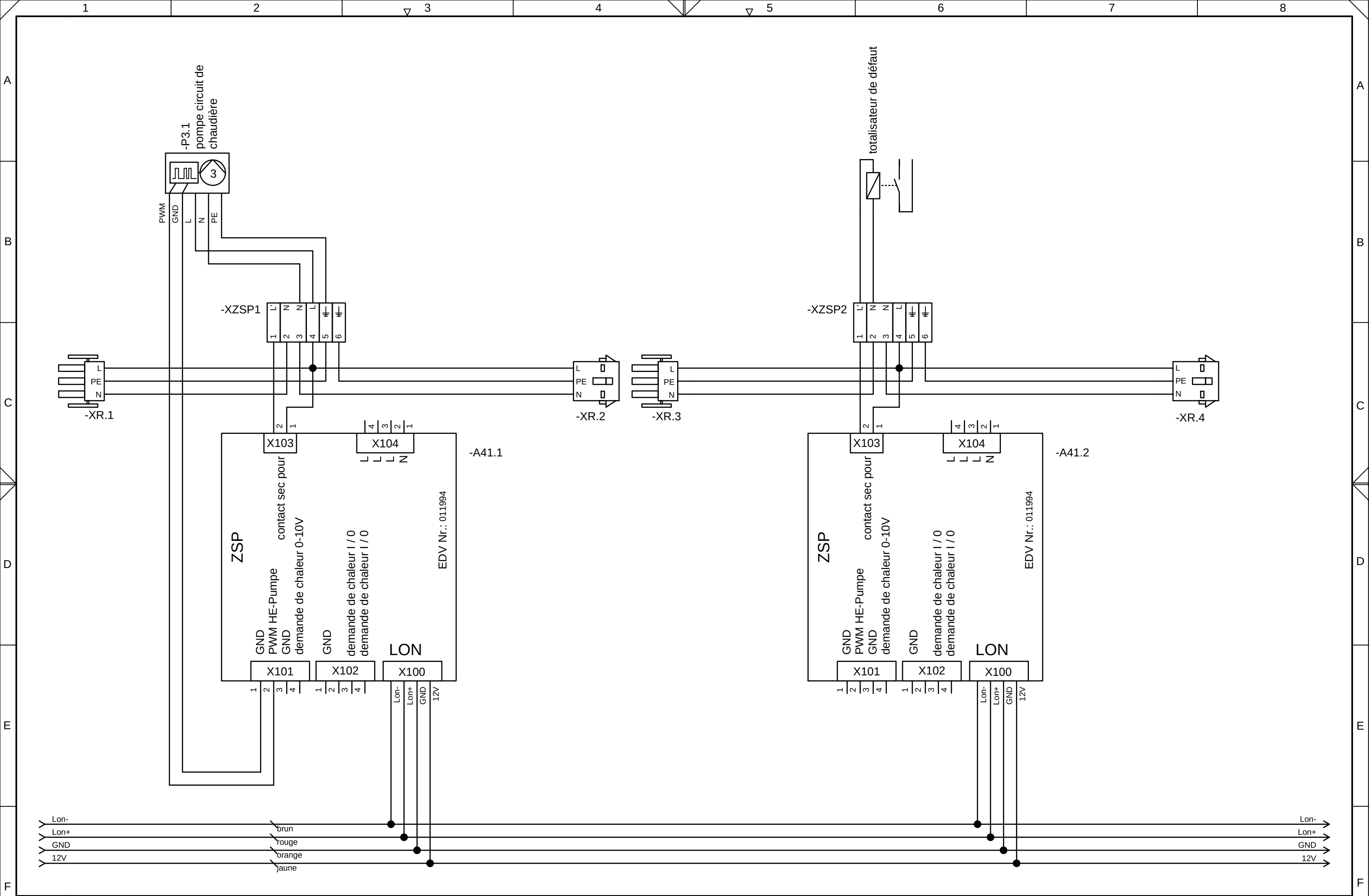
-XZSP	platine supplémentaire
L'	
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094667/00

platine supplémentaire	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM pompe circuit de chaudière
GND	





-XZSP	platine supplémentaire
L'	
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094667/00

platine supplémentaire	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM pompe circuit de chaudière
GND	

-XZSP	platine supplémentaire
L'	totalisateur de défaut
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	platine supplémentaire
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	platine supplémentaire
L'	totalisateur de défaut
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	platine supplémentaire
-X102 /4	
-X102 /3	
-X102 /2	
GND	

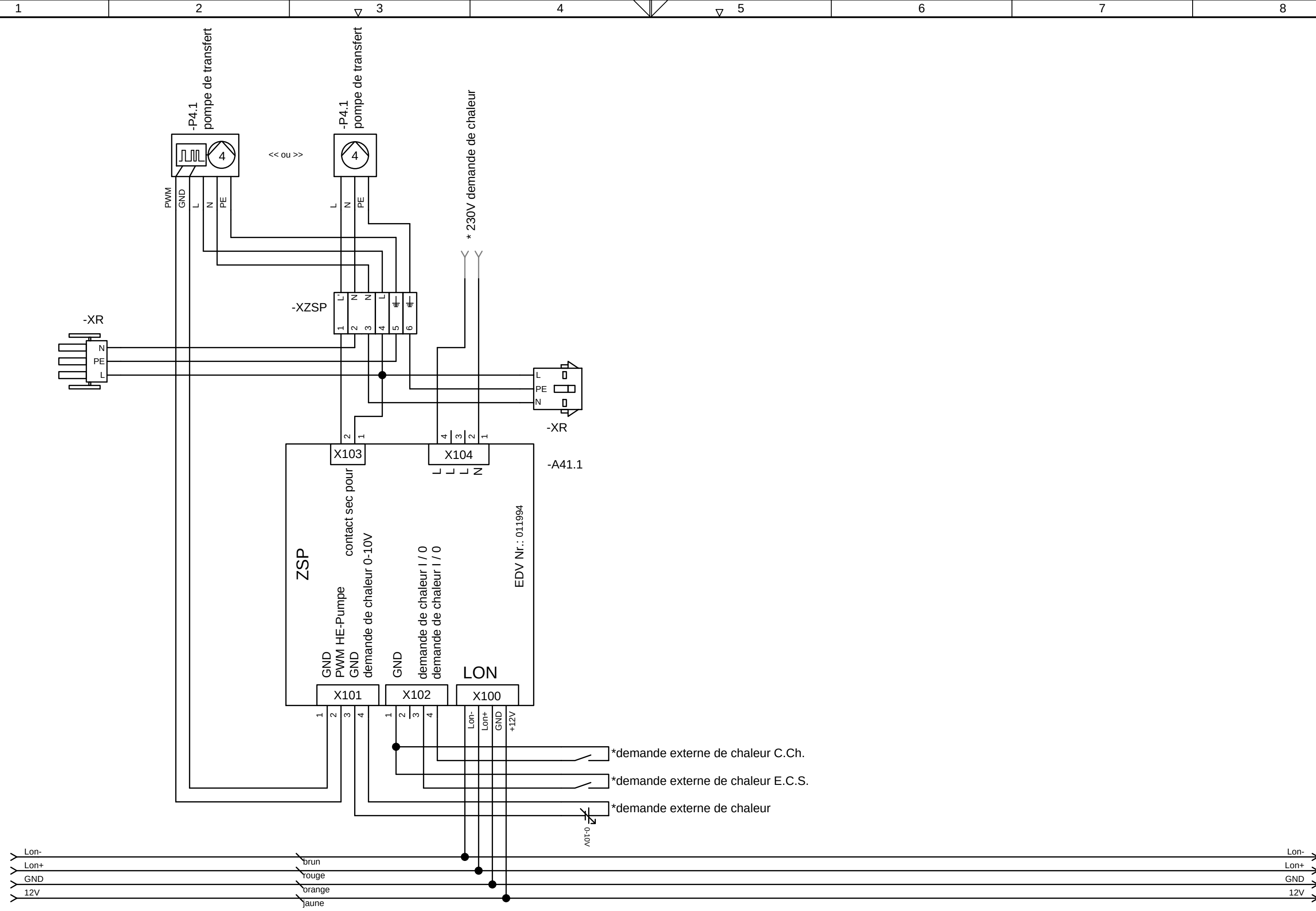
-X101 /4	
GND	
-X101 /2	
GND	

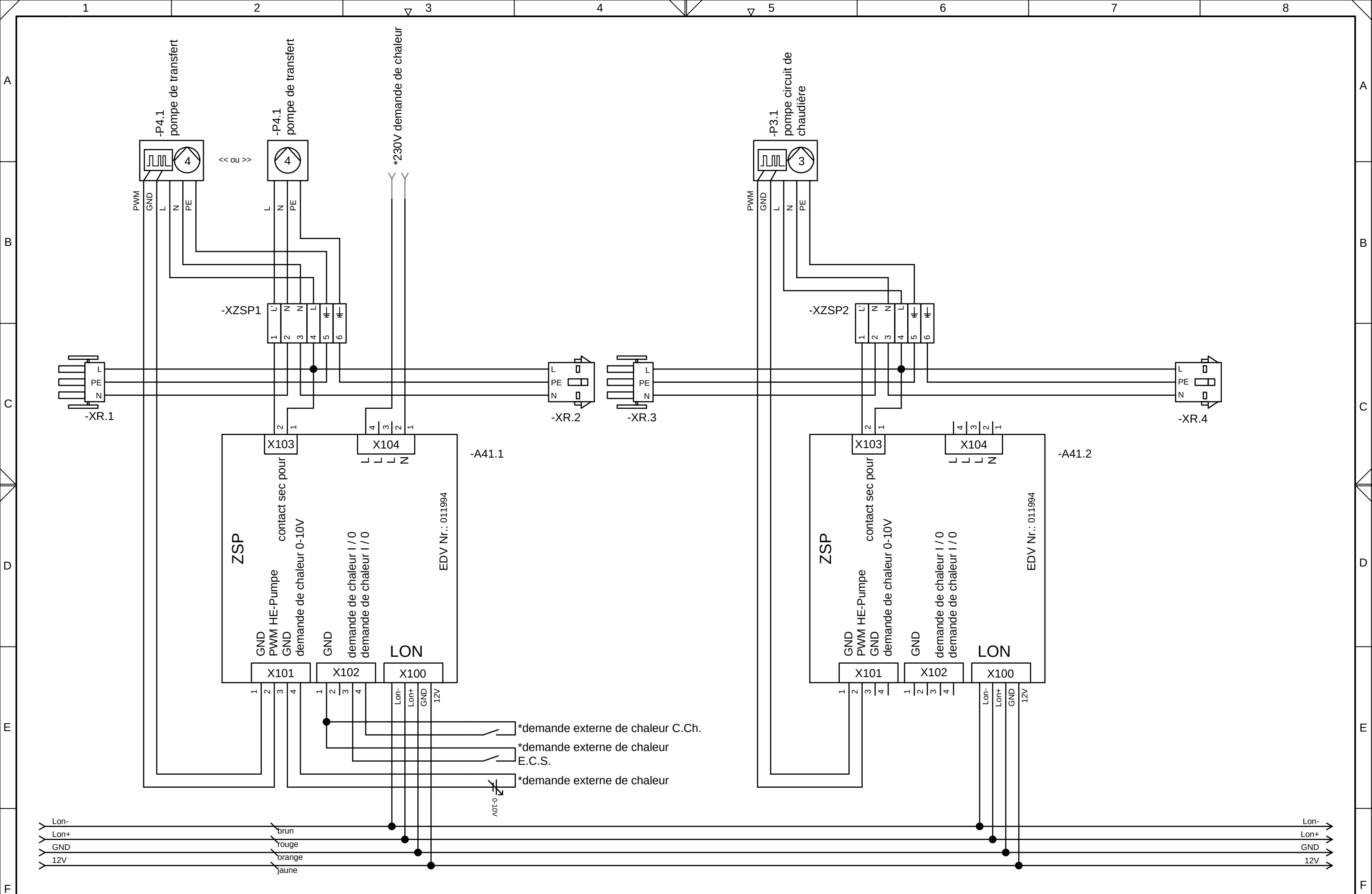
-XZSP	platine supplémentaire
L'	pompe de transfert
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	platine supplémentaire
-X102 /4	demande de chaleur externe C.Ch.
-X102 /3	demande de chaleur externe E.C.S.
-X102 /2	
GND	

-X101 /4	demande de chaleur
GND	0-10V
-X101 /2	PWM pompe de
GND	transfert





-XZSP	platine supplémentaire
L'	
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094667/00

platine supplémentaire	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

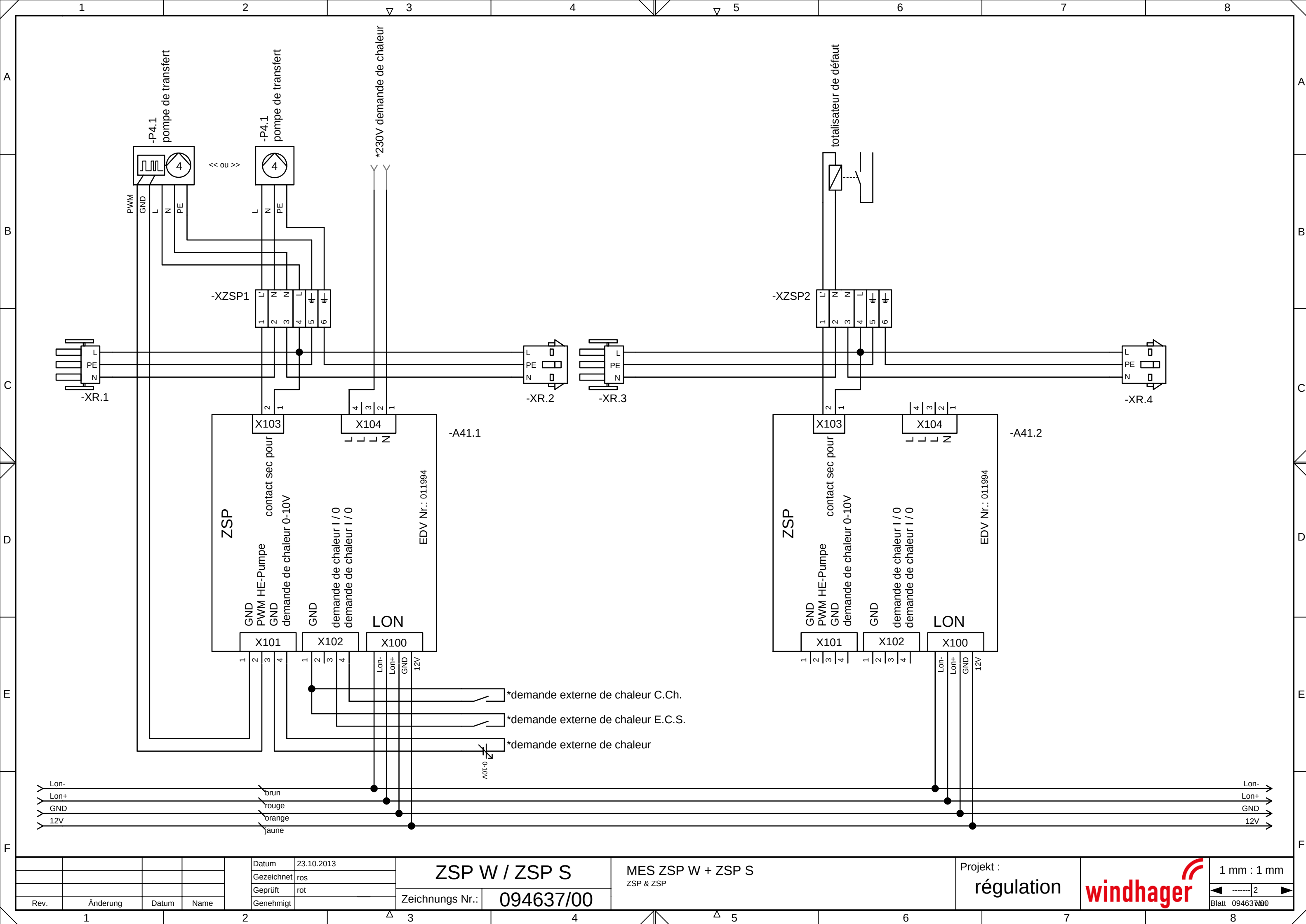
-X101 /4	
GND	
-X101 /2	PWM pompe circuit de chaudière
GND	

-XZSP	platine supplémentaire
L'	pompe de transfert
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	platine supplémentaire
-X102 /4	demande de chaleur externe C.Ch.
-X102 /3	demande de chaleur externe E.C.S.
-X102 /2	
GND	

-X101 /4	demande de chaleur
GND	0-10V
-X101 /2	PWM pompe de
GND	transfert



-XZSP	platine supplémentaire
L'	totalisateur de défaut
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	platine supplémentaire
-X102 /4	
-X102 /3	
-X102 /2	
GND	

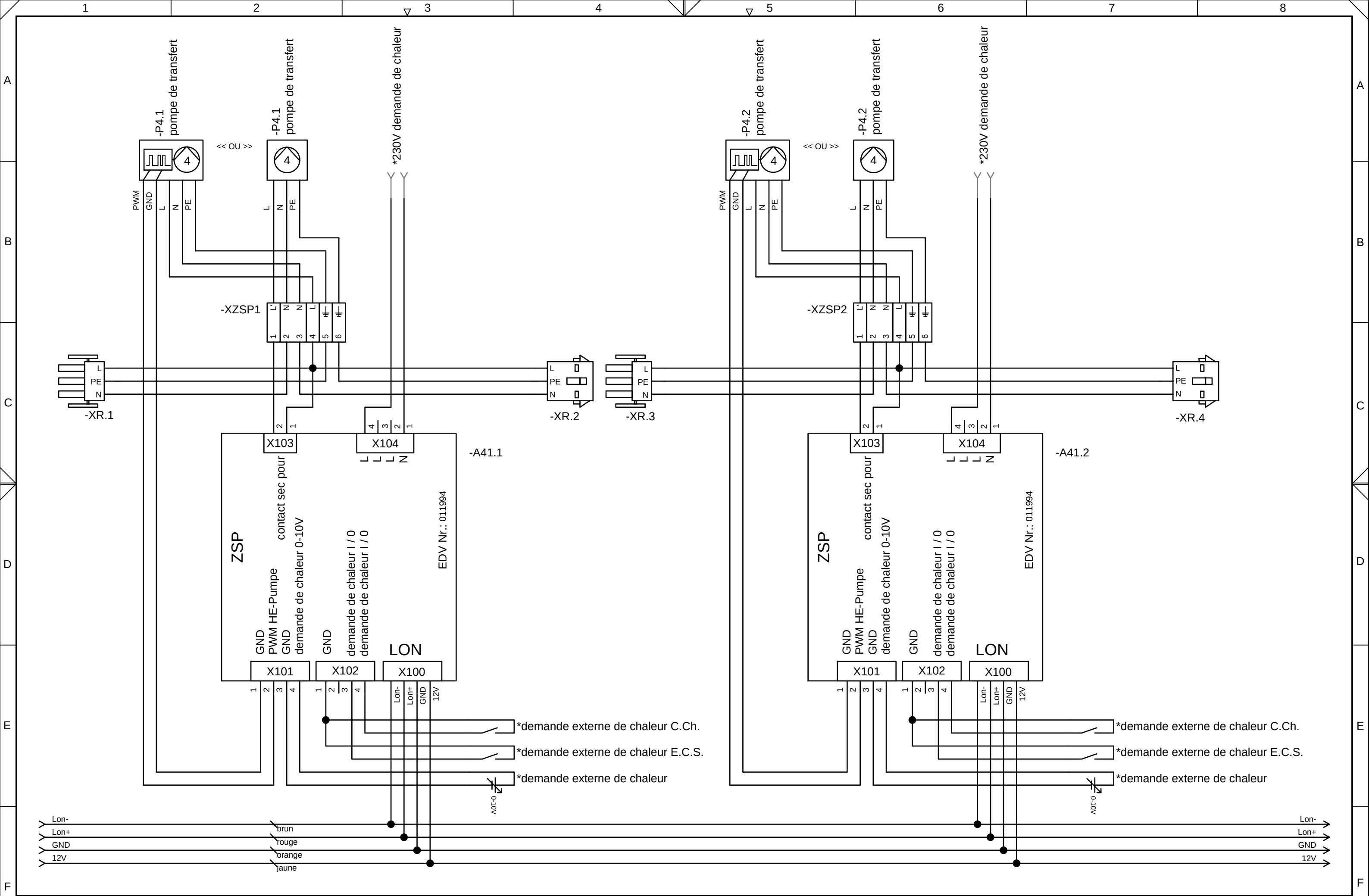
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	platine supplémentaire
L'	pompe de transfert
N	
N	Phase permanente
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	platine supplémentaire
-X102 /4	demande de chaleur externe C.Ch.
-X102 /3	demande de chaleur externe E.C.S.
-X102 /2	
GND	

-X101 /4	demande de chaleur
GND	0-10V
-X101 /2	PWM pompe de transfert
GND	



-XZSP	platine supplémentaire
L'	pompe de transfert
N	
N	Phase permanente
L	
PE	PE
PE	

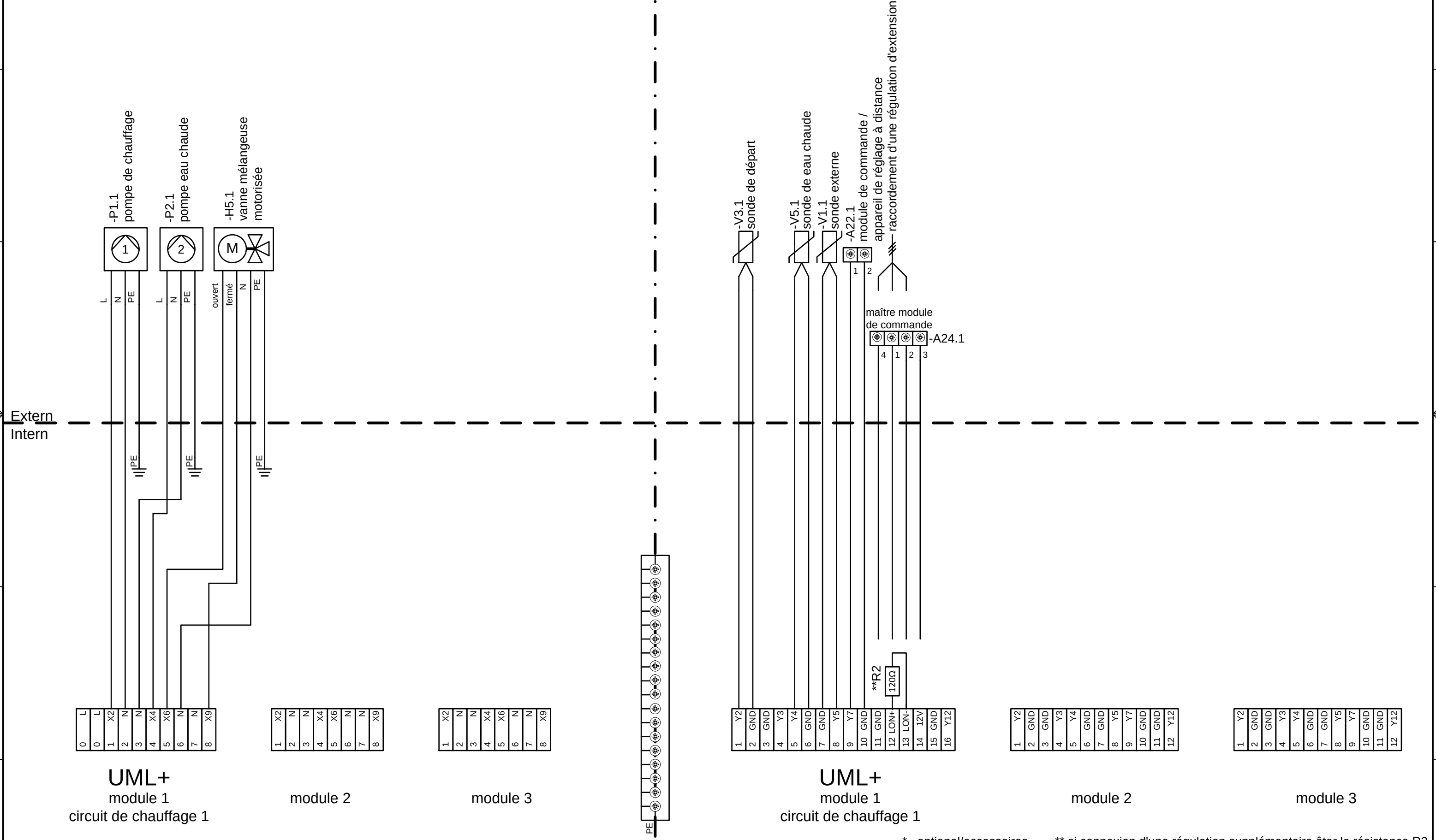
EDV Nr. 094672/00

-XSP	platine supplémentaire
-X102 /4	demande de chaleur externe C.Ch.
-X102 /3	demande de chaleur externe E.C.S.
-X102 /2	
GND	

-X101 /4	demande de chaleur
GND	0-10V
-X101 /2	PWM pompe de
GND	transfert

tension 230 VAC

basse tension-sonde



UML+	module 1 circuit de chauffage 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092738/01

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

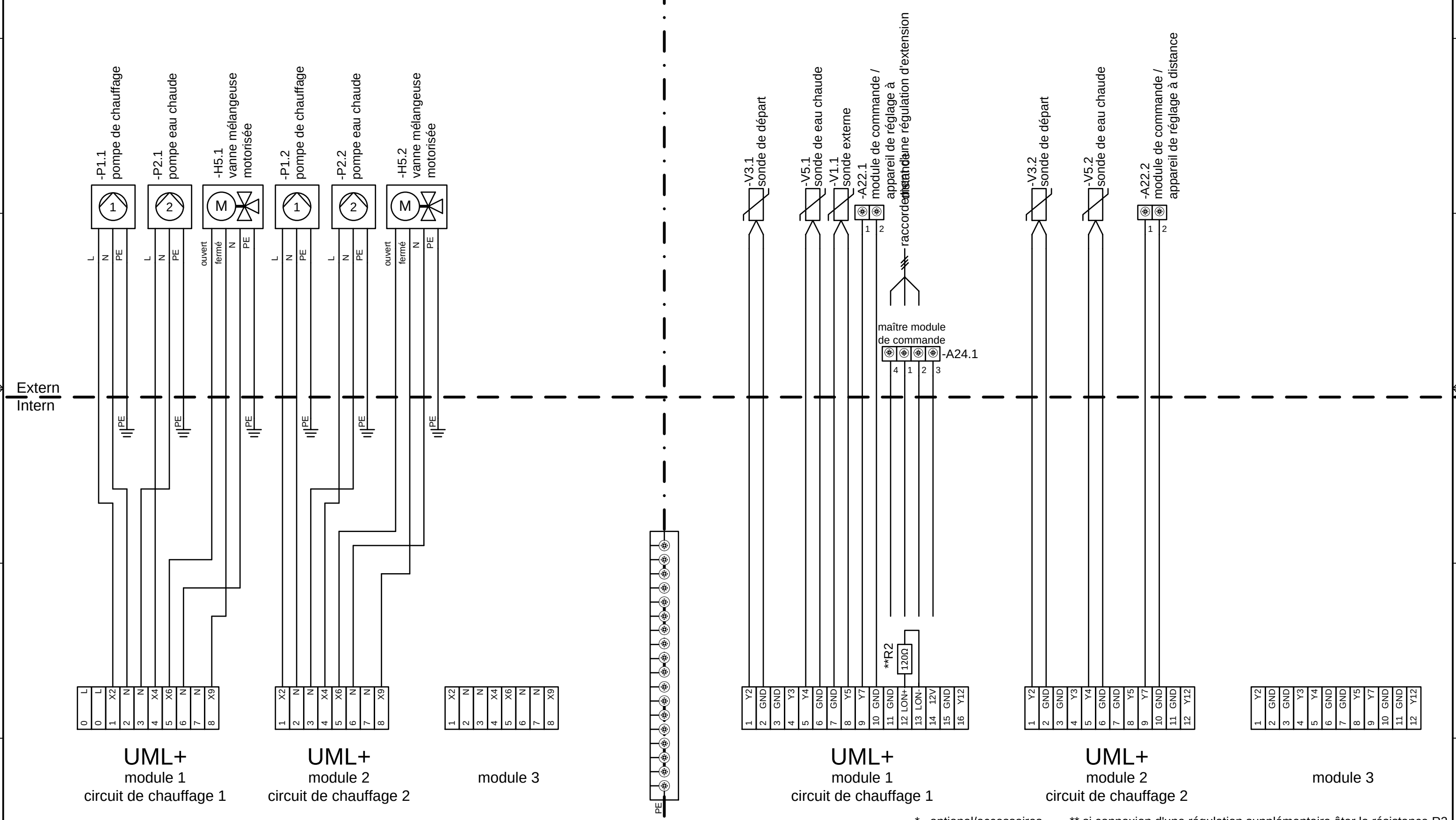
	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092738/01

tension 230 VAC

basse tension-sonde



UML+	module 1 circuit de chauffage 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	C.Ch. 1 fermé
8 X9	

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	C.Ch. 2 fermé
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092748/01

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande appareil de réglage à
10 GND	distance
11 GND	maître module de
12 Lon+	commande
13 Lon-	raccordement d'une
14 12V	régulation d'extension
15 GND	
16 Y12	

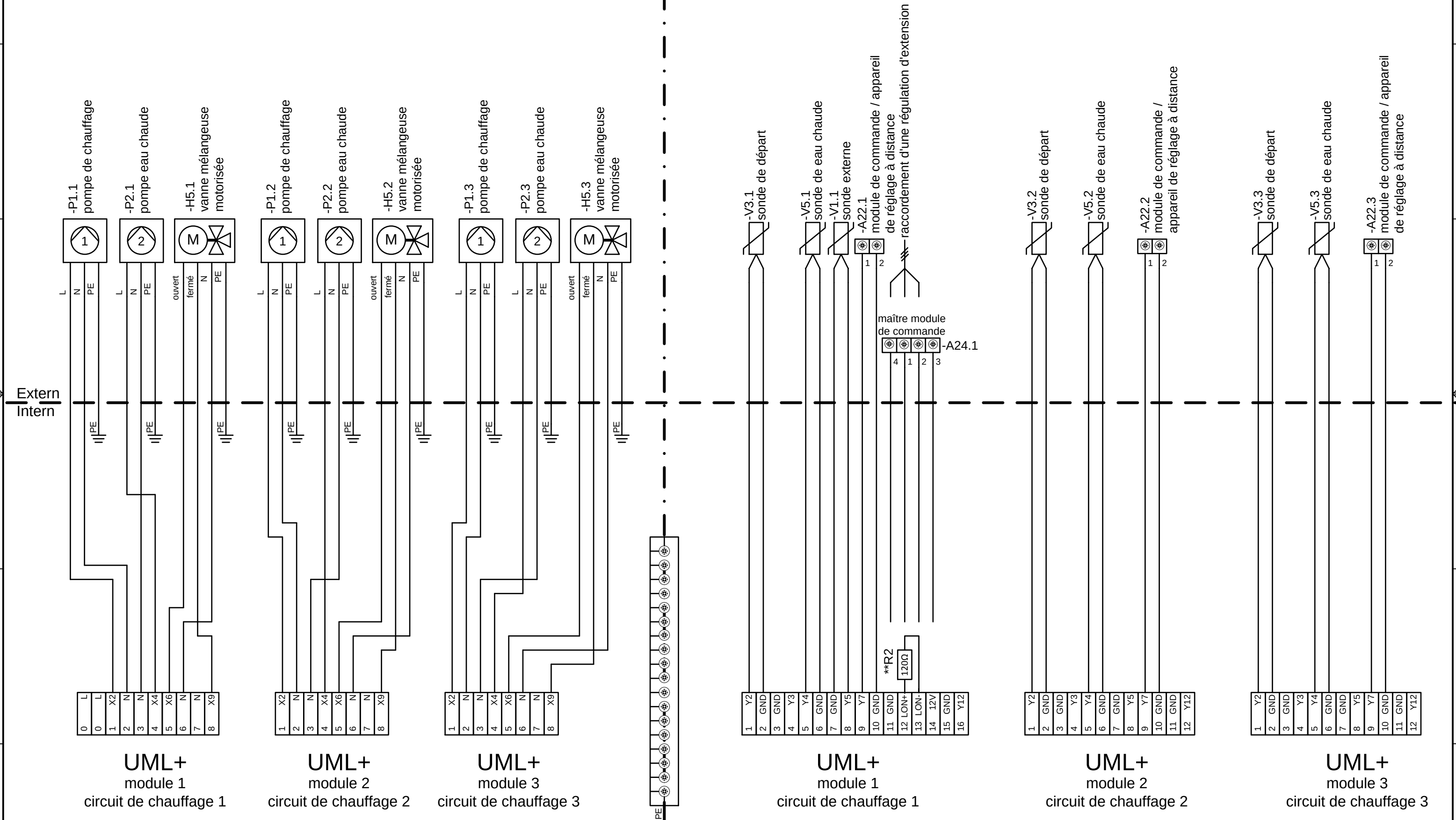
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à
10 GND	distance
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092748/01

tension 230 VAC

basse tension-sonde



				Datum	04.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 régulation par température extérieure pour 3 circuits de chauffage mélangés et circuit d'eau chaude	Projet : régulation		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092750/01				

UML+	module 1 circuit de chauffage 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	pompe de chauffage C.Ch.1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	
8 X9	C.Ch. 1 fermé

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	
8 X9	C.Ch. 2 fermé

UML+	module 3 circuit de chauffage 3
1 X2	pompe de chauffage C.Ch. 3
2 N	
3 N	pompe eau chaude C.Ch. 3
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	
8 X9	C.Ch. 3 fermé

092751/01

UML+	module 1 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande appareil de réglage à
10 GND	distance
11 GND	maître module de
12 Lon+	commande
13 Lon-	raccordement d'une
14 12V	régulation d'extension
15 GND	
16 Y12	

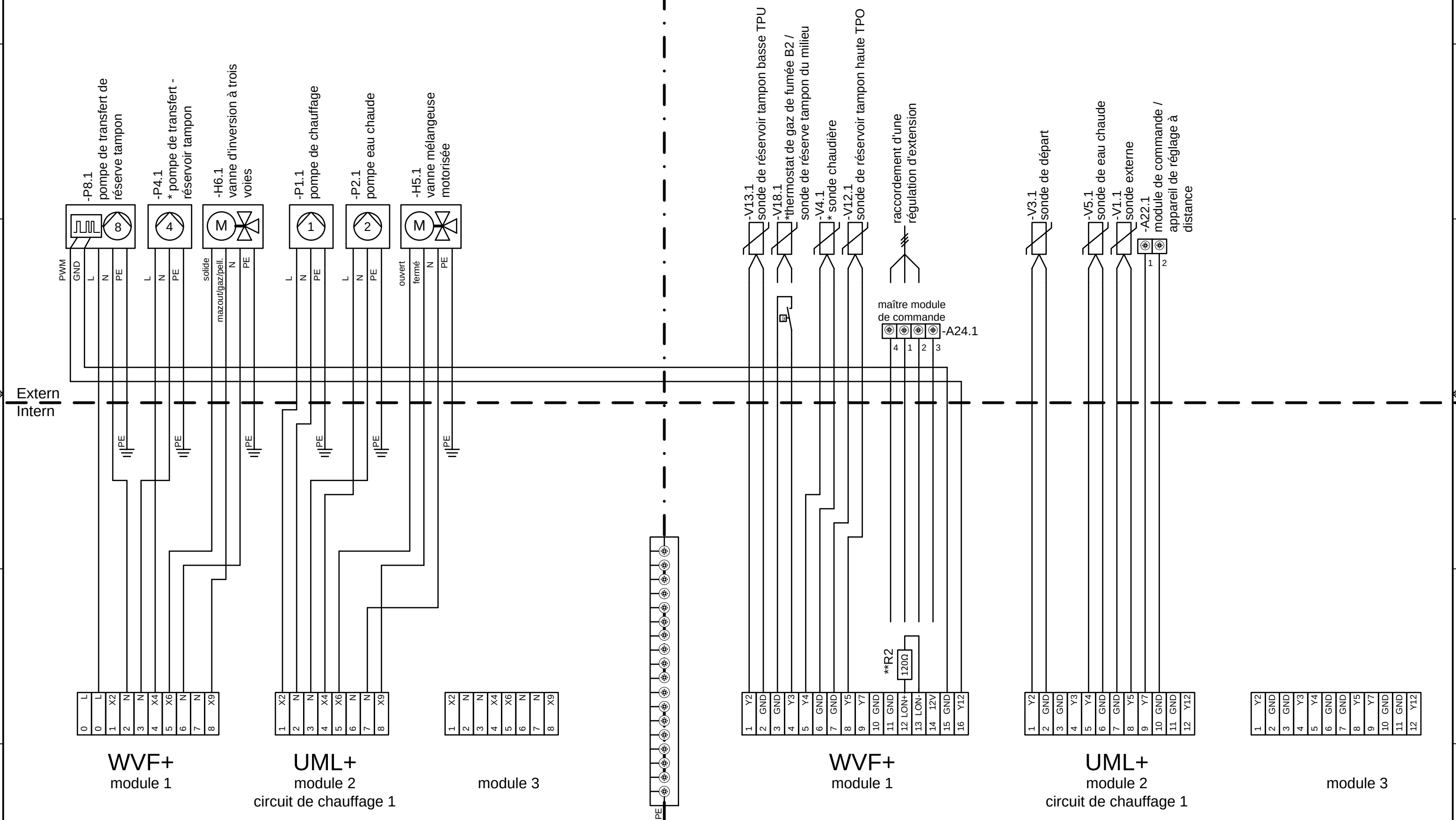
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à
10 GND	distance
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 3
1 Y2	sonde de départ C.Ch. 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 3
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à
10 GND	distance
11 GND	
12 Y12	

092751/01

tension 230 VAC

basse tension-sonde



WVF+	module 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	réservoir tampon
5 X6	solide
6 N	vanne
7 N	d'inversion à
	trois voies
8 X9	mazout/gaz/pell.

WVF+	module 1
1 Y2	sonde de réservoir
2 GND	tampon basse
3 GND	*thermostat de gaz de
4 Y3	fumée B2
	sonde de réserve
	tampon du milieu
5 Y4	*sonde chaudière
6 GND	
7 GND	sonde de réservoir
8 Y5	tampon haute
	TPO
9 Y7	
10 GND	
11 GND	maître module de
12 Lon+	commande
13 Lon-	raccordement d'une
14 12V	régulation
	d'extension
15 GND	PWM pompe de
16 Y12	transfert de réserve
	tampon

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage
2 N	C.Ch. 1
3 N	pompe eau chaude
4 X4	C.Ch. 1
5 X6	ouvert
6 N	vanne mélangeuse
7 N	motorisée
8 X9	C.Ch. 1
	fermé

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ
2 GND	C.Ch. 1
3 GND	
4 Y3	
5 Y4	sonde de eau chaude
6 GND	C.Ch. 1
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à
	distance
11 GND	
12 Y12	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

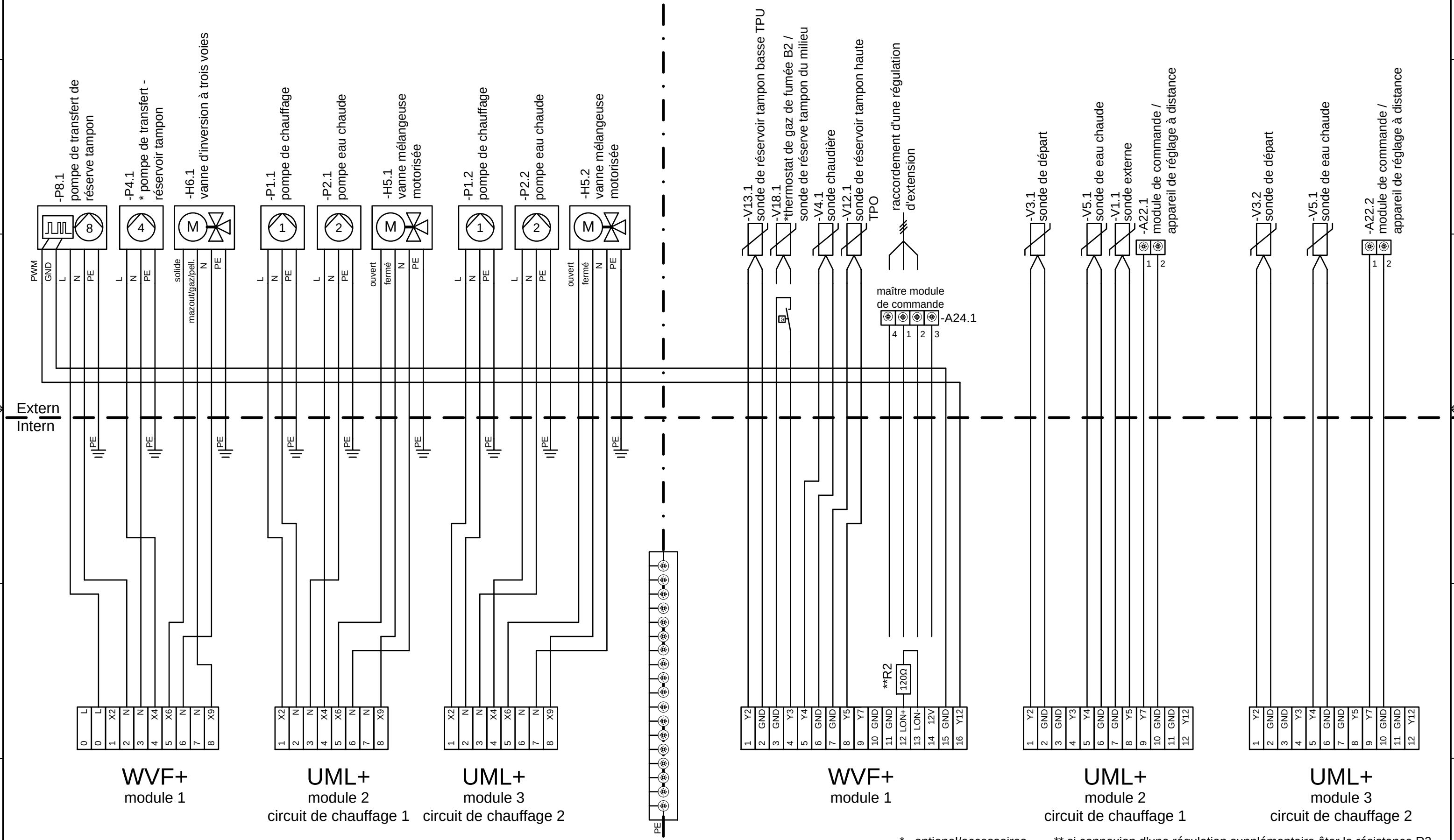
092842/01

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092842/01

tension 230 VAC

basse tension-sonde



WVF+	module 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	solide
6 N	vanne
7 N	d'inversion à trois voies
8 X9	mazout/gaz/pell.

UML+	module 2 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse
7 N	motorisée
8 X9	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse
7 N	motorisée
8 X9	C.Ch. 2 fermé

092848/01

WVF+	module 1
1 Y2	sonde de réservoir tampon basse TPU
2 GND	
3 GND	*thermostat de gaz de fumée B2 / sonde de réserve tampon du milieu
4 Y3	
5 Y4	* sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe de transfert de réserve tampon
16 Y12	

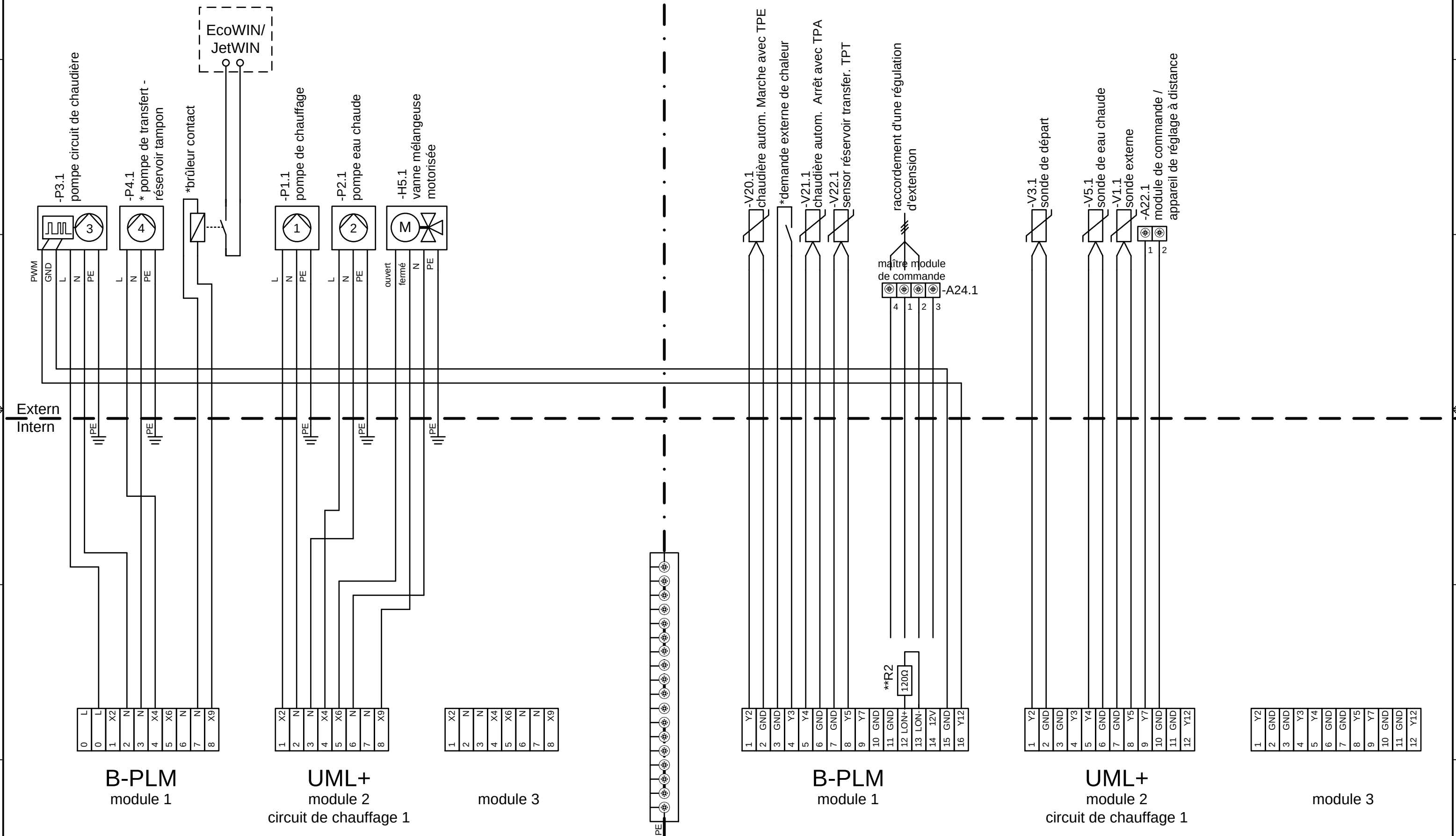
UML+	module 2 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

092848/01

tension 230 VAC

basse tension-sonde



B-PLM	module 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

UML+	module 2
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée C.Ch. 1 fermé
6 N	
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092851/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

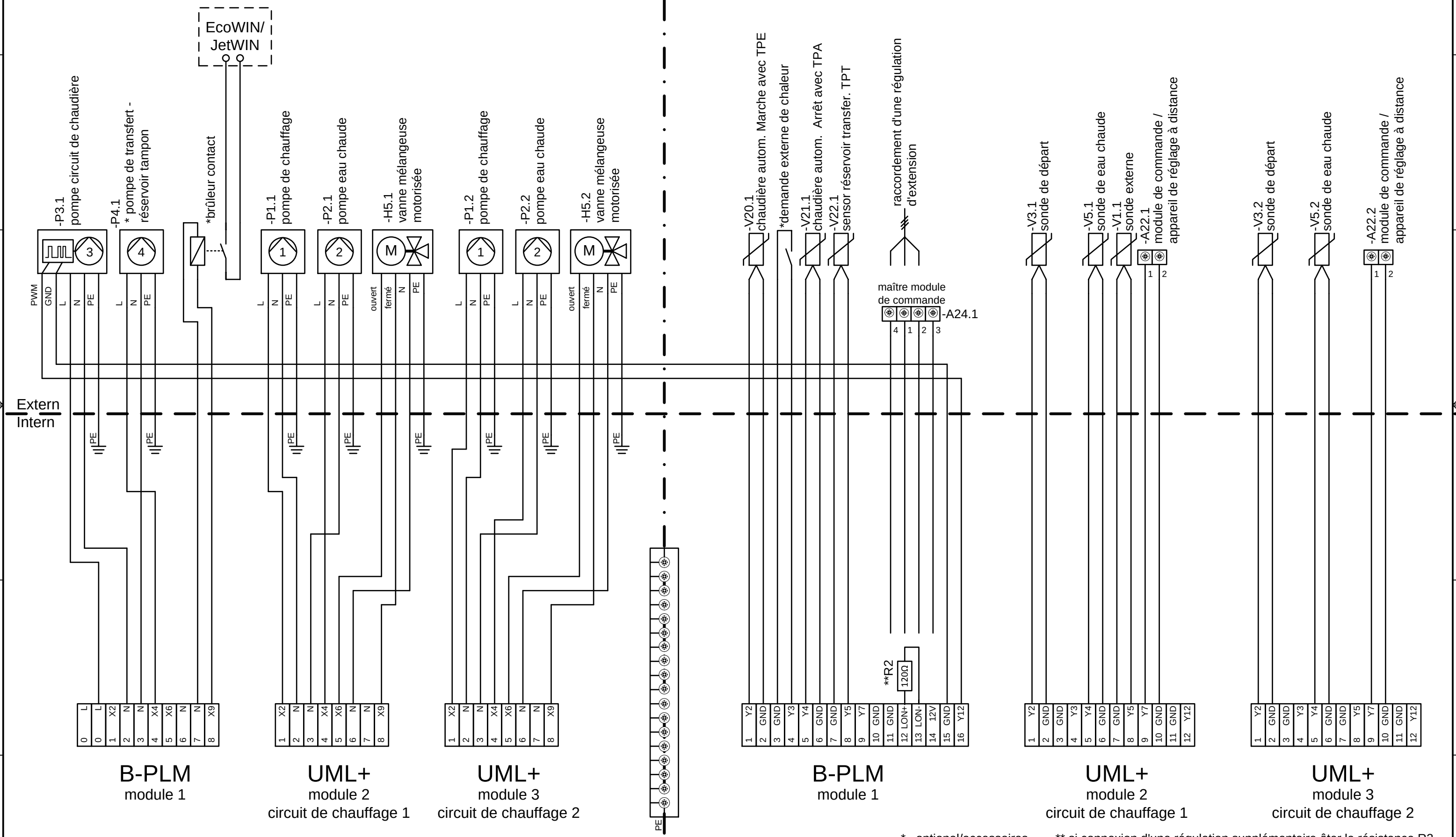
UML+	module 2
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092851/01

tension 230 VAC

basse tension-sonde



B-PLM	module 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	
8 X9	
	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	
8 X9	C.Ch. 2 fermé

092851/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

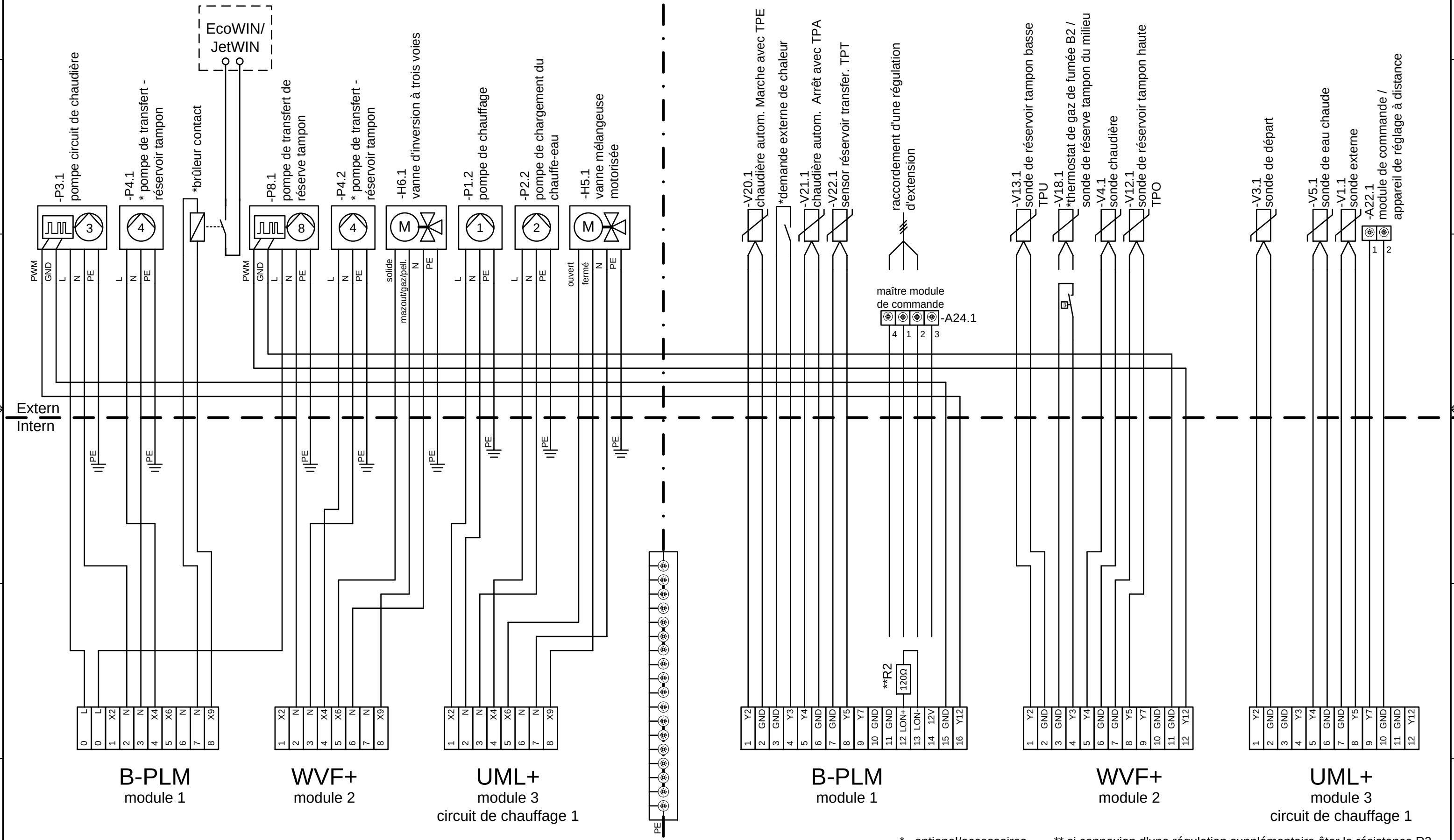
UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

092851/01

tension 230 VAC

basse tension-sonde



B-PLM	module 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

WVF+	module 2
1 X2	
2 N	
3 N	*pompe de transfert réservoir tampon
4 X4	
5 X6	solide vanne
6 N	d'inversion à trois voies
7 N	
8 X9	mazout/gaz/pell.

UML+	module 3 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	C.Ch. 1 fermé
8 X9	

092845/01

B-PLM	module 1
1 Y2	chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfert. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

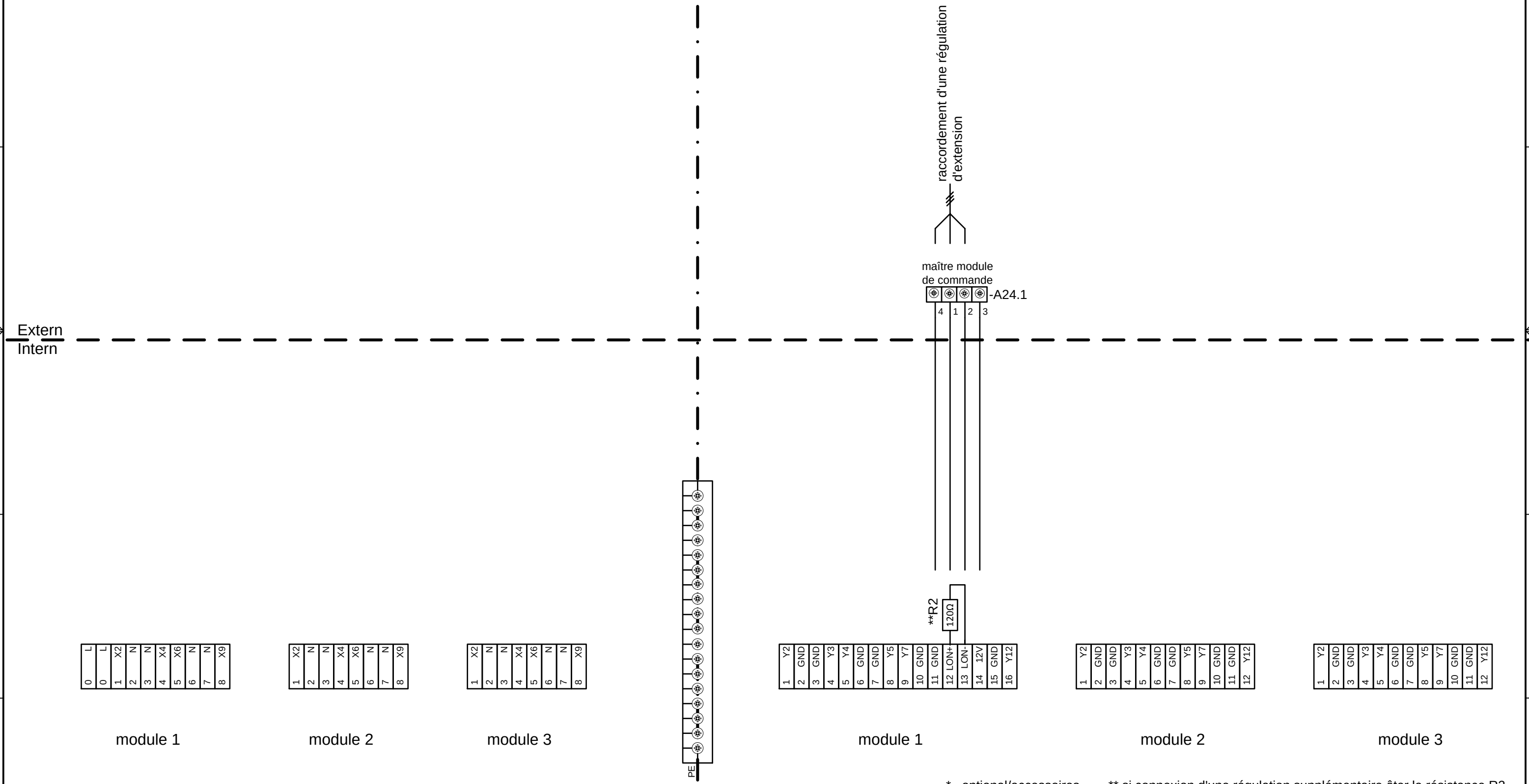
WVF+	module 2
1 Y2	réservoir tampon bas TPU
2 GND	
3 GND	*thermostat de gaz de fumée B2
4 Y3	sonde de réserve tampon du milieu
5 Y4	*sonde chaudière
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM pompe de transfert de réserve tampon
12 Y12	

UML+	module 3 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

092845/01

tension 230 VAC

basse tension-sonde



1	module 1
0 L	PWM Phase permanente 1
0 L	PWM Phase permanente 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	module 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	module 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092735/01

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

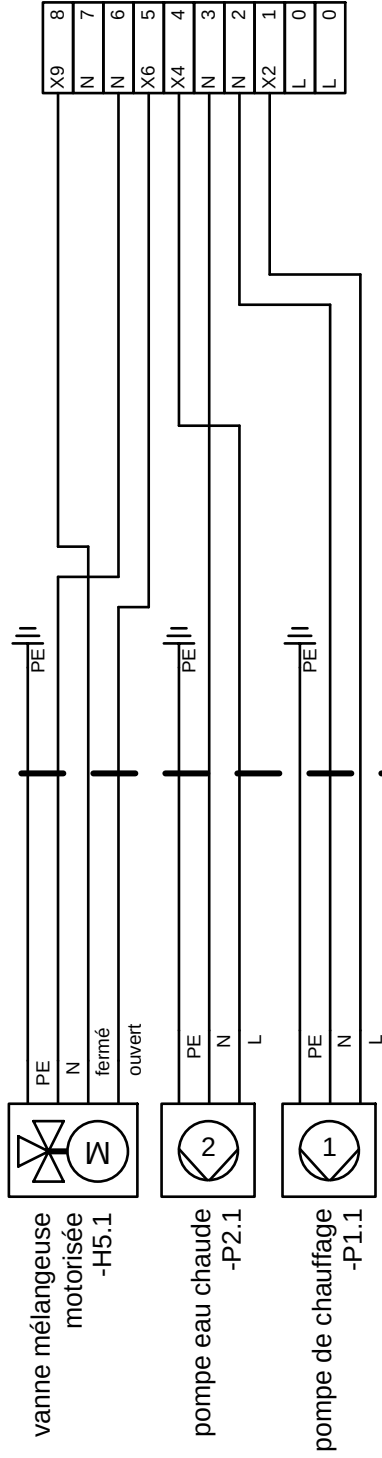
2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092735/01

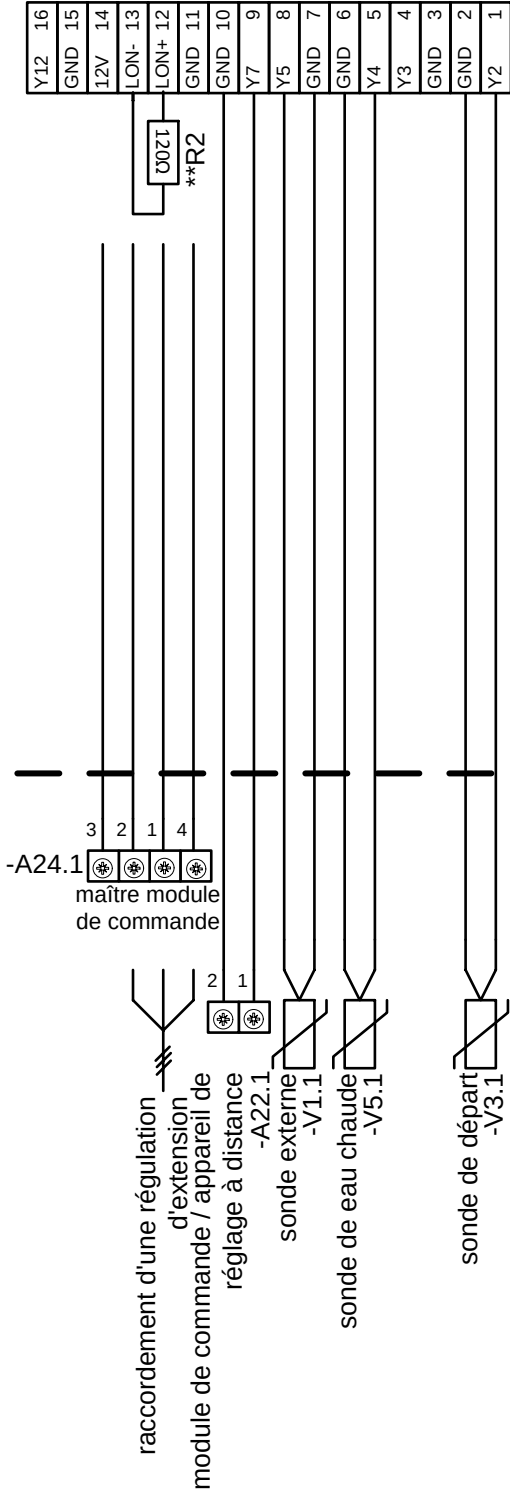
tension 230 VAC

UML+
module 1
circuit de chauffage 1



basse tension-sonde

UML+
module 1
circuit de chauffage 1



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

UML+	module 1 circuit de chauffage 1
C.Ch. 1 fermé	8 X9 7 N
vanne mélangeuse motorisée	6 N 5 X6
pompe eau chaude C.Ch. 1	4 X4 3 N
pompe de chauffage C.Ch. 1	2 N 1 X2
Phase permanente 2	0 L
Phase permanente 1	0 L

092723/01

UML+	module 1 circuit de chauffage 1
	16 Y12 15 GND
maître module de commande raccordement d'une régulation d'extension	14 12V 13 Lon- 12 Lon+
module de commande appareil de réglage à distance	11 GND 10 GND 9 Y7
sonde externe	8 Y5 7 GND
sonde de eau chaude C.Ch. 1	6 GND 5 Y4
	4 Y3 3 GND
sonde de départ C.Ch. 1	2 GND 1 Y2

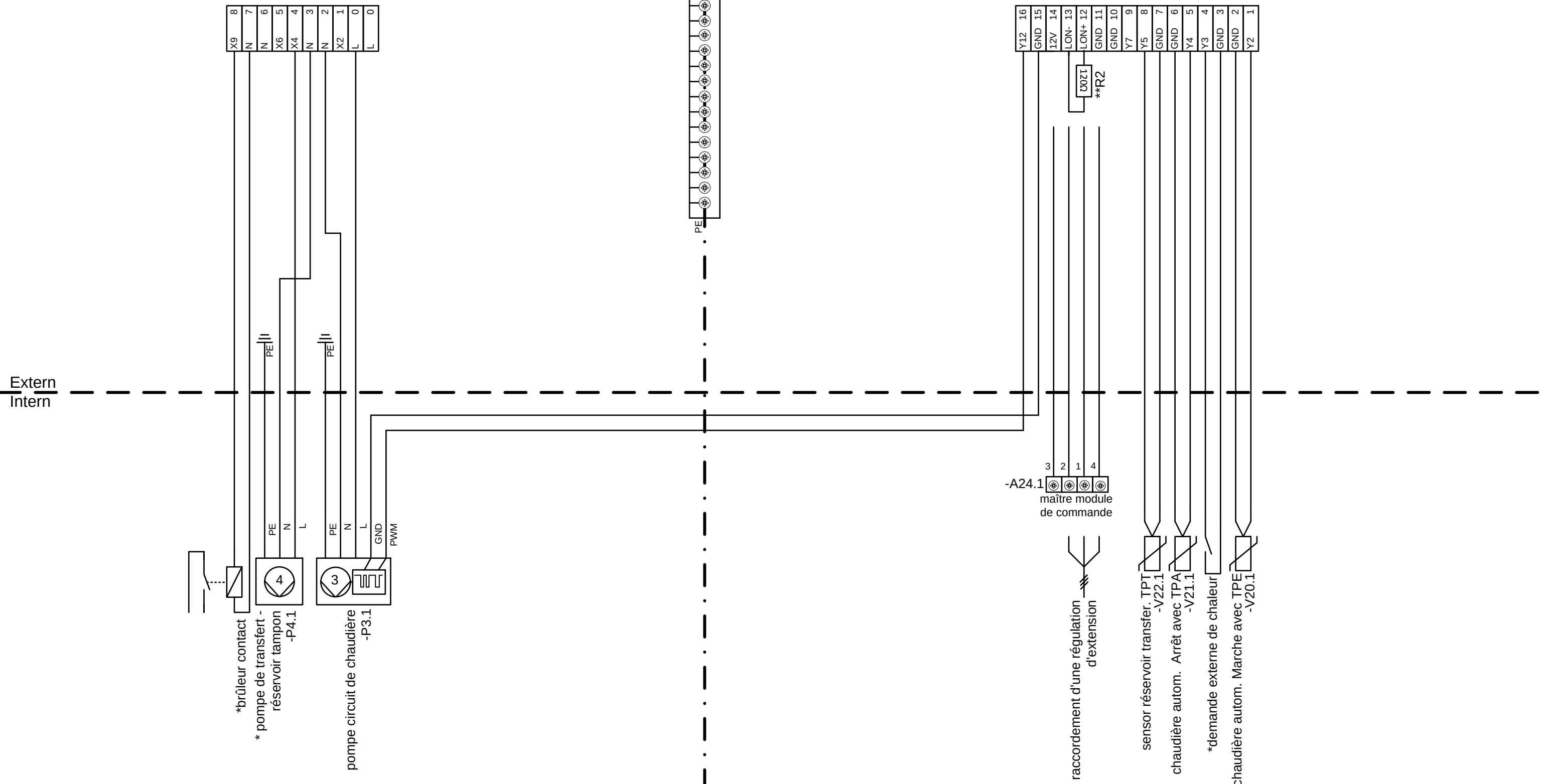
092723/01

tension 230 VAC

basse tension-sonde

B-PLM
module 1

B-PLM
module 1



B-PLM	module 1
*brûleur contact	8 X9 7 N
	6 N 5 X6
pompe de transfert	4 X4 3 N
	2 N 1 X2
Phase permanente 2	0 L
Phase permanente 1	0 L

092906/01

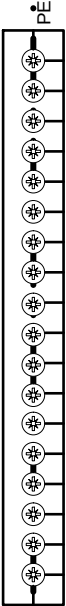
B-PLM	module 1
PWM pompe circuit de chaudière	16 Y12 15 GND
maître module de commande raccordement d'une régulation d'extension	14 12V 13 Lon- 12 Lon+ 11 GND
	10 GND 9 Y7
sensor réservoir transfert. TPT	8 Y5 7 GND
chaudière autom. Arrêt avec TPA	6 GND 5 Y4
*demande externe de chaleur	4 Y3 3 GND
chaudière autom. Marche avec TPE	2 GND 1 Y2

092906/01

tension 230 VAC

MES-Module factice
module 1
circuit de chauffage

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0



basse tension-sonde

MES-Module factice
module 1
circuit de chauffage

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



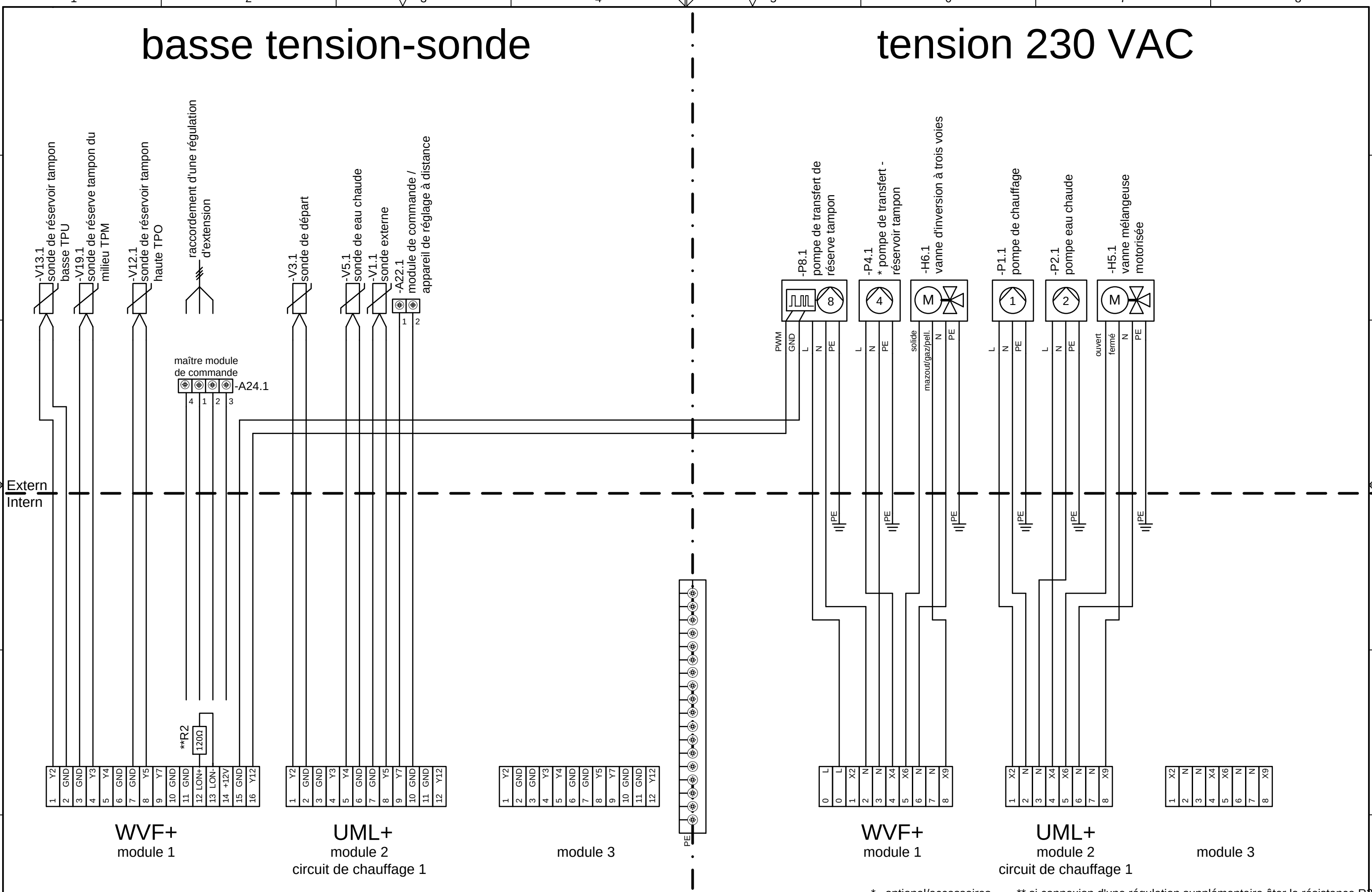
Extern
Intern

1	module 1
X9	8 X9 7 N
X6	6 N 5 X6
X4	4 X4 3 N
X2	2 N 1 X2
Phase permanente 2	0 L
Phase permanente 1	0 L

092726/01

1	module 1
Y12	16 Y12 15 GND
maître module de commande raccordement d'une régulation d'extension	14 12V 13 Lon- 12 Lon+ 11 GND
Y7	10 GND 9 Y7
Y5	8 Y5 7 GND
Y4	6 GND 5 Y4
Y3	4 Y3 3 GND
Y2	2 GND 1 Y2

092726/01



-XS	dispositifs de sécurité
L	manque eau fusible (Germany)
L	
WVF+	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	solide vanne
6 N	d'inversion à trois voies
7 N	mazout/gaz/pell.
8 X9	

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	Ouvert vanne mélangeuse
6 N	motorisée C.Ch. 1 fermé
7 N	
8 X9	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

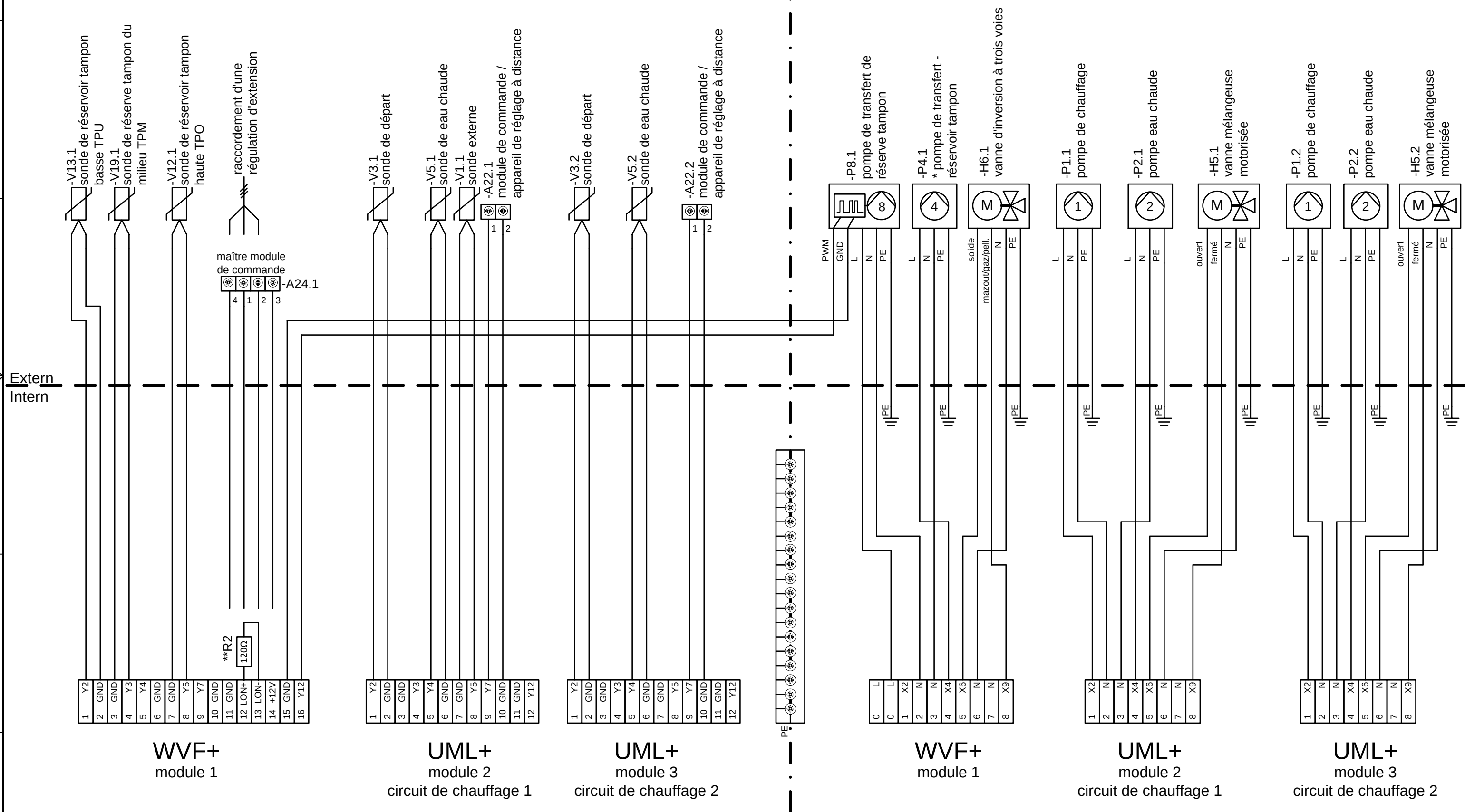
WVF+	module 1
1 Y2	sonde de réservoir tampon basse TPU
2 GND	
3 GND	*sonde de réserve tampon du milieu TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe de transfert de réserve tampon
16 Y12	

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

basse tension-sonde

tension 230 VAC



-XS	dispositifs de sécurité
L	manque eau fusible (Germany)
L	
WVF+	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert- réservoir tampon
4 X4	
5 X6	solide vanne
6 N	d'inversion à trois voies
7 N	
8 X9	mazout/gaz/pell.

WVF+	module 1
1 Y2	sonde de réservoir tampon basse
2 GND	TPU
3 GND	*sonde de réserve
4 Y3	tampon du milieu TPM
5 Y4	
6 GND	
7 GND	sonde de réservoir
8 Y5	tampon haute TPO
9 Y7	
10 GND	
11 GND	maître module de commande
12 Lon+	raccordement d'une
13 Lon-	régulation
14 12V	d'extension
15 GND	PWM pompe de
16 Y12	transfert de réserve tampon

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	
8 X9	C.Ch. 1 fermé

UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage C.Ch. 2
2 N	
3 N	pompe eau chaude C.Ch. 2
4 X4	
5 X6	ouvert vanne mélangeuse
6 N	motorisée
7 N	
8 X9	C.Ch. 2 fermé

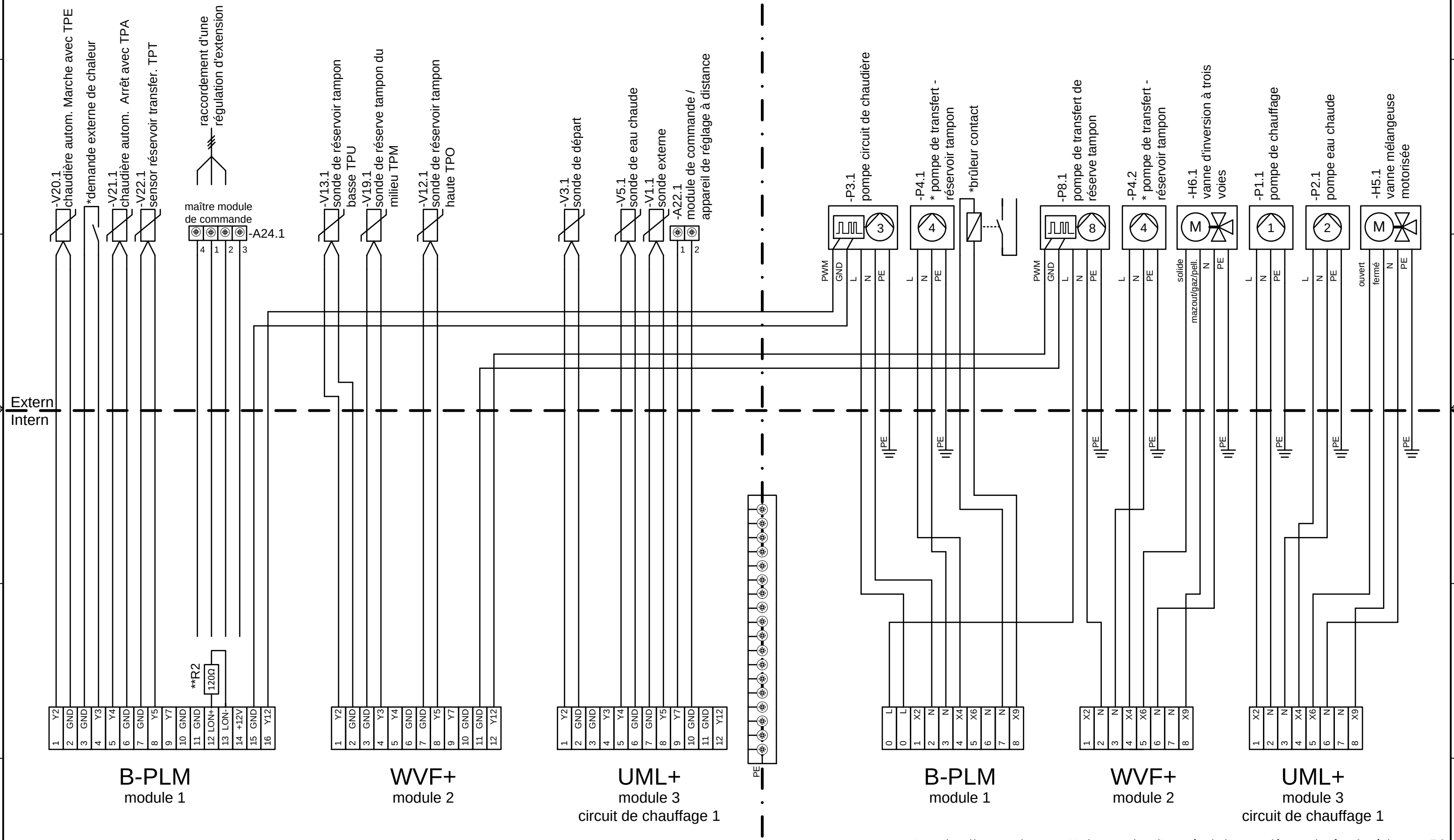
092817/01

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	
8 Y5	sonde externe
9 Y7	module de commande Fernsteller
10 GND	
11 GND	
12 Y12	

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ C.Ch. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 2
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande appareil de réglage à
10 GND	distance
11 GND	
12 Y12	

basse tension-sonde

tension 230 VAC



-XS	dispositifs de sécurité
L	manque eau fusible (Germany)
L	
B-PLM	Modul 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	*pompe de transfert réservoir tampon
4 X4	
5 X6	
6 N	
7 N	*brûleur contact
8 X9	

WVF+	module 2
1 X2	
2 N	
3 N	*pompe de transfert réservoir tampon
4 X4	
5 X6	solide vanne
6 N	
7 N	d'inversion à trois voies
8 X9	
	mazout/gaz/pell.

UML+	module 3 circuit de chauffage 1
1 X2	pompe de chauffage C.Ch. 1
2 N	
3 N	pompe eau chaude C.Ch. 1
4 X4	
5 X6	ouvert vanne mélangeuse motorisée
6 N	
7 N	C.Ch. 1 fermé
8 X9	

092811/01

B-PLM	Modul 1
1 Y2	*chaudière autom. Marche avec TPE
2 GND	
3 GND	*demande externe de chaleur
4 Y3	
5 Y4	*chaudière autom. Arrêt avec TPA
6 GND	
7 GND	*sensor réservoir transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe du circuit chaudière
16 Y12	

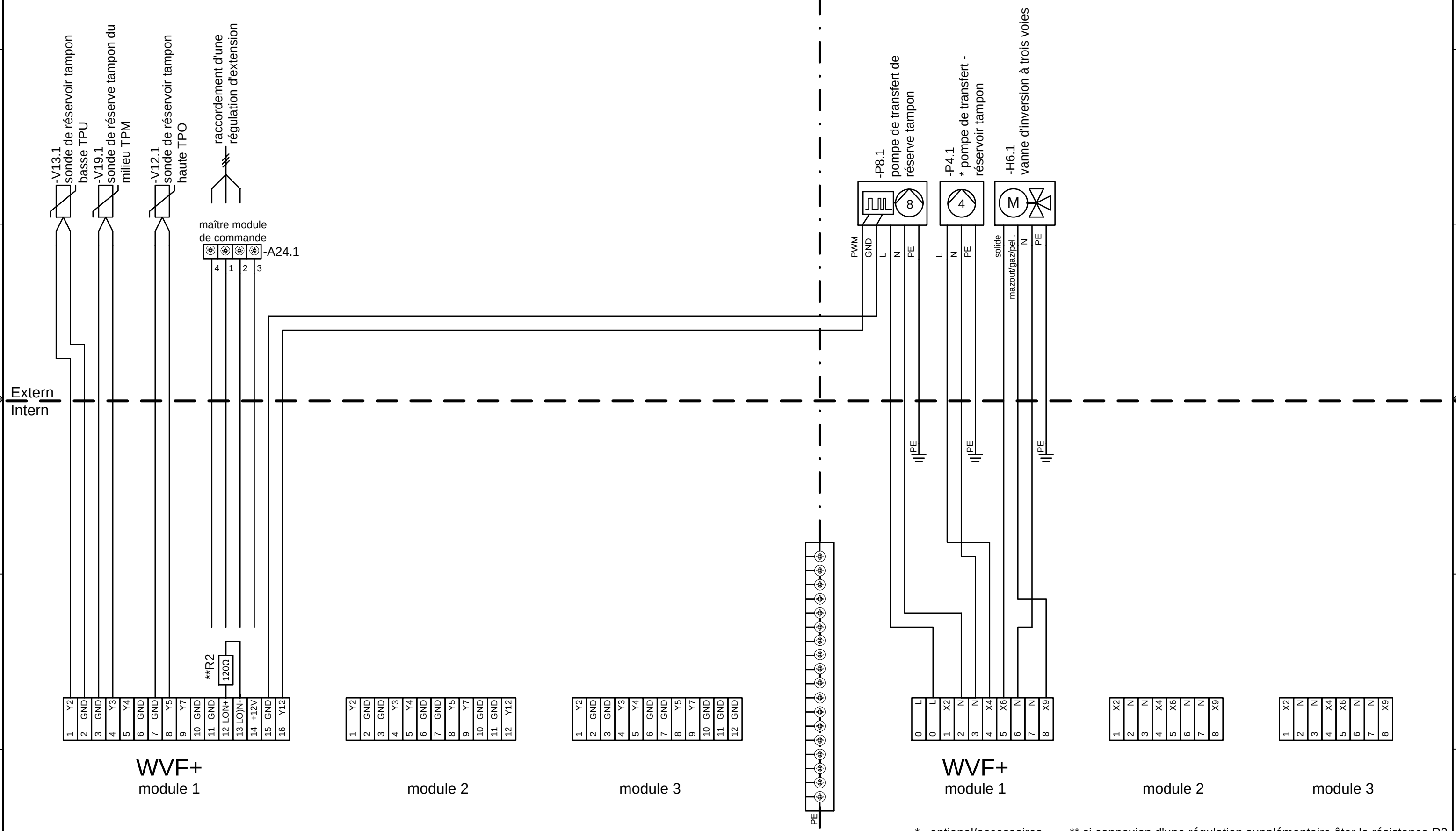
WVF+	module 2
1 Y2	sonde de réservoir tampon basse TPU
2 GND	
3 GND	*sonde de réserve tampon du milieu TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM pompe de transfert de réserve tampon
12 Y12	

UML+	module 3 circuit de chauffage 1
1 Y2	sonde de départ C.Ch. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonde de eau chaude C.Ch. 1
6 GND	
7 GND	sonde externe
8 Y5	
9 Y7	module de commande appareil de réglage à distance
10 GND	
11 GND	
12 Y12	

092811/01

basse tension-sonde

tension 230 VAC



-XS	dispositifs de sécurité
L	manque eau fusible (Germany)
L	
WVF+	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	solide vanne d'inversion à trois voies
2 N	
3 N	
4 X4	
5 X6	
6 N	mazout/gaz/pell.
7 N	
8 X9	

WVF+	module 1
1 Y2	réservoir tampon bas TPU
2 GND	
3 GND	sonde de réserve tampon du milieu TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sonde de réservoir tampon haute TPO
8 Y5	
9 Y7	
10 GND	
11 GND	maître module de commande raccordement d'une régulation d'extension
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompe de transfert de réserve tampon
16 Y12	

	module 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

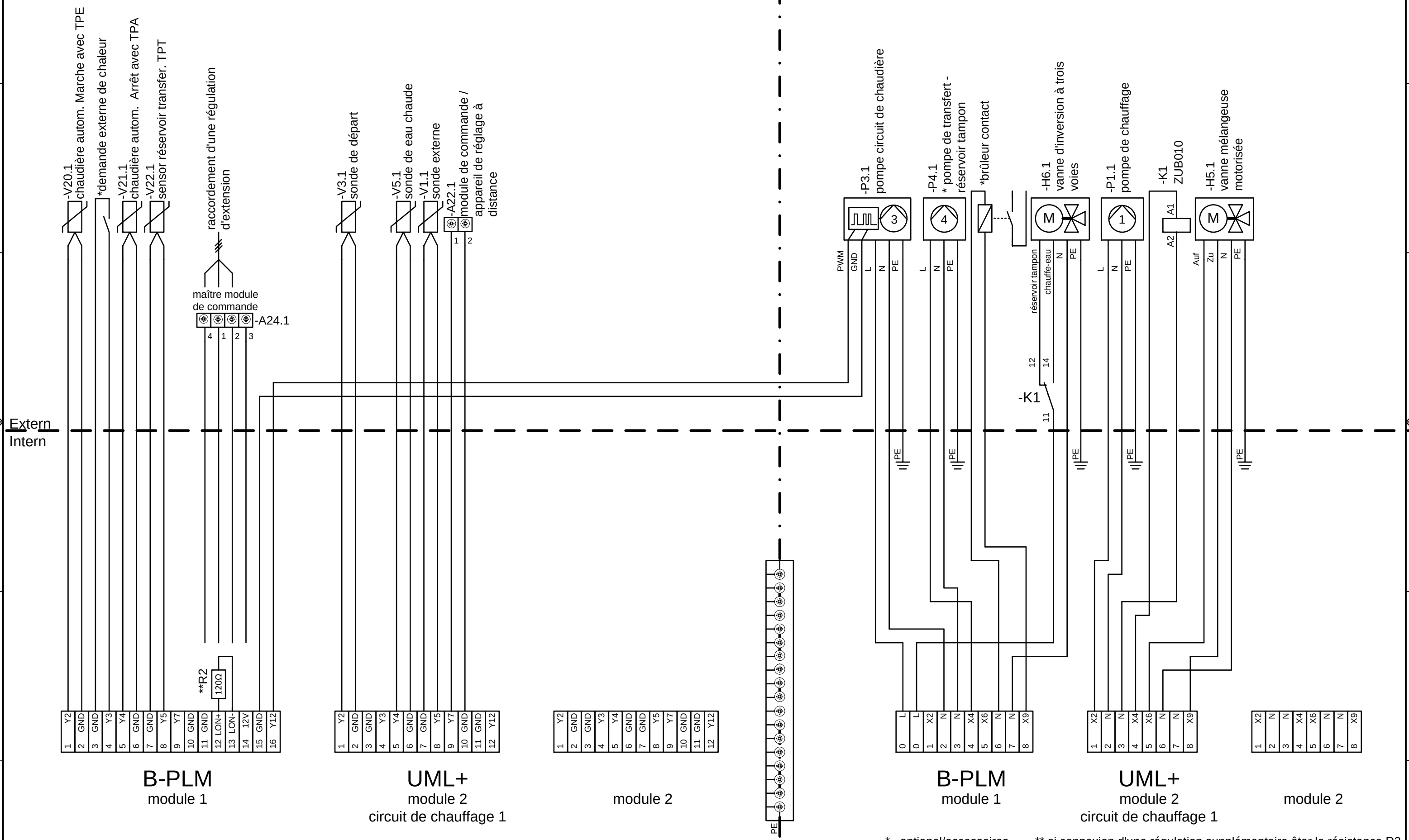
	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092820/01

basse tension-sonde

tension 230 VAC



	dispositifs- de sécurité
L	arrêt chauffage
L	interrupteur urgence
B-PLM	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	* pompe de transfert
4 X4	
5 X6	
6 N	
7 N	*contact brûleur
8 X9	

B-PLM	module 1
1 Y2	chaudière autom.
2 GND	Marche avec TPE
3 GND	* demande externe de
4 Y3	chaleur
5 Y4	* chaudière autom.
6 GND	Arrêt avec TPA
7 GND	* sensor réservoir
8 Y5	transfer. TPT
9 Y7	
10 GND	
11 GND	maître module de
12 Lon+	commande
13 Lon-	raccordement d'une
14 12V	régulation
	d'extension
15 GND	PWM pompe du circuit
16 Y12	chaudière

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage
2 N	C.Ch. 1
3 N	contacteur -K1
4 X4	C.Ch. 1
5 X6	ouvert
6 N	vanne mélangeuse
7 N	motorisée
8 X9	C.Ch. 1
	fermé

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ
2 GND	C.Ch. 1
3 GND	
4 Y3	
5 Y4	sonde de eau chaude
6 GND	C.Ch. 1
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à
	distance
11 GND	
12 Y12	

	module 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

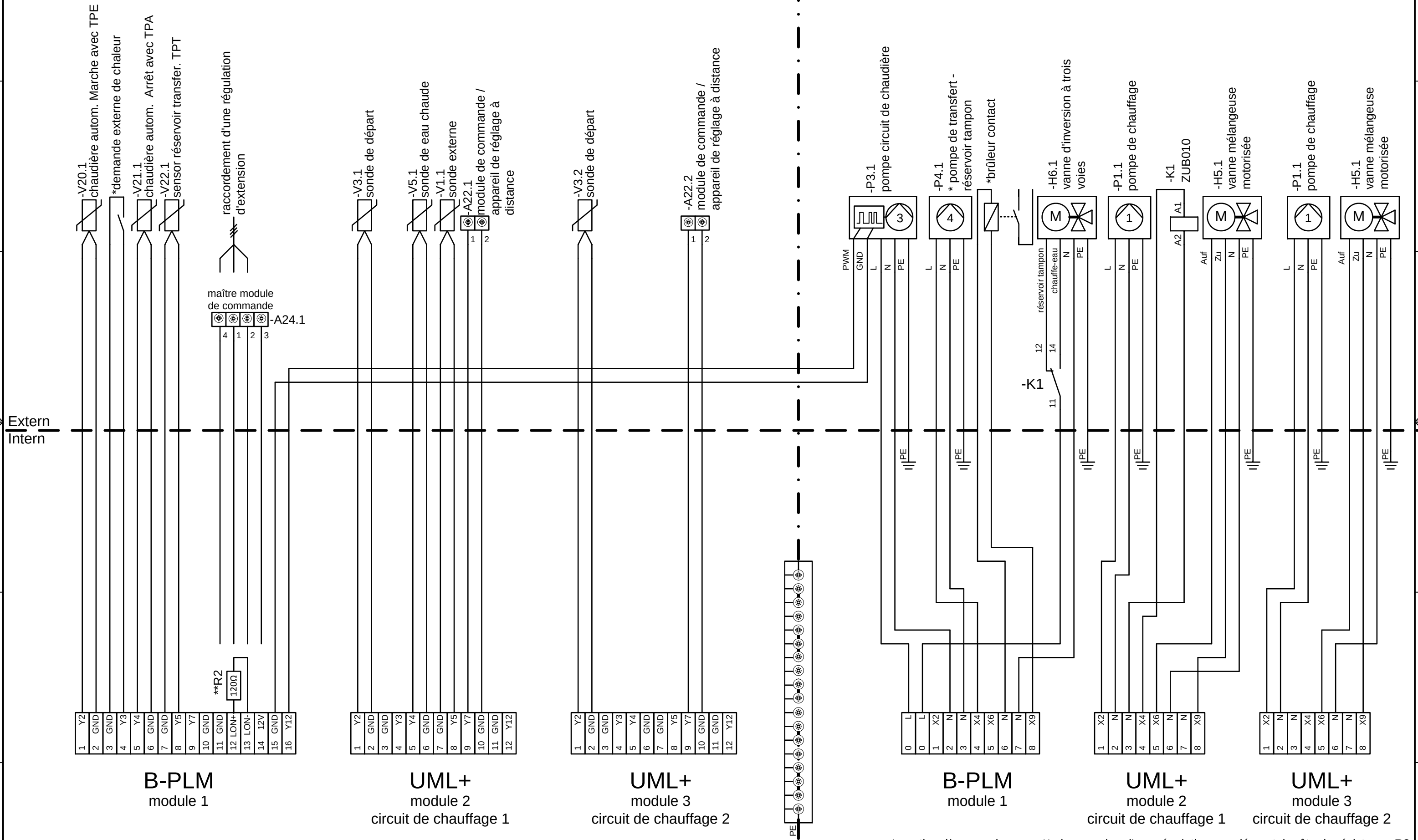
	module 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094550/01

094550/01

basse tension-sonde

tension 230 VAC



	dispositifs- de sécurité
L	arrêt chauffage
L	interrupteur urgence
B-PLM	module 1
0 L PWM	Phase permanente 1
0 L PWM	Phase permanente 2
1 X2	
2 N	
3 N	* pompe de transfert
4 X4	
5 X6	
6 N	
7 N	
8 X9	*contact brûleur

B-PLM	module 1
1 Y2	chaudière autom.
2 GND	Marche avec TPE
3 GND	* demande externe de
4 Y3	chaleur
5 Y4	* chaudière autom.
6 GND	Arrêt avec TPA
7 GND	* sensor réservoir
8 Y5	transfer. TPT
9 Y7	
10 GND	
11 GND	maître module de
12 Lon+	commande
13 Lon-	raccordement d'une
14 12V	régulation
	d'extension
15 GND	PWM pompe du circuit
16 Y12	chaudière

UML+	module 2 circuit de chauffage 1
1 X2	pompe de chauffage
2 N	C.Ch. 1
3 N	contacteur -K1
4 X4	C.Ch. 1
5 X6	ouvert
6 N	vanne mélangeuse
	motorisée
7 N	C.Ch. 1
8 X9	fermé

UML+	module 2 circuit de chauffage 1
1 Y2	sonde de départ
2 GND	C.Ch. 1
3 GND	
4 Y3	
5 Y4	sonde de eau chaude
6 GND	C.Ch. 1
7 GND	
8 Y5	sonde externe
9 Y7	module de commande
10 GND	appareil de réglage à
	distance
11 GND	
12 Y12	

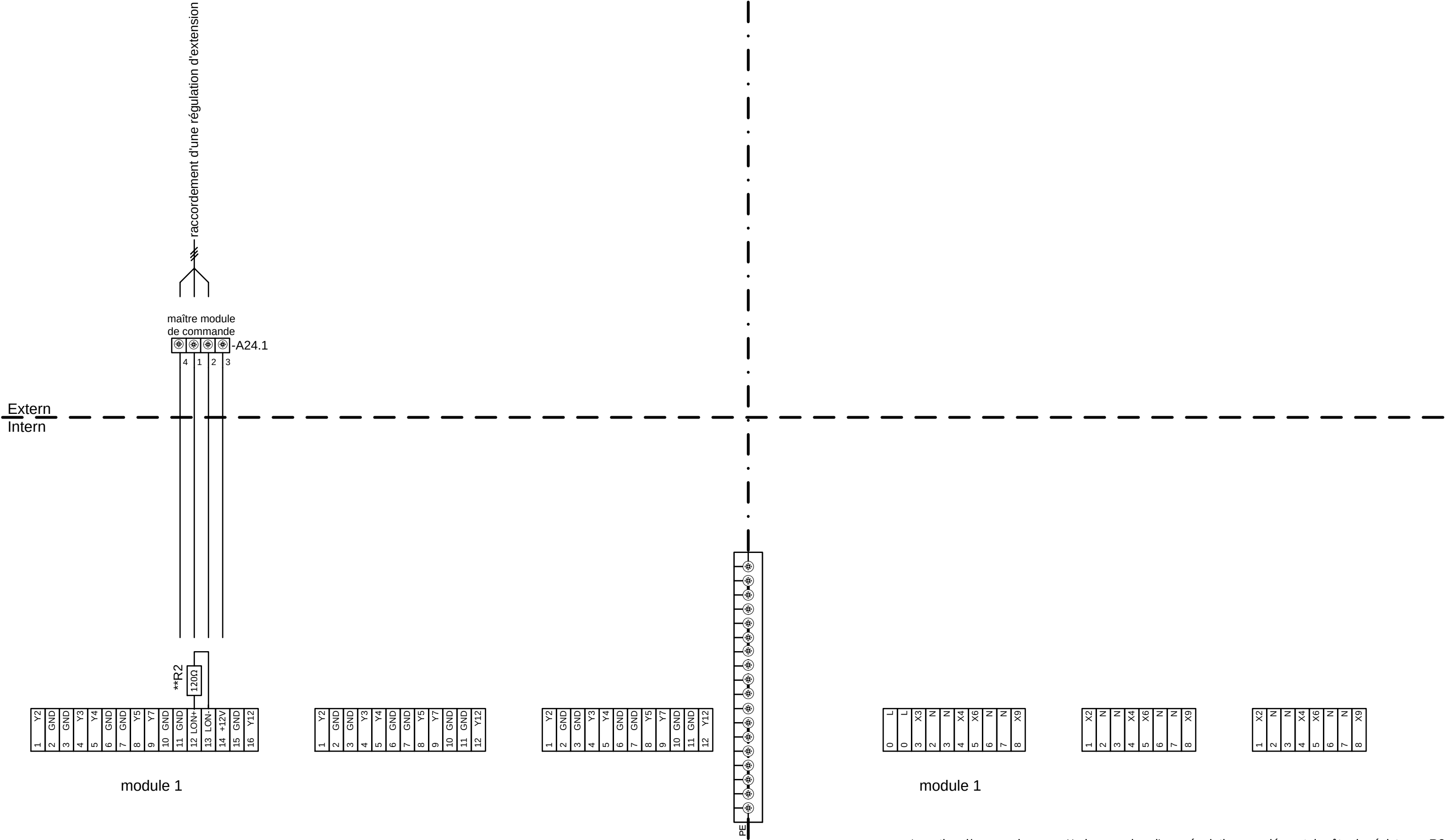
UML+	module 3 circuit de chauffage 2
1 X2	pompe de chauffage
2 N	C.Ch. 2
3 N	
4 X4	
5 X6	ouvert
6 N	vanne mélangeuse
	motorisée
7 N	C.Ch. 2
8 X9	fermé

UML+	module 3 circuit de chauffage 2
1 Y2	sonde de départ
2 GND	C.Ch. 2
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	module de commande
10 GND	appareil de réglage à
	distance
11 GND	
12 Y12	

094553/01

basse tension-sonde

tension 230 VAC



-XS	dispositifs de sécurité	
L	manque eau fusible (Germany)	
L		
1	module 1	
0 L PWM Phase permanente 1		
0 L PWM Phase permanente 2		
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		
2	module 2	
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		
3	module 3	
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		

092638/01

1	module 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	module 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	module 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092638/01

tension 230 VAC

basse tension-sonde

KAS+
module 1

module 2

module 3

KAS+
module 1

module 2

module 3

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Extern
Intern

*brûleur contact
additionnel chaudière

PWM
GND
L
N
PE
-P6.1
additionnel pompe du circuit
chaudière

-A24.1
maître module
de commande

raccordement d'une régulation
d'extension

-V23.1
additionnel sonde chaudière TZK

-V21.1
chaudière autom. Arrêt avec TPA

Digitaler Eingang für Folgeschaltung

-V20.1
chaudière autom. Marche avec TPE

*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

Rev.	Änderung	Datum	Name

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

KAS+	
Zeichnungs Nr.:	092682/00

MES KAS+
cascade

Projekt :
régulation



1 mm : 1 mm
◀ ----- 2 ----- ▶
Blatt 092682/00

-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

KAS+	module 1
brûleur relais additionnel chaudière	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

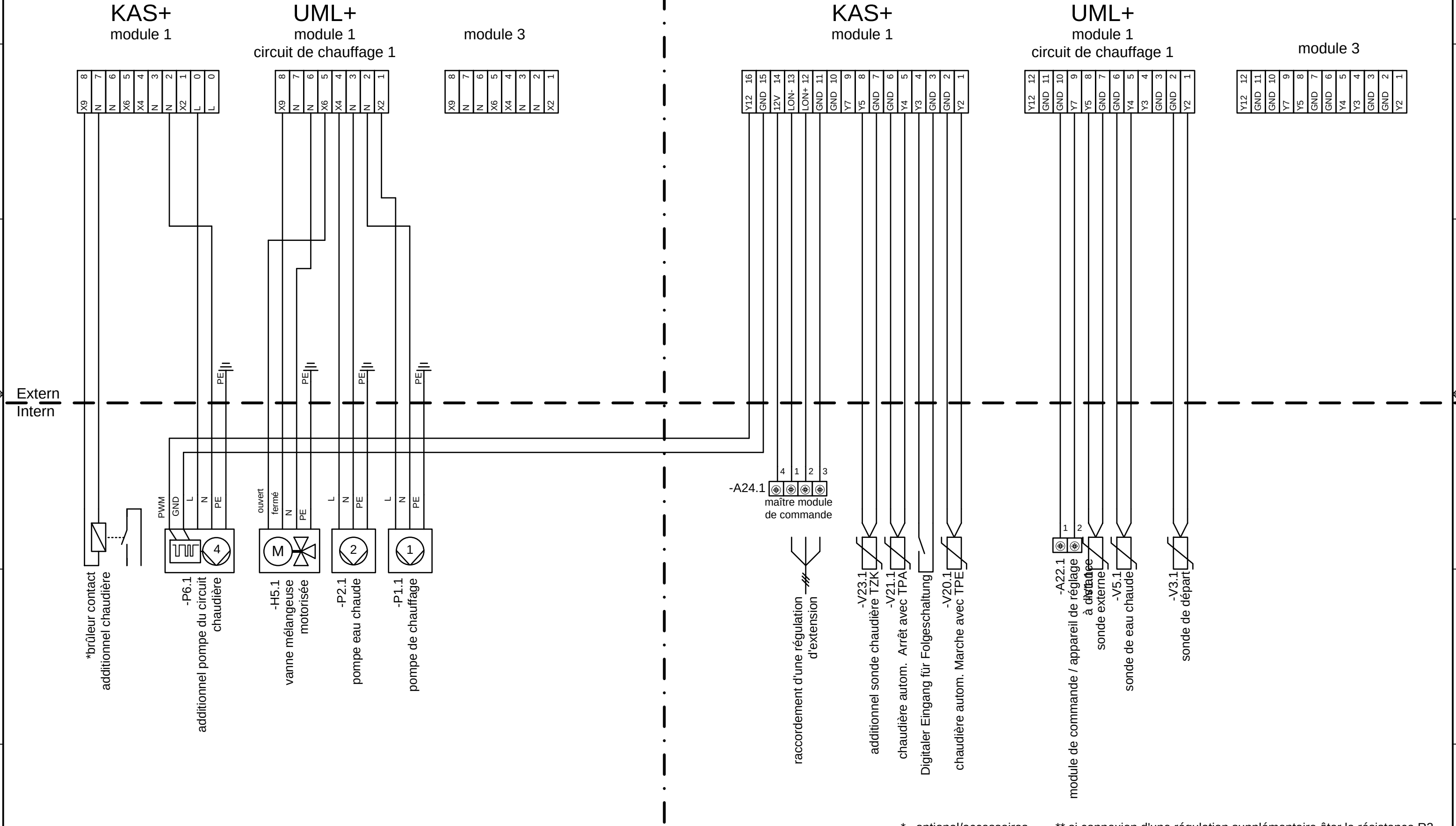
KAS+	module 1
PWM additionnel chaudière Pompe	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
chaudière autom. Arrêt avec TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

KAS+	module 1
brûleur relais additionnel chaudière	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
vanne mélangeuse motorisée	X9 8 N 7 N 6 HK 1 ouvert
pompe eau chaude	X4 4 N 3
pompe de chauffage HK 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

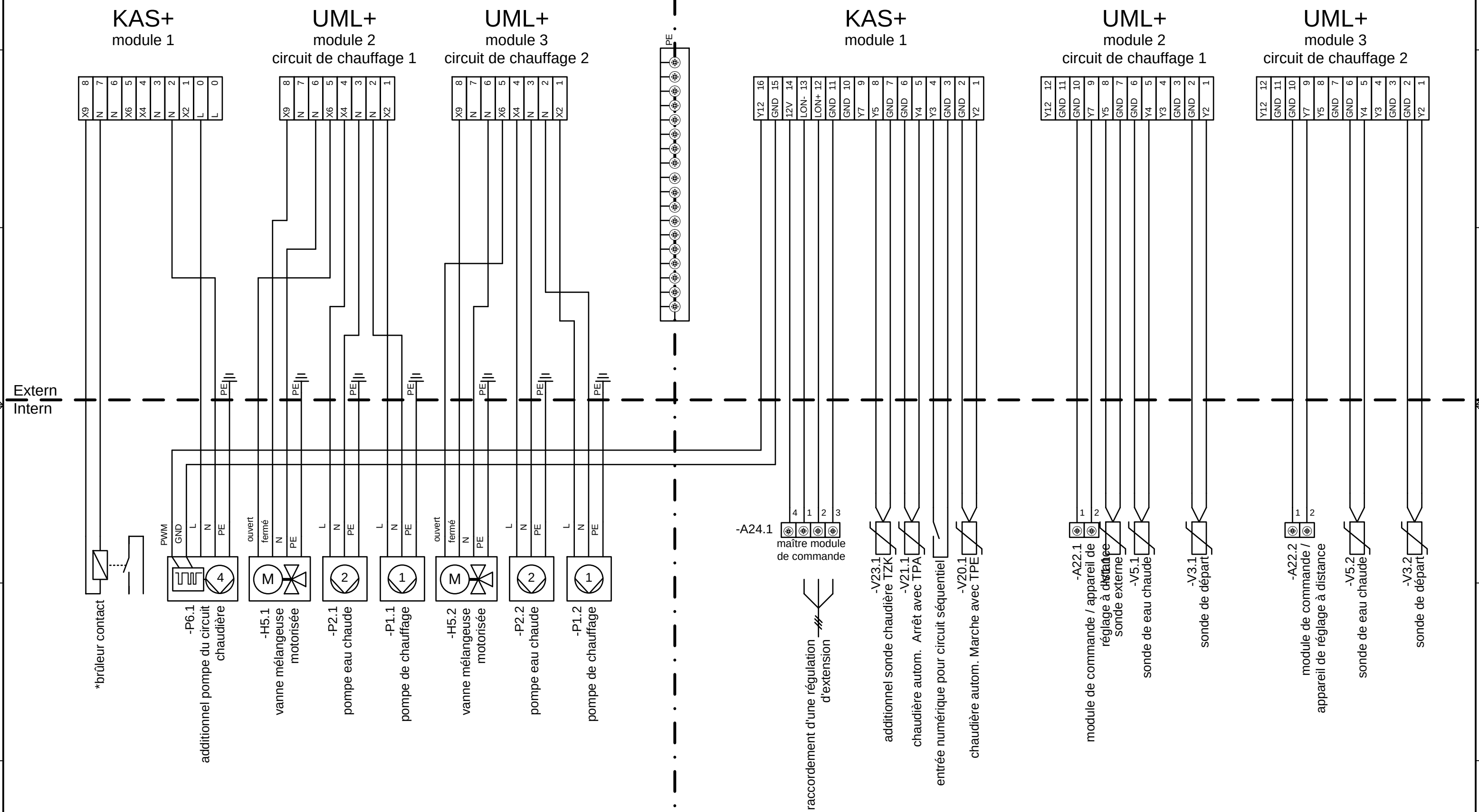
KAS+	module 1
PWM additionnel chaudière Pompe	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
chaudière autom. Arrêt avec TPA	GND 6 Y4 5
entrée numérique pour circuit séquentiel	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ HK 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

KAS+	module 1
brûleur relais additionnel chaudière	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude HK 1	X4 4 N 3
pompe de chauffage HK 1	N 2 X2 1

UML+	module 3 circuit de chauffage 2
fermé HK 2	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude HK 2	X4 4 N 3
pompe de chauffage HK 2	N 2 X2 1

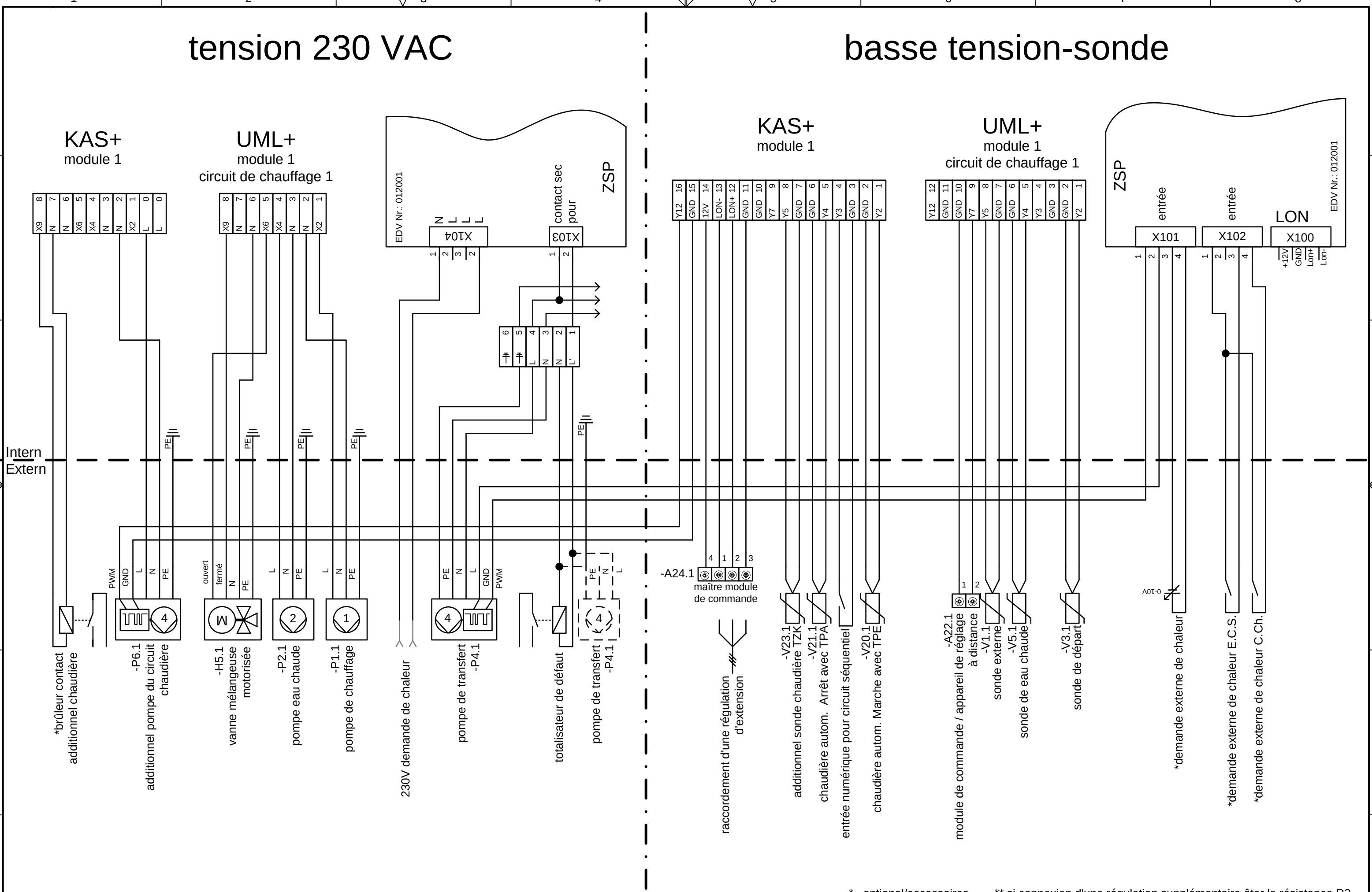
KAS+	module 1
PWM additionnel chaudière Pompe	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Zusatz Kesselfühler	Y5 8 GND 7
chaudière autom. Arrêt avec TPA	GND 6 Y4 5
entrée numérique pour circuit séquentiel	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ HK 1	GND 2 Y2 1

UML+	module 3 circuit de chauffage 2
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
	Y5 8 GND 7
sonde de eau chaude HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ HK 1	GND 2 Y2 1

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

KAS+	module 1
brûleur relais additionnel chaudière	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
vanne mélangeuse motorisée	X9 8 N 7 N 6 HK 1 ouvert
pompe eau chaude	X4 4 N 3
pompe de chauffage HK 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	module 1
PWM additionnel chaudière Pompe	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
chaudière autom. Arrêt avec TPA	GND 6 Y4 5
entrée numérique pour circuit séquentiel	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ HK 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
totalisateur de défaut OU pompe de transfert	N L'

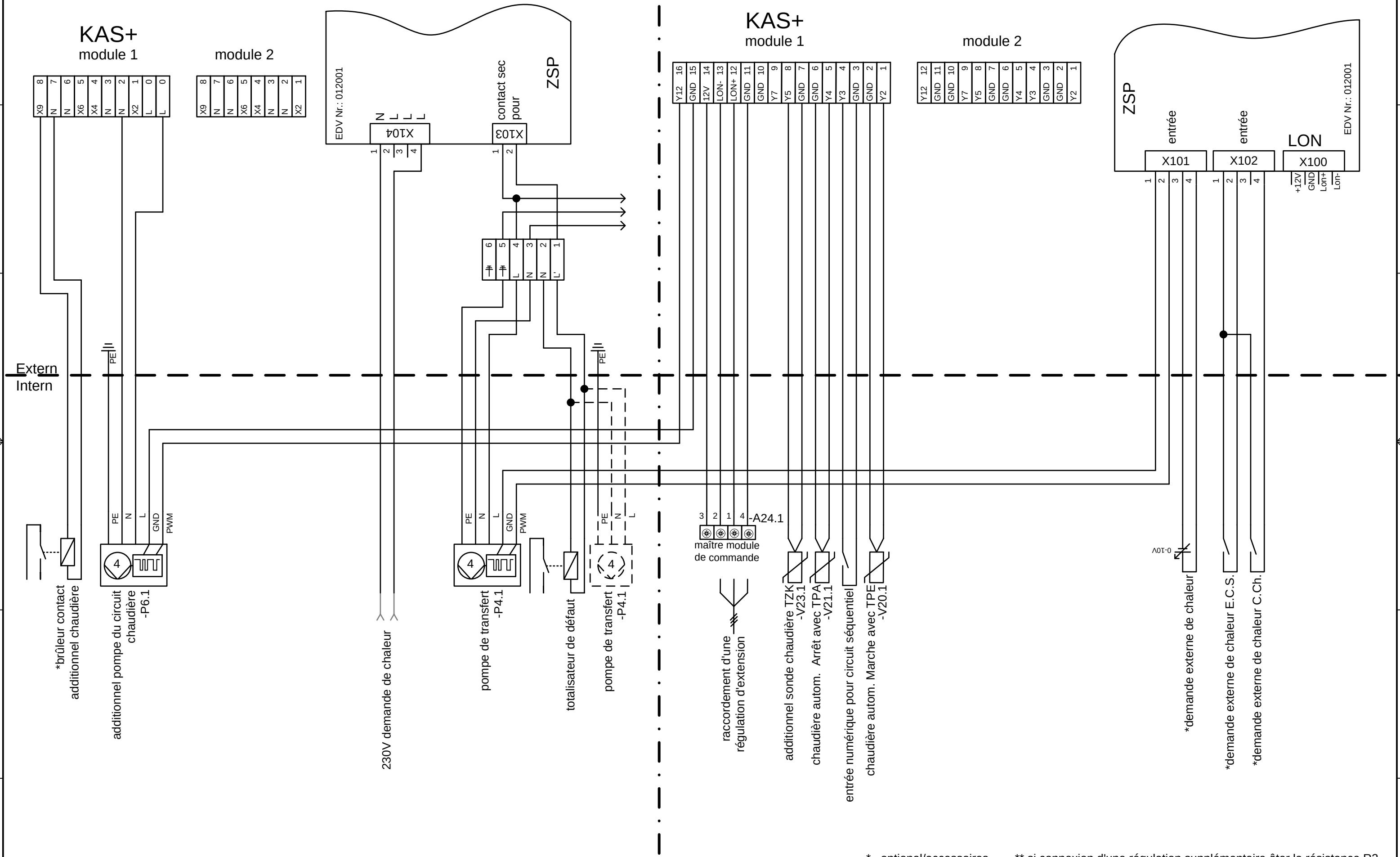
-XSP	platine supplémentaire
GND	PWM pompe de transfert
-X101 /2	
GND	demande de chaleur 0-
-X101 /4	10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094512/00

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

KAS+	module 1
PWM additionnel chaudière Pompe	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
chaudière autom. Arrêt avec TPA	GND 6 Y4 5
entrée numérique pour circuit séquentiel	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

KAS+	module 1
brûleur relais additionnel chaudière	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
totalisateur de défaut OU pompe de transfert	N L'

-XSP	platine supplémentaire
GND	PWM pompe de transfert
-X101 /2	
GND	demande de chaleur 0-
-X101 /4	10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094512/00

tension 230 VAC

basse tension-sonde

UML+
module 1
circuit de chauffage 1

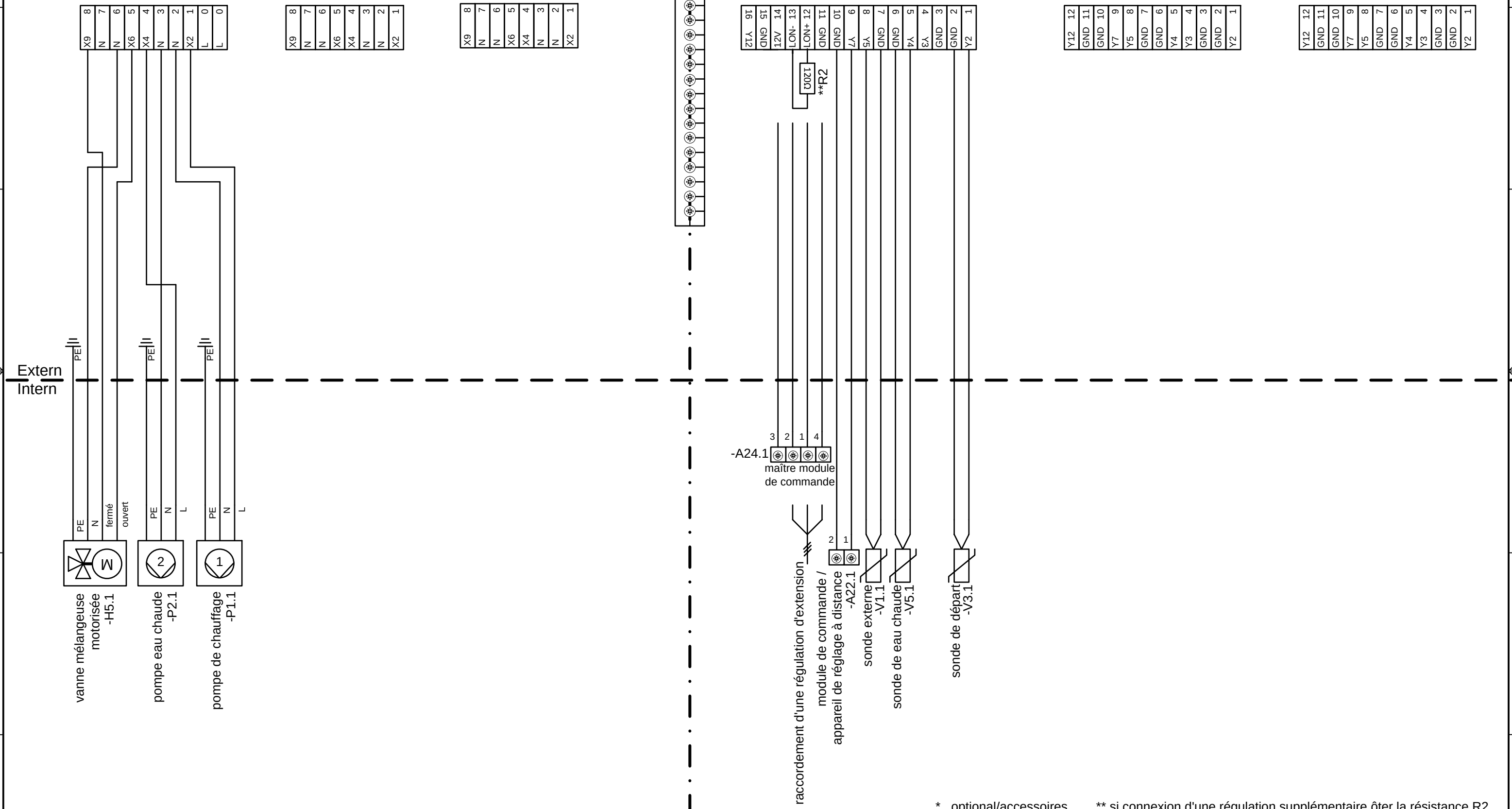
module 2

module 3

UML+
module 1
circuit de chauffage 1

module 2

module 3



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

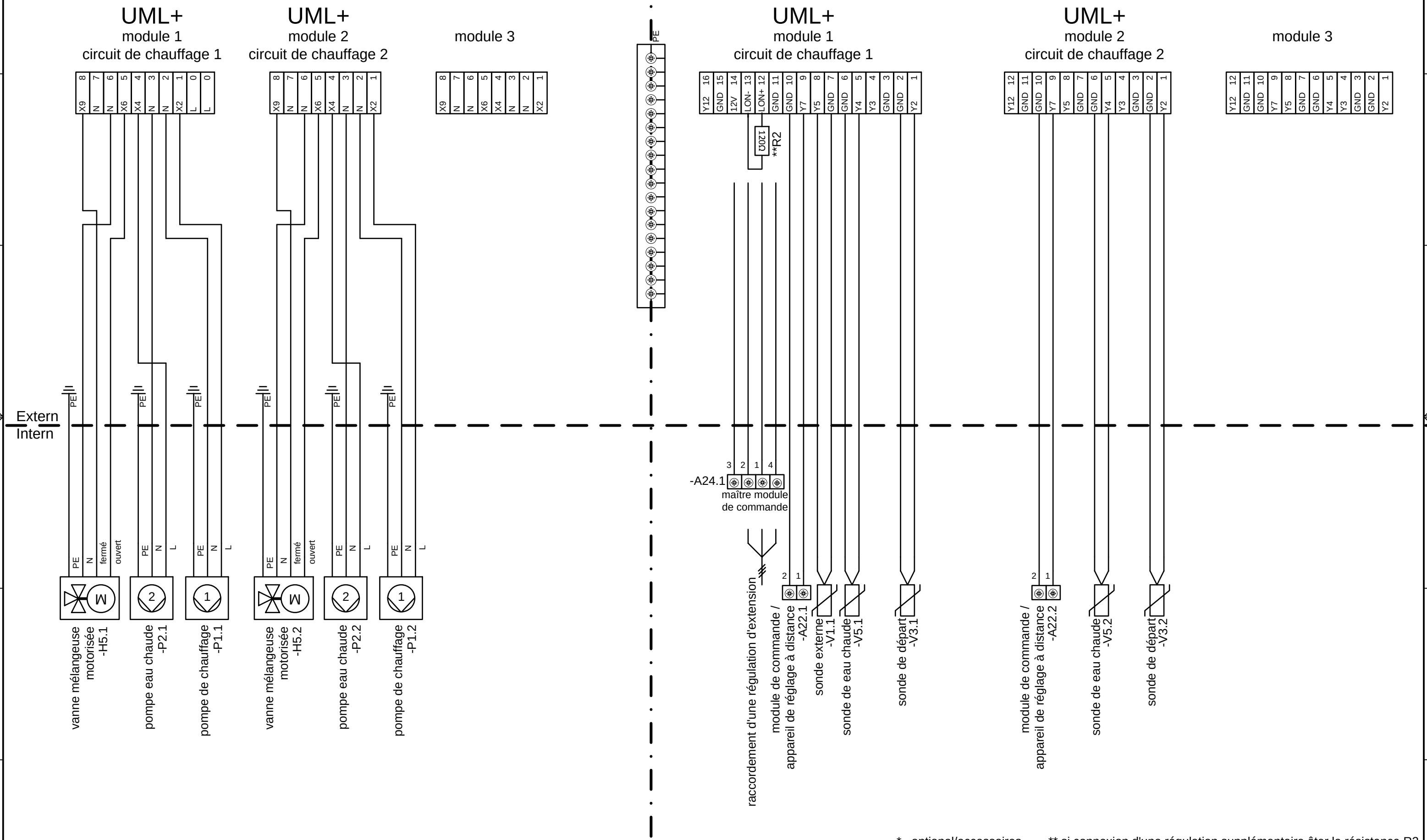
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

092671/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
	230VAC L 1
	interne L' 2 L' 3
	230VAC N 4
	interne N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
	+12V 14 maître module de commande Lon- 13 raccordement Lon+ 12 d'une régulation d'extension GND 11
	module de commande GND 10 appareil de réglage à distance Y7 9
	sonde externe Y5 8 GND 7
	sonde de eau chaude C.Ch. 1 GND 6 Y4 5
	Y3 4 GND 3
	sonde de départ C.Ch. 1 GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
	fermé X9 8 C.Ch. 1 N 7
	vanne mélangeuse N 6 motorisée ouvert X6 5
	pompe eau chaude X4 4 C.Ch. 1 N 3
	pompe de chauffage N 2 C.Ch. 1 X2 1
	PWM Phase permanente 1 L 0
	PWM Phase permanente 2 L 0

UML+	module 2 circuit de chauffage 2
	Y12 12 GND 11
	module de commande GND 10 appareil de réglage à distance Y7 9
	Y5 8 GND 7
	sonde de eau chaude GND 6 C.Ch. 2 Y4 5
	Y3 4 GND 3
	sonde de départ GND 2 C.Ch. 2 Y2 1

UML+	module 2 circuit de chauffage 2
	fermé X9 8 C.Ch. 2 N 7
	vanne mélangeuse N 6 motorisée ouvert X6 5
	pompe eau chaude X4 4 C.Ch. 2 N 3
	pompe de chauffage N 2 C.Ch. 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

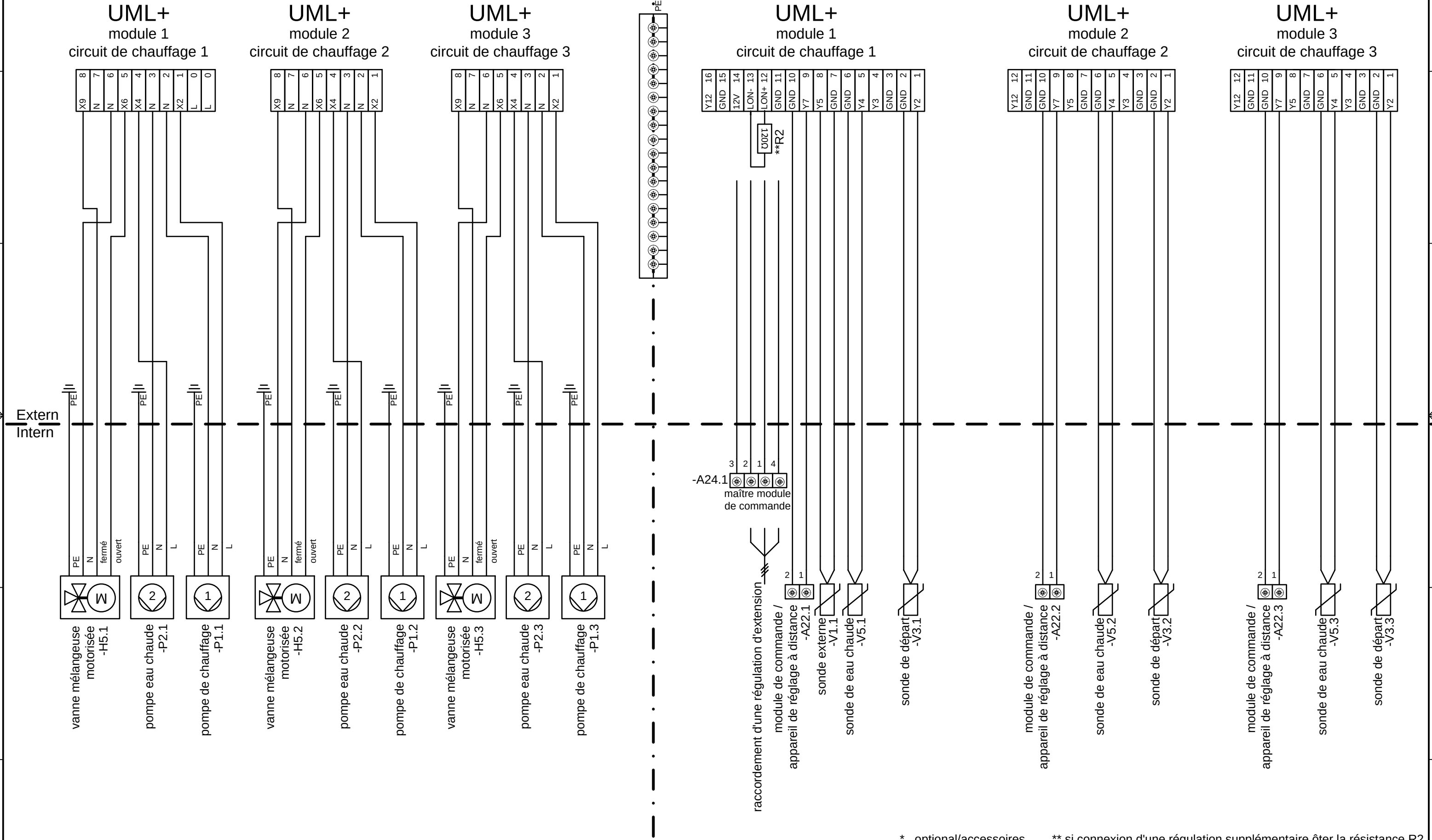
	module 3
	X9 8
	N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
	230VAC L 1
	interne L' 2 L' 3
	230VAC N 4
	interne N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
	maître module de commande raccordement d'une régulation d'extension +12V 14 Lon- 13 Lon+ 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	sonde externe Y5 8 GND 7
	sonde de eau chaude C.Ch. 1 Y4 5 Y3 4 GND 3
	sonde de départ C.Ch. 1 GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
	fermé C.Ch. 1 X9 8 N 7
	vanne mélangeuse motorisée ouvert N 6 X6 5
	pompe eau chaude C.Ch. 1 X4 4 N 3
	pompe de chauffage C.Ch. 1 N 2 X2 1
	PWM Phase permanente 1 L 0
	PWM Phase permanente 2 L 0

UML+	module 2 circuit de chauffage 2
	Y12 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	Y5 8 GND 7
	sonde de eau chaude C.Ch. 2 GND 6 Y4 5 Y3 4 GND 3
	sonde de départ C.Ch. 2 GND 2 Y2 1

UML+	module 2 circuit de chauffage 2
	fermé C.Ch. 2 X9 8 N 7
	vanne mélangeuse motorisée ouvert N 6 X6 5
	pompe eau chaude C.Ch. 2 X4 4 N 3
	pompe de chauffage C.Ch. 2 N 2 X2 1

UML+	module 3 circuit de chauffage 3
	Y12 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	Y5 8 GND 7
	sonde de eau chaude C.Ch.3 GND 6 Y4 5
	Y3 4 GND 3
	sonde de départ C.Ch. 3 GND 2 Y2 1

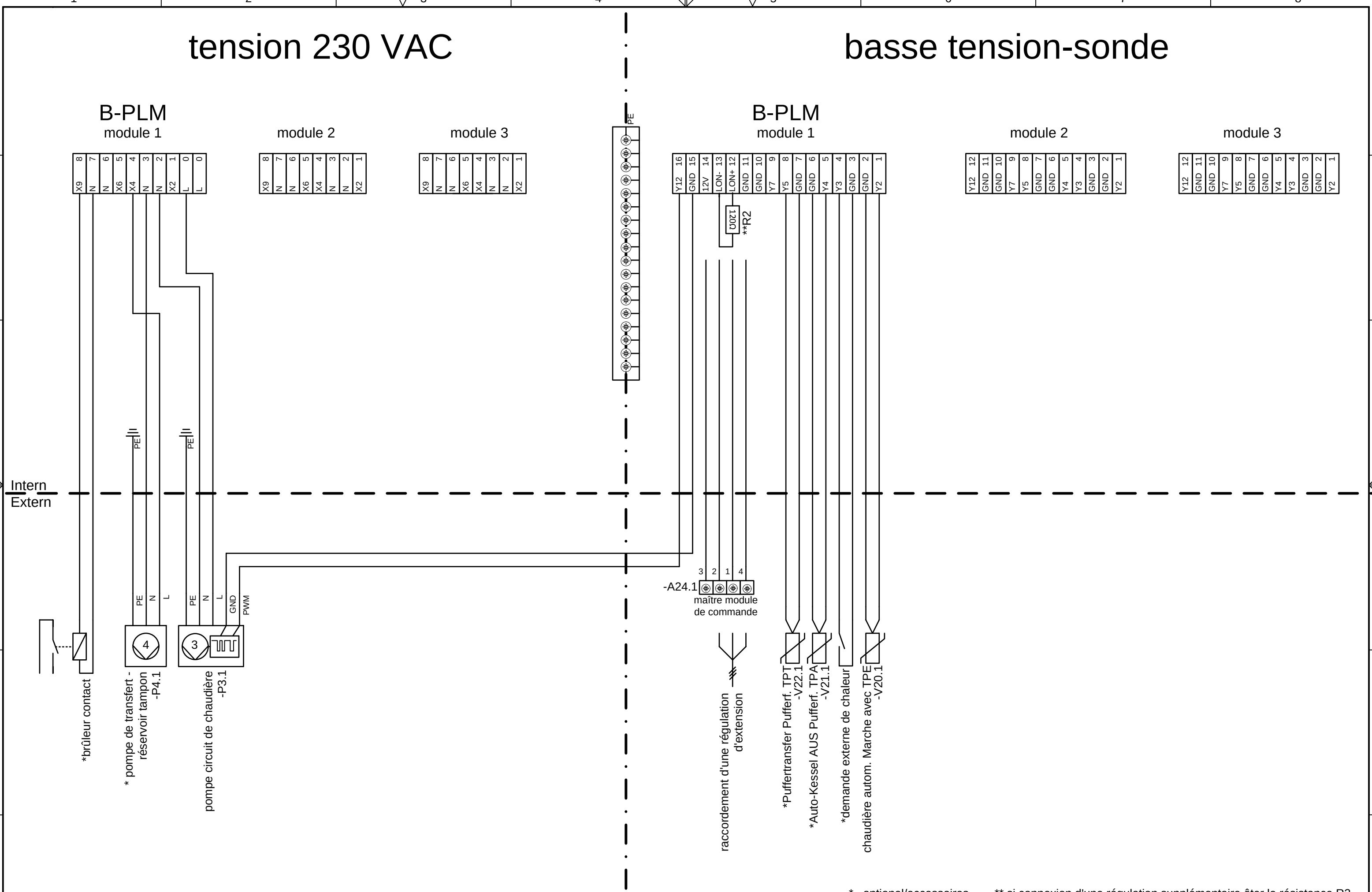
UML+	module 3 circuit de chauffage 3
	fermé C.Ch. 3 X9 8 N 7
	vanne mélangeuse motorisée ouvert N 6 X6 5
	pompe eau chaude C.Ch. 3 X4 4 N 3
	pompe de chauffage C.Ch. 3 N 2 X2 1

092681/01

092681/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleurcontact	X9 8 N 7 N 6 X6 5
*pompe de transfert réservoir tampon	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer . TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

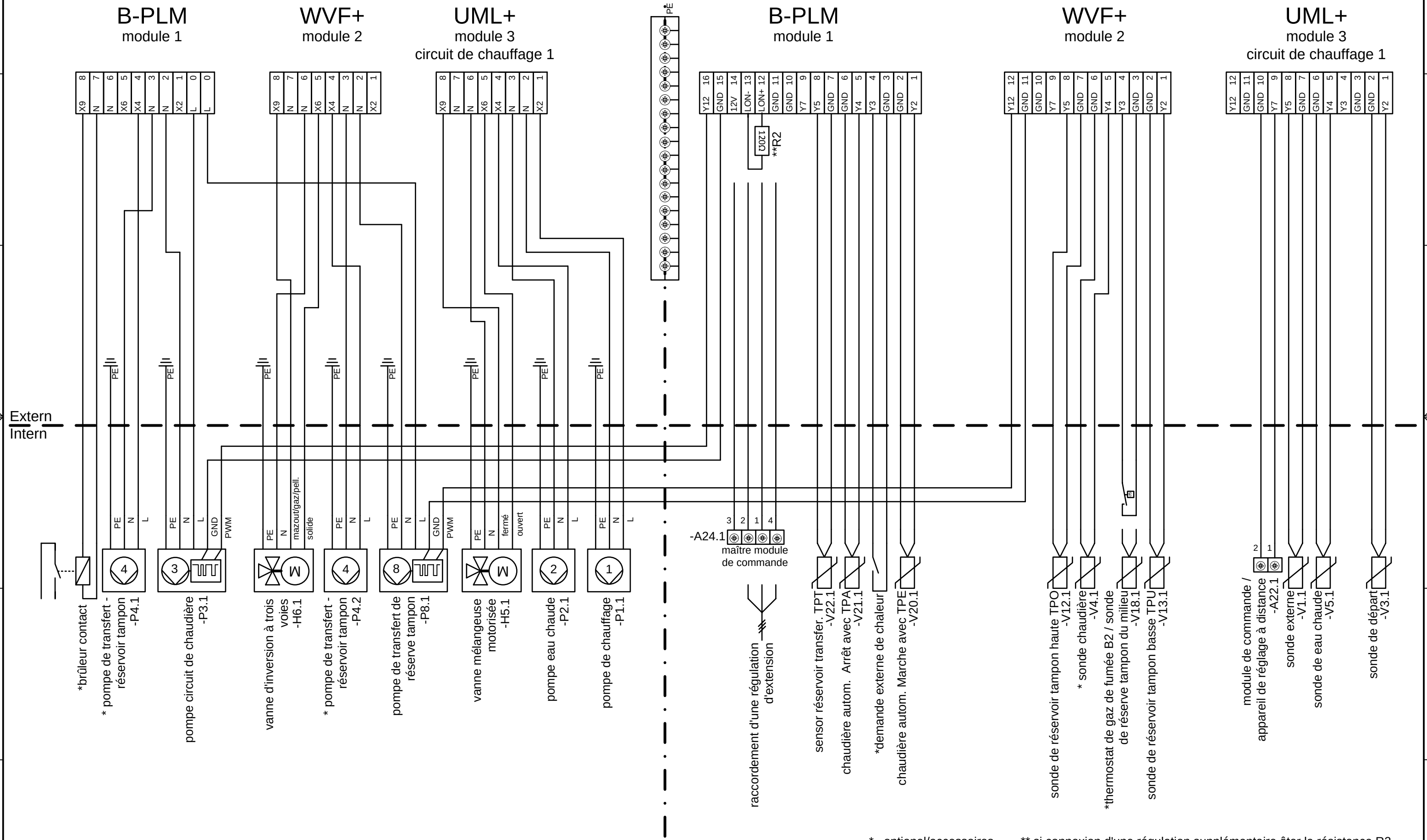
	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

tension 230 VAC

basse tension-sonde



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	09.07.2013	B-PLM/WVF+/UML+		MES P030 + P041 + H021 régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude avec commande brûleur mazout/gaz/pell. et un module de combustibles solides WVF	Projekt : régulation		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092866/01				Blatt 092866/01

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*pompe de transfert réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

WVF+	module 2
mazout/gaz/pell.	X9 8 N 7
vanne d'inversion à trois voies solide	N 6 X6 5
*pompe de transfert- réservoir tampon	X4 4 N 3
	N 2 X2 1

UML+	module 3 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

092868/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer. TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

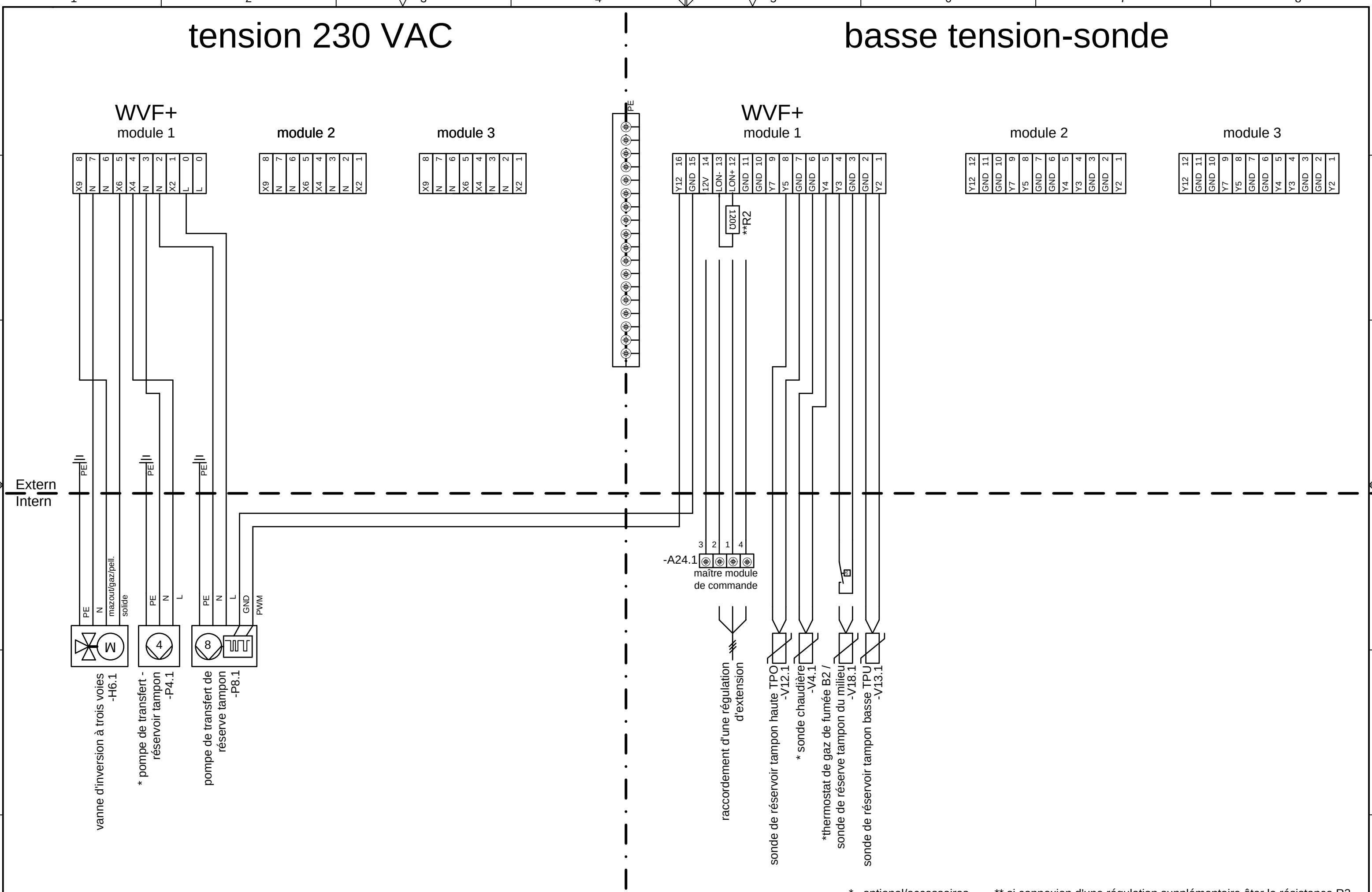
WVF+	module 2
PWM pompe de transfert de réserve tampon	Y12 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute TPO	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
sonde de réservoir tampon basse TPU	GND 2 Y2 1

UML+	module 3 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

092868/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7
vanne d'inversion à trois voies solide	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1 L 0	
PWM Phase permanente 2 L 0	

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	module 1
	PWM pompe de transfert de réserve tampon Y12 16 GND 15
	maître module de commande +12V 14 Lon- 13 Lon+ 12 d'une régulation d'extension GND 11
	GND 10 Y7 9
	sonde de réservoir tampon haute TPO Y5 8 GND 7
	*sonde chaudière GND 6 Y4 5
	*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu Y3 4 GND 3
	sonde de réservoir tampon basse TPU GND 2 Y2 1

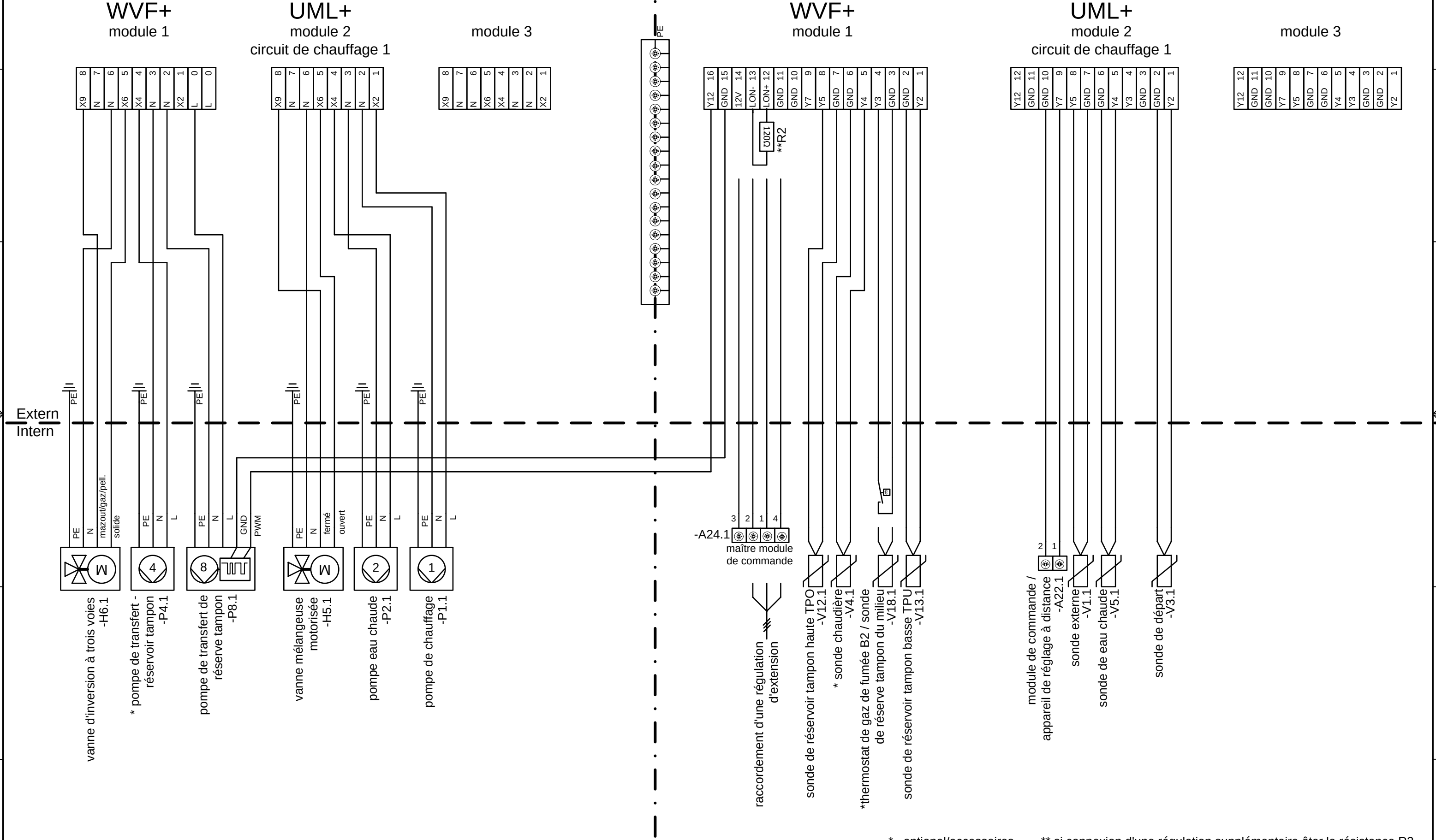
	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7 vanne d'inversion à trois voies solide X6 5
pompe de transfert réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

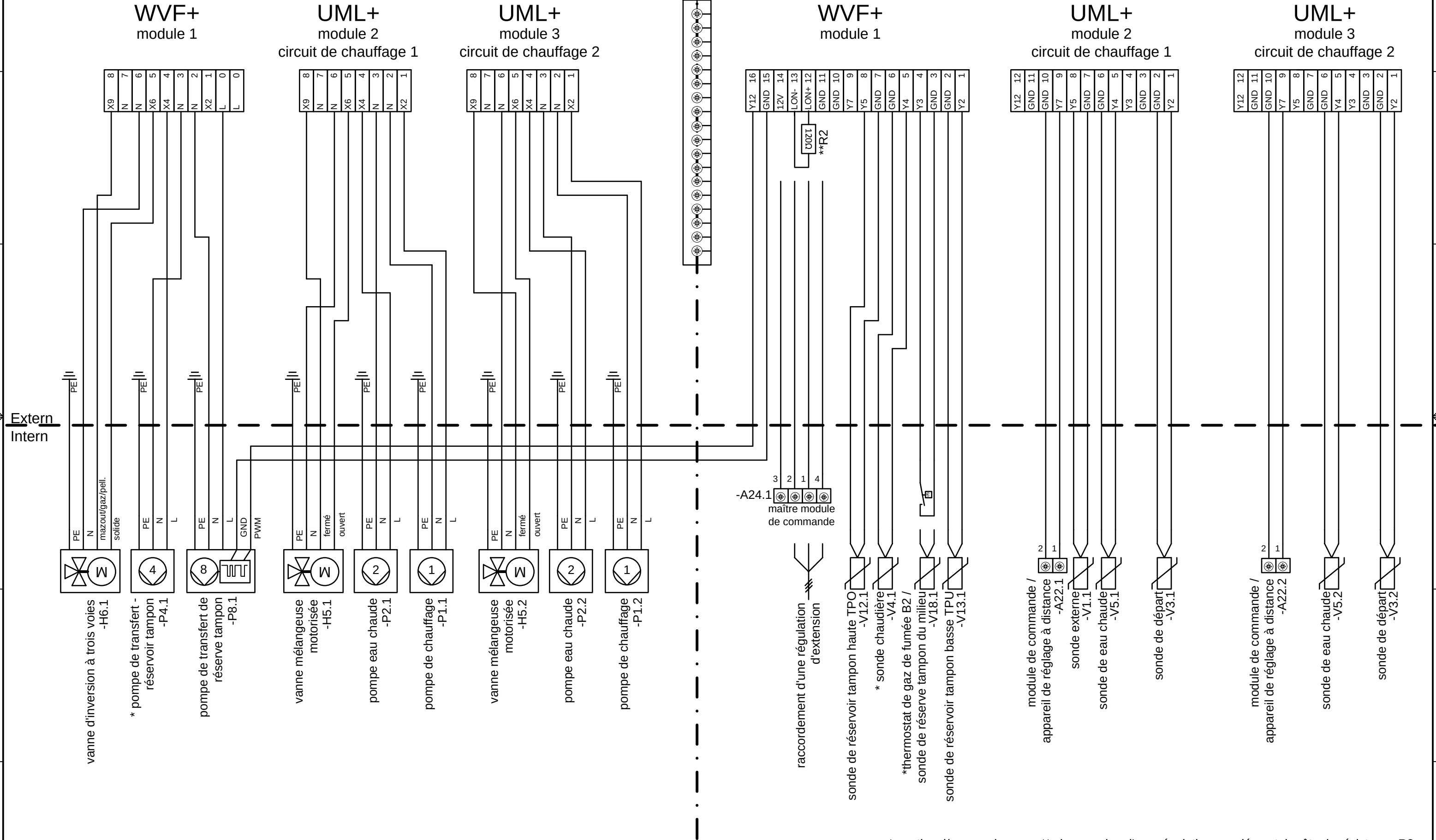
WVF+	module 1
PWM pompe de transfert de réserve tampon	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute TPO	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
sonde de réservoir tampon basse TPU	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7 N 6 X6 5
vanne d'inversion à trois voies solide	
*pompe de transfert réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	Modul 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

UML+	module 3 circuit de chauffage 2
fermé C.Ch. 2	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 2	X4 4 N 3
pompe de chauffage C.Ch. 2	N 2 X2 1

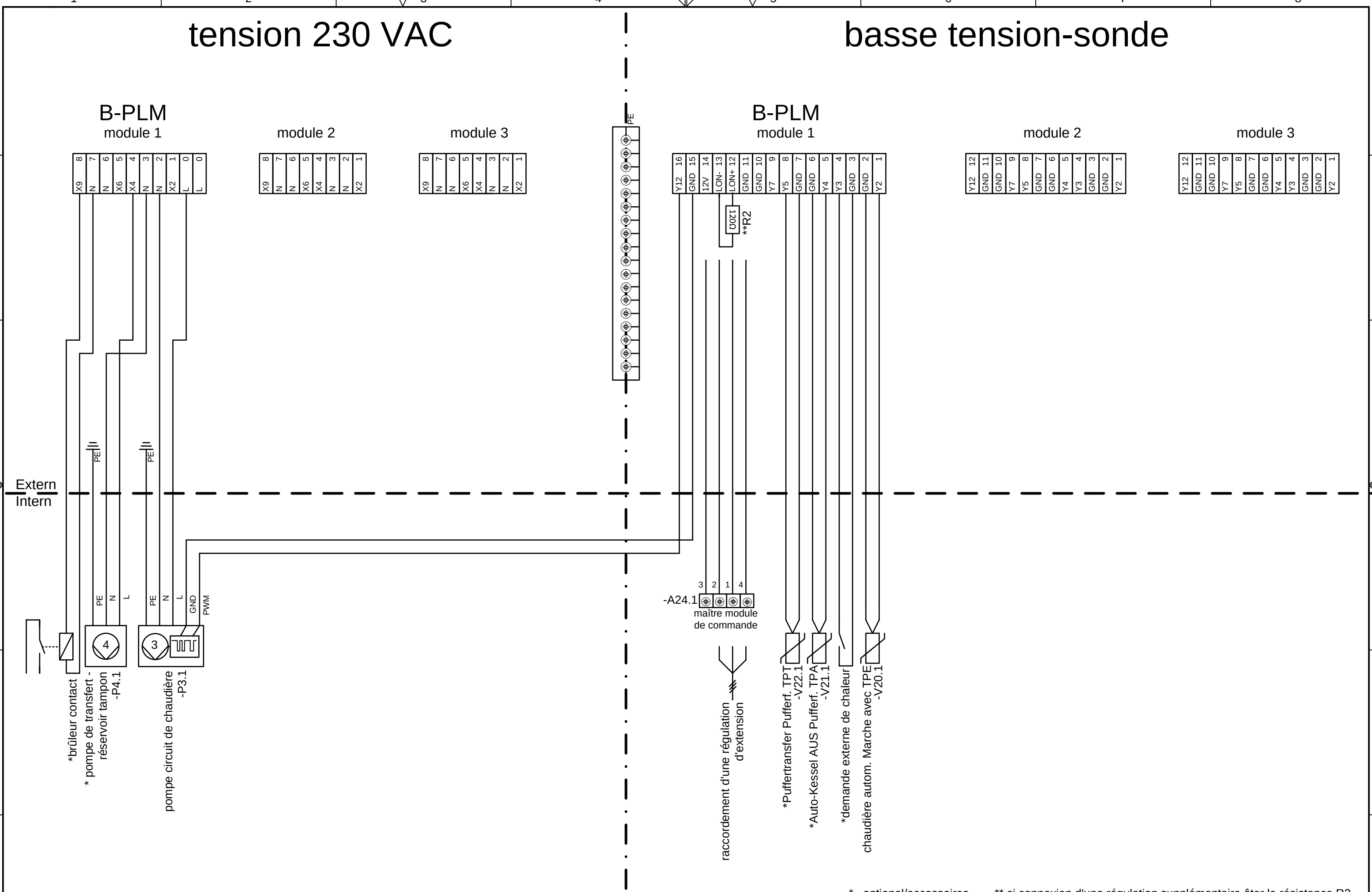
WVF+	module 1
PWM pompe de transfert de réserve tampon	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
sonde de réservoir tampon basse TPU	GND 2 Y2 1

UML+	Modul 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

UML+	module 3 circuit de chauffage 2
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
	Y5 8 GND 7
sonde de eau chaude C.Ch. 2	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 2	GND 2 Y2 1

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1 L 0	
PWM Phase permanente 2 L 0	

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

B-PLM	module 1
	PWM pompe du circuit chaudière Y12 16 GND 15
	+12V 14 maître module de commande Lon- 13 raccordement Lon+ 12 d'une régulation d'extension GND 11
	GND 10 Y7 9
	*sensor réservoir transfer . TPT Y5 8 GND 7
	*chaudière autom. Arrêt avec TPA GND 6 Y4 5
	*demande externe de chaleur Y3 4 GND 3
	chaudière autom. Marche avec TPE GND 2 Y2 1

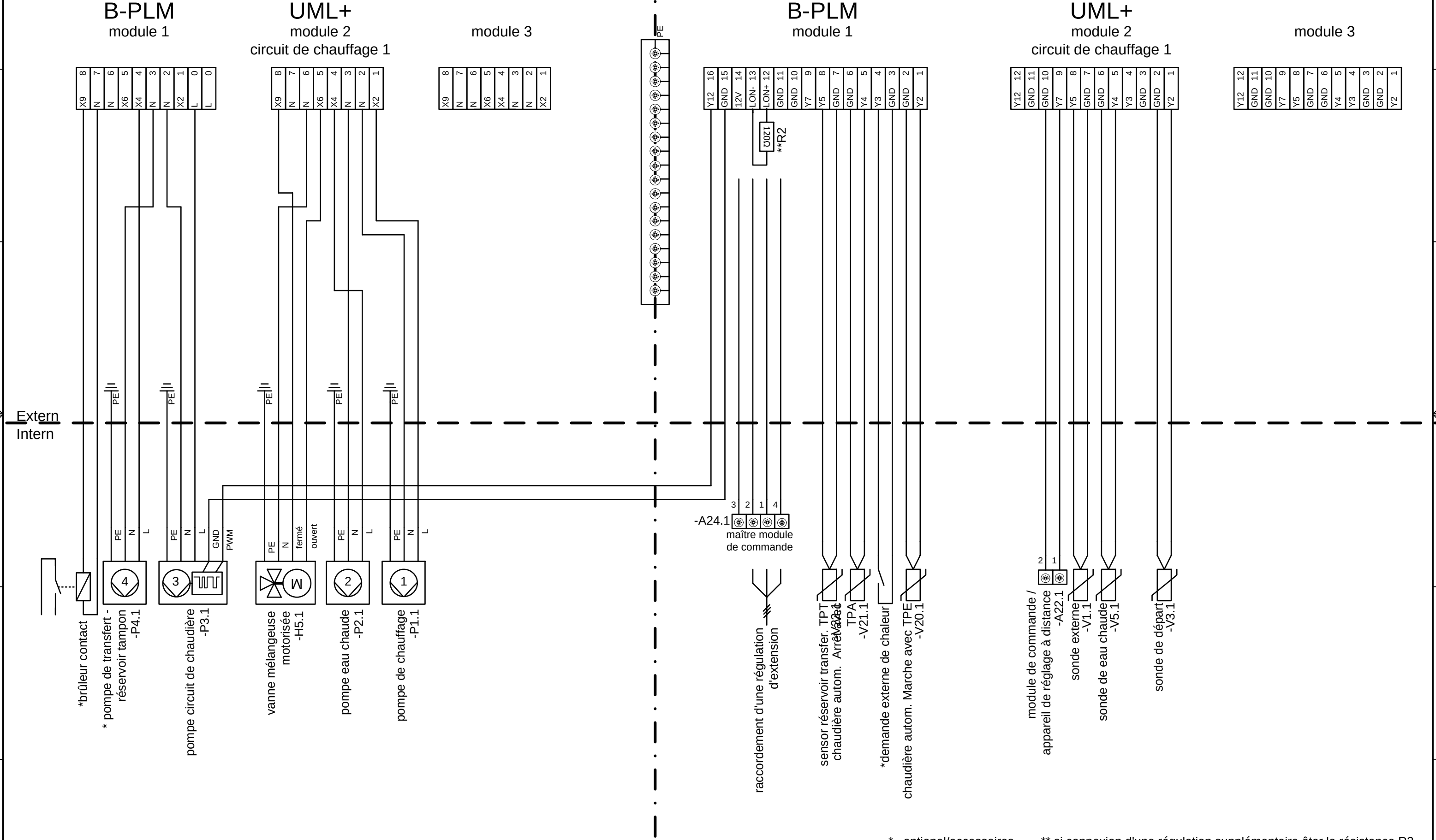
	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092890/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*Transferpump-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1 L 0	
PWM Phase permanente 2 L 0	

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer. TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*pompe de transfert- réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

UML +	module 3 circuit de chauffage 2
fermé C.Ch. 2	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 2	X4 4 N 3
pompe de chauffage C.Ch. 2	N 2 X2 1

092887/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer. TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

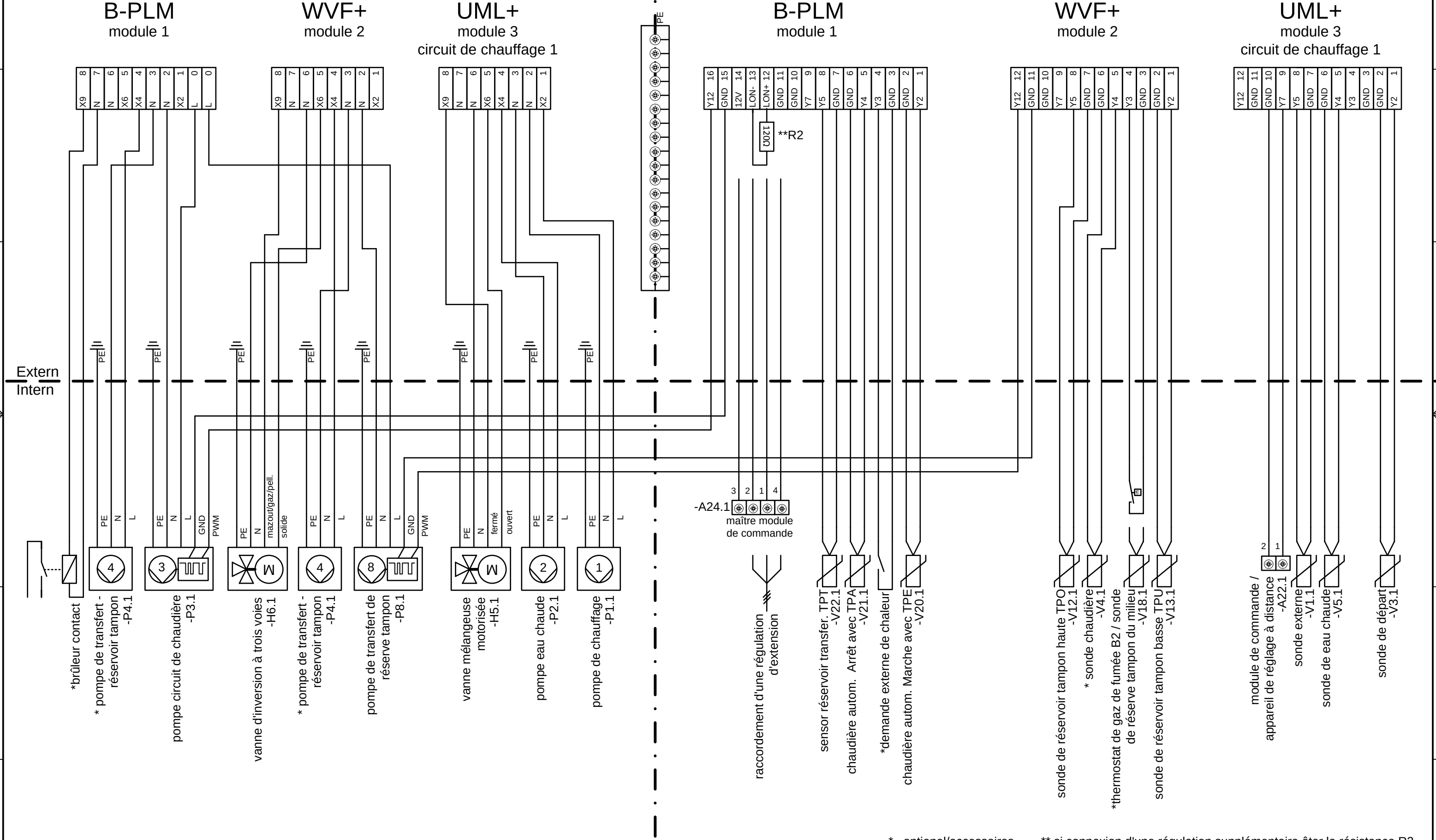
UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

UML +	module 3 circuit de chauffage 2
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
	Y5 8 GND 7
sonde de eau chaude C.Ch. 2	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 2	GND 2 Y2 1

092887/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

WVF+	module 2
mazout/gaz/pell. vanne d'inversion à trois voies solide	X9 8 N 7 N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2 X2 1

UML+	module 3 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

092893/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer. TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

WVF+	module 2
PWM pompe de transfert de réserve tampon	Y12 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
réservoir tampon bas TPU	GND 2 Y2 1

UML+	module 3 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

092893/01

tension 230 VAC

basse tension-sonde

B-PLM
module 1

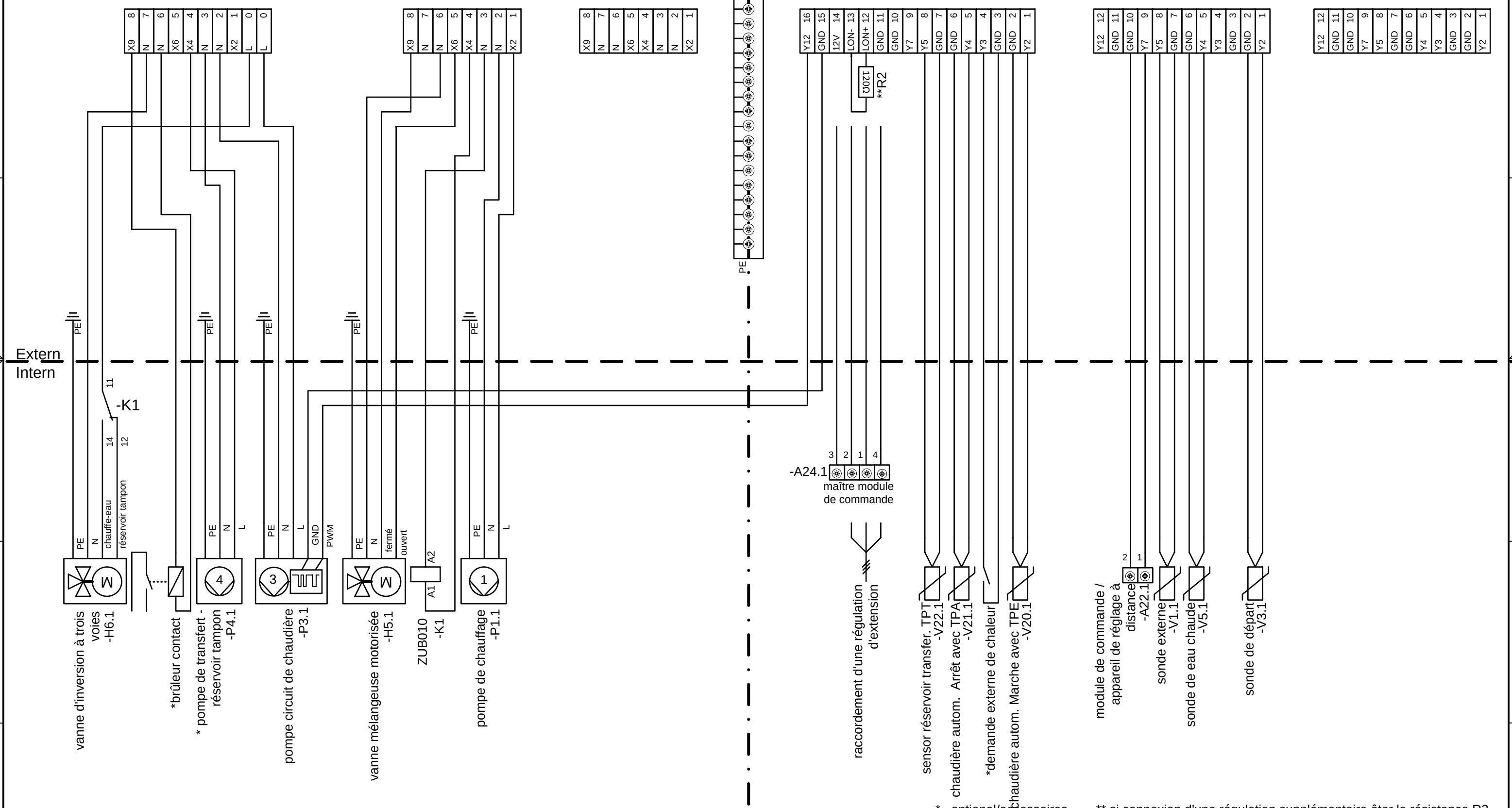
UML+
module 2
circuit de chauffage 1

module 3

B-PLM
module 1

UML+
module 2
circuit de chauffage 1

module 3



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*contact brûleur	X9 8 N 7
	N 6 X6 5
* pompe de transfert	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1 L 0	
PWM Phase permanente 2 L 0	

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
contacteur -K1 C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor réservoir transfer. TPT	Y5 8 GND 7
* chaudière autom. Arrêt avec TPA	GND 6 Y4 5
* demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

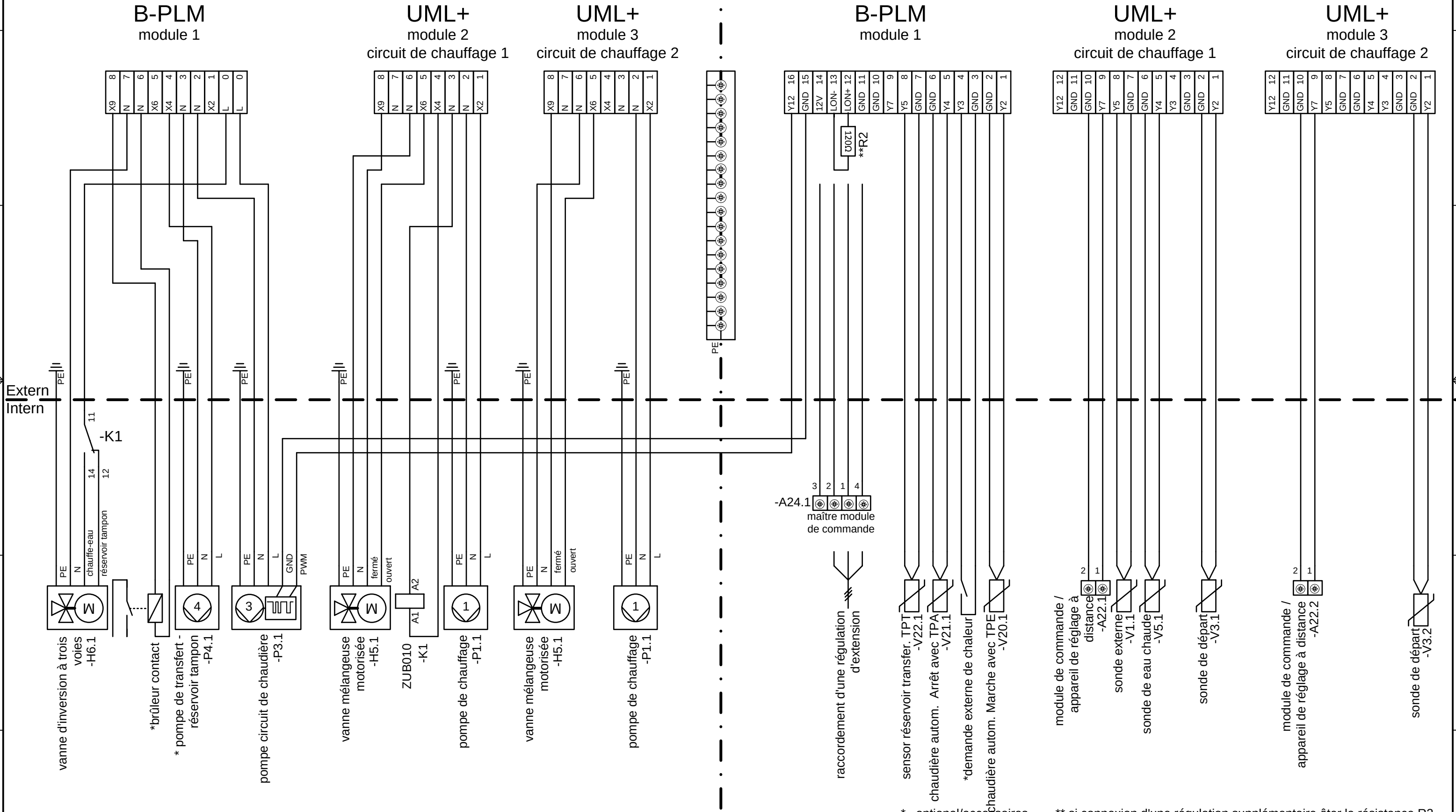
UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

tension 230 VAC

basse tension-sonde



-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*contact brûleur	X9 8 N 7
	N 6
	X6 5
* pompe de transfert	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
contacteur -K1 C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

UML+	module 3 circuit de chauffage 2
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
	X4 4 N 3
pompe de chauffage C.Ch. 2	N 2 X2 1

094557/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor réservoir transfer. TPT	Y5 8 GND 7
* chaudière autom. Arrêt avec TPA	GND 6 Y4 5
* demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

UML+	module 3 circuit de chauffage 2
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 2	GND 2 Y2 1

094557/01

-XA	bloc de connexion
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	module 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM Phase permanente 1 L 0	
PWM Phase permanente 2 L 0	

MES	module 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	bloc de connexion
	230VAC L 1
	interne L' 2 L' 3
	230VAC N 4
	interne N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
	maître module de commande raccordement d'une régulation d'extension +12V 14 Lon- 13 Lon+ 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	sonde externe Y5 8 GND 7
	sonde de eau chaude C.Ch. 1 GND 6 Y4 5
	Y3 4 GND 3
	sonde de départ C.Ch. 1 GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
	fermé X9 8 C.Ch. 1 N 7
	vanne mélangeuse motorisée ouvert N 6 X6 5
	pompe eau chaude C.Ch. 1 X4 4 N 3
	pompe de chauffage C.Ch. 1 N 2 X2 1
	PWM Phase permanente 1 L 0
	PWM Phase permanente 2 L 0

UML+	module 2 circuit de chauffage 2
	Y12 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	Y5 8 GND 7
	sonde de eau chaude C.Ch. 2 GND 6 Y4 5
	Y3 4 GND 3
	sonde de départ C.Ch. 2 GND 2 Y2 1

UML+	module 2 circuit de chauffage 2
	fermé X9 8 C.Ch. 2 N 7
	vanne mélangeuse motorisée ouvert N 6 X6 5
	pompe eau chaude C.Ch. 2 X4 4 N 3
	pompe de chauffage C.Ch. 2 N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8
	N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

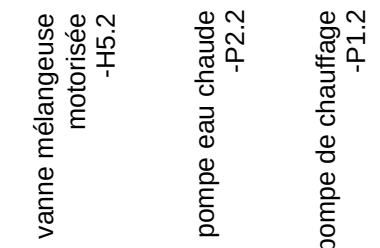
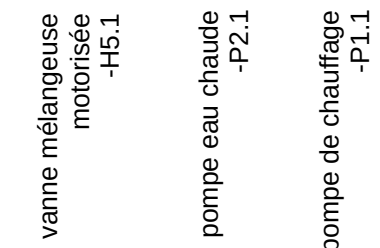
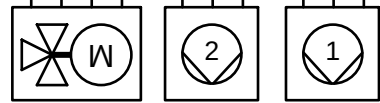
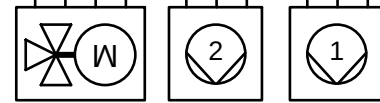
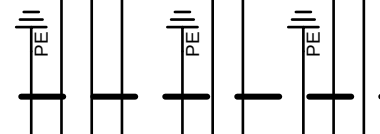
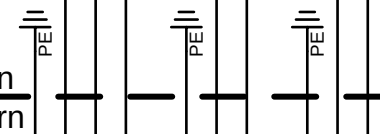
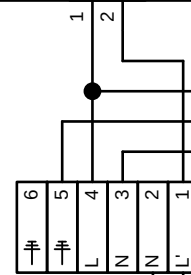
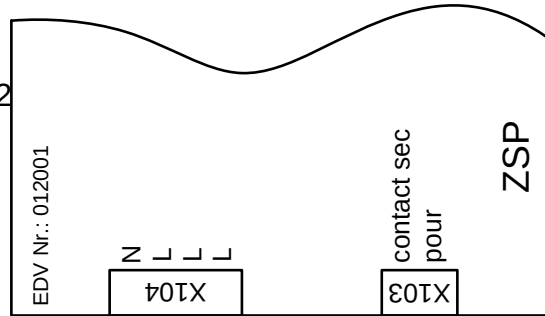
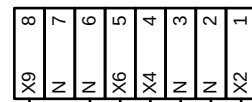
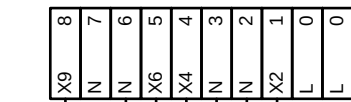
092675/01

tension 230 VAC

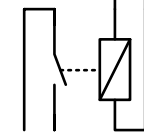
basse tension-sonde

UML+
module 1
circuit de chauffage 1

UML+
module 2
circuit de chauffage 2



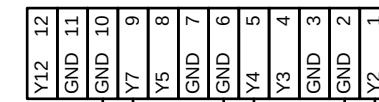
230V demande de chaleur



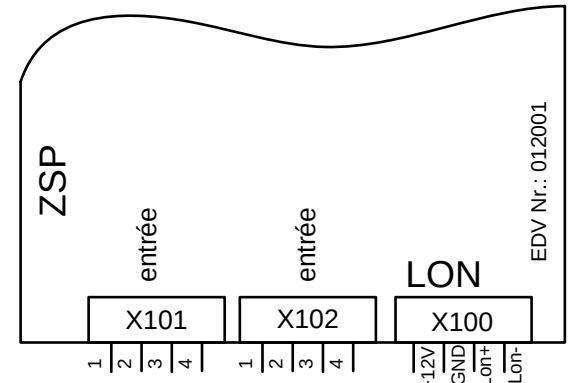
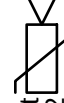
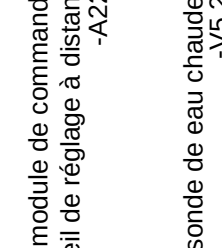
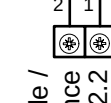
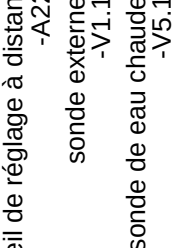
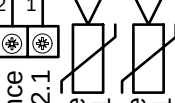
totalisateur de défaut

UML+
module 1
circuit de chauffage 1

UML+
module 2
circuit de chauffage 2



raccordement d'une régulation
d'extension /
module de commande /
appareil de réglage à distance
-A22.1



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	24.06.2013	UML+ /UML+ /ZSP S		MES H021 + H024 + ZSP S régulation par température extérieure pour 2 circuits de chauffage mélangés et circuit d'eau chaude et ZSP S	Projekt : régulation		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094608/00				◀ ----- 2 ▶	
												Blatt 094608/00

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
	230VAC L 1
	interne L' 2 L' 3
	230VAC N 4
	interne N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
	maître module de commande raccordement d'une régulation d'extension +12V 14 Lon- 13 Lon+ 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	sonde externe Y5 8 GND 7
	sonde de eau chaude C.Ch. 1 GND 6 Y4 5
	Y3 4 GND 3
	sonde de départ C.Ch. 1 GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
	fermé X9 8 C.Ch. 1 N 7
	vanne mélangeuse motorisée N 6 ouvert X6 5
	pompe eau chaude C.Ch. 1 X4 4 N 3
	pompe de chauffage C.Ch. 1 N 2 X2 1
	PWM Phase permanente 1 L 0
	PWM Phase permanente 2 L 0

UML+	module 2 circuit de chauffage 2
	Y12 12 GND 11
	module de commande appareil de réglage à distance GND 10 Y7 9
	Y5 8 GND 7
	sonde de eau chaude C.Ch. 2 GND 6 Y4 5
	Y3 4 GND 3
	sonde de départ C.Ch. 2 GND 2 Y2 1

UML+	module 2 circuit de chauffage 2
	fermé X9 8 C.Ch. 2 N 7
	vanne mélangeuse motorisée N 6 ouvert X6 5
	pompe eau chaude C.Ch. 2 X4 4 N 3
	pompe de chauffage C.Ch. 2 N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8
	N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094812/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

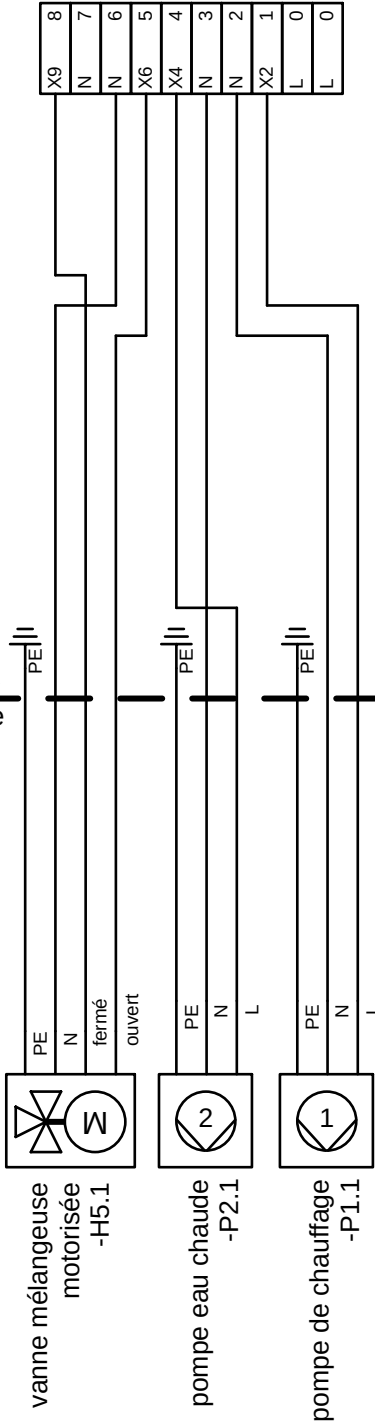
	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

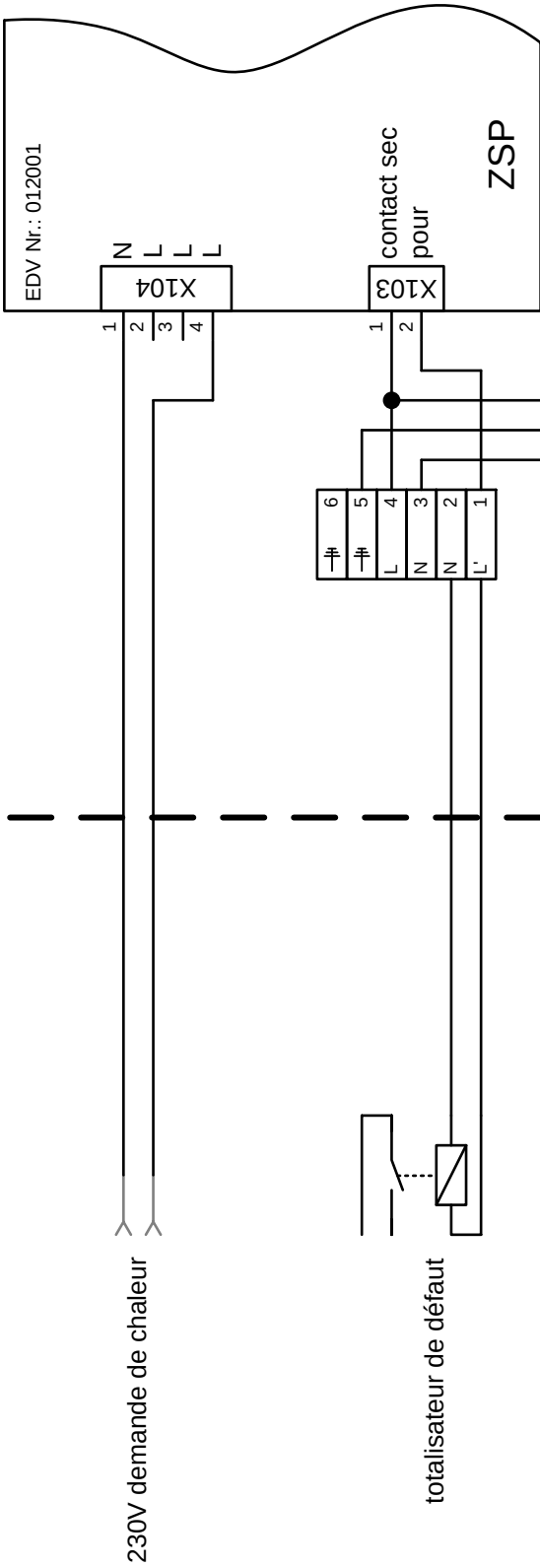
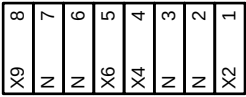
092671/01

tension 230 VAC

UML+
module 1
circuit de chauffage 1

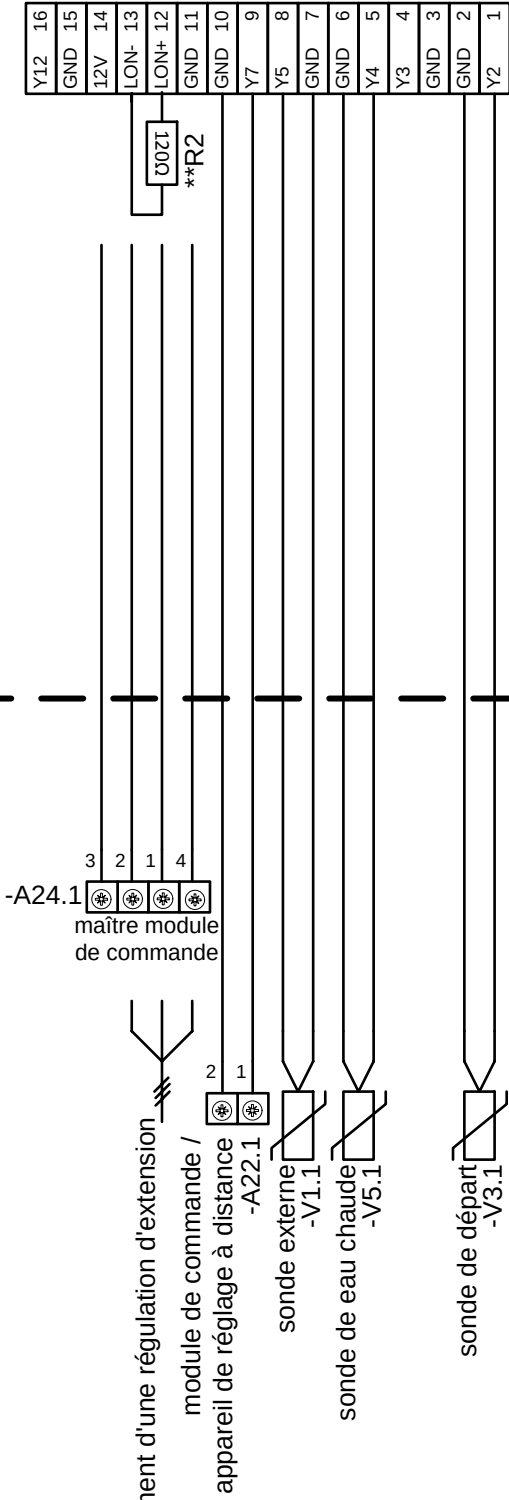


module 2

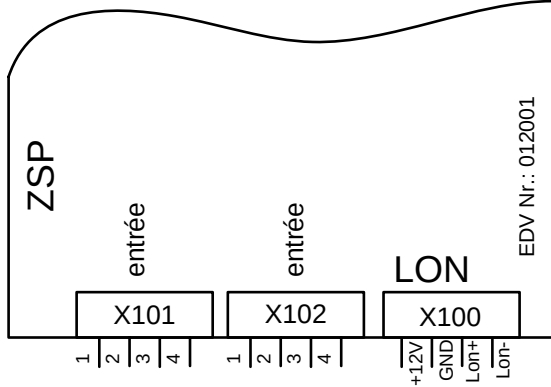
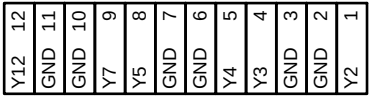


basse tension-sonde

UML+
module 1
circuit de chauffage 1



module 2



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

UML+	module 1 circuit de chauffage 1
	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

UML+	module 1 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

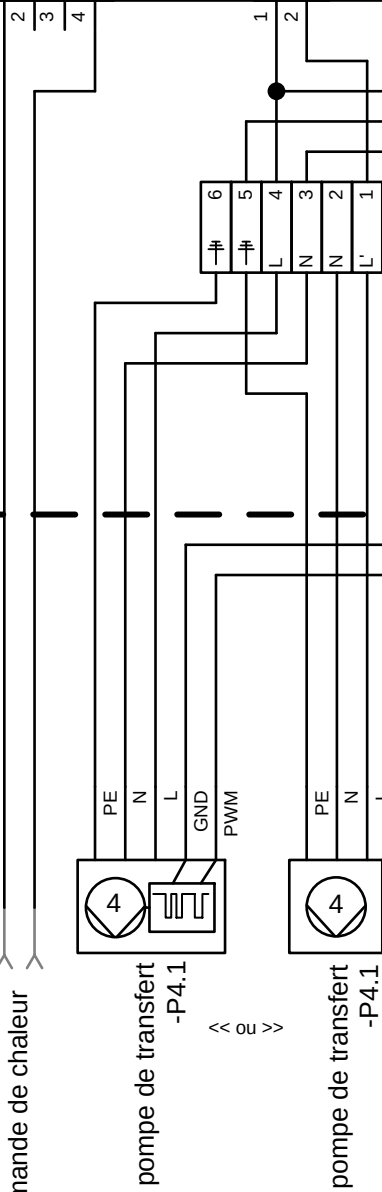
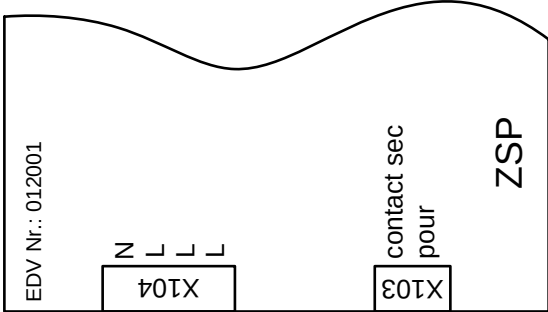
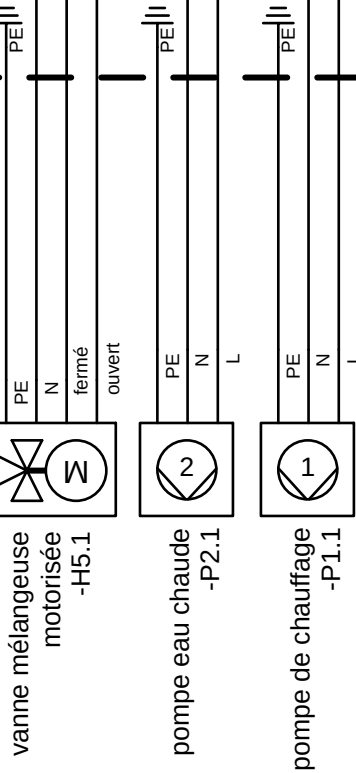
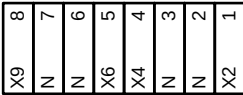
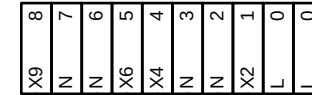
092671/01

tension 230 VAC

basse tension-sonde

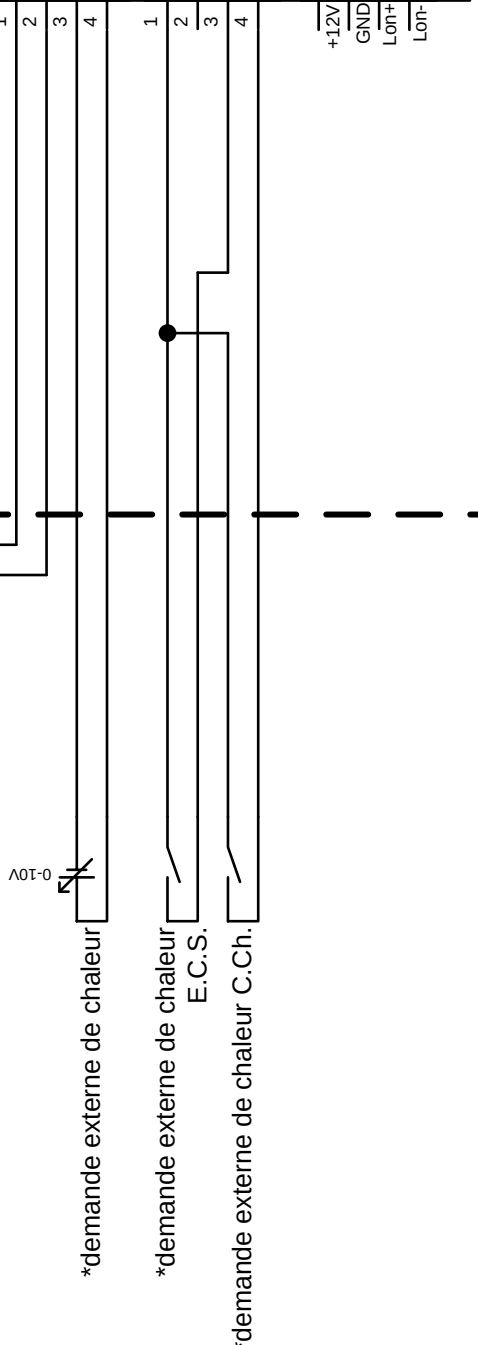
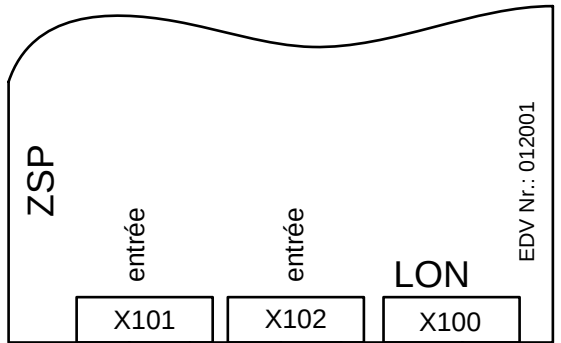
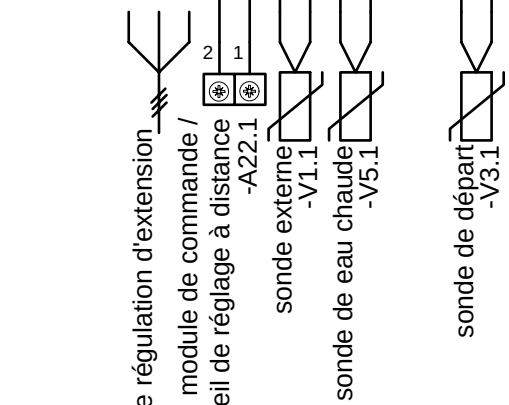
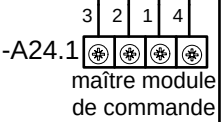
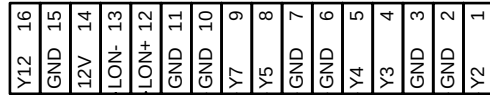
UML+
module 1
circuit de chauffage 1

module 2



UML+
module 1
circuit de chauffage 1

module 2



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094812/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleurcontact	X9 8 N 7 N 6 X6 5
*pompe de transfert réservoir tampon	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	module 1
	PWM pompe du circuit chaudière Y12 16 GND 15
	+12V 14 maître module de commande Lon- 13 raccordement Lon+ 12 d'une régulation d'extension GND 11
	GND 10 Y7 9
	*sensor réservoir transfer . TPT Y5 8 GND 7
	*chaudière autom. Arrêt avec TPA GND 6 Y4 5
	*demande externe de chaleur Y3 4 GND 3
	chaudière autom. Marche avec TPE GND 2 Y2 1

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

tension 230 VAC

basse tension-sonde

B-PLM

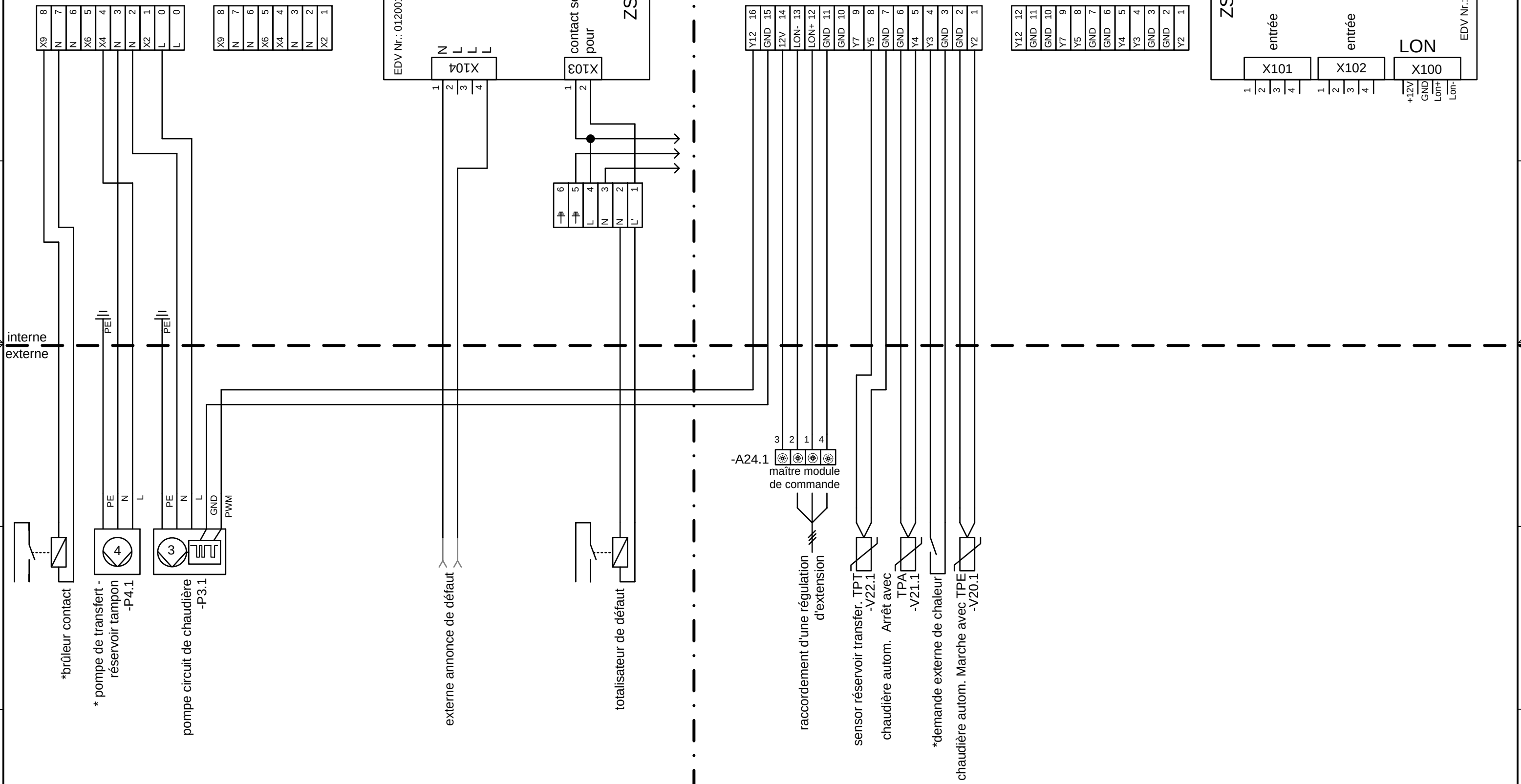
module 1

module 2

B-PLM

module 1

module 2



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

					Datum	24.06.2013	B-PLM / ZSP S	MES P030 + ZSP S avec commande brûleur mazout/gaz/pell. et ZSP S	Projekt : régulation		1 mm : 1 mm
					Gezeichnet	rot					
					Geprüft	ros					
Rev.	Änderung	Datum	Name		Genehmigt		Zeichnungs Nr.:	094613/00			

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleurcontact	X9 8 N 7 N 6 X6 5
*pompe de transfert réservoir tampon	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer . TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

tension 230 VAC

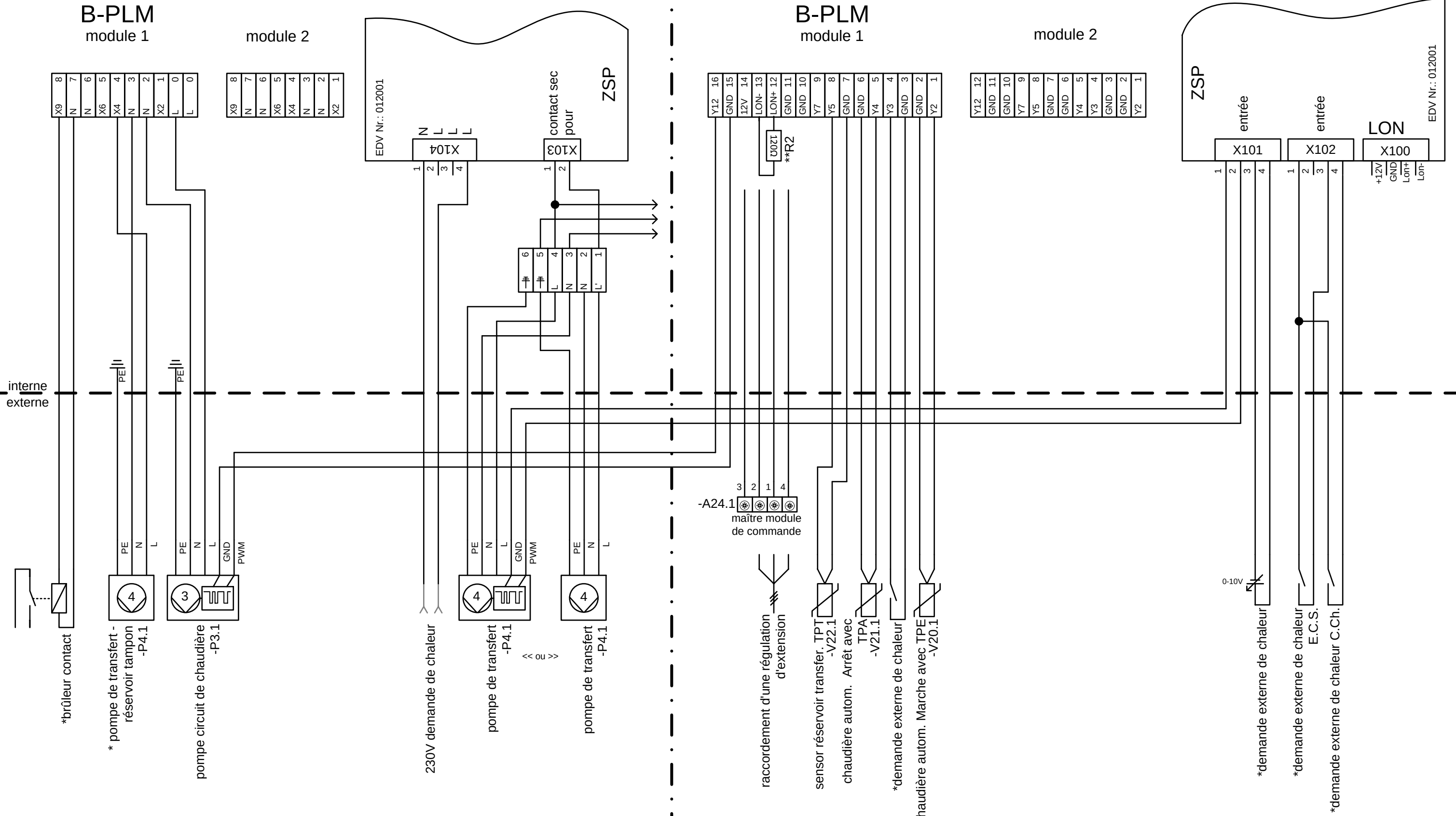
basse tension-sonde

B-PLM
module 1

module 2

B-PLM
module 1

module 2



-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

EDV Nr. 094812/00

-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7
vanne d'inversion à trois voies solide	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	module 1
PWM pompe de transfert de réserve tampon	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute TPO	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
sonde de réservoir tampon basse TPU	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

tension 230 VAC

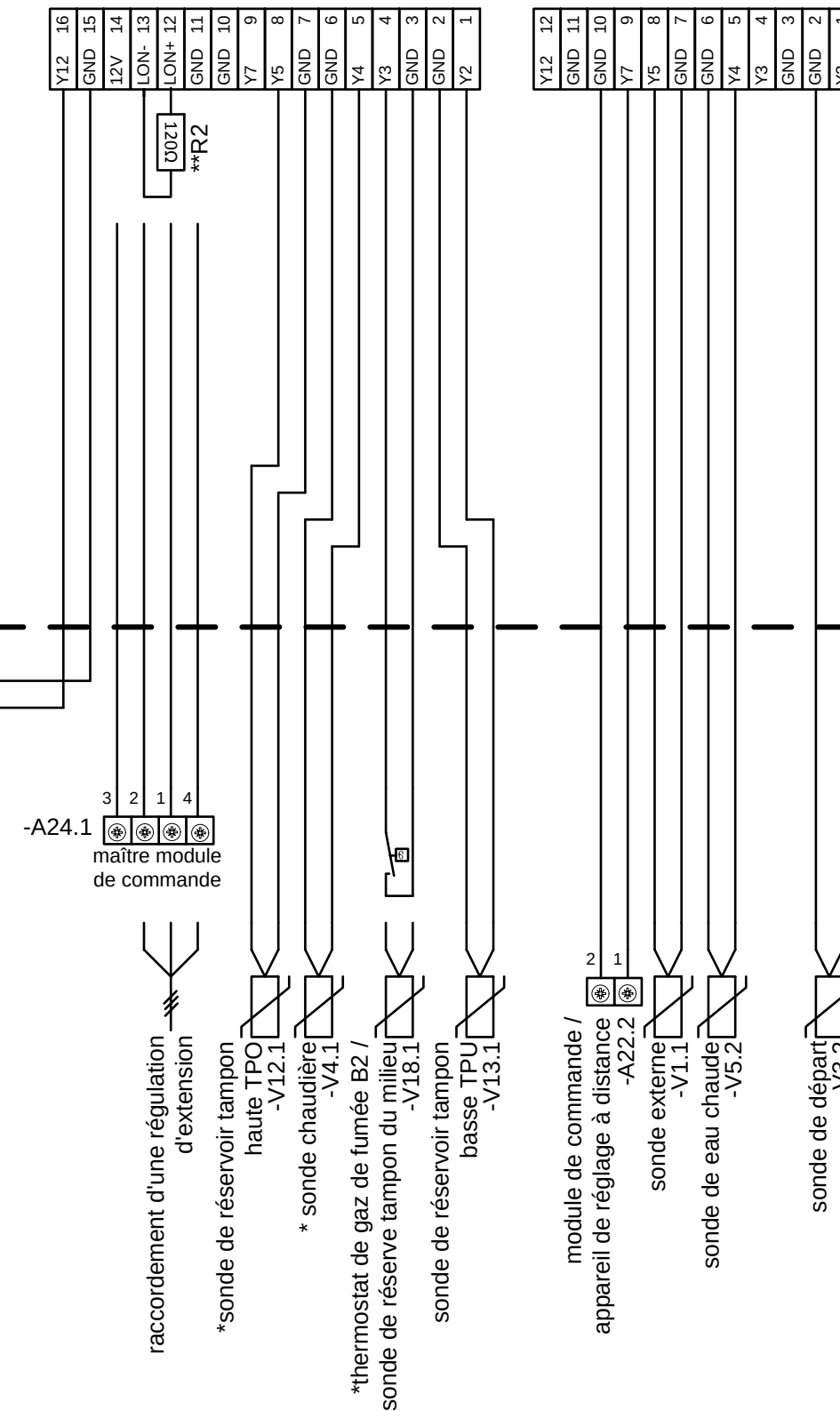
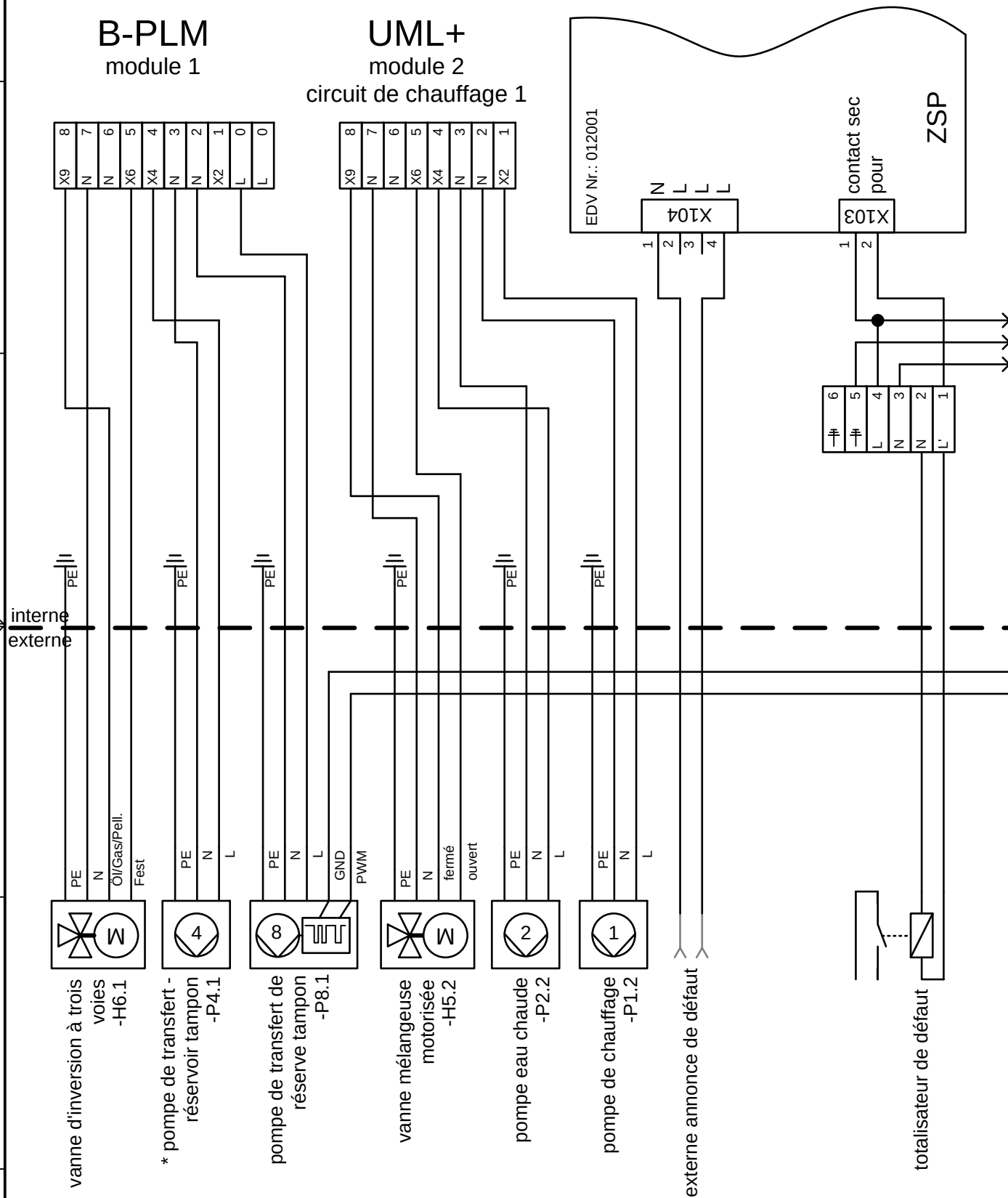
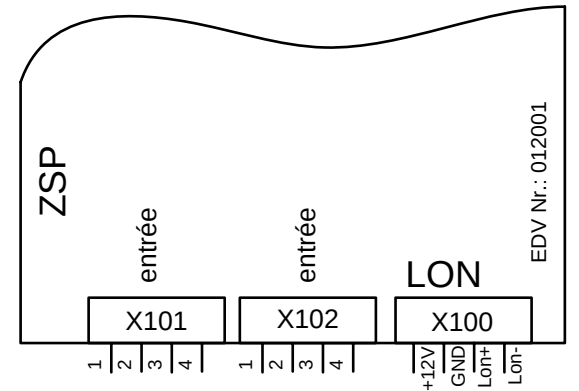
basse tension-sonde

B-PLM
module 1

UML+
module 2
circuit de chauffage 1

B-PLM
module 1

UML+
module 2
circuit de chauffage 1



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum 24.06.2013

Gezeichnet rot

Geprüft ros

Genehmigt

B-PLM/ UML+ / ZSP S

Zeichnungs Nr.: 094624/00

MES P041 + H021 + ZSP S

régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude et réservoir tampon-module B-PLM et ZSP S

Projekt :
régulation

windhager

1 mm : 1 mm

2

Blatt 094624/00

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7
vanne d'inversion à trois voies solide	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML+	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	module 1
PWM pompe de transfert de réserve tampon	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute TPO	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
sonde de réservoir tampon basse TPU	GND 2 Y2 1

UML+	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

tension 230 VAC

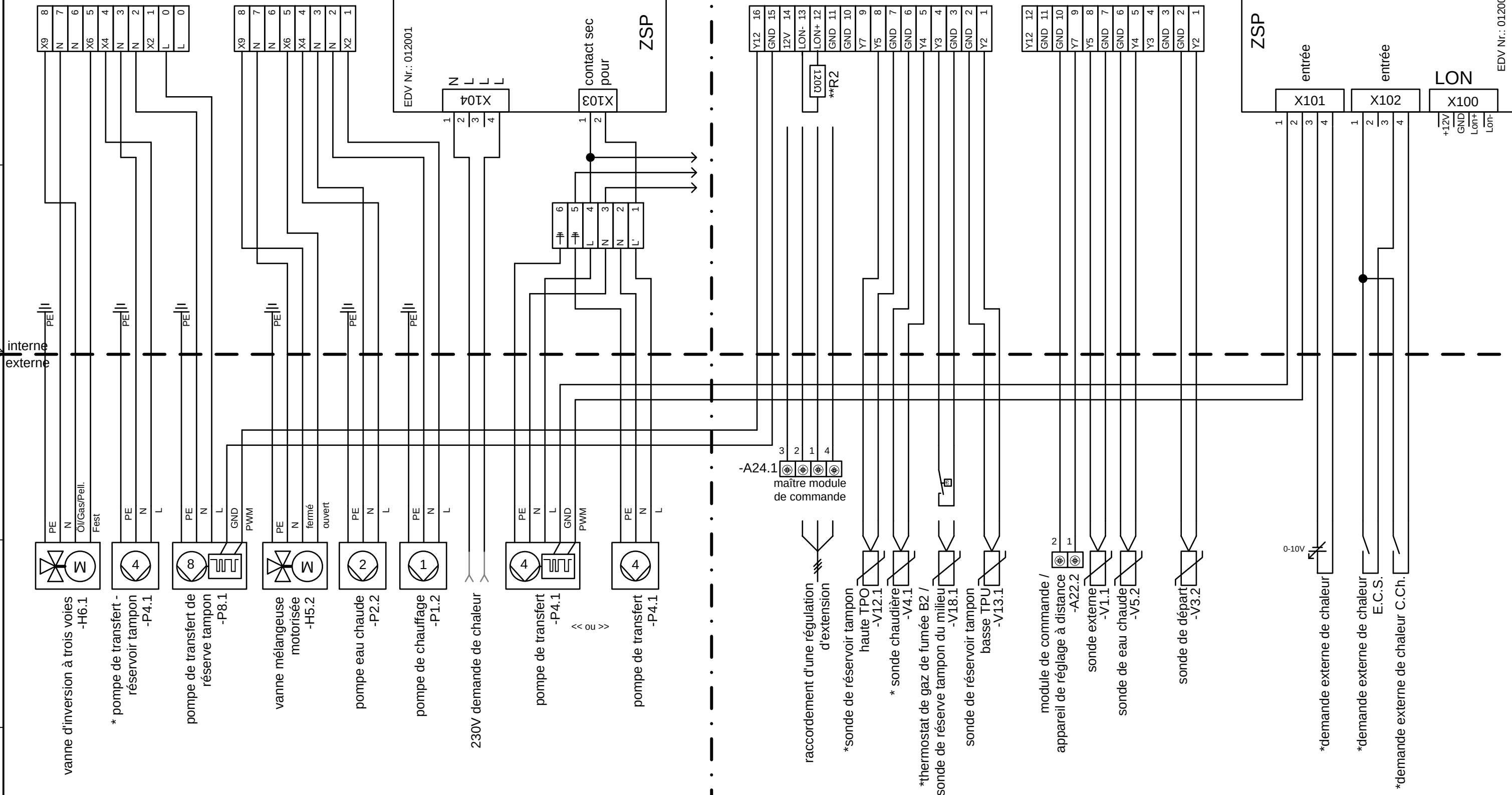
basse tension-sonde

WVF+
module 1

UML+
module 2
circuit de chauffage 1

WVF+
module 1

UML+
module 2
circuit de chauffage 1



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	24.06.2013	WVF+ / UML+ / ZSP W		MES P041 + H021 + ZSP W régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude commutation auto sur comb prod solides av remplis réserv et ZSP W	Projekt : régulation		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros	Zeichnungs Nr.: 094626/00					Blatt 094626/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

EDV Nr. 094812/00

-XSP	platine supplémentaire
GND	PWM pompe de transfert
-X101 /2	
GND	demande de chaleur
-X101 /4	0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7
vanne d'inversion à trois voies solide	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	module 1
PWM pompe de transfert de réserve tampon	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonde de réservoir tampon haute TPO	Y5 8 GND 7
*sonde chaudière	GND 6 Y4 5
*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu	Y3 4 GND 3
sonde de réservoir tampon basse TPU	GND 2 Y2 1

	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

tension 230 VAC

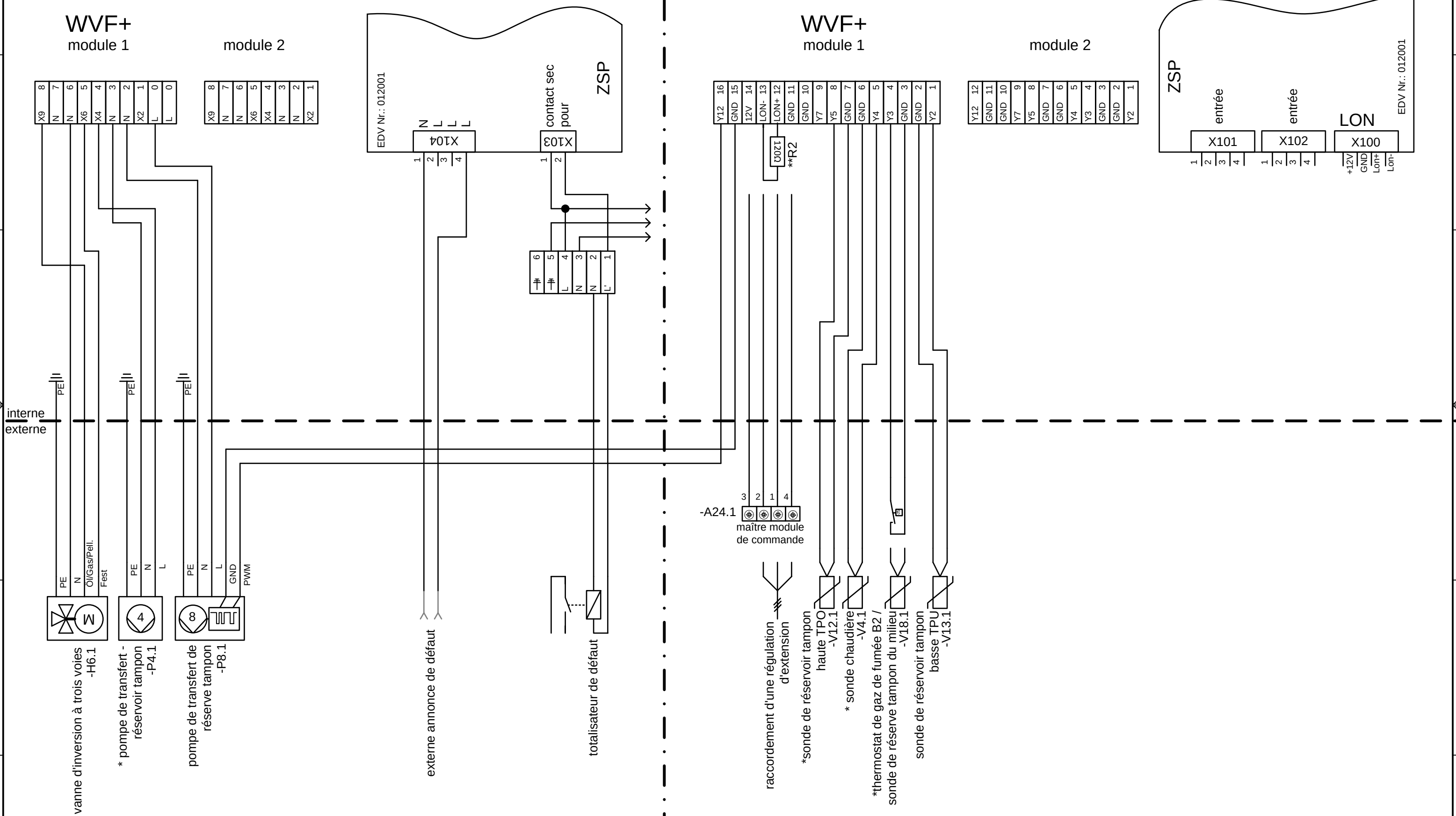
basse tension-sonde

WVF+
module 1

module 2

WVF+
module 1

module 2



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

					Datum	24.06.2013	WVF / ZSP S		MES P041 + ZSP S commutation auto sur comb prod solides av remplis réserv et ZSP S	Projekt : régulation		1 mm : 1 mm
					Gezeichnet	rot						
					Geprüft	ros	Zeichnungs Nr.:	094616/00				
Rev.	Änderung	Datum	Name		Genehmigt							

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

WVF+	module 1
mazout/gaz/pell.	X9 8 N 7
vanne d'inversion à trois voies solide	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	module 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	module 1
	PWM pompe de transfert de réserve tampon Y12 16 GND 15
	maître module de commande +12V 14 Lon- 13 Lon+ 12 d'une régulation d'extension GND 11
	GND 10 Y7 9
	sonde de réservoir tampon haute TPO Y5 8 GND 7
	*sonde chaudière GND 6 Y4 5
	*thermostat de gaz de fumée B2 sonde de réserve tampon du milieu Y3 4 GND 3
	sonde de réservoir tampon basse TPU GND 2 Y2 1

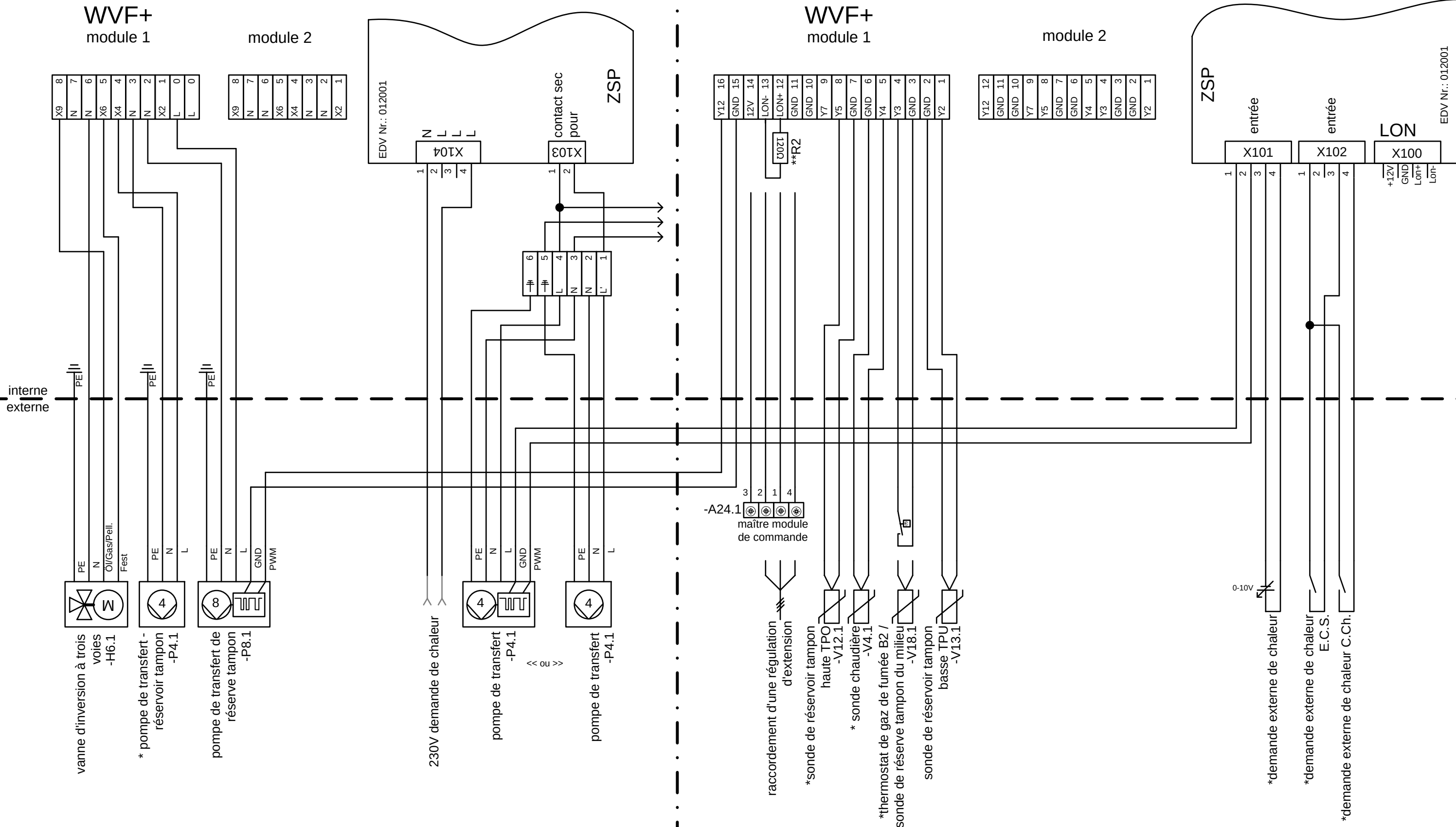
	module 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

tension 230 VAC

basse tension-sonde



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	24.06.2013	WVF+ / ZSP W		MES P041 + ZSP W commutation auto sur comb prod solides av remplis réserv et ZSP W	Projekt : régulation		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094617/00				◀ ----- 2 ▶	
												Blatt 094617/00

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094812/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*Transferpump-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer. TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

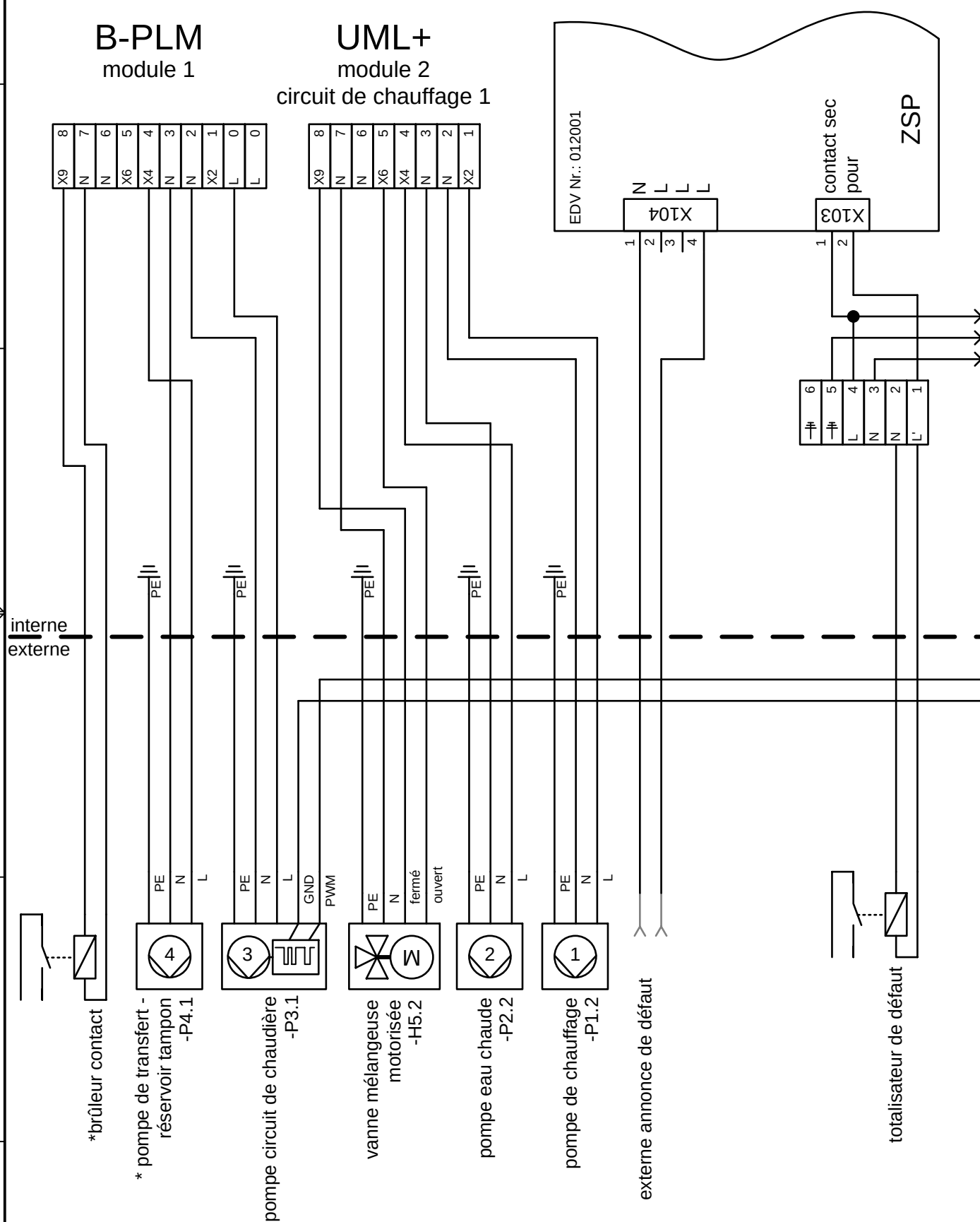
	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

tension 230 VAC

basse tension-sonde

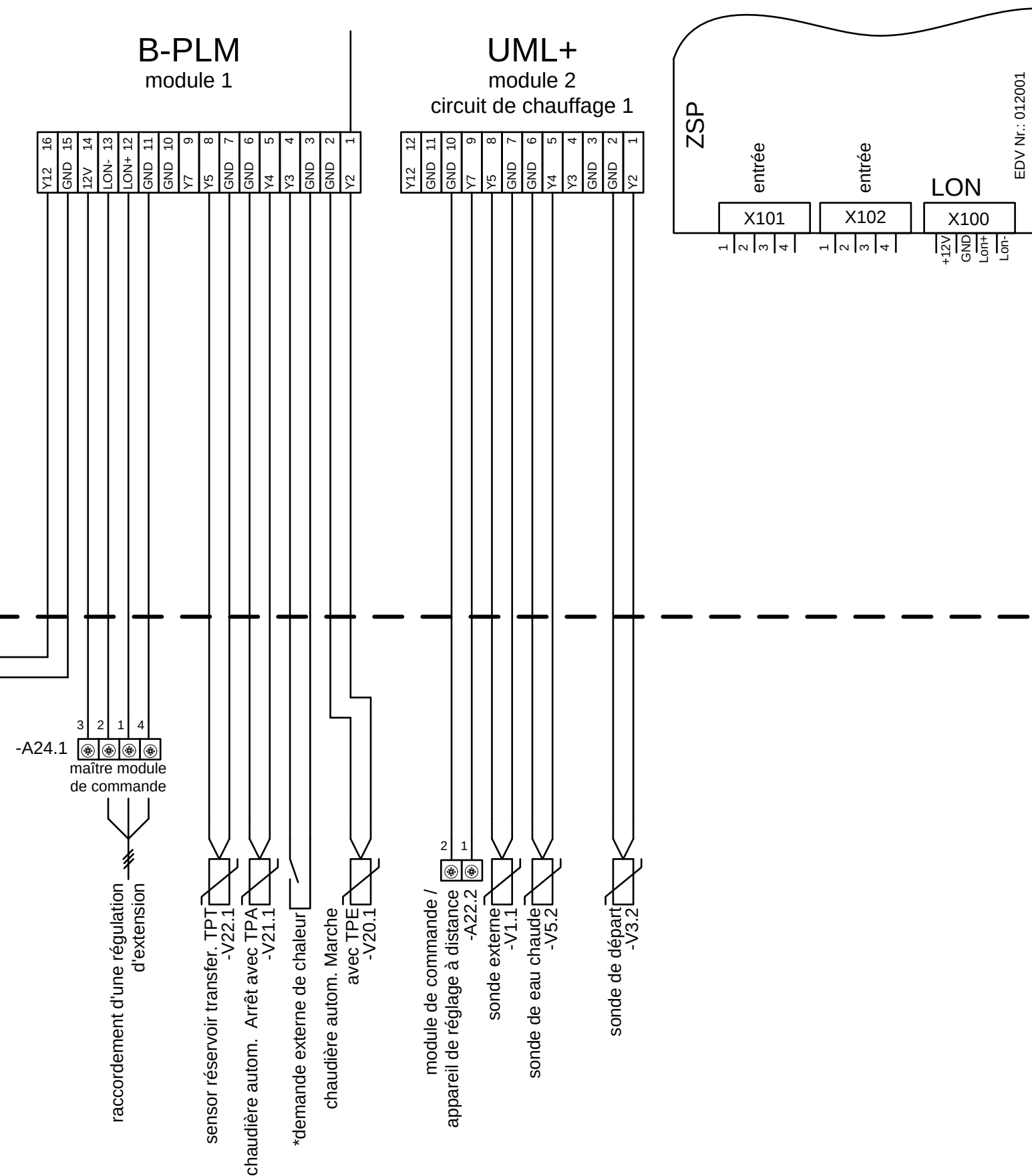
B-PLM
module 1

UML+
module 2
circuit de chauffage 1



B-PLM
module 1

UML+
module 2
circuit de chauffage 1



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / UML+ / ZSP S

Zeichnungs Nr.: 094620/00

MES P042 + H021 + ZSP S

régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude et réservoir tampon-module B-PLM et ZSP S

Projekt :
régulation

windhager

1 mm : 1 mm

Blatt 094620/00

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*Transferpump-réservoir tampon	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
pompe eau chaude C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer. TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

EDV Nr. 094812/00

-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor réservoir transfer . TPT	Y5 8 GND 7
*chaudière autom. Arrêt avec TPA	GND 6 Y4 5
*demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092890/01

092890/01

tension 230 VAC

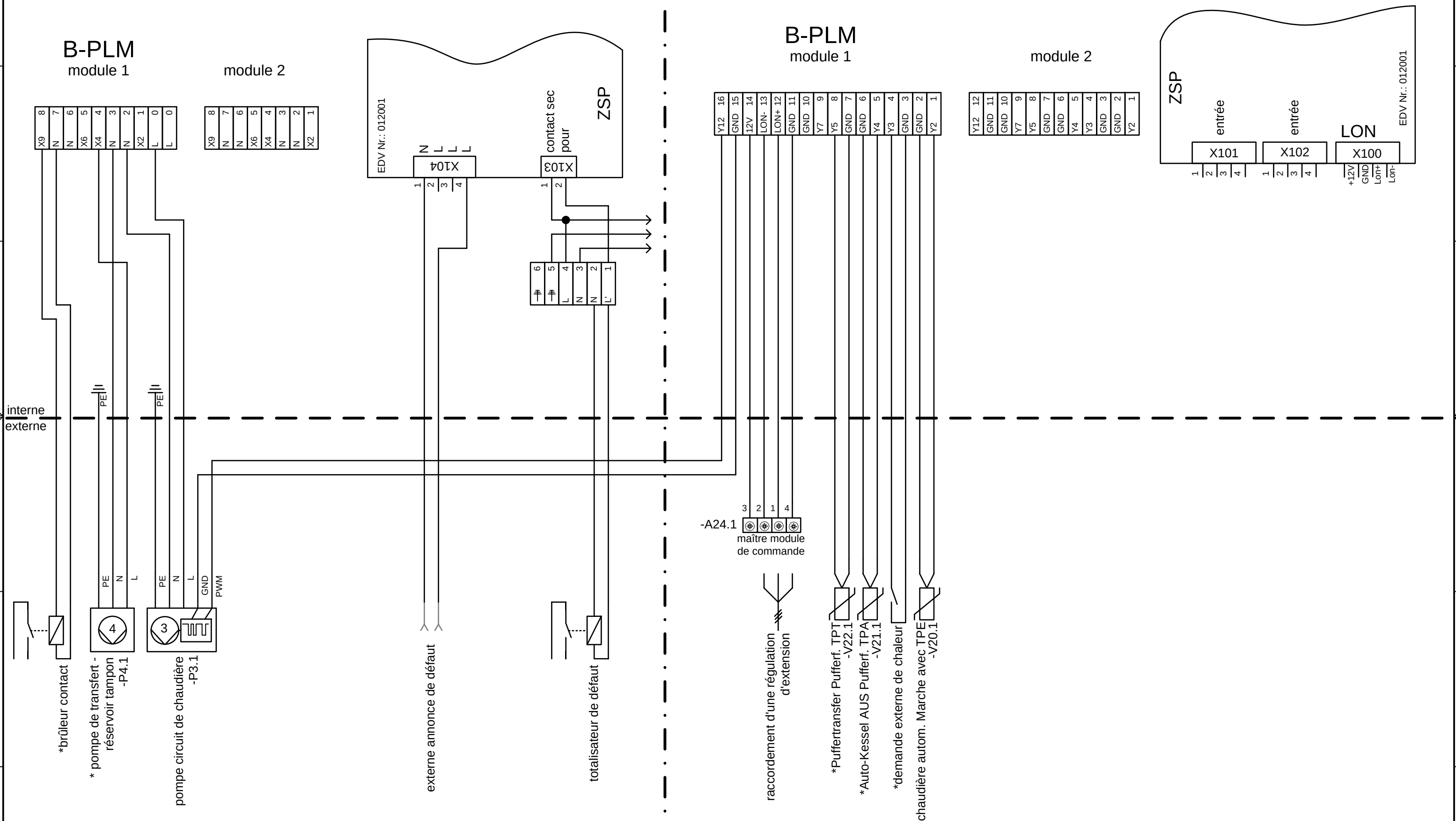
basse tension-sonde

B-PLM
module 1

module 2

B-PLM
module 1

module 2



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	24.06.2013	B-PLM / ZSP S		MES P042 + ZSP S tampon mémoire B-PLM et ZSP S		Projekt : régulation				1 mm : 1 mm Blatt 094618/00	
				Gezeichnet	rot										
				Geprüft	ros										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		094618/00									

-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230VAC	L 1
interne	L' 2 L' 3
230VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*brûleur contact	X9 8 N 7
	N 6 X6 5
*pompe de transfert-réservoir tampon	X4 4 N 3
	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

B-PLM	module 1
	PWM pompe du circuit chaudière Y12 16 GND 15
	maître module de commande raccordement d'une régulation d'extension +12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	*sensor réservoir transfer . TPT Y5 8 GND 7
	*chaudière autom. Arrêt avec TPA GND 6 Y4 5
	*demande externe de chaleur Y3 4 GND 3
	chaudière autom. Marche avec TPE GND 2 Y2 1

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092890/01

tension 230 VAC

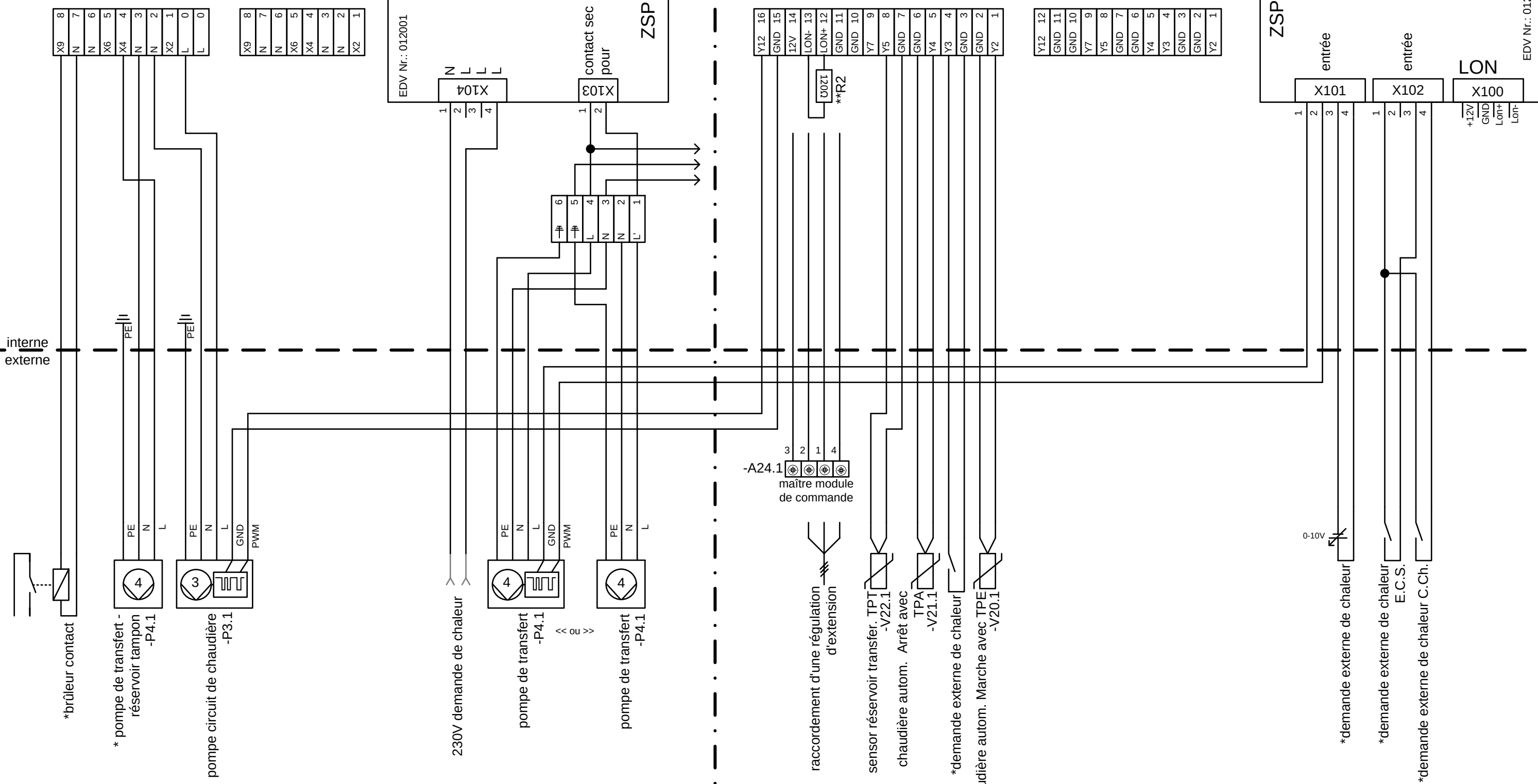
basse tension-sonde

B-PLM
module 1

module 2

B-PLM
module 1

module 2



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / ZSP W

Zeichnungs Nr.: 094619/00

MES P042 + ZSP W
réservoir tampon mémoire module B-PLM
et ZSP W

Projekt :
régulation

windhager

1 mm : 1 mm

Blatt 094619/00

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

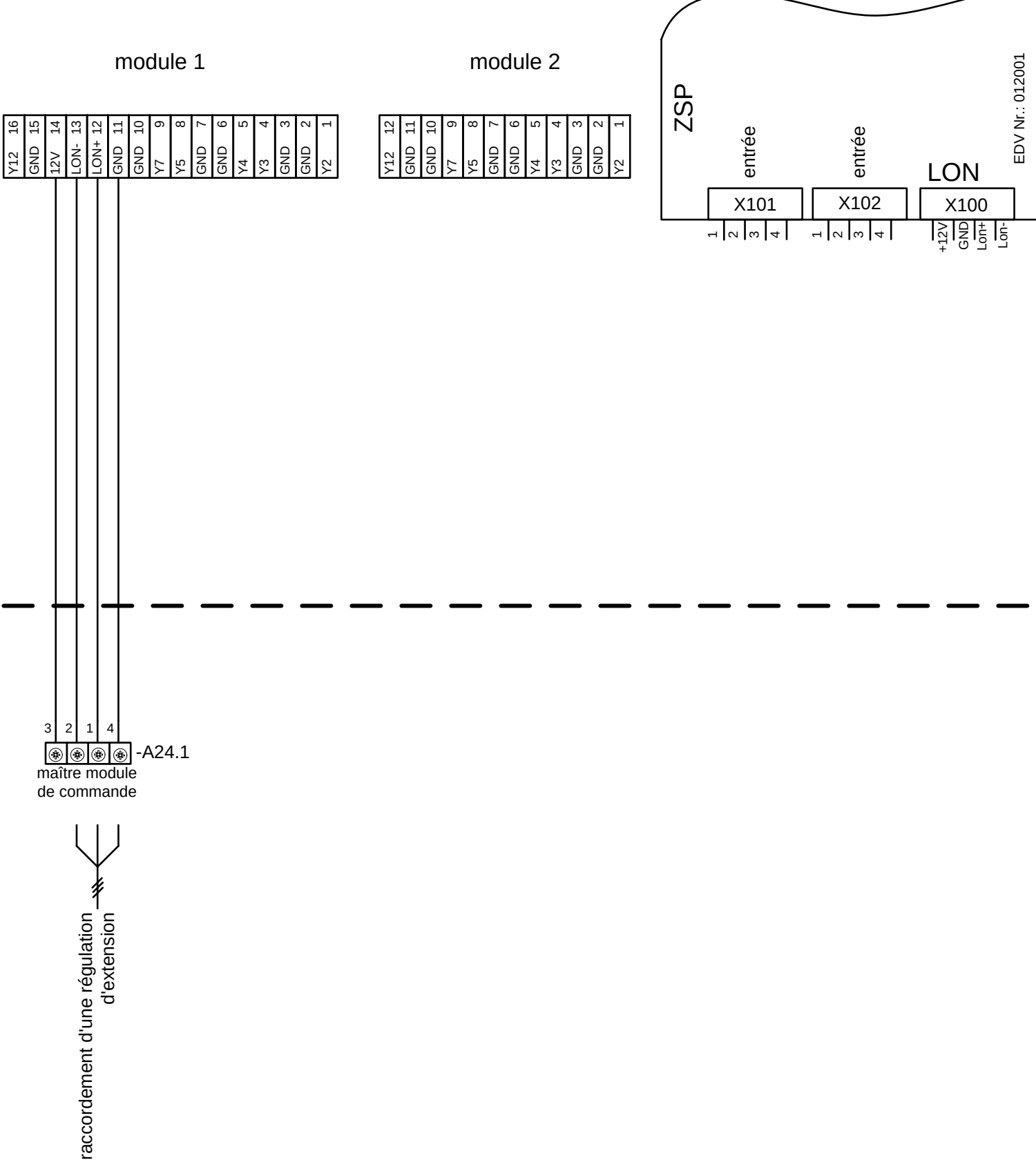
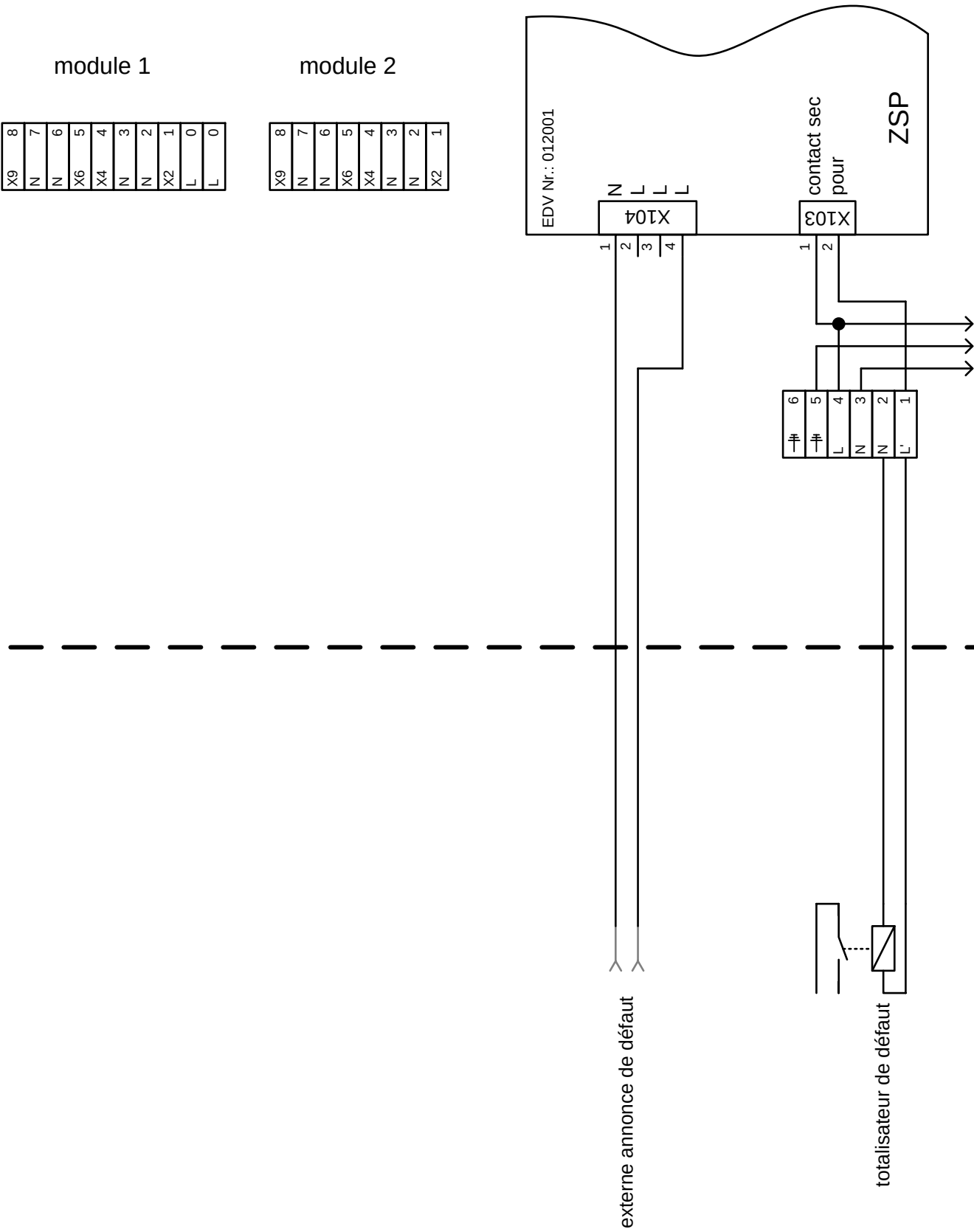
-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094812/00

tension 230 VAC

basse tension-sonde



-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	module 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

MES	module 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

EDV Nr. 094812/00

-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

-XA	bloc de connexion
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	module 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM Phase permanente 1 L 0	
PWM Phase permanente 2 L 0	

MES	module 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	module 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	module 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*contact brûleur	X9 8 N 7
	N 6 X6 5
* pompe de transfert	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
contacteur -K1 C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor réservoir transfer . TPT	Y5 8 GND 7
* chaudière autom. Arrêt avec TPA	GND 6 Y4 5
* demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

tension 230 VAC

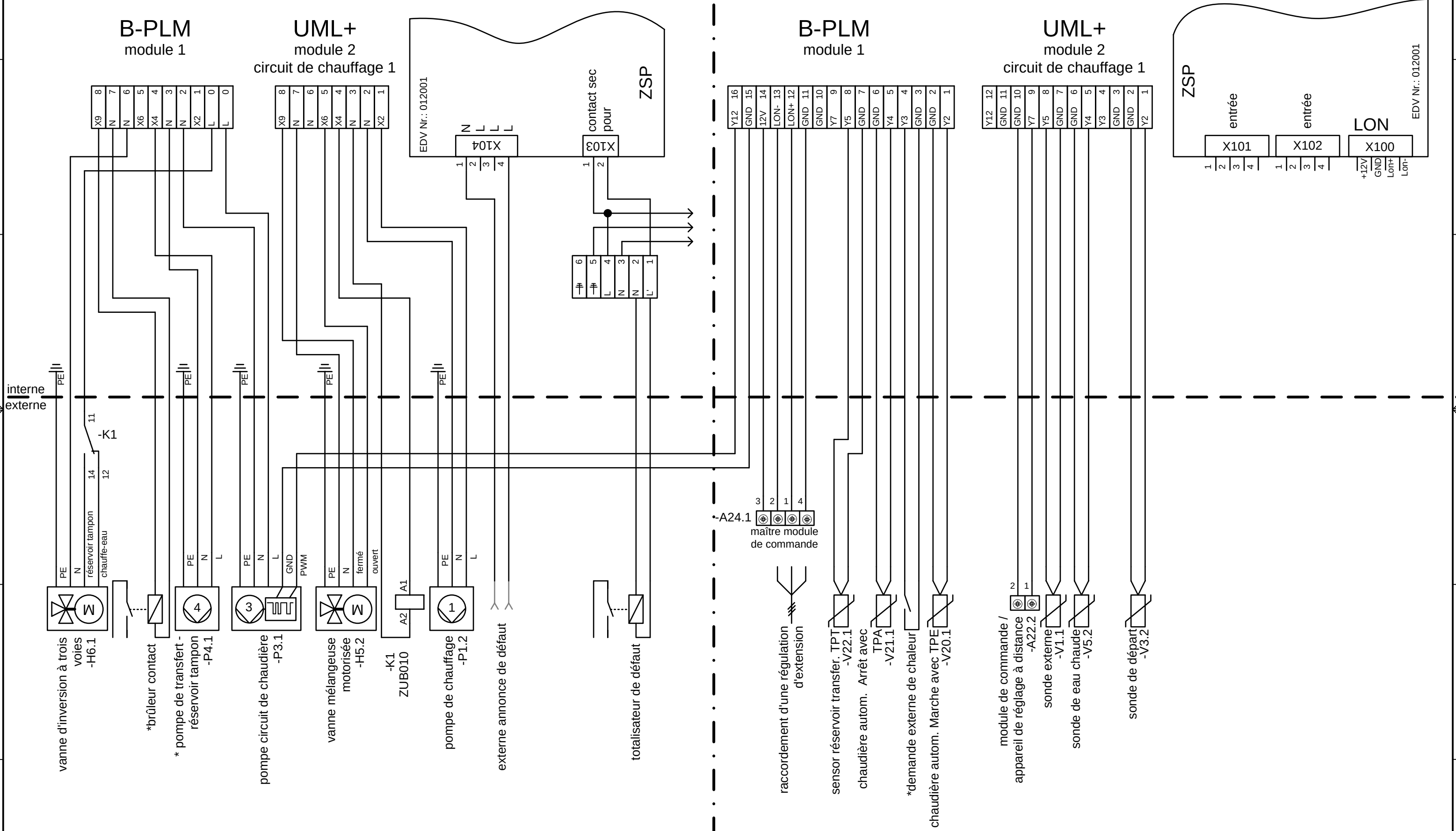
basse tension-sonde

B-PLM
module 1

UML+
module 2
circuit de chauffage 1

B-PLM
module 1

UML+
module 2
circuit de chauffage 1



-XZSP	platine supplémentaire
PE	PE
	PE
Phase permanente	L
	N
totalisateur de défaut	N
	L'

-XSP	platine supplémentaire
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloc de connexion
230 VAC	L 1
interne	L' 2 L' 3
230 VAC	N 4
interne	N' 5 N' 6

B-PLM	module 1
*contact brûleur	X9 8 N 7
	N 6 X6 5
* pompe de transfert	X4 4 N 3
	N 2
	X2 1
PWM Phase permanente 1	L 0
PWM Phase permanente 2	L 0

UML +	module 2 circuit de chauffage 1
fermé C.Ch. 1	X9 8 N 7
vanne mélangeuse motorisée ouvert	N 6 X6 5
contacteur -K1 C.Ch. 1	X4 4 N 3
pompe de chauffage C.Ch. 1	N 2 X2 1

	module 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	module 1
PWM pompe du circuit chaudière	Y12 16 GND 15
maître module de commande raccordement d'une régulation d'extension	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor réservoir transfer. TPT	Y5 8 GND 7
* chaudière autom. Arrêt avec TPA	GND 6 Y4 5
* demande externe de chaleur	Y3 4 GND 3
chaudière autom. Marche avec TPE	GND 2 Y2 1

UML +	module 2 circuit de chauffage 1
	Y12 12 GND 11
module de commande appareil de réglage à distance	GND 10 Y7 9
sonde externe	Y5 8 GND 7
sonde de eau chaude C.Ch. 1	GND 6 Y4 5
	Y3 4 GND 3
sonde de départ C.Ch. 1	GND 2 Y2 1

	module 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

tension 230 VAC

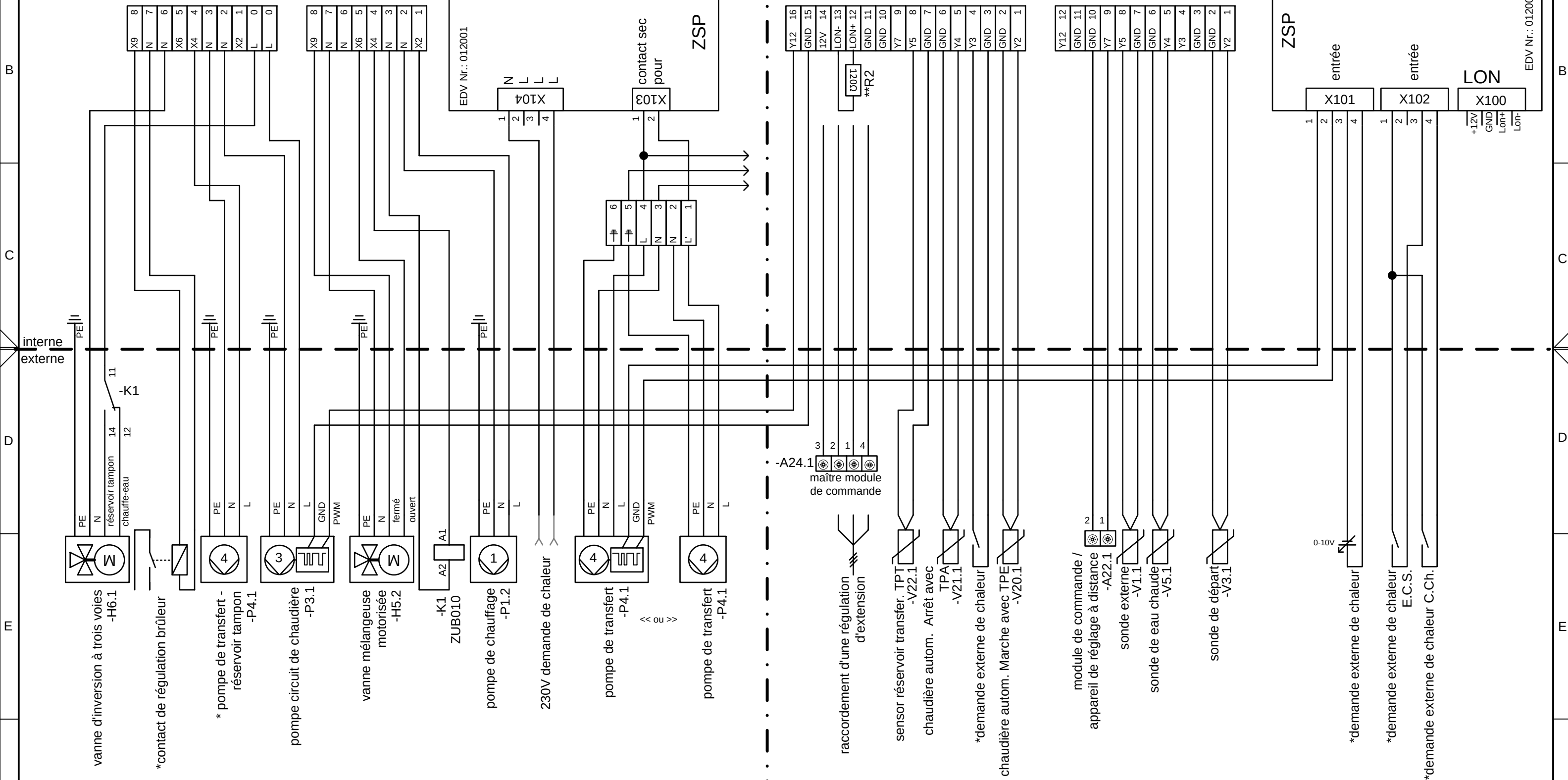
basse tension-sonde

B-PLM
module 1

UML+
module 2
circuit de chauffage 1

B-PLM
module 1

UML+
module 2
circuit de chauffage 1



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM/ UML+/ ZSP W

Zeichnungs Nr.: 094630/00

MES ZUB010 + ZSP W

ZUB010 vanne d'inversion à trois voies réservoir tampon-chauffe-eau et ZSP W

Projekt :
régulation

windhager

1 mm : 1 mm

2

Blatt 094630/00

-XZSP	platine supplémentaire
PE	PE
PE	PE
Phase permanente	L N
pompe de transfert	N L'

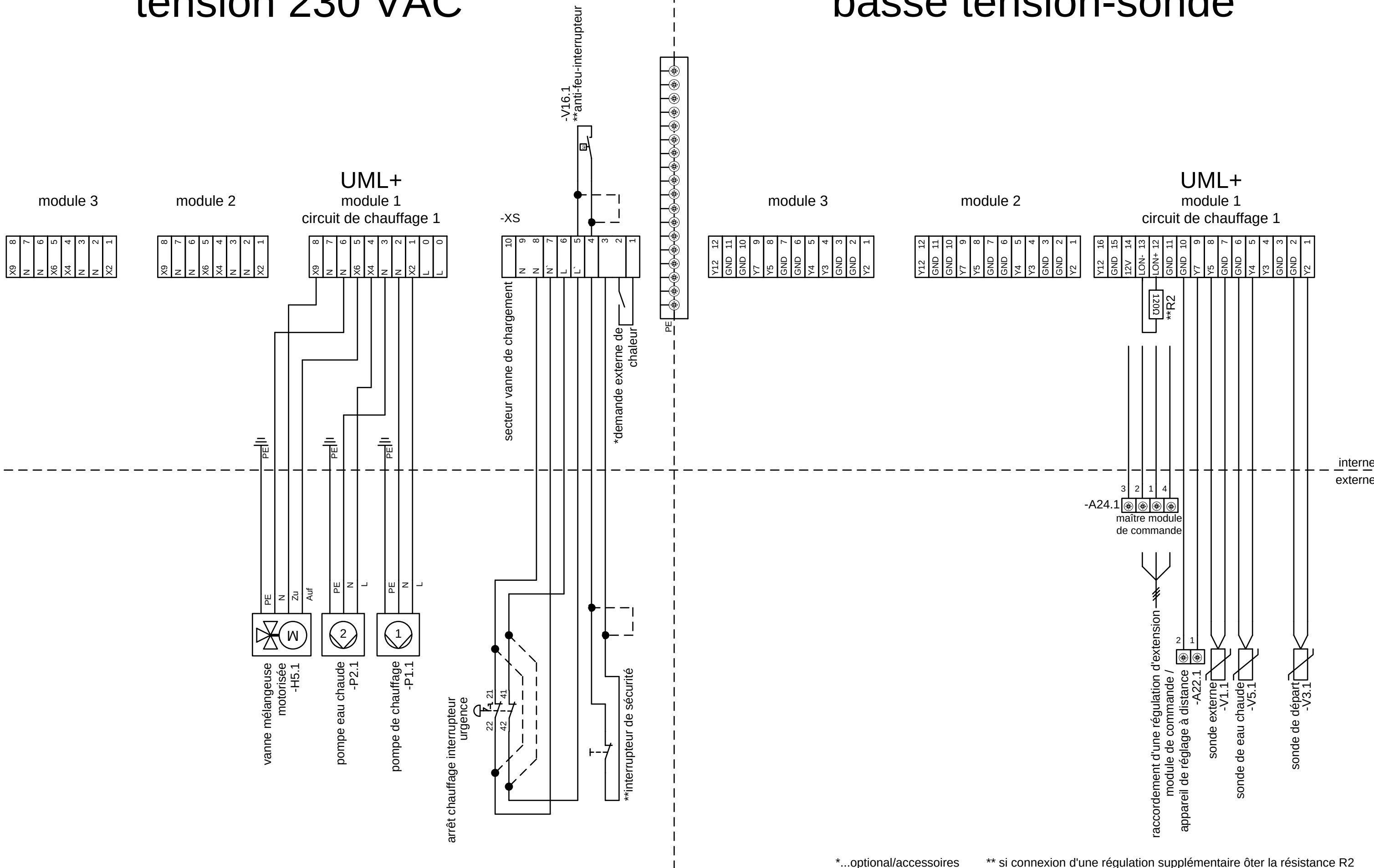
-XSP	platine supplémentaire
GND -X101 /2	PWM pompe de transfert
GND -X101 /4	demande de chaleur 0-10V

GND	
-X102 /2	
-X102 /3	demande de chaleur externe E.C.S.
-X102 /4	demande de chaleur externe C.Ch.

EDV Nr. 094812/00

tension 230 VAC

basse tension-sonde

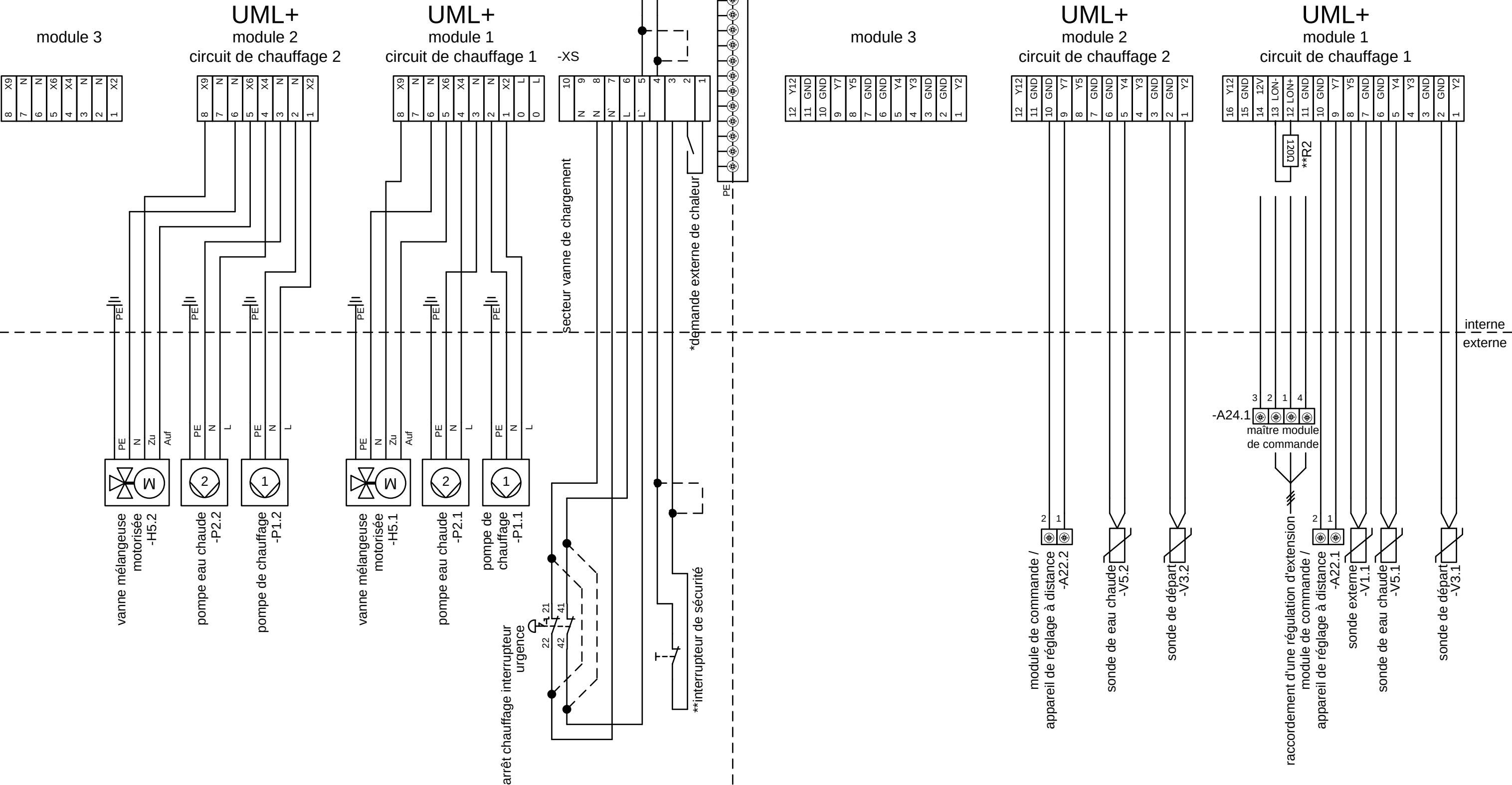


*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

				Datum	07.08.2013	UML+		MES H021 régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude		Projet : régulation				1 mm : 1 mm Blatt 092760/01	
				Gezeichnet	rot										
				Geprüft	ros										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092760/01									

tension 230 VAC

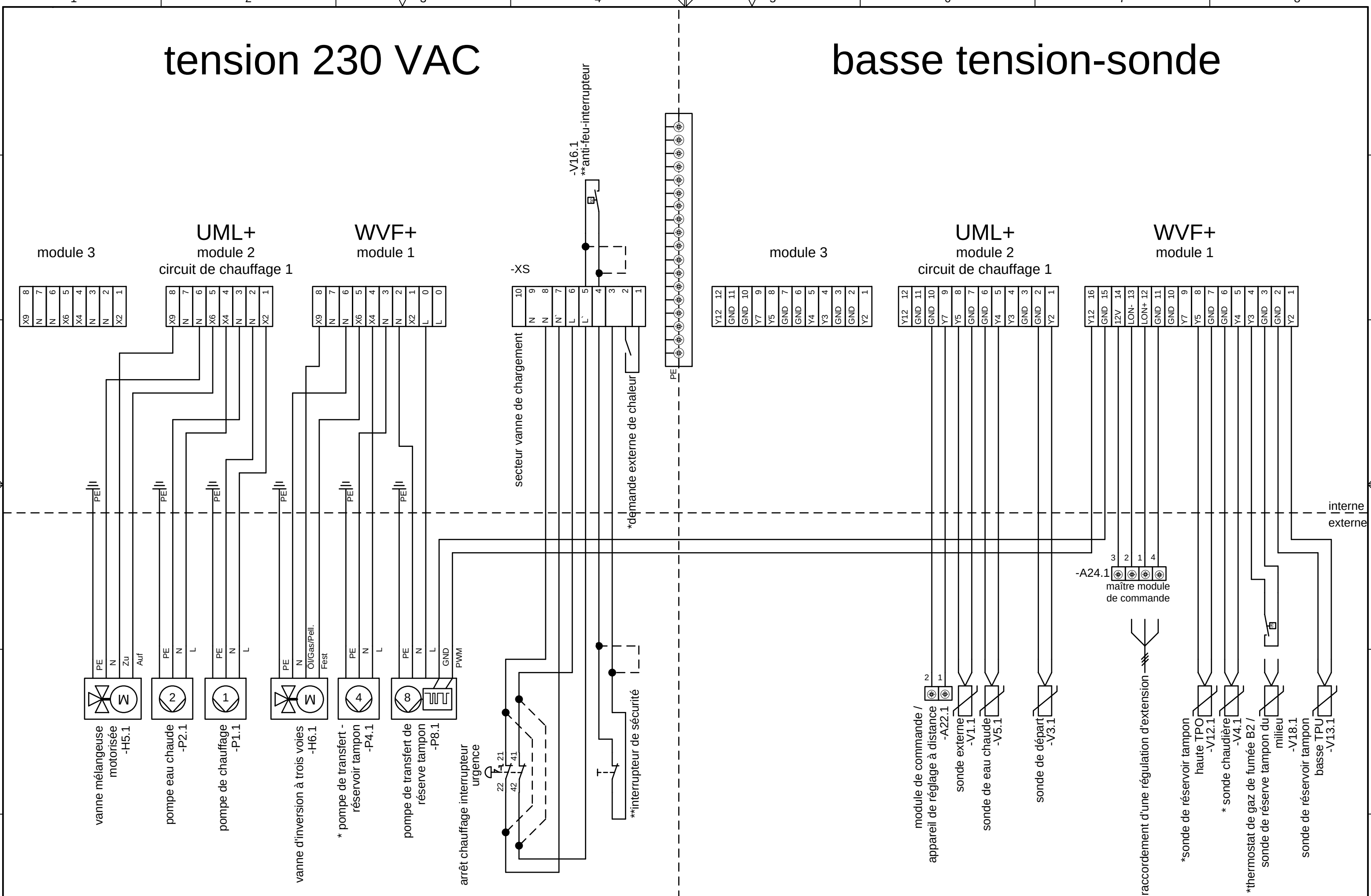
basse tension-sonde



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

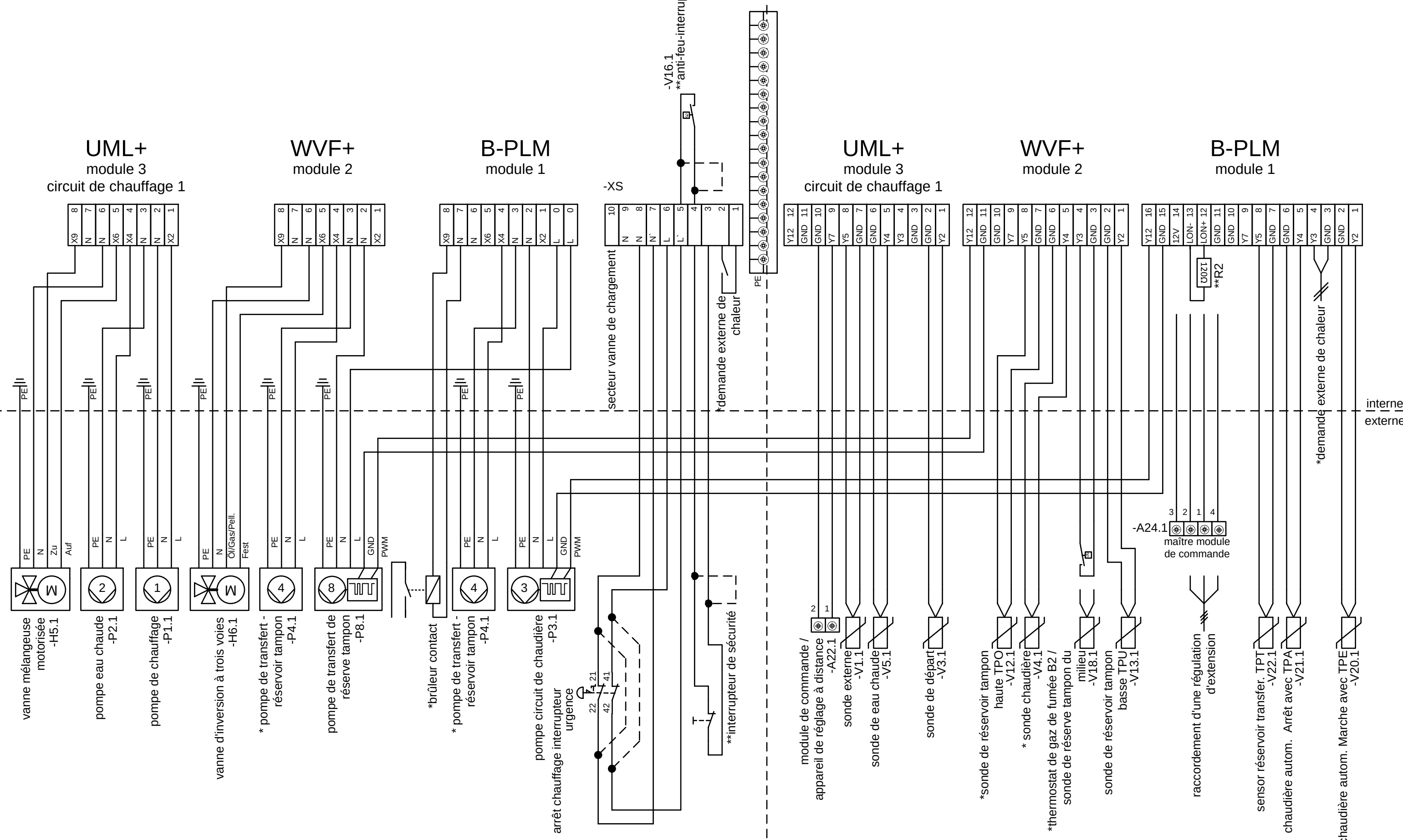
tension 230 VAC

basse tension-sonde



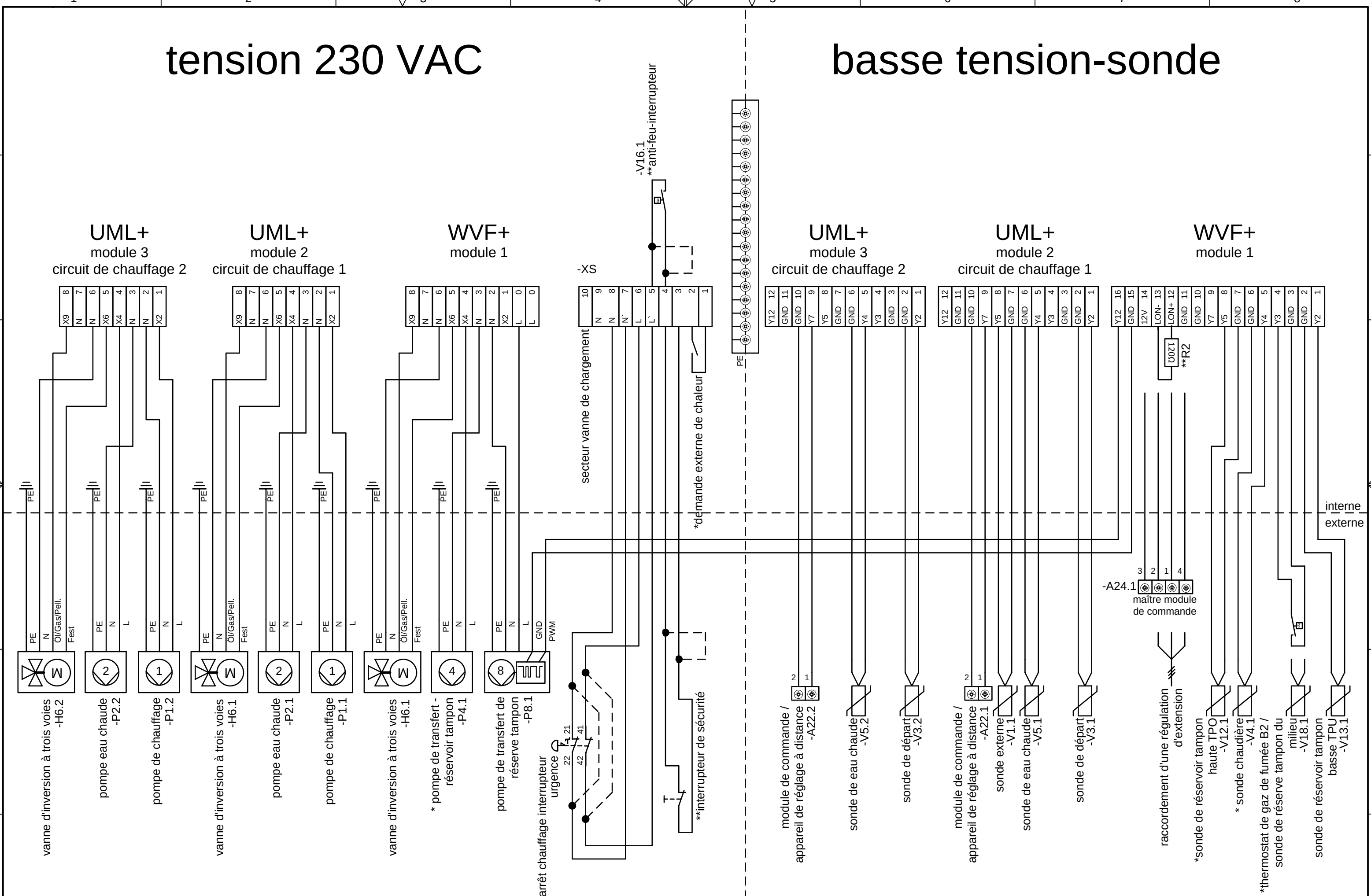
tension 230 VAC

basse tension-sonde



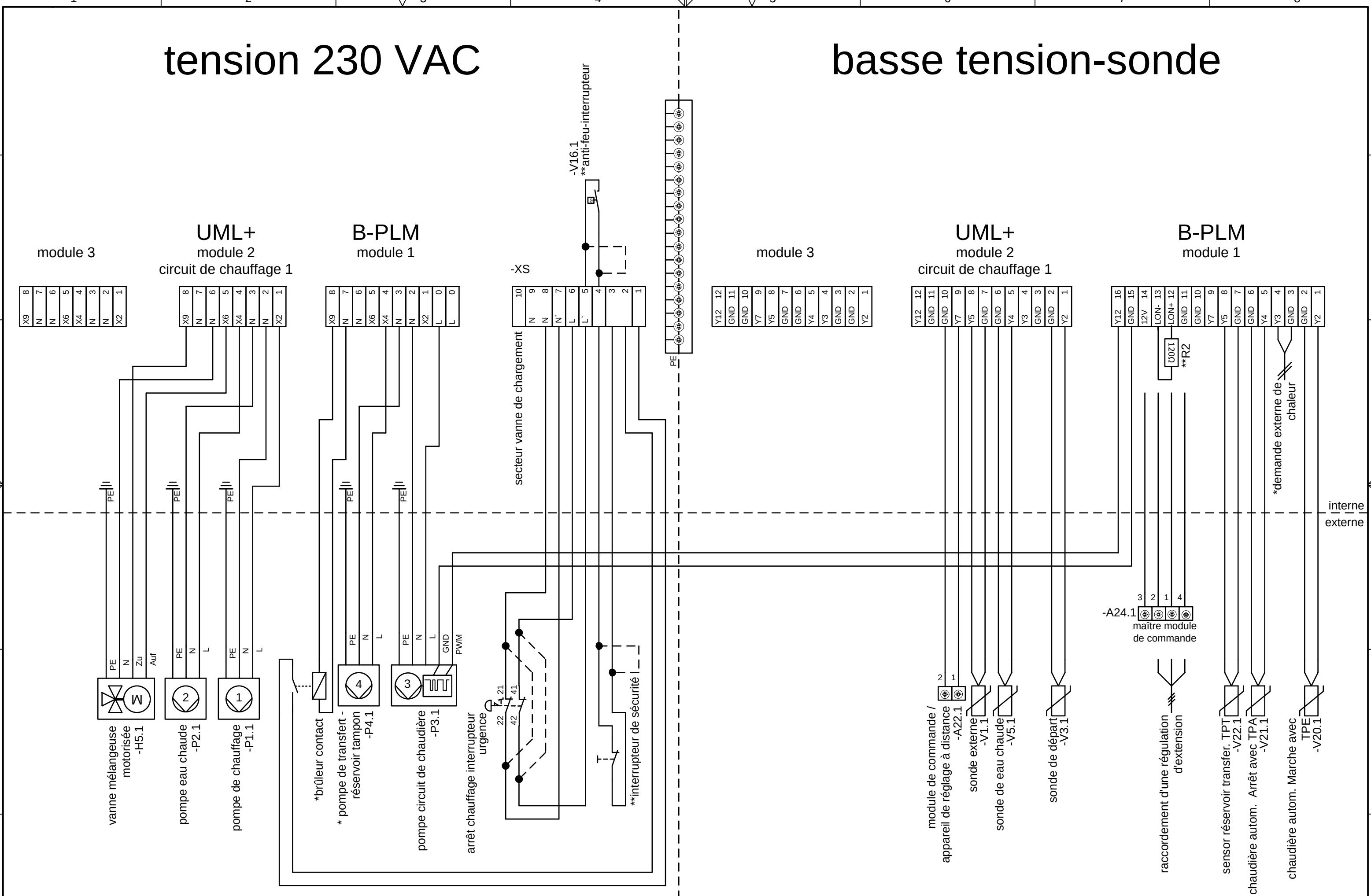
tension 230 VAC

basse tension-sonde



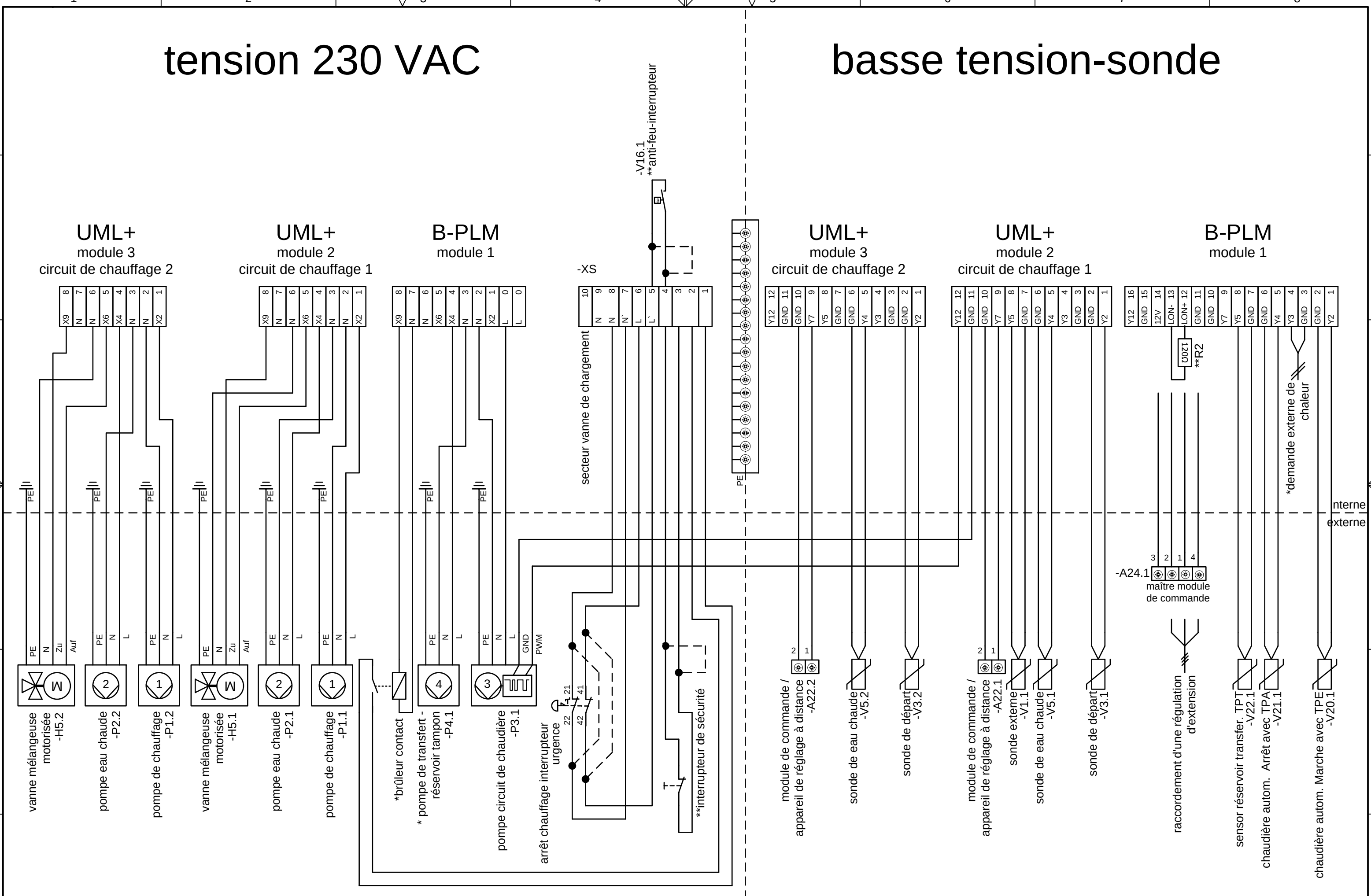
tension 230 VAC

basse tension-sonde



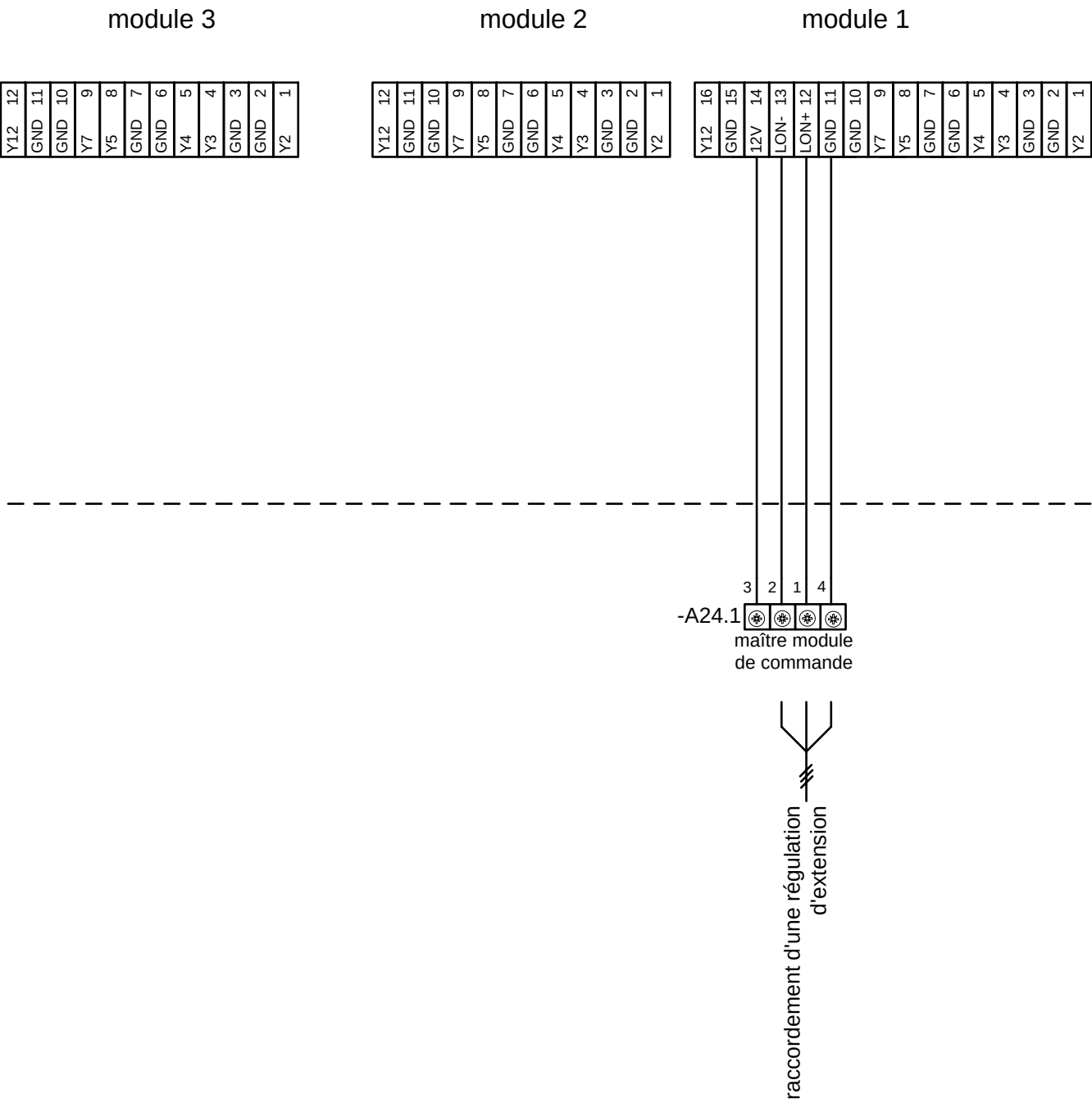
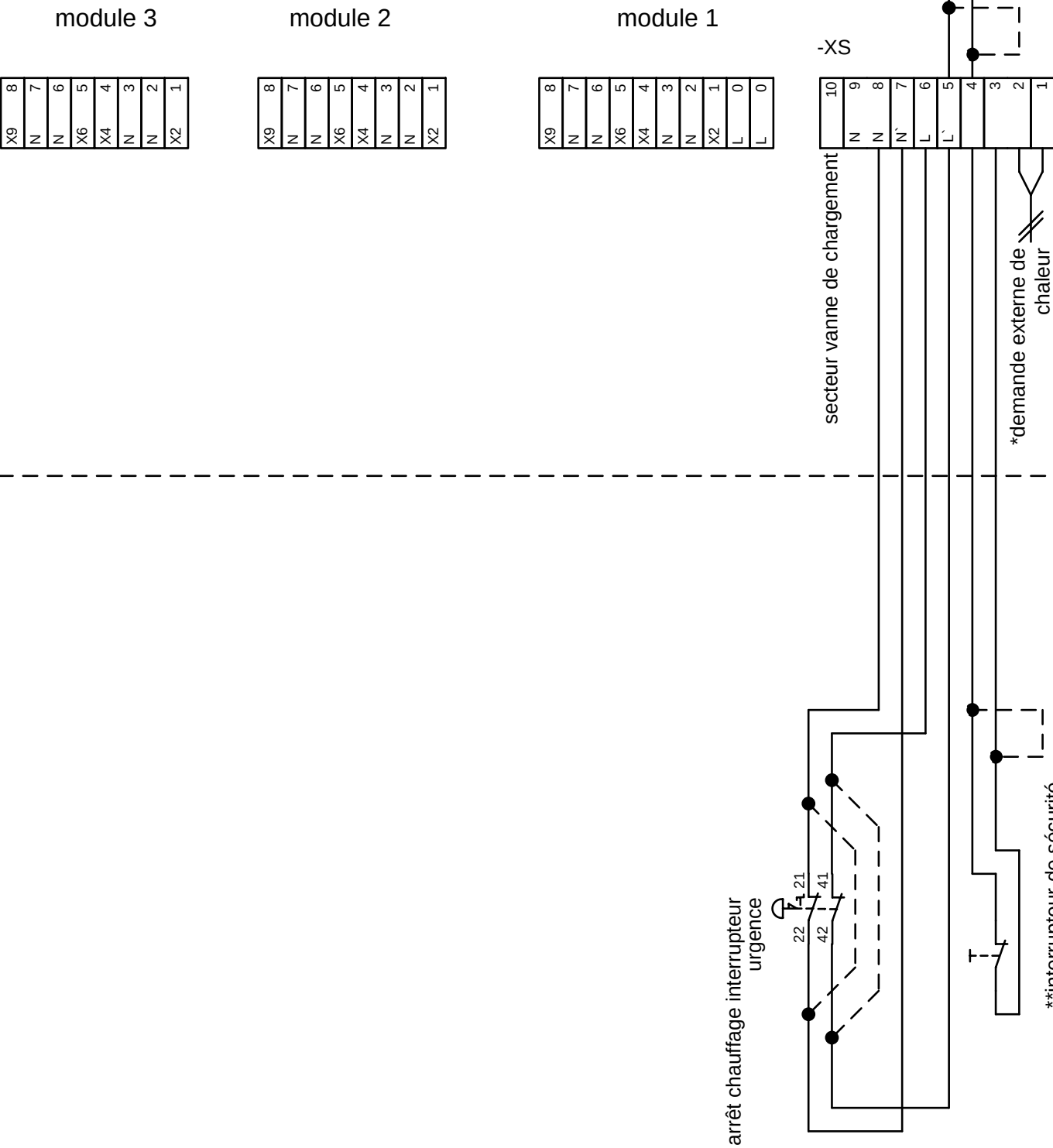
tension 230 VAC

basse tension-sonde



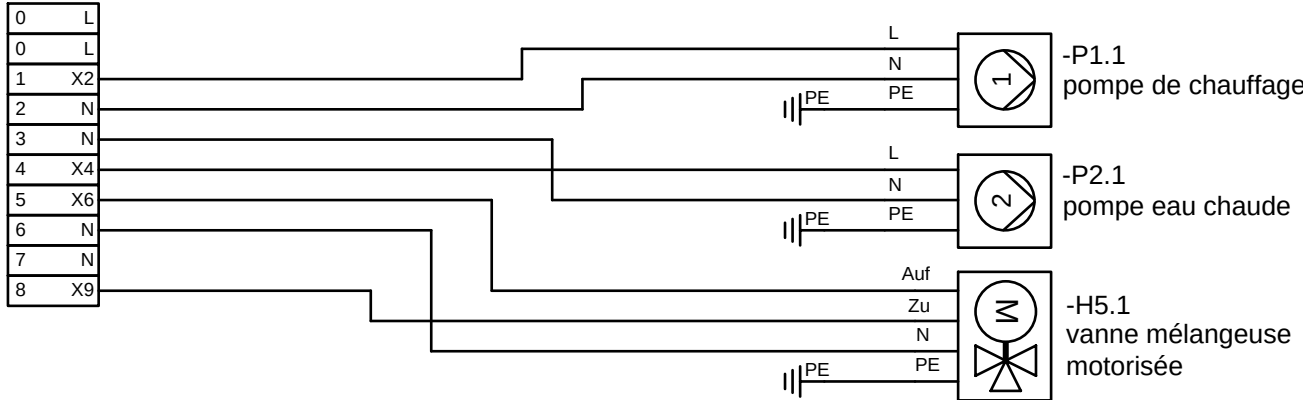
tension 230 VAC

basse tension-sonde

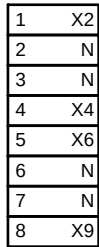


tension 230 VAC

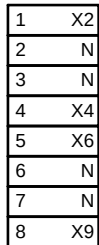
UML+
module 1



module 2

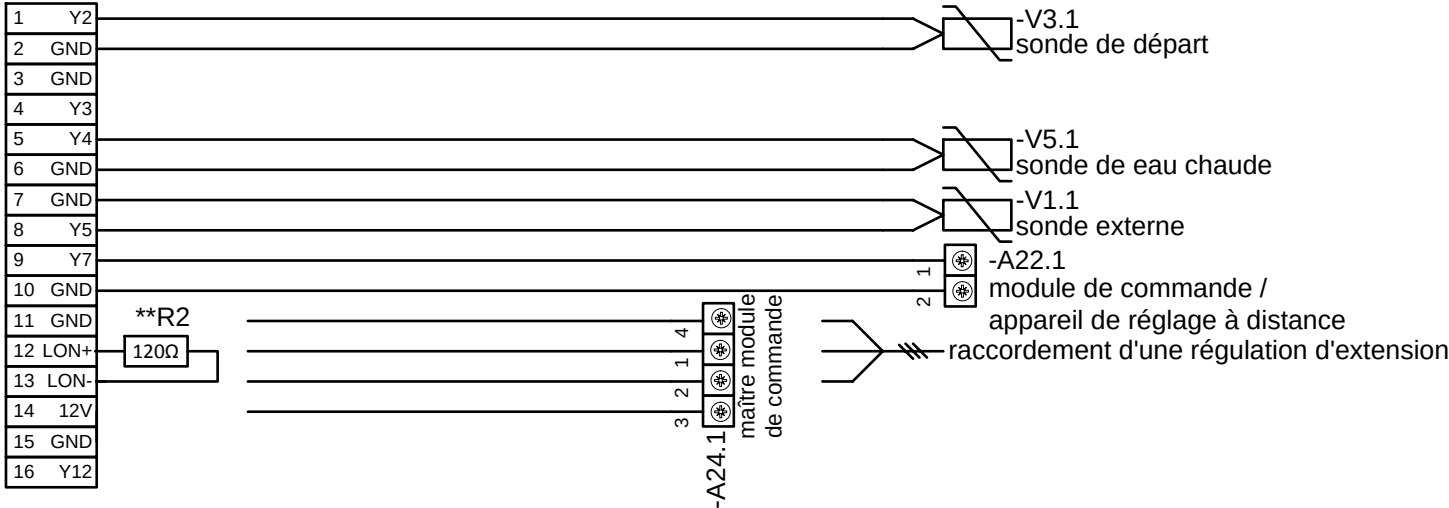


module 3

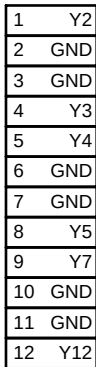


basse tension-sonde

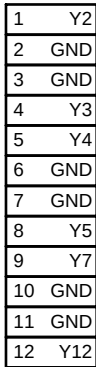
UML+
module 1



module 2

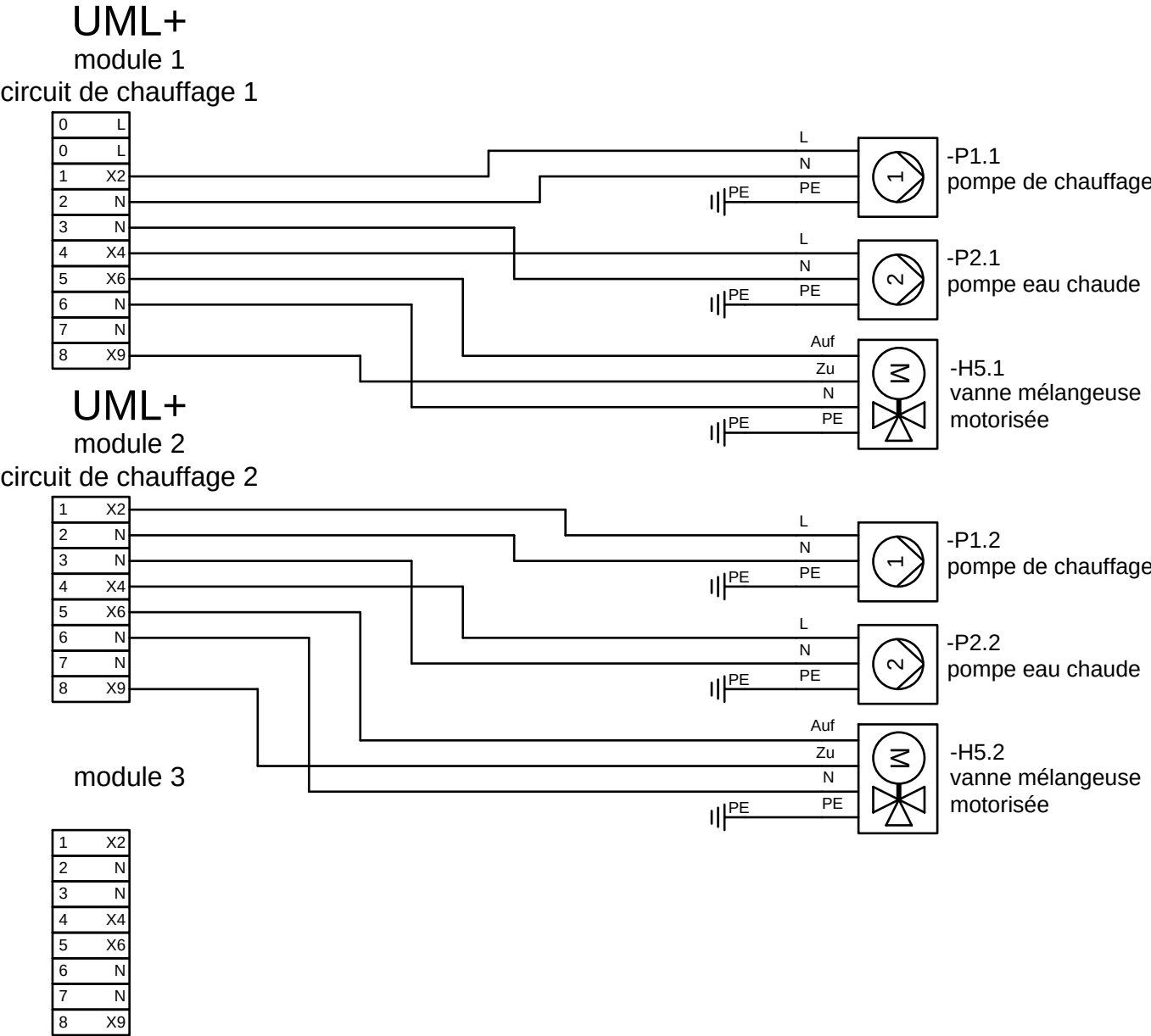


module 3

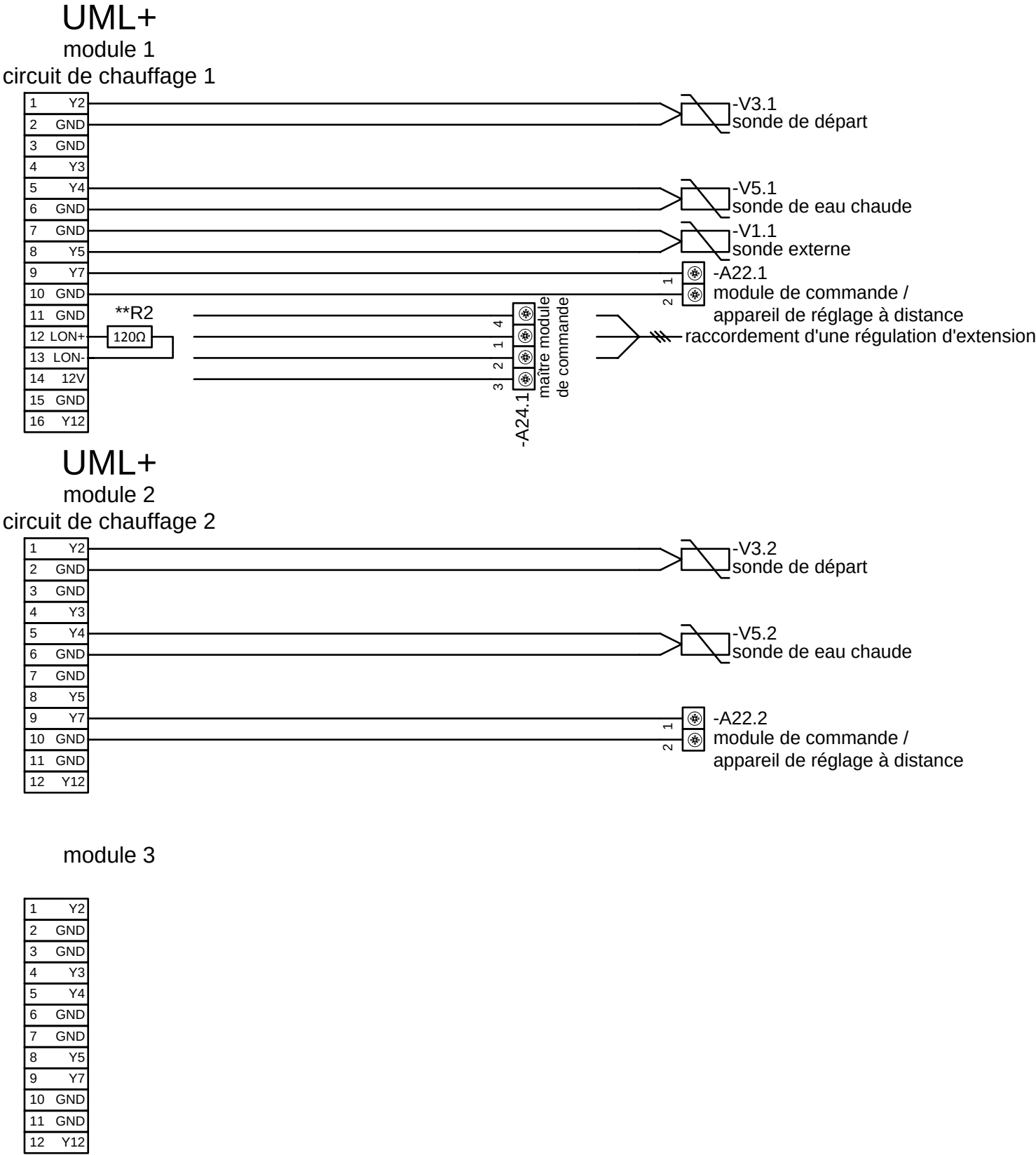


*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

tension 230 VAC



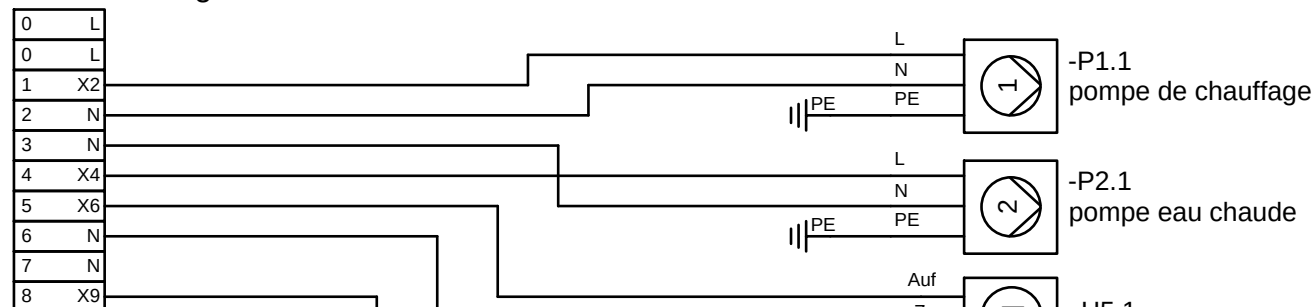
basse tension-sonde



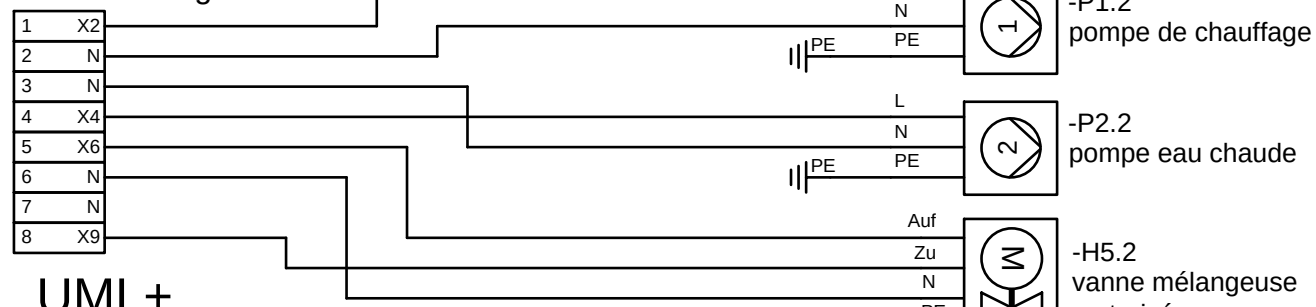
*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

tension 230 VAC

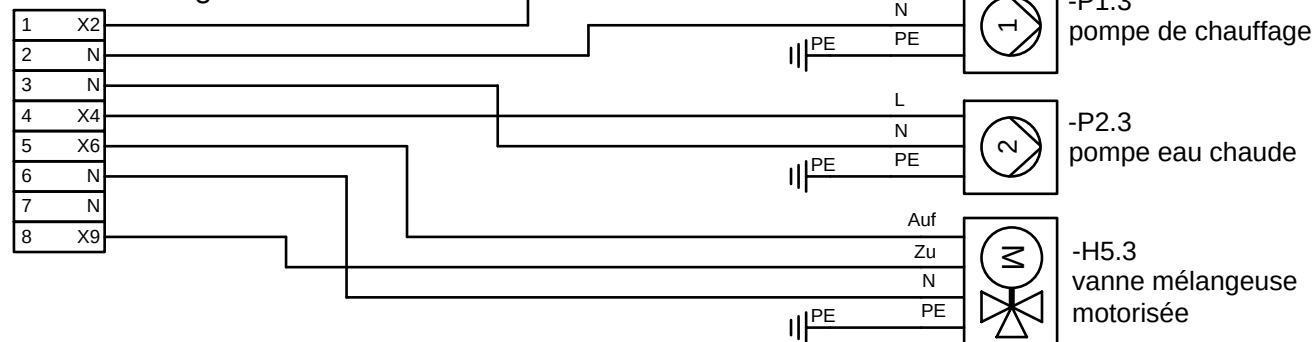
UML+ module 1 circuit de chauffage 1



UML+ module 2 circuit de chauffage 2

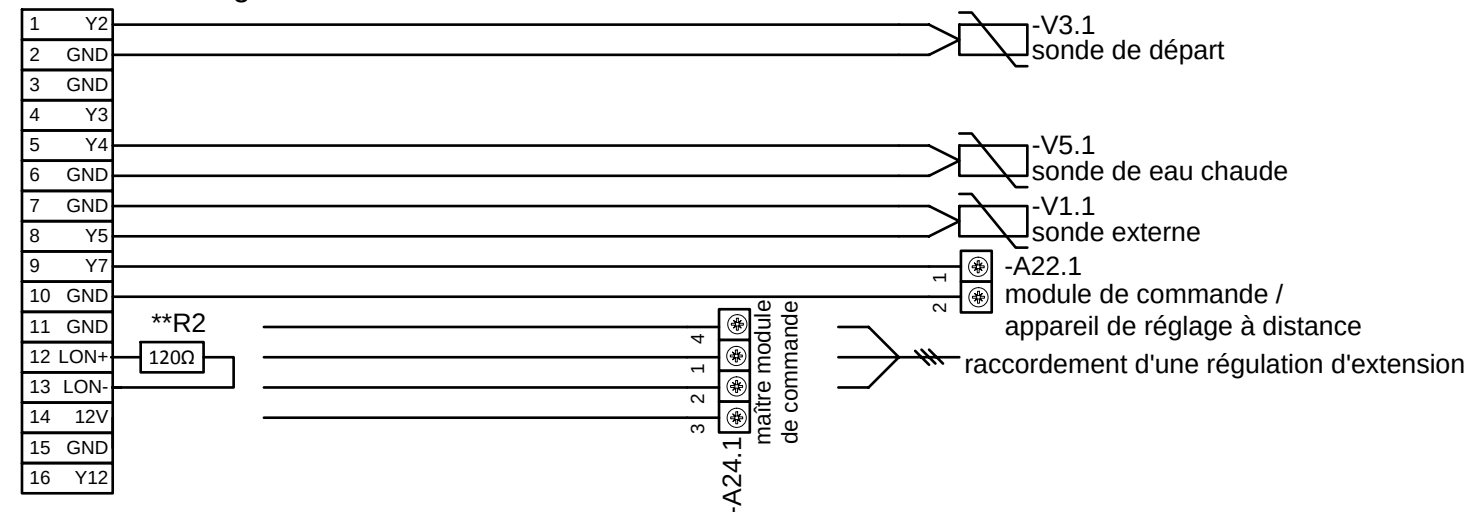


UML+ module 3 circuit de chauffage 3

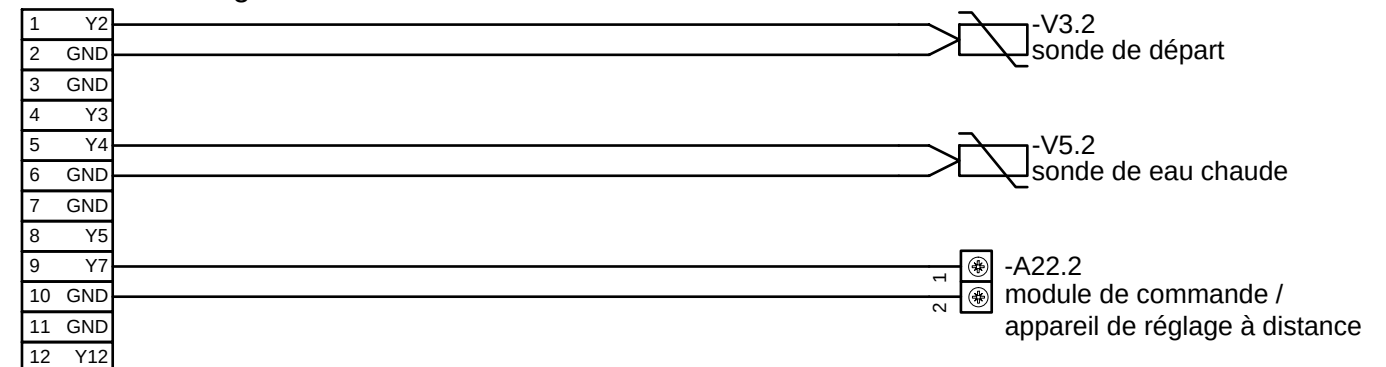


basse tension-sonde

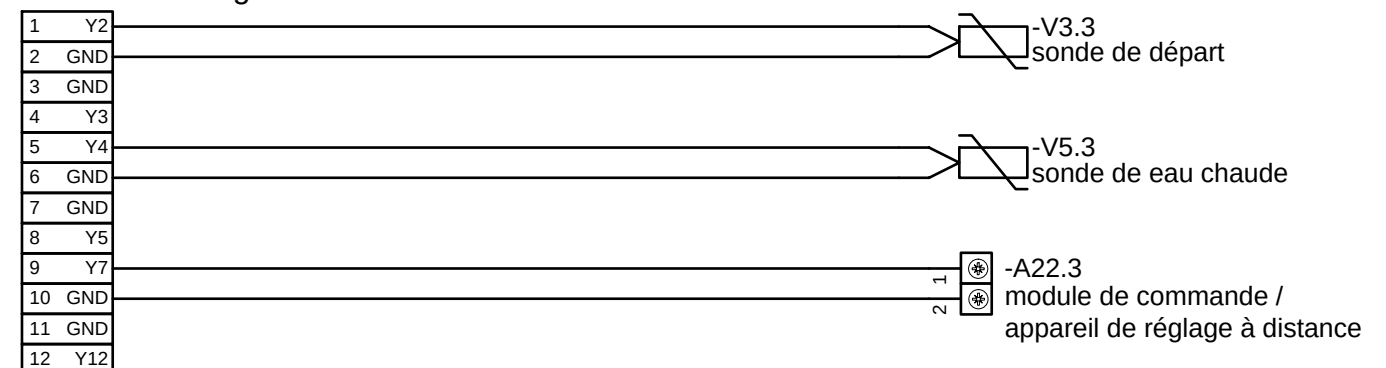
UML+ module 1 circuit de chauffage 1



UML+ module 2 circuit de chauffage 2



UML+ module 3 circuit de chauffage 3



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

tension 230 VAC

basse tension-sonde

WVF+ module 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

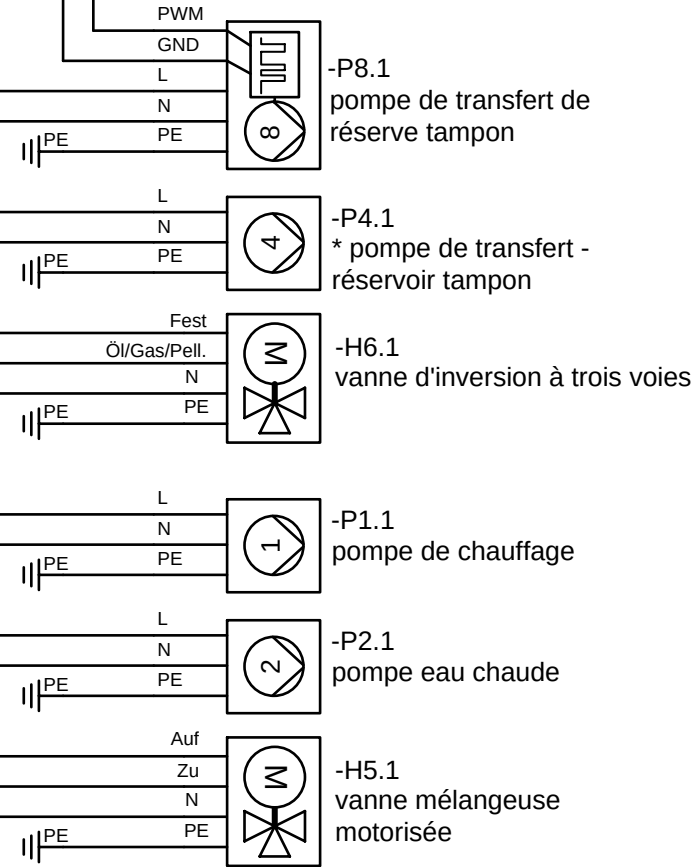
UML+ module 2

circuit de chauffage 1

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

module 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



WVF+ module 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

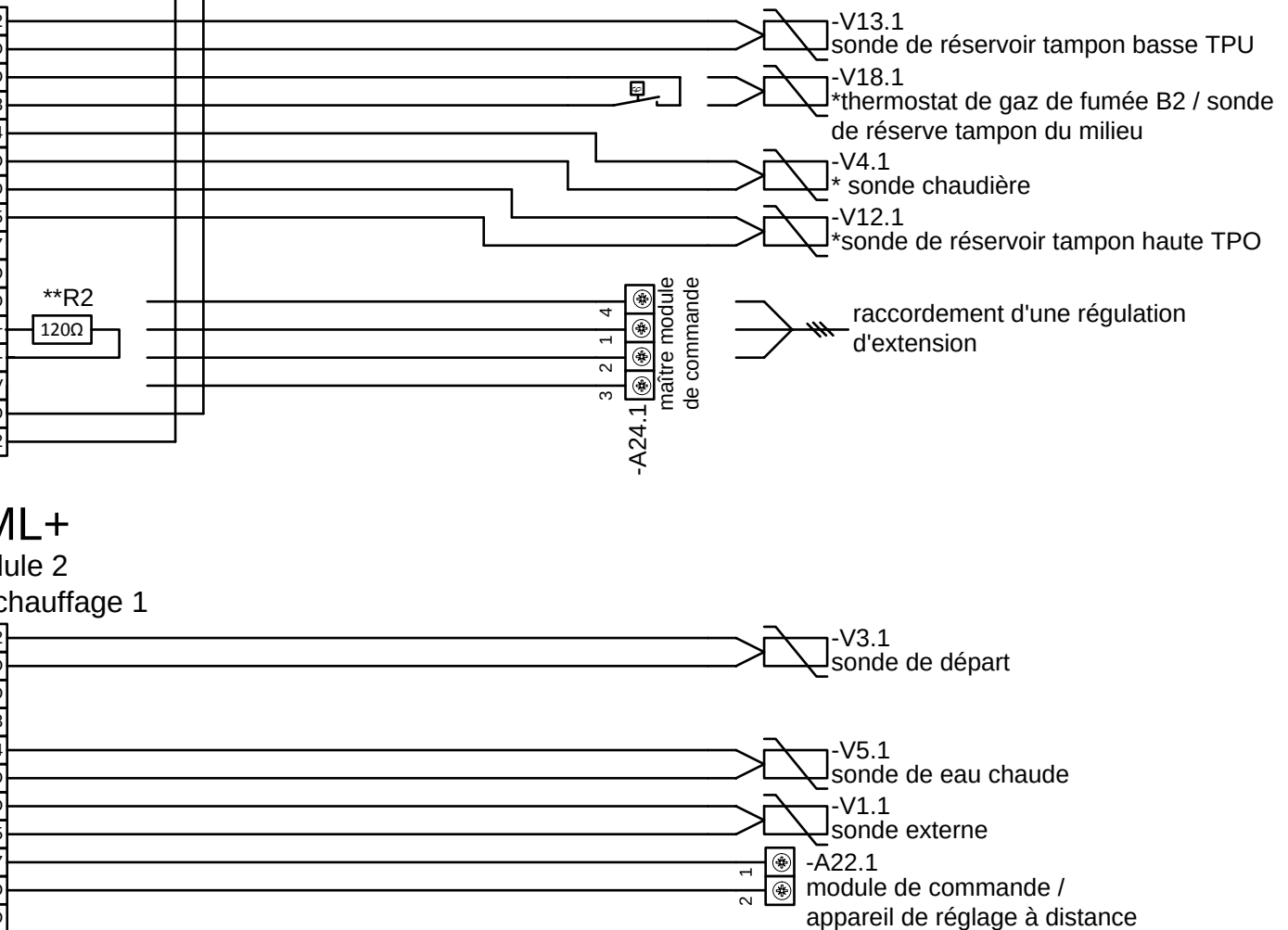
UML+ module 2

circuit de chauffage 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

module 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12



*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum 07.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

WVF+ / UML+

Zeichnungs Nr.:

092834/01

MES P041 + H021

régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau
chaude
commutation auto sur comb prod solides av remplis réserv

Projekt :

régulation

windhager

1 mm : 1 mm

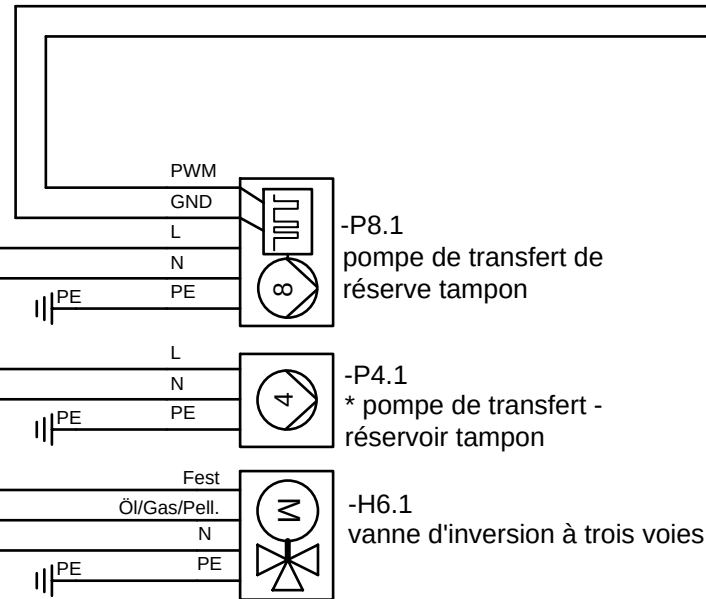
2

Blatt 092834/01

tension 230 VAC

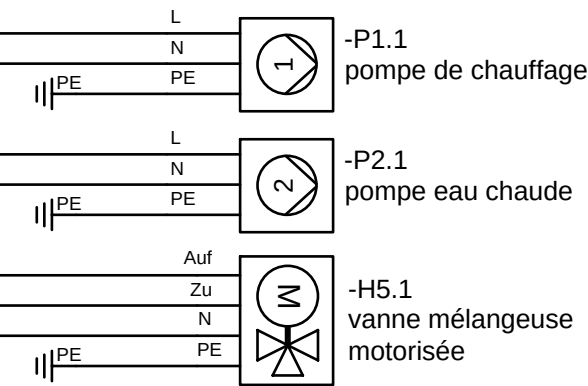
WVF+ module 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



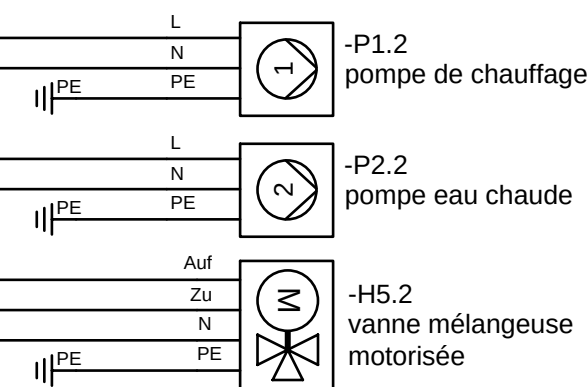
UML+ module 2 circuit de chauffage 1

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



UML+ module 3 circuit de chauffage 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



basse tension-sonde

WVF+ module 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

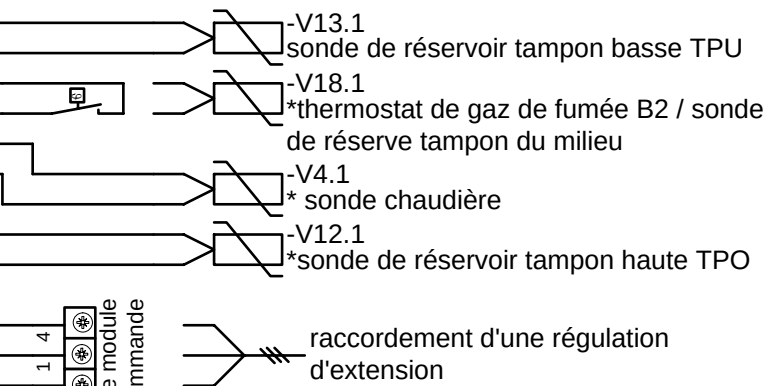
**R2
120Ω

UML+ module 2 circuit de chauffage 1

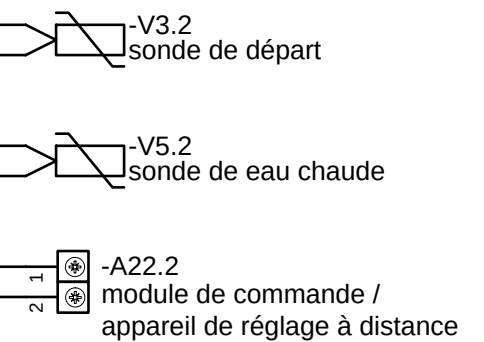
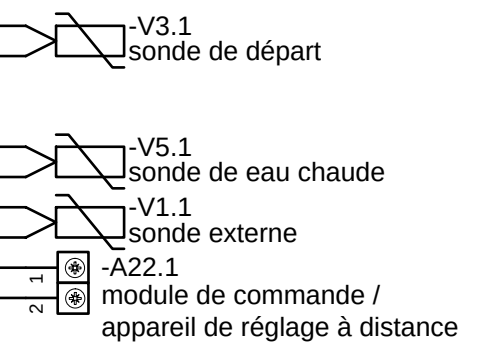
1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

UML+ module 3 circuit de chauffage 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12



raccordement d'une régulation d'extension



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum	06.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF+ / UML+ / UML+
Zeichnungs Nr.: 092837/01

MES P041 + H021 + H024
régulation par température extérieure pour 2 circuits de chauffage mélangés et circuit d'eau chaude
commutation auto sur comb prod solides av remplis réserv

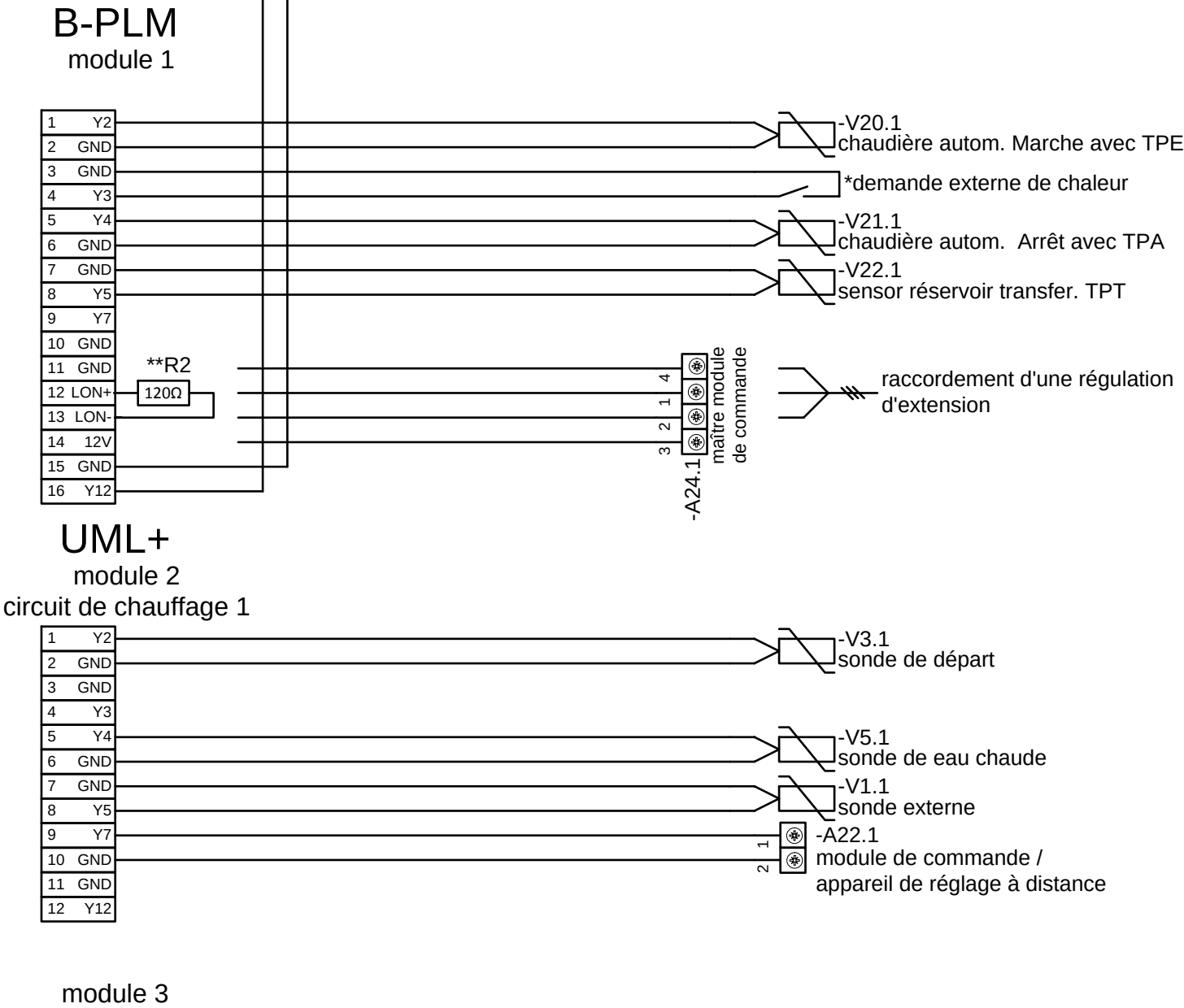
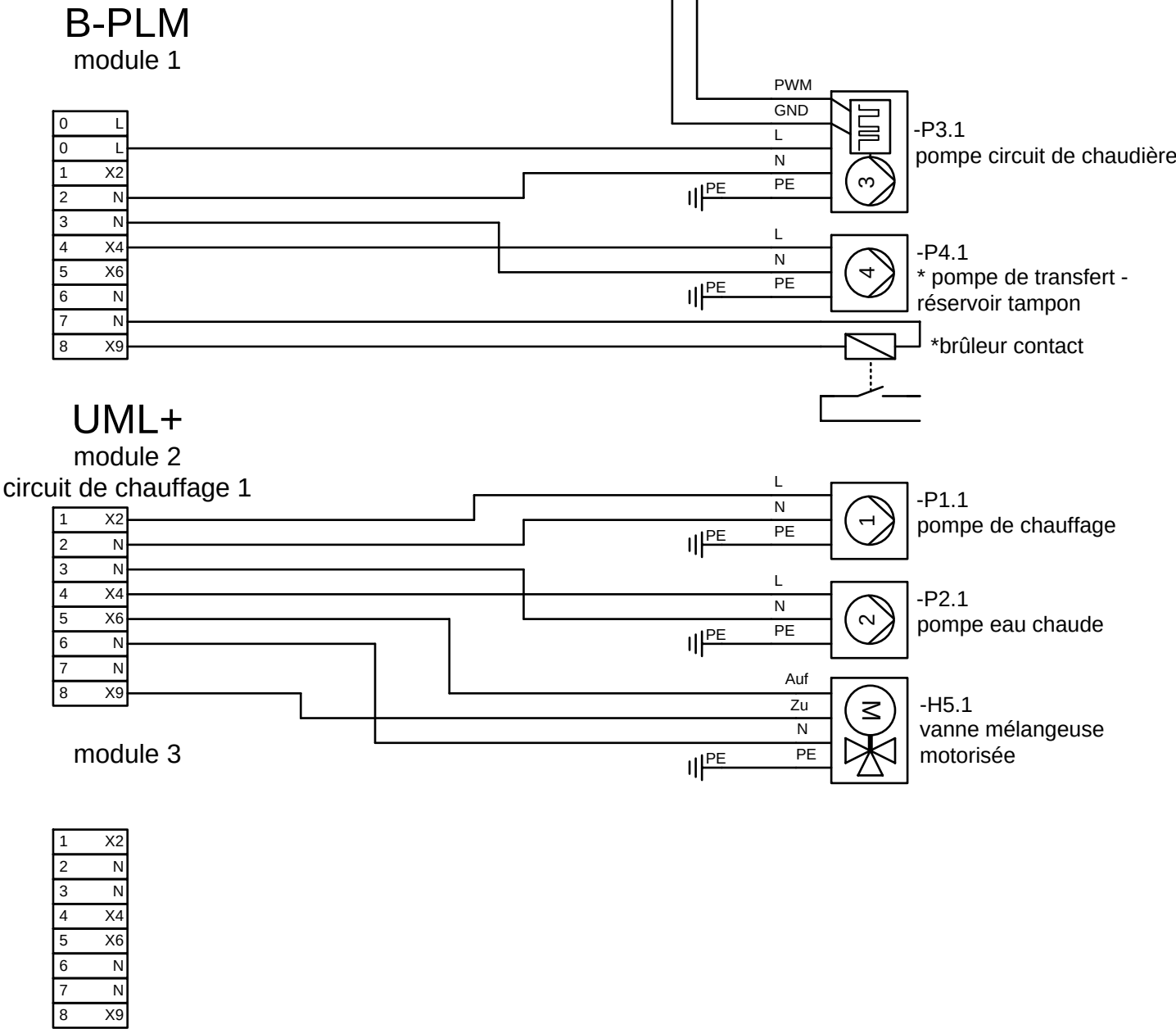
Projekt :
régulation

windhager

1 mm : 1 mm
Blatt 092837/01

tension 230 VAC

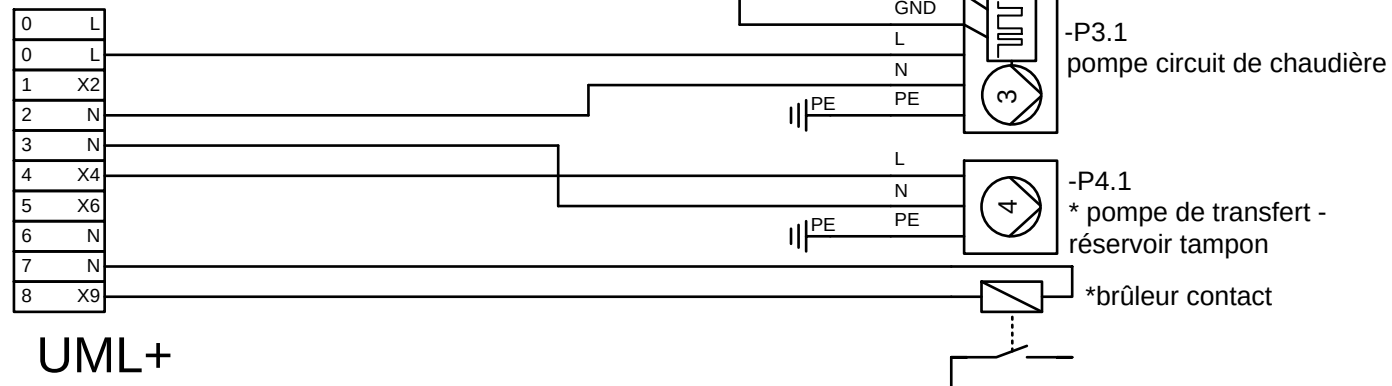
basse tension-sonde



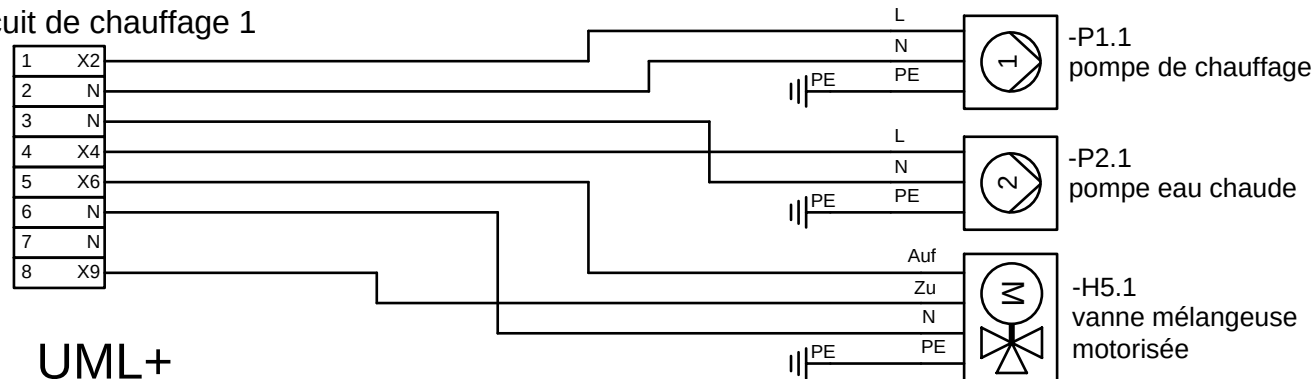
*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

tension 230 VAC

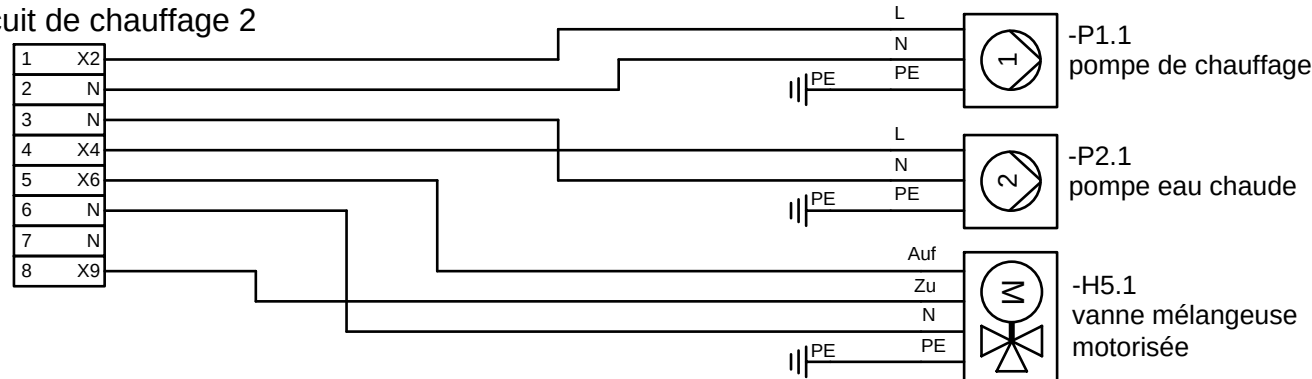
B-PLM
module 1



UML+
module 2
circuit de chauffage 1

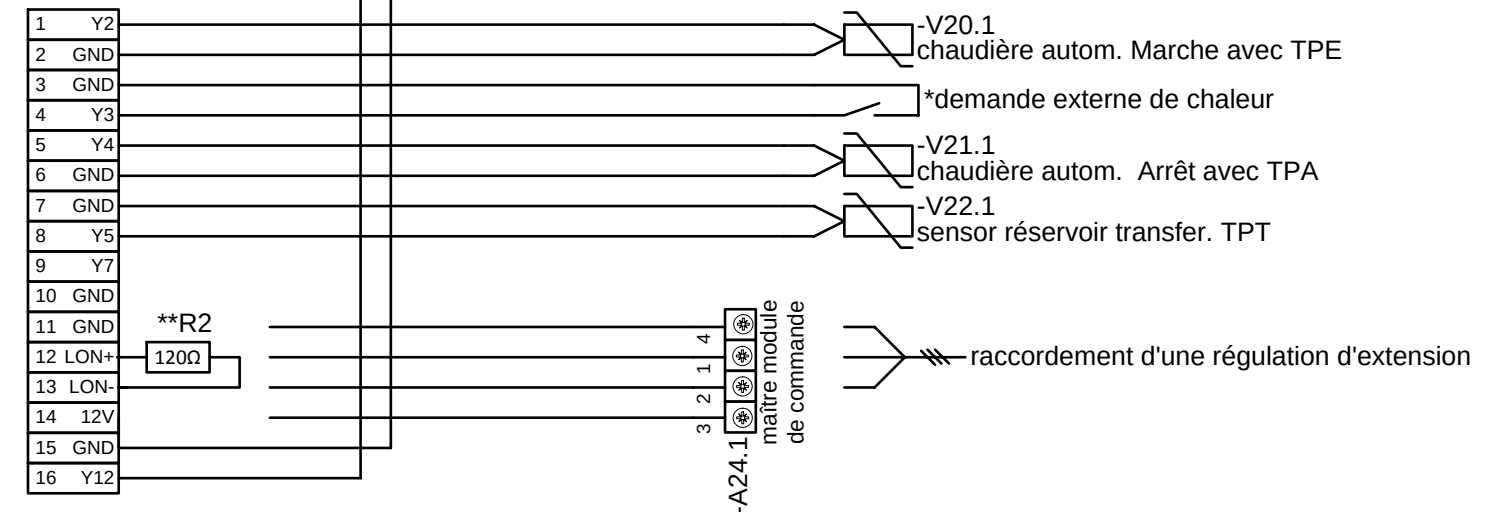


UML+
module 2
circuit de chauffage 2

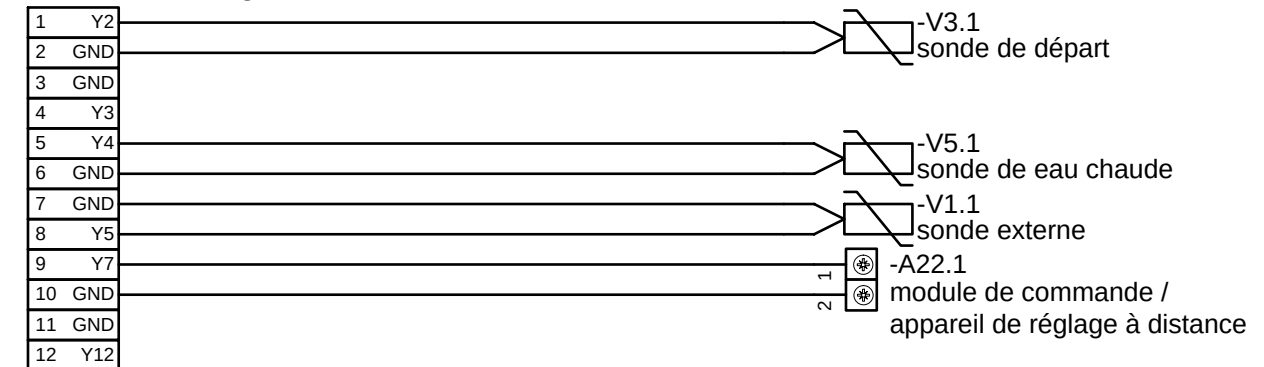


basse tension-sonde

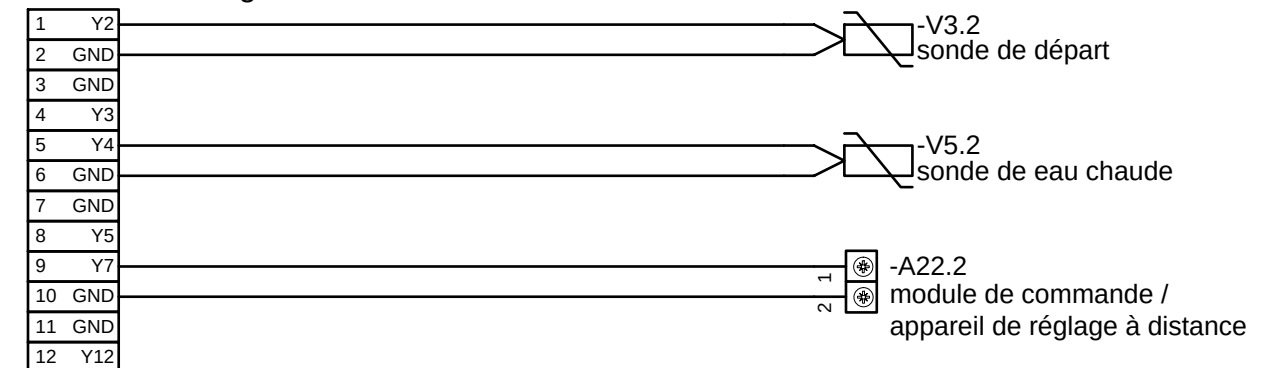
B-PLM
module 1



UML+
module 2
circuit de chauffage 1



UML+
module 3
circuit de chauffage 2



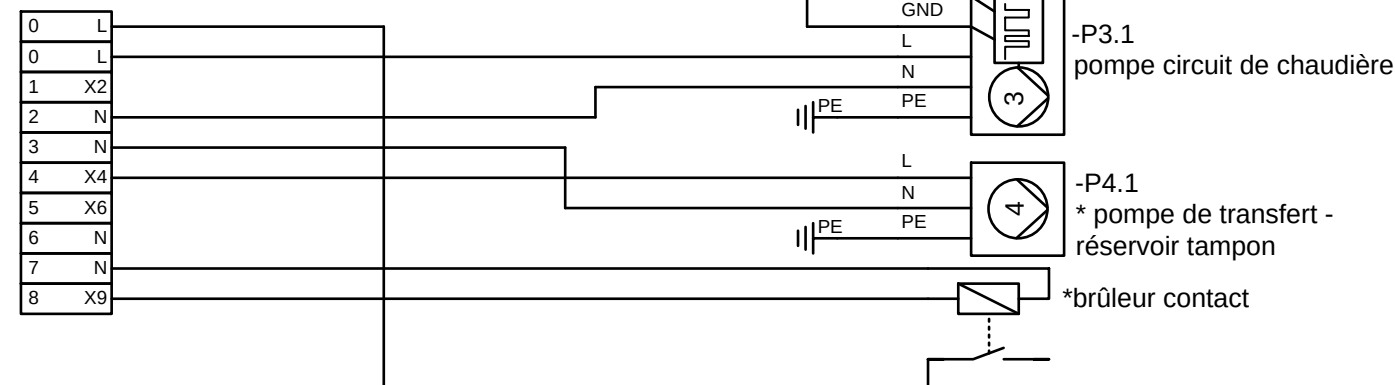
*...optional/accessoires

** si connexion d'une régulation supplémentaire ôter la résistance R2

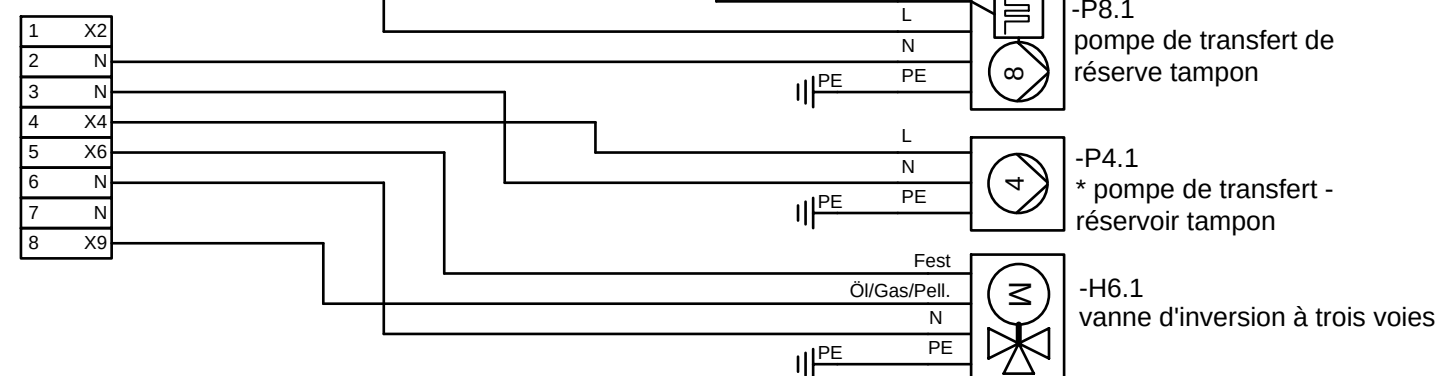
tension 230 VAC

basse tension-sonde

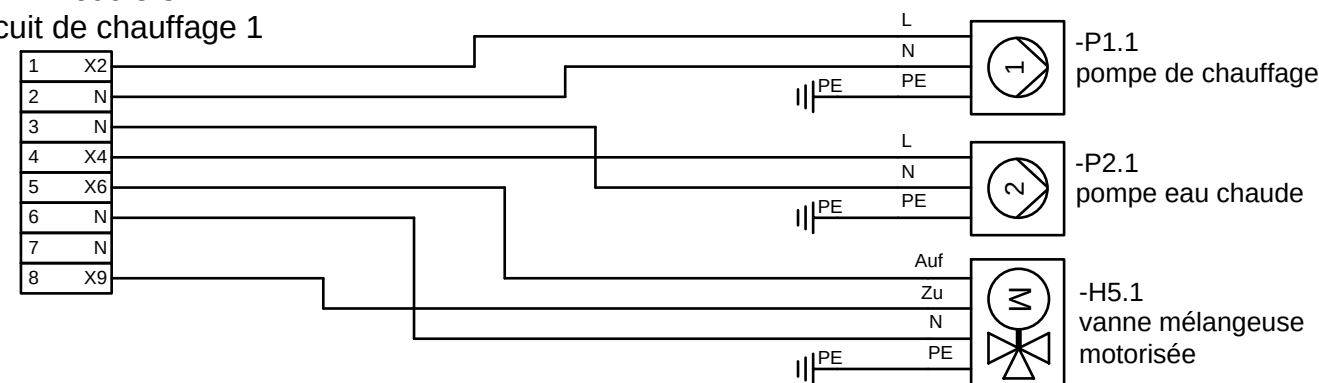
B-PLM
module 1



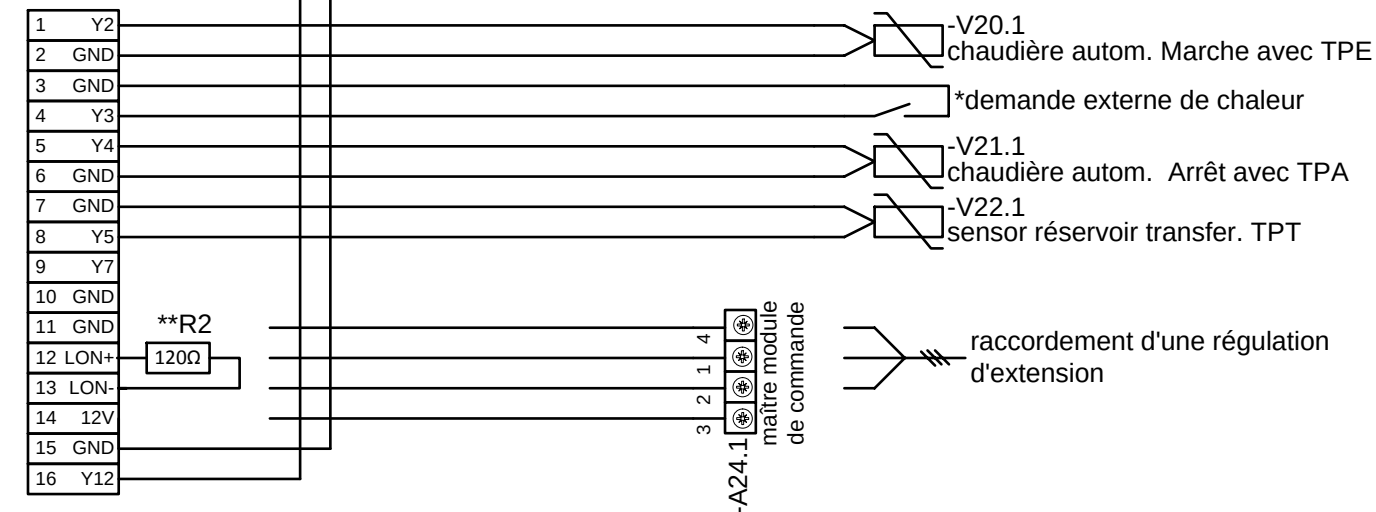
WVF+
module 2



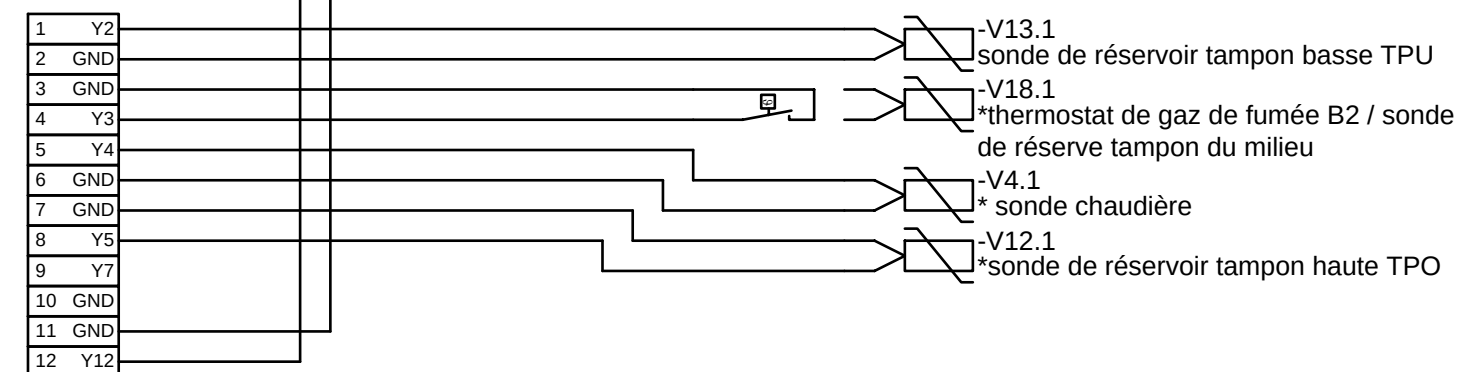
UML+
module 3
circuit de chauffage 1



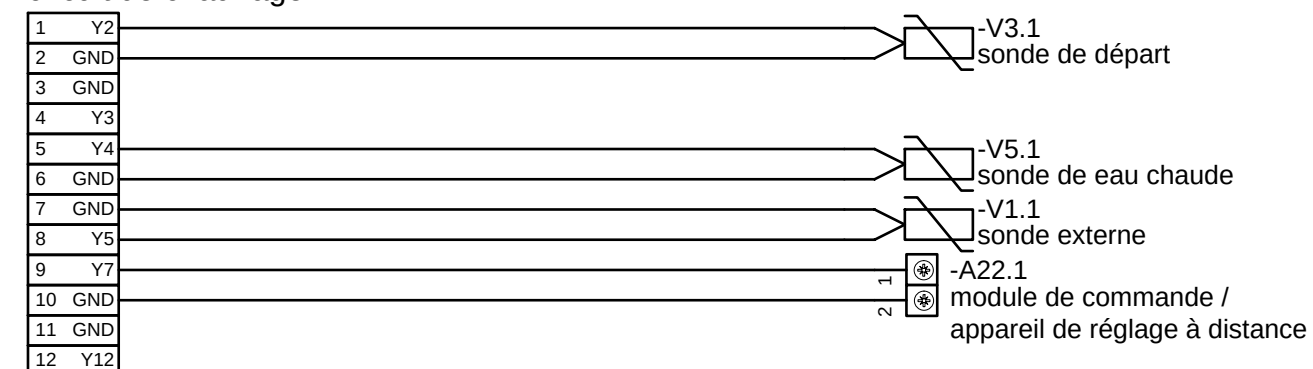
B-PLM
module 1



WVF+
module 2



UML+
module 3
circuit de chauffage 1



*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

B-PLM / WVF+ / UML+

Zeichnungs Nr.: 093125/01

MES P042 + P041+ H021

régulation par température extérieure pour 1 circuit de chauffage mélangé et 1 circuit d'eau chaude et un module de combustibles solides WVF+et brûleur/ module réservoir tampon B-PLM

Projekt :
régulation

windhager

1 mm : 1 mm

2

Blatt 093125/01

tension 230 VAC

module 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

module 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

module 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

basse tension-sonde

module 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

**R2

120Ω

module 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

module 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

-A24.1
maître module
de commande

raccordement d'une régulation d'extension

*...optional/accessoires ** si connexion d'une régulation supplémentaire ôter la résistance R2

OT-interface

Y4.6 maître

Y4.5 BUML 1 / MWP

Y4.4

Slave BUML 2

Y4.3

Y4.2

Y4.1

Bus- Kommunikation:



ON = marche
OFF = arrêt

Mischerfunktion:



ON = marche
OFF = arrêt

Boilerladung:



ON = commutation parallèle
OFF = commutation prioritaire

chauffe-eau avec:



ON = vanne de chargement
OFF = pompe de chargement

**chaudière thermostat
minimum**



ON = 35C° / 95 °F
OFF = 20C° / 68 °F

BUML-TTL	
Y2.6	RAM 850
Y2.5	RAM 786
Y2.4	sonde externe
Y2.3	
Y2.2	sonde du chauffe-eau
Y2.1	
Y1.6	sonde chaudière
Y1.5	
Y1.4	sonde de départ
Y1.3	
Y1.2	libre
Y1.1	
X2.8 L	Phase permanente pompe de chargement du chauffe-eau
X2.7 N	
X2.6 L	
X2.5 N	pompe de chauffage
X2.4 L	
X2.3 L	fermé
X2.2 L	ouvert
X2.1 N	vanne mélangeuse motorisée
X1.1 L	connexion alimentation électrique230 VAC
X1.2 N	
X1.3 L"	
X1.4 L"	
X1.5 L'	interrupteur manuel de la pompe du chauffe-eau
X1.6 L'	interrupteur manuel de la pompe de chauffage
EDV Nr.: 094505/00	

094517/00

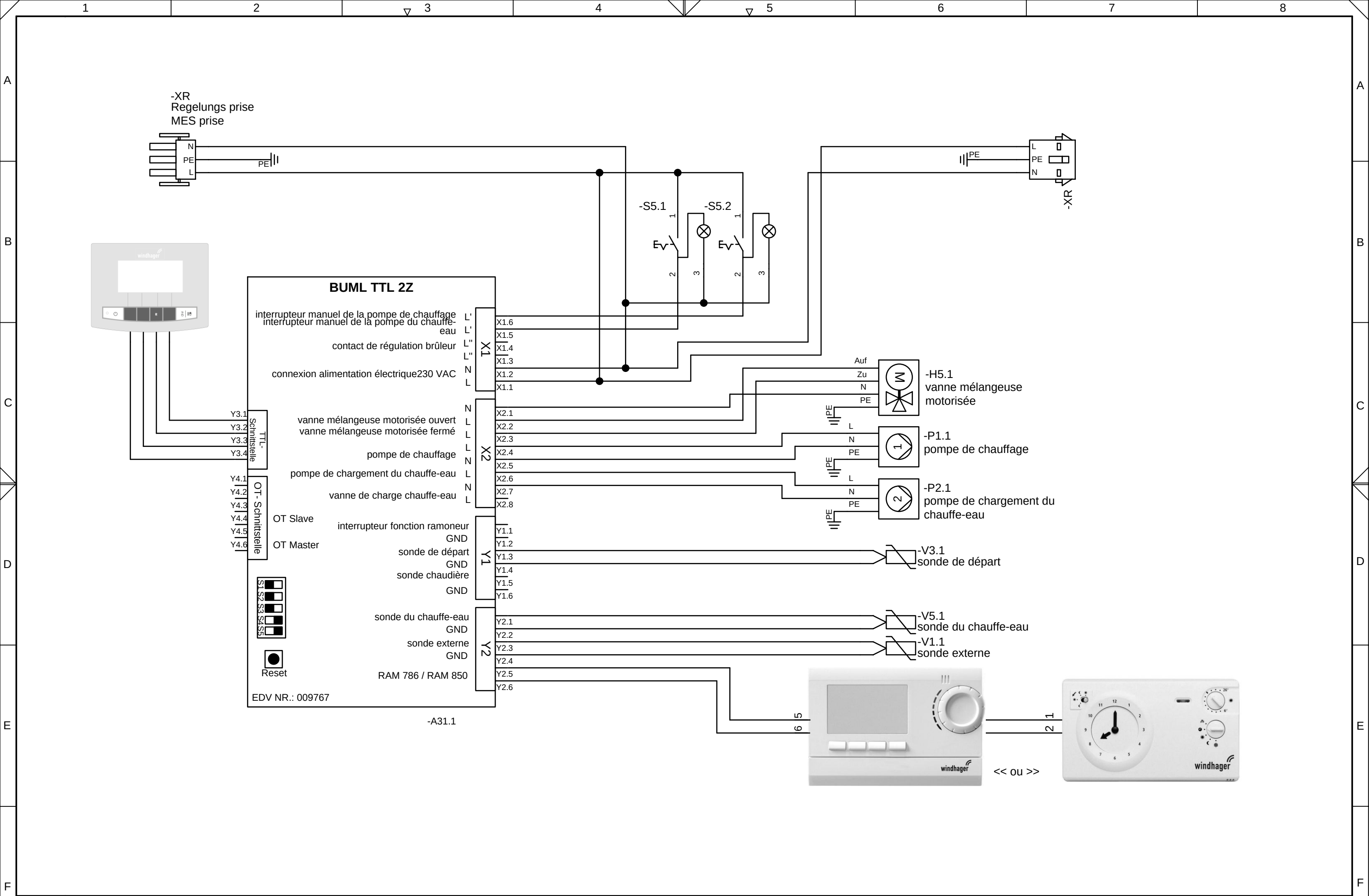
RESET	DIP	OT	Y4.6	Y4.5	Y4.4	Y4.3	Y4.2	Y4.1

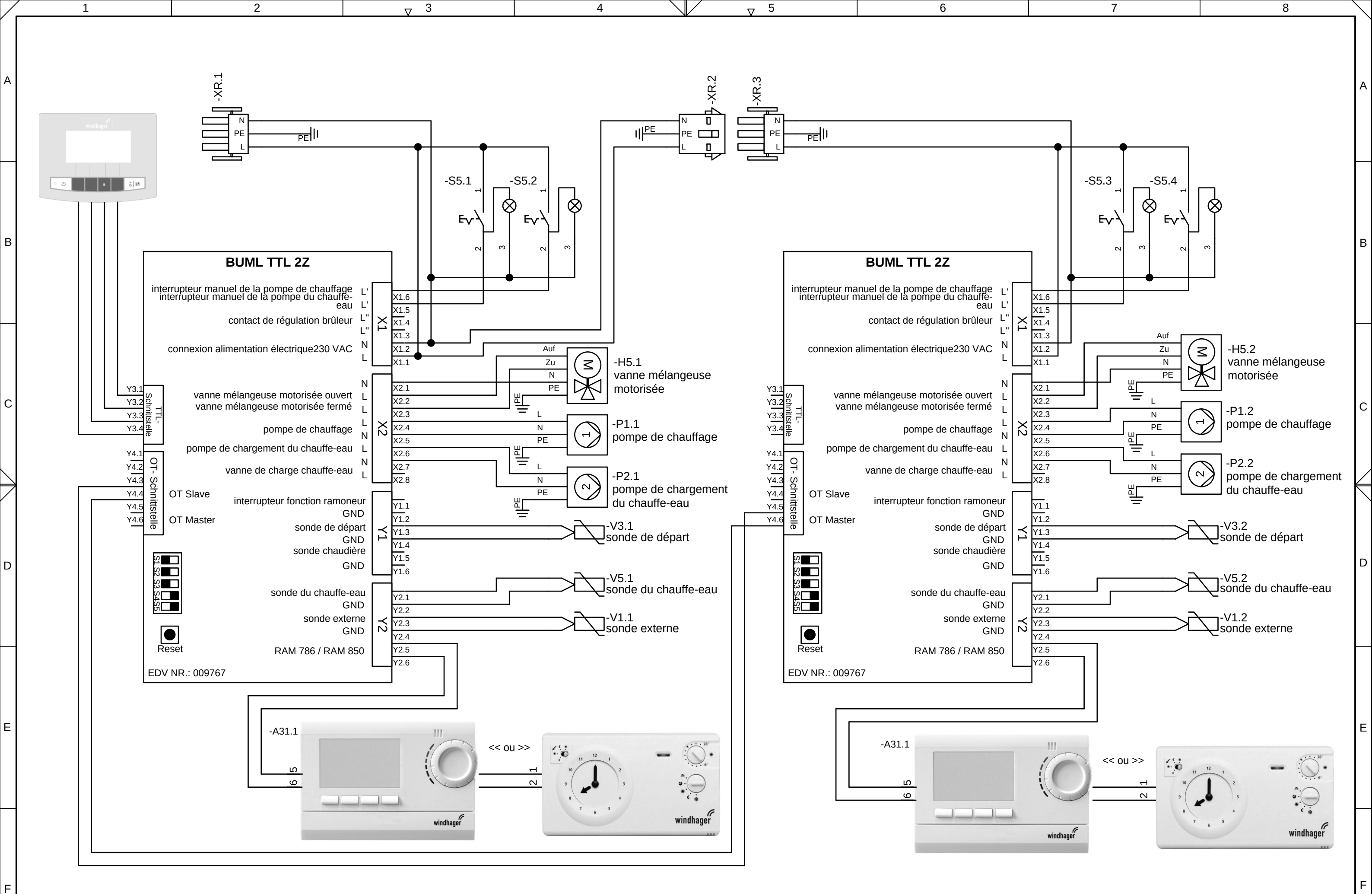
EDV Nr.: 094519/01	
interrupteur manuel de la pompe de chauffage	X1.6 L'
interrupteur manuel de la pompe du chauffe-eau	X1.5 L'
	X1.4 L"
	X1.3 L"
connexion	X1.2 N
alimentation électrique230 VAC	X1.1 L
vanne mélangeuse motorisée	X2.1 N
ouvert	X2.2 L
fermé	X2.3 L
pompe de chauffage	X2.4 L
	X2.5 N
vanne de charge chauffe-eau	X2.6 L
pompe de chargement du chauffe-eau	X2.7 N
Phase permanente	X2.8 L
libre	Y1.1
	Y1.2
sonde de départ	Y1.3
	Y1.4
sonde chaudière	Y1.5
	Y1.6
sonde du chauffe-eau	Y2.1
	Y2.2
sonde externe	Y2.3
	Y2.4
RAM 850	Y2.5
RAM 786	Y2.6
BUML-TTL	

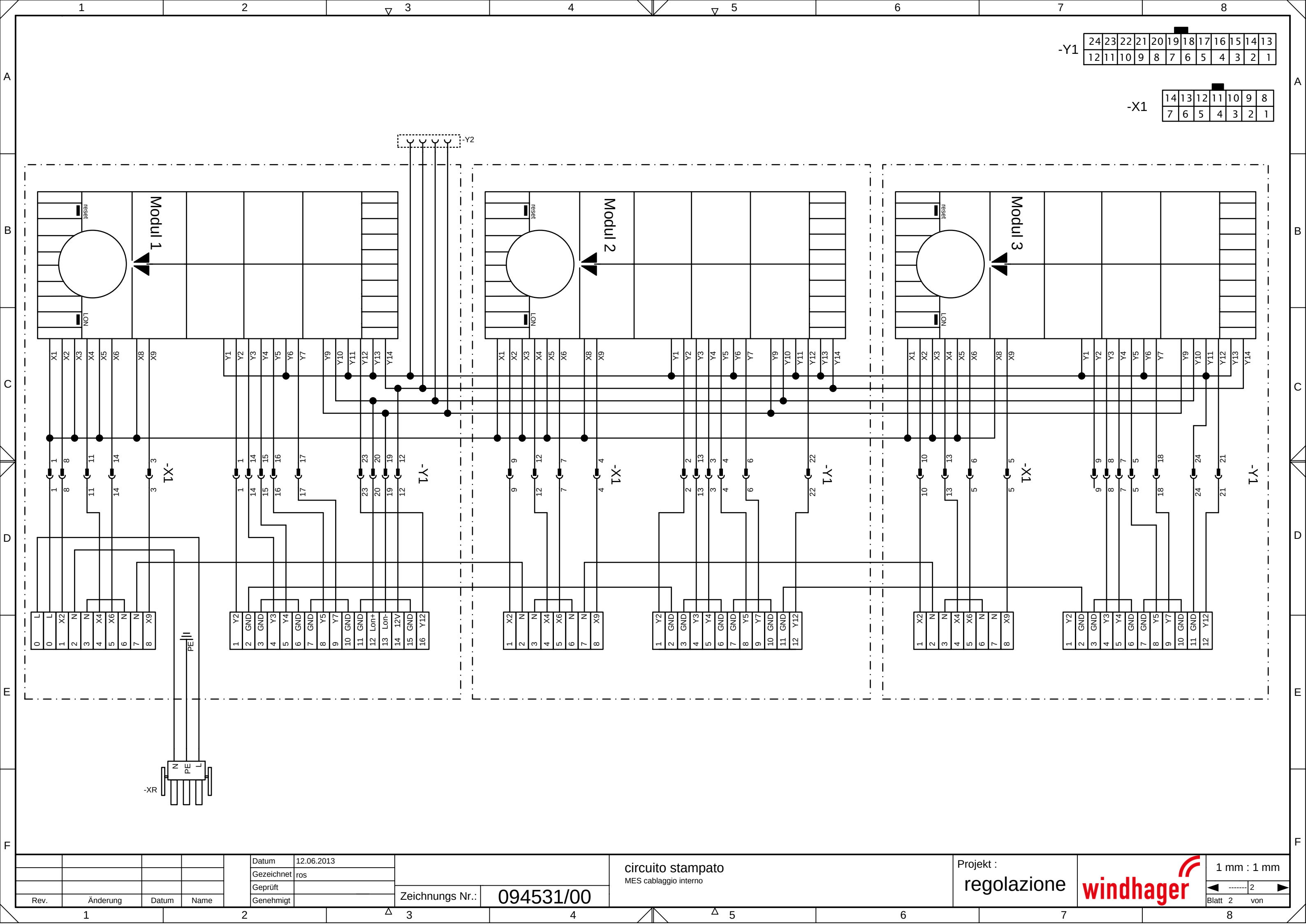
chaudière thermostat minimum	
S1	☐ ON = 35C° / 95 °F ☐ OFF = 20C° / 68 °F
chauffe-eau avec:	
S2	☐ ON = vanne de chargement ☐ OFF = pompe de chargement
Boilerladung:	
S3	☐ ON = commutation parallèle ☐ OFF = commutation prioritaire
Mischerfunktion:	
S4	☐ ON = marche ☐ OFF = arrêt
Bus- Kommunikation:	
S5	☐ ON = marche ☐ OFF = arrêt
Y4.1	
Y4.2	
Y4.3 Slave	
Y4.4 BUML 2	
Y4.5 maître	
Y4.6 BUML 1 / MWP	
OT-interfaces	



094521/00

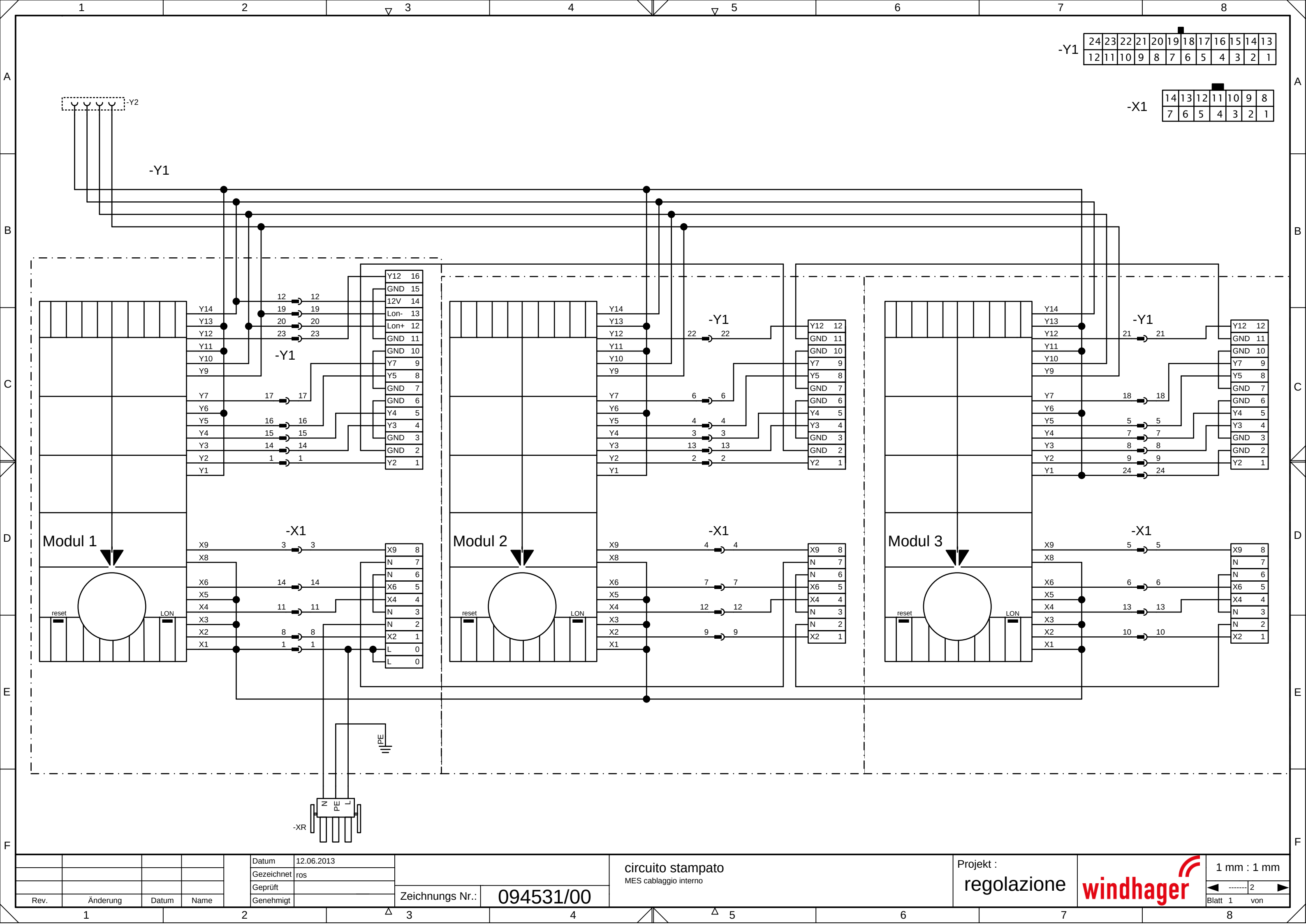






24	23	22	21	20	19	18	17	16	15	14	13
12	11	10	9	8	7	6	5	4	3	2	1

14	13	12	11	10	9	8
7	6	5	4	3	2	1



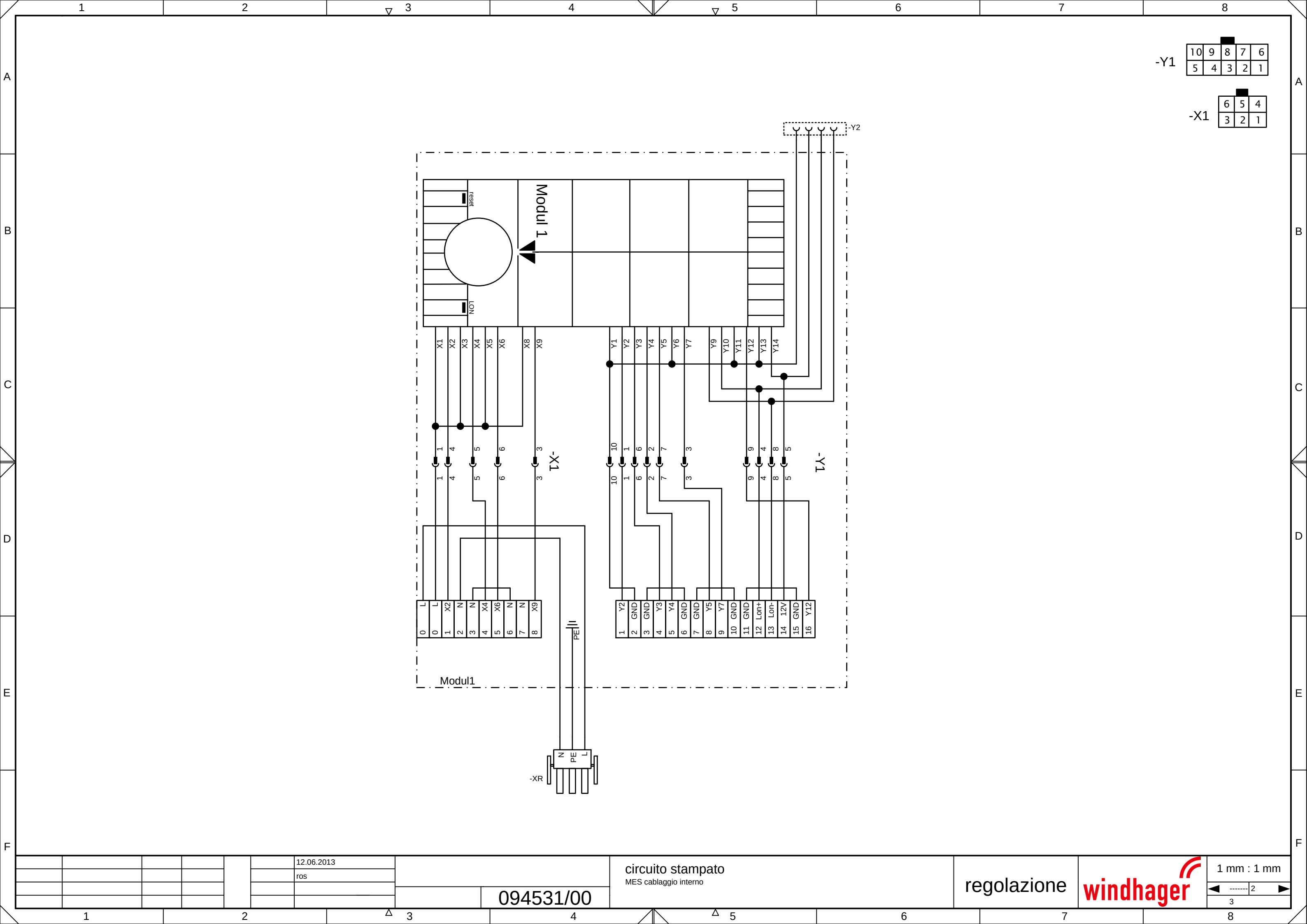
				Datum	12.06.2013
				Gezeichnet	ros
				Geprüft	
Rev.	Änderung	Datum	Name	Genehmigt	

Zeichnungs Nr.:		094531/00

circuito stampato
MES cablaggio interno

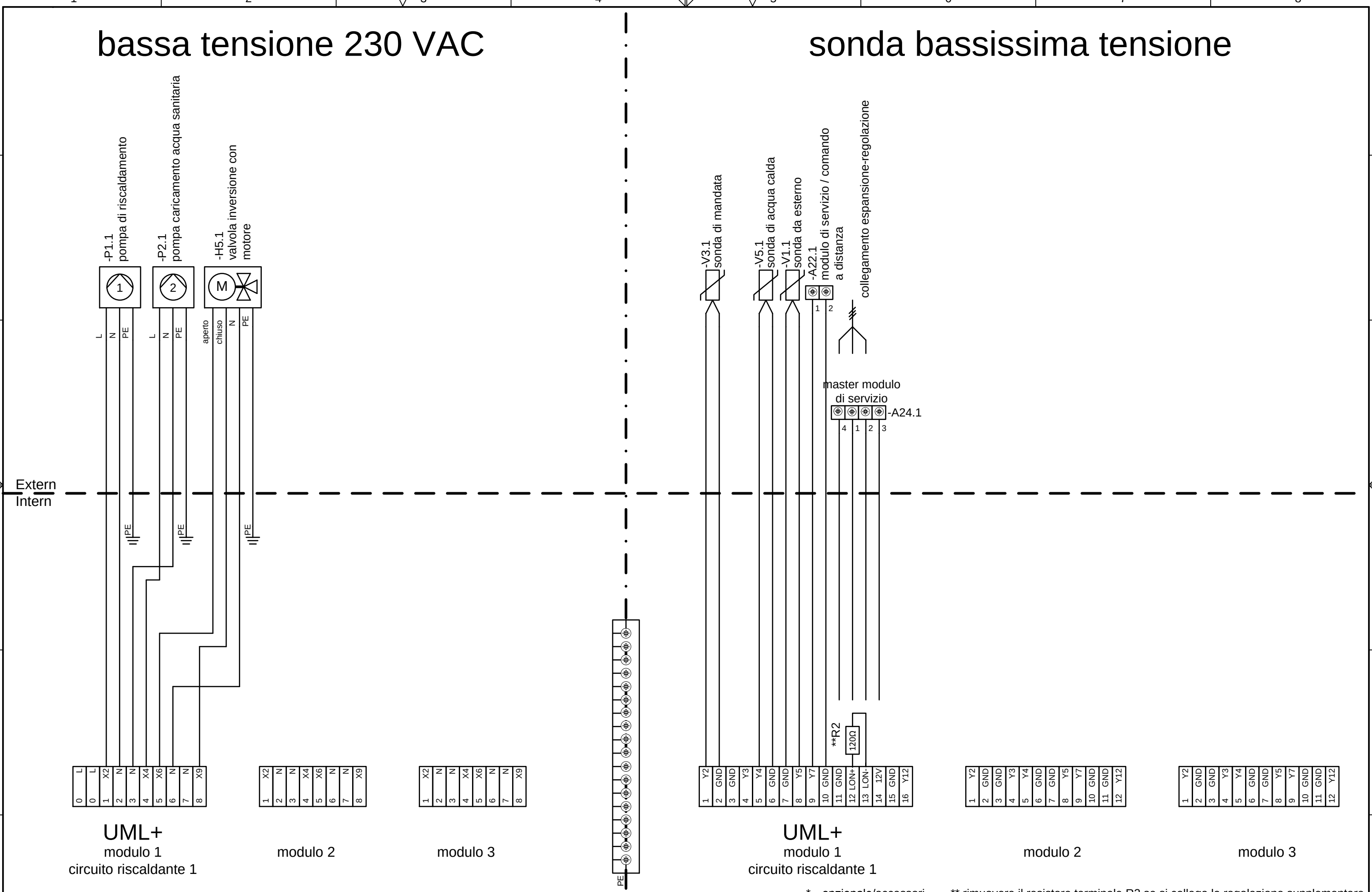
Projekt :
regolazione





bassa tensione 230 VAC

sonda bassissima tensione



UML+	modulo 1 circuito riscaldante 1
0 L	230 VAC
0 L	
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore c.r. 1 chiuso
6 N	
7 N	
8 X9	

	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094776/00

UML+	modulo 1 circuito riscaldante 1
1 Y2	sonda di mandata c.r.1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda HK1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

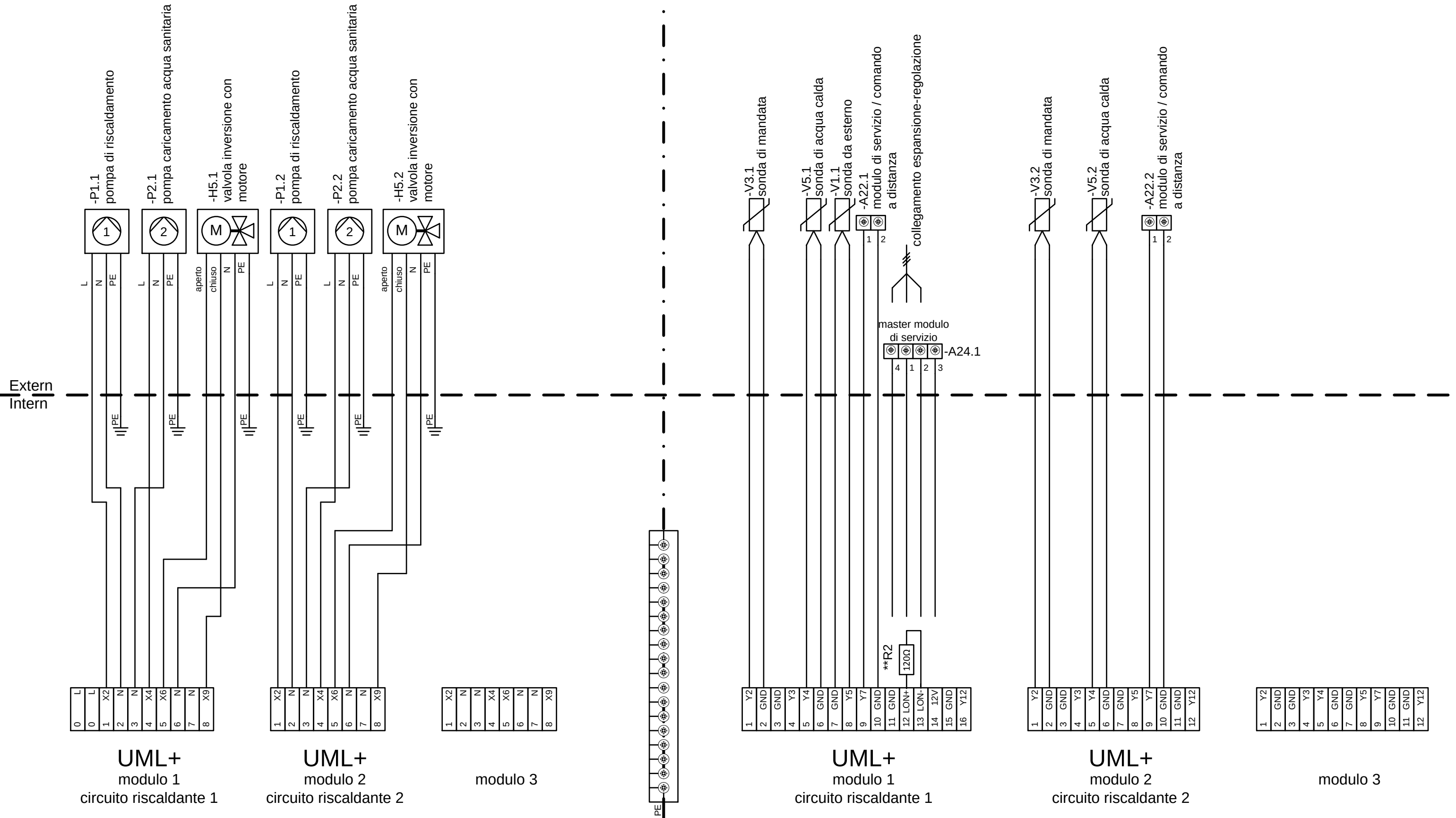
	modulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094776/00

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	04.07.2013	UML+/UML+		MES H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda		Projekt : regolazione				1 mm : 1 mm Blatt 094777/00	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094777/00								

UML+	modulo 1 circuitto riscaldante 1
0 L	230 VAC
0 L	
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 1
5 X6	aperto
6 N	valvola inversione con
	motore
7 N	c.r. 1
	chiuso
8 X9	

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento
2 N	c.r. 2
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 2
5 X6	aperto
6 N	valvola inversione con
	motore
7 N	c.r. 2
	chiuso
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094778/00

UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	
11 GND	master modulo di servizio
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

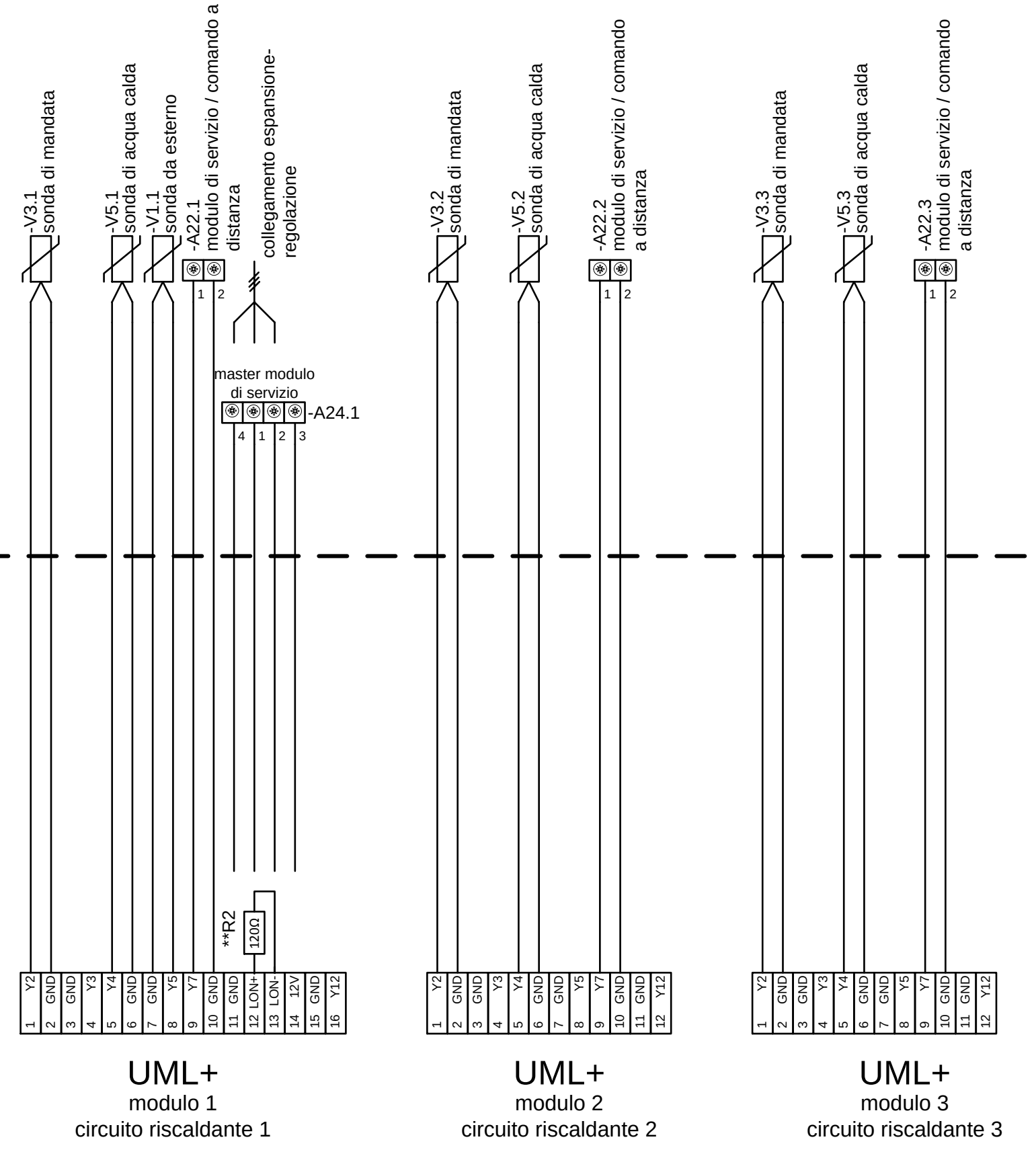
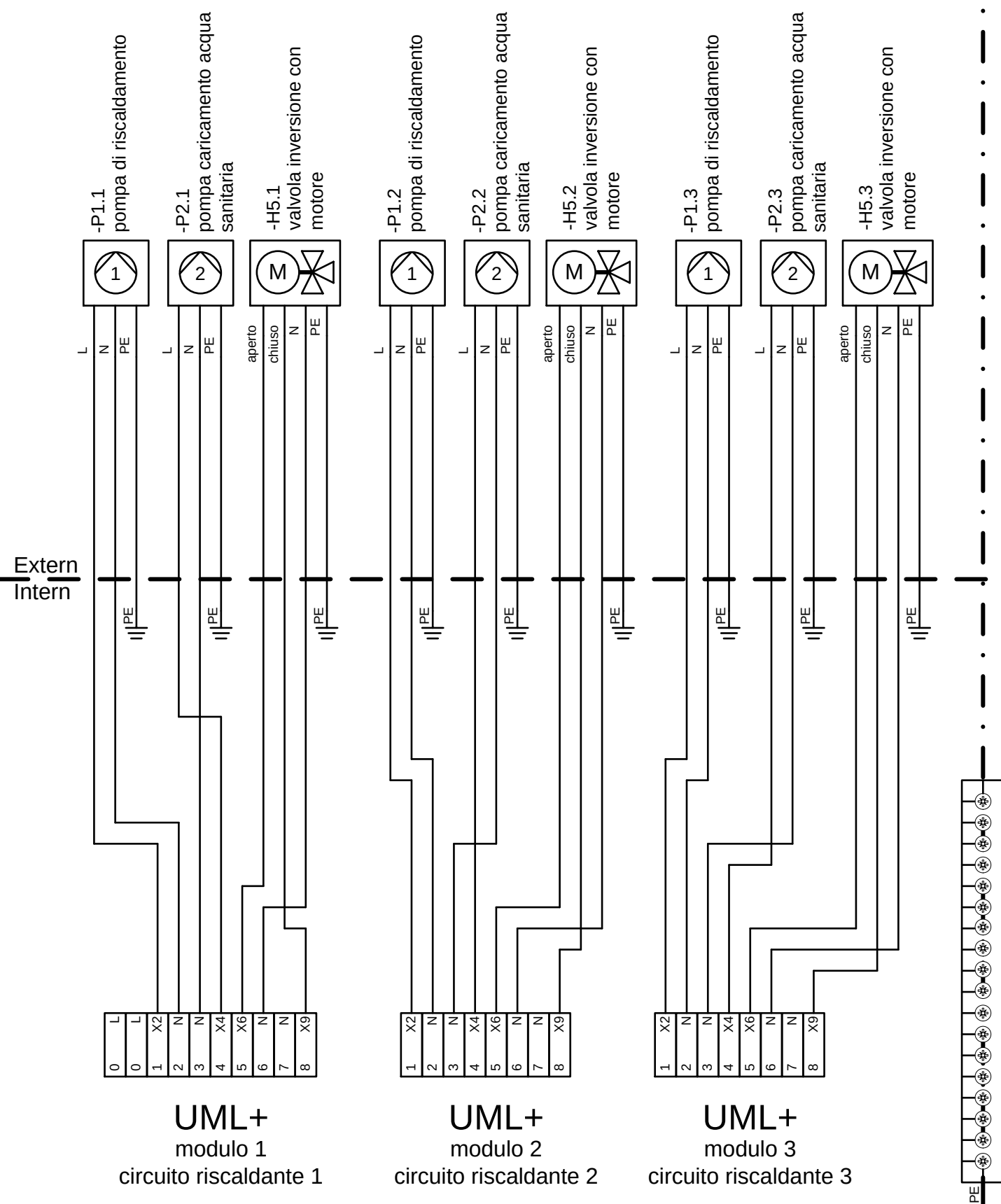
UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094778/00

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

UML+	modulo 1 circuitto riscaldante 1
0 L	230 VAC
0 L	
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	valvola inversione con motore c.r. 1 chiuso
6 N	
7 N	
8 X9	

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	valvola inversione con motore c.r. 2 chiuso
6 N	
7 N	
8 X9	

UML+	modulo 3 circuitto riscaldante 3
1 X2	pompa di riscaldamento c.r. 3
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 3
4 X4	
5 X6	valvola inversione con motore c.r. 3 chiuso
6 N	
7 N	
8 X9	

094782/00

UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

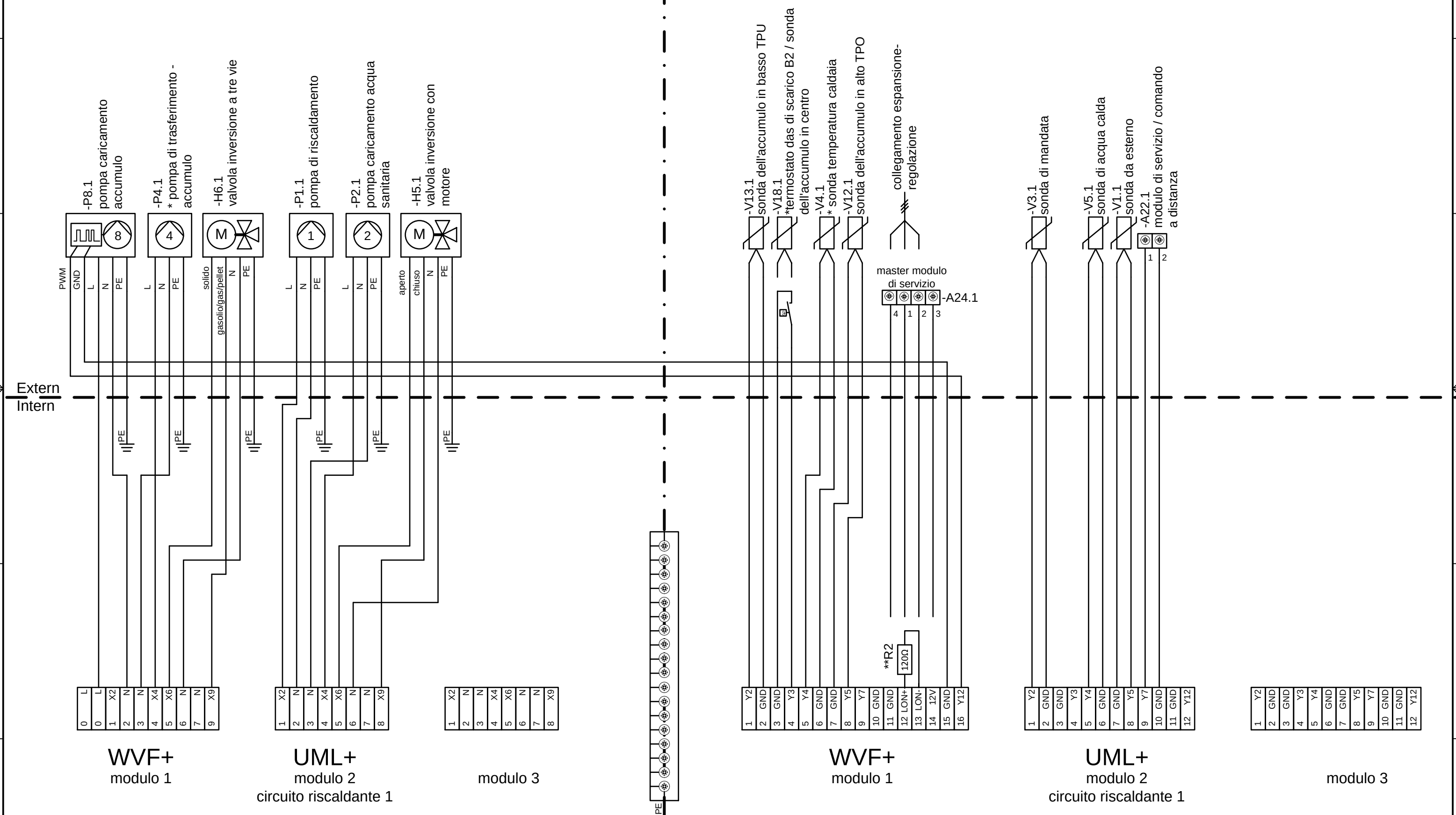
UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 3
1 Y2	sonda di mandata HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 3
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

094782/00

bassa tensione 230 VAC

sonda bassissima tensione



WVF+	modulo 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*pompa di trasferimento accumulo
4 X4	
5 X6	solido valvola inversione a tre vie
6 N	gasolio/gas/pellet
7 N	
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria
4 X4	c.r. 1
5 X6	aperto valvola inversione con motore
6 N	c.r. 1 chiuso
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094787/00

WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso
2 GND	TPU
3 GND	*termostato das di scarico B2
4 Y3	sonda dell'accumulo in centro
5 Y4	*sonda temperatura caldaia
6 GND	
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione- regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa
16 Y12	caricamento accumulo

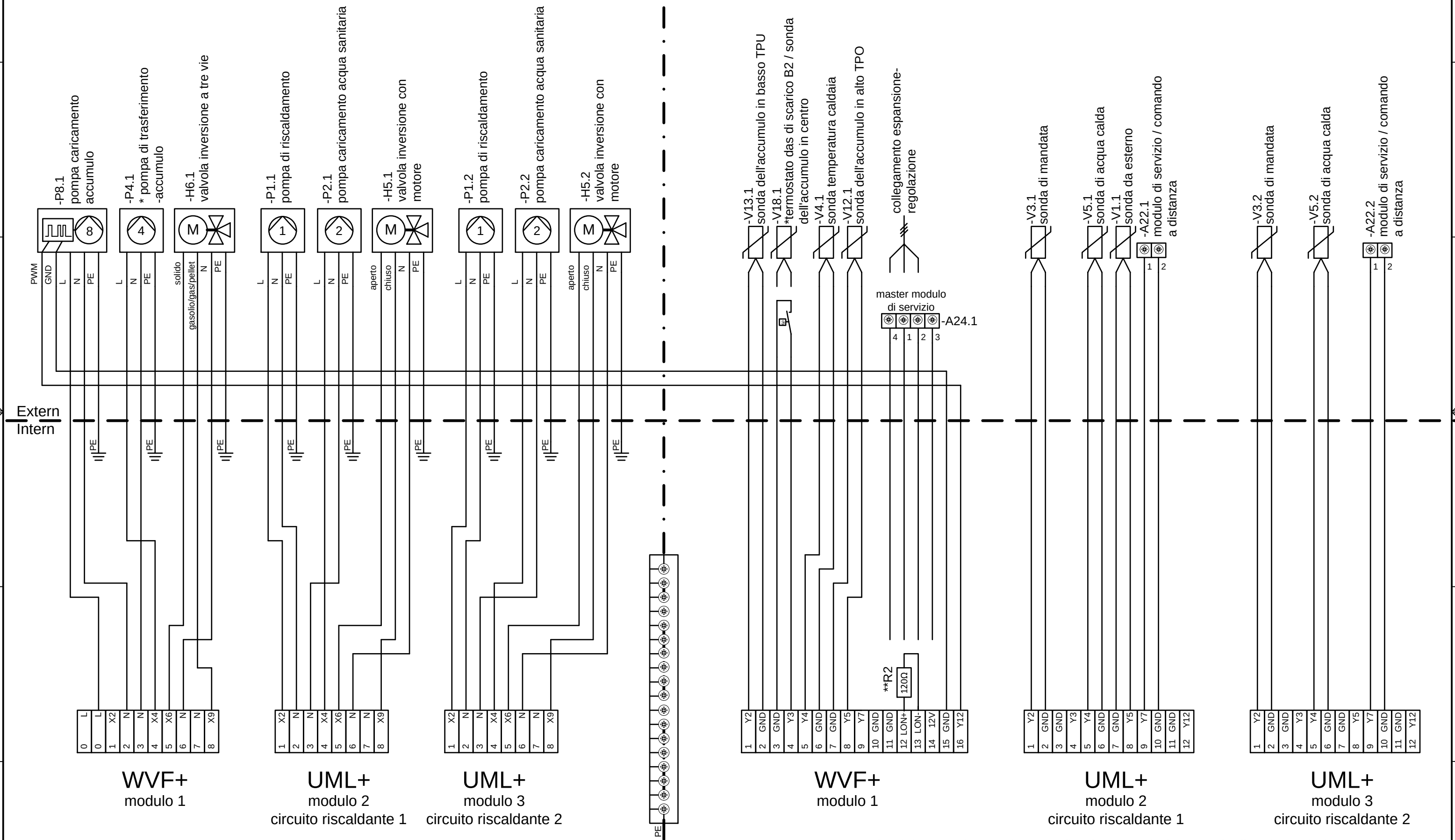
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094787/00

bassa tensione 230 VAC

sonda bassissima tensione



WVF+	modulo 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	solido
6 N	valvola inversione a tre vie
7 N	gasolio/gas/pellet
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 2
8 X9	chiuso

094786/00

WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso TPU
2 GND	
3 GND	*termostato das di scarico B2 / sonda dell'accumulo in centro
4 Y3	
5 Y4	* sonda della caldaia
6 GND	
7 GND	sonda dell'accumulo in alto TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa
16 Y12	caricamento accumulo

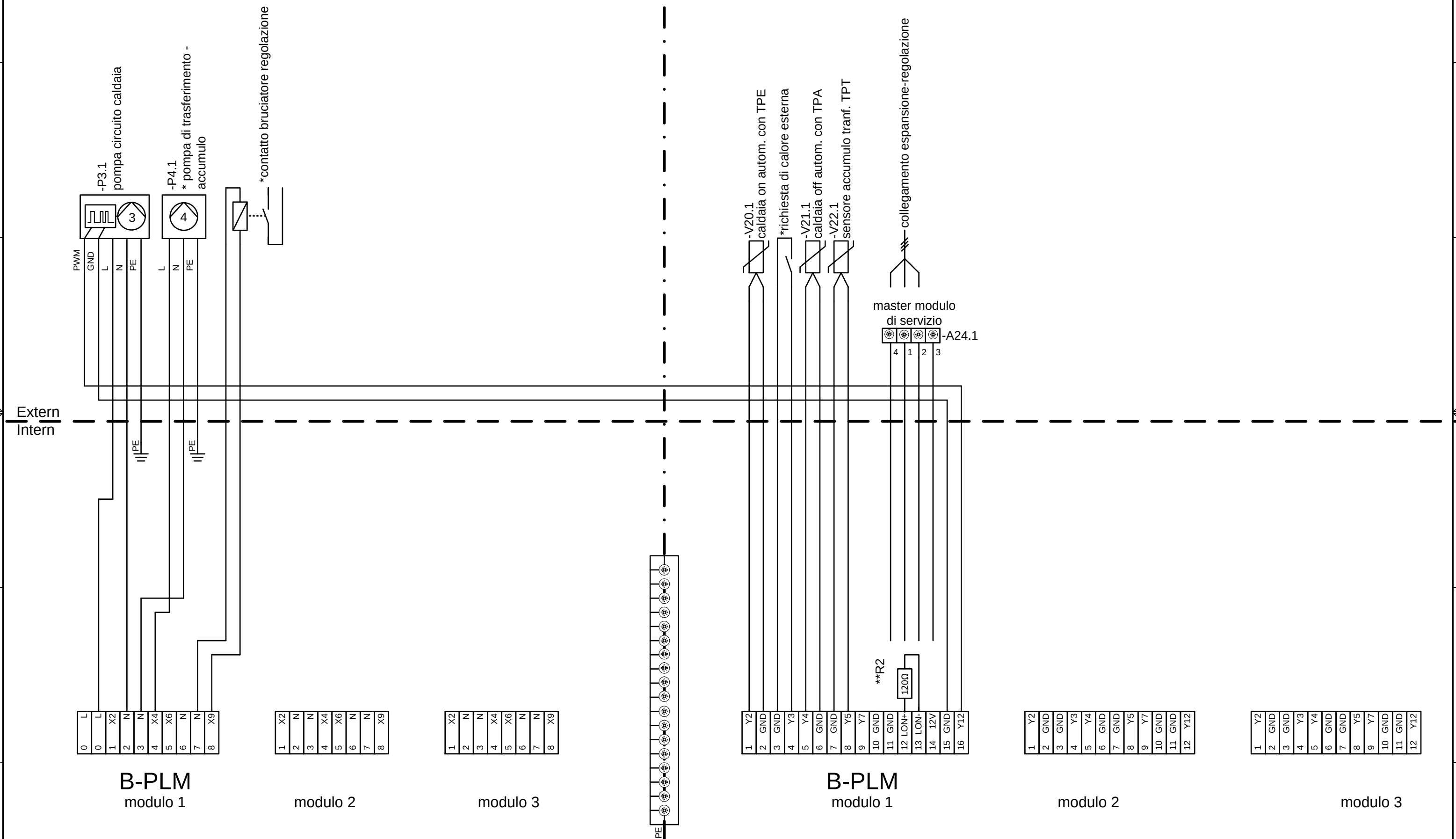
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

094786/00

bassa tensione 230 VAC

sonda bassissima tensione



B-PLM	modulo 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* pompa di trasferimento accumulo
4 X4	
5 X6	
6 N	
7 N	
8 X9	*bruciatore contatto

	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094788/00

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master modulo di servizio collegamento espansione- regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

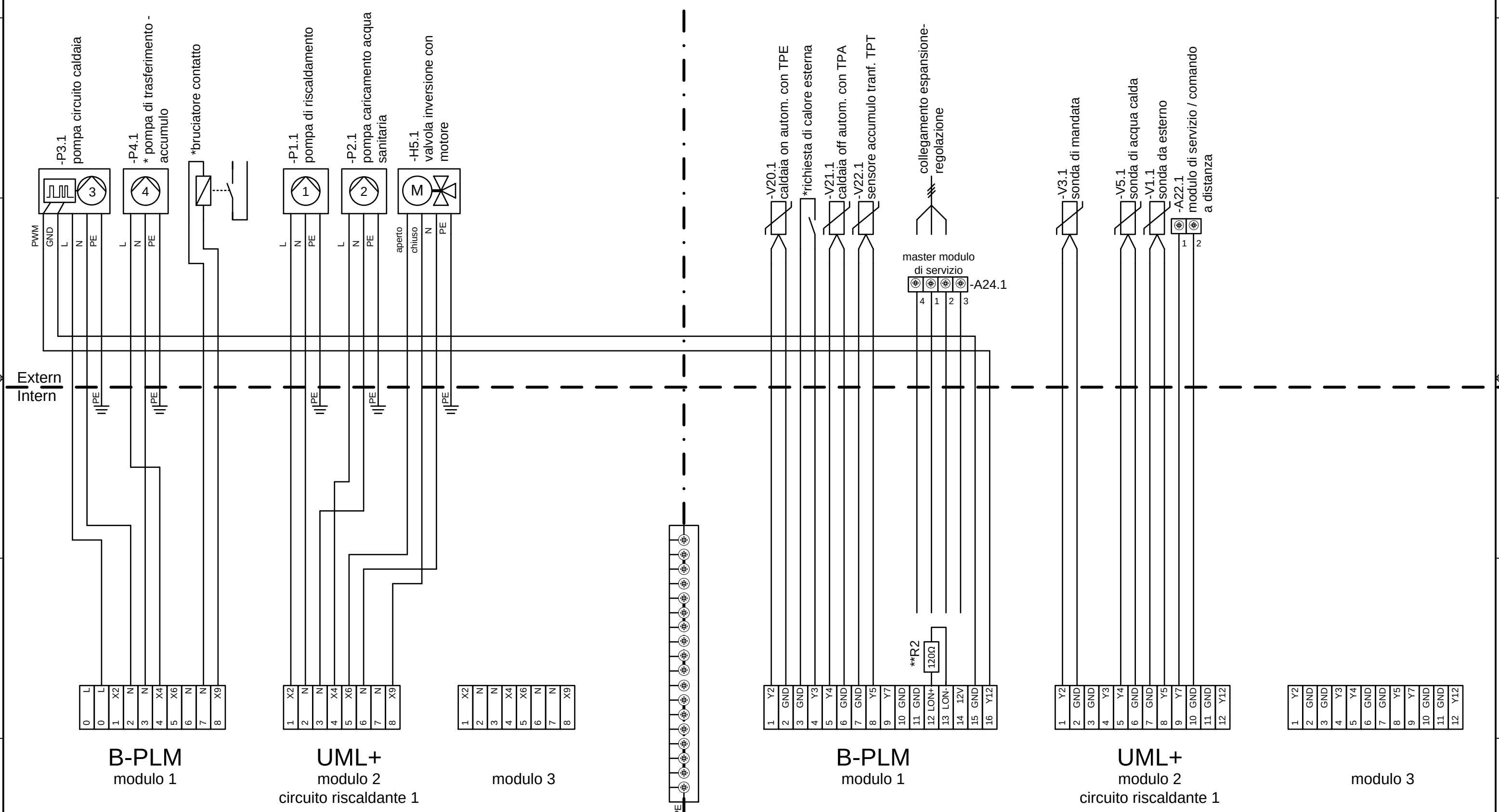
	modulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094788/00

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

B-PLM	modulo 1
0 L	230 VAC
0 L	
1 X2	*pompa di trasferimento
2 N	
3 N	4 X4
4 X4	
5 X6	6 N
6 N	
7 N	*bruciatore contatto
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	valvola inversione con motore c.r. 1 chiuso
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094790/00

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

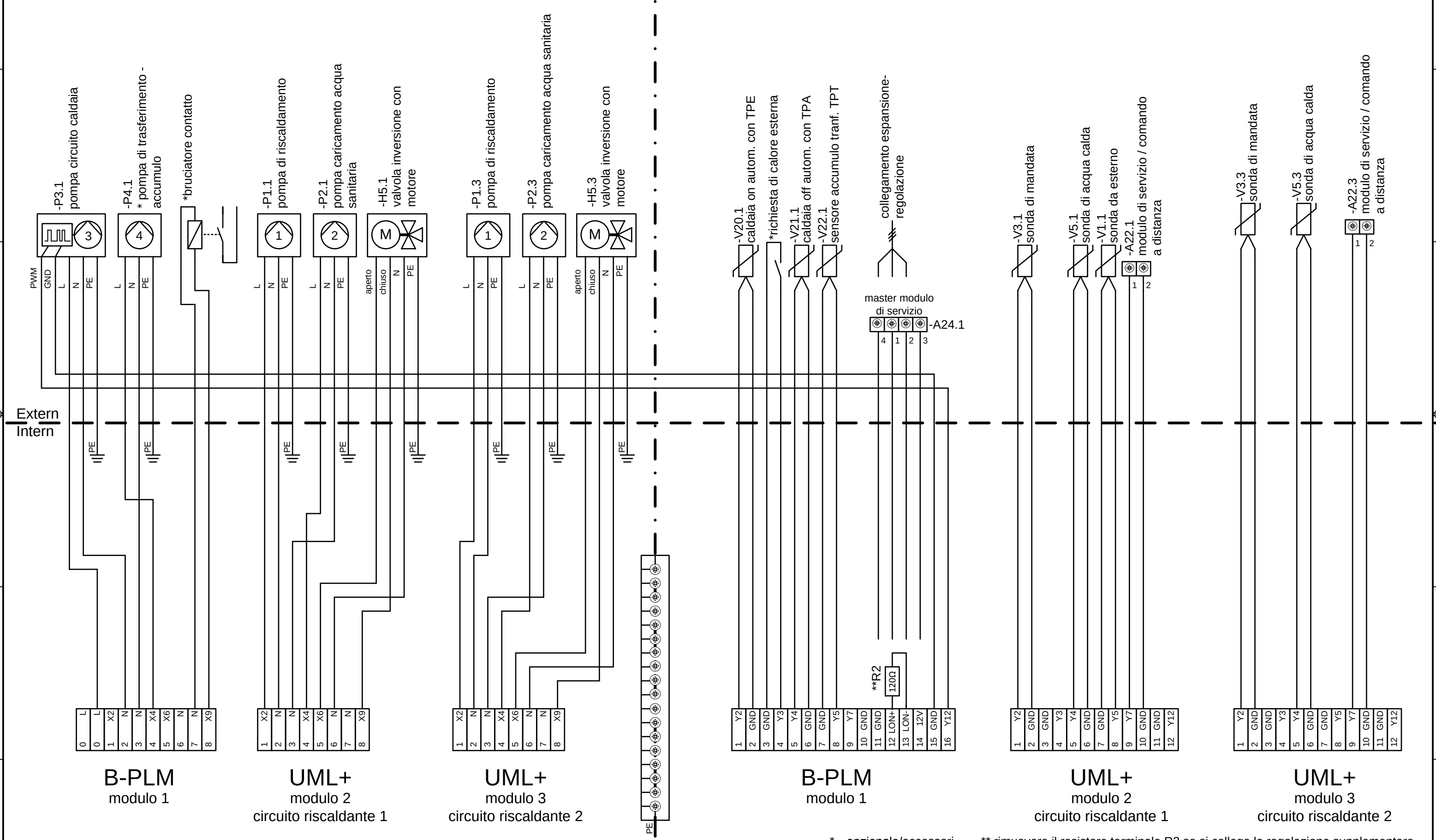
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	12 Y12
12 Y12	

	modulo 3
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

094790/00

bassa tensione 230 VAC

sonda bassissima tensione



B-PLM	modulo 1
0 L	230 VAC
0 L	
1 X2	*pompa di trasferimento
2 N	
3 N	4 X4
4 X4	
5 X6	6 N
6 N	
7 N	*bruciatore contatto
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	valvola inversione con motore c.r. 1 chiuso
6 N	
7 N	
8 X9	

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	aperto valvola inversione con motore c.r. 2 chiuso
6 N	
7 N	
8 X9	

094792/00

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

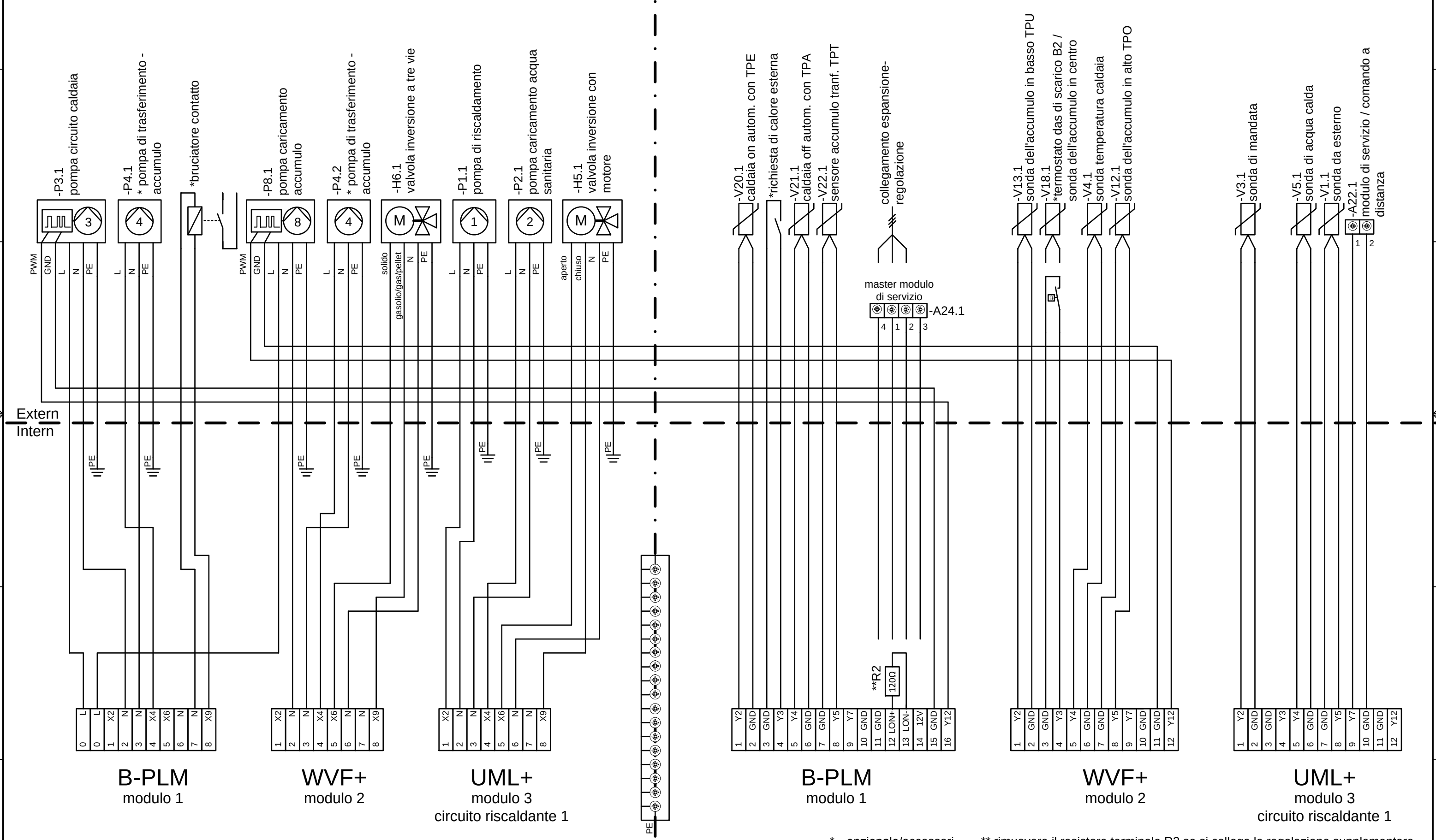
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	12 Y12
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	12 Y12
12 Y12	

094792/00

bassa tensione 230 VAC

sonda bassissima tensione



B-PLM	modulo 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	accumulo
5 X6	
6 N	
7 N	
8 X9	*bruciatore contatto

WVF+	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	solido
6 N	valvola inversione a tre vie
7 N	gasolio/gas/pellet
8 X9	

UML+	modulo 3 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1 chiuso
8 X9	

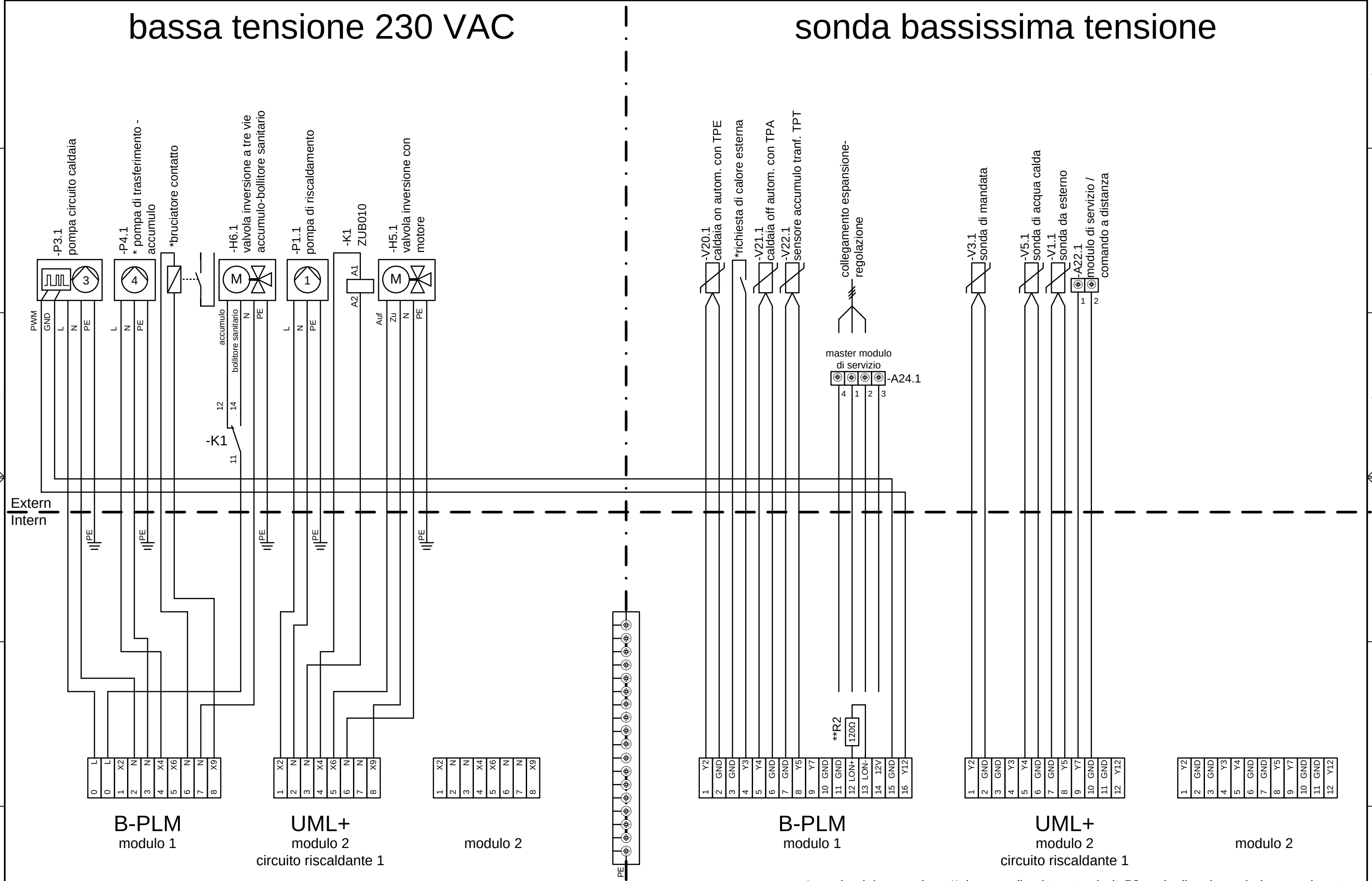
094794/00

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

WVF+	modulo 2
1 Y2	accumulo in basso TPU
2 GND	
3 GND	*termostato das di scarico B2 sonda dell'accumulo in centro
4 Y3	
5 Y4	*sonda temperatura caldaia
6 GND	
7 GND	sonda dell'accumulo in alto TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM pompa caricamento accumulo
12 Y12	

UML+	modulo 3 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

094794/00



B-PLM	modulo 1
0 L	230 VAC
0 L	
1 X2	* pompa di trasferimento
2 N	
3 N	4 X4
4 X4	
5 X6	6 N
6 N	
7 N	contatto del bruciatore
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	contattore -K1 c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	
	c.r. 1 chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094796/00

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	* richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

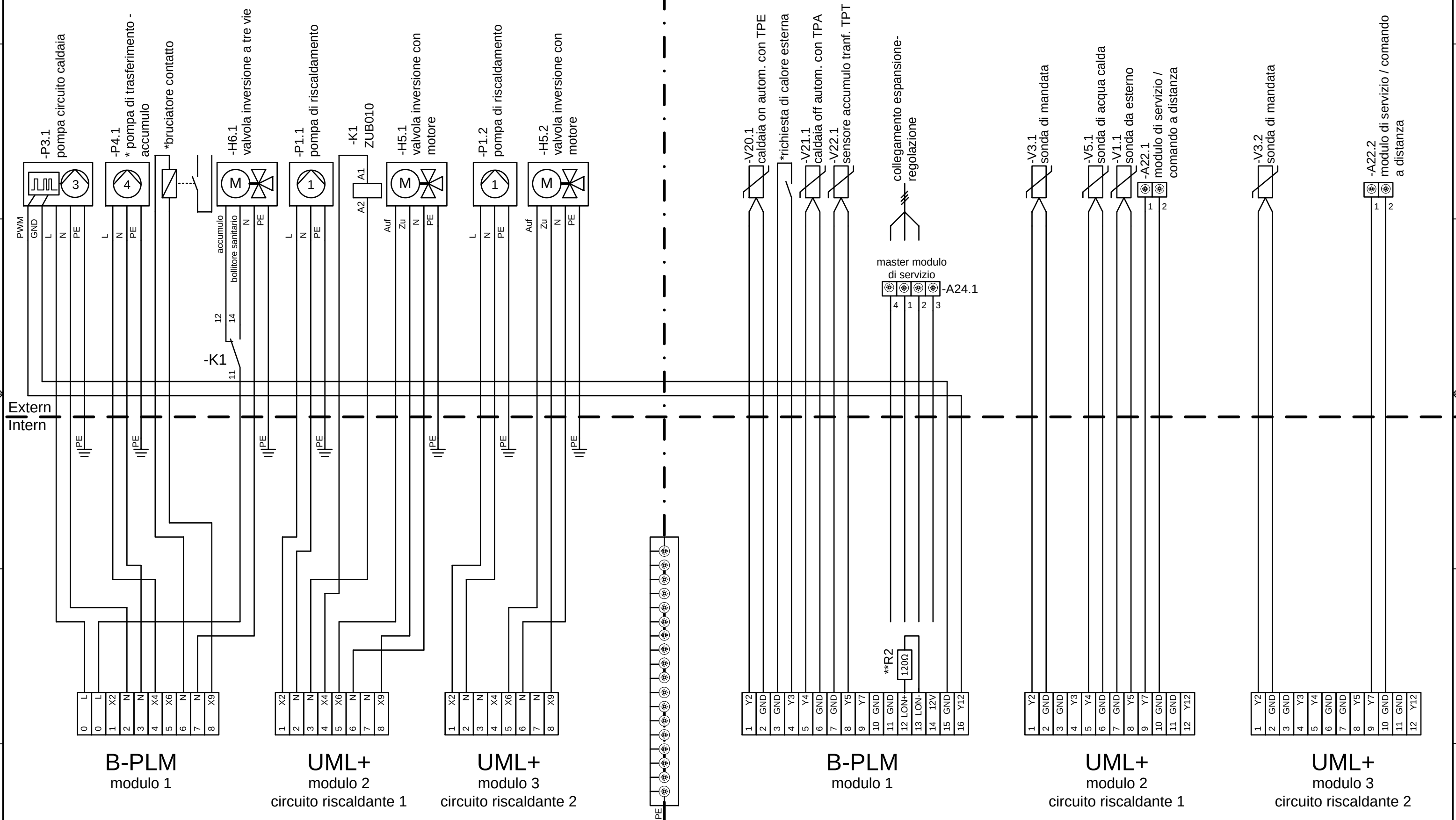
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	12 Y12
12 Y12	

	modulo 3
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

094796/00

bassa tensione 230 VAC

sonda bassissima tensione



B-PLM	modulo 1
0 L	230 VAC
0 L	
1 X2	* pompa di trasferimento
2 N	
3 N	4 X4
4 X4	
5 X6	contatto del bruciatore
6 N	
7 N	8 X9
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	contattore -K1 c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	

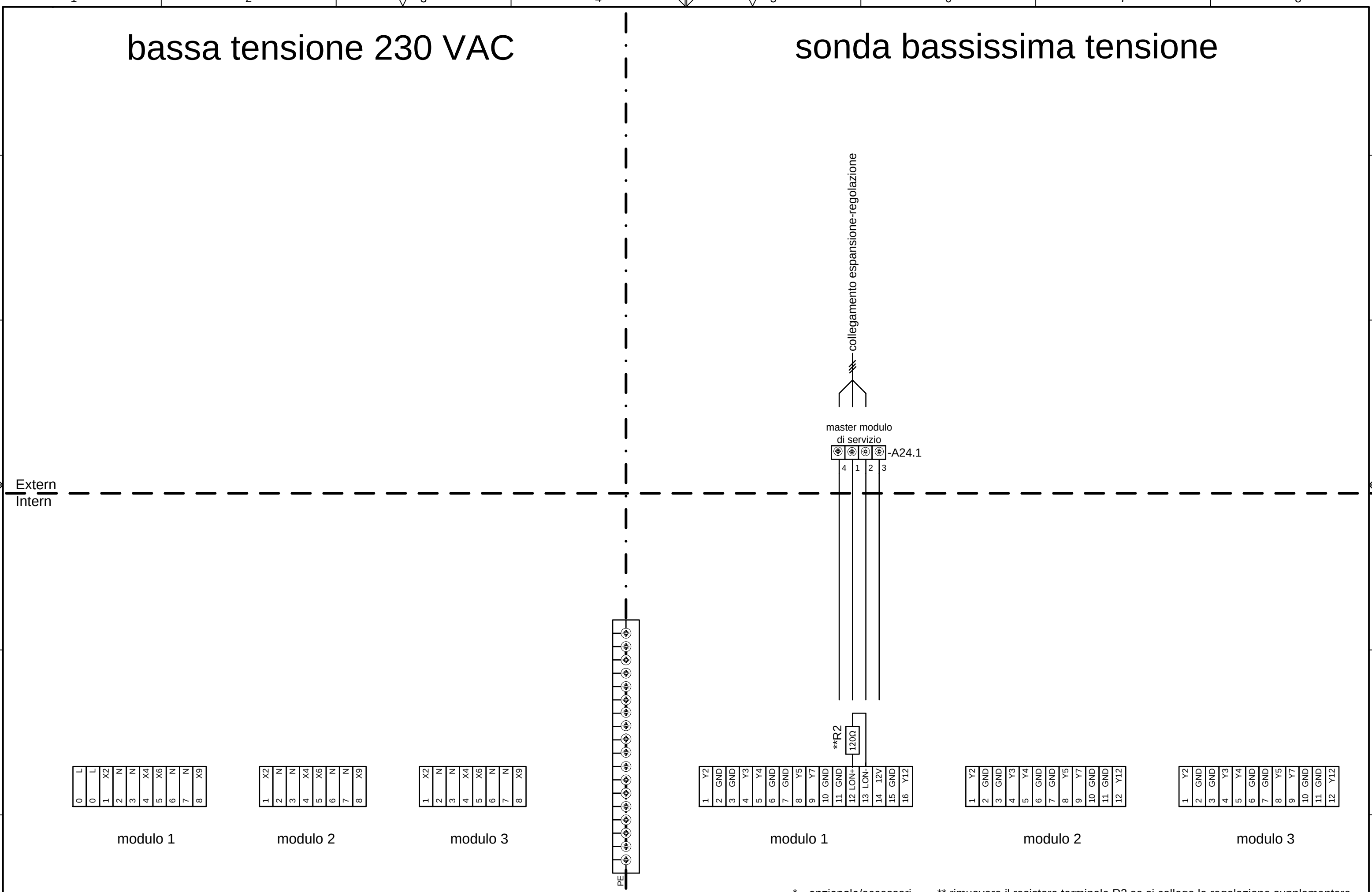
094799/00

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	* richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione-regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

094799/00



				Datum	04.07.2013	-		senza regolazione Windhager MES senza regolazione Windhager MES		Projekt : regolazione				1 mm : 1 mm							
				Gezeichnet	ros															◀ ----- 2 ▶	
				Geprüft	rot																
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094800/00							Blatt 094800/00							

*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

1	modulo 1
0 L	230 VAC
0 L	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	modulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	modulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

094801/00

1	modulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	modulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	modulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

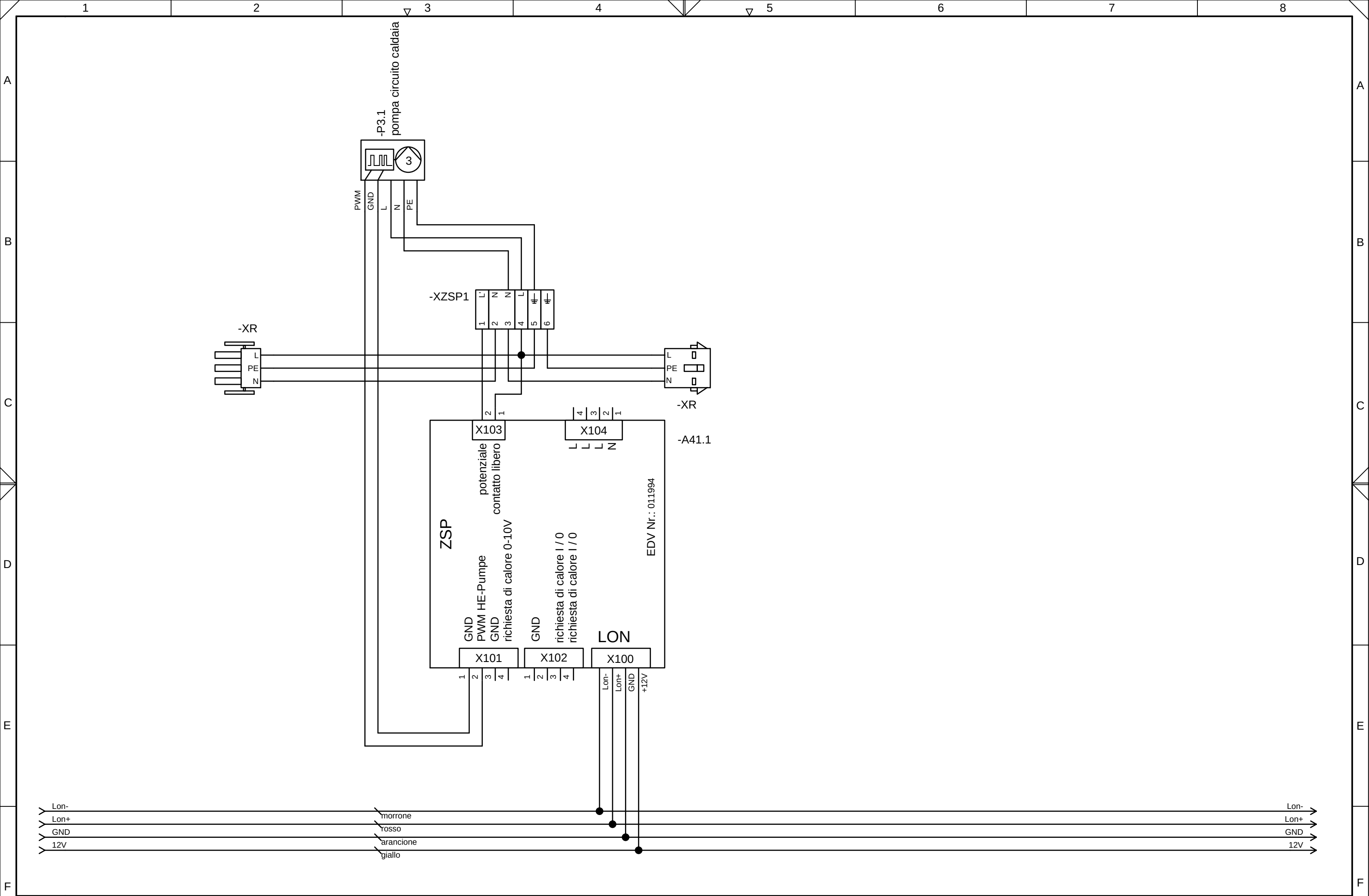
094801/00

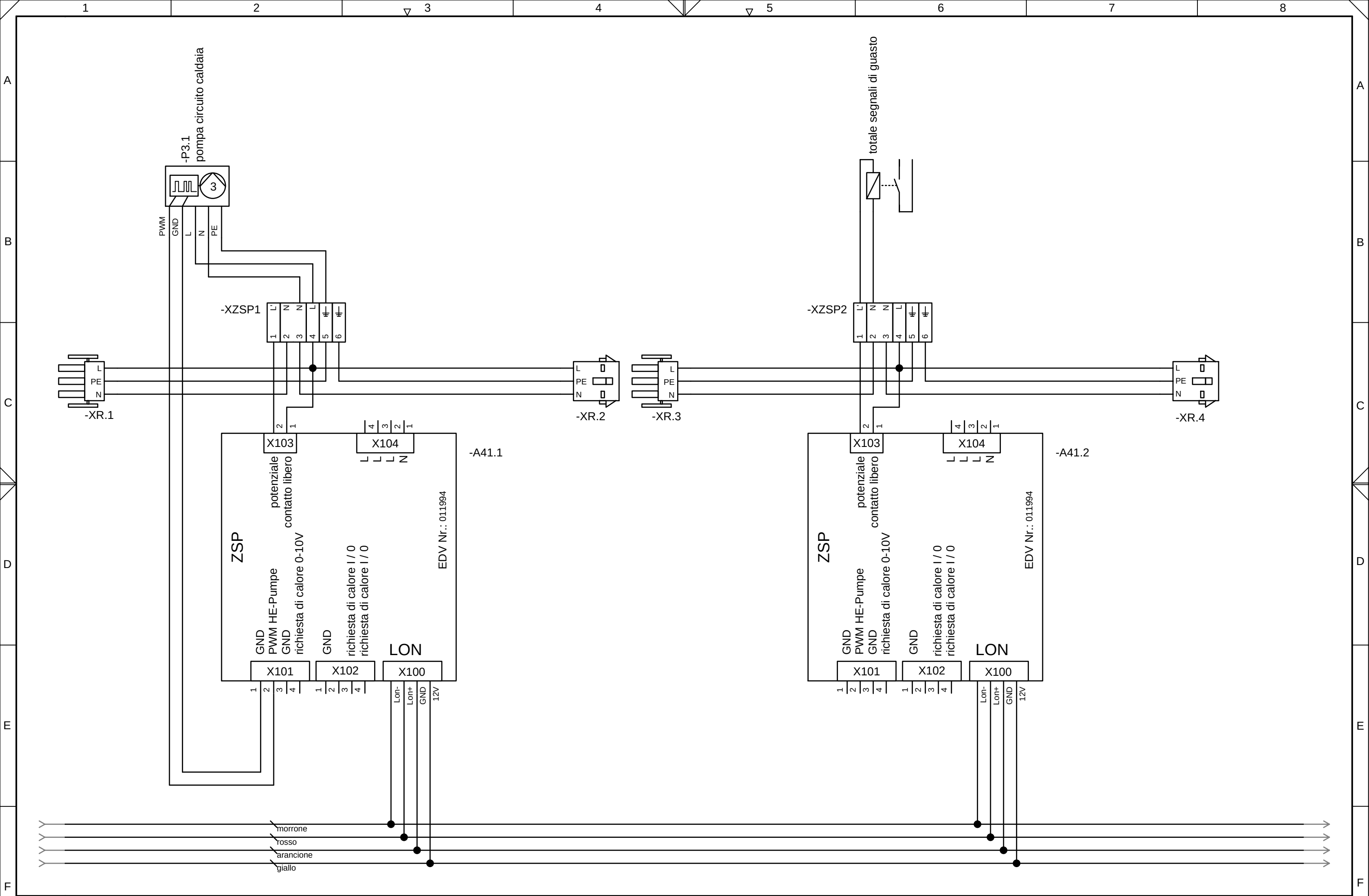
-XZSP	scheda aggiuntiva
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	scheda aggiuntiva
PWM pompa circuito caldaia	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4





-XZSP	scheda aggiuntiva
L' N	totale segnali di guasto
N L	fase continua
PE PE	PE

EDV Nr. 094808/00

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

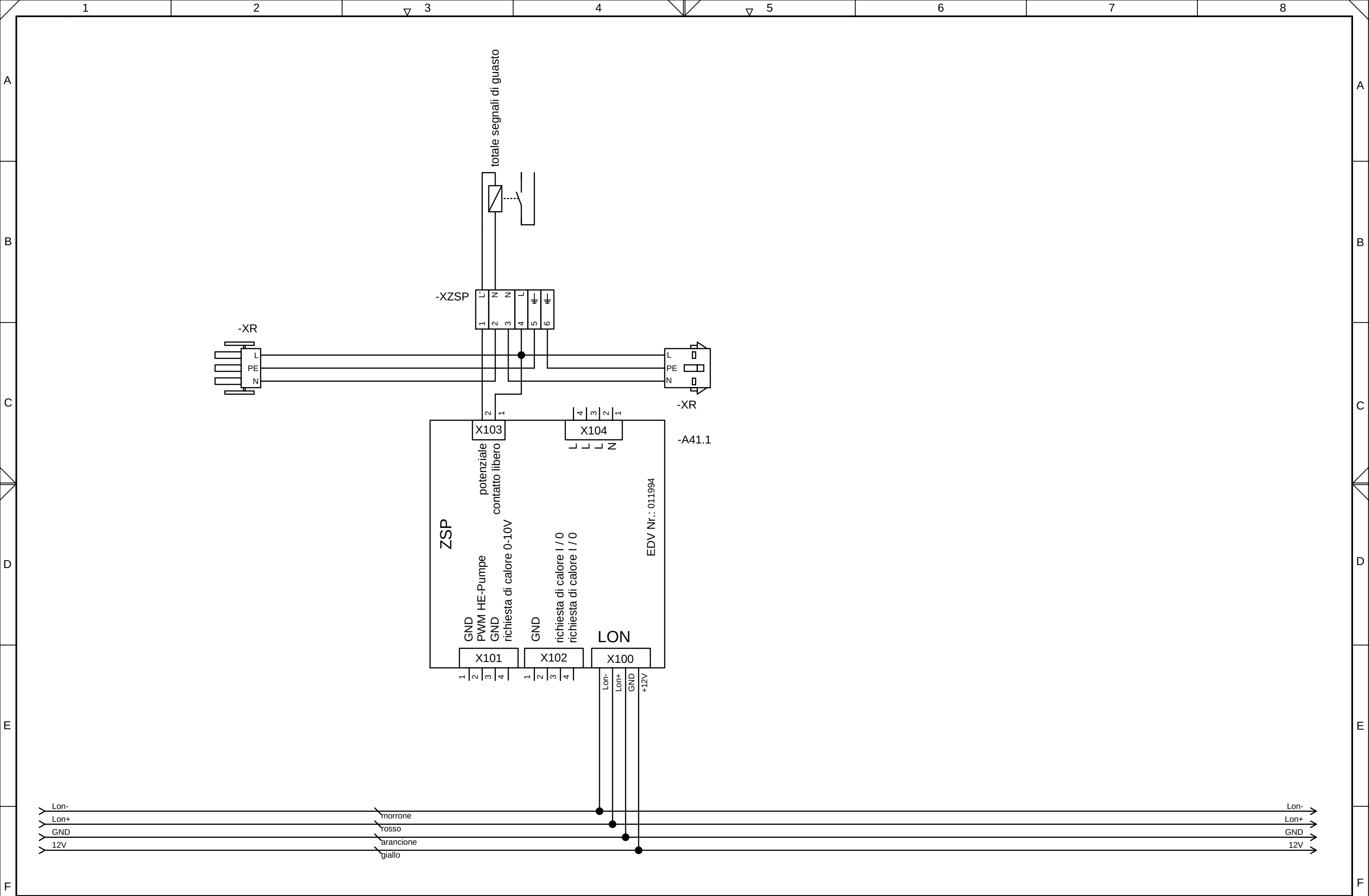
	GND
	-X102 /2
	-X102 /3
	-X102 /4

-XZSP	scheda aggiuntiva
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	scheda aggiuntiva
PWM pompa circuito caldaia	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

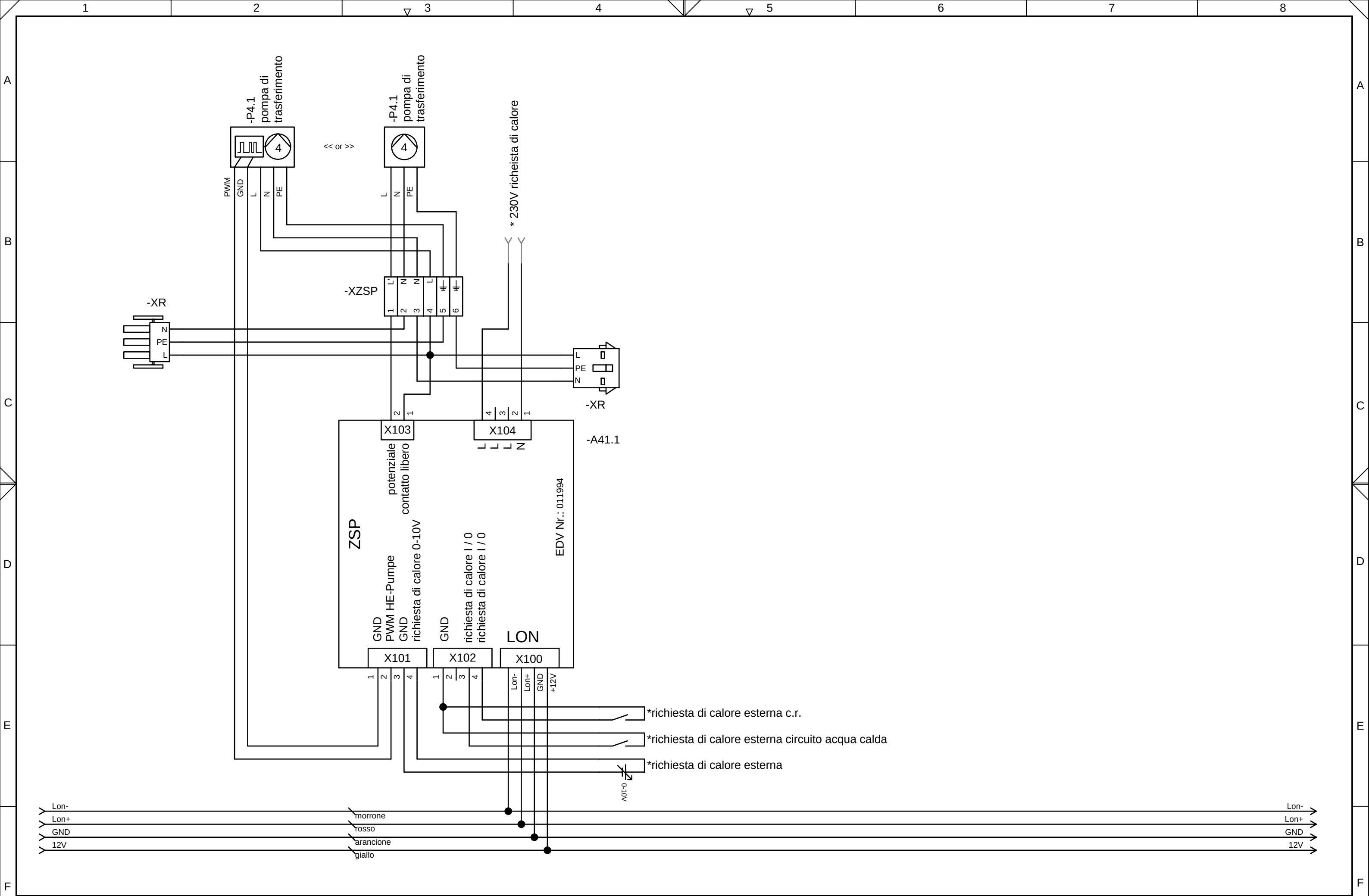


-XZSP	scheda aggiuntiva
L' N	totale segnali di guasto
N L	fase continua
PE PE	PE

EDV Nr. 094808/00

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4



-XZSP	scheda aggiuntiva
L' N	pompa di trasferimento
N L	fase continua
PE PE	PE

EDV Nr. 094809/00

-XSP	scheda aggiuntiva
PWM pompa di trasferimento	GND -X101 /2
richeista di calore 0-10V	GND -X101 /4

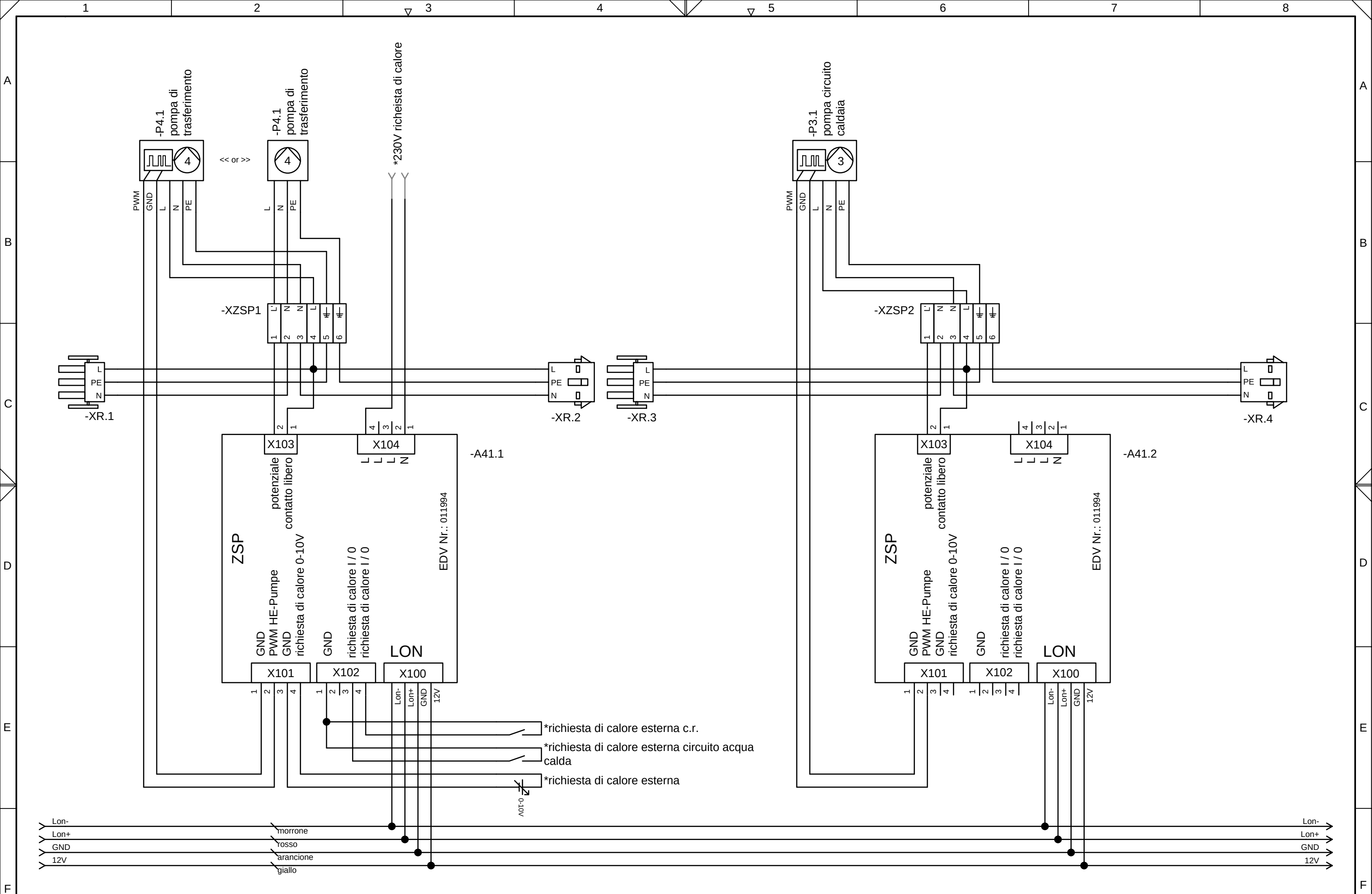
GND -X102 /2	GND
esterna-richiesta di calore circuitto acqua calda	-X102 /3
esterna-richiesta di calore c.f.	-X102 /4

-XZSP	scheda aggiuntiva
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	scheda aggiuntiva
PWM pompa circuito caldaia	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

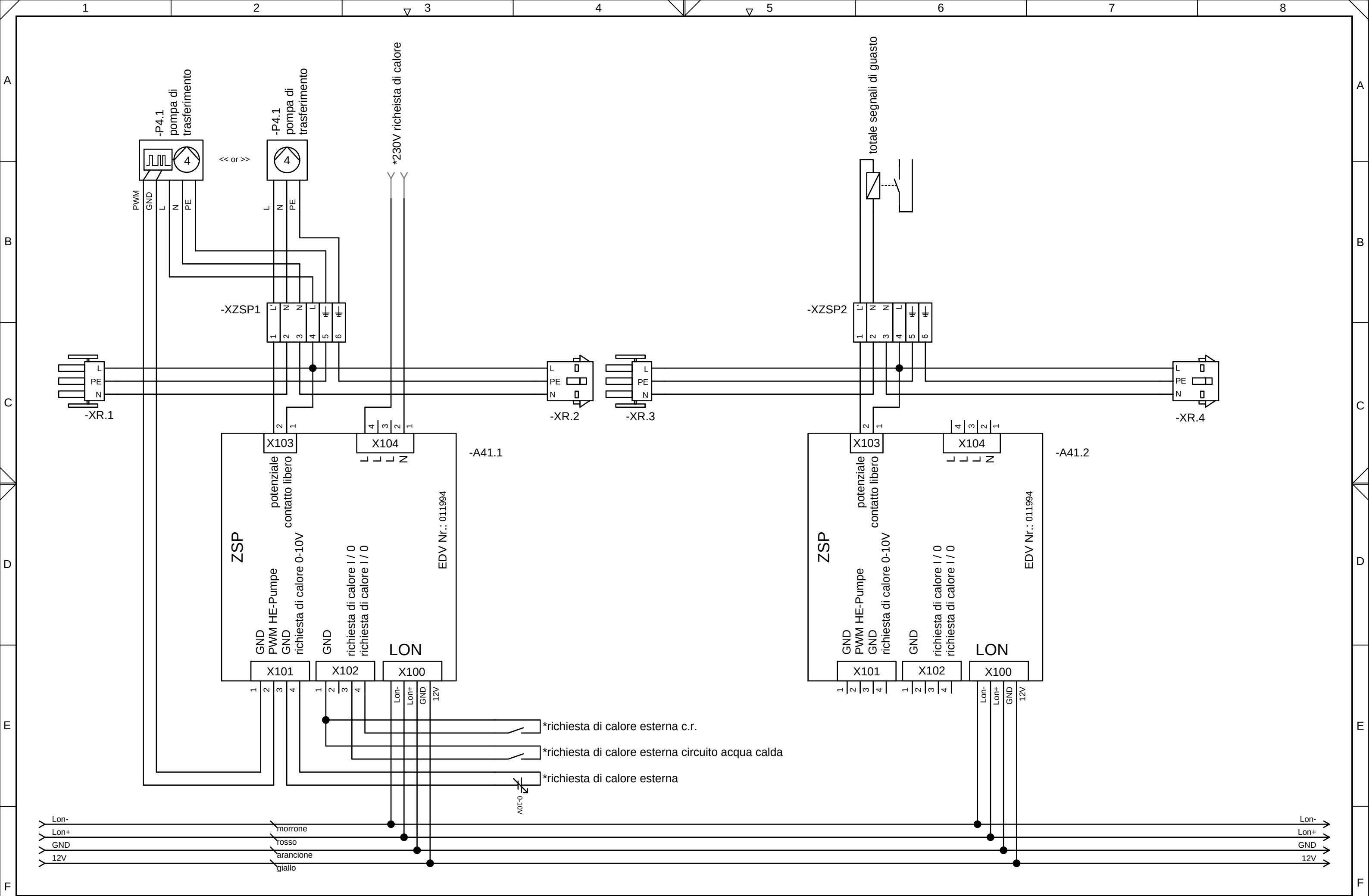


-XZSP	scheda aggiuntiva
L' N	pompa di trasferimento
N L	fase continua
PE PE	PE

EDV Nr. 094809/00

-XSP	scheda aggiuntiva
	PWM pompa di trasferimento GND -X101 /2
	richiesta di calore 0-10V GND -X101 /4

	GND -X102 /2
	esterna-richiesta di calore circuitto acqua calda -X102 /3
	esterna-richiesta di calore c.f. -X102 /4



-XZSP	scheda aggiuntiva
L' N	totale segnali di guasto
N L	fase continua
PE PE	PE

EDV Nr. 094808/00

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

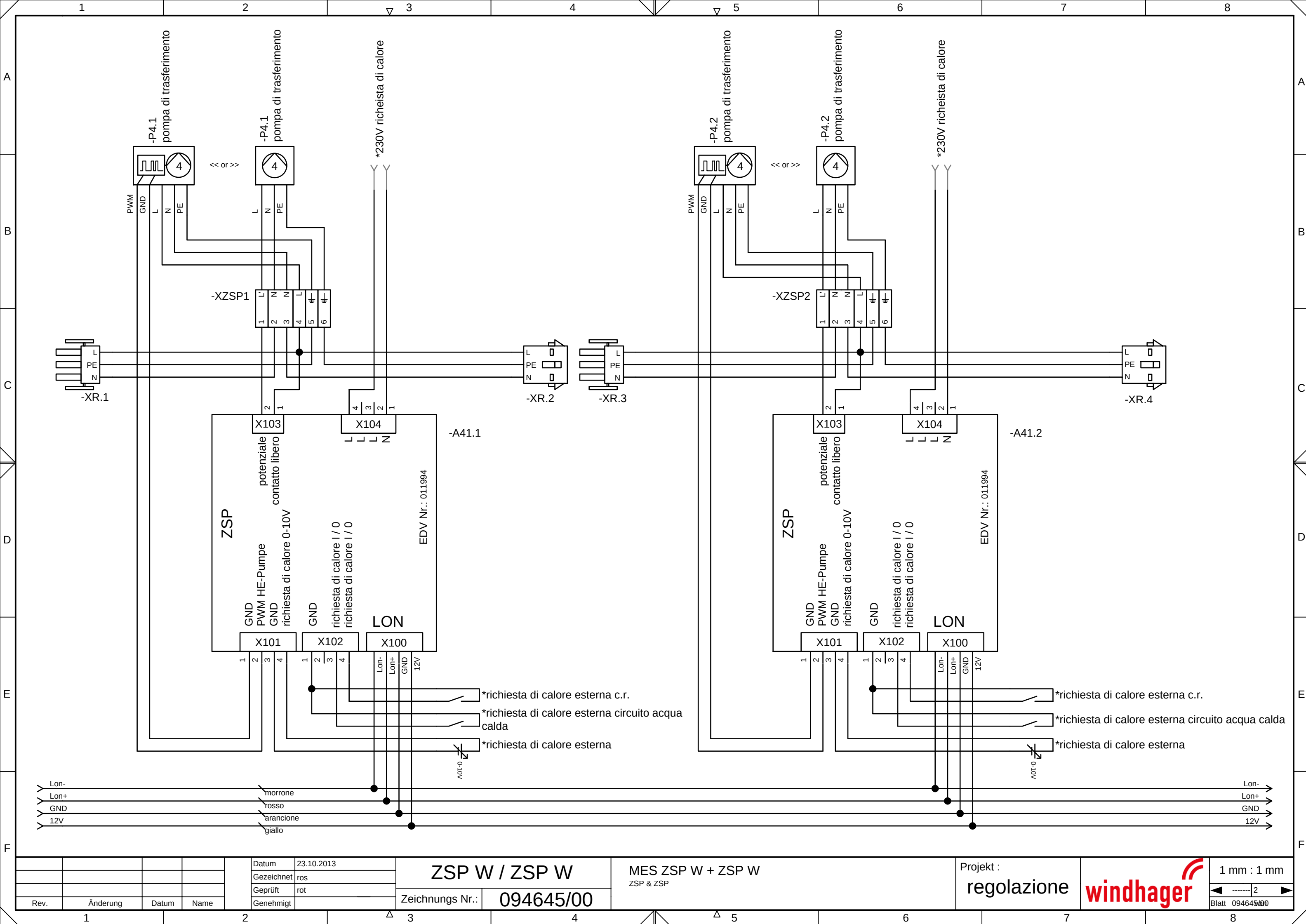
	GND
	-X102 /2
	-X102 /3
	-X102 /4

-XZSP	scheda aggiuntiva
L' N	pompa di trasferimento
N L	fase continua
PE PE	PE

EDV Nr. 094809/00

-XSP	scheda aggiuntiva
	PWM pompa di trasferimento GND -X101 /2
	richiesta di calore 0-10V GND -X101 /4

	GND -X102 /2
	esterna-richiesta di calore circuitto acqua calda -X102 /3
	esterna-richiesta di calore c.f. -X102 /4



-XZSP	scheda aggiuntiva
L' N	pompa di trasferimento
N L	fase continua
PE PE	PE

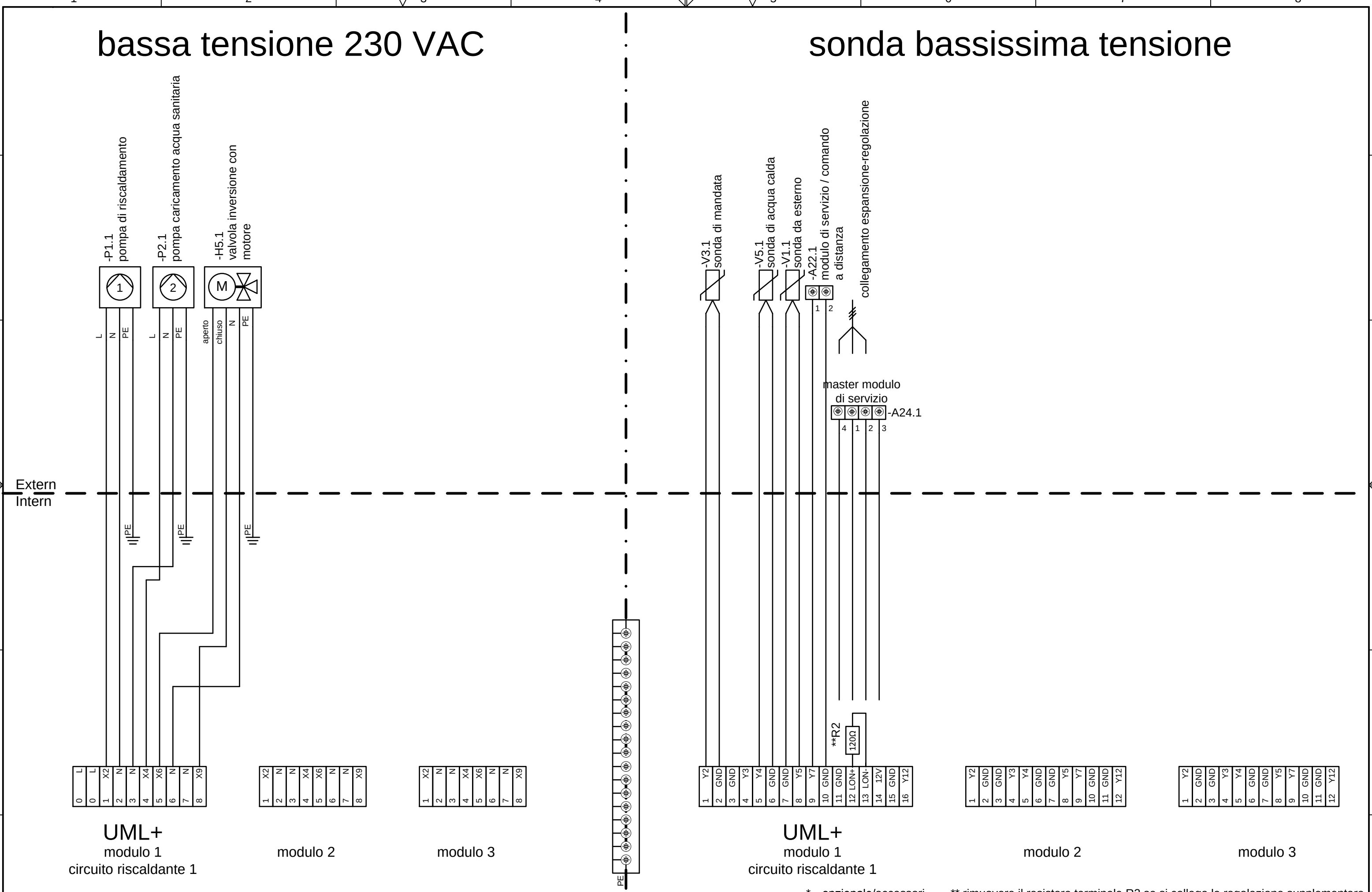
EDV Nr. 094809/00

-XSP	scheda aggiuntiva
	PWM pompa di trasferimento GND -X101 /2
	richiesta di calore 0-10V GND -X101 /4

	GND -X102 /2
	esterna-richiesta di calore circuitto acqua calda -X102 /3
	esterna-richiesta di calore c.f. -X102 /4

bassa tensione 230 VAC

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

UML+	modulo 1 circuitto riscaldante 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 1
	chiuso

	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092595/01

UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata
2 GND	c.r.1
3 GND	
4 Y3	
5 Y4	sonda di acqua
6 GND	calda HK1
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Lon+	master modulo di servizio
13 Lon-	collegamento espansione-
14 12V	regolazione
15 GND	
16 Y12	

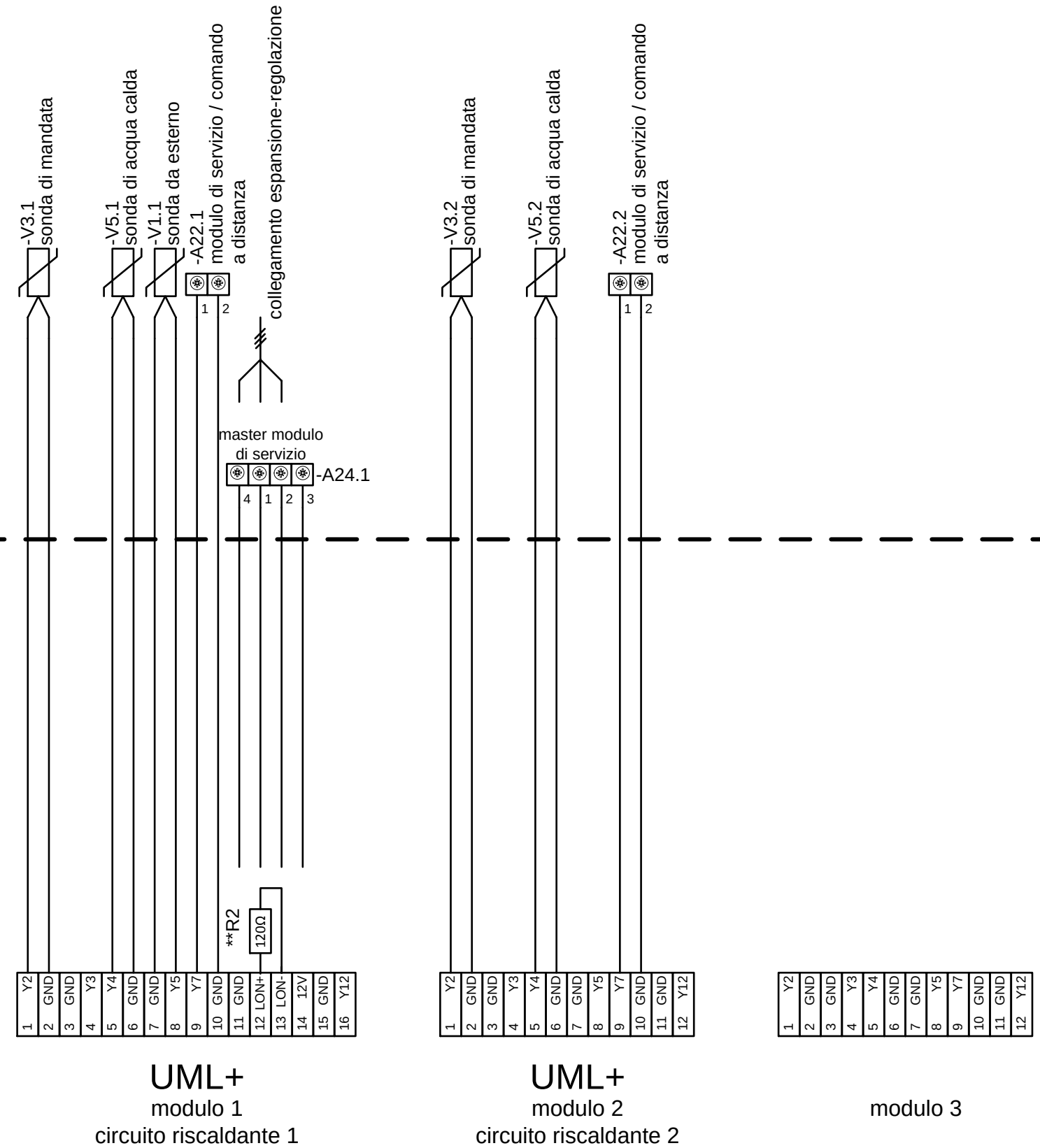
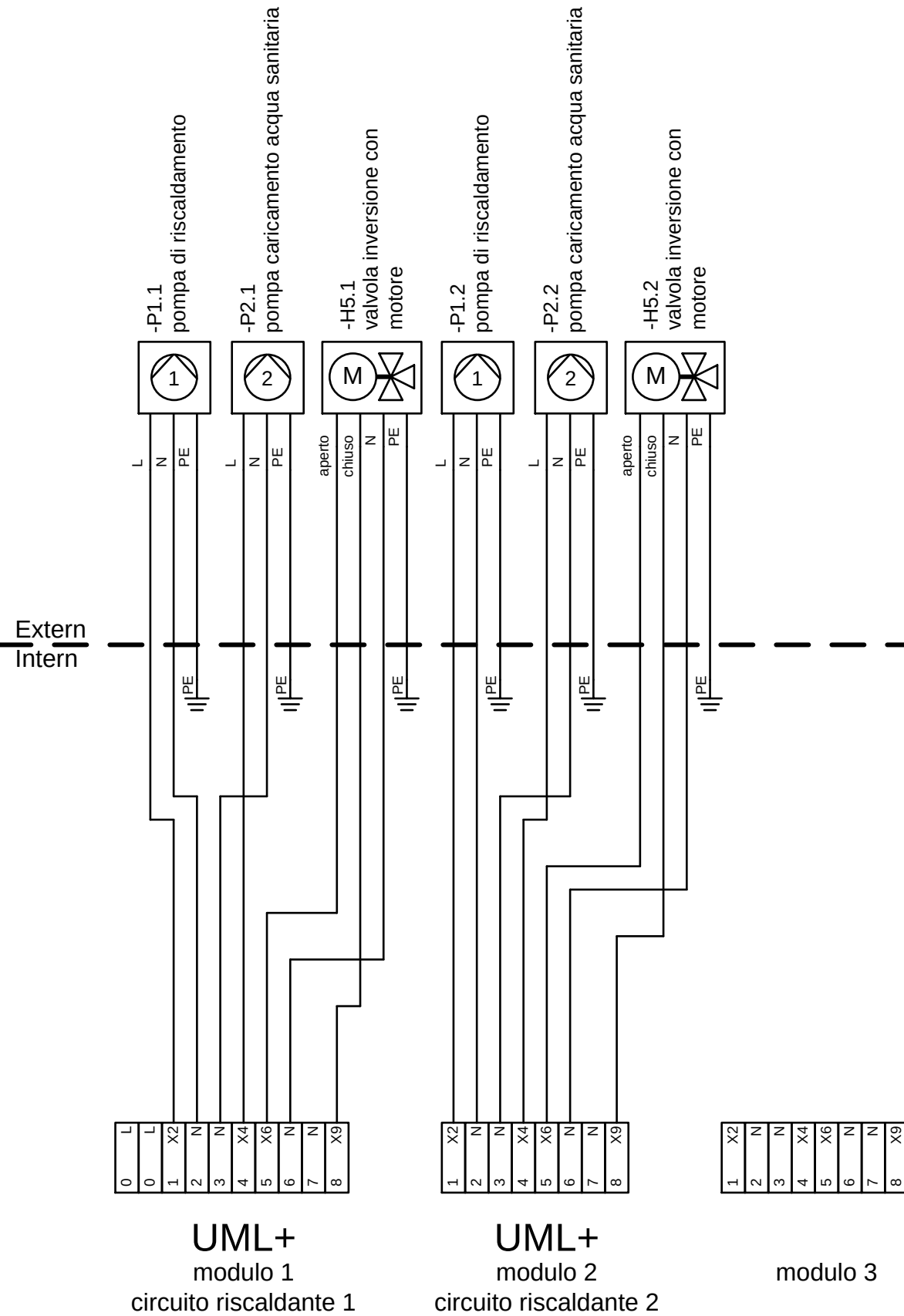
	modulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092595/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	04.07.2013	UML+/UML+		MES H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092607/01				Blatt 092607/01	

-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

UML+	modulo 1 circuitto riscaldante 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	
	c.r. 1
8 X9	chiuso

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento
2 N	c.r. 2
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 2
5 X6	aperto
6 N	valvola inversione con motore
7 N	
	c.r. 2
8 X9	chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092608/01

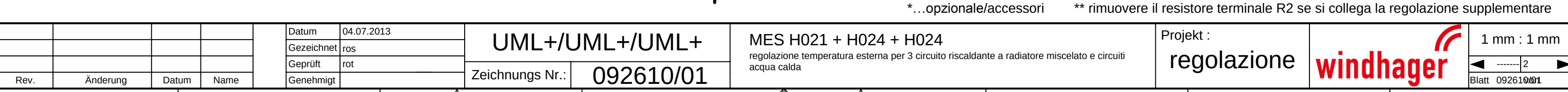
UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata
2 GND	c.r. 1
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 1
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Lon+	master modulo
13 Lon-	di servizio
14 12V	collegamento
	espansione-
	regolazione
15 GND	
16 Y12	

UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata
2 GND	c.r. 2
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 2
7 GND	
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092608/01

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	interno
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

UML+	modulo 1 circuitto riscaldante 1
0 L PWM	fase continua 1
0 L PWM	fase continua 2
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento
2 N	c.r. 2
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 2
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 2
8 X9	chiuso

UML+	modulo 3 circuitto riscaldante 3
1 X2	pompa di riscaldamento
2 N	c.r. 3
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 3
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 3
8 X9	chiuso

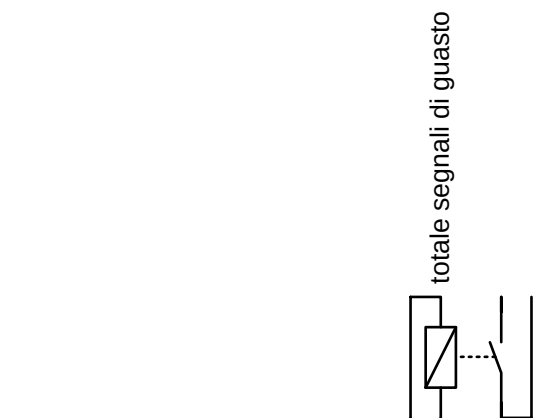
UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata
2 GND	c.r. 1
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 1
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Lon+	master modulo di servizio
13 Lon-	collegamento espansione-regolazione
14 12V	
15 GND	
16 Y12	

UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata
2 GND	c.r. 2
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 2
7 GND	
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 3
1 Y2	sonda di mandata
2 GND	HK 3
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 3
7 GND	
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

bassa tensione 230 VAC

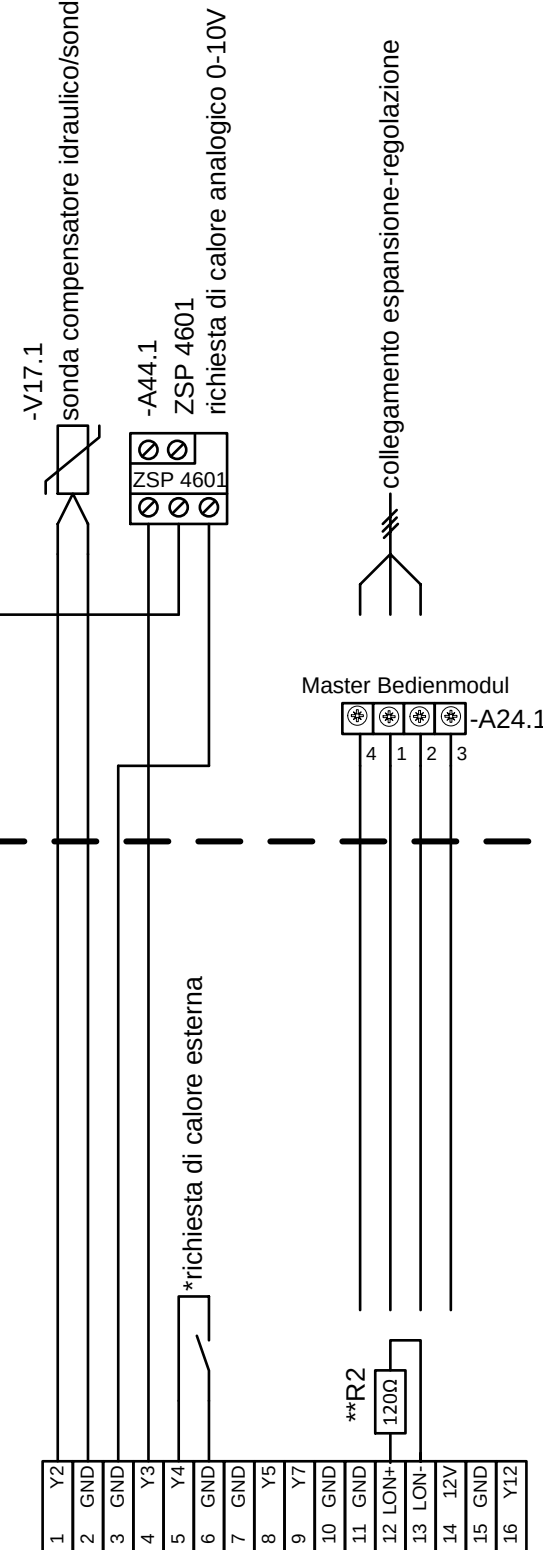
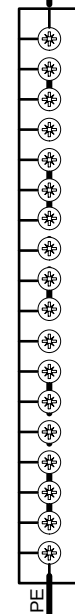
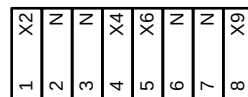
sonda bassissima tensione



Extern
Intern



KAS P
modulo 1



KAS P
modulo 1



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Rev.	Änderung	Datum	Name

Datum	24.06.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

KAS P	
Zeichnungs Nr.:	092621/01

MES KAS P
cascata senza regolazione Windhager MES

Projekt :
regolazione

	1 mm : 1 mm
	◀ ----- 2 ----- ▶
	Blatt 092621/01

-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

KAS	modulo 1 cascata
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	totale segnali di guasto
8 X9	

	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092623/01

KAS	modulo 1 cascata
1 Y2	sonda compensatore idraulico/sonda dell'accumulo
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	richiesta di calore esterna
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione-regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

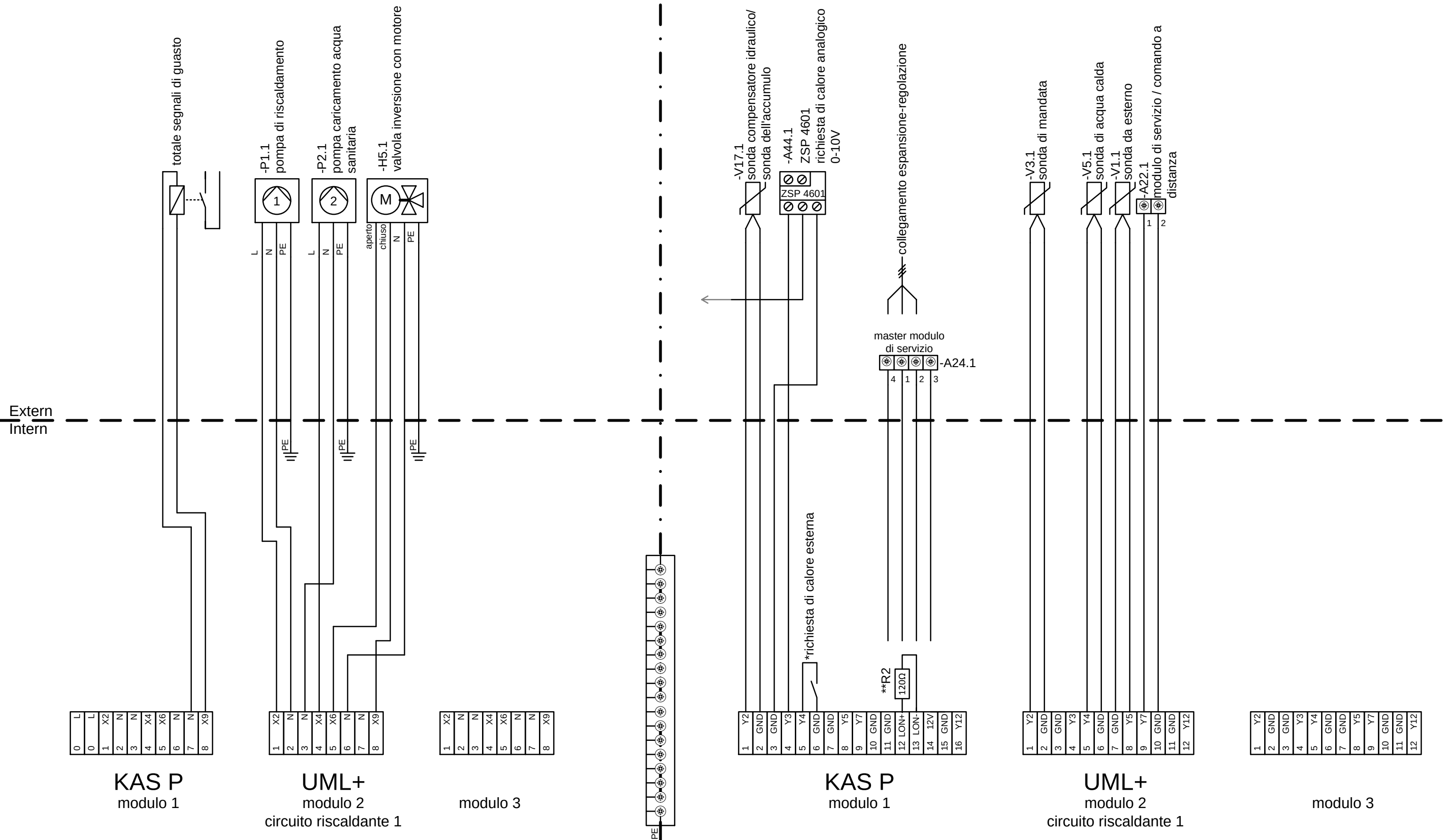
	modulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092623/01

bassa tensione 230 VAC

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

KAS P	modulo 1 cascata
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	totale segnali di guasto

UML+	modulo 2 circuiti riscaldante 1
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092626/01

KAS P	modulo 1 cascata
1 Y2	sonda compensatore idraulico/sonda dell'accumulo
2 GND	
3 GND	
4 Y3	ZSP 4601
5 Y4	richiesta di calore esterna
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	
16 Y12	

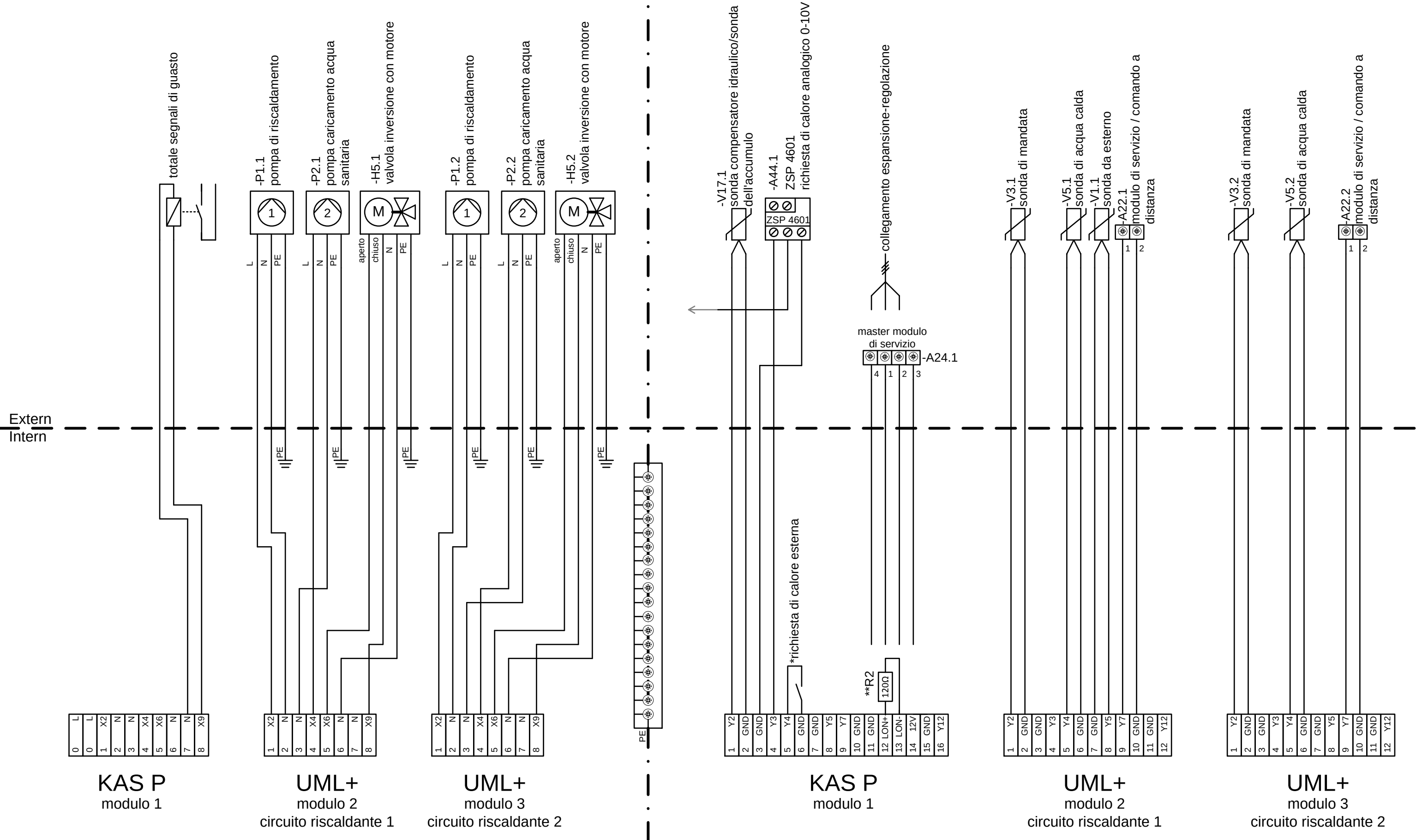
UML+	modulo 2 circuiti riscaldante 1
1 Y2	sonda di mandata
2 GND	c.r. 1
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 1
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092626/01

bassa tensione 230 VAC

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

KAS P	modulo 1 cascata
1 Y2	sonda compensatore idraulico/sonda dell'accumulo
2 GND	
3 GND	ZSP 4601
4 Y3	
5 Y4	richiesta di calore esterna
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	
16 Y12	

KAS P	modulo 1 cascata
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	totale segnali di guasto
8 X9	

UML+	modulo 2 c circuito riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

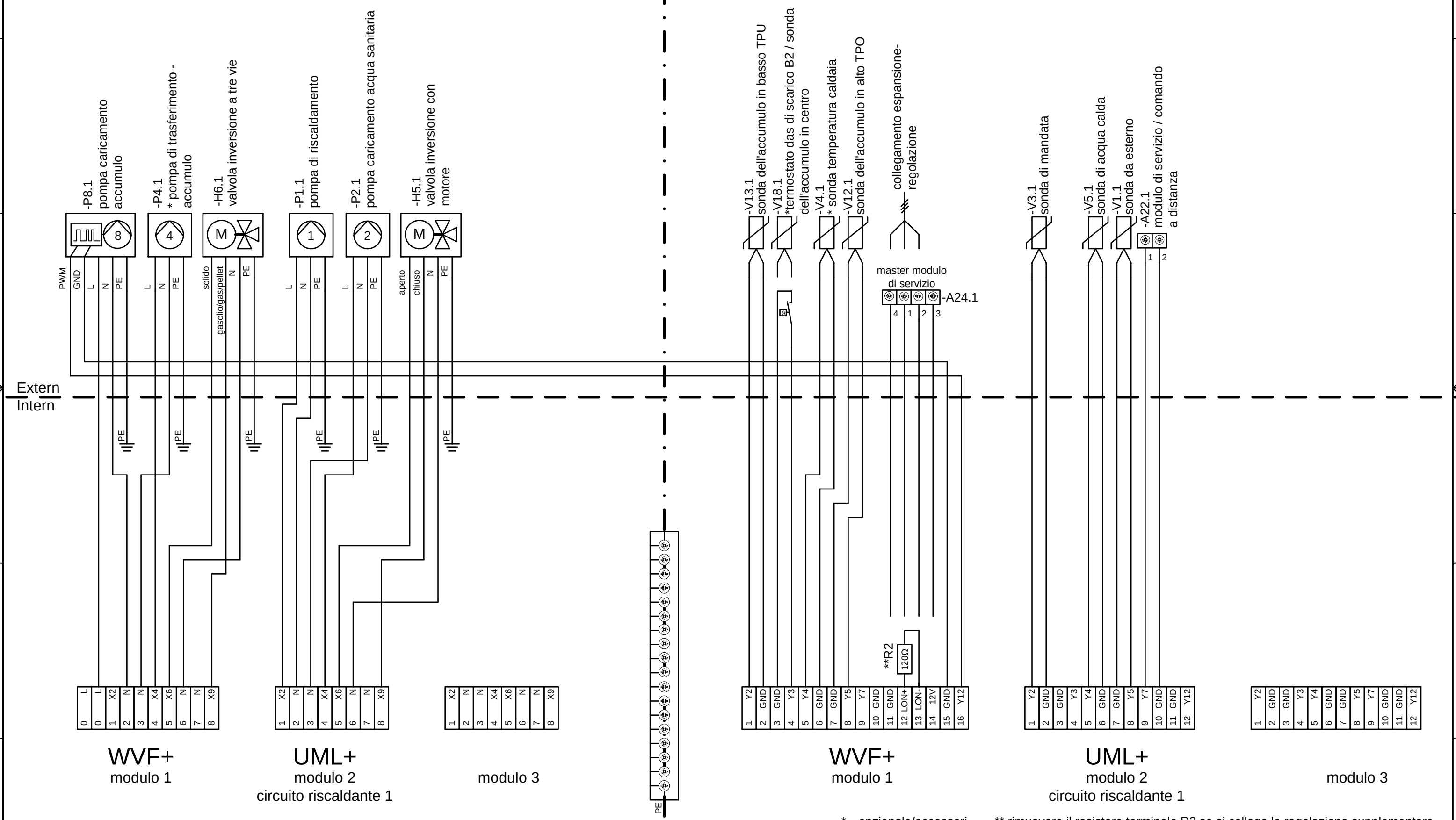
UML+	modulo 2 c circuito riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria
4 X4	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

UML+	modulo 3 c circuito riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	sonda di acqua calda c.r. 2
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

UML+	modulo 3 c circuito riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria
4 X4	c.r. 2
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 2
8 X9	chiuso

bassa tensione 230 VAC

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

WVF+	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento accumulo
4 X4	
5 X6	solido valvola
6 N	inversione a tre vie
7 N	
8 X9	gasolio/gas/pellet

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 1
8 X9	chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092804/01

WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso
2 GND	TPU
3 GND	*termostato das di scarico B2
4 Y3	sonda dell'accumulo in centro
5 Y4	*sonda temperatura caldaia
6 GND	
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa
16 Y12	caricamento accumulo

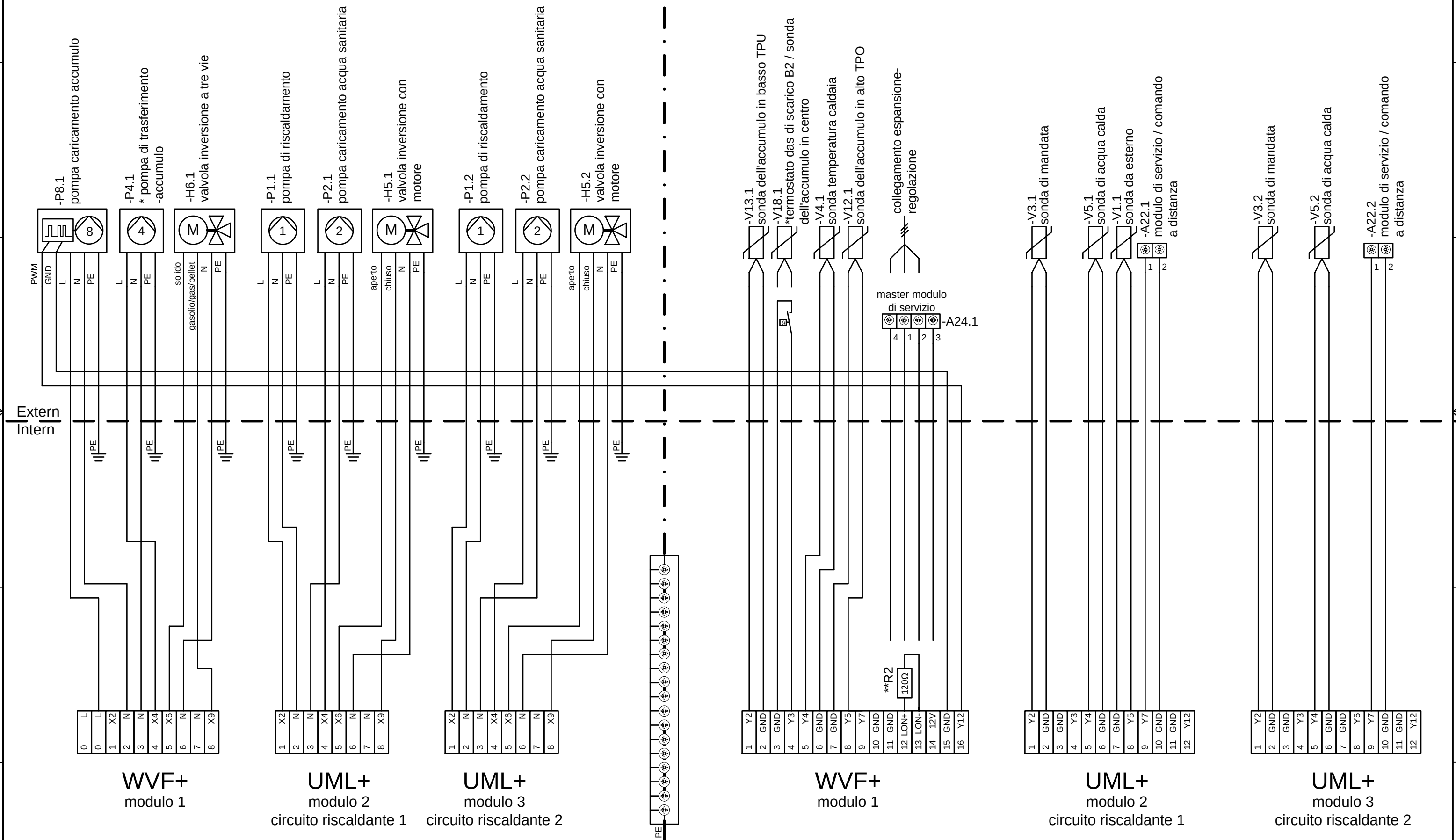
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092804/01

bassa tensione 230 VAC

sonda bassissima tensione



WVF+
modulo 1

UML+
modulo 2
circuitto riscaldante 1

UML+
modulo 3
circuitto riscaldante 2

WVF+
modulo 1

UML+
modulo 2
circuitto riscaldante 1

UML+
modulo 3
circuitto riscaldante 2

*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	03.07.2013	WVF+/UML+/UML+		MES P041 + H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda commutazione automatica combustibili solidi con carica accumulo	Projekt : regolazione		1 mm : 1 mm			
				Gezeichnet	ros								◀ ----- 2 ▶	
				Geprüft	rot									
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092806/01				Blatt 092806/01			

-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

WVF+	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	solido valvola inversione a tre vie
6 N	
7 N	
8 X9	gasolio/gas/pellet

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 1 chiuso

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 2 chiuso

092807/01

WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso TPU
2 GND	
3 GND	*termostato das di scarico B2 /
4 Y3	sonda dell'accumulo in centro
5 Y4	* sonda della caldaia
6 GND	
7 GND	sonda dell'accumulo in alto TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa
16 Y12	caricamento accumulo

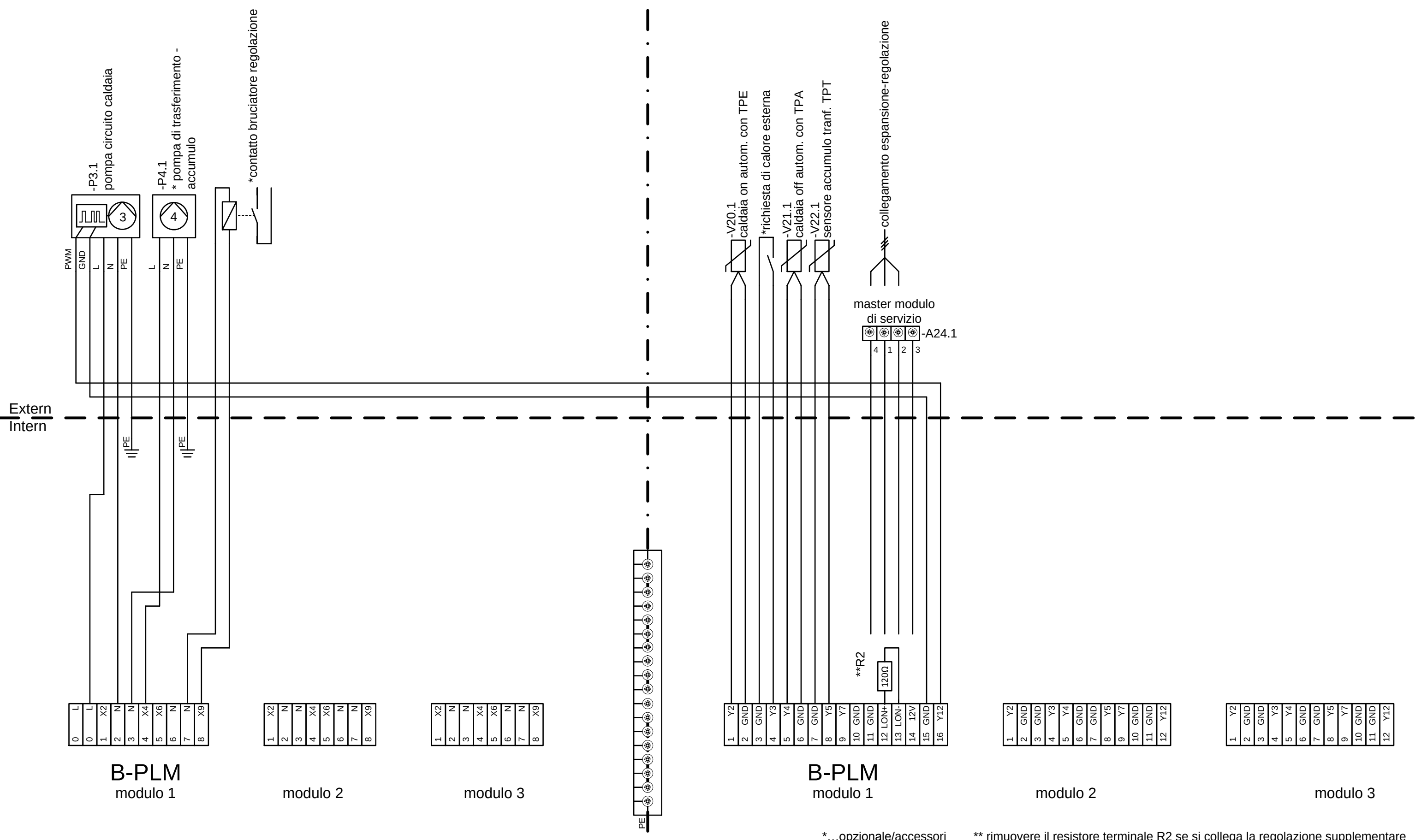
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

092807/01

bassa tensione 230 VAC

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

B-PLM	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* pompa di trasferimento accumulo
4 X4	
5 X6	
6 N	
7 N	*bruciatore contatto
8 X9	

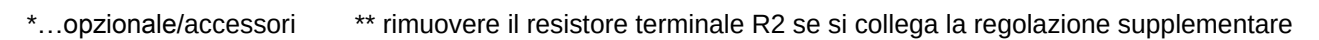
	modulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

sonda bassissima tensione



				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis e bruciatore-/modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092797/01				 2
Blatt 092797/01											

-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

B-PLM	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	
8 X9	*bruciatore contatto

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 1 chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092798/01

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

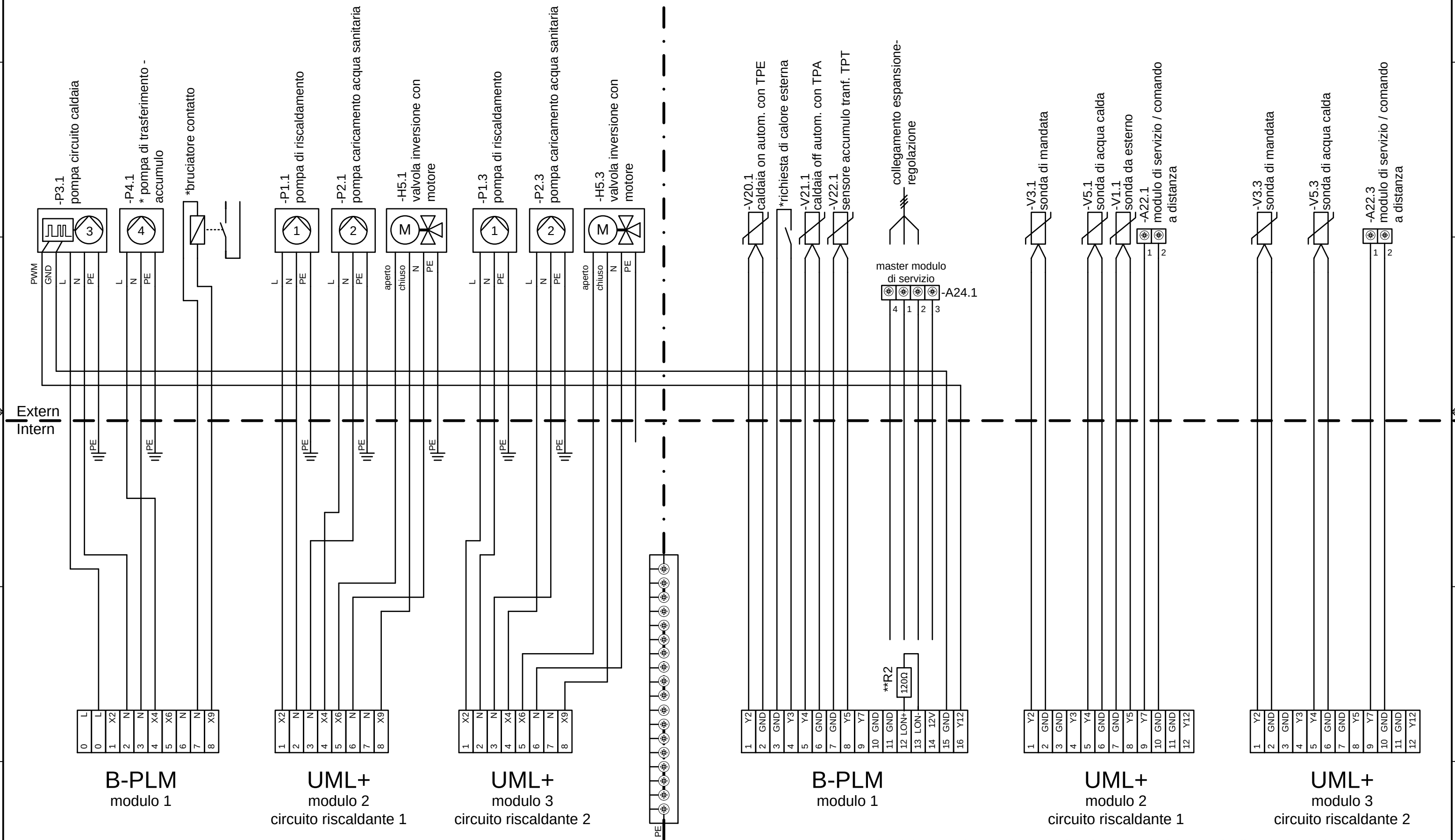
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092798/01

bassa tensione 230 VAC

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

B-PLM	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	
8 X9	*bruciatore contatto

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 1 chiuso

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 2 chiuso

092798/01

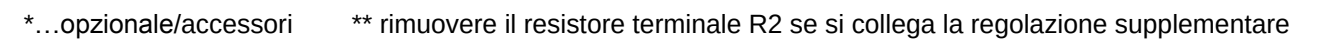
B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

092798/01

sonda bassissima tensione



				Datum	04.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e un modulo per combustibili solidi WVF+ e modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092880/01				Blatt 092880/01

-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

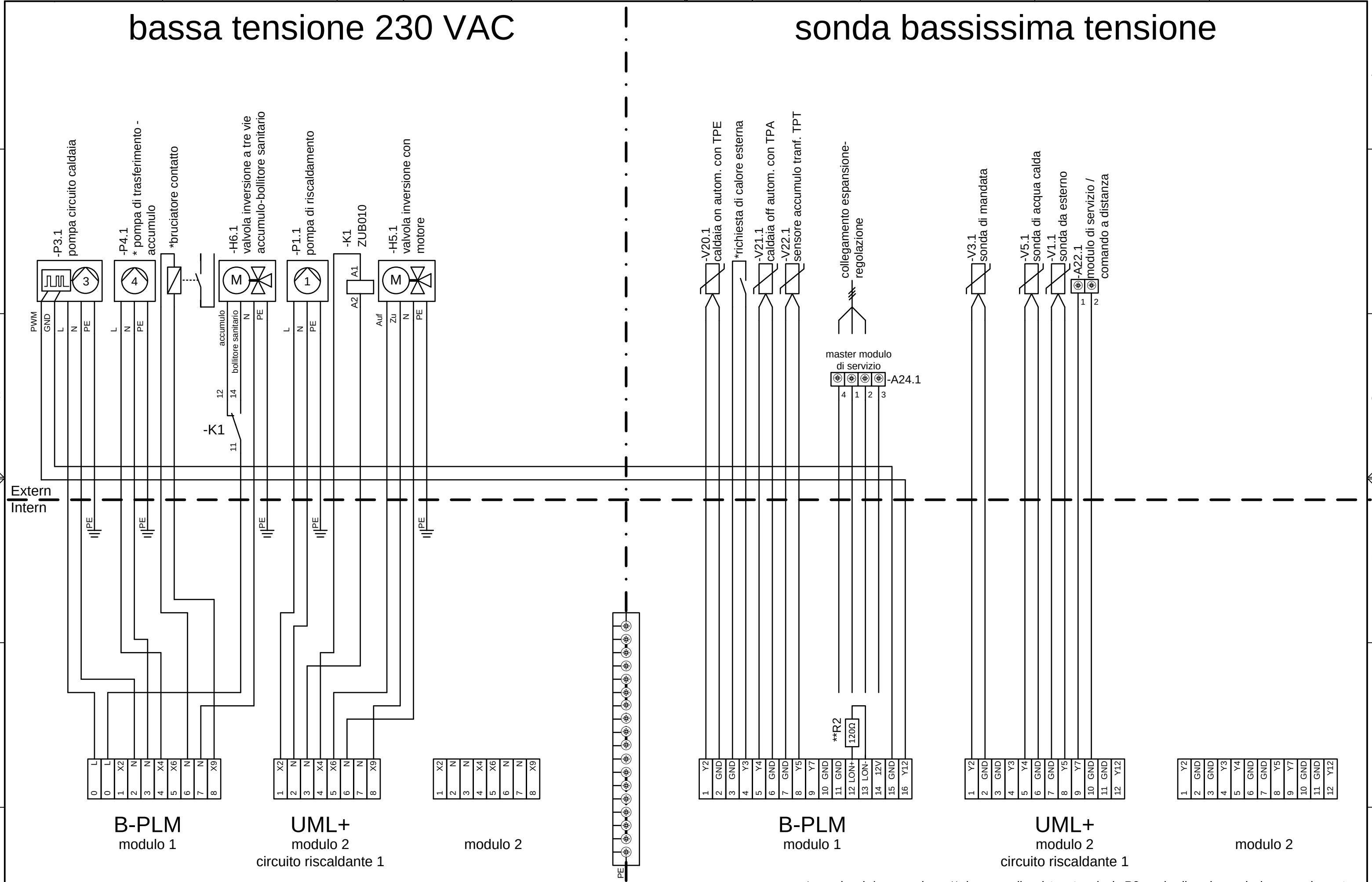
B-PLM	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento accumulo
4 X4	
5 X6	
6 N	
7 N	
8 X9	*bruciatore contatto

WVF+	modulo 2
1 Y2	accumulo in basso TPU
2 GND	
3 GND	*termostato das di scarico B2
4 Y3	sonda dell'accumulo in centro
5 Y4	*sonda temperatura caldaia
6 GND	
7 GND	sonda dell'accumulo in alto TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM pompa
12 Y12	caricamento accumulo

WVF+	modulo 2
1 X2	
2 N	
3 N	*pompa di trasferimento accumulo
4 X4	
5 X6	solido valvola
6 N	inversione a tre vie
7 N	
8 X9	gasolio/gas/pellet

UML+	modulo 3 circuito riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

UML+	modulo 3 circuito riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 1 chiuso



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

B-PLM	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	
8 X9	contatto del bruciatore

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	contattore -K1 c.r. 1
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094547/01

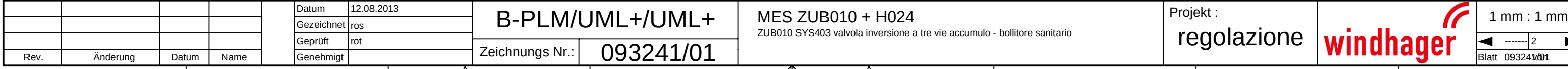
B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	* richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094547/01

sonda bassissima tensione



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza riscaldamento
3 N'	
4 L	
5 L	interruttore di emergenza riscaldamento
6 L'	
7 LL	
8 RL	motore-unità di commutazione
9 N	

B-PLM	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	
8 X9	contatto del bruciatore

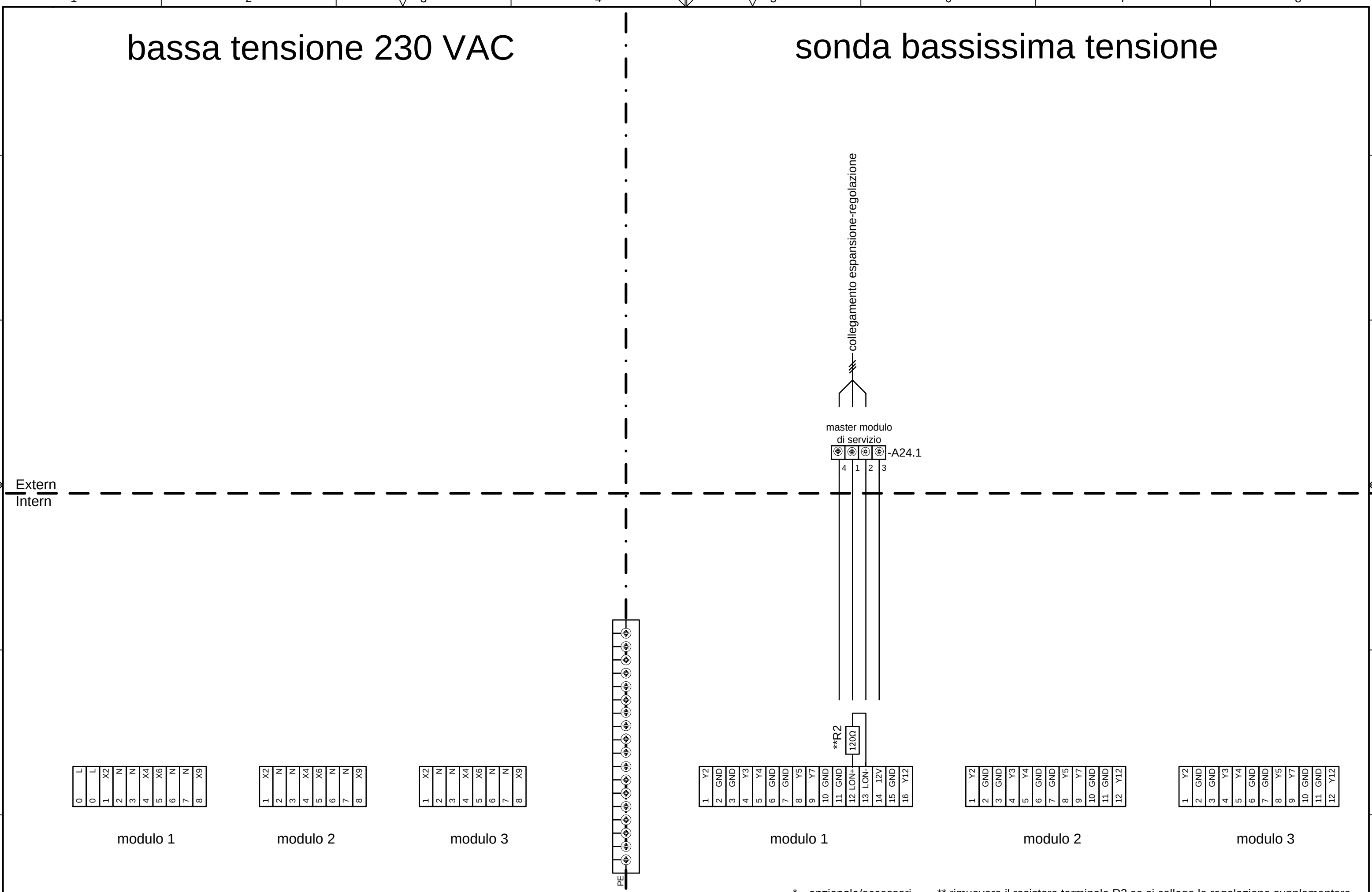
UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	contattore -K1 c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 1 chiuso

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 2 chiuso

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	* richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione-regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	



-XS	sicurezza-dispositivo
1 N	interno
2 N	interruttore di emergenza
3 N'	riscaldamento
4 L	
5 L	interruttore di emergenza
6 L'	riscaldamento
7 LL	
8 RL	motore-unità di commutazione
9 N	

1	modulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	master modulo di servizio collegamento espansione-regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

1	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	modulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

2	modulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	modulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

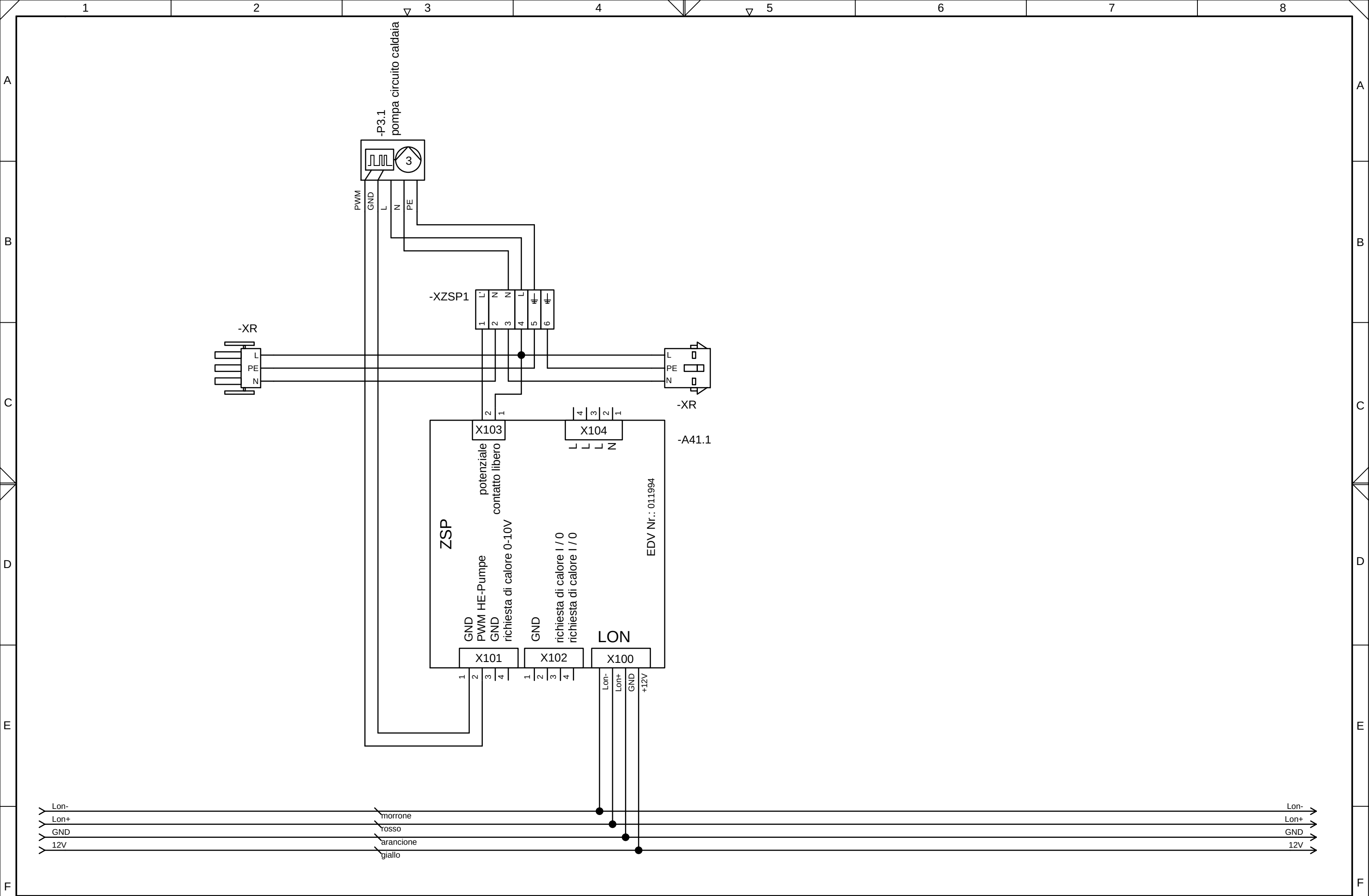
3	modulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

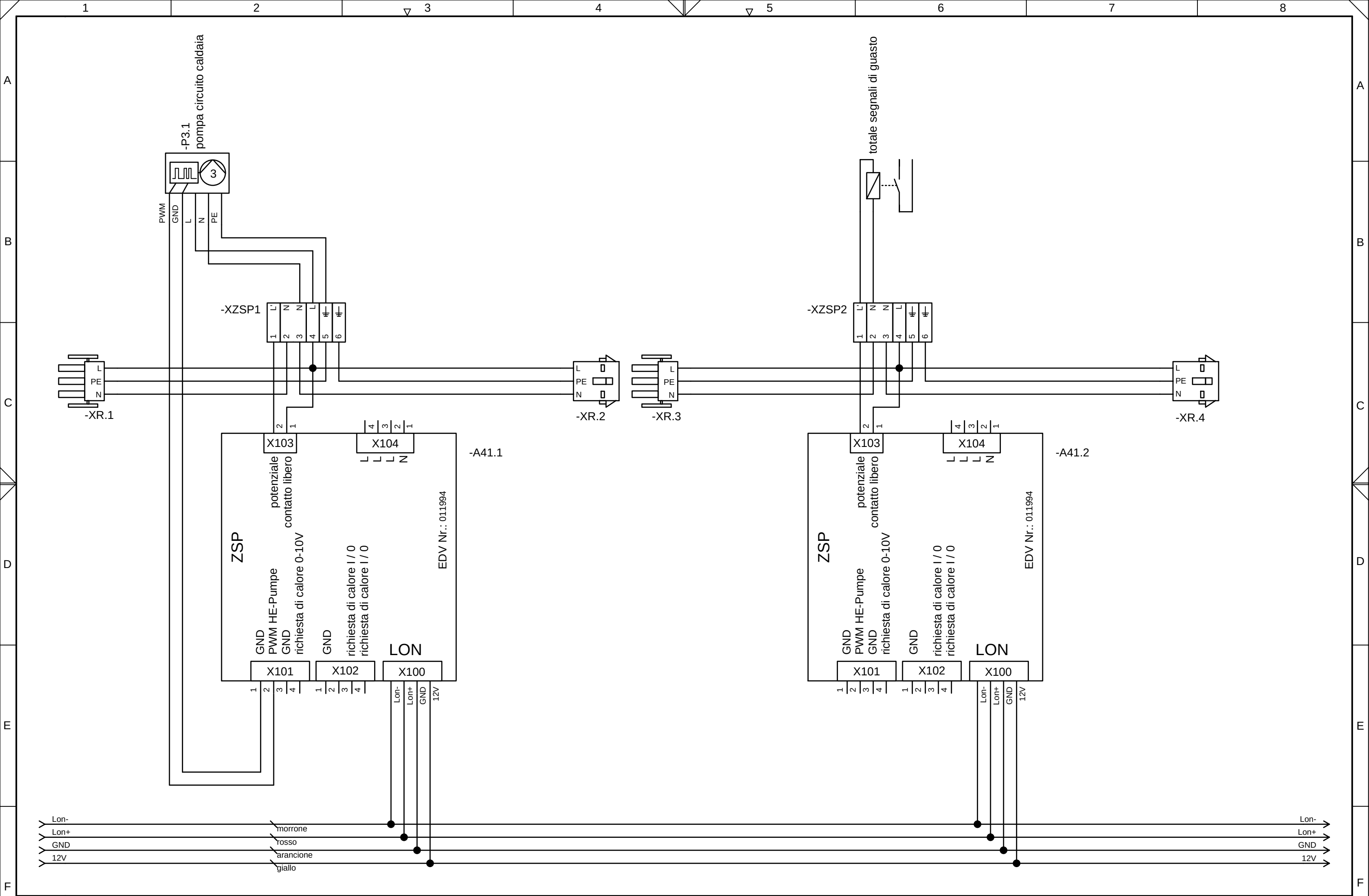
-XZSP	scheda aggiuntiva
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094667/00

scheda aggiuntiva	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM pompa
GND	circuito caldaia





-XZSP	scheda aggiuntiva
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094667/00

scheda aggiuntiva	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM pompa circuito
GND	caldaia

-XZSP	scheda aggiuntiva
L'	totale segnali di guasto
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	scheda aggiuntiva
-X102 /4	
-X102 /3	
-X102 /2	
GND	

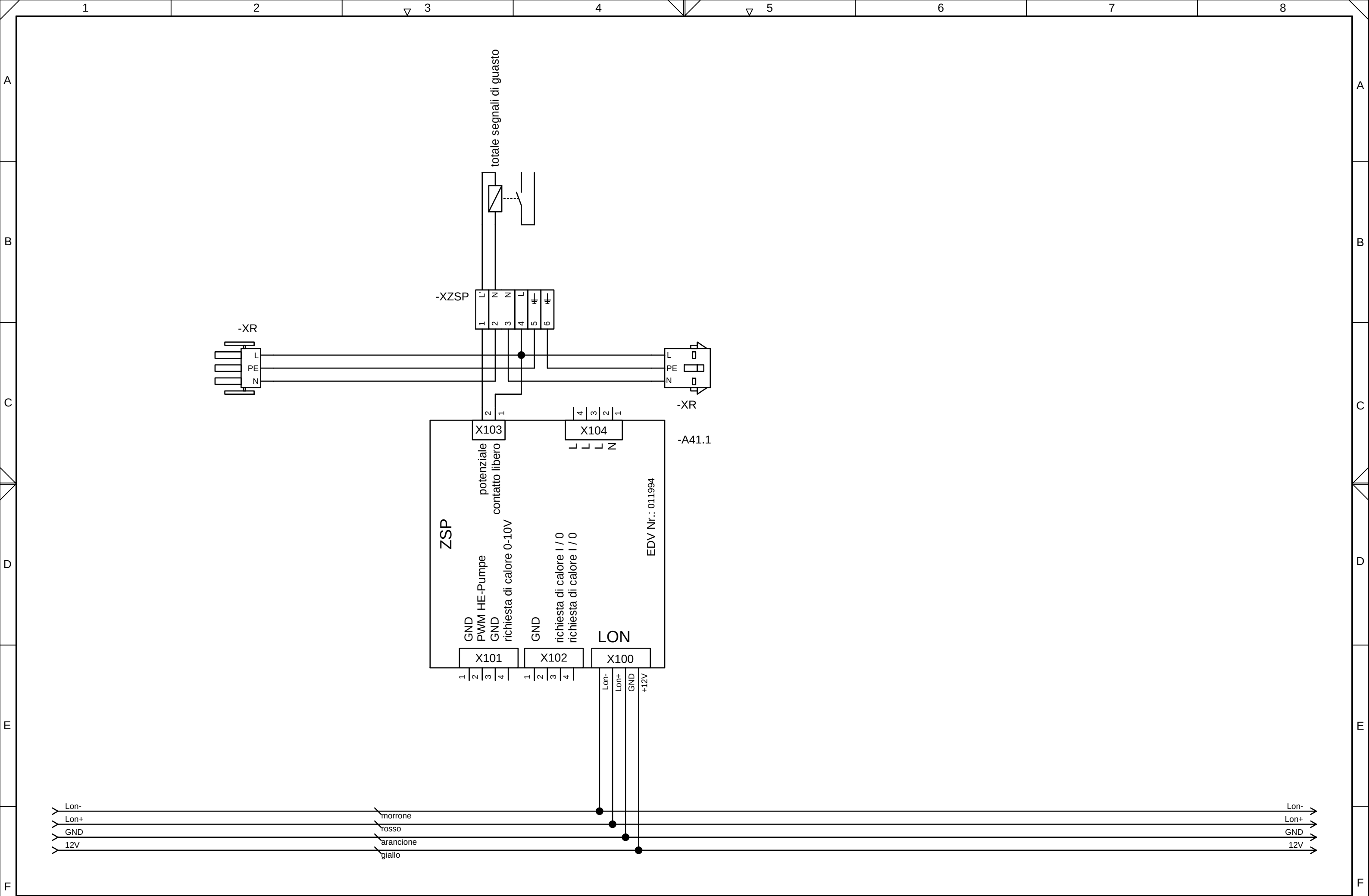
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	scheda aggiuntiva
L'	totale segnali di guasto
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	scheda aggiuntiva
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	
GND	

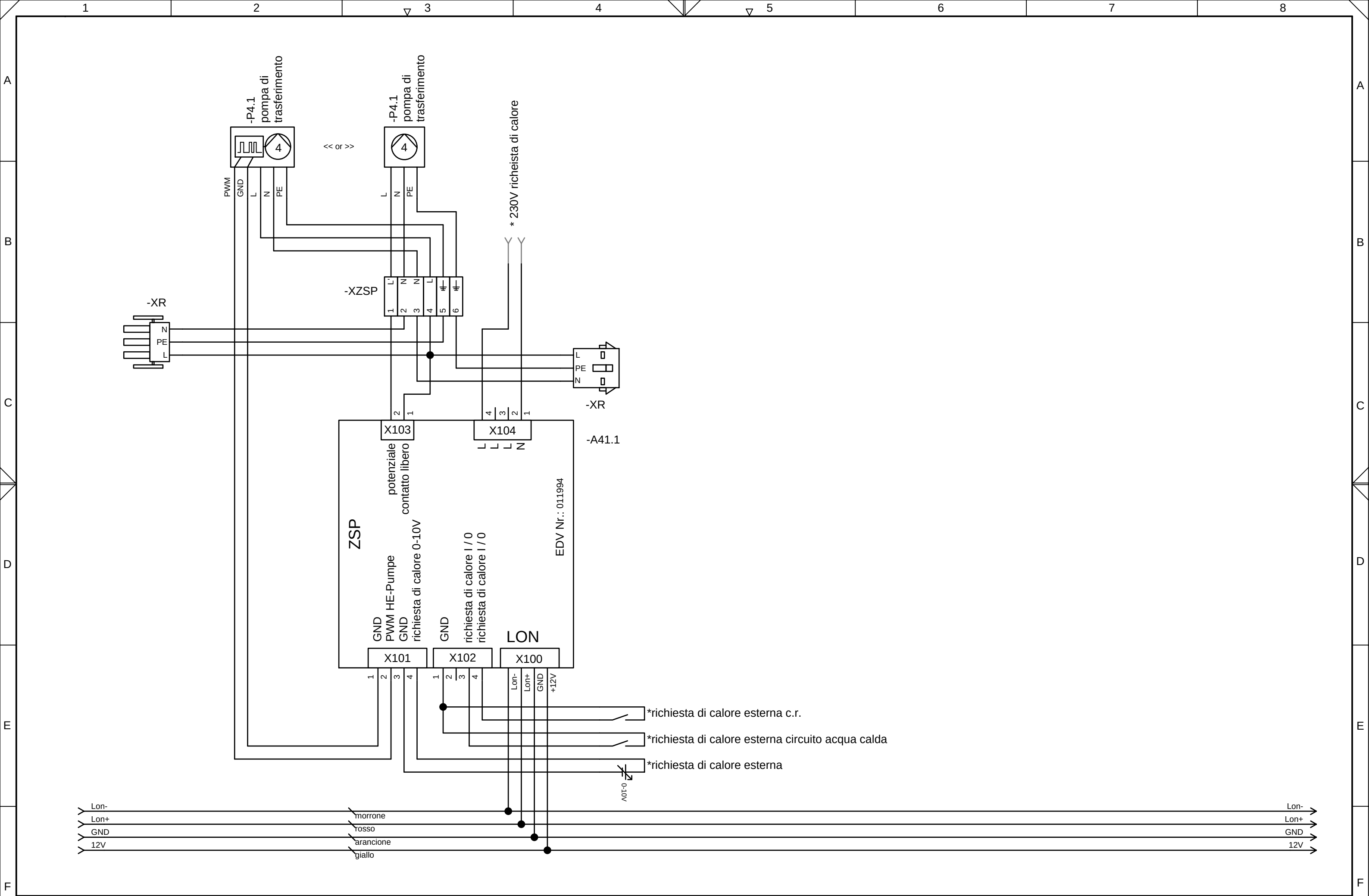


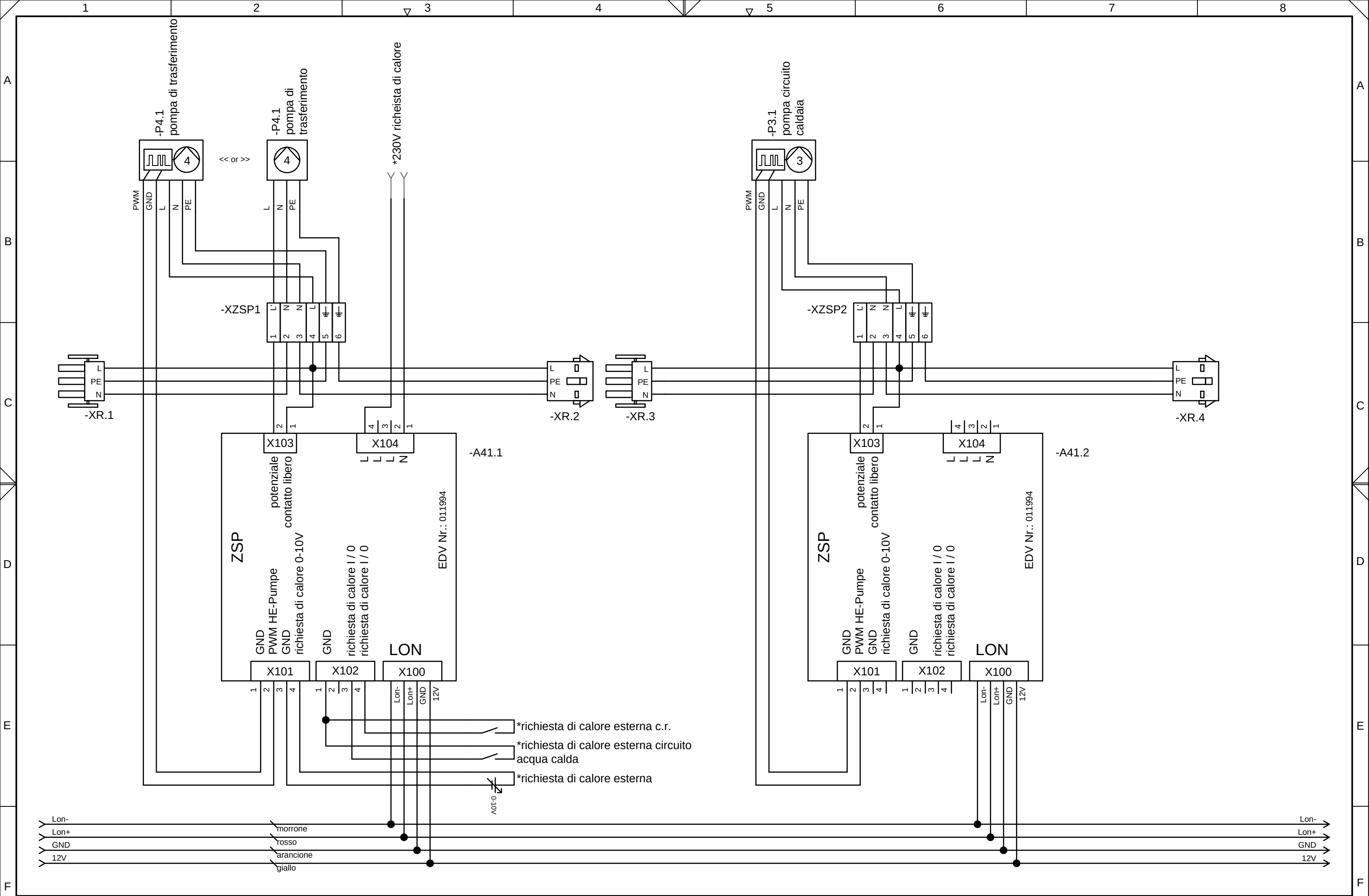
-XZSP	scheda aggiuntiva
L'	pompa di trasferimento
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	scheda aggiuntiva
-X102 /4	esterna-richiesta di calore c.r.
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /2	
GND	

-X101 /4	richeista di calore 0- 10V
GND	
-X101 /2	PWM pompa di
GND	trasferimento





-XZSP	scheda aggiuntiva
L'	
N	
N L	fase continua
PE PE	PE

EDV Nr. 094667/00

scheda aggiuntiva	-XSP
-X102 /4	
-X102 /3	
-X102 /2 GND	

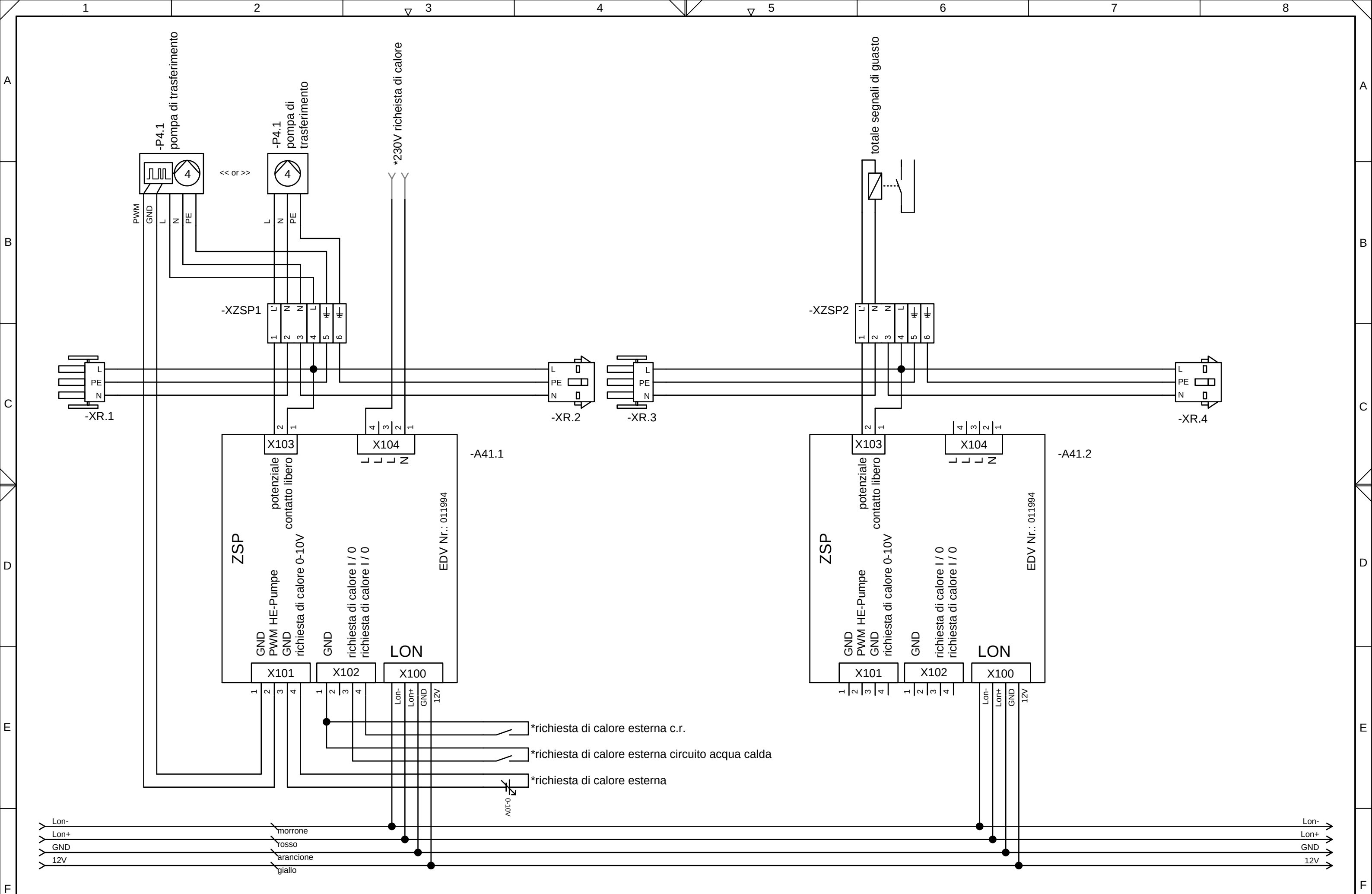
-X101 /4 GND	
-X101 /2 GND	PWM pompa circuito caldaia

-XZSP	scheda aggiuntiva
L'	pompa di trasferimento
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	scheda aggiuntiva
-X102 /4	esterna-richiesta di calore c.r.
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /2	
GND	

-X101 /4	richeista di calore 0- 10V
GND	
-X101 /2	PWM pompa di trasferimento
GND	



-XZSP	scheda aggiuntiva
L'	totale segnali di guasto
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	scheda aggiuntiva
-X102 /4	
-X102 /3	
-X102 /2	
GND	

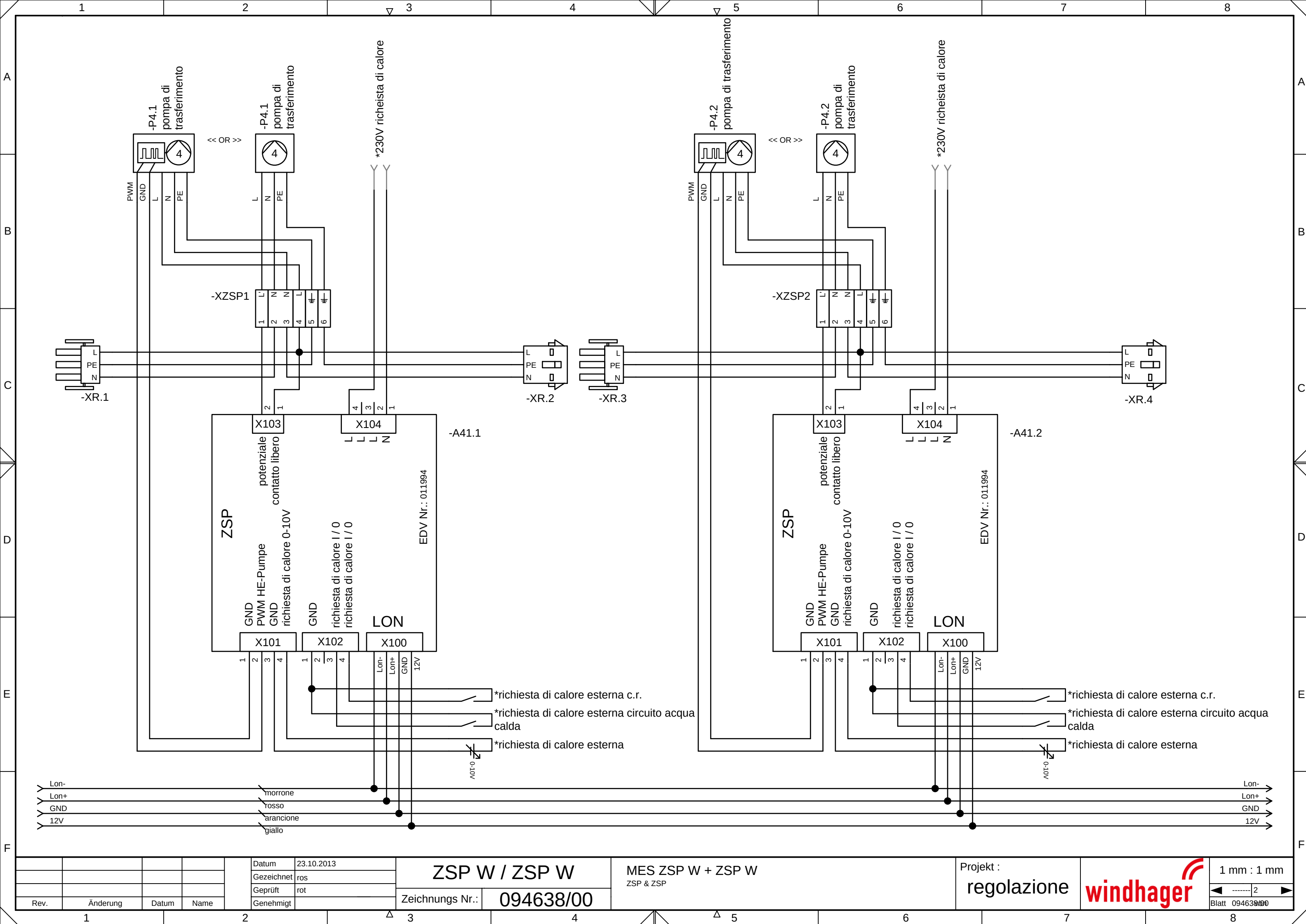
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	scheda aggiuntiva
L'	pompa di trasferimento
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	scheda aggiuntiva
-X102 /4	esterna-richiesta di calore c.r.
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /2	
GND	

-X101 /4	richeista di calore 0- 10V
GND	
-X101 /2	PWM pompa di trasferimento
GND	



-XZSP	scheda aggiuntiva
L'	pompa di trasferimento
N	
N	fase continua
L	
PE	PE
PE	

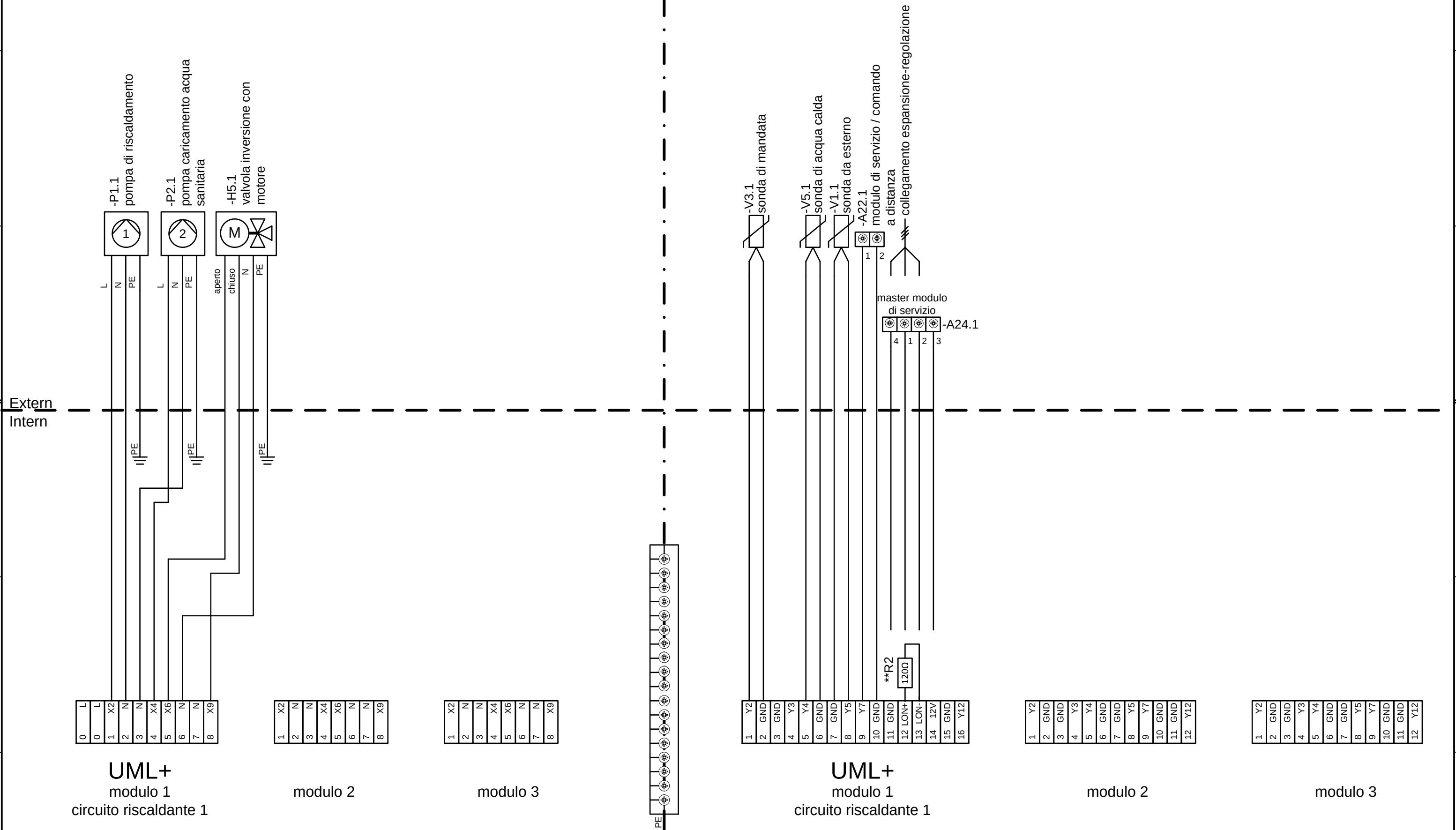
EDV Nr. 094672/00

-XSP	scheda aggiuntiva
-X102 /4	esterna-richiesta di calore c.r.
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /2	
GND	

-X101 /4	richeista di calore 0- 10V
GND	
-X101 /2	PWM pompa di trasferimento
GND	

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	UML+		MES H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092737/01				◀ ----- 2 ▶ Blatt 092737/01	

UML+	modulo 1 circuitto riscaldante 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 1 chiuso

	modulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092738/01

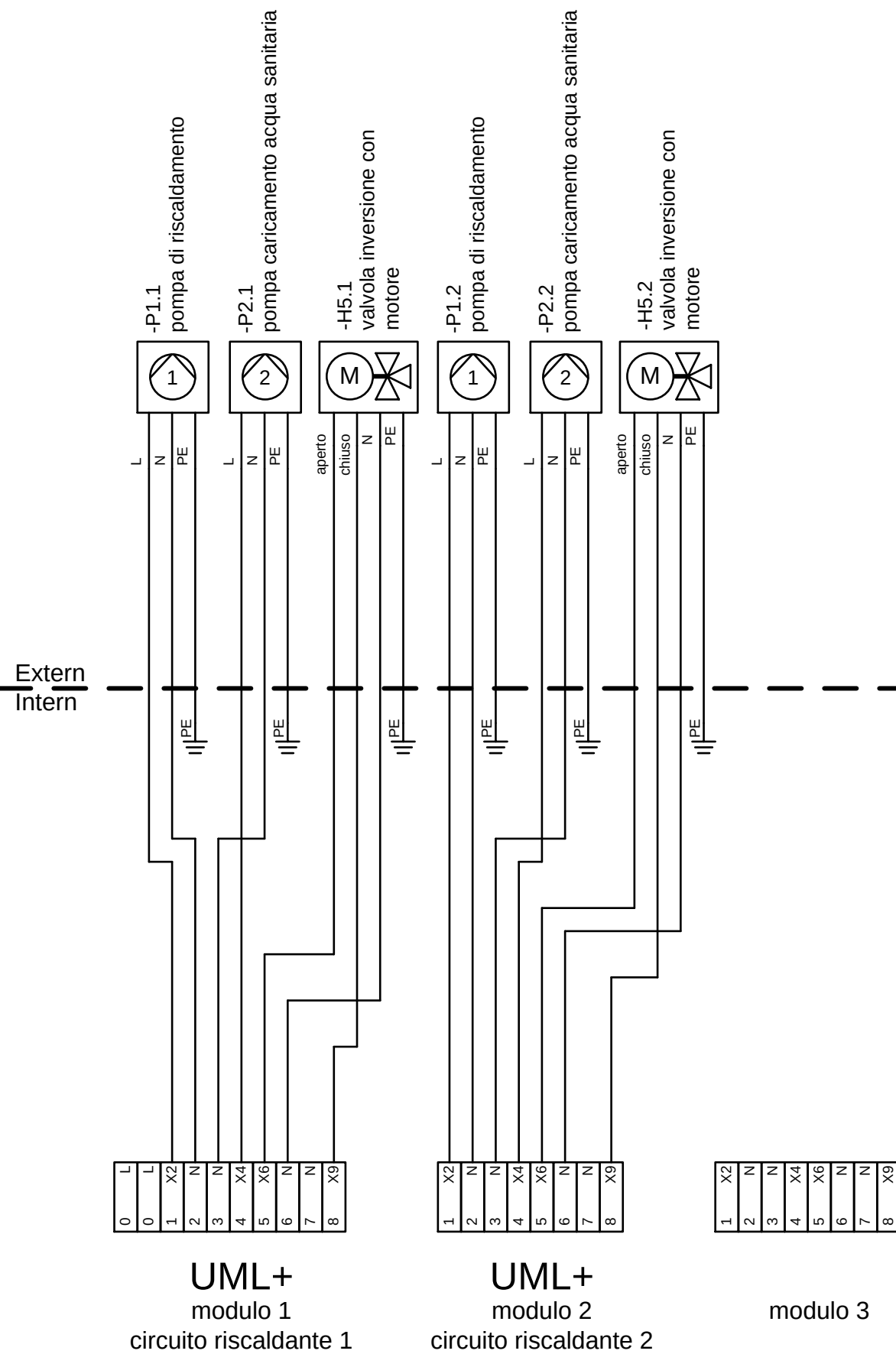
UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	master modulo di servizio
12 Lon+	collegamento
13 Lon-	espansione-
14 12V	regolazione
15 GND	
16 Y12	

	modulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

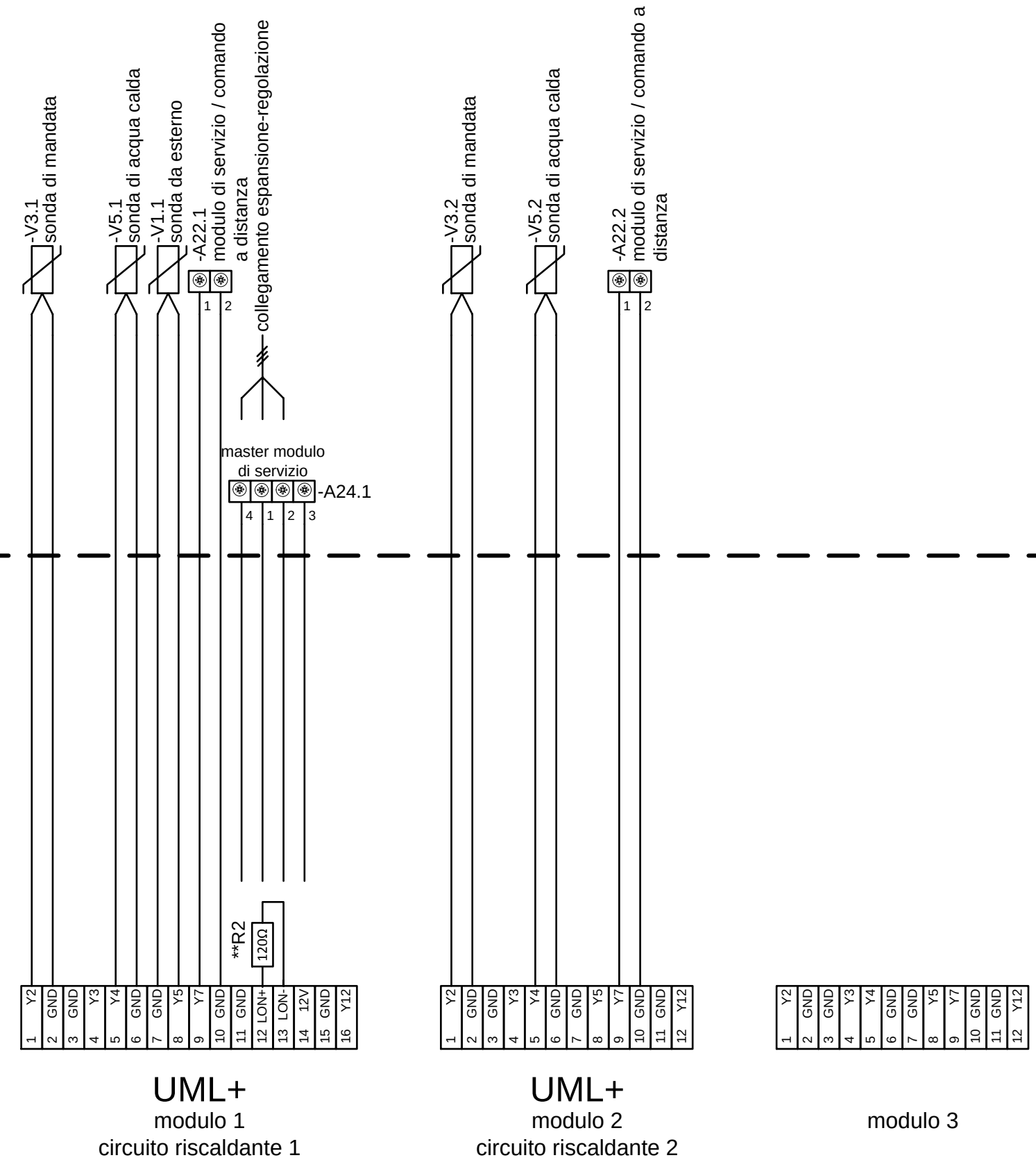
	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092738/01

bassa tensione 230 VAC



sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	04.07.2013	UML+/UML+		MES H021+H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092747/01				◀ ----- 2 ▶ Blatt 092747/01

UML+	modulo 1 circuitto riscaldante 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 1 chiuso
8 X9	

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 2 chiuso
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092748/01

UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione- regolazione
13 Lon-	
14 12V	
15 GND	
16 Y12	

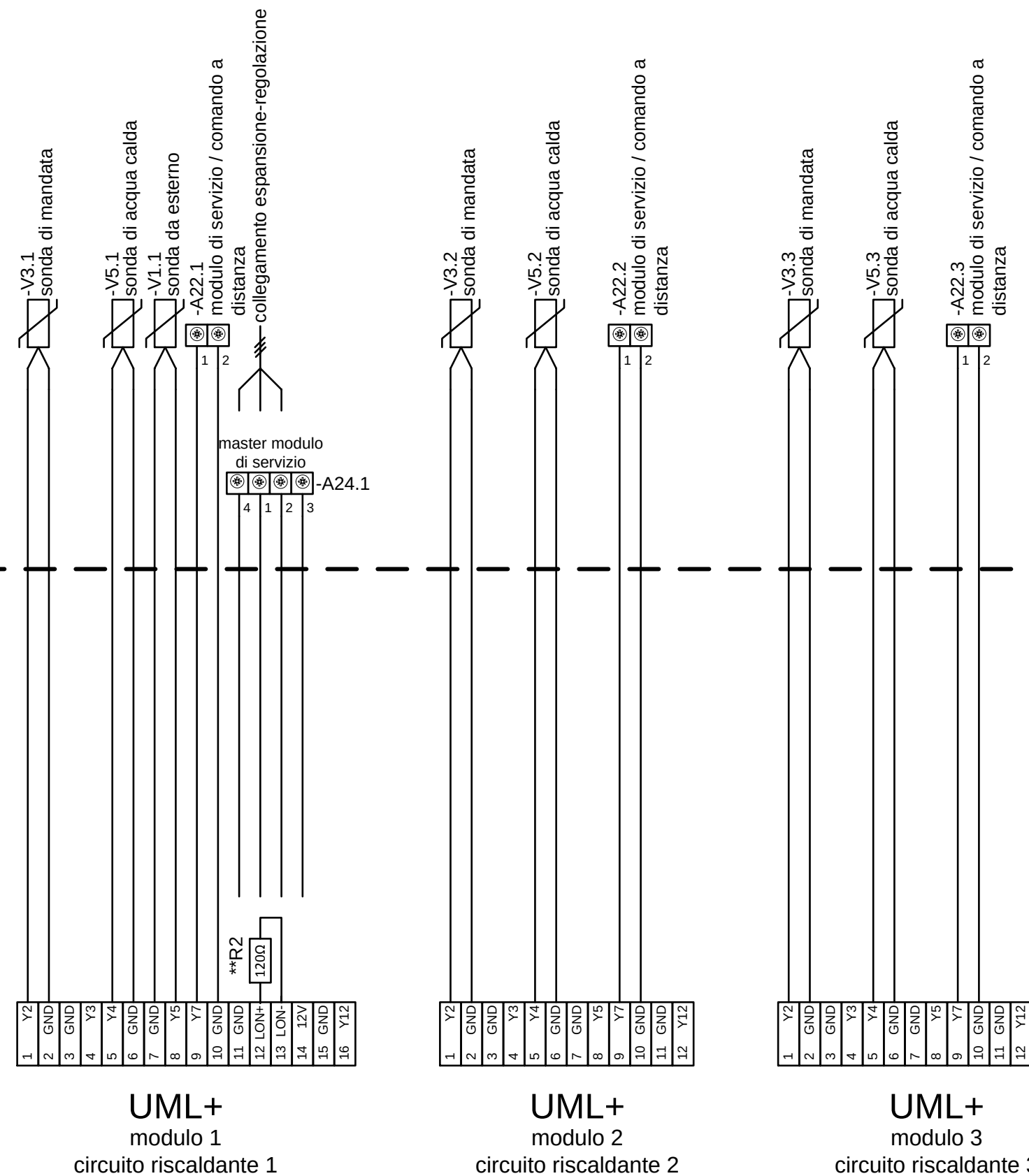
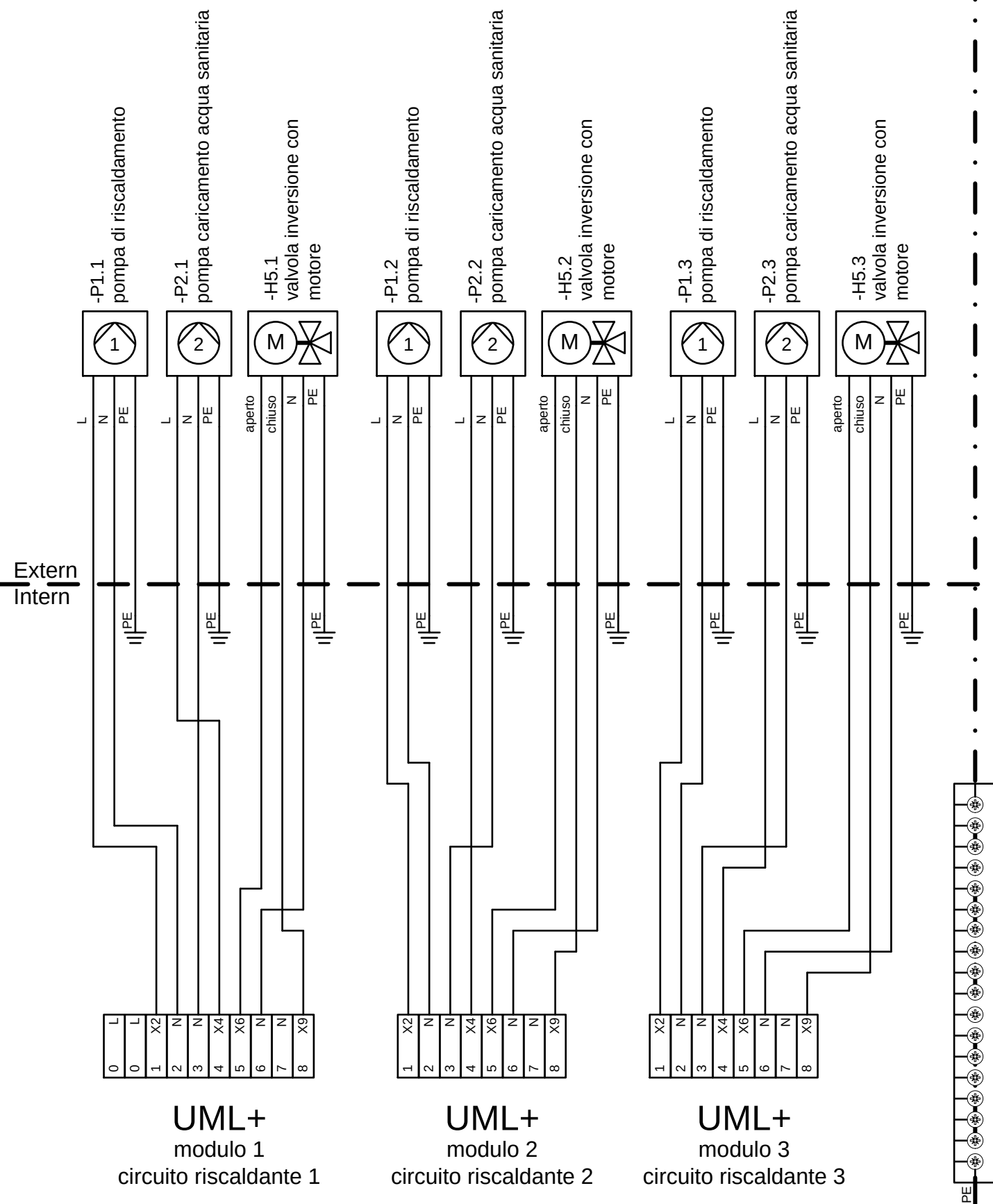
UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092748/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Rev.	Änderung	Datum	Name
1			

Datum	04.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

UML+/UML+/UML+	
Zeichnungs Nr.:	092750/01

MES H021 + H024 + H024
regolazione temperatura esterna per 3 circuito riscaldante a radiatore miscelato e circuiti acqua calda

Projekt :
regolazione



1 mm : 1 mm
2
Blatt 092750/01

UML+	modulo 1 circuitto riscaldante 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	pompa di riscaldamento c.r.1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 1 chiuso
8 X9	

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 2 chiuso
8 X9	

UML+	modulo 3 circuitto riscaldante 3
1 X2	pompa di riscaldamento c.r. 3
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 3
4 X4	
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 3 chiuso
8 X9	

092751/01

UML+	modulo 1 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento espansione- regolazione
13 Lon-	
14 12V	
15 GND	
16 Y12	

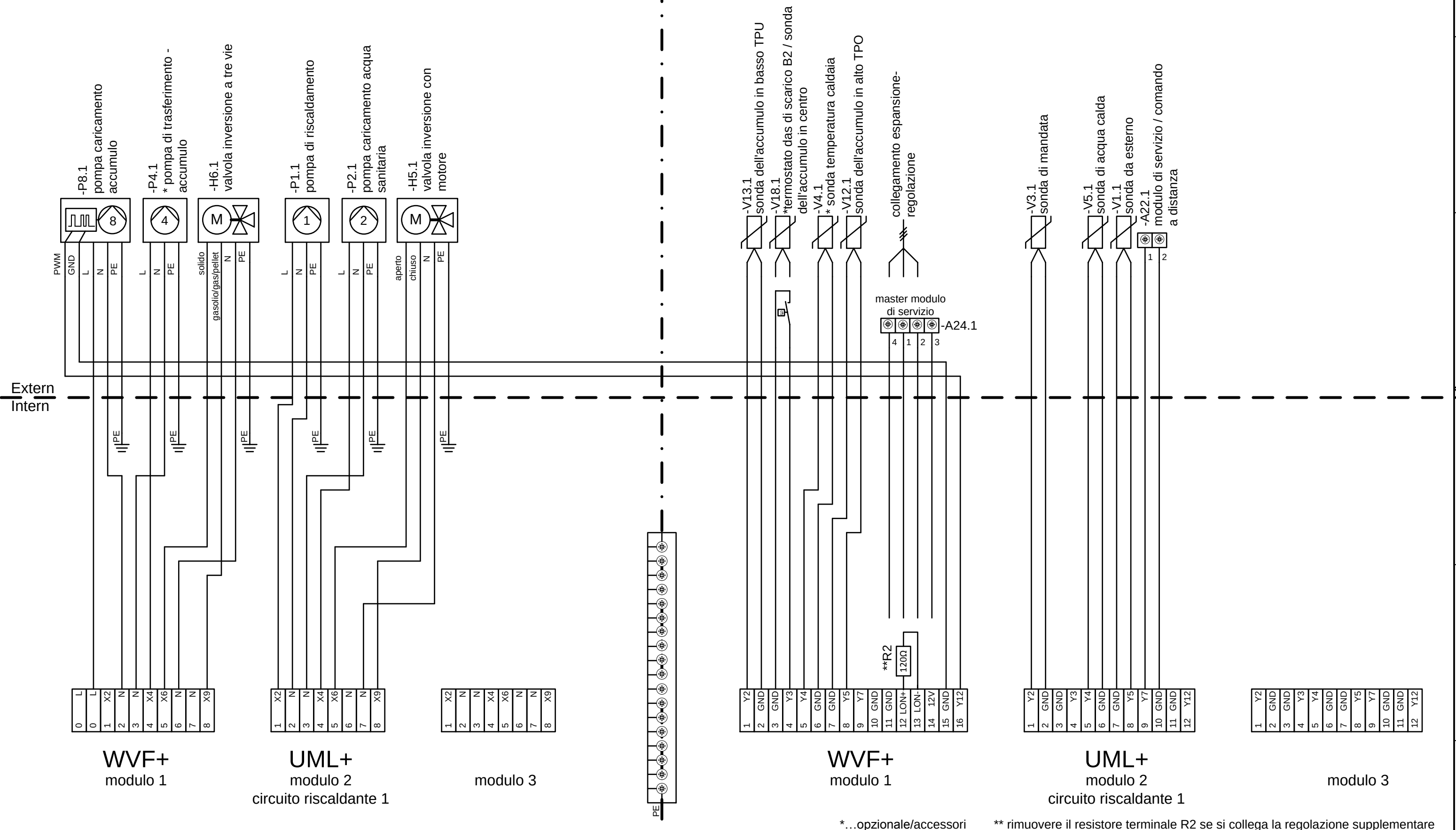
UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 3
1 Y2	sonda di mandata c.r. 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 3
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

092751/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	04.07.2013	WVF+/UML+		MES P041 + H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda commutazione automatica combustibili solidi con carica accumulo	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092840/01				Blatt 092840/01

WVF+	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	accumulo
5 X6	solido
6 N	valvola
7 N	inversione a tre vie
8 X9	gasolio/gas/pellet

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 1
	chiuso

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092842/01

WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso
2 GND	TPU
3 GND	*termostato d'as di scarico B2
4 Y3	sonda dell'accumulo in centro
5 Y4	*sonda temperatura
6 GND	caldaia
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento
13 Lon-	espansione-
14 12V	regolazione
15 GND	PWM pompa
16 Y12	caricamento accumulo

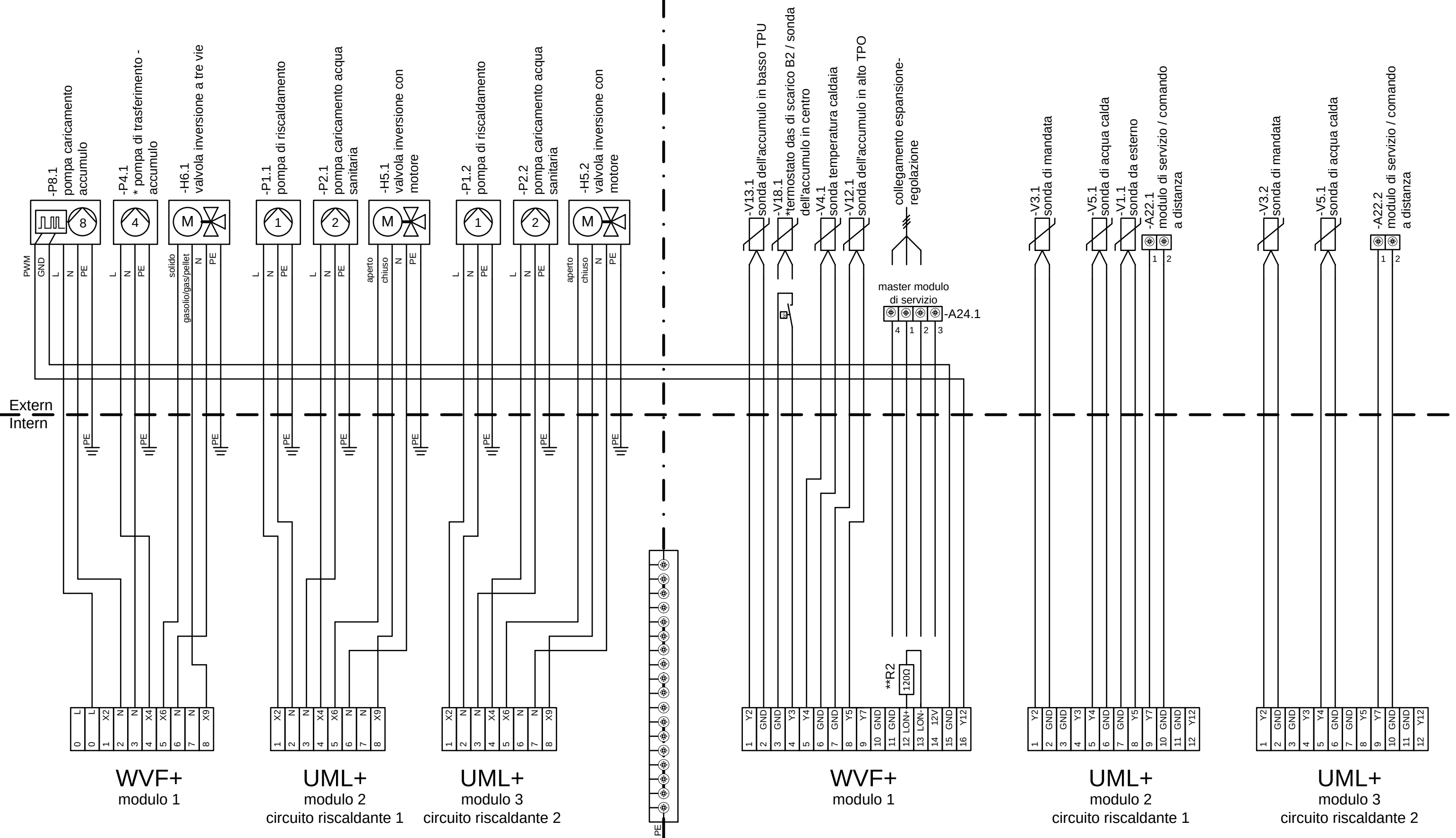
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata
2 GND	c.r. 1
3 GND	
4 Y3	
5 Y4	sonda di acqua calda
6 GND	c.r. 1
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092842/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	03.07.2013	WVF+/UML+/UML+		MES P041 + H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda commutazione automatica combustibili solidi con carica accumulo	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092847/01				Blatt 092847/01

WVF+	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	solido valvola
6 N	inversione a tre vie
7 N	
8 X9	gasolio/gas/pellet

UML+	modulo 2 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria
4 X4	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 1 chiuso

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria
4 X4	c.r. 2
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 2 chiuso

092848/01

WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso
2 GND	TPU
3 GND	*termostato das di scarico B2 /
4 Y3	sonda dell'accumulo in centro
5 Y4	* sonda della caldaia
6 GND	
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento
13 Lon-	espansione-
14 12V	regolazione
15 GND	PWM pompa
16 Y12	caricamento accumulo

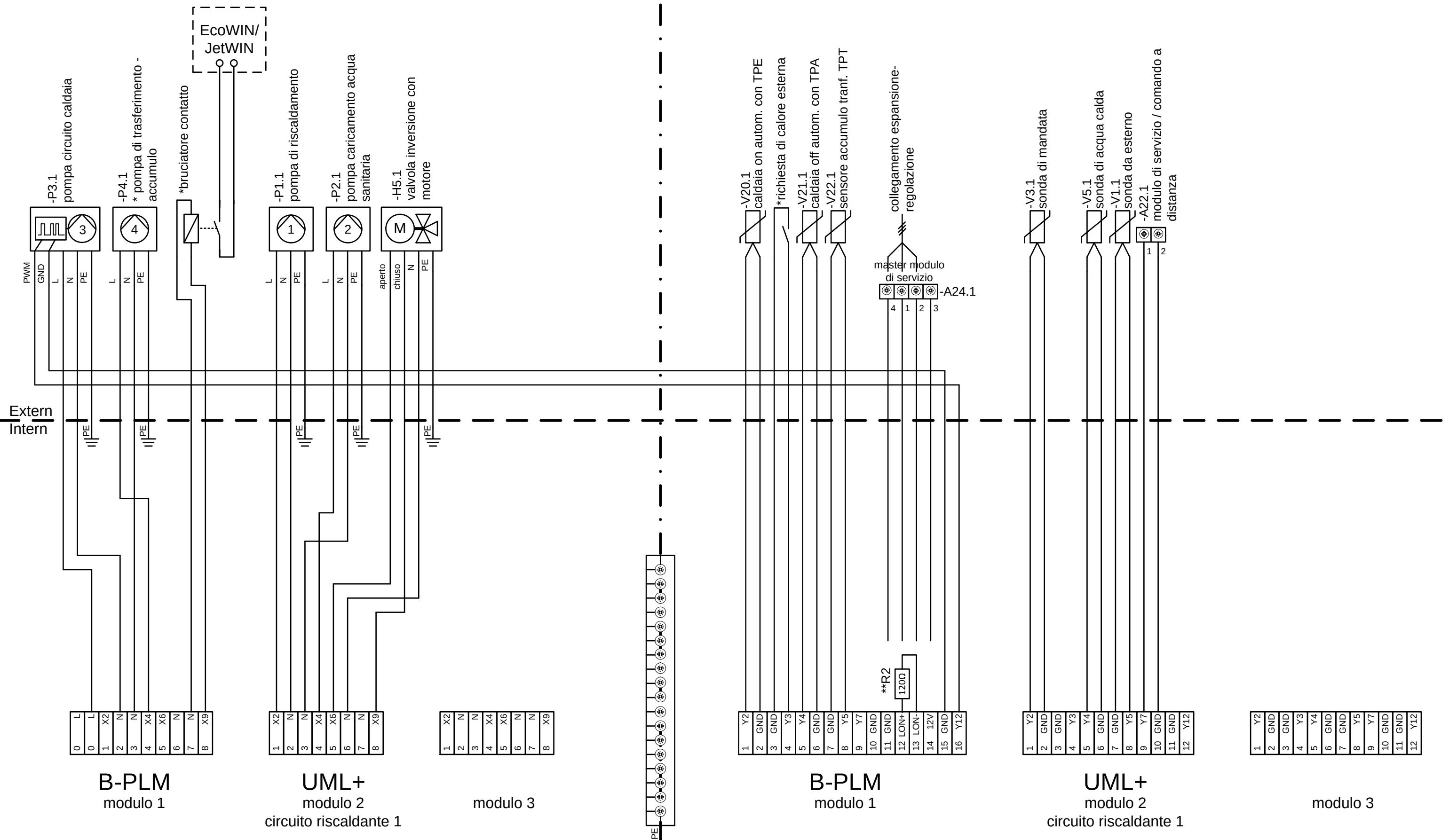
UML+	modulo 2 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

092848/01

bassa tensione 230 VAC

sonda bassissima tensione



B-PLM	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	*bruciatore contatto
8 X9	

UML+	modulo 2
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	valvola inversione con motore
6 N	
7 N	
8 X9	

	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092851/01

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

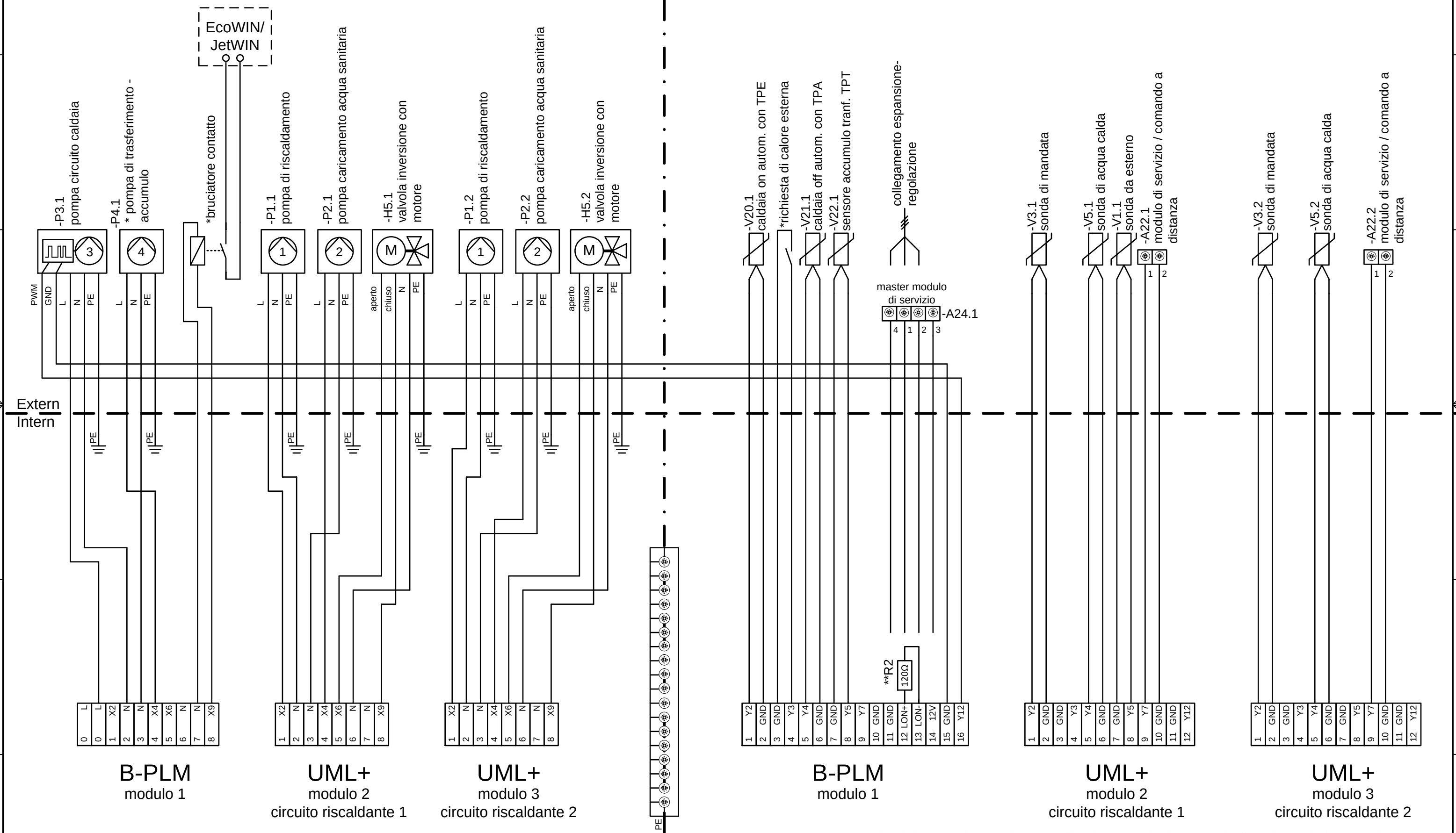
UML+	modulo 2
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092851/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda e modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092850/01					
												Blatt 092850/01

B-PLM	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	*bruciatore contatto
8 X9	

UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	valvola inversione con motore
6 N	
7 N	
8 X9	

UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 2
4 X4	
5 X6	valvola inversione con motore
6 N	
7 N	
8 X9	c.r. 2 chiuso

092851/01

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

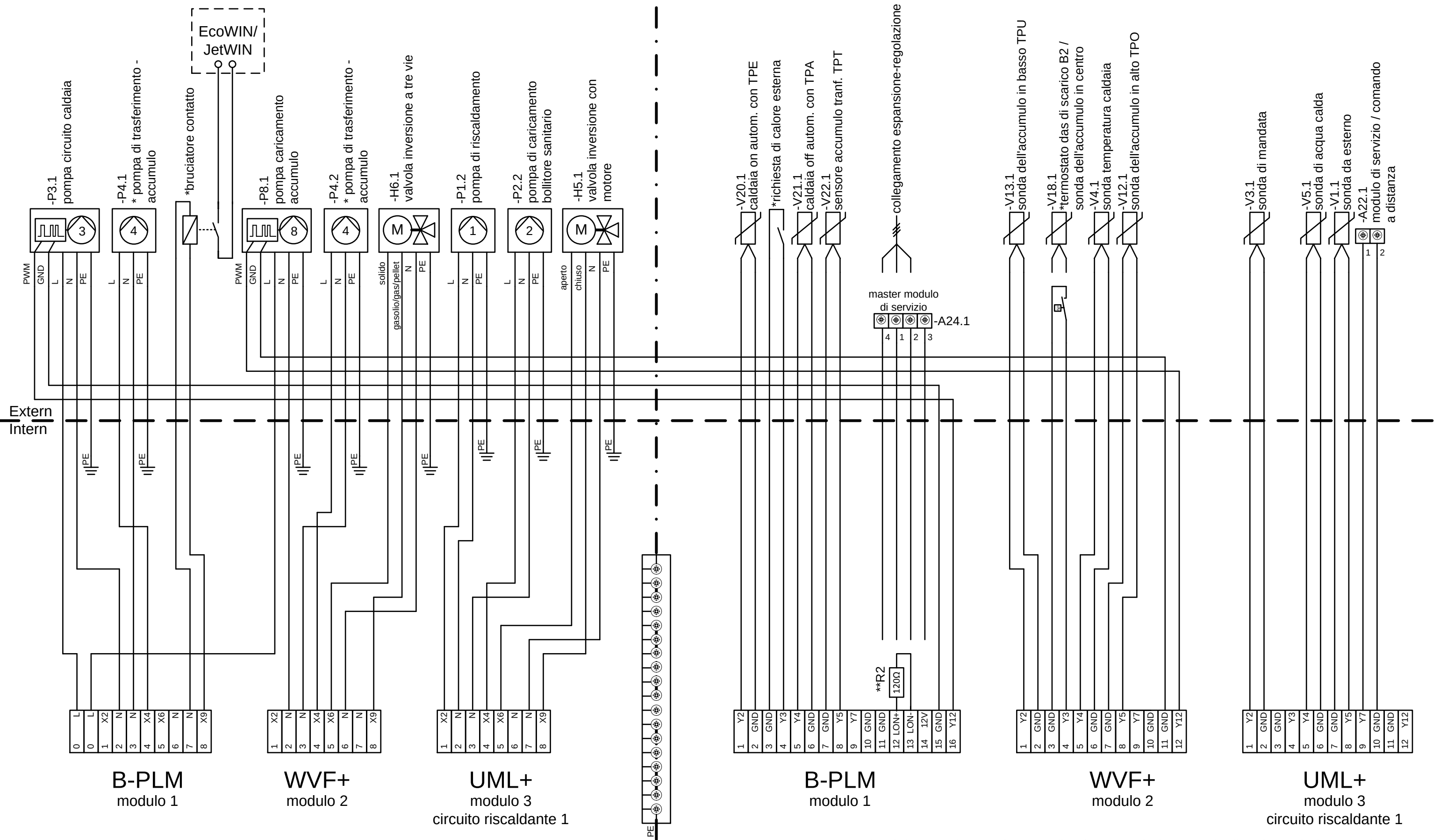
UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 2
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

092851/01

bassa tensione 230 VAC

sonda bassissima tensione



B-PLM
modulo 1

WVF+
modulo 2

UML+
modulo 3
circuitto riscaldante 1

B-PLM
modulo 1

WVF+
modulo 2

UML+
modulo 3
circuitto riscaldante 1

*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	04.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e circuiti acqua calda e un modulo per combustibili solidi WVF+ e modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092844/01				

B-PLM	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	*bruciatore contatto
8 X9	

WVF+	modulo 2
1 X2	
2 N	
3 N	*pompa di trasferimento accumulo
4 X4	
5 X6	solido valvola
6 N	inversione a tre vie
7 N	
8 X9	gasolio/gas/pellet

UML+	modulo 3 circuiti riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria
4 X4	c.r. 1
5 X6	aperto valvola inversione con motore
6 N	
7 N	c.r. 1
8 X9	chiuso

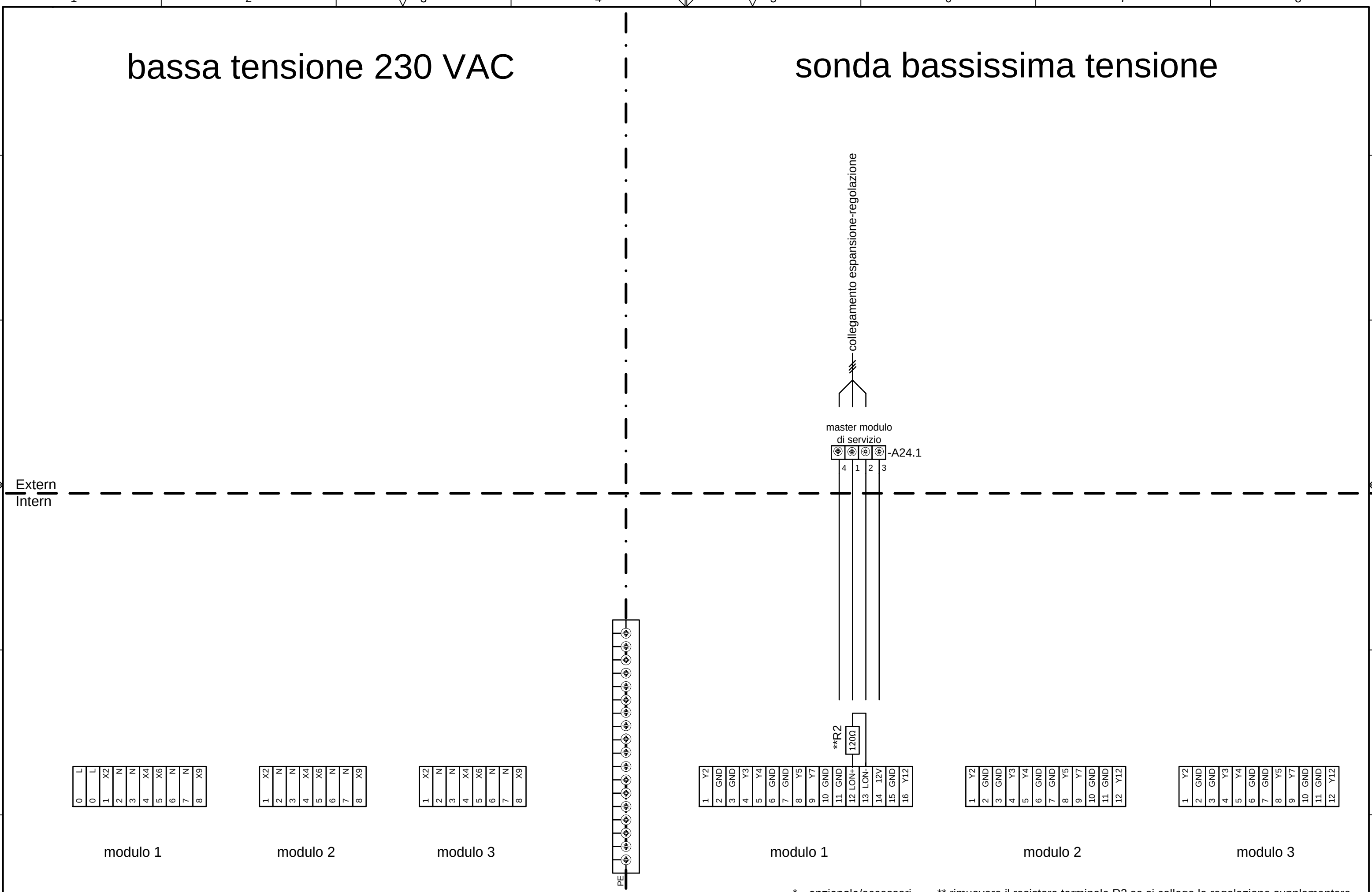
092845/01

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento
13 Lon-	espansione-
14 12V	regolazione
15 GND	PWM pompa circuito caldaia
16 Y12	

WVF+	modulo 2
1 Y2	accumulo in basso TPU
2 GND	
3 GND	*termostato das di scarico B2
4 Y3	sonda dell'accumulo in centro
5 Y4	*sonda temperatura caldaia
6 GND	
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM pompa
12 Y12	caricamento accumulo

UML+	modulo 3 circuiti riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

092845/01



1	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	modulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	modulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092735/01

1	modulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	master modulo di servizio collegamento espansione-regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	modulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

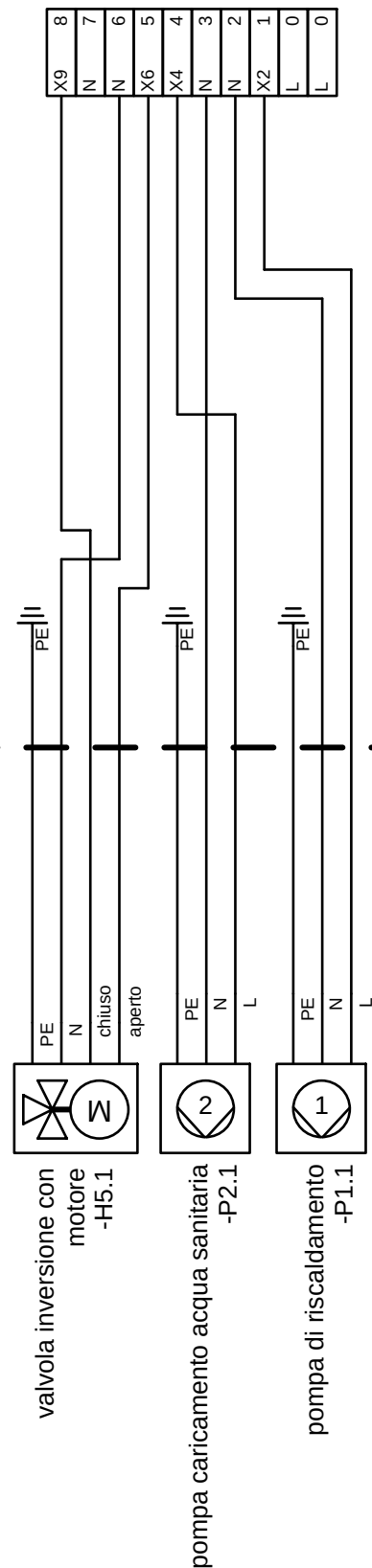
3	modulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092735/01

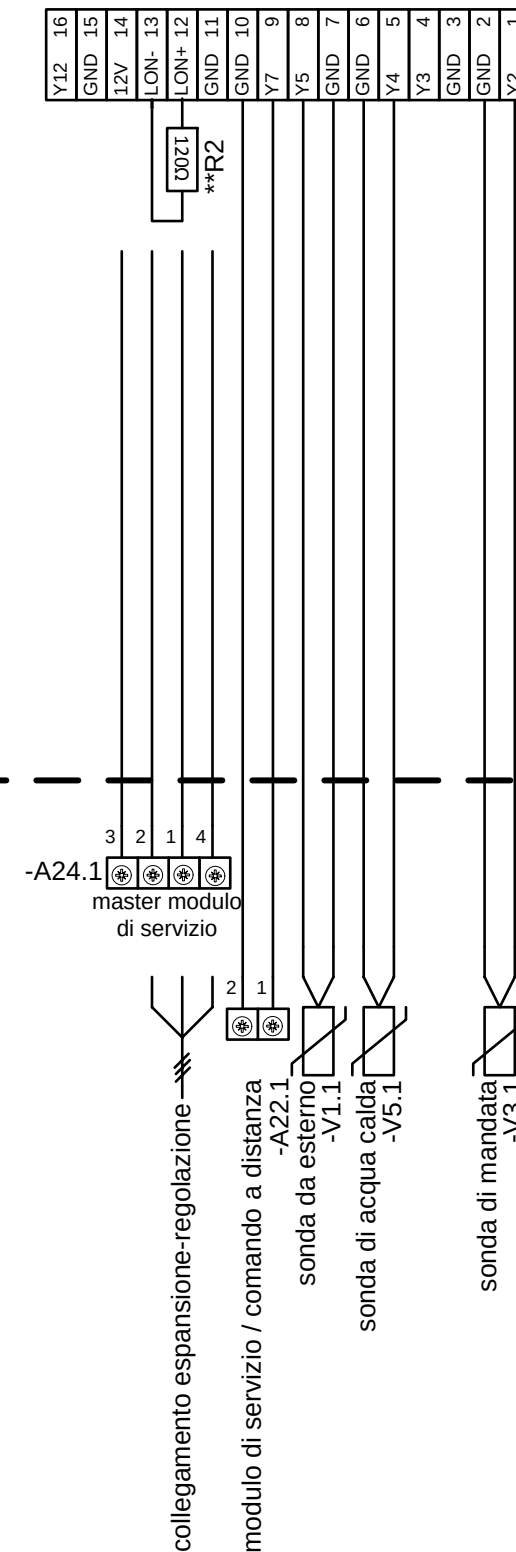
bassa tensione 230 VAC

sonda bassissima tensione

UML+
modulo 1
circuito riscaldante 1



UML+
modulo 1
circuito riscaldante 1



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	17.07.2013	UML+		MES H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot	Zeichnungs Nr.: 092722/01					◀ ----- 2 ▶
Rev.	Änderung	Datum	Name	Genehmigt							
Blatt 092722/01											

UML+	modulo 1 circuitò riscaldante 1
c.r. 1	8 X9
chiuso	7 N
aperto	6 N
valvola inversione con motore	5 X6
pompa caricamento acqua sanitaria	4 X4
c.r. 1	3 N
pompa di riscaldamento	2 N
c.r. 1	1 X2
fase continua 2	0 L
fase continua 1	0 L

092723/01

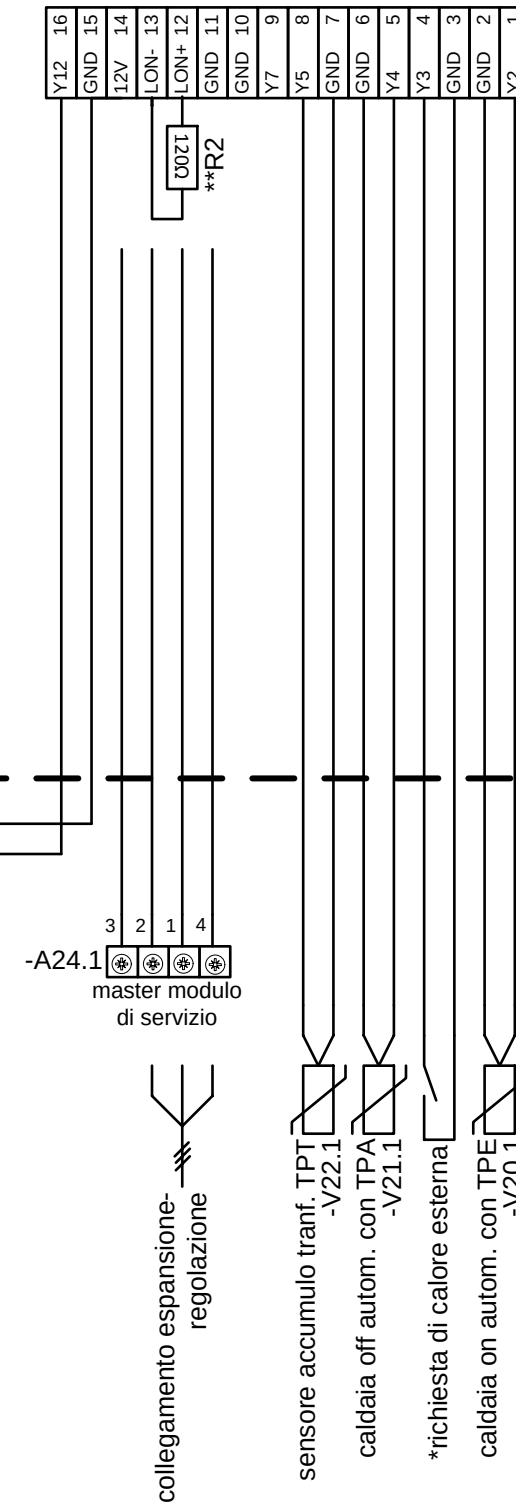
UML+	modulo 1 circuitò riscaldante 1
	16 Y12 15 GND
master modulo di servizio collegamento espansione-regolazione	14 12V 13 Lon- 12 Lon+ 11 GND
modulo di servizio comando a distanza	10 GND 9 Y7
sonda da esterno	8 Y5 7 GND
sonda di acqua calda c.r. 1	6 GND 5 Y4
	4 Y3 3 GND
sonda di mandata c.r. 1	2 GND 1 Y2

092723/01

sonda bassissima tensione

B-PLM

modulo 1



** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	17.07.2013	B-PLM		MES P042 e modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092722/01				◀ ----- 2 ▶ Blatt 092905/01	

B-PLM	modulo 1
*bruciatore contatto	8 X9 7 N
	6 N 5 X6
pompa di trasferimento	4 X4 3 N
	2 N
	1 X2
fase continua 2	0 L
fase continua 1	0 L

092906/01

B-PLM	modulo 1
PWM pompa circuito caldaia	16 Y12 15 GND
master modulo di servizio collegamento espansione-regolazione	14 12V 13 Lon- 12 Lon+ 11 GND
	10 GND 9 Y7
sensore accumulo tranf. TPT	8 Y5 7 GND
caldaia off autom. con TPA	6 GND 5 Y4
*richiesta di calore esterna	4 Y3 3 GND
caldaia on autom. con TPE	2 GND 1 Y2

092906/01

bassa tensione 230 VAC

piastra cieca
modulo 1
circuito riscaldante

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

sonda bassissima tensione

piastra cieca
modulo 1
circuito riscaldante

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

120Ω
**R2

3 2 1 4
-A24.1
master modulo
di servizio

collegamento espansione-regolazione

Extern
Intern

*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	17.07.2013	senza regolazione Windhager MES senza regolazione Windhager MES		Projekt : regolazione				1 mm : 1 mm Blatt 092725/01	
				Gezeichnet	ros								
				Geprüft	rot								
Rev.	Änderung	Datum	Name	Genehmigt									
1		2		3		Zeichnungs Nr.: 092725/01		4		5		6	
7		8		9		10		11		12		13	

1	modulo 1
X9	8 X9 7 N
X6	6 N 5 X6
X4	4 X4 3 N
X2	2 N 1 X2
fase continua 2 0 L	
fase continua 1 0 L	

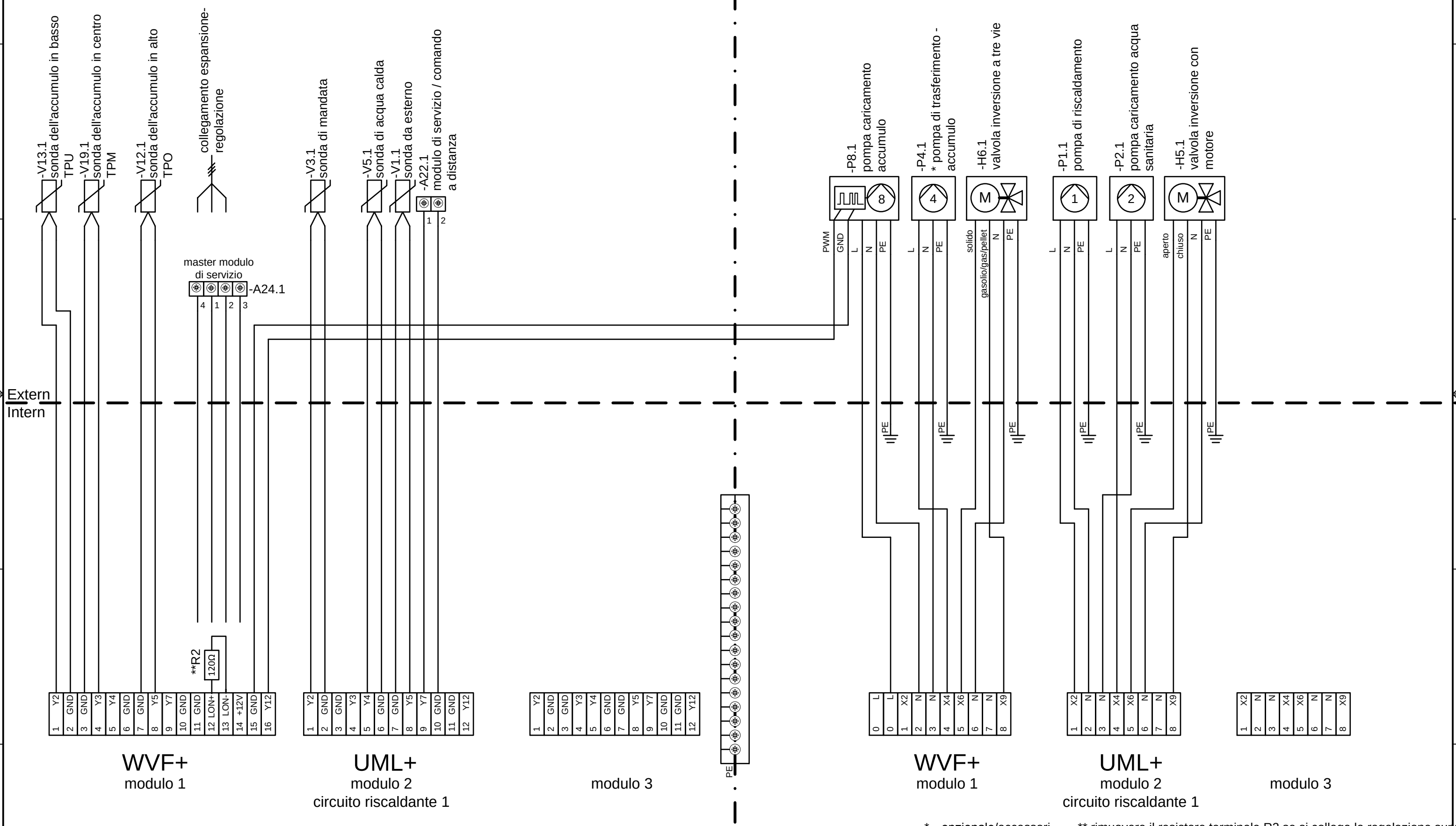
092726/01

1	modulo 1
Y12	16 Y12 15 GND
master modulo di servizio collegamento espansione- regolazione	14 12V 13 Lon- 12 Lon+ 11 GND
Y7	10 GND 9 Y7
Y5	8 Y5 7 GND
Y4	6 GND 5 Y4
Y3	4 Y3 3 GND
Y2	2 GND 1 Y2

092726/01

sonda bassissima tensione

bassa tensione 230 VAC



-XS	dispositivo di sicurezza
L	mancanza di acqua comando di sicurezza (Germania)
L	
WVF+	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	solido valvola inversione a tre vie
2 N	
3 N	
4 X4	
5 X6	
6 N	gasolio/gas/pellet
7 N	
8 X9	
UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	
5 X6	Aperta valvola inversione con motore c.r. 1 chiuso
6 N	
7 N	
8 X9	
	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	092814/01
6 N	
7 N	
8 X9	

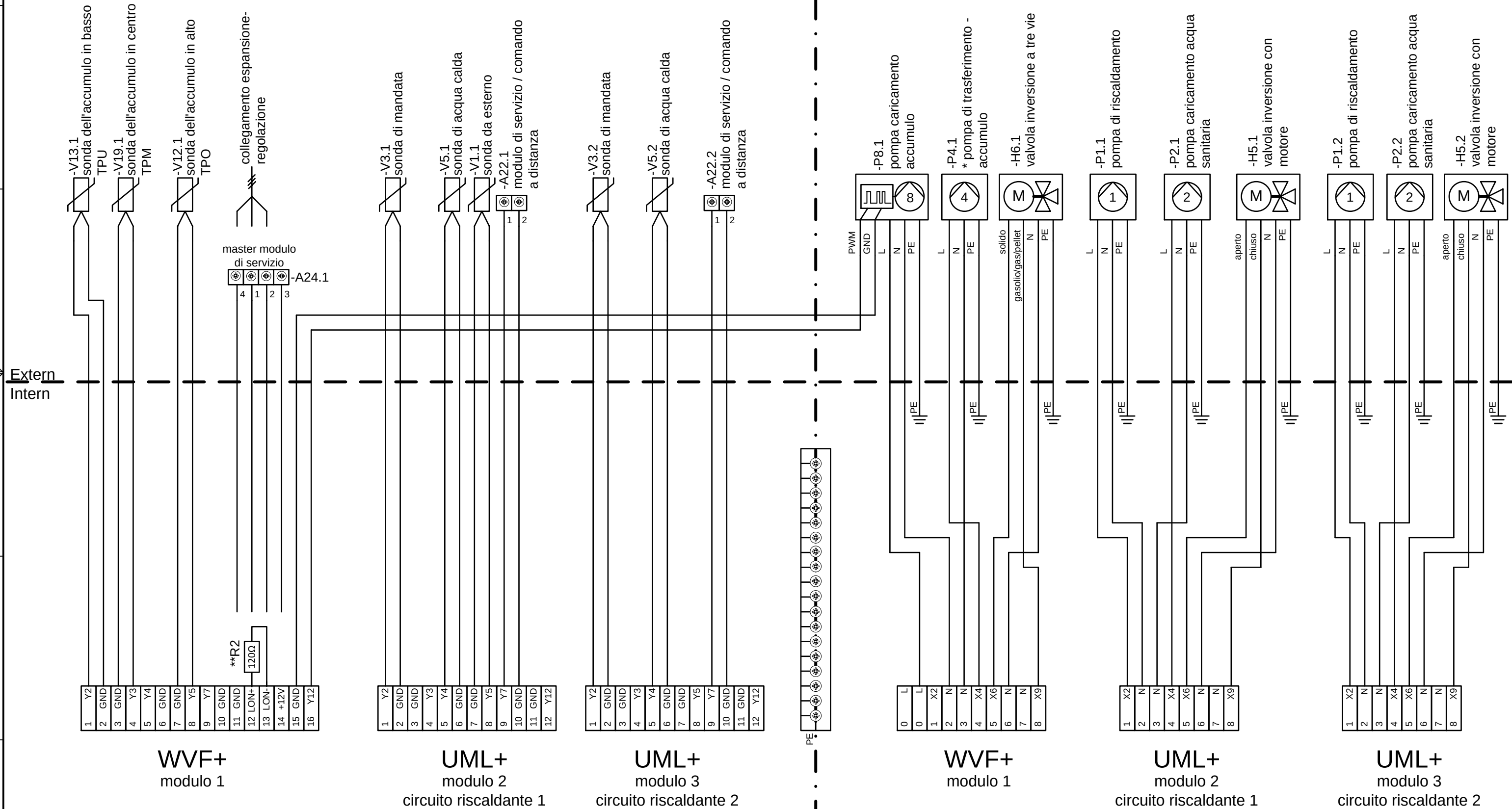
WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso TPU
2 GND	
3 GND	*sonda dell'accumulo in centro TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sonda dell'accumulo in alto TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione- regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa caricamento accumulo
16 Y12	

UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

sonda bassissima tensione

bassa tensione 230 VAC



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	WVF+/UML+/UML+		MES LW021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda commutazione automatica combustibili solidi con carica accumulo	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092816/01				Blatt 092816/01

-XS	dispositivo di sicurezza
L	mancanza di acqua
L	comando di sicurezza (Germania)
WVF+	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento-
4 X4	accumulo
5 X6	solido
6 N	valvola
7 N	inversione a tre vie
8 X9	gasolio/gas/pellet
UML+	modulo 2 circuitto riscaldante 1
1 X2	pompa di riscaldamento
2 N	c.r. 1
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 1
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 1 chiuso
UML+	modulo 3 circuitto riscaldante 2
1 X2	pompa di riscaldamento
2 N	c.r. 2
3 N	pompa caricamento
4 X4	acqua sanitaria
	c.r. 2
5 X6	aperto
6 N	valvola inversione con motore
7 N	
8 X9	c.r. 2 chiuso

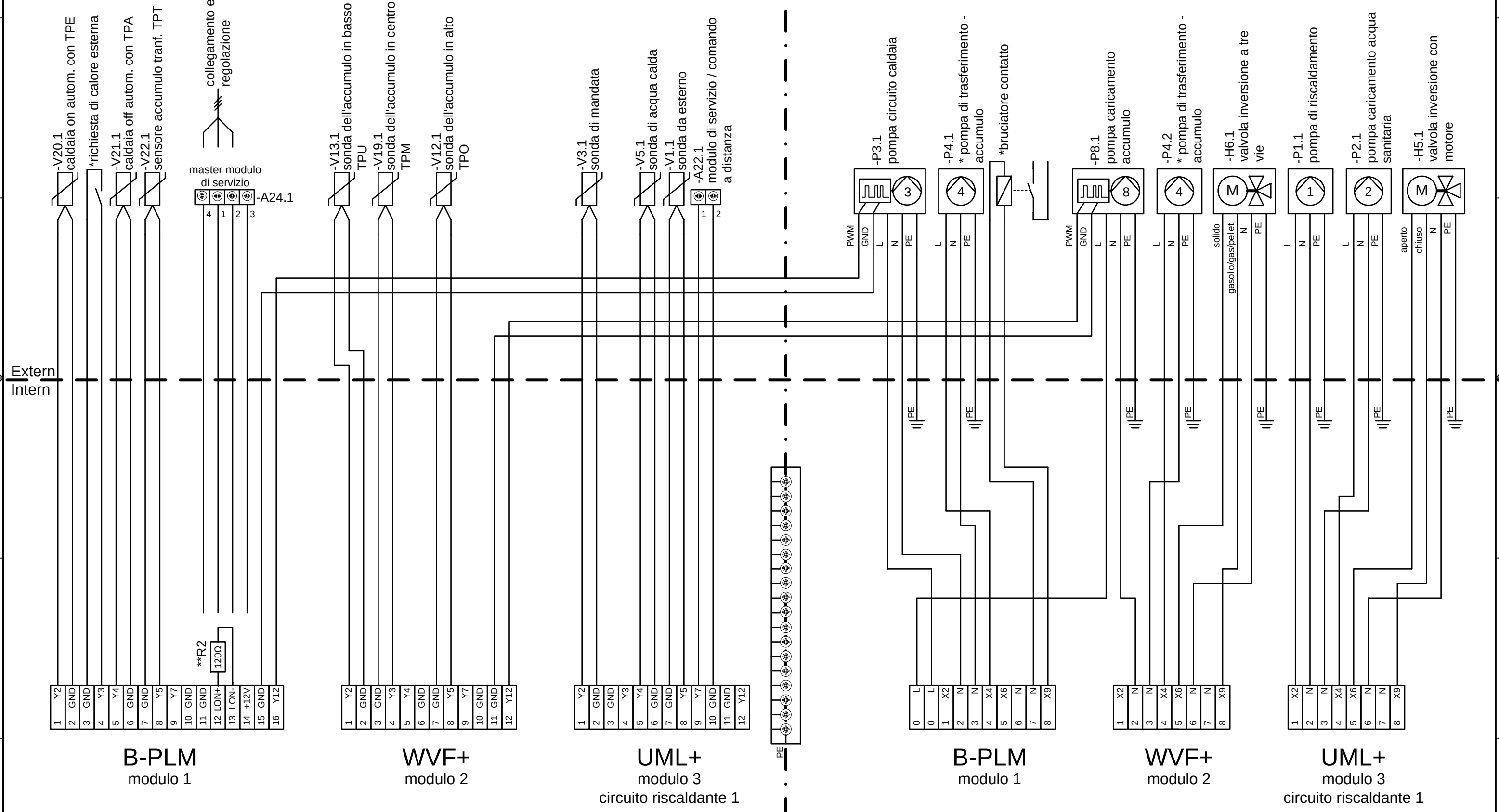
WVF+	modulo 1
1 Y2	sonda dell'accumulo in basso
2 GND	TPU
3 GND	*sonda dell'accumulo in centro
4 Y3	TPM
5 Y4	
6 GND	
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	collegamento
13 Lon-	espansione-
14 12V	regolazione
15 GND	PWM pompa
16 Y12	caricamento accumulo

UML+	modulo 2 circuitto riscaldante 1
1 Y2	sonda di mandata
2 GND	c.r. 1
3 GND	
4 Y3	
5 Y4	sonda di acqua
6 GND	calda c.r. 1
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio
10 GND	Fernsteller
11 GND	
12 Y12	

UML+	modulo 3 circuitto riscaldante 2
1 Y2	sonda di mandata
2 GND	c.r. 2
3 GND	
4 Y3	
5 Y4	sonda di acqua
6 GND	calda c.r. 2
7 GND	
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

sonda bassissima tensione

bassa tensione 230 VAC



-XS	dispositivo di sicurezza
L	mancanza di acqua comando di sicurezza (Germania)
L	
B-PLM	Modul 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	accumulo
5 X6	
6 N	
7 N	
8 X9	*bruciatore contatto

B-PLM	Modul 1
1 Y2	*caldaia on autom. con TPE
2 GND	
3 GND	*richiesta di calore esterna
4 Y3	
5 Y4	*caldaia off autom. con TPA
6 GND	
7 GND	*sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio
12 Lon+	estensione collegamento-
13 Lon-	regolazione
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

WVF+	modulo 2
1 X2	
2 N	
3 N	*pompa di trasferimento
4 X4	accumulo
5 X6	solido valvola
6 N	inversione a tre vie
7 N	
8 X9	gasolio/gas/pellet

WVF+	modulo 2
1 Y2	sonda dell'accumulo in basso
2 GND	TPU
3 GND	*sonda dell'accumulo in centro
4 Y3	TPM
5 Y4	
6 GND	
7 GND	sonda dell'accumulo in alto
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM pompa
12 Y12	caricamento accumulo

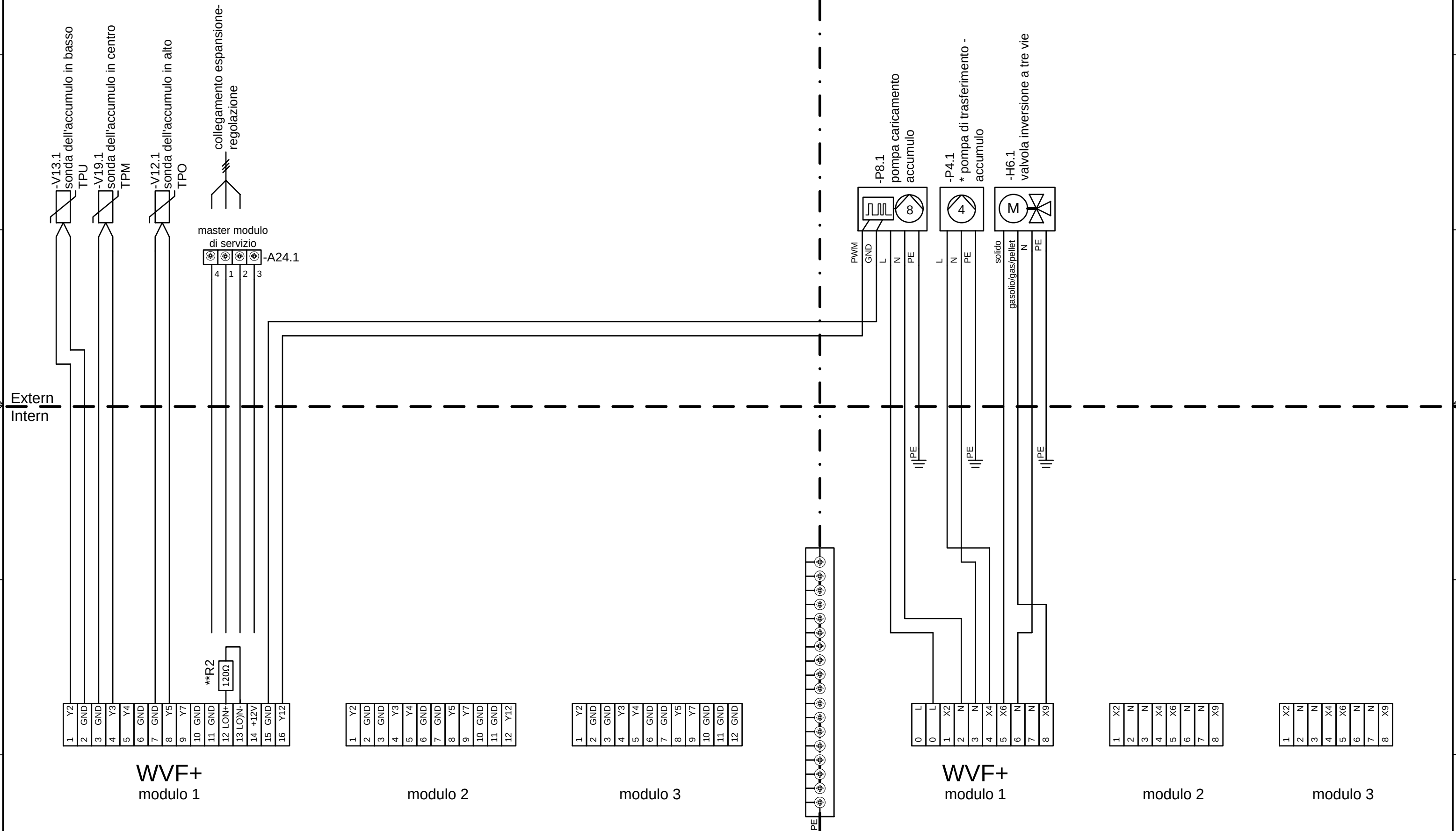
UML+	modulo 3 circuito riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	pompa caricamento acqua sanitaria c.r. 1
4 X4	aperto
5 X6	valvola inversione con motore
6 N	
7 N	c.r. 1
8 X9	chiuso

UML+	modulo 3 circuito riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	sonda da esterno
8 Y5	
9 Y7	modulo di servizio
10 GND	comando a distanza
11 GND	
12 Y12	

092811/01

sonda bassissima tensione

bassa tensione 230 VAC



-XS	dispositivo di sicurezza
L	mancanza di acqua comando di sicurezza (Germania)
L	
WVF+	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	solido valvola inversione a tre vie
2 N	
3 N	
4 X4	
5 X6	
6 N	gasolio/gas/pellet
7 N	
8 X9	

WVF+	modulo 1
1 Y2	accumulo in basso TPU
2 GND	
3 GND	sonda dell'accumulo in centro TPM
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	sonda dell'accumulo in alto TPO
8 Y5	
9 Y7	11 GND
10 GND	
11 GND	
12 Lon+	master modulo di servizio collegamento espansione- regolazione
13 Lon-	
14 12V	
15 GND	PWM pompa caricamento accumulo
16 Y12	

modulo 2	
1 X2	2 N
2 N	
3 N	4 X4
4 X4	
5 X6	8 X9
6 N	
7 N	
8 X9	

modulo 2	
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

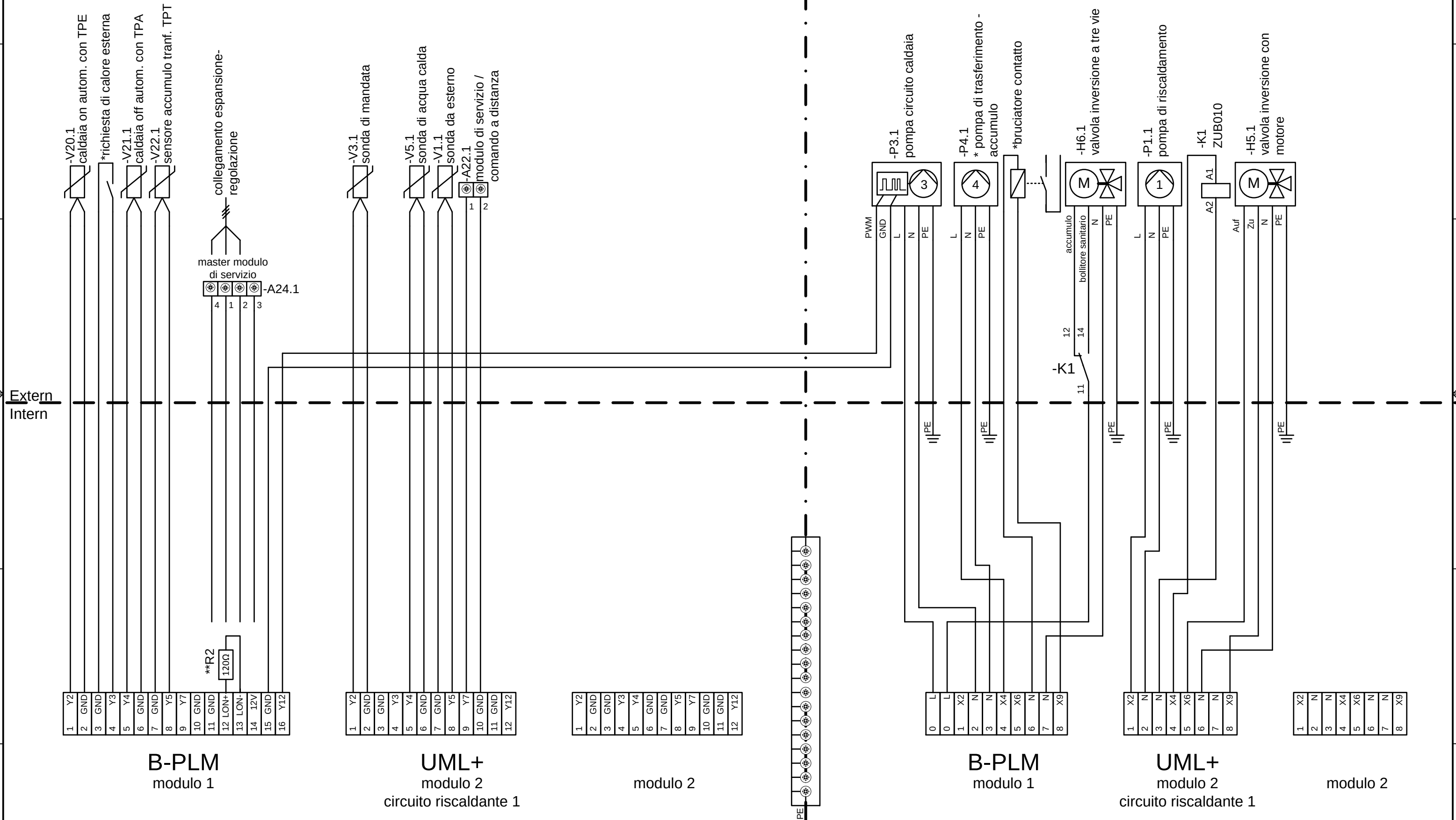
modulo 3	
1 X2	2 N
2 N	
3 N	4 X4
4 X4	
5 X6	8 X9
6 N	
7 N	
8 X9	

modulo 3	
1 Y2	2 GND
2 GND	
3 GND	4 Y3
4 Y3	
5 Y4	6 GND
6 GND	
7 GND	8 Y5
8 Y5	
9 Y7	10 GND
10 GND	
11 GND	12 Y12
12 Y12	

092820/01

sonda bassissima tensione

bassa tensione 230 VAC



	sicurezza-dispositivo
L	interruttore di emergenza riscaldamento
L	
B-PLM	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	* pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	
8 X9	contatto del bruciatore

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	* richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione-regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

UML+	modulo 2 circuito riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	contattore -K1 c.r. 1
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

UML+	modulo 2 circuito riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

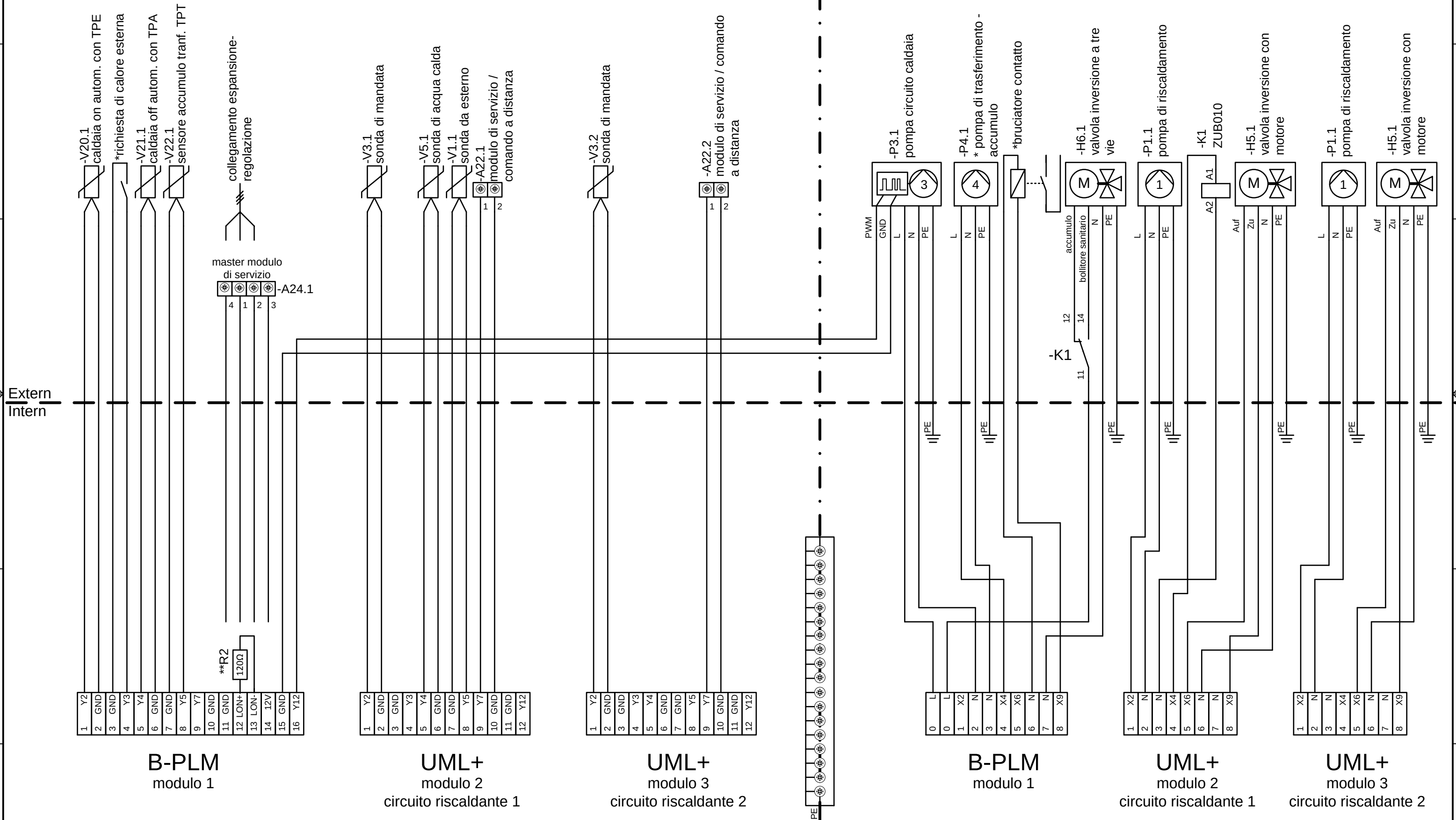
	modulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	modulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094550/01

sonda bassissima tensione

bassa tensione 230 VAC



	sicurezza-dispositivo
L	interruttore di emergenza riscaldamento
L	
B-PLM	modulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	* pompa di trasferimento
4 X4	
5 X6	
6 N	
7 N	
8 X9	contatto del bruciatore

B-PLM	modulo 1
1 Y2	caldaia on autom. con TPE
2 GND	
3 GND	* richiesta di calore esterna
4 Y3	
5 Y4	* caldaia off autom. con TPA
6 GND	
7 GND	* sensore accumulo tranf. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master modulo di servizio collegamento espansione-regolazione
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM pompa circuito caldaia
16 Y12	

UML+	modulo 2 circuito riscaldante 1
1 X2	pompa di riscaldamento c.r. 1
2 N	
3 N	contattore -K1 c.r. 1
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 1
8 X9	chiuso

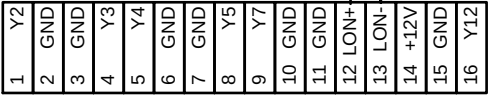
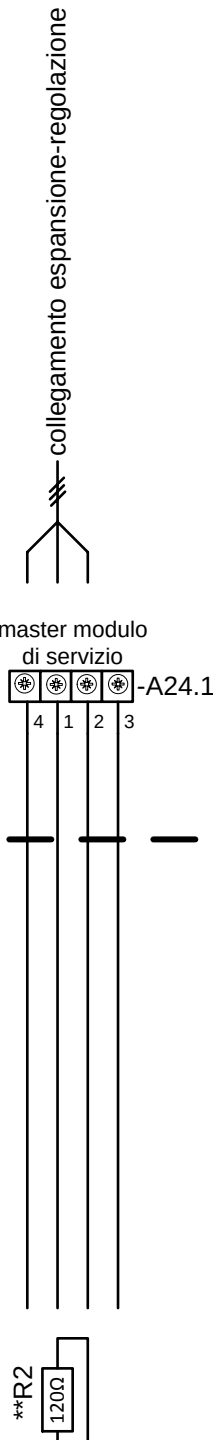
UML+	modulo 2 circuito riscaldante 1
1 Y2	sonda di mandata c.r. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda di acqua calda c.r. 1
6 GND	
7 GND	
8 Y5	sonda da esterno
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

UML+	modulo 3 circuito riscaldante 2
1 X2	pompa di riscaldamento c.r. 2
2 N	
3 N	
4 X4	
5 X6	aperto
6 N	valvola inversione con motore
7 N	c.r. 2
8 X9	chiuso

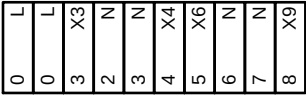
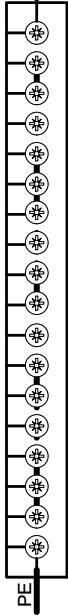
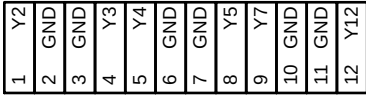
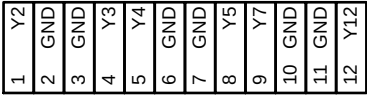
UML+	modulo 3 circuito riscaldante 2
1 Y2	sonda di mandata c.r. 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	modulo di servizio comando a distanza
10 GND	
11 GND	
12 Y12	

sonda bassissima tensione

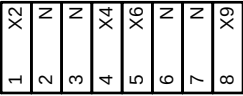
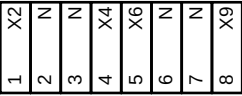
bassa tensione 230 VAC



modulo 1



modulo 1



-XS	dispositivo di sicurezza
L	mancanza di acqua comando di sicurezza (Germania)
L	

1	modulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	modulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	modulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092638/01

1	modulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	modulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	modulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092638/01

bassa tensione 230 VAC

sonda bassissima tensione

KAS+
modulo 1

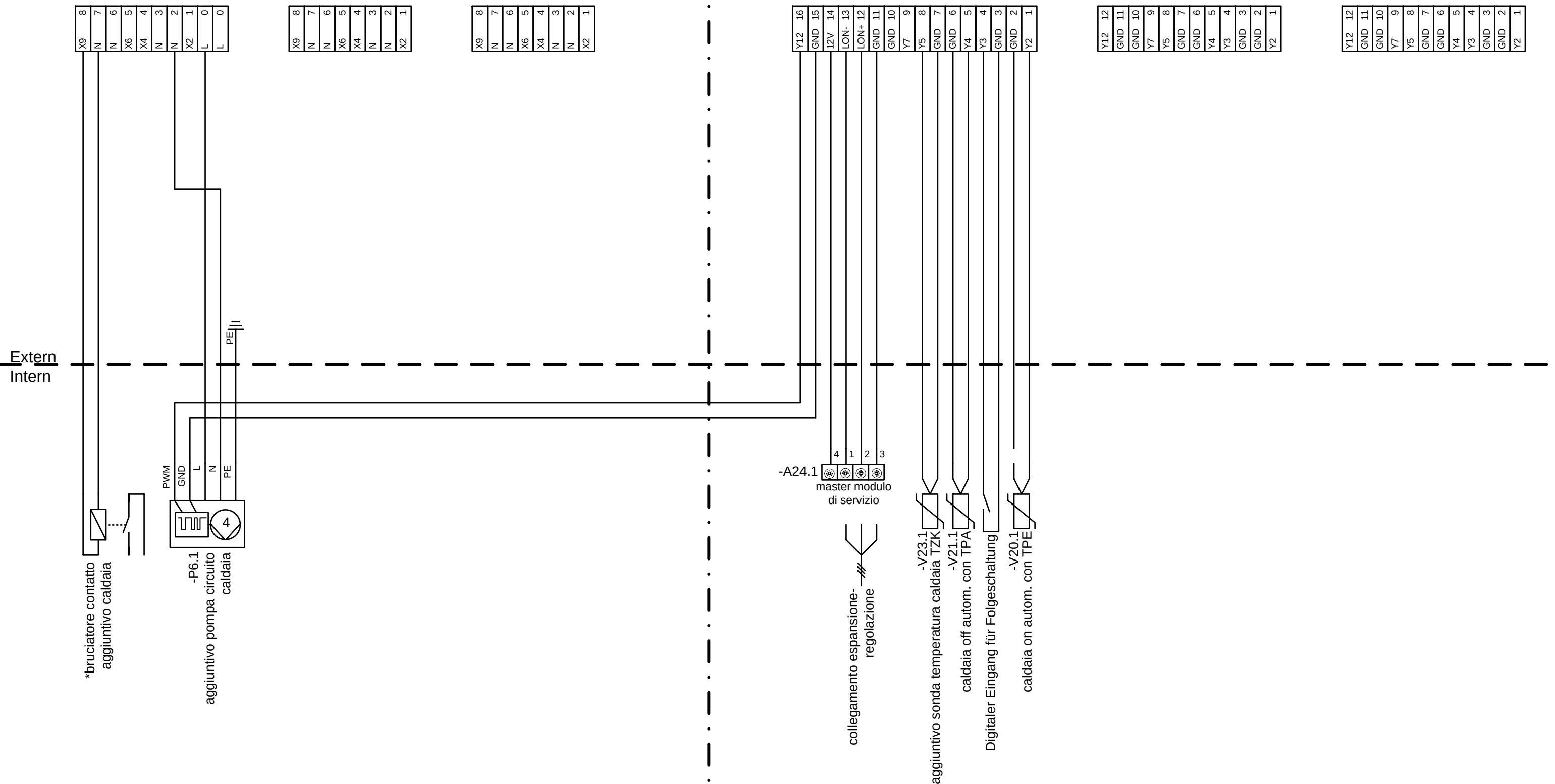
modulo 2

modulo 3

KAS+
modulo 1

modulo 2

modulo 3



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

-XA	blocco di collegamento
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	modulo 1
bruciatore relè aggiuntivo caldaia	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1 PWM fase continua 2	L 0 L 0

modulo 2
X9 8 N 7 N 6 X6 5
X4 4 N 3
N 2 X2 1

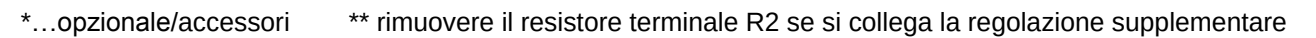
modulo 3
X9 8 N 7 N 6 X6 5
X4 4 N 3
N 2 X2 1

KAS+	modulo 1
PWM aggiuntivo caldaia Pompa	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldaia off autom. con TPA	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

modulo 2
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

modulo 3
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

sonda bassissima tensione



1 mm : 1 mm	
◀ -----	2 ▶
Blatt 092684/00	

-XA	blocco di collegamento
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	modulo 1
PWM aggiuntivo caldaia Pompa	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldaia off autom. con TPA	GND 6 Y4 5
Ingresso digitale per circuito sequenziale	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

KAS+	modulo 1
bruciatore relè aggiuntivo caldaia	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuito riscaldante 1
valvola inversione con motore	X9 8 N 7 N 6 HK 1 X6 5
pompa caricamento acqua sanitaria	X4 4 N 3
pompa di riscaldamento HK 1	N 2 X2 1

UML+	modulo 2 circuito riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda HK 1	GND 6 Y4 5 Y3 4 GND 3
sonda di mandata HK 1	GND 2 Y2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

bassa tensione 230 VAC

sonda bassissima tensione

KAS+
modulo 1

UML+
modulo 2
circuito riscaldante 1

UML+
modulo 3
circuito riscaldante 2

KAS+
modulo 1

UML+
modulo 2
circuito riscaldante 1

UML+
modulo 3
circuito riscaldante 2

Extern
Intern

*bruciatore contatto

-P6.1
aggiuntivo pompa circuito
caldaia

-H5.1
valvola inversione con
motore

-P2.1
pompa caricamento acqua
sanitaria

-P1.1
pompa di riscaldamento

-H5.2
valvola inversione con
motore

-P2.2
pompa caricamento acqua
sanitaria

-P1.2
pompa di riscaldamento

-A24.1
master modulo
di servizio

collegamento espansione-
regolazione

-V23.1
aggiuntivo sonda temperatura caldaia TZK

-V21.1
caldaia off autom. con TPA

Ingresso digitale per circuito sequenziale

-V20.1
caldaia on autom. con TPE

-A22.1
modulo di servizio / comando a distanza

-V1.1
sonda da esterno

-V5.1
sonda di acqua calda

-V3.1
sonda di mandata

-A22.2
modulo di servizio / comando a distanza

-V5.2
sonda di acqua calda

-V3.2
sonda di mandata

*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

KAS+/UML+/UML+

MES KAS + H021 + H024

Projekt :
regolazione

windhager

1 mm : 1 mm

2

Blatt 092686/00

Zeichnungs Nr.: 092686/00

-XA	blocco di collegamento
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	modulo 1
bruciatore relè aggiuntivo caldaia	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria HK 1	X4 4 N 3
pompa di riscaldamento HK 1	N 2 X2 1

UML+	modulo 3 circuiti riscaldante 2
chiuso HK 2	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria HK 2	X4 4 N 3
pompa di riscaldamento HK 2	N 2 X2 1

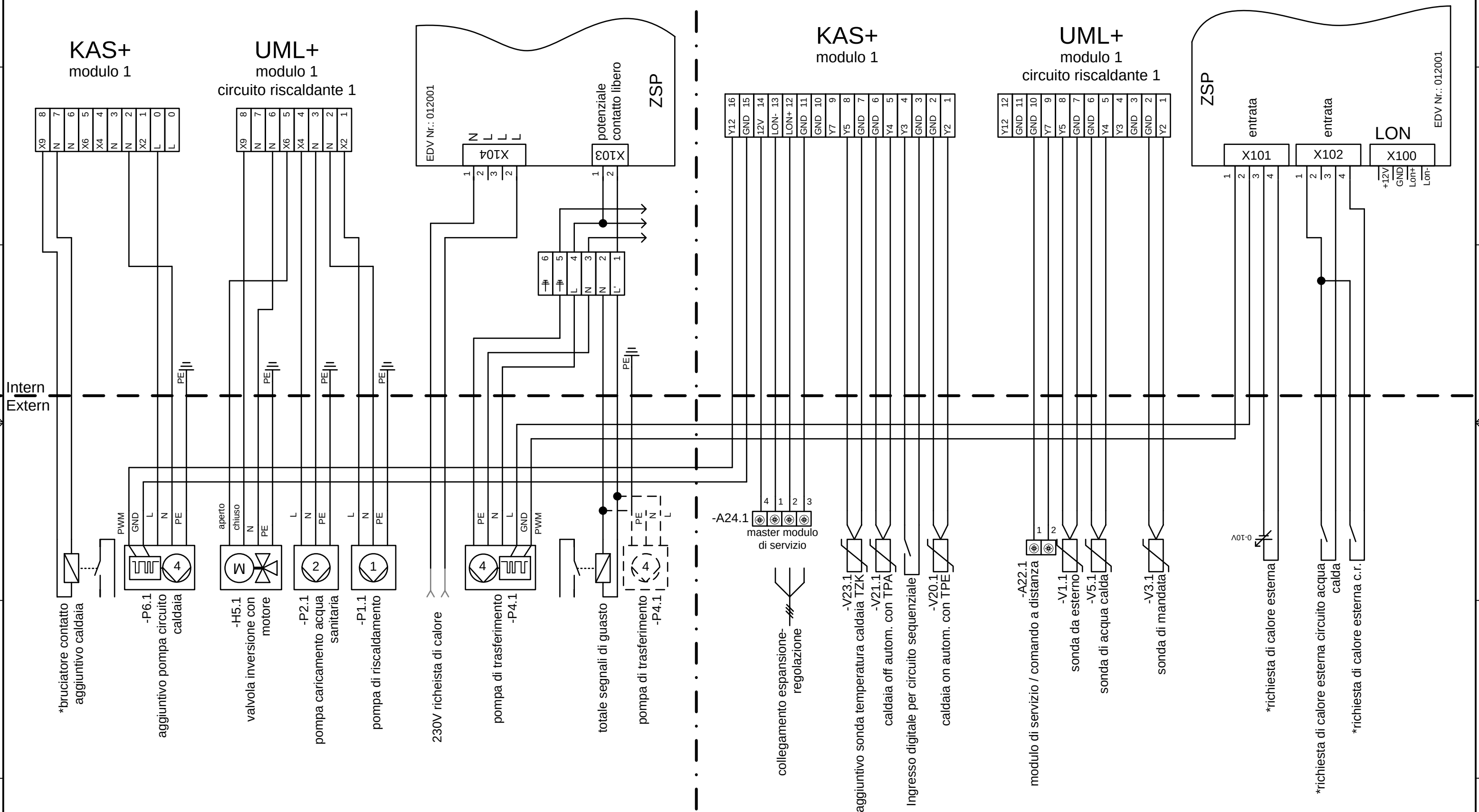
KAS+	modulo 1
PWM aggiuntivo caldaia Pompa	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Zusatz Kesselfühler	Y5 8 GND 7
caldaia off autom. con TPA	GND 6 Y4 5
Ingresso digitale per circuiti sequenziale	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

UML+	modulo 2 circuiti riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata HK 1	GND 2 Y2 1

UML+	modulo 3 circuiti riscaldante 2
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
	Y5 8 GND 7
sonda di acqua calda HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata HK 1	GND 2 Y2 1

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	KAS+/UML+/ZSP W		MES KAS + H021 + ZSP W	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	rot						◀ ----- 2 ▶	
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092686/00				Blatt 092684/00	

-XA	blocco di collegamento
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	modulo 1
bruciatore relè aggiuntivo caldaia	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuito riscaldante 1
valvola inversione con motore	X9 8 N 7
	N 6 HK 1
	X6 5 aperto
pompa caricamento acqua sanitaria	X4 4 N 3
pompa di riscaldamento	N 2 HK 1
	X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	modulo 1
PWM aggiuntivo caldaia Pompa	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldaia off autom. con TPA	GND 6 Y4 5
Ingresso digitale per circuito sequenziale	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

UML+	modulo 2 circuito riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda HK 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata HK 1	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	scheda aggiuntiva
	PE PE
	fase continua L N
	totale segnali di guasto OR N pompa di trasferimento L'

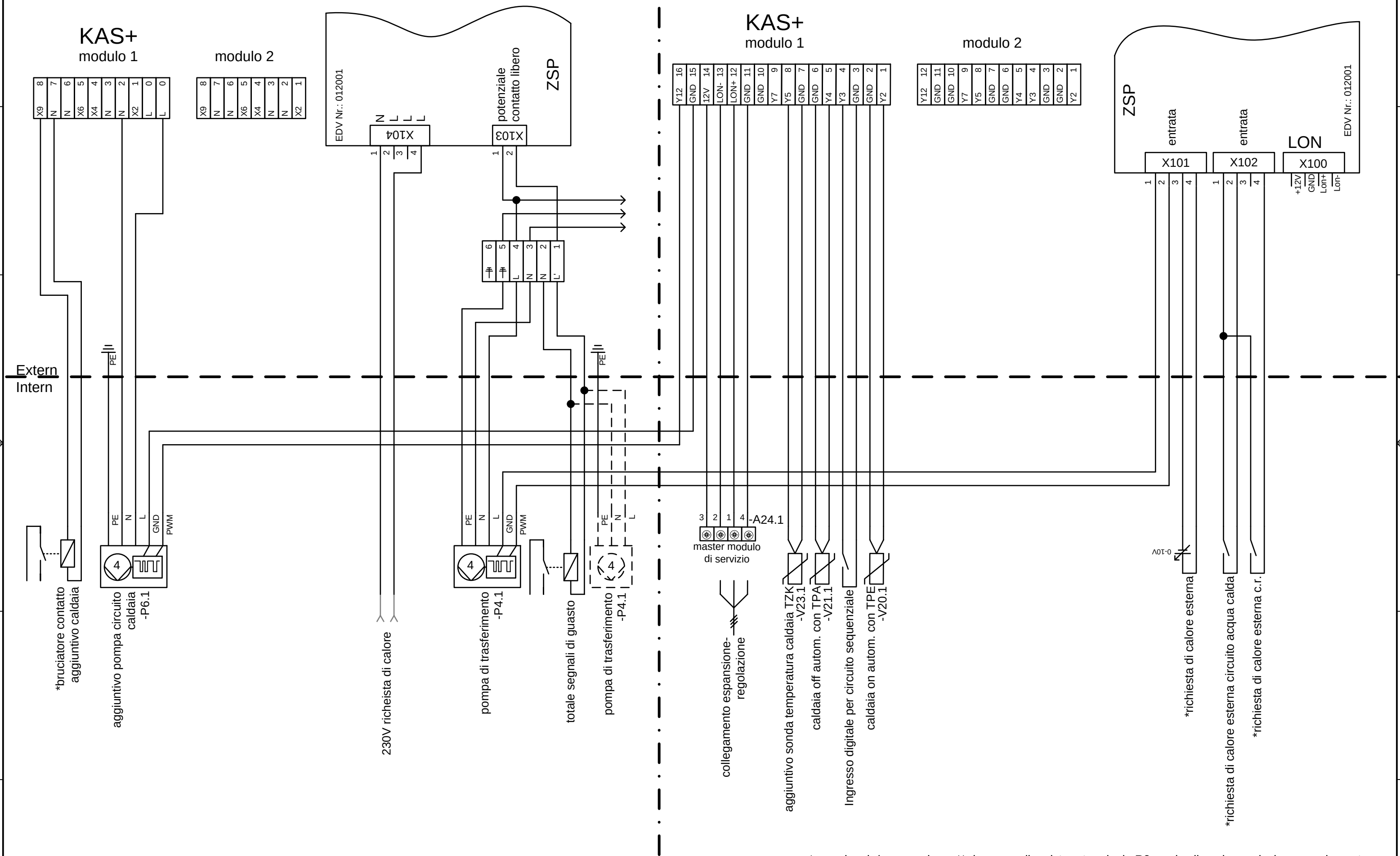
EDV Nr. 094512/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0-10V

GND	
-X102 /2	
-X102 /3	esterna-richiesta di calore circuitto acqua calda
-X102 /4	esterna-richiesta di calore c.r.

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

-XA	blocco di collegamento
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	modulo 1
bruciatore relè aggiuntivo caldaia	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2 X2 1
PWM fase continua 1 PWM fase continua 2	L 0 L 0

modulo 2
X9 8 N 7 N 6 X6 5
X4 4 N 3
N 2 X2 1

modulo 3
X9 8 N 7 N 6 X6 5
X4 4 N 3
N 2 X2 1

KAS+	modulo 1
PWM aggiuntivo caldaia Pompa	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldaia off autom. con TPA	GND 6 Y4 5
Ingresso digitale per ciclo sequenziale	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

modulo 2
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

modulo 3
Y12 12 GND 11
GND 10 Y7 9
Y5 8 GND 7
GND 6 Y4 5
Y3 4 GND 3
GND 2 Y2 1

-XZSP	scheda aggiuntiva
PE	PE
PE	PE
fase continua	L N
totale segnali di guasto OR pompa di trasferimento	N L'

-XSP	scheda aggiuntiva
GND	PWM pompa di trasferimento
-X101 /2	
GND	richeista di calore 0-10V
-X101 /4	

GND	
-X102 /2	
-X102 /3	esterna-richiesta di calore circuitto acqua calda
-X102 /4	esterna-richiesta di calore c.r.

EDV Nr. 094512/00

bassa tensione 230 VAC

sonda bassissima tensione

UML+
modulo 1
circuito riscaldante 1

modulo 2

modulo 3

UML+
modulo 1
circuito riscaldante 1

modulo 2

modulo 3

Extern
Intern

-A24.1
master modulo
di servizio

*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	05.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

UML+

Zeichnungs Nr.: 092670/01

MES H021

regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda

Projekt :
regolazione

windhager

1 mm : 1 mm

Blatt 092670/01

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
master modulo di servizio collegamento espansione-regolazione	Y12 16 GND 15
	+12V 14 Lon- 13 Lon+ 12 GND 11
	modulo di servizio comando a distanza
	GND 10 Y7 9
	Y5 8 GND 7
	sonda di acqua calda c.r. 1
	GND 6 Y4 5 Y3 4 GND 3
	sonda di mandata c.r. 1
	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
valvola inversione con motore aperto	chiuso c.r. 1
	X9 8 N 7
	N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 1
	X4 4 N 3
	pompa di riscaldamento c.r. 1
	N 2 X2 1
	PWM fase continua 1
	L 0
	PWM fase continua 2
	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5 Y3 4 GND 3
	GND 2 Y2 1

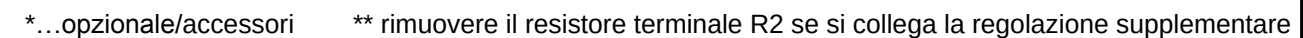
	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092671/01

092671/01

sonda bassissima tensione



				Datum	05.07.2013	UML+/UML+		MES H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092674/01					
												Blatt 092674/01

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
master modulo di servizio collegamento espansione-regolazione	Y12 16 GND 15
	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 comando a distanza Y7 9
sonda da esterno	Y5 8 GND 7
	sonda di acqua calda c.r. 1 GND 6 Y4 5 Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
valvola inversione con motore aperto	X9 8 N 7 N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 1 X4 4 N 3
	pompa di riscaldamento c.r. 1 N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuiti riscaldante 2
modulo di servizio comando a distanza	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
sonda di acqua calda c.r. 2	GND 6 Y4 5 Y3 4 GND 3
	sonda di mandata c.r. 2 GND 2 Y2 1

UML+	modulo 2 circuiti riscaldante 2
valvola inversione con motore aperto	X9 8 N 7 N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 2 X4 4 N 3
	pompa di riscaldamento c.r. 2 N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9 Y5 8 GND 7
	GND 6 Y4 5 Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3 N 2 X2 1

092675/01

092675/01

sonda bassissima tensione



1 mm : 1 mm	
◀ -----	2 ▶
Blatt 092680/01	

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuiti riscaldante 2
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
	Y5 8 GND 7
sonda di acqua calda c.r. 2	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 2	GND 2 Y2 1

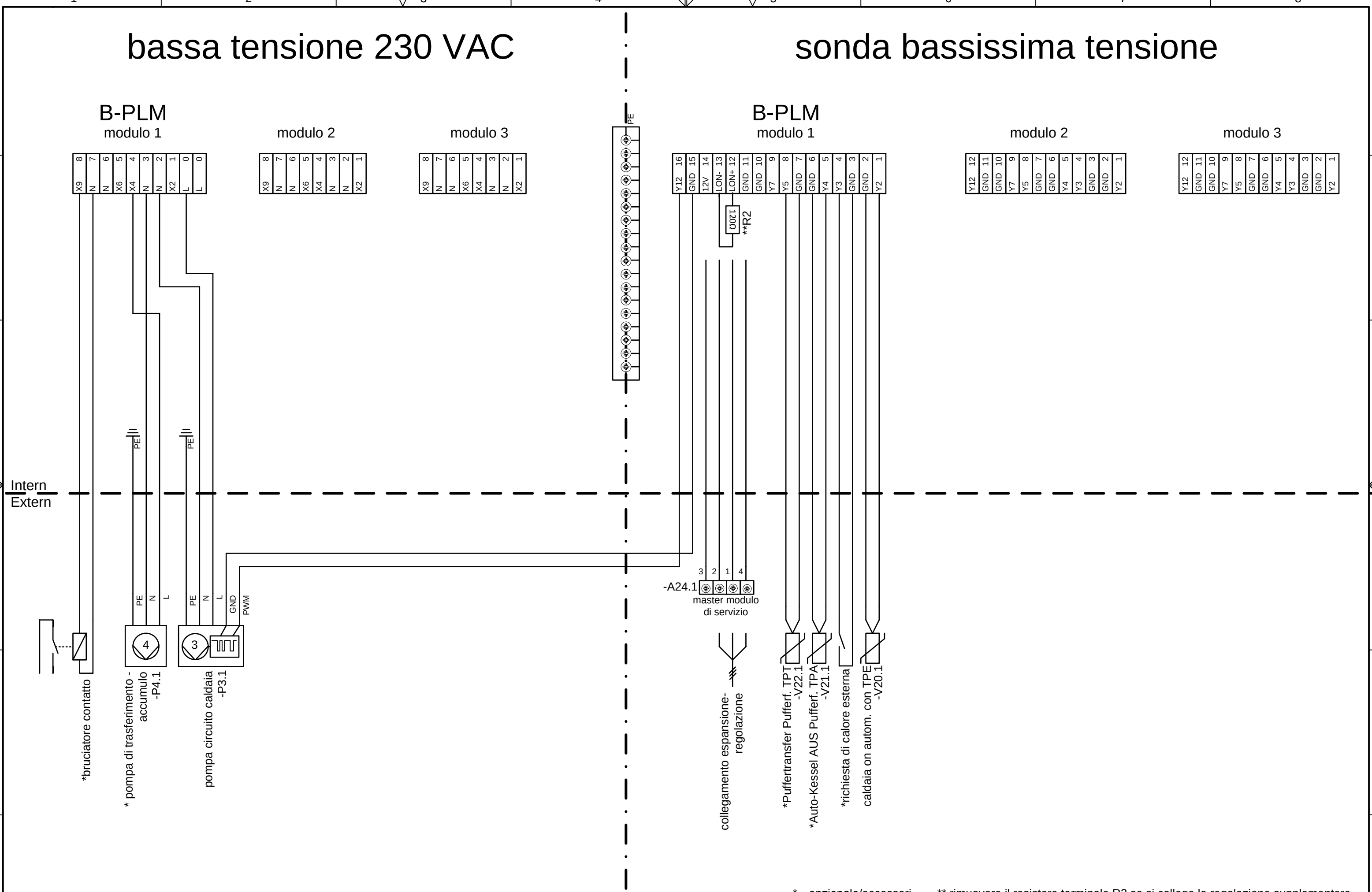
UML+	modulo 2 circuiti riscaldante 2
chiuso c.r. 2	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 2	X4 4 N 3
pompa di riscaldamento c.r. 2	N 2 X2 1

UML+	modulo 3 circuiti riscaldante 3
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
	Y5 8 GND 7
sonda di acqua calda c.r.3	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 3	GND 2 Y2 1

UML+	modulo 3 circuiti riscaldante 3
chiuso c.r. 3	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 3	X4 4 N 3
pompa di riscaldamento c.r. 3	N 2 X2 1

092681/01

092681/01



-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	modulo 1
*bruciatorecontatto	X9 8 N 7
	N 6 X6 5
*pompa di trasferimento accumulo	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

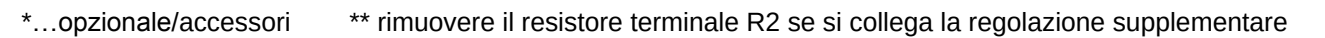
B-PLM	modulo 1
PWM pompa circuito caldaia	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensore accumulo tranf. TPT	Y5 8 GND 7
*caldaia off autom. con TPA	con GND 6 Y4 5
*richiesta di calore esterna	Y3 4 GND 3
caldaia on autom. con TPE	con GND 2 Y2 1

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

sonda bassissima tensione



1 mm : 1 mm
 2
 Blatt 092866/01

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	modulo 1
*bruciatore contatto	X9 8 N 7
	N 6 X6 5
*pompa di trasferimento accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

WVF+	modulo 2
gasolio/gas/pellet valvola inversione a tre vie solido	X9 8 N 7 N 6 X6 5
*pompa di trasferimento- accumulo	X4 4 N 3
	N 2
	X2 1

UML+	modulo 3 circuitto riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1

092868/01

B-PLM	modulo 1
PWM pompa circuito caldaia	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensore accumulo tranf. TPT	Y5 8 GND 7
*caldaia off autom. con TPA	GND 6 Y4 5
*richiesta di calore esterna	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

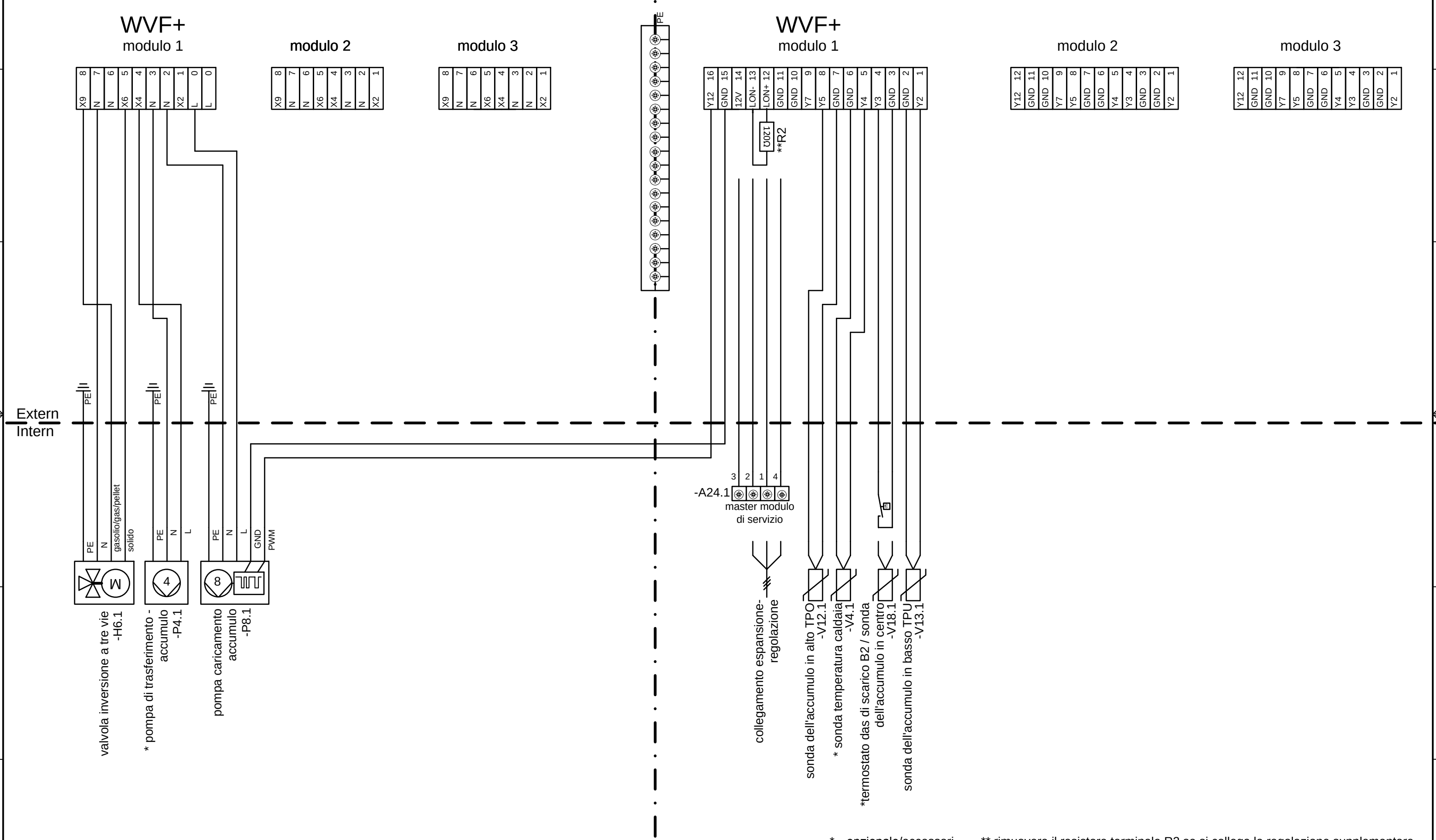
WVF+	modulo 2
PWM pompa caricamento accumulo	Y12 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto TPO	Y5 8 GND 7
*sonda della caldaia	GND 6 Y4 5
*termostato das di scarico B2 sonda dell'accumulo in centro	Y3 4 GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

UML+	modulo 3 circuitto riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

092868/01

bassa tensione 230 VAC

sonda bassissima tensione



-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8 N 7
valvola inversione a tre vie solido	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

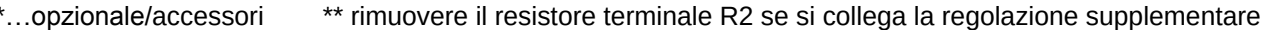
WVF+	modulo 1
	PWM pompa caricamento accumulogND 15
	+12V 14 master modulo di servizio collegamento espansione-regolazione Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	sonda dell'accumulo in alto TPO Y5 8 GND 7
	GND 6 *sonda della caldaia Y4 5
	*termostato das di scarico B2 sonda dell'accumulo in centro Y3 4 GND 3
	sonda dell'accumulo in basso TPU GND 2 Y2 1

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

sonda bassissima tensione



				Datum	08.07.2013	WVF+/UML+		MES P041 + H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda commutazione automatica combustibili solidi con carica accumulo	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092870/01				◀ ----- 2 ▶ Blatt 092870/01

-XA	blocco di collegamento
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8
valvola inversione a tre vie solido	N 7 N 6 X6 5
pompa di trasferimento accumulo	X4 4 N 3
	N 2
PWM fase continua 1	X2 1
PWM fase continua 2	L 0 L 0

UML+	modulo 2 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	modulo 1
PWM pompa caricamento accumulo	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto TPO	Y5 8 GND 7
*sonda temperatura caldaia	GND 6 Y4 5
termostato d'as di scarico B2 sonda dell'accumulo in centro	Y3 4 GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

UML+	modulo 2 circuiti riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

bassa tensione 230 VAC

sonda bassissima tensione

WVF+ modulo 1

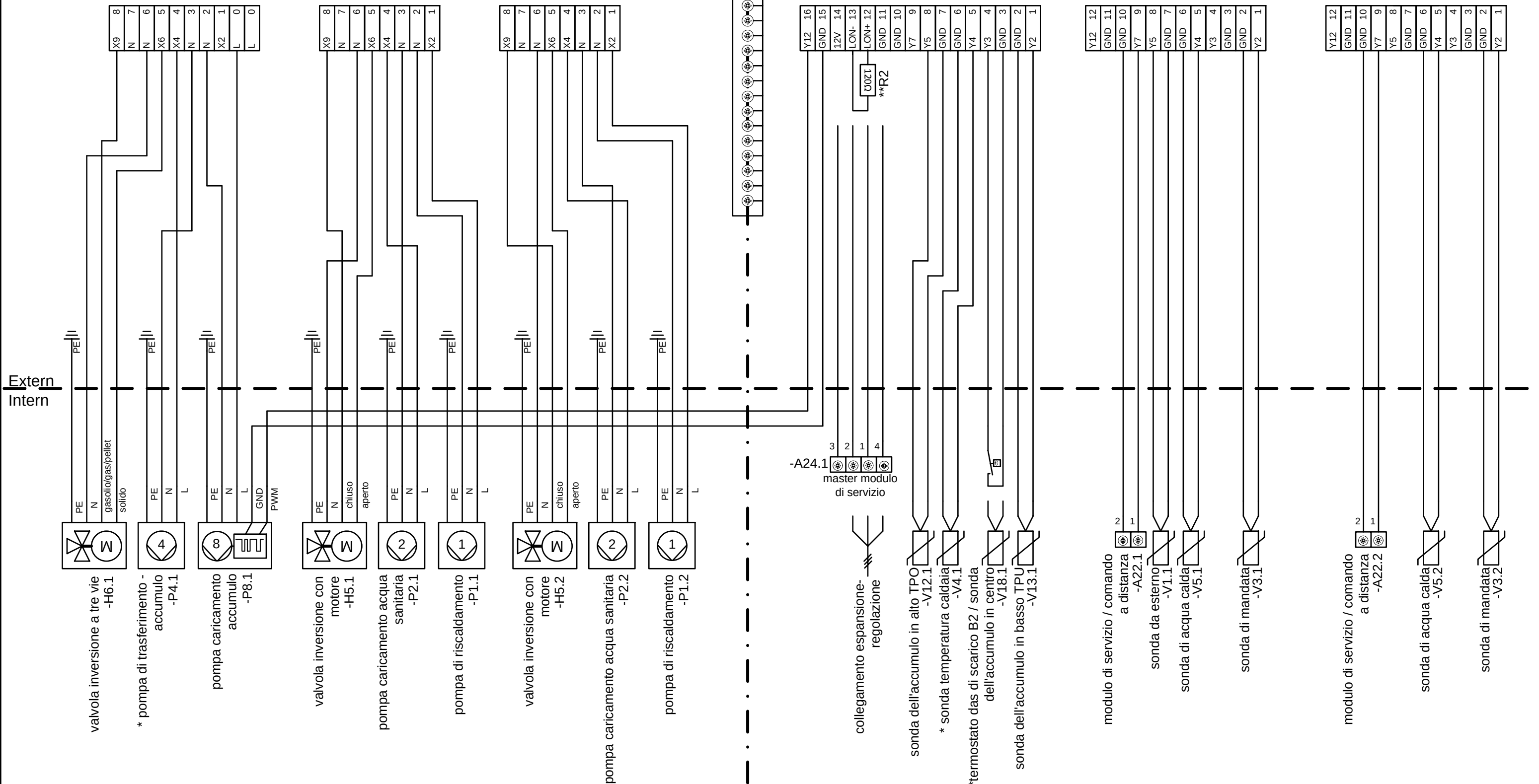
UML+ modulo 2 circuito riscaldante 1

UML+ modulo 3 circuito riscaldante 2

WVF+ modulo 1

UML+ modulo 2 circuito riscaldante 1

UML+ modulo 3 circuito riscaldante 2



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	08.07.2013	WVF+/UML+/UML+		MES P041 + H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda commutazione automatica combustibili solidi con carica accumulo		Projekt : regolazione				1 mm : 1 mm Blatt 092873/01	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092873/01								

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8
valvola inversione a tre vie solido	N 7 N 6 X6 5
*pompa di trasferimento accumulo	X4 4 N 3
	N 2
PWM fase continua 1	X2 1
PWM fase continua 2	L 0 L 0

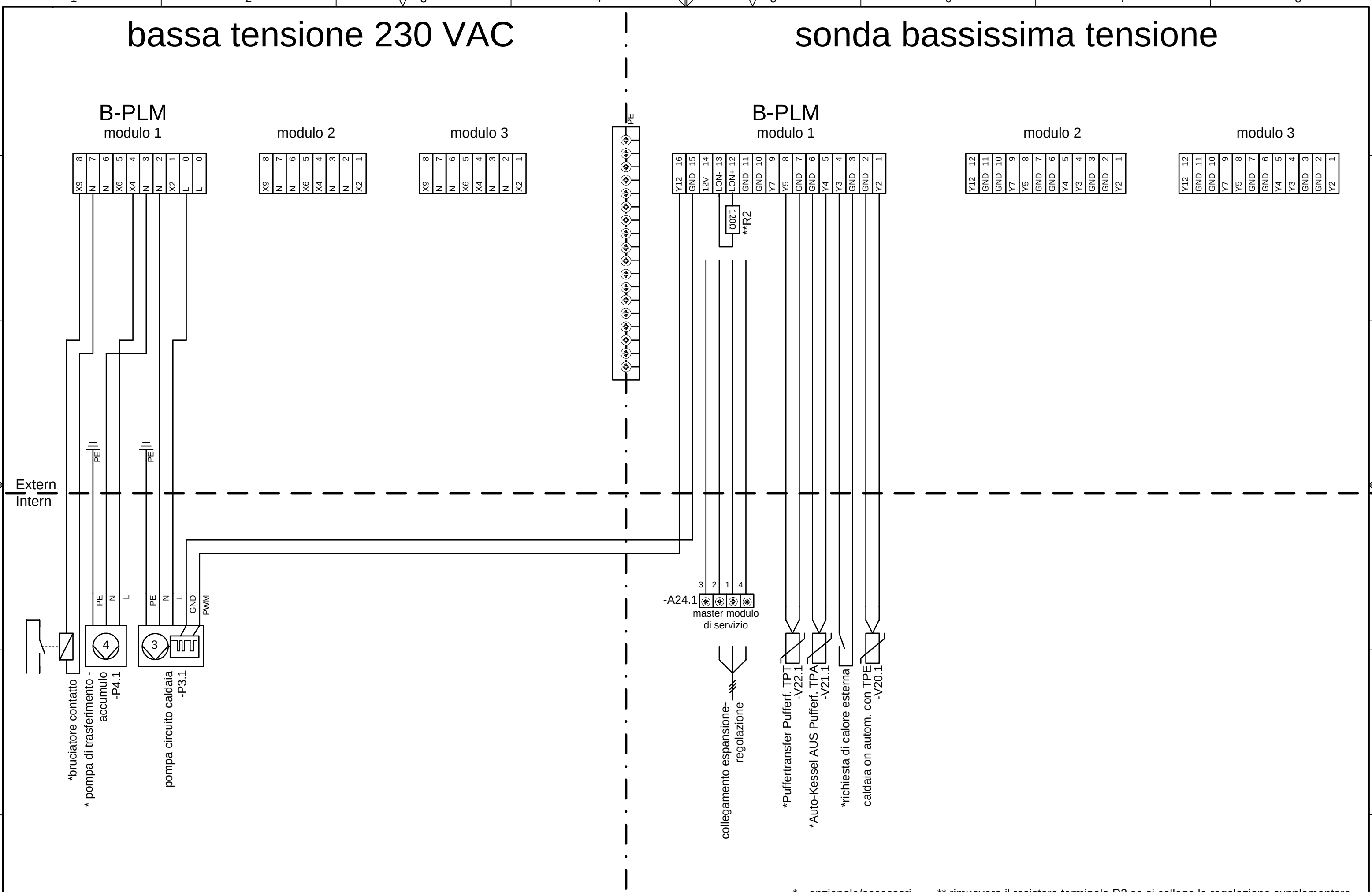
UML+	Modul 2 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1

UML+	modulo 3 circuiti riscaldante 2
chiuso c.r. 2	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 2	X4 4 N 3
pompa di riscaldamento c.r. 2	N 2 X2 1

WVF+	modulo 1
PWM pompa caricamento accumulo	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto	Y5 8 GND 7
*sonda temperatura caldaia	GND 6 Y4 5
*termostato d'as di scarico B2 sonda dell'accumulo in centro	Y3 4 GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

UML+	Modul 2 circuiti riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

UML+	modulo 3 circuiti riscaldante 2
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
	Y5 8 GND 7
sonda di acqua calda c.r. 2	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 2	GND 2 Y2 1



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	modulo 1
*bruciatore contatto	X9 8 N 7
	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

B-PLM	modulo 1
PWM pompa circuito caldaia	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensore accumulo tranf. TPT	Y5 8 GND 7
*caldaia off autom. con TPA	con GND 6 Y4 5
*richiesta di calore esterna	Y3 4 GND 3
caldaia on autom. con TPE	con GND 2 Y2 1

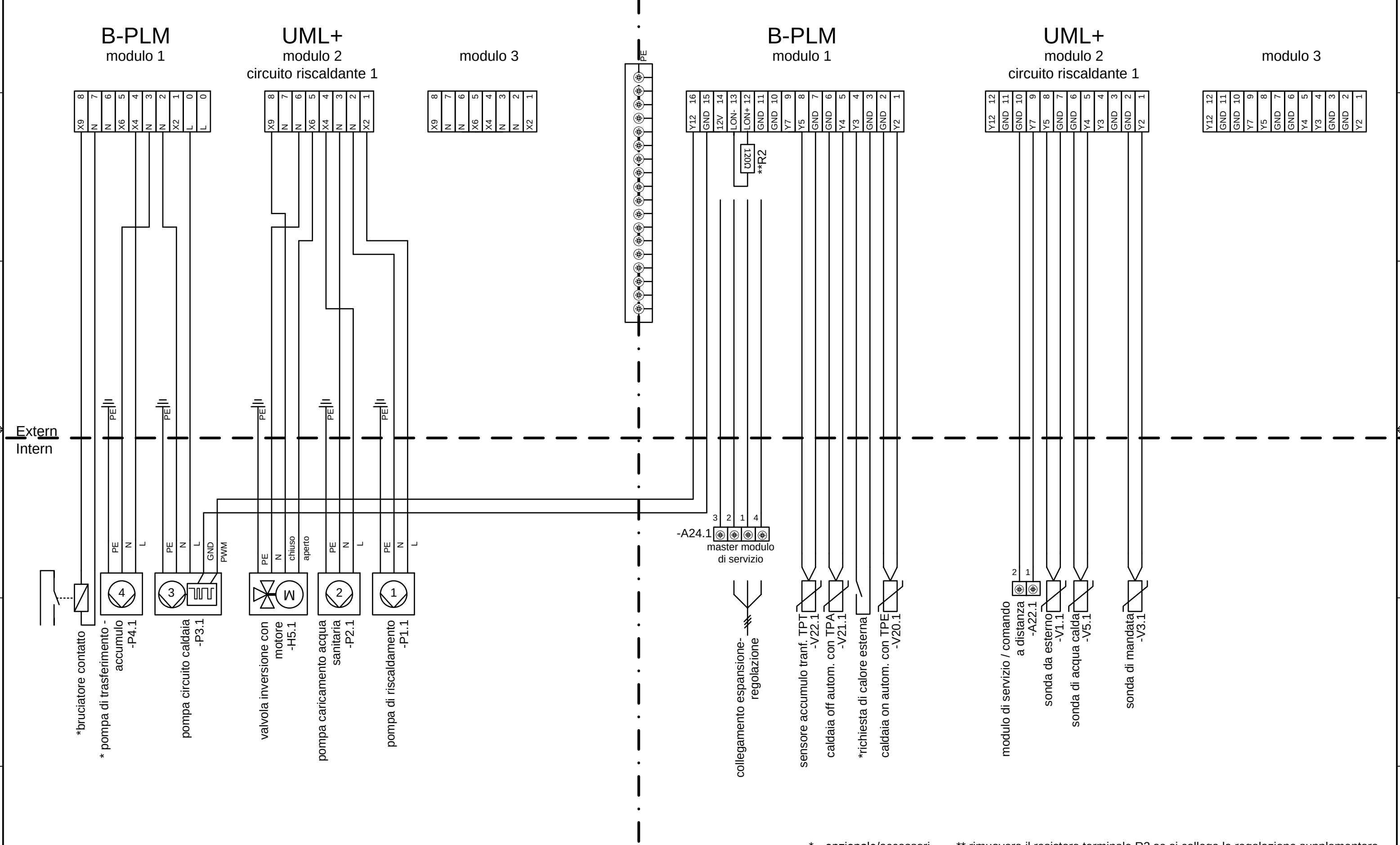
	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092890/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

-XA	blocco di collegamento	
230VAC	L 1	
interno	L' 2	
	L' 3	
230VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14	Lon- 13 Lon+ 12 GND 11
	GND 10	Y7 9
*sensore accumulo tranf. TPT	Y5 8	GND 7
*caldaia off autom. con TPA	GND 6 Y4 5	
*richiesta di calore esterna	Y3 4	GND 3
caldaia on autom. con TPE	GND 2	Y2 1

B-PLM	modulo 1	
*bruciatore contatto	X9 8	N 7
	N 6	
	X6 5	
*Transferpump-accumulo	X4 4	N 3
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

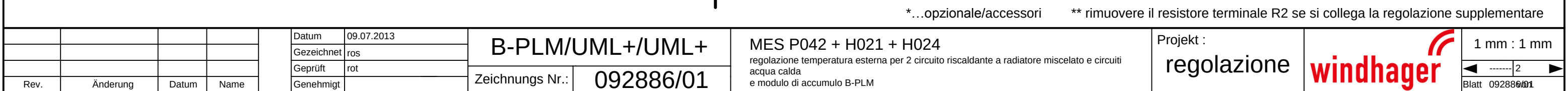
UML +	modulo 2 circuito riscaldante 1	
	Y12 12	GND 11
modulo di servizio comando a distanza	GND 10	Y7 9
sonda da esterno	Y5 8	GND 7
sonda di acqua calda c.r. 1	GND 6	Y4 5
	Y3 4	GND 3
sonda di mandata c.r. 1	GND 2	Y2 1

UML +	modulo 2 circuito riscaldante 1	
chiuso c.r. 1	X9 8	N 7
valvola inversione con motore aperto	N 6	X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4	N 3
pompa di riscaldamento c.r. 1	N 2	X2 1

	modulo 3	
	Y12 12	GND 11
	GND 10	Y7 9
	Y5 8	GND 7
	GND 6	Y4 5
	Y3 4	GND 3
	GND 2	Y2 1

	modulo 3	
	X9 8	N 7
	N 6	X6 5
	X4 4	N 3
	N 2	X2 1

sonda bassissima tensione



-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	modulo 1
*bruciatore contatto	X9 8 N 7
	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuitto riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1

UML+	modulo 3 circuitto riscaldante 2
chiuso c.r. 2	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 2	X4 4 N 3
pompa di riscaldamento c.r. 2	N 2 X2 1

092887/01

B-PLM	modulo 1
PWM pompa circuito caldaia	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensore accumulo tranf. TPT	Y5 8 GND 7
*caldaia off autom. con TPA	GND 6 Y4 5
*richiesta di calore esterna	Y3 4 GND 3
caldaia on autom. con TPE	GND 2 Y2 1

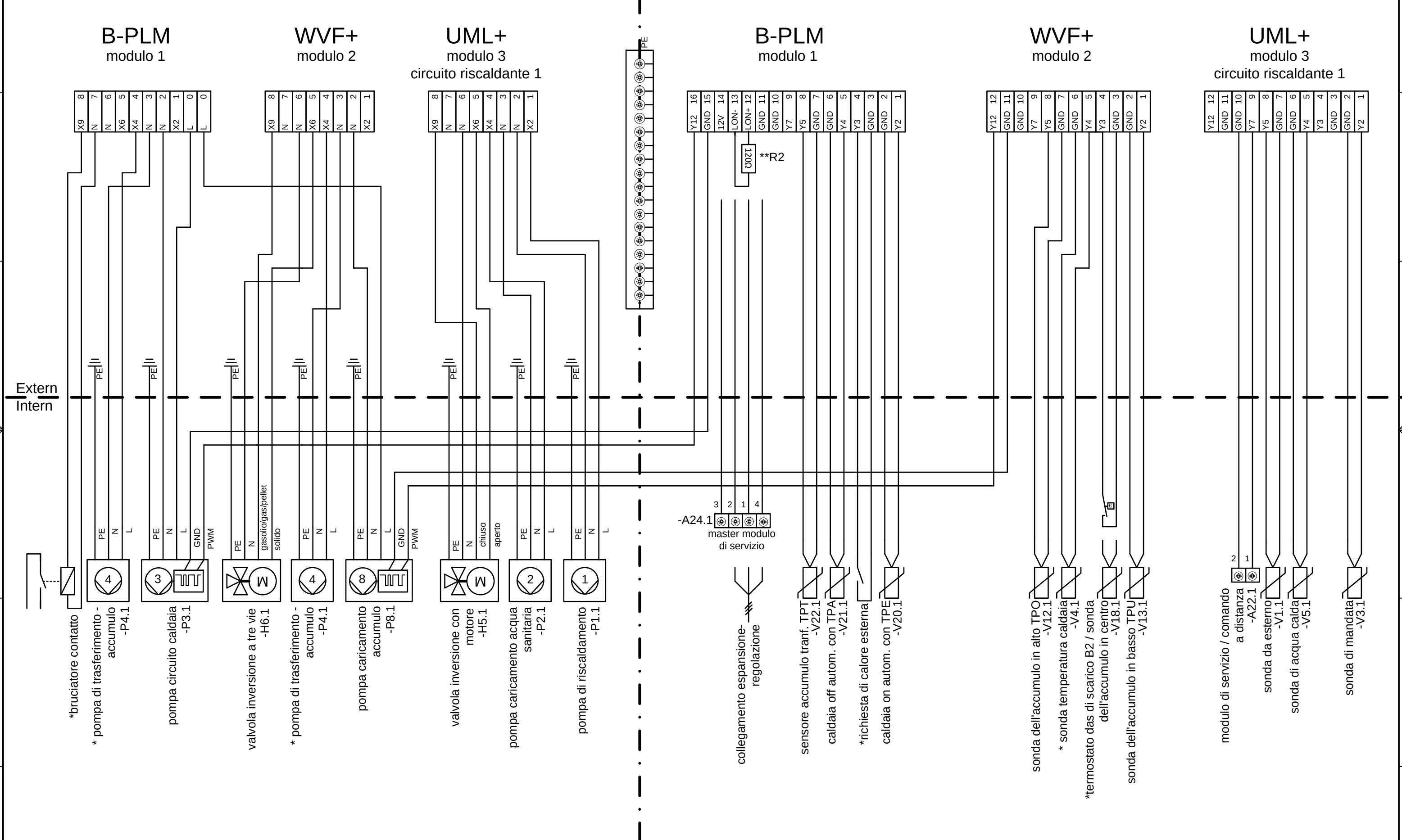
UML+	modulo 2 circuitto riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

UML+	modulo 3 circuitto riscaldante 2
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
	Y5 8 GND 7
sonda di acqua calda c.r. 2	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 2	GND 2 Y2 1

092887/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	09.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e un modulo per combustibili solidi WVF+ e modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092892/01				◀ ----- 2 ▶
Blatt 092892/01											

-XA	blocco di collegamento	
230VAC	L 1	
interno	L' 2	
	L' 3	
230VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
*bruciatore contatto	X9 8	N 7
	N 6	
	X6 5	
*pompa di trasferimento-accumulo	X4 4	N 3
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

WVF+	modulo 2	
gasolio/gas/pellet	X9 8	N 7
valvola		
inversione a tre vie	N 6	
solido	X6 5	
*pompa di trasferimento-accumulo	X4 4	N 3
	N 2	
	X2 1	

UML+	modulo 3 circuitto riscaldante 1	
chiuso	X9 8	
c.r. 1	N 7	
valvola inversione con motore	N 6	
aperto	X6 5	
pompa caricamento acqua sanitaria	X4 4	N 3
c.r. 1		
pompa di riscaldamento	N 2	
c.r. 1	X2 1	

092893/01

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	GND 15
master modulo di servizio	+12V 14	Lon- 13
collegamento espansione-regolazione	Lon+ 12	GND 11
	GND 10	
	Y7 9	
*sensore accumulo tranf. TPT	Y5 8	GND 7
*caldaia off autom. con TPA	GND 6	Y4 5
*richiesta di calore esterna	Y3 4	GND 3
caldaia on autom. con TPE	GND 2	Y2 1

WVF+	modulo 2	
PWM pompa caricamento accumulo	Y12 12	GND 11
	GND 10	Y7 9
sonda dell'accumulo in alto	Y5 8	GND 7
*sonda della caldaia	GND 6	Y4 5
*termostato das di scarico B2	Y3 4	
sonda dell'accumulo in centro	GND 3	
accumulo in basso	GND 2	
TPU	Y2 1	

UML+	modulo 3 circuitto riscaldante 1	
	Y12 12	GND 11
modulo di servizio comando a distanza	GND 10	Y7 9
sonda da esterno	Y5 8	GND 7
sonda di acqua calda c.r. 1	GND 6	Y4 5
	Y3 4	GND 3
sonda di mandata c.r. 1	GND 2	Y2 1

092893/01

bassa tensione 230 VAC

sonda bassissima tensione

B-PLM
modulo 1

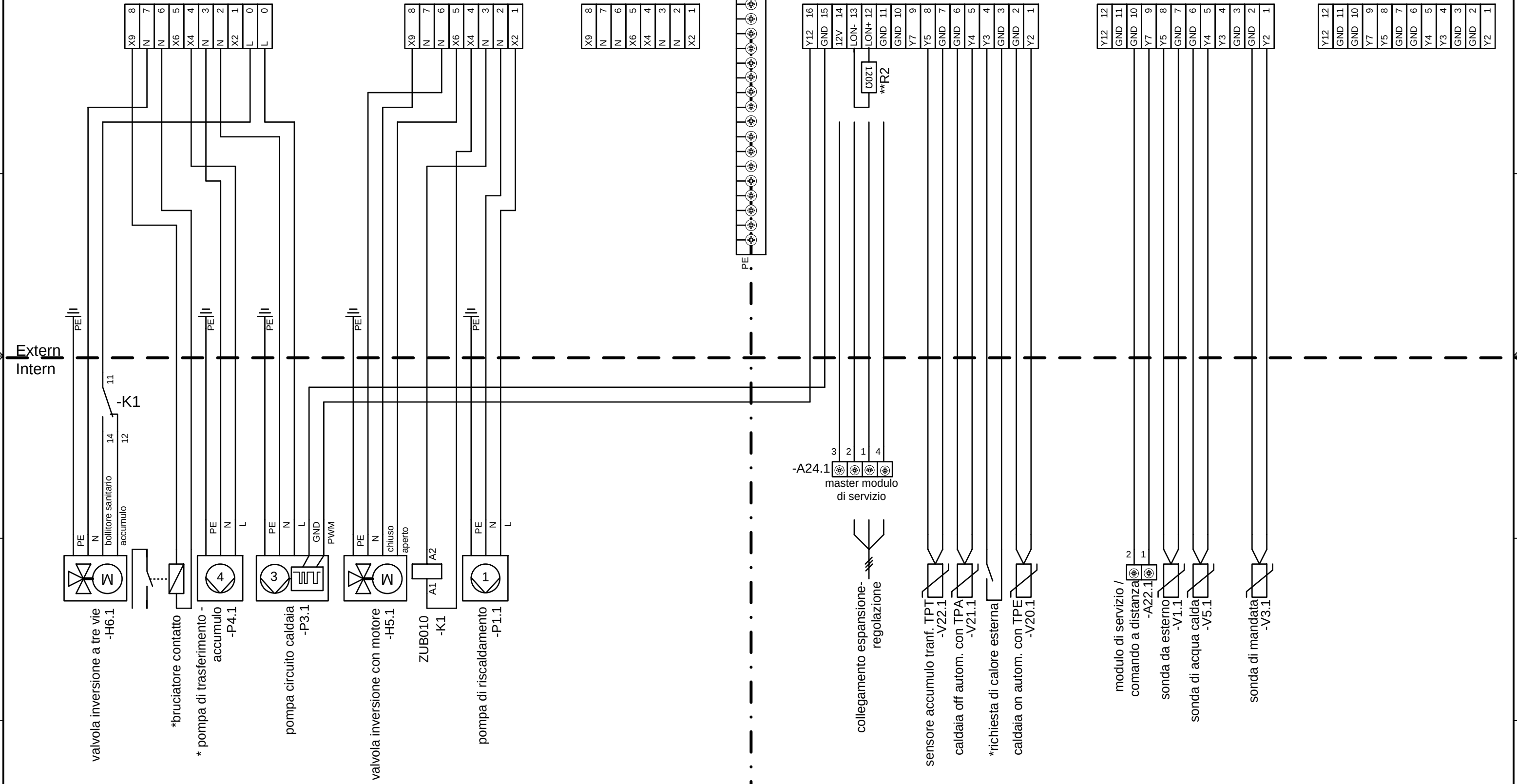
UML+
modulo 2
circuito riscaldante 1

modulo 3

B-PLM
modulo 1

UML+
modulo 2
circuito riscaldante 1

modulo 3



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

-XA	blocco di collegamento	
230 VAC	L 1	
interno	L' 2	
	L' 3	
230 VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
contatto del bruciatore	X9 8	
	N 7	
	N 6	
	X6 5	
* pompa di trasferimento	X4 4	
	N 3	
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML +	modulo 2 circuiti riscaldante 1	
chiuso c.r. 1	X9 8	
	N 7	
valvola inversione con motore aperto	N 6	
	X6 5	
contattore -K1 c.r. 1	X4 4	
	N 3	
pompa di riscaldamento c.r. 1	N 2	
	X2 1	

	modulo 3	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

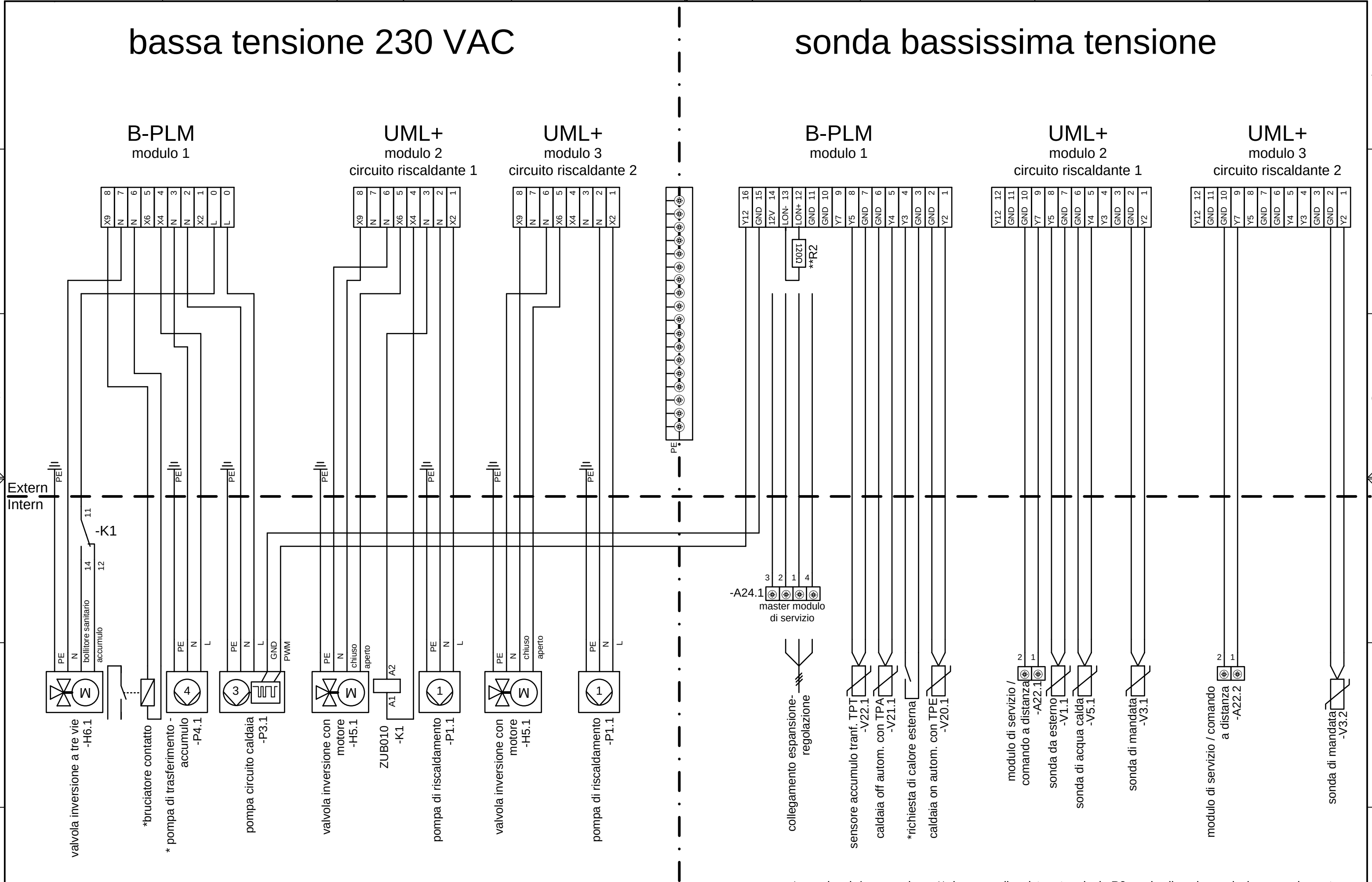
094555/01

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	
	GND 15	
master modulo di servizio collegamento espansione-regolazione	+12V 14	
	Lon- 13	
	Lon+ 12	
	GND 11	
	GND 10	
	Y7 9	
* sensore accumulo tranf. TPT	Y5 8	
	GND 7	
* caldaia off autom. con TPA	con GND 6	
	Y4 5	
* richiesta di calore esterna	Y3 4	
	GND 3	
caldaia on autom. con TPE	con GND 2	
	Y2 1	

UML +	modulo 2 circuiti riscaldante 1	
	Y12 12	
	GND 11	
modulo di servizio comando a distanza	GND 10	
	Y7 9	
sonda da esterno	Y5 8	
	GND 7	
sonda di acqua calda c.r. 1	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
sonda di mandata c.r. 1	GND 2	
	Y2 1	

	modulo 3	
	Y12 12	
	GND 11	
	GND 10	
	Y7 9	
	Y5 8	
	GND 7	
	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
	GND 2	
	Y2 1	

094555/01



...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	12.08.2013	B-PLM/UML+/UML+		MES ZUB010 + H024 ZUB010 SYS403 valvola inversione a tre vie accumulo - bollitore sanitario		Projekt : regolazione				1 mm : 1 mm Blatt 094556/01	
				Gezeichnet	ros										
				Geprüft	rot										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		094556/01									

-XA	blocco di collegamento	
230 VAC	L 1	
interno	L' 2	
	L' 3	
230 VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
contatto del bruciatore	X9 8	
	N 7	
	N 6	
	X6 5	
* pompa di trasferimento	X4 4	
	N 3	
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML+	modulo 2 circuiti riscaldante 1	
chiuso c.r. 1	X9 8	
	N 7	
valvola inversione con motore aperto	N 6	
	X6 5	
contattore -K1 c.r. 1	X4 4	
	N 3	
pompa di riscaldamento c.r. 1	N 2	
	X2 1	

UML+	modulo 3 circuiti riscaldante 2	
chiuso c.r. 1	X9 8	
	N 7	
valvola inversione con motore aperto	N 6	
	X6 5	
	X4 4	
	N 3	
pompa di riscaldamento c.r. 2	N 2	
	X2 1	

094557/01

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	
	GND 15	
master modulo di servizio collegamento espansione-regolazione	+12V 14	
	Lon- 13	
	Lon+ 12	
	GND 11	
	GND 10	
	Y7 9	
* sensore accumulo tranf. TPT	Y5 8	
	GND 7	
* caldaia off autom. con TPA	con GND 6	
	Y4 5	
* richiesta di calore esterna	Y3 4	
	GND 3	
caldaia on autom. con TPE	GND 2	
	Y2 1	

UML+	modulo 2 circuiti riscaldante 1	
	Y12 12	
	GND 11	
modulo di servizio comando a distanza	GND 10	
	Y7 9	
sonda da esterno	Y5 8	
	GND 7	
sonda di acqua calda c.r. 1	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
sonda di mandata c.r. 1	GND 2	
	Y2 1	

UML+	modulo 3 circuiti riscaldante 2	
	Y12 12	
	GND 11	
modulo di servizio comando a distanza	GND 10	
	Y7 9	
	Y5 8	
	GND 7	
	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
sonda di mandata c.r. 2	GND 2	
	Y2 1	

094557/01

-XA	blocco di collegamento
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	modulo 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

MES	modulo 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	modulo 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	modulo 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	modulo 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	modulo 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
master modulo di servizio collegamento espansione-regolazione	Y12 16 GND 15
	+12V 14 Lon- 13 Lon+ 12 GND 11
	modulo di servizio comando a distanza
	GND 10 Y7 9
	Y5 8 GND 7
	sonda di acqua calda c.r. 1
	GND 6 Y4 5 Y3 4 GND 3
	sonda di mandata c.r. 1
	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
valvola inversione con motore aperto	chiuso c.r. 1
	X9 8 N 7
	N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 1
	X4 4 N 3
	pompa di riscaldamento c.r. 1
	N 2 X2 1
	PWM fase continua 1
	L 0
	PWM fase continua 2
	L 0

UML+	modulo 2 circuiti riscaldante 2
modulo di servizio comando a distanza	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	sonda di acqua calda c.r. 2
	GND 6 Y4 5 Y3 4 GND 3
	sonda di mandata c.r. 2
	GND 2 Y2 1

UML+	modulo 2 circuiti riscaldante 2
valvola inversione con motore aperto	chiuso c.r. 2
	X9 8 N 7
	N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 2
	X4 4 N 3
	pompa di riscaldamento c.r. 2
	N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

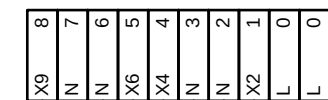
	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

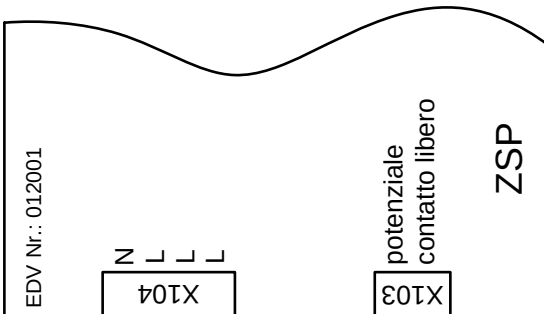
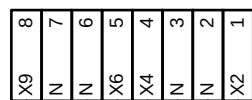
092675/01

bassa tensione 230 VAC

UML+
modulo 1
circuito riscaldante 1



UML+
modulo 2
circuito riscaldante 2

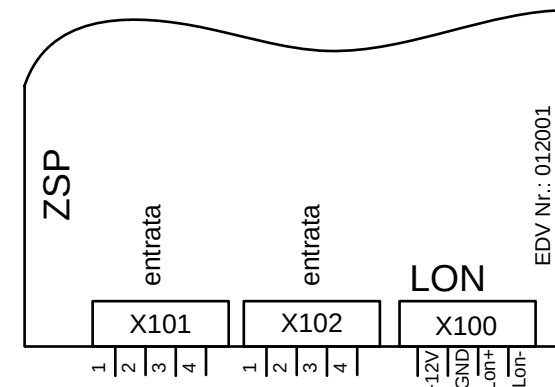
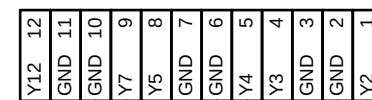


sonda bassissima tensione

UML+
modulo 1
circuito riscaldante 1



UML+
modulo 2
circuito riscaldante 2



collegamento espansione-regolazione
modulo di servizio / comando
a distanza
-A22.1

sonda da esterno
-V1.1

sonda di acqua calda
-V5.1

sonda di mandata
-V3.1

modulo di servizio / comando
a distanza
-A22.2

sonda di acqua calda
-V5.2

sonda di mandata
-V3.2

*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ /UML+ /ZSP S

Zeichnungs Nr.: 094608/00

MES H021 + H024 + ZSP S

regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda e ZSP S

Projekt :
regolazione



1 mm : 1 mm

Blatt 094608/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
master modulo di servizio collegamento espansione-regolazione	Y12 16 GND 15
	+12V 14 Lon- 13 Lon+ 12 GND 11
	modulo di servizio comando a distanza
	GND 10 Y7 9
	Y5 8 GND 7
	sonda di acqua calda c.r. 1
	GND 6 Y4 5 Y3 4 GND 3
	sonda di mandata c.r. 1
	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
valvola inversione con motore aperto	chiuso c.r. 1
	X9 8 N 7
	N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 1
	X4 4 N 3
	pompa di riscaldamento c.r. 1
	N 2 X2 1
	PWM fase continua 1
	L 0
	PWM fase continua 2
	L 0

UML+	modulo 2 circuiti riscaldante 2
modulo di servizio comando a distanza	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	sonda di acqua calda c.r. 2
	GND 6 Y4 5 Y3 4 GND 3
	sonda di mandata c.r. 2
	GND 2 Y2 1

UML+	modulo 2 circuiti riscaldante 2
valvola inversione con motore aperto	chiuso c.r. 2
	X9 8 N 7
	N 6 X6 5
	pompa caricamento acqua sanitaria c.r. 2
	X4 4 N 3
	pompa di riscaldamento c.r. 2
	N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

sonda bassissima tensione



				Datum	24.06.2013	UML+/UML+/ZSP W		MES H021 + H024 + ZSP W regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda e ZSP W	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	rot							◀ ----- 2 ▶
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094610/00				Blatt 094610/00	

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuitto acqua calda
-X102 /4	esterna-richiesta di calore c.r.

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

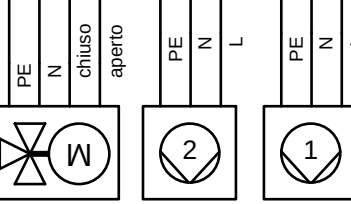
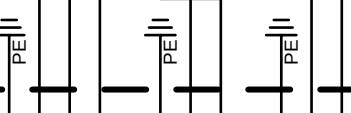
092671/01

092671/01

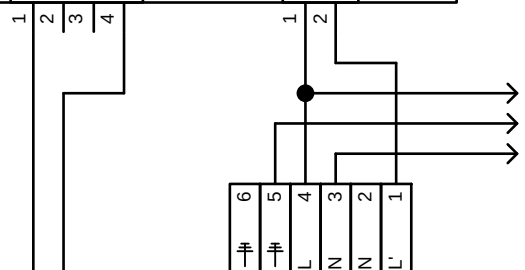
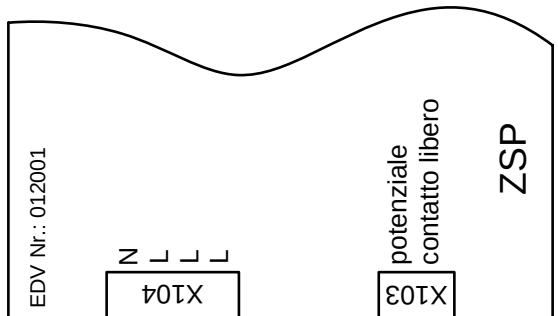
bassa tensione 230 VAC

UML+
modulo 1
circuito riscaldante 1

modulo 2



valvola inversione con motore -H5.1
pompa caricamento acqua sanitaria -P2.1
pompa di riscaldamento -P1.1

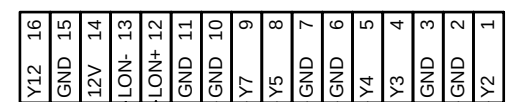


230V richiesta di calore
totale segnali di guasto

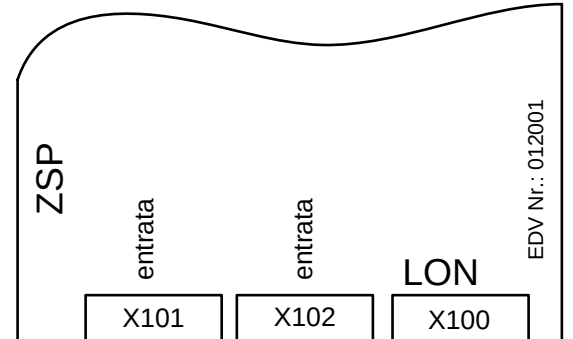
sonda bassissima tensione

UML+
modulo 1
circuito riscaldante 1

modulo 2



collegamento espansione-regolazione
modulo di servizio / comando a distanza -A22.1
sonda da esterno -V1.1
sonda di acqua calda -V5.1
sonda di mandata -V3.1



entrata
entrata
LON
+12V
GND
Lon+
Lon-

*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	modulo 1 circuiti riscaldante 1
	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

UML+	modulo 1 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

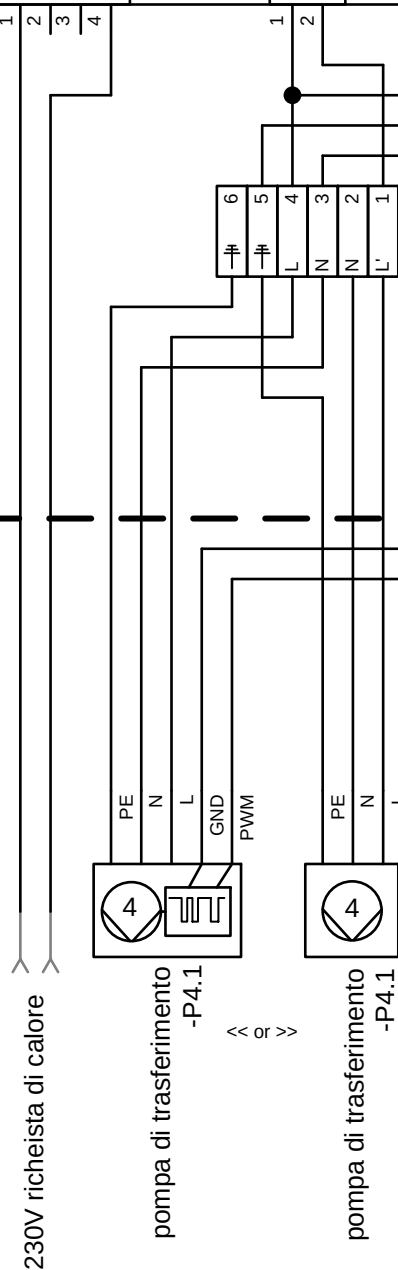
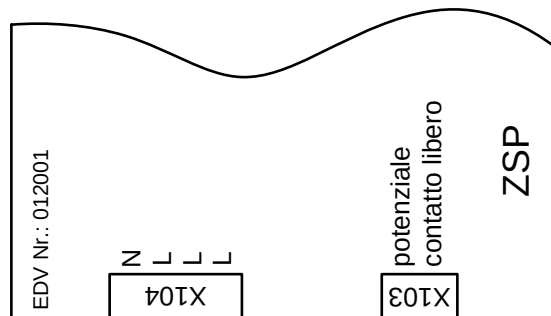
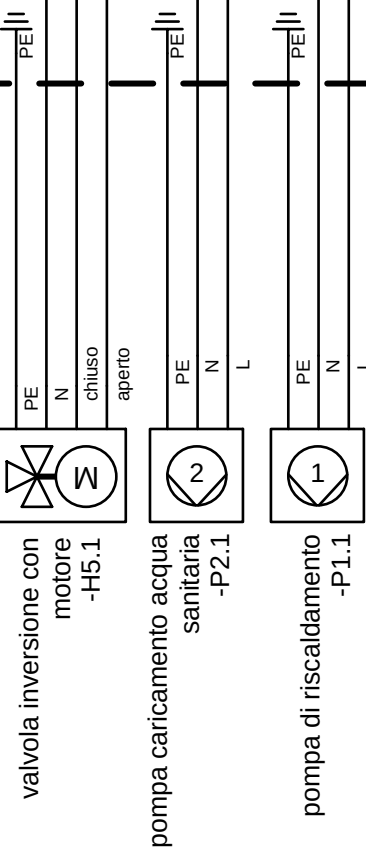
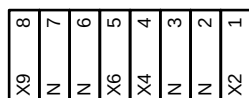
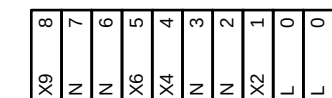
092671/01

092671/01

bassa tensione 230 VAC

UML+
modulo 1
circuitto riscaldante 1

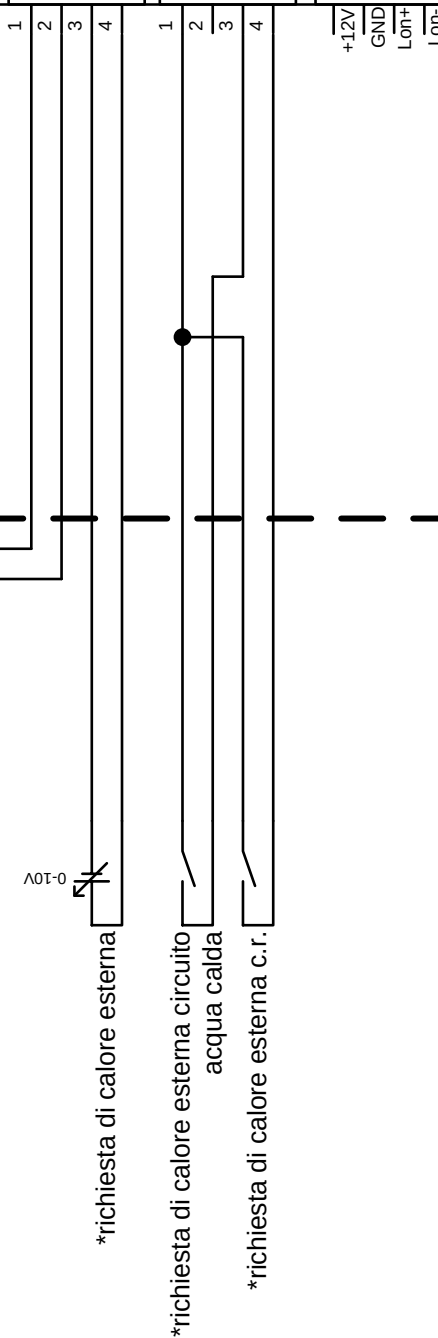
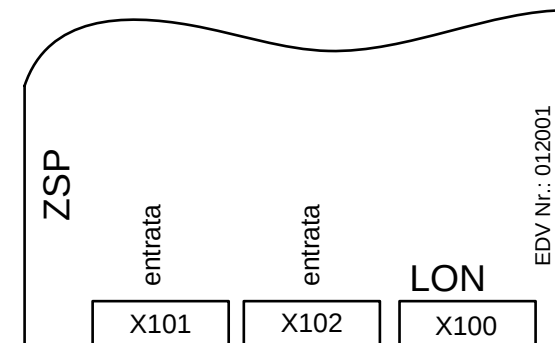
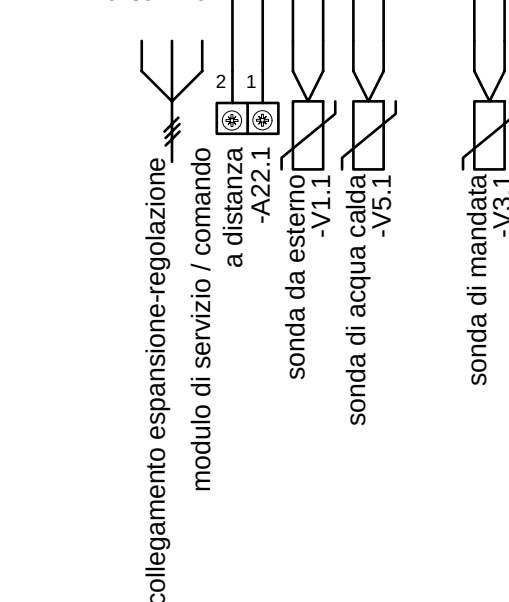
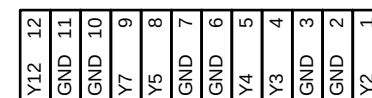
modulo 2



sonda bassissima tensione

UML+
modulo 1
circuitto riscaldante 1

modulo 2



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ / ZSP W

Zeichnungs Nr.: 094612/00

MES H021 + ZSP W

regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e ZSP W

Projekt :
regolazione



1 mm : 1 mm

Blatt 094612/00

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /4	esterna-richiesta di calore c.r.

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	modulo 1
*bruciatorecontatto	X9 8 N 7
	N 6 X6 5
*pompa di trasferimento accumulo	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	modulo 1
PWM pompa circuito caldaia	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensore accumulo tranf. TPT	Y5 8 GND 7
*caldaia off autom. con TPA	con GND 6 Y4 5
*richiesta di calore esterna	Y3 4 GND 3
caldaia on autom. con TPE	con GND 2 Y2 1

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

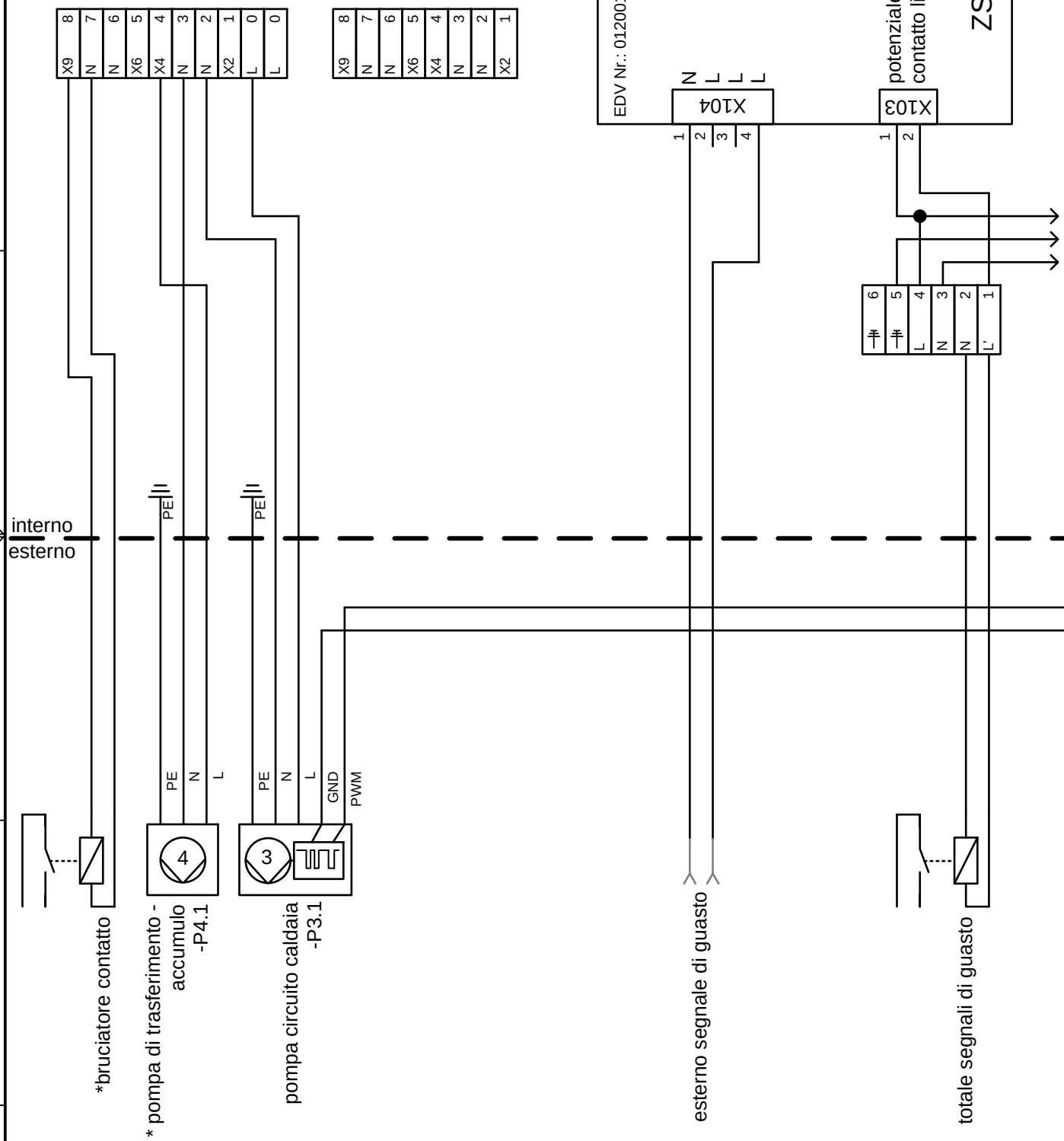
bassa tensione 230 VAC

sonda bassissima tensione

B-PLM

modulo 1

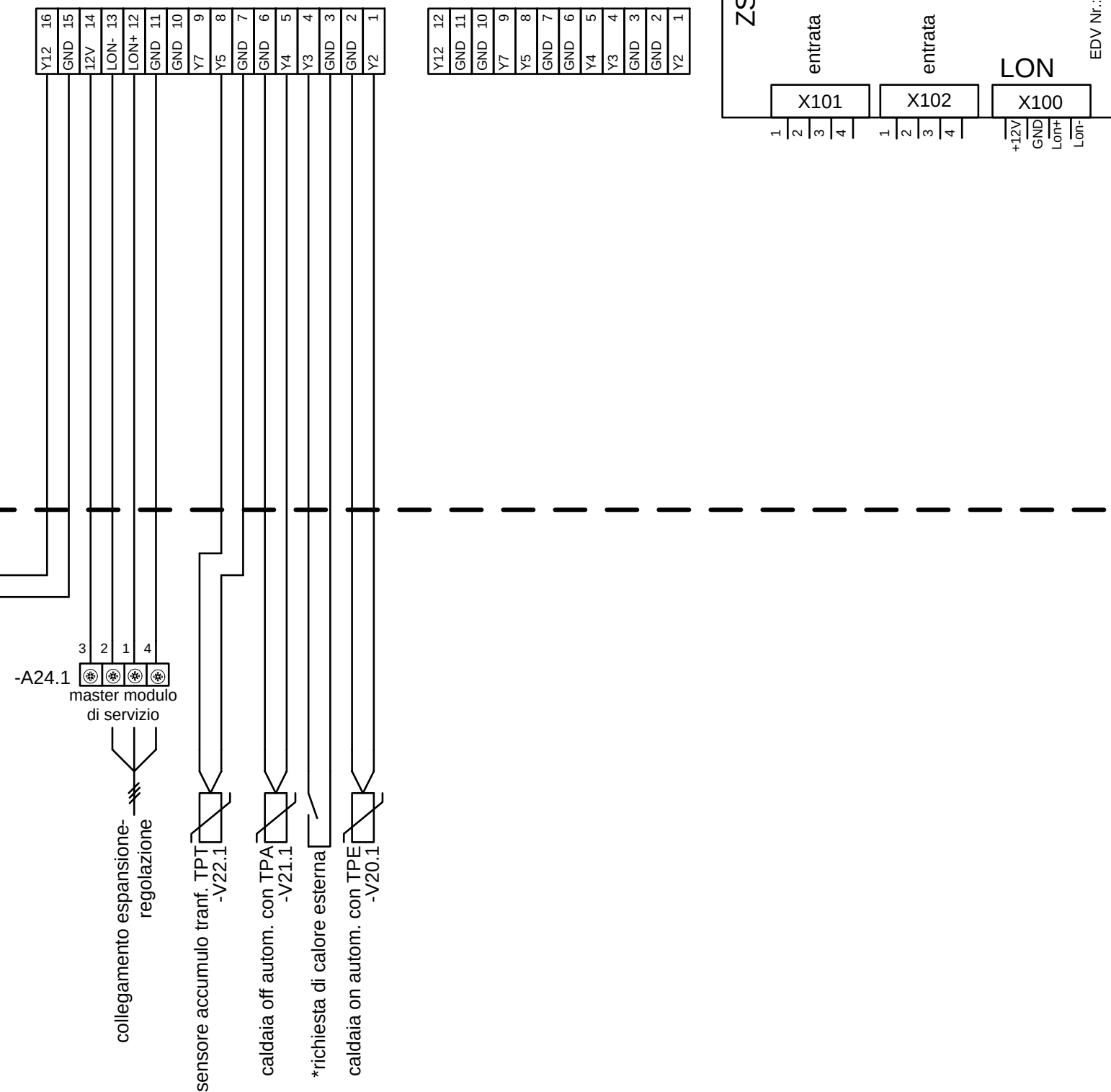
modulo 2



B-PLM

modulo 1

modulo 2



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / ZSP S

Zeichnungs Nr.: 094613/00

MES P030 + ZSP S

con controllo bruciatore gasolio/gas/pellet e ZSP S

Projekt :

regolazione



1 mm : 1 mm

Blatt 094613/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	modulo 1
*bruciatorecontatto	X9 8 N 7
	N 6 X6 5
*pompa di trasferimento accumulo	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	modulo 1
PWM pompa circuito caldaia	Y12 16 GND 15
master modulo di servizio collegamento espansione- regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensore accumulo tranf. TPT	Y5 8 GND 7
*caldaia off autom. con TPA	con GND 6 Y4 5
*richiesta di calore esterna	Y3 4 GND 3
caldaia on autom. con TPE	con GND 2 Y2 1

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

bassa tensione 230 VAC

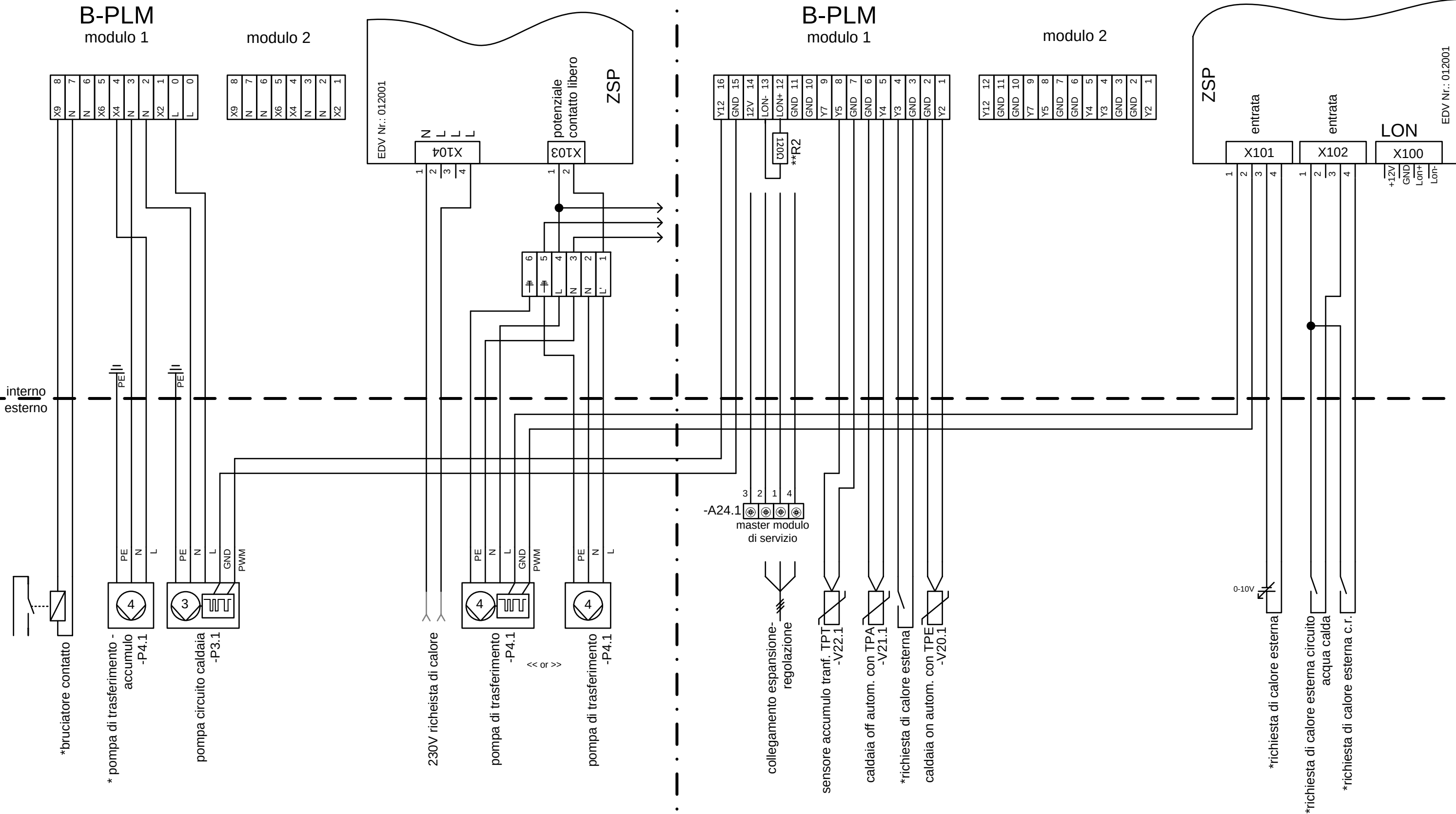
sonda bassissima tensione

B-PLM
modulo 1

modulo 2

B-PLM
modulo 1

modulo 2



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / ZSP W

Zeichnungs Nr.: 094614/00

MES P030 + ZSP W
con controllo bruciatore gasolio/gas/pellet e ZSP W

Projekt :
regolazione

windhager

1 mm : 1 mm

Blatt 094614/00

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /4	esterna-richiesta di calore c.r.

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8 N 7
valvola inversione a tre vie solido	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	modulo 1
PWM pompa caricamento accumulogND 15	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto TPO	Y5 8 GND 7
*sonda della caldaia	GND 6 Y4 5
*termostato d'as di scarico B2 sonda dell'accumulo in centro	Y3 4 GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

UML+	modulo 2 circuiti riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

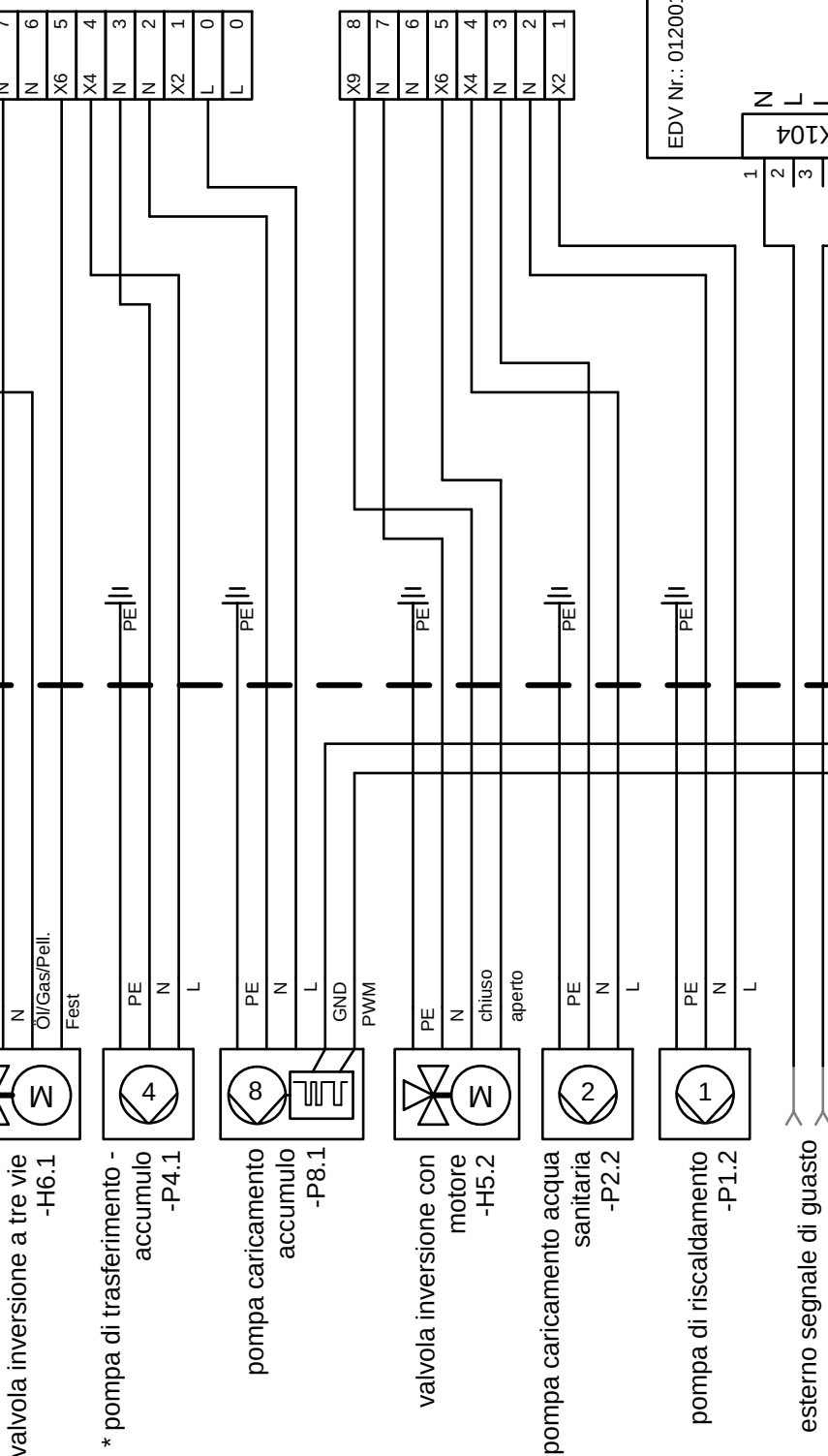
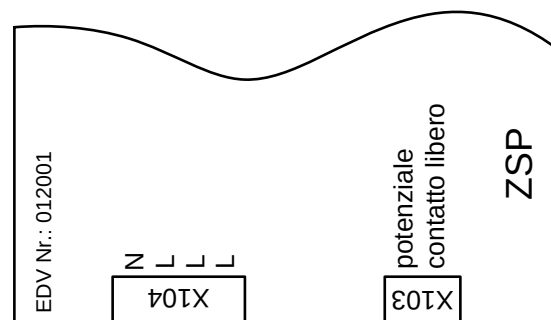
	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

bassa tensione 230 VAC

sonda bassissima tensione

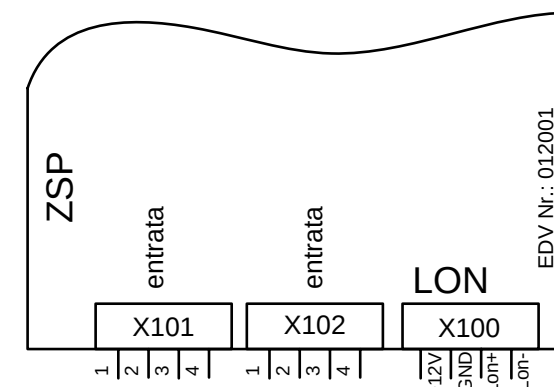
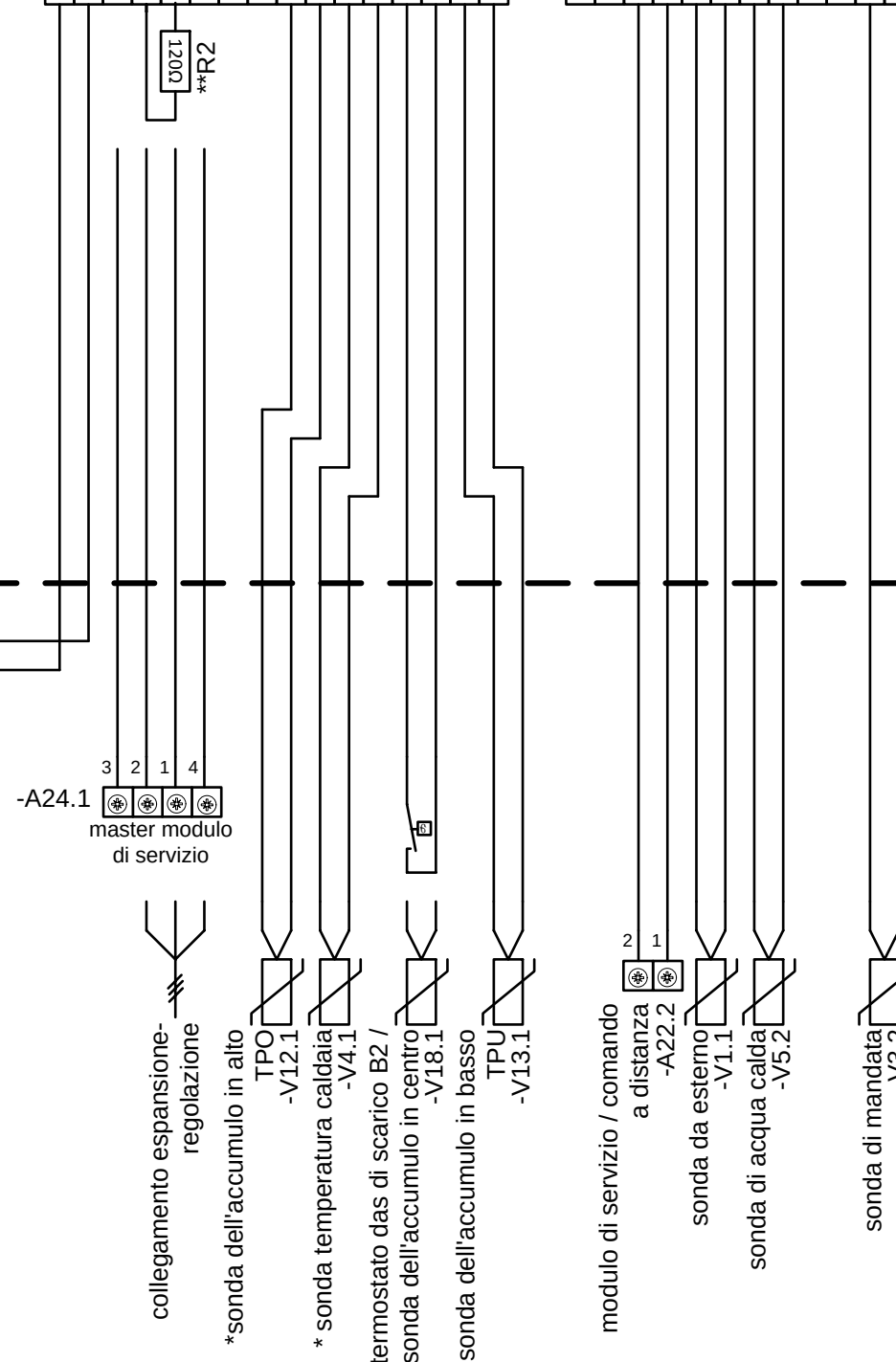
B-PLM modulo 1

UML+ modulo 2 circuito riscaldante 1



B-PLM modulo 1

UML+ modulo 2 circuito riscaldante 1



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM/ UML+ / ZSP S

Zeichnungs Nr.: 094624/00

MES P041 + H021 + ZSP S

regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e accumulo -modulo B-PLM e ZSP S

Projekt :
regolazione



1 mm : 1 mm

Blatt 094624/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8 N 7
valvola inversione a tre vie solido	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	modulo 2 circuiti riscaldante 1
chiuso c.r. 1	X9 8 N 7
valvola inversione con motore aperto	N 6 X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4 N 3
pompa di riscaldamento c.r. 1	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	modulo 1
PWM pompa caricamento accumulog	Y12 16 GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto TPO	Y5 8 GND 7
*sonda della caldaia	GND 6 Y4 5
*termostato d'as di scarico B2	Y3 4
sonda dell'accumulo in centro	GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

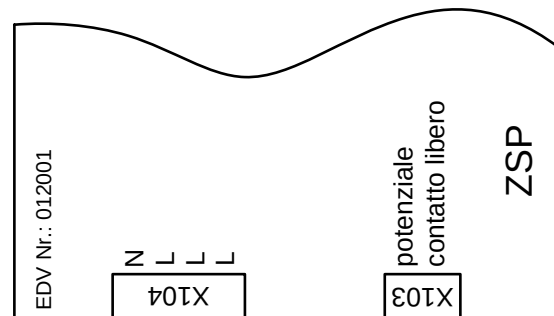
UML+	modulo 2 circuiti riscaldante 1
	Y12 12 GND 11
modulo di servizio comando a distanza	GND 10 Y7 9
sonda da esterno	Y5 8 GND 7
sonda di acqua calda c.r. 1	GND 6 Y4 5
	Y3 4 GND 3
sonda di mandata c.r. 1	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

bassa tensione 230 VAC

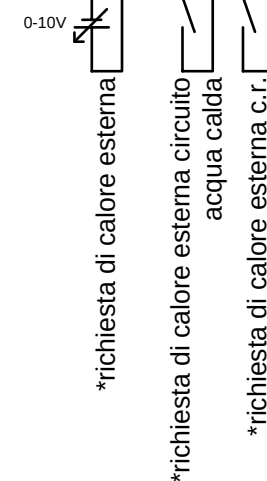
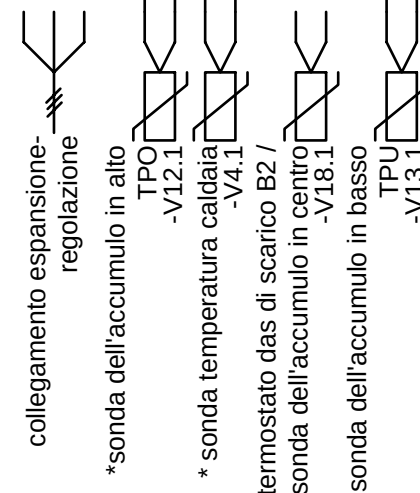
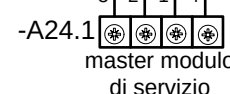
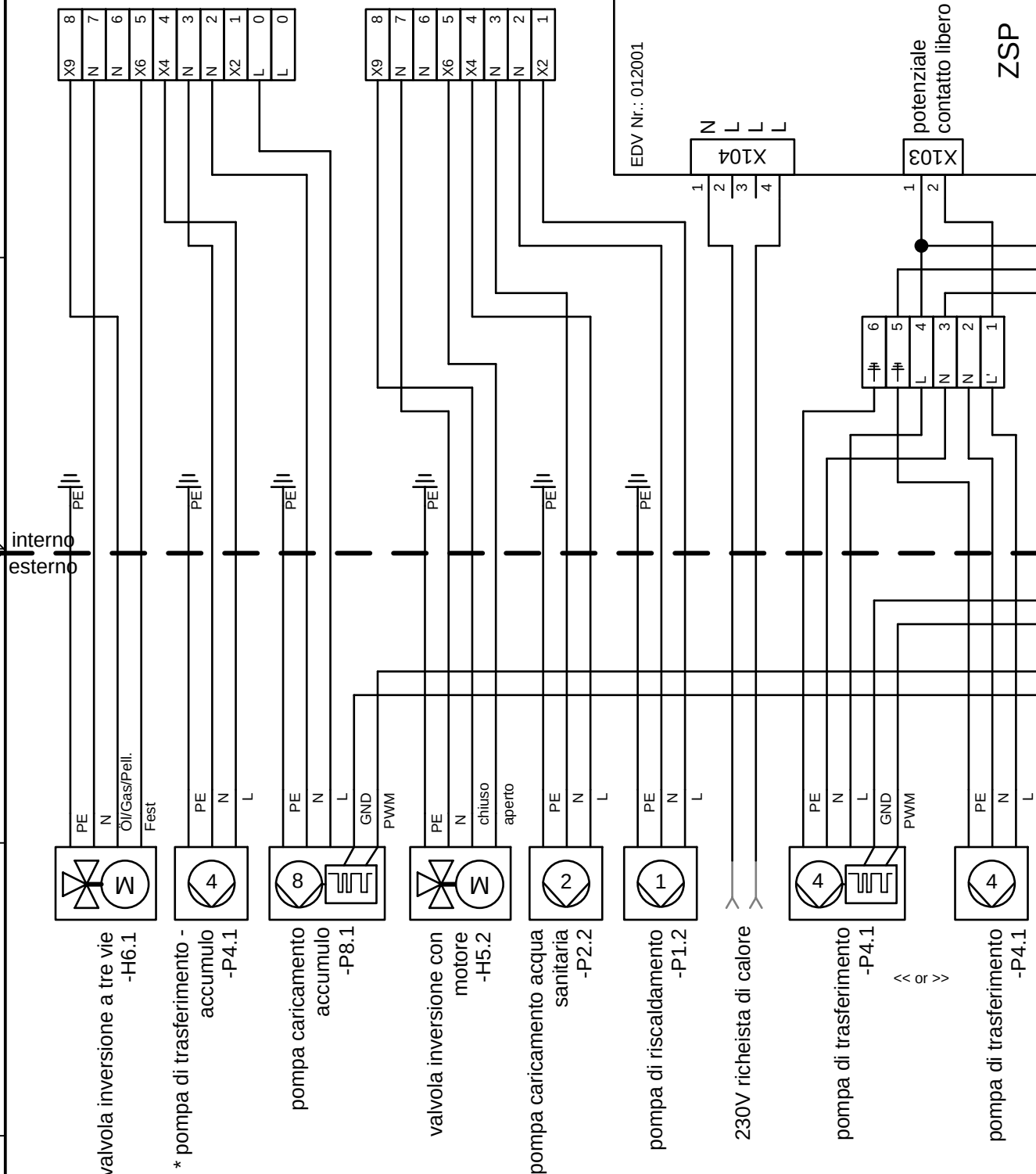
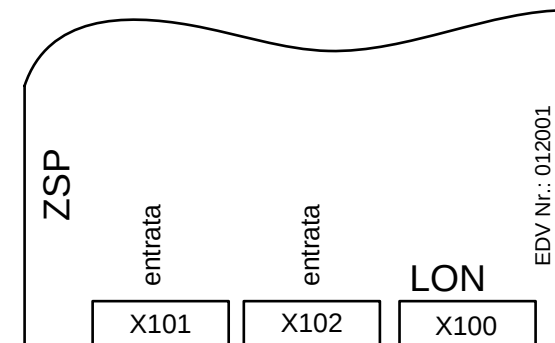
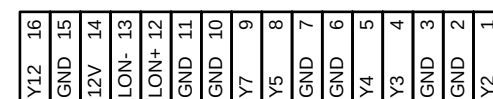
WVF+ modulo 1

UML+ modulo 2 circuito riscaldante 1



WVF+ modulo 1

UML+ modulo 2 circuito riscaldante 1



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Rev.	Änderung	Datum	Name
1			

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF+/ UML+ / ZSP W	
Zeichnungs Nr.:	094626/00

MES P041 + H021 + ZSP W
regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda
commutazione automatica combustibili solidi con carica accumulo e ZSP W

Projekt :
regolazione



1 mm : 1 mm
Blatt 094626/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	pompa di trasferimento
	N L'

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND	
-X102 /2	
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /4	esterna-richiesta di calore c.r.

EDV Nr. 094812/00

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8 N 7
valvola inversione a tre vie solido	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	modulo 1
	PWM pompa caricamento accumulogND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto TPO	Y5 8 GND 7
*sonda della caldaia	GND 6 Y4 5
*termostato das di scarico B2 sonda dell'accumulo in centro	Y3 4 GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

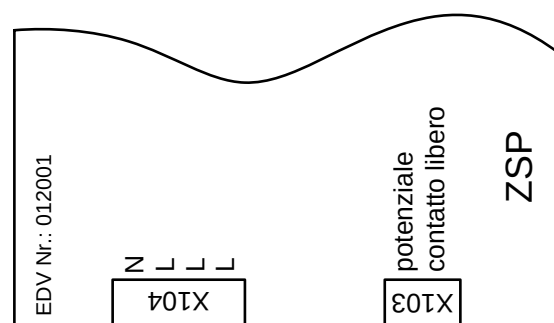
	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

bassa tensione 230 VAC

WVF+
modulo 1

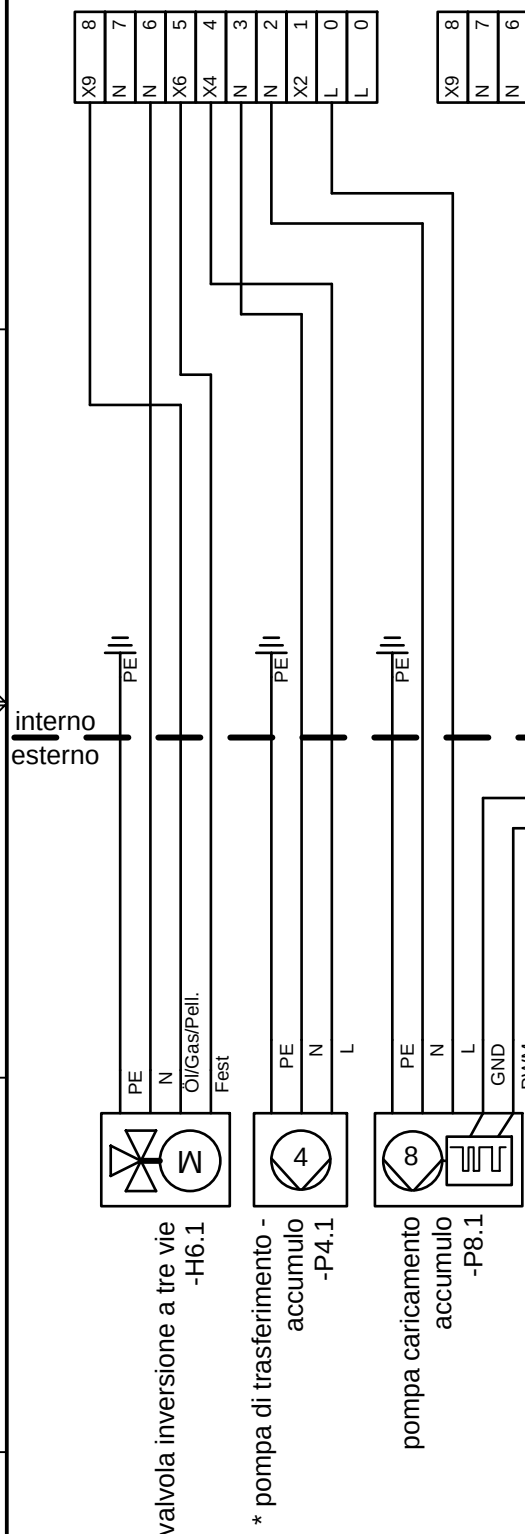
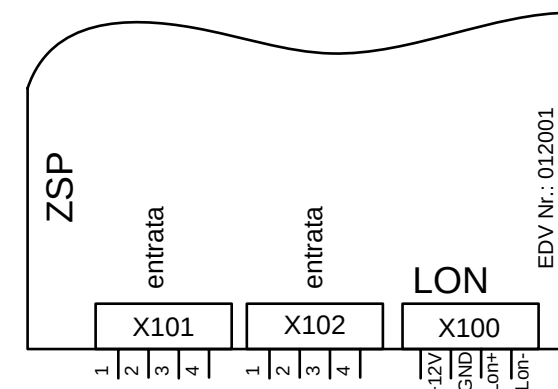
modulo 2



sonda bassissima tensione

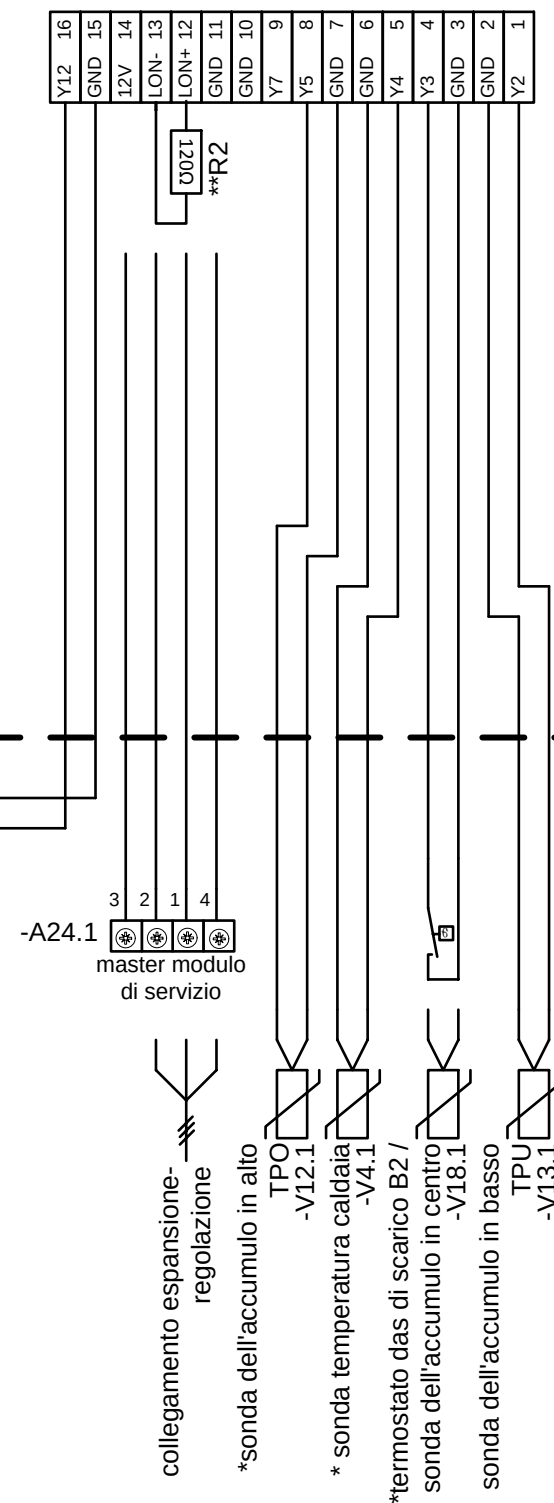
WVF+
modulo 1

modulo 2



esterno segnale di guasto

totale segnali di guasto



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Rev.	Änderung	Datum	Name
1			

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF / ZSP S	
Zeichnungs Nr.:	094616/00

MES P041 + ZSP S
commutazione automatica combustibili solidi con carica accumulo e ZSP S

Projekt :
regolazione



1 mm : 1 mm
Blatt 094616/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	modulo 1
gasolio/gas/pellet	X9 8 N 7
valvola inversione a tre vie solido	N 6 X6 5
*pompa di trasferimento-accumulo	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	modulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	modulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	modulo 1
	PWM pompa caricamento accumulogND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sonda dell'accumulo in alto TPO	Y5 8 GND 7
*sonda della caldaia	GND 6 Y4 5
*termostato das di scarico B2 sonda dell'accumulo in centro	Y3 4 GND 3
sonda dell'accumulo in basso TPU	GND 2 Y2 1

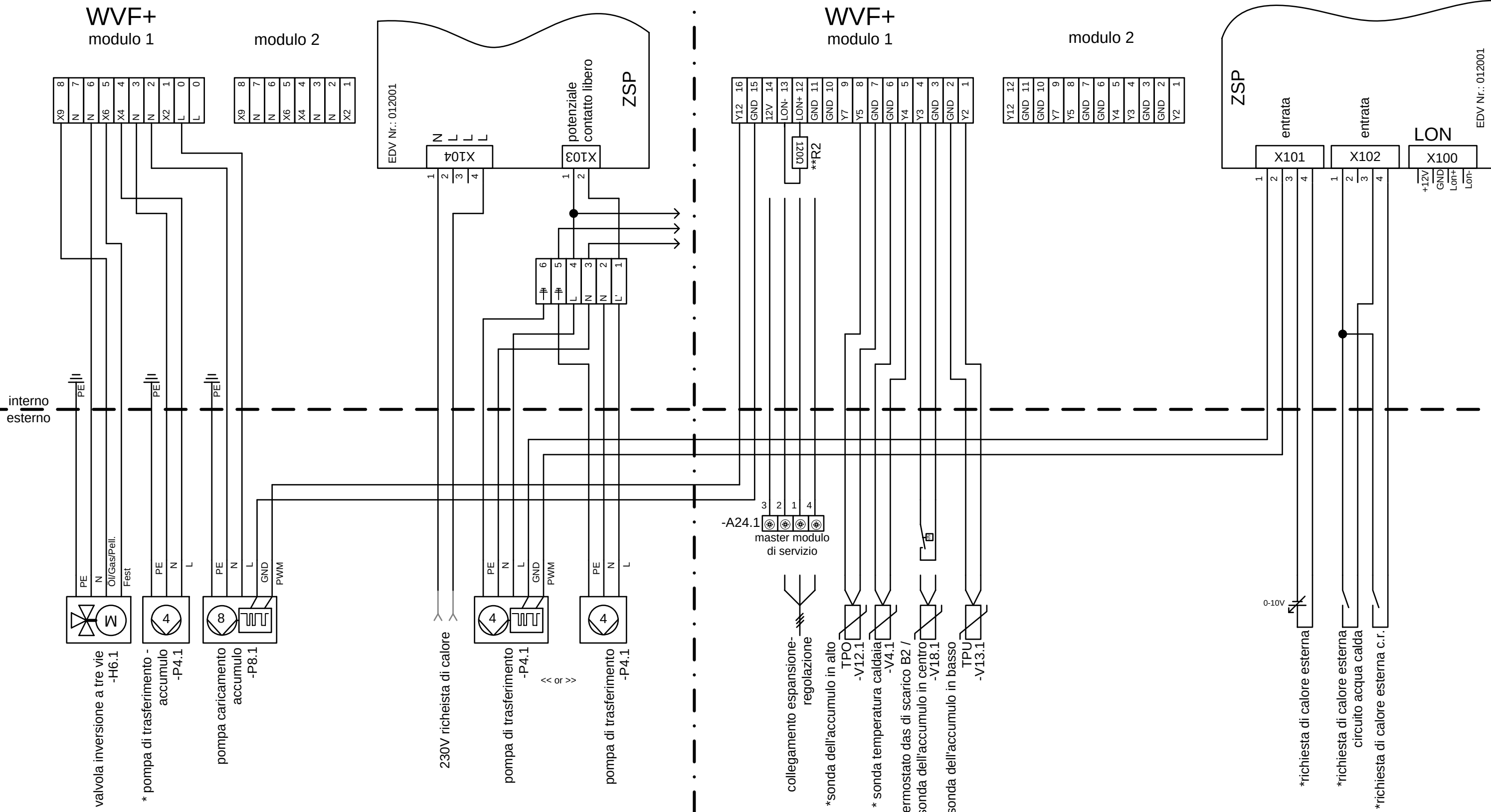
	modulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	modulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	WVF+ / ZSP W		MES P041 + ZSP W commutazione automatica combustibili solidi con carica accumulo e ZSP W	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094617/00				◀ ----- 2 ▶	
												Blatt 094617/00

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND	
-X102 /2	
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /4	esterna-richiesta di calore c.r.

-XA	blocco di collegamento	
230VAC	L 1	
interno	L' 2	
	L' 3	
230VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
*bruciatore contatto	X9 8	N 7
	N 6	
	X6 5	
*Transferpump-accumulo	X4 4	N 3
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML+	modulo 2 circuiti riscaldante 1	
chiuso c.r. 1	X9 8	N 7
valvola inversione con motore aperto	N 6	X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4	N 3
pompa di riscaldamento c.r. 1	N 2	X2 1

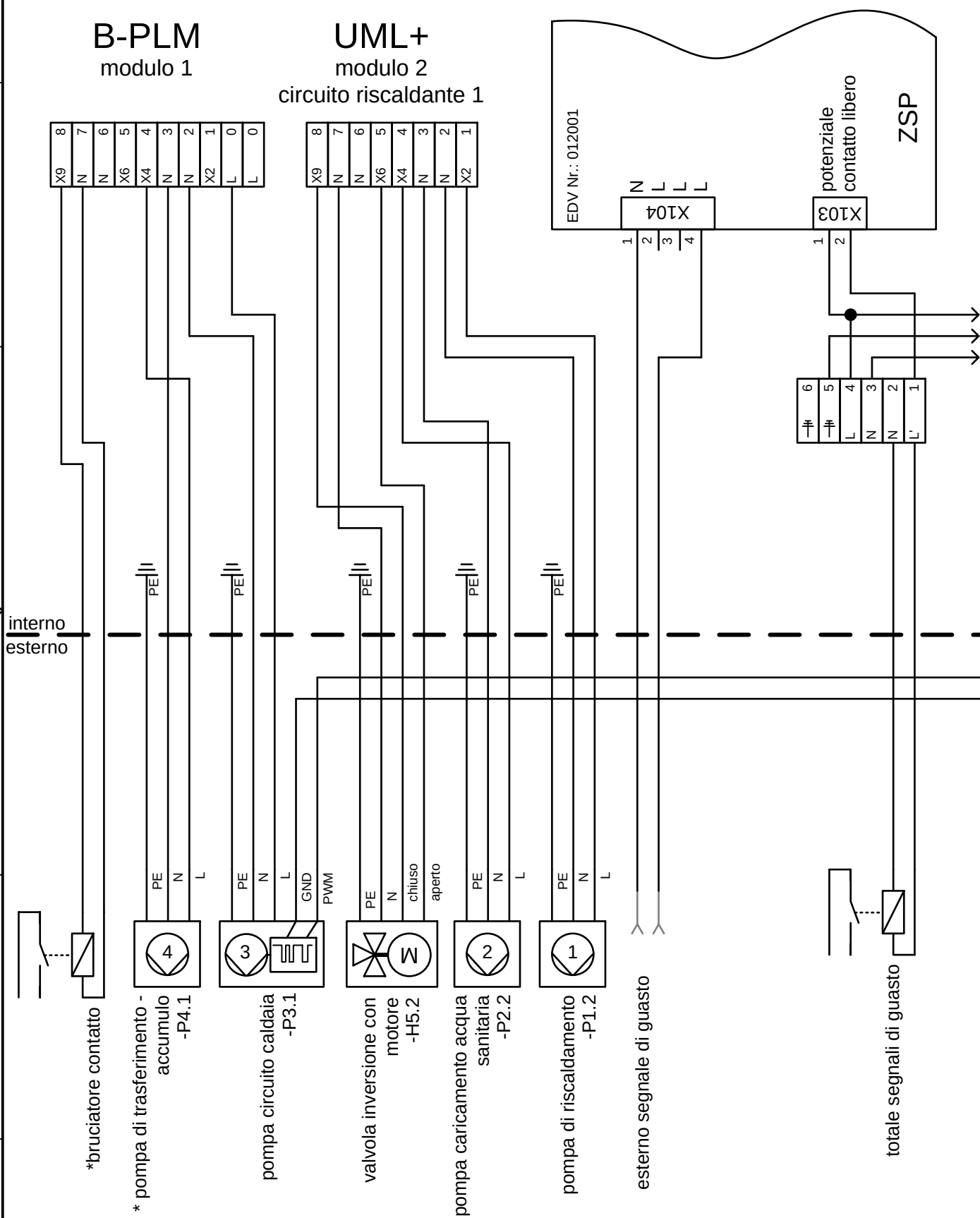
	modulo 3	
	X9 8	N 7
	N 6	X6 5
	X4 4	N 3
	N 2	X2 1

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14	Lon- 13 Lon+ 12 GND 11
	GND 10	Y7 9
*sensore accumulo tranf. TPT	Y5 8	GND 7
*caldaia off autom. con TPA	con GND 6	Y4 5
*richiesta di calore esterna	Y3 4	GND 3
caldaia on autom. con TPE	con GND 2	Y2 1

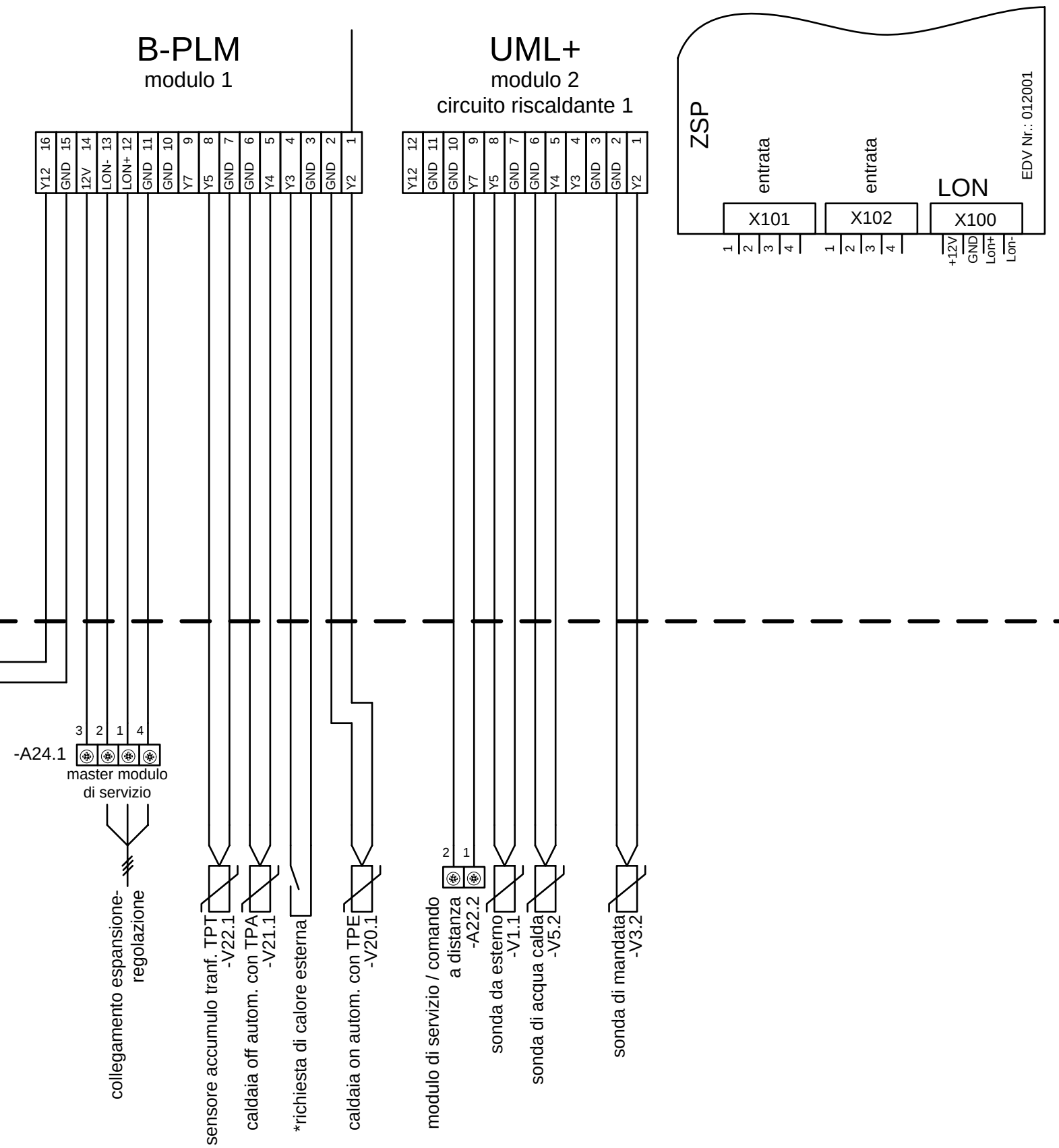
UML+	modulo 2 circuiti riscaldante 1	
	Y12 12	GND 11
modulo di servizio comando a distanza	GND 10	Y7 9
sonda da esterno	Y5 8	GND 7
sonda di acqua calda c.r. 1	GND 6	Y4 5
	Y3 4	GND 3
sonda di mandata c.r. 1	GND 2	Y2 1

	modulo 3	
	Y12 12	GND 11
	GND 10	Y7 9
	Y5 8	GND 7
	GND 6	Y4 5
	Y3 4	GND 3
	GND 2	Y2 1

bassa tensione 230 VAC



sonda bassissima tensione



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	B-PLM / UML+ / ZSP S		MES P042 + H021 + ZSP S regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e accumulo -modulo B-PLM e ZSP S	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094620/00				Blatt 094620/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento	
230VAC	L 1	
interno	L' 2	
	L' 3	
230VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
*bruciatore contatto	X9 8	N 7
	N 6	
	X6 5	
*Transferpump-accumulo	X4 4	N 3
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML+	modulo 2 circuitro riscaldante 1	
chiuso c.r. 1	X9 8	N 7
valvola inversione con motore aperto	N 6	X6 5
pompa caricamento acqua sanitaria c.r. 1	X4 4	N 3
pompa di riscaldamento c.r. 1	N 2	X2 1

	modulo 3	
	X9 8	N 7
	N 6	X6 5
	X4 4	N 3
	N 2	X2 1

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	GND 15
master modulo di servizio collegamento espansione-regolazione	+12V 14	Lon- 13 Lon+ 12 GND 11
	GND 10	Y7 9
*sensore accumulo tranf. TPT	Y5 8	GND 7
*caldaia off autom. con TPA	GND 6	Y4 5
*richiesta di calore esterna	Y3 4	GND 3
caldaia on autom. con TPE	GND 2	Y2 1

UML+	modulo 2 circuitro riscaldante 1	
	Y12 12	GND 11
modulo di servizio comando a distanza	GND 10	Y7 9
sonda da esterno	Y5 8	GND 7
sonda di acqua calda c.r. 1	GND 6	Y4 5
	Y3 4	GND 3
sonda di mandata c.r. 1	GND 2	Y2 1

	modulo 3	
	Y12 12	GND 11
	GND 10	Y7 9
	Y5 8	GND 7
	GND 6	Y4 5
	Y3 4	GND 3
	GND 2	Y2 1

bassa tensione 230 VAC

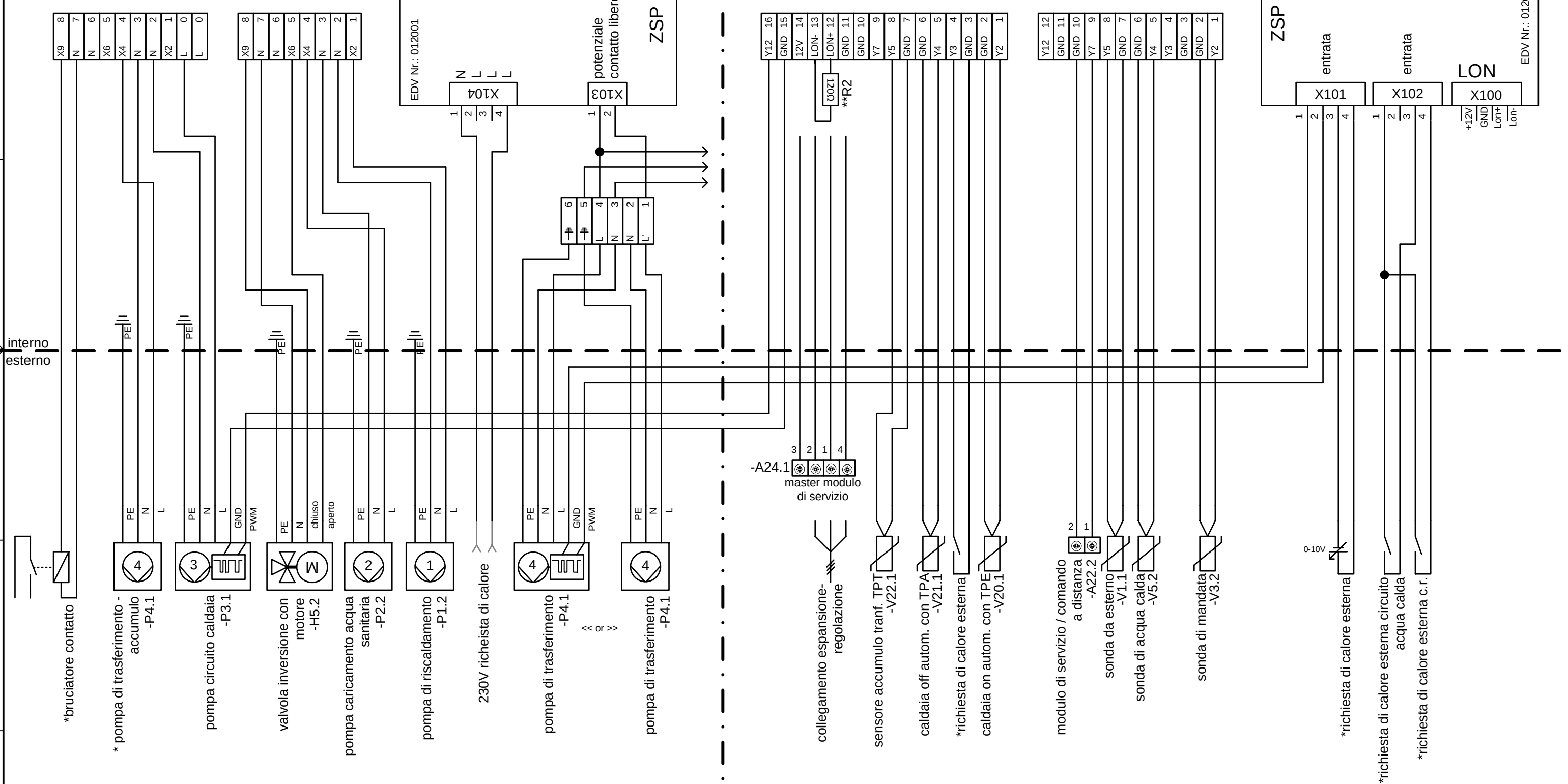
sonda bassissima tensione

B-PLM
modulo 1

UML+
modulo 2
circuito riscaldante 1

B-PLM
modulo 1

UML+
modulo 2
circuito riscaldante 1



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	B-PLM/ UML+ /ZSP W		MES P042 + H021 + ZSP W regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e accumulo -modulo B-PLM e ZSP W	Projekt : regolazione		1 mm : 1 mm			
				Gezeichnet	rot						Zeichnungs Nr.:		094622/00	◀ ----- 2 ▶
Rev.	Änderung	Datum	Name	Geprüft	ros									Blatt 094622/00
				Genehmigt										

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /4	esterna-richiesta di calore c.r.

-XA	blocco di collegamento	
230VAC	L 1	
interno	L' 2	
	L' 3	
230VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	
	GND 15	
master modulo di servizio collegamento espansione-regolazione	+12V 14	
	Lon- 13	
	Lon+ 12	
	GND 11	
	GND 10	
	Y7 9	
*sensore accumulo transf. TPT	Y5 8	
	GND 7	
*caldaia off autom. con TPA	GND 6	
	Y4 5	
*richiesta di calore esterna	Y3 4	
	GND 3	
caldaia on autom. con TPE	GND 2	
	Y2 1	

B-PLM	modulo 1	
*bruciatore contatto	X9 8	
	N 7	
	N 6	
	X6 5	
*pompa di trasferimento-accumulo	X4 4	
	N 3	
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

	Modul 2	
	Y12 12	
	GND 11	
	GND 10	
	Y7 9	
	Y5 8	
	GND 7	
	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
	GND 2	
	Y2 1	

	Modul 2	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

	Modul 3	
	Y12 12	
	GND 11	
	GND 10	
	Y7 9	
	Y5 8	
	GND 7	
	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
	GND 2	
	Y2 1	

	Modul 3	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

092890/01

092890/01

bassa tensione 230 VAC

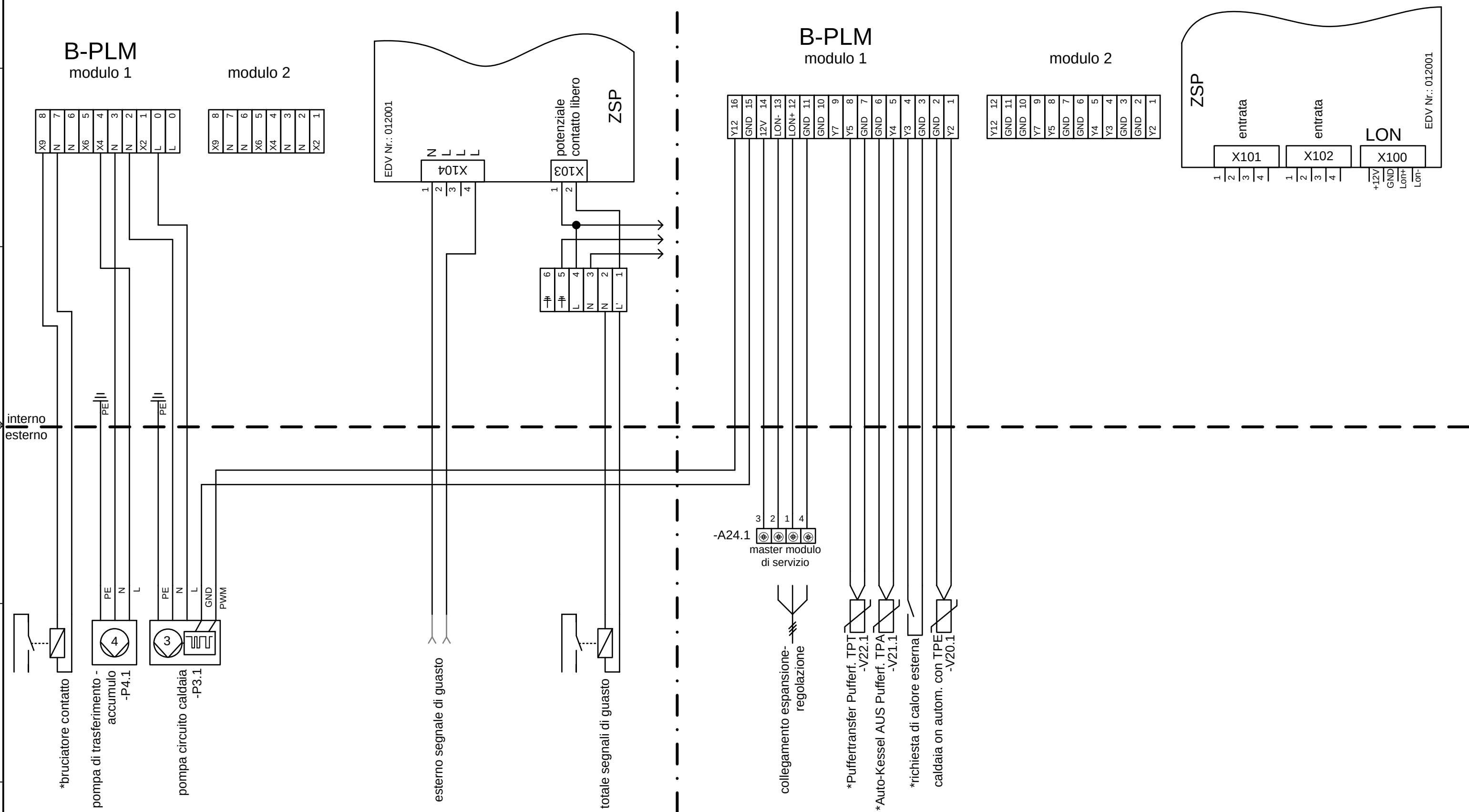
sonda bassissima tensione

B-PLM
modulo 1

modulo 2

B-PLM
modulo 1

modulo 2



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	B-PLM / ZSP S		MES P042 + ZSP S buffer memoria B-PLM e ZSP S	Projekt : regolazione		1 mm : 1 mm		
				Gezeichnet	rot								◀ ----- 2 ▶
				Geprüft	ros								
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094618/00						

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento	
230VAC	L 1	
interno	L' 2	
	L' 3	
230VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
*bruciatore contatto	X9 8	N 7
	N 6	
	X6 5	
*pompa di trasferimento-accumulo	X4 4	N 3
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

	Modul 2	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

	Modul 3	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

092890/01

B-PLM	modulo 1	
	PWM pompa circuito caldaia	Y12 16 GND 15
	master modulo di servizio collegamento espansione-regolazione	+12V 14 Lon- 13 Lon+ 12 GND 11
		GND 10 Y7 9
	*sensore accumulo tranf. TPT	Y5 8 GND 7
	*caldaia off autom. con TPA	GND 6 Y4 5
	*richiesta di calore esterna	Y3 4 GND 3
	caldaia on autom. con TPE	GND 2 Y2 1

	Modul 2	
		Y12 12 GND 11
		GND 10 Y7 9
		Y5 8 GND 7
		GND 6 Y4 5
		Y3 4 GND 3
		GND 2 Y2 1

	Modul 3	
		Y12 12 GND 11
		GND 10 Y7 9
		Y5 8 GND 7
		GND 6 Y4 5
		Y3 4 GND 3
		GND 2 Y2 1

092890/01

bassa tensione 230 VAC

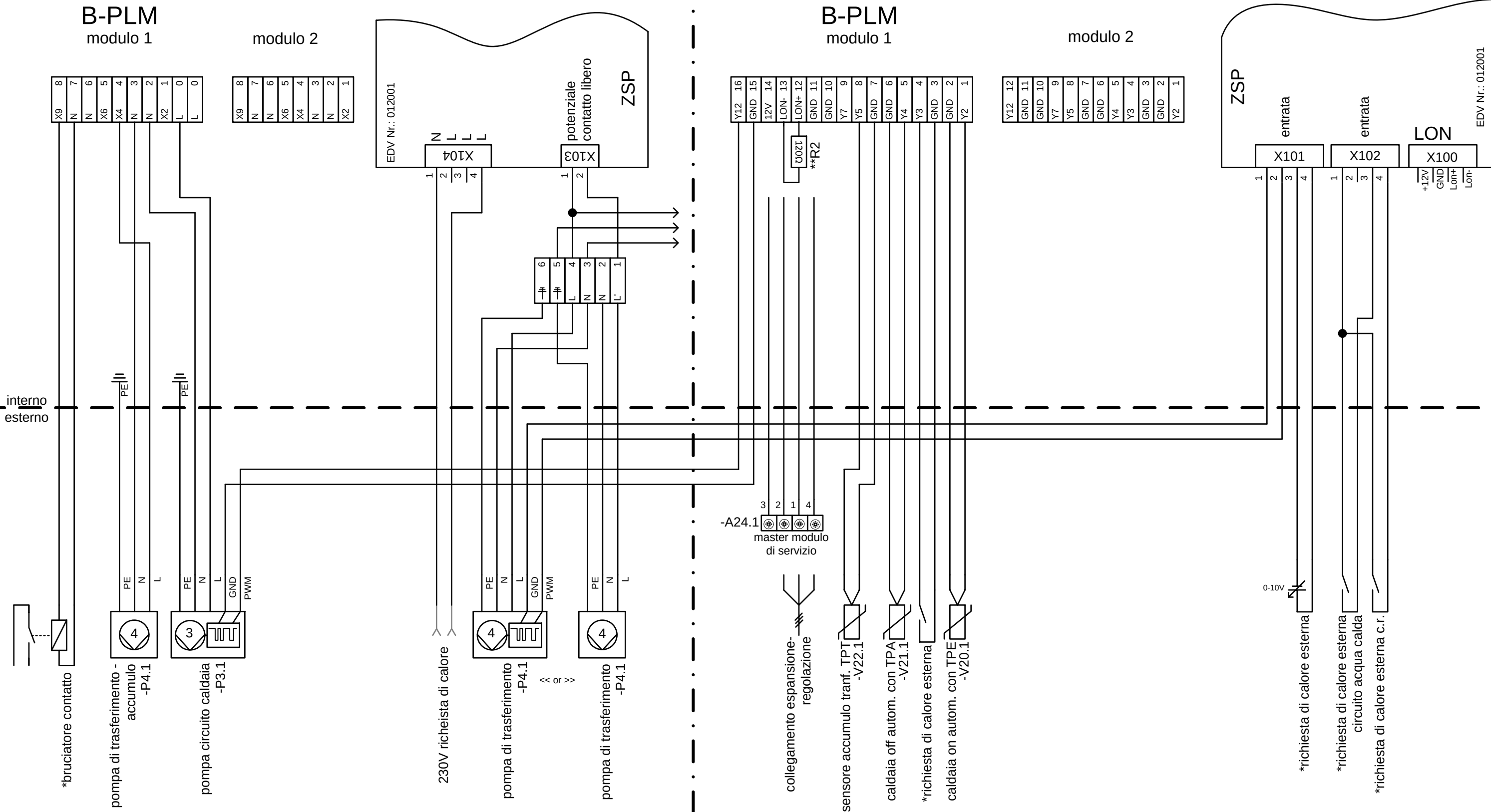
sonda bassissima tensione

B-PLM
modulo 1

modulo 2

B-PLM
modulo 1

modulo 2



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	B-PLM / ZSP W		MES P042 + ZSP W accumulo memoria modulo B-PLM e ZSP W	Projekt : regolazione		1 mm : 1 mm		
				Gezeichnet	rot						Zeichnungs Nr.:	094619/00	◀ ----- 2 ▶
				Geprüft	ros								Blatt 094619/00
Rev.	Änderung	Datum	Name	Genehmigt									

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuitto acqua calda
-X102 /4	esterna-richiesta di calore c.r.

bassa tensione 230 VAC

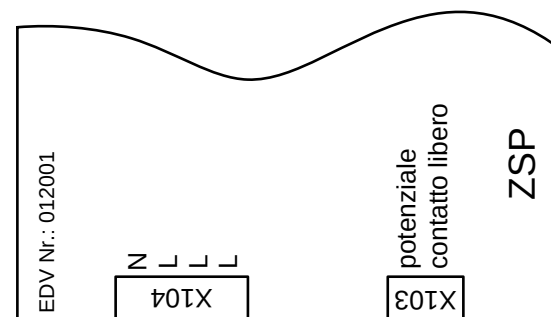
sonda bassissima tensione

modulo 1

modulo 2

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1



esterno segnale di guasto

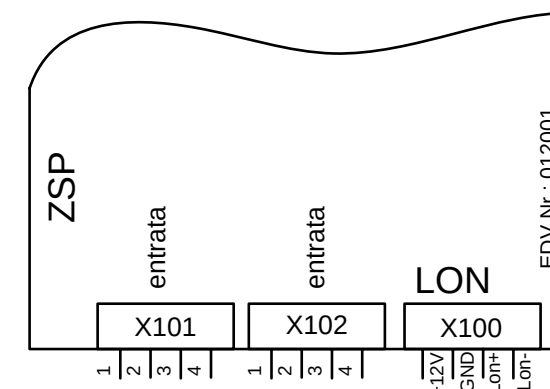
totale segnali di guasto

modulo 1

modulo 2

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



-A24.1
master modulo
di servizio

collegamento espansione-
regolazione

*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Rev.	Änderung	Datum	Name	Datum	24.06.2013	Gezeichnet	rot	Geprüft	ros	Genehmigt		ZSP S	MES ZSP S scheda aggiuntiva S	Projekt : regolazione	1 mm : 1 mm	Blatt 094627/00
1		2		3		4		5		6		7		8		

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	modulo 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

MES	modulo 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	modulo 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

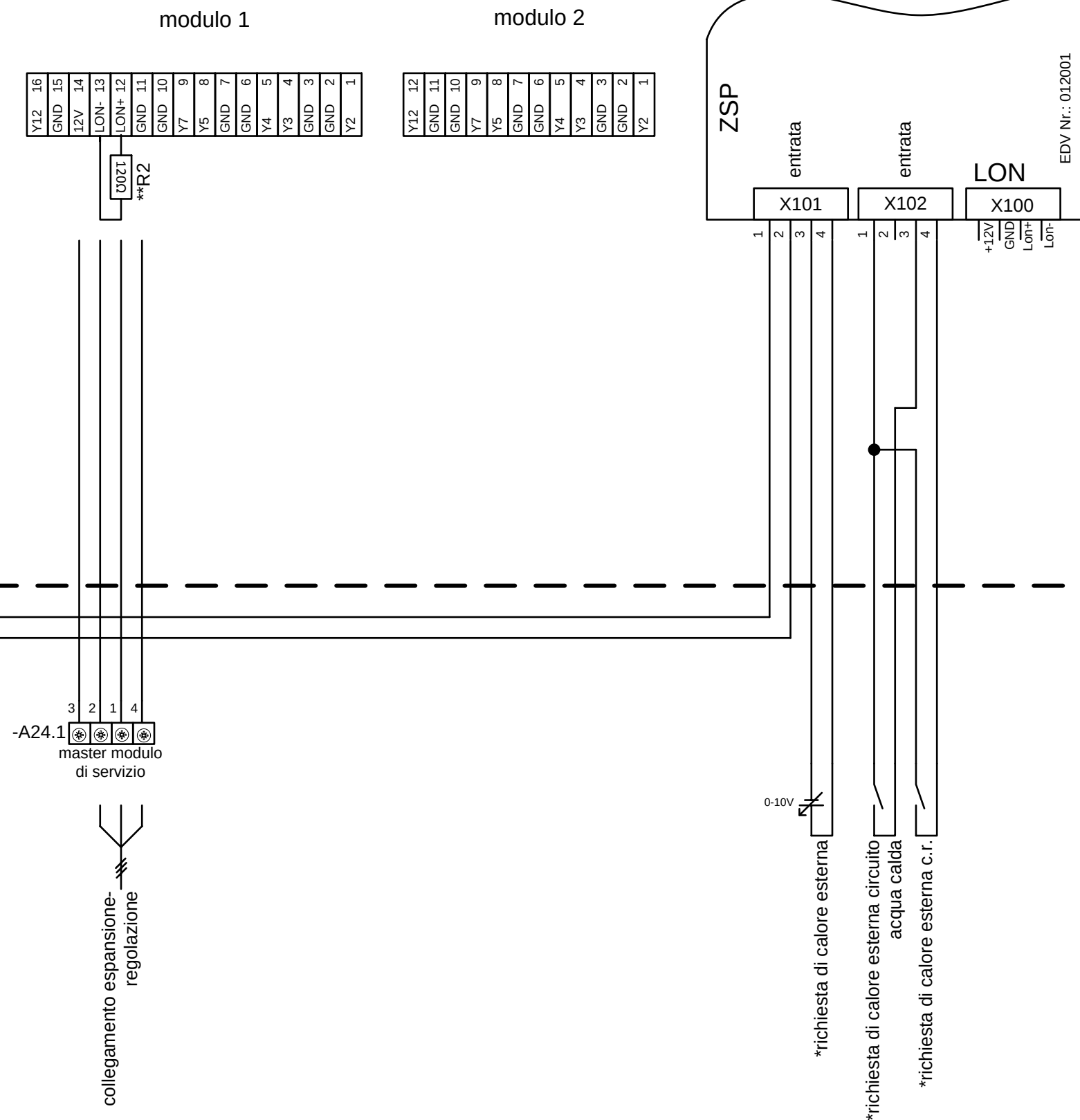
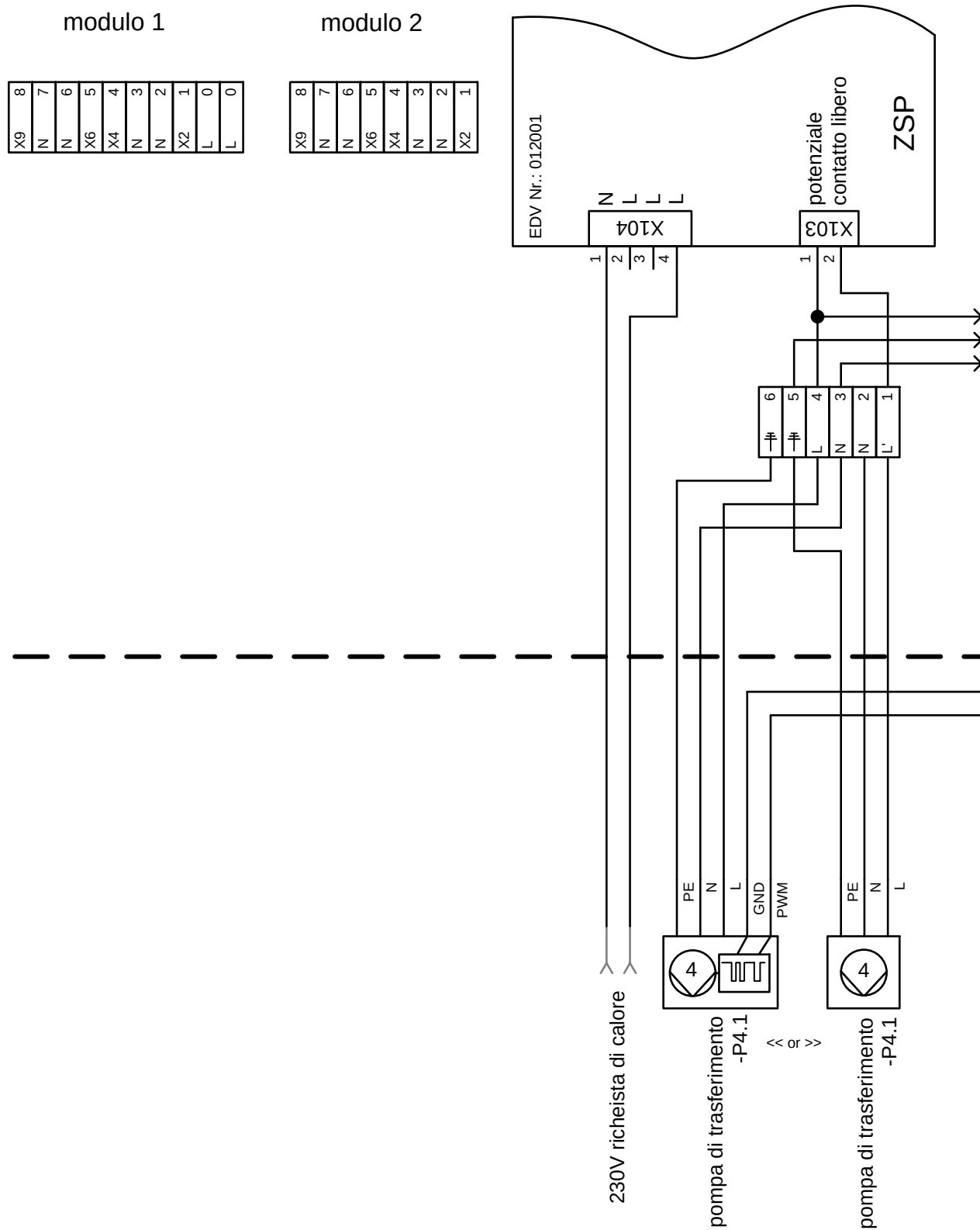
MES	modulo 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	modulo 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	modulo 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

bassa tensione 230 VAC

sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	24.06.2013	ZSP W		MES ZSP W	Projekt : regolazione	windhager	1 mm : 1 mm
				Gezeichnet	rot			scheda aggiuntiva W			
				Geprüft	ros	Zeichnungs Nr.: 094628/00					
Rev.	Änderung	Datum	Name	Genehmigt							Blatt 094628/00

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuito acqua calda
-X102 /4	esterna-richiesta di calore c.r.

-XA	blocco di collegamento
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	modulo 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

MES	modulo 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	modulo 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	modulo 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	modulo 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	modulo 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	blocco di collegamento	
230 VAC	L 1	
interno	L' 2	
	L' 3	
230 VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
contatto del bruciatore	X9 8	
	N 7	
	N 6	
	X6 5	
* pompa di trasferimento	X4 4	
	N 3	
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML +	modulo 2 circuiti riscaldante 1	
chiuso c.r. 1	X9 8	
	N 7	
valvola inversione con motore aperto	N 6	
	X6 5	
contattore -K1 c.r. 1	X4 4	
	N 3	
pompa di riscaldamento c.r. 1	N 2	
	X2 1	

	modulo 3	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

094555/01

B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	
	GND 15	
master modulo di servizio collegamento espansione-regolazione	+12V 14	
	Lon- 13	
	Lon+ 12	
	GND 11	
	GND 10	
	Y7 9	
* sensore accumulo tranf. TPT	Y5 8	
	GND 7	
* caldaia off autom. con TPA	con GND 6	
	Y4 5	
* richiesta di calore esterna	Y3 4	
	GND 3	
caldaia on autom. con TPE	GND 2	
	Y2 1	

UML +	modulo 2 circuiti riscaldante 1	
	Y12 12	
	GND 11	
modulo di servizio comando a distanza	GND 10	
	Y7 9	
sonda da esterno	Y5 8	
	GND 7	
sonda di acqua calda c.r. 1	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
sonda di mandata c.r. 1	GND 2	
	Y2 1	

	modulo 3	
	Y12 12	
	GND 11	
	GND 10	
	Y7 9	
	Y5 8	
	GND 7	
	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
	GND 2	
	Y2 1	

094555/01

sonda bassissima tensione



				Datum	24.06.2013	B-PLM/ UML+/ ZSP S		MES ZUB010 + ZSP S ZUB010 SYS valvola inversione a tre vie accumulo-bollitore sanitario e ZSP S	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094629/00				Blatt 094629/00

-XZSP	scheda aggiuntiva
	PE PE
	L N
	fase continua
	N L'

-XSP	scheda aggiuntiva
	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	blocco di collegamento	
230 VAC	L 1	
interno	L' 2	
	L' 3	
230 VAC	N 4	
interno	N' 5	
	N' 6	

B-PLM	modulo 1	
contatto del bruciatore	X9 8	
	N 7	
	N 6	
	X6 5	
* pompa di trasferimento	X4 4	
	N 3	
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML +	modulo 2 circuiti riscaldante 1	
chiuso c.r. 1	X9 8	
	N 7	
valvola inversione con motore aperto	N 6	
	X6 5	
contattore -K1 c.r. 1	X4 4	
	N 3	
pompa di riscaldamento c.r. 1	N 2	
	X2 1	

	modulo 3	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

094555/01

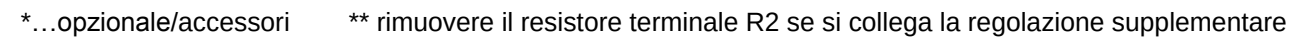
B-PLM	modulo 1	
PWM pompa circuito caldaia	Y12 16	
	GND 15	
master modulo di servizio collegamento espansione-regolazione	+12V 14	
	Lon- 13	
	Lon+ 12	
	GND 11	
	GND 10	
	Y7 9	
* sensore accumulo tranf. TPT	Y5 8	
	GND 7	
* caldaia off autom. con TPA	con GND 6	
	Y4 5	
* richiesta di calore esterna	Y3 4	
	GND 3	
caldaia on autom. con TPE	GND 2	
	Y2 1	

UML +	modulo 2 circuiti riscaldante 1	
	Y12 12	
	GND 11	
modulo di servizio comando a distanza	GND 10	
	Y7 9	
sonda da esterno	Y5 8	
	GND 7	
sonda di acqua calda c.r. 1	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
sonda di mandata c.r. 1	GND 2	
	Y2 1	

	modulo 3	
	Y12 12	
	GND 11	
	GND 10	
	Y7 9	
	Y5 8	
	GND 7	
	GND 6	
	Y4 5	
	Y3 4	
	GND 3	
	GND 2	
	Y2 1	

094555/01

sonda bassissima tensione



				Datum	24.06.2013	B-PLM/ UML+/ ZSP W		MES ZUB010 + ZSP W ZUB010 valvola inversione a tre vie accumulo-bollitore sanitario e ZSP W	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros	Zeichnungs Nr.:	094630/00				Blatt 094630/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	scheda aggiuntiva
	PE
	PE
fase continua	L
	N
pompa di trasferimento	N
	L'

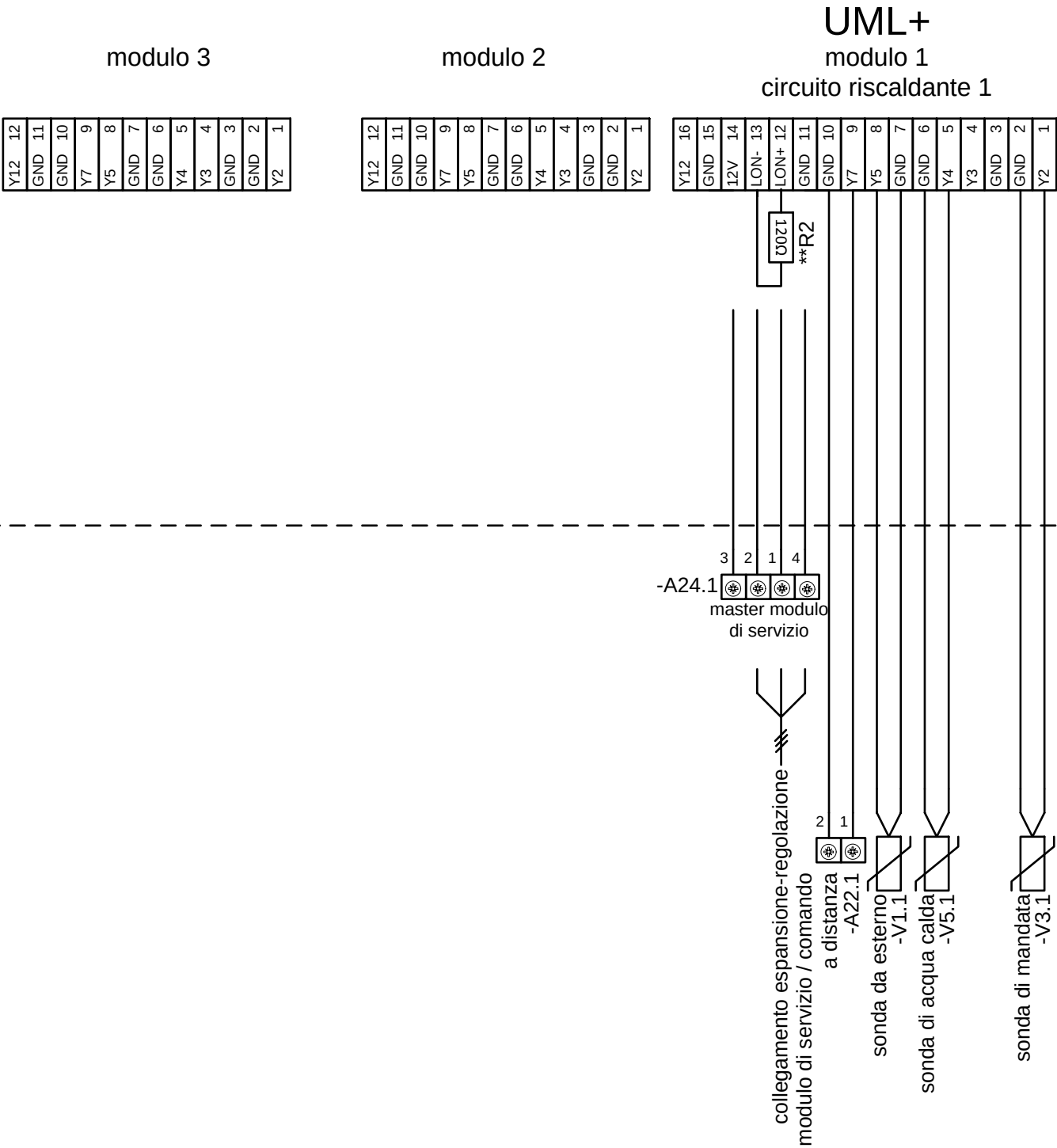
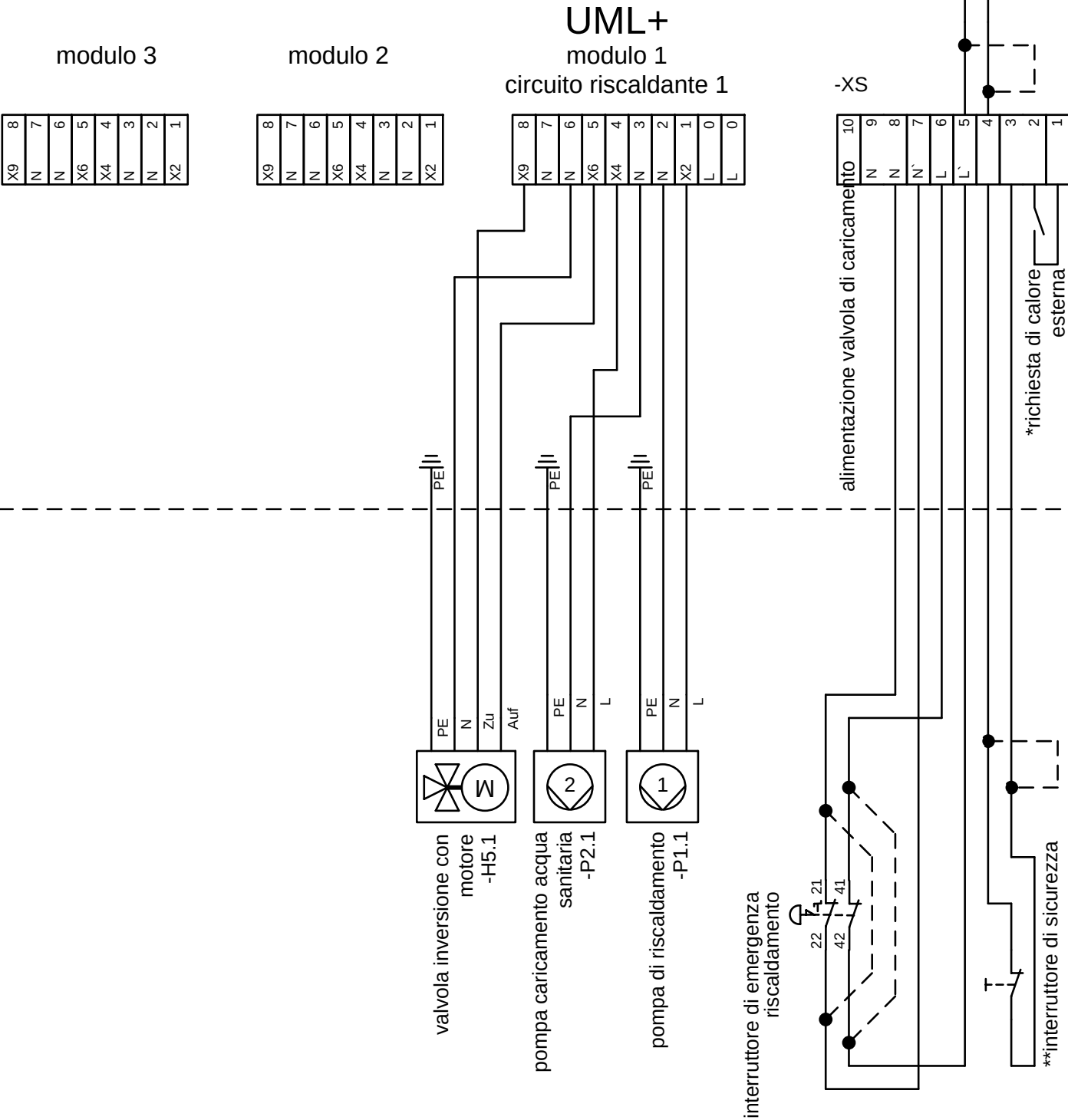
EDV Nr. 094812/00

-XSP	scheda aggiuntiva
GND -X101 /2	PWM pompa di trasferimento
GND -X101 /4	richeista di calore 0- 10V

GND -X102 /2	
-X102 /3	esterna-richiesta di calore circuitto acqua calda
-X102 /4	esterna-richiesta di calore c.r.f.

bassa tensione 230 VAC

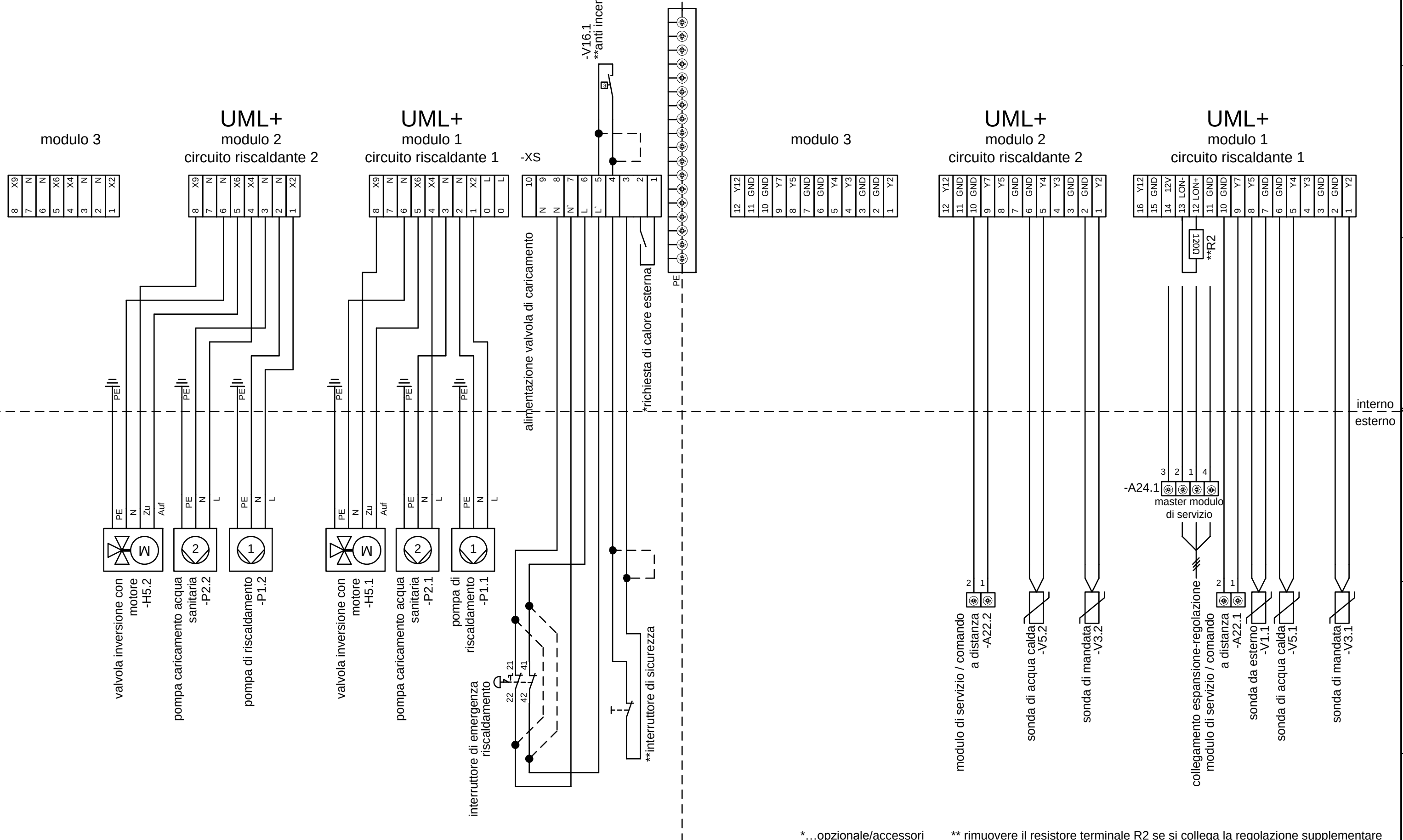
sonda bassissima tensione



*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

bassa tensione 230 VAC

sonda bassissima tensione



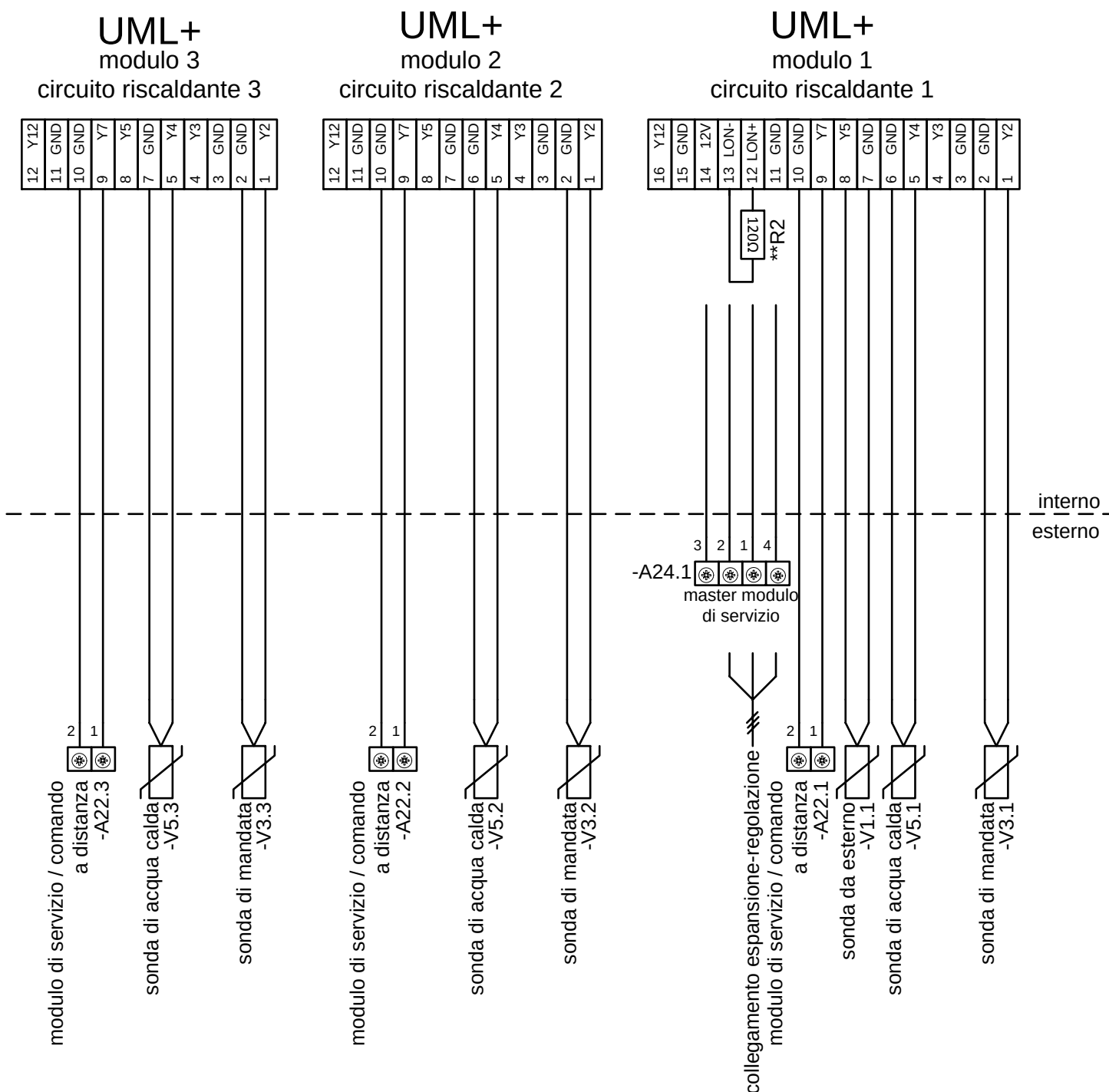
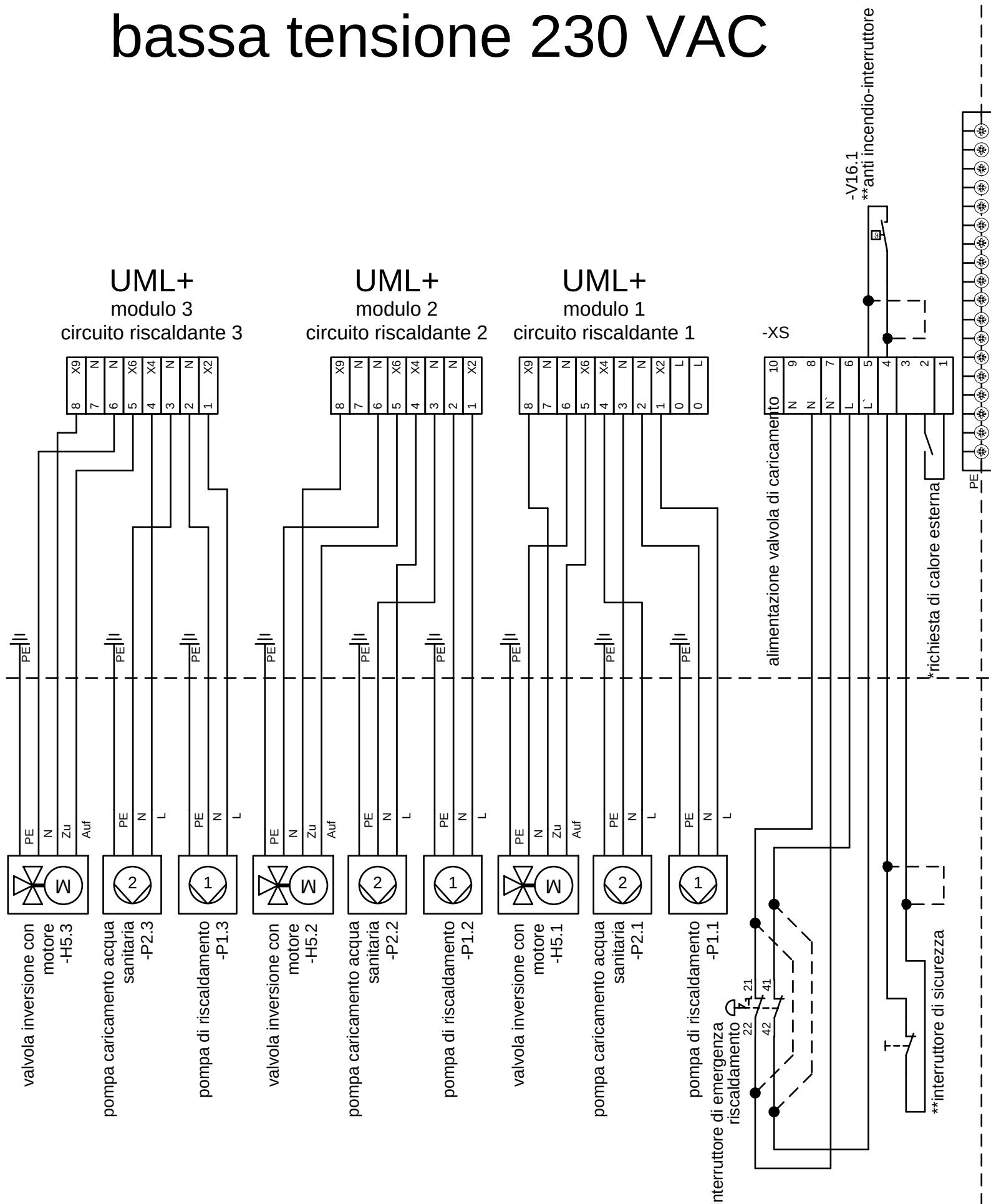
*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	07.08.2013	UML+ / UML+		MES H021 + H024 regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros	Zeichnungs Nr.:	092771/01				Blatt 092771/01
Rev.	Änderung	Datum	Name	Genehmigt							

bassa tensione 230 VAC

sonda bassissima tensione



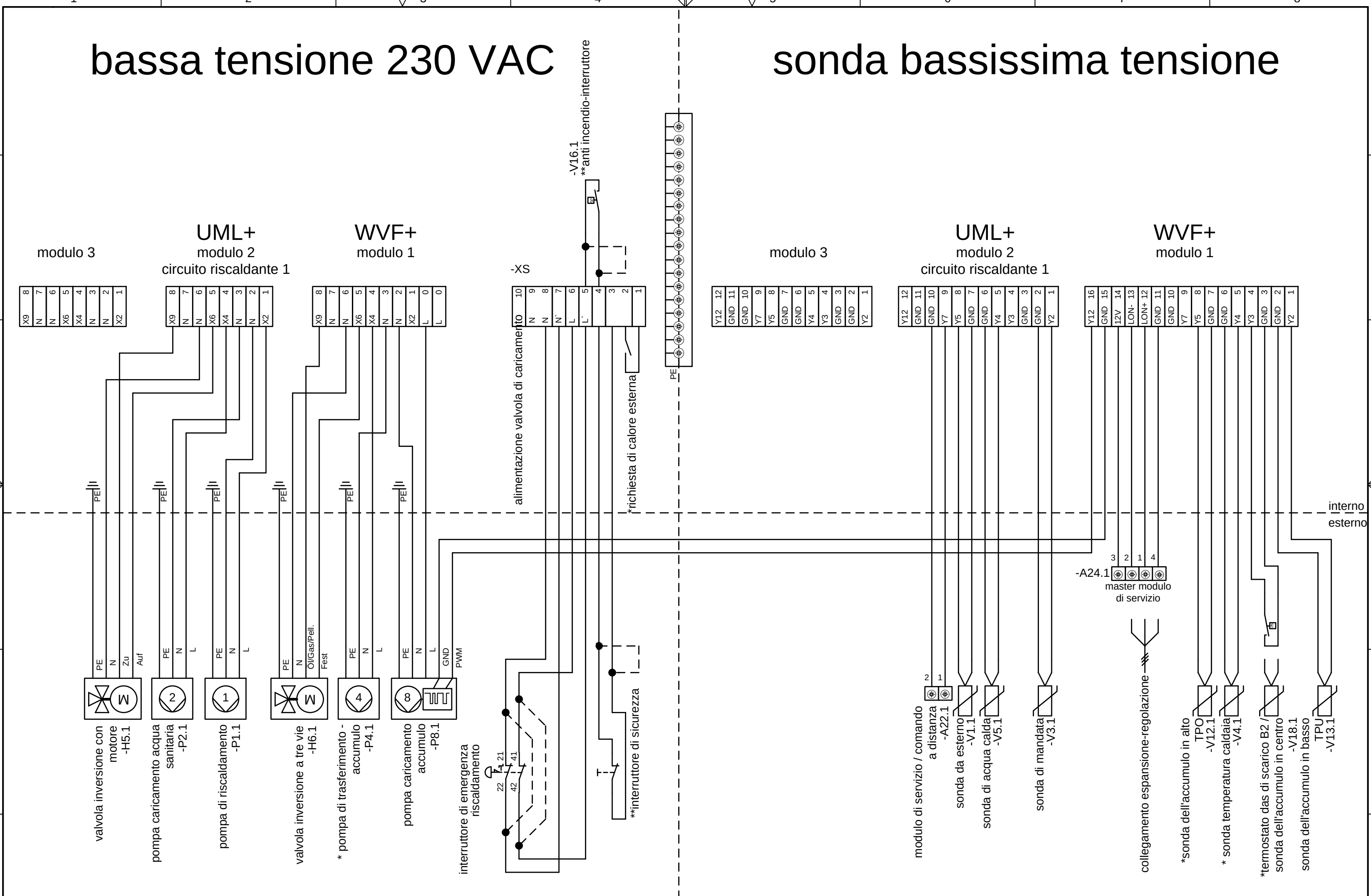
*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

				Datum	08.08.2013	UML+ / UML+ / UML+		MES H021 + H024 + H024 regolazione temperatura esterna per 3 circuito riscaldante a radiatore miscelato e circuiti acqua calda	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros		◀ ----- 2 ▶				
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092774/01				Blatt 092774/01

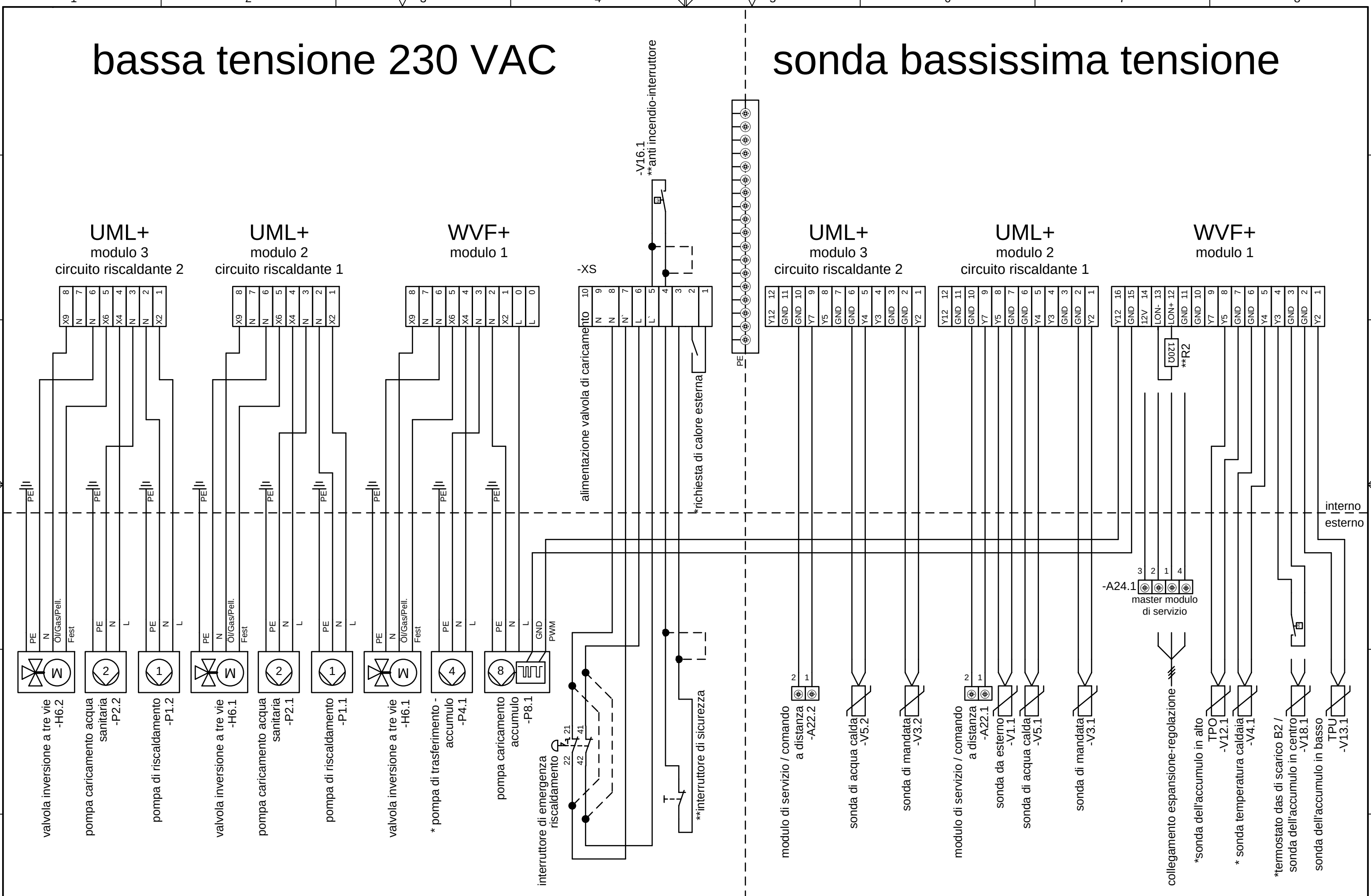
bassa tensione 230 VAC

sonda bassissima tensione



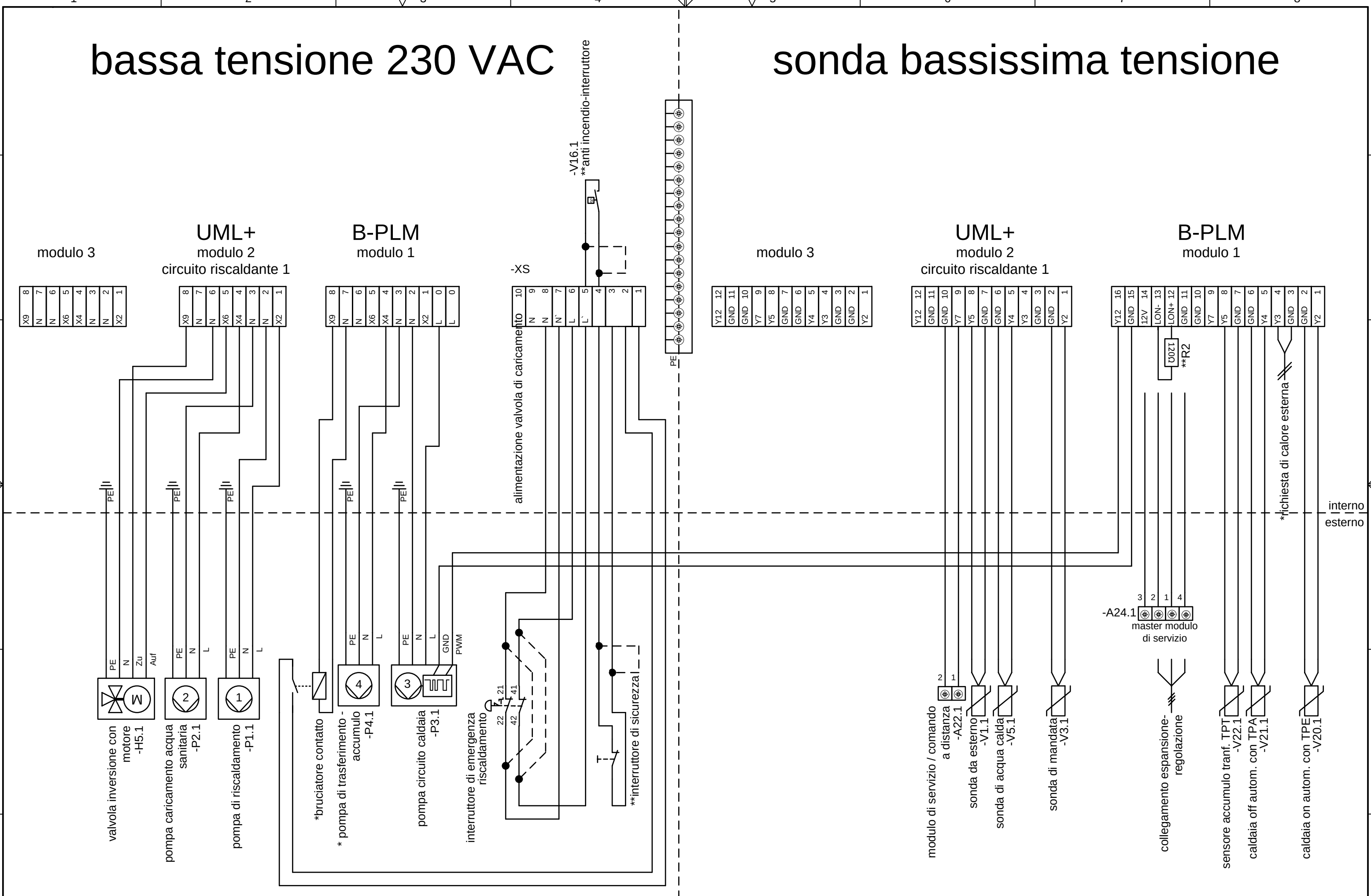
bassa tensione 230 VAC

sonda bassissima tensione



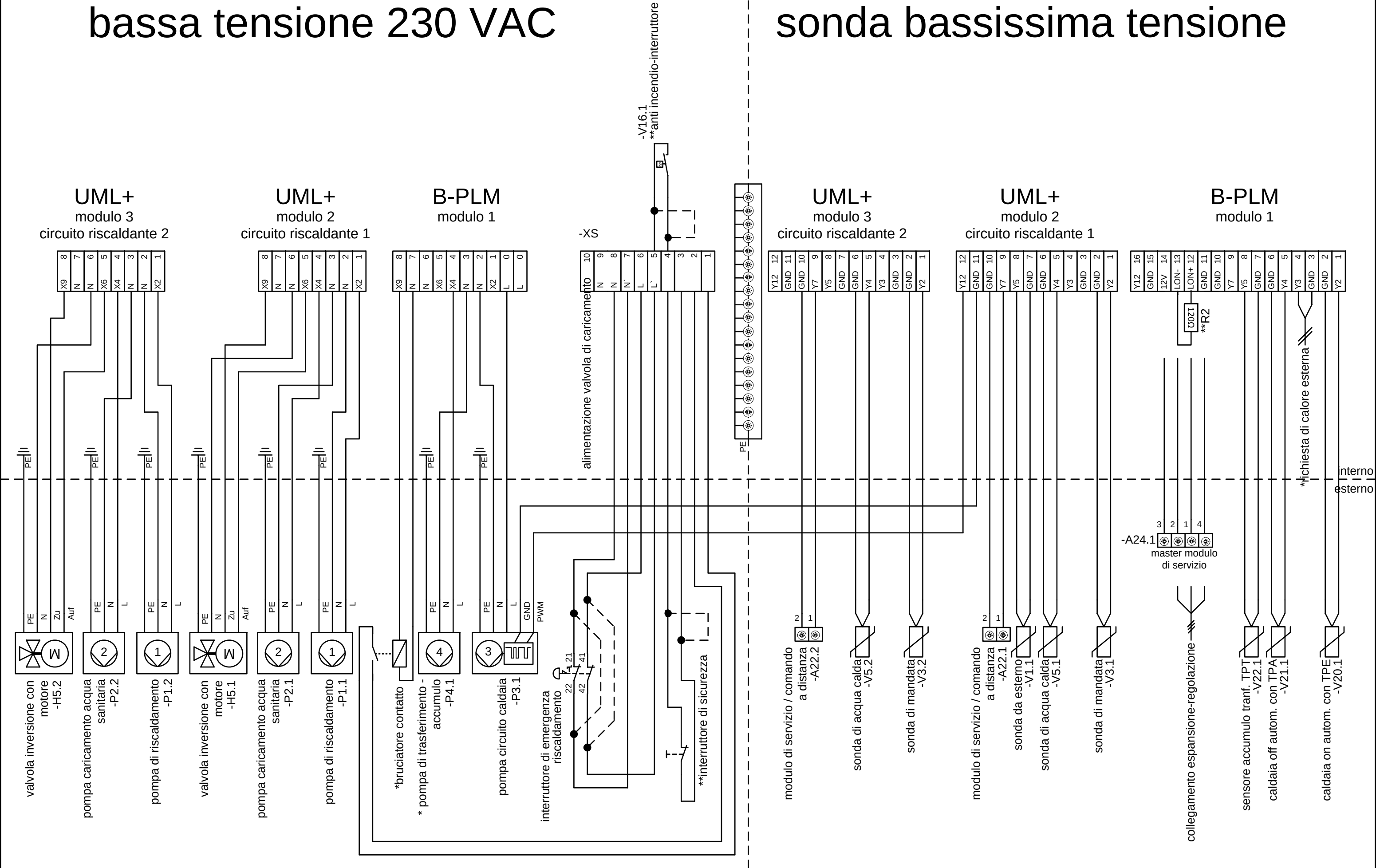
bassa tensione 230 VAC

sonda bassissima tensione



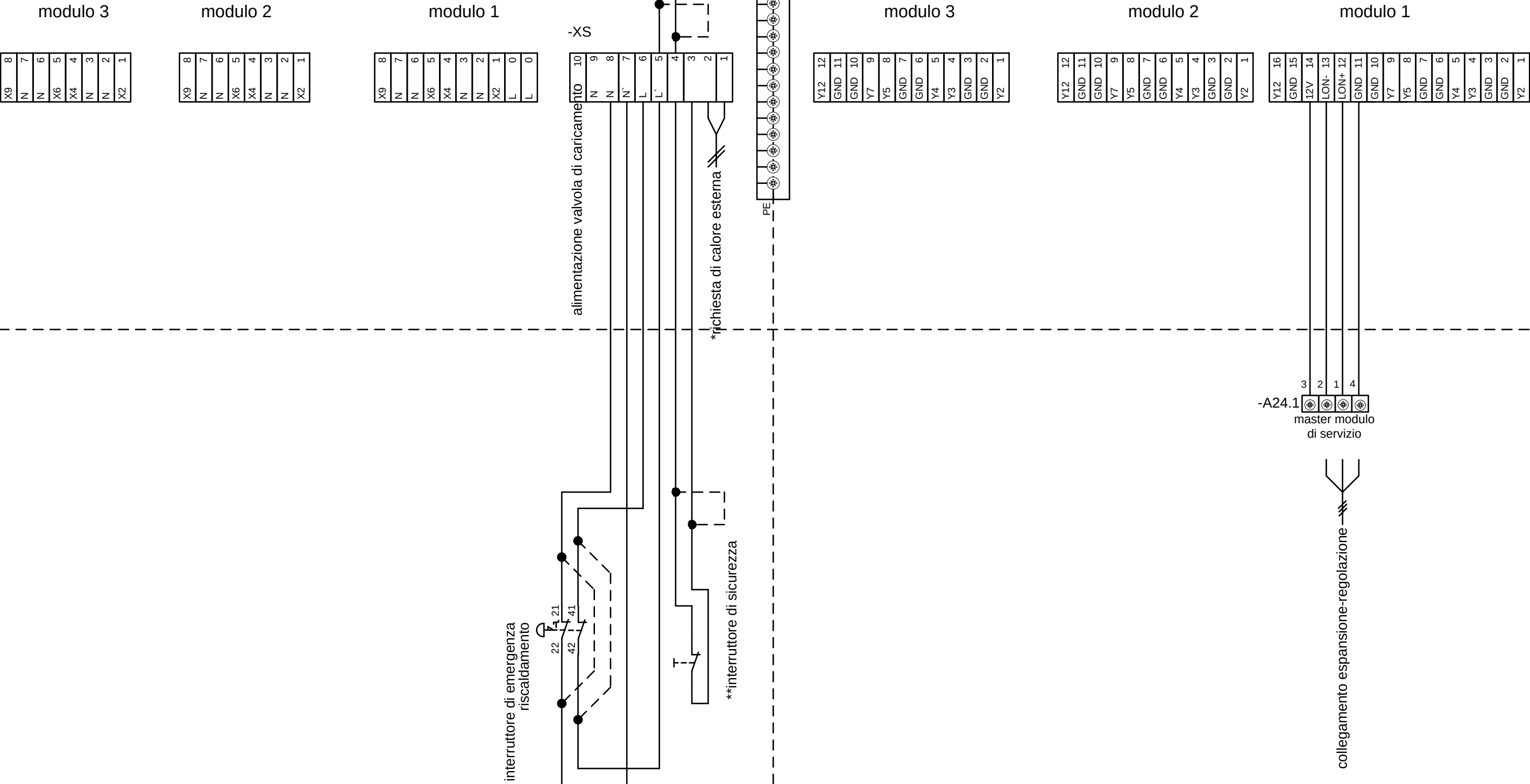
bassa tensione 230 VAC

sonda bassissima tensione



bassa tensione 230 VAC

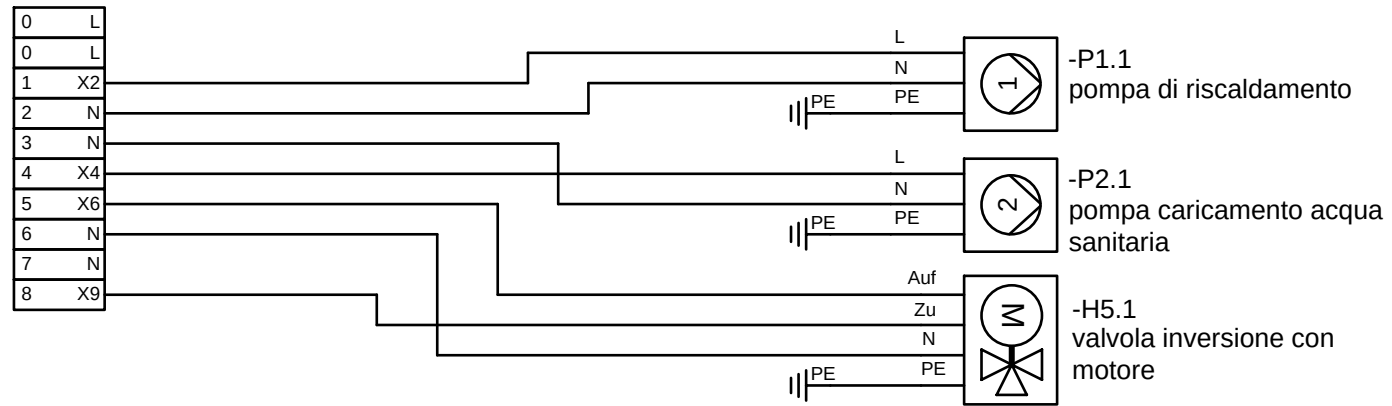
sonda bassissima tensione



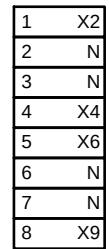
bassa tensione 230 VAC

UML+

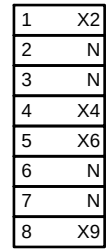
modulo 1



modulo 2



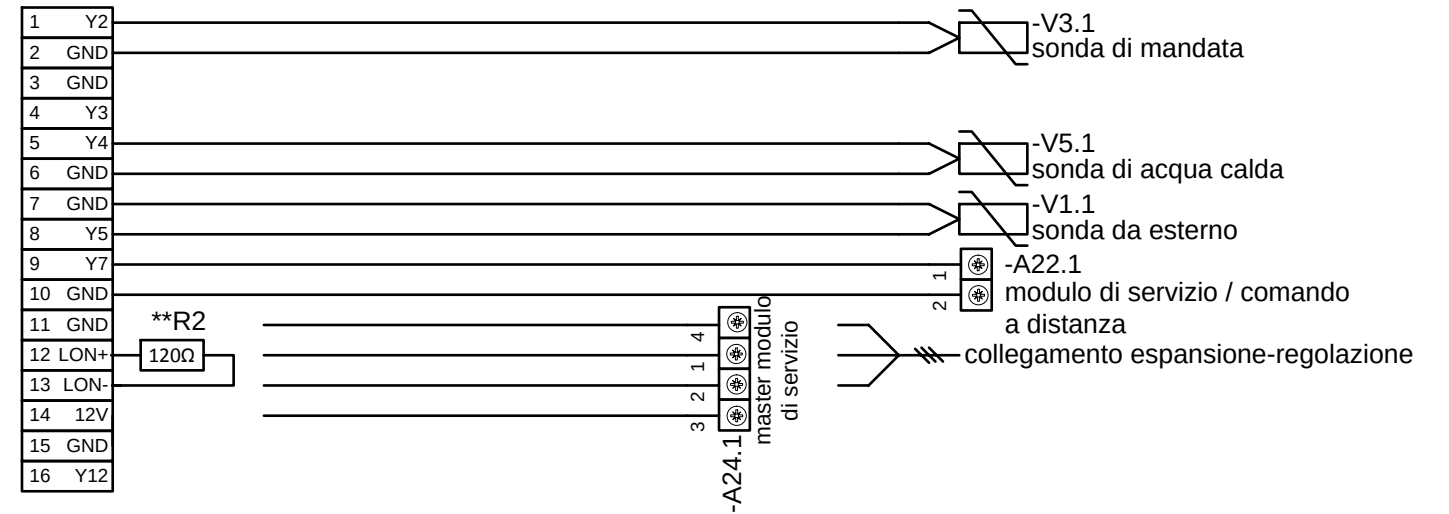
modulo 3



sonda bassissima tensione

UML+

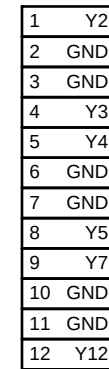
modulo 1



modulo 2



modulo 3



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

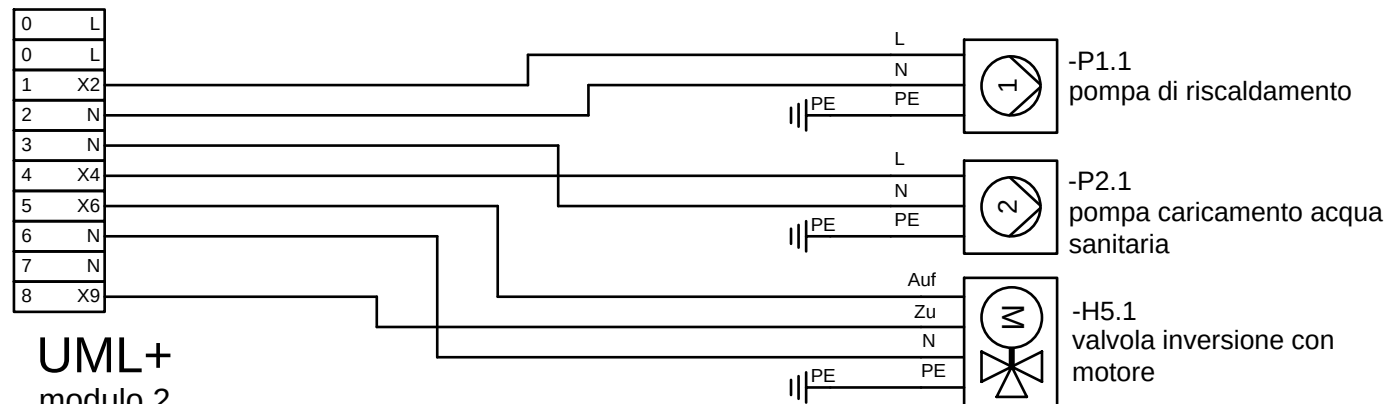
				Datum	06.08.2013	UML+		MES H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda	Projekt : regolazione		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092690/01				
											Blatt 092690/01

bassa tensione 230 VAC

UML+

modulo 1

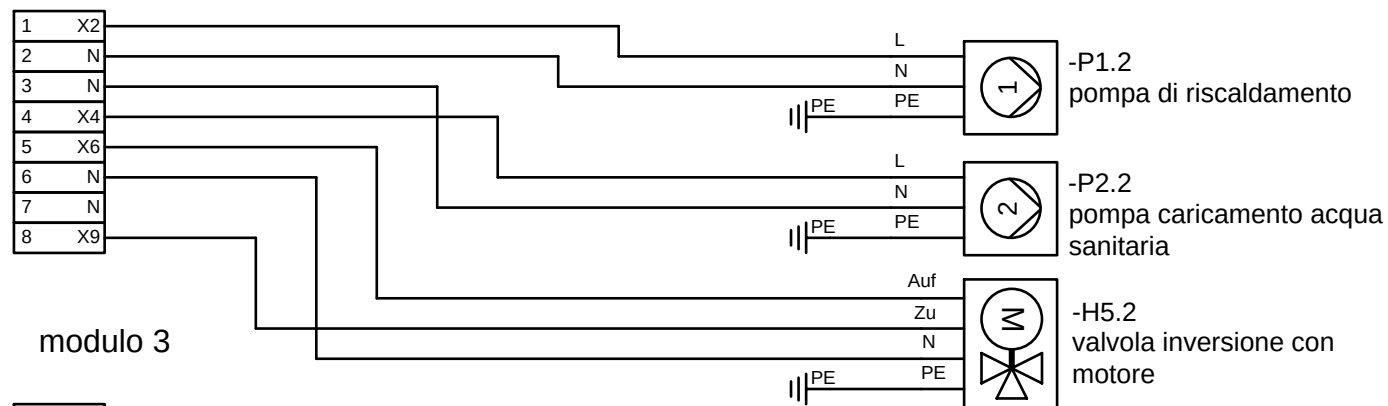
circuito riscaldante 1



UML+

modulo 2

circuito riscaldante 2



modulo 3

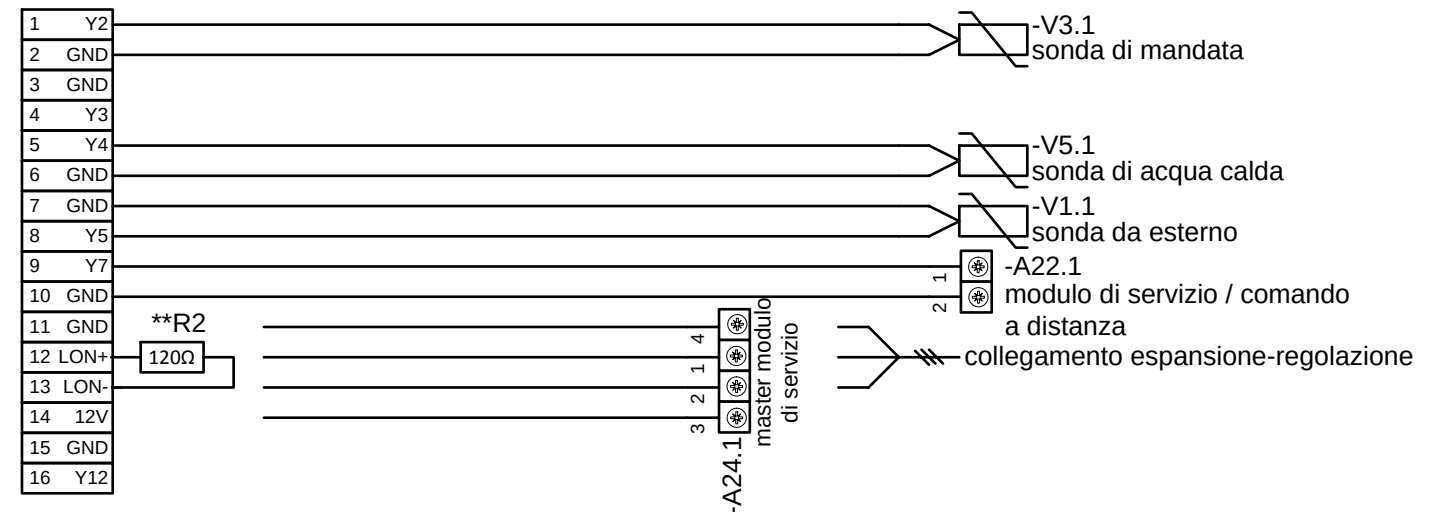
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

sonda bassissima tensione

UML+

modulo 1

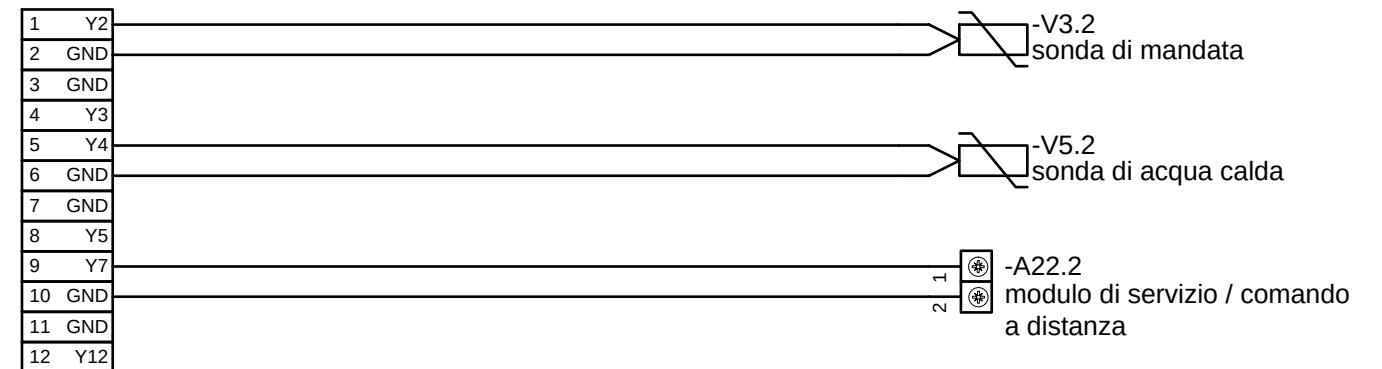
circuito riscaldante 1



UML+

modulo 2

circuito riscaldante 2



modulo 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

UML+ / UML+

Zeichnungs Nr.:

092697/01

MES H021+H024

regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda

Projekt :

regolazione

windhager

1 mm : 1 mm

2

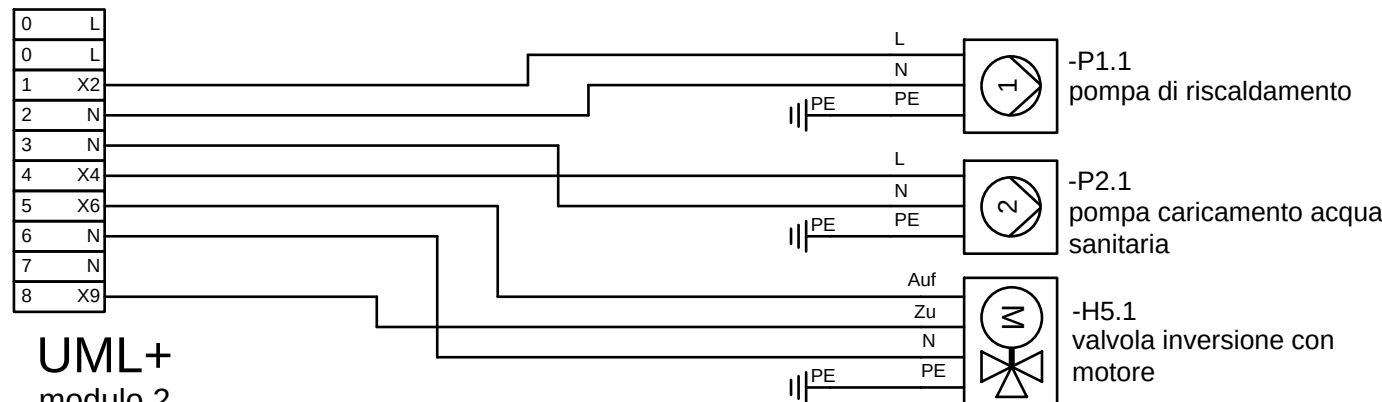
Blatt 092697/01

bassa tensione 230 VAC

UML+

modulo 1

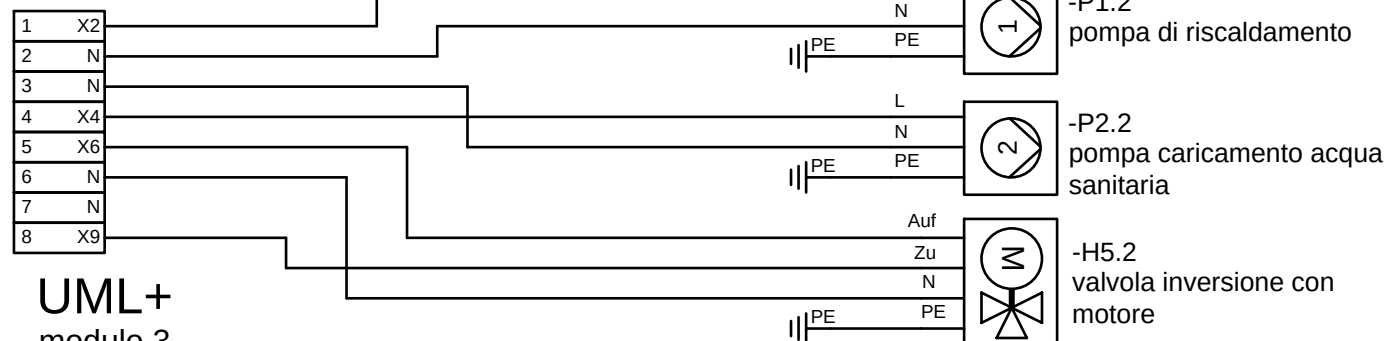
circuito riscaldante 1



UML+

modulo 2

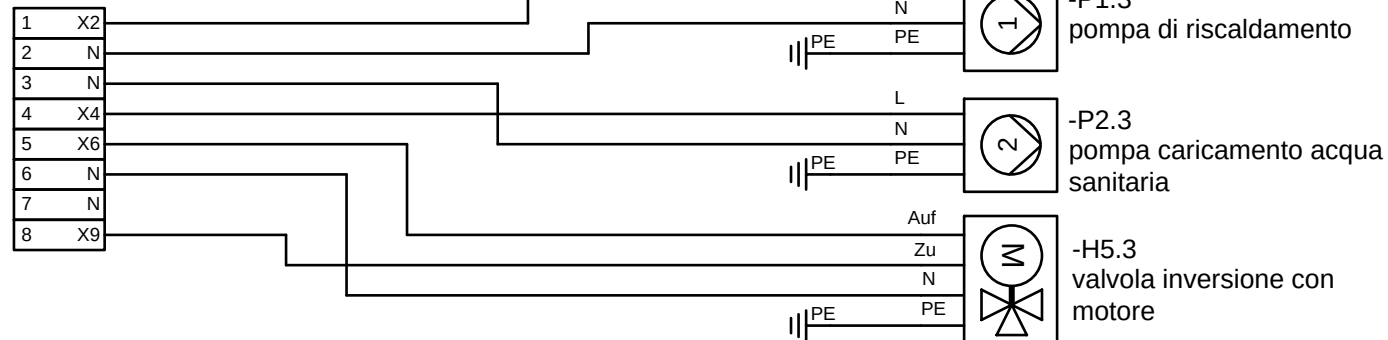
circuito riscaldante 2



UML+

modulo 3

circuito riscaldante 3

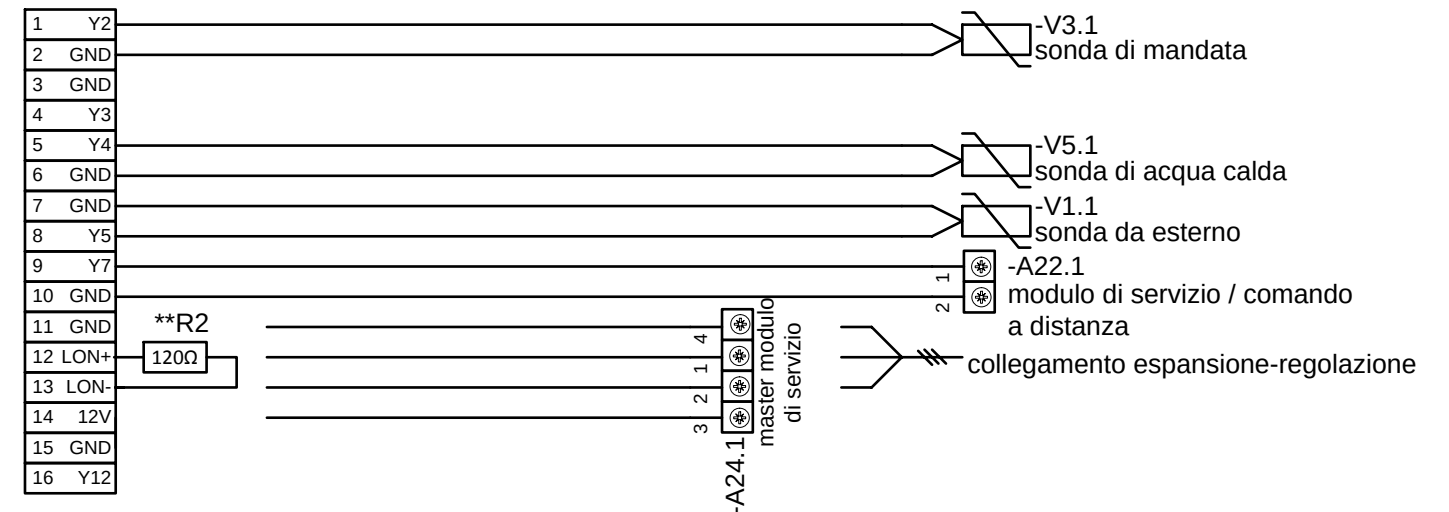


sonda bassissima tensione

UML+

modulo 1

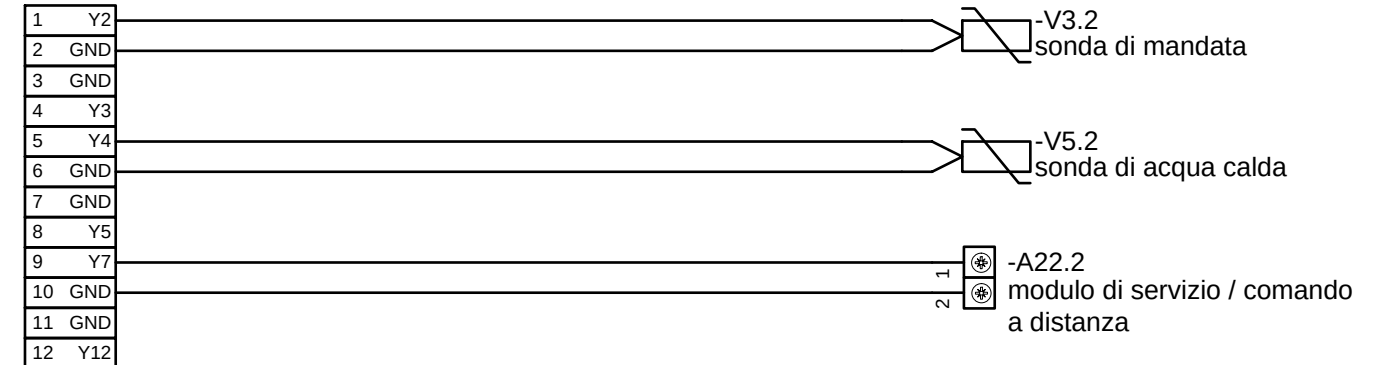
circuito riscaldante 1



UML+

modulo 2

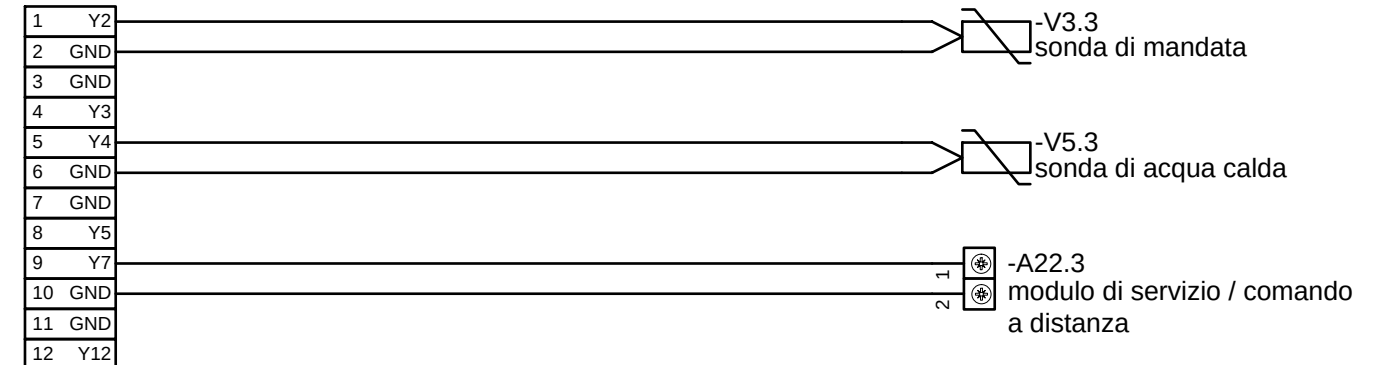
circuito riscaldante 2



UML+

modulo 3

circuito riscaldante 3



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

UML+ / UML+ / UML+

Zeichnungs Nr.:

092700/01

MES H021 + H024 + H024

regolazione temperatura esterna per 3 circuito riscaldante a radiatore miscelato e circuiti acqua calda

Projekt :

regolazione

windhager

1 mm : 1 mm

2

Blatt 092700/01

bassa tensione 230 VAC

WVF+ modulo 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

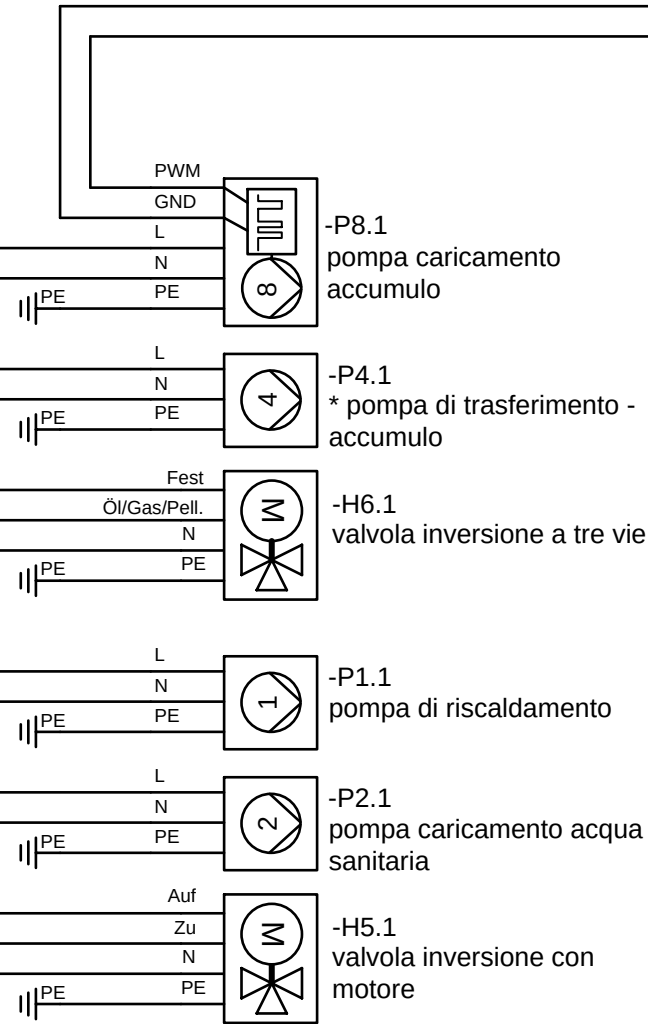
UML+ modulo 2

circuito riscaldante 1

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

modulo 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



sonda bassissima tensione

WVF+ modulo 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

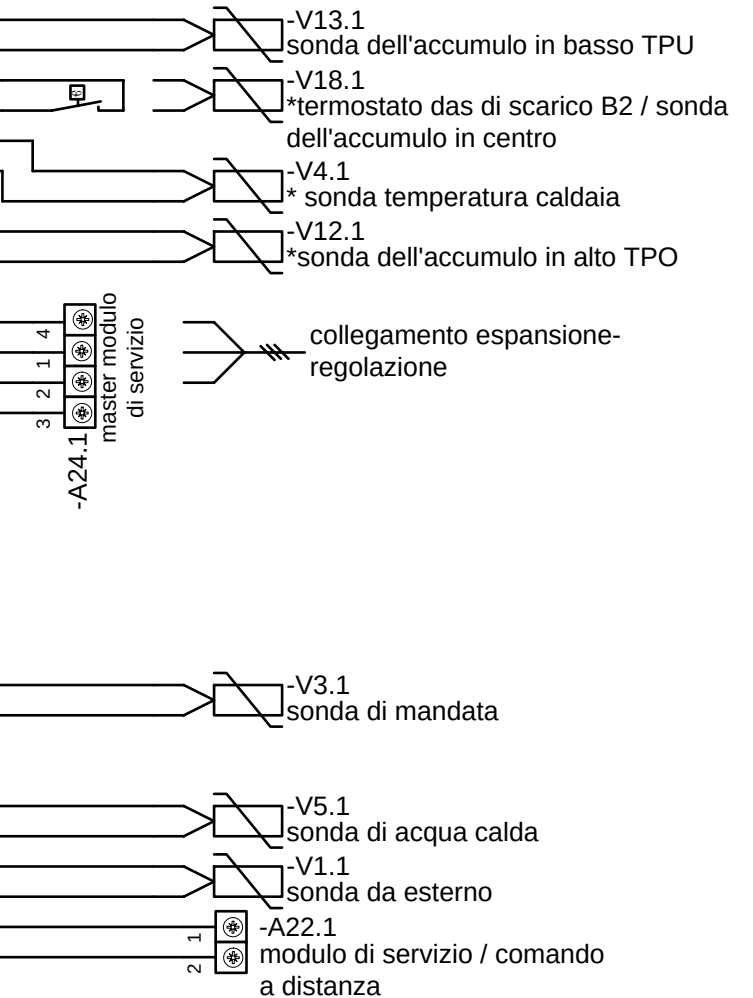
UML+ modulo 2

circuito riscaldante 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

modulo 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Rev.	Änderung	Datum	Name

Datum	07.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF+ / UML+	
Zeichnungs Nr.:	092834/01

MES P041 + H021

regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda
commutazione automatica combustibili solidi con carica accumulo

Projekt :
regolazione

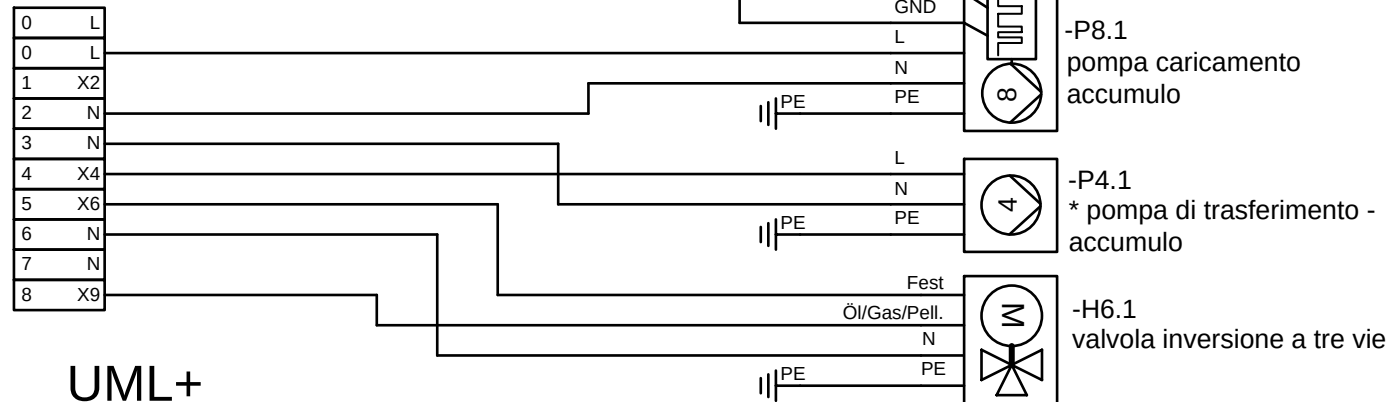


1 mm : 1 mm

Blatt 092834/01

bassa tensione 230 VAC

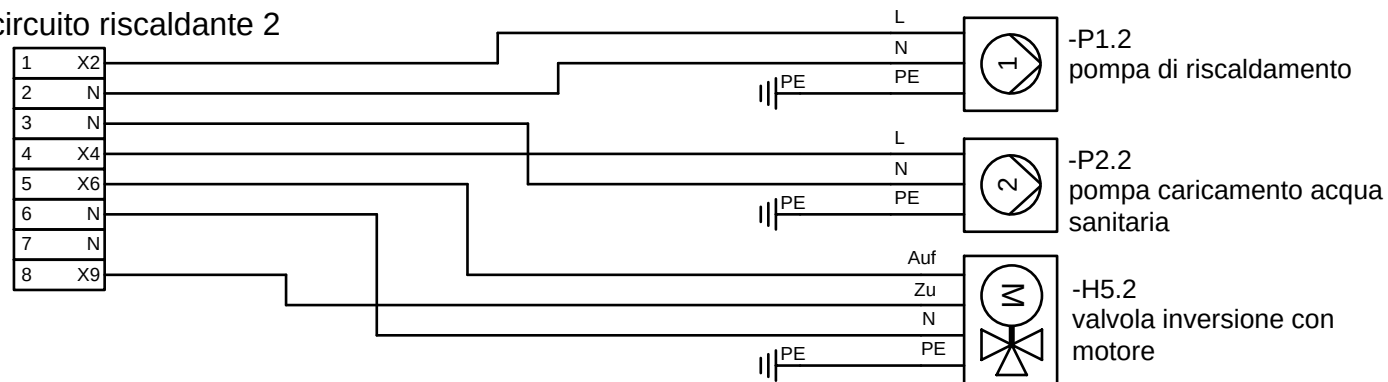
WVF+ modulo 1



UML+ modulo 2 circuito riscaldante 1

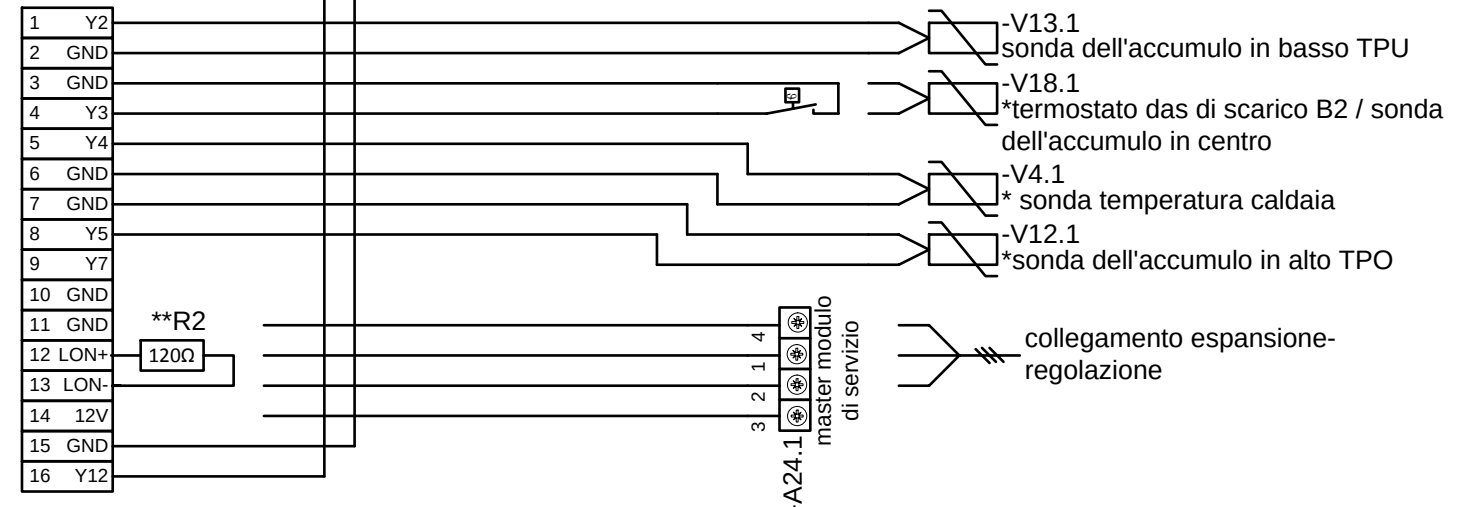


UML+ modulo 3 circuito riscaldante 2

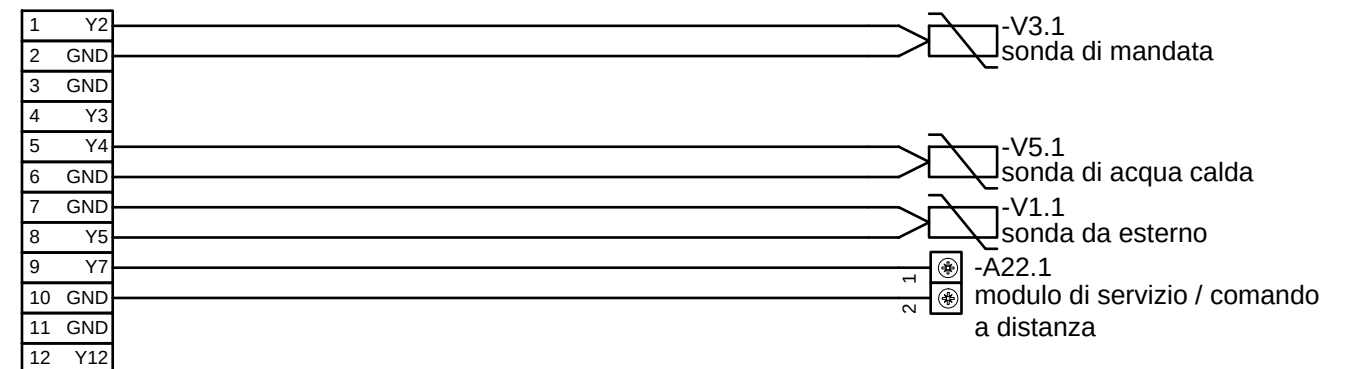


sonda bassissima tensione

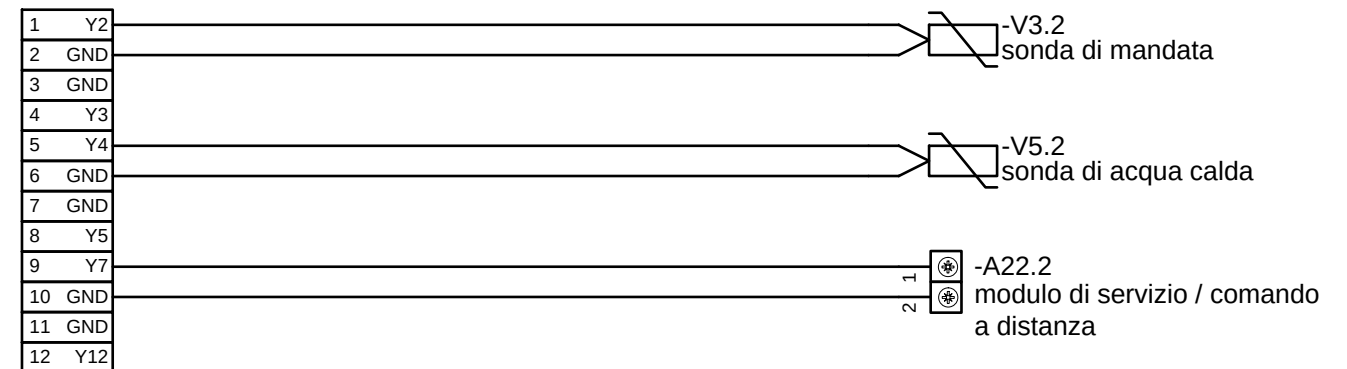
WVF+ modulo 1



UML+ modulo 2 circuito riscaldante 1



UML+ modulo 3 circuito riscaldante 2



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

WVF+ / UML+ / UML+

Zeichnungs Nr.: 092837/01

MES P041 + H021 + H024

regolazione temperatura esterna per 2 circuito riscaldante a radiatore miscelato e circuiti acqua calda
commutazione automatica combustibili solidi con carica accumulo

Projekt :

regolazione

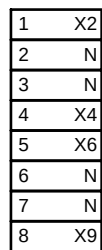
windhager

1 mm : 1 mm

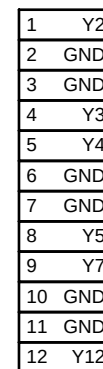
Blatt 092837/01

2

bassa tensione 230 VAC



sonda bassissima tensione



** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

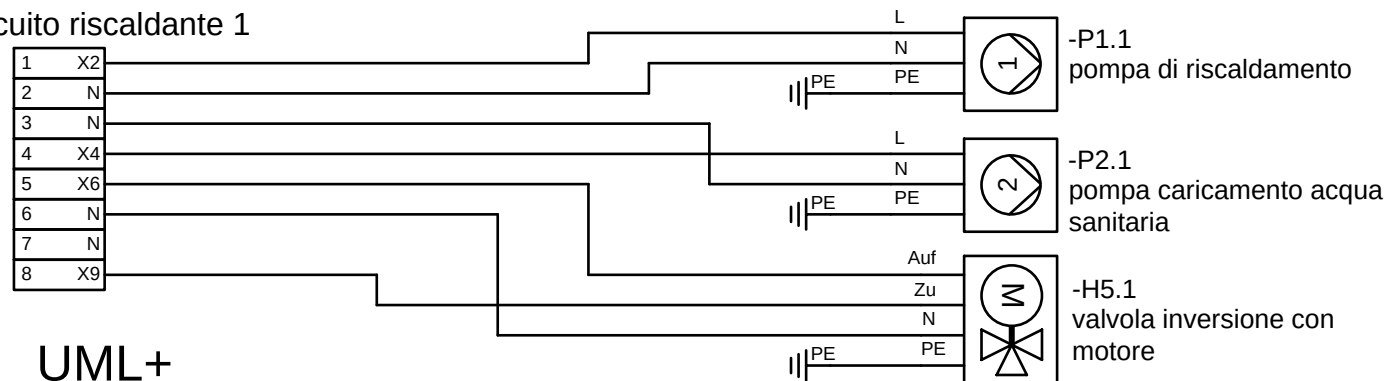
				Datum	07.08.2013	B-PLM /UML+		MES P042 + H021 regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e bruciatore-/modulo di accumulo B-PLM	Projekt : regolazione		1 mm : 1 mm	
				Gezeichnet	rot						Zeichnungs Nr.: 093120/01	◀ ----- 2 ▶
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt							Blatt 093120/01	

bassa tensione 230 VAC

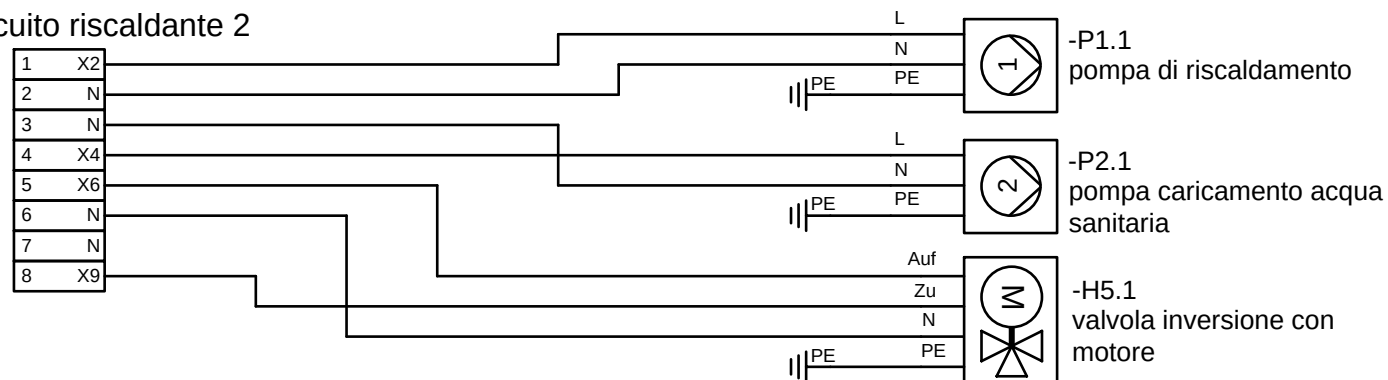
B-PLM modulo 1



UML+ modulo 2 circuito riscaldante 1

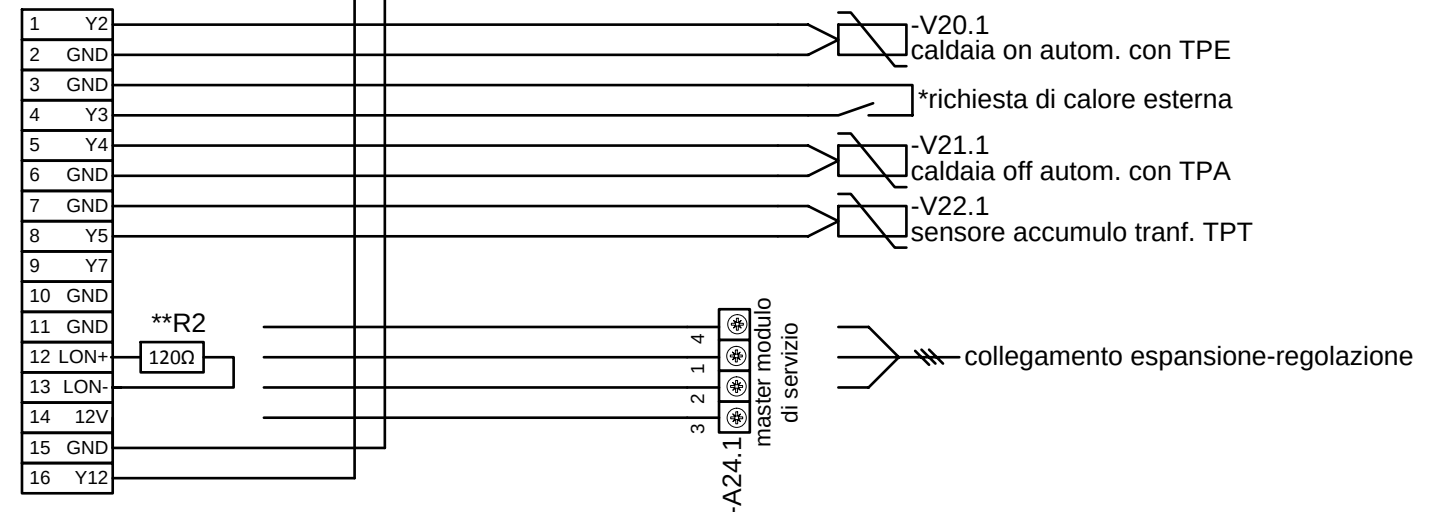


UML+ modulo 2 circuito riscaldante 2

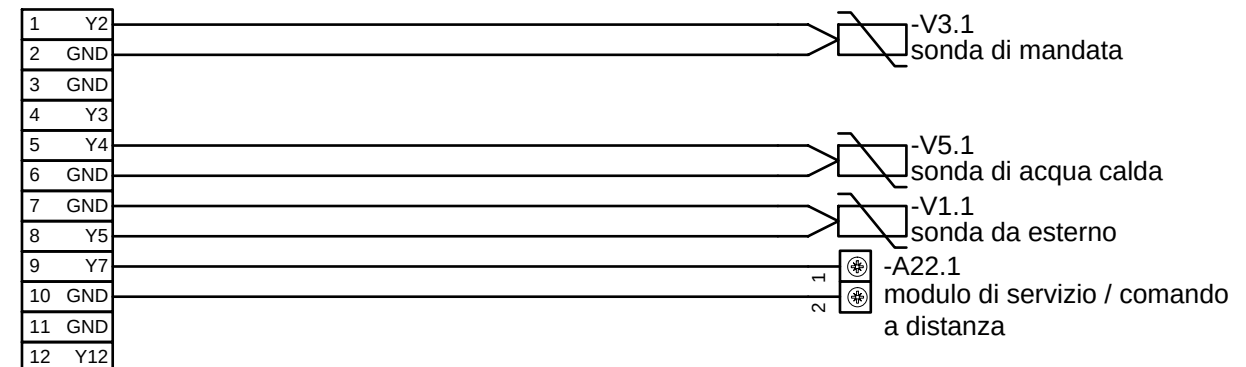


sonda bassissima tensione

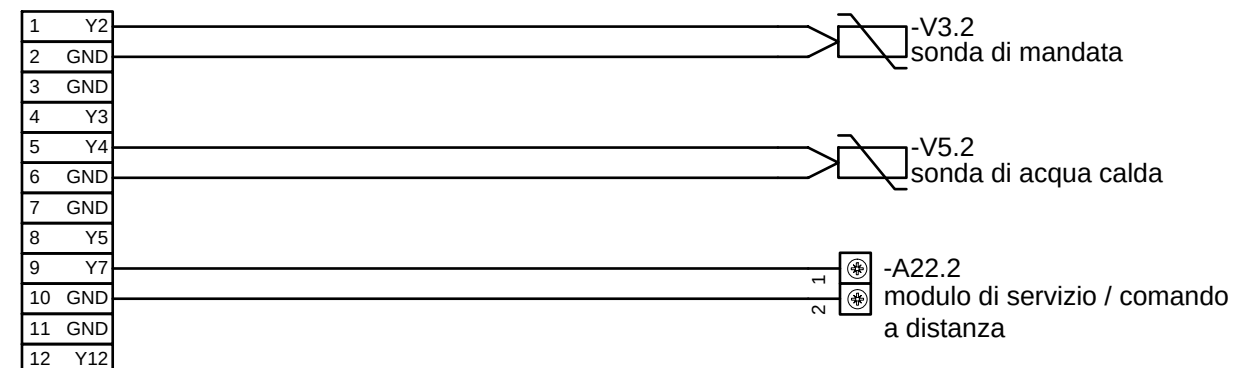
B-PLM modulo 1



UML+ modulo 2 circuito riscaldante 1



UML+ modulo 3 circuito riscaldante 2



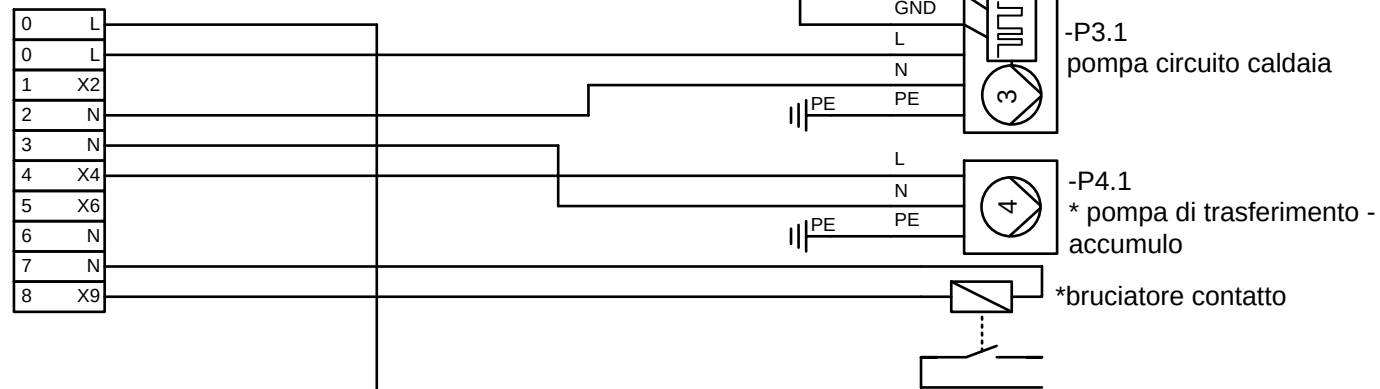
*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

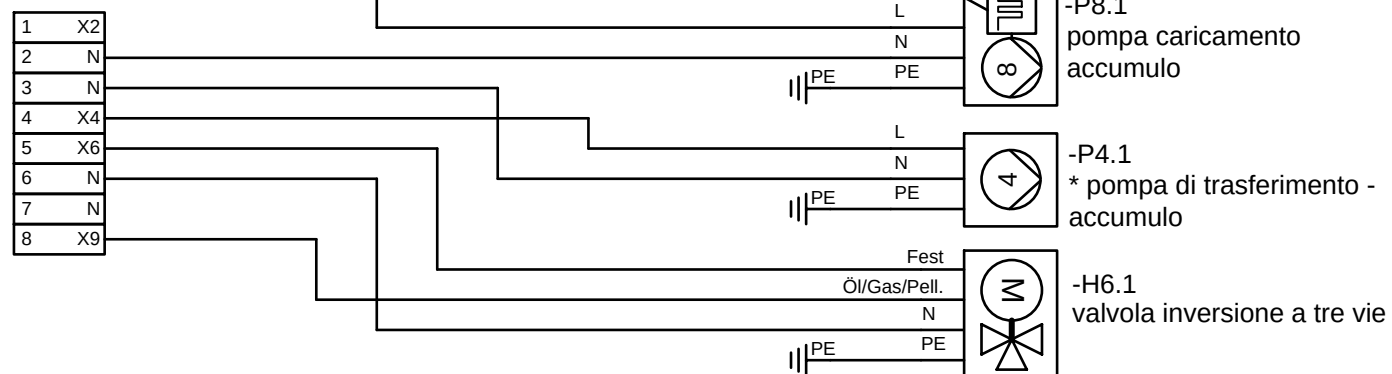
bassa tensione 230 VAC

sonda bassissima tensione

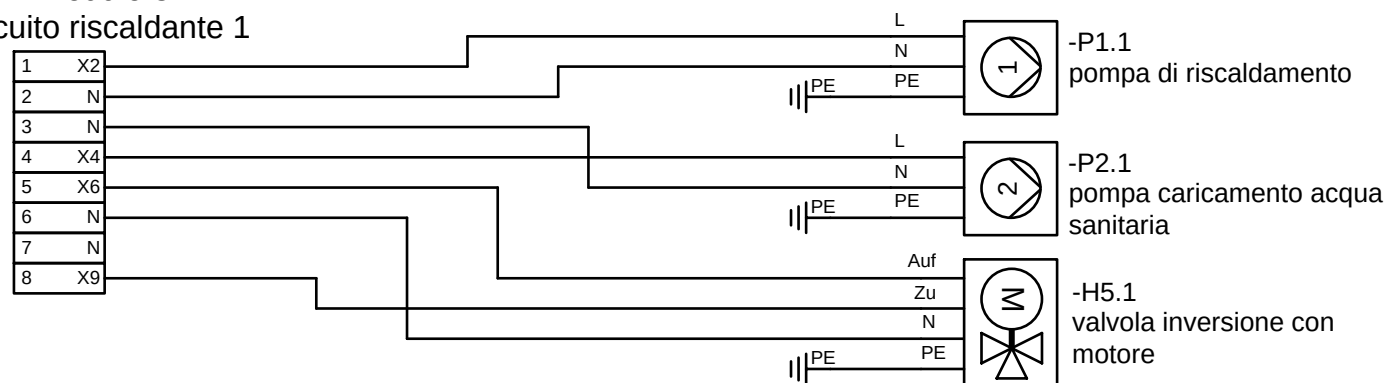
B-PLM modulo 1



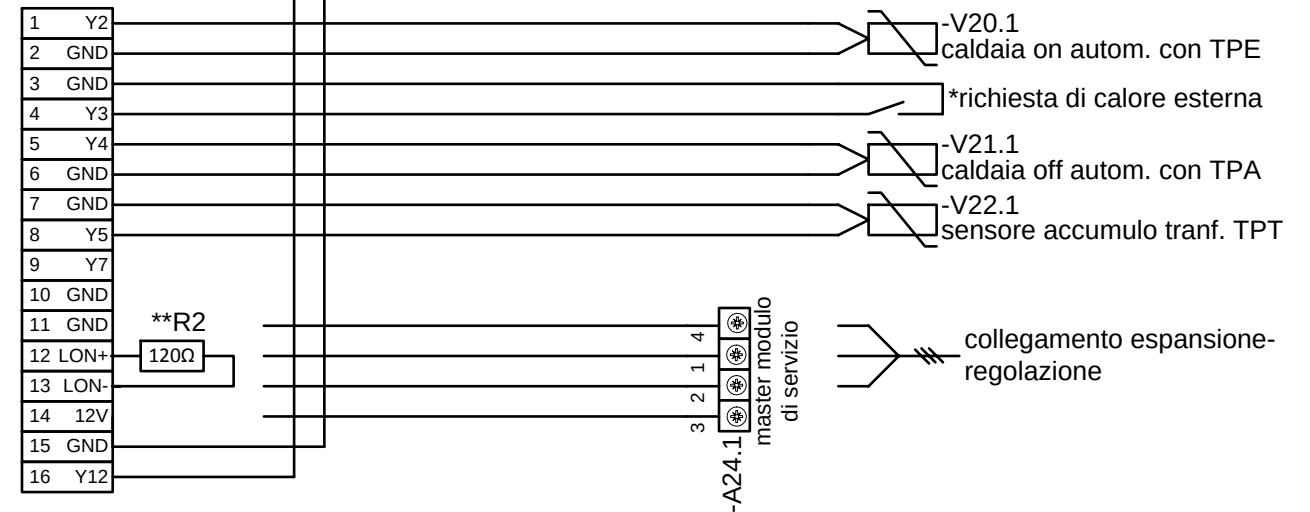
WVF+ modulo 2



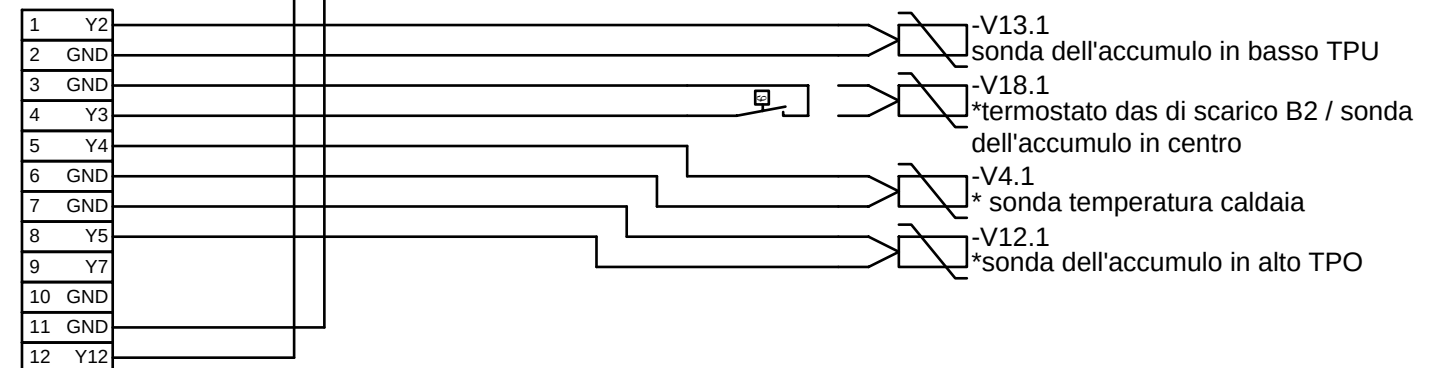
UML+ modulo 3 circuitto riscaldante 1



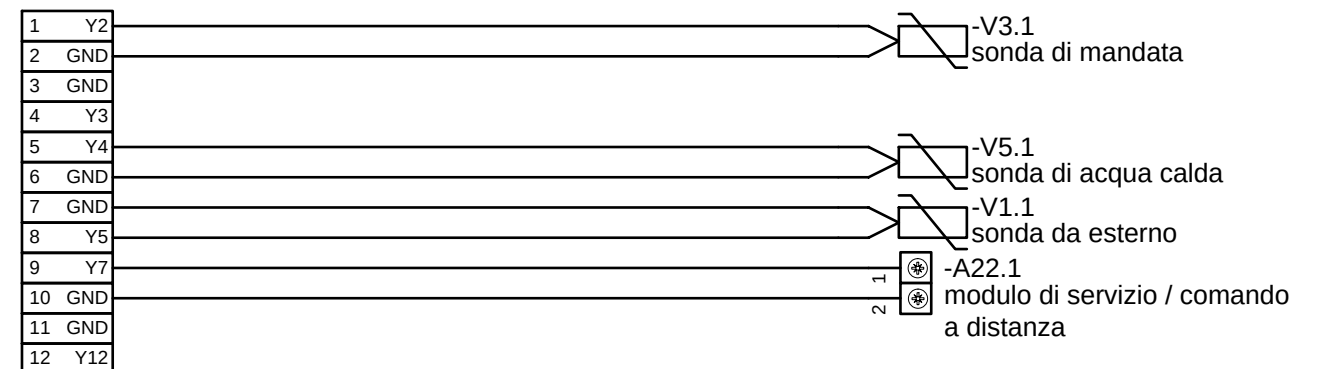
B-PLM modulo 1



WVF+ modulo 2



UML+ modulo 3 circuitto riscaldante 1



*...opzionale/accessori

** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

B-PLM / WVF+ / UML+

Zeichnungs Nr.: 093125/01

MES P042 + P041+ H021

regolazione temperatura esterna per 1 circuito riscaldante a radiatore miscelato e 1 circuito acqua calda e un modulo per combustibili solidi WVF+e bruciatore-/modulo di accumulo B-PLM

Projekt :

regolazione

windhager

1 mm : 1 mm

2

Blatt 093125/01

bassa tensione 230 VAC

modulo 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

modulo 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

modulo 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

sonda bassissima tensione

modulo 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

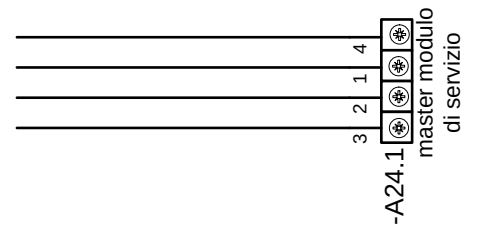
**R2
120Ω

modulo 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

modulo 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12



collegamento espansione-regolazione

*...opzionale/accessori ** rimuovere il resistore terminale R2 se si collega la regolazione supplementare

OT-interfaccia

Y4.6 master

Y4.5 BUML 1 / MWP

Y4.4

Slave BUML 2

Y4.3

Y4.2

Y4.1

Bus- Kommunikation:

S5

☒ ON = acceso
☐ OFF = spento

Mischerfunktion:

S4

☒ ON = acceso
☐ OFF = spento

Boilerladung:

S3

☒ ON = caricamento in parallelo
☐ OFF = commutazione prioritaria

bollitore sanitario con :

S2

☒ ON = valvola di caricamento
☐ OFF = pompa di caricamento

caldaia termostato del
minimo

S1

☒ ON = 35C° / 95 °F
☐ OFF = 20C° / 68 °F

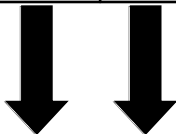
BURL-TTL	
Y2.6	RAM 850
Y2.5	RAM 786
Y2.4	sonda da esterno
Y2.3	
Y2.2	sonda del bollitore sanitario
Y2.1	
Y1.6	sonda temperatura caldaia
Y1.5	
Y1.4	sonda di mandata
Y1.3	
Y1.2	libero
Y1.1	
X2.8 L	fase continua
X2.7 N	pompa di caricamento bollitore sanitario
X2.6 L	valvola di caricamento bollitore sanitario
X2.5 N	pompa di riscaldamento
X2.4 L	
X2.3 L	chiuso
X2.2 L	aperto
X2.1 N	valvola inversione con motore
X1.1 L	collegamento
X1.2 N	alimentazione corrente 230VAC
X1.3 L"	
X1.4 L"	
X1.5 L'	interruttore manuale della pompa del bollitore sanitario
X1.6 L'	interruttore manuale della pompa di riscaldamento
EDV Nr.: 094505/00	

094517/00

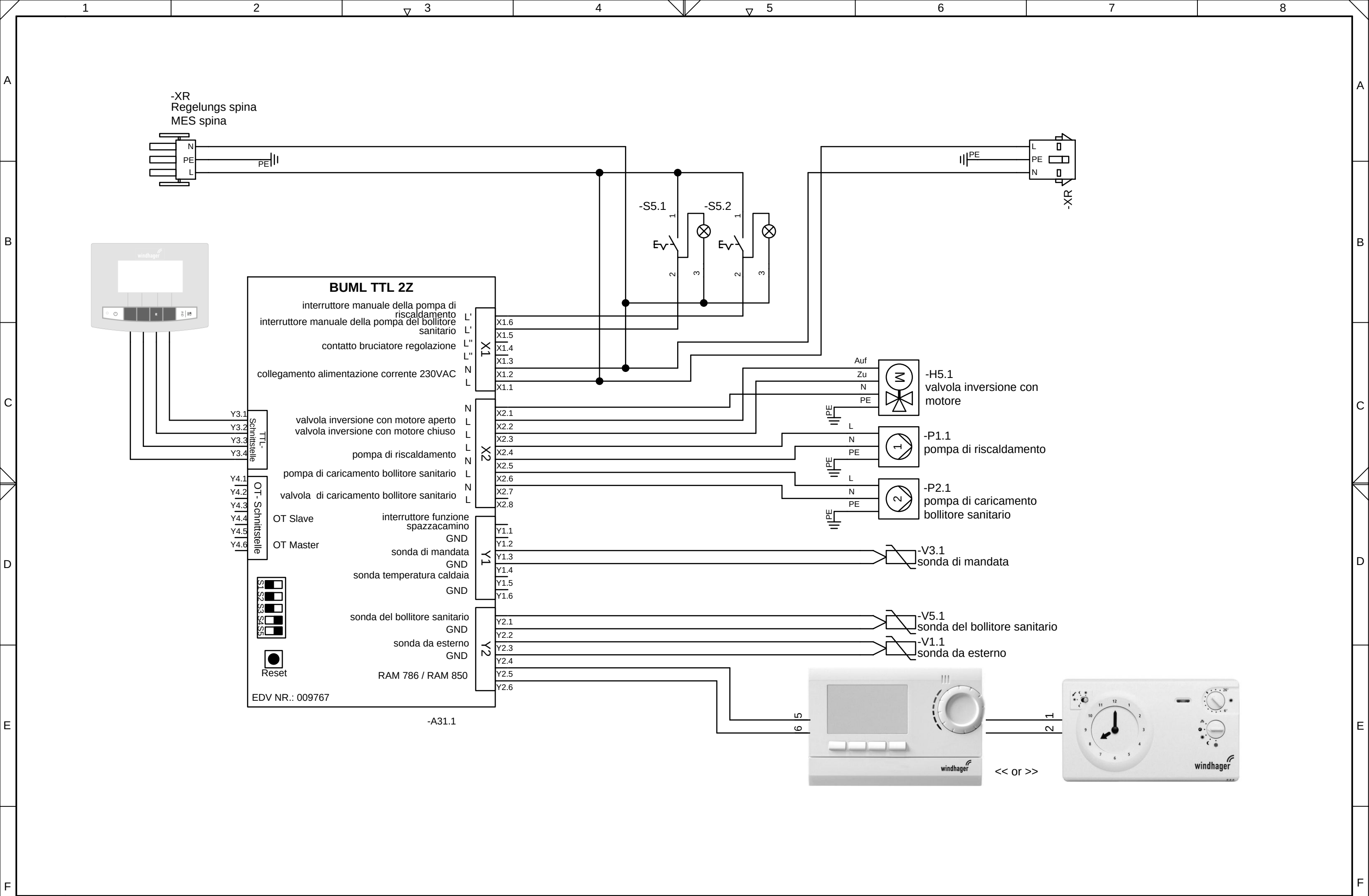
RESET	DIP	OT	Y4.6	Y4.5	Y4.4	Y4.3	Y4.2	Y4.1

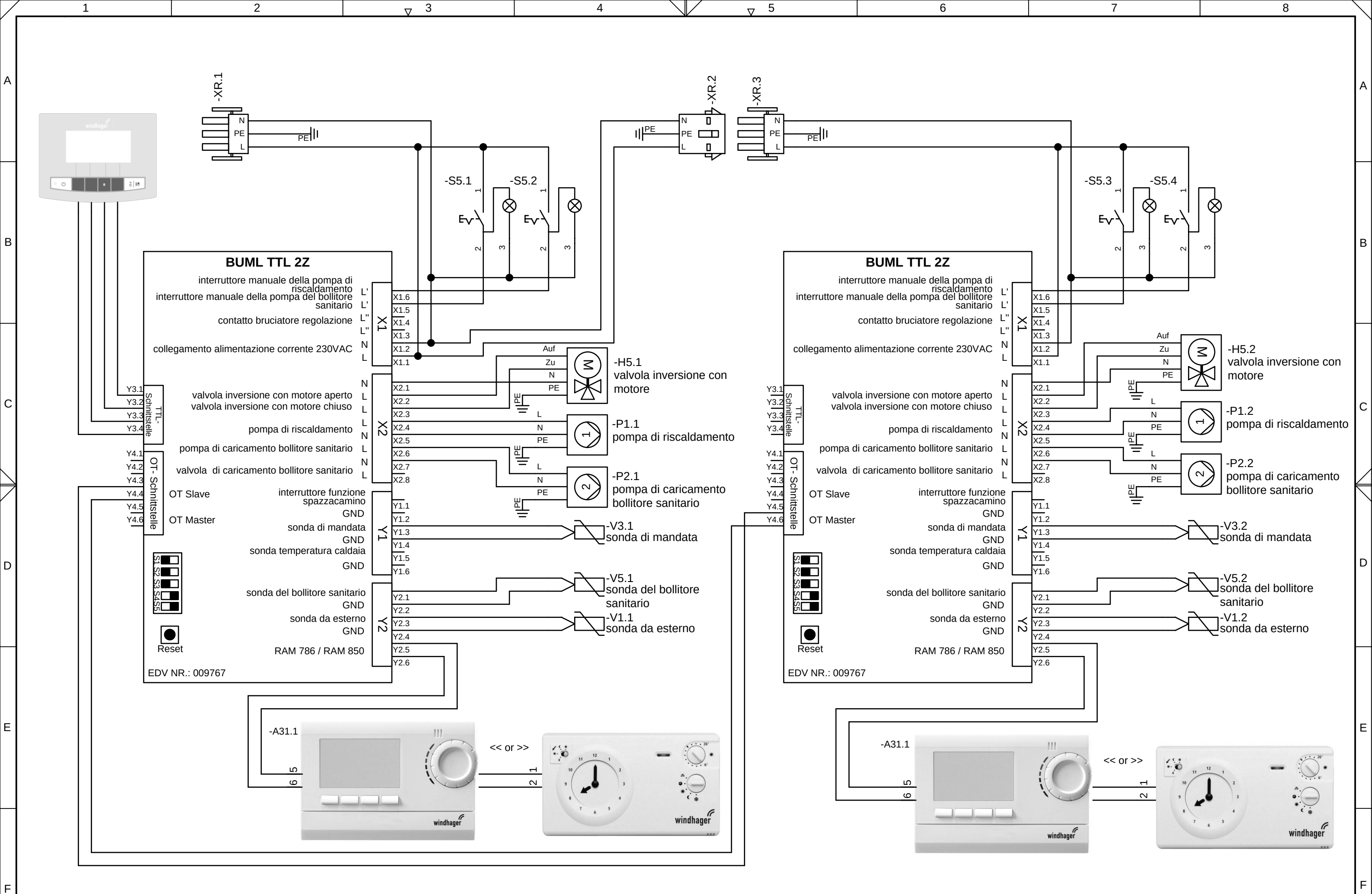
EDV Nr.: 094519/01	
interruttore manuale della pompa di riscaldamento	X1.6 L'
interruttore manuale della pompa del bollitore sanitario	X1.5 L'
	X1.4 L"
	X1.3 L"
collegamento	X1.2 N
alimentazione	
corrente 230VAC	X1.1 L
valvola inversione con motore	X2.1 N
aperto	X2.2 L
chiuso	X2.3 L
pompa di riscaldamento	X2.4 L
	X2.5 N
valvola di caricamento bollitore sanitario	X2.6 L
pompa di caricamento bollitore sanitario	X2.7 N
fase continua	X2.8 L
libero	Y1.1
	Y1.2
sonda di mandata	Y1.3
	Y1.4
sonda temperatura caldaia	Y1.5
	Y1.6
sonda del bollitore sanitario	Y2.1
	Y2.2
sonda da esterno	Y2.3
	Y2.4
RAM 850	Y2.5
RAM 786	Y2.6
BUML-TTL	

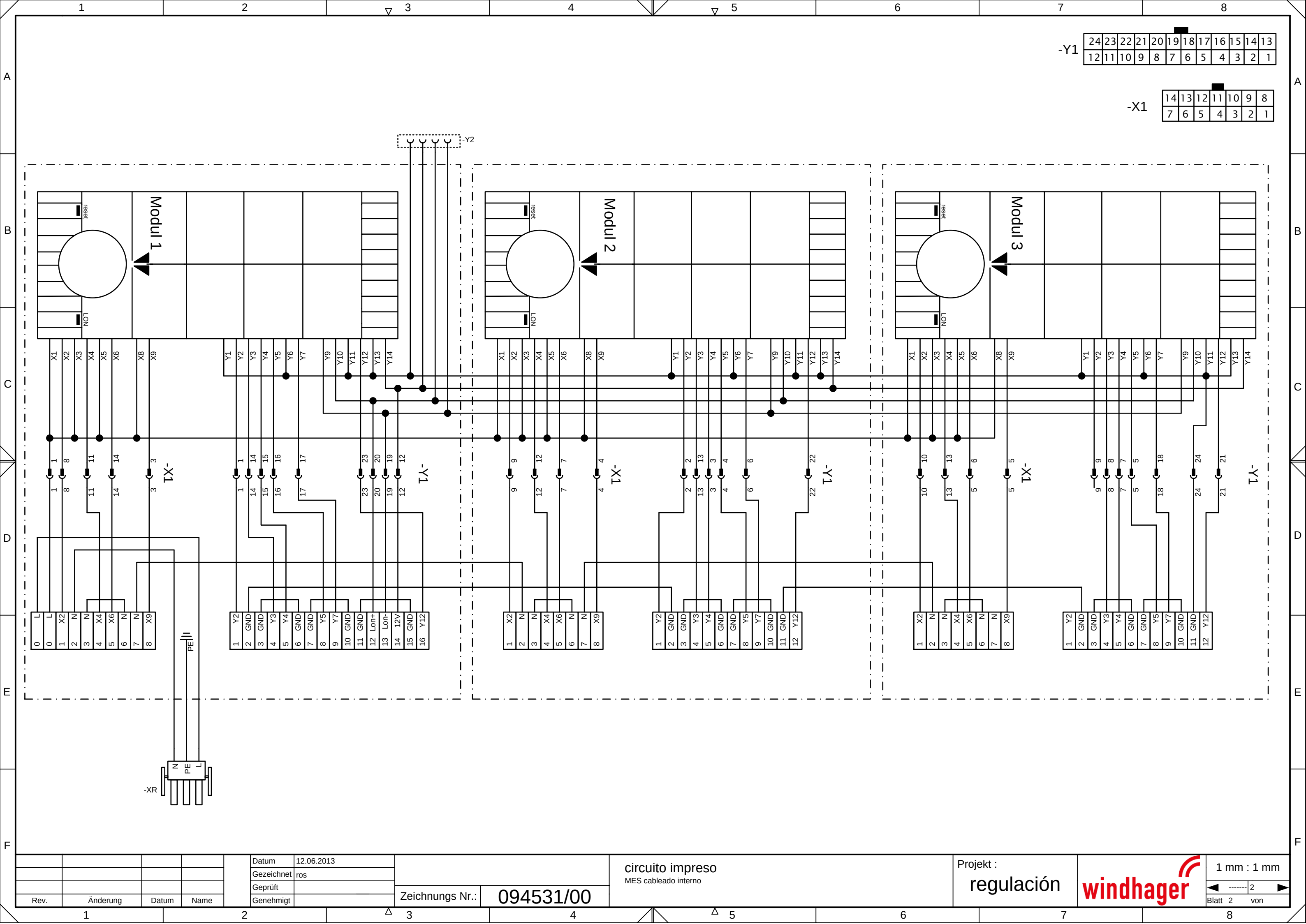
caldaia termostato del minimo	
S1	☐ ON = 35C° / 95 °F ☐ OFF = 20C° / 68 °F
bollitore sanitario con :	
S2	☐ ON = valvola di caricamento ☐ OFF = pompa di caricamento
Boilerladung:	
S3	☐ ON = caricamento in parallelo ☐ OFF = commutazione prioritaria
Mischerfunktion:	
S4	☐ ON = acceso ☐ OFF = spento
Bus- Kommunikation:	
S5	☐ ON = acceso ☐ OFF = spento
Y4.1	
Y4.2	
Y4.3	Slave
Y4.4	BUML 2
Y4.5	master
Y4.6	BUML 1 / MWP
OT-interface	



094521/00

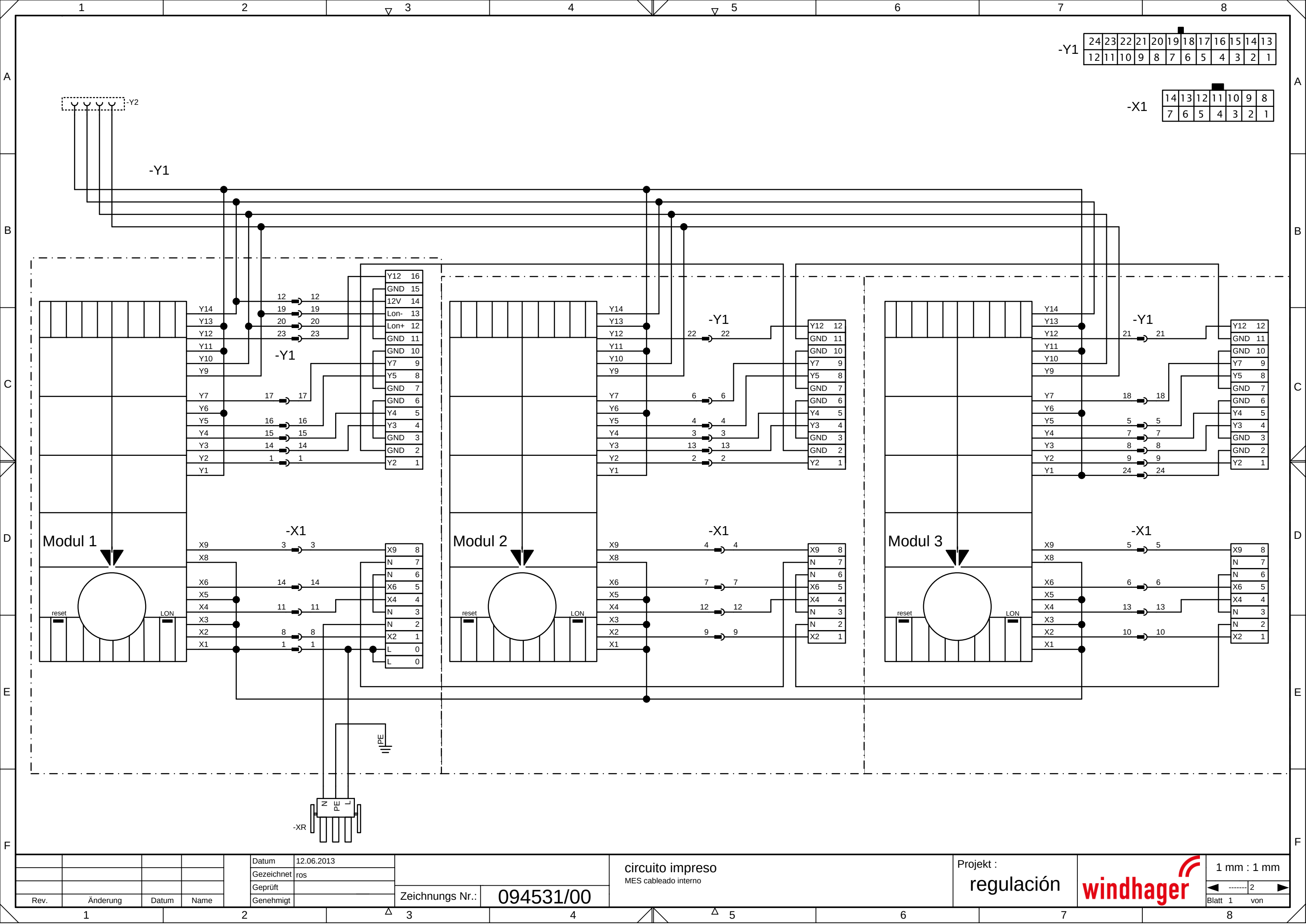






24	23	22	21	20	19	18	17	16	15	14	13
12	11	10	9	8	7	6	5	4	3	2	1

14	13	12	11	10	9	8
7	6	5	4	3	2	1



24	23	22	21	20	19	18	17	16	15	14	13
12	11	10	9	8	7	6	5	4	3	2	1

14	13	12	11	10	9	8
7	6	5	4	3	2	1

Rev.	Änderung	Datum	Name
1		2	

Datum	12.06.2013
Gezeichnet	ros
Geprüft	
Genehmigt	

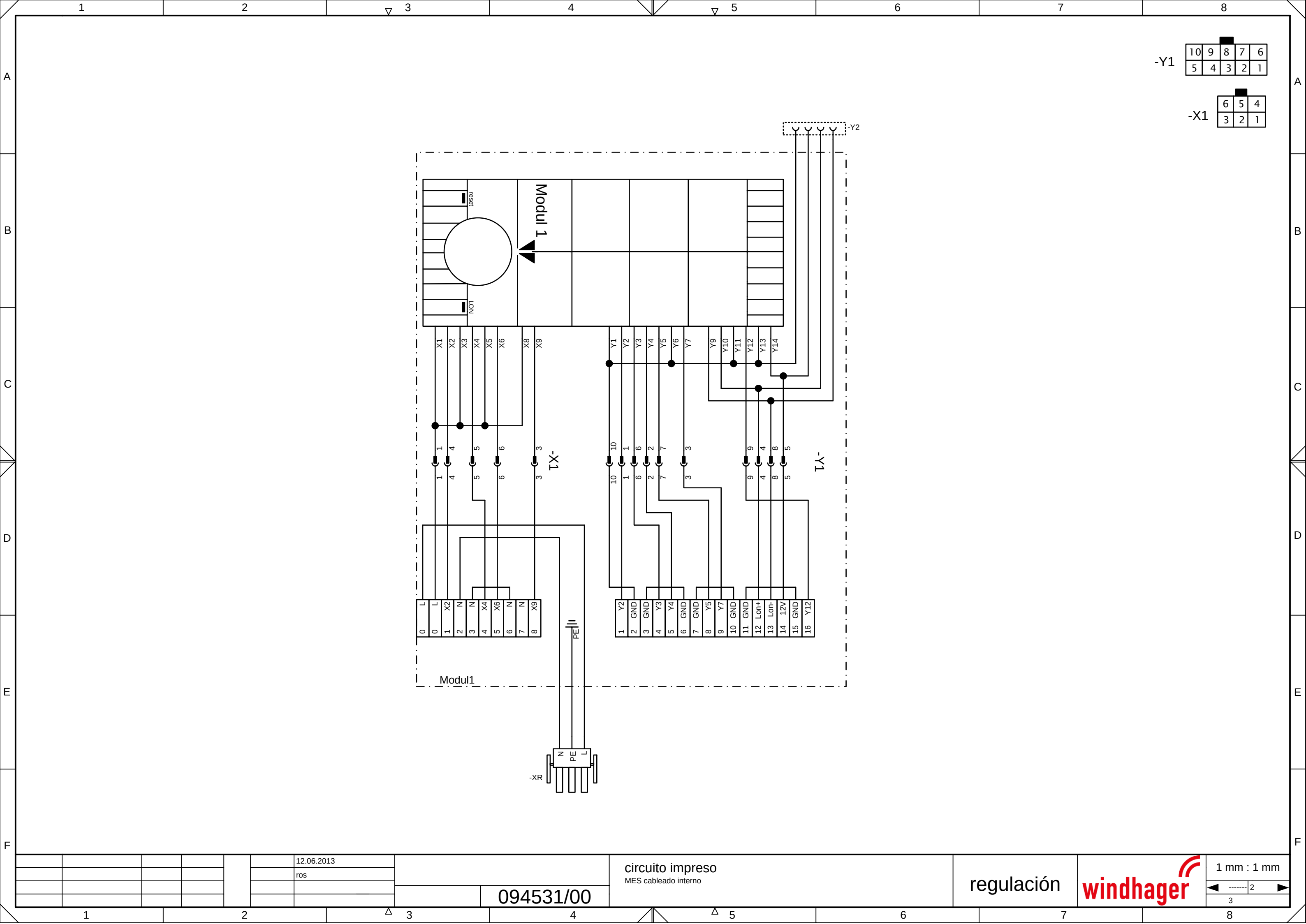
Zeichnungs Nr.:	094531/00

circuito impreso
MES cableado interno

Projekt :
regulación



1 mm : 1 mm
Blatt 1 von 2



10	9	8	7	6
5	4	3	2	1

6	5	4
3	2	1

					12.06.2013
					ros

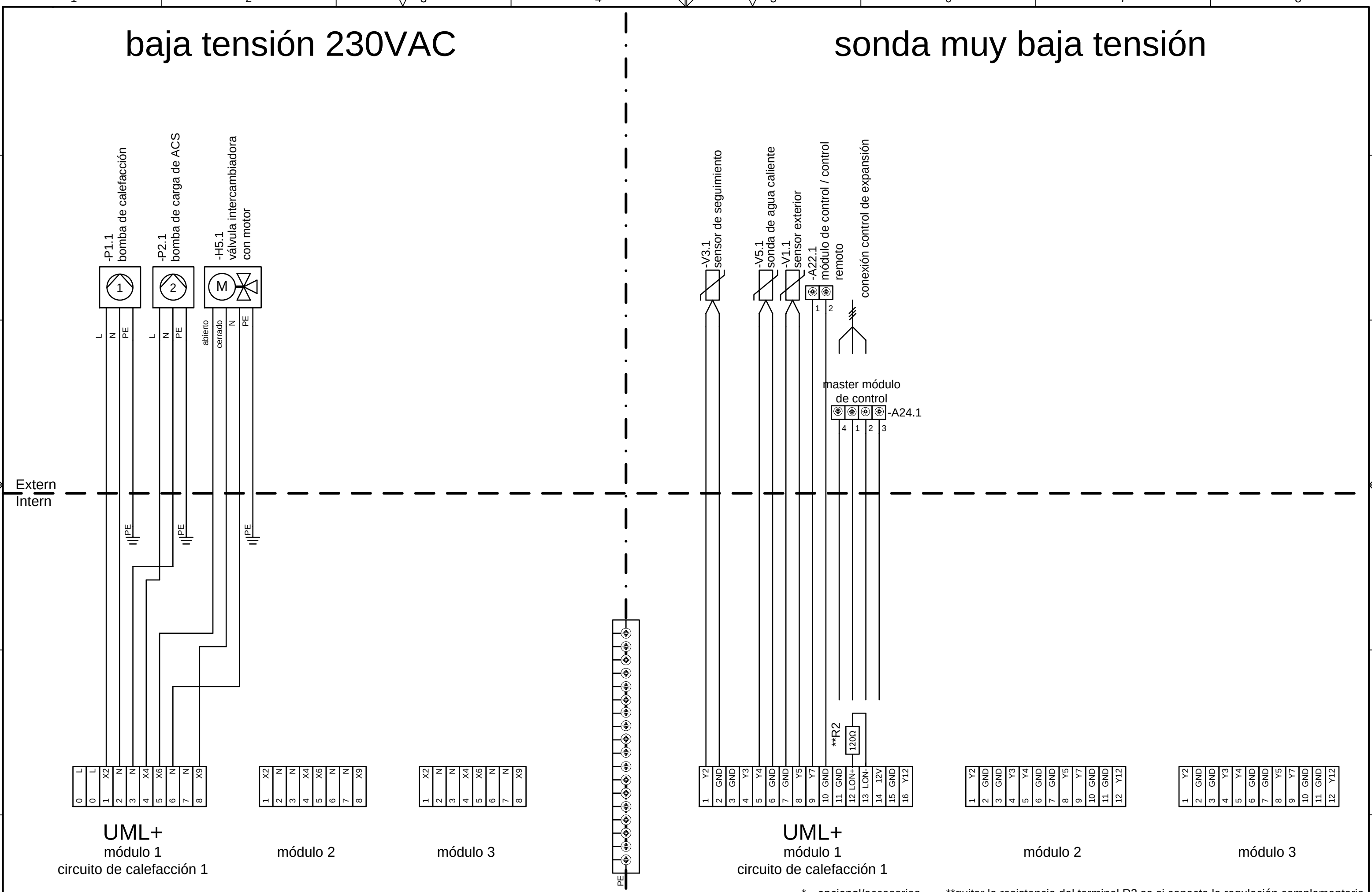
094531/00

circuito impreso
MES cableado interno

regulación



1 mm : 1 mm
2
3



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

UML+	módulo 1 circuito de calefacción 1
0 L	230 VAC
0 L	
1 X2	bomba de calefacción
2 N	c.c. 1
3 N	bomba de carga de ACS
4 X4	c.c. 1
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	c.c. 1
8 X9	cerrado

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094776/00

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c.1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente HK1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

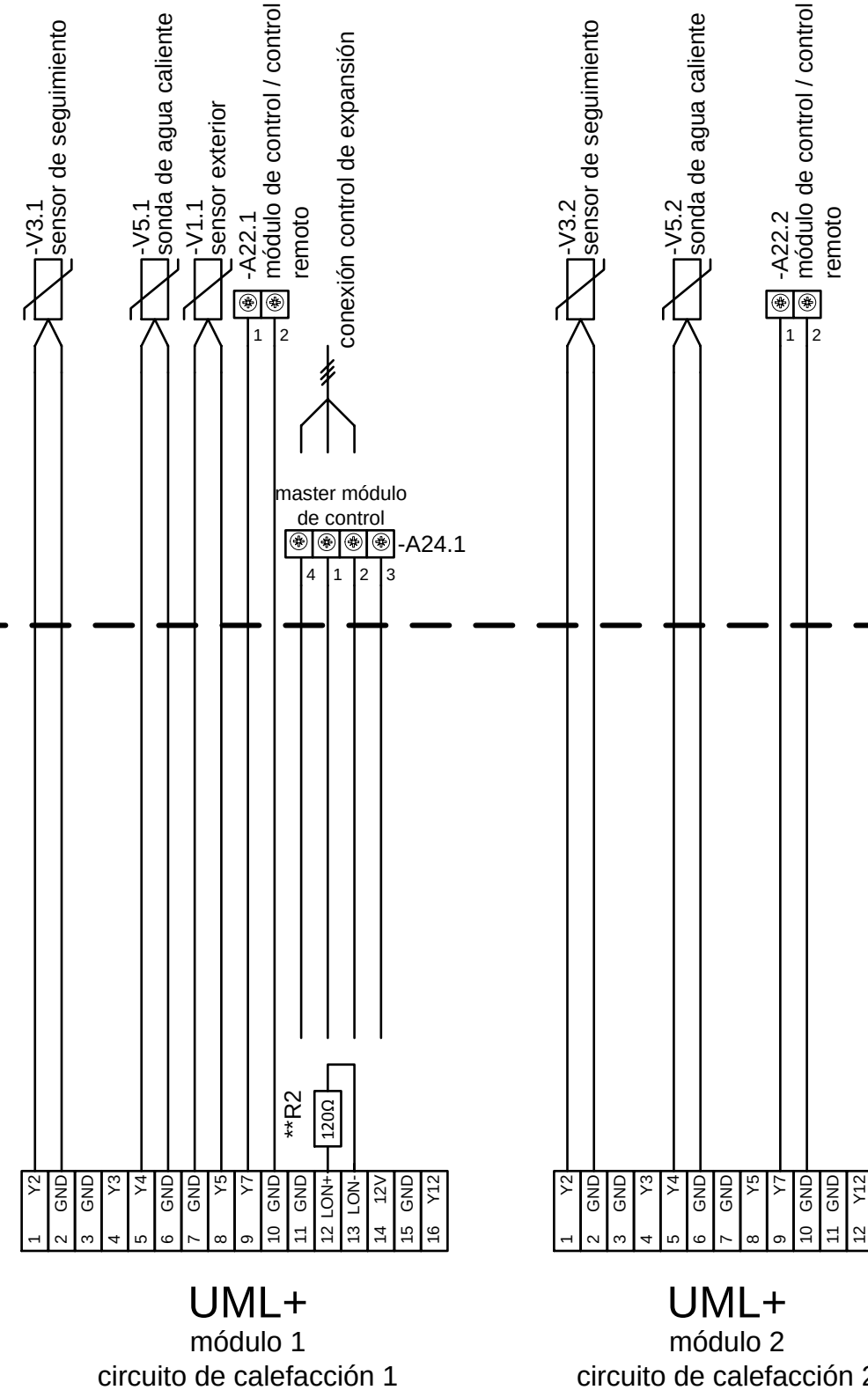
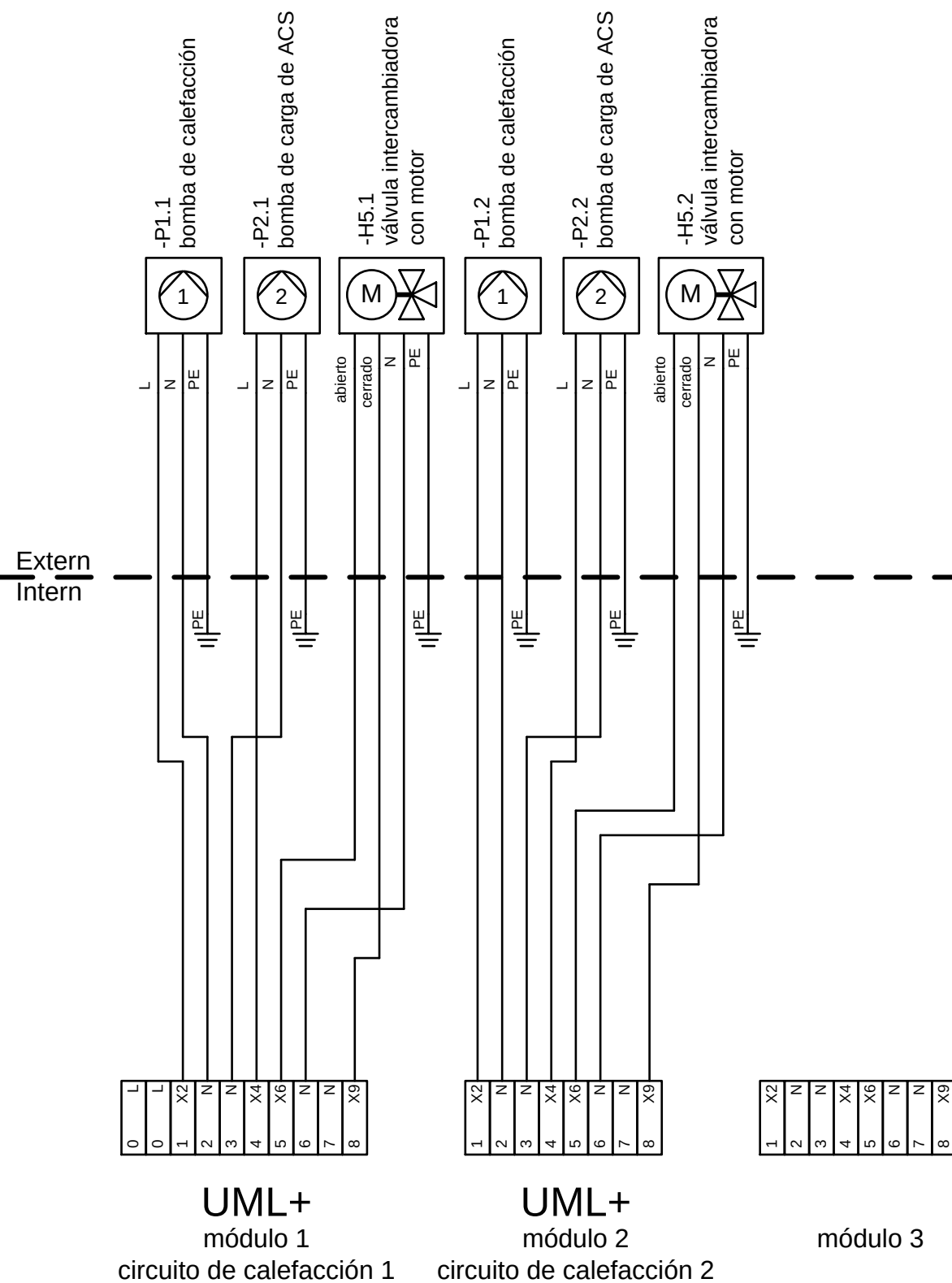
	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094776/00

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	04.07.2013	UML+/UML+		MES H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente		Projekt : regulación				1 mm : 1 mm Blatt 094777/00	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094777/00								

UML+	módulo 1 circuito de calefacción 1
0 L	230 VAC
0 L	
1 X2	bomba de calefacción
2 N	c.c. 1
3 N	bomba de carga de ACS
4 X4	c.c. 1
5 X6	abierto
6 N	válvula intercambiadora
7 N	con motor
8 X9	c.c. 1
	cerrado

UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción
2 N	c.c. 2
3 N	bomba de carga de ACS
4 X4	c.c. 2
5 X6	abierto
6 N	válvula intercambiadora
7 N	con motor
8 X9	c.c. 2
	cerrado

	módulo 3
1 X2	094778/00
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

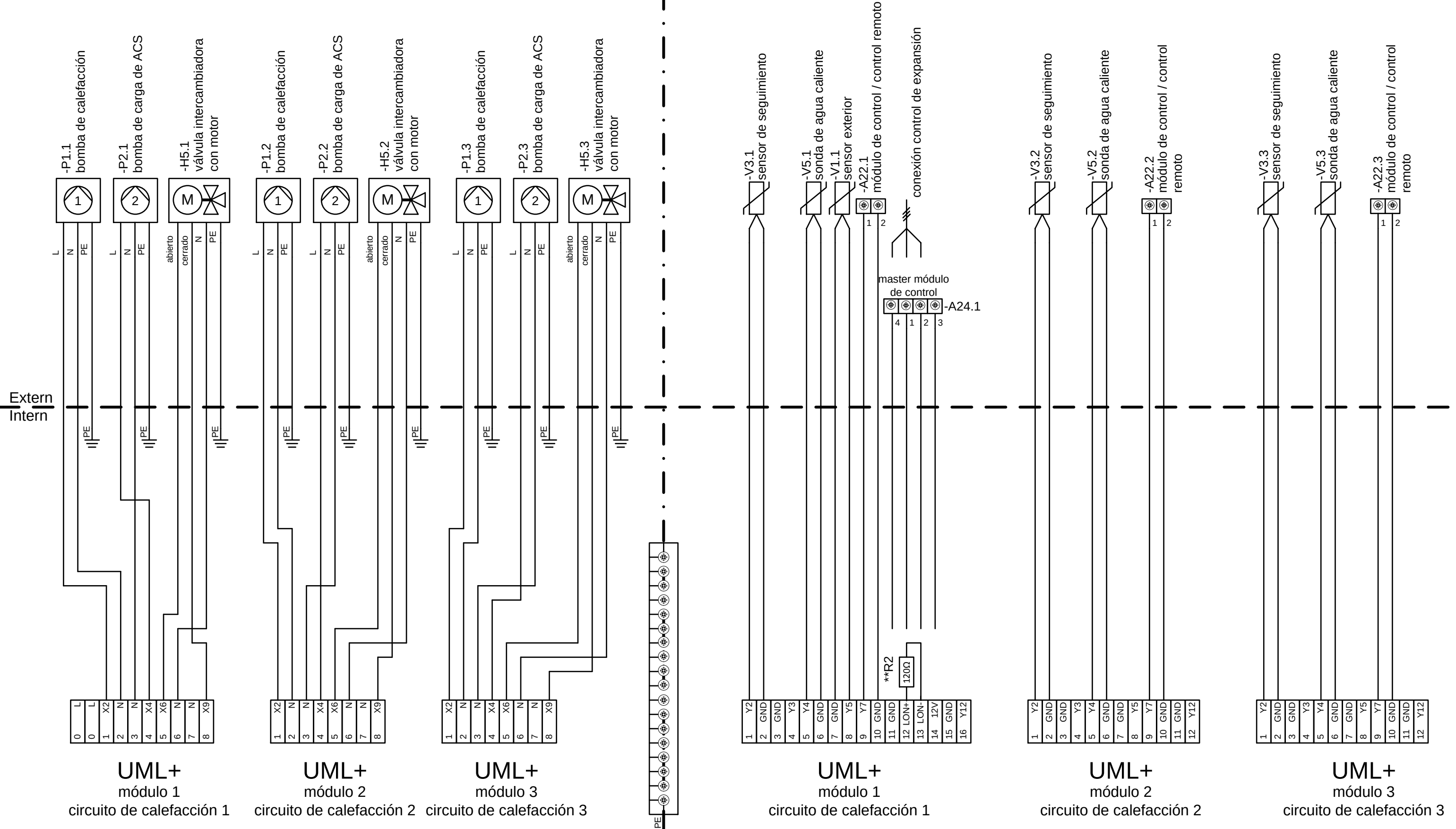
UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento
2 GND	c.c. 1
3 GND	
4 Y3	
5 Y4	sonda de agua caliente
6 GND	c.c. 1
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	master módulo de control
12 Lon+	
13 Lon-	
14 12V	conexión control de expansión
15 GND	
16 Y12	

UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento
2 GND	c.c. 2
3 GND	
4 Y3	
5 Y4	sonda de agua caliente
6 GND	c.c. 2
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

baja tensión 230VAC

sonda muy baja tensión



UML+	módulo 1 circuito de calefacción 1
0 L	230 VAC
0 L	
1 X2	bomba de calefacción
2 N	c.c. 1
3 N	bomba de carga de ACS
4 X4	c.c. 1
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	c.c. 1
8 X9	cerrado

UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción
2 N	c.c. 2
3 N	bomba de carga de ACS
4 X4	c.c. 2
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	c.c. 2
8 X9	cerrado

UML+	módulo 3 circuito de calefacción 3
1 X2	bomba de calefacción
2 N	c.c. 3
3 N	bomba de carga de ACS
4 X4	c.c. 3
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	c.c. 3
8 X9	cerrado

094782/00

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento
2 GND	c.c. 1
3 GND	
4 Y3	
5 Y4	sonda de agua caliente
6 GND	c.c. 1
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	
16 Y12	

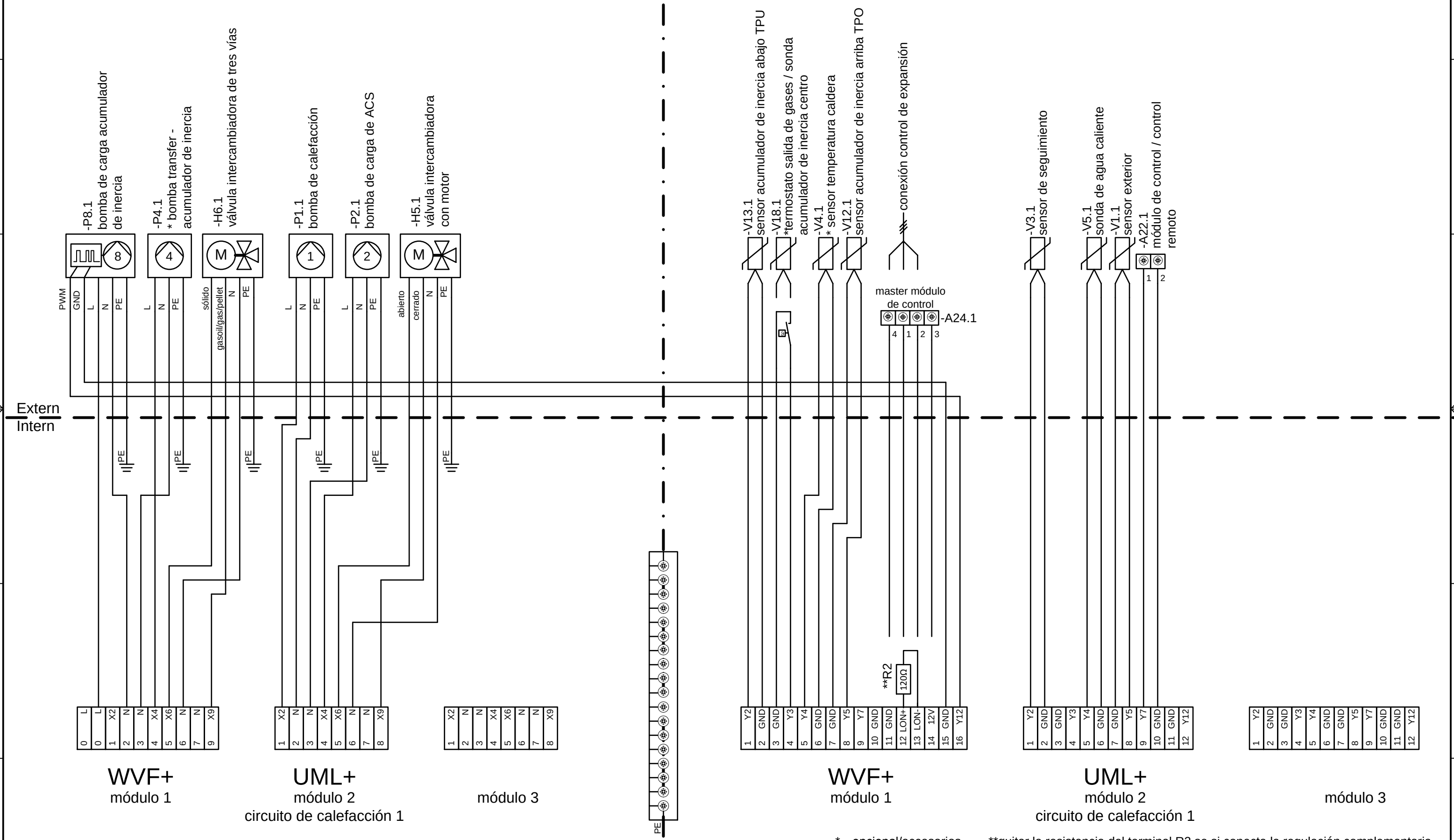
UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento
2 GND	c.c. 2
3 GND	
4 Y3	
5 Y4	sonda de agua caliente
6 GND	c.c. 2
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 3
1 Y2	sensor de seguimiento
2 GND	HK 3
3 GND	
4 Y3	
5 Y4	sonda de agua caliente
6 GND	c.c. 3
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

094782/00

baja tensión 230VAC

sonda muy baja tensión



WVF+	módulo 1
0 L	230 VAC
0 L	
1 X2	sólido válvula intercambiadora de tres vías gasoil/gas/pellet
2 N	
3 N	
4 X4	
5 X6	sólido válvula intercambiadora de tres vías gasoil/gas/pellet
6 N	
7 N	
8 X9	

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo TPU
2 GND	
3 GND	*termostato salida de gases sonda acumulador de inercia centro
4 Y3	
5 Y4	*sensor temperatura caldera
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de carga acumulador de inercia
16 Y12	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

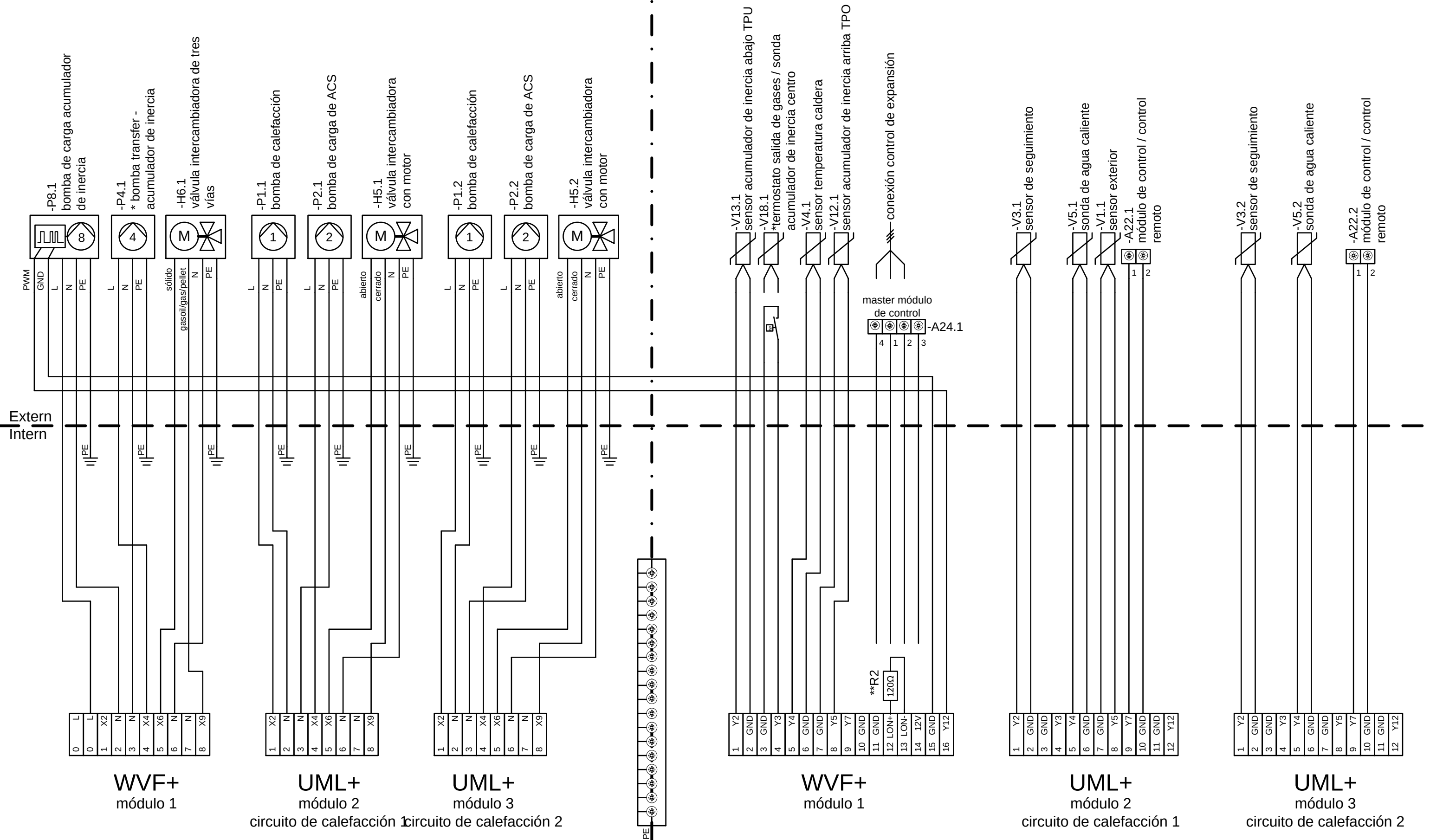
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

	módulo 3
1 X2	094787/00
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 Y2	094787/00
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

					Datum	03.07.2013	WVF+/UML+/UML+		MES P041 + H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente comutación automática combustibles sólidos con carga acumulador de inercia	Projekt : regulación		1 mm : 1 mm
					Gezeichnet	ros						 ----- 2 
					Geprüft	rot						
Rev.	Änderung	Datum	Name		Genehmigt		Zeichnungs Nr.:	094785/00				

WVF+	módulo 1
0 L	230 VAC
0 L	
1 X2	sólido válvula intercambiadora de tres vías gasoil/gas/pellet
2 N	
3 N	
4 X4	
5 X6	*bomba transfer
6 N	
7 N	
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

094786/00

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo TPU
2 GND	
3 GND	*termostato salida de gases / sonda acumulador de inercia centro
4 Y3	
5 Y4	* sensor de la caldera
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de carga acumulador de inercia
16 Y12	

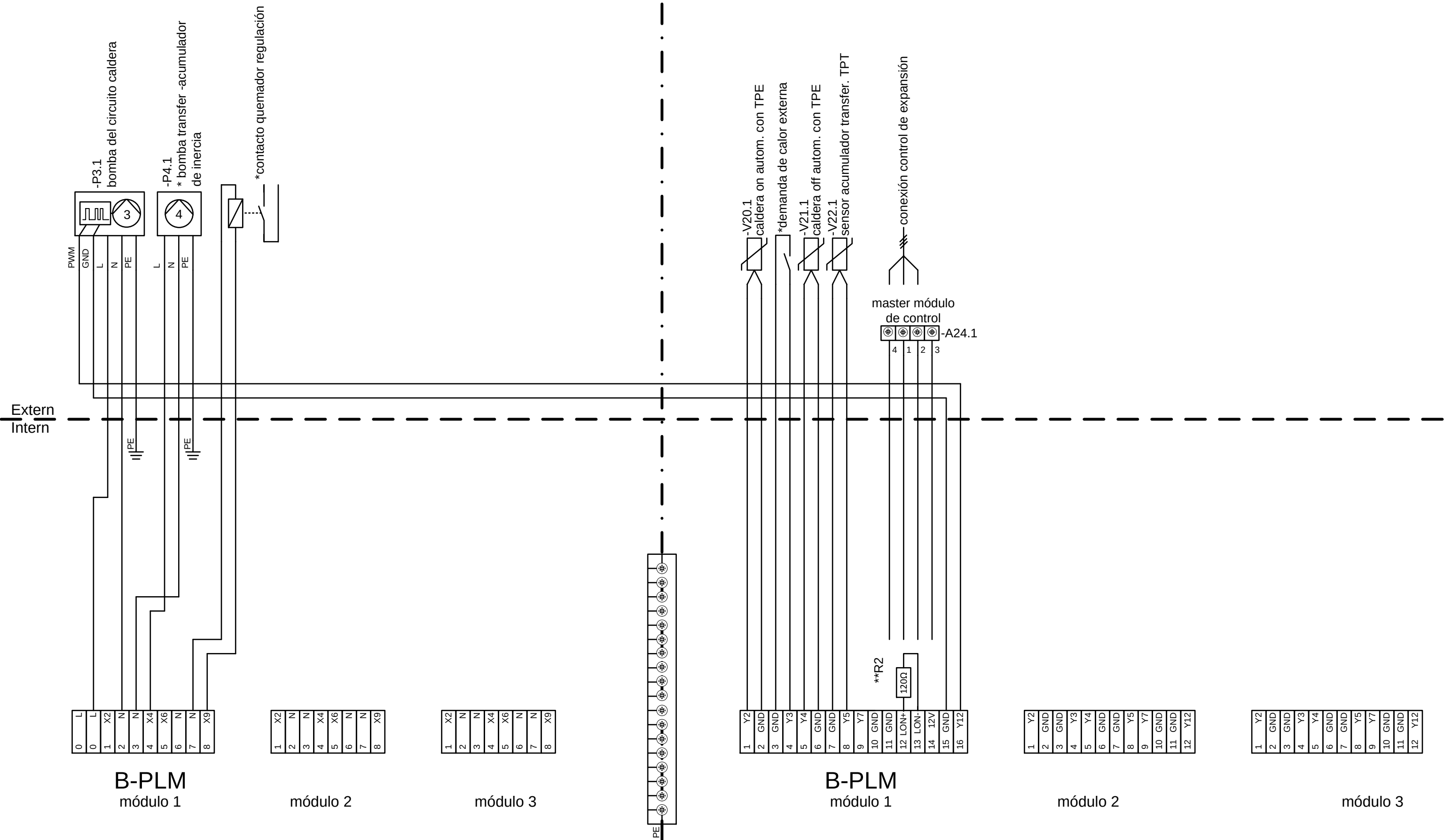
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

094786/00

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	04.07.2013	B-PLM		MES P042 y modulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094787/00					
Blatt 094787/00												

B-PLM	módulo 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	* bomba transfer
4 X4	acumulador de inercia
5 X6	
6 N	
7 N	
8 X9	*quemador Contacto

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094788/00

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	* caldera off autom.
6 GND	con TPE
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	
13 Lon-	
14 12V	conexión control de expansión
15 GND	PWM bomba de circuito de la caldera
16 Y12	

	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094788/00

sonda muy baja tensión



				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis y quemador/módulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot	Zeichnungs Nr.:	094789/00				Blatt 094789/00
Rev.	Änderung	Datum	Name	Genehmigt							

B-PLM	módulo 1
0 L	230 VAC
0 L	
1 X2	*bomba transfer
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	
	c.c. 1 cerrado

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094790/00

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de circuito de la caldera
16 Y12	

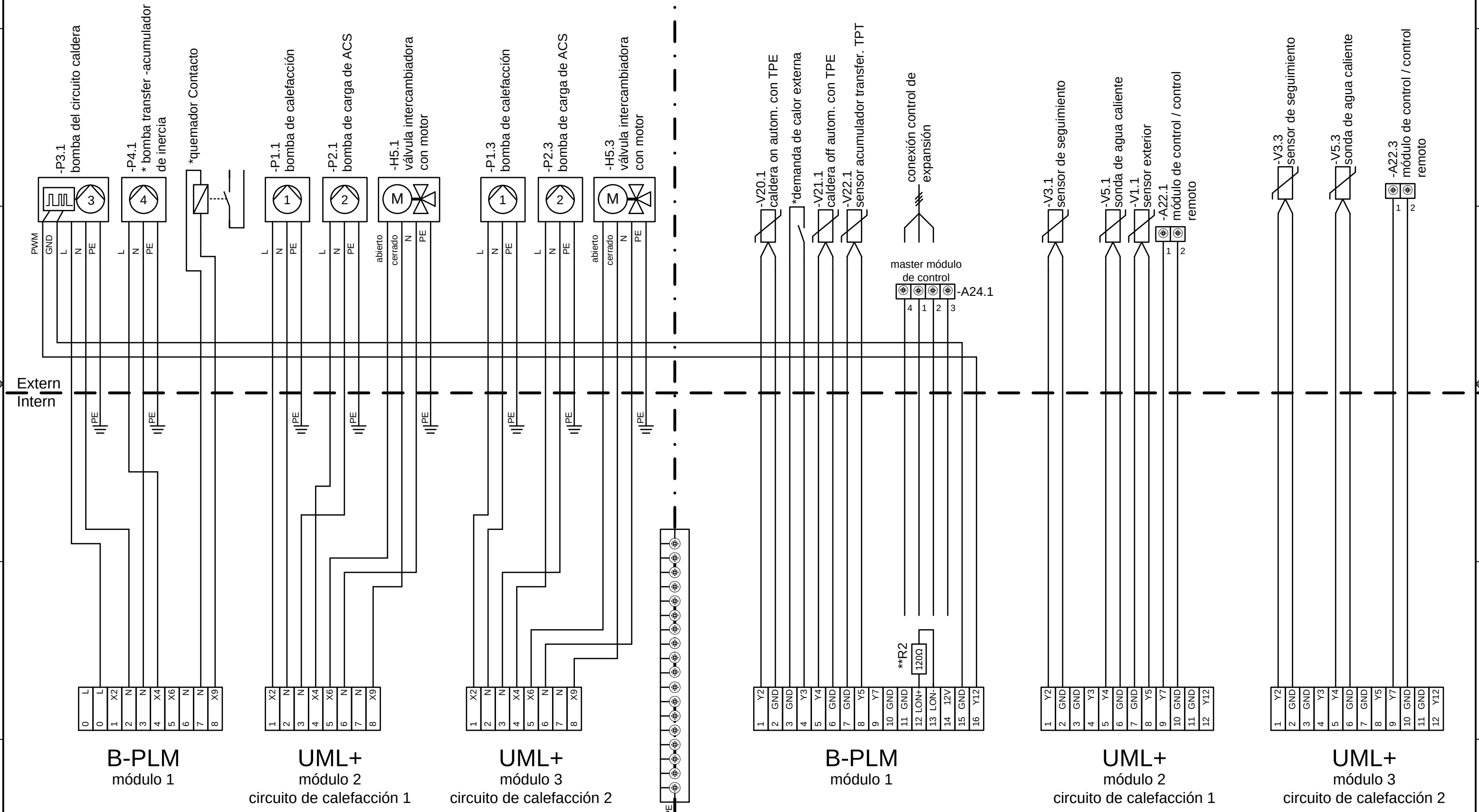
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094790/00

baja tensión 230VAC

sonda muy baja tensión



B-PLM	módulo 1
0 L	230 VAC
0 L	
1 X2	*bomba transfer
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

094792/00

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	PWM bomba de circuito de la caldera
15 GND	
16 Y12	

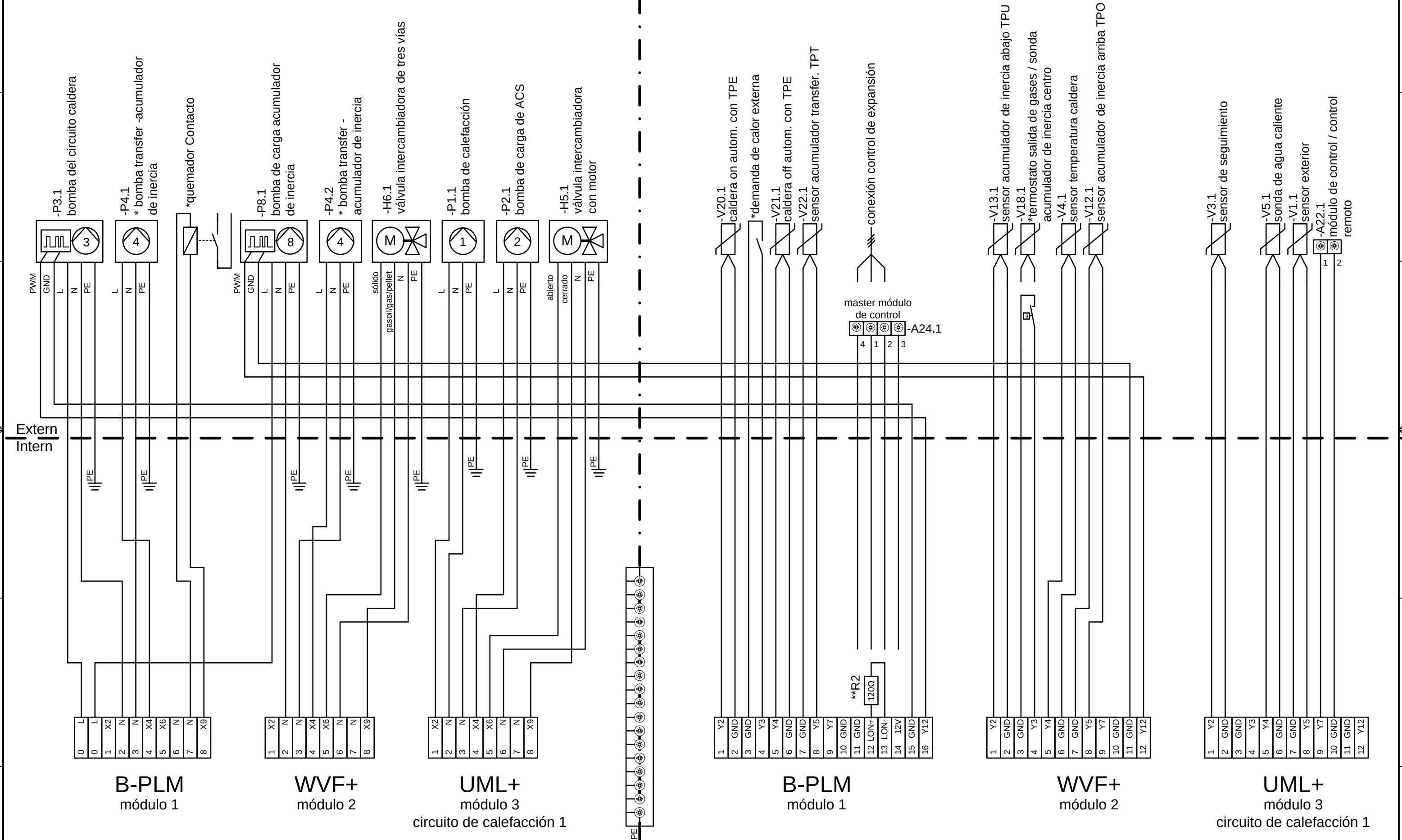
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

094792/00

baja tensión 230VAC

sonda muy baja tensión



B-PLM	módulo 1
0 L	230 VAC
0 L	
1 X2	
2 N	
3 N	*bomba transfer acumulador de inercia
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

WVF+	módulo 2
1 X2	
2 N	
3 N	*bomba transfer acumulador de inercia
4 X4	
5 X6	sólido válvula intercambiadora de tres vías gasoil/gas/pellet
6 N	
7 N	
8 X9	

UML+	módulo 3 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor c.c. 1 cerrado
6 N	
7 N	
8 X9	

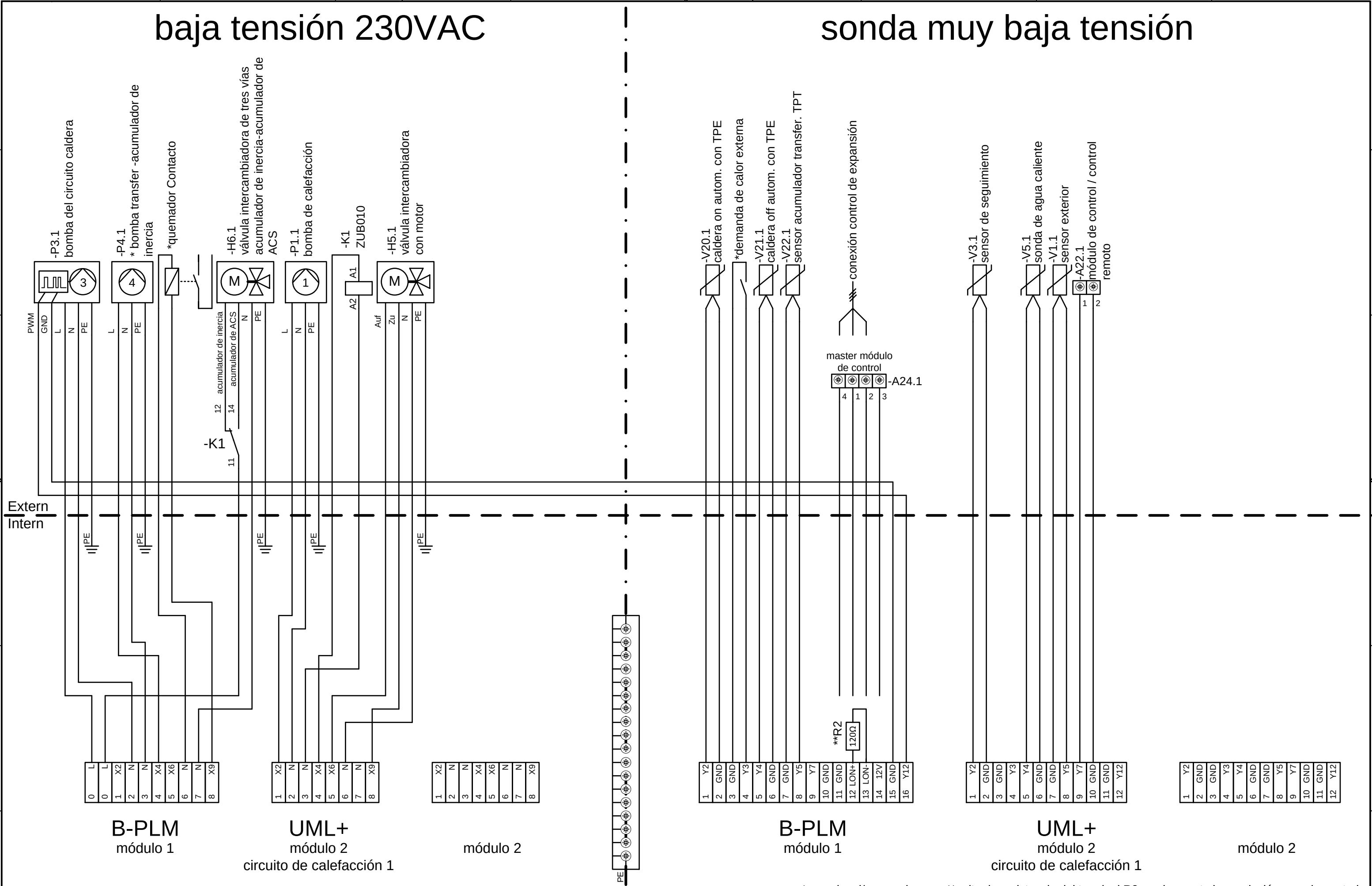
094794/00

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de circuito de la caldera
16 Y12	

WVF+	módulo 2
1 Y2	acumulador de inercia abajo TPU
2 GND	
3 GND	*termostato salida de gases sonda acumulador de inercia centro
4 Y3	
5 Y4	*sensor temperatura caldera
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM bomba de carga acumulador de inercia
12 Y12	

UML+	módulo 3 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

094794/00



B-PLM	módulo 1
0 L	230 VAC
0 L	
1 X2	* bomba transfer
2 N	
3 N	* bomba transfer
4 X4	
5 X6	contacto del quemador
6 N	
7 N	contacto del quemador
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	Contactor -K1 c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094796/00

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	* demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de circuito de la caldera
16 Y12	

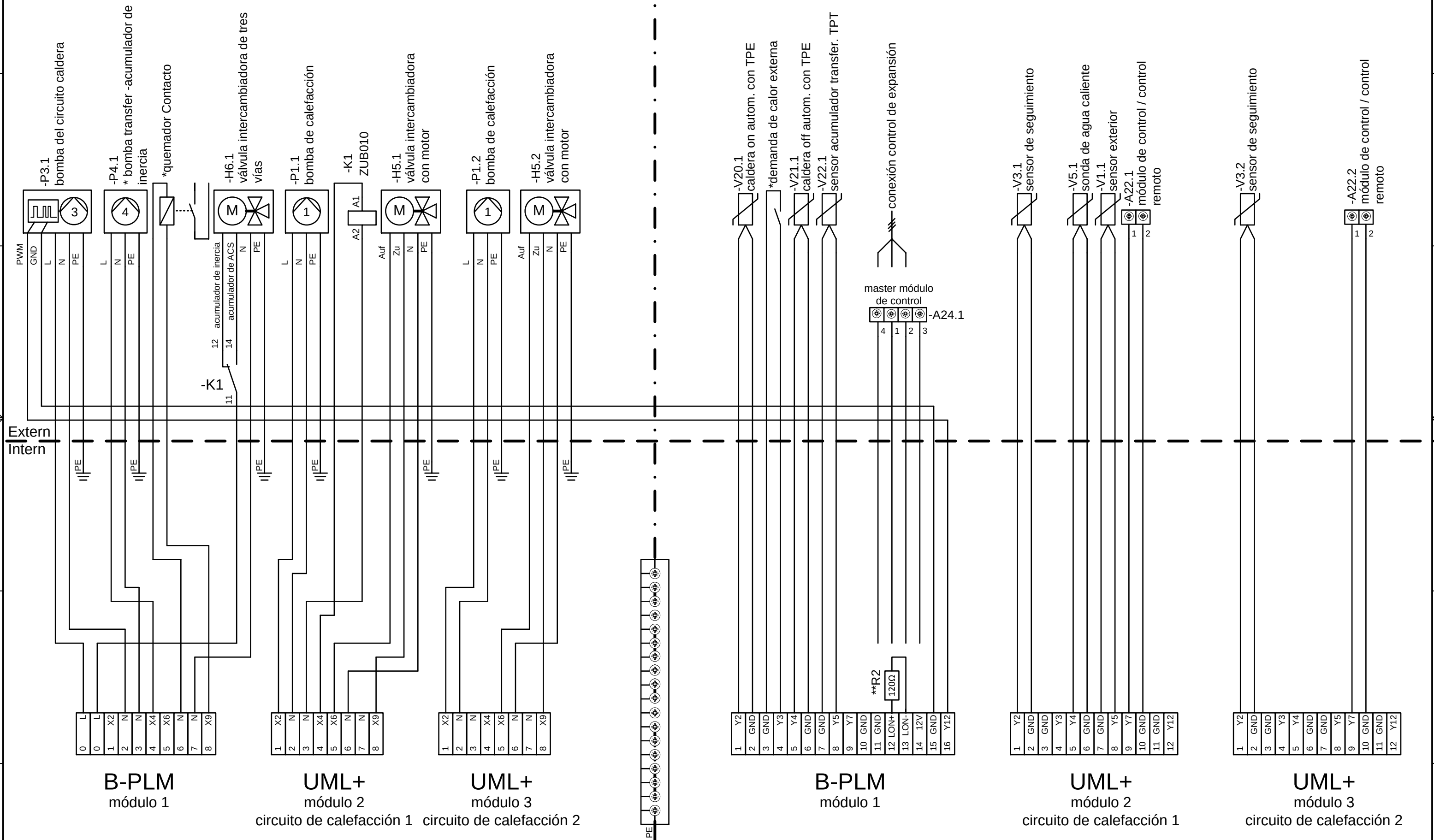
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094796/00

baja tensión 230VAC

sonda muy baja tensión



				Datum	12.08.2013	B-PLM/UML+/UML+		MES ZUB010 + H024 ZUB010 SYS403 válvula intercambiadora de tres vías acumulador de inercia - acumulador de ACS	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094797/00				Blatt 094797/00	

B-PLM	módulo 1
0 L	230 VAC
0 L	
1 X2	* bomba transfer
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	contacto del quemador
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	Contactor -K1 c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 2 cerrado
8 X9	

094799/00

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	* demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	PWM bomba de circuito de la caldera
15 GND	
16 Y12	

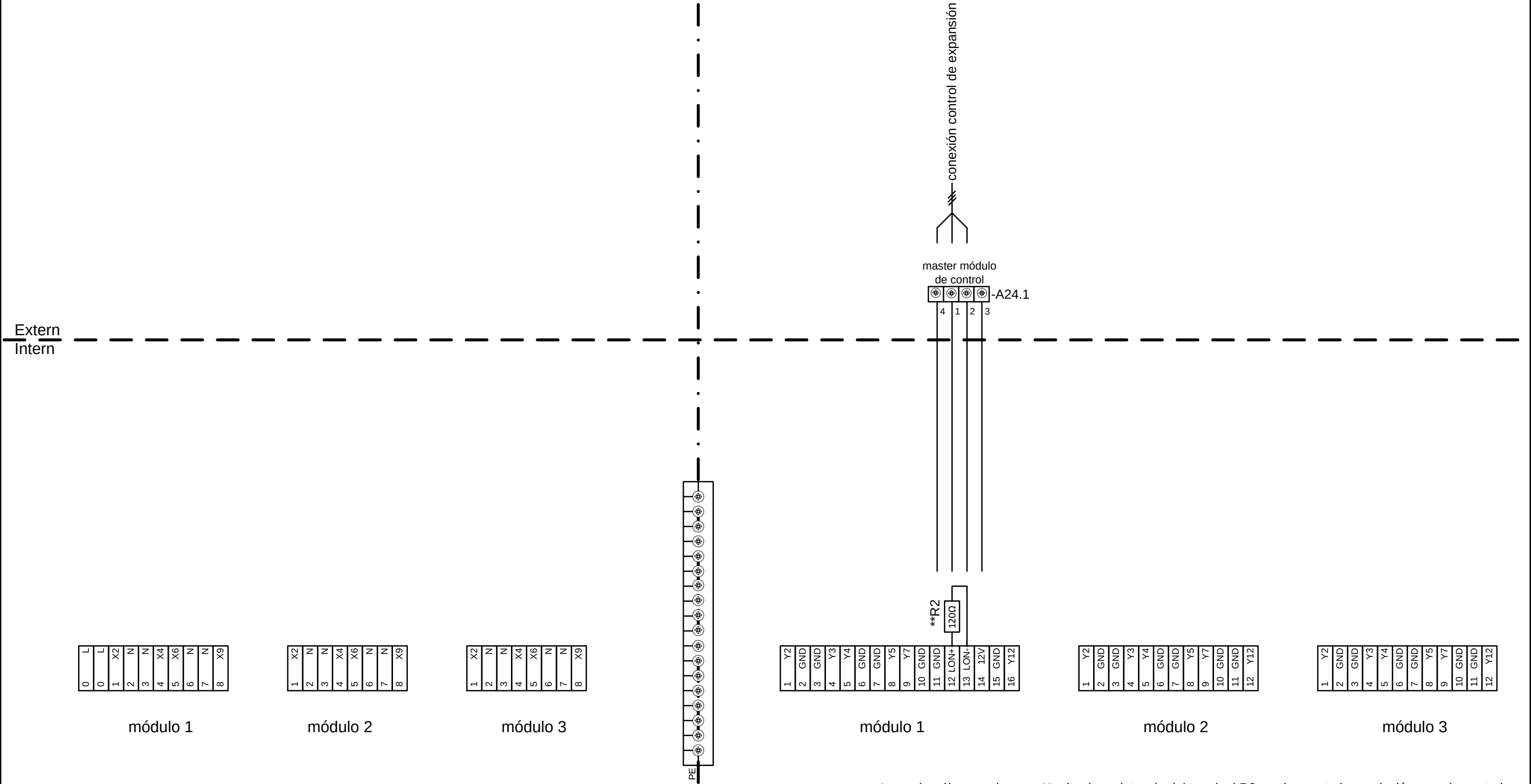
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

094799/00

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

1	módulo 1
0 L	230 VAC
0 L	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	módulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	módulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

094801/00

1	módulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	módulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	módulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

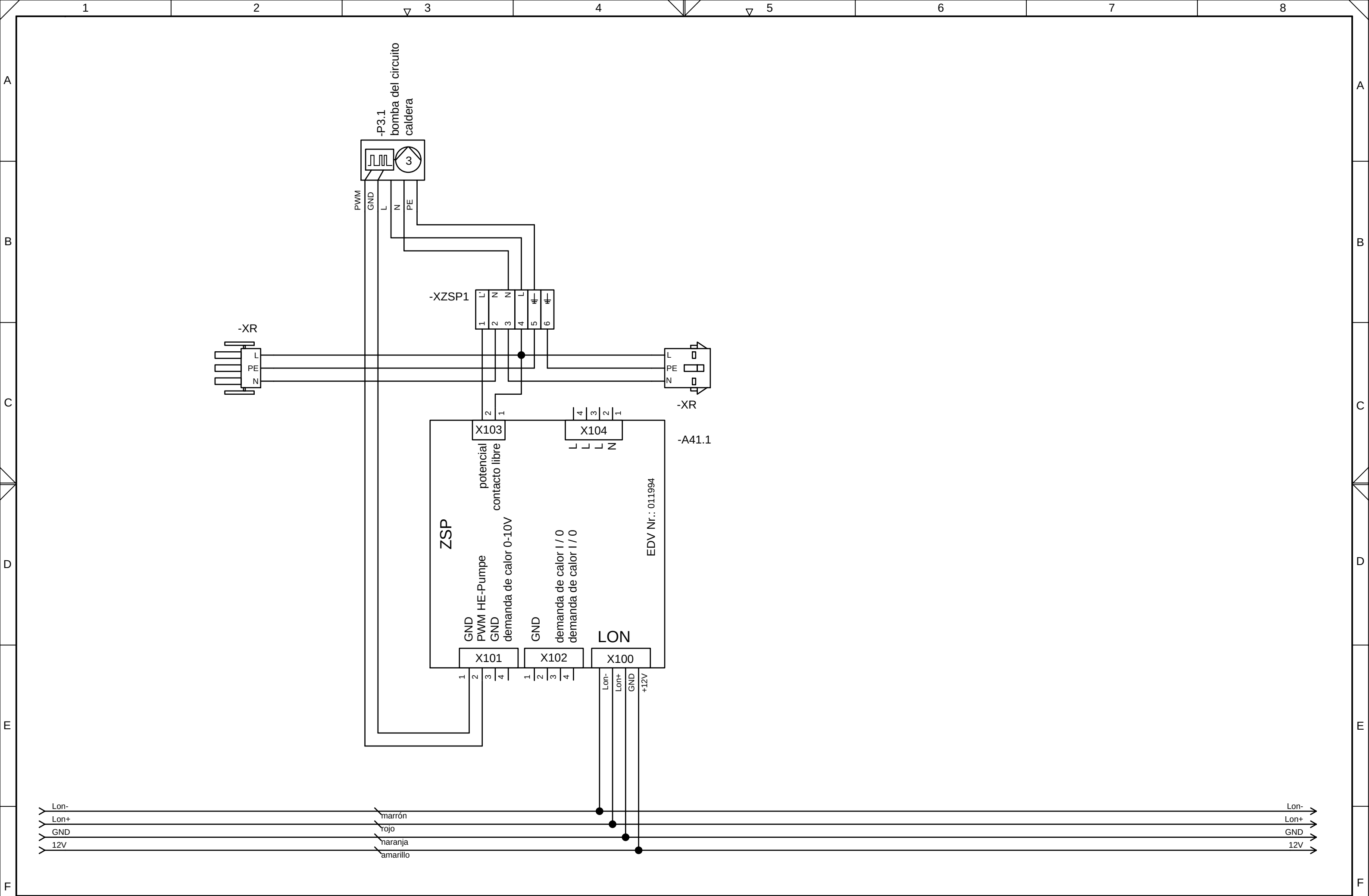
094801/00

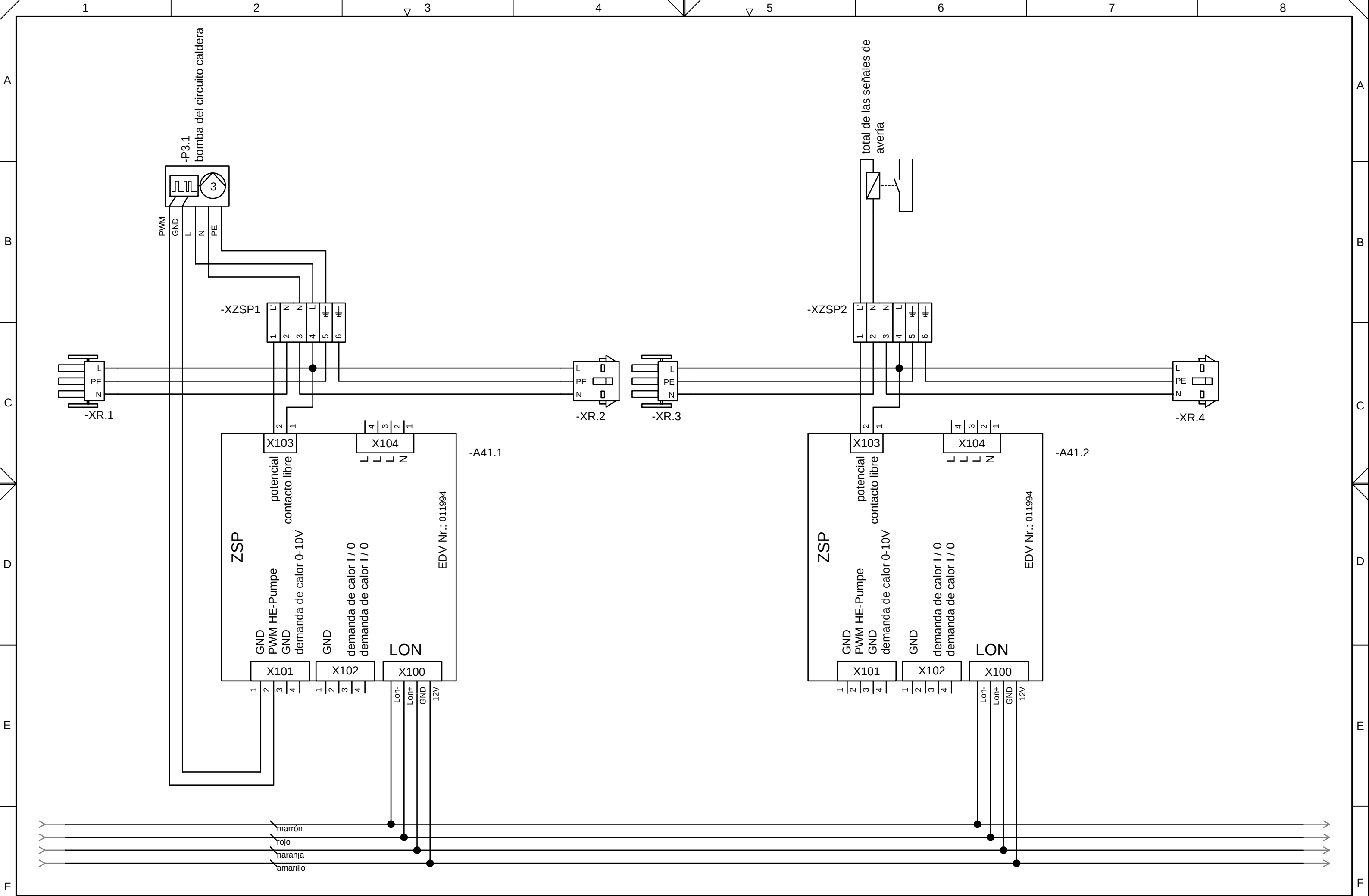
-XZSP	placa adicional
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	placa adicional
PWM bomba del circuito caldera	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4





-XZSP	placa adicional
L' N	total de las señales de avería
N L	fase continua
PE PE	PE

EDV Nr. 094808/00

-XSP	placa adicional
	GND -X101 /2
	GND -X101 /4

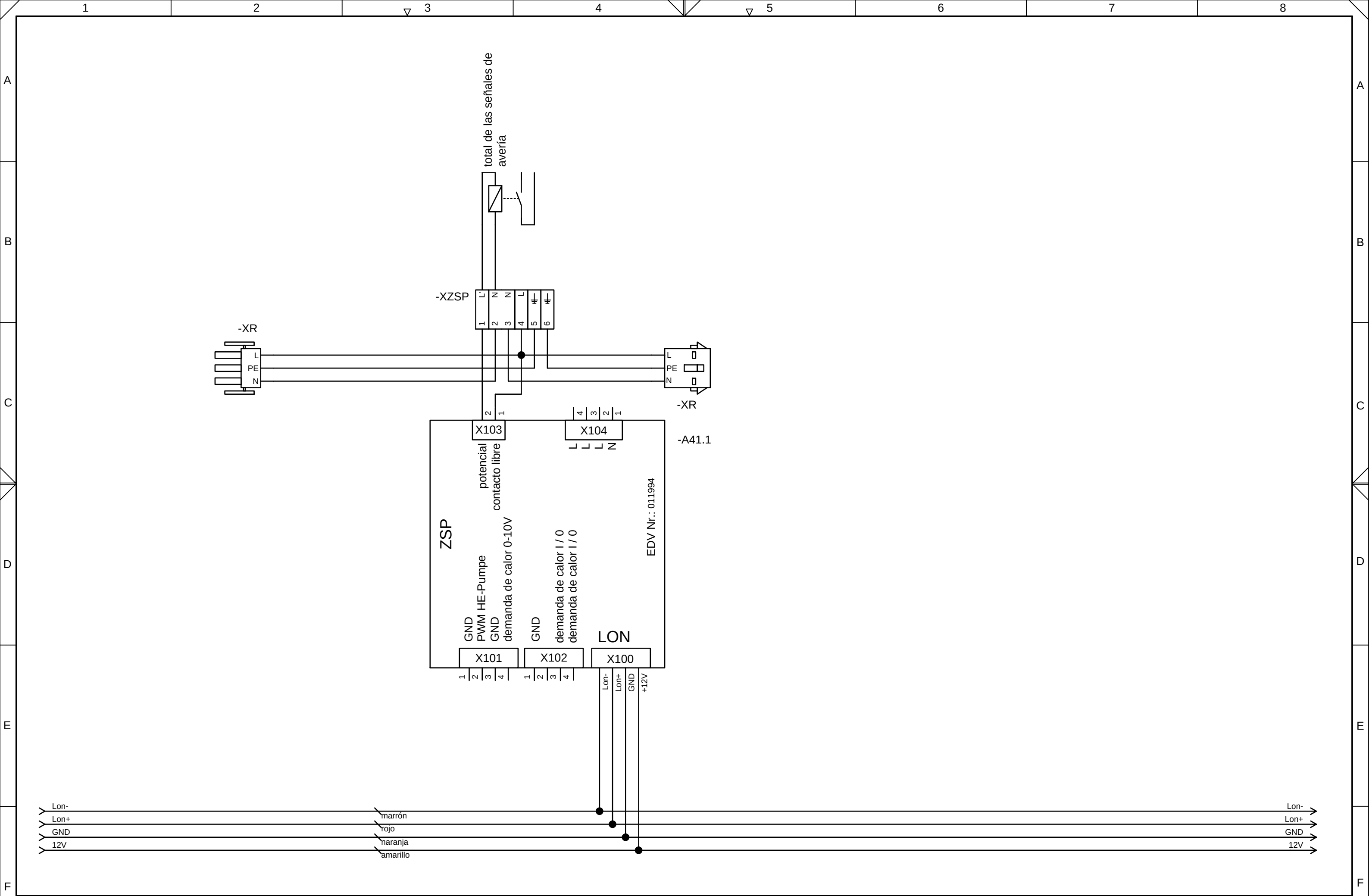
	GND -X102 /2
	-X102 /3
	-X102 /4

-XZSP	placa adicional
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	placa adicional
PWM bomba del circuito caldera	GND -X101 /2
	GND -X101 /4

	GND
	-X102 /2
	-X102 /3
	-X102 /4

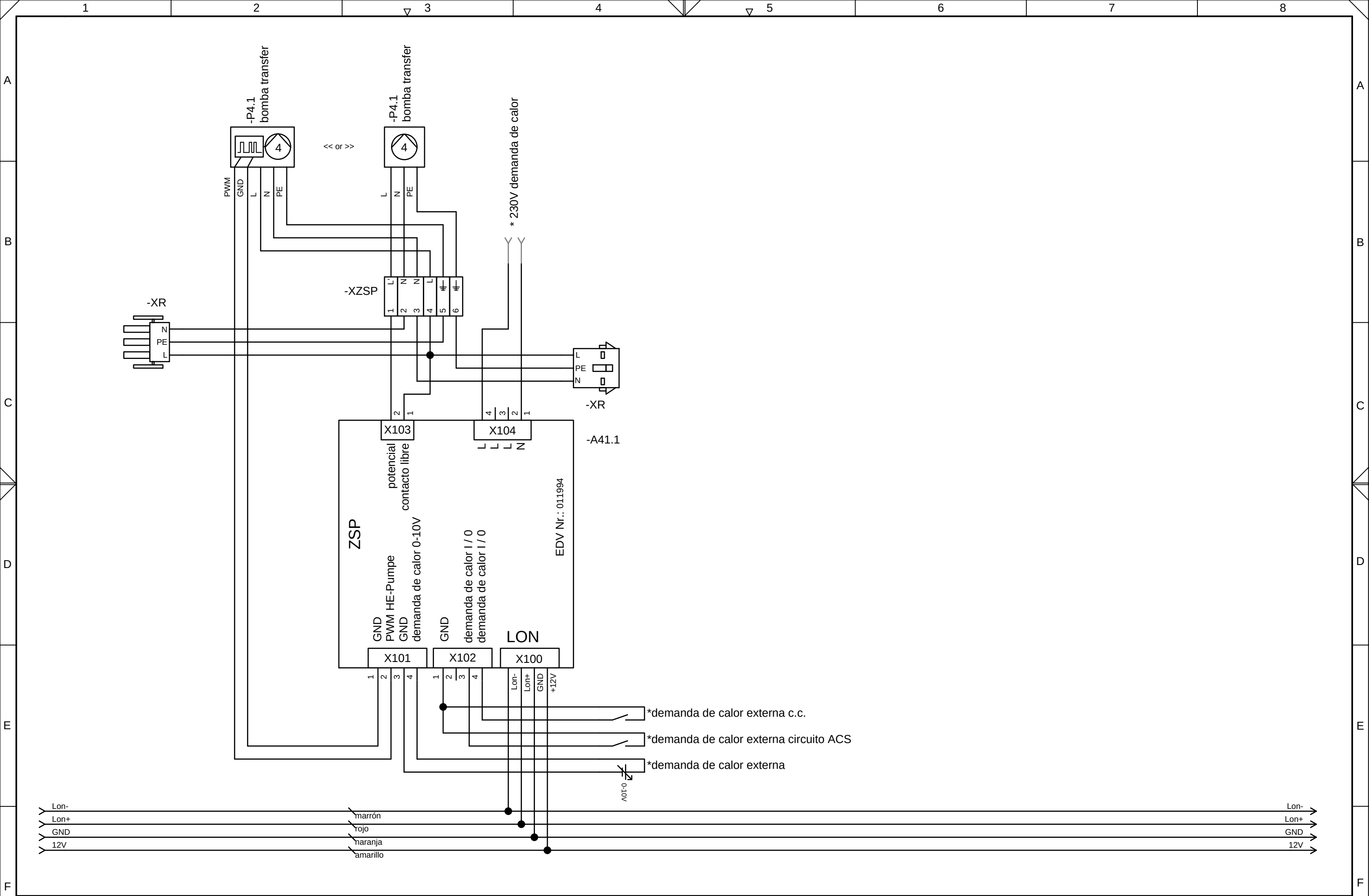


-XZSP	placa adicional
L' N	total de las señales de avería
N L	fase continua
PE PE	PE

EDV Nr. 094808/00

-XSP	placa adicional
	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4



-XZSP	placa adicional
L' N	bomba transfer
N L	fase continua
PE PE	PE

EDV Nr. 094809/00

-XSP	placa adicional
PWM bomba transfer	GND -X101 /2
demanda de calor 0-10V	GND -X101 /4

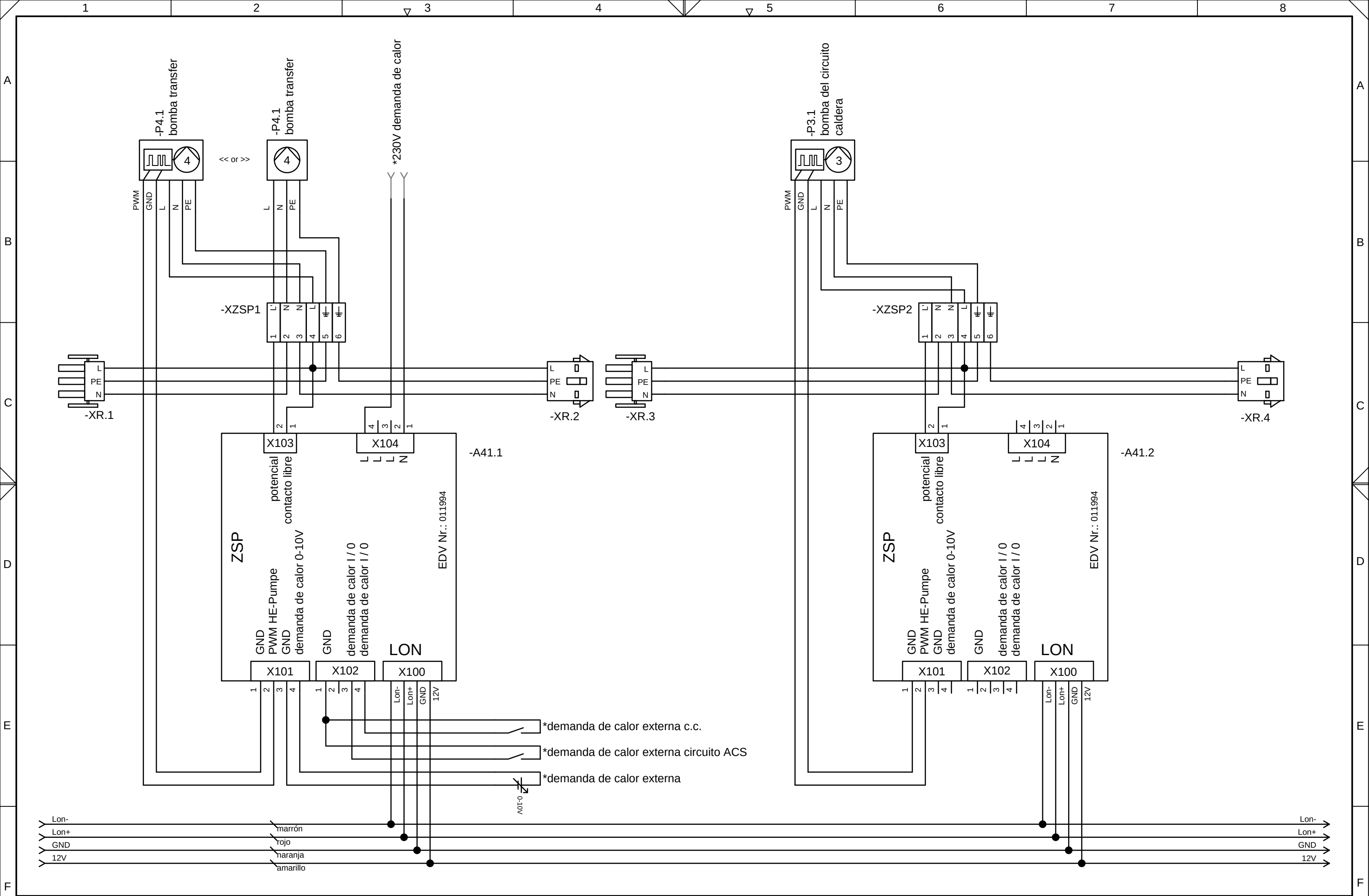
GND	-X102 /2
demanda de calor externa circuito ACS	-X102 /3
demanda de calor externa C.C.	-X102 /4

-XZSP	placa adicional
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094512/00

-XSP	placa adicional
PWM bomba del circuito caldera	GND -X101 /2
	GND -X101 /4

	GND -X102 /2
	-X102 /3
	-X102 /4

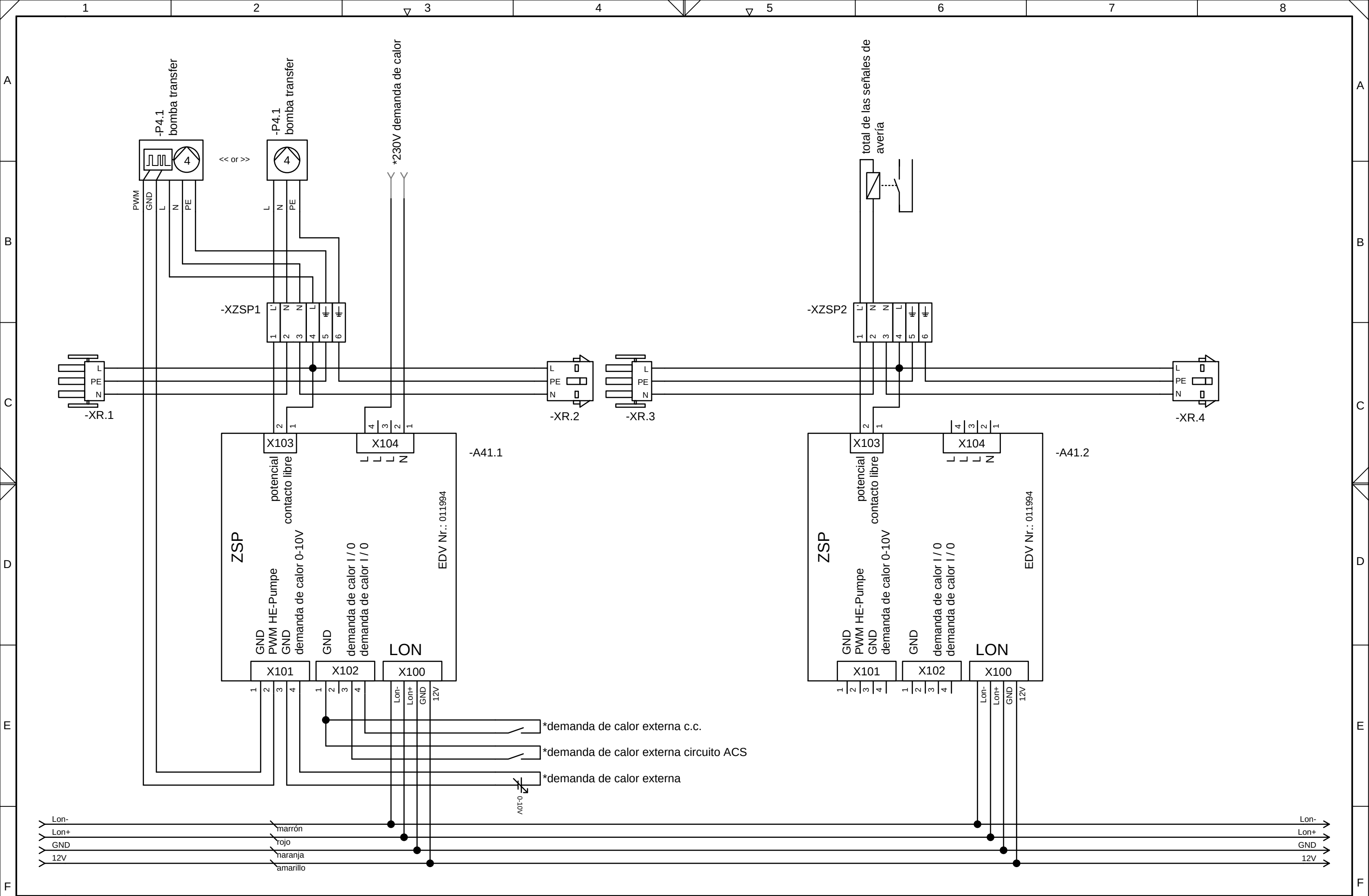


-XZSP	placa adicional
L' N	bomba transfer
N L	fase continua
PE PE	PE

EDV Nr. 094809/00

-XSP	placa adicional
PWM bomba transfer	GND -X101 /2
demanda de calor 0-10V	GND -X101 /4

GND -X102 /2	GND
demanda de calor externa circuito ACS	-X102 /3
demanda de calor externa C.C.	-X102 /4



-XZSP	placa adicional
L' N	total de las señales de avería
N L	fase continua
PE PE	PE

EDV Nr. 094808/00

-XSP	placa adicional
	GND -X101 /2
	GND -X101 /4

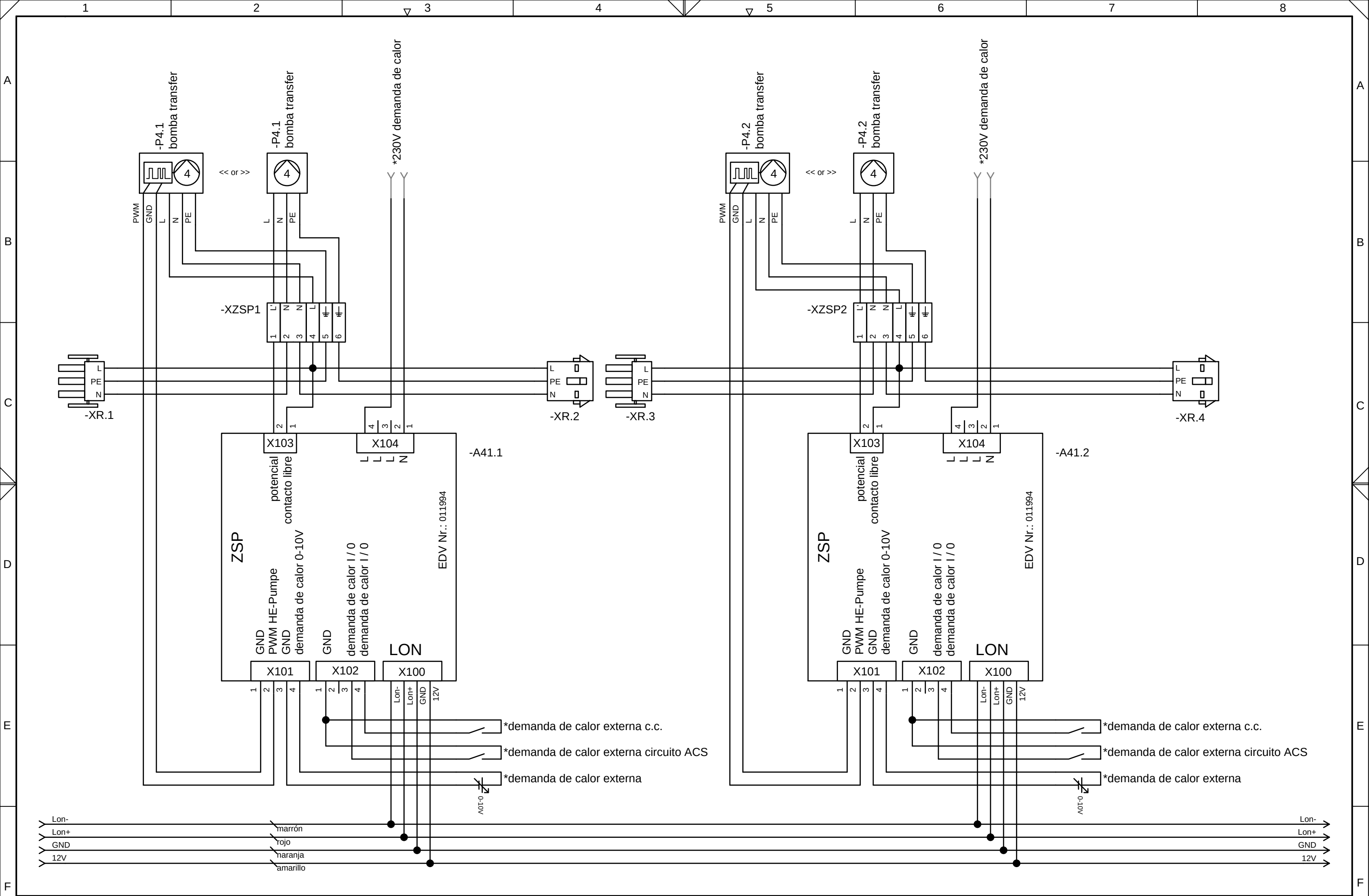
	GND -X102 /2
	-X102 /3
	-X102 /4

-XZSP	placa adicional
L' N	bomba transfer
N L	fase continua
PE PE	PE

EDV Nr. 094809/00

-XSP	placa adicional
PWM bomba transfer	GND -X101 /2
demanda de calor 0-10V	GND -X101 /4

GND -X102 /2	GND
demanda de calor externa circuito ACS	-X102 /3
demanda de calor externa C.C.	-X102 /4



-XZSP	placa adicional
L' N	bomba transfer
N L	fase continua
PE PE	PE

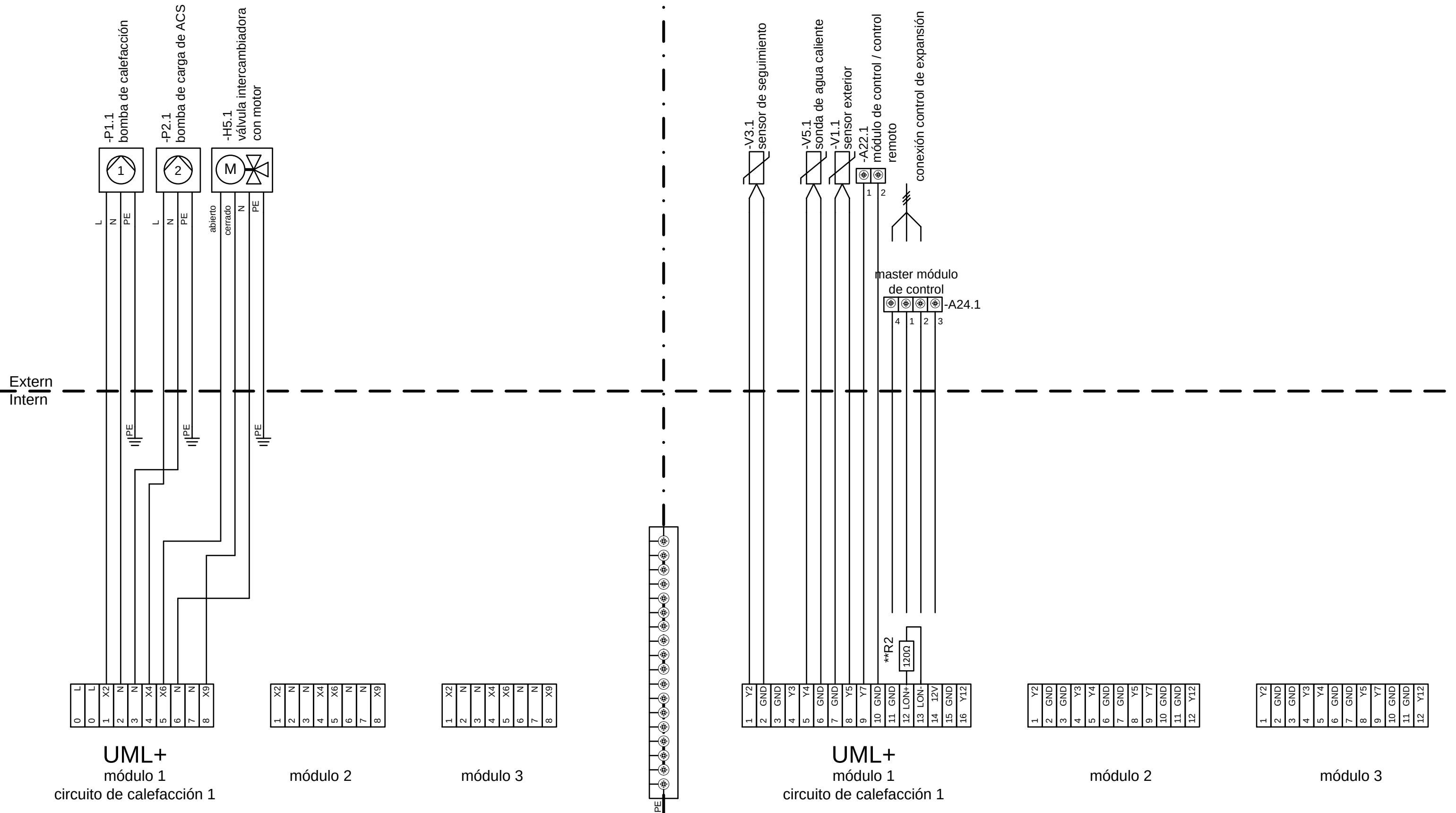
EDV Nr. 094809/00

-XSP	placa adicional
PWM bomba transfer	GND -X101 /2
demanda de calor 0-10V	GND -X101 /4

GND -X102 /2	GND
demanda de calor externa circuito ACS	-X102 /3
demanda de calor externa C.C.	-X102 /4

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

UML+	módulo 1 circuito de calefacción 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	c.c. 1 cerrado

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092595/01

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c.1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente HK1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	
16 Y12	

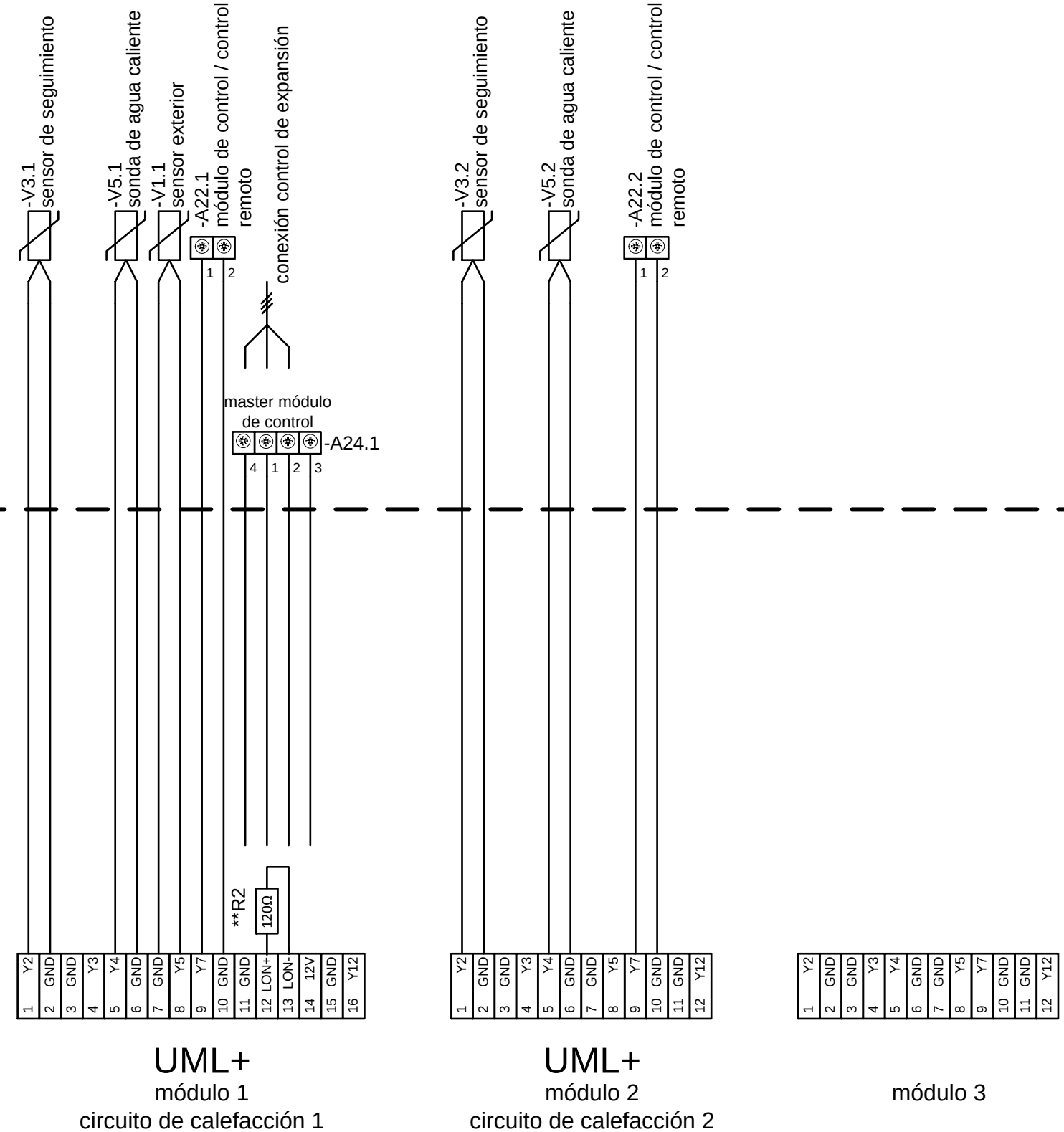
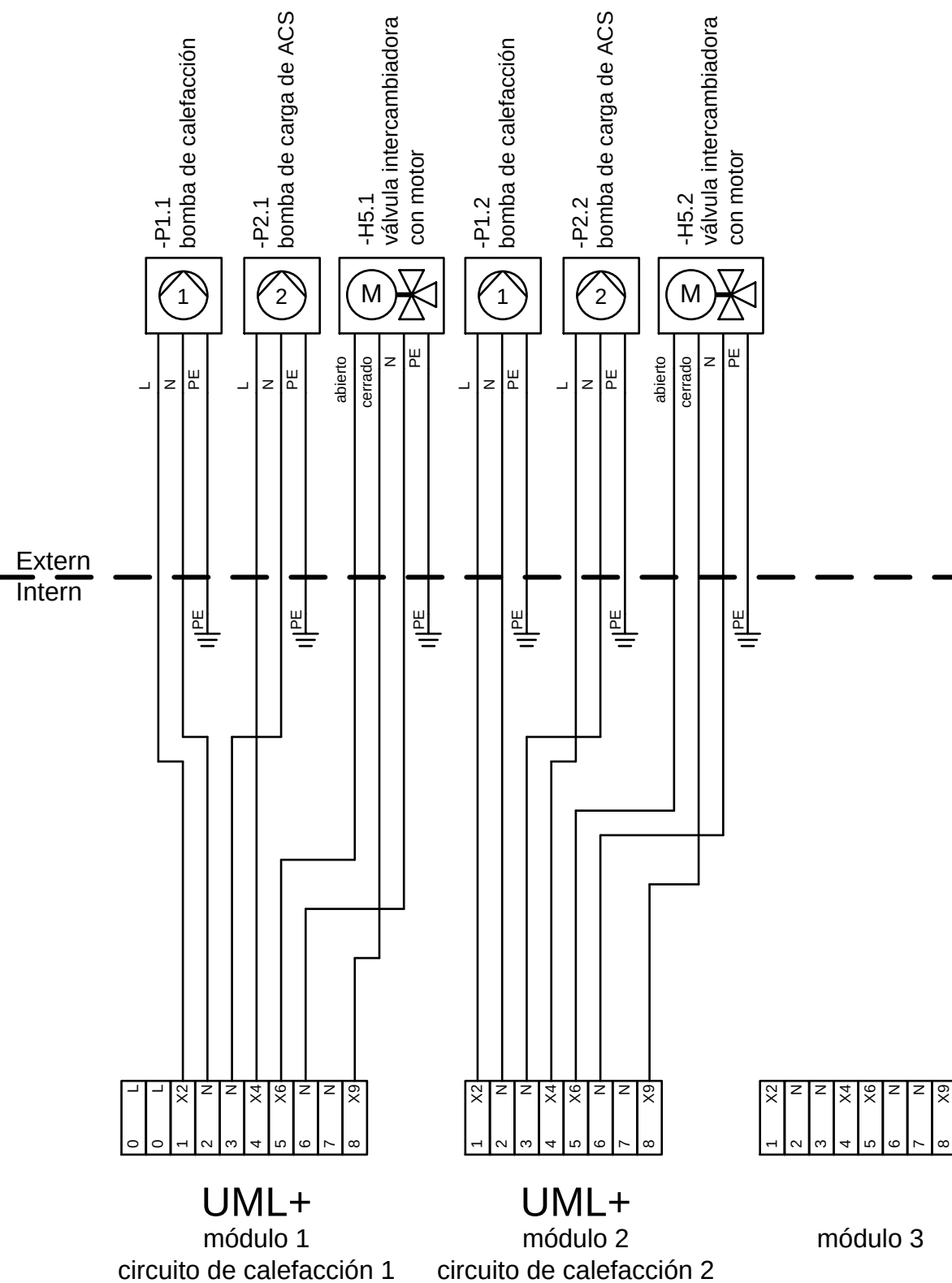
	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092595/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum 04.07.2013		UML+/UML+		MES H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente		Projekt : regulación				1 mm : 1 mm Blatt 092607/01	
Rev.	Änderung	Datum	Name	Gezeichnet ros	Geprüft rot										
				Genehmigt		Zeichnungs Nr.: 092607/01									

-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

UML+	módulo 1 circuito de calefacción 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1
8 X9	cerrado

UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

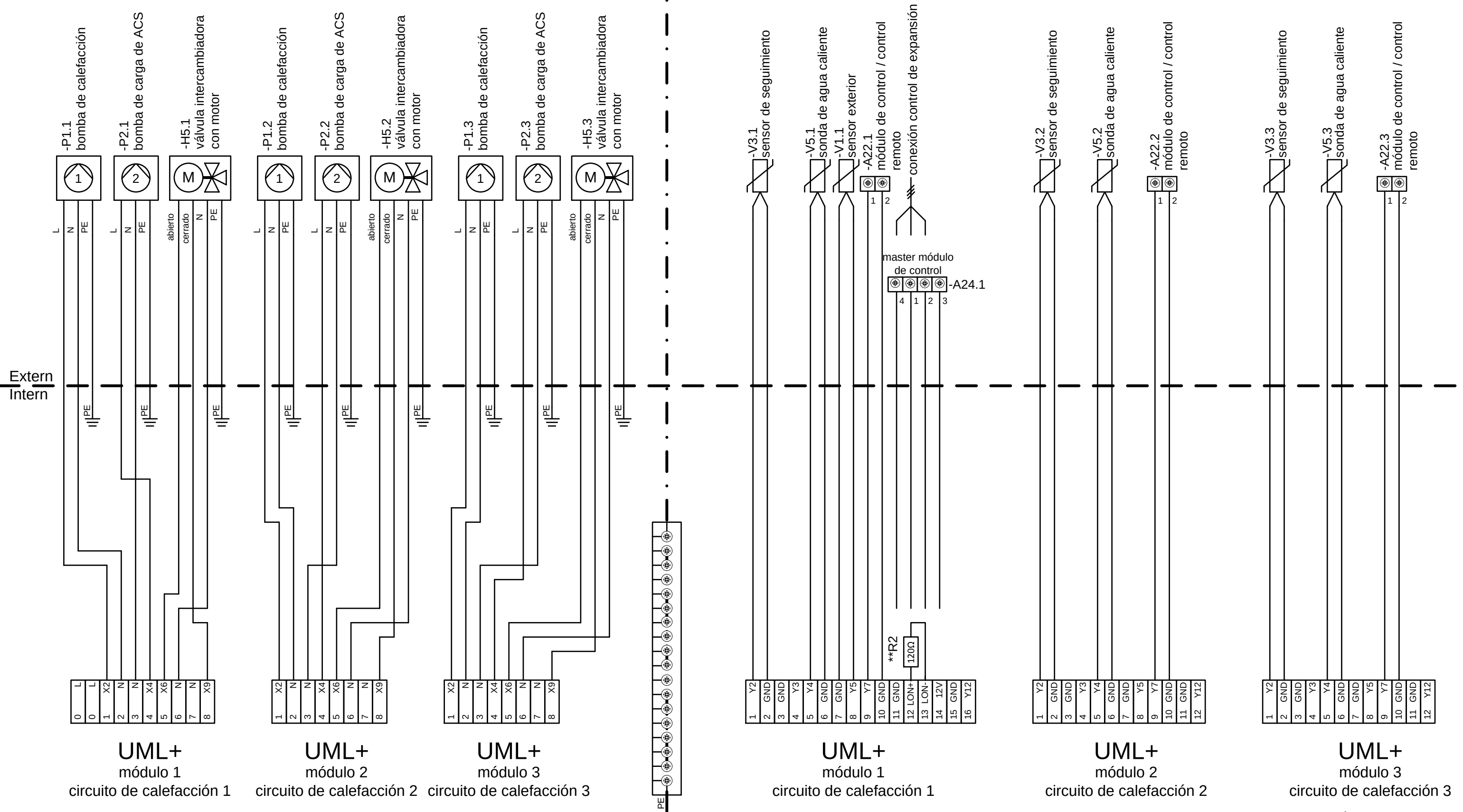
UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 2
8 X9	cerrado

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	04.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 regulación temperatura externa para 3 circuitos de calefacción con mezcladora y circuitos agua caliente	Projekt : regulación		1 mm : 1 mm			
				Gezeichnet	ros								◀ ----- 2 ▶	
				Geprüft	rot									
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092610/01				Blatt 092610/01			

-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	interno
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

UML+	módulo 1 circuito de calefacción 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora
6 N	con motor
7 N	c.c. 1
8 X9	cerrado

UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora
6 N	con motor
7 N	c.c. 2
8 X9	cerrado

UML+	módulo 3 circuito de calefacción 3
1 X2	bomba de calefacción c.c. 3
2 N	
3 N	bomba de carga de ACS c.c. 3
4 X4	
5 X6	abierto válvula intercambiadora
6 N	con motor
7 N	c.c. 3
8 X9	cerrado

092611/01

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	
16 Y12	

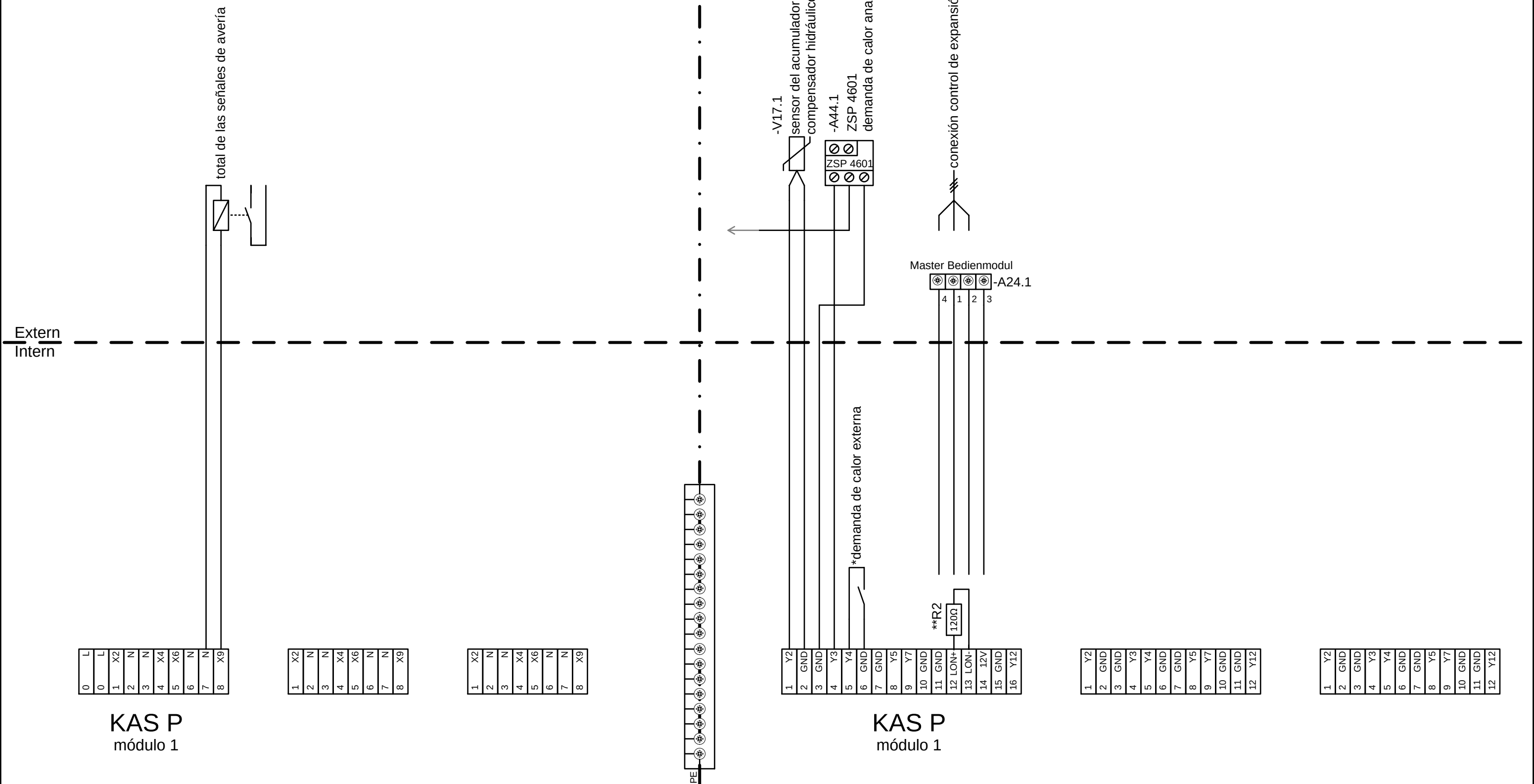
UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 3
1 Y2	sensor de seguimiento HK 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 3
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

092611/01

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

KAS	módulo 1 Cascada
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	total de las señales de avería
8 X9	

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092623/01

KAS	módulo 1 Cascada
1 Y2	sensor del acumulador de inercia/sensor del
2 GND	compensador hidráulico
3 GND	ZSP 4601
4 Y3	
5 Y4	demanda de calor externa
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

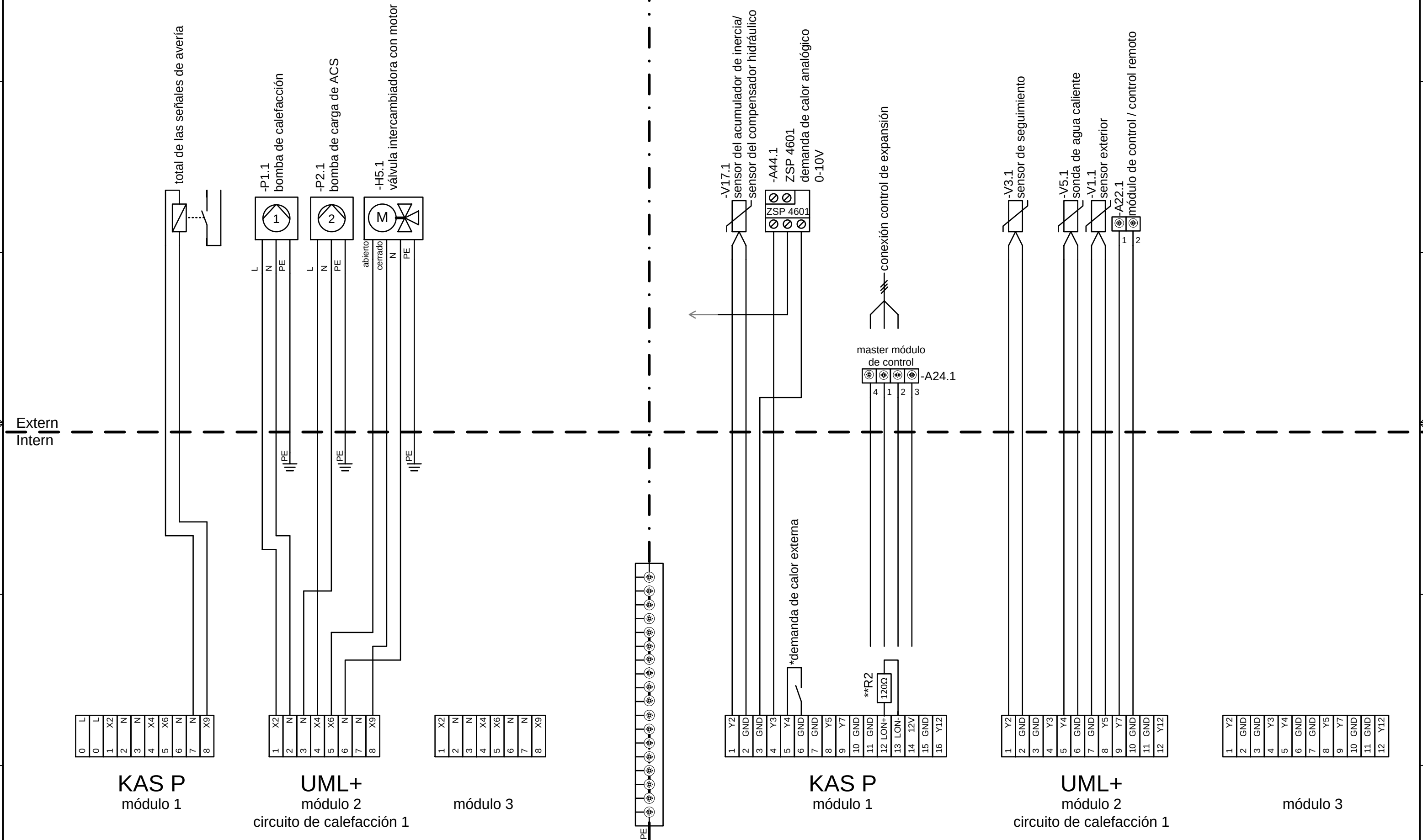
	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092623/01

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

KAS P	módulo 1 Cascada
1 Y2	sensor del acumulador de inercia/sensor del
2 GND	compensador hidráulico
3 GND	
4 Y3	ZSP 4601
5 Y4	demanda de calor externa
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	
16 Y12	

KAS P	módulo 1 Cascada
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	total de las señales de avería
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

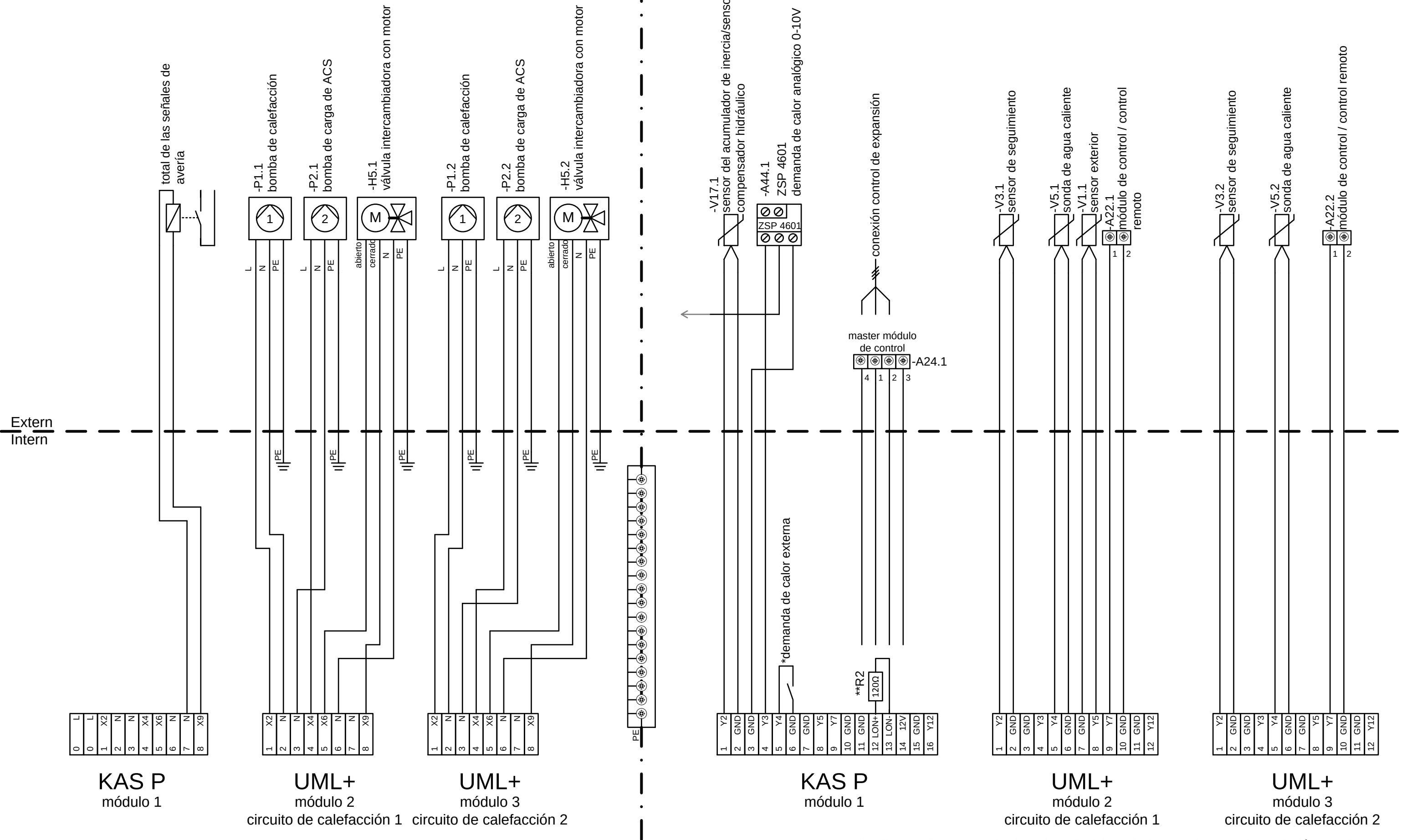
UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	12.08.2013	KAS P/UML+/UML+	BioWIN KAS + H021 + H024 Cascada con regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente	Projekt : regulación		1 mm : 1 mm ◀ ----- 2 ▶ Blatt 092629/01
				Gezeichnet	ros					
				Geprüft	rot					
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:				

-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

KAS P	módulo 1 Cascada
1 Y2	sensor del acumulador de inercia/sensor del
2 GND	compensador hidráulico
3 GND	
4 Y3	ZSP 4601
5 Y4	demanda de calor externa
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	
16 Y12	

KAS P	módulo 1 Cascada
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	total de las señales de avería
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

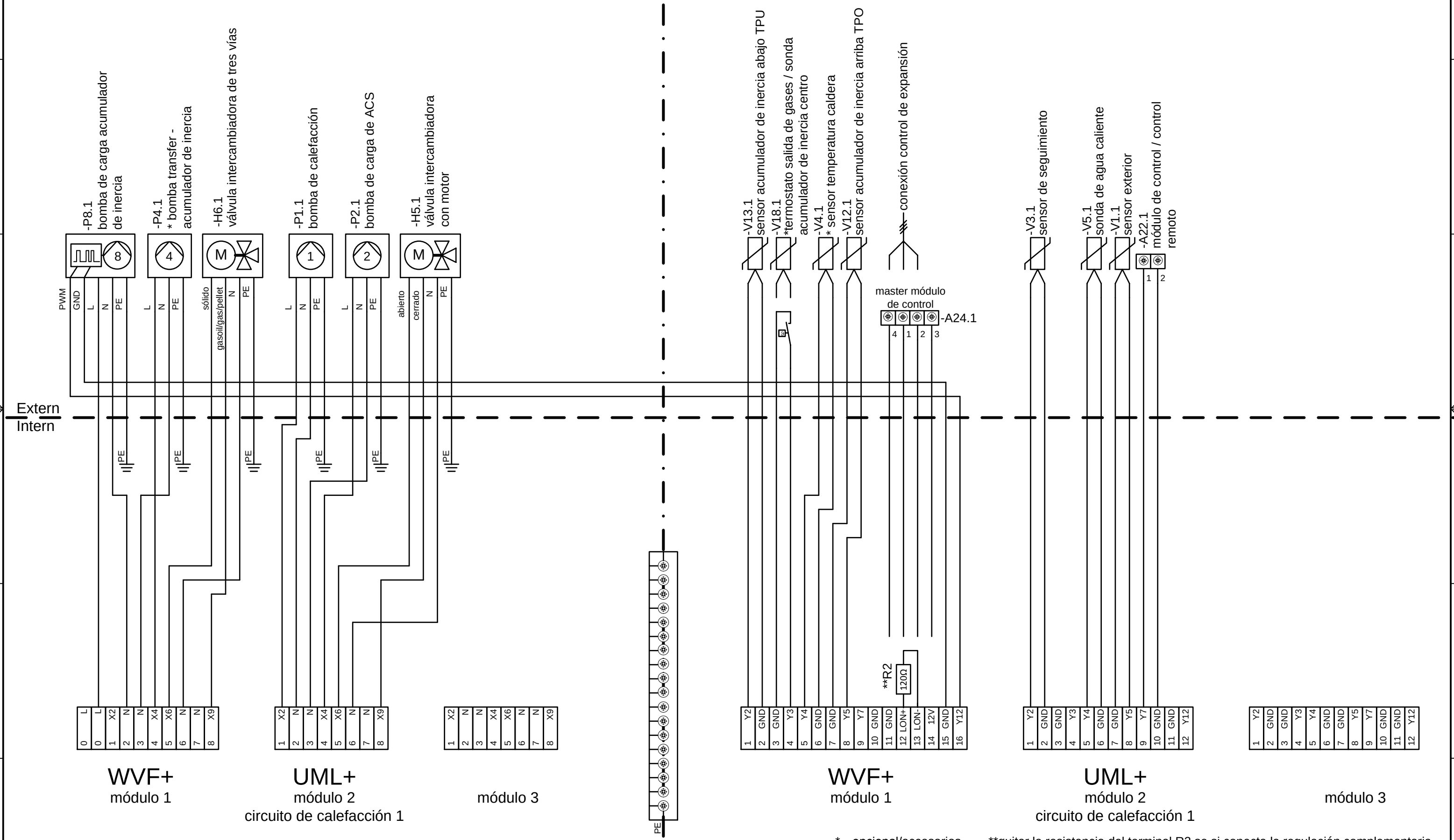
UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	sonda de agua caliente c.c. 2
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 2 cerrado

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo
2 GND	TPU
3 GND	*termostato salida de gases
4 Y3	sonda acumulador de inercia centro
5 Y4	*sensor temperatura caldera
6 GND	
7 GND	sensor acumulador de inercia arriba
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de carga
16 Y12	acumulador de inercia

WVF+	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer
4 X4	acumulador de inercia
5 X6	sólido válvula
6 N	intercambiadora de tres vías
7 N	
8 X9	gasoil/gas/pellet

UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

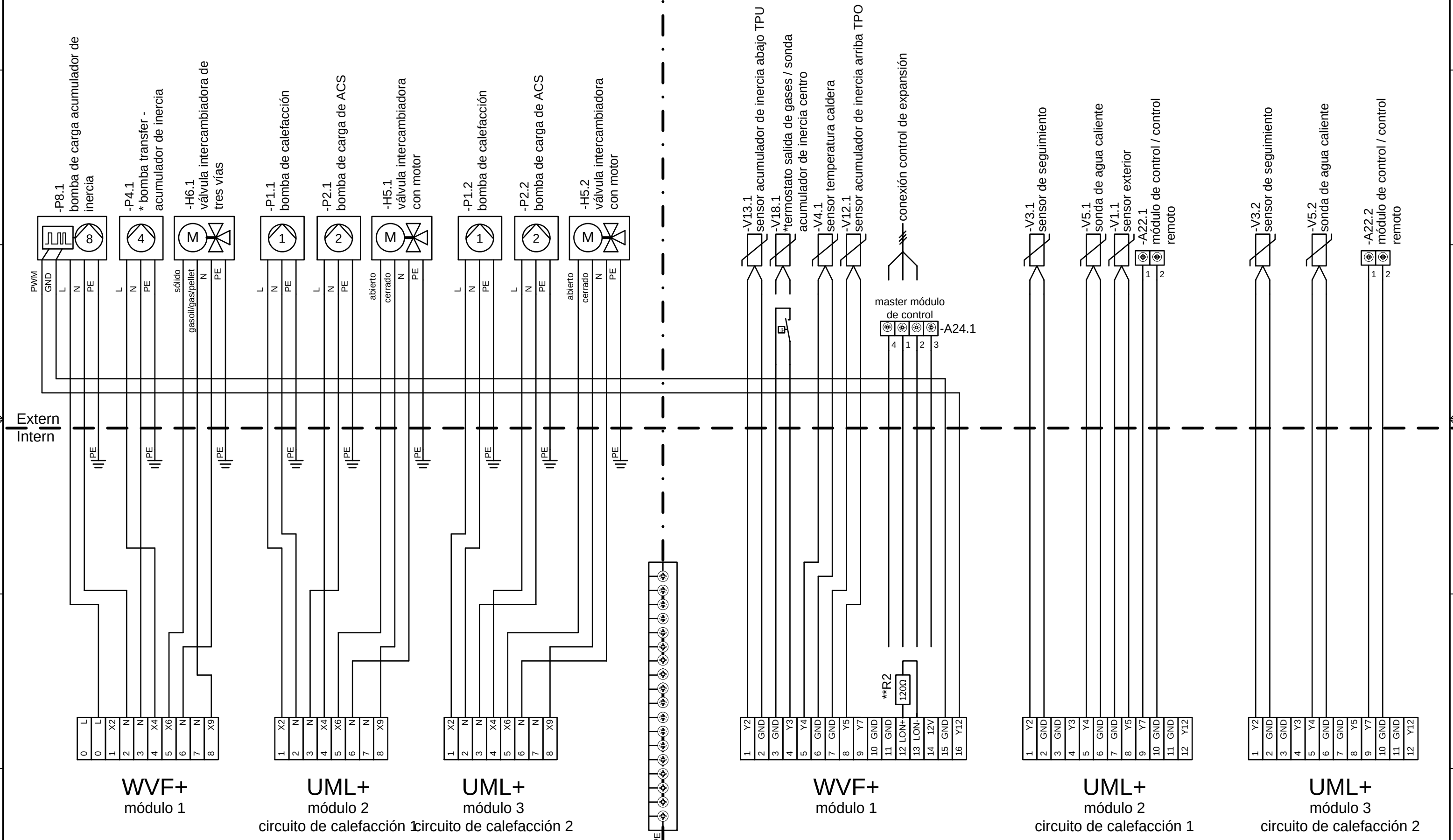
UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

WVF+	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	sólido válvula intercambiador a de tres vías
6 N	
7 N	
8 X9	gasoil/gas/pellet

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción C.C. 1
2 N	
3 N	bomba de carga de ACS C.C. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	C.C. 1 cerrado
8 X9	

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción C.C. 2
2 N	
3 N	bomba de carga de ACS C.C. 2
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	C.C. 2 cerrado
8 X9	

092807/01

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo TPU
2 GND	
3 GND	*termostato salida de gases /
4 Y3	sonda acumulador de inercia centro
5 Y4	* sensor de la caldera
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de carga acumulador de inercia
16 Y12	

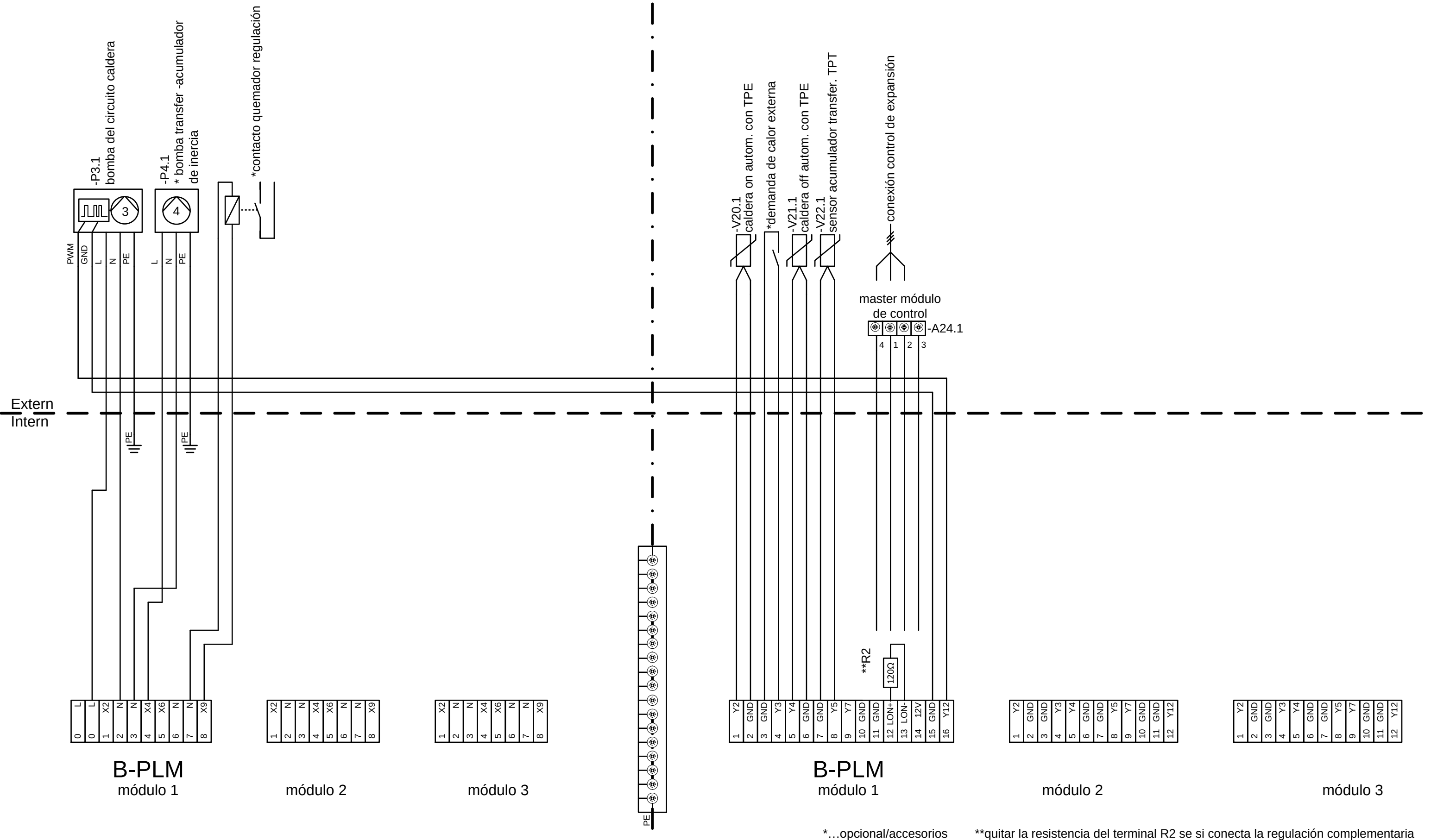
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento C.C. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente C.C. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento C.C. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente C.C. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

092807/01

baja tensión 230VAC

sonda muy baja tensión



				Datum	04.07.2013	B-PLM		MES P042 y modulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092743/01				 2	
Blatt 092743/01												

-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* bomba transfer
4 X4	acumulador de inercia
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092744/01

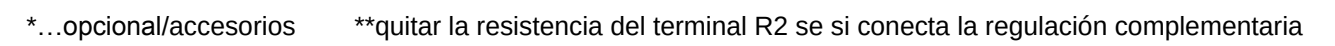
B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

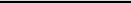
	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092744/01

sonda muy baja tensión



				Datum	04.07.2013	B-PLM/UML+		MES P042 + H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis y quemador/módulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							
				Gepüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092797/01				 2	
Blatt 092797/01												

-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	
8 X9	*quemador Contacto

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092798/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

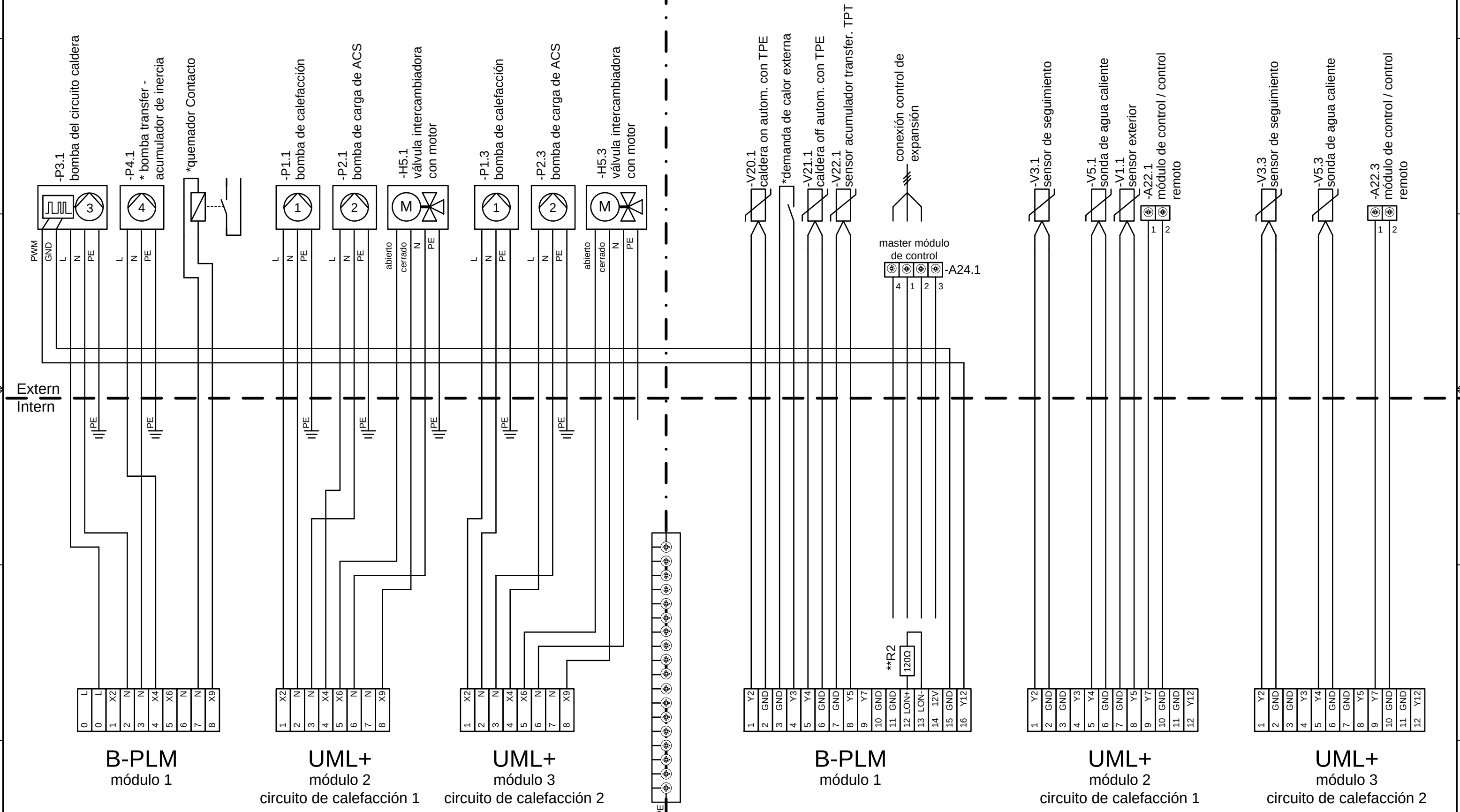
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092798/01

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	
8 X9	*quemador Contacto

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 2 cerrado

092798/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

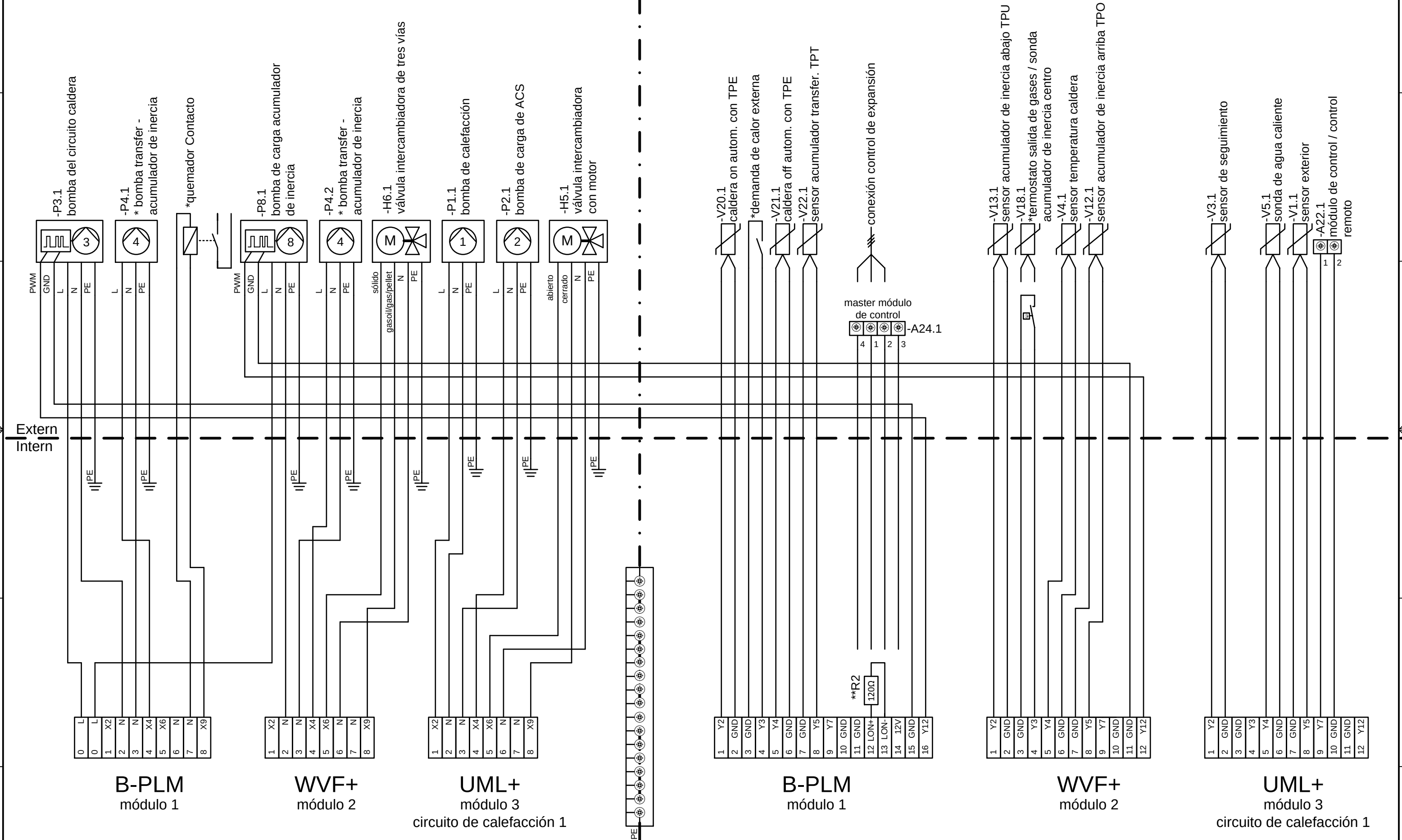
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

092798/01

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

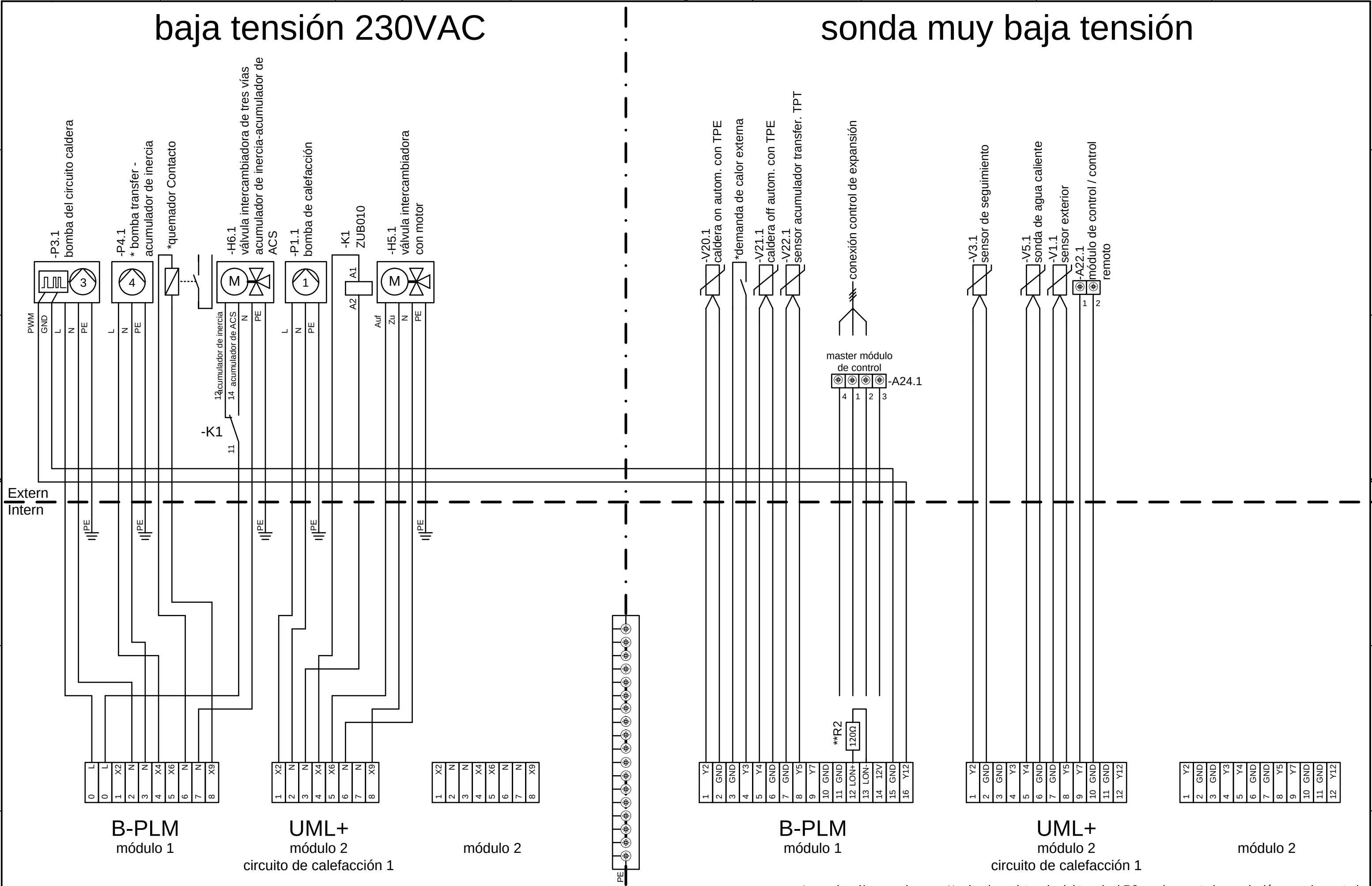
B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer
4 X4	acumulador de inercia
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

WVF+	módulo 2
1 Y2	acumulador de inercia abajo
2 GND	TPU
3 GND	*termostato salida de gases
4 Y3	sonda acumulador de inercia centro
5 Y4	*sensor temperatura caldera
6 GND	
7 GND	sensor acumulador de inercia arriba
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM bomba de carga
12 Y12	acumulador de inercia

WVF+	módulo 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	acumulador de inercia
5 X6	sólido
6 N	válvula intercambiadora de tres vías
7 N	
8 X9	gasoil/gas/pellet

UML+	módulo 3 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* bomba transfer
4 X4	
5 X6	
6 N	
7 N	
8 X9	contacto del quemador

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	Contactor -K1
4 X4	c.c. 1
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1
8 X9	cerrado

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094547/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	* demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

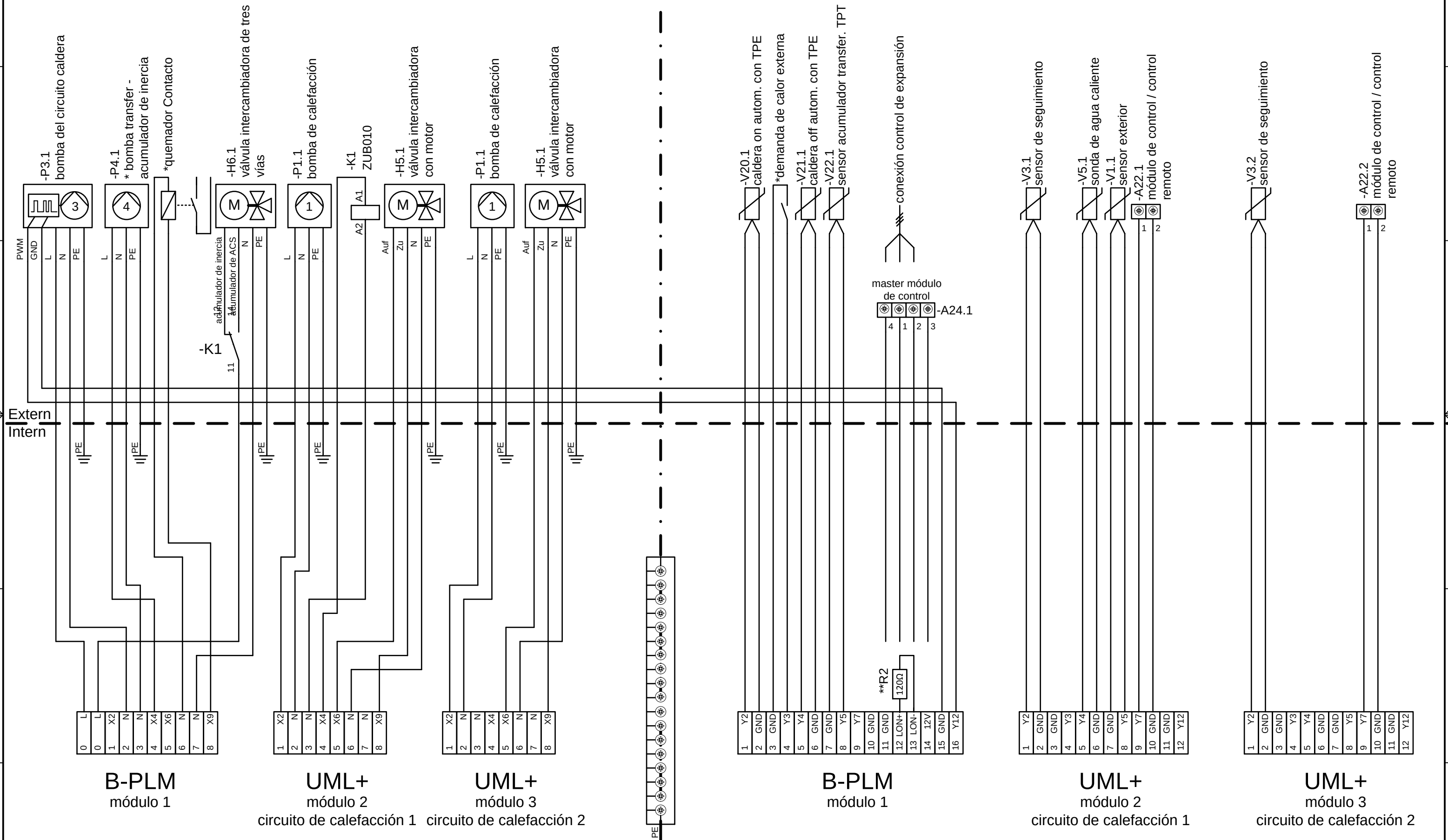
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094547/01

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	motor de unidad conmutadora
8 RL	
9 N	

B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* bomba transfer
4 X4	
5 X6	
6 N	
7 N	contacto del quemador
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	Contactador -K1 c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 2 cerrado
8 X9	

094548/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	* demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

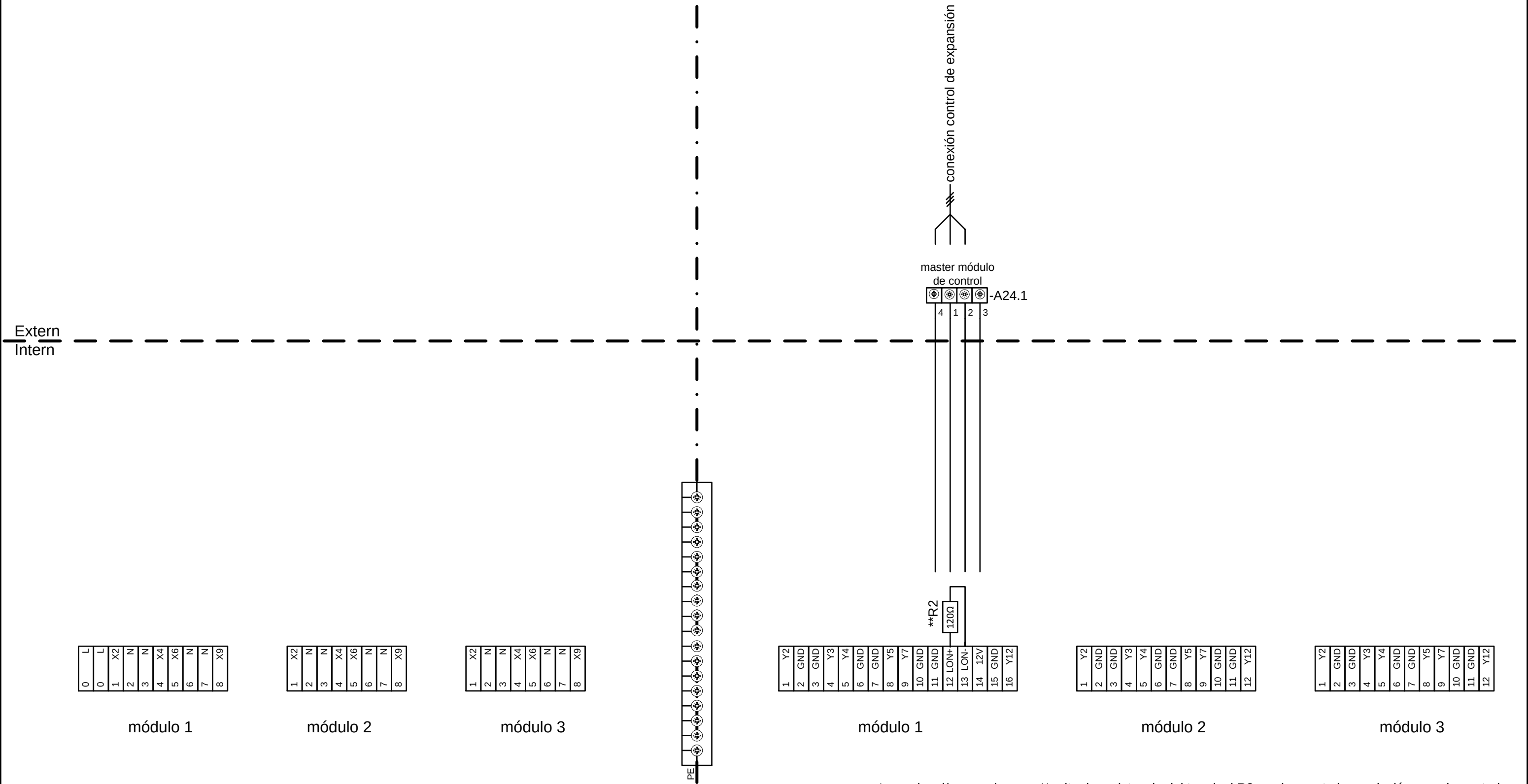
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente HK 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

094548/01

baja tensión 230VAC

sonda muy baja tensión



-XS	dispositivo de seguridad
1 N	interno
2 N	interruptor de emergencia calefacción
3 N'	
4 L	
5 L	interruptor de emergencia calefacción
6 L'	
7 LL	
8 RL	motor de unidad conmutadora
9 N	

1	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	módulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	módulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092634/01

1	módulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	módulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	módulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

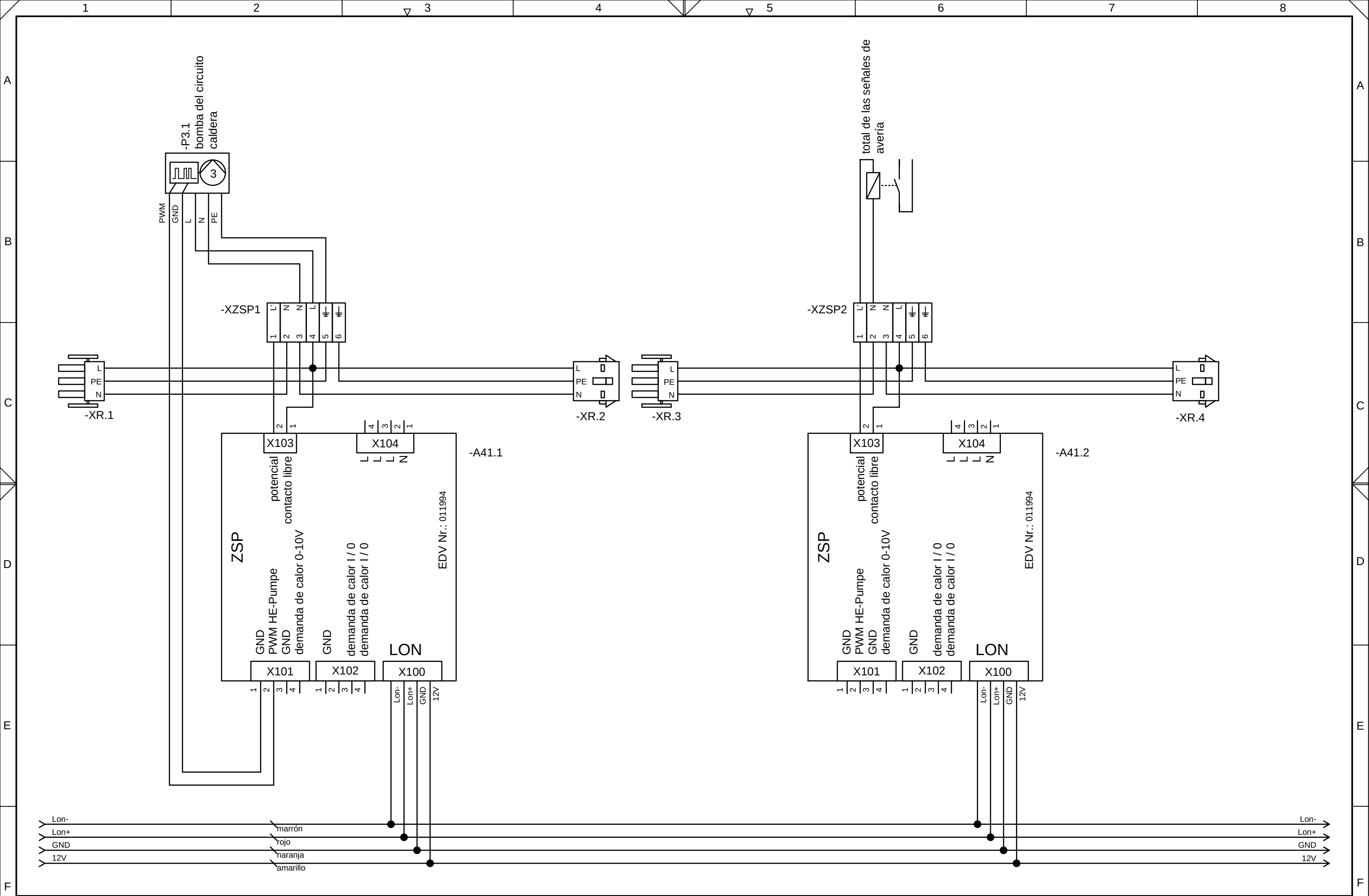
092634/01

-XZSP	placa adicional
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094667/00

placa adicional	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM bomba del
GND	circuito caldera



-XZSP	placa adicional
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094667/00

placa adicional	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	PWM bomba del
GND	circuito caldera

-XZSP	placa adicional
L'	total de las señales de avería
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	placa adicional
-X102 /4	
-X102 /3	
-X102 /2	
GND	

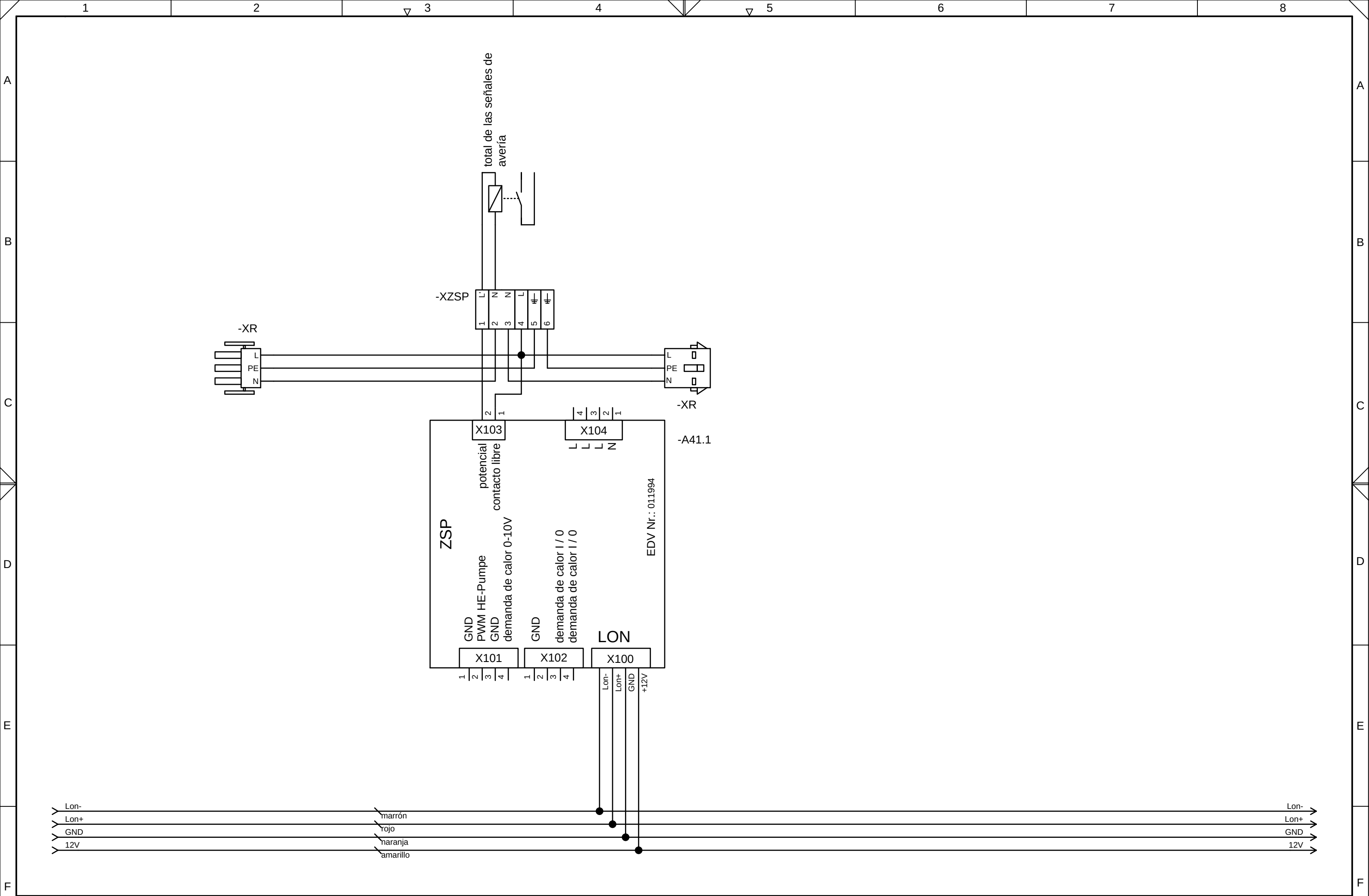
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	placa adicional
L'	total de las señales de avería
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	placa adicional
-X102 /4	
-X102 /3	
-X102 /2	
GND	

-X101 /4	
GND	
-X101 /2	
GND	

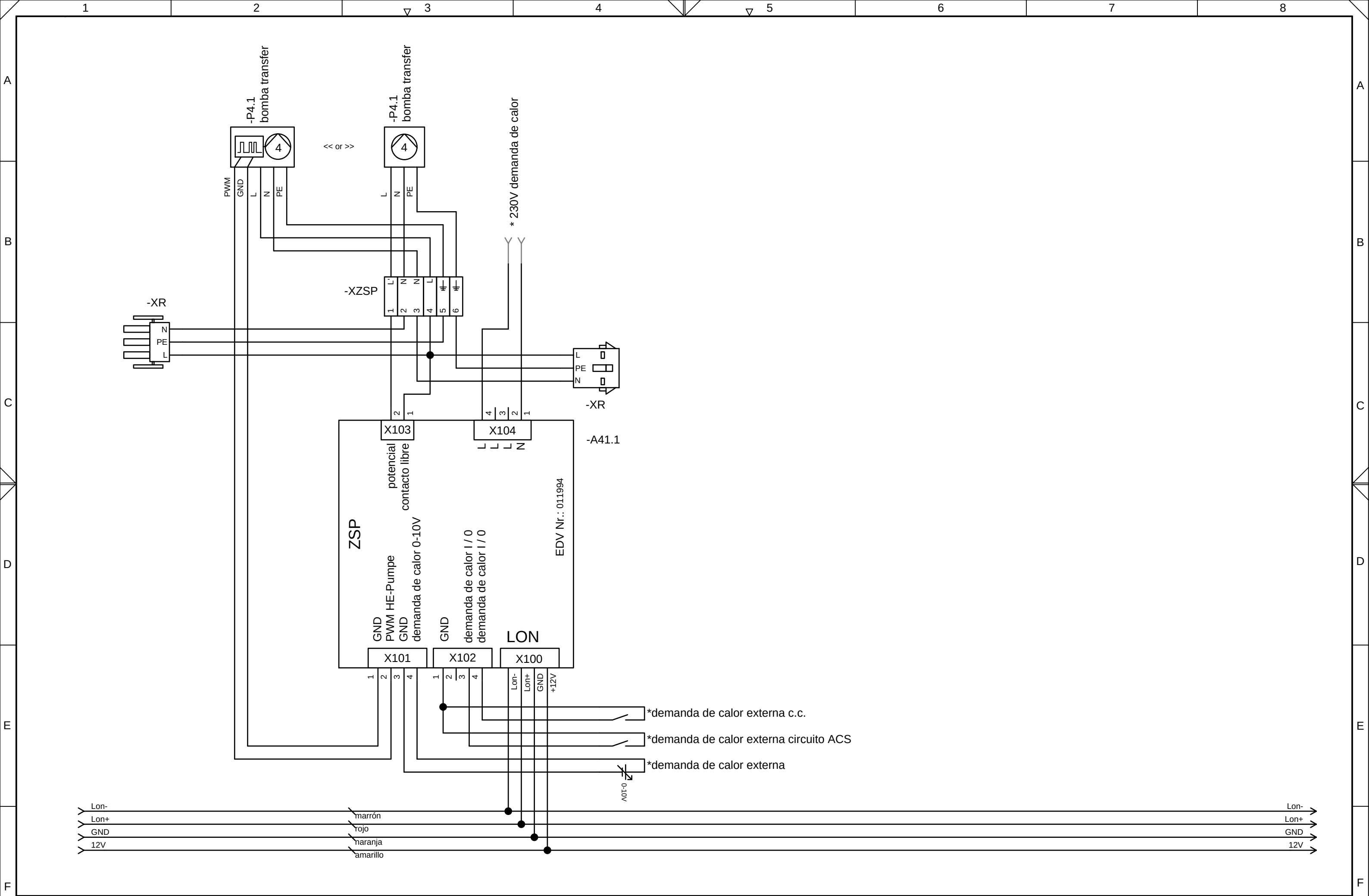


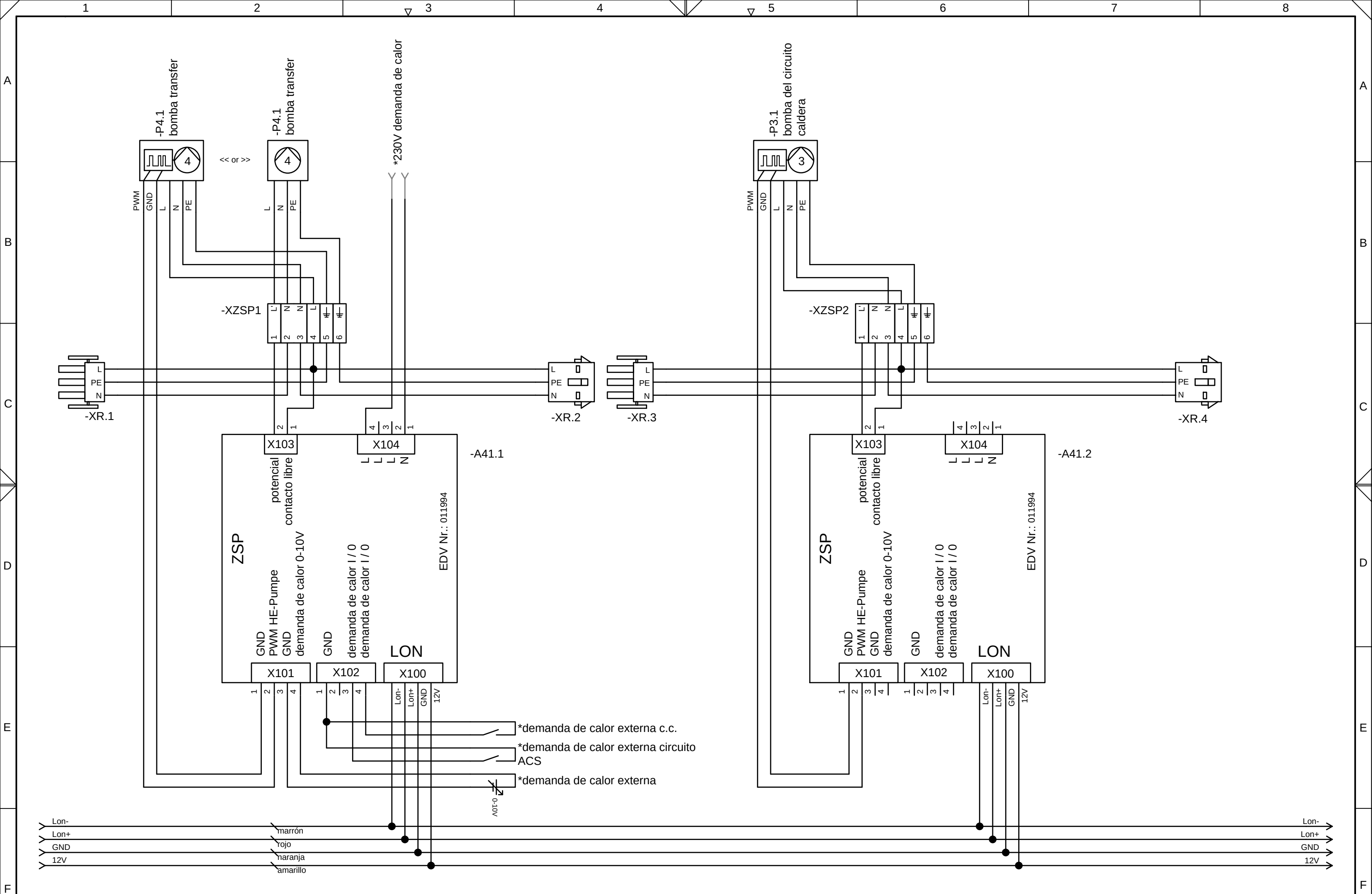
-XZSP	placa adicional
L'	bomba transfer
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	placa adicional
-X102 /4	demanda de calor externa c.c.
-X102 /3	demanda de calor externa circuitu ACS
-X102 /2	
GND	

-X101 /4	demanda de calor 0- 10V
GND	
-X101 /2	PWM bomba transfer
GND	





-XZSP	placa adicional
L'	
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094667/00

placa adicional	-XSP
-X102 /4	
-X102 /3	
-X102 /2	
GND	

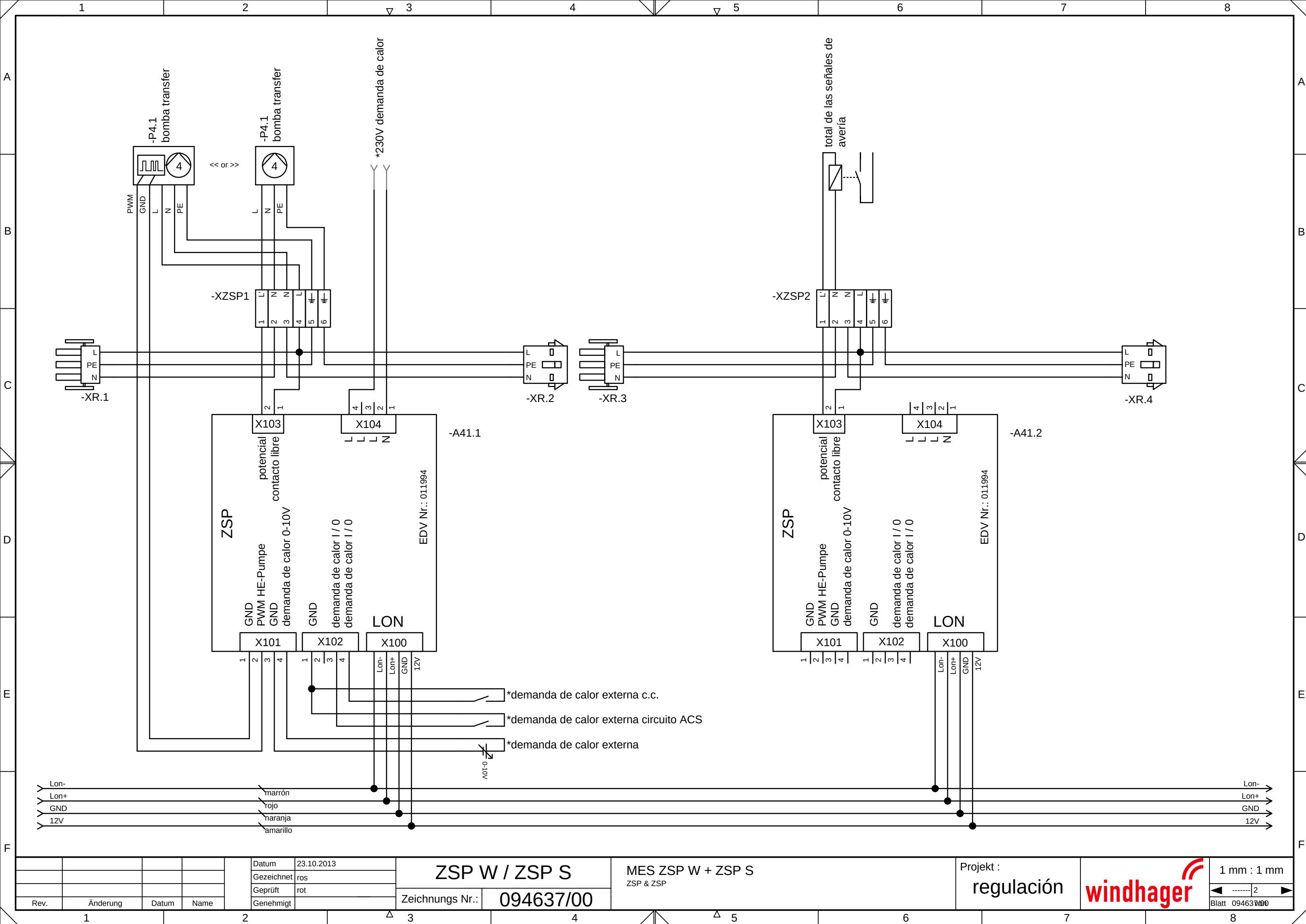
-X101 /4	
GND	
-X101 /2	PWM bomba del
GND	circuito caldera

-XZSP	placa adicional
L'	bomba transfer
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	placa adicional
-X102 /4	demanda de calor externa c.c.
-X102 /3	demanda de calor externa circuitu ACS
-X102 /2	
GND	

-X101 /4	demanda de calor 0-
GND	10V
-X101 /2	PWM bomba transfer
GND	



-XZSP	placa adicional
L'	total de las señales de avería
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094670/00

-XSP	placa adicional
-X102 /4	
-X102 /3	
-X102 /2	
GND	

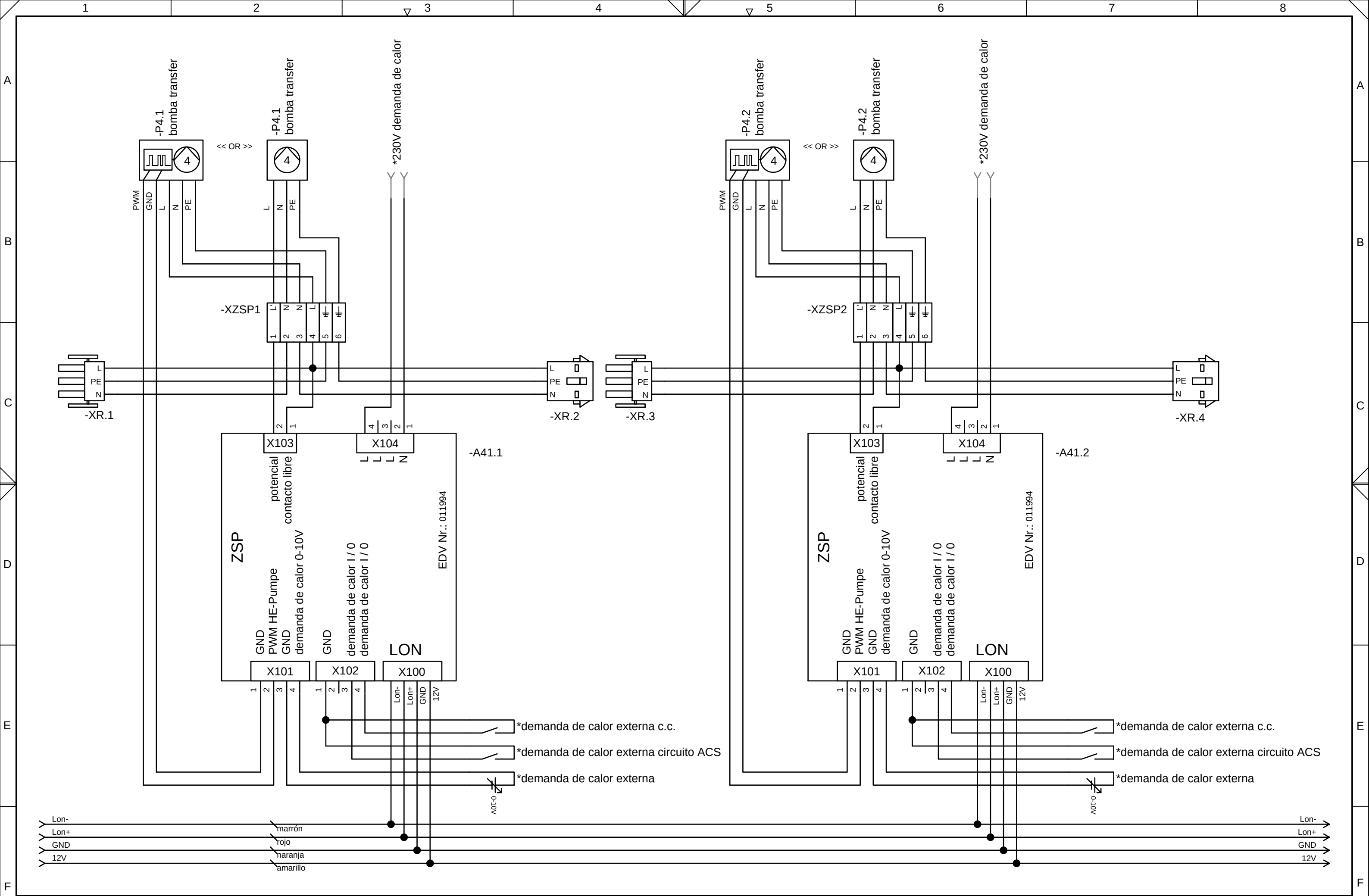
-X101 /4	
GND	
-X101 /2	
GND	

-XZSP	placa adicional
L'	bomba transfer
N	
N	fase continua
L	
PE	PE
PE	

EDV Nr. 094672/00

-XSP	placa adicional
-X102 /4	demanda de calor externa c.c.
-X102 /3	demanda de calor externa circuitu ACS
-X102 /2	
GND	

-X101 /4	demanda de calor 0- 10V
GND	
-X101 /2	PWM bomba transfer
GND	



-XZSP	placa adicional
L'	bomba transfer
N	
N	fase continua
L	
PE	PE
PE	

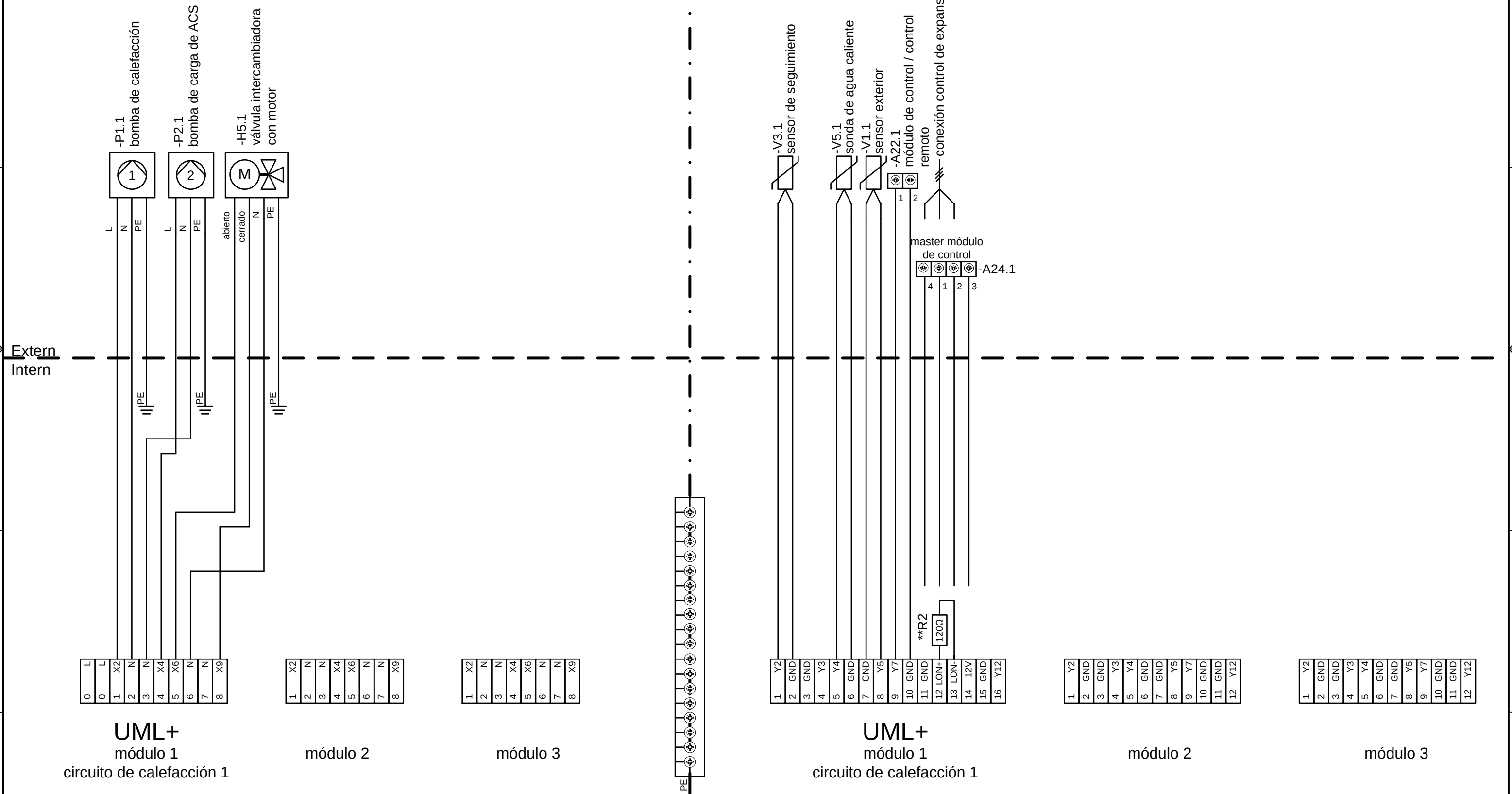
EDV Nr. 094672/00

-XSP	placa adicional
-X102 /4	demanda de calor externa c.c.
-X102 /3	demanda de calor externa circuitu ACS
-X102 /2	
GND	

-X101 /4	demanda de calor 0- 10V
GND	
-X101 /2	PWM bomba transfer
GND	

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	UML+		MES H021 regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092737/01				Blatt 092737/01	

UML+	módulo 1 circuito de calefacción 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	válvula intercambiadora abierto con motor
6 N	
7 N	
8 X9	c.c. 1 cerrado

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092738/01

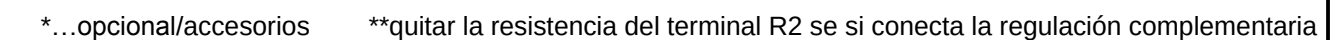
UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	
16 Y12	

	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092738/01

sonda muy baja tensión



				Datum	04.07.2013	UML+/UML+		MES H021+H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092747/01				Blatt 092747/01

UML+	módulo 1 circuito de calefacción 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 2 cerrado
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092748/01

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	
16 Y12	

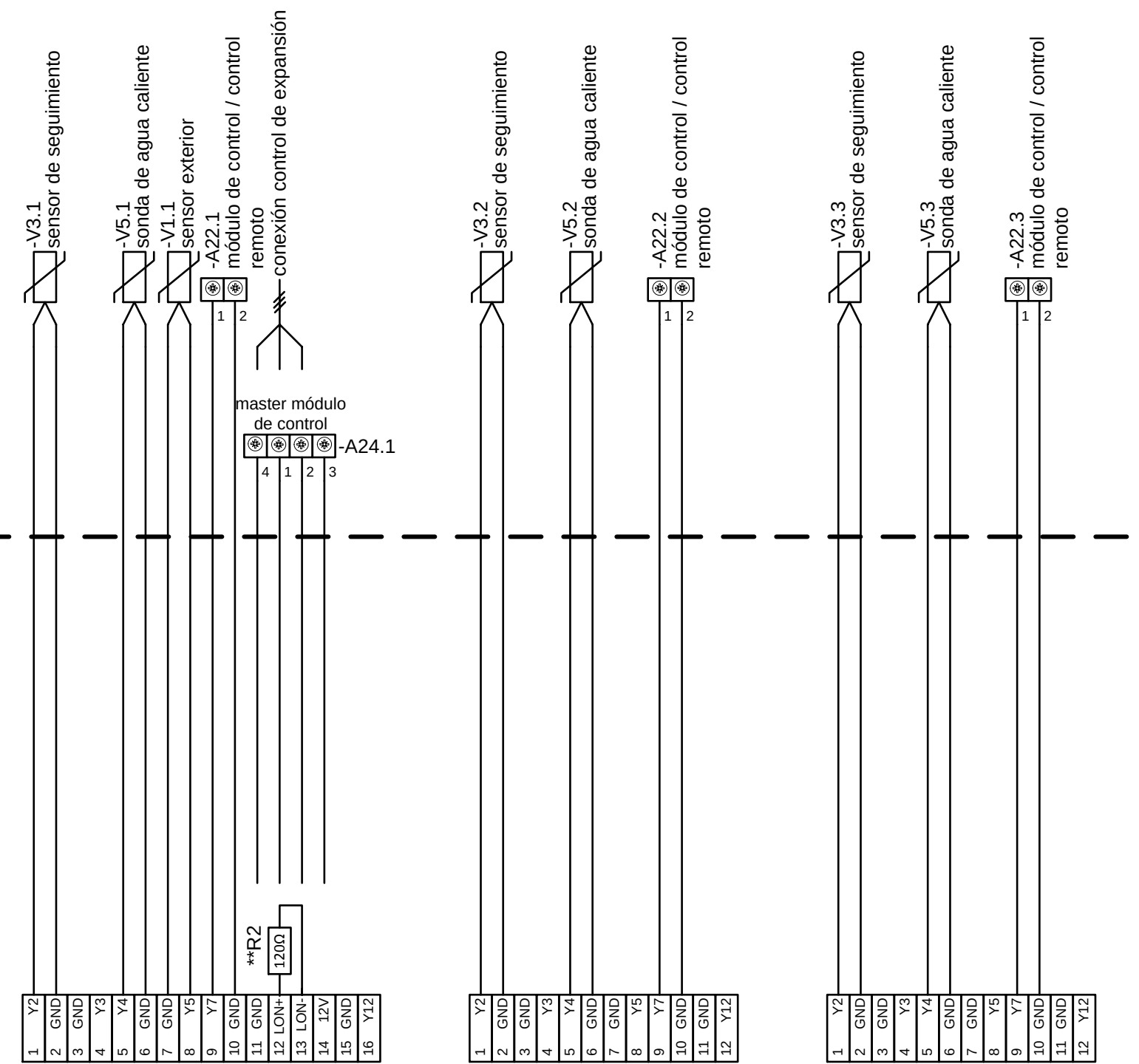
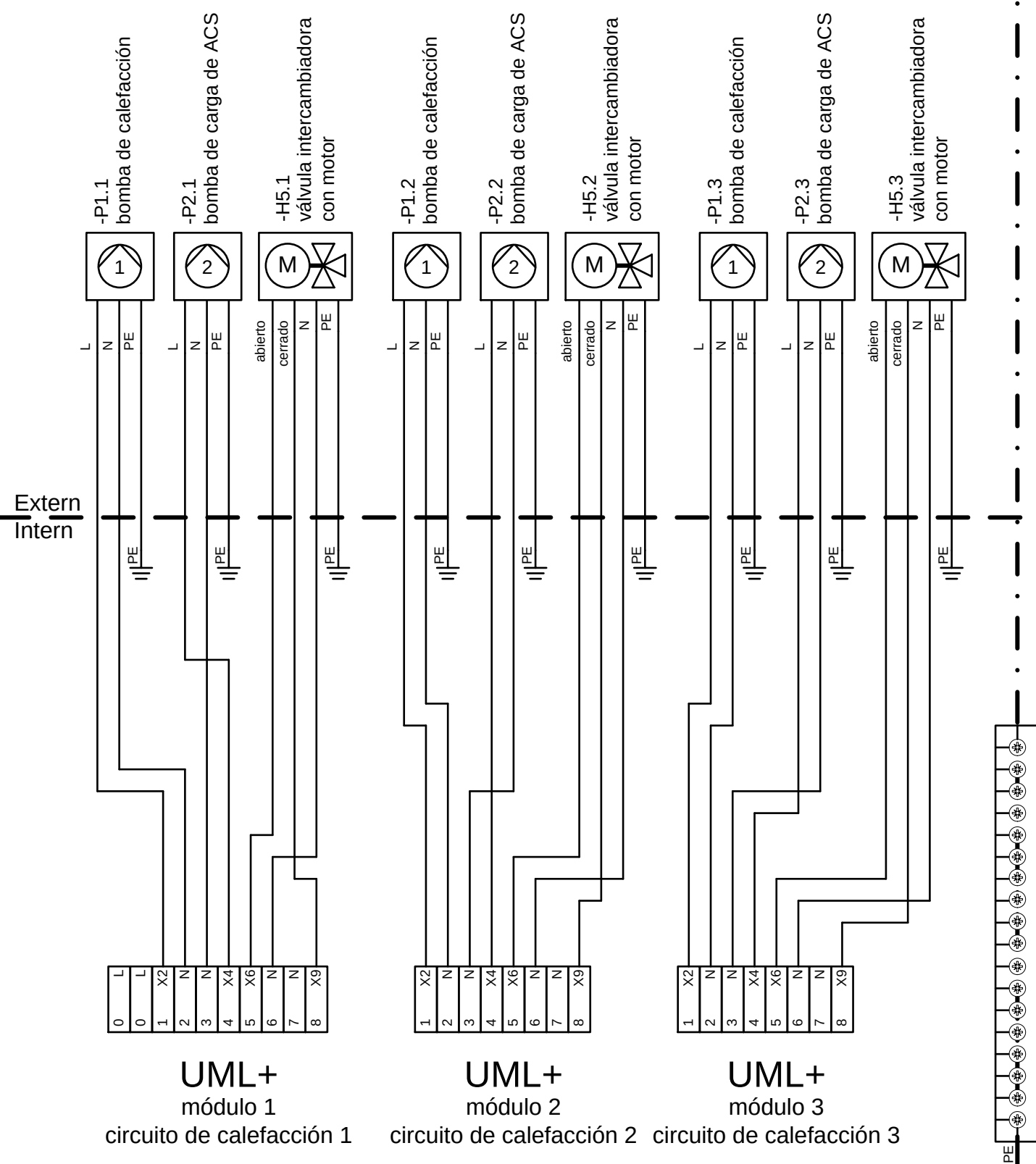
UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092748/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	04.07.2013	UML+/UML+/UML+		MES H021 + H024 + H024 regulación temperatura externa para 3 circuitos de calefacción con mezcladora y circuitos agua caliente	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092750/01				◀ ----- 2 ▶	
												Blatt 092750/01

UML+	módulo 1 circuito de calefacción 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	bomba de calefacción c.c.1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	válvula intercambiadora abierto con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	válvula intercambiadora abierto con motor
6 N	
7 N	c.c. 2 cerrado
8 X9	

UML+	módulo 3 circuito de calefacción 3
1 X2	bomba de calefacción c.c. 3
2 N	
3 N	bomba de carga de ACS c.c. 3
4 X4	
5 X6	válvula intercambiadora abierto con motor
6 N	
7 N	c.c. 3 cerrado
8 X9	

092751/01

UML+	módulo 1 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	
16 Y12	

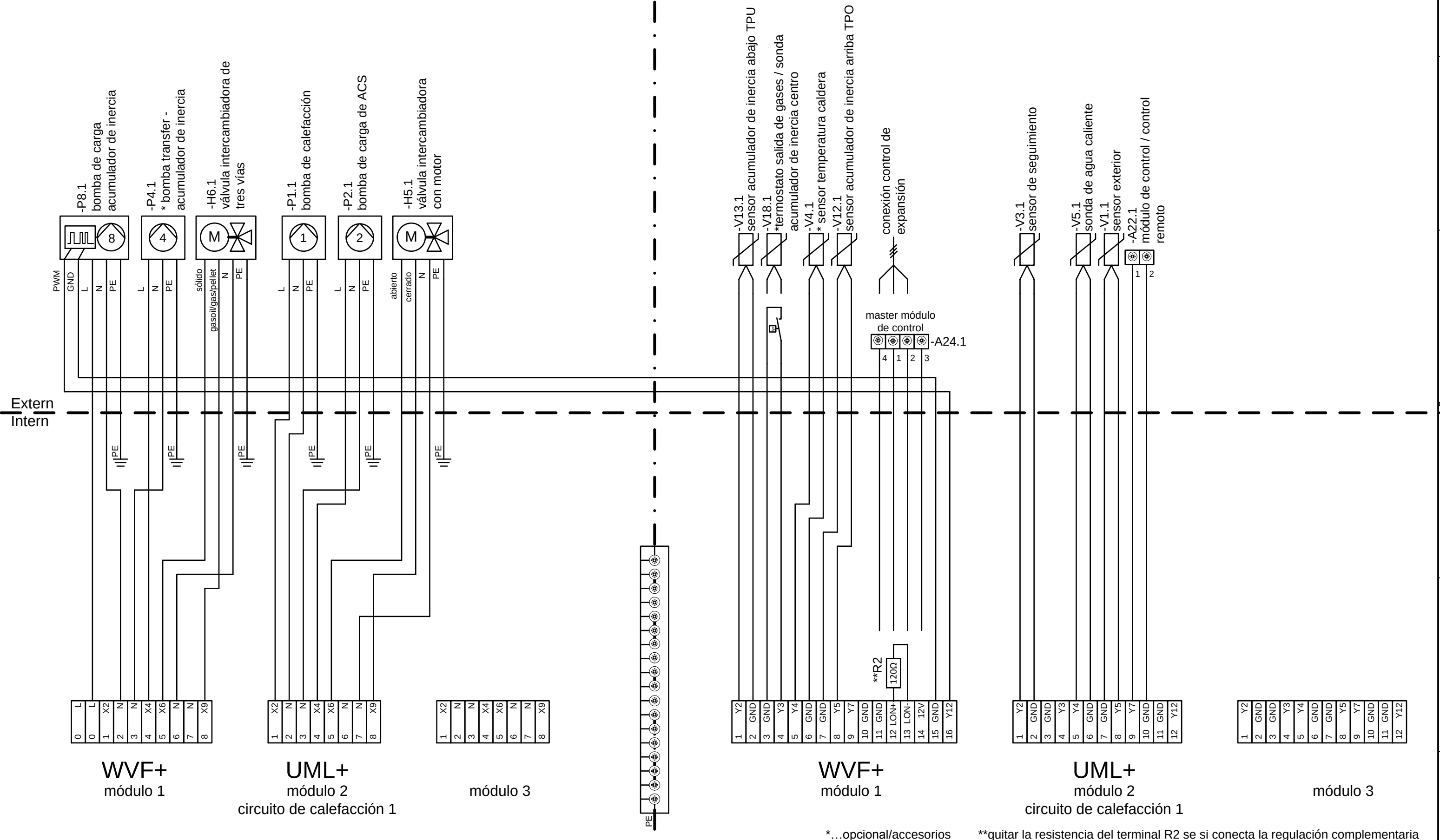
UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 3
1 Y2	sensor de seguimiento c.c. 3
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 3
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

092751/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	04.07.2013	WVF+/UML+		MES P041 + H021 regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente comutación automática combustibles sólidos con carga acumulador de inercia	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092840/01				Blatt 092840/01

WVF+	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	acumulador de inercia
5 X6	sólido
6 N	válvula
7 N	intercambiadora
	de tres vías
8 X9	gasoil/gas/pellet

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción
2 N	c.c. 1
3 N	bomba de carga de ACS
4 X4	c.c. 1
5 X6	abierto
6 N	válvula intercambiadora
7 N	con motor
8 X9	c.c. 1
	cerrado

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092842/01

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo
2 GND	TPU
3 GND	*termostato salida de gases
4 Y3	sonda acumulador de inercia centro
5 Y4	*sensor temperatura
6 GND	caldera
7 GND	sensor acumulador de inercia arriba
8 Y5	TPO
9 Y7	
10 GND	
11 GND	
12 Lon+	master módulo de control
13 Lon-	conexión control de expansión
14 12V	
15 GND	PWM bomba de carga
16 Y12	acumulador de inercia

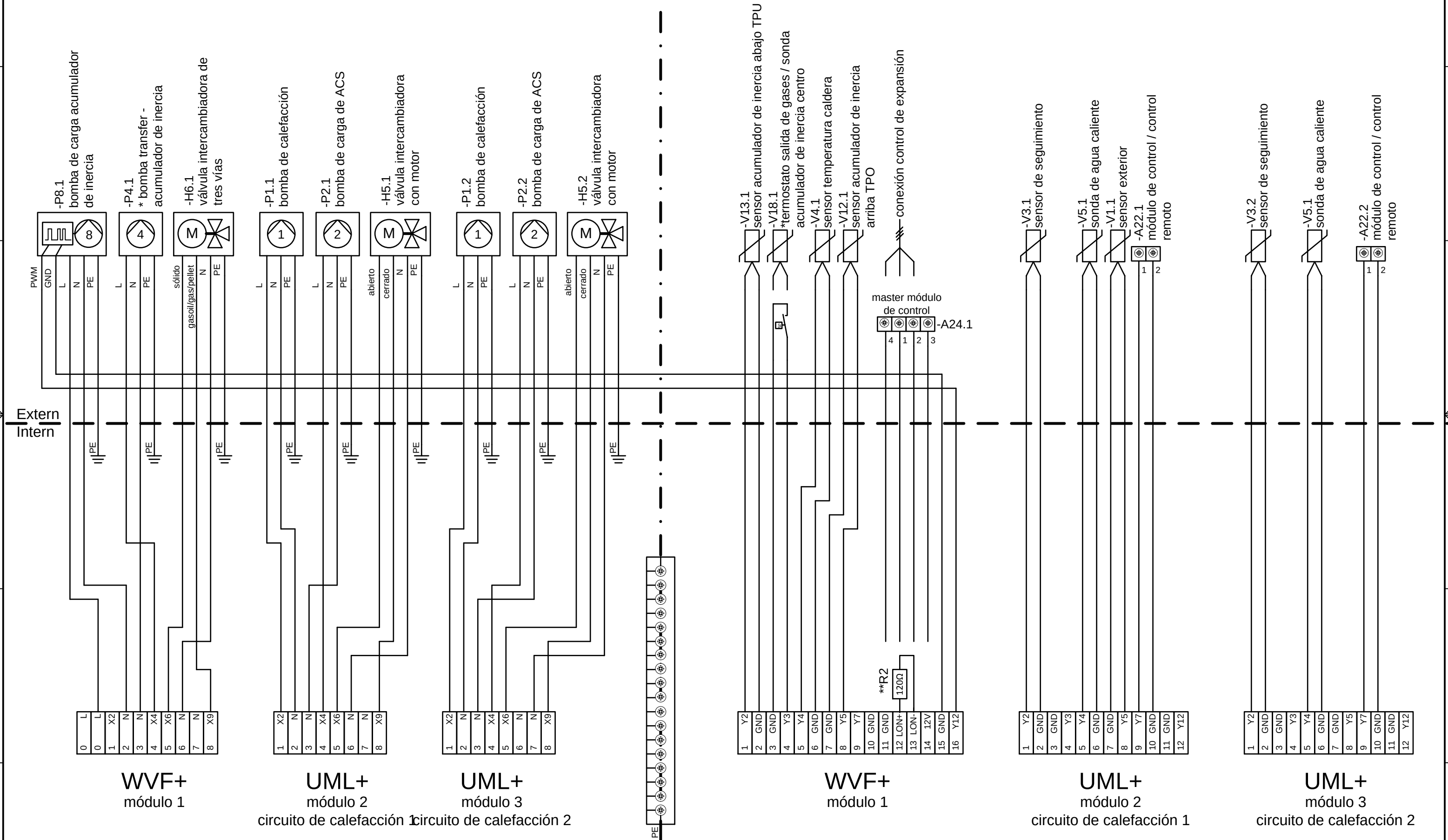
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento
2 GND	c.c. 1
3 GND	
4 Y3	
5 Y4	sonda de agua caliente
6 GND	c.c. 1
7 GND	
8 Y5	sensor exterior
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092842/01

baja tensión 230VAC

sonda muy baja tensión



				Datum 03.07.2013		WVF+/UML+/UML+		MES P041 + H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente comutación automática combustibles sólidos con carga acumulador de inercia		Projekt : regulación				1 mm : 1 mm Blatt 092847/01	
Rev.	Änderung	Datum	Name	Gezeichnet ros	Geprüft ros										
				Genehmigt		Zeichnungs Nr.: 092847/01									

WVF+	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	sólido válvula
6 N	intercambiadora de tres vías
7 N	gasoil/gas/pellet
8 X9	

UML+	módulo 2 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora
6 N	con motor
7 N	
8 X9	c.c. 1 cerrado

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora
6 N	con motor
7 N	
8 X9	c.c. 2 cerrado

092848/01

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo
2 GND	TPU
3 GND	*termostato salida de gases /
4 Y3	sonda acumulador de inercia centro
5 Y4	* sensor de la caldera
6 GND	
7 GND	sensor acumulador de inercia arriba
8 Y5	TPO
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de carga
16 Y12	acumulador de inercia

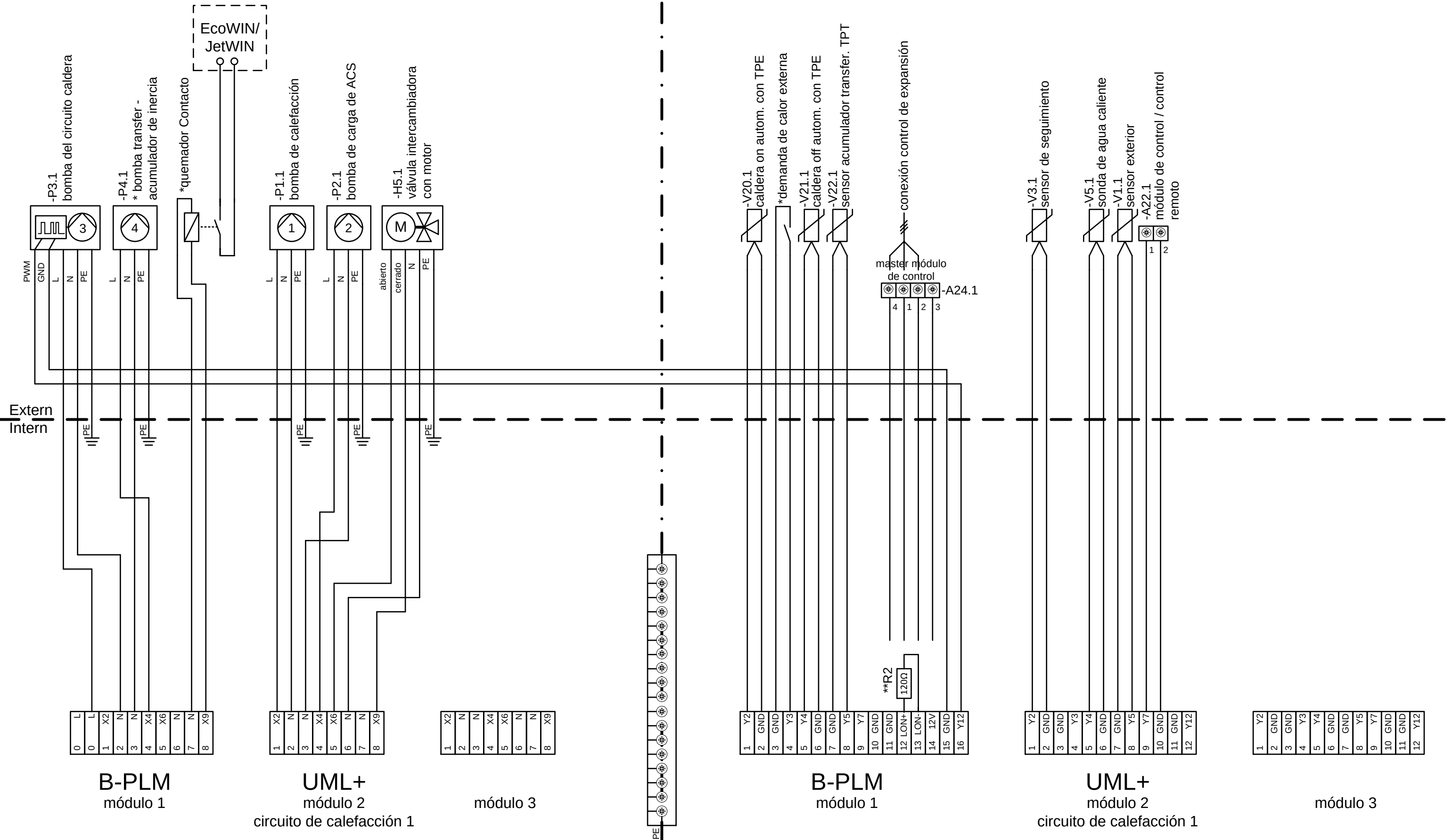
UML+	módulo 2 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

092848/01

baja tensión 230VAC

sonda muy baja tensión



B-PLM	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

UML+	módulo 2
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092851/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

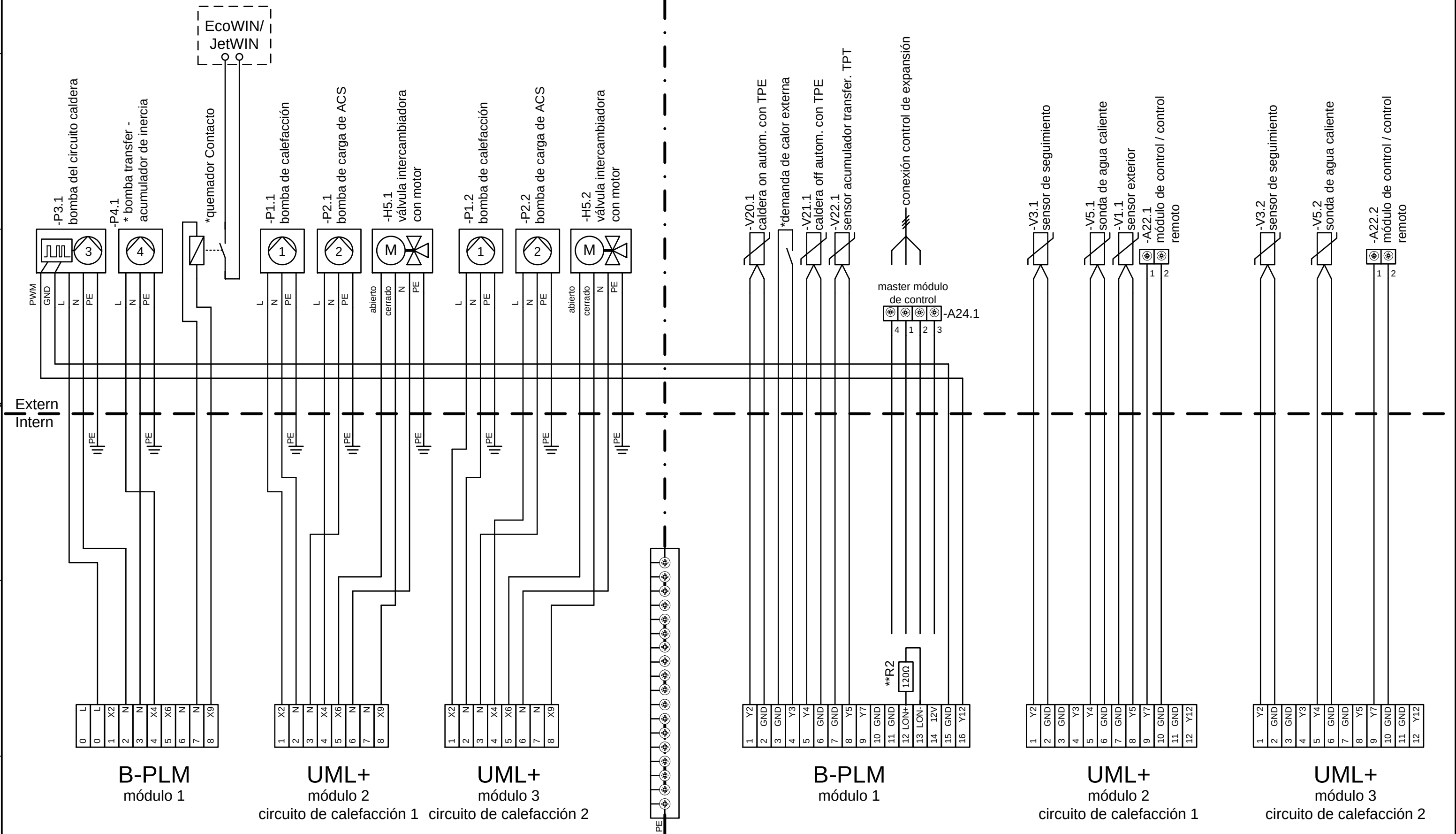
UML+	módulo 2
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092851/01

baja tensión 230VAC

sonda muy baja tensión



B-PLM	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 1 cerrado

UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto
6 N	válvula intercambiadora con motor
7 N	
8 X9	c.c. 2 cerrado

092851/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

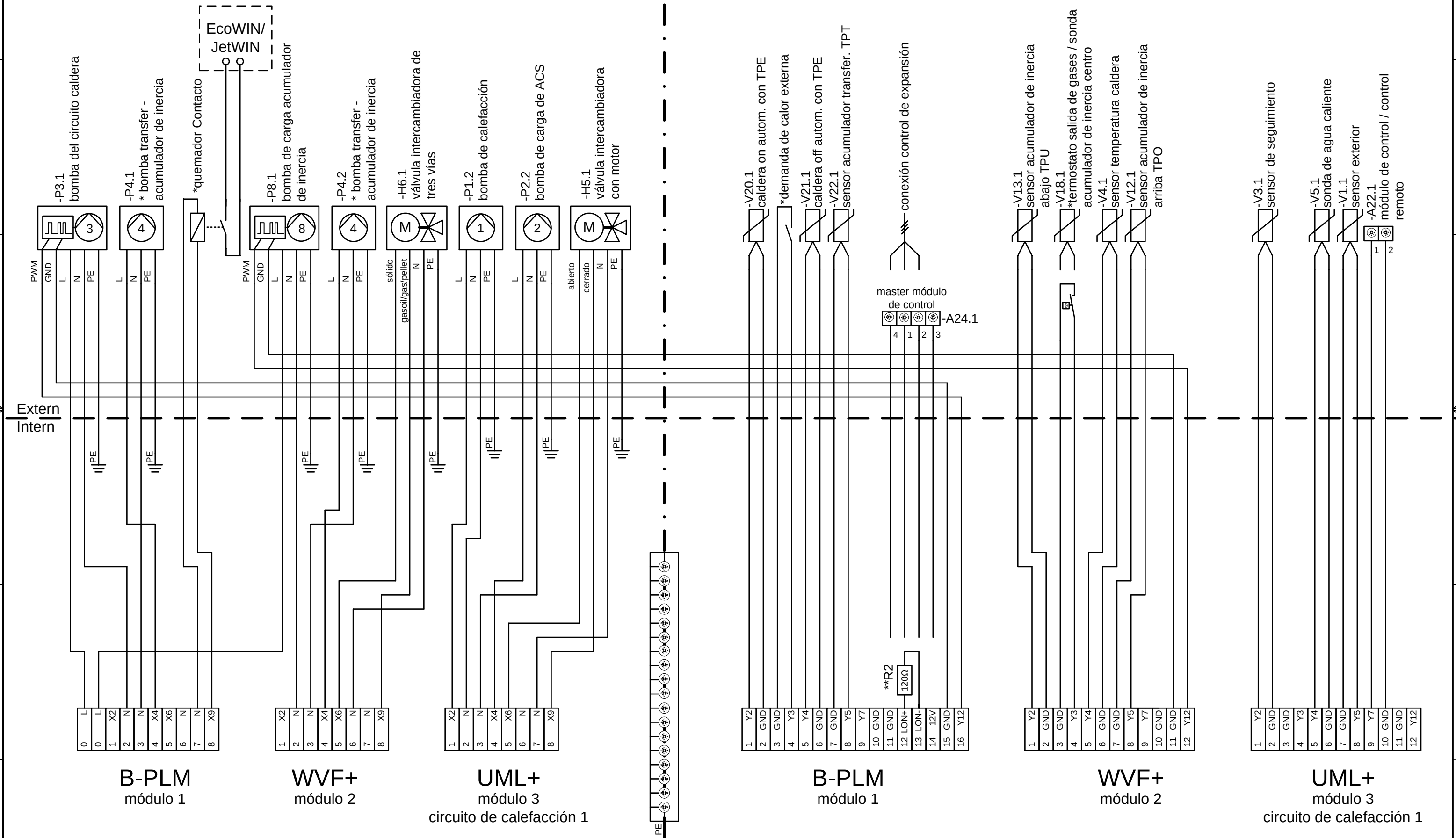
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

092851/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	04.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 regulación temperatura externa para 1 circuito de calefacción con mezcladora y circuitos agua caliente y un módulo para combustibles sólidos WVF+ y modulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092844/01				Blatt 092844/01

B-PLM	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control
12 Lon+	conexión control de expansión
13 Lon-	
14 12V	
15 GND	PWM bomba de
16 Y12	circuito de la caldera

WVF+	módulo 2
1 X2	
2 N	
3 N	*bomba transfer
4 X4	acumulador de inercia
5 X6	sólido válvula
6 N	intercambiadora de tres vías
7 N	
8 X9	gasoil/gas/pellet

WVF+	módulo 2
1 Y2	acumulador de inercia abajo
2 GND	TPU
3 GND	*termostato salida de gases
4 Y3	sonda acumulador de inercia centro
5 Y4	*sensor temperatura caldera
6 GND	
7 GND	sensor acumulador de inercia arriba
8 Y5	TPO
9 Y7	
10 GND	
11 GND	PWM bomba de carga
12 Y12	acumulador de inercia

UML+	módulo 3 circuito de calefacción 1
1 X2	bomba de calefaccióni c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1
8 X9	cerrado

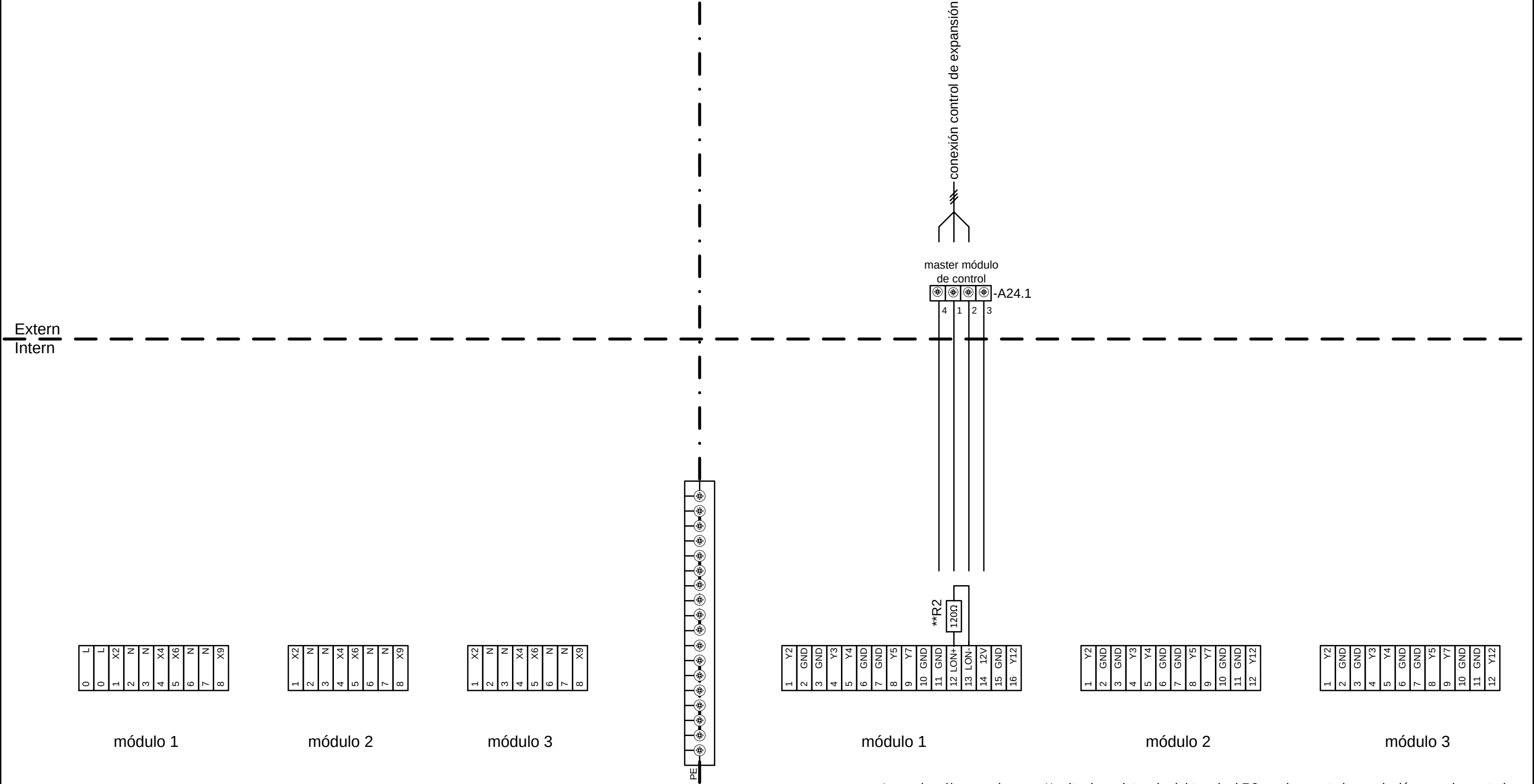
092845/01

UML+	módulo 3 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control
10 GND	control remoto
11 GND	
12 Y12	

092845/01

baja tensión 230VAC

sonda muy baja tensión



1	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	módulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	módulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

092735/01

1	módulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

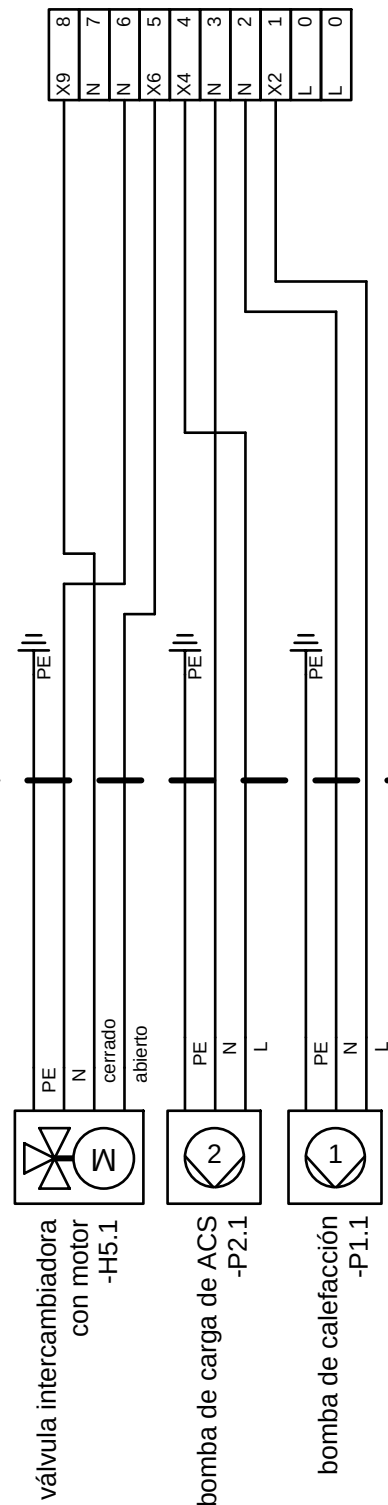
2	módulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

3	módulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092735/01

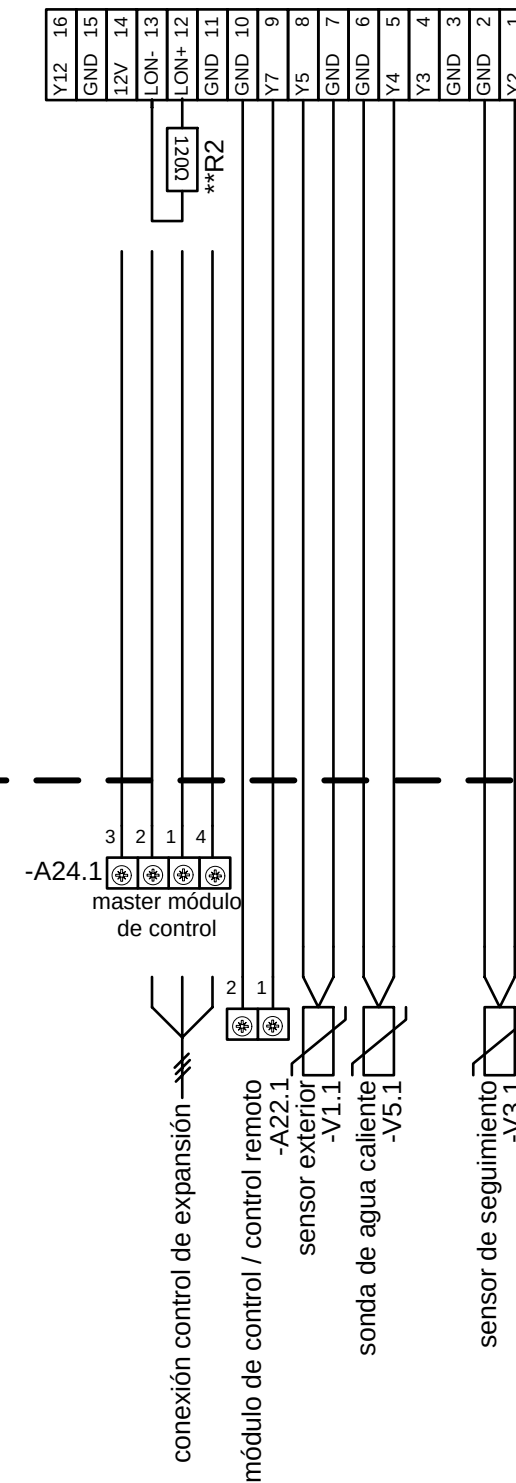
baja tensión 230VAC

UML+
módulo 1
circuito de calefacción 1



sonda muy baja tensión

UML+
módulo 1
circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	17.07.2013	UML+		MES H021 Außentemperaturregelung für 1 Heizkreis gemischt und 1 Warmwasserkreis	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092722/01				Blatt 092722/01

UML+	módulo 1 circuito de calefacción 1
c.c. 1 cerrado	8 X9 7 N
abierto válvula intercambiadora con motor	6 N 5 X6
bomba de carga de ACS c.c. 1	4 X4 3 N
bomba de calefacción c.c. 1	2 N 1 X2
fase continua 2	0 L
fase continua 1	0 L

092723/01

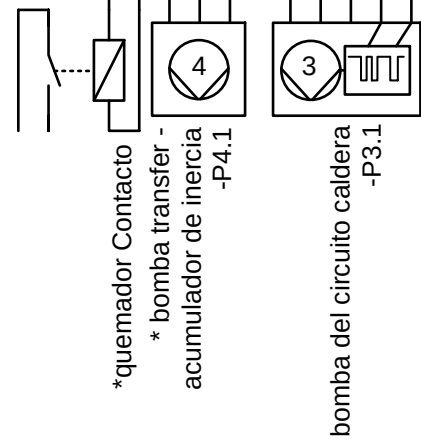
UML+	módulo 1 circuito de calefacción 1
	16 Y12 15 GND
master módulo de control conexión control de expansión	14 12V 13 Lon- 12 Lon+ 11 GND
módulo de control control remoto	10 GND 9 Y7
sensor exterior	8 Y5 7 GND
sonda de agua caliente c.c. 1	6 GND 5 Y4
	4 Y3 3 GND
sensor de seguimiento c.c. 1	2 GND 1 Y2

092723/01

baja tensión 230VAC

B-PLM módulo 1

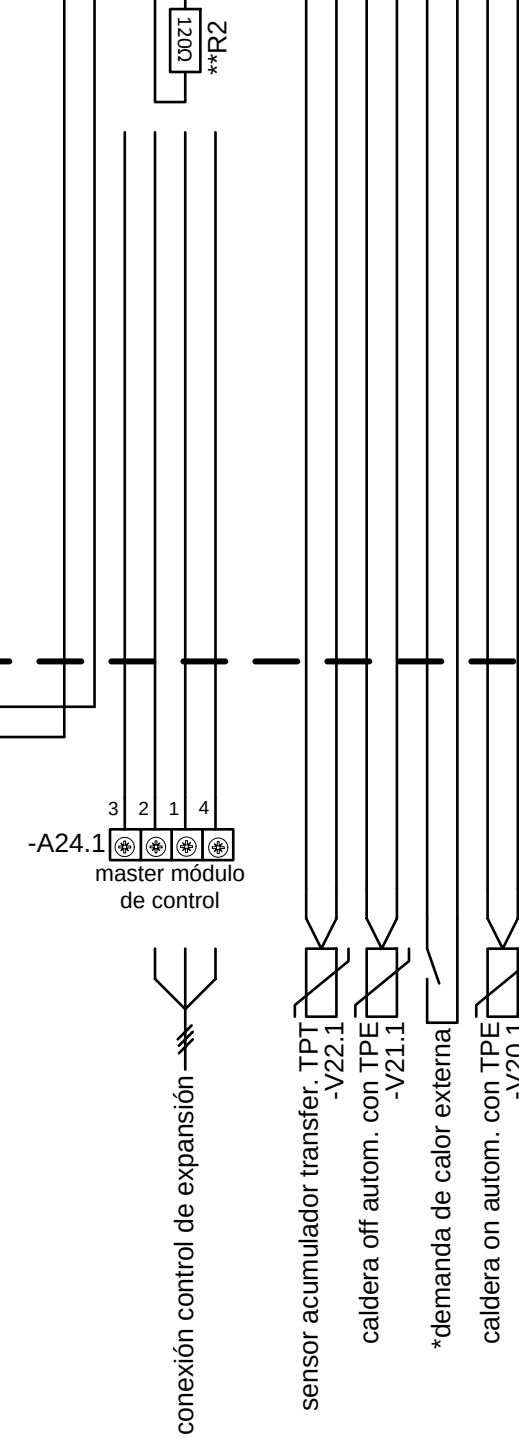
X9 8 7 6 5 4 3 2 1 0 0
N N N X6 X4 N N X2 L L



sonda muy baja tensión

B-PLM módulo 1

Y12 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
GND 12V LON- LON+ GND GND Y7 Y5 GND GND Y4 Y3 GND GND Y2



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	17.07.2013	B-PLM		MES P042	Projekt : regulación	windhager	1 mm : 1 mm
				Gezeichnet	ros			y modulo de acumulador de inercia B-PLM			
				Geprüft	rot	Zeichnungs Nr.: 092722/01					
Rev.	Änderung	Datum	Name	Genehmigt							

Blatt 092905/01

B-PLM	módulo 1
*quemador Contacto	8 X9 7 N
	6 N 5 X6
bomba transfer	4 X4 3 N
	2 N 1 X2
fase continua 2	0 L
fase continua 1	0 L

092906/01

B-PLM	módulo 1
PWM bomba del circuito caldera	16 Y12 15 GND
master módulo de control conexión control de expansión	14 12V 13 Lon- 12 Lon+ 11 GND
	10 GND 9 Y7
sensor acumulador transfer. TPT	8 Y5 7 GND
caldera off autom. con TPE	6 GND 5 Y4
*demanda de calor externa	4 Y3 3 GND
caldera on autom. con TPE	2 GND 1 Y2

092906/01

baja tensión 230VAC

tapa ciega
módulo 1
circuito de calefacción

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

sonda muy baja tensión

tapa ciega
módulo 1
circuito de calefacción

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

120Ω
**R2

3 2 1 4
-A24.1
master módulo
de control

conexión control de expansión

Extern
Intern

*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	17.07.2013	sin regulación Windhager MES sin regulación Windhager MES		Projekt : regulación		1 mm : 1 mm					
				Gezeichnet	ros					Zeichnungs Nr.: 092725/01	◀ ----- 2 ▶				
				Geprüft	rot						Blatt 092725/01				
Rev.	Änderung	Datum	Name	Genehmigt											
1		2		3		4		5		6		7		8	
				Zeichnungs Nr.:		092725/01									

1	módulo 1
X9	8 X9 7 N
X6	6 N 5 X6
X4	4 X4 3 N
X2	2 N 1 X2
fase continua 2 0 L	
fase continua 1 0 L	

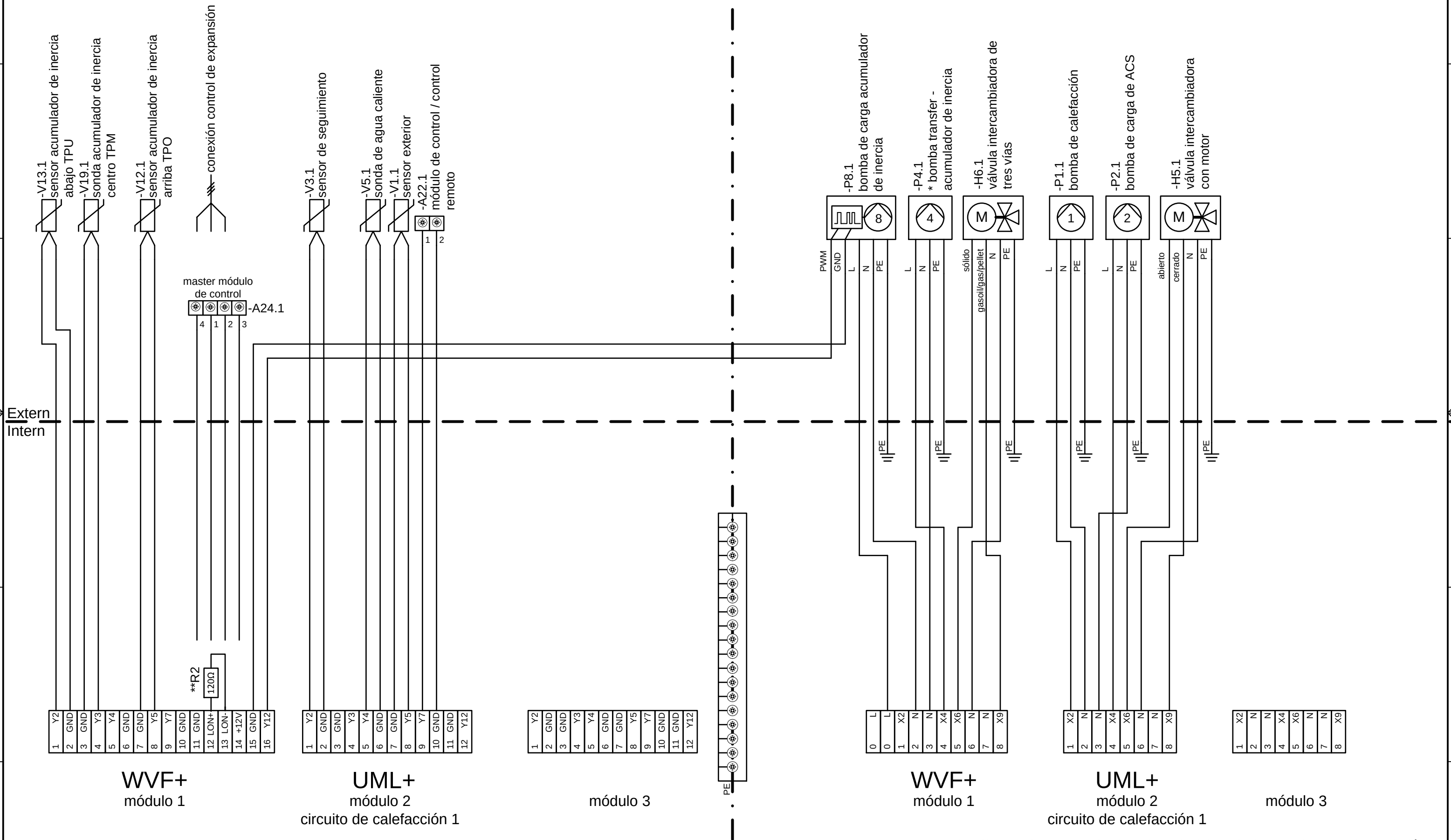
092726/01

1	módulo 1
Y12	16 Y12 15 GND
master módulo de control conexión control de expansión	14 12V 13 Lon- 12 Lon+ 11 GND
Y7	10 GND 9 Y7
Y5	8 Y5 7 GND
Y4	6 GND 5 Y4
Y3	4 Y3 3 GND
Y2	2 GND 1 Y2

092726/01

sonda muy baja tensión

baja tensión 230VAC



-XS	dispositivo de seguridad
L	falta de agua control de seguridad (Alemania)
L	
WVF+	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	bomba transfer
4 X4	
5 X6	sólido válvula
6 N	intercambiadora de tres vías
7 N	
8 X9	gasoil/gas/pellet

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo TPU
2 GND	
3 GND	*sonda acumulador de inercia centro TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de carga acumulador de inercia
16 Y12	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	Abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

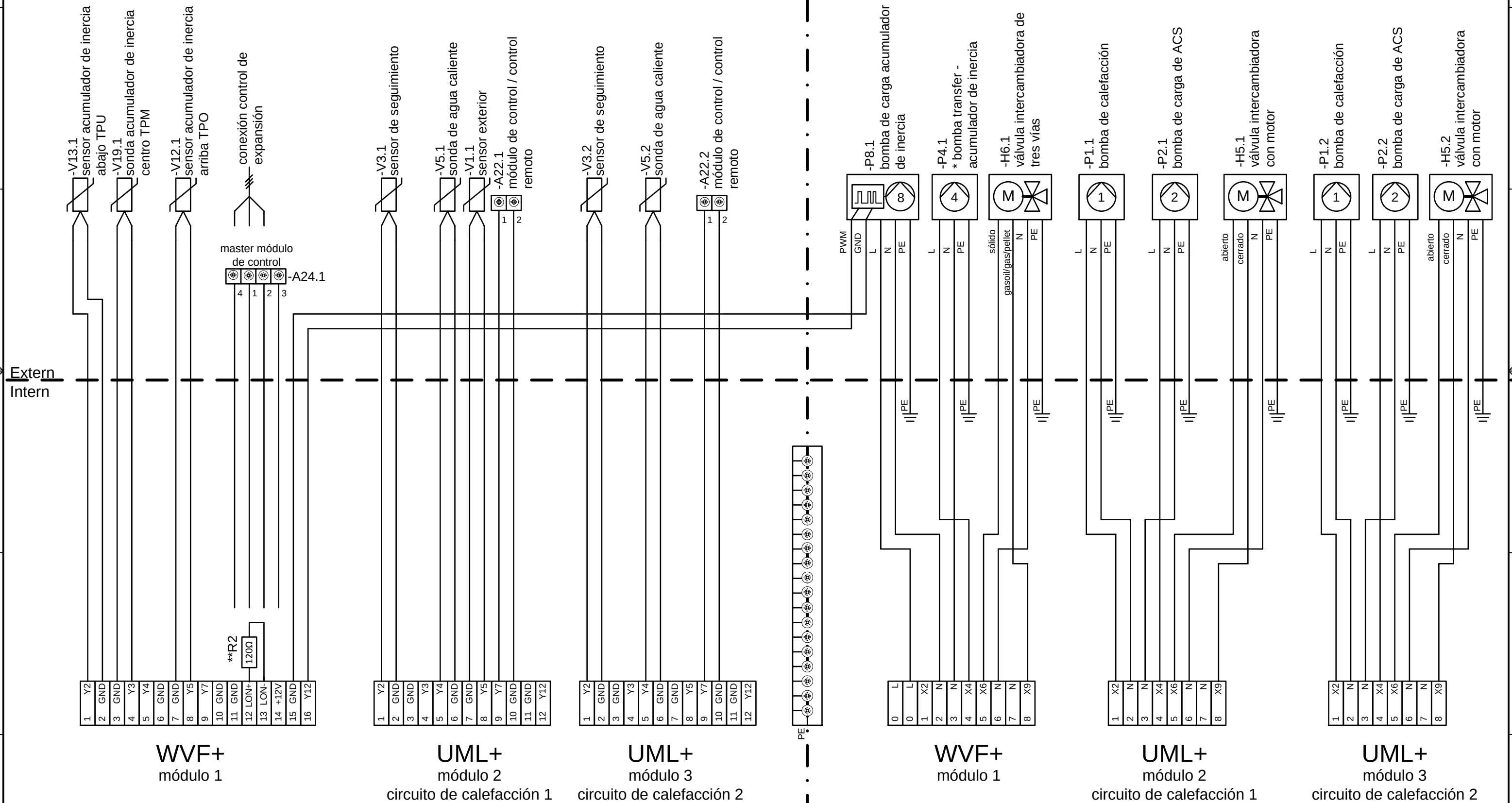
	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092814/01

sonda muy baja tensión

baja tensión 230VAC



-XS	dispositivo de seguridad
L	falta de agua control de seguridad (Alemania)
L	
WVF+	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer- acumulador de inercia
4 X4	
5 X6	sólido válvula intercambiadora de tres vías
6 N	
7 N	
8 X9	gasoil/gas/pellet

WVF+	módulo 1
1 Y2	sensor acumulador de inercia abajo TPU
2 GND	
3 GND	*sonda acumulador de inercia centro TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de carga acumulador de inercia
16 Y12	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	
	c.c. 1 cerrado

UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control Fernsteller
10 GND	
11 GND	
12 Y12	

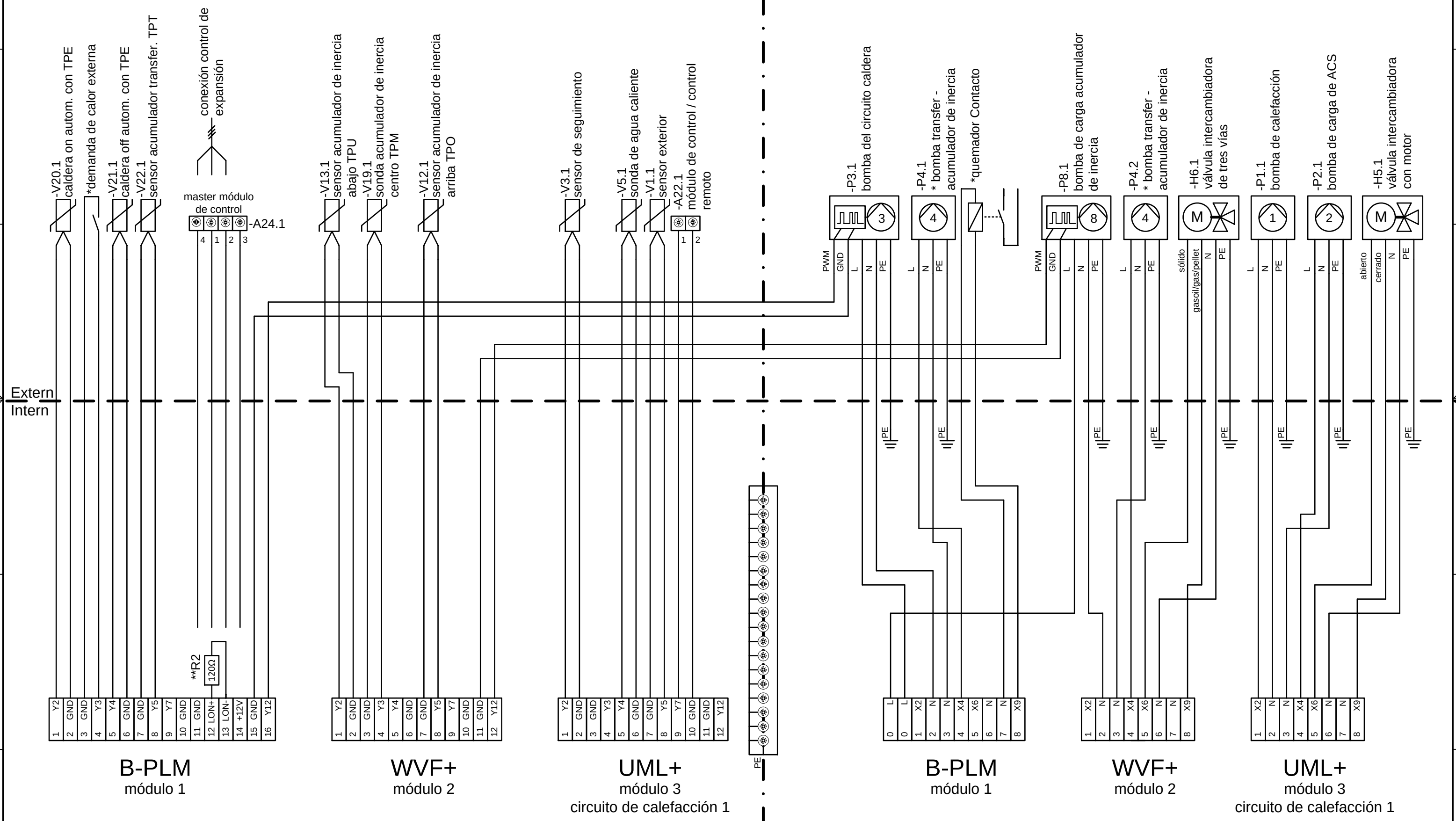
UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	bomba de carga de ACS c.c. 2
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	
	c.c. 2 cerrado

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 2
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

092817/01

sonda muy baja tensión

baja tensión 230VAC



-XS	dispositivo de seguridad
L	falta de agua control de seguridad (Alemania)
L	
B-PLM	Modul 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	*bomba transfer acumulador de inercia
4 X4	
5 X6	
6 N	
7 N	*quemador Contacto
8 X9	

WVF+	módulo 2
1 X2	
2 N	
3 N	*bomba transfer acumulador de inercia
4 X4	
5 X6	sólido válvula intercambiadora de tres vías
6 N	
7 N	gasoil/gas/pellet
8 X9	

UML+	módulo 3 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	bomba de carga de ACS c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	c.c. 1 cerrado
8 X9	

092811/01

B-PLM	Modul 1
1 Y2	*caldera on autom. con TPE
2 GND	
3 GND	*demanda de calor externa
4 Y3	
5 Y4	*caldera off autom. con TPE
6 GND	
7 GND	*sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control extensión conexión-regulación
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de circuito de la caldera
16 Y12	

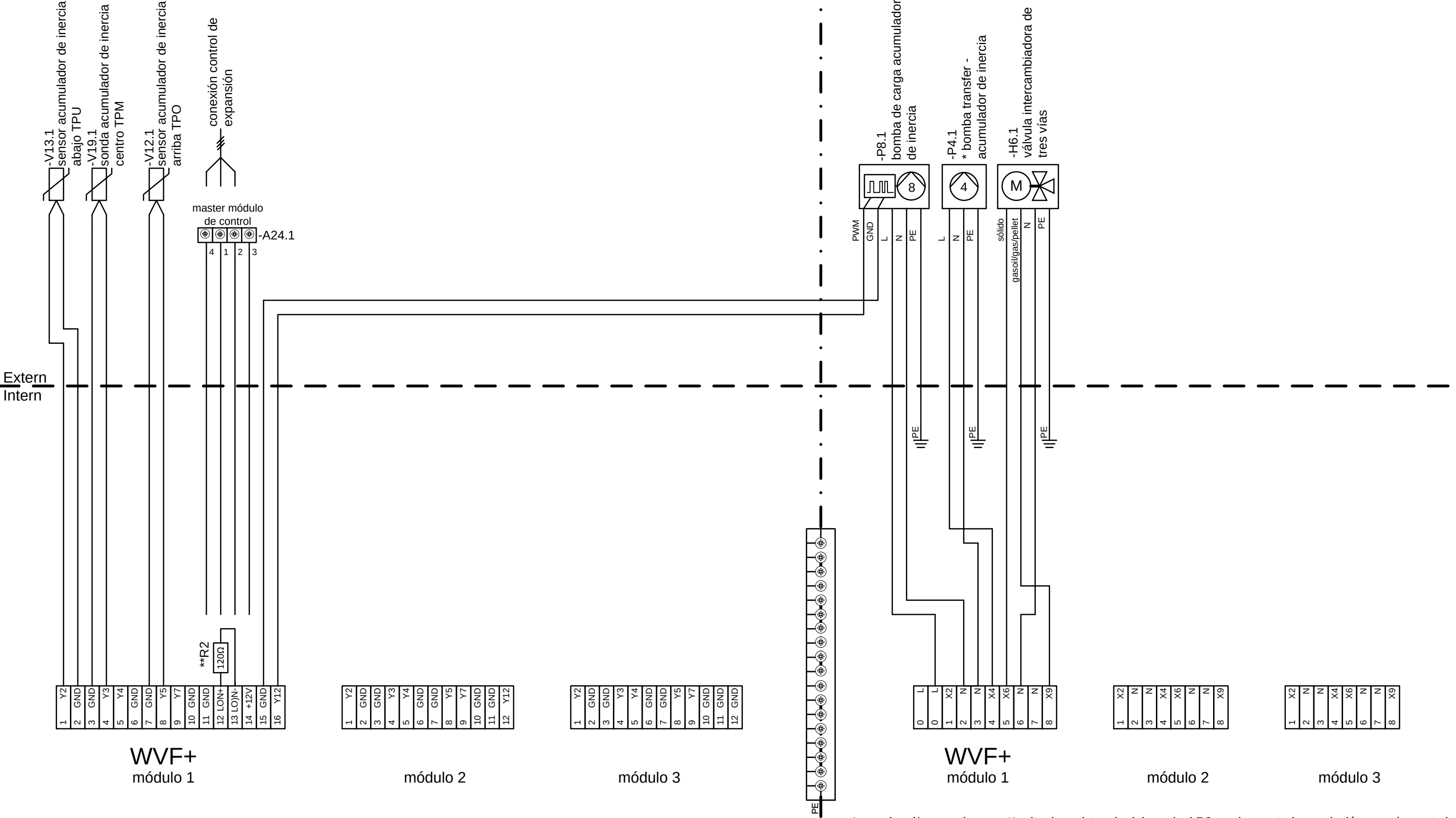
WVF+	módulo 2
1 Y2	sensor acumulador de inercia abajo TPU
2 GND	
3 GND	*sonda acumulador de inercia centro TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	PWM bomba de carga acumulador de inercia
12 Y12	

UML+	módulo 3 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

092811/01

sonda muy baja tensión

baja tensión 230VAC



-XS	dispositivo de seguridad
L	falta de agua control de seguridad (Alemania)
L	
WVF+	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	sólido válvula intercambiadora de tres vías
2 N	
3 N	
4 X4	
5 X6	gasoil/gas/pellet
6 N	
7 N	
8 X9	

	módulo 2
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

092820/01

WVF+	módulo 1
1 Y2	acumulador de inercia abajo TPU
2 GND	
3 GND	sonda acumulador de inercia centro TPM
4 Y3	
5 Y4	
6 GND	
7 GND	sensor acumulador de inercia arriba TPO
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de carga acumulador de inercia
16 Y12	

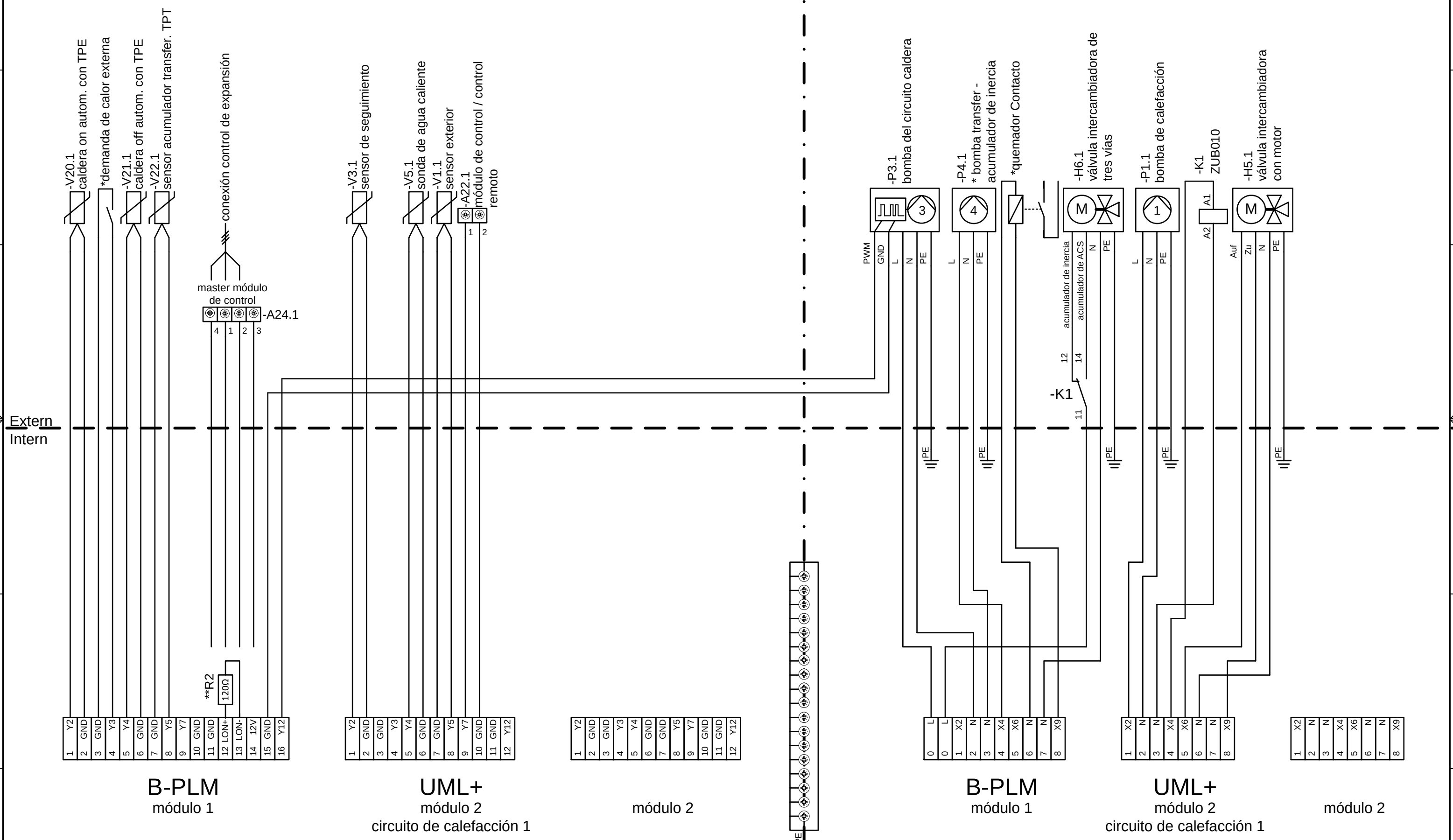
	módulo 2
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

092820/01

sonda muy baja tensión

baja tensión 230VAC



	dispositivo de seguridad
L	interruptor de emergencia calefacción
L	
B-PLM	módulo 1
0 L PWM fase continua 1	
0 L PWM fase continua 2	
1 X2	
2 N	
3 N	* bomba transfer
4 X4	
5 X6	
6 N	
7 N	contacto del quemador
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	Contactor -K1 c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

	módulo 3
1 X2	
2 N	
3 N	
4 X4	
5 X6	
6 N	
7 N	
8 X9	

094550/01

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	* demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de circuito de la caldera
16 Y12	

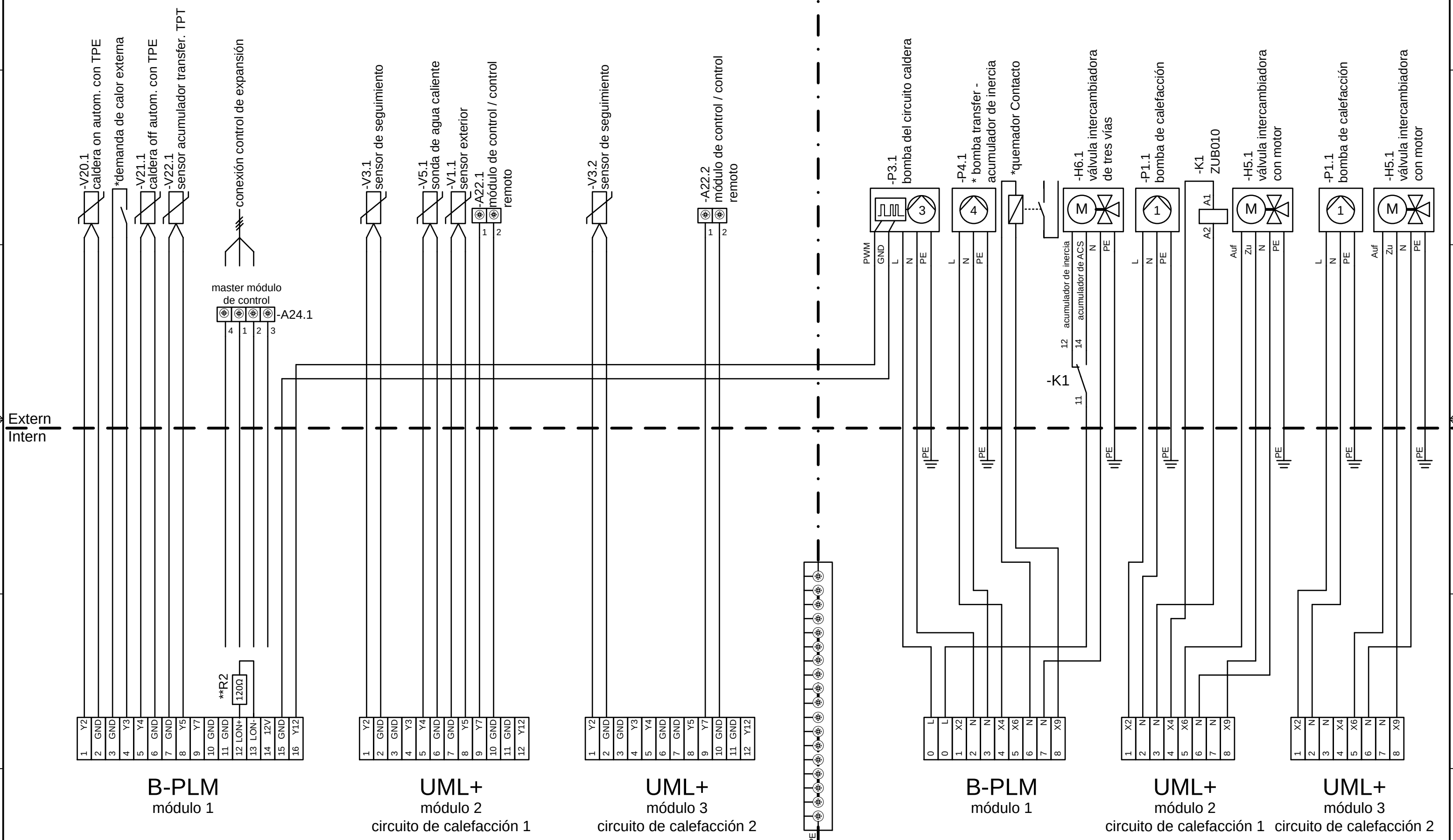
UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

	módulo 3
1 Y2	
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	
10 GND	
11 GND	
12 Y12	

094550/01

sonda muy baja tensión

baja tensión 230VAC



	dispositivo de seguridad
L	interruptor de emergencia calefacción
L	
B-PLM	módulo 1
0 L	PWM fase continua 1
0 L	PWM fase continua 2
1 X2	
2 N	
3 N	* bomba transfer
4 X4	
5 X6	
6 N	
7 N	contacto del quemador
8 X9	

B-PLM	módulo 1
1 Y2	caldera on autom. con TPE
2 GND	
3 GND	* demanda de calor externa
4 Y3	
5 Y4	* caldera off autom. con TPE
6 GND	
7 GND	* sensor acumulador transfer. TPT
8 Y5	
9 Y7	
10 GND	
11 GND	master módulo de control conexión control de expansión
12 Lon+	
13 Lon-	
14 12V	
15 GND	PWM bomba de circuito de la caldera
16 Y12	

UML+	módulo 2 circuito de calefacción 1
1 X2	bomba de calefacción c.c. 1
2 N	
3 N	Contactor -K1 c.c. 1
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

UML+	módulo 2 circuito de calefacción 1
1 Y2	sensor de seguimiento c.c. 1
2 GND	
3 GND	
4 Y3	
5 Y4	sonda de agua caliente c.c. 1
6 GND	
7 GND	sensor exterior
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

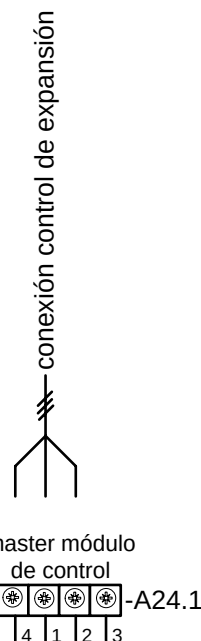
UML+	módulo 3 circuito de calefacción 2
1 X2	bomba de calefacción c.c. 2
2 N	
3 N	
4 X4	
5 X6	abierto válvula intercambiadora con motor
6 N	
7 N	
8 X9	

UML+	módulo 3 circuito de calefacción 2
1 Y2	sensor de seguimiento c.c. 2
2 GND	
3 GND	
4 Y3	
5 Y4	
6 GND	
7 GND	
8 Y5	
9 Y7	módulo de control control remoto
10 GND	
11 GND	
12 Y12	

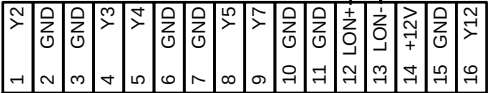
094553/01

sonda muy baja tensión

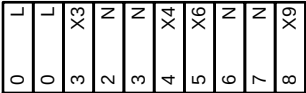
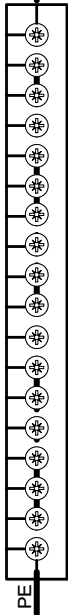
baja tensión 230VAC



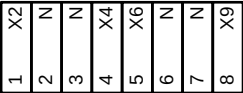
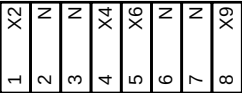
Extern
Intern



módulo 1



módulo 1



-XS	dispositivo de seguridad	
L	falta de agua control de seguridad (Alemania)	
L		
1	módulo 1	
0 L PWM fase continua 1		
0 L PWM fase continua 2		
1 X2	X2	
2 N		
3 N	X4	
4 X4		
5 X6	X6	
6 N		
7 N	X9	
8 X9		

1	módulo 1
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Lon
12 Lon+	
13 Lon-	
14 12V	
15 GND	Y12
16 Y12	

2	módulo 2
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

2	módulo 2
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

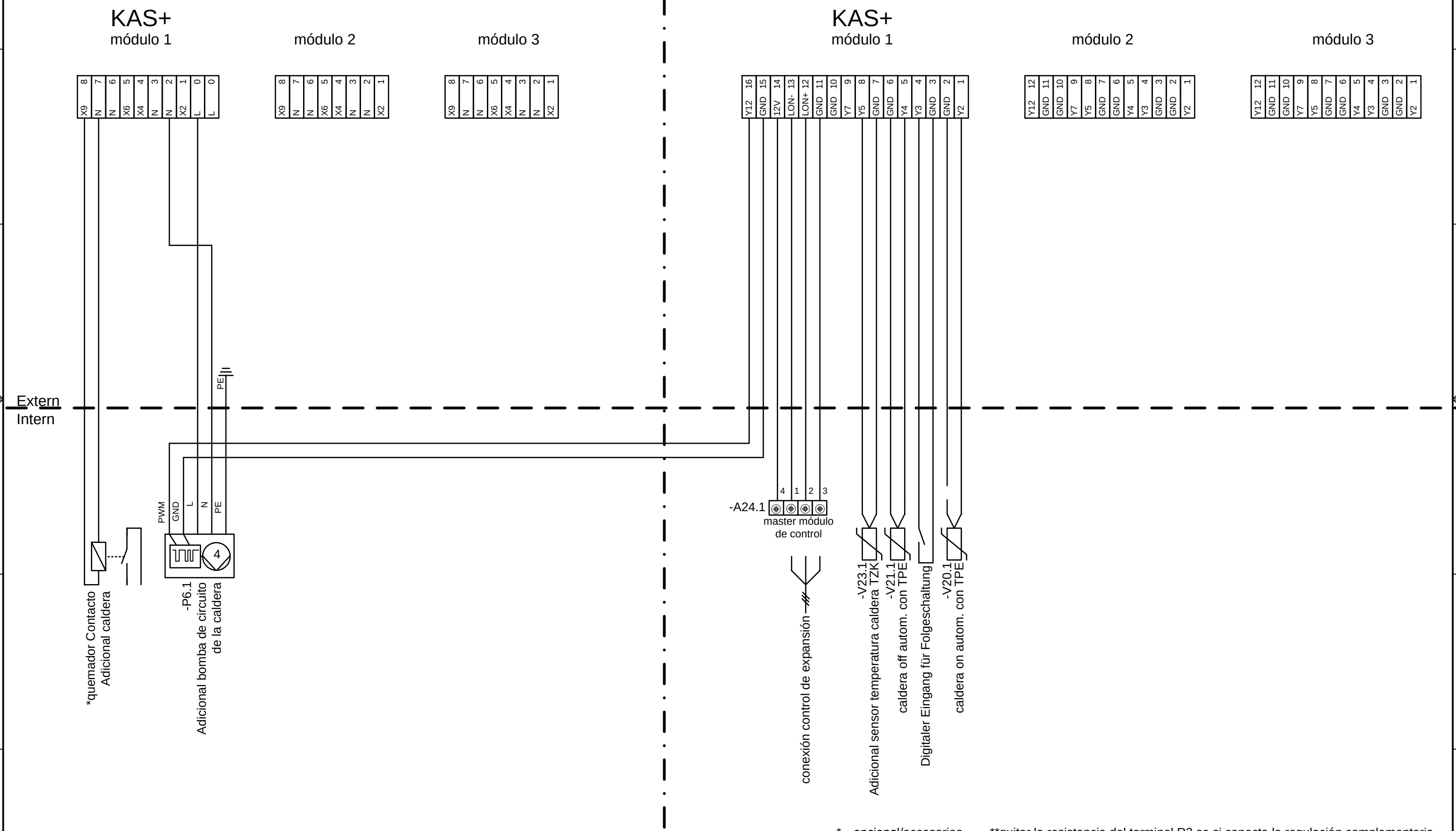
3	módulo 3
1 X2	X2
2 N	
3 N	X4
4 X4	
5 X6	X6
6 N	
7 N	X9
8 X9	

3	módulo 3
1 Y2	Y2
2 GND	
3 GND	Y3
4 Y3	
5 Y4	Y4
6 GND	
7 GND	Y5
8 Y5	
9 Y7	Y7
10 GND	
11 GND	Y12
12 Y12	

092638/01

baja tensión 230VAC

sonda muy baja tensión



-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	módulo 1
quemador relé Adicional caldera	X9 8
	N 7
	N 6
	X6 5
	X4 4
	N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8
	N 7
	N 6
	X6 5
	X4 4
	N 3
	N 2
	X2 1

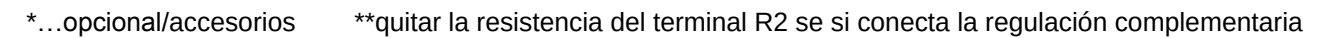
	módulo 3
	X9 8
	N 7
	N 6
	X6 5
	X4 4
	N 3
	N 2
	X2 1

KAS+	módulo 1
PWM Adicional caldera Bomba	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldera off autom. con TPE	GND 6 Y4 5
Digitaler Eingang für Folgeschaltung	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

sonda muy baja tensión



1 mm : 1 mm

2

Blatt 092684/00

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	módulo 1
quemador relé Adicional caldera	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado válvula intercambiadora con motor	X9 8 N 7
HK 1 abierto	N 6 X6 5
bomba de carga de ACS	X4 4 N 3
bomba de calefacción HK 1	N 2 X2 1

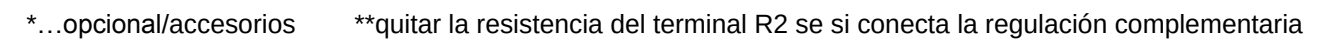
	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	módulo 1
PWM Adicional caldera Bomba	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldera off autom. con TPE	GND 6 Y4 5
entrada digital para circuito secuencial	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente HK 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento HK 1	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

sonda muy baja tensión



					Datum	24.06.2013	KAS+/UML+/UML+	MES KAS + H021 + H024	Projekt : regulación		1 mm : 1 mm						
					Gezeichnet	rot							2				
					Geprüft	ros											
Rev.	Änderung	Datum	Name		Genehmigt						Zeichnungs Nr.:	092686/00		Blatt 092686/00			
1			2			3		4		5		6		7		8	

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	módulo 1
quemador relé Adicional caldera	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS HK 1	X4 4 N 3
bomba de calefacción HK 1	N 2 X2 1

UML+	módulo 3 circuito de calefacción 2
cerrado HK 2	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS HK 2	X4 4 N 3
bomba de calefacción HK 2	N 2 X2 1

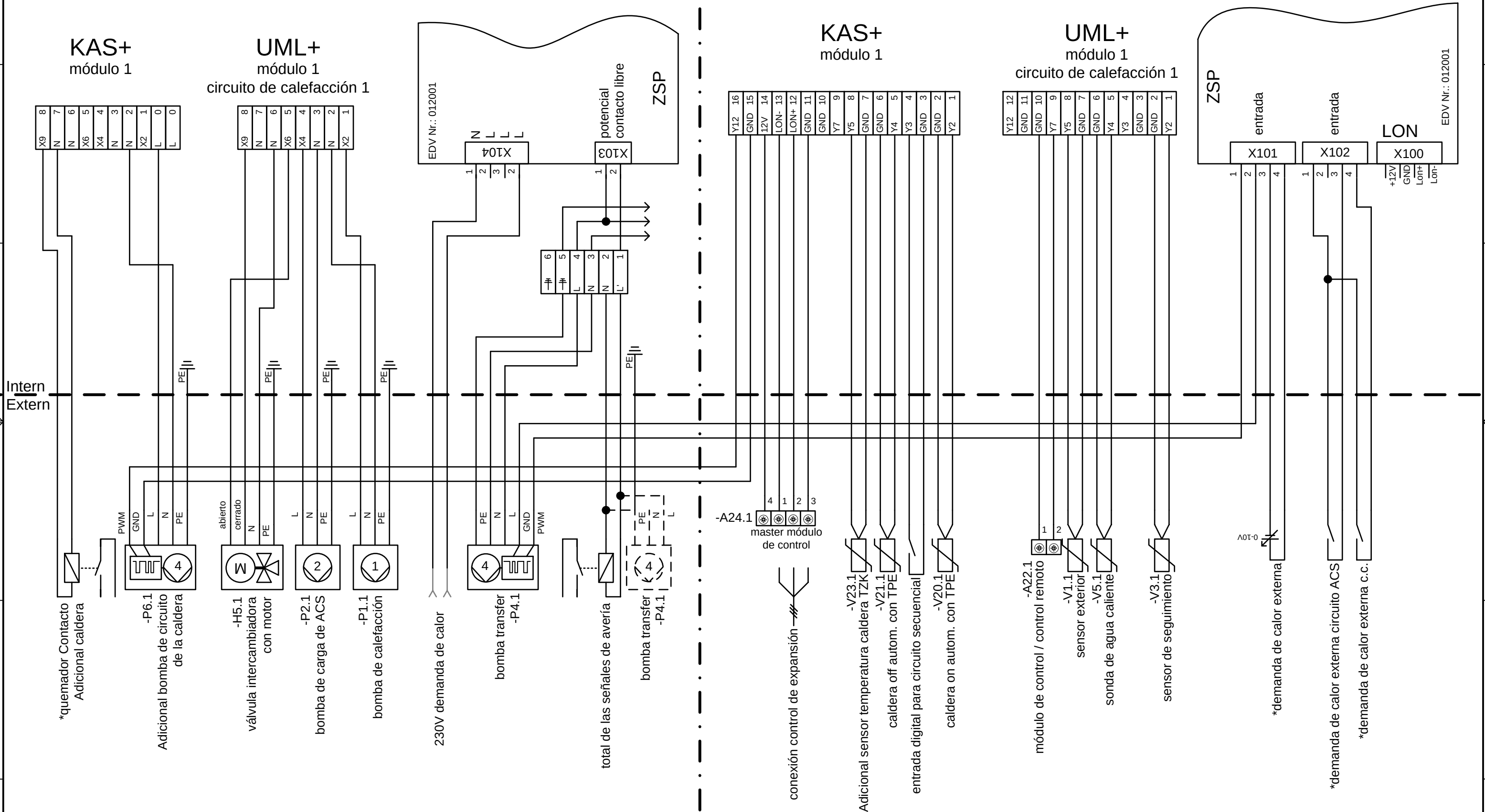
KAS+	módulo 1
PWM Adicional caldera Bomba	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
Zusatz Kesselfühler	Y5 8 GND 7
caldera off autom. con TPE	GND 6 Y4 5
entrada digital para circuito secuencial	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente HK 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento HK 1	GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
sonda de agua caliente HK 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento HK 1	GND 2 Y2 1

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	KAS+/UML+/ZSP W		MES KAS + H021 + ZSP W	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092686/00				Blatt 092684/00	

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	módulo 1
quemador relé Adicional caldera	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado válvula intercambiadora con motor	X9 8 N 7
HK 1 abierto	N 6 X6 5
bomba de carga de ACS	X4 4 N 3
bomba de calefacción HK 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	módulo 1
PWM Adicional caldera Bomba	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldera off autom. con TPE	GND 6 Y4 5
entrada digital para circuito secuencial	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente HK 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento HK 1	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	placa adicional
PE	PE
PE	PE
fase continua	L N
total de las señales de avería OR bomba transfer	N L'

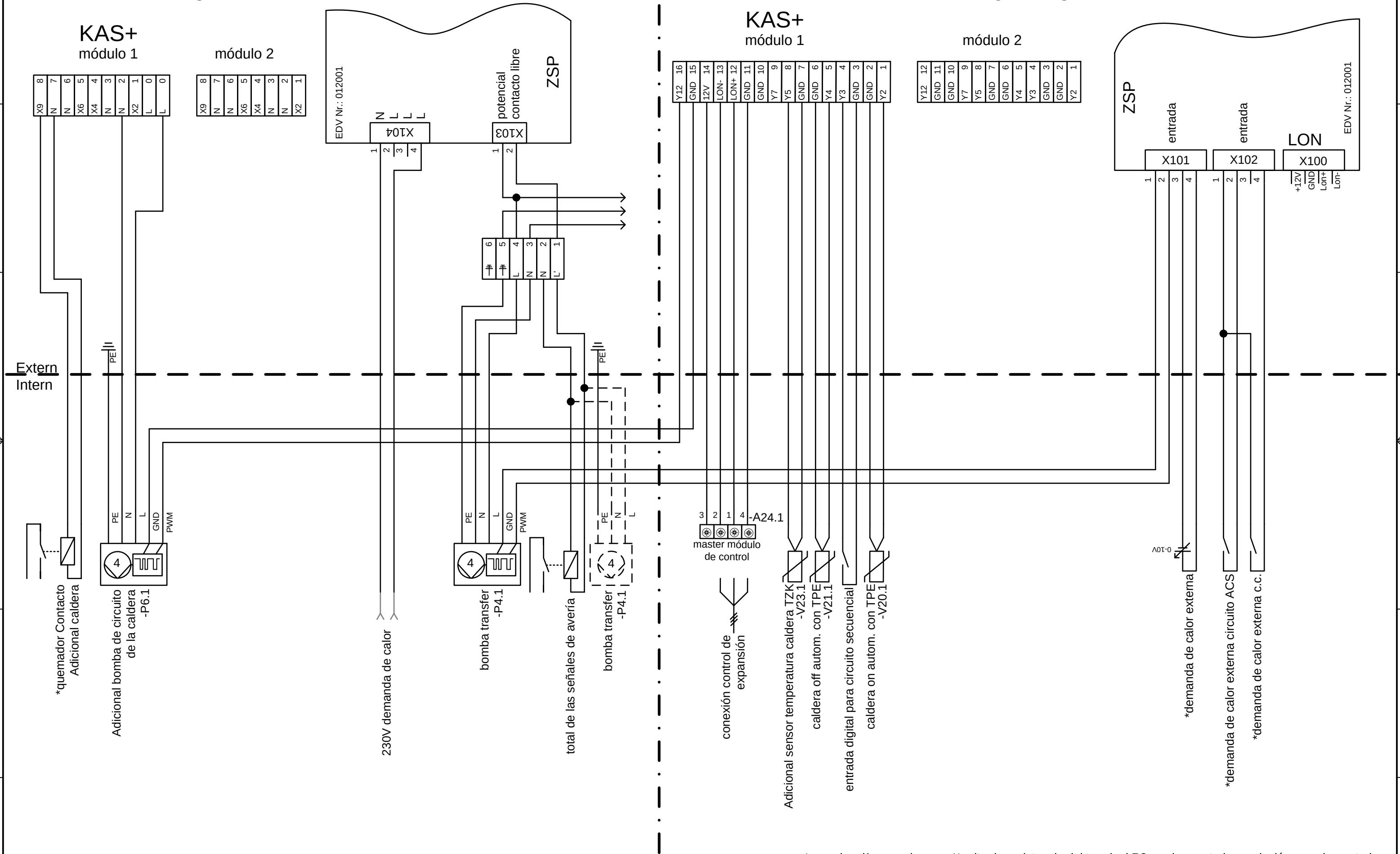
EDV Nr. 094512/00

-XSP	placa adicional
GND	PWM bomba transfer
-X101 /2	
GND	demanda de calor 0-
-X101 /4	10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

baja tensión 230VAC

sonda muy baja tensión



-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

KAS+	módulo 1
quemador relé Adicional caldera	X9 8 N 7
	N 6 X6 5
	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1 PWM fase continua 2	L 0 L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

KAS+	módulo 1
PWM Adicional caldera Bomba	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
caldera off autom. con TPE	GND 6 Y4 5
entrada digital para circuito secuencial	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

-XZSP	placa adicional
PE	PE
PE	PE
fase continua	L N
total de las señales de avería OR bomba transfer	N L'

EDV Nr. 094512/00

-XSP	placa adicional
GND	PWM bomba transfer
-X101 /2	
GND	demanda de calor 0-
-X101 /4	10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

baja tensión 230VAC

sonda muy baja tensión

UML+
módulo 1
circuito de calefacción 1

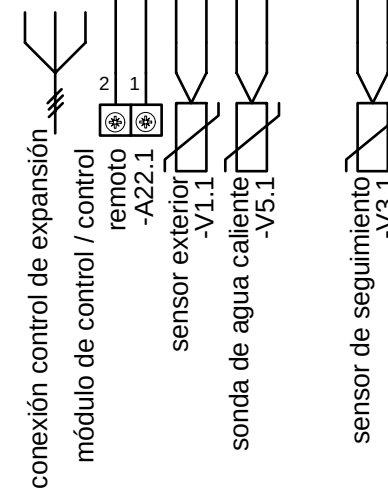
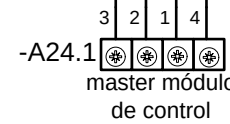
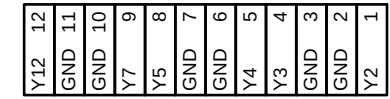
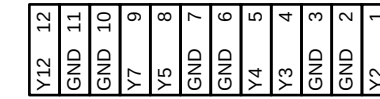
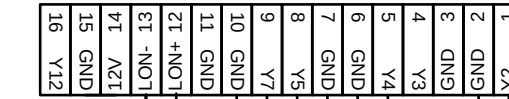
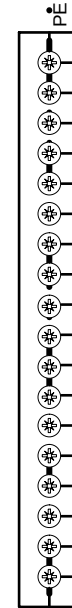
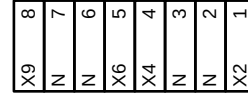
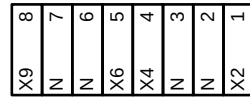
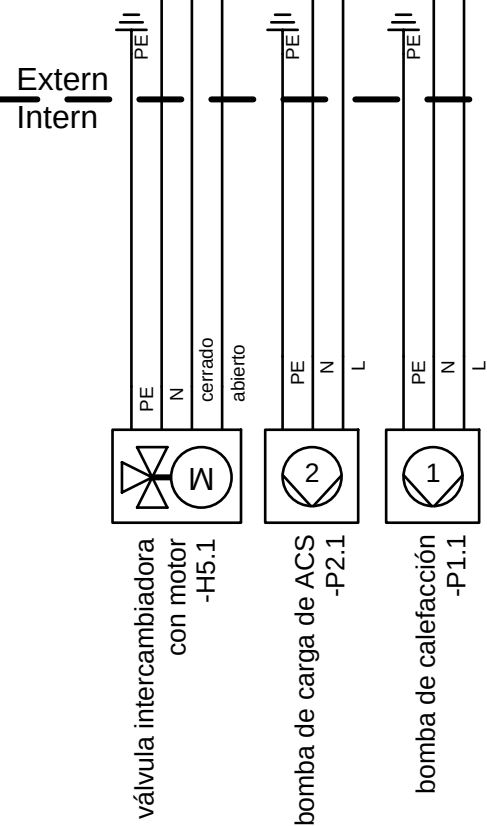
módulo 2

módulo 3

UML+
módulo 1
circuito de calefacción 1

módulo 2

módulo 3



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	05.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

UML+

Zeichnungs Nr.: 092670/01

MES H021

regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente

Projekt :
regulación



1 mm : 1 mm

2

Blatt 092670/01

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

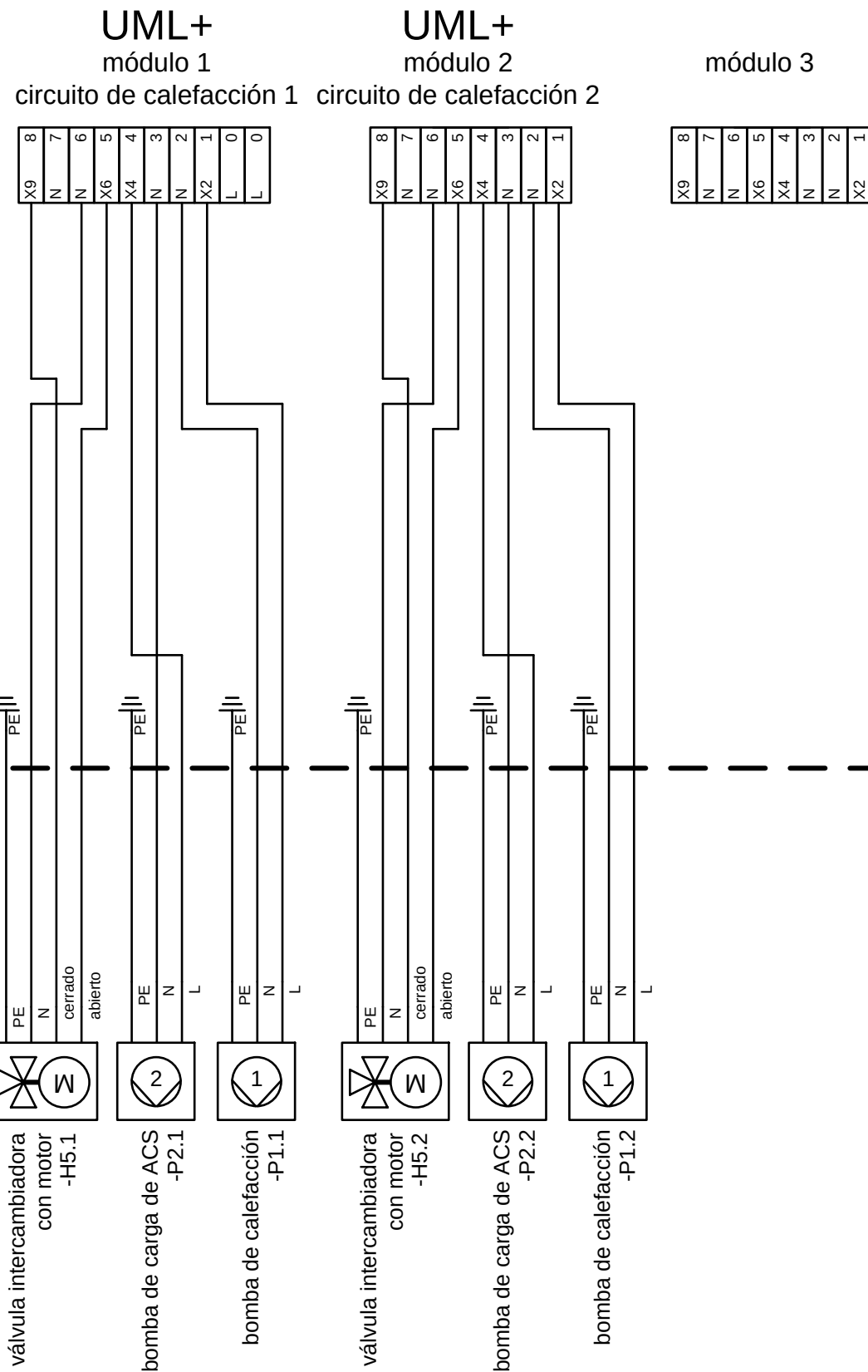
UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

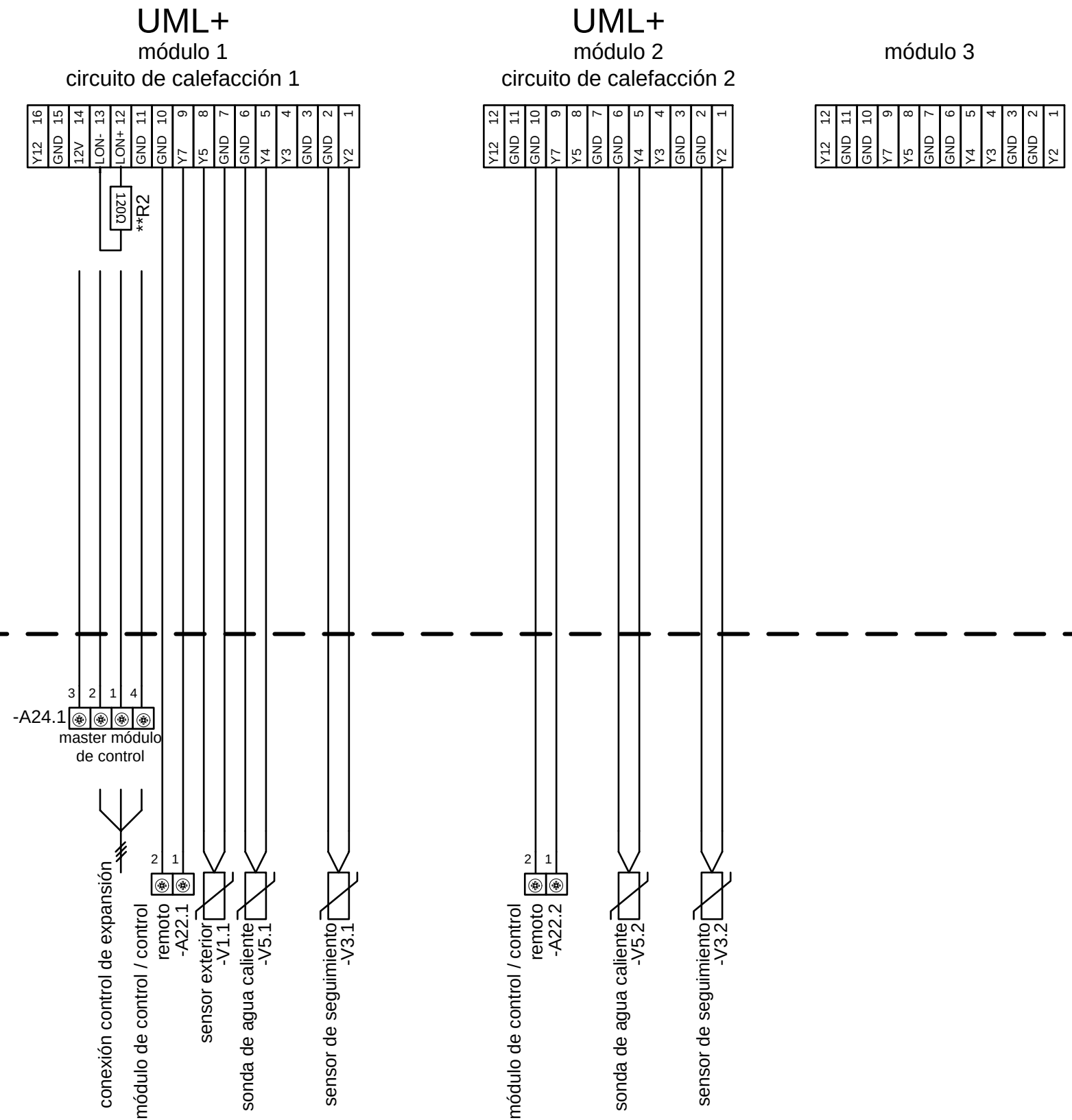
	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092671/01

baja tensión 230VAC



sonda muy baja tensión



*...opcional/accesorios

****quitar la resistencia del terminal R2 se si conecta la regulación complementaria**

				Datum	05.07.2013	UML+/UML+		MES H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	ros							◀ ----- 2 ▶
				Geprüft	rot							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092674/01				Blatt 092674/01	

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 1 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
sonda de agua caliente c.c. 2	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 2	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 2
cerrado c.c. 2	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 2	X4 4 N 3
bomba de calefacción c.c. 2	N 2 X2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

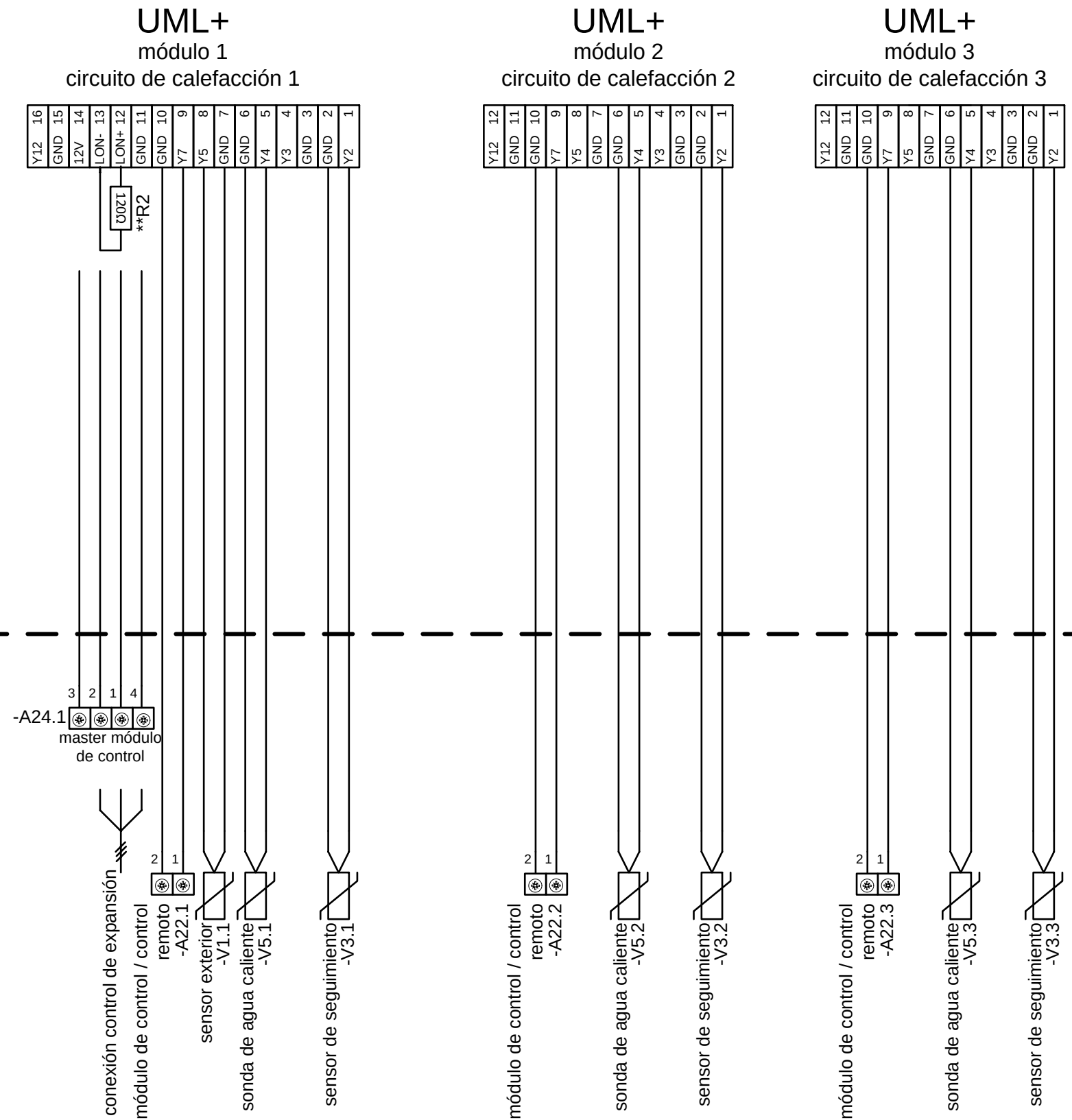
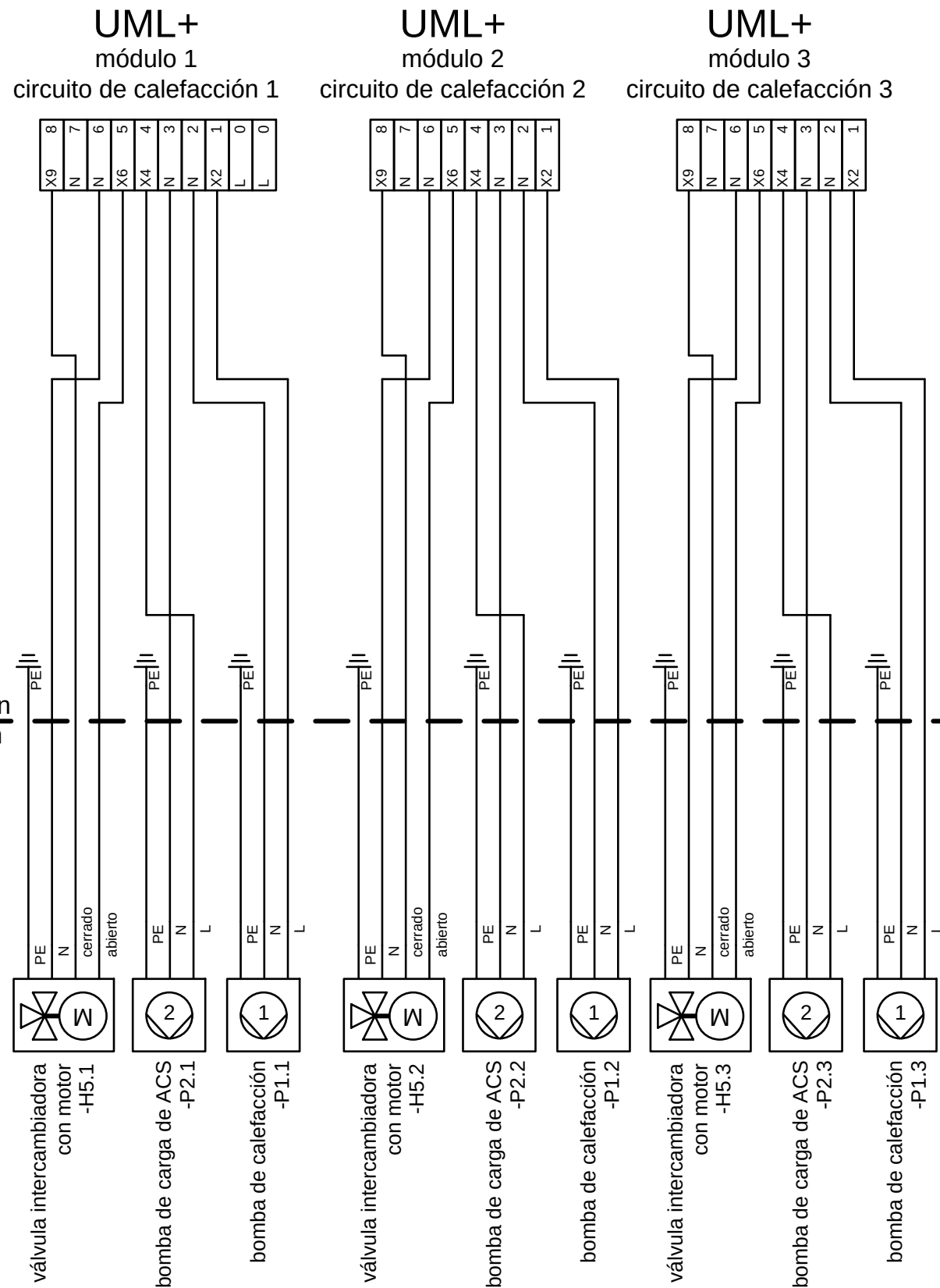
	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum 05.07.2013
Gezeichnet ros
Geprüft rot
Genehmigt

UML+/UML+/UML+
Zeichnungs Nr.: 092680/01

MES H021 + H024 + H024
regulación temperatura externa para 3 circuitos de calefacción con mezcladora y circuitos agua caliente

Projekt :
regulación

windhager

1 mm : 1 mm
2
Blatt 092680/01

-XA	bloque de conexión
	230VAC L 1
	interno L' 2 L' 3
	230VAC N 4
	interno N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	módulo de control control remoto GND 10 Y7 9
	Y5 8 sensor exterior GND 7
	sonda de agua caliente c.c. 1 GND 6 Y4 5
	Y3 4 GND 3
	sensor de seguimiento c.c. 1 GND 2 Y2 1

UML+	módulo 1 circuito de calefacción 1
	cerrado X9 8 c.c. 1 N 7
	válvula intercambiadora con motor N 6 abierto X6 5
	bomba de carga de ACS X4 4 c.c. 1 N 3
	bomba de calefacción N 2 c.c. 1 X2 1
	PWM fase continua 1 L 0
	PWM fase continua 2 L 0

UML+	módulo 2 circuito de calefacción 2
	Y12 12 GND 11
	módulo de control GND 10 control remoto Y7 9
	Y5 8 GND 7
	sonda de agua caliente c.c. 2 GND 6 Y4 5
	Y3 4 GND 3
	sensor de seguimiento c.c. 2 GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 2
	cerrado X9 8 c.c. 2 N 7
	válvula intercambiadora con motor N 6 abierto X6 5
	bomba de carga de ACS X4 4 c.c. 2 N 3
	bomba de calefacción N 2 c.c. 2 X2 1

UML+	módulo 3 circuito de calefacción 3
	Y12 12 GND 11
	módulo de control GND 10 control remoto Y7 9
	Y5 8 GND 7
	sonda de agua caliente c.c.3 GND 6 Y4 5
	Y3 4 GND 3
	sensor de seguimiento c.c. 3 GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 3
	cerrado X9 8 c.c. 3 N 7
	válvula intercambiadora con motor N 6 abierto X6 5
	bomba de carga de ACS X4 4 c.c. 3 N 3
	bomba de calefacción N 2 c.c. 3 X2 1

092681/01

092681/01

baja tensión 230VAC

sonda muy baja tensión

B-PLM

módulo 1

módulo 2

módulo 3

B-PLM

módulo 1

módulo 2

módulo 3

Intern
Extern

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

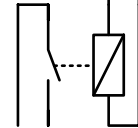
X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

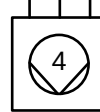
Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

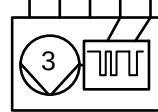
Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



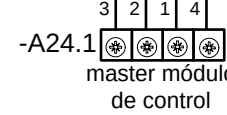
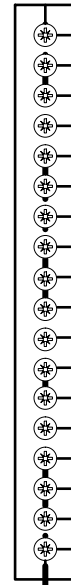
*quemador Contacto



* bomba transfer -
acumulador de inercia
-P4.1



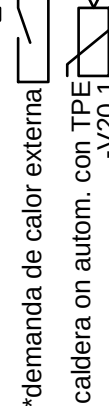
bomba del circuito caldera
-P3.1



*Puffertransfer Pufferf. TPT
-V22.1



*Auto-Kessel AUS Pufferf. TPA
-V21.1



*demanda de calor externa
caldera on autom. con TPE
-V20.1

*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	29.07.2013
Gezeichnet	ros
Geprüft	rot
Genehmigt	

B-PLM

Zeichnungs Nr.: 092863/01

MES P030

con control quemador gasoil/gas/pellet

Projekt :
regulación

windhager

1 mm : 1 mm

2

Blatt 092863/01

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemadorContacto	X9 8 N 7
	N 6 X6 5
*bomba transfer acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	módulo 1
	PWM bomba de circuito de la caldera
	Y12 16 GND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	GND 10 Y7 9
	*sensor acumulador transfer. TPT Y5 8 GND 7
	*caldera off autom. con TPE GND 6 Y4 5
	*demanda de calor externa Y3 4 GND 3
	caldera on autom. con TPE GND 2 Y2 1

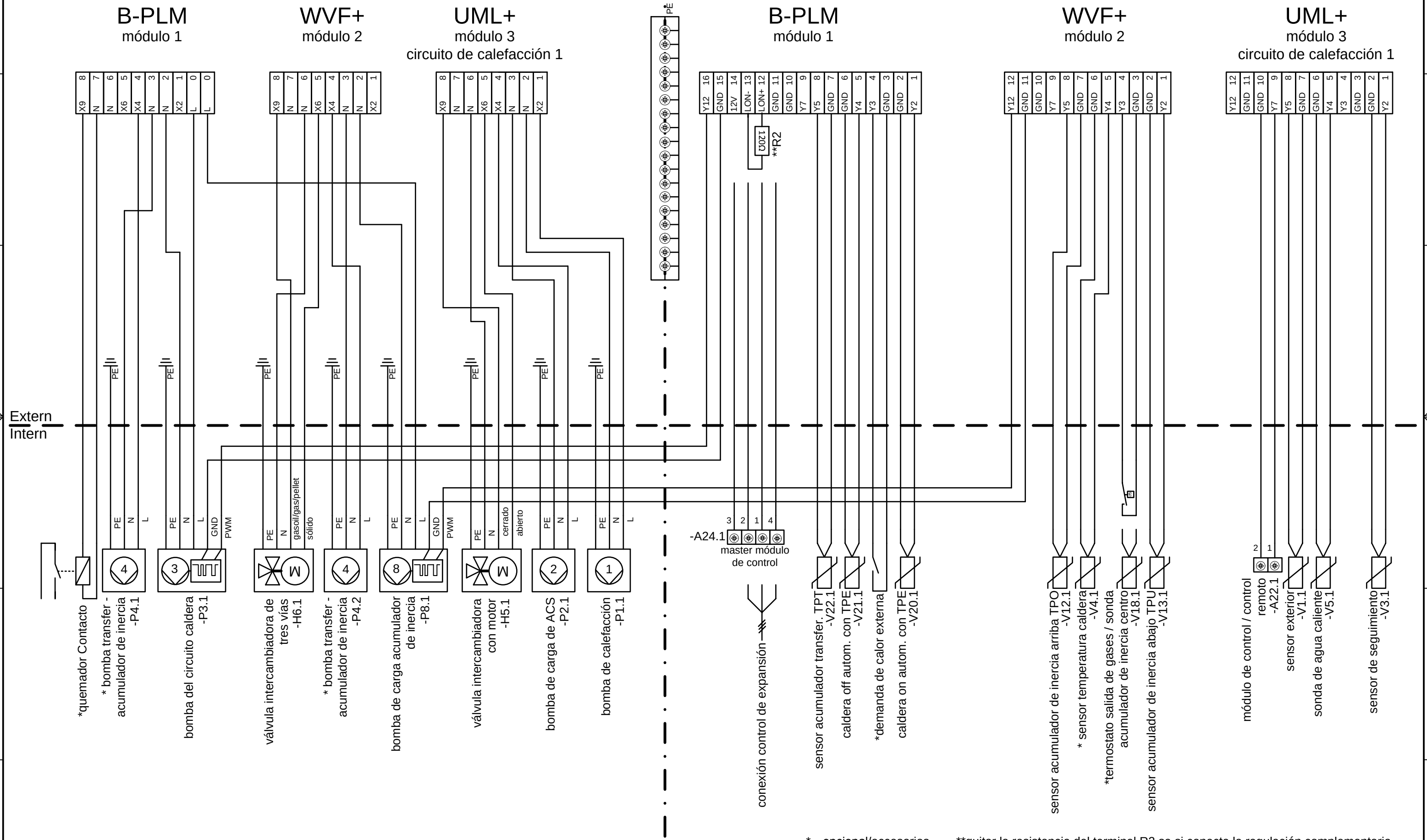
	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*bomba transfer acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

WVF+	módulo 2
gasoil/gas/pellet válvula intercambiadora de tres vías sólido	X9 8 N 7 N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1

UML+	módulo 3 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

092868/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor acumulador transfer. TPT	Y5 8 GND 7
*caldera off autom. con TPE	con GND 6 Y4 5
*demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	con GND 2 Y2 1

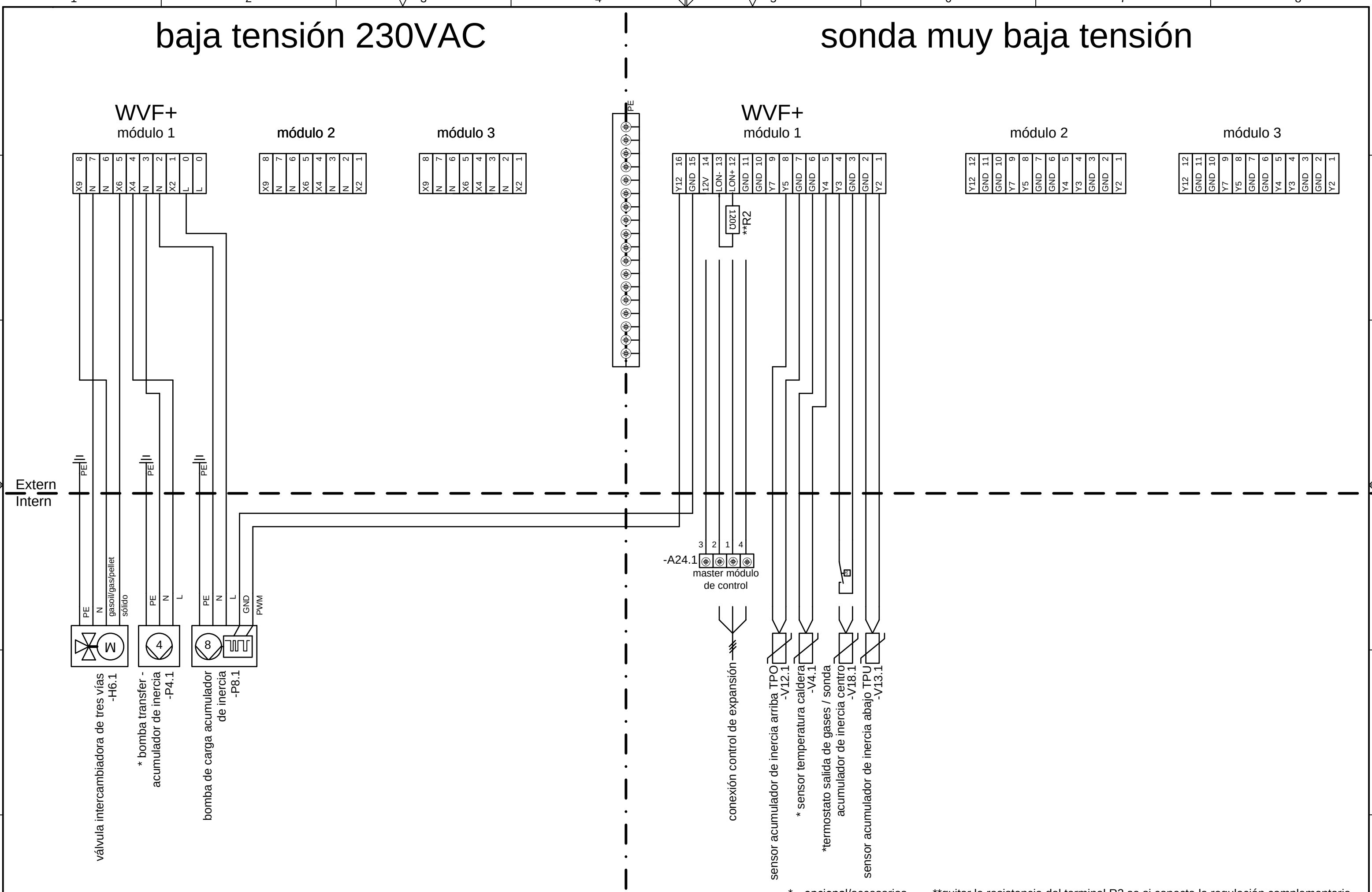
WVF+	módulo 2
PWM bomba de carga acumulador de inercia	Y12 12 GND 11
	GND 10 Y7 9
sensor acumulador de inercia arriba TPO	Y5 8 GND 7
*sensor de la caldera	GND 6 Y4 5
*termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
sensor acumulador de inercia abajo TPU	con GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	con GND 2 Y2 1

092868/01

baja tensión 230VAC

sonda muy baja tensión



-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
PWM bomba de carga acumulador de inercia	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10
sensor acumulador de inercia arriba TPO	Y7 9 Y5 8 GND 7
*sensor de la caldera	GND 6 Y4 5
*termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
sensor acumulador de inercia abajo TPU	GND 2 Y2 1

WVF+	módulo 1
gasoil/gas/pellet	X9 8 N 7
válvula intercambiadora de tres vías sólido	N 6 X6 5
*bomba transfer-acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9 Y5 8 GND 7
	GND 6 Y4 5 Y3 4 GND 3
	GND 2 Y2 1

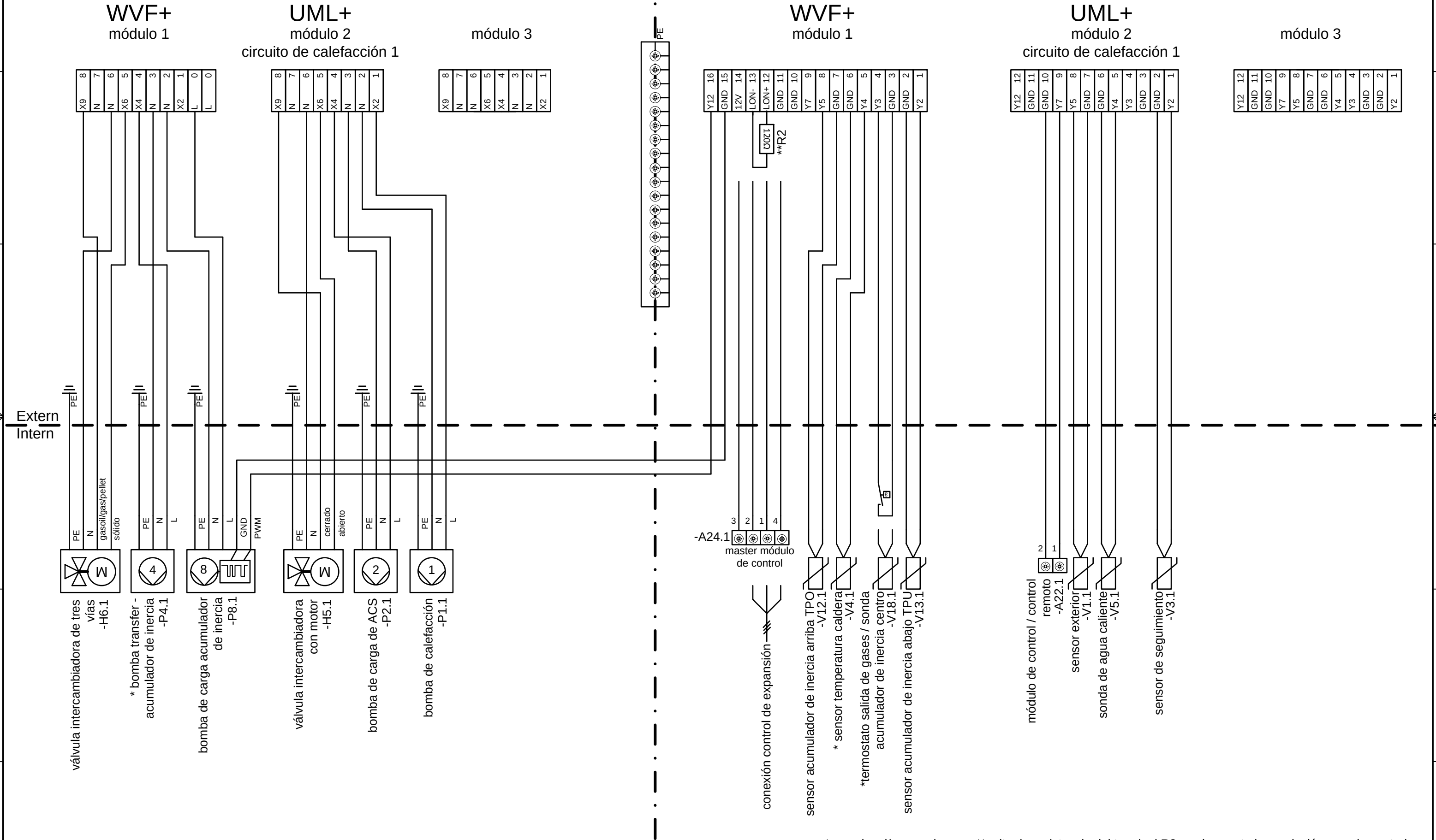
	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3 N 2 X2 1

092877/01

092877/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
gasoil/gas/pellet	X9 8
válvula intercambiador a de tres vías sólido	N 7 N 6 X6 5
bomba transfer acumulador de inercia	X4 4 N 3
	N 2
PWM fase continua 1	X2 1
PWM fase continua 2	L 0 L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

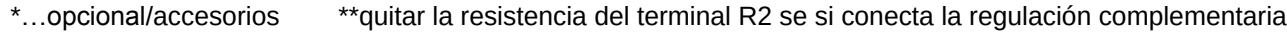
	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	módulo 1
PWM bomba de carga acumulador de inercia	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sensor acumulador de inercia arriba TPO	Y5 8 GND 7
*sensor temperatura caldera	GND 6 Y4 5
termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
sensor acumulador de inercia abajo TPU	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

sonda muy baja tensión



				Datum	08.07.2013	WVF+/UML+/UML+		MES P041 + H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente comutación automática combustibles sólidos con carga acumulador de inercia	Projekt : regulación		1 mm : 1 mm		
				Gezeichnet	ros								◀ ----- 2 ▶
				Geprüft	rot								
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092873/01				Blatt 092873/01		

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
gasoil/gas/pellet	X9 8
válvula intercambiador a de tres vías sólido	N 7 N 6 X6 5
*bomba transfer acumulador de inercia	X4 4 N 3
	N 2
PWM fase continua 1	X2 1 L 0
PWM fase continua 2	L 0

UML+	Modul 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

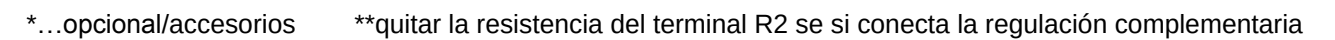
UML+	módulo 3 circuito de calefacción 2
cerrado c.c. 2	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 2	X4 4 N 3
bomba de calefacción c.c. 2	N 2 X2 1

WVF+	módulo 1
PWM bomba de carga acumulador de inercia	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sensor acumulador de inercia arriba	Y5 8 GND 7
*sensor temperatura caldera	GND 6 Y4 5
*termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
sensor acumulador de inercia abajo TPU	GND 2 Y2 1

UML+	Modul 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
sonda de agua caliente c.c. 2	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 2	GND 2 Y2 1

sonda muy baja tensión



					Datum	08.07.2013	B-PLM		MES P042 Pufferspeicher- módulo B-PLM	Projekt : regulación		1 mm : 1 mm	
					Gezeichnet	ros							
					Geprüft	rot							
Rev.	Änderung	Datum	Name		Genehmigt		Zeichnungs Nr.:	092889/01					◀ ----- 2 ▶
													Blatt 092889/01

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control	+12V 14 Lon- 13
conexión control de expansión	Lon+ 12 GND 11
	GND 10 Y7 9
*sensor acumulador transfer. TPT	Y5 8 GND 7
*caldera off autom. con TPE	GND 6 Y4 5
*demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*bomba transfer-acumulador de inercia	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

092890/01

baja tensión 230VAC

sonda muy baja tensión

B-PLM
módulo 1

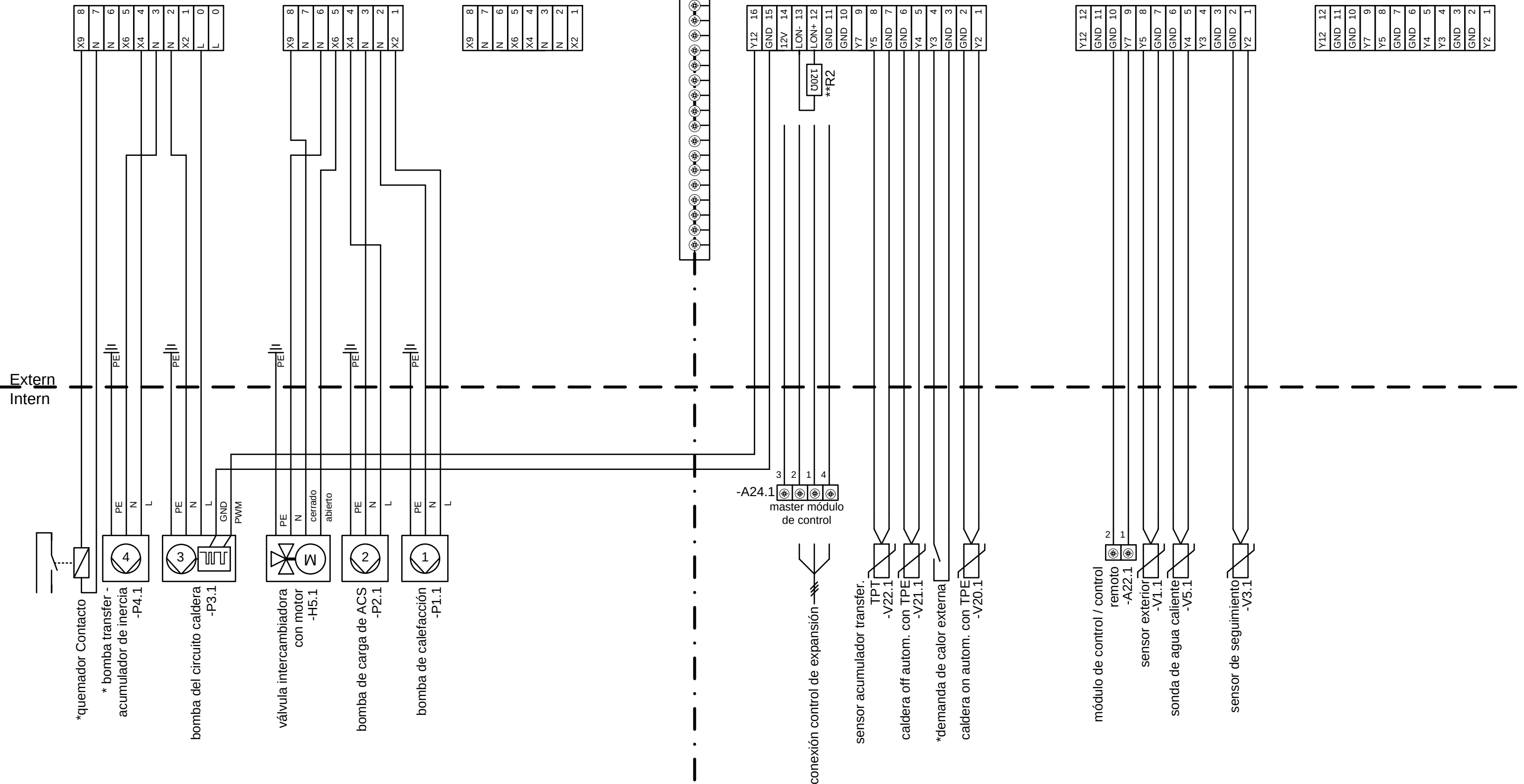
UML+
módulo 2
circuito de calefacción 1

módulo 3

B-PLM
módulo 1

UML+
módulo 2
circuito de calefacción 1

módulo 3



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	09.07.2013	B-PLM/UML+		MES P042 + H021 regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y modulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	092883/01				Blatt 092883/01

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*Transferpump- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

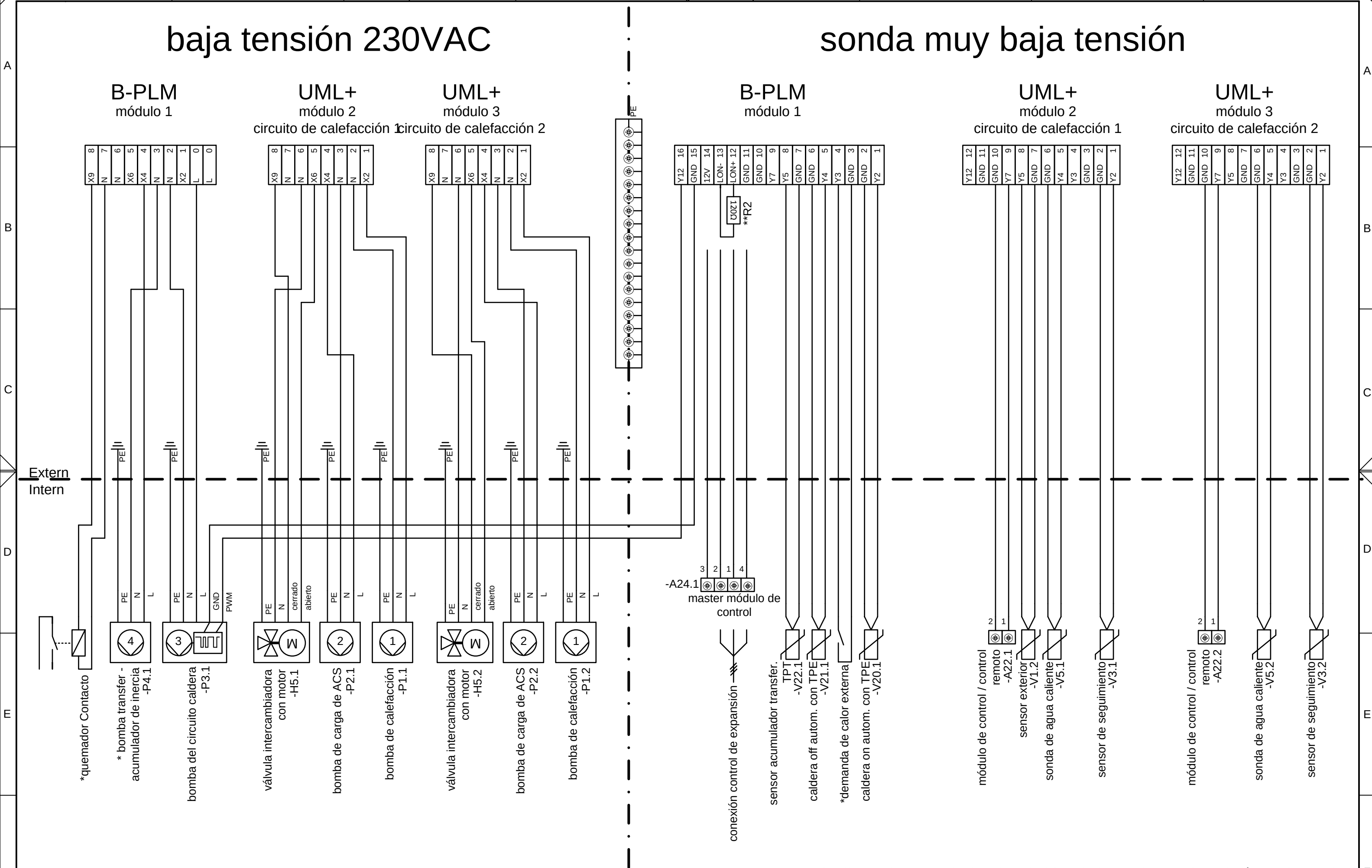
B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor acumulador transfer. TPT	Y5 8 GND 7
*caldera off autom. con TPE	con GND 6 Y4 5
*demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	con GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	09.07.2013	B-PLM/UML+/UML+		MES P042 + H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente y modulo de acumulador de inercia B-PLM	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						Zeichnungs Nr.:
Rev.	Änderung	Datum	Name	Geprüft	rot						Blatt 092886/01
				Genehmigt							

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
PWM fase continua 1	X2 1 L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

UML+	módulo 3 circuito de calefacción 2
cerrado c.c. 2	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 2	X4 4 N 3
bomba de calefacción c.c. 2	N 2 X2 1

092887/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor acumulador transfer. TPT	Y5 8 GND 7
*caldera off autom. con TPE	con GND 6 Y4 5
*demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	con GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
sonda de agua caliente c.c. 2	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 2	GND 2 Y2 1

092887/01

baja tensión 230VAC

sonda muy baja tensión

B-PLM
módulo 1

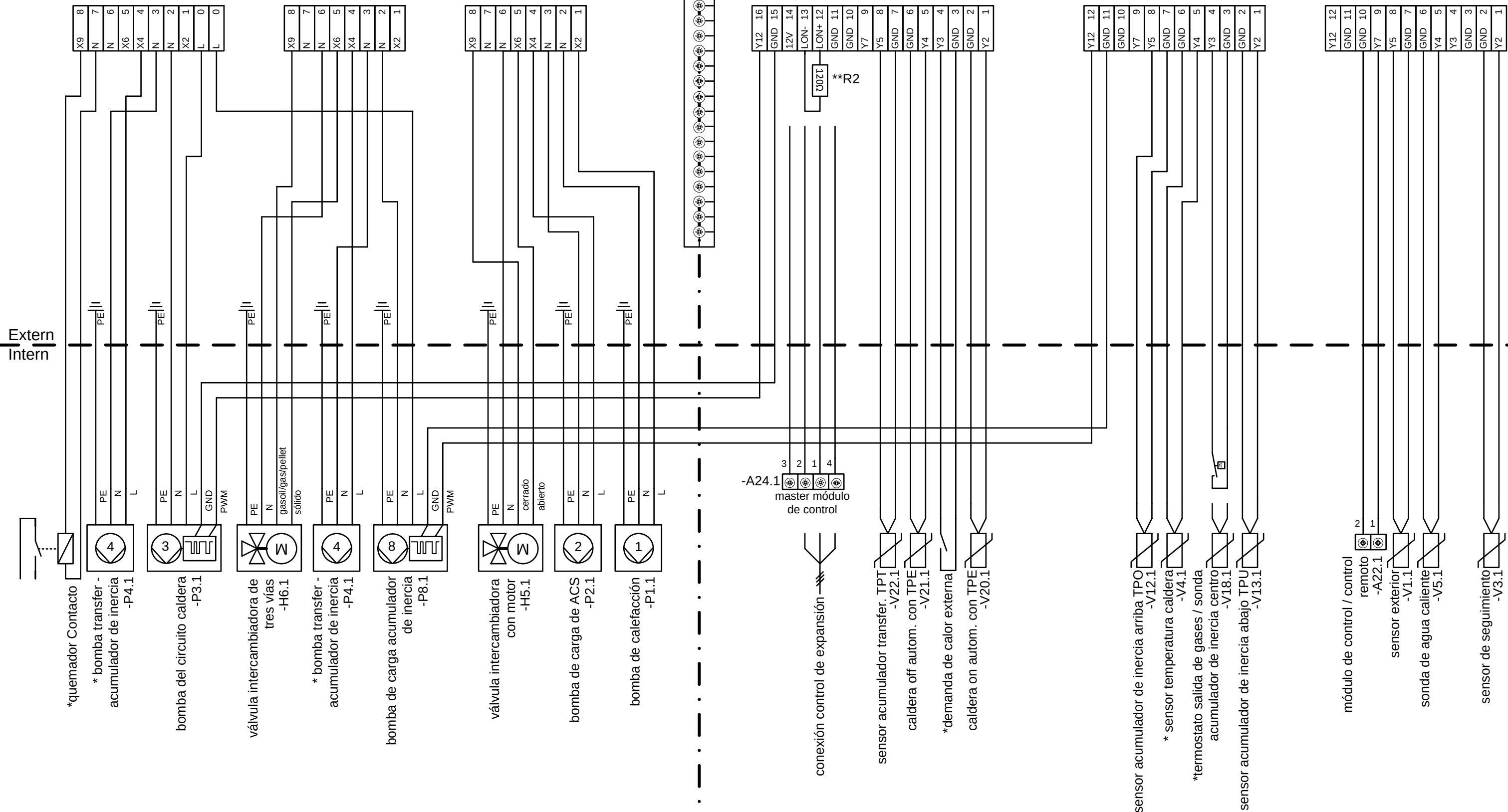
WVF+
módulo 2

UML+
módulo 3
circuito de calefacción 1

B-PLM
módulo 1

WVF+
módulo 2

UML+
módulo 3
circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	09.07.2013	B-PLM/WVF+/UML+		MES P042 + P041+ H021 regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y un módulo para combustibles sólidos WVF+ y modulo de acumulador de inercia B-PLM		Projekt : regulación				1 mm : 1 mm Blatt 092892/01	
				Gezeichnet	ros										
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:		092892/01							

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

WVF+	módulo 2
gasoil/gas/pellet válvula intercambiadora de tres vías sólido	X9 8 N 7 N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1

UML+	módulo 3 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

092893/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor acumulador transfer. TPT	Y5 8 GND 7
*caldera off autom. con TPE	con GND 6 Y4 5
*demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	con GND 2 Y2 1

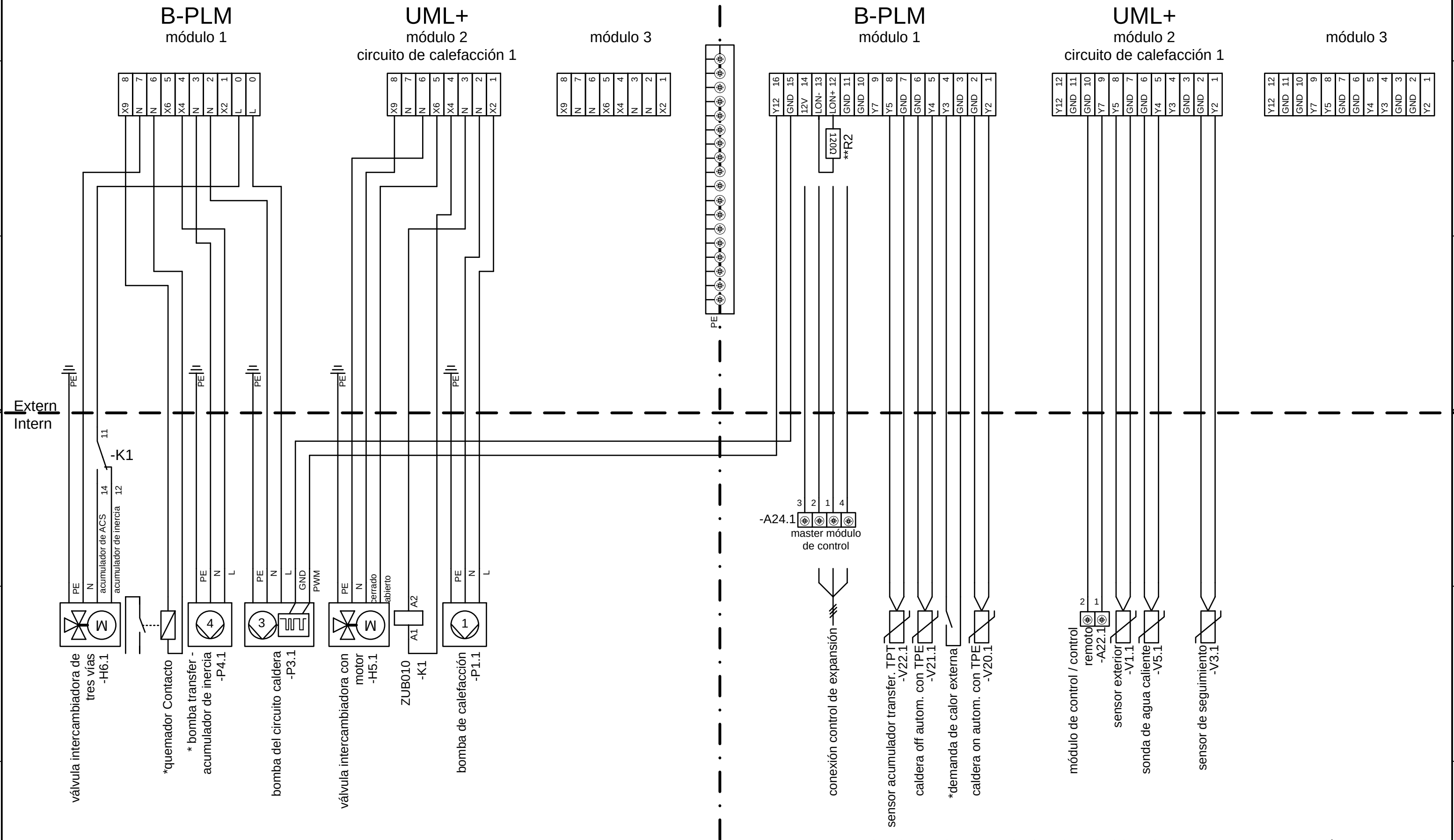
WVF+	módulo 2
PWM bomba de carga acumulador de inercia	Y12 12 GND 11
	GND 10 Y7 9
sensor acumulador de inercia arriba	Y5 8 GND 7
*sensor de la caldera	GND 6 Y4 5
*termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
acumulador de inercia abajo TPU	GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

092893/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	12.08.2013	B-PLM/UML+		MES ZUB010 ZUB010 SYS403 válvula intercambiadora de tres vías acumulador de inercia - acumulador de ACS	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	ros						◀ ----- 2 ▶
				Geprüft	rot						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094554/01				Blatt 094554/01

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
contacto del quemador	X9 8 N 7
	N 6 X6 5
* bomba transfer	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML +	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
Contactador -K1 c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor acumulador transfer. TPT	Y5 8 GND 7
* caldera off autom. con TPE	con GND 6 Y4 5
* demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

UML +	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

baja tensión 230VAC

sonda muy baja tensión

B-PLM
módulo 1

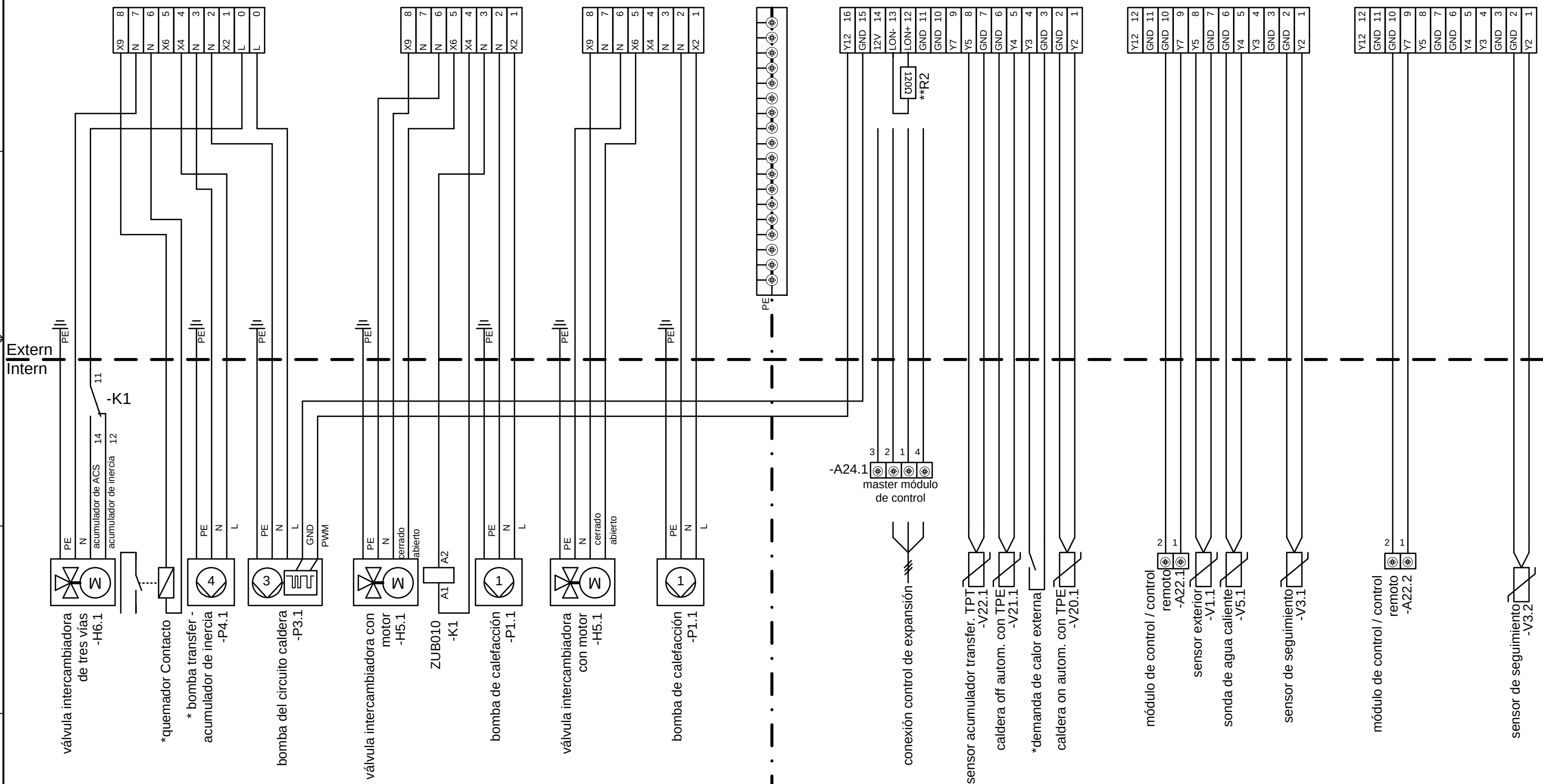
UML+
módulo 2
circuito de calefacción 1

UML+
módulo 3
circuito de calefacción 2

B-PLM
módulo 1

UML+
módulo 2
circuito de calefacción 1

UML+
módulo 3
circuito de calefacción 2



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	12.08.2013	B-PLM/UML+/UML+		MES ZUB010 + H024 ZUB010 SYS403 válvula intercambiadora de tres vías acumulador de inercia - acumulador de ACS		Projekt : regulación				1 mm : 1 mm	
				Gezeichnet	ros									◀ ----- 2 ▶	
				Geprüft	rot										
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094556/01							Blatt 094556/01	

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
contacto del quemador	X9 8 N 7
	N 6 X6 5
* bomba transfer	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
Contactador -K1 c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

UML+	módulo 3 circuito de calefacción 2
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
	X4 4 N 3
bomba de calefacción c.c. 2	N 2 X2 1

094557/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor acumulador transfer. TPT	Y5 8 GND 7
* caldera off autom. con TPE	con GND 6 Y4 5
* demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 3 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 2	GND 2 Y2 1

094557/01

-XA	bloque de conexión
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	módulo 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

MES	módulo 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	módulo 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	módulo 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	módulo 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	módulo 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 1 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
sonda de agua caliente c.c. 2	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 2	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 2
cerrado c.c. 2	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 2	X4 4 N 3
bomba de calefacción c.c. 2	N 2 X2 1

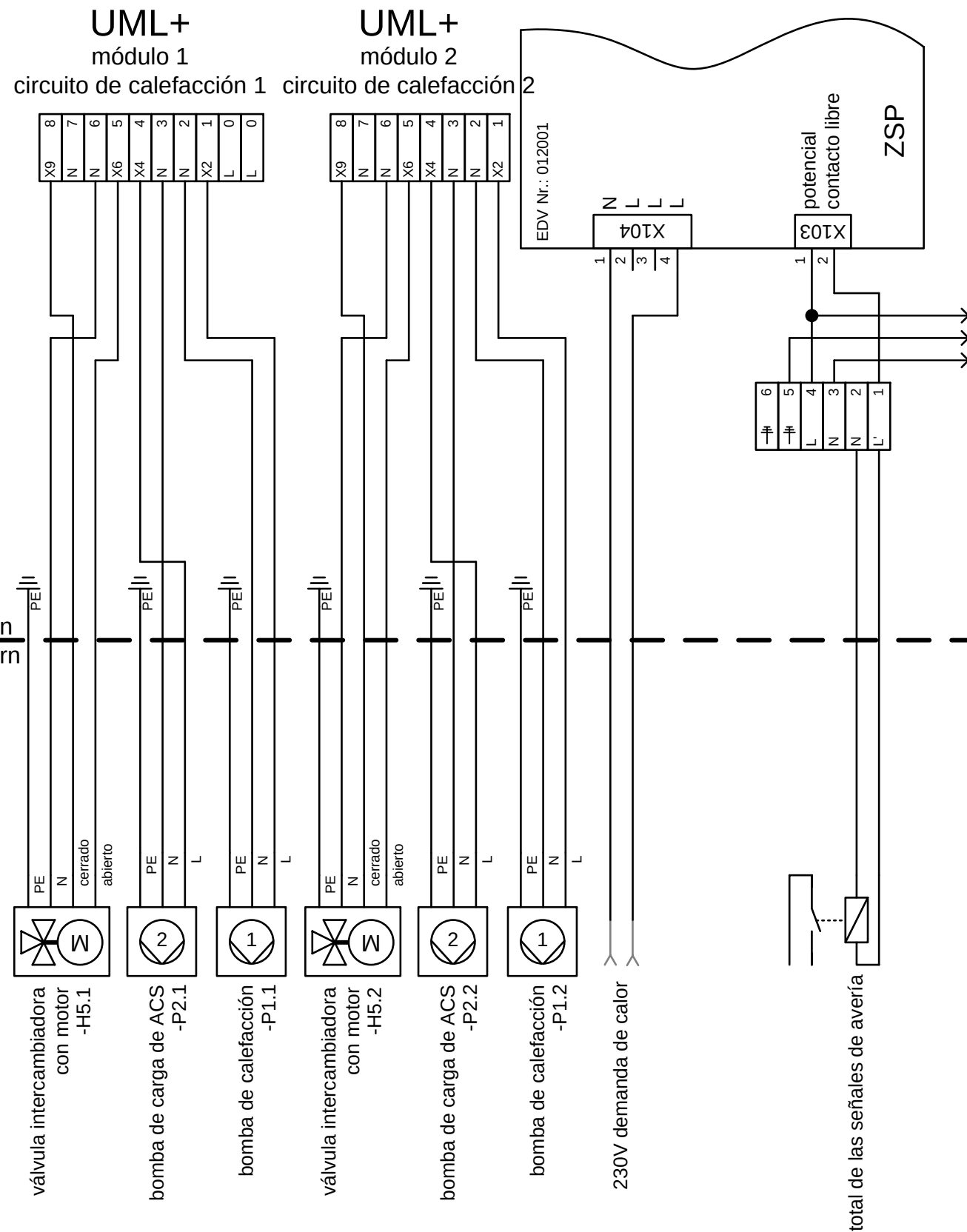
	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

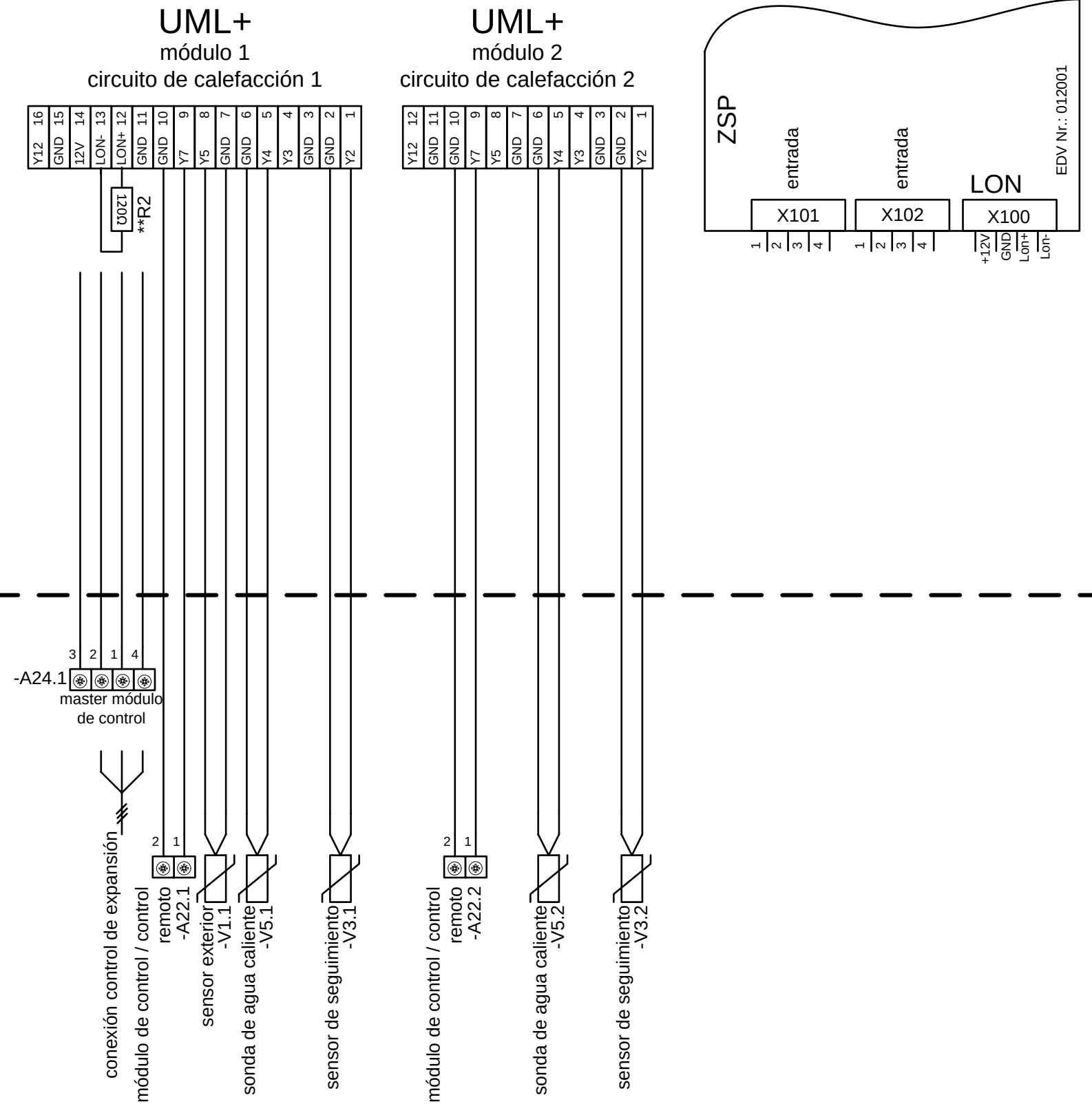
092675/01

092675/01

baja tensión 230VAC



sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	UML+ /UML+ /ZSP S		MES H021 + H024 + ZSP S regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente y ZSP S	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros	Zeichnungs Nr.:	094608/00				Blatt 094608/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	placa adicional
PE	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 1 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 2
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
	Y5 8 GND 7
sonda de agua caliente c.c. 2	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 2	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 2
cerrado c.c. 2	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 2	X4 4 N 3
bomba de calefacción c.c. 2	N 2 X2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

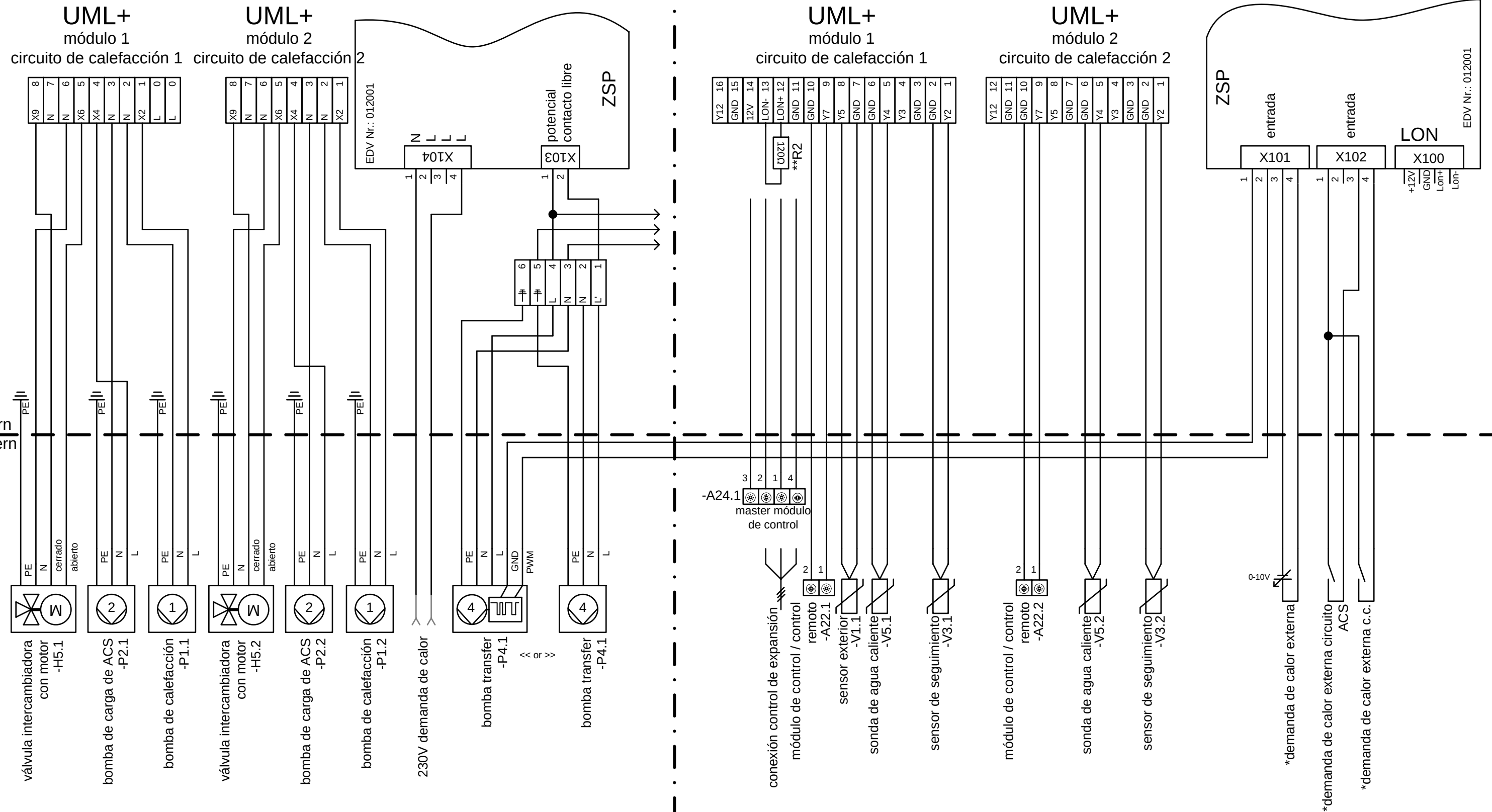
	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092675/01

092675/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	UML+/UML+/ZSP W		MES H021 + H024 + ZSP W regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente y ZSP W	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros	Zeichnungs Nr.: 094610/00					Blatt 094610/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	placa adicional
	PE PE
fase continua	L N
bomba transfer	N L'

-XSP	placa adicional
GND -X101 /2	PWM bomba transfer
GND -X101 /4	demanda de calor 0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

EDV Nr. 094812/00

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

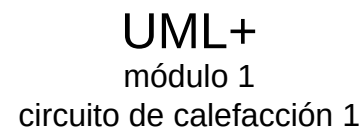
	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

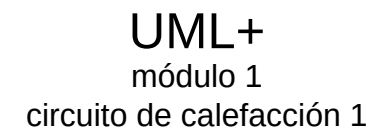
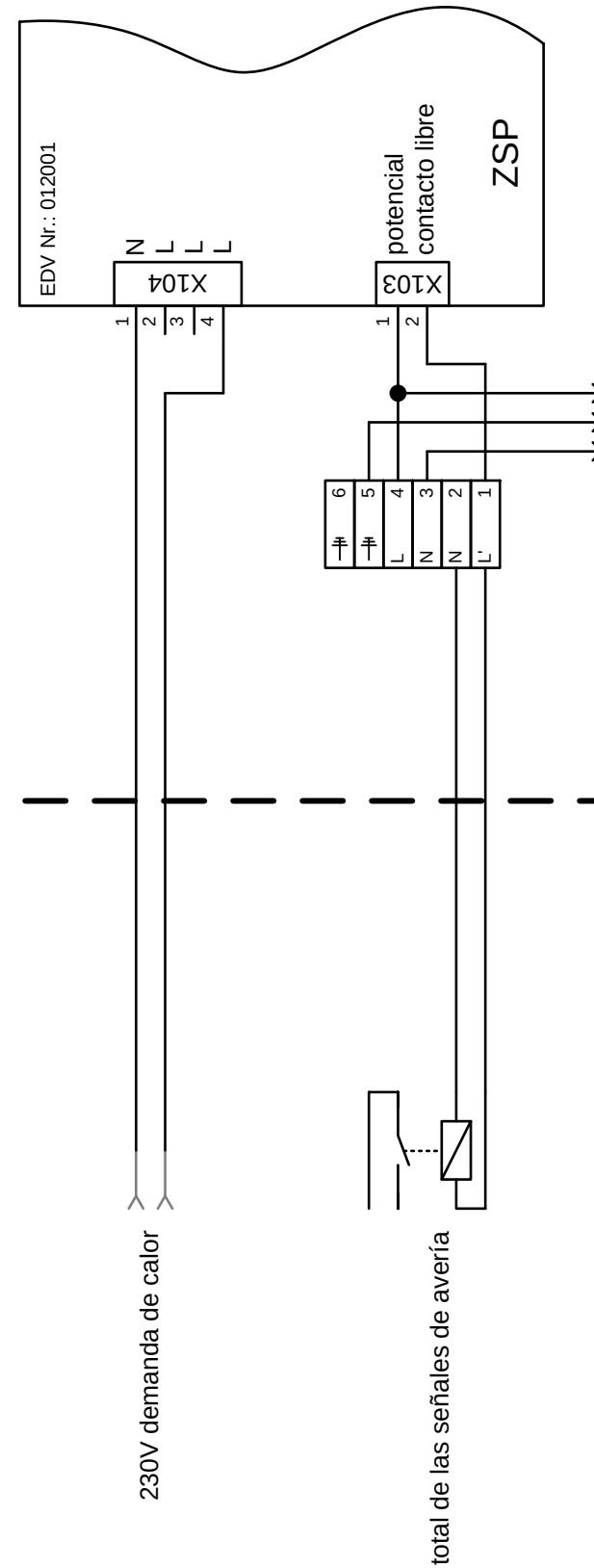
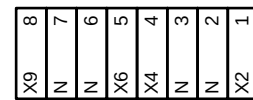
092671/01

baja tensión 230VAC

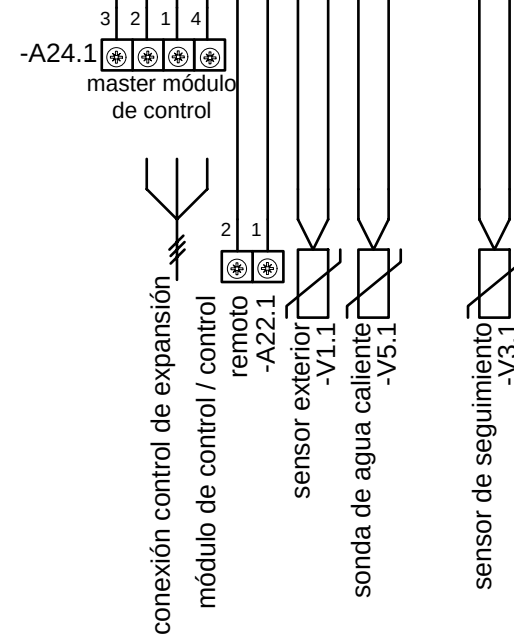
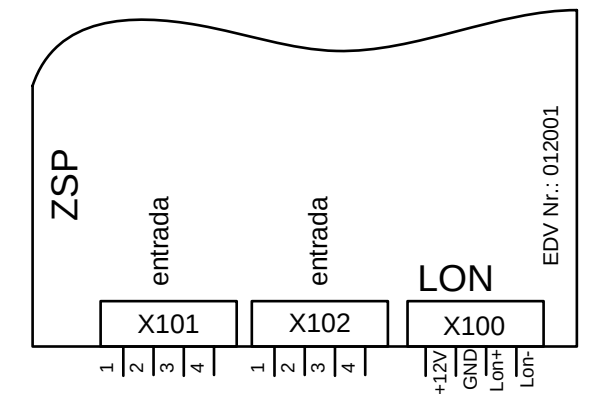
sonda muy baja tensión



módulo 2



módulo 2



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	UML+ /ZSP S		MES H021 + ZSP S regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y ZSP S	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094611/00				Blatt 094611/00

-XZSP	placa adicional
PE	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

EDV Nr. 094810/00

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

UML+	módulo 1 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092671/01

UML+	módulo 1 circuito de calefacción 1
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

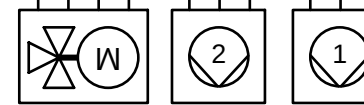
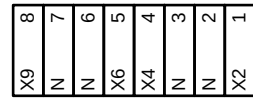
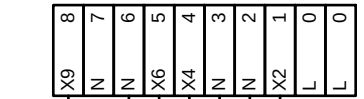
092671/01

baja tensión 230VAC

sonda muy baja tensión

UML+
módulo 1
circuito de calefacción 1

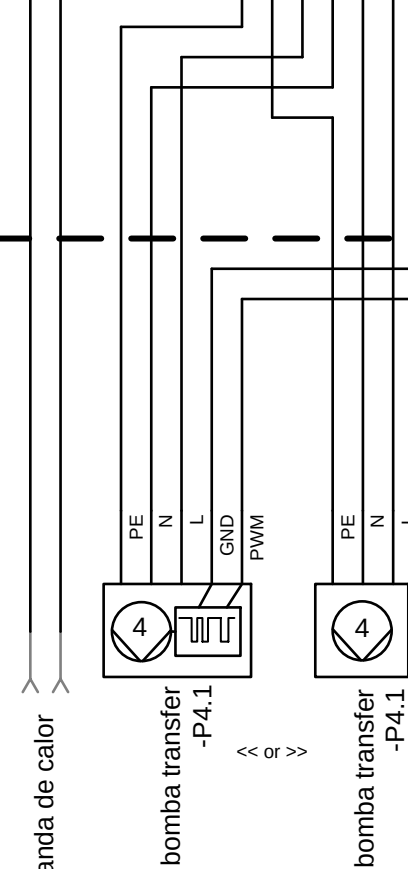
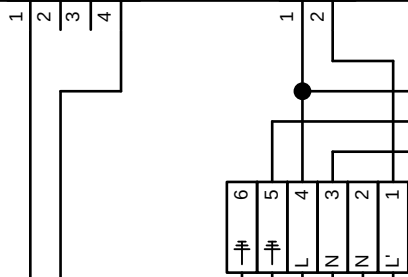
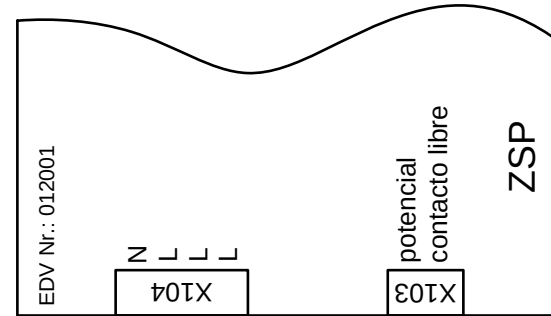
módulo 2



válvula intercambiadora
con motor
-H5.1

bomba de carga de ACS
-P2.1

bomba de calefacción
-P1.1



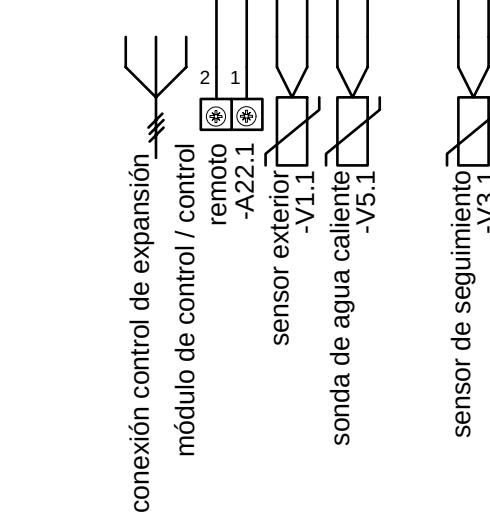
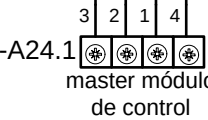
230V demanda de calor

bomba transfer
-P4.1

bomba transfer
-P4.1

UML+
módulo 1
circuito de calefacción 1

módulo 2

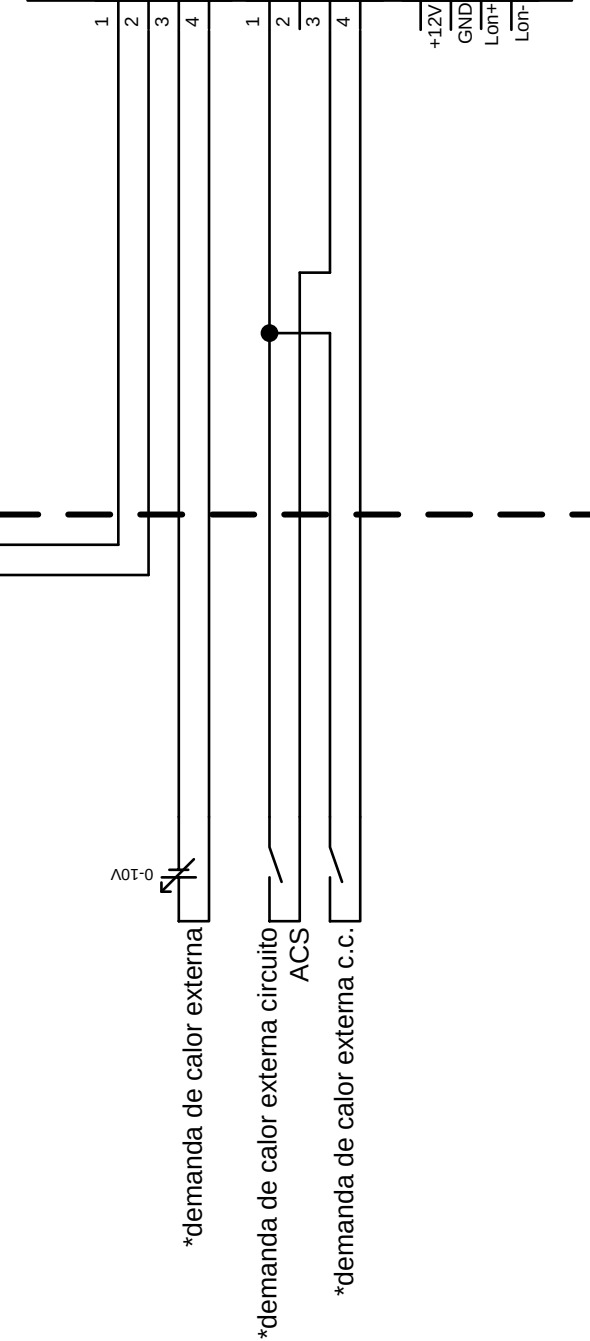
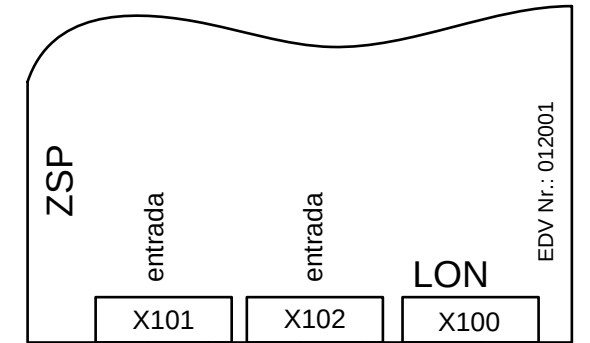


conexión control de expansión
módulo de control / control
remoto
-A22.1

sensor exterior
-V1.1

sonda de agua caliente
-V5.1

sensor de seguimiento
-V3.1



*demanda de calor externa

*demanda de calor externa circuito
ACS

*demanda de calor externa c.c.

*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

UML+ / ZSP W

Zeichnungs Nr.: 094612/00

MES H021 + ZSP W

regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y ZSP W

Projekt :
regulación

windhager

1 mm : 1 mm

Blatt 094612/00

-XZSP	placa adicional
	PE PE
fase continua	L N
bomba transfer	N L'

EDV Nr. 094812/00

-XSP	placa adicional
GND -X101 /2	PWM bomba transfer
GND -X101 /4	demanda de calor 0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemadorContacto	X9 8 N 7
	N 6 X6 5
*bomba transfer acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	módulo 1
	PWM bomba de circuito de la caldera
	Y12 16 GND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	GND 10 Y7 9
	*sensor acumulador transfer. TPT Y5 8 GND 7
	*caldera off autom. con TPE GND 6 Y4 5
	*demanda de calor externa Y3 4 GND 3
	caldera on autom. con TPE GND 2 Y2 1

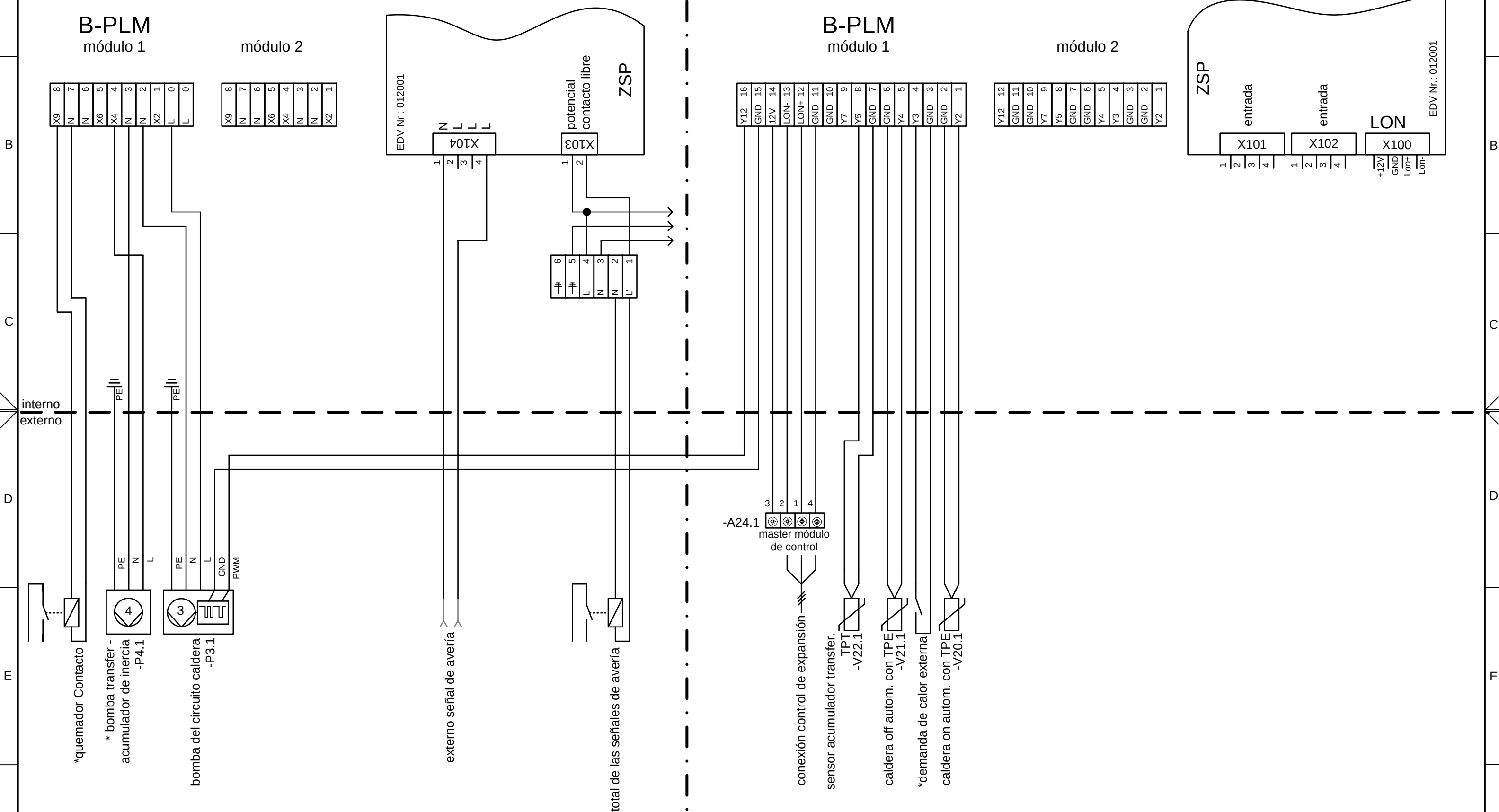
	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	B-PLM / ZSP S		MES P030 + ZSP S con control quemador gasoil/gas/pellet y ZSP S	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	rot						◀
				Geprüft	ros	Zeichnungs Nr.:	094613/00				Blatt 094613/00
Rev.	Änderung	Datum	Name	Genehmigt							

-XZSP	placa adicional
PE	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemadorContacto	X9 8 N 7
	N 6 X6 5
*bomba transfer acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092864/00

B-PLM	módulo 1
	PWM bomba de circuito de la caldera
	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
*sensor acumulador transfer. TPT	Y5 8 GND 7
*caldera off autom. con TPE	con GND 6 Y4 5
*demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	con GND 2 Y2 1

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092864/00

baja tensión 230VAC

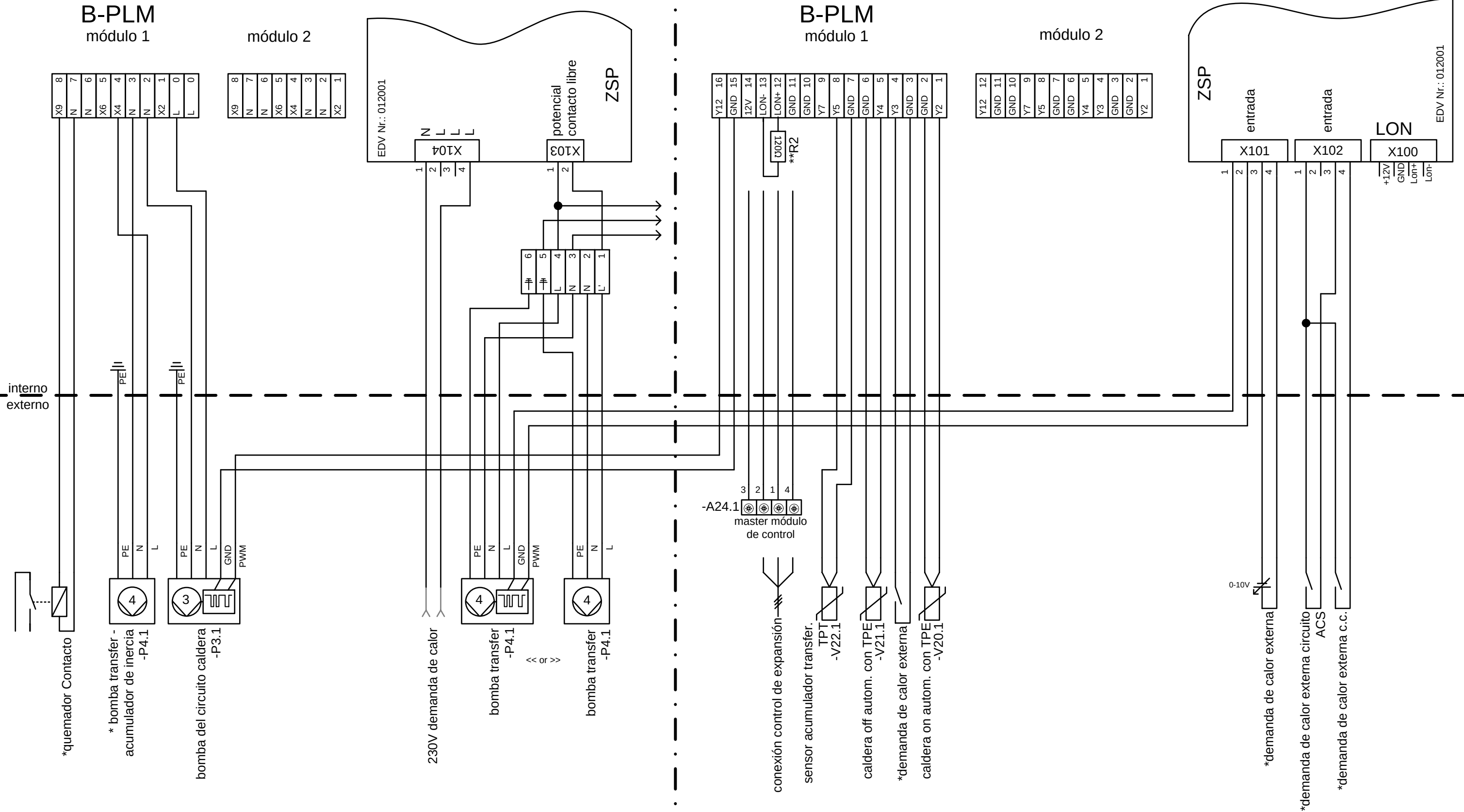
sonda muy baja tensión

B-PLM
módulo 1

módulo 2

B-PLM
módulo 1

módulo 2



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / ZSP W

Zeichnungs Nr.: 094614/00

MES P030 + ZSP W

con control quemador gasoil/gas/pellet y ZSP W

Projekt :
regulación

windhager

1 mm : 1 mm

Blatt 094614/00

-XZSP	placa adicional
PE	PE
PE	PE
fase continua	L N
bomba transfer	N L'

EDV Nr. 094812/00

-XSP	placa adicional
GND	PWM bomba transfer
-X101 /2	
GND	demanda de calor
-X101 /4	0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
PWM bomba de carga acumulador de inercia	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
sensor acumulador de inercia arriba TPO	Y5 8 GND 7
*sensor de la caldera	GND 6 Y4 5
*termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
sensor acumulador de inercia abajo TPU	GND 2 Y2 1

WVF+	módulo 1
gasoil/gas/pellet válvula intercambiadora de tres vías sólido	X9 8 N 7 N 6 X6 5
*bomba transfer-acumulador de inercia	X4 4 N 3
	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

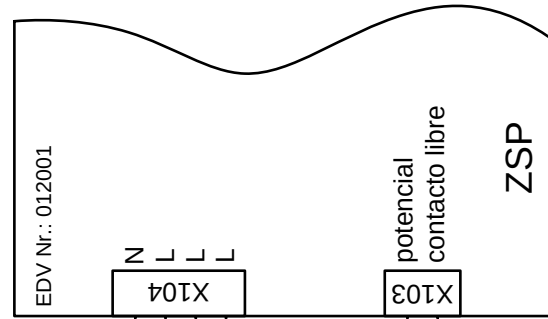
baja tensión 230VAC

sonda muy baja tensión

B-PLM módulo 1

UML+ módulo 2

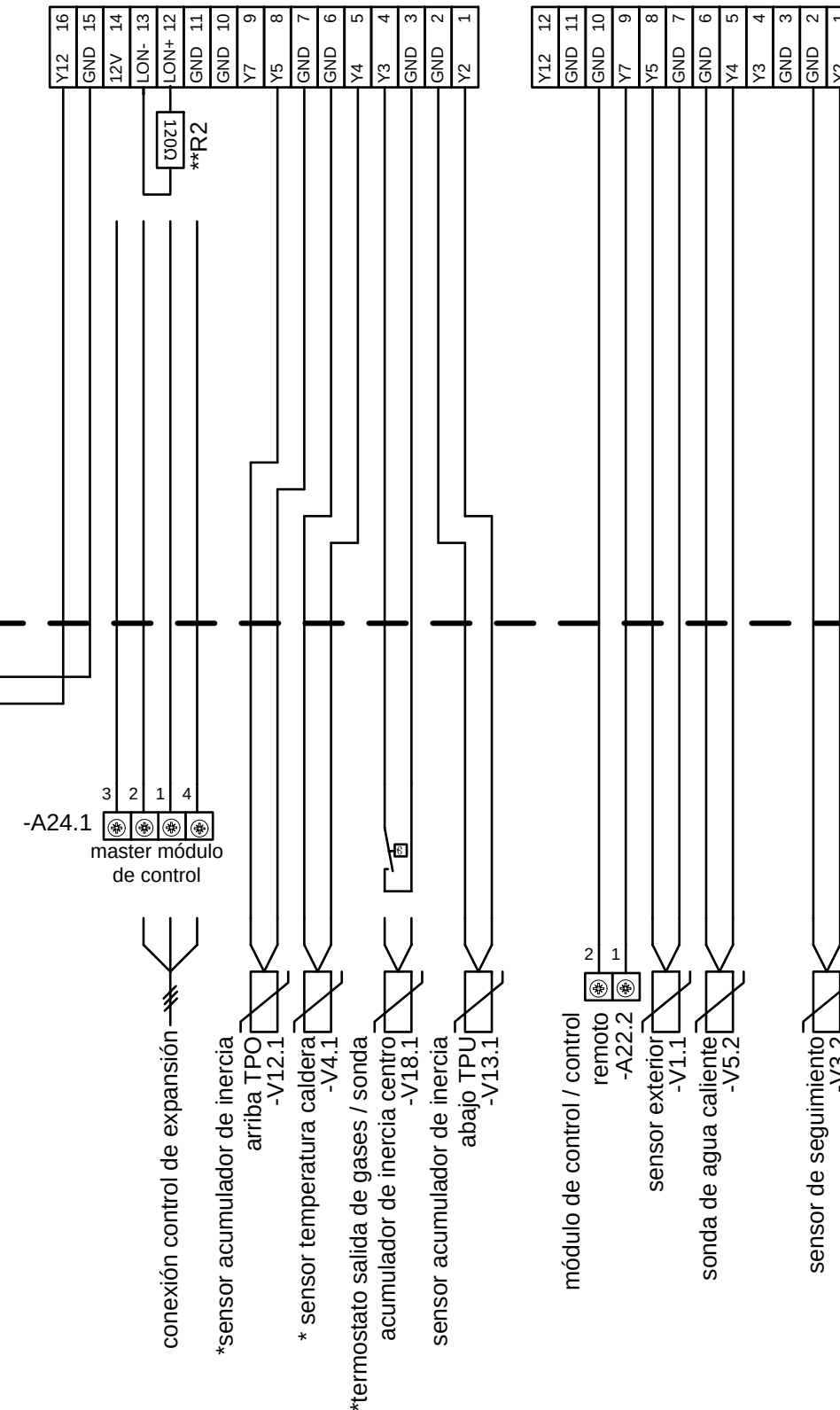
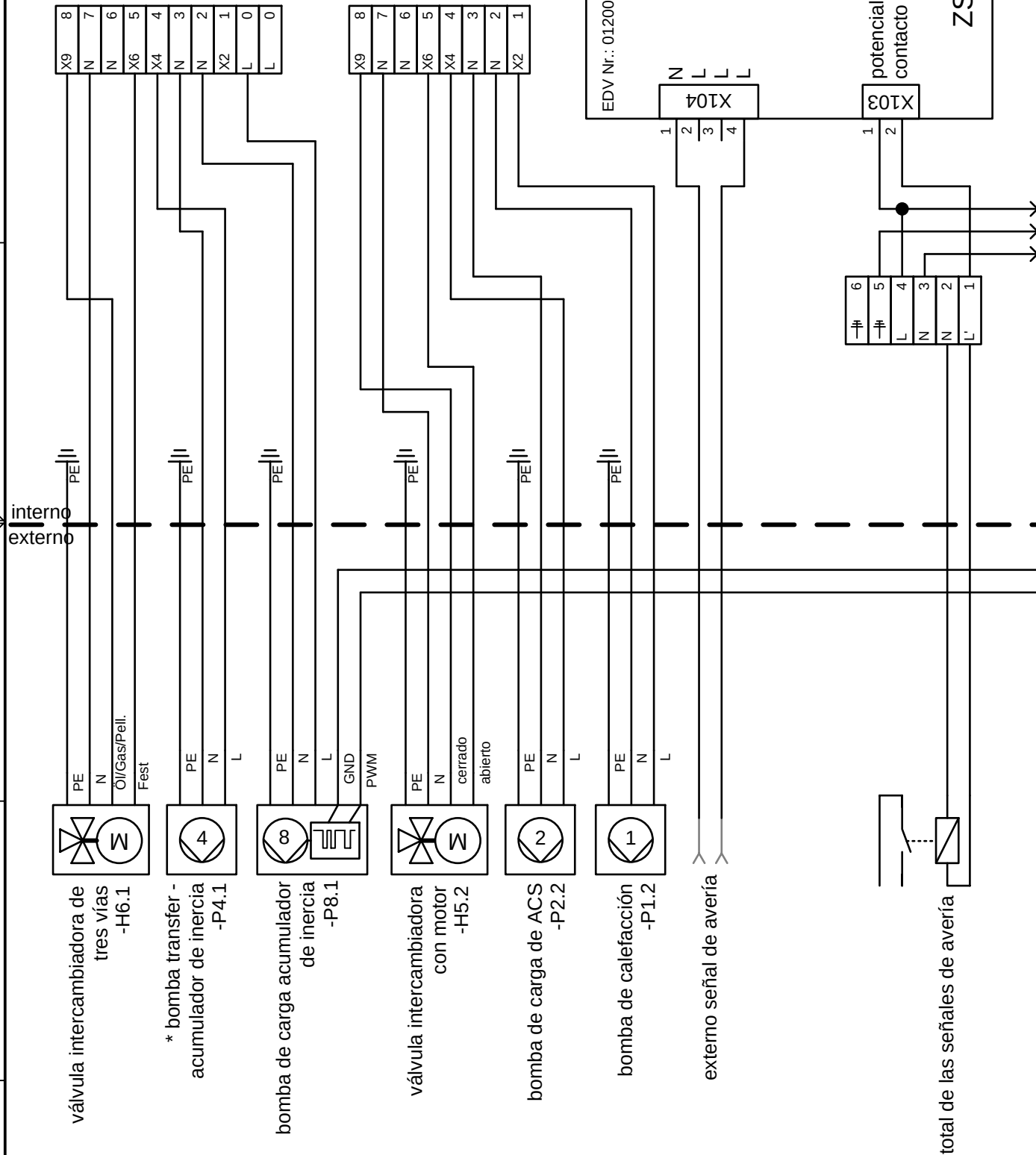
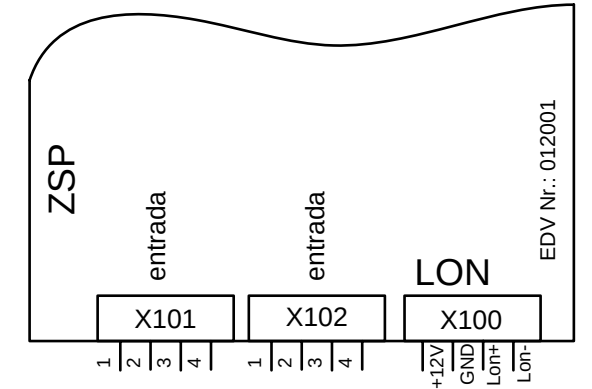
circuito de calefacción 1



B-PLM módulo 1

UML+ módulo 2

circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	B-PLM/ UML+ / ZSP S		MES P041 + H021 + ZSP S regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y acumulador de inercia-módulo B-PLM y ZSP S	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094624/00					
												Blatt 094624/00

-XZSP	placa adicional
	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
gasoil/gas/pellet	X9 8 N 7
válvula intercambiadora de tres vías sólido	N 6 X6 5
*bomba transfer-acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

WVF+	módulo 1
PWM bomba de carga acumulador de inercia	Y12 16 GND 15
master módulo de control	+12V 14 Lon- 13
conexión control de expansión	Lon+ 12 GND 11
	GND 10 Y7 9
sensor acumulador de inercia arriba TPO	Y5 8 GND 7
*sensor de la caldera	GND 6 Y4 5
*termostato salida de gases sonda acumulador de inercia centro	Y3 4 GND 3
sensor acumulador de inercia abajo TPU	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

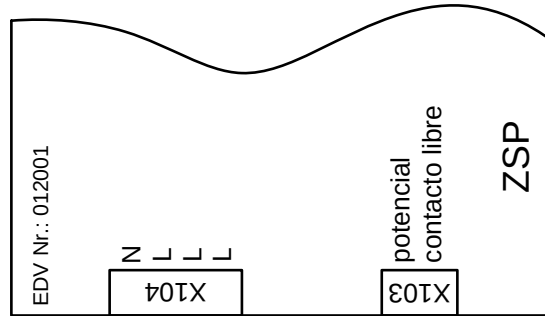
	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

baja tensión 230VAC

WVF+
módulo 1

UML+
módulo 2

circuito de calefacción 1

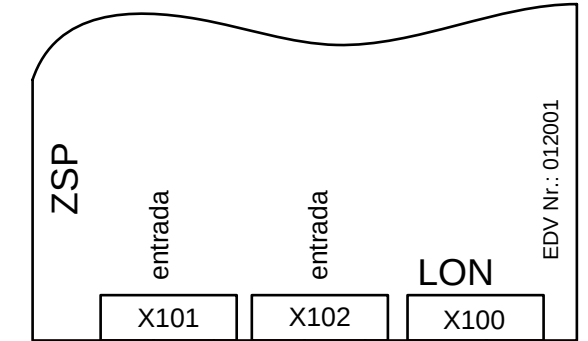
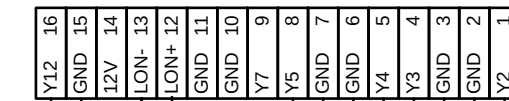


sonda muy baja tensión

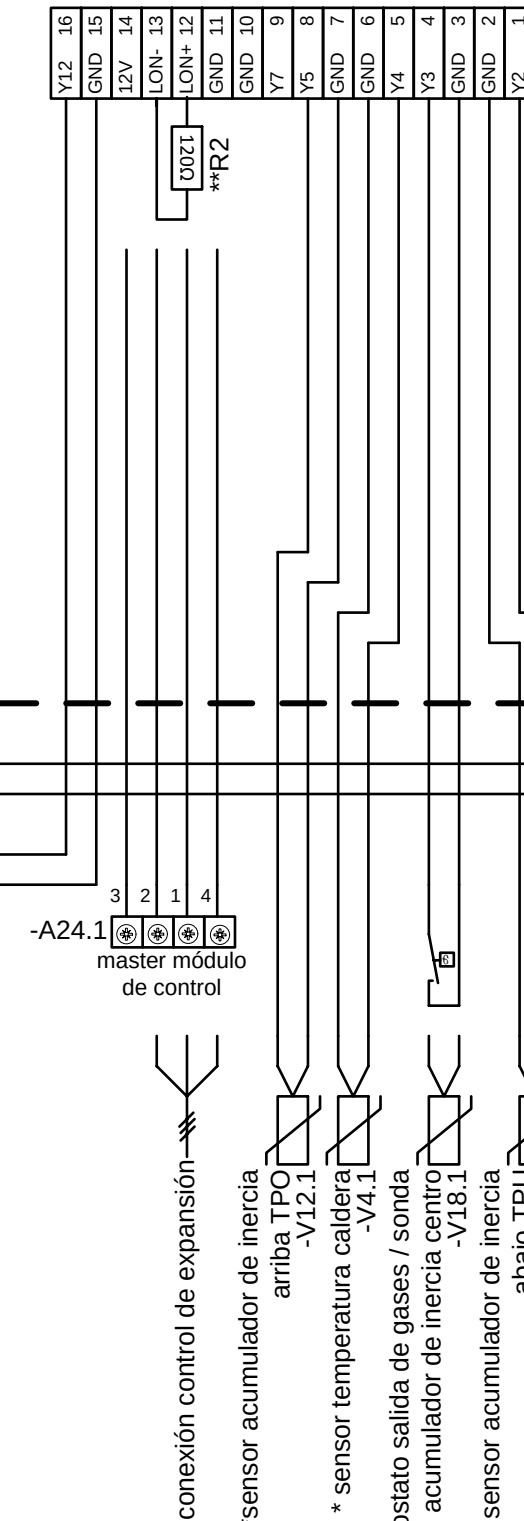
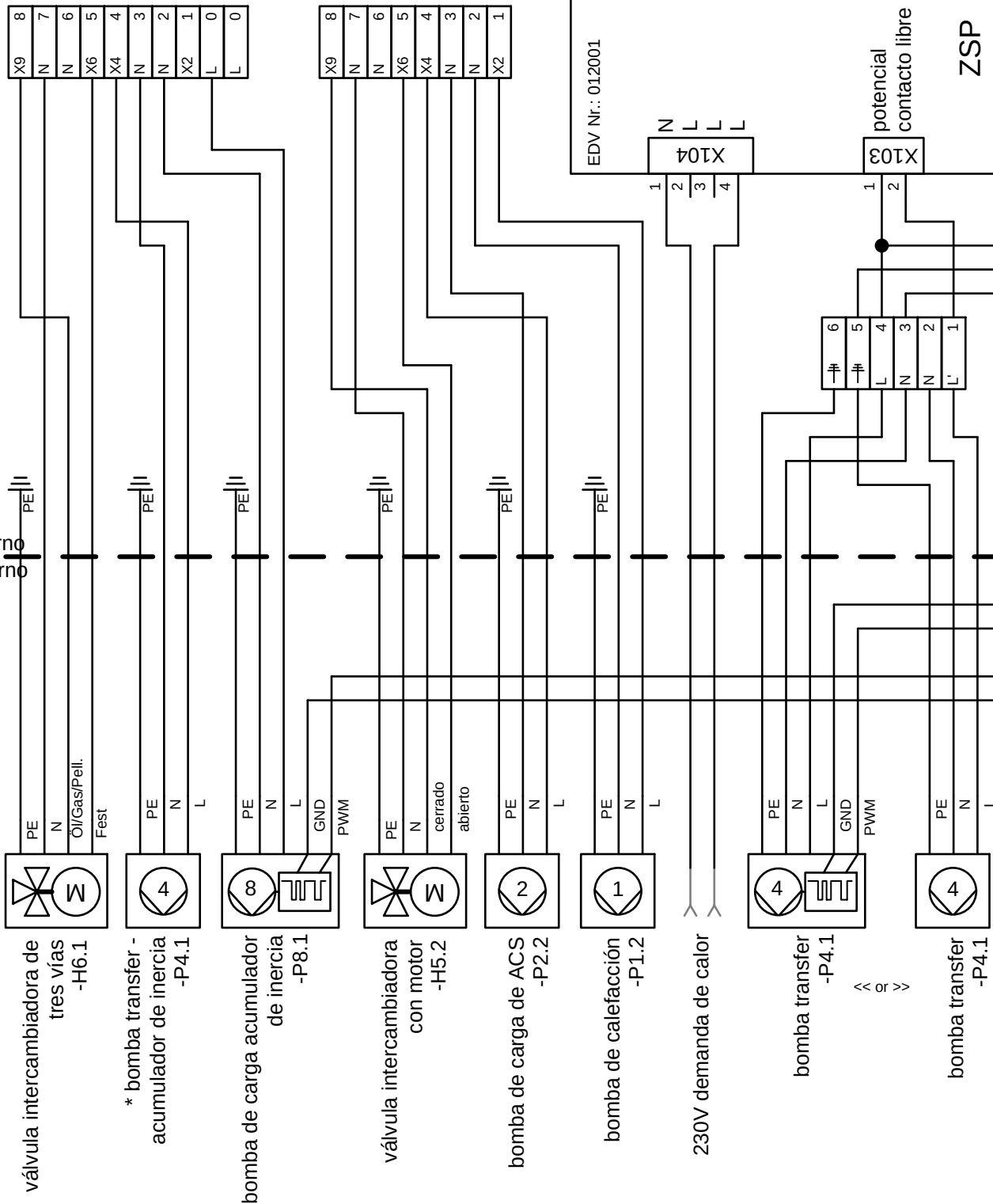
WVF+
módulo 1

UML+
módulo 2

circuito de calefacción 1



interno
externo



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	WVF+ / UML+ / ZSP W		MES P041 + H021 + ZSP W regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente comutación automática combustibles sólidos con carga acumulador de inercia y ZSP W	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	rot						◀ ----- 2 ▶
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094626/00				Blatt 094626/00

-XZSP	placa adicional
	PE PE
fase continua	L N
bomba transfer	N L'

EDV Nr. 094812/00

-XSP	placa adicional
GND -X101 /2	PWM bomba transfer
GND -X101 /4	demanda de calor 0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
gasoil/gas/pellet	X9 8 N 7
válvula intercambiadora de tres vías sólido	N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	módulo 1
	PWM bomba de carga Y12 16 acumulador de inerciaGND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	GND 10 Y7 9
	sensor acumulador de inercia arriba TPO Y5 8 GND 7
	*sensor de la caldera GND 6 Y4 5
	*termostato salida de gases Y3 4 sonda acumulador de inercia centro GND 3
	sensor acumulador de inercia abajo TPU GND 2 Y2 1

	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

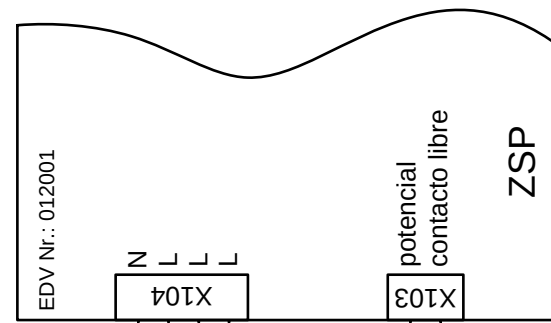
	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

baja tensión 230VAC

WVF+
módulo 1

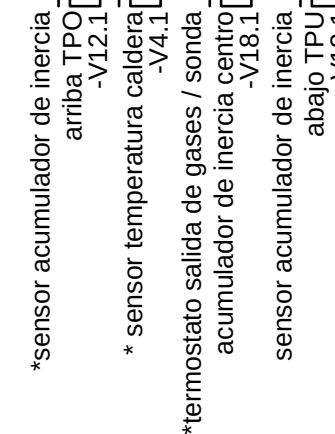
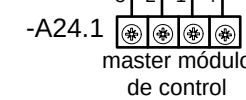
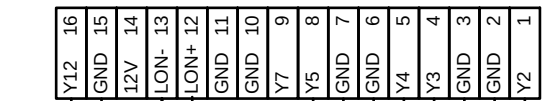
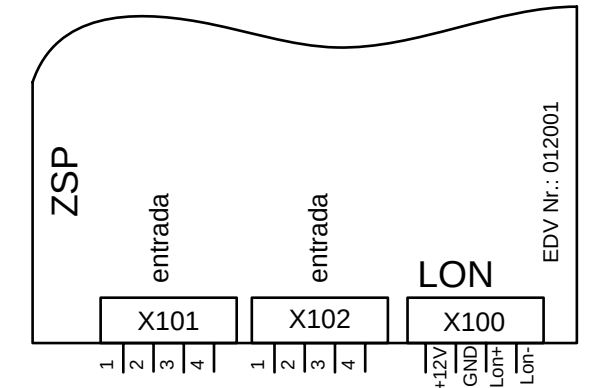
módulo 2



sonda muy baja tensión

WVF+
módulo 1

módulo 2



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	WVF / ZSP S		MES P041 + ZSP S comutación automática combustibles sólidos con carga acumulador de inercia y ZSP S	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094616/00				 2 	
												Blatt 094616/00

-XZSP	placa adicional
	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

WVF+	módulo 1
gasoil/gas/pellet	X9 8 N 7
válvula intercambiadora de tres vías sólido	N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	módulo 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092877/01

WVF+	módulo 1
	PWM bomba de carga Y12 16 acumulador de inerciaGND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	GND 10 Y7 9
	sensor acumulador de inercia arriba TPO Y5 8 GND 7
	*sensor de la caldera GND 6 Y4 5
	*termostato salida de gases Y3 4 sonda acumulador de inercia centro GND 3
	sensor acumulador de inercia abajo TPU GND 2 Y2 1

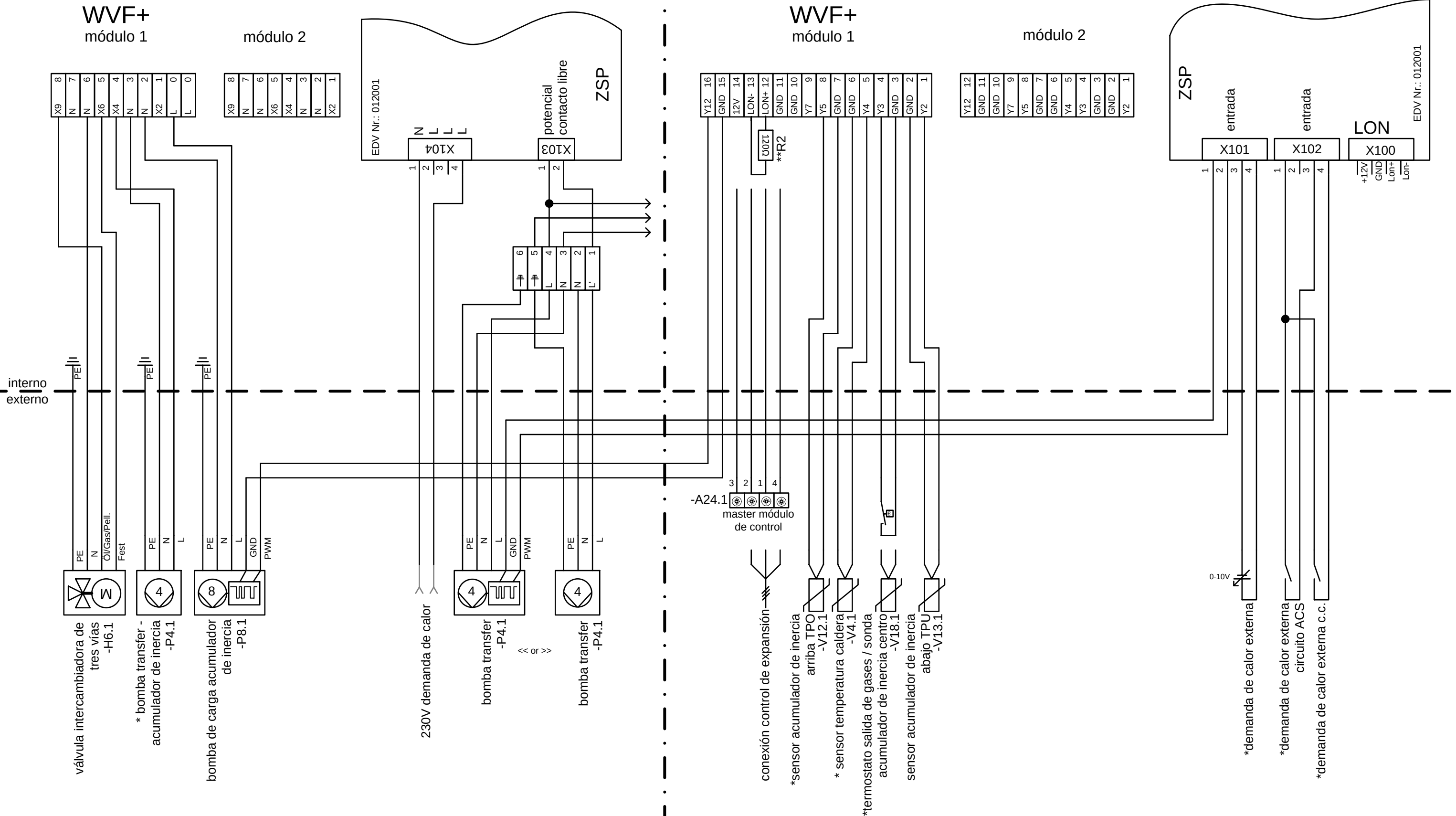
	módulo 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092877/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum 24.06.2013				WVF+ / ZSP W				MES P041 + ZSP W				Projekt : regulación				1 mm : 1 mm			
Gezeichnet rot				Zeichnungs Nr.: 094617/00				comutación automática combustibles sólidos con carga acumulador de inercia y ZSP W				windhager				Blatt 094617/00			
Geprüft ros																			
Genehmigt																			
Rev.				Änderung				Datum				Name							

-XZSP	placa adicional
PE	PE
PE	PE
fase continua	L N
bomba transfer	N L'

EDV Nr. 094812/00

-XSP	placa adicional
GND	PWM bomba transfer
-X101 /2	
GND	demanda de calor
-X101 /4	0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

-XA	bloque de conexión
	230VAC L 1
	interno L' 2 L' 3
	230VAC N 4
	interno N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*Transferpump- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
bomba de carga de ACS c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

B-PLM	módulo 1
	PWM bomba de circuito de la caldera Y12 16 GND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	GND 10 Y7 9
	*sensor acumulador transfer. TPT Y5 8 GND 7
	*caldera off autom. con TPE GND 6 Y4 5
	*demanda de calor externa Y3 4 GND 3
	caldera on autom. con TPE GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
	módulo de control GND 10 control remoto Y7 9
	sensor exterior Y5 8 GND 7
	sonda de agua GND 6 caliente c.c. 1 Y4 5
	Y3 4 GND 3
	sensor de seguimiento GND 2 c.c. 1 Y2 1

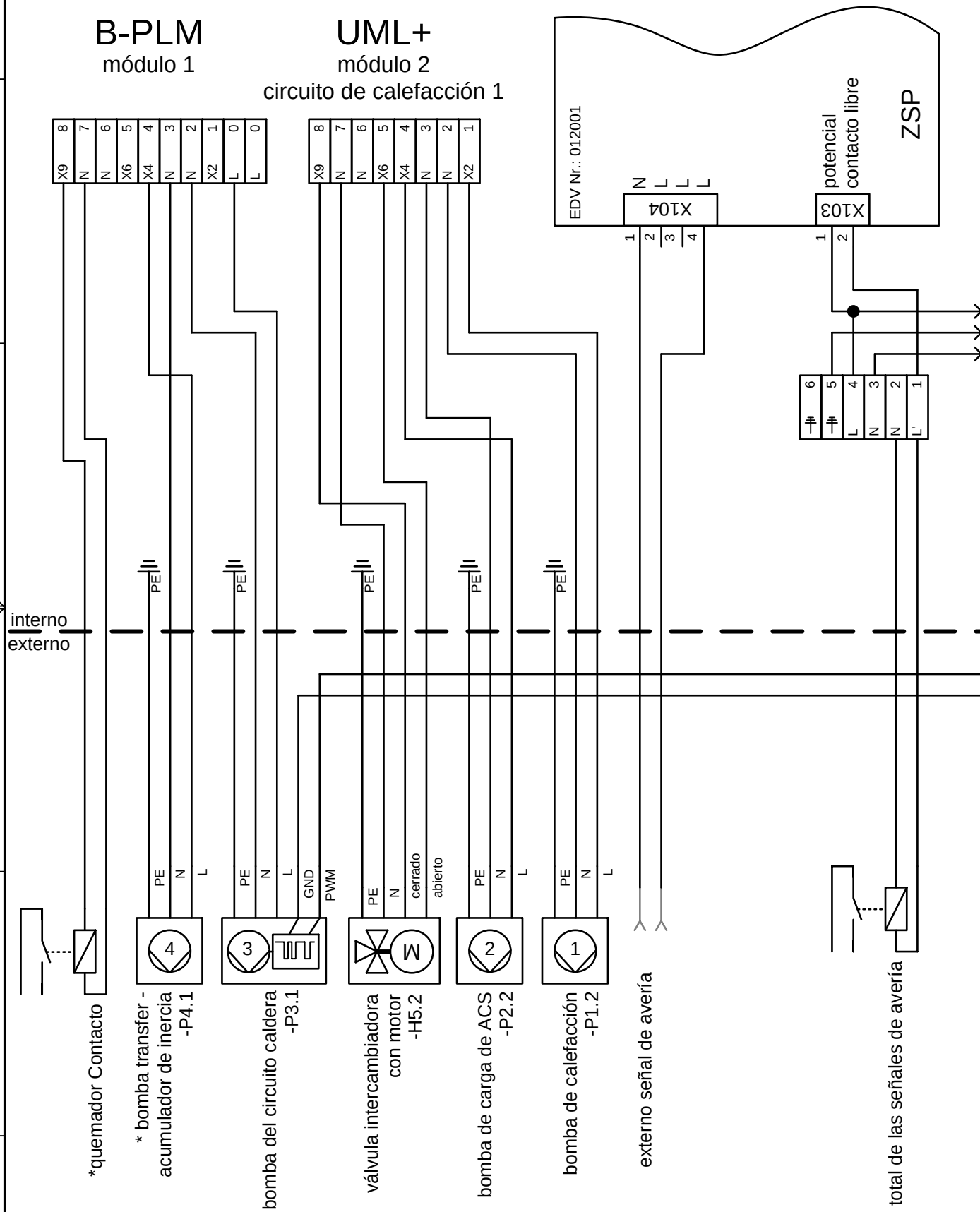
	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

baja tensión 230VAC

B-PLM
módulo 1

UML+
módulo 2

circuito de calefacción 1

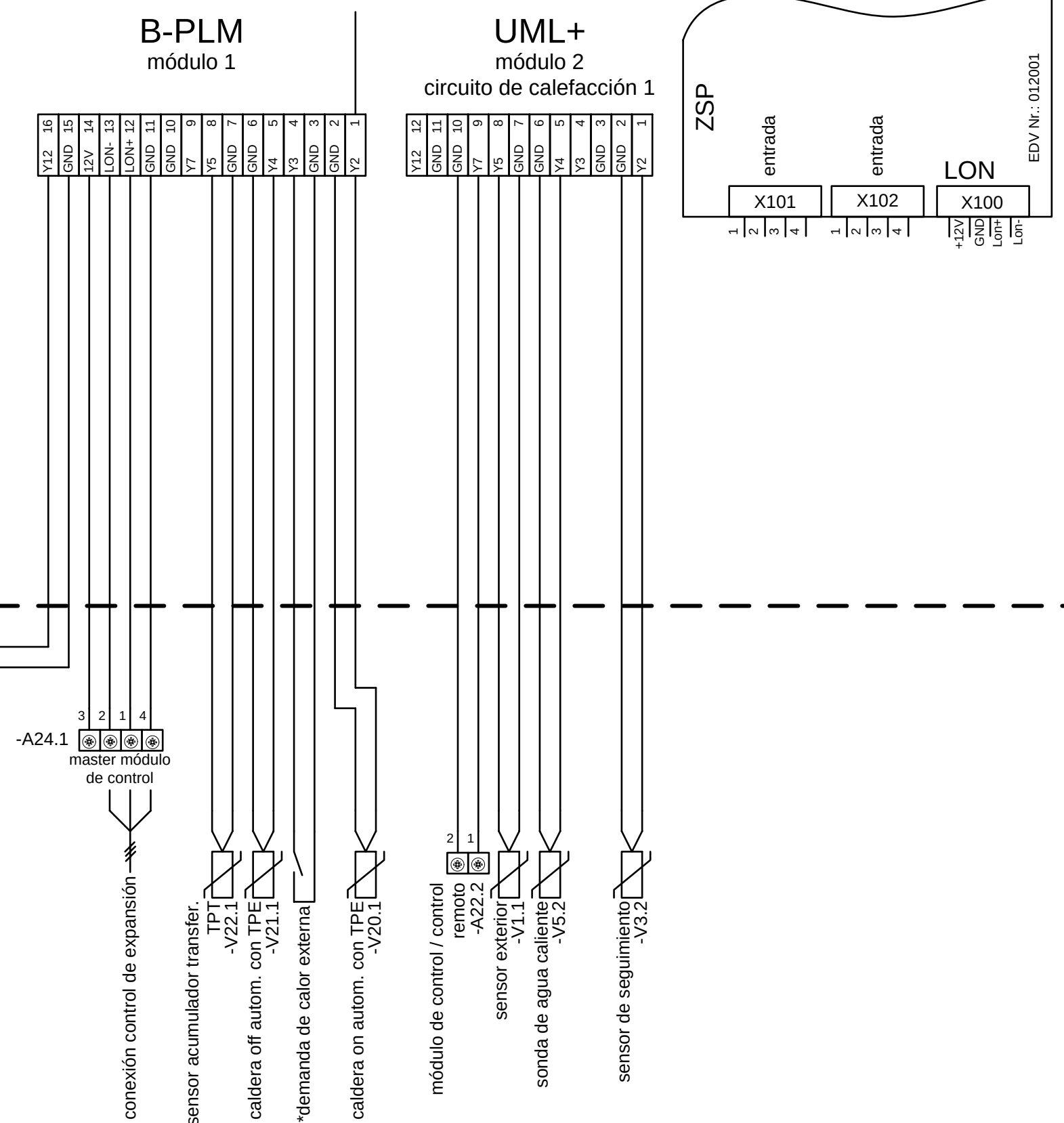


sonda muy baja tensión

B-PLM
módulo 1

UML+
módulo 2

circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / UML+ / ZSP S

Zeichnungs Nr.: 094620/00

MES P042 + H021 + ZSP S

regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y acumulador de inercia-módulo B-PLM y ZSP S

Projekt :
regulación

windhager

1 mm : 1 mm

Blatt 094620/00

-XZSP	placa adicional
	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

EDV Nr. 094810/00

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

-XA	bloque de conexión	
	230VAC	L 1
	interno	L' 2 L' 3
	230VAC	N 4
	interno	N' 5 N' 6

B-PLM	módulo 1	
*quemador Contacto	X9 8	N 7
	N 6	X6 5
*Transferpump- acumulador de inercia	X4 4 N 3	
	N 2	
	X2 1	
PWM fase continua 1	L 0	
PWM fase continua 2	L 0	

UML+	módulo 2	circuito de calefacción 1
	cerrado c.c. 1	X9 8 N 7
	válvula intercambiadora con motor abierto	N 6 X6 5
	bomba de carga de ACS c.c. 1	X4 4 N 3
	bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3	
	X9 8	
	N 7	
	N 6	
	X6 5	
	X4 4	
	N 3	
	N 2	
	X2 1	

B-PLM	módulo 1	
	PWM bomba de circuito de la caldera	Y12 16 GND 15
	master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
		GND 10 Y7 9
	*sensor acumulador transfer. TPT	Y5 8 GND 7
	*caldera off autom. con TPE	con GND 6 Y4 5
	*demanda de calor externa	Y3 4 GND 3
	caldera on autom. con TPE	con GND 2 Y2 1

UML+	módulo 2	circuito de calefacción 1
		Y12 12 GND 11
	módulo de control control remoto	GND 10 Y7 9
	sensor exterior	Y5 8 GND 7
	sonda de agua caliente c.c. 1	GND 6 Y4 5
		Y3 4 GND 3
	sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 3	
	Y12 12	GND 11
	GND 10	Y7 9
	Y5 8	GND 7
	GND 6	Y4 5
	Y3 4	GND 3
	GND 2	Y2 1

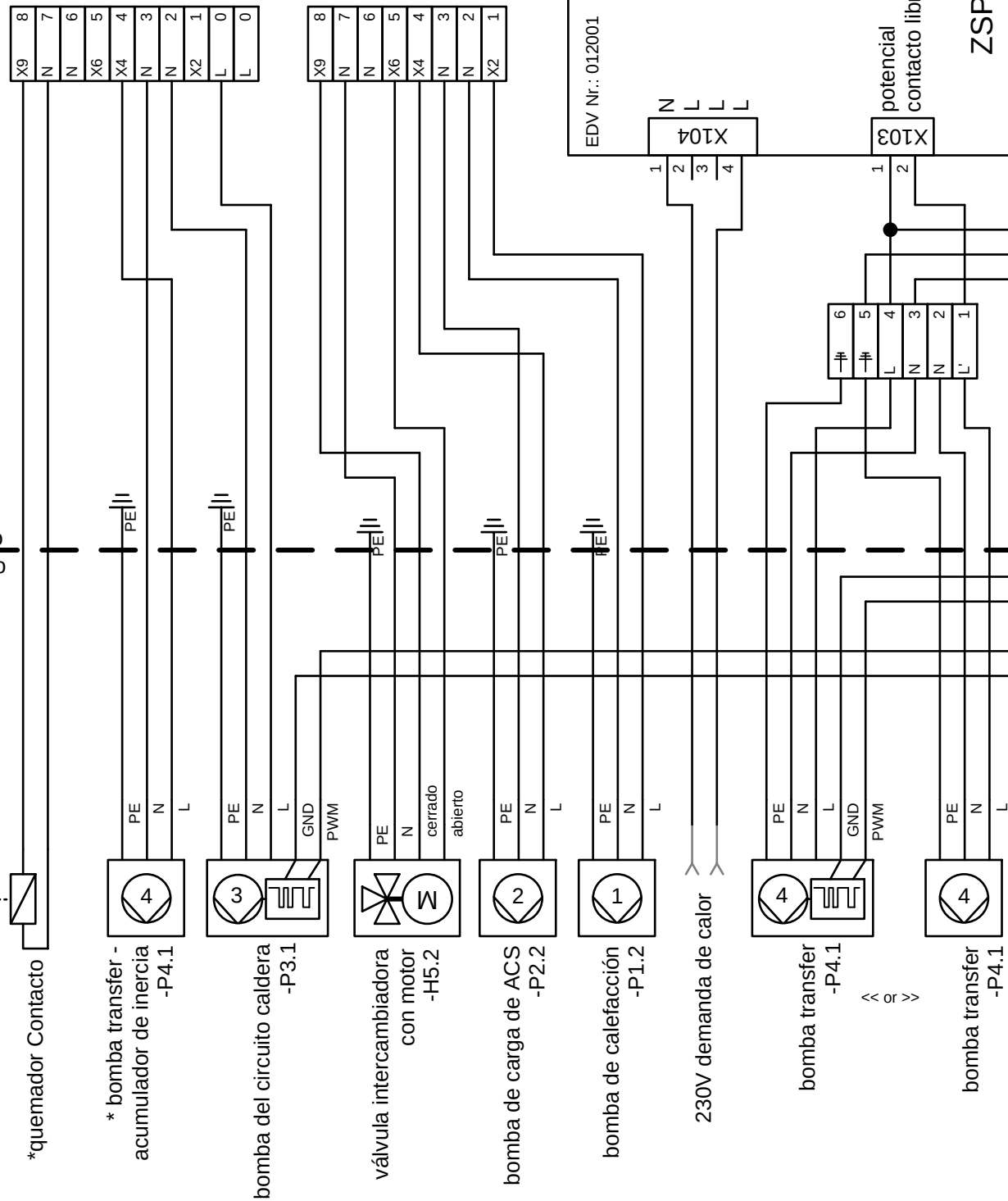
baja tensión 230VAC

sonda muy baja tensión

B-PLM
módulo 1

UML+
módulo 2

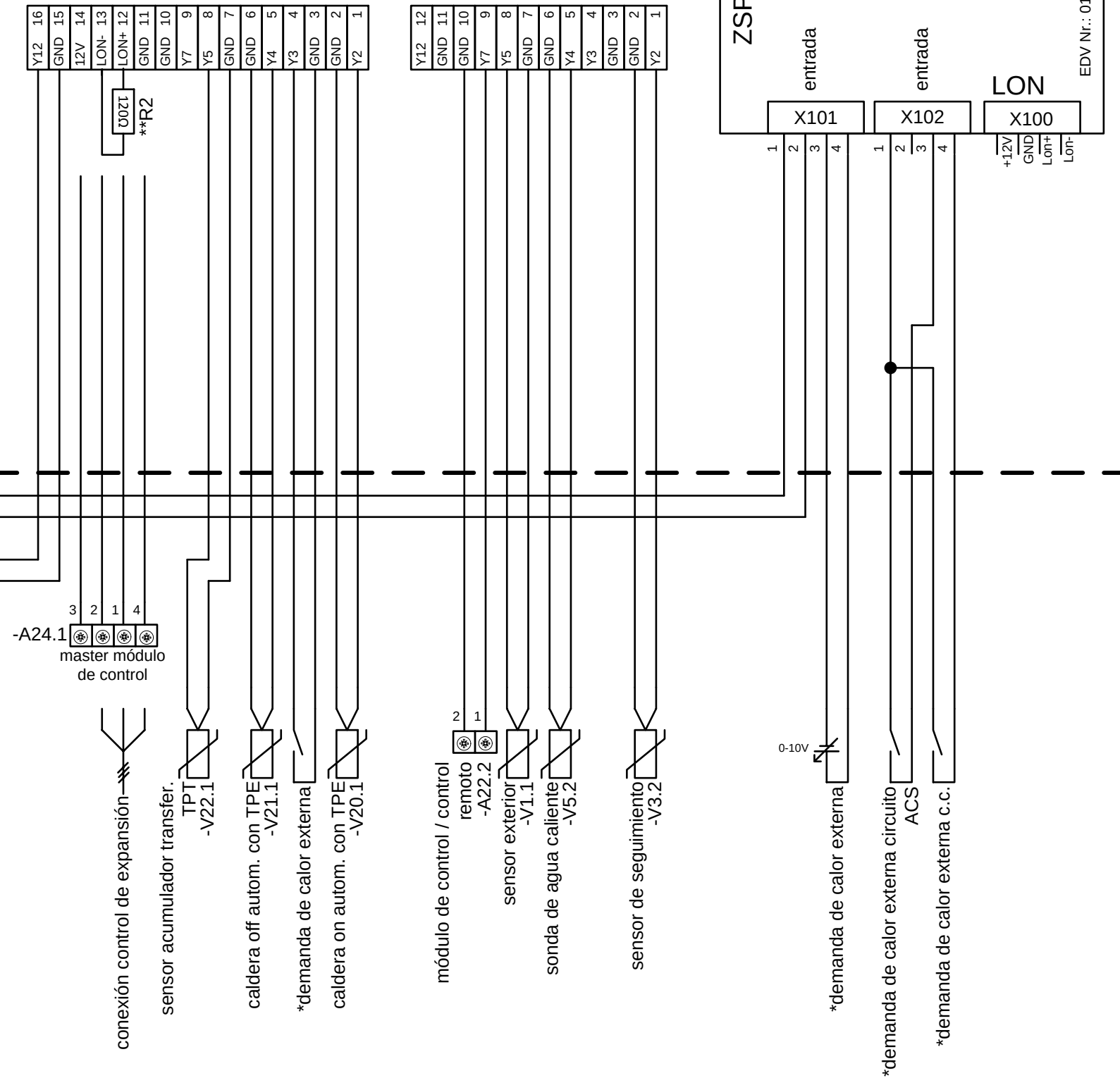
circuito de calefacción 1



B-PLM
módulo 1

UML+
módulo 2

circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM/ UML+ /ZSP W

Zeichnungs Nr.: 094622/00

MES P042 + H021 + ZSP W

regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente y acumulador de inercia-módulo B-PLM y ZSP W

Projekt :
regulación



1 mm : 1 mm

2

Blatt 094622/00

-XZSP	placa adicional
PE	PE
PE	PE
fase continua	L N
bomba transfer	N L'

EDV Nr. 094812/00

-XSP	placa adicional
GND	PWM bomba transfer
-X101 /2	
GND	demanda de calor
-X101 /4	0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

B-PLM	módulo 1
	PWM bomba de circuito de la caldera
	Y12 16 GND 15
	+12V 14 master módulo de control Lon- 13 conexión control de Lon+ 12 expansión GND 11
	GND 10 Y7 9
	*sensor acumulador transfer. TPT Y5 8 GND 7
	*caldera off autom. con TPE GND 6 Y4 5
	*demanda de calor externa Y3 4 GND 3
	caldera on autom. con TPE GND 2 Y2 1

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092890/01

baja tensión 230VAC

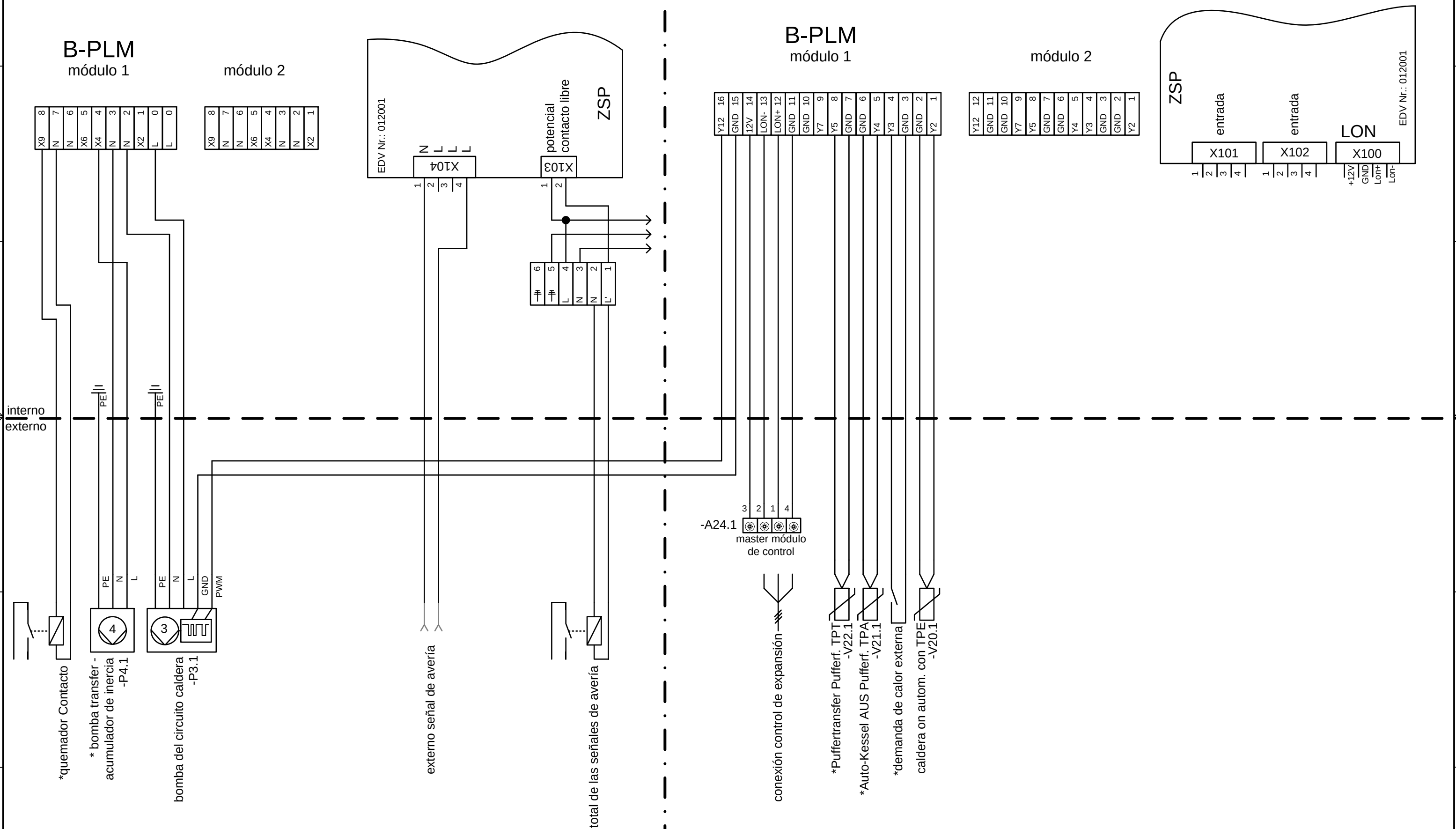
sonda muy baja tensión

B-PLM
módulo 1

módulo 2

B-PLM
módulo 1

módulo 2



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	B-PLM / ZSP S		MES P042 + ZSP S Buffer Memoria B-PLM y ZSP S	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	rot							
				Geprüft	ros							
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094618/00					◀ ----- 2 ▶
												Blatt 094618/00

-XZSP	placa adicional
PE	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

EDV Nr. 094810/00

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

-XA	bloque de conexión
230VAC	L 1
interno	L' 2 L' 3
230VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
*quemador Contacto	X9 8 N 7
	N 6 X6 5
*bomba transfer- acumulador de inercia	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

	Modul 2
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

	Modul 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

092890/01

B-PLM	módulo 1
	PWM bomba de circuito de la caldera
	Y12 16 GND 15
	+12V 14 master módulo de control Lon- 13 conexión control de expansión Lon+ 12 GND 11
	GND 10 Y7 9
	*sensor acumulador transfer. TPT Y5 8 GND 7
	*caldera off autom. con TPE GND 6 Y4 5
	*demanda de calor externa Y3 4 GND 3
	caldera on autom. con TPE GND 2 Y2 1

	Modul 2
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

	Modul 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

092890/01

baja tensión 230VAC

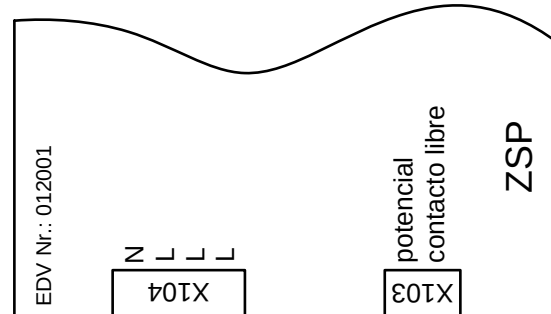
sonda muy baja tensión

B-PLM módulo 1

módulo 2

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

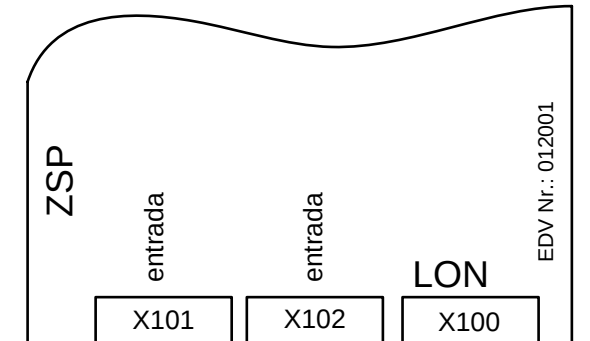
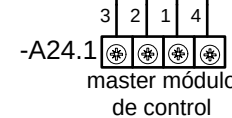


B-PLM módulo 1

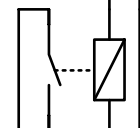
módulo 2

Y12	16
GND	15
12V	14
LON+	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

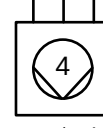
Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



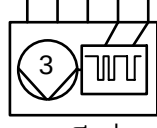
interno
externo



*quemador Contacto

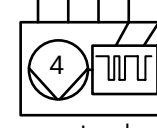


* bomba transfer -
acumulador de inercia
-P4.1



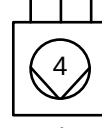
bomba del circuito caldera
-P3.1

230V demanda de calor

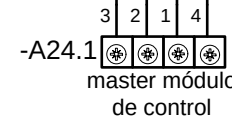


bomba transfer
-P4.1

< or >

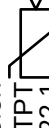


bomba transfer
-P4.1



conexión control de expansión

sensor acumulador transfer.



TPT
-V22.1



caldera off autom. con TPE
-V21.1



*demanda de calor externa



caldera on autom. con TPE
-V20.1

0-10V

*demanda de calor externa

*demanda de calor externa
circuito ACS

*demanda de calor externa c.c.

*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM / ZSP W

Zeichnungs Nr.: 094619/00

MES P042 + ZSP W

acumulador de inercia Memoria módulo B-PLM
y ZSP W

Projekt :
regulación



1 mm : 1 mm

2

Blatt 094619/00

-XZSP	placa adicional
	PE PE
fase continua	L N
bomba transfer	N L'

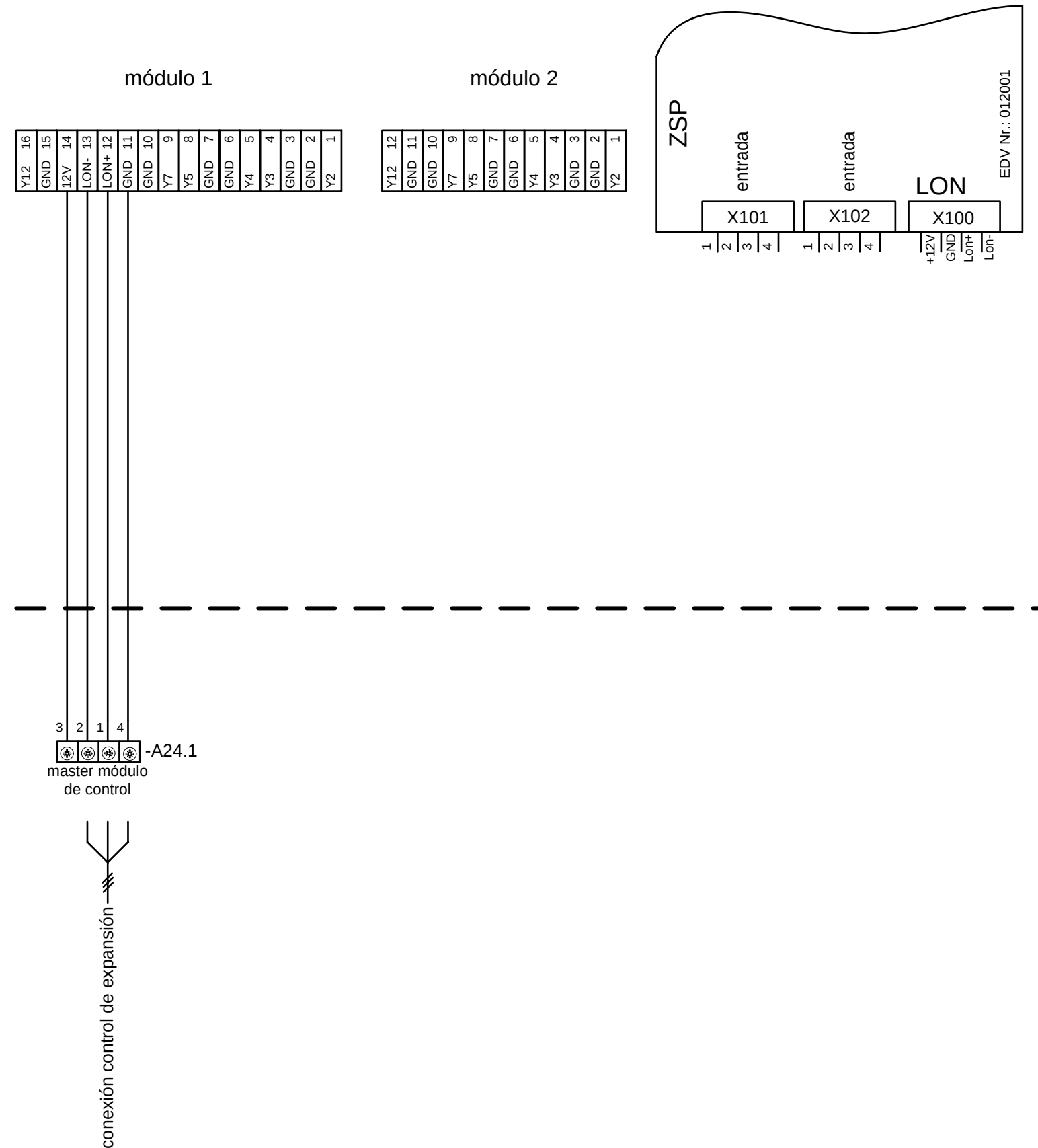
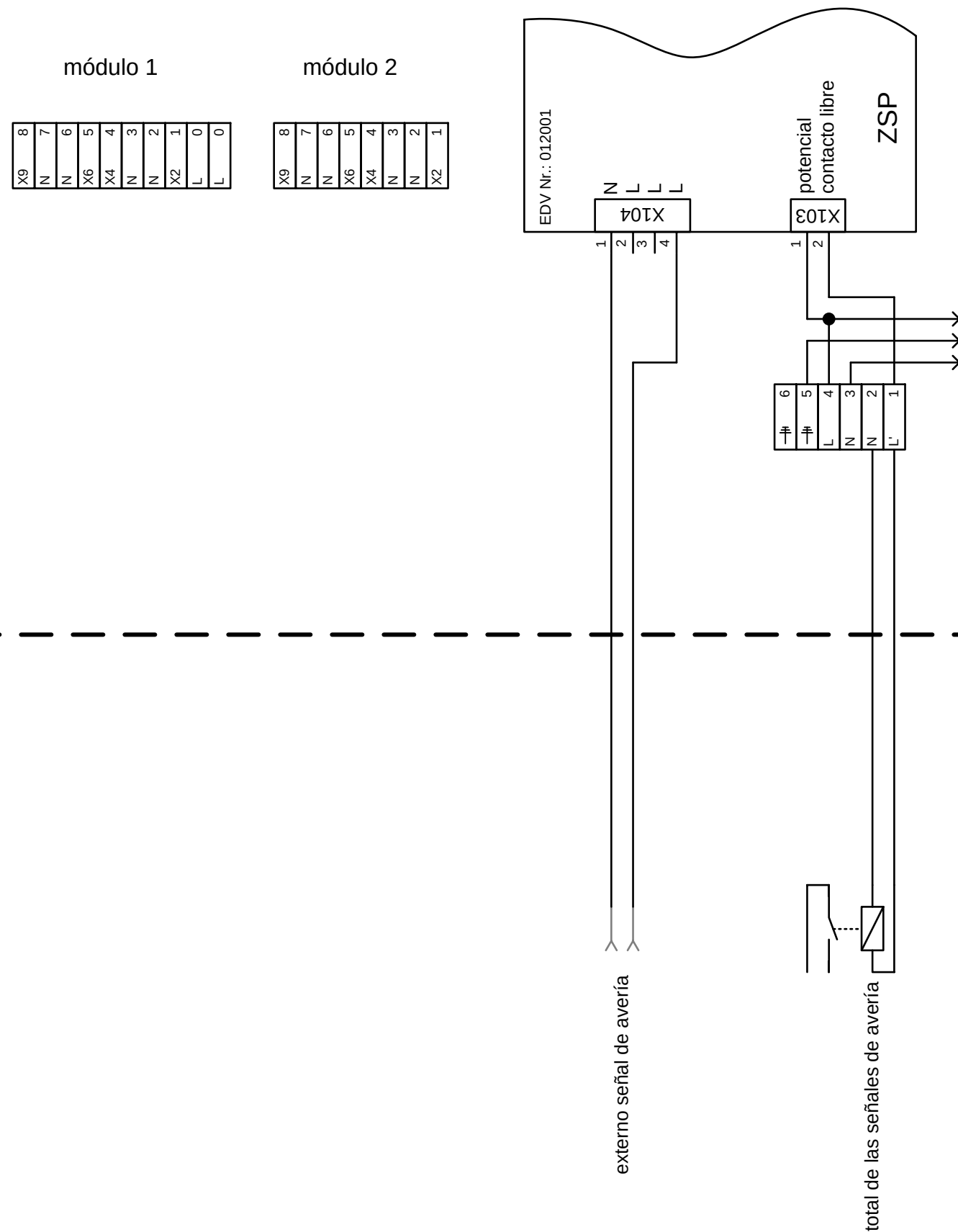
EDV Nr. 094812/00

-XSP	placa adicional
GND -X101 /2	PWM bomba transfer
GND -X101 /4	demanda de calor 0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	ZSP S		MES ZSP S placa adicional S	Projekt : regulación		1 mm : 1 mm	
				Gezeichnet	rot						◀ ----- 2 ▶	
				Geprüft	ros	Zeichnungs Nr.: 094627/00					Blatt 094627/00	
Rev.	Änderung	Datum	Name	Genehmigt								

-XZSP	placa adicional
	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

EDV Nr. 094810/00

-XA	bloque de conexión
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	módulo 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

MES	módulo 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	módulo 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	módulo 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	módulo 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	módulo 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

baja tensión 230VAC

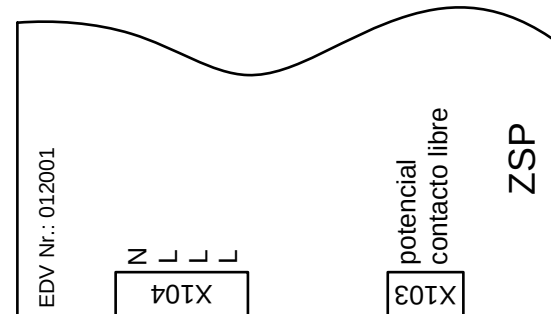
sonda muy baja tensión

módulo 1

módulo 2

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1
L	0
L	0

X9	8
N	7
N	6
X6	5
X4	4
N	3
N	2
X2	1

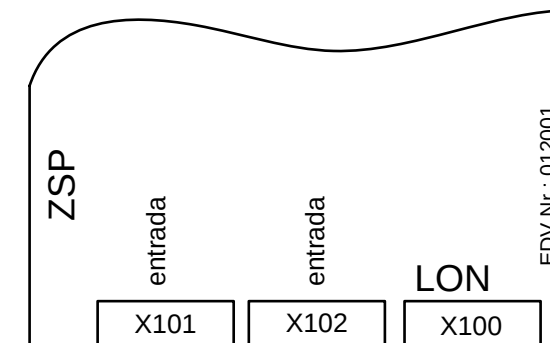


módulo 1

módulo 2

Y12	16
GND	15
12V	14
LON-	13
LON+	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1

Y12	12
GND	11
GND	10
Y7	9
Y5	8
GND	7
GND	6
Y4	5
Y3	4
GND	3
GND	2
Y2	1



Extern
Intern

230V demanda de calor

bomba transfer
-P4.1

<< or >>

bomba transfer
-P4.1



conexión control de expansión

0-10V

*demanda de calor externa

*demanda de calor externa circuito
ACS

*demanda de calor externa c.c.

*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum 24.06.2013		ZSP W		MES ZSP W		Projekt : regulación		1 mm : 1 mm	
				Gezeichnet ros		Zeichnungs Nr.: 094628/00		placa adicional W				2	
				Geprüft ros								Blatt 094628/00	
				Genehmigt									
Rev.	Änderung	Datum	Name										



-XZSP	placa adicional
	PE PE
fase continua	L N
bomba transfer	N L'

EDV Nr. 094812/00

-XSP	placa adicional
GND -X101 /2	PWM bomba transfer
GND -X101 /4	demanda de calor 0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa c.c.

-XA	bloque de conexión
230 VAC	L 1
-----	L' 2
	L' 3
230 VAC	N 4
-----	N' 5
	N' 6

MES	módulo 1
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

MES	módulo 2
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	módulo 3
X9	X9 8 N 7
X6	N 6 X6 5
X4	X4 4 N 3
X2	N 2 X2 1

MES	módulo 1
Y12	Y12 16 GND 15
LON	+12V 14 Lon- 13 Lon+ 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	módulo 2
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

MES	módulo 3
Y12	Y12 12 GND 11
Y7	GND 10 Y7 9
Y5	Y5 8 GND 7
Y4	GND 6 Y4 5
Y3	Y3 4 GND 3
Y2	GND 2 Y2 1

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
contacto del quemador	X9 8 N 7
	N 6 X6 5
* bomba transfer	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML+	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
Contactador -K1 c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor acumulador transfer. TPT	Y5 8 GND 7
* caldera off autom. con TPE	con GND 6 Y4 5
* demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

UML+	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

baja tensión 230VAC

sonda muy baja tensión

B-PLM
módulo 1

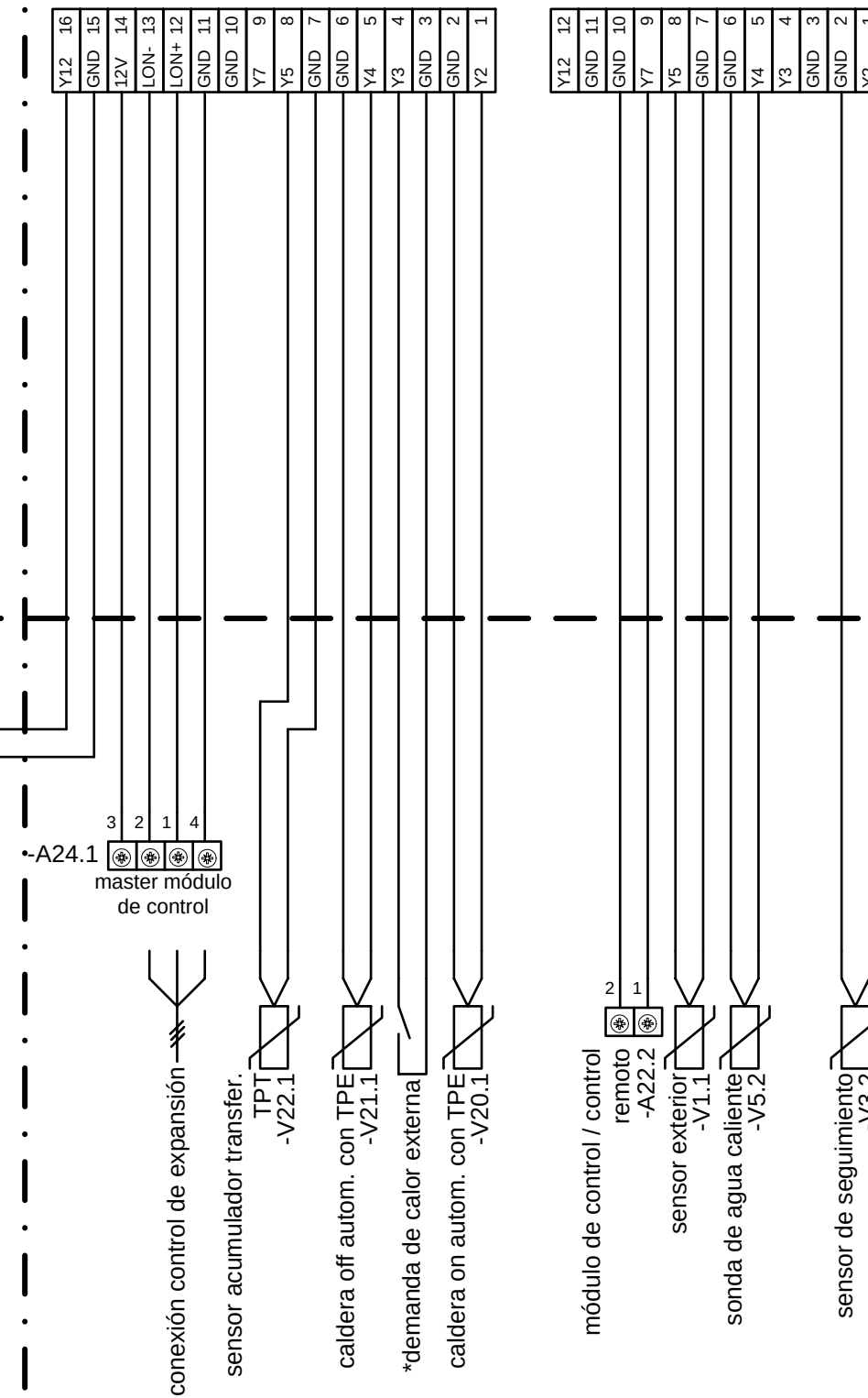
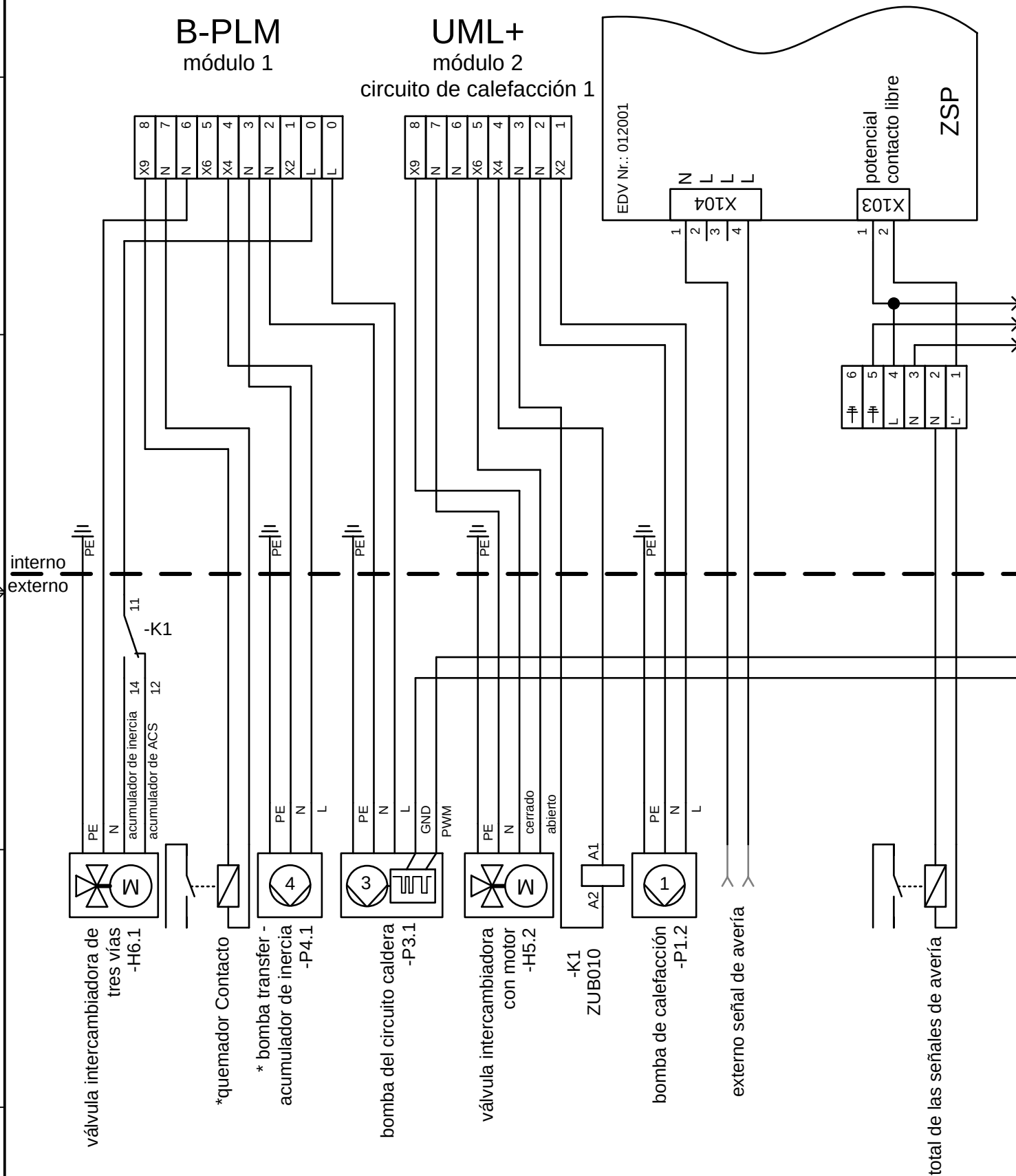
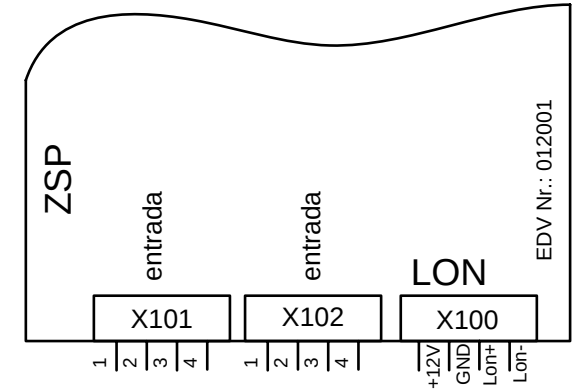
UML+
módulo 2

circuito de calefacción 1

B-PLM
módulo 1

UML+
módulo 2

circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	24.06.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

B-PLM/ UML+/ ZSP S

Zeichnungs Nr.: 094629/00

MES ZUB010 + ZSP S

ZUB010 SYS válvula intercambiadora de tres vías acumulador de inercia-acumulador de ACS y ZSP S

Projekt :
regulación

windhager

1 mm : 1 mm

2

Blatt 094629/00

-XZSP	placa adicional
	PE
	PE
fase continua	L
	N
total de las señales de avería	N
	L'

EDV Nr. 094810/00

-XSP	placa adicional
GND	
	-X101 /2
GND	
	-X101 /4

GND	
	-X102 /2
	-X102 /3
	-X102 /4

-XA	bloque de conexión
230 VAC	L 1
interno	L' 2 L' 3
230 VAC	N 4
interno	N' 5 N' 6

B-PLM	módulo 1
contacto del quemador	X9 8 N 7
	N 6 X6 5
* bomba transfer	X4 4 N 3
	N 2
	X2 1
PWM fase continua 1	L 0
PWM fase continua 2	L 0

UML +	módulo 2 circuito de calefacción 1
cerrado c.c. 1	X9 8 N 7
válvula intercambiadora con motor abierto	N 6 X6 5
Contactador -K1 c.c. 1	X4 4 N 3
bomba de calefacción c.c. 1	N 2 X2 1

	módulo 3
	X9 8 N 7 N 6 X6 5
	X4 4 N 3
	N 2 X2 1

094555/01

B-PLM	módulo 1
PWM bomba de circuito de la caldera	Y12 16 GND 15
master módulo de control conexión control de expansión	+12V 14 Lon- 13 Lon+ 12 GND 11
	GND 10 Y7 9
* sensor acumulador transfer. TPT	Y5 8 GND 7
* caldera off autom. con TPE	con GND 6 Y4 5
* demanda de calor externa	Y3 4 GND 3
caldera on autom. con TPE	GND 2 Y2 1

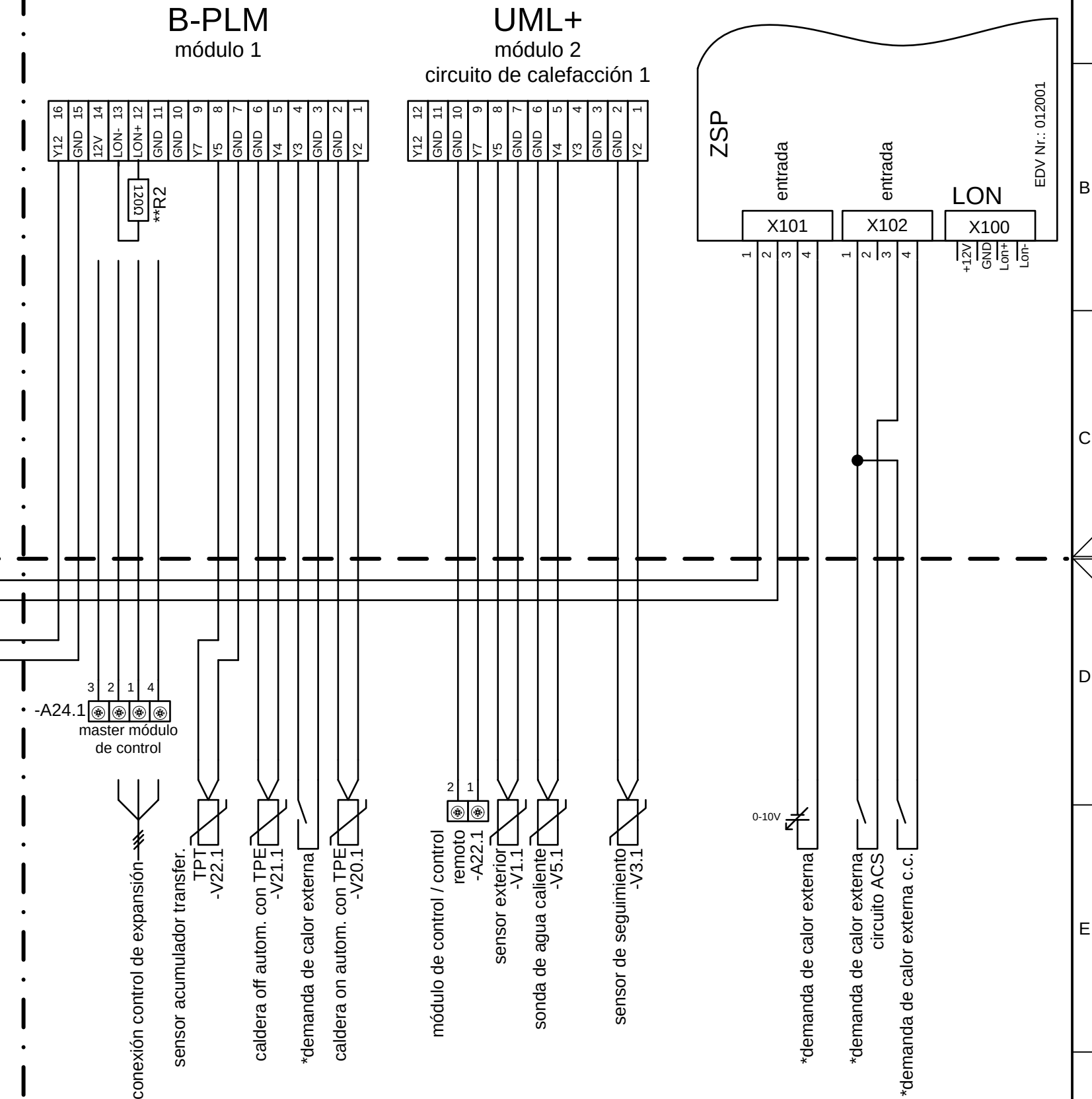
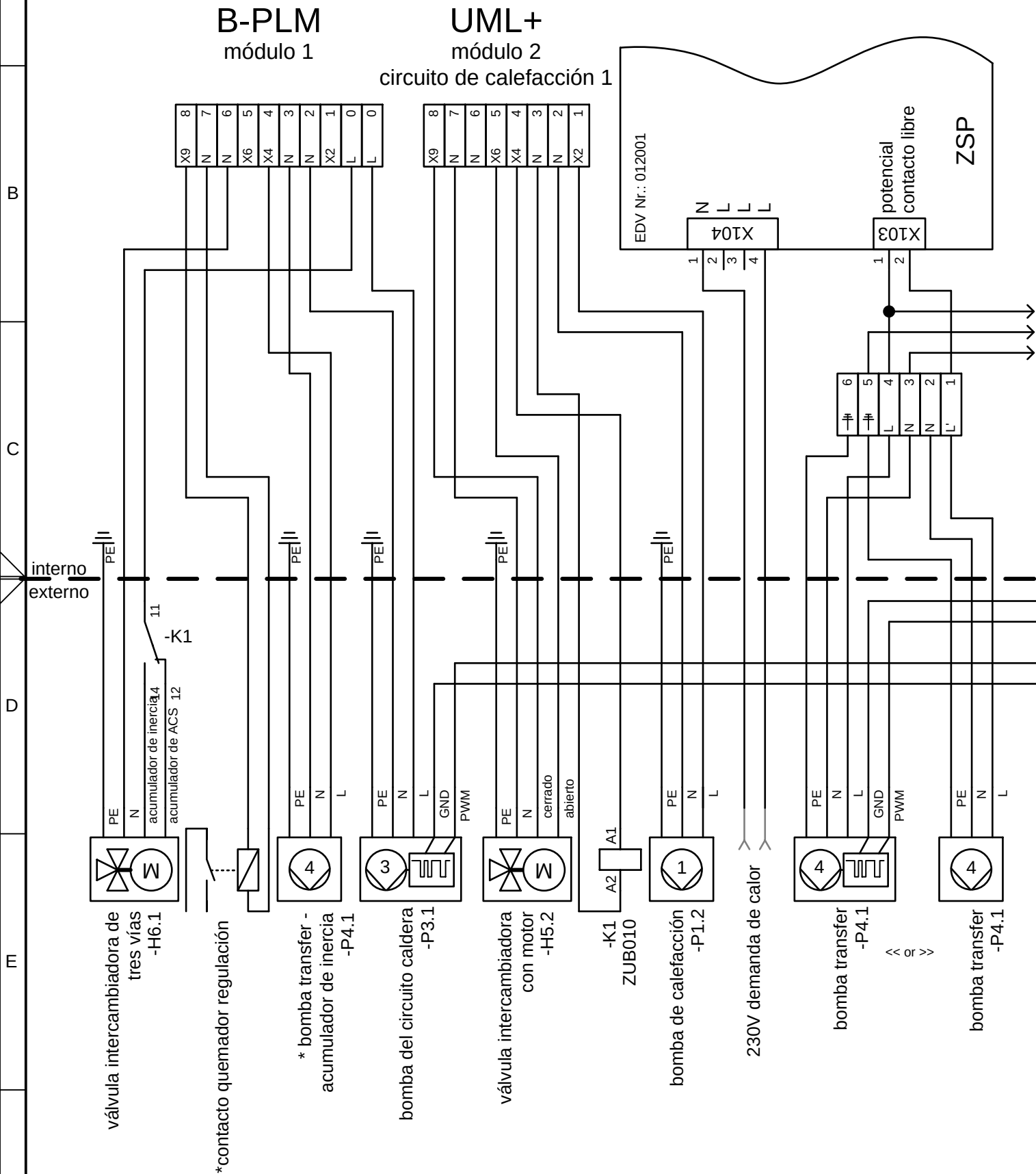
UML +	módulo 2 circuito de calefacción 1
	Y12 12 GND 11
módulo de control control remoto	GND 10 Y7 9
sensor exterior	Y5 8 GND 7
sonda de agua caliente c.c. 1	GND 6 Y4 5
	Y3 4 GND 3
sensor de seguimiento c.c. 1	GND 2 Y2 1

	módulo 3
	Y12 12 GND 11
	GND 10 Y7 9
	Y5 8 GND 7
	GND 6 Y4 5
	Y3 4 GND 3
	GND 2 Y2 1

094555/01

baja tensión 230VAC

sonda muy baja tensión



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	24.06.2013	B-PLM/ UML+/ ZSP W		MES ZUB010 + ZSP W ZUB010 válvula intercambiadora de tres vías acumulador de inercia-acumulador de ACS y ZSP W	Projekt : regulación		1 mm : 1 mm
				Gezeichnet	rot						
				Geprüft	ros						
Rev.	Änderung	Datum	Name	Genehmigt		Zeichnungs Nr.:	094630/00				◀ ----- 2 ▶
											Blatt 094630/00

-XZSP	placa adicional
PE	PE
PE	PE
fase continua	L N
bomba transfer	N L'

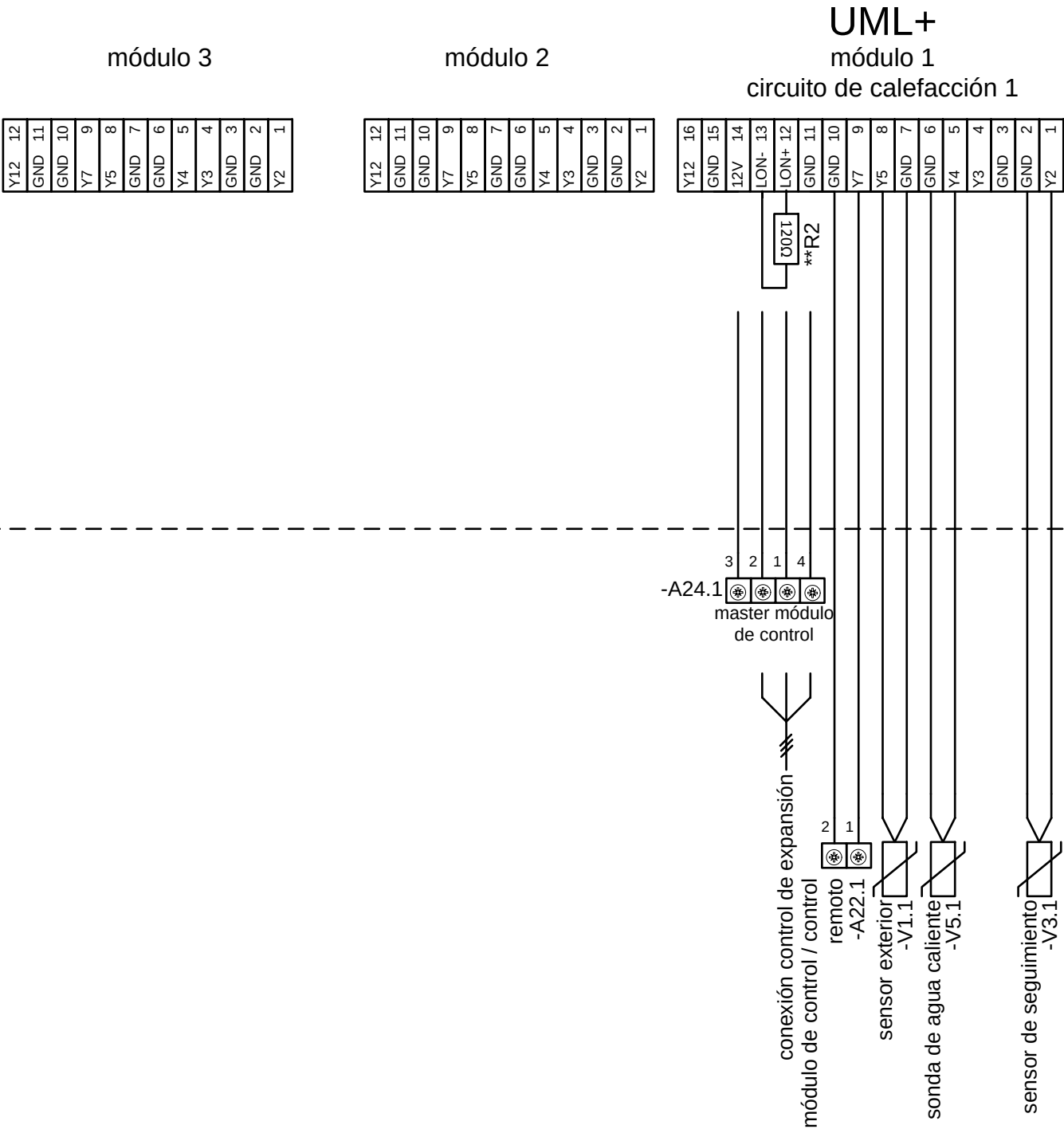
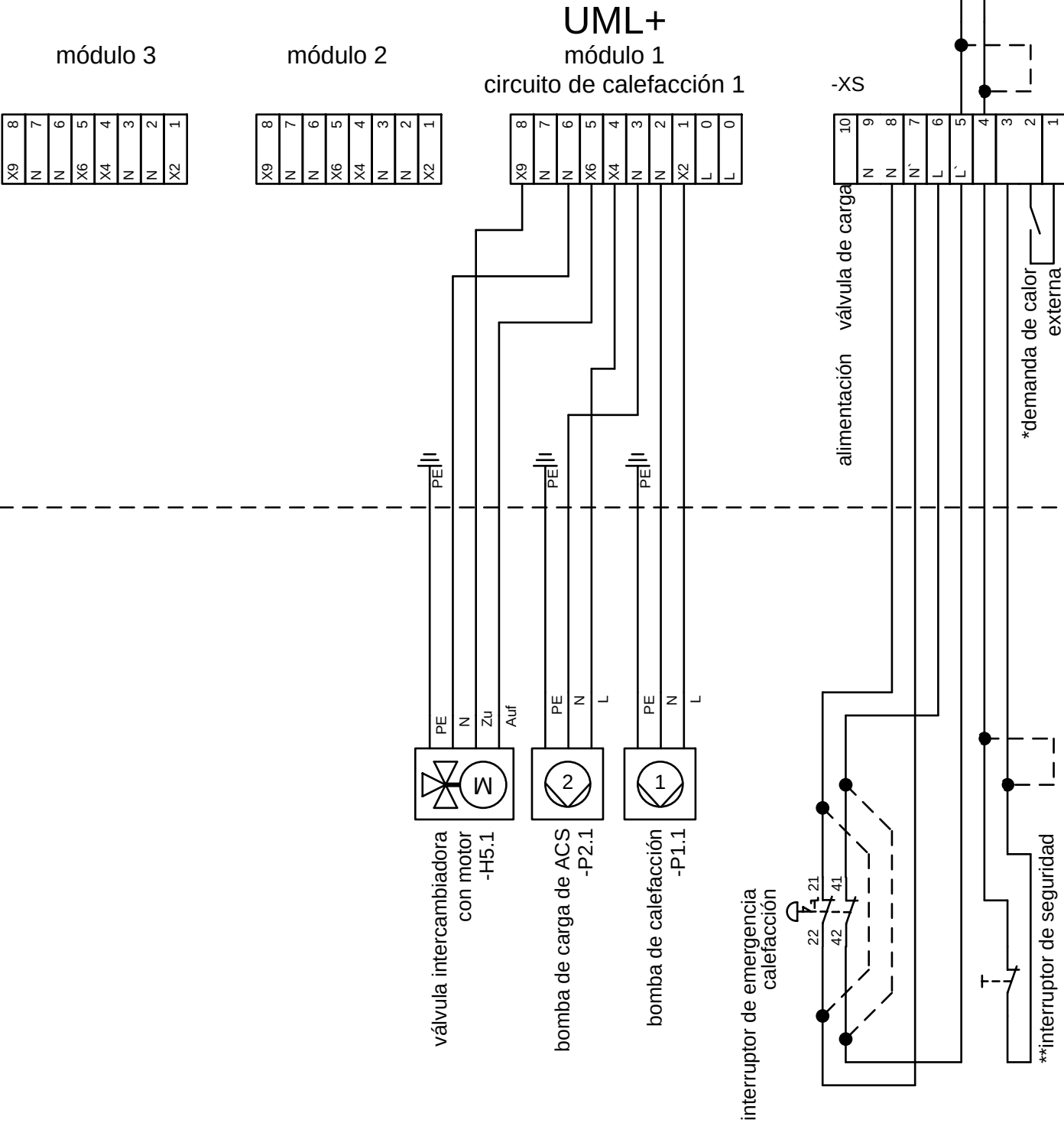
EDV Nr. 094812/00

-XSP	placa adicional
GND	PWM bomba transfer
-X101 /2	
GND	demanda de calor
-X101 /4	0-10V

GND	
-X102 /2	
-X102 /3	demanda de calor externa circuito ACS
-X102 /4	demanda de calor externa C.C.

baja tensión 230VAC

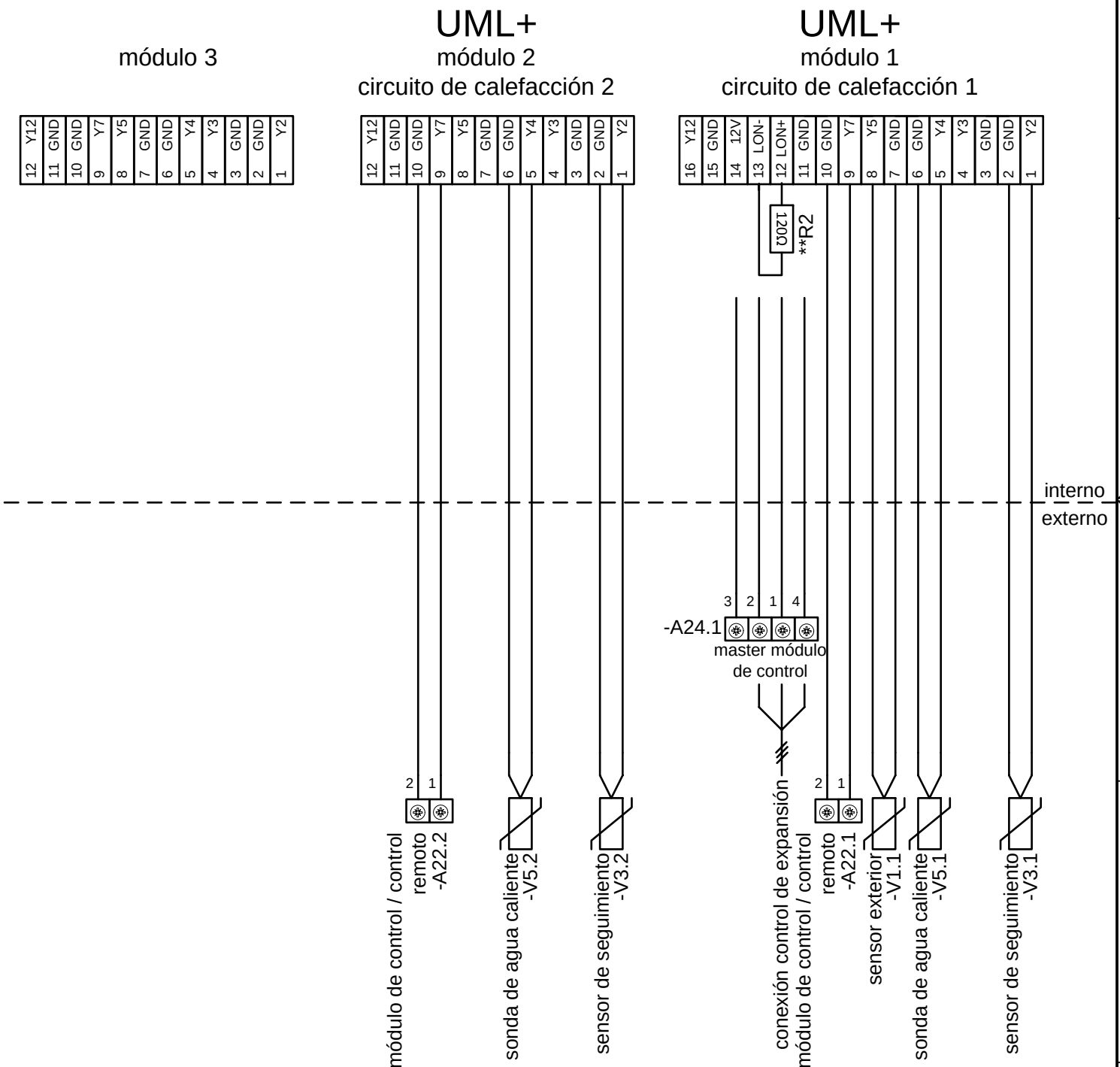
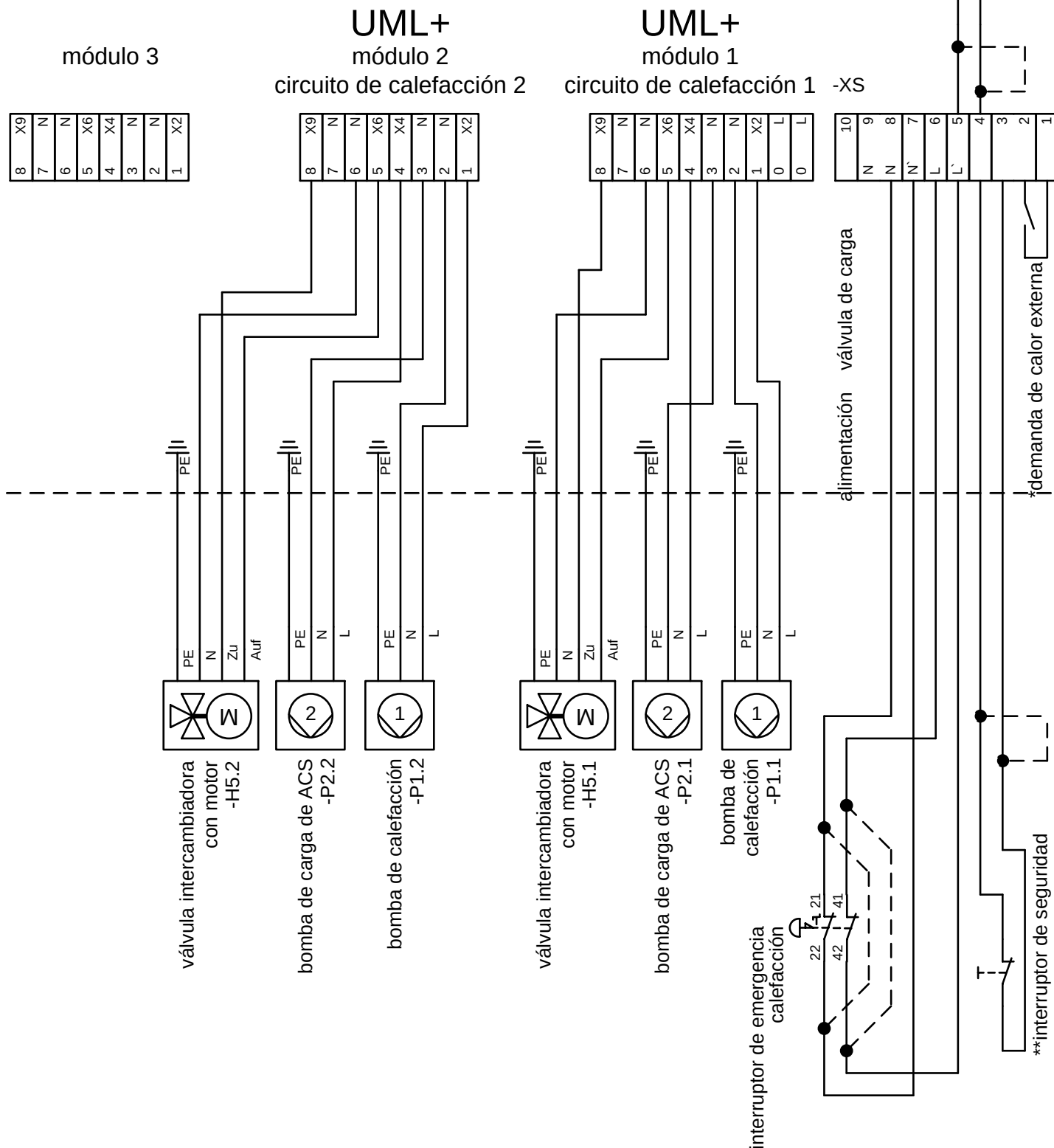
sonda muy baja tensión



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

baja tensión 230VAC

sonda muy baja tensión



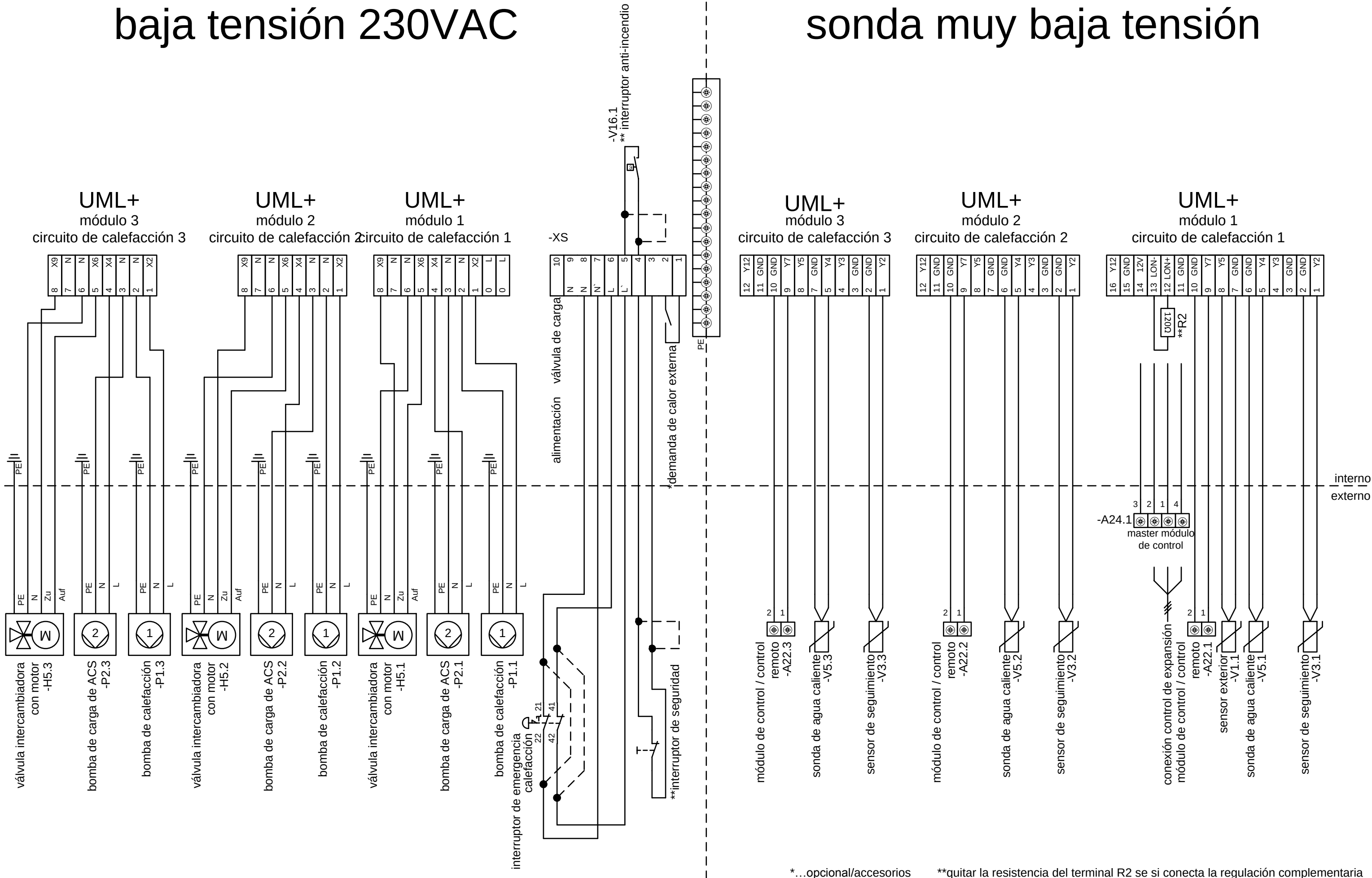
*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	07.08.2013	UML+ / UML+		MES H021 + H024 regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente		Projekt : regulación				1 mm : 1 mm Blatt 092771/01	
				Gezeichnet	rot										
				Geprüft	ros										
				Genehmigt											
Rev.	Änderung	Datum	Name	Zeichnungs Nr.:		092771/01									

baja tensión 230VAC

sonda muy baja tensión



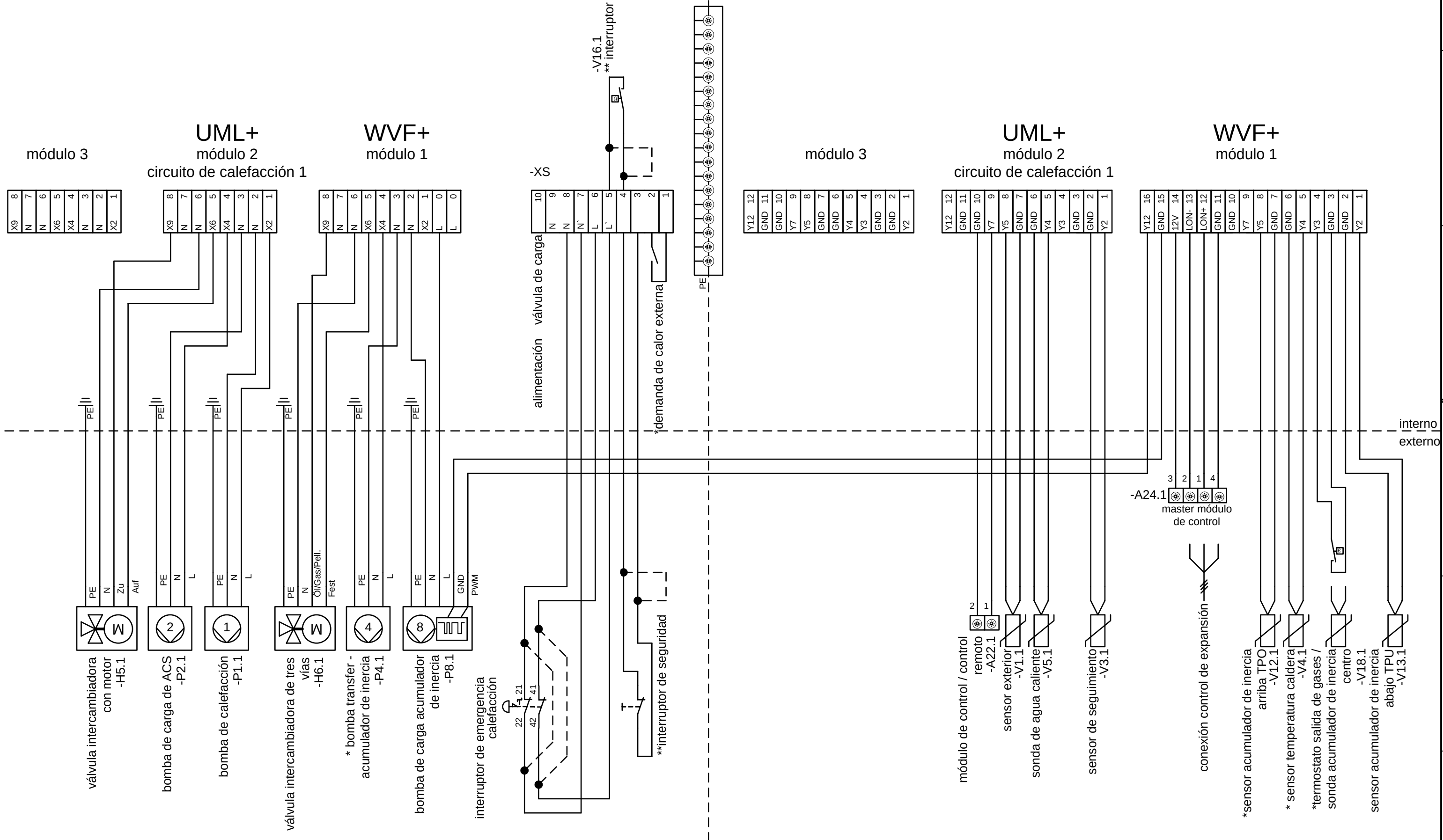
*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

				Datum	08.08.2013	UML+ / UML+ / UML+		MES H021 + H024 + H024 regulación temperatura externa para 3 circuitos de calefacción con mezcladora y circuitos agua caliente		Projekt : regulación				1 mm : 1 mm Blatt 092774/01	
Rev.	Änderung	Datum	Name	Gezeichnet	rot										
				Geprüft	ros	Zeichnungs Nr.: 092774/01									
				Genehmigt											

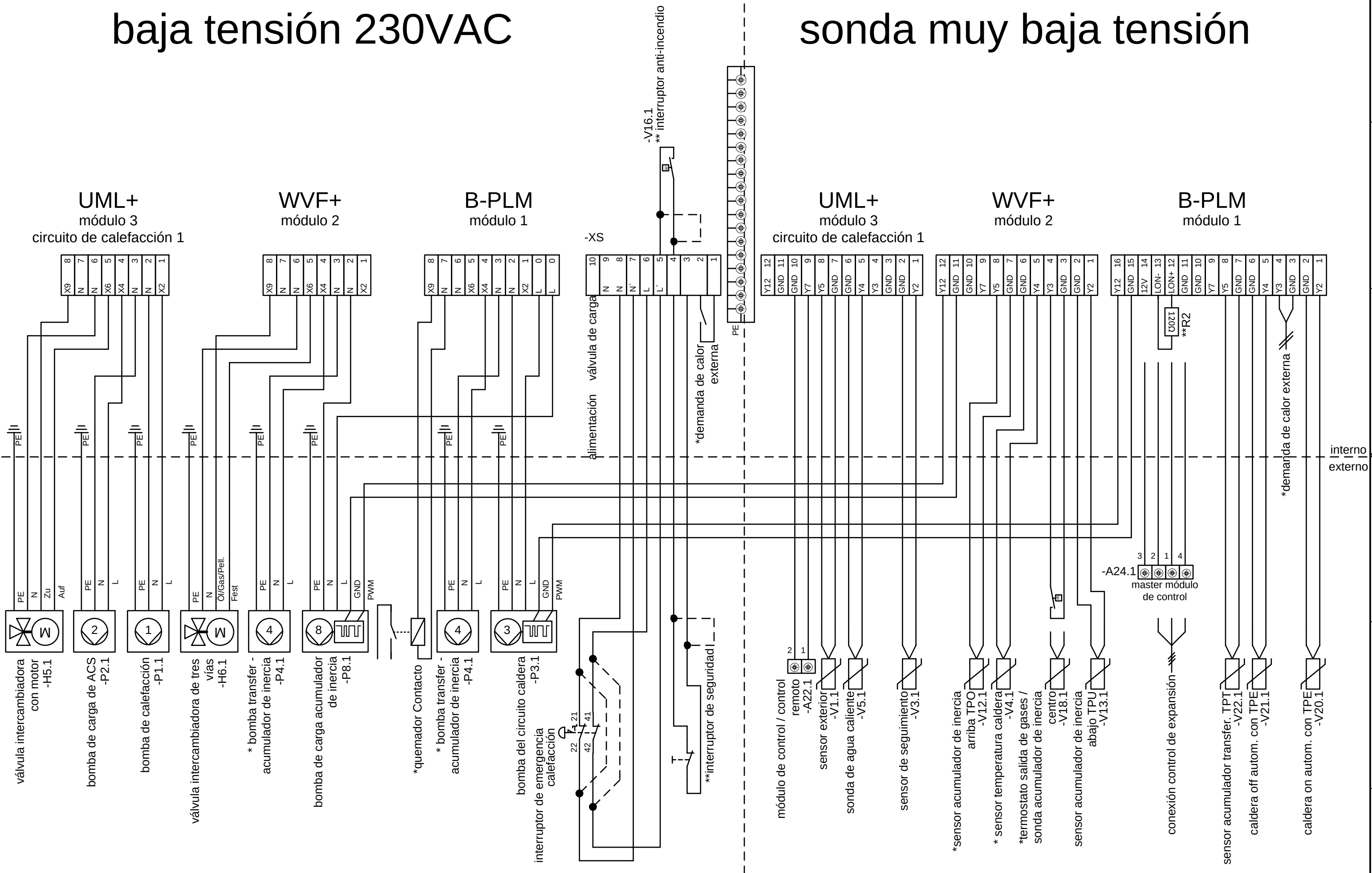
baja tensión 230VAC

sonda muy baja tensión



baja tensión 230VAC

sonda muy baja tensión



Datum	07.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF+ / UML+ / UML+
Zeichnungs Nr.: 092698/01

MES P041 + H021 + H024
regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente
y un módulo para combustibles sólidos WVF+y modulo de acumulador de inercia B-PLM

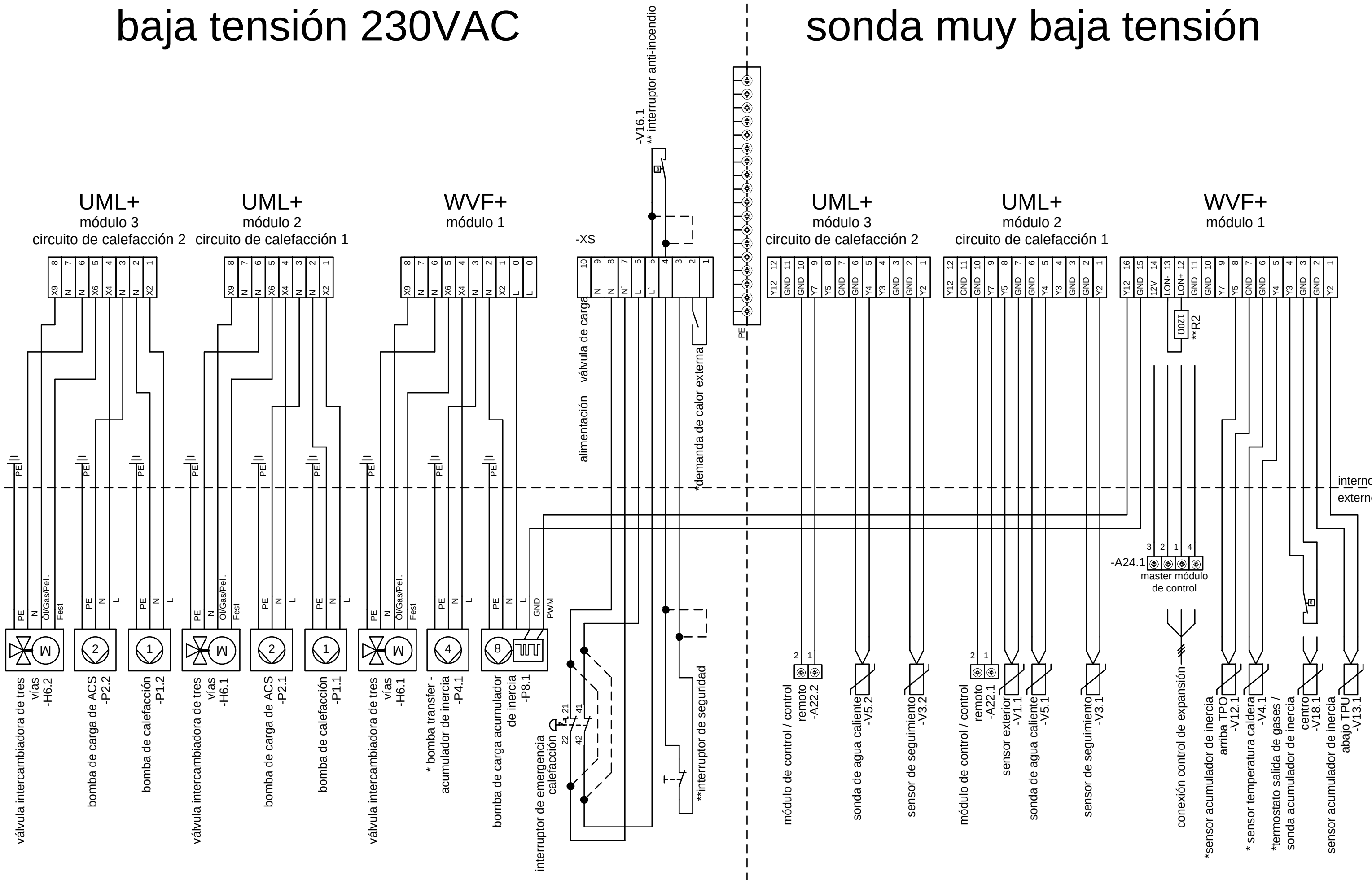
Projekt :
regulación

windhager

1 mm : 1 mm
Blatt 092698/01

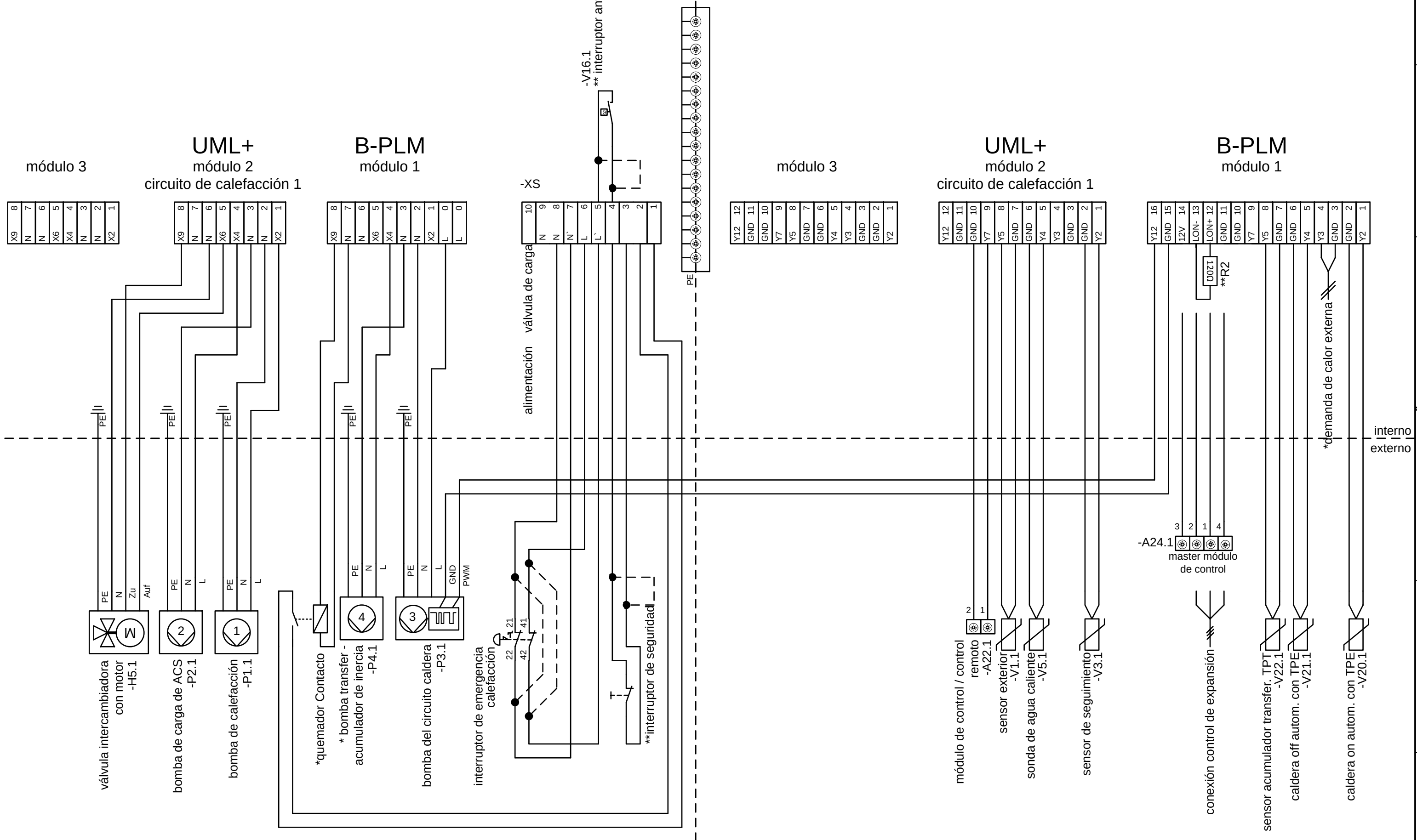
baja tensión 230VAC

sonda muy baja tensión



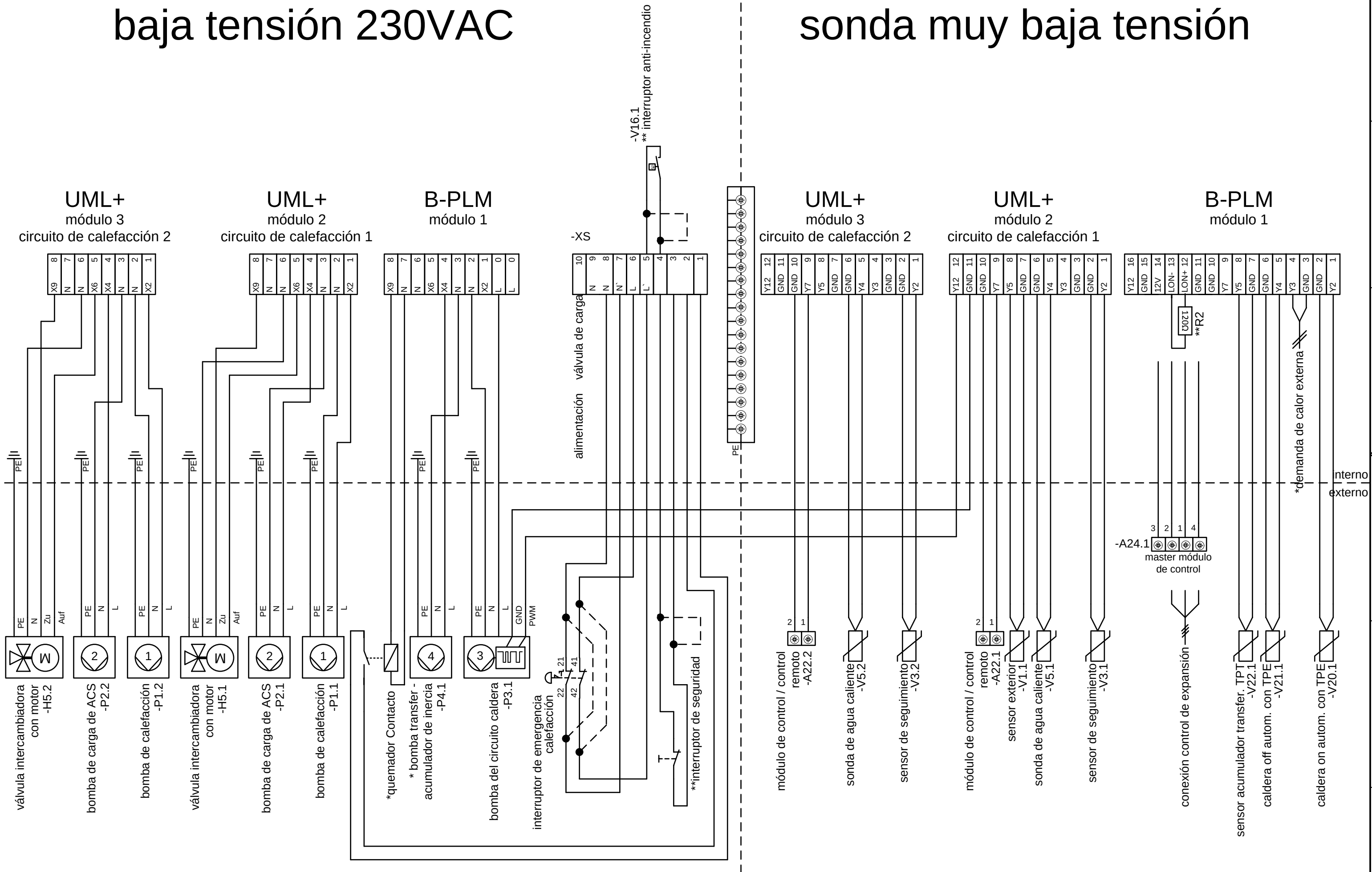
baja tensión 230VAC

sonda muy baja tensión



baja tensión 230VAC

sonda muy baja tensión



Datum 07.08.2013
Gezeichnet rot
Geprüft ros
Genehmigt

B-PLM / UML+ / UML+
Zeichnungs Nr.: 093115/01

MES P042 + H021 + H024
regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente
y quemador/módulo de acumulador de inercia B-PLM

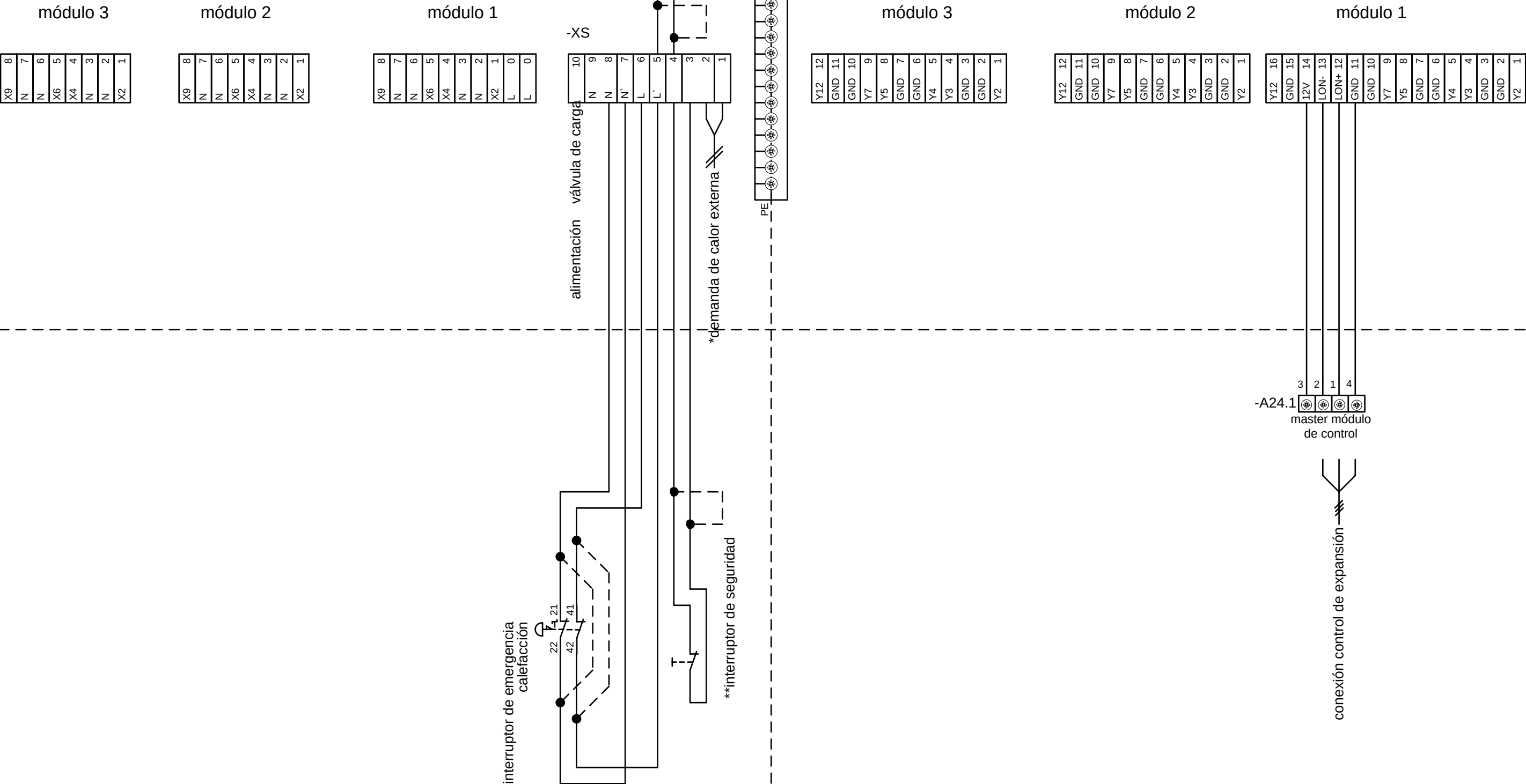
Projekt :
regulación

windhager

1 mm : 1 mm
Blatt 093115/01

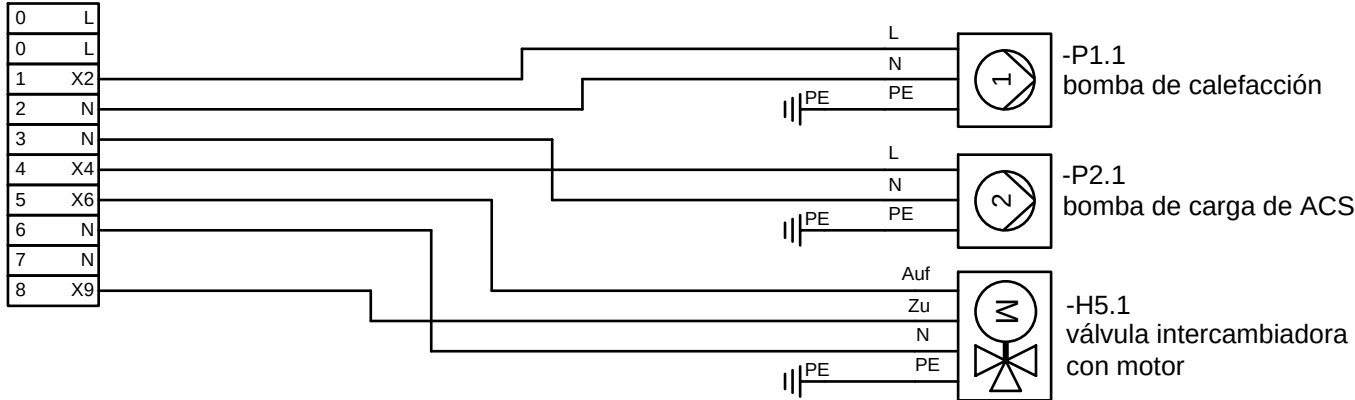
baja tensión 230VAC

sonda muy baja tensión



baja tensión 230VAC

UML+
módulo 1



módulo 2

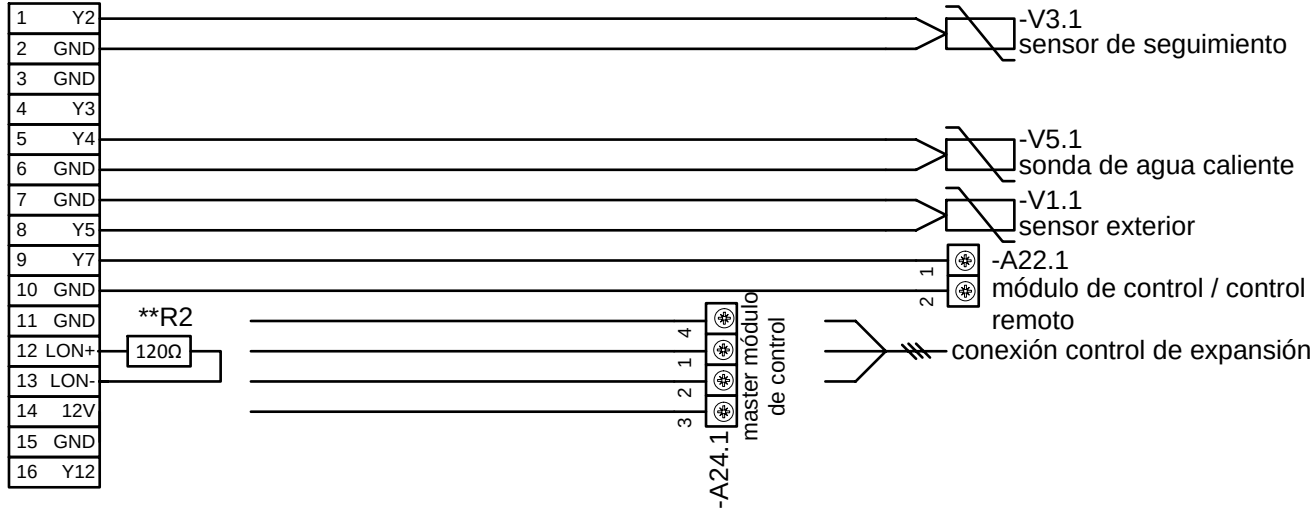
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

módulo 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

sonda muy baja tensión

UML+
módulo 1



módulo 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

módulo 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

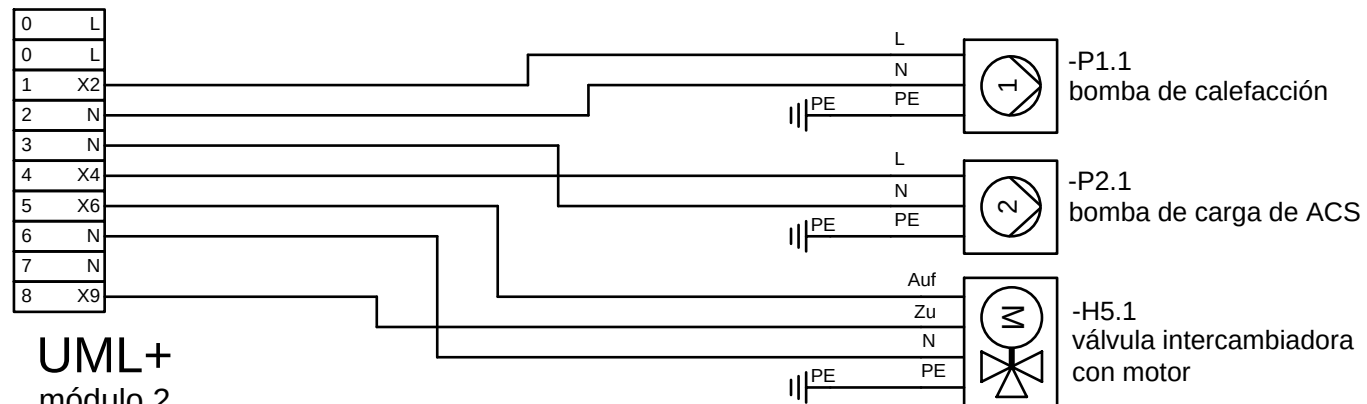
*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

baja tensión 230VAC

UML+

módulo 1

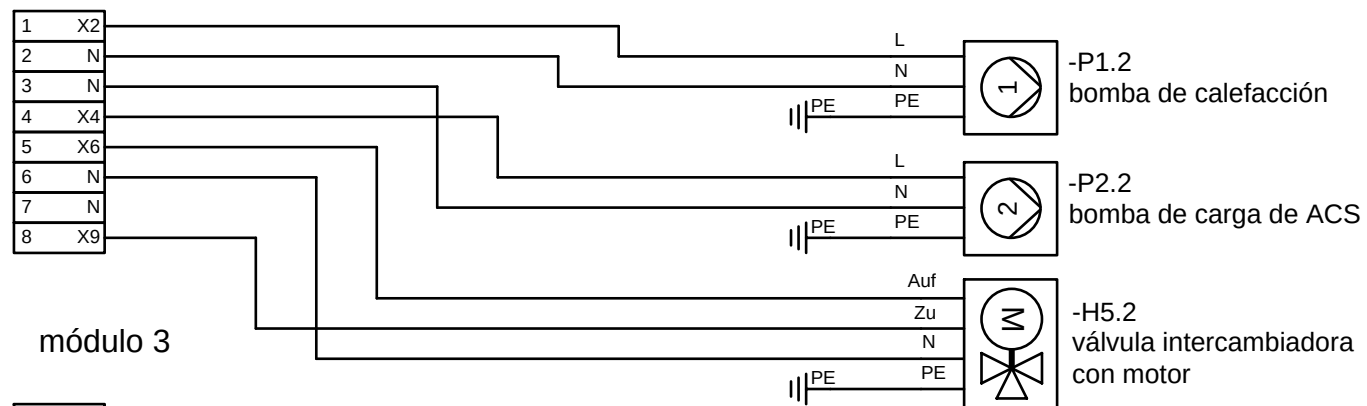
circuito de calefacción 1



UML+

módulo 2

circuito de calefacción 2



módulo 3

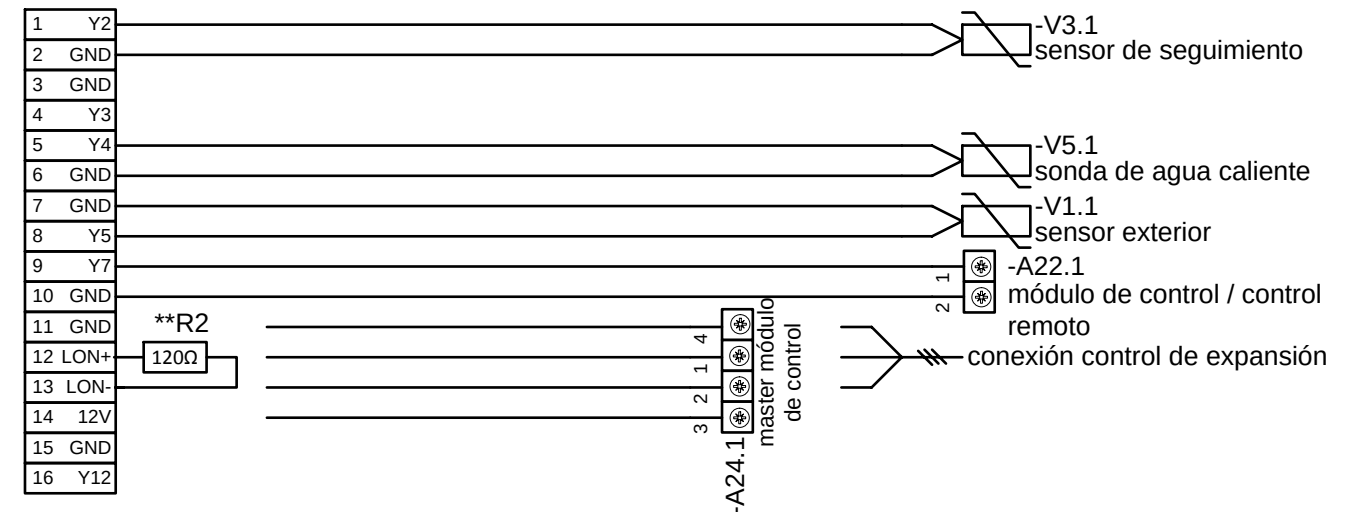
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

sonda muy baja tensión

UML+

módulo 1

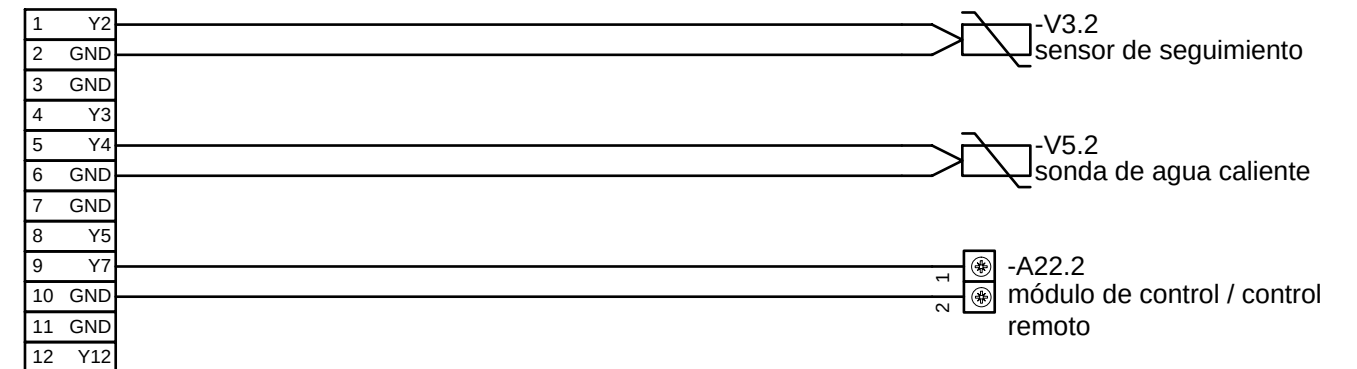
circuito de calefacción 1



UML+

módulo 2

circuito de calefacción 2



módulo 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

*...opcional/accesorios

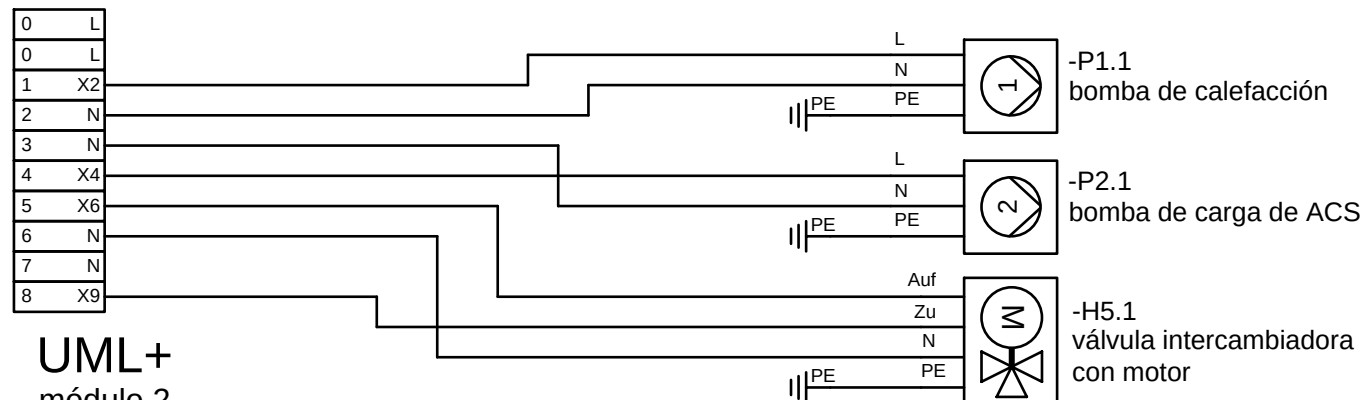
**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

baja tensión 230VAC

UML+

módulo 1

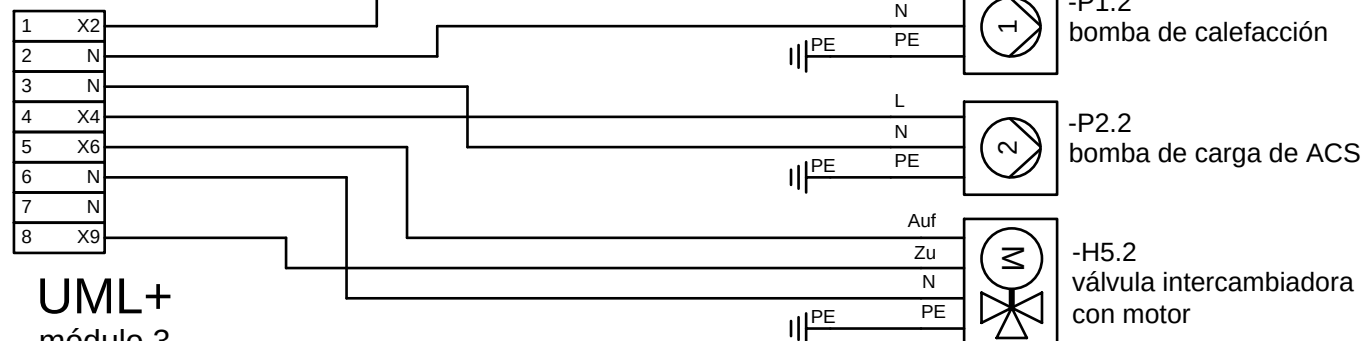
circuito de calefacción 1



UML+

módulo 2

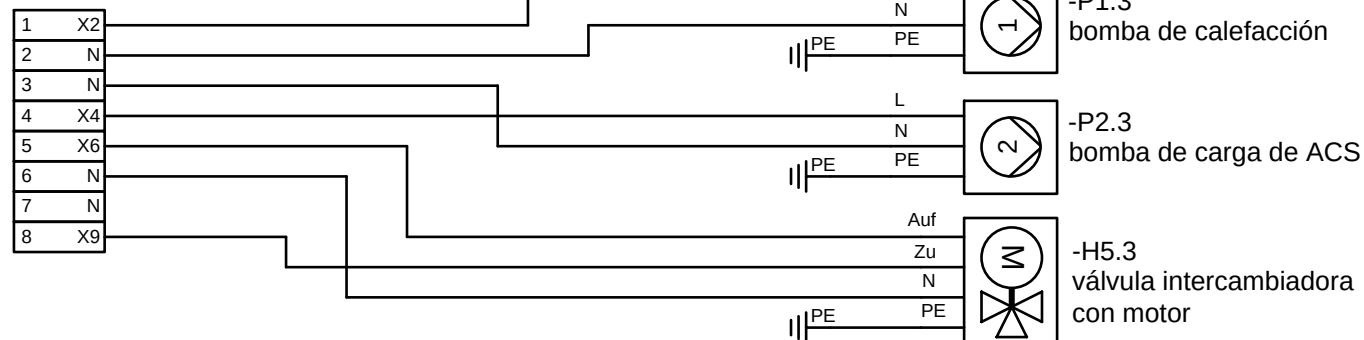
circuito de calefacción 2



UML+

módulo 3

circuito de calefacción 3

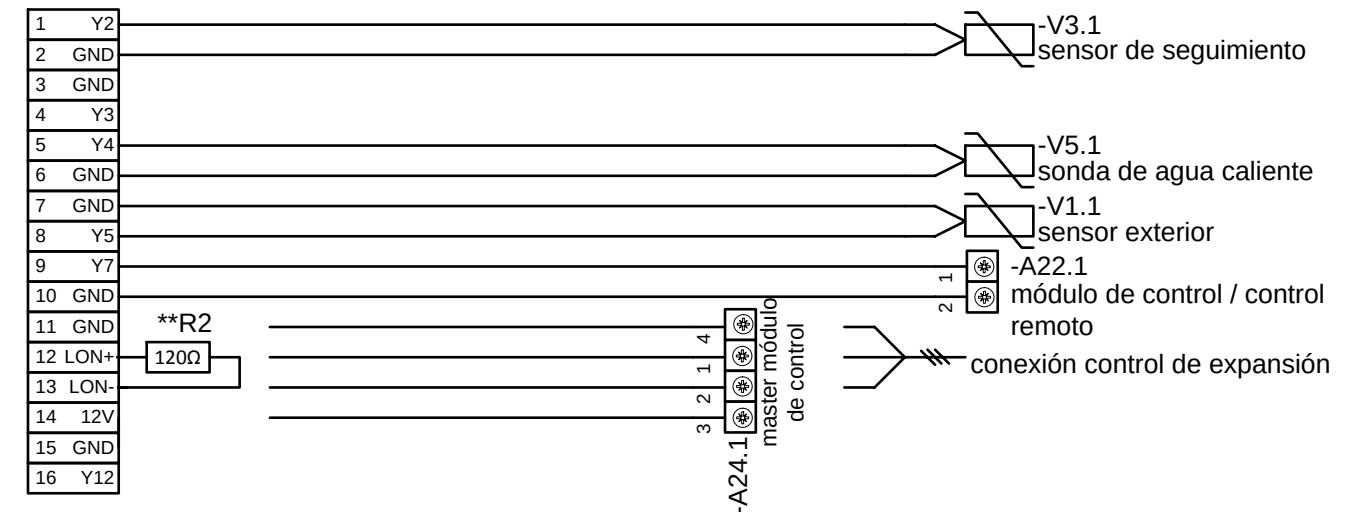


sonda muy baja tensión

UML+

módulo 1

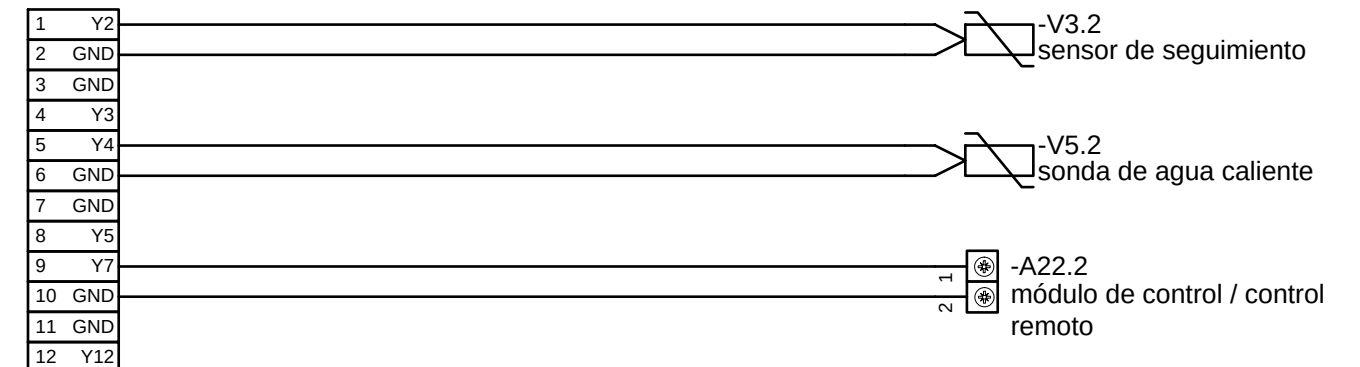
circuito de calefacción 1



UML+

módulo 2

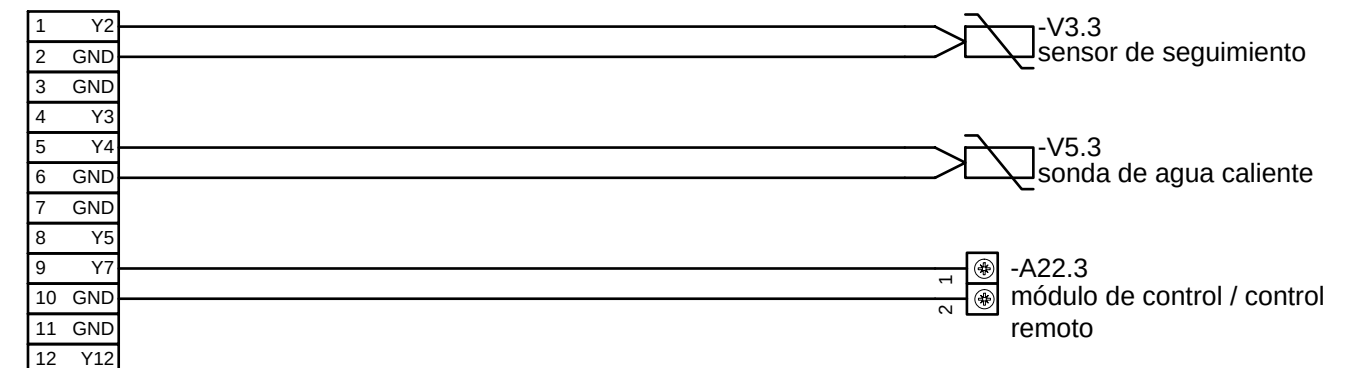
circuito de calefacción 2



UML+

módulo 3

circuito de calefacción 3



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

UML+ / UML+ / UML+

Zeichnungs Nr.: 092700/01

MES H021 + H024 + H024

regulación temperatura externa para 3 circuitos de calefacción con mezcladora y circuitos agua caliente

Projekt :

regulación

windhager

1 mm : 1 mm

2

Blatt 092700/01

baja tensión 230VAC

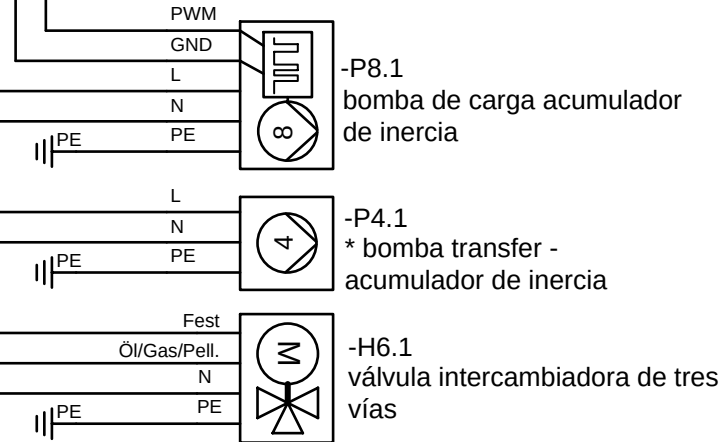


baja tensión 230VAC

sonda muy baja tensión

WVF+ módulo 1

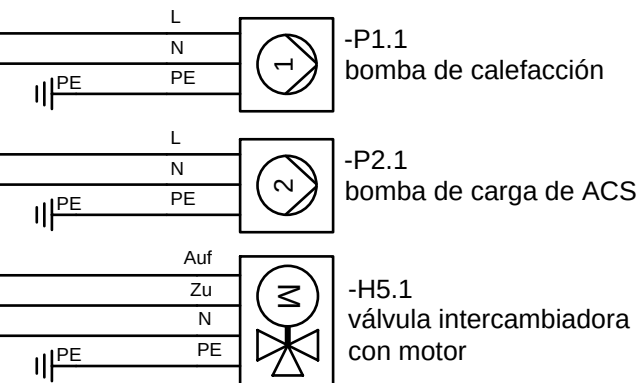
0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



UML+ módulo 2

circuito de calefacción 1

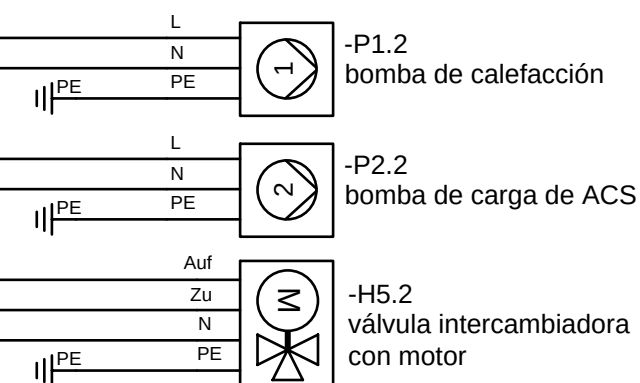
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



UML+ módulo 3

circuito de calefacción 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9



WVF+ módulo 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

**R2
120Ω

UML+ módulo 2

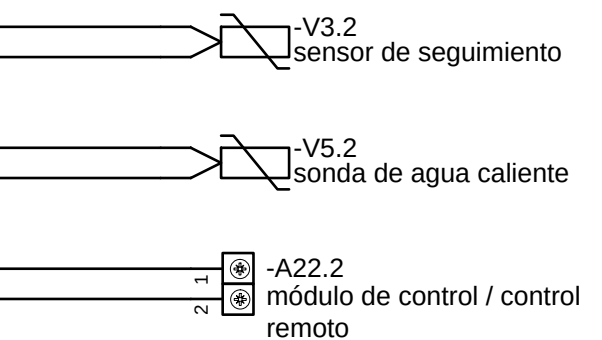
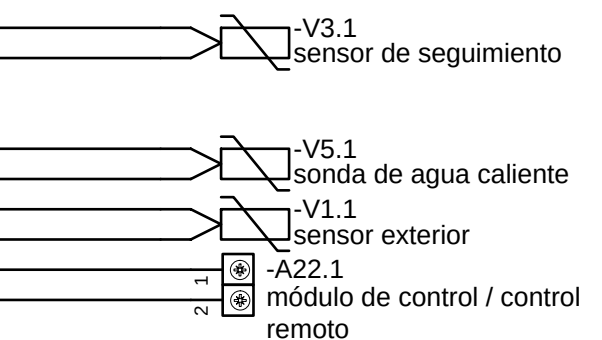
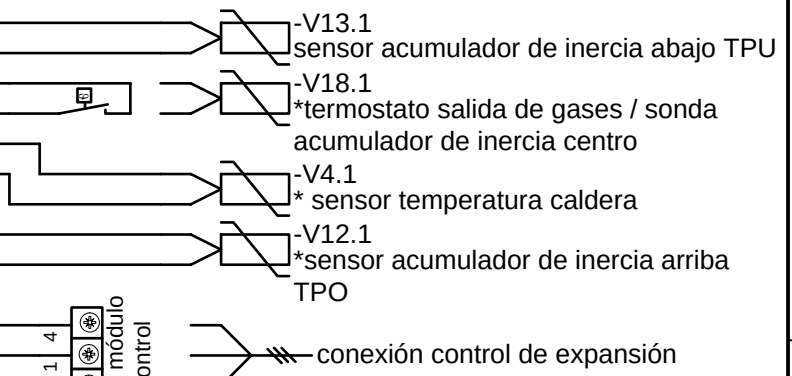
circuito de calefacción 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

UML+ módulo 3

circuito de calefacción 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Rev.	Änderung	Datum	Name
1			

Datum	06.08.2013
Gezeichnet	rot
Geprüft	ros
Genehmigt	

WVF+ / UML+ / UML+	
Zeichnungs Nr.:	092837/01

MES P041 + H021 + H024
regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente
comutación automática combustibles sólidos con carga acumulador de inercia

Projekt :
regulación

windhager

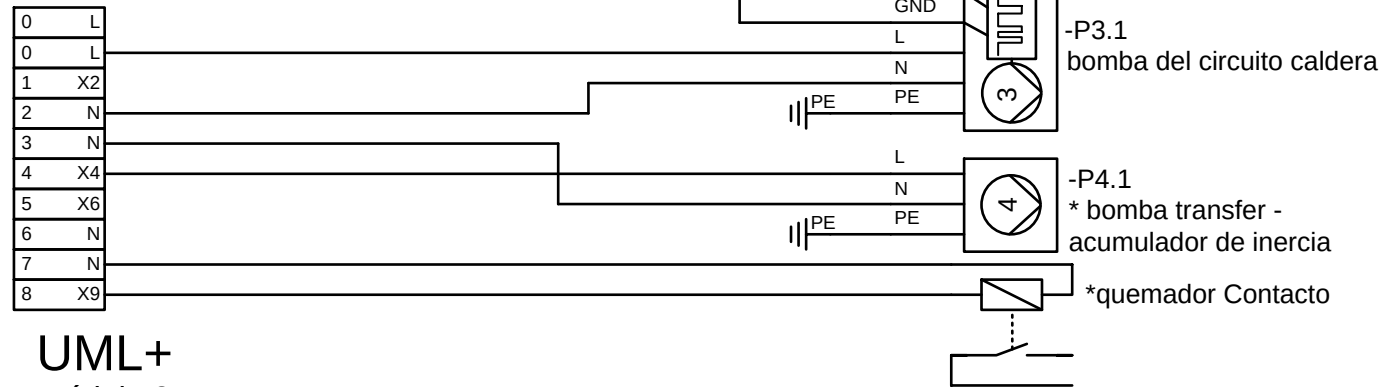
1 mm : 1 mm
Blatt 092837/01

baja tensión 230VAC



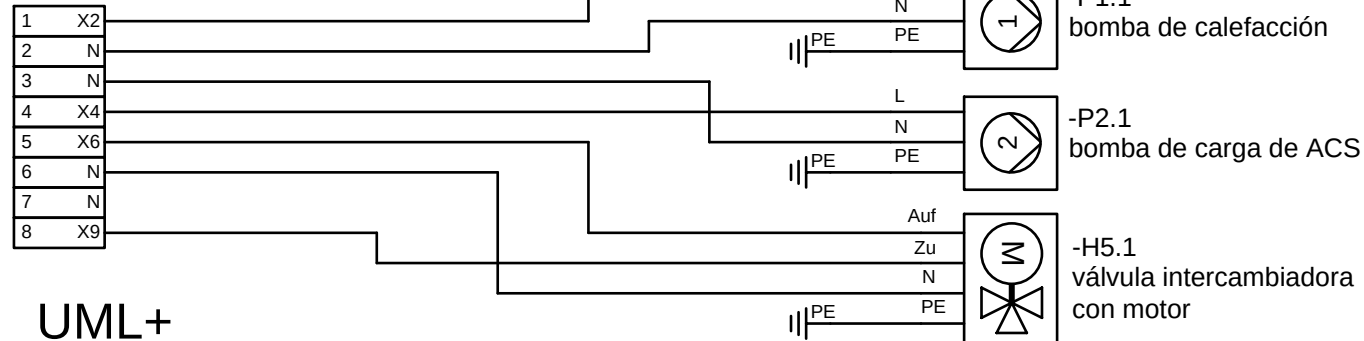
baja tensión 230VAC

B-PLM módulo 1



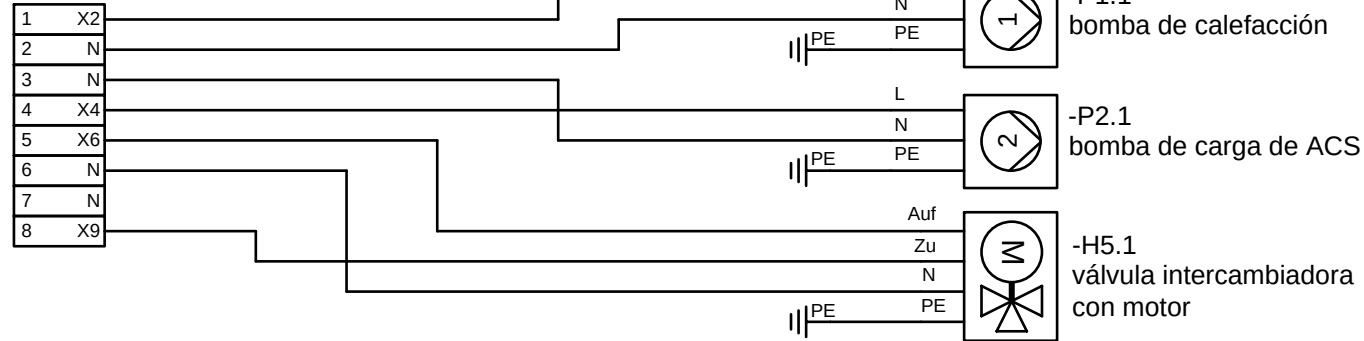
UML+ módulo 2

circuito de calefacción 1



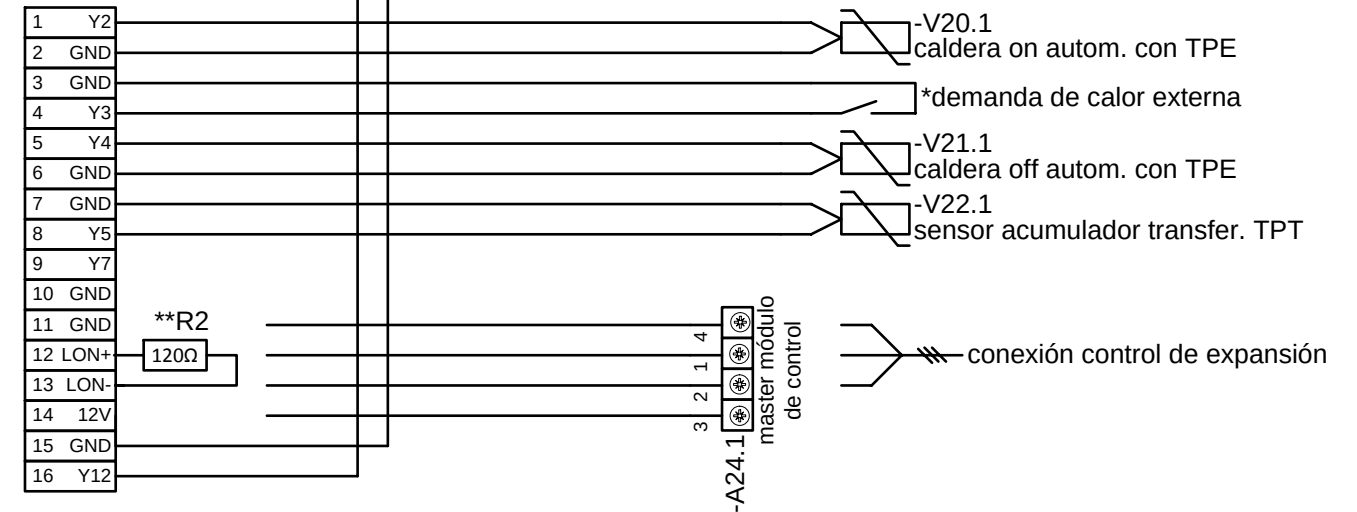
UML+ módulo 2

circuito de calefacción 2



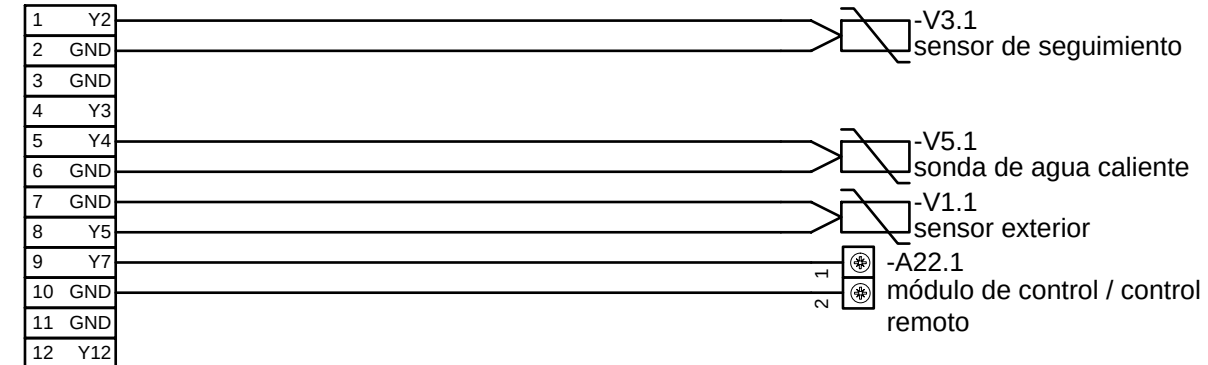
sonda muy baja tensión

B-PLM módulo 1



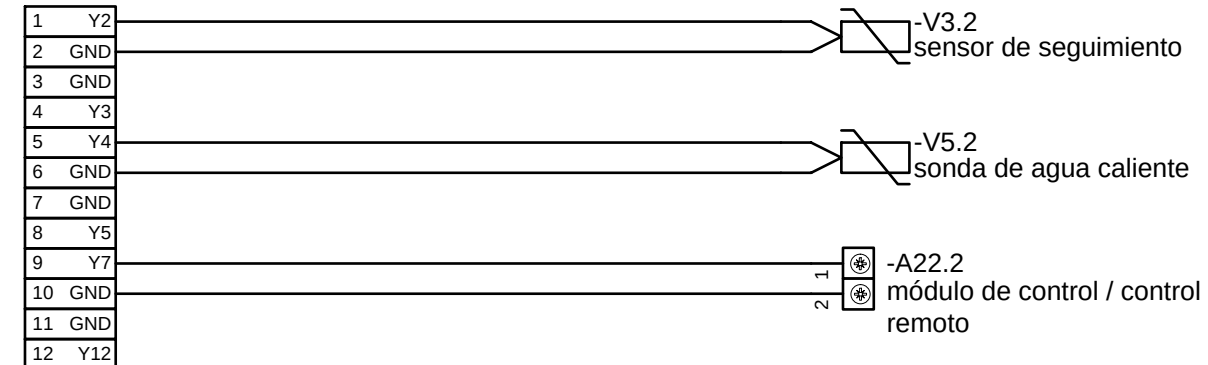
UML+ módulo 2

circuito de calefacción 1



UML+ módulo 3

circuito de calefacción 2



*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum	07.08.2013
Gezeichnet	ros
Geprüft	ros
Genehmigt	

B-PLM / UML+ / UML+
Zeichnungs Nr.: **093123/01**

MES P042 + H021 + H024
regulación temperatura externa para 2 circuitos de calefacción con mezcladora y circuitos agua caliente y quemador/módulo de acumulador de inercia B-PLM

Projekt :
regulación

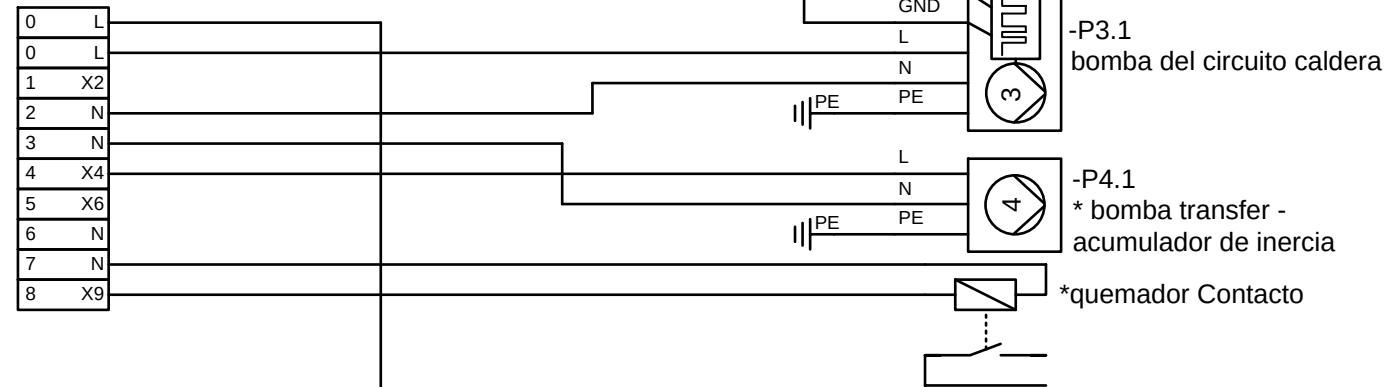
windhager

1 mm : 1 mm
Blatt 093123/01

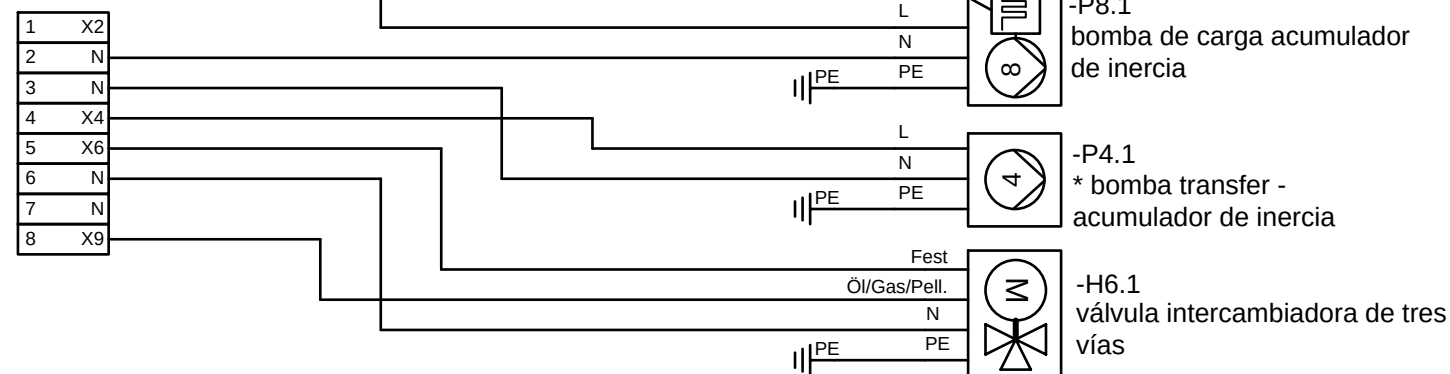
baja tensión 230VAC

sonda muy baja tensión

B-PLM módulo 1

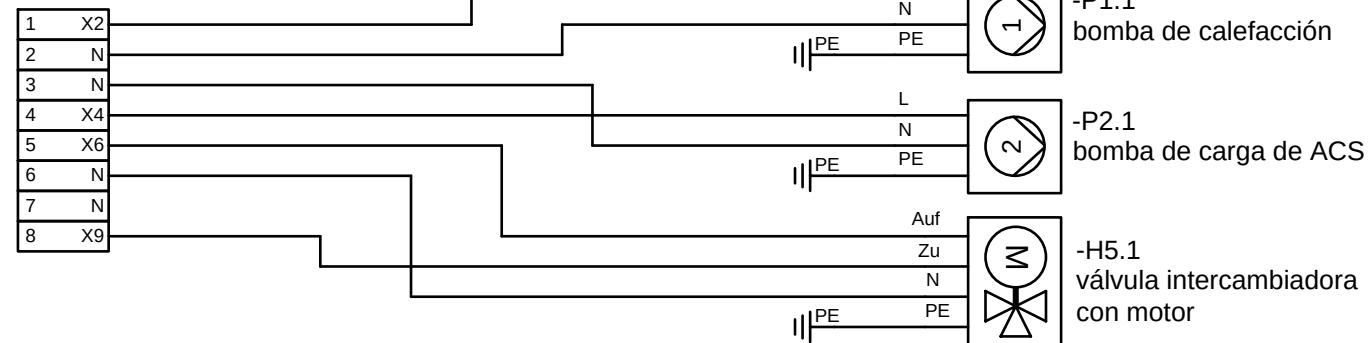


WVF+ módulo 2

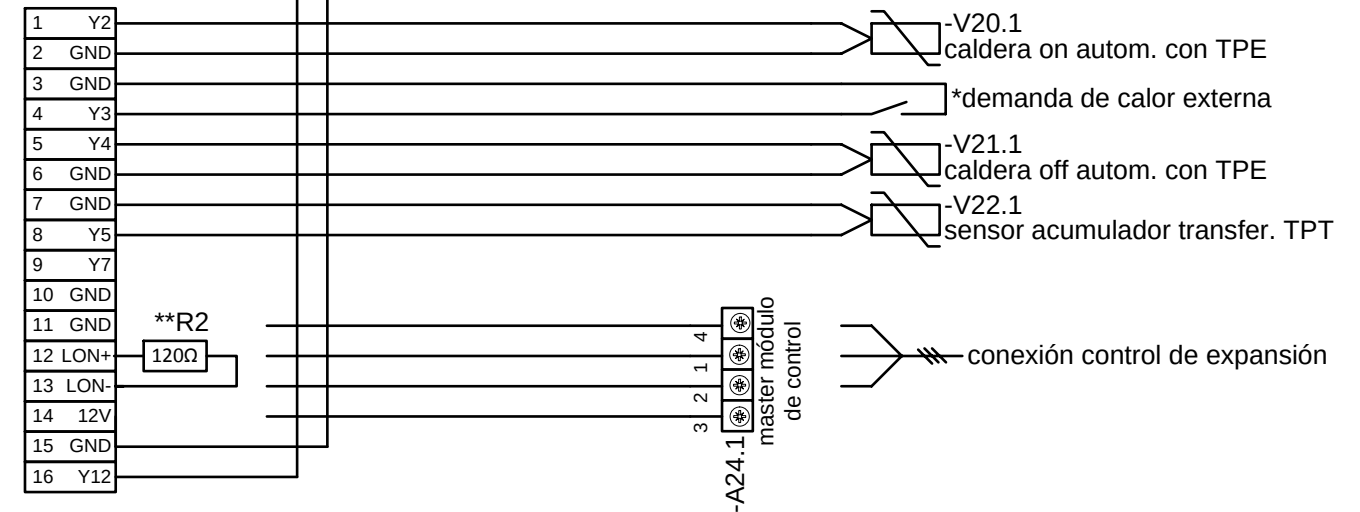


UML+ módulo 3

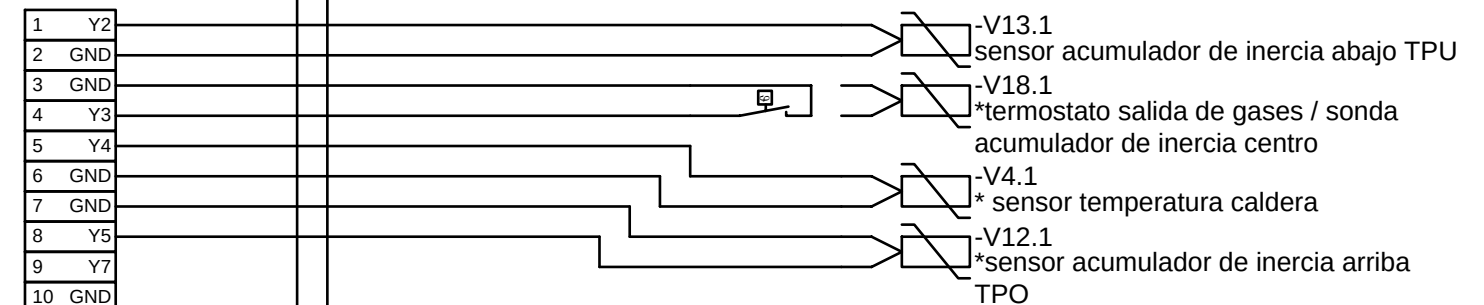
circuito de calefacción 1



B-PLM módulo 1

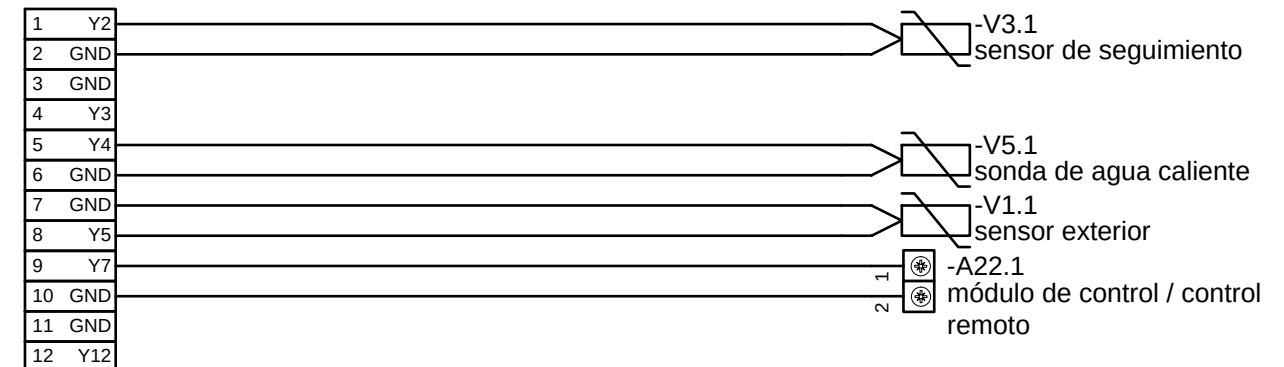


WVF+ módulo 2



UML+ módulo 3

circuito de calefacción 1



*...opcional/accesorios

**quitar la resistencia del terminal R2 se si conecta la regulación complementaria

Datum 06.08.2013

Gezeichnet rot

Geprüft ros

Genehmigt

B-PLM / WVF+ / UML+

Zeichnungs Nr.: 093125/01

MES P042 + P041+ H021

regulación temperatura externa para 1 circuito de calefacción con mezcladora y 1 circuito agua caliente
y un módulo para combustibles sólidos WVF+y quemador/módulo de acumulador de inercia

Projekt :
regulación

windhager

1 mm : 1 mm

Blatt 093125/01

2

baja tensión 230VAC

módulo 1

0	L
0	L
1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

módulo 2

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

módulo 3

1	X2
2	N
3	N
4	X4
5	X6
6	N
7	N
8	X9

sonda muy baja tensión

módulo 1

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	LON+
13	LON-
14	12V
15	GND
16	Y12

**R2

120Ω

módulo 2

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

módulo 3

1	Y2
2	GND
3	GND
4	Y3
5	Y4
6	GND
7	GND
8	Y5
9	Y7
10	GND
11	GND
12	Y12

-A24.1
master módulo
de control

conexión control de expansión

*...opcional/accesorios **quitar la resistencia del terminal R2 se si conecta la regulación complementaria

OT-Interfaz

Y4.6 master
Y4.5 BUML 1 / MWP

Y4.4 Slave BUML 2
Y4.3

Y4.2
Y4.1

Bus- Kommunikation:

S5 ☒ ON = encendido
☐ OFF = apagado

Mischerfunktion:

S4 ☒ ON = encendido
☐ OFF = apagado

Boilerladung:

S3 ☒ ON = carga en paralelo
☐ OFF = conmutación prioritaria

acumulador de ACS con:

S2 ☒ ON = válvula de carga
☐ OFF = bomba de carga

caldera termostato mínimo

S1 ☒ ON = 35C° / 95 °F
☐ OFF = 20C° / 68 °F

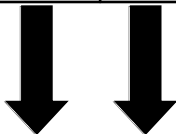
BUML-TTL	
Y2.6	RAM 850
Y2.5	RAM 786
Y2.4	sensor exterior
Y2.3	
Y2.2	sensor de ACS
Y2.1	
Y1.6	sensor temperatura caldera
Y1.5	
Y1.4	sensor de seguimiento
Y1.3	
Y1.2	libre
Y1.1	
X2.8 L	fase continua
X2.7 N	bomba de carga de ACS
X2.6 L	válvula de carga de ACS
X2.5 N	bomba de calefacción
X2.4 L	
X2.3 L	cerrado
X2.2 L	abierto válvula
X2.1 N	intercambiadora con motor
X1.1 L	conexión fuente de alimentación
X1.2 N	230VAC
X1.3 L"	
X1.4 L"	
X1.5 L'	interruptor manual de la bomba de ACS
X1.6 L'	interruptor manual de la bomba de calefacción
EDV Nr.: 094505/00	

094517/00

RESET	DIP	OT	Y4.6	Y4.5	Y4.4	Y4.3	Y4.2	Y4.1

EDV Nr.: 094519/01	
interruptor manual de la bomba de calefacción	X1.6 L'
interruptor manual de la bomba de ACS	X1.5 L'
	X1.4 L"
	X1.3 L"
conexión fuente de alimentación 230VAC	X1.2 N
	X1.1 L
válvula	
intercambiadora con motor	X2.1 N
abierto	X2.2 L
cerrado	X2.3 L
bomba de calefacción	X2.4 L
	X2.5 N
válvula de carga de ACS	X2.6 L
bomba de carga de ACS	X2.7 N
fase continua	X2.8 L
libre	Y1.1
	Y1.2
sensor de seguimiento	Y1.3
	Y1.4
sensor temperatura caldera	Y1.5
	Y1.6
sensor de ACS	Y2.1
	Y2.2
sensor exterior	Y2.3
	Y2.4
RAM 850	Y2.5
RAM 786	Y2.6
BUML-TTL	

caldera termostato mínimo	
S1	☐ ON = 35C° / 95 °F ☒ OFF = 20C° / 68 °F
acumulador de ACS con:	
S2	☐ ON = válvula de carga ☒ OFF = bomba de carga
Boilerladung:	
S3	☐ ON = carga en paralelo ☒ OFF = conmutación prioritaria
Mischerfunktion:	
S4	☒ ON = encendido ☐ OFF = apagado
Bus- Kommunikation:	
S5	☒ ON = encendido ☐ OFF = apagado
Y4.1	
Y4.2	
Y4.3	Slave
Y4.4	BUML 2
Y4.5	master
Y4.6	BUML 1 / MWP
OT-Interfaces	



094521/00

