

Installation instructions for contractors

VIESMANN

Divicon

Heating circuit distributor

DIVICON



Safety instructions



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

Safety instructions explained



Danger

This symbol warns against the risk of injury.



Please note

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

- The Code of Practice of relevant trade associations
- all current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE [and all local standards].
 - Ⓐ ÖNORM, EN, ÖVGW-TR Gas, ÖVGW-TRF and ÖVE
 - ⒸH SEV, SUVA, SVGW, SVTI, SWKI, VKF and EKAS guideline 1942: LPG, part 2

Note

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

Target group

These instructions are exclusively intended for qualified contractors.

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

Regulations

Observe the following when working on this system:

- Statutory regulations regarding the prevention of accidents
- Statutory regulations regarding environmental protection

Working on the system

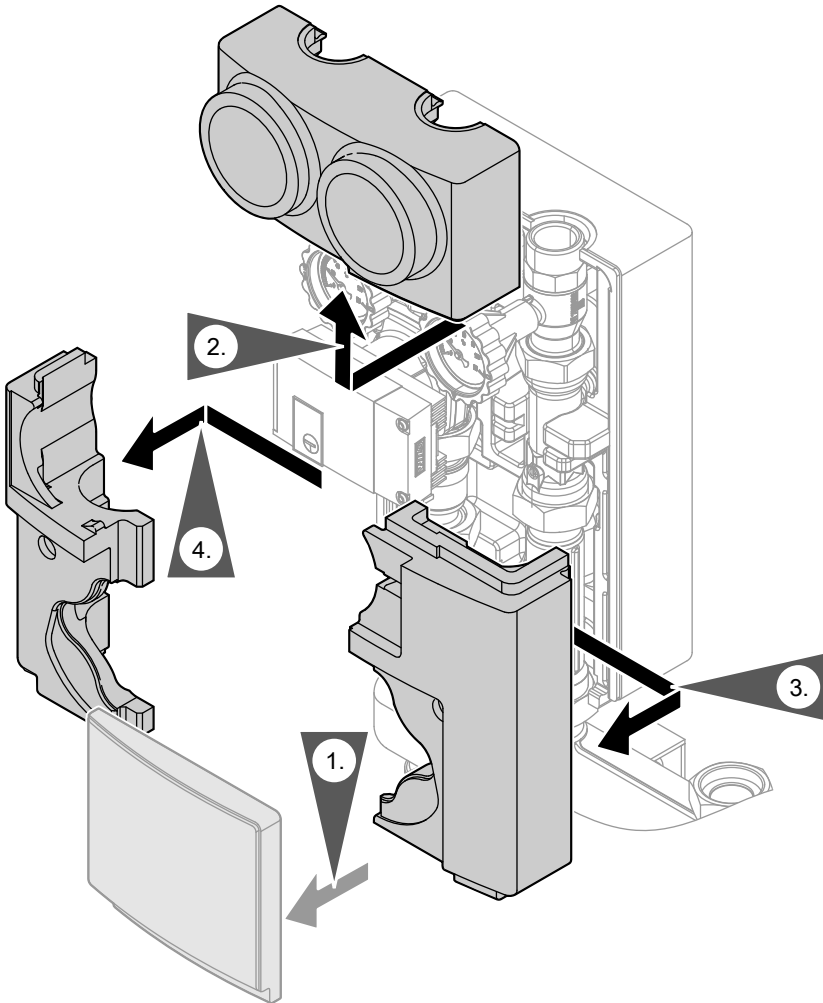
- Isolate the system from the power supply (e.g. by removing the separate fuse or by means of a mains isolator) and check that it is no longer 'live'.
- Safeguard the system against reconnection.
- Where gas is used as the fuel, close the main gas shut-off valve and safeguard it against unintentional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

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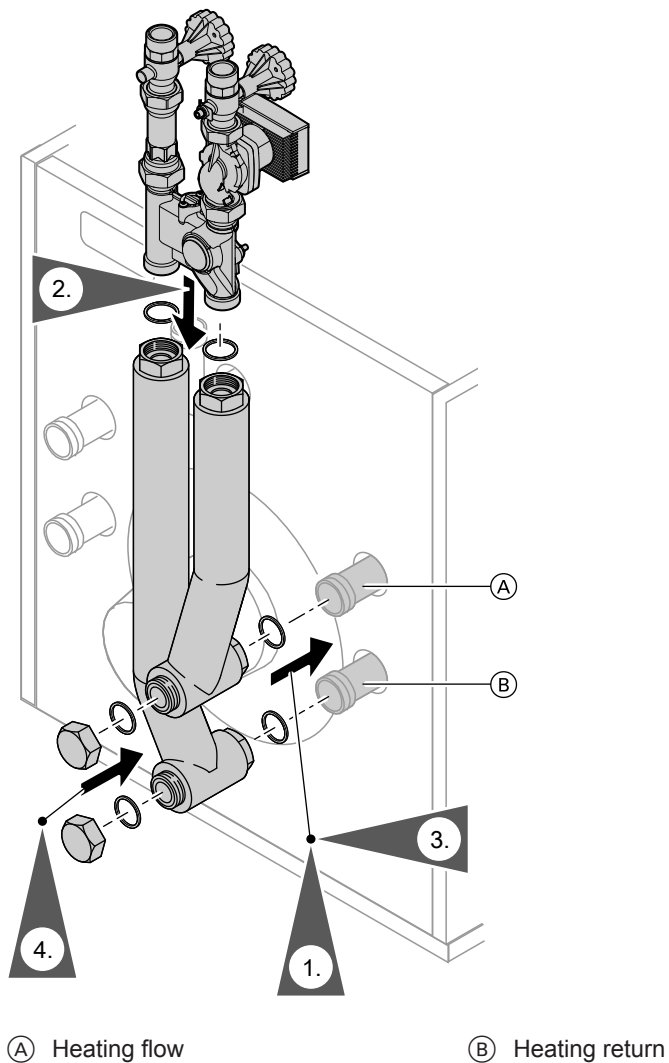
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Preparing for installation

Removing the thermal insulation

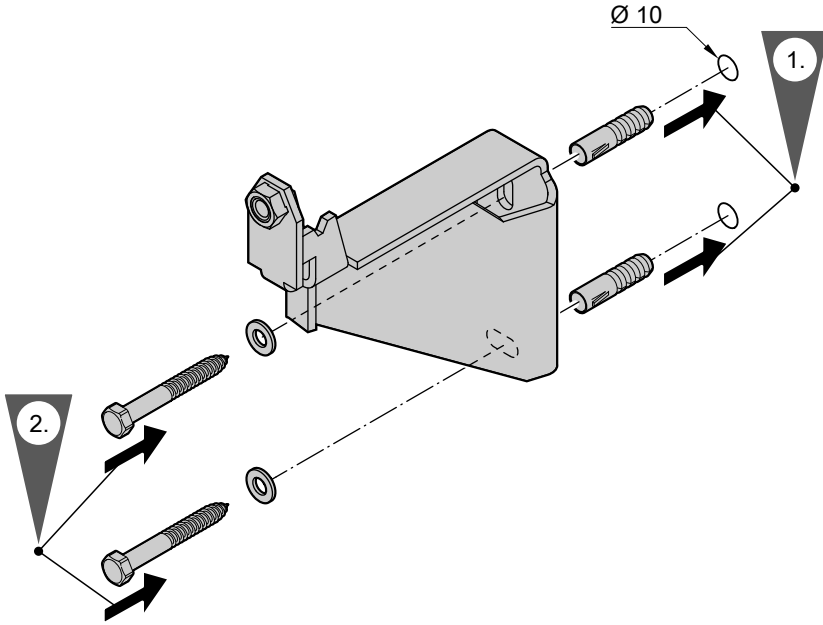


Installation on the boiler with pipe assembly (accessories)

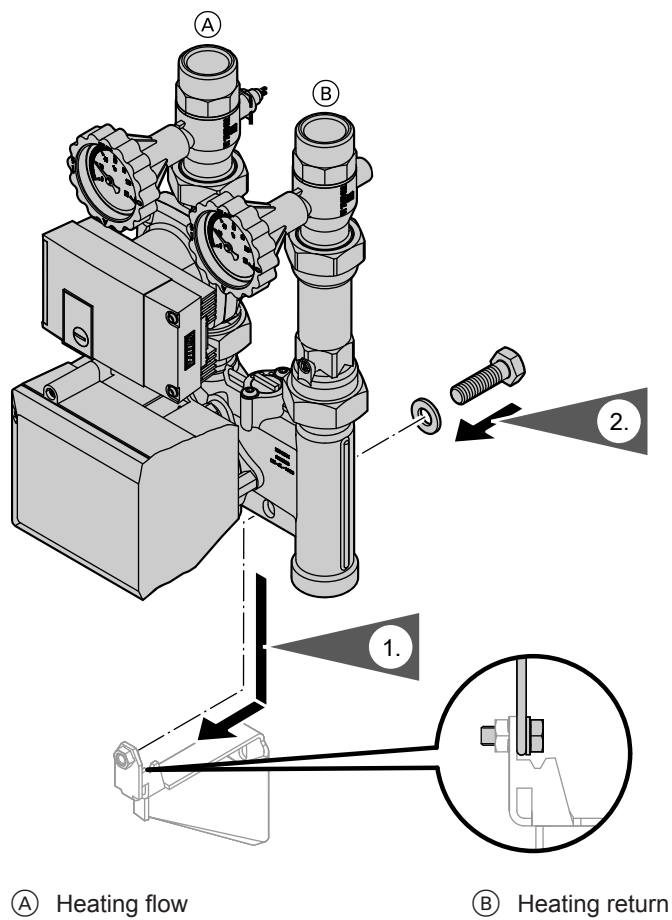


Mounting on a wall

Fitting a single module (without manifold)

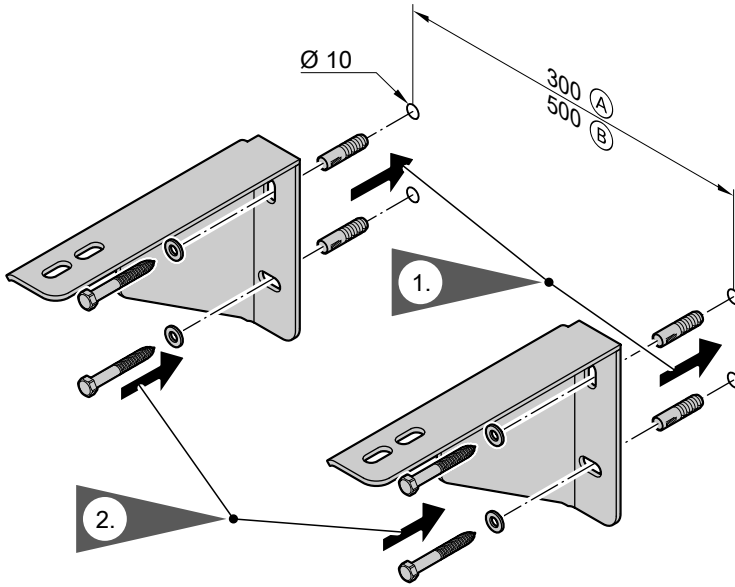


Mounting on a wall (cont.)



Mounting on a wall (cont.)

Fitting several modules with manifold (accessories)

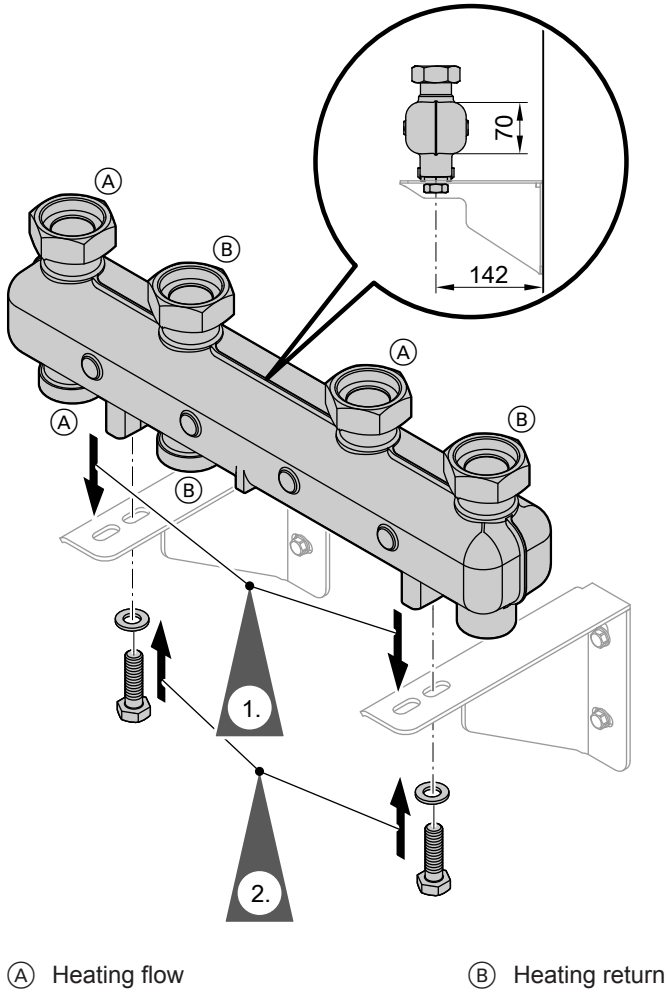


(A) Manifold for 2 Divicons

(B) Manifold for 3 Divicons

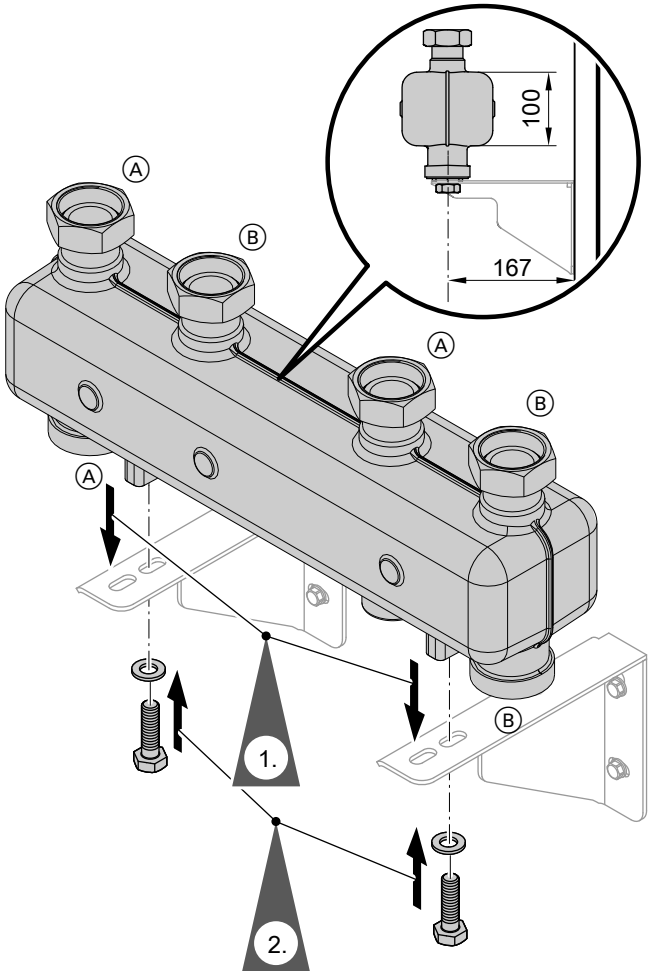
Mounting on a wall (cont.)

Manifold (H = 70 mm) for two Divicons



Mounting on a wall (cont.)

Manifold (H = 100 mm) for two Divicons

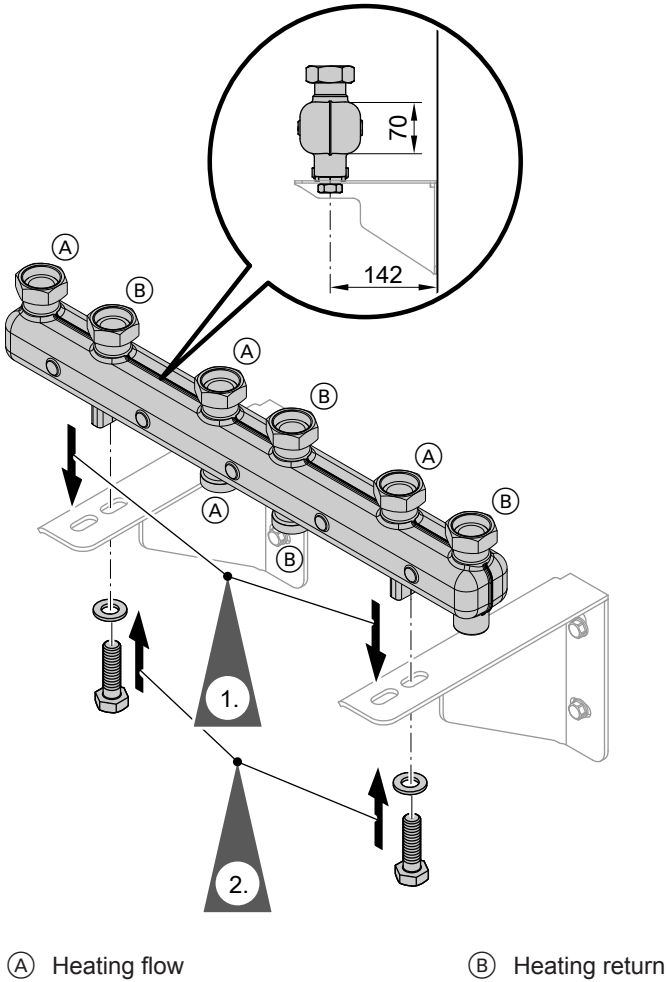


(A) Heating flow

(B) Heating return

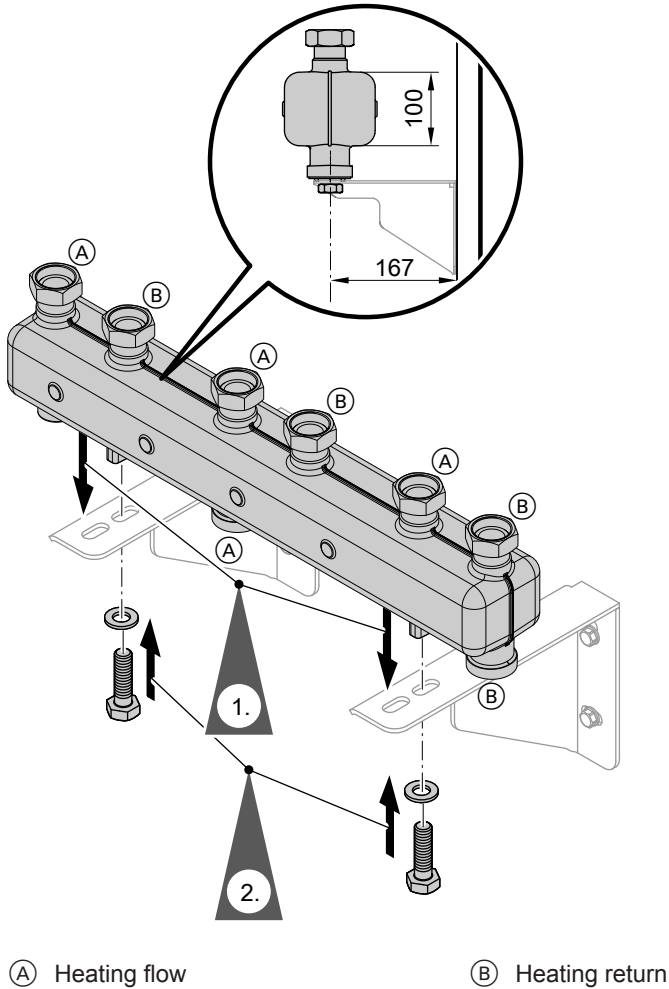
Mounting on a wall (cont.)

Manifold (H = 70 mm) for three Divicons

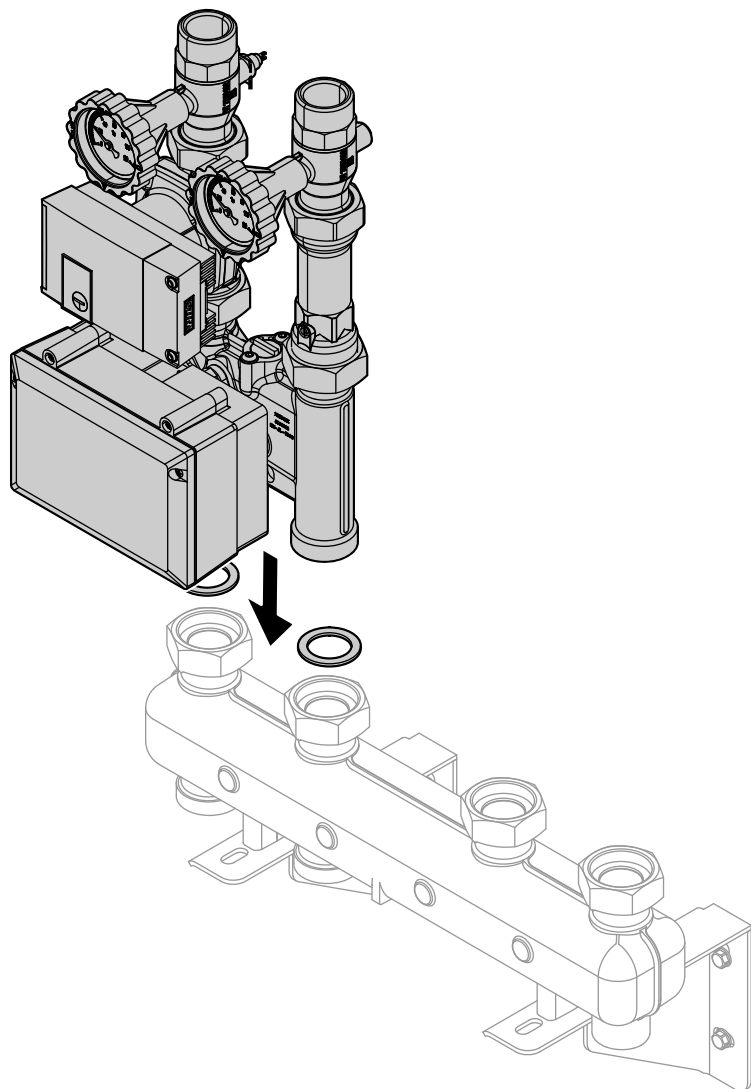


Mounting on a wall (cont.)

Manifold (H = 100 mm) for three Divicons

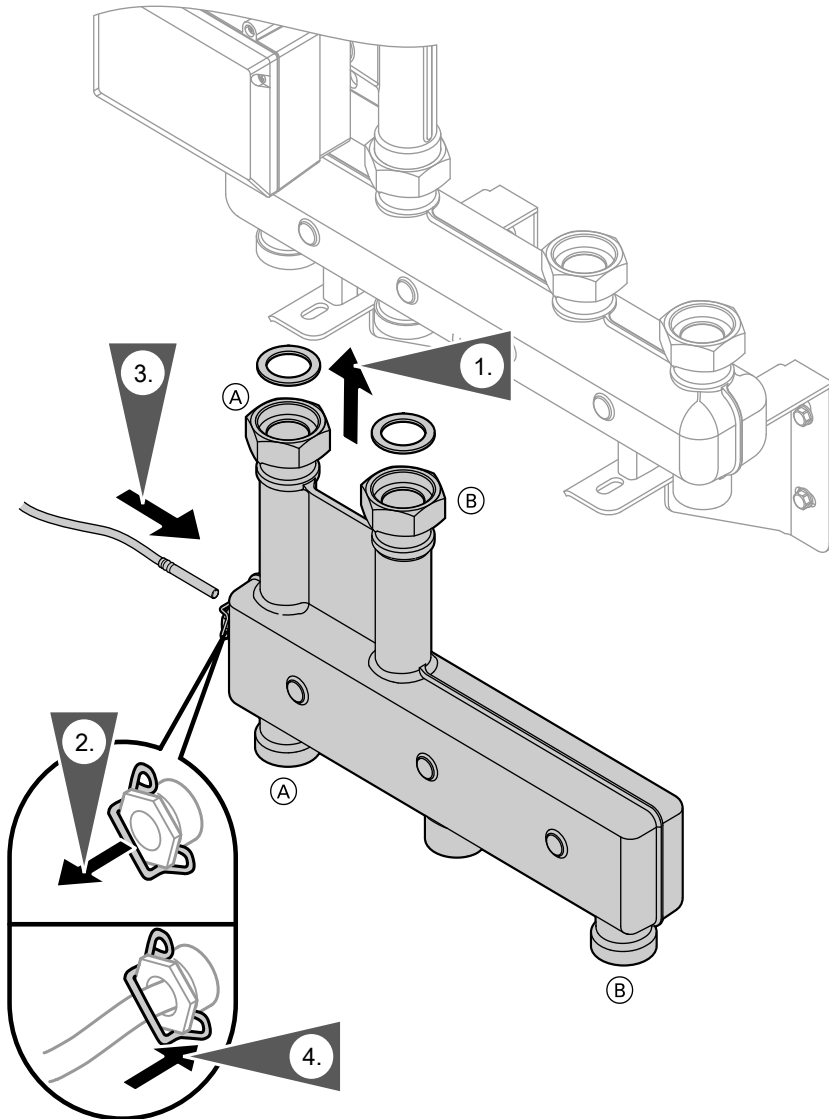


Mounting on a wall (cont.)



Mounting on a wall (cont.)

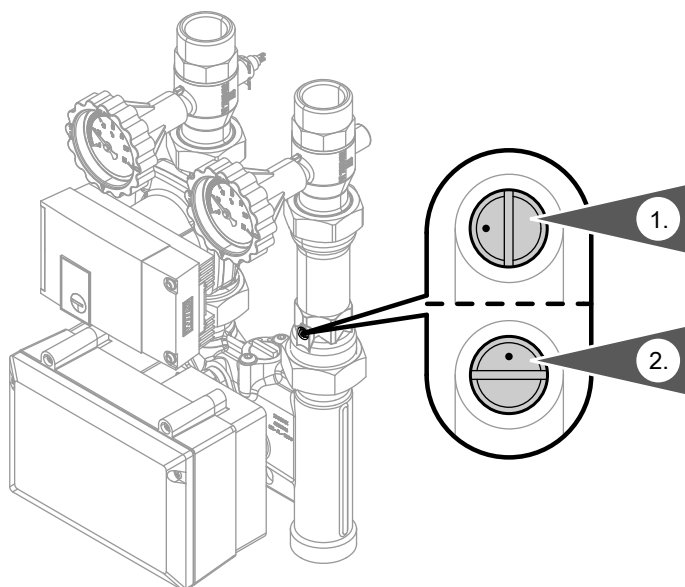
Low loss header (if supplied)



(A) Heating flow

(B) Heating return

Filling the system



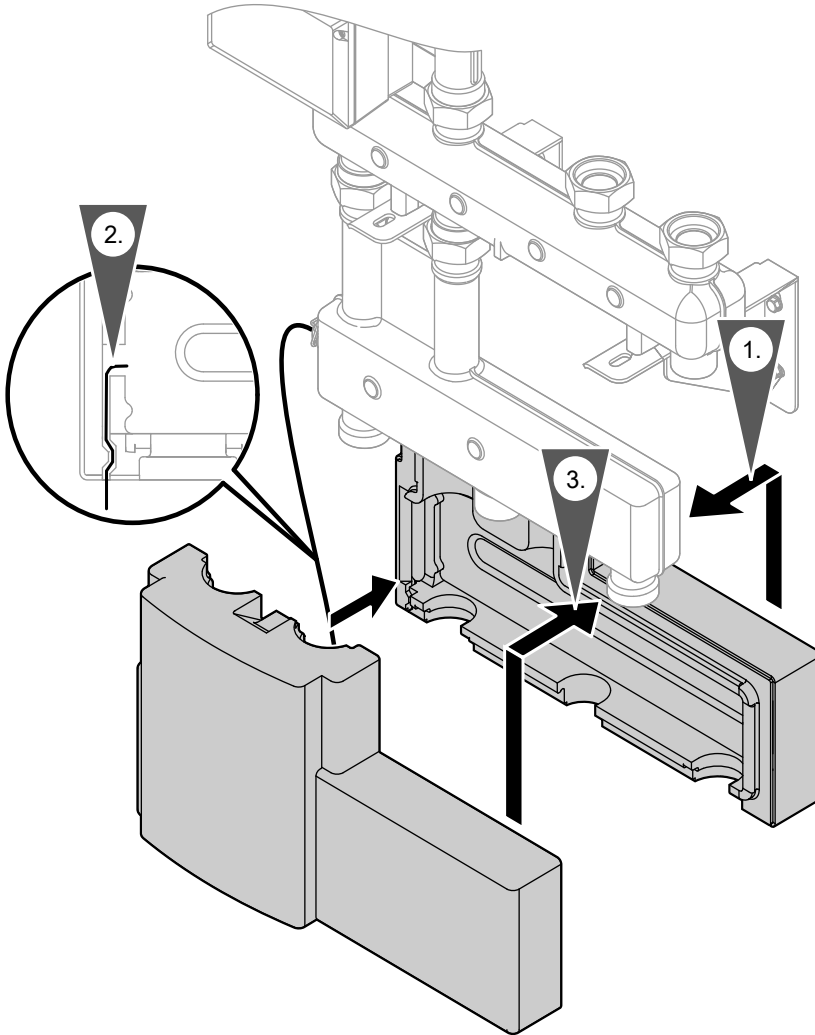
1. For filling (with heating water), open the check valve in the heating return by positioning the slot of the screw in the vertical position.
2. For operation, position the slot of the screw in the horizontal position.

Note

Observe the marking on the adjusting screw.

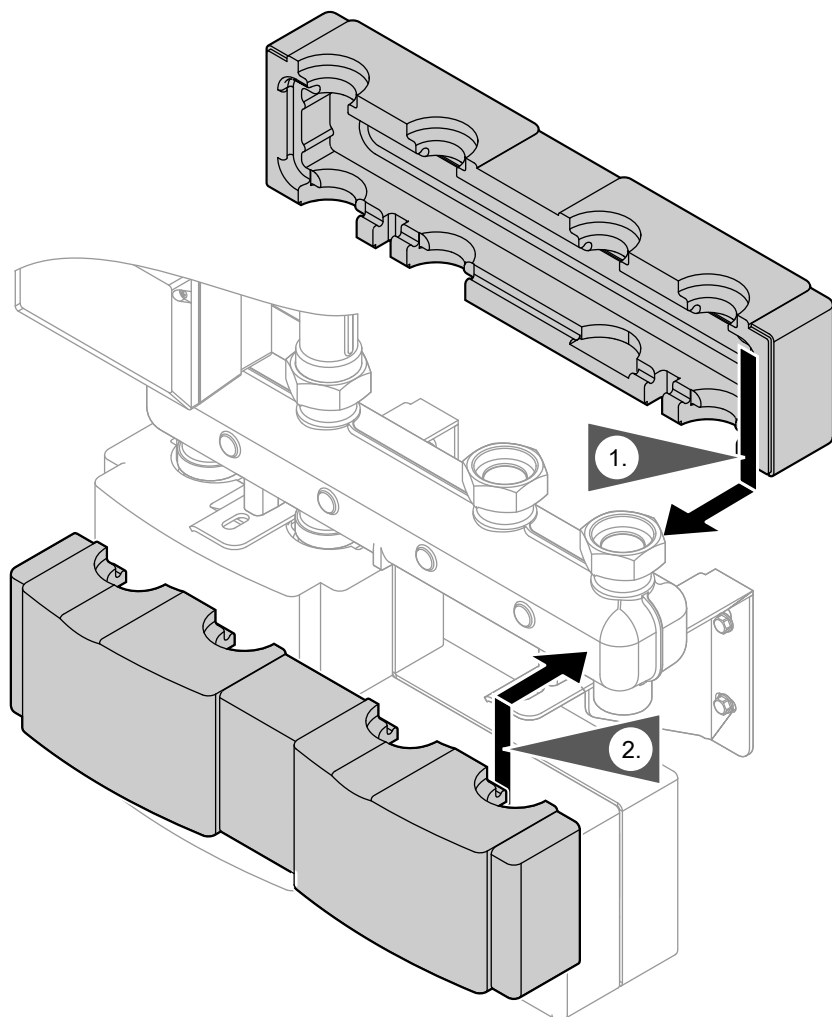
Fitting the thermal insulation

Low loss header (if supplied)



Fitting the thermal insulation (cont.)

Manifold

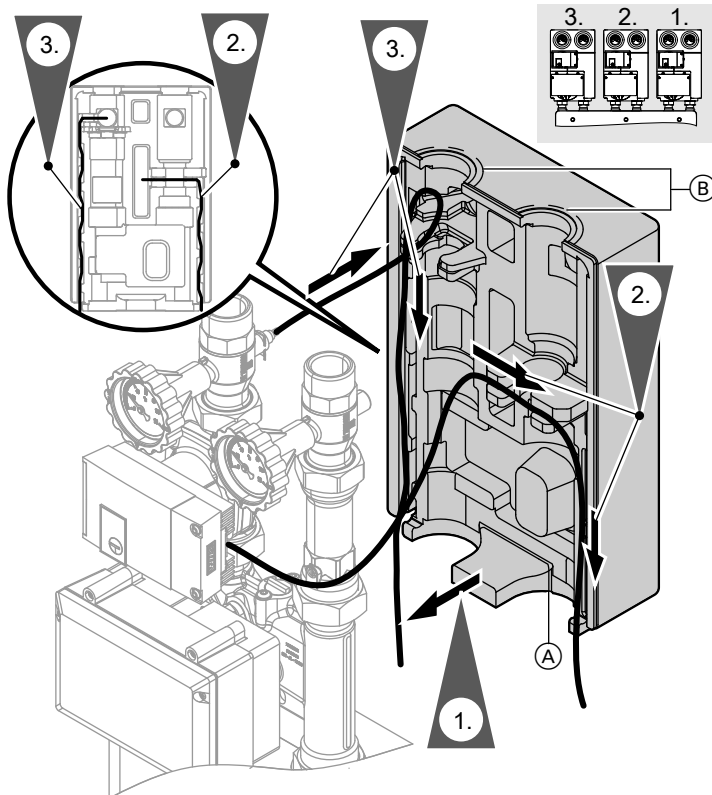


Fitting the thermal insulation (cont.)

Divicon with mixer

Note

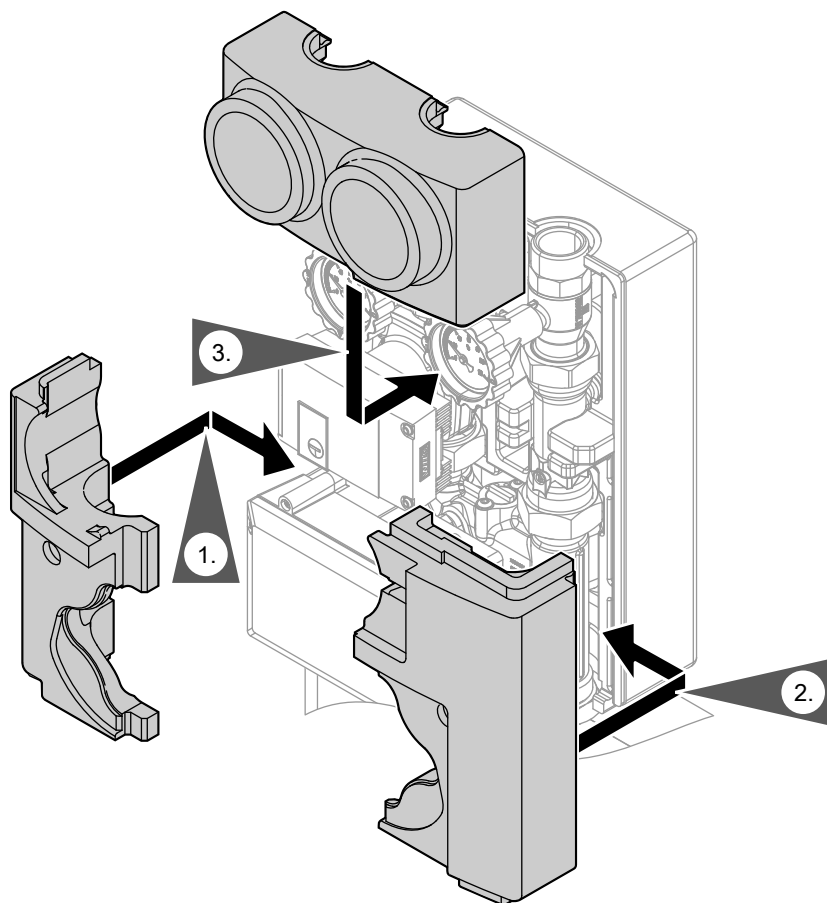
With several Divicons, first fit the thermal insulation on the right Divicon. For the remaining Divicons, fit the insulation from right to left.



(A) Cut 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.)

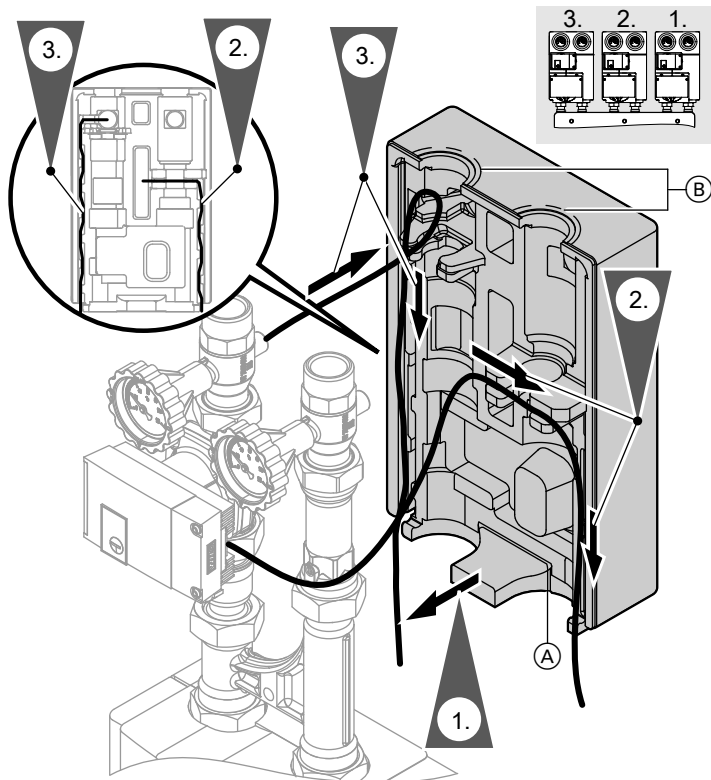


Fitting the thermal insulation (cont.)

Divicon without mixer

Note

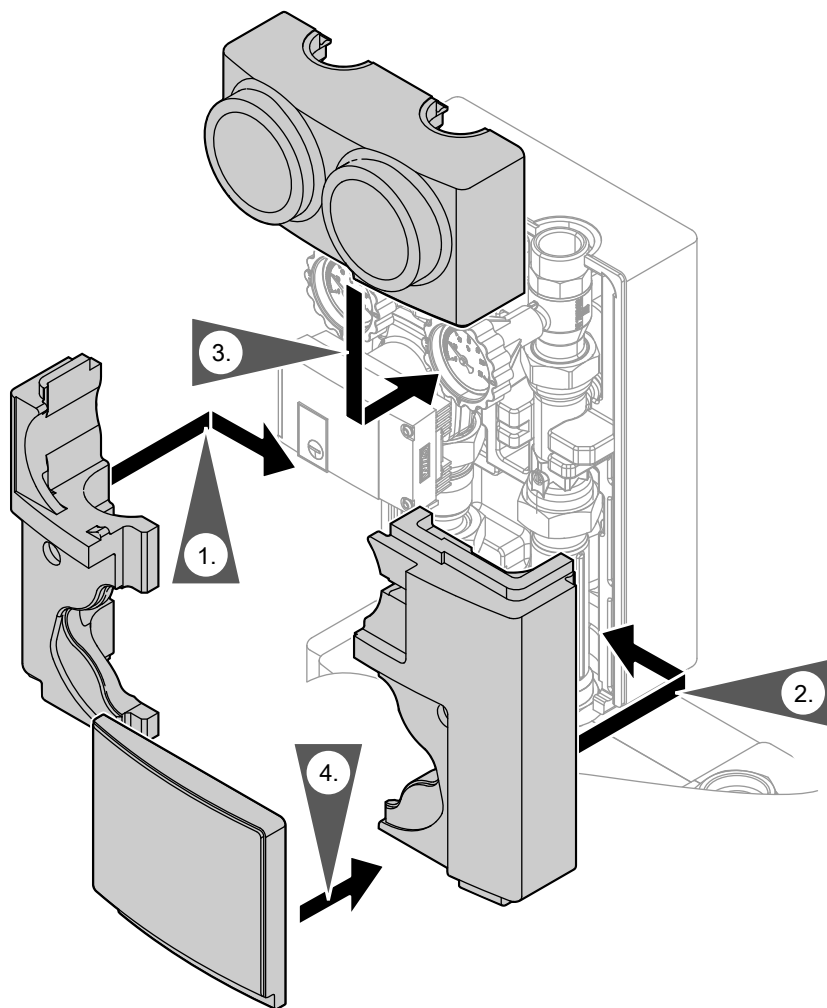
With several Divicons, first fit the thermal insulation on the right Divicon. For the remaining Divicons, fit the insulation from right to left.



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

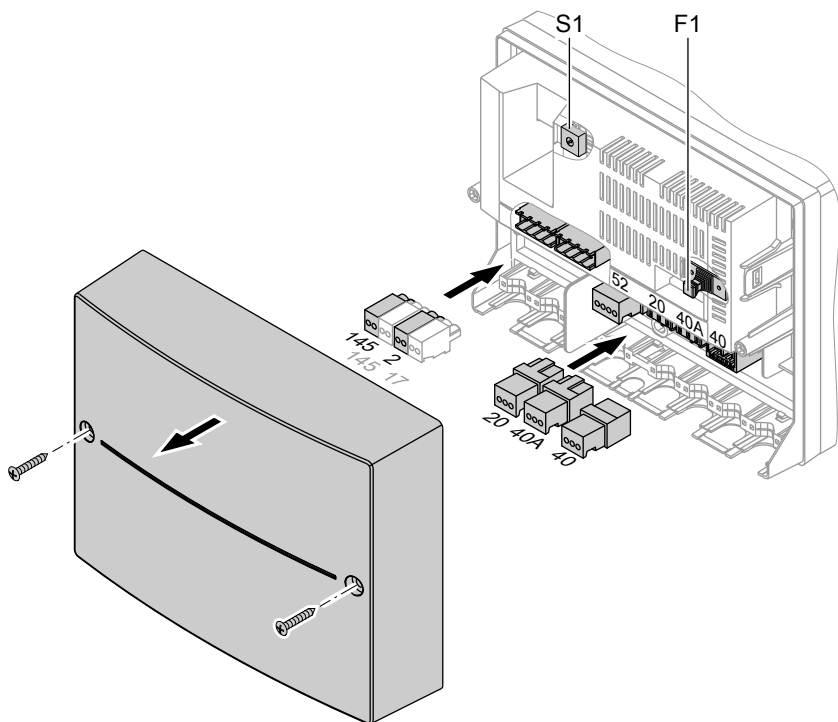
(B) Cut out the thermal insulation if connecting with a union nut

Fitting the thermal insulation (cont.)



Extension kit with mixer PCB

Overview of electrical connections



F1 Fuse, 2A (slow)

S1 Rotary selector

230 V~ plugs

20 Heating circuit pump

40 Power supply 230 V/50 Hz

40A Power supply connection of accessories

52 Mixer motor

Low voltage connections

2 Flow temperature sensor

17 Return temperature sensor (in conjunction with the Vitotronic 300, type KW3, if installed)

145 KM BUS cable



Please note

Electronic modules can be damaged by electrostatic charges. Before beginning work, touch earthed objects, such as heating or water pipes, to discharge static loads.

Extension kit with mixer PCB (cont.)

Note

Apply a strain relief to all on-site cables.

Close any unnecessary knockouts with cable grommets (not cut open).

Connecting the extension kit to the control unit

Connecting the Vitotronic 300, type KW3



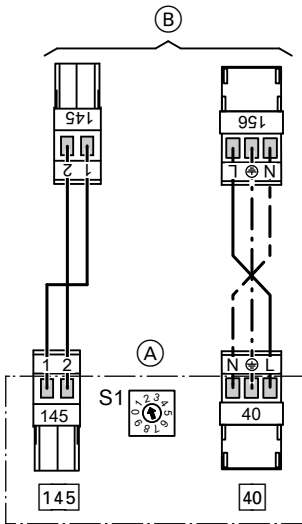
Danger

Incorrect core termination can cause severe injuries and damage to the equipment.

Take care not to interchange wires "L1" and "N".

145 KM BUS to the control unit or to the KM BUS distributor (accessories)

156 Power supply via control unit or via power distributor (accessories)



(A) Extension kit

(B) To the control unit

S1 Rotary selector: for position, see the following table

Extension kit with mixer PCB (cont.)

Rotary selector settings:

Heating circuit the mixer affects	Sensors connected	Rotary selector S1
Heating circuit with mixer M2	Flow temperature sensor	"2" (Delivered condition)
	Flow temperature sensor and return temperature sensor	"3"
Heating circuit with mixer M3	Flow temperature sensor	"4"
	Flow temperature sensor and return temperature sensor	"5"

Wall mounted and compact boilers

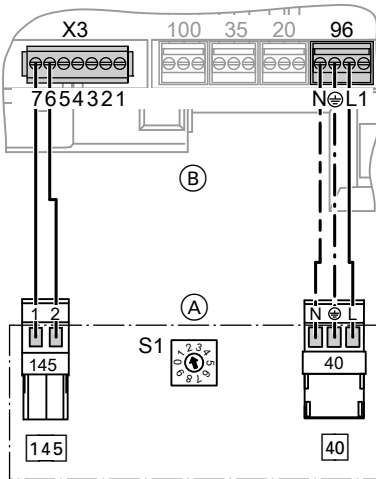


Danger

Incorrect core termination can cause severe injuries and damage to the equipment.

Take care not to interchange wires "L1" and "N".

Extension kit with mixer PCB (cont.)



- (A) Extension kit
- (B) Control unit

"X3" Connect KM BUS to terminals "7" and "6" (remove plug 145)
 or
 with plug 145 to the KM BUS distributor (accessories)
96 Power supply [terminals]

Note

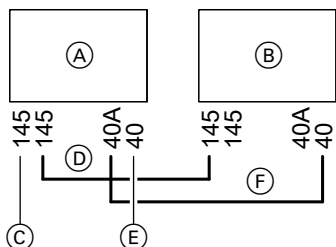
If the mains power supply has already been allocated, see chapter "Power supply".

S1 Rotary selector: for position, see the following table

Rotary selector settings:

Heating circuit the mixer should affects	Rotary selector S1
Heating circuit with mixer M2	"2" (Delivered condition)
Heating circuit with mixer M3	"4"

Connecting two extension kits



- (A) Extension kit for a heating circuit with mixer M2
- (B) Extension kit for heating circuit with mixer M3
- (C) KM BUS cable (standard delivery) to the control unit
- (D) KM BUS cable, 0.8 m long (cable kit accessory, part no. 7424 960)
- (E) Power supply (connect the power cable supplied, see the following chapter)
- (F) Power cable with plug $\overline{40}$ and $\overline{40}A$ (cable kit accessory, part no. 7424 960)

Power supply [terminals]

Connect accessories with a total wattage **above 400 W directly** to the mains power supply.



Danger

Incorrectly executed electrical installations can lead to injury from electrical current and result in equipment damage.

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


- IEC 60364-4-41
- VDE requirements
- Requirements specified by your local power supply utility
- Protect the power cable with 16 A max.

Extension kit with mixer PCB (cont.)

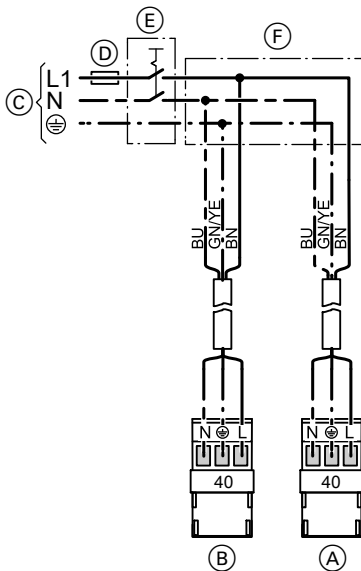


Danger

The absence of component earthing in the system can lead to serious injury from electrical current if an electrical fault occurs. The equipment and the pipework must be connected to the earth bonding of the house in question.

- The main isolator (if installed) must simultaneously isolate all non-earthed conductors from the mains with a minimum contact separation of 3 mm.
- If **no** main isolator is installed, all non-earthed cables must be isolated from the mains by the upstream breaker with at least 3 mm contact separation.
- We additionally recommend installing an AC/DC-sensitive RCD (RCD class B ) for DC (fault) currents that can occur with energy-efficient equipment.

Make the power supply connection in accordance with the diagram.



Danger

Incorrect core termination can cause severe injuries and damage to the equipment. Never interchange cores "L" and "N".



Please note

An incorrect phase sequence can cause damage to the unit. Check for phase equality with the power supply connection of the control unit.

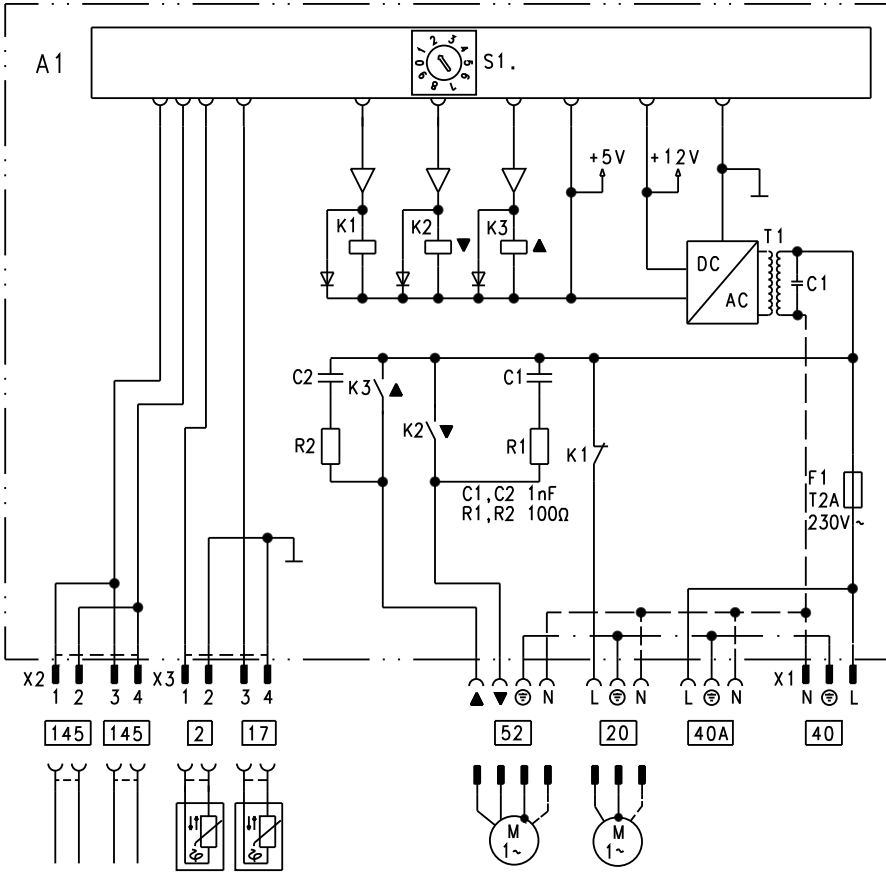
Colour coding to DIN/IEC 60757

BN brown
 BU blue
 GN/YE green/yellow

- (A) Extension kit power supply
- (B) Control unit power supply
- (C) Power supply 230 V/50 Hz
- (D) Fuse (max. 16 A)
- (E) Main isolator, two-pole, on site (if installed)
- (F) Junction box (on site)

Extension kit with mixer PCB (cont.)

Connection and wiring diagram



A1 Main PCB

F1 Fuse

S1 Rotary selector

Plug 230 V~

- 20 Heating circuit pump
- 40 Power supply 230 V/50 Hz
- 40A Power supply connection of accessories
- 52 Mixer motor

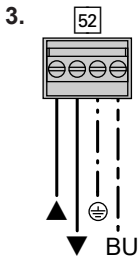
Extension kit with mixer PCB (cont.)

Low voltage plugs

- 2 Flow temperature sensor
- 17 Return temperature sensor (in conjunction with the Vitotronic 300, type KW3, if installed)
- 145 KM BUS cable for connection with the control unit and an additional extension kit

Changing the rotational direction (if required)

1. Switch OFF the power.
2. Remove the casing cover (see chapter "Overview of electrical connections").
- 3.
4. Refit the casing cover.
5. Check the rotational direction.



Interchange cores BK ▲ and BK ▼ of plug 52.

Specification

Flow temperature sensor

Sensor type

IP rating

Permissible ambient temperature

- during operation
- during storage and transport

Viessmann cylinder temperature sensor (NTC)

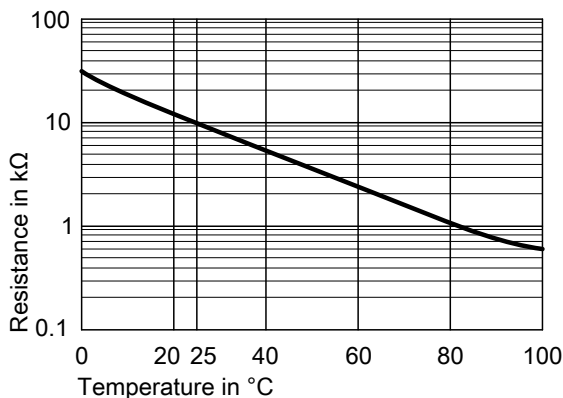
IP 53 to EN 60 529; ensure through design/installation

-20 to +90 °C

-20 to +70 °C

Extension kit with mixer PCB (cont.)

Curve



Mixer motor

Rated voltage	230 V~
Rated frequency	50 Hz
Rated current	2 A
Power consumption	5.5 W
Protection class	I
IP rating	IP32 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 capacity of the relay outputs	
■ Heating circuit pump	2 (1) A, 230 V~
■ Mixer motor	0.2 (0.1) A, 230 V~

Extension kit without mixer PCB

Connecting the extension kit to the control unit

Connecting the flow temperature sensor




Installation and service instructions of the relevant control unit

Push sensor plug **2** into the corresponding socket of the control unit.

Extension kit without mixer PCB (cont.)

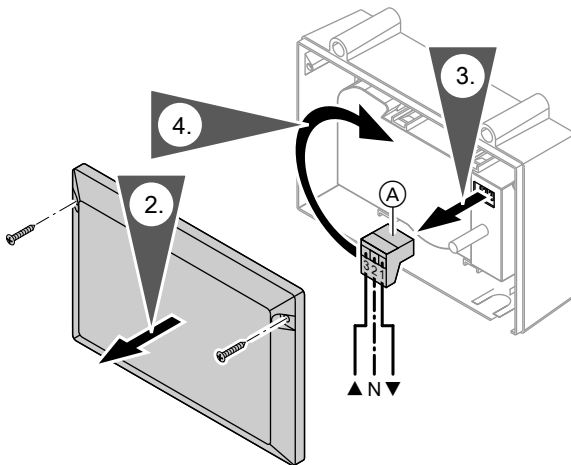
Connecting the mixer motor



Push cable plug  into the corresponding socket of the control unit.



Installation and service instructions of the relevant control unit

Changing the rotational direction (if required)



1. Switch OFF the power supply to the control unit.
2. Remove the enclosure lid.
3. Pull out 3-pin plug  in the mixer motor.
4. Insert 3-pin plug  in the mixer motor rotated through 180°.
5. Check the rotational direction.

Extension kit without mixer PCB (cont.)

Specification

Flow temperature sensor

Sensor type

Viessmann Ni500

IP rating

IP 32 to EN 60 529; ensure through design/installation

Permissible ambient temperature

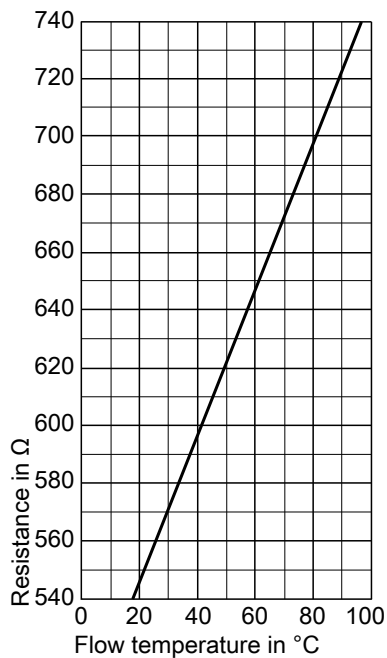
■ during operation

0 to +120 °C

■ during storage and transport

-20 to +70 °C

Curve



Extension kit without mixer PCB (cont.)

Mixer motor

Rated voltage	230 V~
Rated frequency	50 Hz
Rated current	2 A
Power consumption	4 W
Protection class	I
IP rating	IP 42 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 capacity of the relay outputs	
■ Heating circuit pump	4 (2) A 230 V~
■ Mixer motor	0.2 (0.1) A 230 V~

Declaration of conformity

We, Viessmann Werke GmbH&Co KG, D-35107 Allendorf, confirm as sole responsible body that the product **Extension kit for one heating circuit with mixer** complies with the following standards:

EN 55 014-1 and 2
EN 60 335-1 and 2-102

In accordance with the following Directives, these products are designated with **CE**:

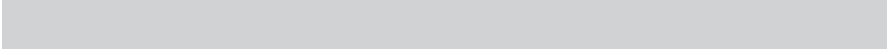
2004/108/EC
2006/95/EC
2006/42/EC

Allendorf, 10/12/2012

Viessmann Werke GmbH&Co KG

A handwritten signature in black ink, appearing to read 'M. Sommer', written in a cursive style.

Authorised signatory Manfred Sommer



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5443 825 GB Subject to technical modifications.