

# Installation instructions

for contractors

**VIESMANN**

## Divicon

Heating circuit distributor

## Divicon



## Safety instructions



Please follow these safety instructions closely to prevent accidents and material losses.

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### Safety instructions explained



#### **Danger**

This symbol warns against the risk of injury.

#### **Note**

*Details identified by the word "Note" contain additional information.*



#### **Please note**

This symbol warns against the risk of material losses and environmental pollution.

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### Target group

These instructions are exclusively intended for qualified contractors.

- Work on gas installations may only be carried out by a registered gas fitter.
- Work on electrical equipment may only be carried out by a qualified electrician.

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### Regulations to be observed

- National installation regulations
- Statutory regulations for the prevention of accidents
- Statutory regulations for environmental protection
- Codes of practice of the relevant trade associations
- All current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE and all locally applicable standards
  - Ⓐ ÖNORM, EN, ÖVGW G K directives, ÖVGW-TRF and ÖVE
  - ⒸH SEV, SUVA, SVGW, SVTI, SWKI, VKF and EKAS guideline 1942: LPG, part 2

## Safety instructions (cont.)

### Working on the system

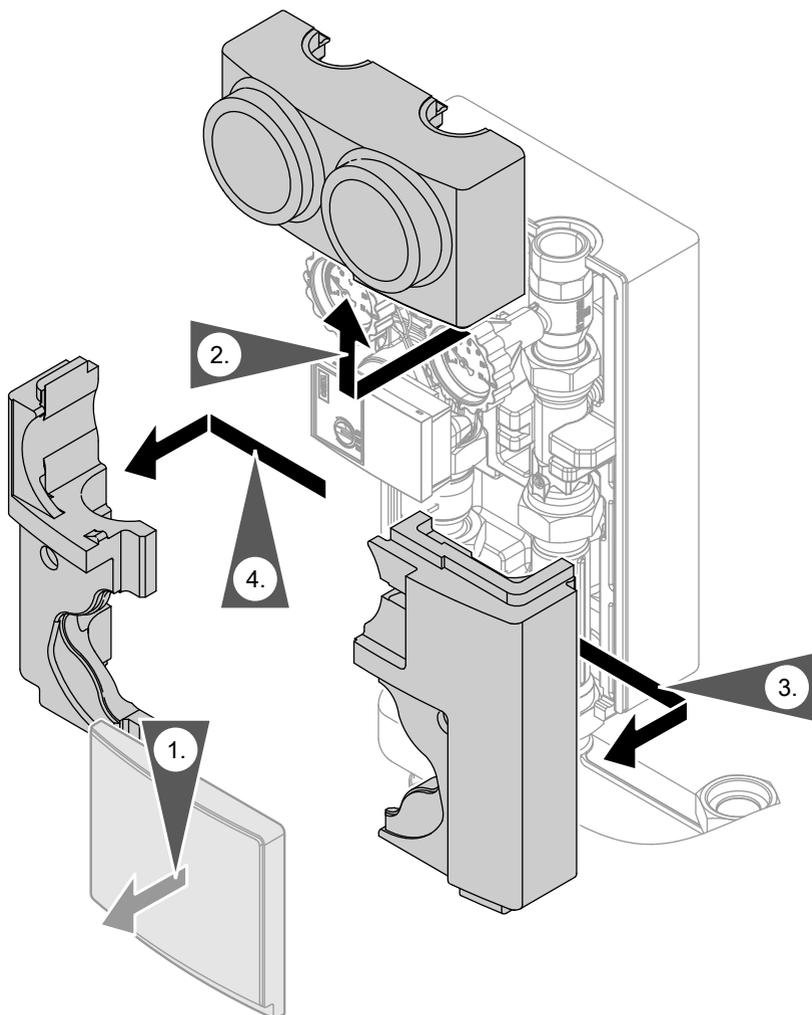
- Isolate the system from the power supply (e.g. by removing the separate fuse or by means of a mains isolator) and check that it is no longer 'live'.
- Safeguard the system against reconnection.
- Where gas is used as the fuel, close the main gas shut-off valve and safeguard it against unintentional reopening.

## Index

<b>Preparing for installation</b> .....	5
<b>Installation sequence</b>	
Wall mounting.....	6
■ Fitting a single module (without manifold).....	6
■ Fitting several modules with manifold (accessories).....	8
Filling the system.....	15
Fitting the thermal insulation.....	16
■ Low loss header (if supplied).....	16
■ Manifold.....	17
■ Divicon with mixer.....	18
■ Divicon without mixer.....	20
Extension kit with mixer PCB.....	22
■ Overview of electrical connections.....	22
■ Rotary switch S1.....	23
■ Connecting the PlusBus to the heat generator control unit.....	23
■ Power supply.....	24
■ Connecting several accessories.....	26
■ Connection and wiring diagram.....	28
■ Changing the rotational direction (if required).....	29
<b>Specification</b> .....	30
<b>Declaration of conformity for extension kit</b> .....	31

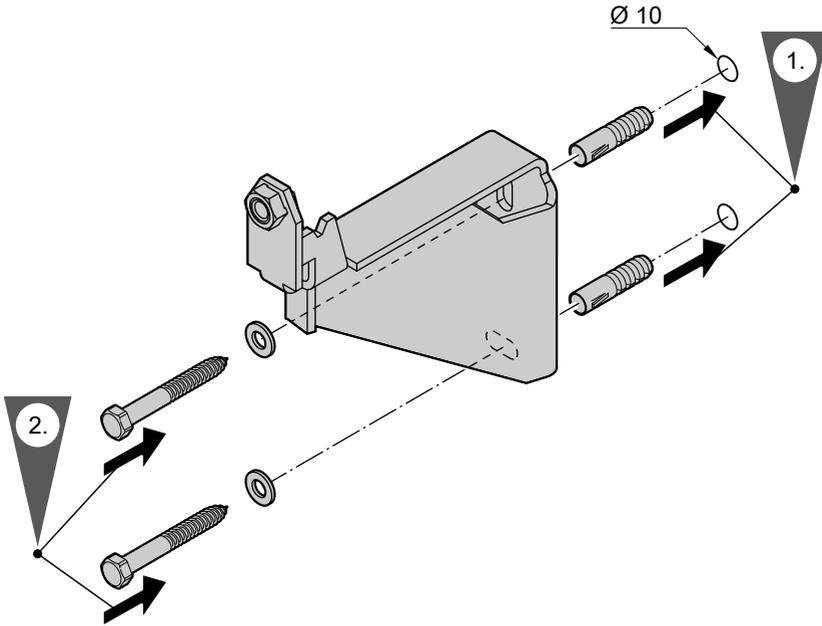
## Preparing for installation

### Removing the thermal insulation

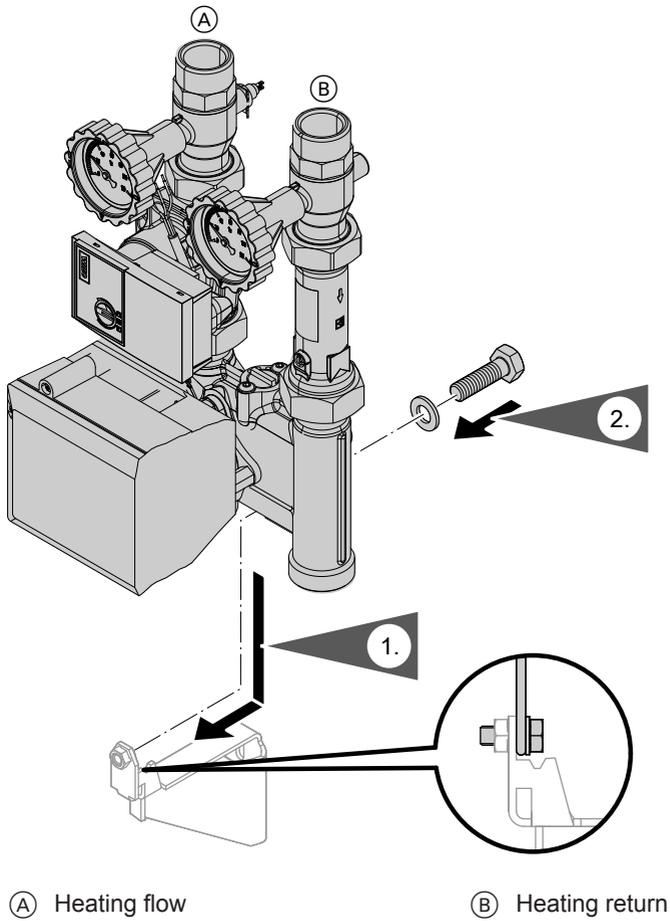


## Wall mounting

### Fitting a single module (without manifold)

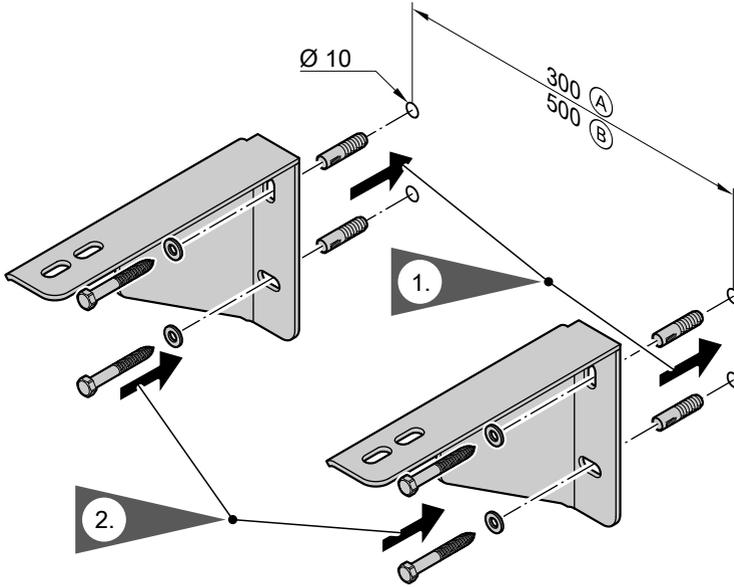


## Wall mounting (cont.)



## Wall mounting (cont.)

### Fitting several modules with manifold (accessories)

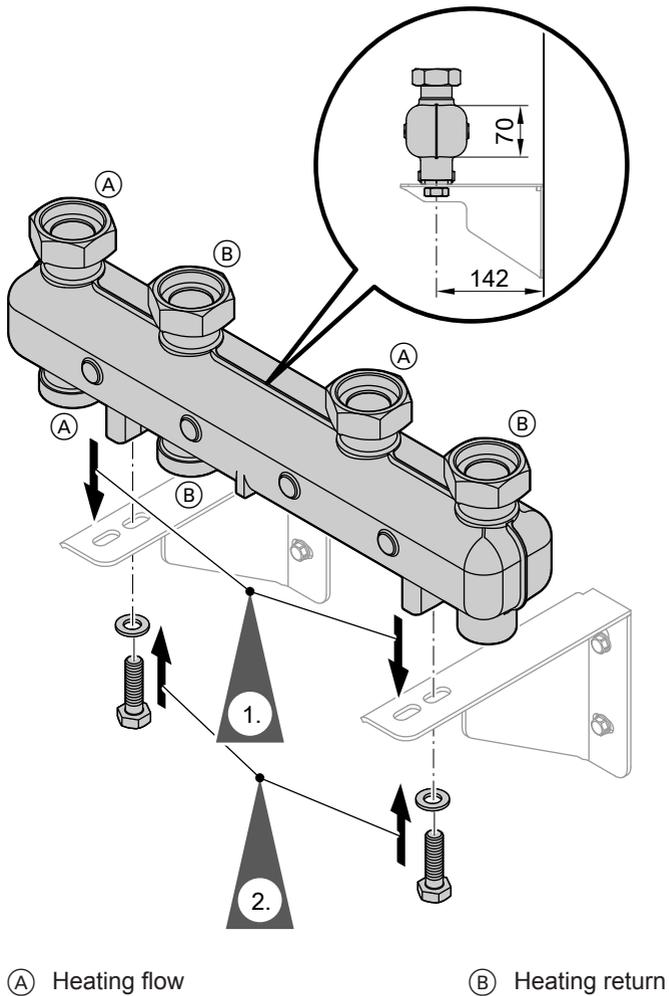


(A) Manifold for 2 Divicons

(B) Manifold for 3 Divicons

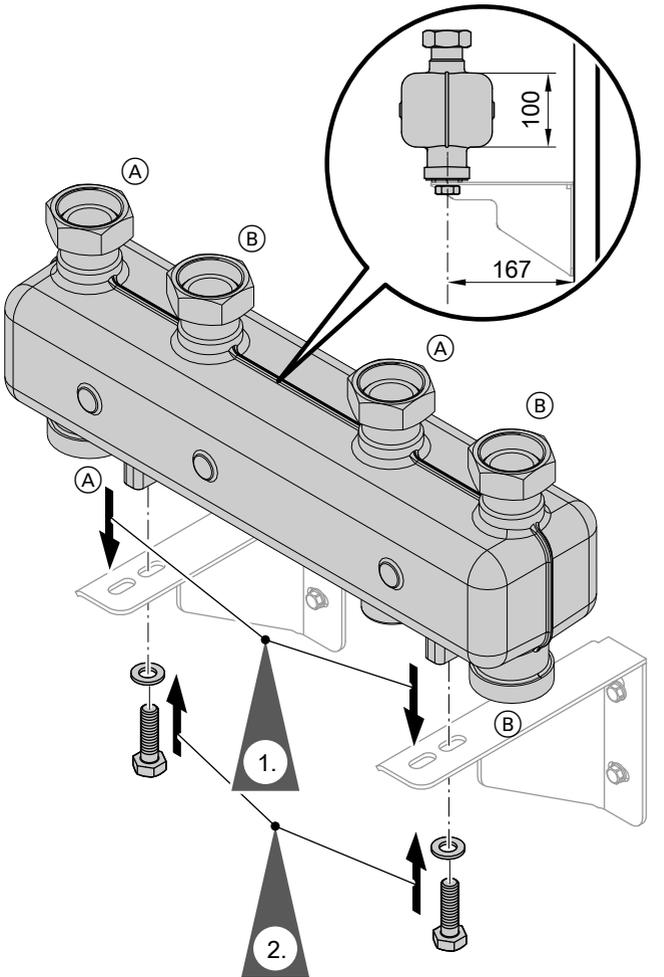
## Wall mounting (cont.)

### Manifold (H = 70 mm) for 2 Divicons



## Wall mounting (cont.)

### Manifold (H = 100 mm) for 2 Divicons

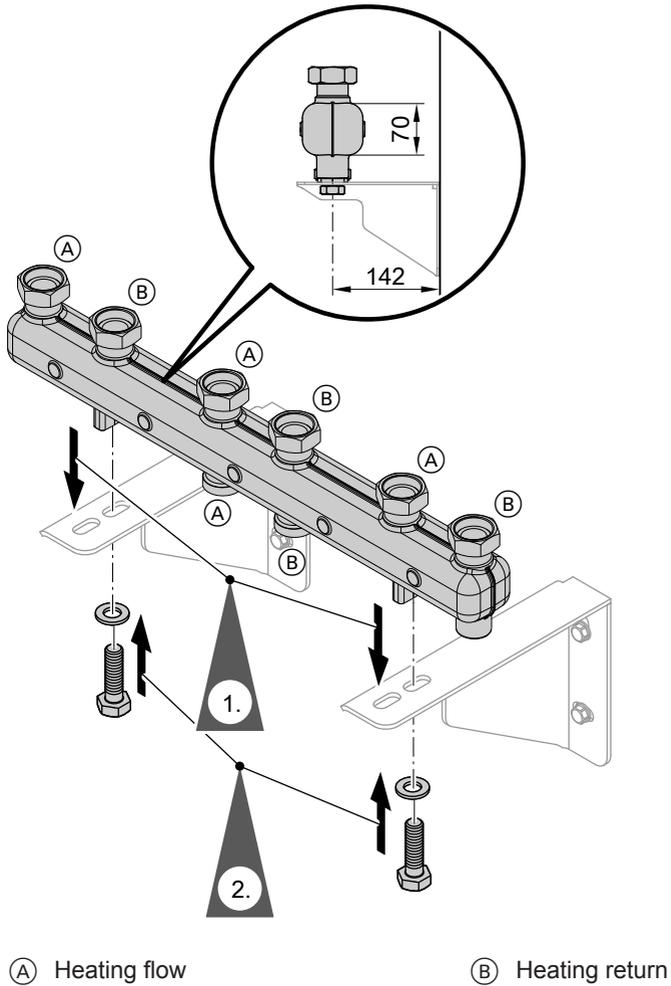


(A) Heating flow

(B) Heating return

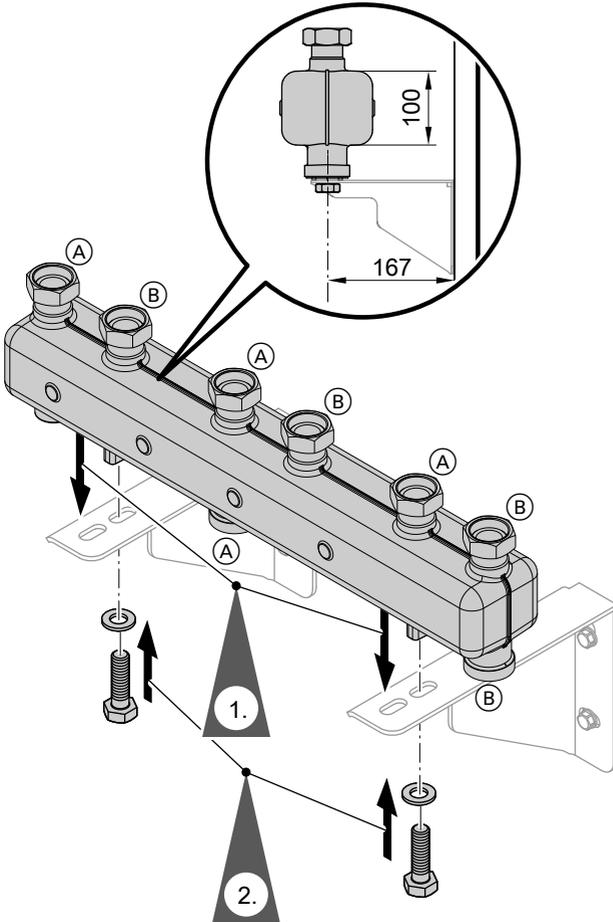
## Wall mounting (cont.)

### Manifold (H = 70 mm) for 3 Divicons



## Wall mounting (cont.)

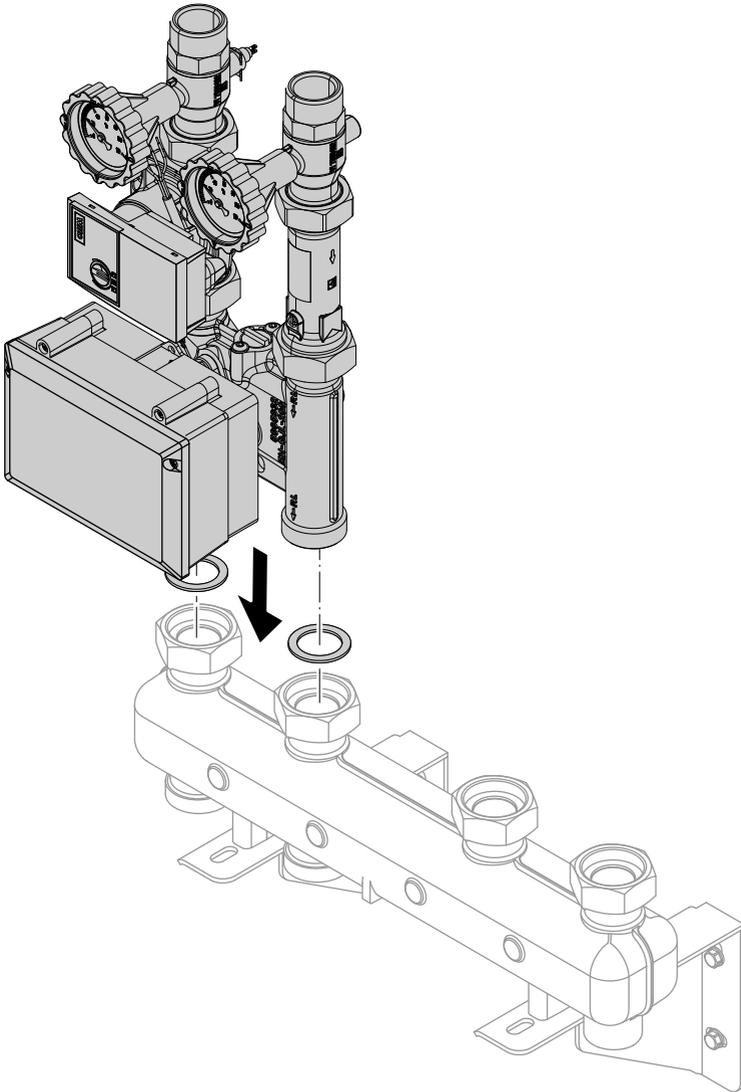
### Manifold (H = 100 mm) for 3 Divicons



(A) Heating flow

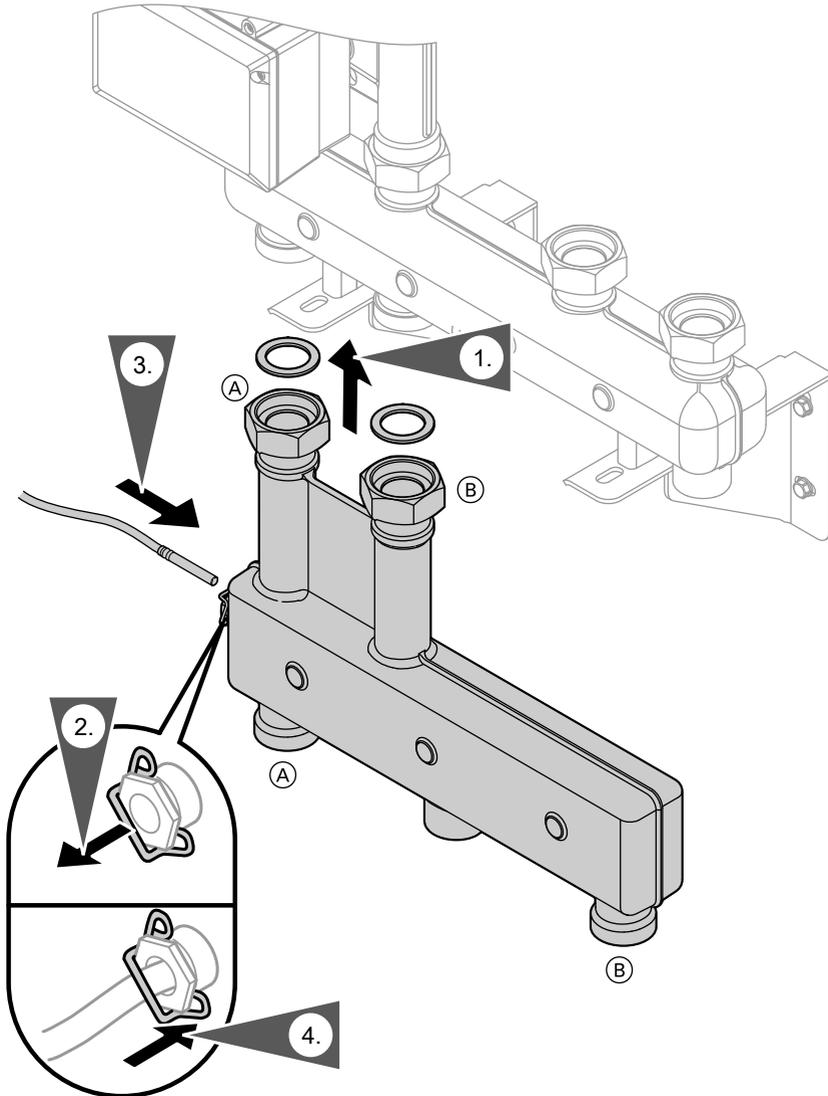
(B) Heating return

## Wall mounting (cont.)



## Wall mounting (cont.)

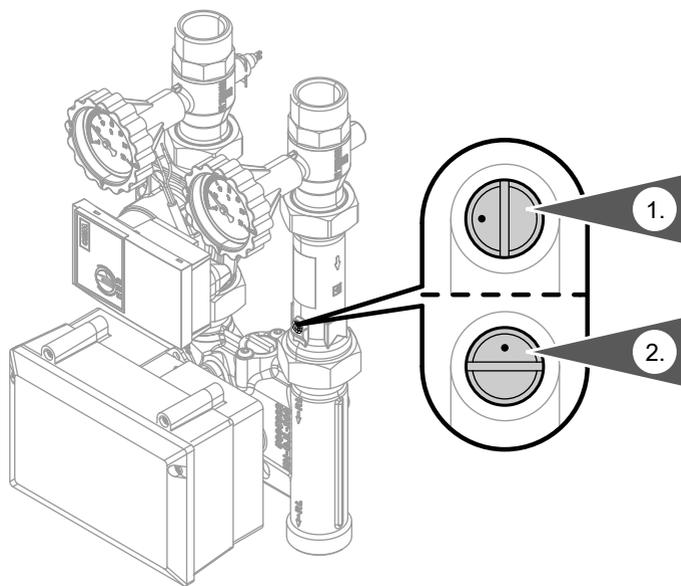
### Low loss header (if supplied)



(A) Heating flow

(B) Heating return

## Filling the system



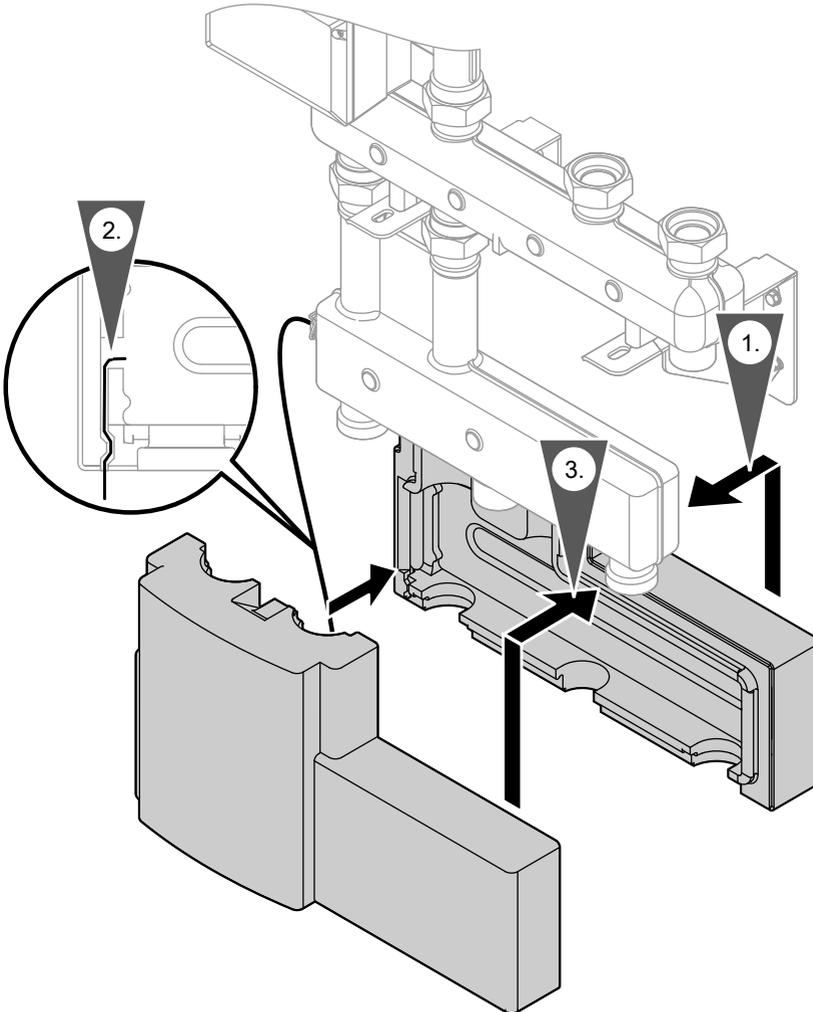
1. For filling (with heating water), open the check valve in the heating return by positioning the slot of the screw in the vertical position.
2. For operation, position the slot of the screw in the horizontal position.

### **Note**

*Observe the marking on the adjusting screw.*

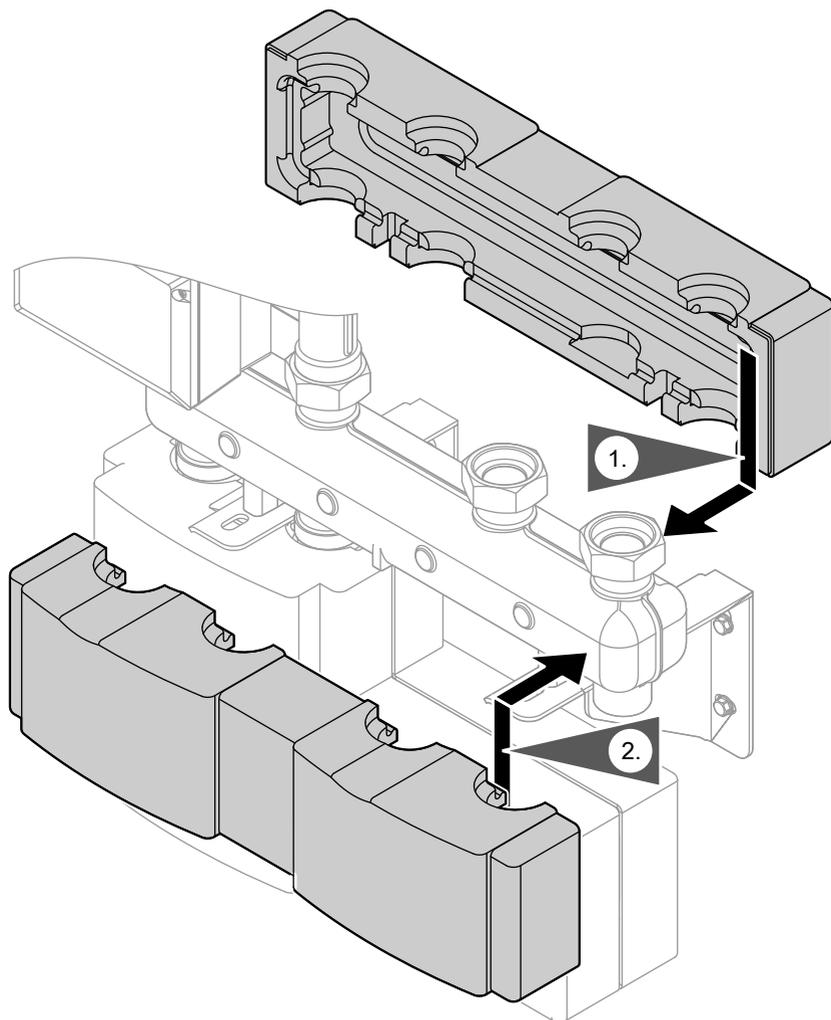
## Fitting the thermal insulation

### Low loss header (if supplied)



## Fitting the thermal insulation (cont.)

### Manifold

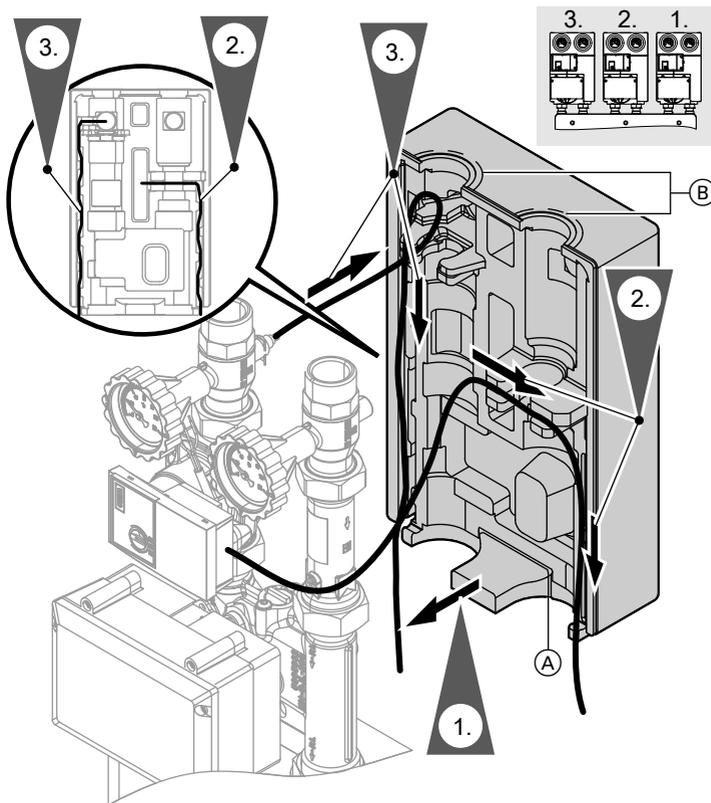


## Fitting the thermal insulation (cont.)

### Divicon with mixer

#### Note

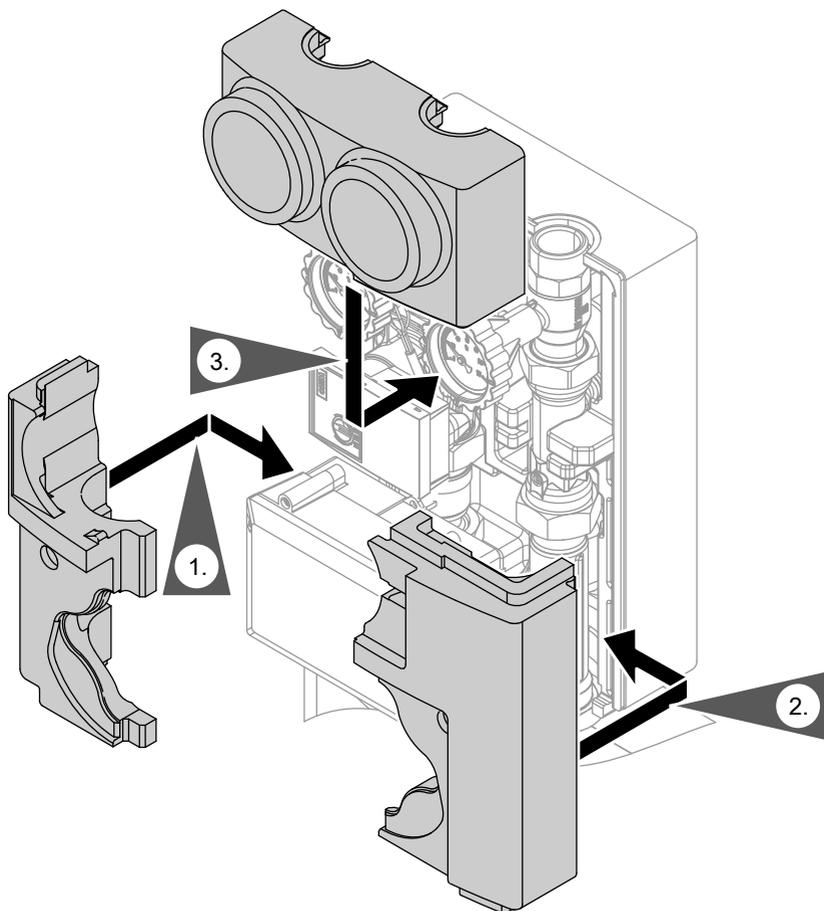
With several Divicons, first fit the thermal insulation on the right-hand Divicon. For the remaining Divicons, fit the insulation from right to left.



(A) Cut off if fitting a single module to the wall.

(B) Cut out the thermal insulation if connecting with a union nut.

## Fitting the thermal insulation (cont.)

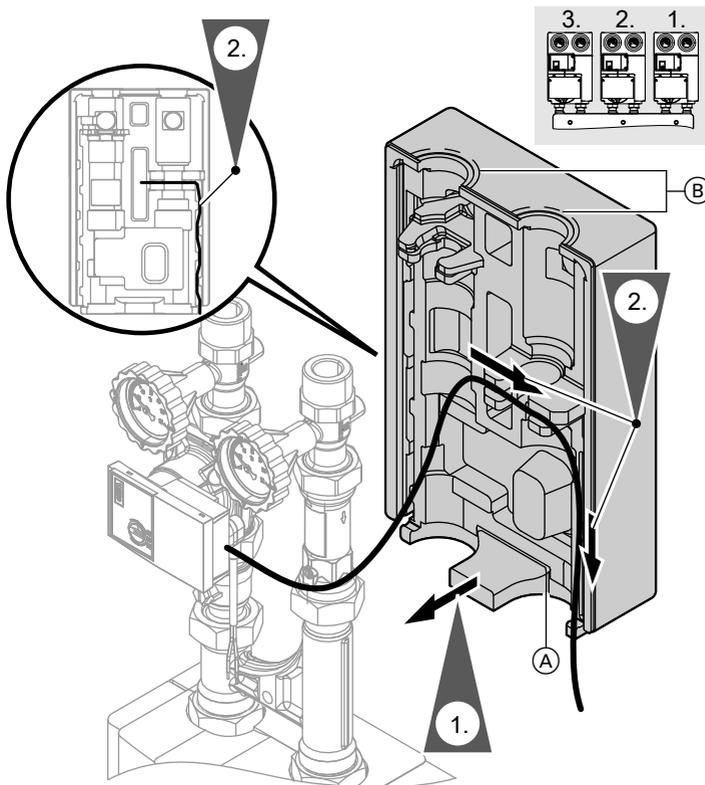


## Fitting the thermal insulation (cont.)

### Divicon without mixer

#### Note

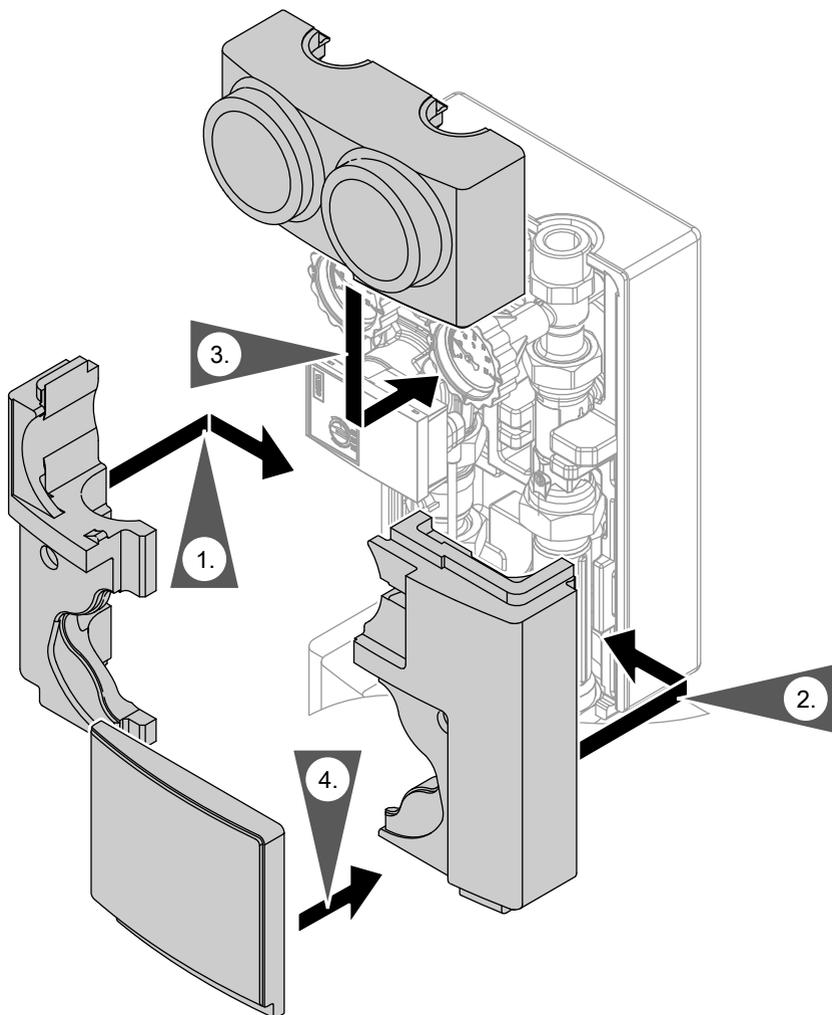
With several Divicons, first fit the thermal insulation on the right-hand Divicon. For the remaining Divicons, fit the insulation from right to left.



(A) Cut off if fitting a single module to the wall.

(B) Cut out the thermal insulation if connecting with a union nut.

## Fitting the thermal insulation (cont.)

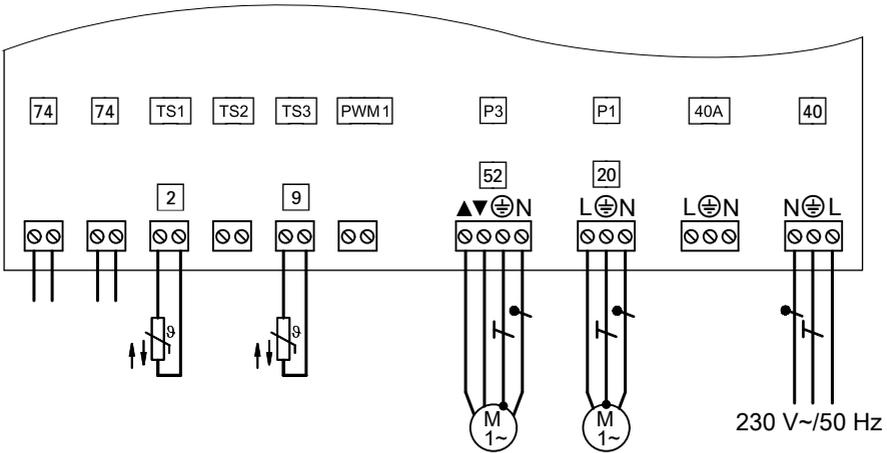


## Extension kit with mixer PCB

### Note

Bundle individual wires from the connecting cables directly below the plugs and secure with cable ties.

### Overview of electrical connections



Plug 230 V~

P1 20 Heating circuit pump

P3 52 Mixer motor

40 Power supply

40A Power supply for accessories

LV connections

PWM1 No function

TS1 2 Flow temperature sensor

TS2 No function

TS3 9 Temperature sensor, low loss header

74 PlusBus



### Please note

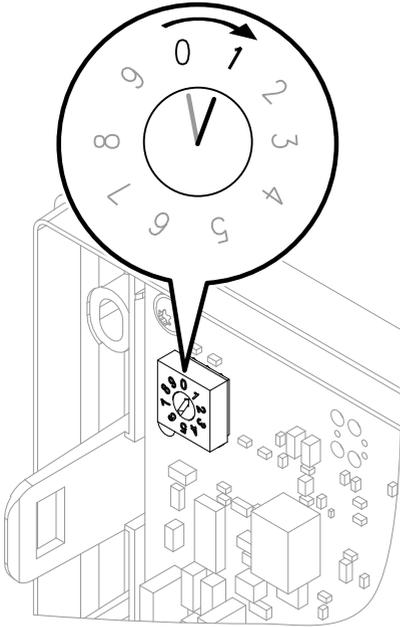
Electronic assemblies can be damaged by electrostatic discharge.

Prior to commencing any work, touch earthed objects such as heating or water pipes to discharge static loads.

### Note

Apply strain relief to on-site cables.  
Seal any unnecessary apertures with cable grommets (not cut open).

## Rotary switch S1



If several mixer extension kits are being connected, set rotary switch S1.

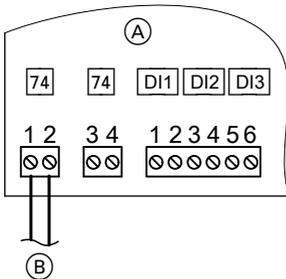
Set the rotary switch on each extension kit to a consecutive number:

- Heating circuit with mixer M2: Rotary switch to 1
- Heating circuit with mixer M3: Rotary switch to 2
- Heating circuit with mixer M4: Rotary switch to 3

### Note

*If additional EM-P1 extensions are connected, always set the subscriber numbers for the EM-P1 extensions to consecutive numbers after the mixer extension kits.*

## Connecting the PlusBus to the heat generator control unit



### Note

*If making the connection to the heat generator with an external plug for the bus connection, connect the wires directly.*

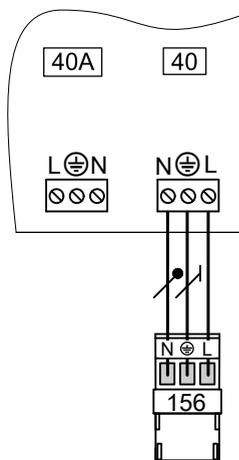


Heat generator installation and service instructions

- (A) Extension
- (B) PlusBus to heat generator

### Power supply

#### Power supply at the heat generator control unit



-  Extension
-  Power supply
-  Power supply for further accessories
-  Plug for power supply to accessories in the heat generator control unit

Create the power supply connection. Route the power cable to the heat generator control unit and connect to plug .

If power is supplied to a further accessory, use plug  provided



Heat generator installation and service instructions



#### **Danger**

Incorrect core assignment can result in serious injury and damage to the appliance. Take care not to interchange wires "L1" and "N".

#### Separate power supply

If the power supply for the extension is **not** made at the heat generator control unit.



#### **Danger**

Incorrect electrical installations can lead to serious injury from electrical current and result in appliance damage.

Connect the power supply and implement all safety measures (e.g. RCD circuit) in accordance with the following regulations:

- IEC 60364-4-41
- VDE regulations
- Technical connection requirements (TAB) specified by the local grid operator

## Extension kit with mixer PCB (cont.)

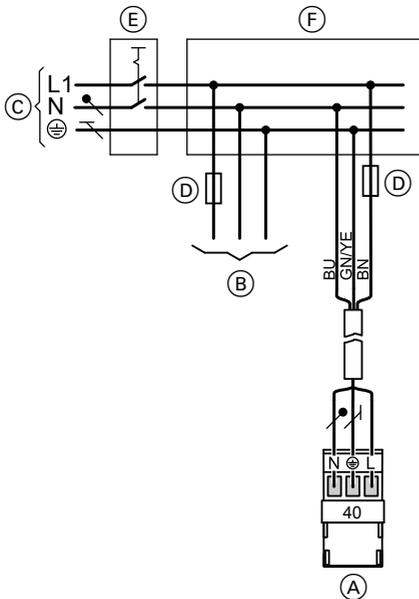


### Danger

The absence of system component earthing can lead to serious injury from electric current if an electrical fault occurs. The appliance and pipework must be connected to the equipotential bonding of the building.

### Isolators for non-earthed conductors

- The mains isolator (if installed) must simultaneously isolate all non-earthed conductors from the mains with a minimum contact separation of 3 mm.
- If **no** mains isolator is installed, all non-earthed conductors must be isolated from the power supply by the upstream circuit breaker with a minimum contact separation of 3 mm.



- (A) Power supply for extension
- (B) Power supply for heat generator control unit
- (C) Power supply 1/N/PE, 230 V/50 Hz
- (D) Fuse (max. 16 A)
- (E) Mains isolator, 2-pole, on site
- (F) Junction box (on site)

Connect the power supply in accordance with the diagram.

If the power supply to the appliance is connected with a flexible cable, ensure that the live conductors are pulled taut before the earth conductor in the event of strain relief failure. The length of the earth conductor wire will depend on the design.



### Danger

Incorrect core assignment can result in serious injury and damage to the appliance. Never interchange cores "L" and "N".



### Please note

Incorrect phase sequence can cause damage to the appliance. Ensure phase equality with the power supply of the heat generator control unit.

Colour coding to IEC 60757

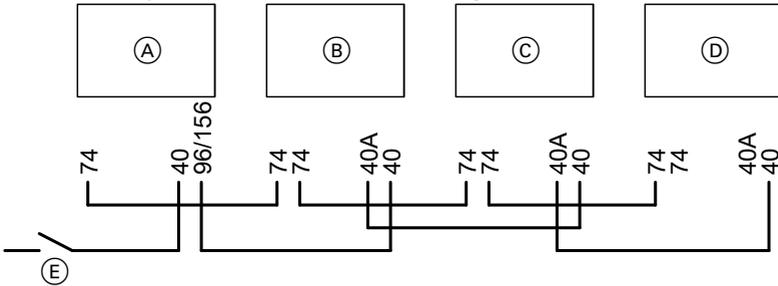
BN	Brown
BU	Blue
GNYE	Green/yellow

## Extension kit with mixer PCB (cont.)

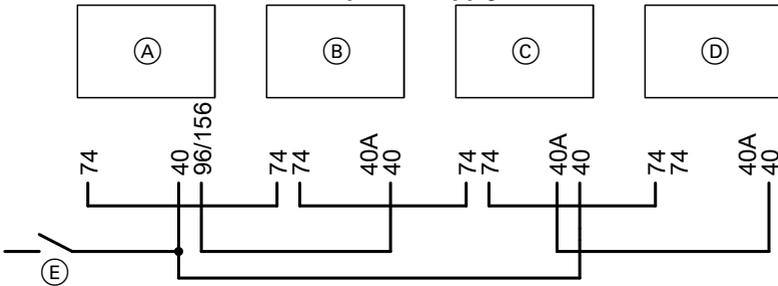
### Connecting several accessories

#### Power supply and PlusBus connection

##### Power supply to all accessories via heat generator control unit



##### Some accessories with direct power supply



- |     |   |        |  |
|-----|---|--------|--|
| (A) | Heat generator control unit                           | (E)    | ON/OFF switch  |
| (B) | Mixer extension kit for heating circuit with mixer M2 | 40 (A) | Power supply   |
| (C) | Mixer extension kit for heating circuit with mixer M3 | 74     | PlusBus  |
| (D) | Further accessories                                   | 96/156 | Accessories power supply in the control unit of the heat generator |

## Extension kit with mixer PCB (cont.)

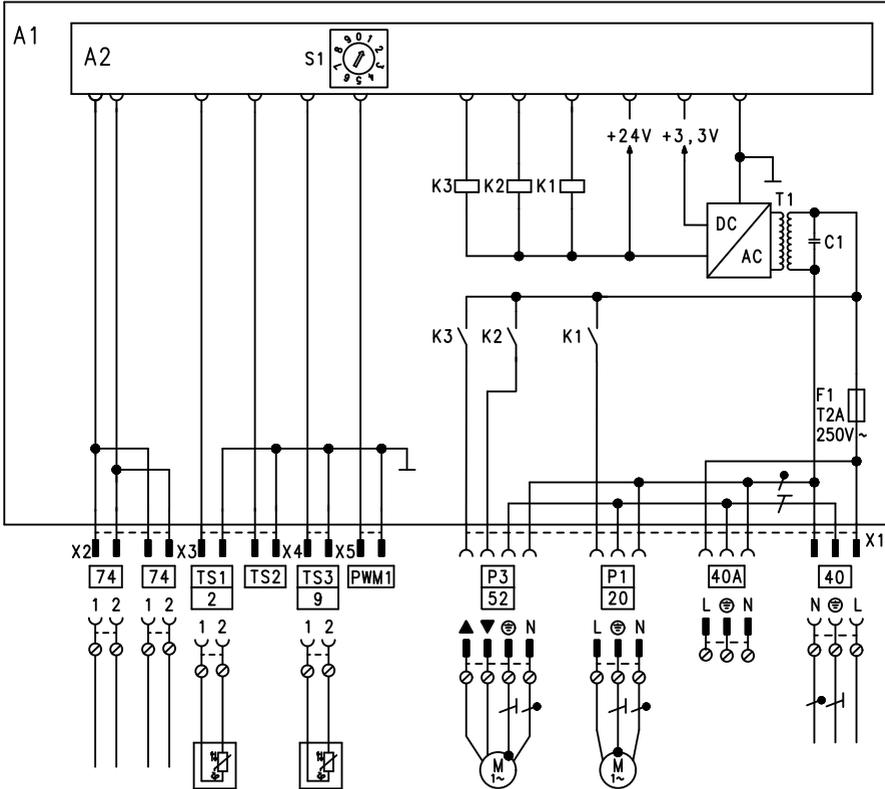
- In the following circumstances, use the output for the accessories only to switch an on-site relay:  
An actuator (e.g. circulation pump) with a higher power demand than the fuse rating required for the accessories is connected at the accessories output.
- In the following circumstances, connect one or more accessories directly to the mains supply via an ON/OFF switch:  
The max. permissible total current of the control unit for the heat generator is exceeded.  
Separate power supply: See the following chapter.

### **Note**

*In this event, the accessories concerned **cannot** be isolated with the ON/OFF switch on the control unit.*

## Extension kit with mixer PCB (cont.)

### Connection and wiring diagram



A1 Mixer extension kit, ADIO control unit  
 A2 PCB

F1 Fuse  
 S1 Rotary switch

230 V~ plugs

P1 20 Heating circuit pump

P3 52 Mixer motor

40 Power supply 230 V/50 Hz

40A Power supply for accessories

LV plugs

PWM1 No function

TS1 2 Flow temperature sensor

TS2 No function

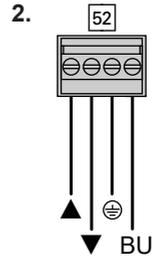
TS3 9 Low loss header temperature sensor (separate accessories)

74 PlusBus connection for connecting to the heat generator and another accessory

### Changing the rotational direction (if required)

1.  **Danger**  
An electric shock can be life threatening.  
Before opening the boiler, disconnect it from the mains voltage, e.g. at the fuse or mains isolator.

Remove the casing cover (see chapter "Overview of electrical connections").



Switch cores BK ▲ and BK ▼ on plug .

3. Refit the casing cover.
4. Check the rotational direction.

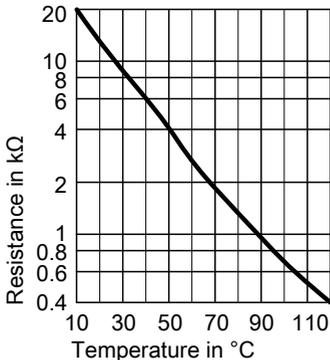
## Specification

Rated voltage	230 V~
Rated frequency	50 Hz
Rated current	2 A
Power consumption	5.5 W
Protection class	I
IP rating	IP 20 D to EN 60 529; ensure through design/installation.
Permissible ambient temperature	
■ During operation	0 to +40 °C
■ During storage and transport	-20 to +65 °C
Rated relay output breaking capacity	
■ Heating circuit pump	1 A 230 V~
■ Mixer motor	0.1 A 230 V~

### Flow temperature sensor/low loss header temperature sensor (separate accessories)

Sensor type	NTC 10 kΩ, at 25 °C
IP rating	IP 53 to EN 60529; ensure through design/installation.
Permissible ambient temperature	
■ Operation	0 to +120 °C
■ Storage and transport	-20 °C to +70 °C

### Curve



## Declaration of conformity for extension kit

We, Viessmann Werke GmbH & Co. KG, D-35107 Allendorf, declare as sole responsible body that the named product complies with the European directives and supplementary national requirements in terms of its design and operational characteristics.

Conformity has been verified with the CE designation. Using the serial number, the full Declaration of Conformity can be found on the following website:

**[www.viessmann.co.uk/eu-conformity](http://www.viessmann.co.uk/eu-conformity)**



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5836498 Subject to technical modifications.