

Installation instructions

for contractors

VIESMANN

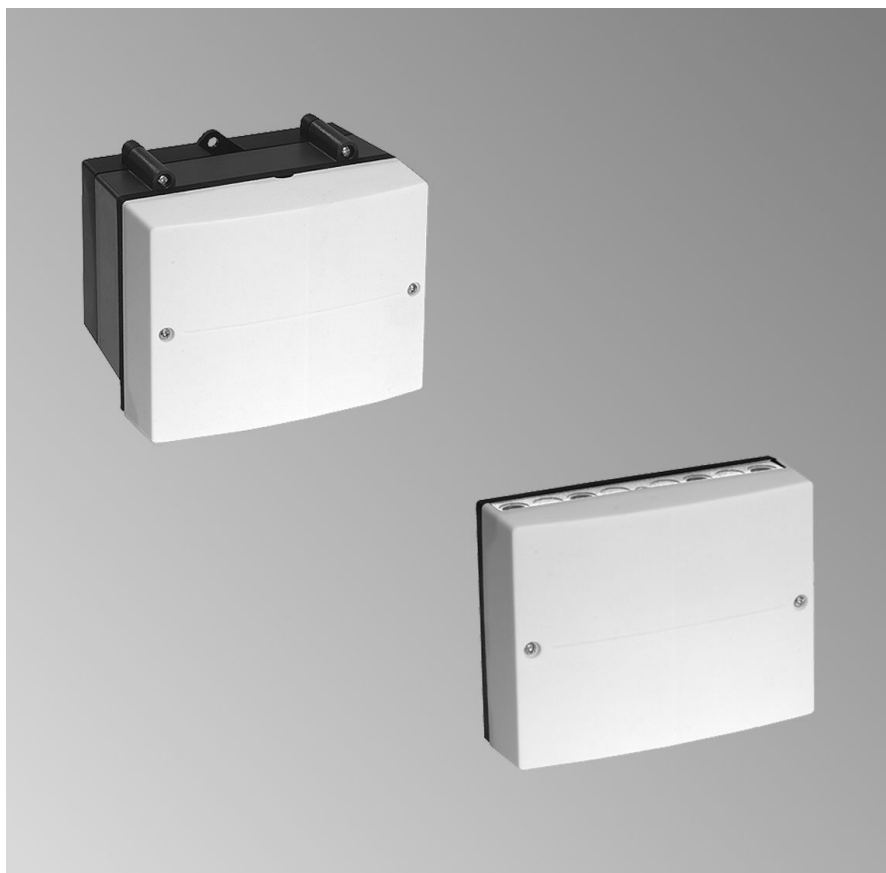
Extension kit

for one heating circuit with mixer

- Part no. 7301063 – Installation on a mixer
- Part no. 7301062 – Installation on a wall



Extension kit



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.

Note

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

Target group

These instructions are exclusively designed for qualified personnel.

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

Regulations

Observe the following when working on this system

- all legal instructions regarding the prevention of accidents,
- all legal instructions regarding environmental protection,
- the Code of Practice of relevant trade associations,

- all current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE and all locally applicable standards.
- Gas Safety (Installation & Use) Regulations
 - the appropriate Building Regulation either the Building regulations, the Building Regulation (Scotland), Building Regulations (Northern Ireland),
 - the Water Fittings Regulation or Water Bylaws in Scotland,
 - the current I.E.E. Wiring Regulations.

Working on the system

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

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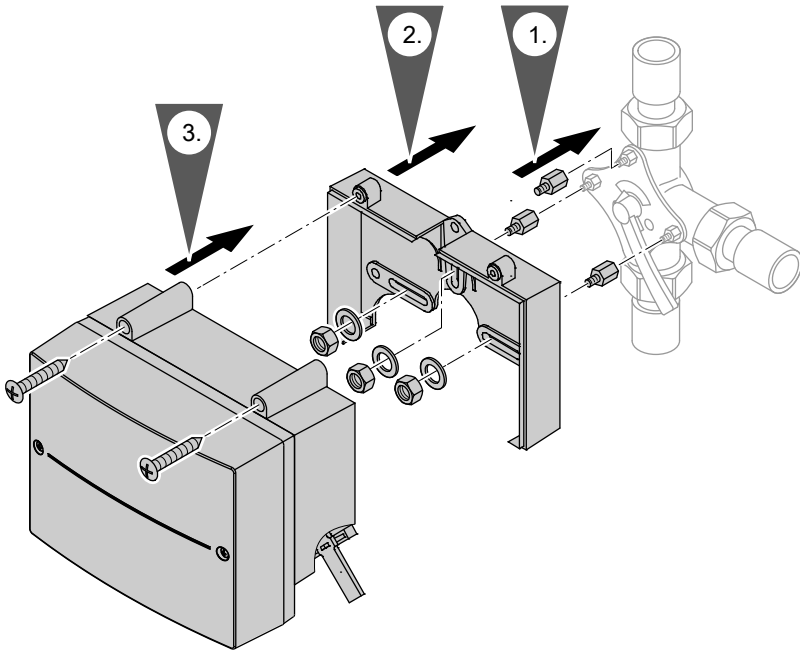
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Mounting the extension kit

Components:

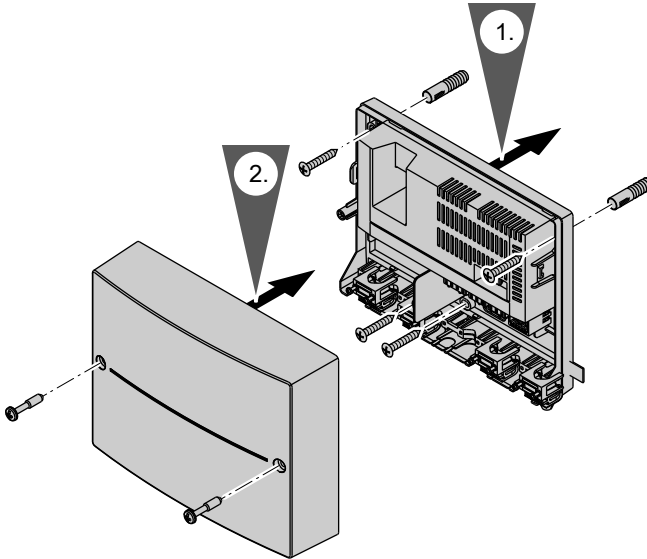
- Extension kit
- KM BUS cable with plug 145
- Power cable with plug 40
- Plug 40/A
- Plug 156

Extension kit for installation on a mixer



Mounting the extension kit (cont.)

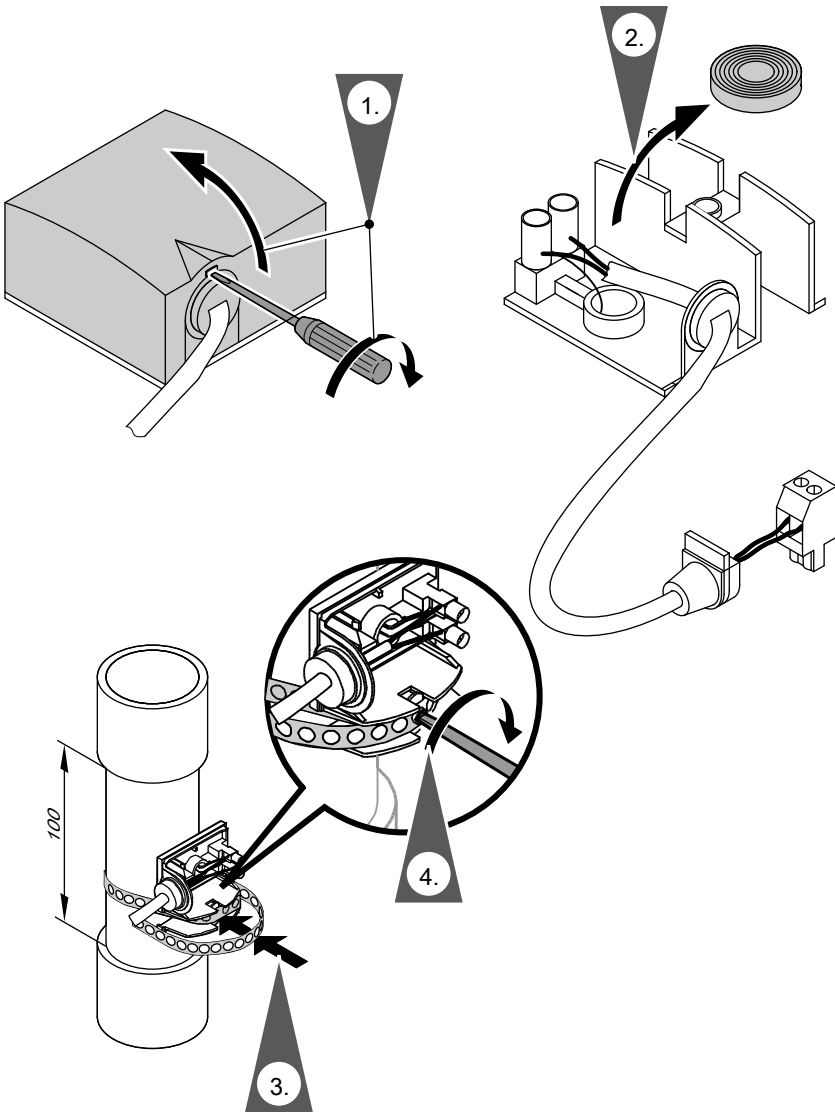
Extension kit for installation on a wall



Fitting the flow/return temperature sensor (contact sensor)

- Fit the sensor as flow temperature sensor in the flow direction on the heating flow pipe immediately downstream of the heating circuit pump.
- When using plastic pipes, fit the sensor on any metal intermediate piece.
- Clean the flow/return pipe down to bare metal.
- Heat conducting paste is not required.
- Never thermally insulate the sensor.

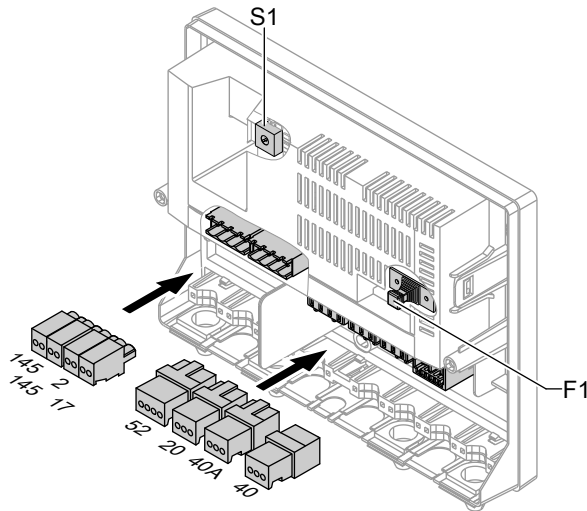
Fitting the flow/return temperature sensor... (cont.)



Electrical connection:

Insert plug **2** (flow temperature sensor)
or plug **17** (return temperature sensor)
at the extension kit (see page 7).

Overview of electrical connections



F1 Fuse
S1 Rotary selector



Please note

Electronic modules can be damaged by electrostatic charges. Before commencing work, touch an earthed object, e.g. heating or water pipes to discharge static loads.

230 V~ plugs

- 20 Heating circuit pump (on site)
- 40 Power supply
- 40A Power supply for solar module for Vitodens 242-F, 343-F or additional extension kit for heating circuit with mixer
- 52 Mixer motor

Low voltage connections

- 2 Flow temperature sensor
- 17 Return temperature sensor (optional accessory for Vitotronic 300, type KW3)
- 145 KM BUS

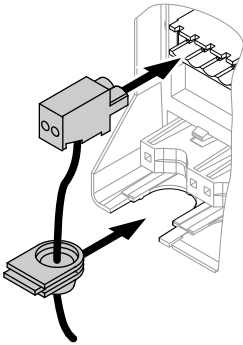
Cable entry

Open the connection chamber of the extension kit (see page 5).

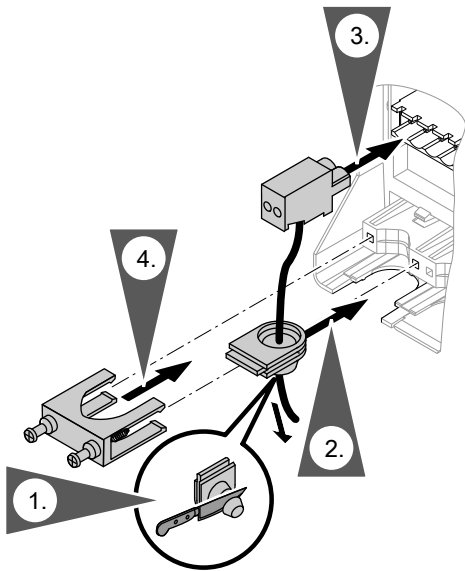
Cable entry (cont.)

Close any unnecessary knock-outs with cable entries (not cut open).

Cables with moulded on strain relief (standard delivery)



On-site cables/leads

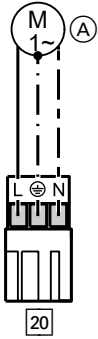


Connecting the heating circuit pump

Note

In underfloor heating circuits, integrate a temperature limiter on site for limiting the maximum temperature of underfloor heating systems.

Heating circuit pump 230 V~

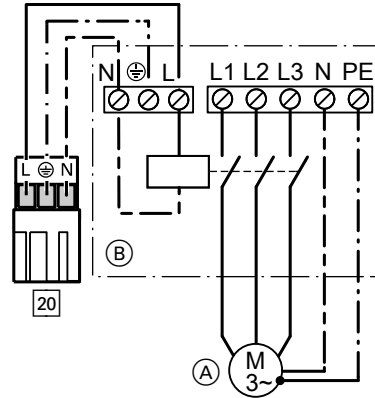


- (A) Heating circuit pump
- 20 To the extension kit

Specification of the heating circuit pump 230 V~

Rated current	2(1) A
Recommended connecting cable	H05VV-F3G 0.75 mm ² or H05RN-F3G 0.75 mm ²

Heating circuit pump 400 V~ (only for wall mounting)



- (A) Heating circuit pump
- (B) Contactor
- 20 To the extension kit

Specification switching the contactor:

Rated voltage	230 V~
Rated current	2(1) A
Recommended connecting cable	H05VV-F3G 0.75 mm ² or H05RN-F3G 0.75 mm ²

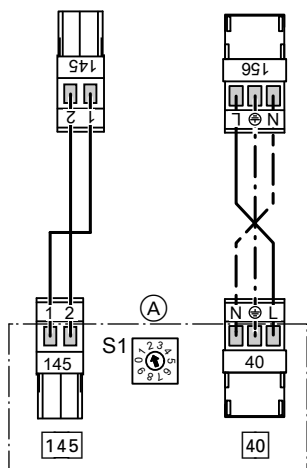
Connecting the Vitotronic 300, type KW3



Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".

Connecting the Vitotronic 300, type KW3 (cont.)



- (A) Extension kit:
- 40 Power supply
 - 145 KM BUS
 - S1 Rotary selector: for position, see the following table
 - 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) (Connect plug 156)

Rotary selector settings:

Heating circuit that the mixer affects

Heating circuit with mixer M2

Connected sensors

Flow temperature sensor

Rotary selector position

"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"

Vitopend/Vitodens with Vitotronic 200

The extension kit can be connected to the following appliances:

- Vitodens 200
 - Type WB2A
- Vitodens 200-W
 - Type WB2B
- Vitodens 222-F
 - Type FS2A
- Vitodens 222-W
 - Type WS2A
- Vitodens 300
 - type WB3A
- Vitodens 300-W
 - Type WB3B
 - Type WB3C
- Vitodens 333
 - Type WS3A
 - Type WS3B

Vitopend/Vitodens with Vitotronic 200 (cont.)

- Vitodens 333-F
 - Type FS3A
 - Type FR3A
 - Type WS3C
 - Type WR3C
- Vitodens 343
 - Type WS4A
- Vitopend 100
 - Type WHE
 - Type WHK
- Vitopend 200
 - Type WH2A
- Vitopend 200-W
 - Type WH2A
 - Type WHKA
- Vitopend 222-W
 - Type WHSA

- (A) Extension kit:
- 40 Power supply
 - 145 KM BUS
 - S1 Rotary selector in position "2" (delivered condition)
- (B) Control unit:
- "X3" KM BUS at terminals "7" and "6" (remove plug 145)
 - or
 - with plug 145 to the KM BUS distributor (accessory)
 - 96 Power supply

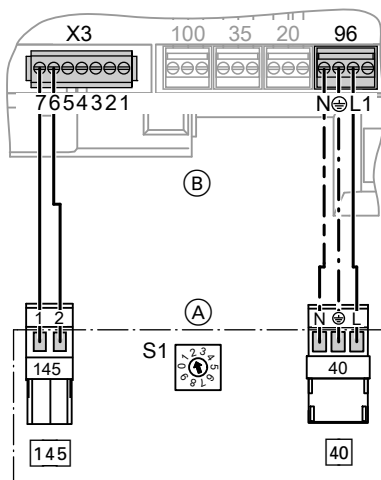
Note

If the power supply terminal is already assigned, see page 21.



Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".



Vitoladens/Vitoplus with Vitotronic 200

The extension kit can be connected to the following appliances:

- Vitoladens 300-C
 - Type VC3
- Vitoladens 300-W
 - Type VP3B
- Vitoladens 333-F
 - Type VP3S
 - Type VP3T
- Vitoplus 300
 - Type VP3A



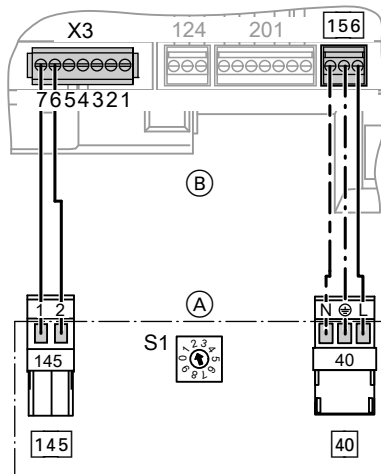
Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".

- (A) Extension kit:
- 40 Power supply
 - 145 KM BUS
 - S1 Rotary selector in position "2" (delivered condition)
- (B) Control unit:
- "X3" KM BUS at terminals "7" and "6" (remove plug 145)
 - or
 - with plug 145 to the KM BUS distributor (accessory)
 - 156 Power supply (connect plug 156)

Note

If the power supply terminal is already assigned, see page 21.



Vitodens with integral solar module

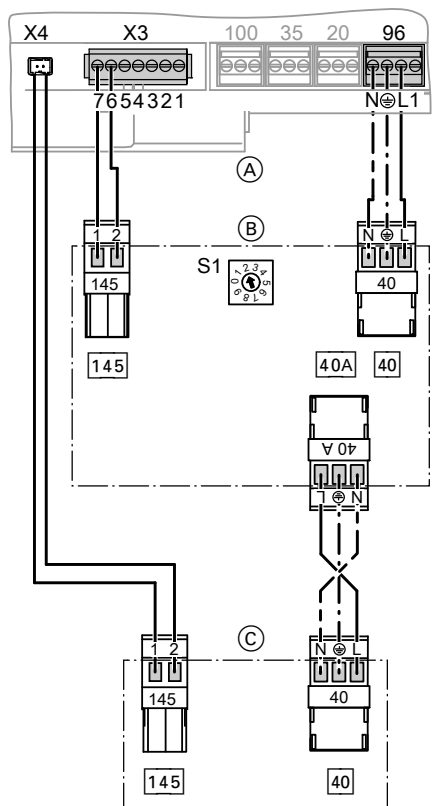
The extension kit can be connected to the following appliances:

- Vitodens 242-F, type FB2A
- Vitodens 343-F, type FB3A



Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".



- (A) Control unit:
"X3" KM BUS at terminals "7" and "6" (remove plug [145])
or
with plug [145] to the KM BUS distributor (accessory)
[96] Power supply

Note

If the power supply terminal is already assigned, see page 21.

- (B) Extension kit:
[40] Power supply
[40A] Power supply, solar module
[145] KM BUS
S1 Rotary selector in position "2" (delivered condition)
- (C) Solar module:
[40] Power supply
[145] KM BUS

1. Insert KM BUS cable with plug [145] into the extension kit and connect cable at plug "X3".
2. Pull plug [40] from the solar module and insert into the extension kit.
3. At the loose end of the power cable supplied (with plug [40]), connect plug [40A].
4. Insert plug [40] of the power cable into the solar module and insert plug [40A] into the extension kit.

Wall mounted appliances with standard programming unit/Comfortrol

The extension kit can be connected to the following appliances:

- Vitodens 100
 - Type WB1
- Vitodens 200
 - Type WB2
- Vitopend 200
 - Type WH2
- Vitoplus 300
 - Type VP3



Danger

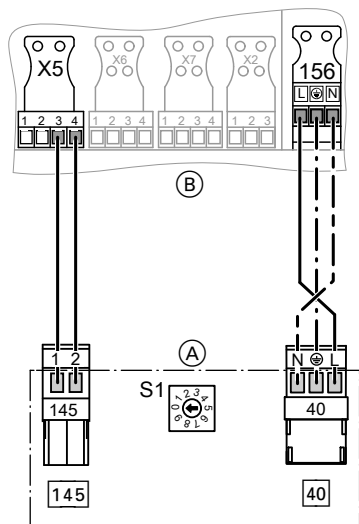
Incorrect core termination can cause severe injuries and damage to the equipment.

Never interchange cores "L1" and "N".

- (A) Extension kit:
- 40 Power supply
 - 145 KM BUS
 - S1 Rotary selector in position "0" (delivered condition: position "2")
- (B) Control unit:
- "X5" KM BUS at terminals "3" and "4" (remove plug 145)
 - or
 - with plug 145 to the KM BUS distributor (accessory)
 - 156 Power supply (connect plug 156)

Note

If the power supply terminal is already assigned, see page 21.



Wall mounted appliances with standard... (cont.)

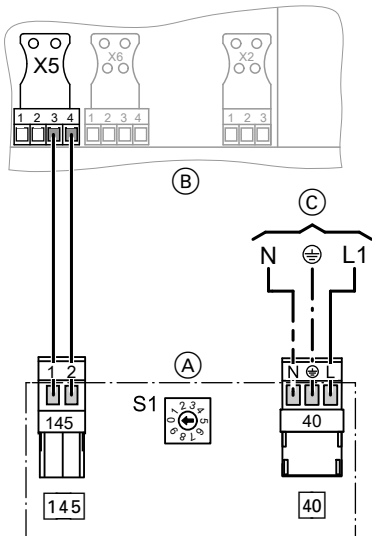
Vitodens 222



Danger

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

Never interchange cores "L1" and "N".



- (A) Extension kit:
 - 40 Power supply
 - 145 KM BUS
 - S1 Rotary selector in position "0" (delivered condition: position "2")
- (B) Control unit:
 - "X5" KM BUS at terminals "3" and "4" (remove plug 145)
 - or
 - with plug 145 to the KM BUS distributor (accessory)
- (C) Power supply (see page 21)

Note

Observe the same phases are connected as in the Vitodens 222 power supply.

Vitodens 300

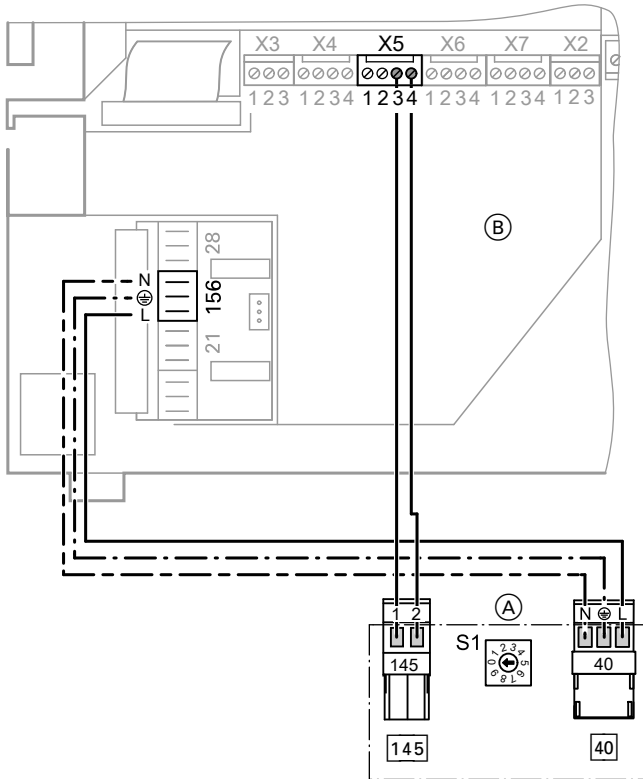


Danger

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

Never interchange cores "L1" and "N".

Wall mounted appliances with standard... (cont.)



- (A) Extension kit:
- 40 Power supply
 - 145 KM BUS
 - S1 Rotary selector in position "0"
(delivered condition: position "2")

- (B) Control unit:
- "X5" KM BUS at terminals "3" and "4" (remove plug 145)
 - or
 - with plug 145 to the KM BUS distributor (accessory)
 - 156 Power supply (connect plug 156)

Note

If the power supply terminal is already assigned, see page 21.

Connecting the Vitocal

Vitocal with CD 70 heat pump control unit

The extension kit can be connected to the following appliances:

- Vitocal 200
- Vitocal 200-G
- Vitocal 222
- Vitocal 242-G
- Vitocal 343



Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".

(A) Extension kit:

40 Power supply

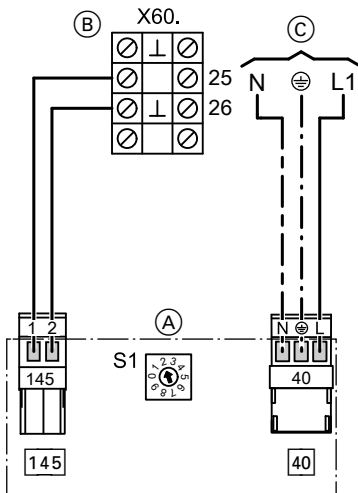
145 KM BUS

S1 Rotary selector: for position, see the following table

(B) Control unit:

"X60" KM BUS at terminals "25" and "26" (remove plug 145)
or
with plug 145 to the KM BUS distributor (accessory)

(C) Power supply (see page 21)



Rotary selector settings:

Function	Sensors connected	Rotary selector position S1
Heating	Flow temperature sensor	"2" (Delivered condition)
Cooling	Flow temperature sensor	"4"

Connecting the Vitocal (cont.)

Vitocal with WPR 300 heat pump control unit

The extension kit can be connected to the following appliances:

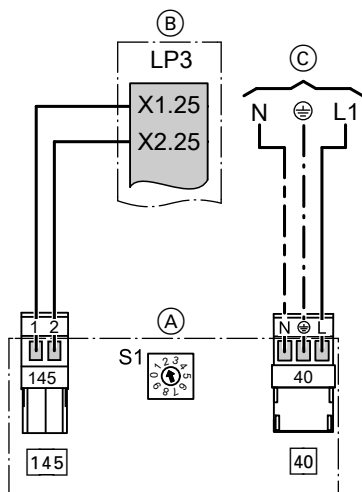
- Vitocal 300-A
- Vitocal 350-A
- Vitocal 300-G



Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".

- (A) Extension kit:
 40 Power supply
 145 KM BUS
 S1 Rotary selector: for position, see the following table
- (B) Control unit:
 "LP3" KM BUS at PCB 3, terminals "X1.25" and "X2.25" (remove plug 145)
 or
 with plug 145 to the KM BUS distributor (accessory)
- (C) Power supply (see page 21)



Rotary selector settings:

Function	Sensors connected	Rotary selector position S1
Heating	Flow temperature sensor	"2" (Delivered condition)
Cooling (not for Vitocal 300-A, 230 V~)	Flow temperature sensor	"4"

Connecting the Vitocal (cont.)

Vitocal with WO1A heat pump control unit

The extension kit can be connected to the following appliances:

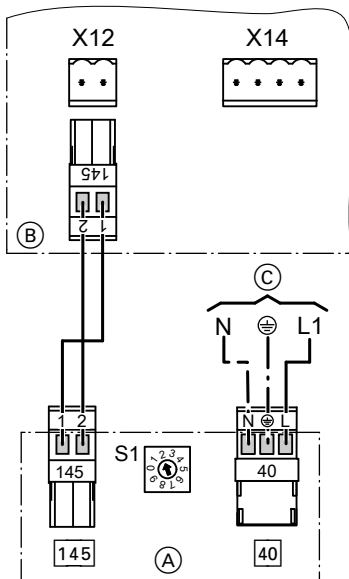
- Vitocal 222-G
- Vitocal 242-G
- Vitocal 333-G
- Vitocal 343-G



Danger

Incorrect core termination can cause severe injuries and damage to the equipment.
Never interchange cores "L1" and "N".

- (A) Extension kit:
 [40] Power supply
 [145] KM BUS
 S1 Rotary selector: for position, see the following table
- (B) Control unit:
 "X12" KM BUS with plug [145] at socket "X12"
 or
 with plug [145] to the KM BUS distributor (accessory)
- (C) Power supply (see page 21)



Connecting the Vitocal (cont.)

Set rotary selector:

Function	Sensors connected	Rotary selector position S1
Heating	Flow temperature sensor	"2" (Delivered condition)
Cooling	Flow temperature sensor	"4"

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.



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.

Isolators for non-earthed conductors

- 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.



Danger

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

Colour coding to DIN/IEC 60757

L	BN	brown
N	BU	blue
⊕	GN/YE	green/yellow

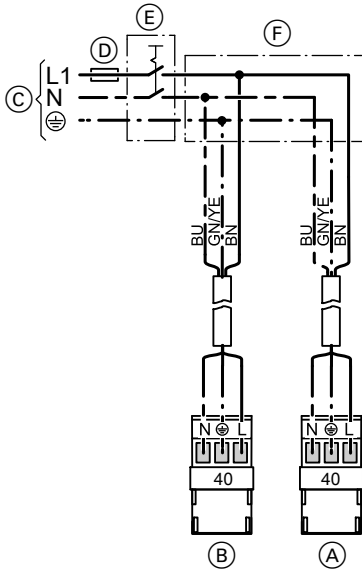


Please note

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

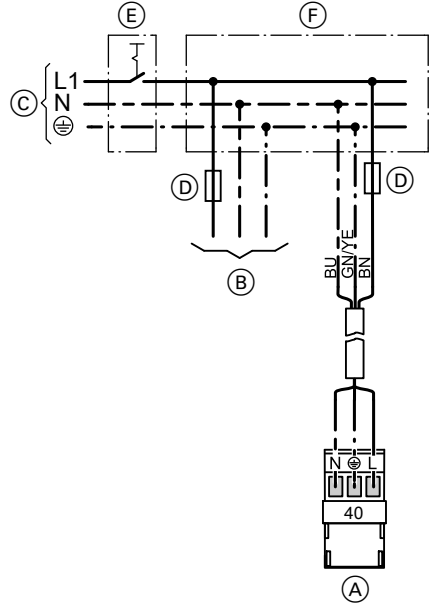
Power supply (cont.)

Power supply for wall mounted and storage combi boilers



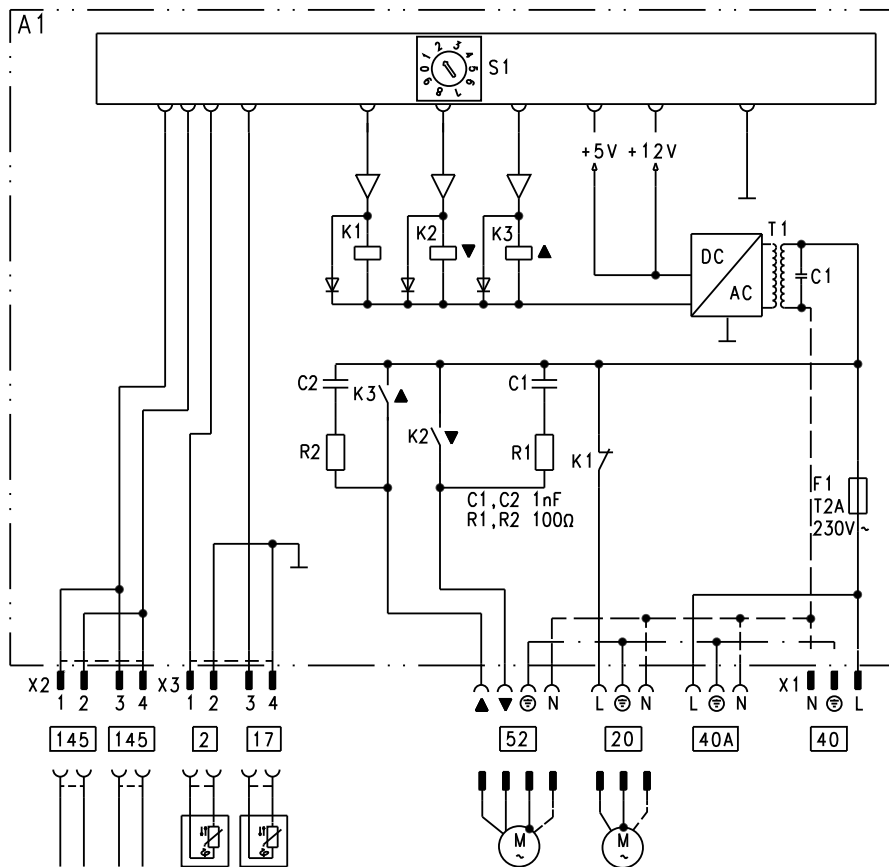
- (A) Extension kit power supply
- (B) Power supply, control unit
- (C) Power supply 230 V/50 Hz
- (D) Fuse (max. 16 A)
- (E) Main isolator, if installed (2-pole, on site)
- (F) Junction box (on site)

Power supply for Vitocal



- (A) Extension kit power supply
- (B) Power supply, control unit
- (C) Power supply 1/N/PE~, 230 V/50 Hz
- (D) Fuse (max. 16 A)
- (E) Main isolator, if installed (2-pole, on site)
- (F) Junction box (on site)

Connection and wiring diagram



A1 Main PCB

F1 Fuse

Plug 230 V~

- 20 Heating circuit pump (on site)
- 40 Power supply 230 V/50 Hz
- 40A Power supply for solar module for Vitodens 242-F/343-F or additional extension kit for heating circuit with mixer
- 52 Mixer motor

S1 Rotary selector

Low voltage plugs

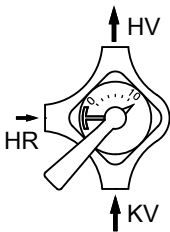
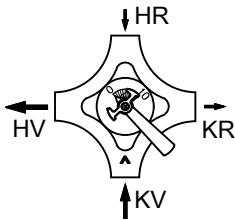
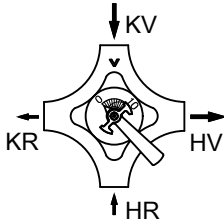
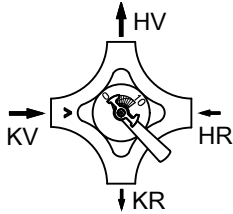
- 2 Flow temperature sensor
- 17 Return temperature sensor (optional accessory for Vitotronic 300, type KW3)
- 145 KM BUS

Changing the rotational direction

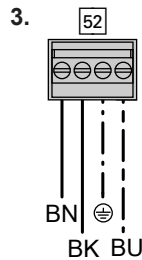
Change the rotational direction in the following cases:

- On systems with Modular-Divicon.
- For the following installation examples:

HR Heating return
 HV Heating flow
 KR Boiler return
 KV Boiler flow



1. Switch OFF the power supply to the control unit.
2. Remove the casing cover of the extension kit.



Interchange wires BN and BK at plug 52 to change the rotational direction.

4. Connect the extension kit.
5. Check the rotational direction.

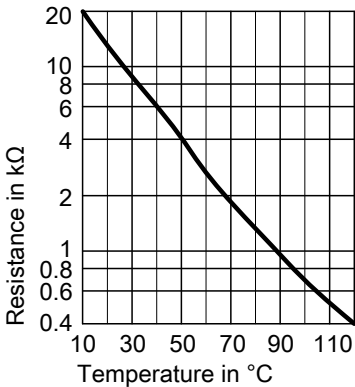
Note

If a fault occurs during commissioning, check the mixer installation (see mixer installation instructions).

Specification

Rated voltage	230 V~
Rated frequency	50 Hz
Rated current	2 A
Power consumption	
■ Wall mounting	1.5 W
■ Installation on mixer	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 relay output breaking capacity	
■ Heating circuit pump 20	2 (1) A 230 V~
■ Mixer motor	0.2 (0.1) A 230 V~

Curve, flow/return temperature sensor



Declaration of conformity

We, Viessmann Werke GmbH&Co KG, D-35107 Allendorf, declare as sole responsible body that the product **Extension kit for one heating circuit with mixer (installation on a wall or on a mixer)** conforms with the following standards:

EN 267	EN 55 014
EN 303	EN 60 335
EN 667	EN 61 000-3-2
EN 50 165	EN 61 000-3-3

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

2004/108/EC
2006/95/EC

Allendorf, 4 May 2009

Viessmann Werke GmbH&Co KG



pp. Manfred Sommer

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