THETA

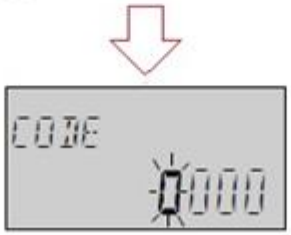
Controller system

Installation and settings

Controller THETA

Installation and settings

Installer-code-setting



Setting of the code „1234“ by turn/press the central button. The correct input must be confirmed by setting „INSTALLER OK“.

Controller THETA

Installation and settings

Installer-code-setting

After setting of expert code and confirming with „INSTALLER OK“ the display will return to the level where the code has been activated. There is no return to the expert level. Now all parameters, described in the expert documentation are available.

Controller THETA

Installation and settings

Menu- und parameter selection

To jump into menu press 3 sec.

Following menu are available (turn central button right):

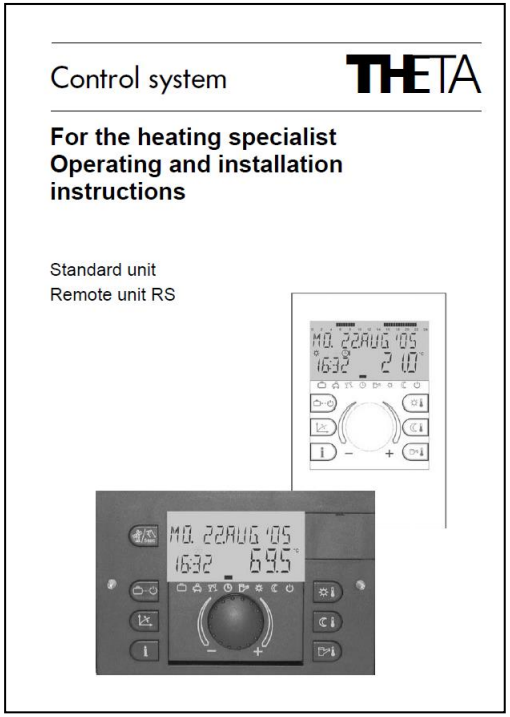
SWITCHING TIME (1. Menu at start)
HYDRAULICS (HF)
SYSTEM
HOT WATER*
DIRECT CIRCUIT*
MIXING CIRCUIT-(1)*
MIXING CIRCUIT-2*
HEAT GENERATOR* (HF)
SOLAR* (HF)
SOLID FUEL* (HF)
BUFFER* (HF)
CASCADE* (HF)
SUMMATION FLOW*(HF)
DATA BUS (HF)
RELAIS TEST (HF)
MALFUNCTION (HF)
SENSE-ADJUST (HF)
TIME-DATE

- **Depending on controller type and hydraulic settings**
- **(HF) only visible in expert mode**

Controller THETA

Installation and settings

Menu- und parameter selection



From the layer menu selection it is possible to jump into the layer parameter selection by pressing the central button for short time

Parameters are described in the expert documentation.

Controller THETA

Installation and settings

Reset

Step 1

Installer-Code
1234

Step 2

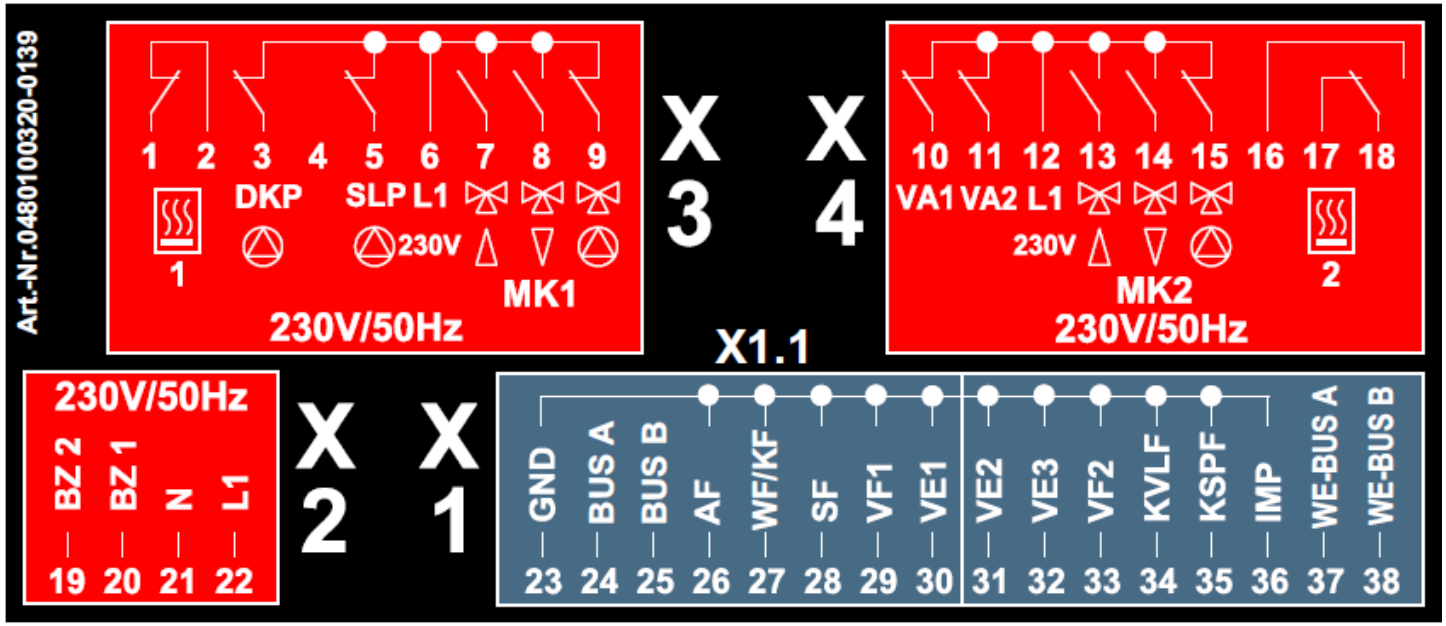
Factory reset (including switching times)

Controller THETA

Installation and settings

interfaces

The red fields are 240V AC area for power supply and AC outputs

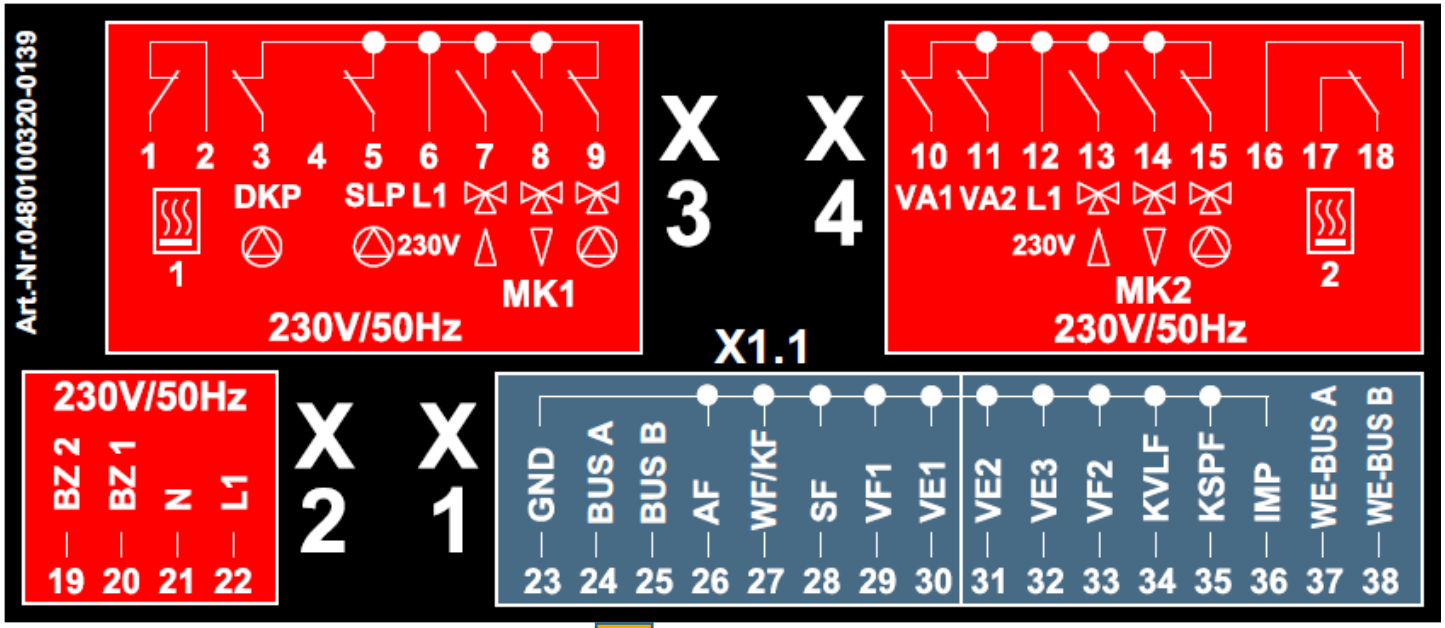


The blue field is low voltage area for input of senses and bus connection

Controller THETA

Installation and settings

interface T2B



BUS A (24)/ BUS B (25)
system bus T2B (THETA 2-wire BUS)

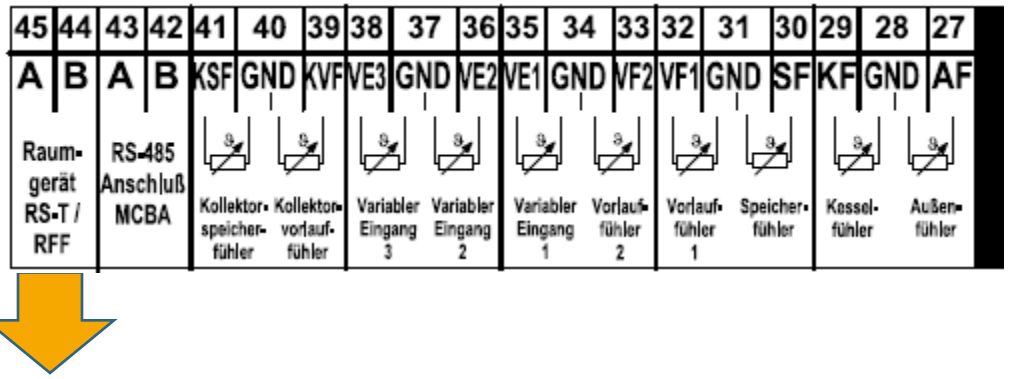
Bus connection for:
- **additional THETA**
- **THETA RS-L**
- **THETA RFF**
- **heatapp! base T2B**
- **THETA ZM 0-10V**

Controller THETA

Installation and settings

interface T2B

WG 500



BUS A (45)/ BUS B (44)
System bus T2B (THETA 2-wire BUS)

Bus connection for:
- **additional THETA**
  - **THETA RS-L**
  - **THETA RFF**
- **heatapp! base T2B**
- **THETA ZM 0-10V**

Controller THETA

Installation and settings

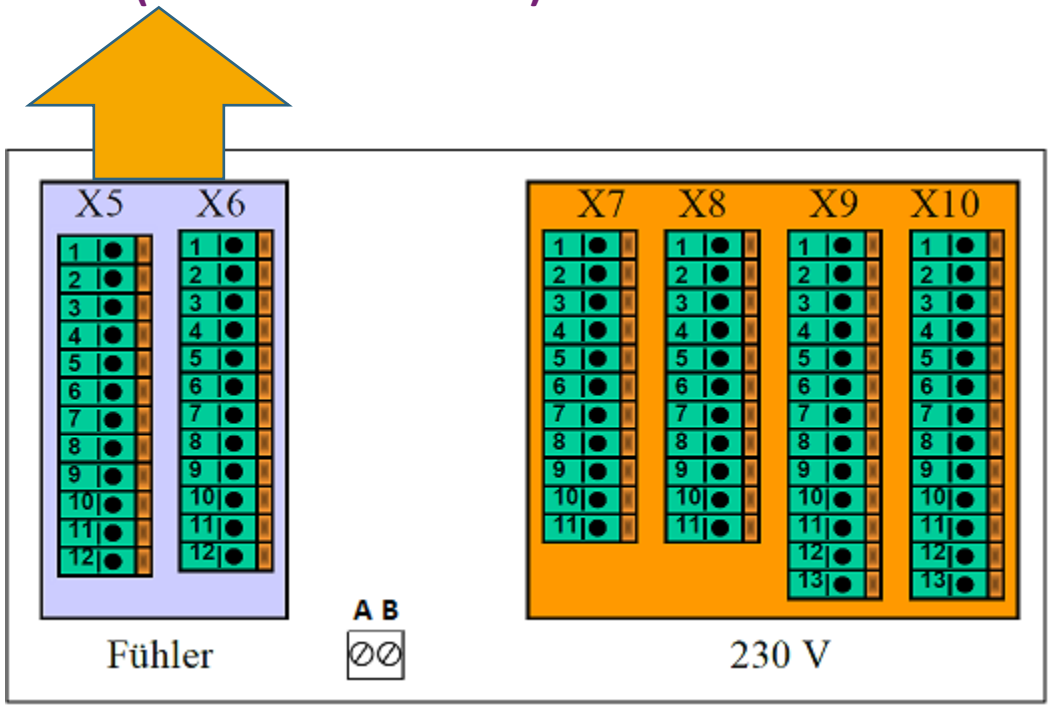
interface T2B

THETA-MSK

Bus connection for:

- additional THETA
  - THETA RS-L
  - THETA RFF
- heatapp! base T2B
- THETA ZM 0-10V

BUS A (X6-1)/ BUS B (X5-1)
System bus T2B (THETA 2-Draht BUS)



Controller THETA

Installation and settings

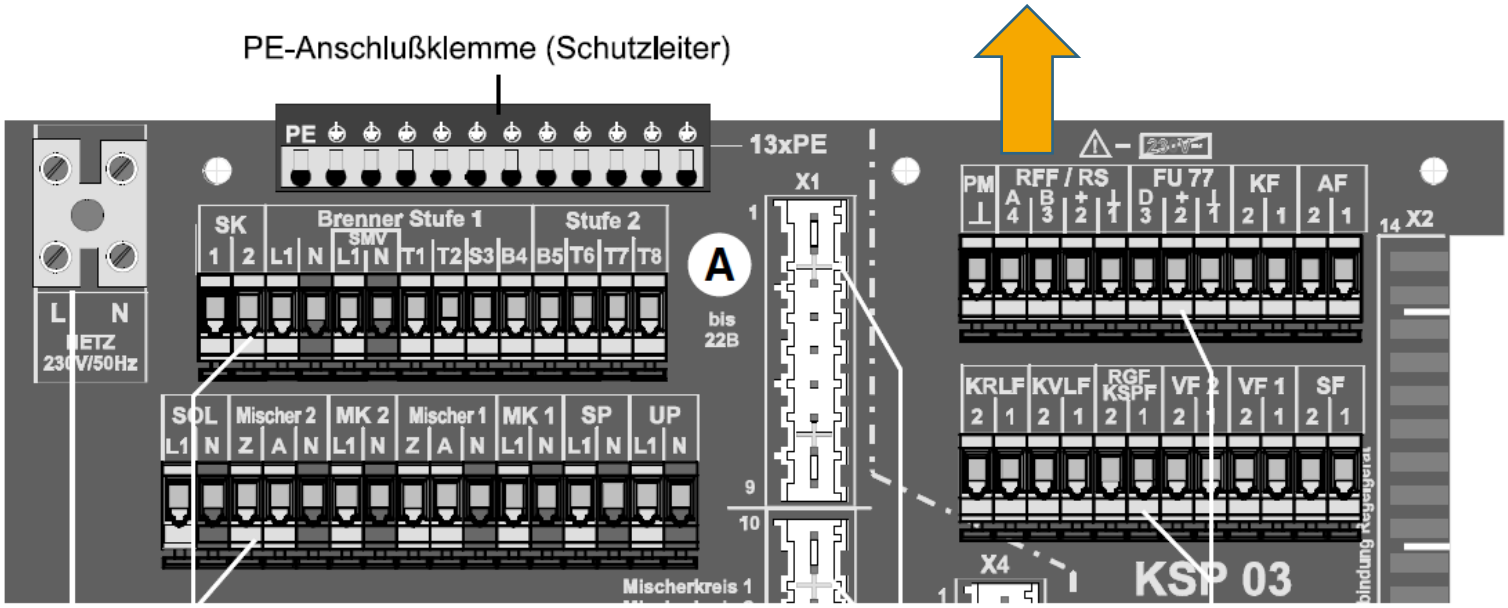
interface T2B

panel KSP 03

Bus connection for:

- additional THETA
  - THETA RS-L
  - THETA RFF
- heatapp! base T2B
- THETA ZM 0-10V

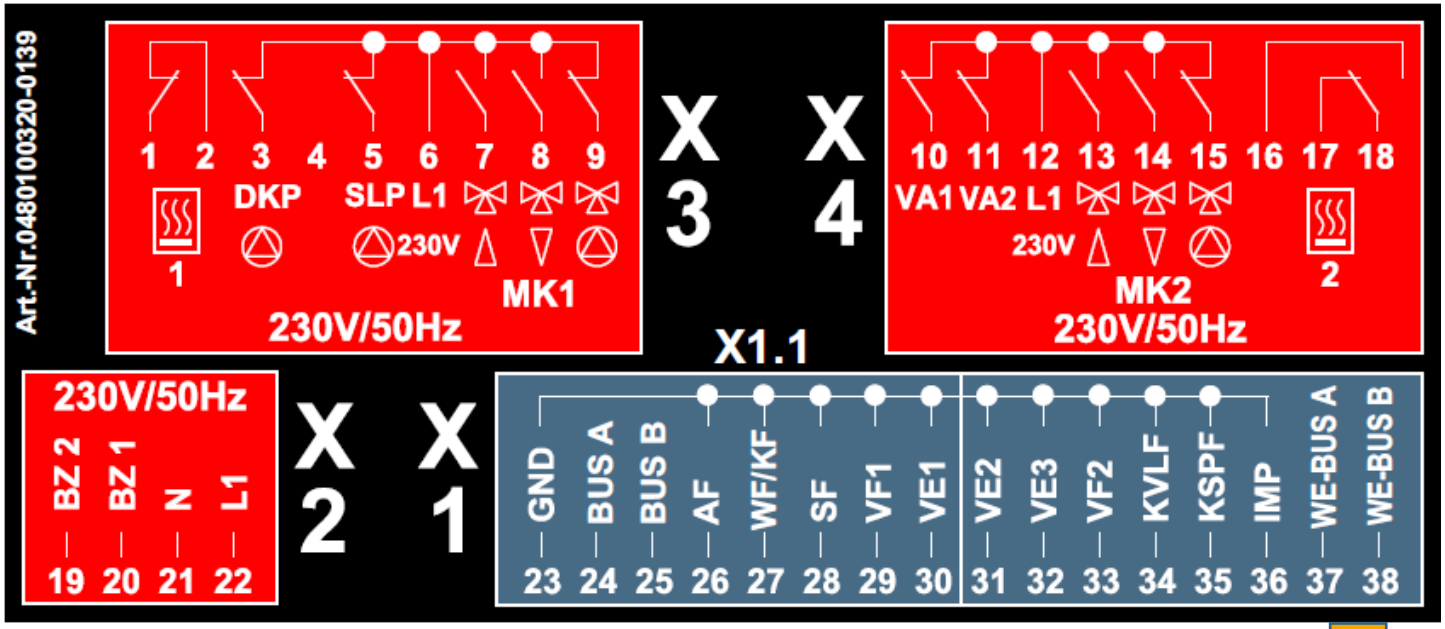
BUS A (4)/ BUS B (3)
System bus T2B (THETA 2-Draht BUS)



Controller THETA

Installation and settings

interface WE-BUS



Bus connection THETA type (C or C-OT) Connection to heat generator or ZM-KM-OT.

WE-BUS A (37)/ WE-BUS B (38)
Heat generator-BUS

Controller THETA

Installation and settings

interface WE-BUS

WG 500

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27
A	B	A	B	KSF	GND	KVF	VE3	GND	VE2	VE1	GND	VF2	VF1	GND	SF	KF	GND	AF
Raum-gerät RS-T / RFF		RS-485 Anschluß MCBA		Kollektor-speicher-fühler		Kollektor-vorlauf-fühler	Variabler Eingang 3		Variabler Eingang 2	Variabler Eingang 1		Vorlauf-fühler 2	Vorlauf-fühler 1		Speicher-fühler	Kessel-fühler		Außen-fühler

WE-BUS A (37)/ WE-BUS B (38)
Heat generator-BUS

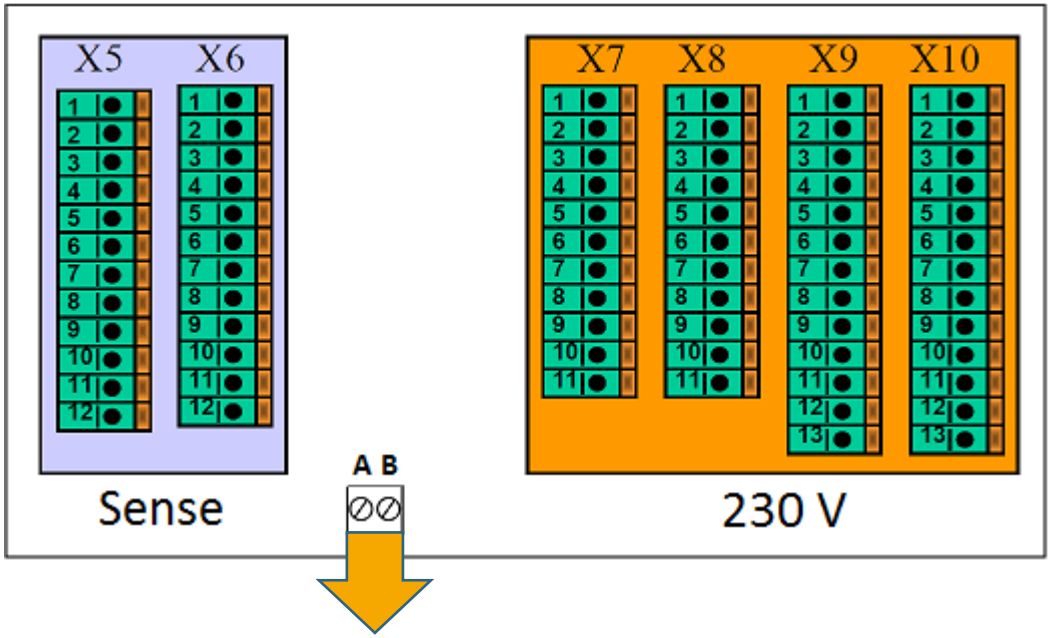
Bus connection
THETA type
(C or C-OT)
Connection to heat generator
or ZM-KM-OT.

Controller THETA

Installation and settings

interface WE-BUS

THETA-MSK



WE-BUS A / WE-BUS B
Heat generator-BUS

Bus connection
THETA type
(C or C-OT)
Connection to heat generator
or ZM-KM-OT.

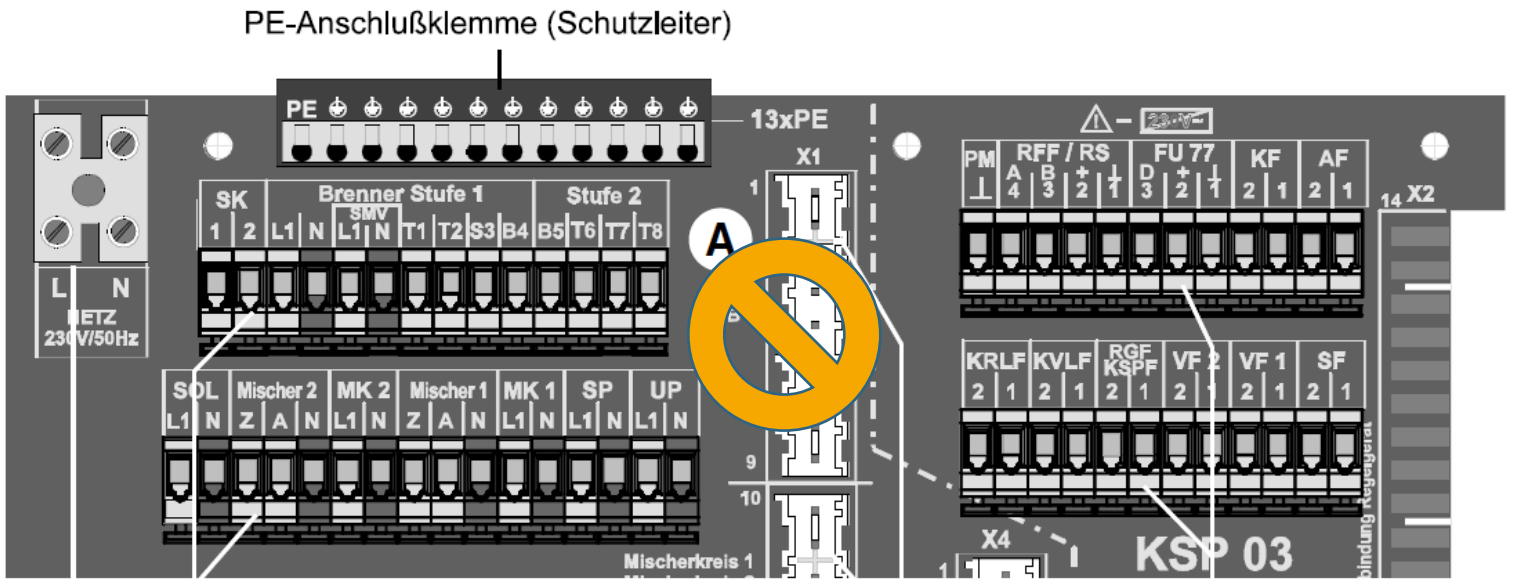
Controller THETA

Installation and settings

interface WE-BUS

panel KSP 03

Bus connection
THETA type
(C or C-OT)
Connection to heat generator
or ZM-KM-OT.

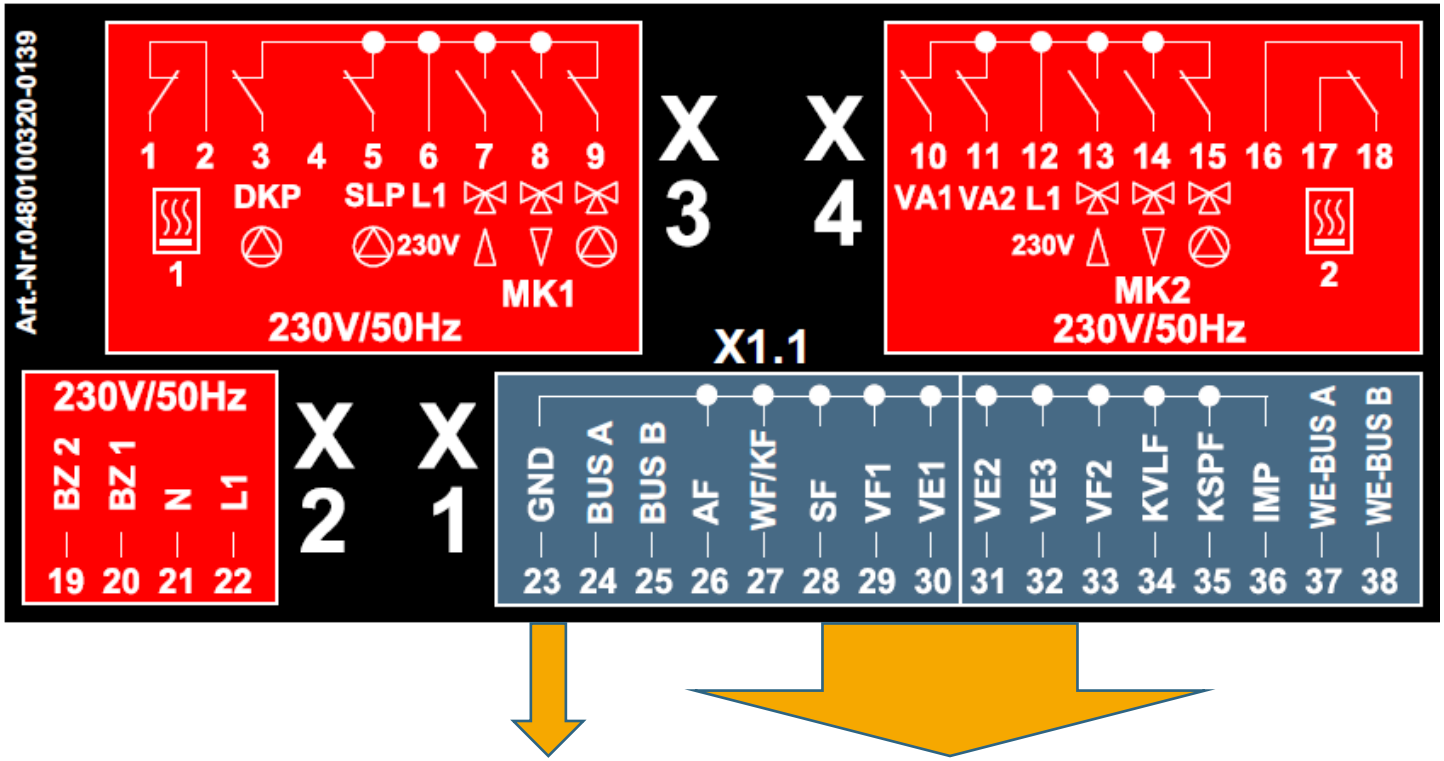


Connection heat generator BUS direct to THETA ReController

Controller THETA

Installation and settings

Connection of sense



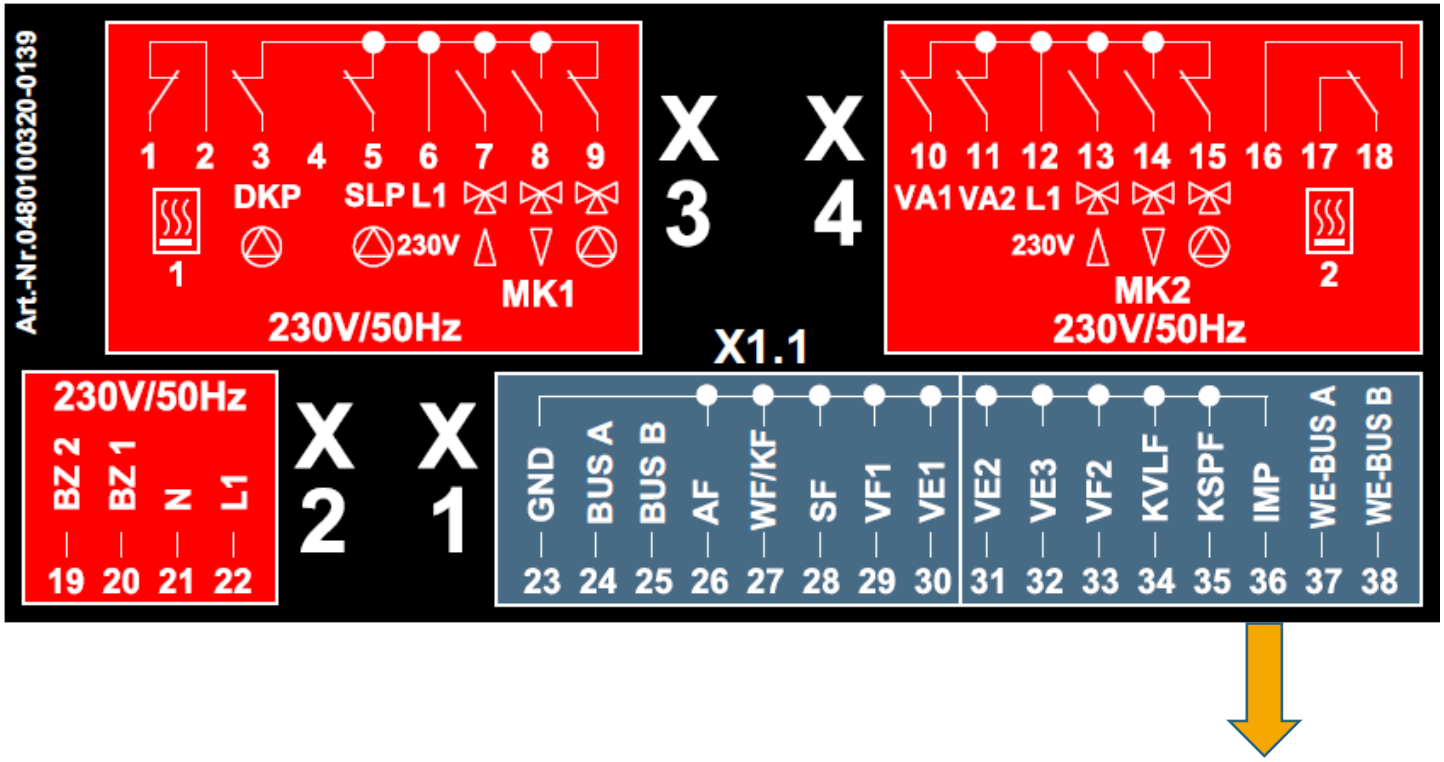
Input X1-26 bis 35 for connection of sense

Sense connection is 2 wire, one wire is connected to GND (X1-23)

Controller THETA

Installation and settings

Connection of sense

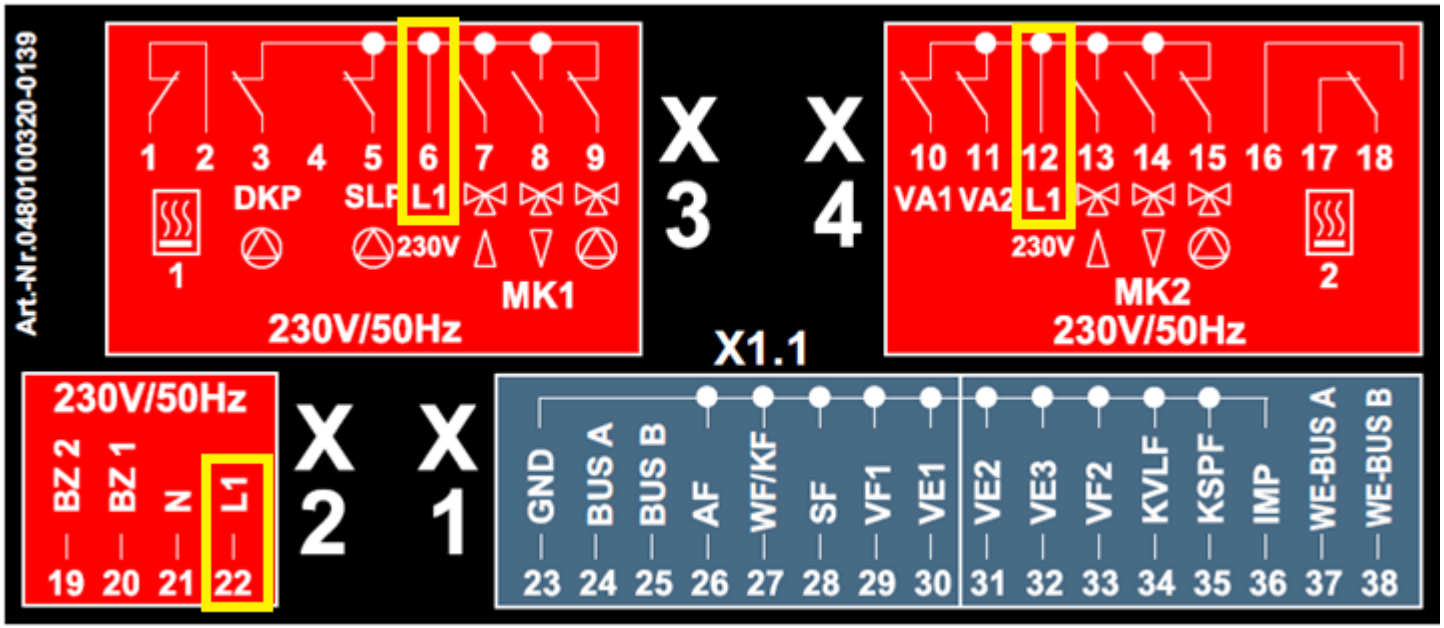


Input X1-36 (IMP) can be connected to pulse counter (analog ON/OFF)
e.g. for counting of solar generation

Controller THETA

Installation and settings

Connection of L1 (240V AC)



If THETA is <u>not</u> mounted inside panel KSP 03, WG 500 or THETA-MSK, then X3-6 und X4-12 (if available) must be connected to L1.

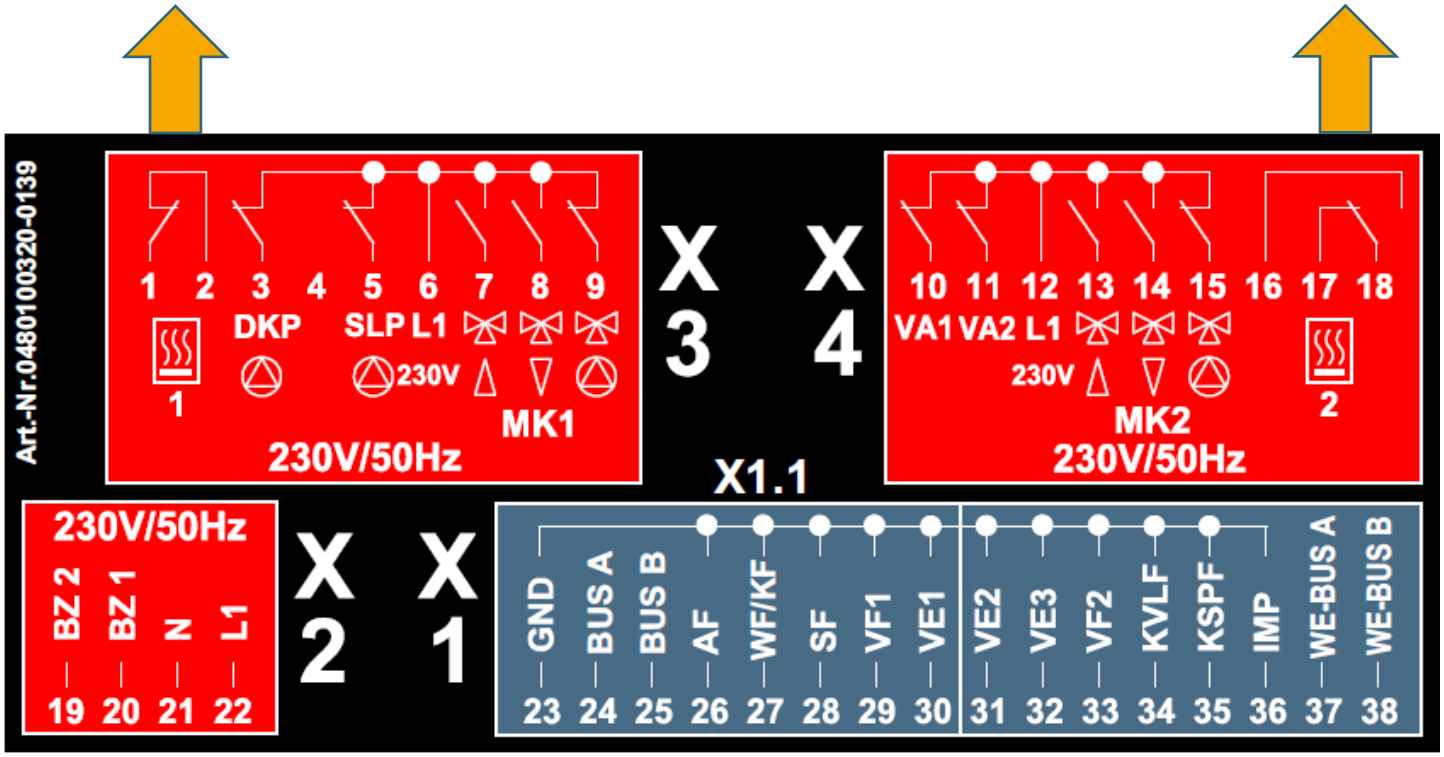
Controller THETA

Installation and settings

Connection of the heat boiler

stage 1
X3-1 T1 / X3-2 T2

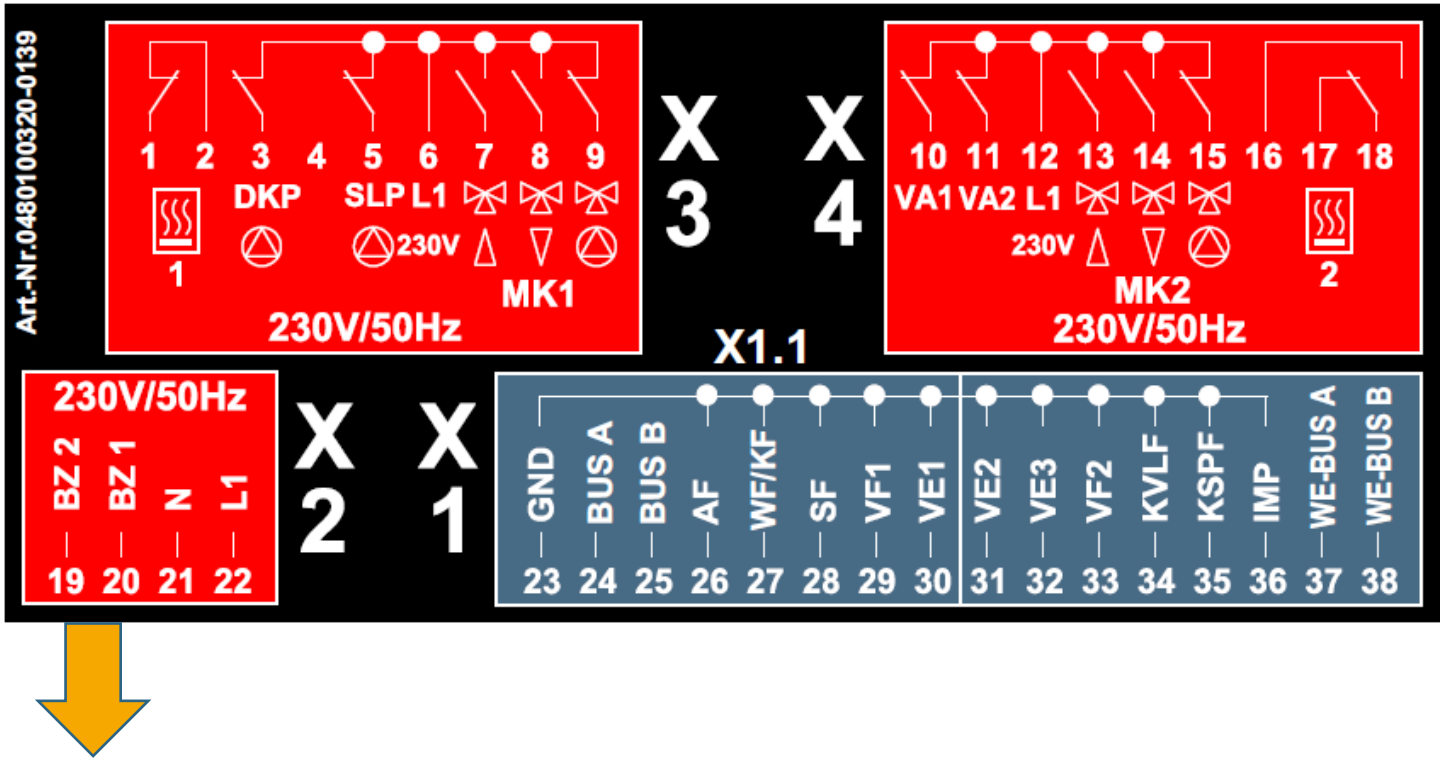
stage 2
X4-18 = T6 / X4-17 = T8



Controller THETA

Installation and settings

Connection of BZ 1 /BZ 2

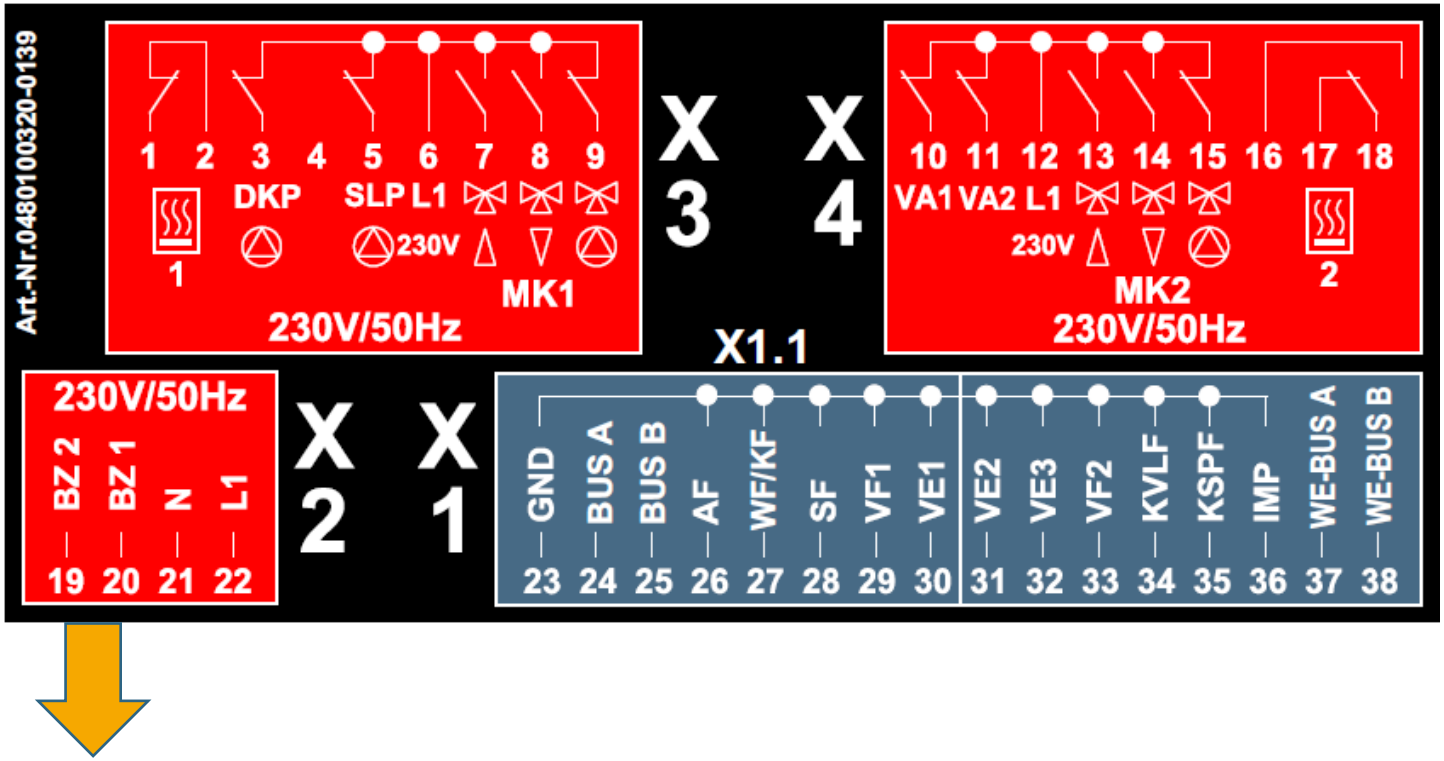


Via connection BZ1/BZ2 comes the status message of the heat boiler stage (ON/OFF). This information will be used to calculate the netto operating time of the heat boiler stage. The value is in the display in the INFO-menu parameters: operation time / starts
If BZ1/BZ2 is not used, the brutto operating time is calculated from release of the respective relay contact.

Controller THETA

Installation and settings

Connection of BZ 1 /BZ 2



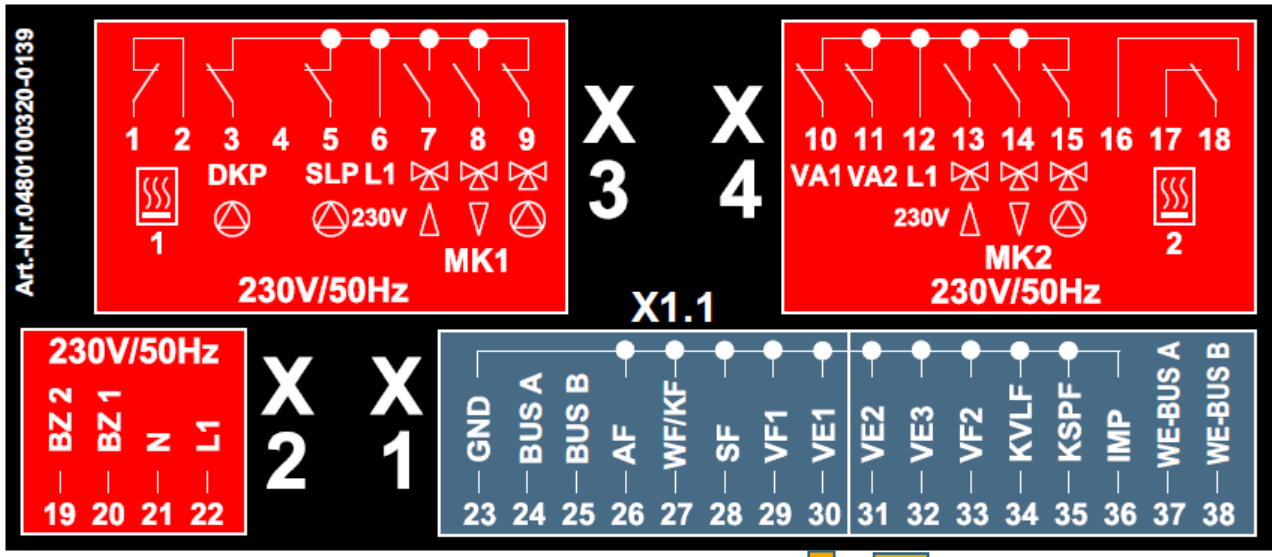
The status of connection BZ1/BZ2 is controlled to detect an error of the heat boiler.
A malfunction message will be generated if the heat boiler is not switching ON or OFF.

Controller THETA

Installation and settings

Parameter setting

Parameter setting has to consider the hydraulic configuration at site.



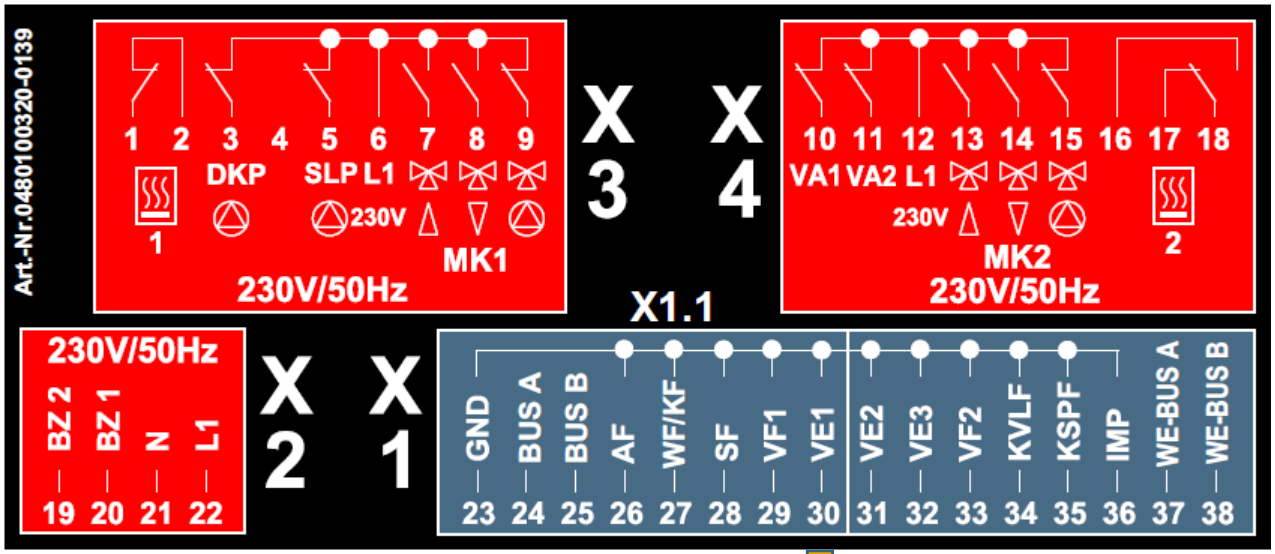
Each THETA offers minimum one variable input (VE-1).

THETA with „VV“ offer three variable input (VE-1 … VE-3).

Controller THETA

Installation and settings

Parameter setting



THETA+ N2B
THETA+ N23B
THETA+ N233B

Variable input (VE-1) can be used e.g. for

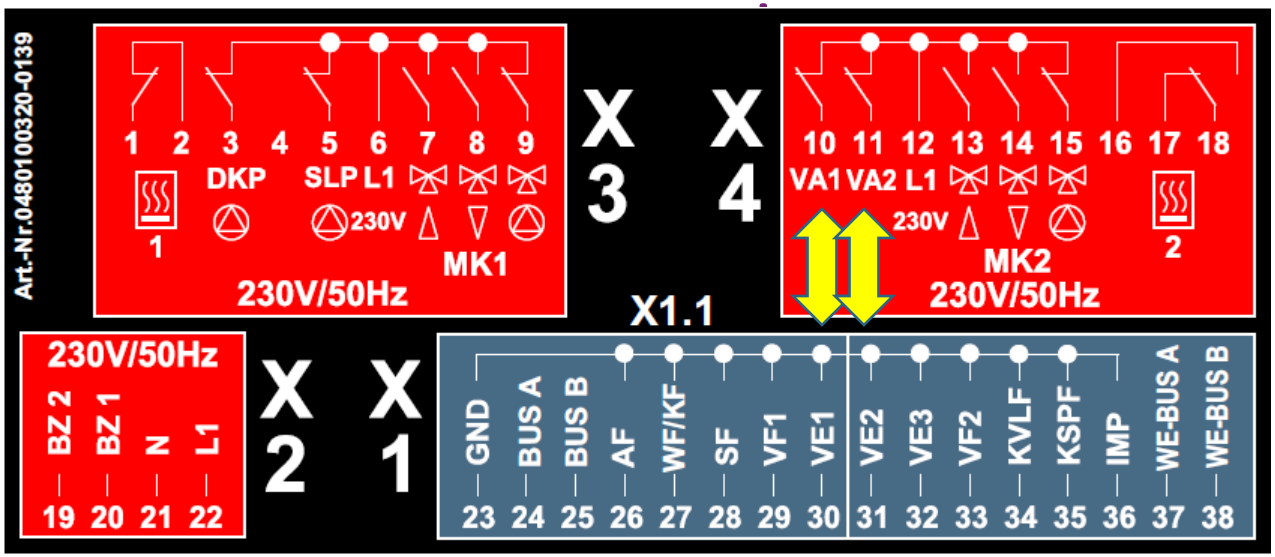
- **exhaust sense**
- **external heat boiler blocking**
- **Requiring contact**
- **Buffer sense (without function for pump PLP)**
- **and others..**

(for details consider expert documentation)

Controller THETA

Installation and settings

Parameter setting



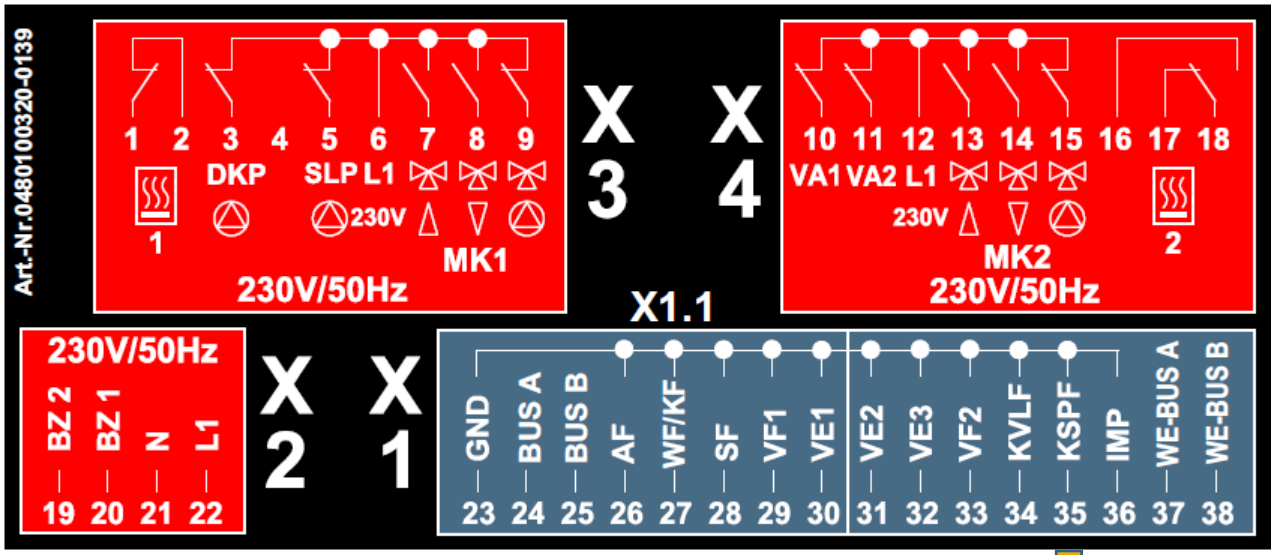
THETA+ N2233BVV
THETA+ N2233BVVC
THETA+ N2233BVVC-OT

If buffer and solid fuel is activated, you have to consider that first the output function (VA) must be activated. This procedure has to be followed because the assignment of the senses is done automatically refering to the inputs. In case that the output function VA-1 (PLP, FSP, SLV) needs a related sense, then THETA will use the input VE-1 for this sense. If a sense is needed for a second function VA-2, then the second sense will be assigned to input VE-2.

Controller THETA

Installation and settings

Parameter setting

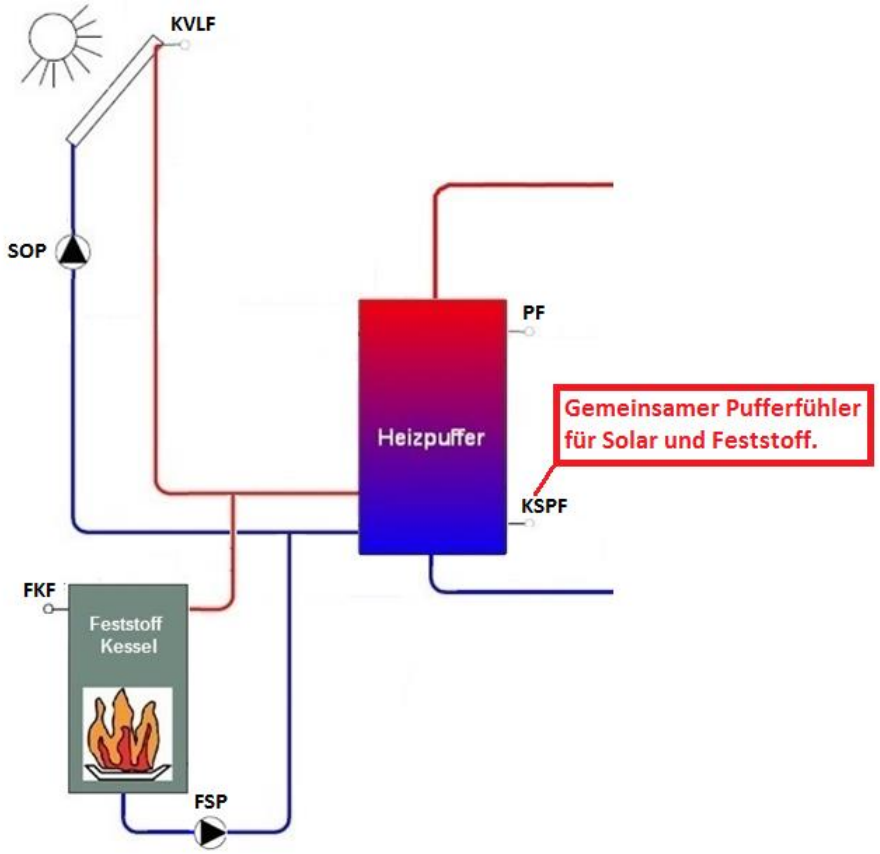


THETA+ N2233BVV
THETA+ N2233BVVC
THETA+ N2233BVVC-OT

Sense KSPF (collector buffer sense) is used for two functions. It is assigned to solar and solid-fuel as buffer sense. Thus one sense can be „saved“

Controller THETA

Installation and settings



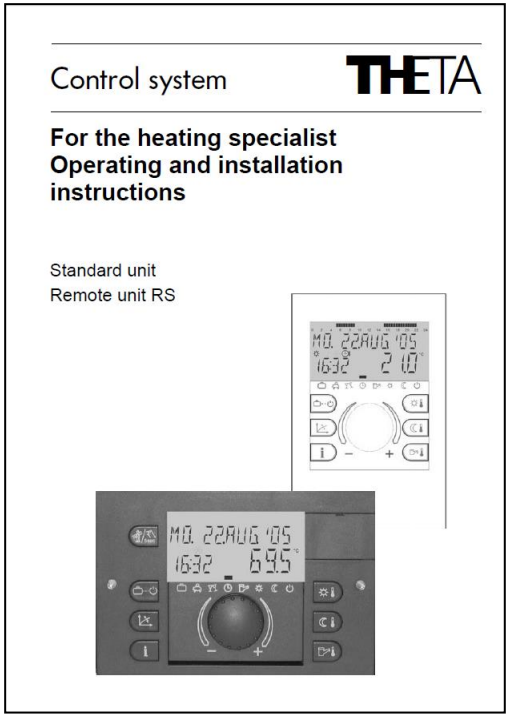
THETA+ N2233BVV
THETA+ N2233BVVC
THETA+ N2233BVVC-OT

Sense KSPF (collector buffer sense) is used for two functions. It is assigned to solar and solid-fuel as buffer sense. Thus one sense can be „saved“

Controller THETA

Installation and settings

Parameter setting



Parameter list and parameter setting can be find in the expert documentation.
You will find the latest released expert documentation at our homepage www.ebv-gmbh.com
We support you with product description and samples for hydraulic configuration on request.

Do you have any questions?

You can contact our support
by e-mail to support@ebv-gmbh.de