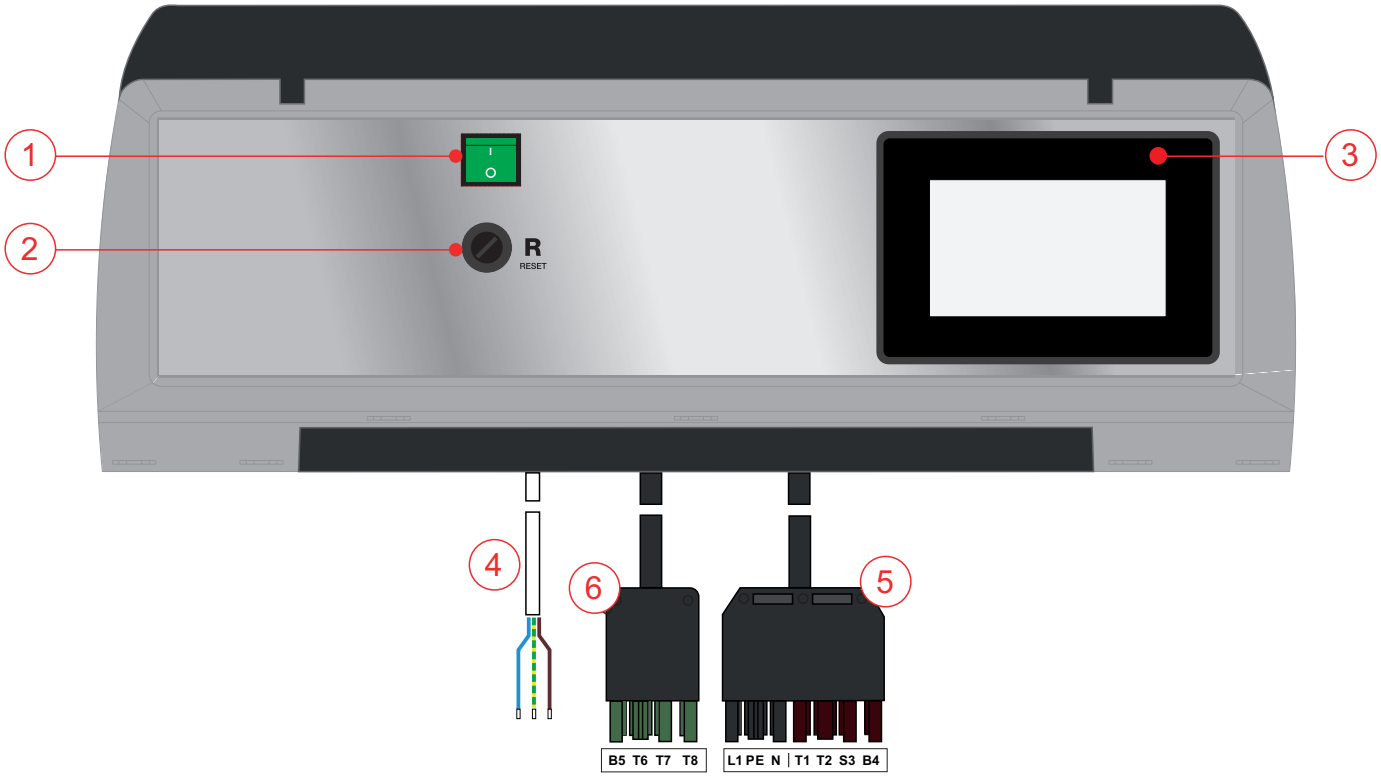
ENGLISH

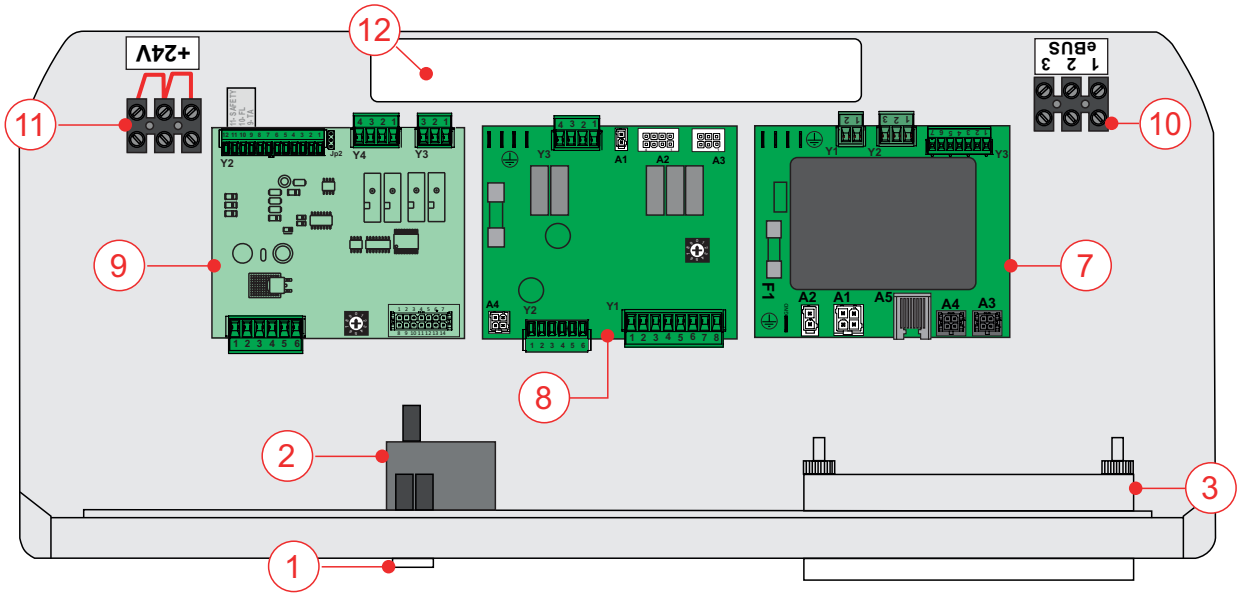
MASTER & SLAVE eBUS CONTROL PANEL

INSTALLATION AND SERVICING MANUAL

1 Generality

Master manager panel

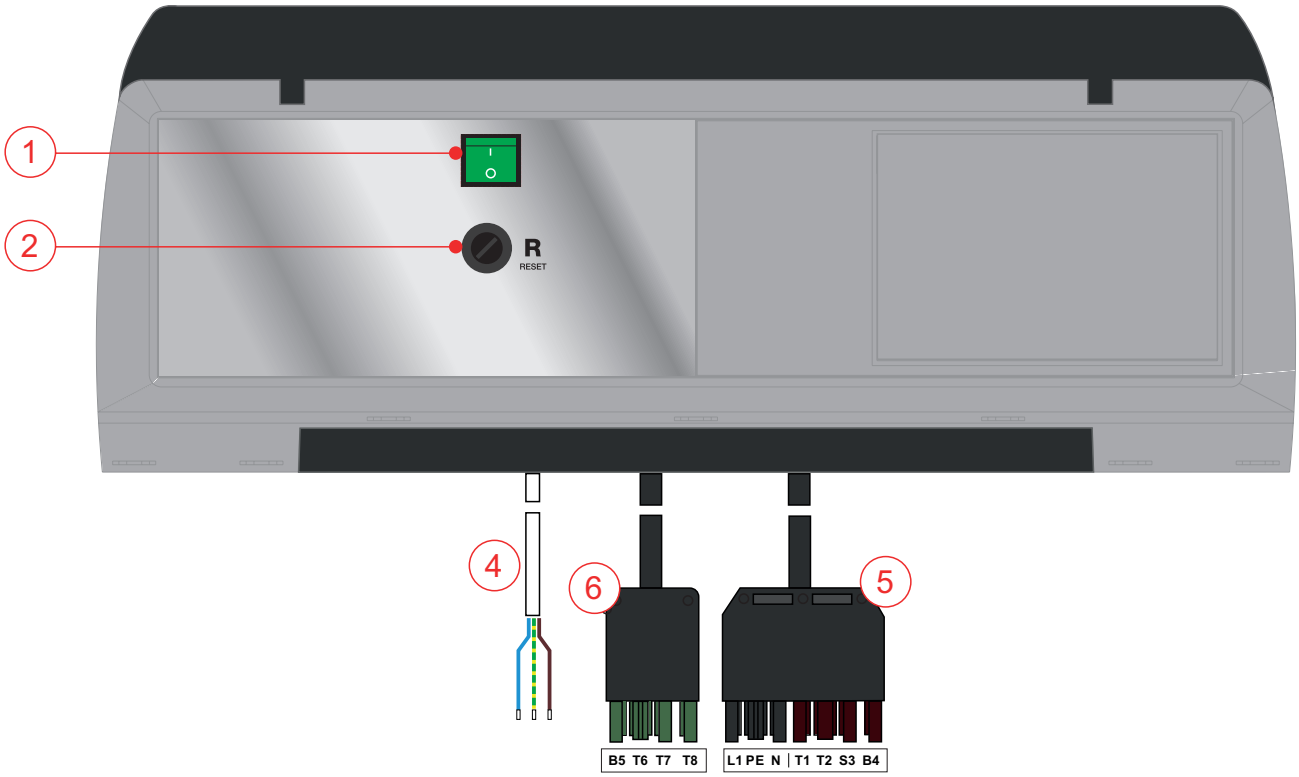


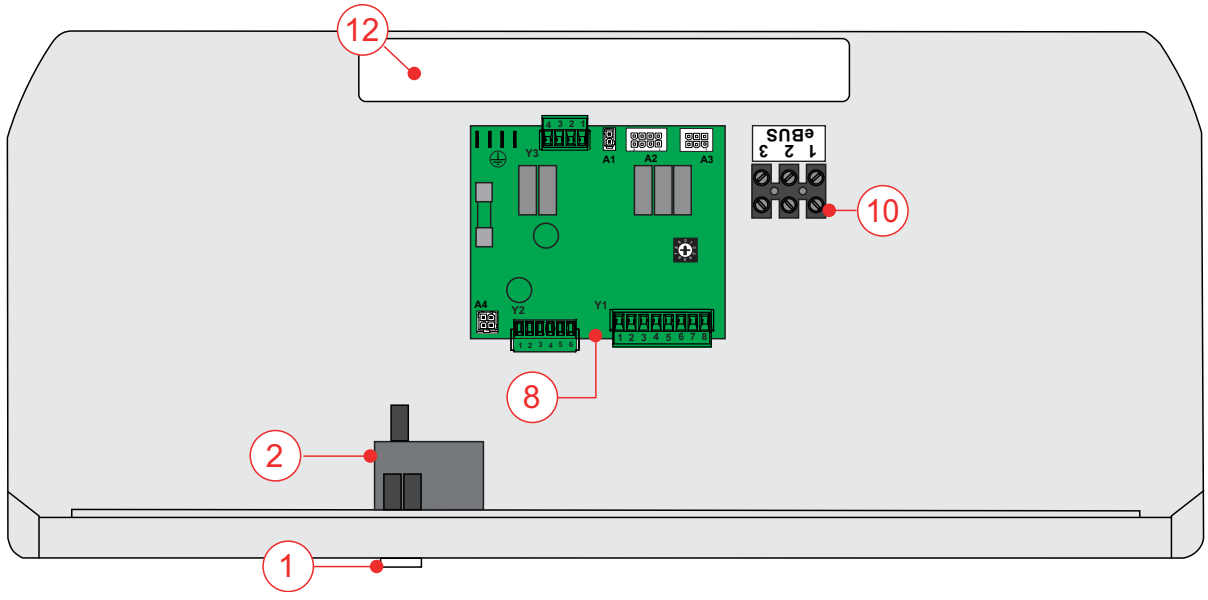


LEGEND		
N°		Description
1		ON / OFF switch
2	TL	Limit thermostat with manual reset
3		User interface thermoregulator (Ufly P / HSCP)

4		Power cable 230V - 50Hz
5		Wieland male plug 7 Poles (1st stage burner)
6		Wieland male plug 4 poles (2nd stage burner)
7		Power board

Slave panel





8	BMM	Burner management card
9	BCM	Cascade controller
10		eBUS terminal block for cascade panel connection
11		Additional terminal block +24 V BCM

12		Connections output

2 Composition

The Master panel consists of:
- Wired panel
- 2 Wieland plugs for connection to the burner
- 1 NTC probe for SR connection (boiler flow sensor)
- 1 NTC probe for Cascade connection
- 1 NTC probe for boiler connection
- 1 external probe
- Technical connection instructions

The Slave panel consists of:
- Wired panel
- 2 Wieland plugs for connection to the burner
- 1 NTC probe for SR connection (boiler flow sensor)
- Technical connection instructions

3 General connections

Maximum Connection Distance
EBUS Boiler: Max 30 m

EBUS Boiler: Max 30 m
If higher and in any case, the cable must be sized so that the fall total voltage does not exceed 0.5 V considering a current of 30 mA.

it is important to avoid interference by separating the Bus cable (Low Voltage) from the other cable (High Voltage) using a double shielded insulated wiring connected on one side.

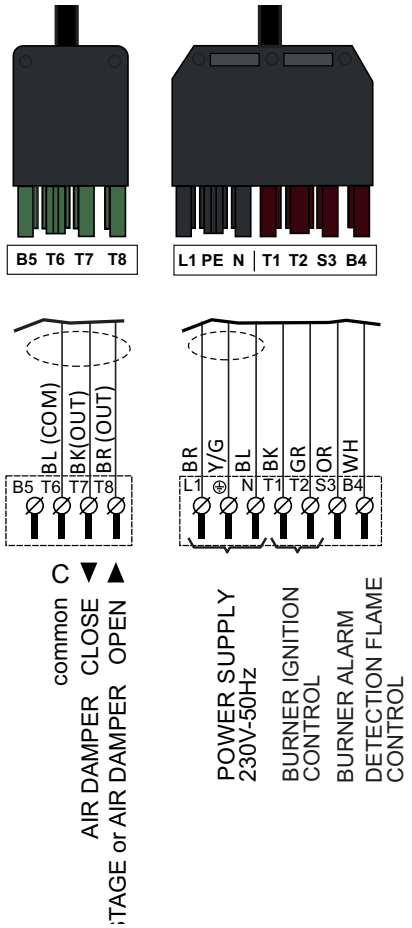
Distance Sensor Connection
SMG: Max 30m

Maximum connection power
Circulators: Max 1 A

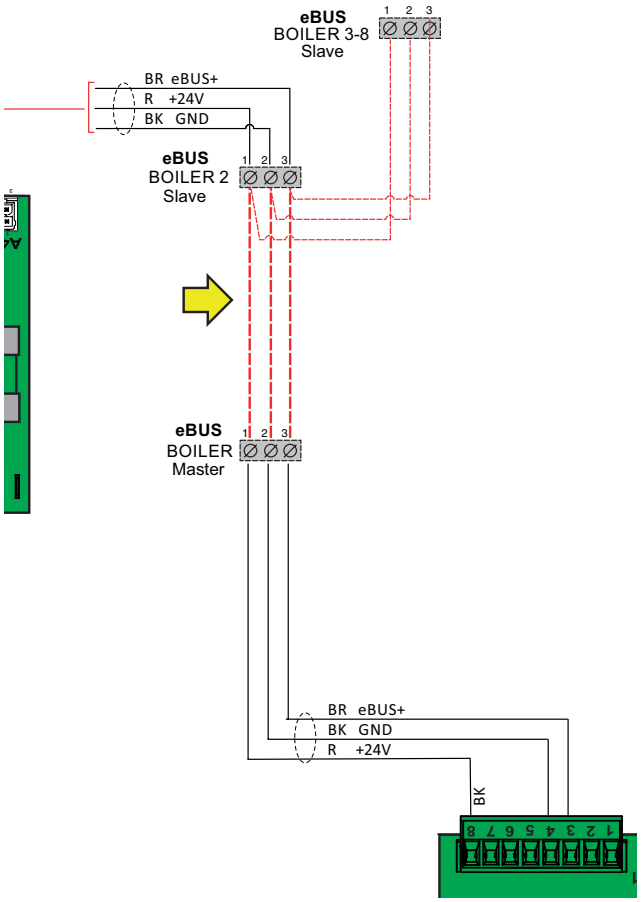
(For higher loads interpose a relay adequately
General connections

4 Connection Detail

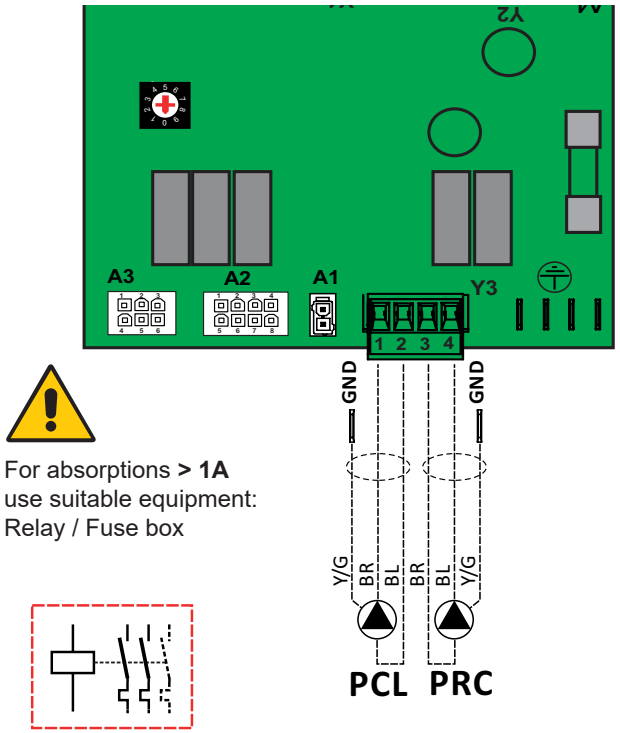
BMM: Burner connection



BMM: Connection between Master / Slave Panels

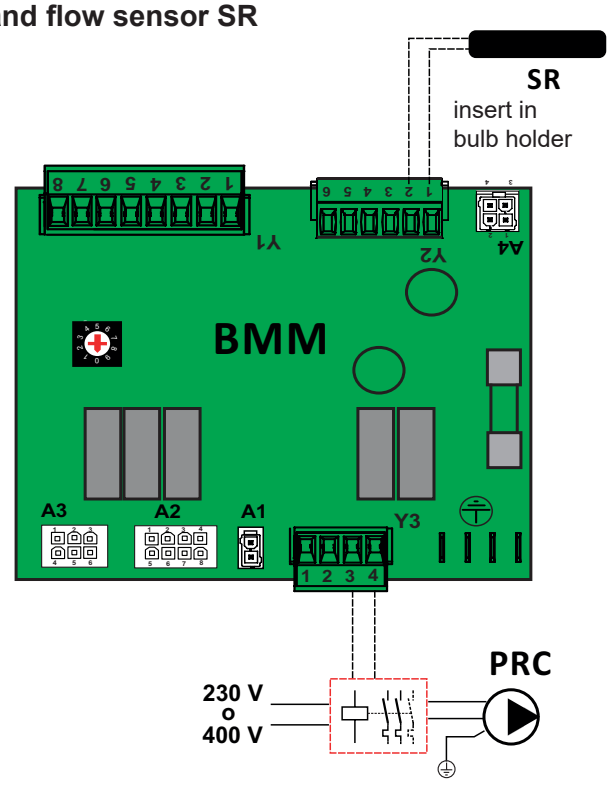


BMM: BMM: Manifold pump connections (PCL) and Boiler circulation pump (PRC)



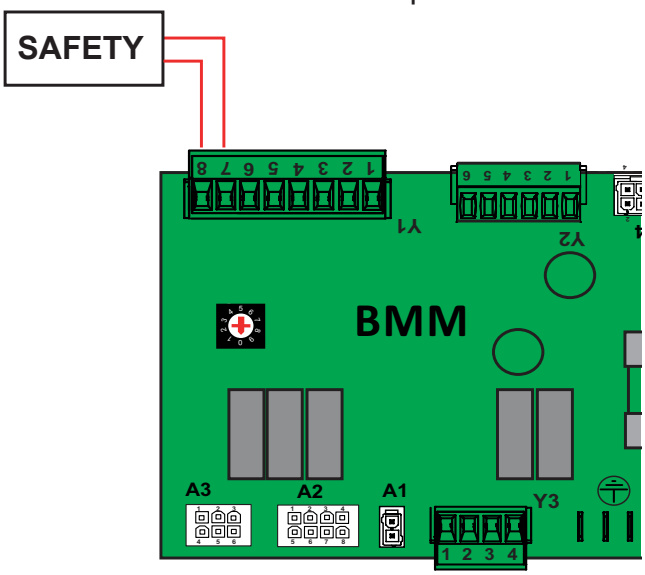
For absorptions **> 1A**
use suitable equipment:
Relay / Fuse box

BMM: BMM: Links recirculation pump (PRC) and flow sensor SR



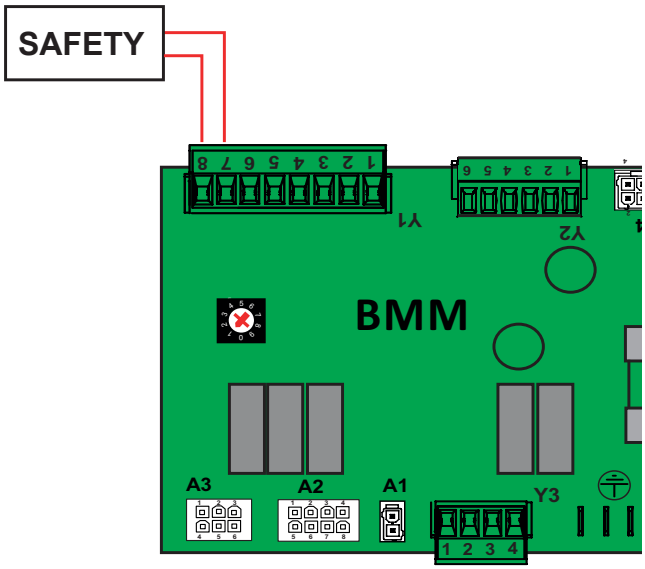
BMM: Safety connections on BMM for cascade boilers

BMM Master panel



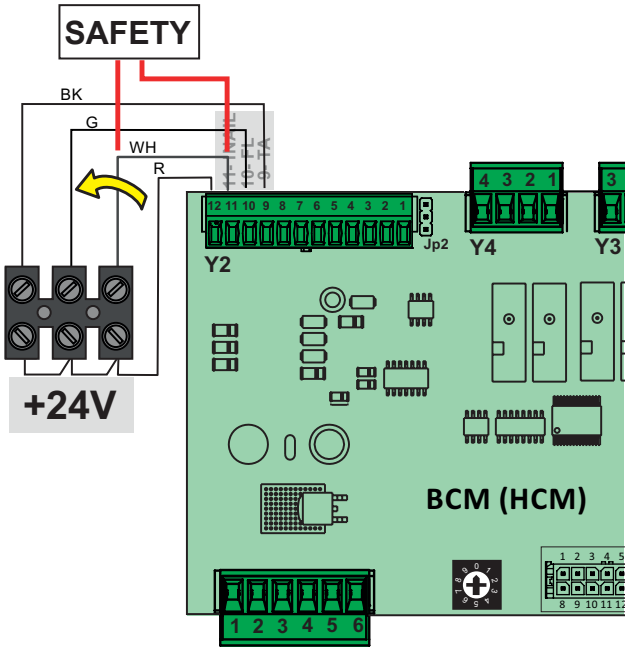
Boiler 1

BMM Slave panel



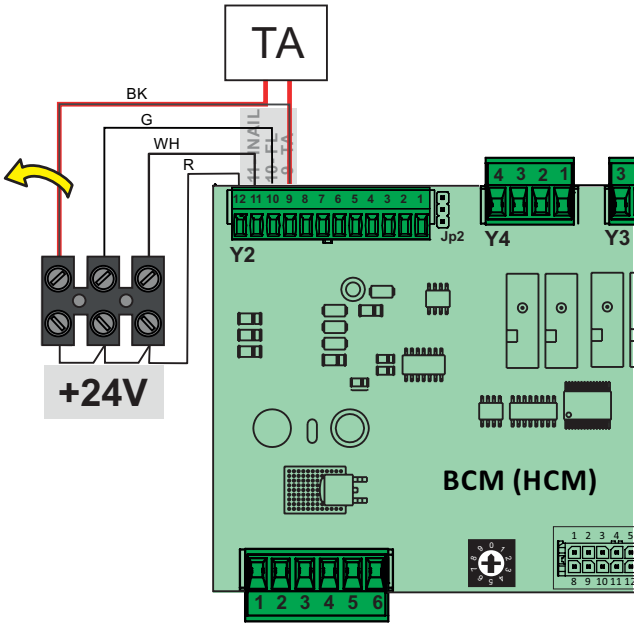
Boiler 2

BCM: Safety connections on BCM for single boiler



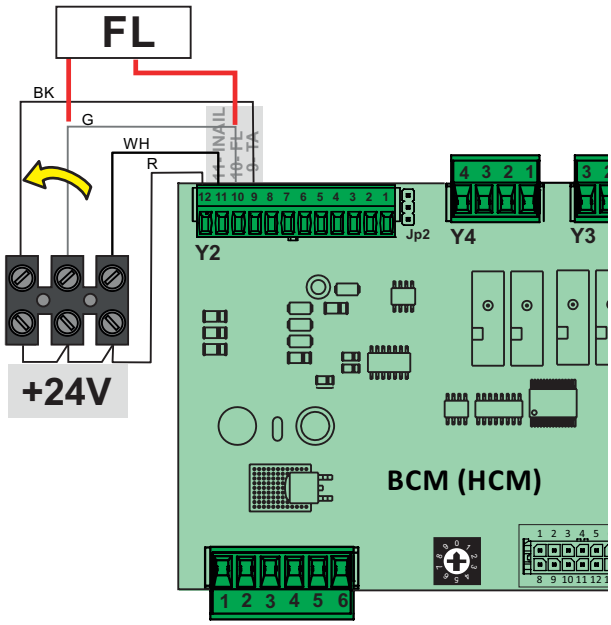
- Remove the jumper and connect the cables as shown **(between terminal block and terminal 11 Y2).**

BCM: Room thermostat / start stop connections



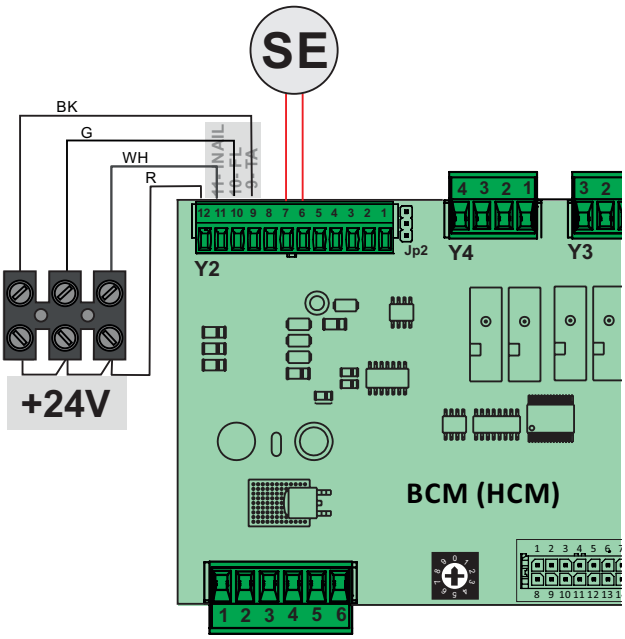
- **Remove the jumper and connect the cables as shown (between terminal block and terminal 9 Y2).**

BCM: FL Flow switch connections



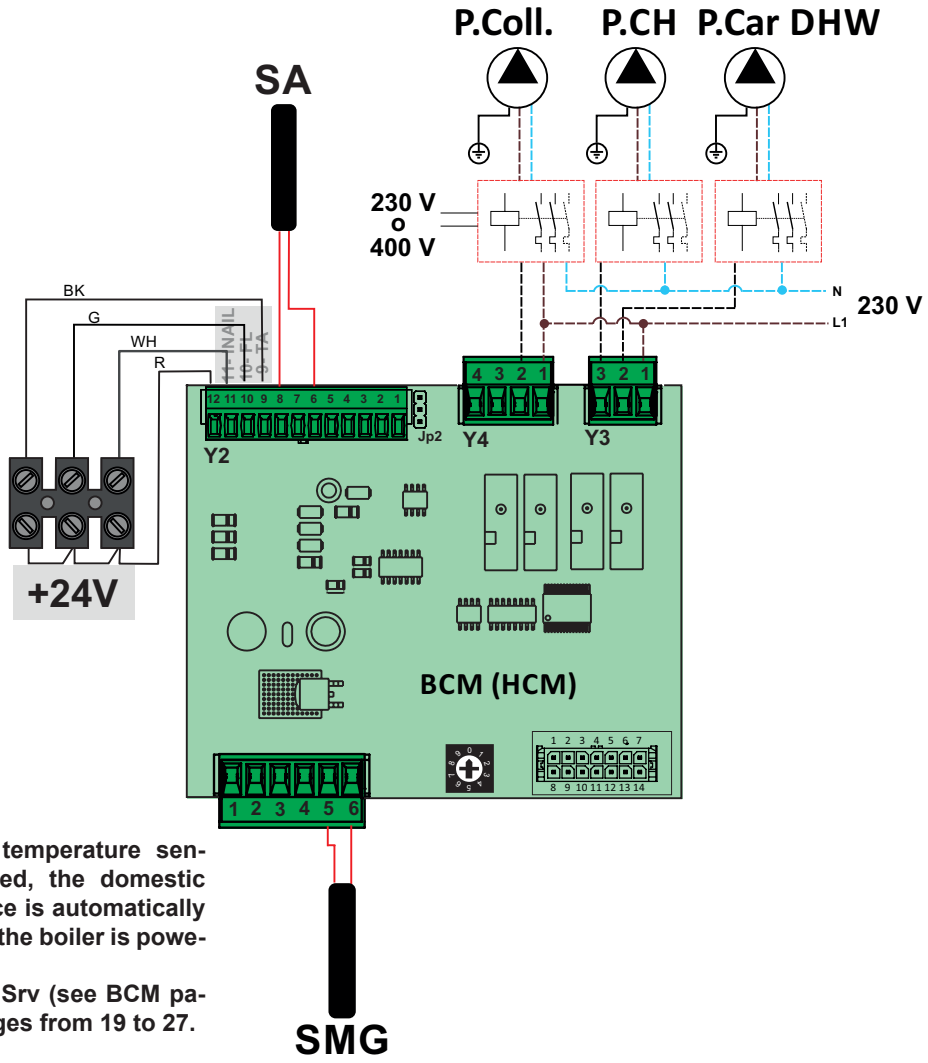
- Remove the jumper and connect the cables as shown (between terminal block and terminal 10 Y2).

BCM: Connections SE External probe



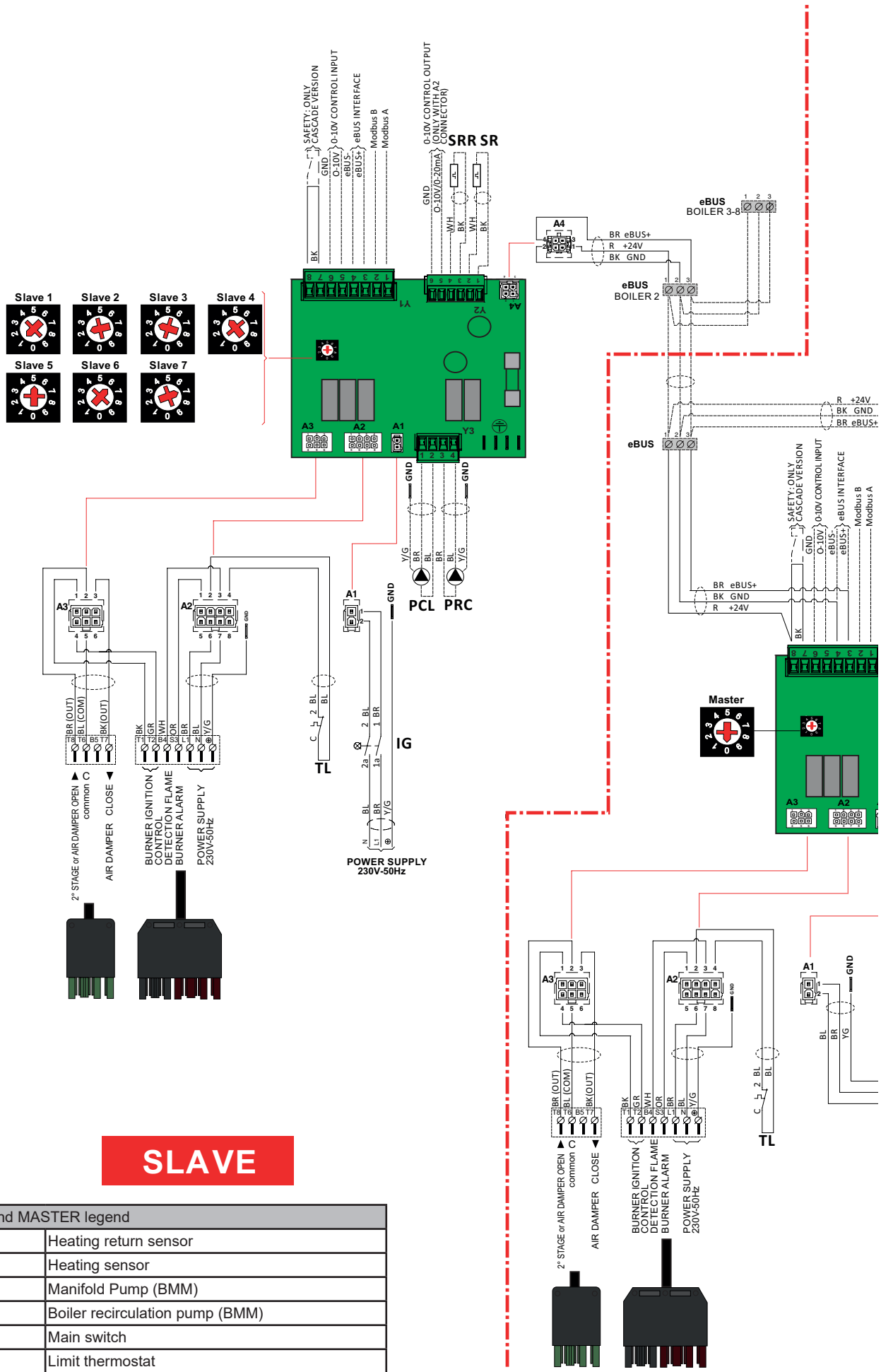
- connection on the terminal block, BCM (Y2 6-7).

BCM: BCM: Circulators connections - SMG global flow probe - SA storage temperature probe



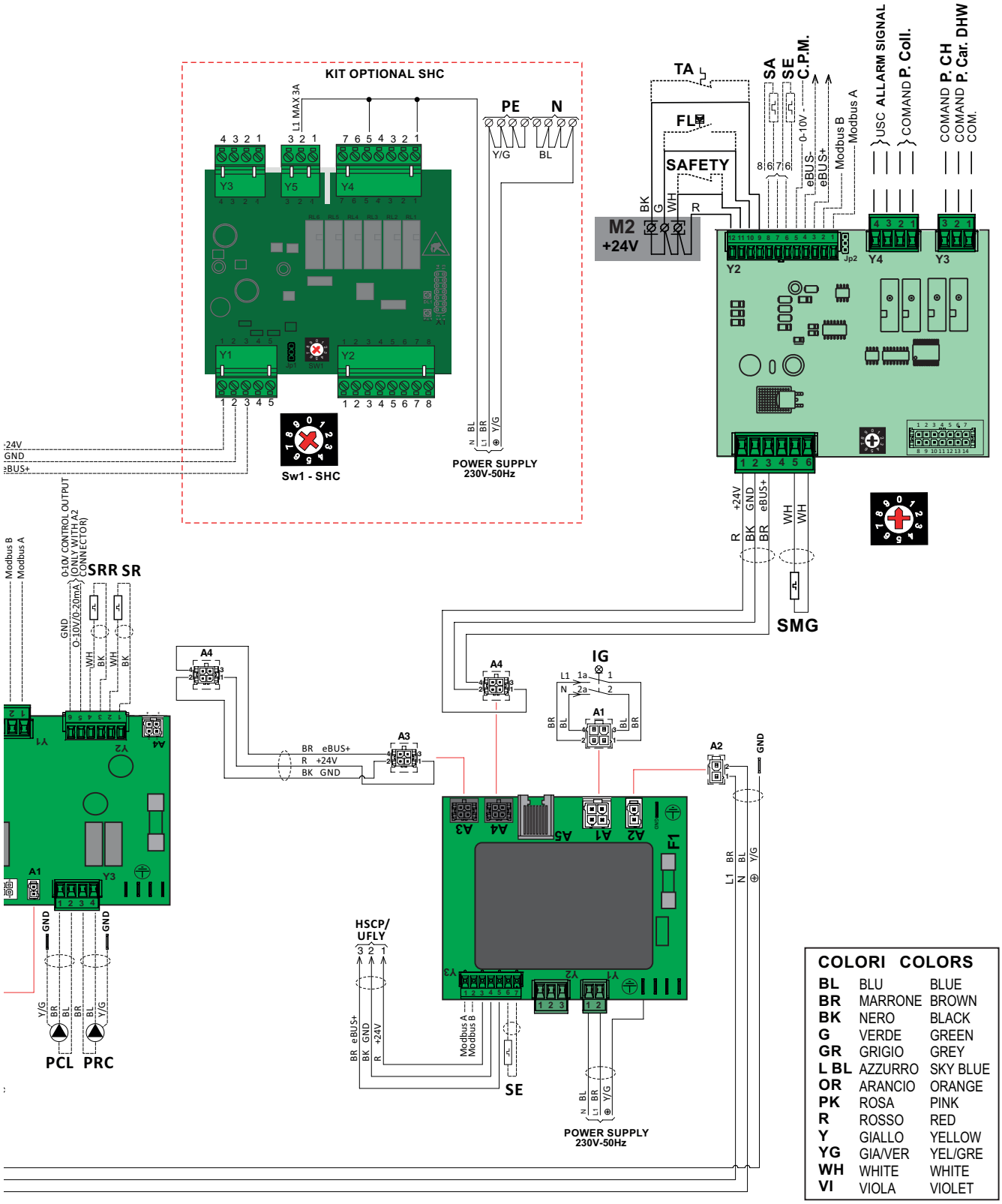
If the storage temperature sensor is connected, the domestic hot water service is automatically activated when the boiler is powered.
The code (803) Srv (see BCM parameters) changes from 19 to 27.

5 Master / Slave general connection diagram



SLAVE

SLAVE and MASTER legend	
SRR	Heating return sensor
SR	Heating sensor
PCL	Manifold Pump (BMM)
PRC	Boiler recirculation pump (BMM)
IG	Main switch
TL	Limit thermostat
MBUS	Connection (boilers in cascade)



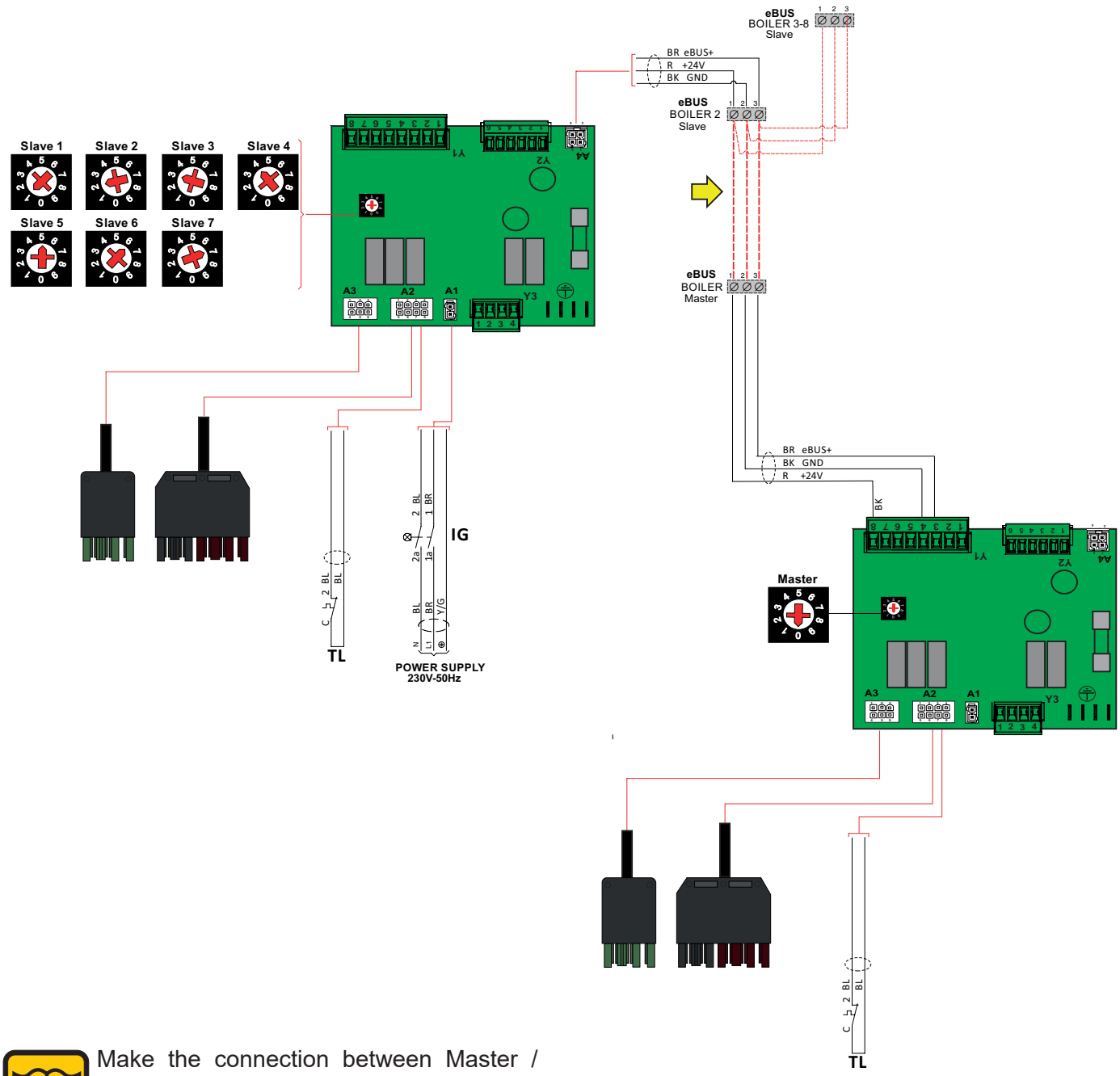
COLORI	COLORS	
BL	BLU	BLUE
BR	MARRONE	BROWN
BK	NERO	BLACK
G	VERDE	GREEN
GR	GRIGIO	GREY
L BL	AZZURRO	SKY BLUE
OR	ARANCIO	ORANGE
PK	ROSA	PINK
R	ROSSO	RED
Y	GIALLO	YELLOW
YG	GIA/VER	YEL/GRE
WH	WHITE	WHITE
VI	VIOLA	VIOLET

MASTER

MASTER legend (BCM) HCM	
SMG	General flow sensor
SA	DHW storage temperature sensor
SE	External probe
CPM	0-10 V Modulating pump control
	eBUS - primary - eBUS + primary
	Modbus A - Modbus B
ALARM SIGNAL	Alarm output

Comm P. COLL	Boiler manifold pump control
Comm P. CH	Heating pump control
Comm.P.car DHW	DHW Command of the cylinder charging pump
Com	Common output
TA	Room thermostat connection
FL	switch connection
SAFETY	Connection for safety devices

5.1 Master / Slave connection 1 ... 7 (rotary switches)

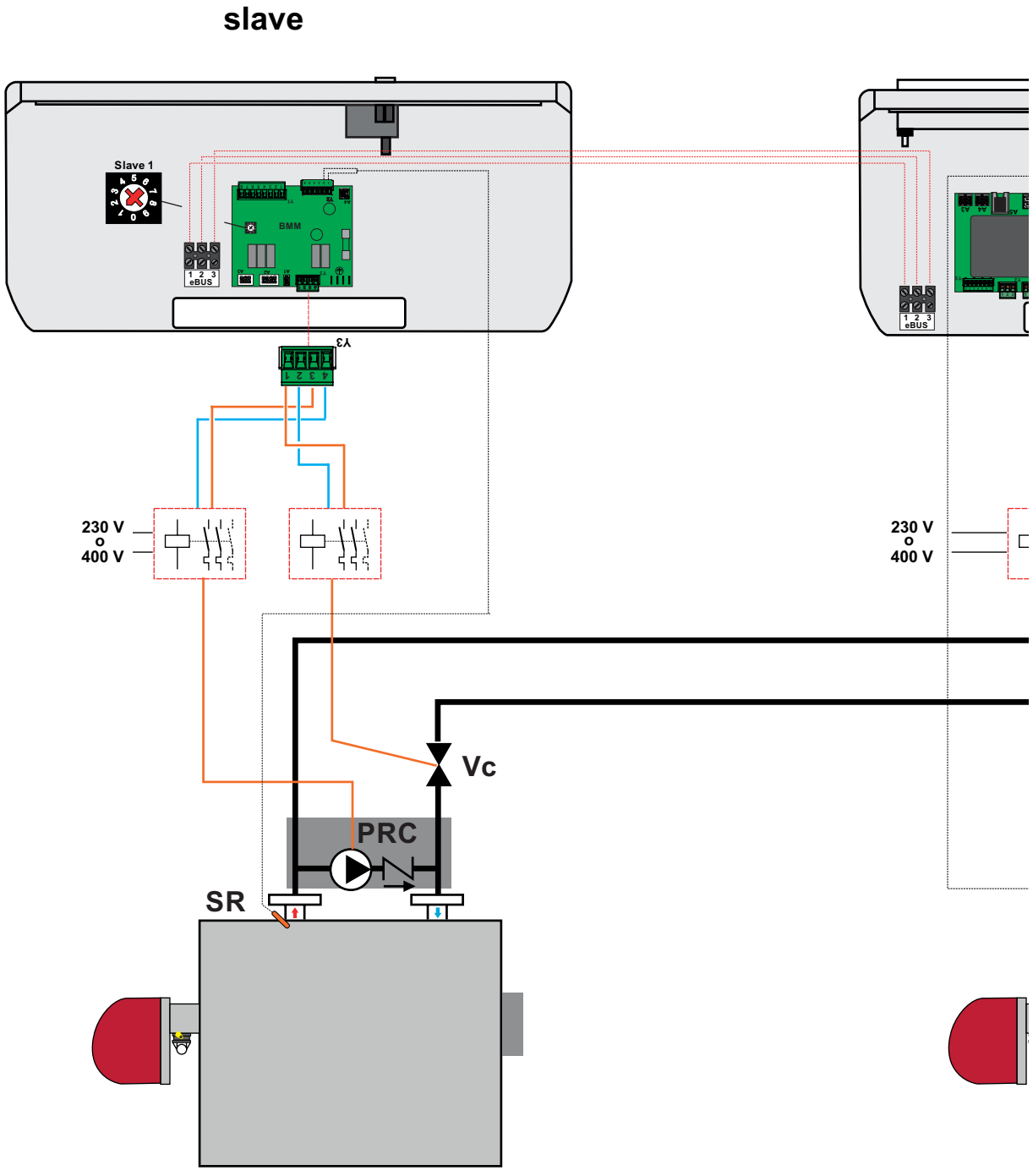


Make the connection between Master / Slave panels from the MBUS terminal board (par.1 pos. 10).
A maximum of 7 Slave boilers + 1 Master boiler can be connected in cascade.

LEFT BLANK INTENTIONALLY

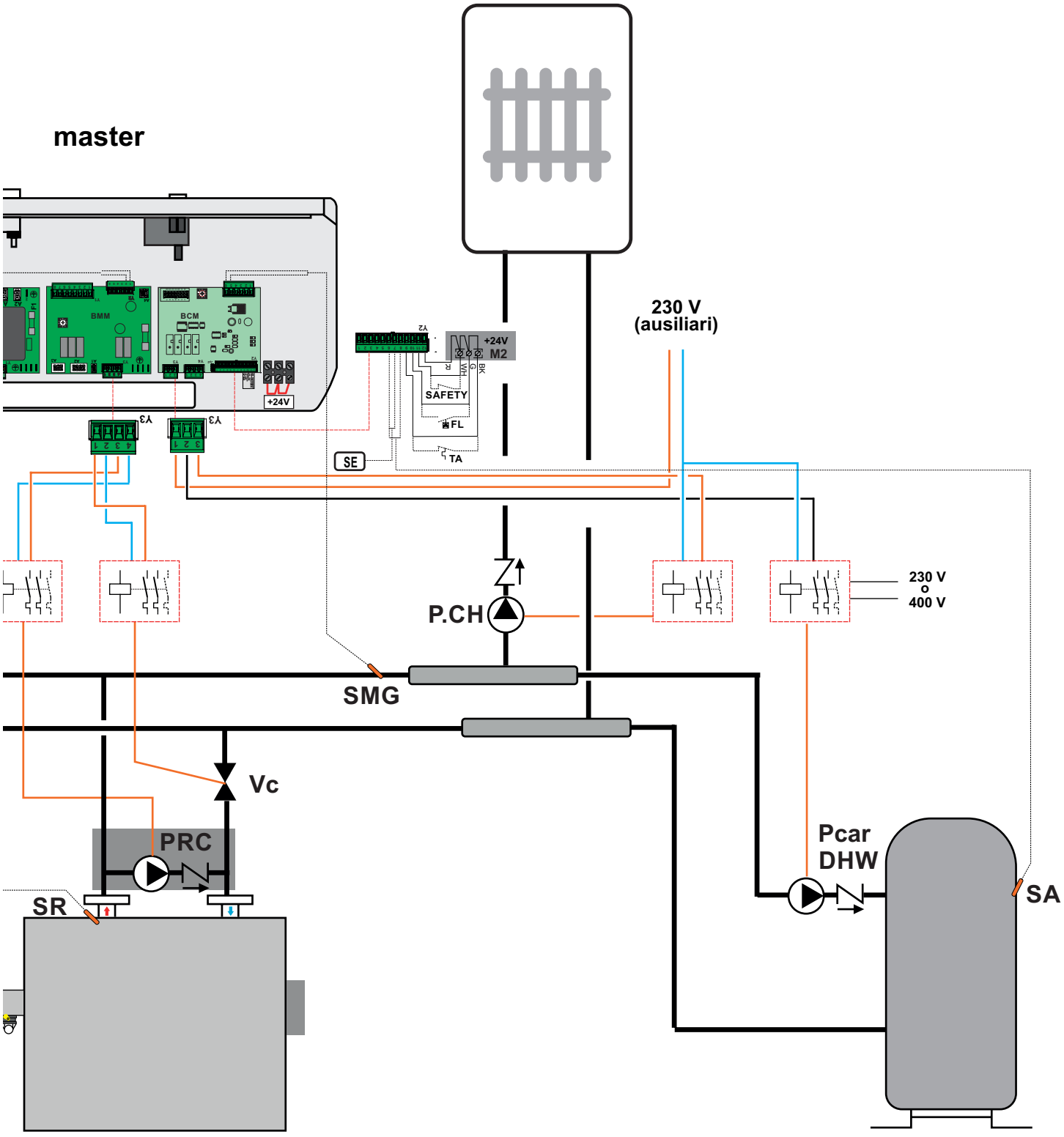
6 Basic scheme (cascade / single BOILER)

High temperature boilers / (Condensing boiler see note *)
without hydraulic separator

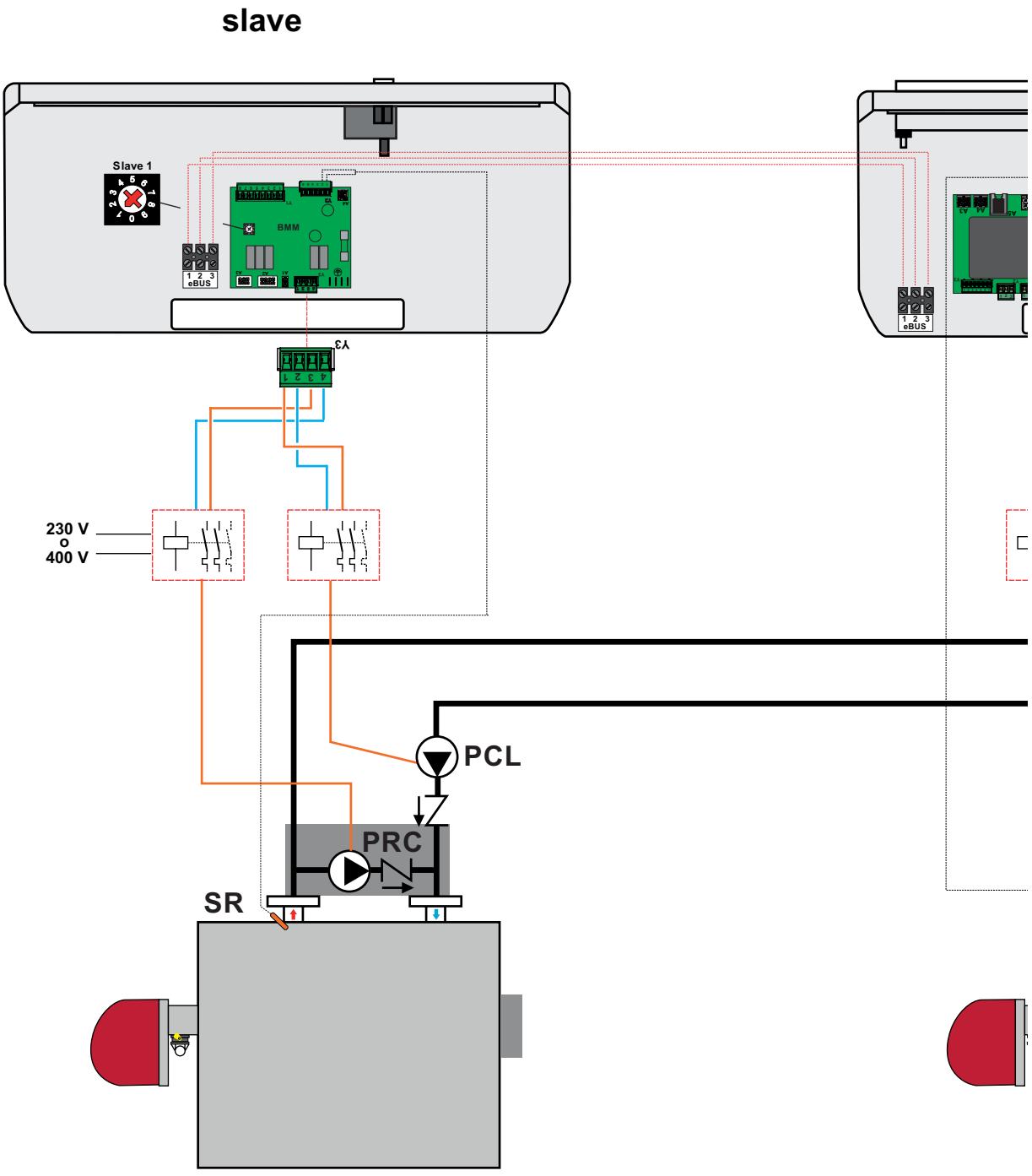


Legend	
SMG	Global Flow sensor
SR	Heating sensor
PRC	Boiler recirculation pump (connect to BMM)
SA	DHW storage temperature sensor
P.car DHW	Cylinder charging pump (connect on BCM)
P. CH	Heating circuit pump (connect to BCM)
Vc	2-way valve Boiler

(*) For condensing boilers, no boiler recirculation pump (PRC) is required.

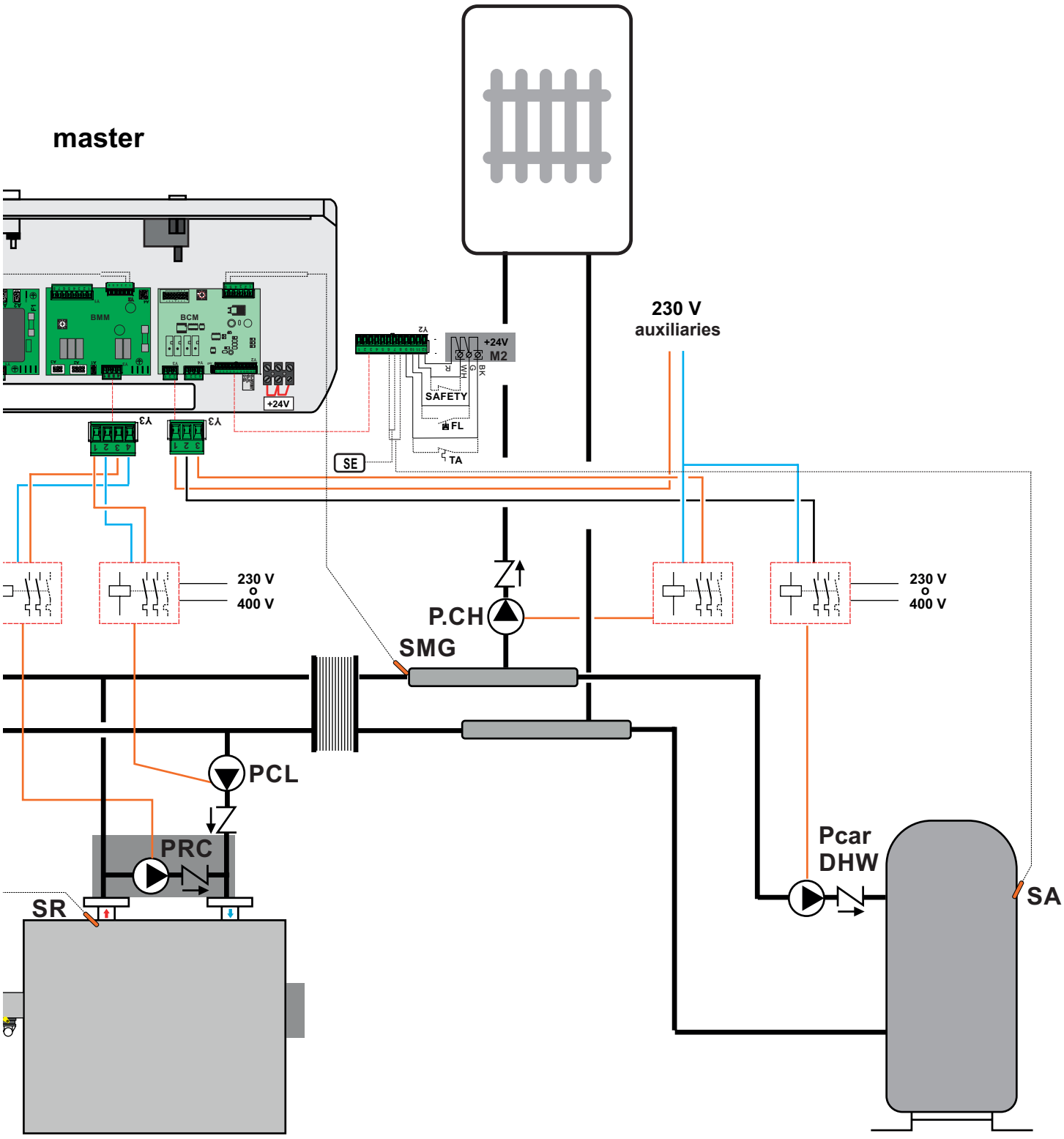

master
BMM
BCM
+24V
Y3
Y3
Y2
+24V
M2
SAFETY
FL
TA
SE
230 V
(ausiliari)
P.CH
230 V
o
400 V
SMG
Vc
PRC
SR
Pcar
DHW
SA

Caldaie Alta temperatura / (Caldaia a condensazione vedi nota *) con separatore idraulico (PCL Pompa collettore su BMM)

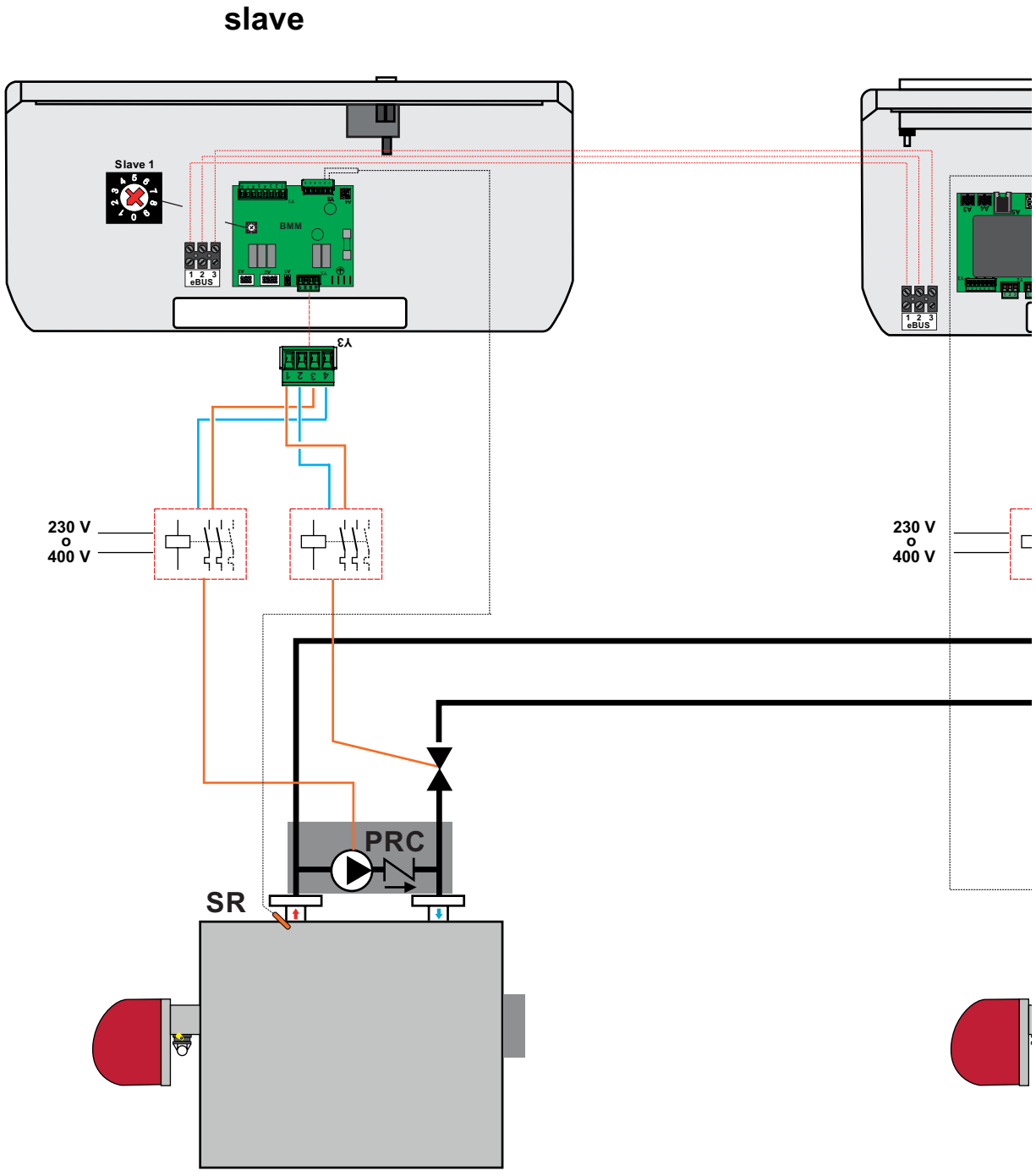


Legenda	
SMG	Sensore mandata generale
SR	Sensore riscaldamento
PRC	Pompa ricircolo caldaia (collegare su BMM)
SA	Sensore temperatura accumulo
P.car DHW	Pompa di carico bollitore (collegare su BCM)
P. CH	Pompa circuito riscaldamento (collegare su BCM)
PCL	Pompa collettore (collegare su BMM)

(*) Per caldaie a condensazione non è necessaria pompa di ricircolo Caldaia PRC.

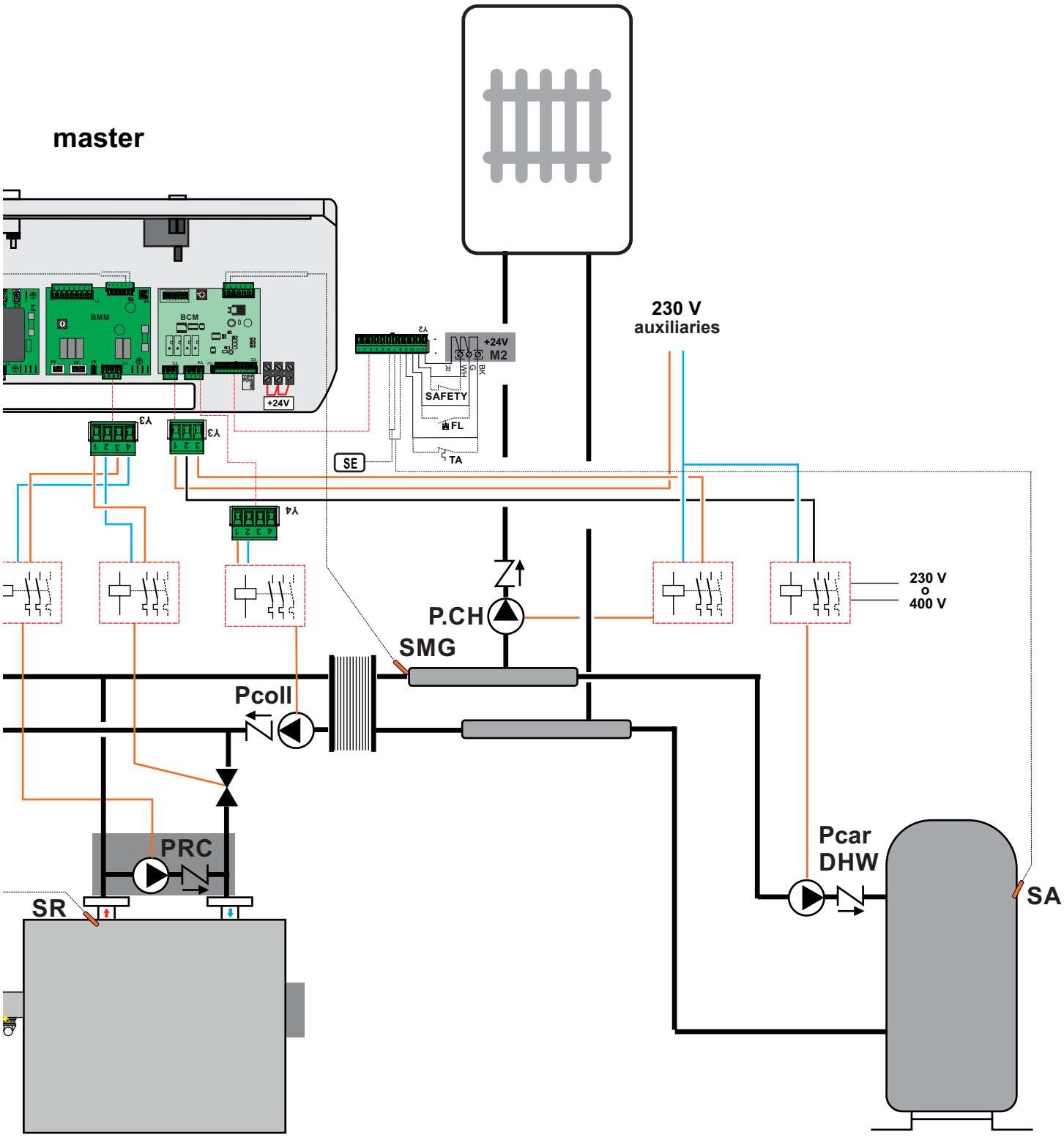

master
BMM
BCM
+24V
Y3
Y3
Y2
+24V
M2
RD
WH
G
BK
SAFETY
FL
TA
SE
230 V
auxiliaries
230 V
o
400 V
230 V
o
400 V
P.CH
SMG
PCL
PRC
SR
Pcar
DHW
SA

High temperature boilers / (Condensing boiler see note *) with hydraulic separator (PCL Manifold pump on BMM)



Legend	
SMG	Global Flow sensor
SR	Heating sensor
PRC	Boiler recirculation pump (connect to BMM)
SA	DHW storage temperature sensor
P.car DHW	DHW Cylinder charging pump (connect on BCM)
P. CH	Heating circuit pump (connect to BCM)
Pcoll	collector pump (connect on the BMM)

(*) For condensing boilers, no boiler recirculation pump (PRC) is required.


master
BMM
BCM
+24V
Y2
+24V
M2
SAFETY
FL
TA
SE
Y3
Y3
Y4
230 V
auxiliaries
230 V
o
400 V
P.CH
SMG
Pcoll
PRC
SR
Pcar
DHW
SA

7 Installation examples

BCM secondary circuit

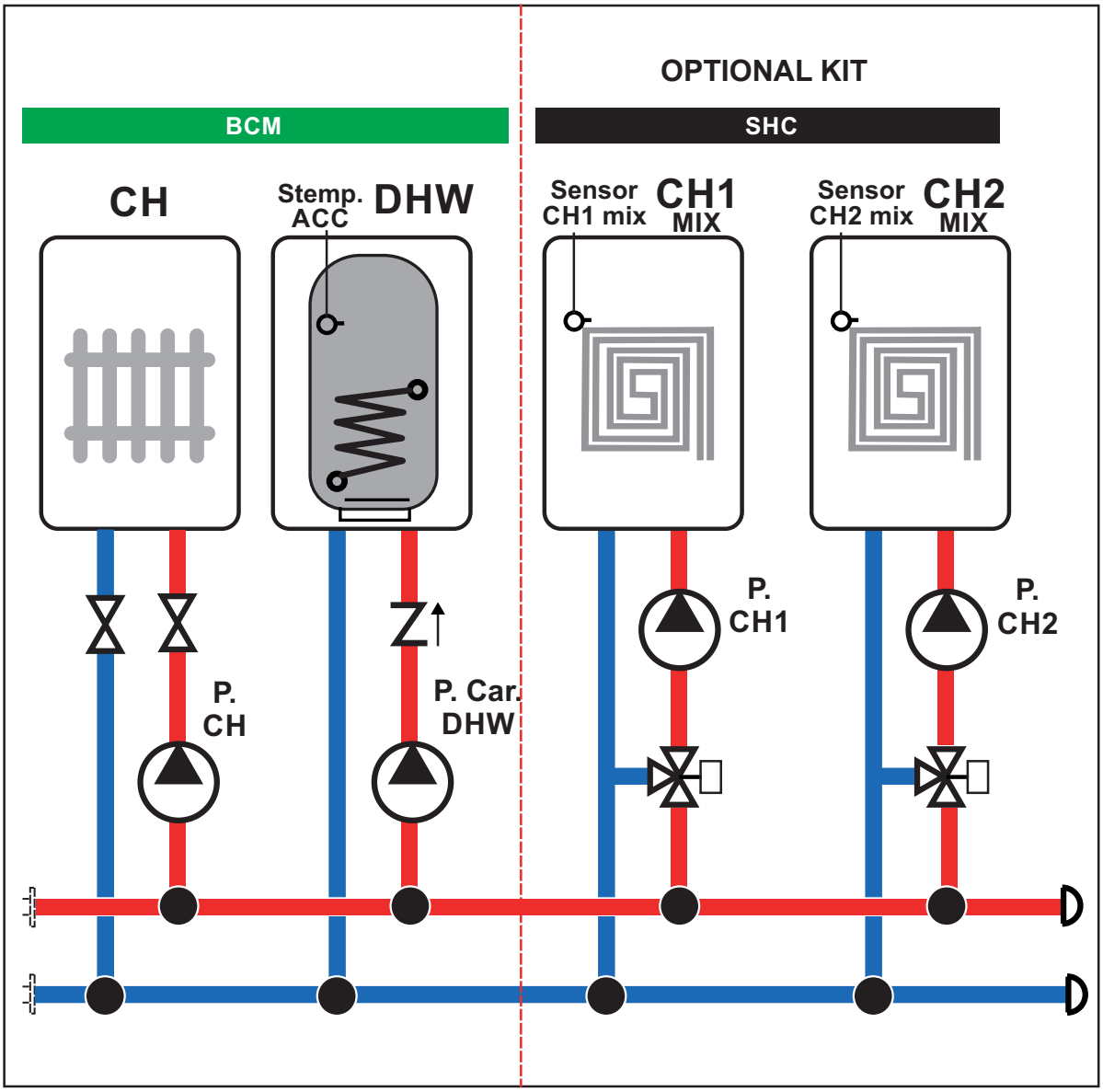
Diagram with:
1 High temperature zone CH
1 DHW storage tank

BCM PARAMETERS		
803	= 16	All services disabled
	= 17	Heating only
	= 18	Antifreeze only
	= 19	Heating + Antifreeze
	= 24	DHW only
	= 25	Heating + DHW
	= 26	DHW + Antifreeze
	= 27	Heating + DHW + Antifreeze

Optional SHC secondary circuit

Diagram with:
2 mixed zones

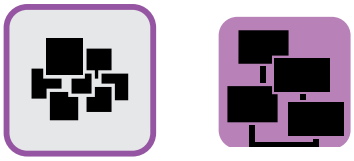
PARAMETRI SHC		
309	= 0	Possibility of 2 mixed zones
803	= 1	Only CHMix 1 active
	= 2	Only CHMix 2 active
	= 3	CHMix 1 & CHMix 2 active



8 Burner type configuration

From the interface regulator (par.1 pos. 3) it is necessary to change the parameters (BMM board) according to the type of burner and the boiler model

The default programming of the MASTER and SLAVE panels is:
TWO-STAGE BURNER (673 Bt = 1)
HIGH TEMPERATURE BOILER (346 FL = 100)

1 Devices Menu	2 Select BMM	3 Edit parameters
	**BMM: 1 BMM: 2 BMM: 3 .....** (burner module manager) **HCM (BCM)** master modul **SHC: if optional kit is fitted**	
To change the parameters, password 0000 is required		

BMM board parameters (to be modified in each panel)							
Code	Symbol	Description	Vaue				
			Single stage burner	Two- stage burner	GAS modulating burner, servomotor time	OIL modulation burner	Modulating burner with analog target (384) 1 = (0-10V) 0 = (0-20mA) BMM connection - Y2 pin5-6
673	Bt	Gen: Heat Generator type	0	1	2	2	3
384	AO1	Analogic output	-	-	-	-	0 / 1
616	BSt	Cascade: insert lock time	0	0	30 (*)	30 (*)	30 (*)
(*) Parameter 616 BSt: Enter the effective moving time of the modulating burner servomotor							

HCM Board Parameters (BCM) (only for master panel)							
Code	Symbol	Description	Vaue				
			Single stage burner	Two- stage burner	GAS modulating burner, servomotor time	OIL modulation burner	Modulating burner with analog target 0 = (0-10V) 1 = (0-20mA) BMM connection - Y2 pin5-6
346	FL	Minimum modulation	100	100	30	30	30

7 Type of boiler (high temperature / condensing)

HCM Board Parameters (BCM) (only for master panel)				
Code	Symbol	Description	Value	
			HIGH TEMPERATURE boiler	CONDENSING boiler low temperature
349	BL	Minimum boiler temperature	60	30

DEFAULT SETTING (*) high temperature boilers with two-stage burner

HCM Board Parameters (BCM) (only for master panel)									
Code	Symbol	Description	Unit	Minimum	Maximum	Value			
						High temperature boilers with two-stage burner (*)	3-point modulating burner high temperature boilers	Condensing boilers with two-stage burner	Condensing boilers with modulating burner
803	Srv	Enabled Services		16	27	19	19	19	19
483	rP	Gen: Temp. Max Differential	°K	0,0	50,0	0,0	0,0	0,0	0,0
34	HY	Burner Hysteresis	°K	5,0	20,0	5,0	5,0	5,0	5,0
31	HL	CH#1: Minimum Set-point	°C	20,0	105,0	30,0	30,0	30,0	30,0
39	HH	CH#1: Maximum Set-point (Thermostat 100° C)	°C	20,0	105,0	85,0	85,0	85,0	85,0
		CH#1: Maximum Set-point (Thermostat 110° C) (*)				95,0	95,0	95,0	95,0
		CH#1: Maximum Set-point (Thermostat 115° C) (*)				100	100	100	100
799	AC	Input 0/10V		0	3	1	1	1	1
376	DI1	Programmable Input #1		0	3	0	0	0	0
322	Po	Pump: Post-circulation	min	1	10	2	2	2	2
341	PL	Pump: Minimum Control	Volt	0,0	10,0	3,0	3,0	3,0	3,0
313	Pr	Pump: Maximum Control	Volt	0,0	10,0	10,0	10,0	10,0	10,0
792	CHP	CH: Max. Modulation	%	0	100	100	100	100	100
611	POT	Gen: Max. Parallel Error	°K	0	30	5	5	5	5
612	POL	Gen: Modulation Max. Parallel	%	0	100	0	0	0	0
650	dL	DHW: Minimum Set-point	°C	25,0	45,0	35,0	35,0	35,0	35,0
385	dH	DHW: Maximum Set-point	°C	50,0	65,0	65,0	65,0	65,0	65,0
360	dt	Water tank Adjustment		0	15	0	0	0	0
656	drT	DHW: Request Differential Temp	°K	-20	20	4	4	4	4
657	drH	ACS: Request Temp. Hysteresis	°K	1	20	8	8	8	8
310	DpT	DHW Pump: Post-circulation	sec	5	600	60	60	60	60
660	dbT	DHW: Maximum Set-point	°C	50	105	80	80	80	80
48	ChSet	CH#1: Maximum Set-point (Thermostat 100° C)	°C	20,0	105,0	85,0	85,0	85,0	85,0
		CH#1: Maximum Set-point (Thermostat 110° C) (*)				95,0	95,0	95,0	95,0
		CH#1: Maximum Set-point (Thermostat 115° C) (*)				100	100	100	100
64	ChPO1	CH#1: Parallel dispensing		0	1	0	0	0	0
649	BL	Minimum boiler temperature	°C	20	80	60	60	30	30
346	mC	Min. Modulation	%	0,0	100,0	100,0	30,0	100,0	30,0
800	mB	Brurner: Minimum Inserted		1	8	1	1	1	1
616	BSt	Gen: Insertion Time	sec	30	900	120	120	120	120
613	BRt	Gen: Removal time	sec	30	900	80	80	80	80
674	MOT	Gen: working time max.	H	2	10	5	5	5	5
647	Bdm	Map of disabled burners		0	4095	0	0	0	0
648	BP	Priority of the first burner		0	1	0	0	0	0
336	HS	Temperature Gradient	°C/min	1	30	5	5	5	5
353	HP	CH PID: Proportional	°K	0	50	10	10	10	10
354	HI	CH PID: Integrative		0	50	12	12	12	12
478	Hd	CH PID: Derivative		0	50	0	0	0	0
816	MI	Modbus address		1	127	1	1	1	1
817	MT	Modbus Timeout	sec	0	240	30	30	30	30
896	TU	^Fahrenheit		0	1	0	0	0	0
309	St	Application Code		0	1	1	1	1	1
368	VA1	Programmable Relay #1		0	1	0	0	0	0
369	VA2	Programmable Relay #2		0	1	0	0	0	0
771	PS	Water Pressure Sensor		0	1	0	0	0	0
768	LG	Min Gas Pressure Sensor		0	1	0	0	0	0
793	COC	Chimney Obstruction Sensor		0	2	0	0	0	0
622	FS	Minimum Flow Sensor		0	7	0	0	0	0
607	UHR	Manual request		0	1	0	0	0	0

BMM board parameters (1/2 / .. for Slave panels)									
Code	Symbol	Description	Unit	Minimum	Maximum	Value			
						High temperature boilers with two-stage burner (*)	3-point modulating burner high temperature boilers	Condensing boilers with two-stage burner	Condensing boilers with modulating burner
803	Srv	Enabled Services		0	1	1	1	1	1
48	ChSet	CH#1: Maximum Set-point (Thermostat 100° C)	°C	30,0	105	85,0	85,0	85,0	85,0
		CH#1: Maximum Set-point (Thermostat 110° C) (*)				95,0	95,0	95,0	95,0
		CH#1: SMaximum Set-point (Thermostat 115° C) (*)				100	100	100	100
31	HL	CH#1: Minimum Set-point	°C	20,0	105,0	30,0	30,0	30,0	30,0
39	HH	CH#1: Setpoint Massimo (Termostato 100° C)	°C	20,0	105,0	85,0	85,0	85,0	85,0
		CH#1: Setpoint Massimo (Termostato 110° C) (*)				95,0	95,0	95,0	95,0
		CH#1: Setpoint Massimo (Termostato 115° C) (*)				100	100	100	100
322	Po	Pump: Post-circulation	min	1	30	3	3	3	3
645	IDT	Gen: Stabilization Time Flame	min	0	10	4	4	4	4
816	MI	Modbus address		1	127	1	1	1	1
817	MT	Modbus Timeout	sec	0	240	30	30	30	30
896	TU	^Fahrenheit		0	1	0	0	0	0
799	AC	Input 0/10V		0	2	0	0	0	0
376	DI1	Programmable Input #1		0	4	4	4	4	4
309	St	Appication Code		0	1	1	1	1	1
484	rL	Gen: Minimum Return Temp	°C	40,0	70,0	50,0	50,0	50,0	50,0
485	rH	Gen: Temperatur Return Isteresis	°K	2,0	10,0	10,0	10,0	10,0	10,0
673	Bt	Gen: Burner code		0	3	1	2	1	2
34	HY	Burner Isteresis	°K	5,0	20,0	5,0	5,0	5,0	5,0
615	HY2	Gen: Stage II hysteresis	%	0	100	30	30	30	30
616	BSt	Gen: Insertion Time	sec	0	600	0	30	0	30
646	BSS	Gradual stop burner	sec	0	100	30	30	30	30
346	FL	Mini. Modulation	%	0	100	30	30	30	30
353	HP	CH PID: Proportional	°K	0,0	50,0	10,0	10,0	10,0	10,0
354	HI	CH PID: Integrative		0	50	12	12	12	12
478	Hd	CH PID: Derivative		0	50	0	0	0	0
384	AO1	Analog output		0	1	1	1	1	1
336	HS	Temperature gradient	°C/min	0,0	30,0	5,0	5,0	5,0	5,0
483	rP	Gen.: Differential Temp. Max	°K	0,0	50,0	0,0	0,0	0,0	0,0
377	DI2	Programmable Input #2		0	2	0	0	0	0
378	DI3	IProgrammable Input #3		0	1	0	0	0	0
607	UHR	CH manual request		0	1	0	0	0	0
2590	bC	Burner power	kW	10	1000	50	50	50	50

After modifying the parameters, remove the power supply from the panel and check in the devices menu if it is necessary to confirm the modification with OK.

(*) Check the characteristics of the safety thermostat mounted on the panel, to change parameters 39, 48 CH Maximum set point (100 ° - 110 ° - 115 °)

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The manufacturer shall not be held liable for any inaccuracies due to transcription or printing errors.
Furthermore, it reserves the right to modify its products as deemed necessary or useful, without affecting their essential features.