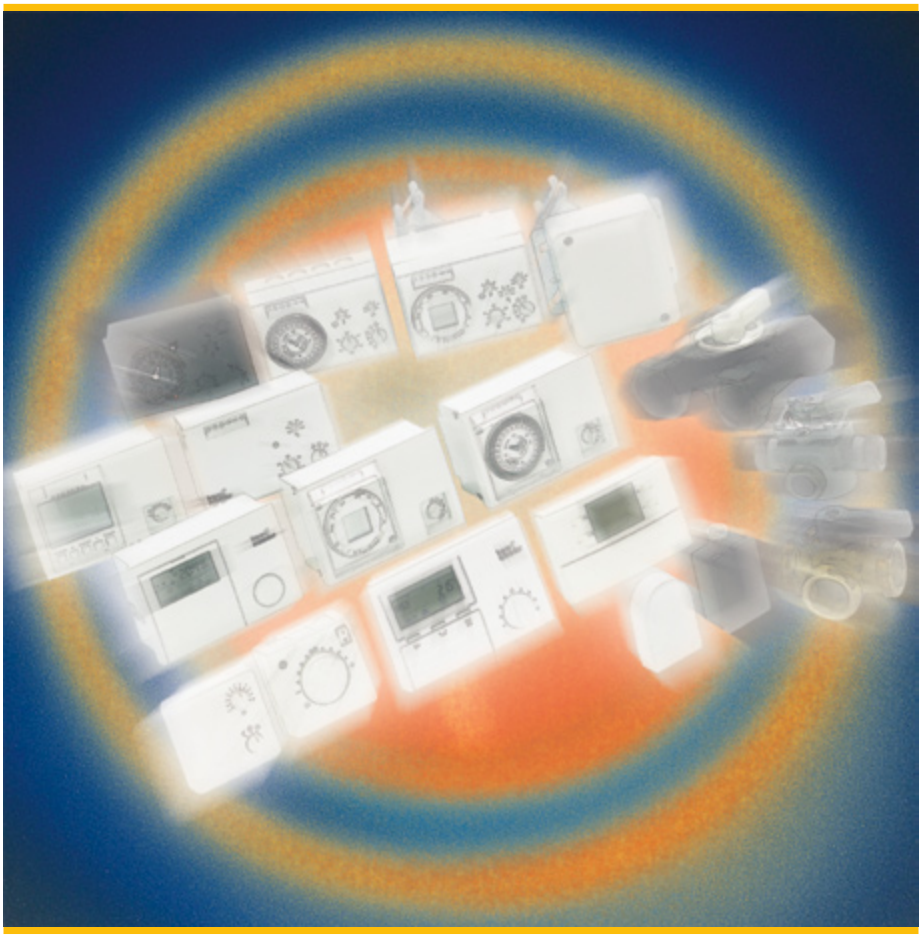

Comfort Controls
Heating Controllers

Edition 5.04 GB

Dear Customer,
We are delighted to present you with our new technical catalogue for planning your heating systems using Kromschröder heating controls.

It describes various sample applications for heating controls in:
- Single dwellings and multiple-residency buildings
- Office buildings and
- Commercial companies

and much more besides.

You can select the unit that is ideal for your application from our range of analogue and digital heating controllers.

Each heating controller is shown with its main technical data.

The sample applications are designed to act as a practical selection tool and therefore make no claim to being a complete description of a heating system.

We are always open to suggestions for improving our catalogue. We will also be delighted to send you detailed technical documentation on request.

You can access all Kromschröder documents using our **document library (Docuthek)** on the Internet.
http://docuthek.kromschroeder.com

Best regards,

G. Kromschröder AG
"Comfort Controls" Business Unit
Hameln, Germany

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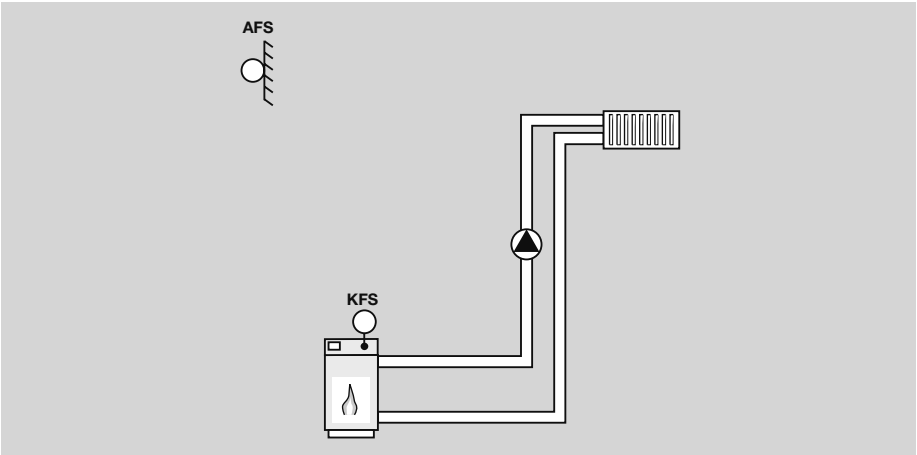
Note

The hydraulic diagrams contained in this brochure are principle sketches. They are descriptive in nature and in no way replace proper system planning. For this reason we cannot guarantee function if a system is built on the basis of these diagrams.

Example 1

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner



Applicable controllers

Type	Notes	Technical data
E25.0100 or K1	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 37 Page 51
E6.0231	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (BM only). Pump blocking protection. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 46

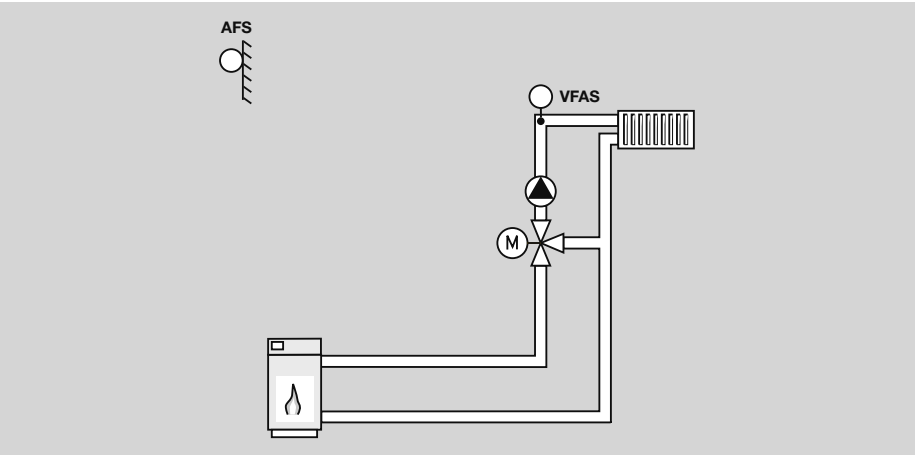
Required sensors and accessories Page 62

AFS	Outdoor sensor		
KFS/VFAS	Boiler sensor	Boiler circuit	
FBR1	Remote control/room sensor	on request	
BM	Intelligent room station	on request (for E6... only)	Page 56

Example 2

Weather and/or room temperature-dependent heating control

Flow temperature regulated via motorised adjustable mixer



Applicable controllers

Type	Notes	Technical data
E25.1000 or K1 or ME	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 41 Page 51 Page 53
E6.1111	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 50

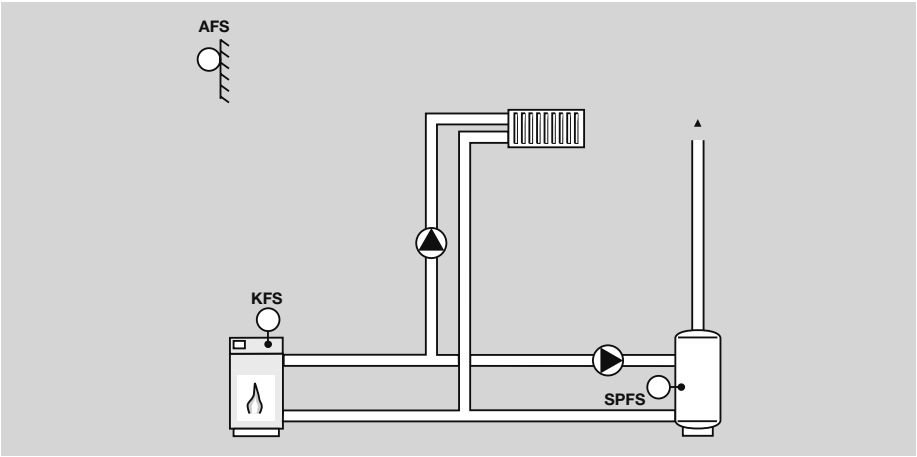
Required sensors and accessories Page 62

AFS	Outdoor sensor	
VFAS	Flow sensor	Mixer circuit
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only) Page 56

Example 3

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner.
Hot-water temperature regulated by switching feed pump.



Applicable controllers

Type	Notes	Technical data
E25.0100 or K1	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or two-channel digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 37 Page 51
E6.0231	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (BM only). Pump blocking protection. Circulation pump. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 46

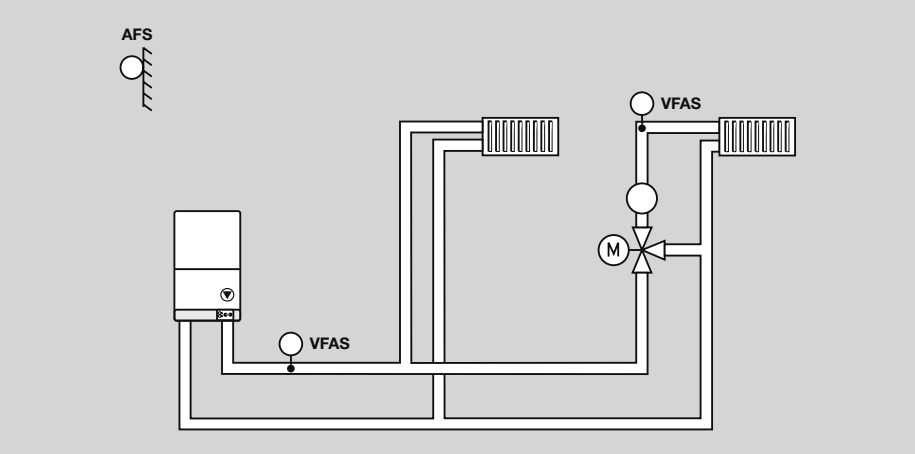
Required sensors and accessories Page 62

AFS	Outdoor sensor		
KFS/VFAS	Boiler sensor	Boiler circuit	
SPFS	Storage tank sensor		
FBR1	Remote control/room sensor	on request	
BM	Intelligent room station	on request (for E6... only)	Page 56

Example 4

Weather and/or room temperature-dependent heating control specifically for wall-mounted gas devices with integrated heating pump

Boiler and flow temperature regulated by switching burner.
Flow temperature of second heating circuit regulated via motorised adjustable mixer.



Applicable controllers

Type	Notes
K3	Controller with analogue controls. Available either with analogue timer (day program) or two-channel digital timer (week program). Connection for remote control/room sensor (FBR1) for mixer circuit.

Technical data
Page 52

Required sensors and accessories

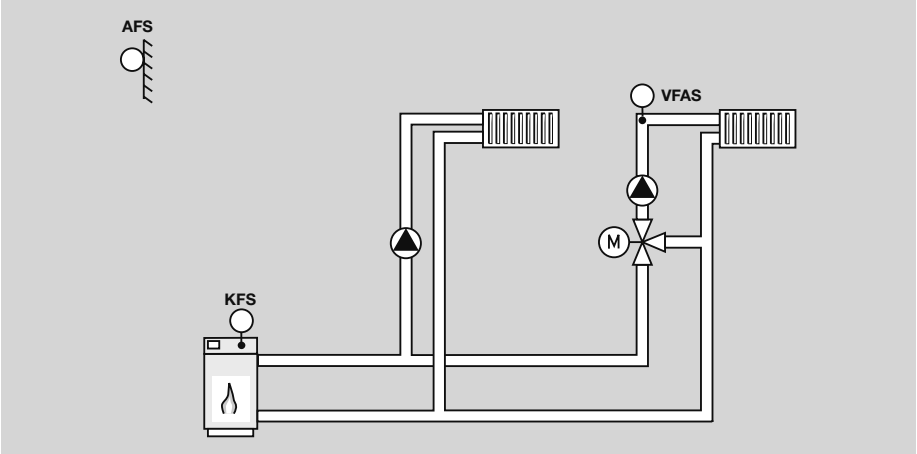
AFS	Outdoor sensor	
VFAS	Flow sensor	Boiler circuit
VFAS	Flow sensor	Mixer circuit
FBR1	Remote control/room sensor	on request

Page 62

Example 5

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner.
Flow temperature of second heating circuit regulated via motorised adjustable mixer.



Applicable controllers

Type	Notes	Technical data
E25.0300	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or two-channel digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 39
E6.0321	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Auxiliary relays. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 47

Required sensors and accessories

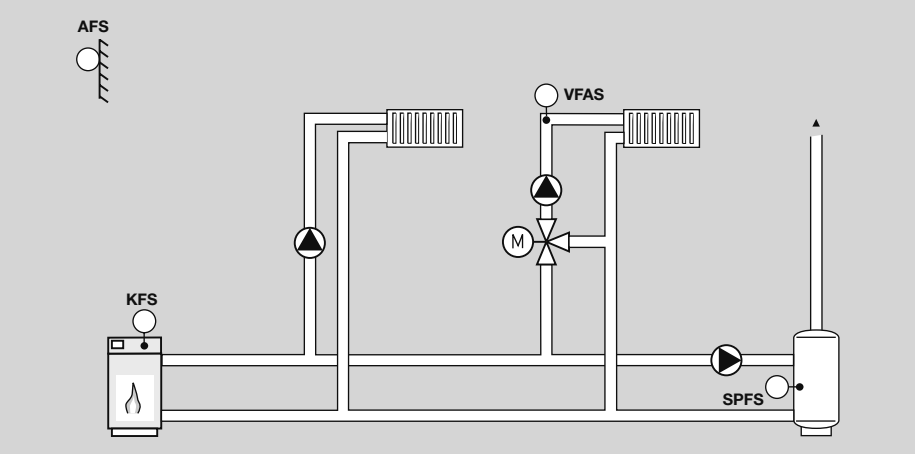
Page 62

AFS	Outdoor sensor		
KFS/VFAS	Boiler sensor/flow sensor	Boiler circuit	
VFAS	Flow sensor	Mixer circuit	
FBR1	Remote control/room sensor	on request	
BM	Intelligent room station	on request (for E6... only)	Page 56

Example 6

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner.
Flow temperature of second heating circuit regulated via motorised adjustable mixer.
Hot-water temperature regulated by switching feed pump.



Applicable controllers

Type	Notes	Technical data
E25.0300	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or two-channel digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 39
E6.0321	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Circulation pump. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 47

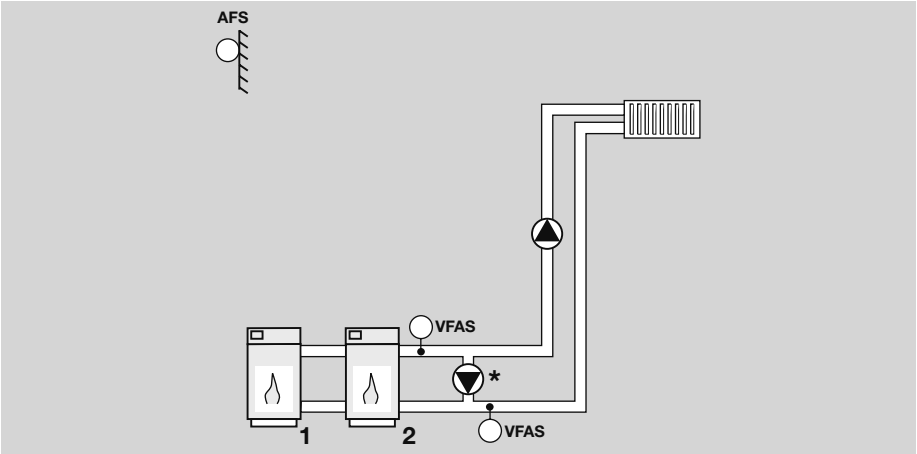
Required sensors and accessories — Page 62

AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Boiler circuit
VFAS	Flow sensor	Mixer circuit
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only) — Page 56

Example 7

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner, for systems with two-stage burner or two boilers.



* optional for E6

Applicable controllers

Type	Notes	Technical data
E25.0200	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or digital timer (week program). Connection for remote control/room sensor FBR1.	Page 38
E6.0231	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar), integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 46

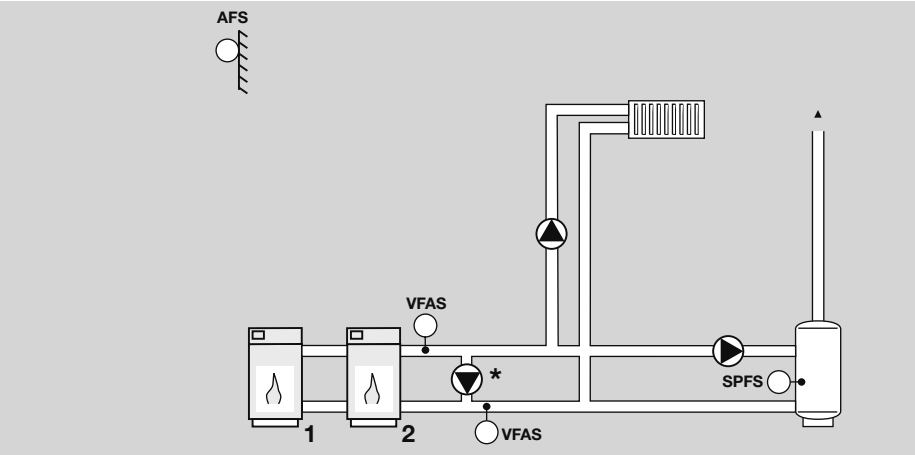
Required sensors and accessories — Page 62

AFS	Outdoor sensor		
VFAS	Flow sensor	or KFS for two-stage burner	
VFAS	Flow sensor	only for E6.0231 when return temperature increasing function used	
FBR1	Remote control/room sensor	on request	
BM	Intelligent room station	on request (for E6... only)	Page 56

Example 8

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner, for systems with two-stage burner or two boilers.
Hot-water temperature regulated by switching feed pump.



* optional for E6

Applicable controllers

Type	Notes	Technical data
E25.0200	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or two-channel digital timer (week program). Connection for remote control/room sensor FBR1.	Page 38
E6.0231	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Circulation pump. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 46

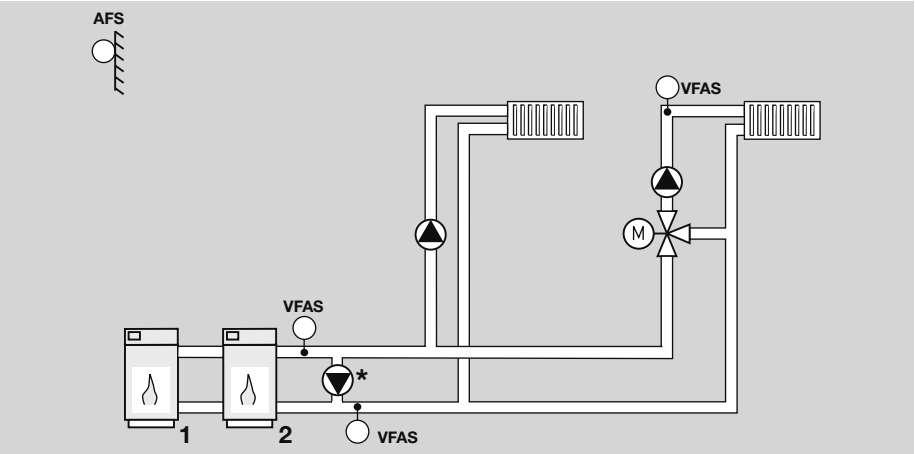
Required sensors and accessories — Page 62

AFS	Outdoor sensor	
VFAS	Flow sensor	or KFS for two-stage burner
VFAS	Flow sensor	only for E6.0231 when return temperature increasing function used
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only) — Page 56

Example 9

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner, for systems with two-stage burner or two boilers.
Flow temperature of second heating circuit regulated via motorised adjustable mixer.



* optional for E6

Applicable controllers

Type	Notes	Technical data
E25.0400	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or two-channel digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 40
E6.0631	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus with connection for intelligent room stations (BM) or analogue remote controls (FBR1). Integrated test functions. Optical service interface.	Page 49

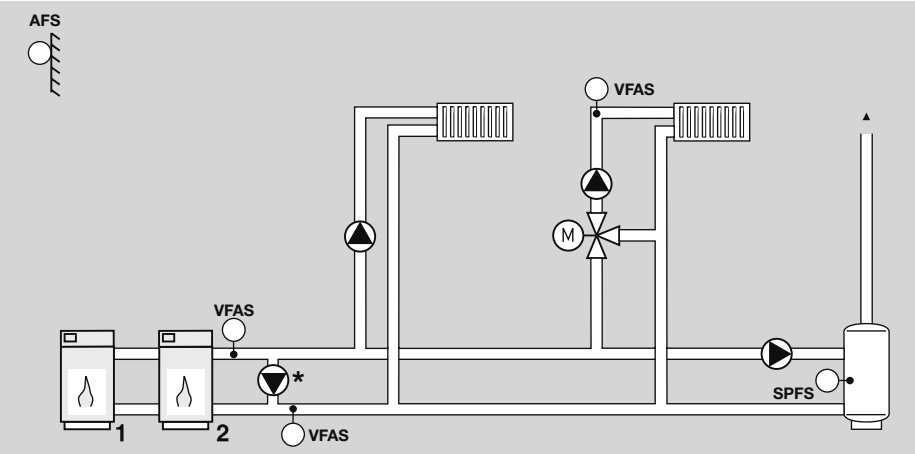
Required sensors and accessories — Page 62

AFS	Outdoor sensor	
VFAS	Flow sensor	or KFS for two-stage burner
VFAS	Flow sensor	Mixer circuit
VFAS	Flow sensor	only for E6.0631 when return temperature increasing function used
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only) — Page 56

Example 10

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner, for systems with two-stage burner or two boilers.
Flow temperature of second heating circuit regulated via motorised adjustable mixer.
Hot-water temperature regulated by switching feed pump.



* optional for E6

Applicable controllers

Type	Notes	Technical data
E25.0400	Controller with analogue controls. Available either with analogue timer (switchable to day/week program) or two-channel digital timer (week program). Connection for remote control/room sensor (FBR1).	Page 40
E6.0631	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Circulation pump. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus. Optional connection for intelligent room stations (BM) or analogue remote controls (FBR1). Integrated test functions. Optical service interface.	Page 49

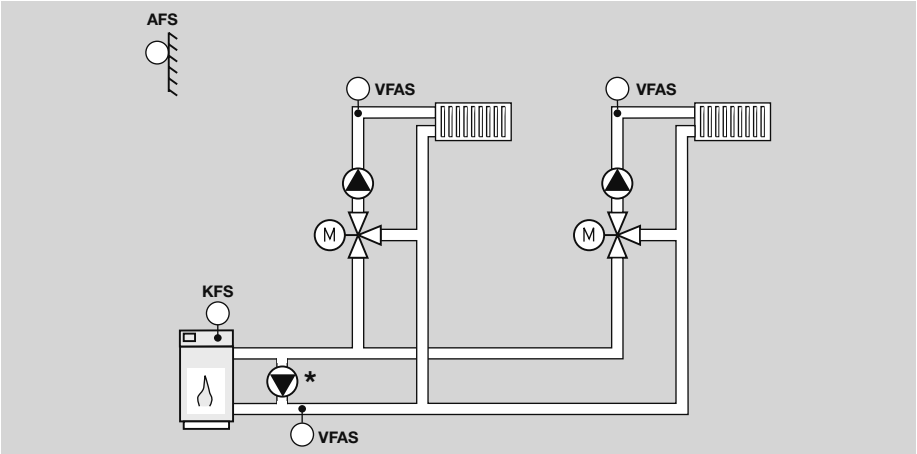
Required sensors and accessories Page 62

AFS	Outdoor sensor	
VFAS	Flow sensor	or KFS for two-stage burner
VFAS	Flow sensor	Mixer circuit
VFAS	Flow sensor	only for E6.0631 when return temperature increasing function used
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only) Page 56

Example 11

Weather and/or room temperature-dependent heating control

Boiler temperature regulated by switching burner.
Flow temperatures of first and second heating circuit regulated via motorised adjustable mixers.



* optional for E6

Applicable controllers

Type	Notes
E6.0631	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus. Optional connection for intelligent room stations (BM) or analogue remote controls (FBR1). Integrated test functions. Optical service interface.

Technical data
Page 49

Required sensors and accessories

Page 62

AFS	Outdoor sensor	
KFS	Boiler sensor	Boiler temperature
VFAS	Flow sensor	Mixer circuit 1
VFAS	Flow sensor	Mixer circuit 2
VFAS	Flow sensor	only for E6.0631 when return temperature increasing function used
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

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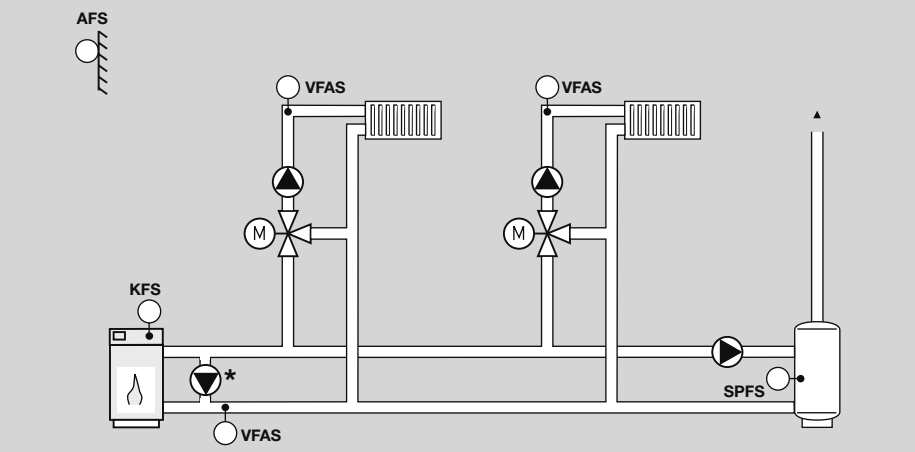
Example 12

Weather and/or room temperature-dependent heating control

Boiler temperature regulated by switching burner.
Flow temperatures of first and second heating circuit regulated via motorised adjustable mixers.
Hot-water temperature regulated by switching feed pump.



* optional for E6

Applicable controllers

Type	Notes
E6.0631	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Ciculation pump. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus. Optional connection for intelligent room stations (BM) or analogue remote controls (FBR1). Integrated test functions. Optical service interface.

Technical data
Page 49

Required sensors and accessories

Page 62

AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Boiler temperature
VFAS	Flow sensor	Mixer circuit 1
VFAS	Flow sensor	Mixer circuit 2
VFAS	Flow sensor	only for E6.0631 when return temperature increasing function used
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

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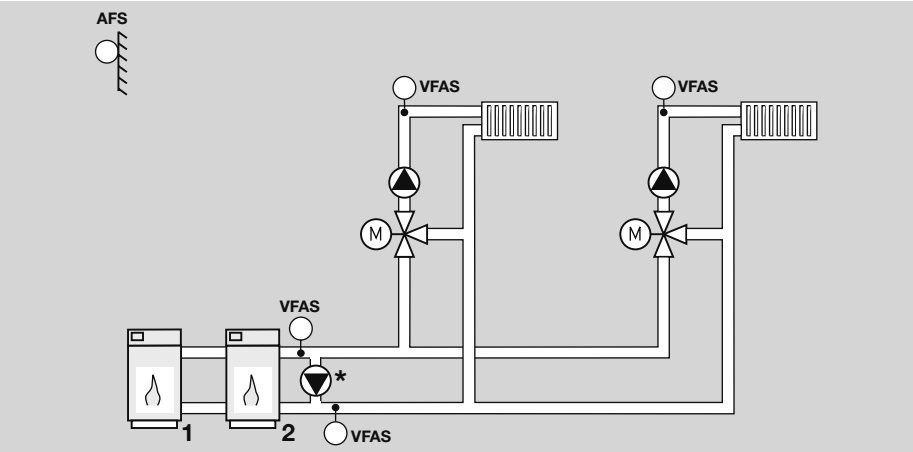
Example 13

Weather and/or room temperature-dependent heating control

Boiler temperature regulated by switching burner, for systems with two boilers or two-stage burner.
Flow temperatures of first and second heating circuit regulated via motorised adjustable mixers.



* optional for E6

Applicable controllers

Type	Notes
E6.0631	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus. Optional connection for intelligent room stations (BM) or analogue remote controls (FBR1). Integrated test functions. Optical service interface.

Technical data
Page 49

Required sensors and accessories

Page 62

AFS	Outdoor sensor	
VFAS	Flow sensor	Boiler temperature
VFAS	Flow sensor	Mixer circuit 1
VFAS	Flow sensor	Mixer circuit 2
VFAS	Flow sensor	only for E6.0631 when return temperature increasing function used
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

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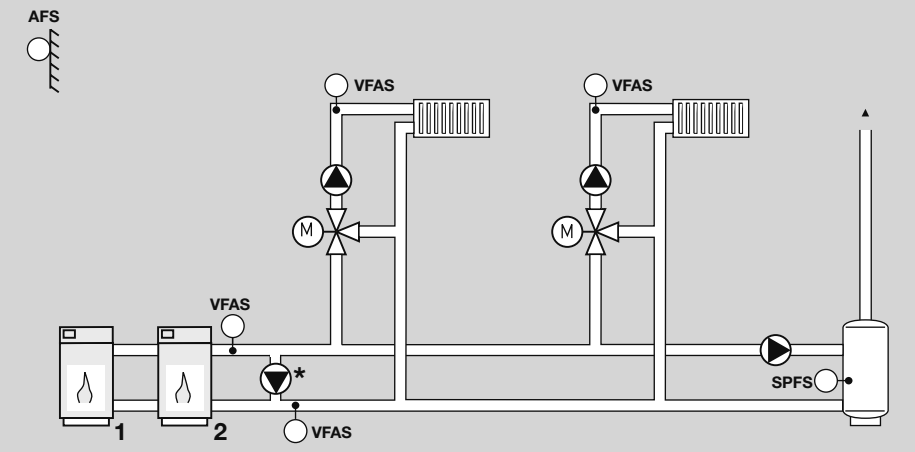
Example 14

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner, for systems with two-stage burner or two boilers.
Flow temperature of heating circuits regulated via motorised adjustable mixers.
Hot-water temperature regulated by switching feed pump.
Return temperature increased by switching return temperature increase pump.



* optional for E6

Applicable controllers

Type	Notes
E6 0631	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Circulation pump. Freely programmable output relay, e.g. for increasing return temperature (see above) or differential control (solid fuel or solar). Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote controls (FBR1). Integrated test functions. Optical service interface.

Technical data
Page 49

Required sensors and accessories

Page 62

AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor (depending on the installation)	Boiler circuit
VFAS	Flow sensor	Mixer circuit 1
VFAS	Flow sensor	Mixer circuit 2
VFAS	Flow sensor	only for E6.0631 when return temperature increasing function used
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

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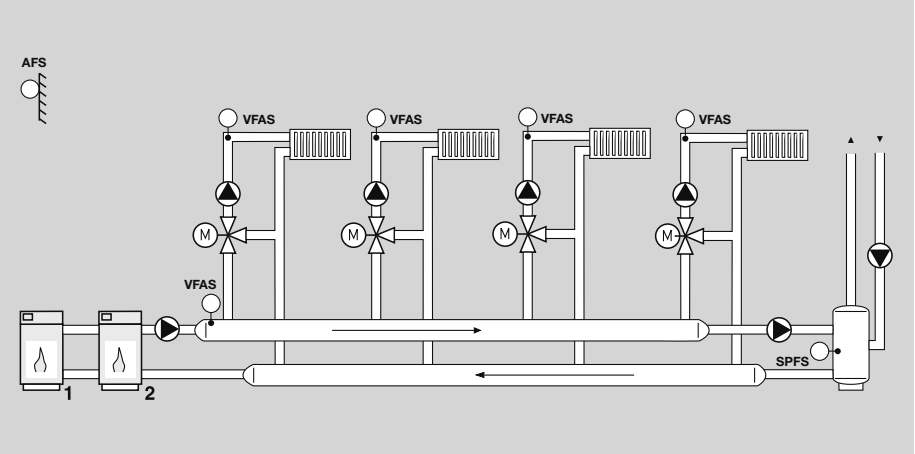
Example 15

Weather and/or room temperature-dependent heating control

Flow temperatures of heating circuits regulated via motorised adjustable mixers.
Adjustable temperature difference between boiler/header and mixer circuits, boiler and header temperature regulated by switching burner (max. two-stage burner or two one-stage boilers).
Hot-water temperature regulated by switching feed pump.
Connection for hot-water circulation pump.



Applicable controllers

Type	Notes	Technical data
E6.0631 + E6.1111	E6.0631 Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Output relay for circulation pump with separate timer channel. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.	Page 49 Page 50
E6.1111	Digital controller for two mixer circuits to extend systems with existing E6... controllers.	

Required sensors and accessories

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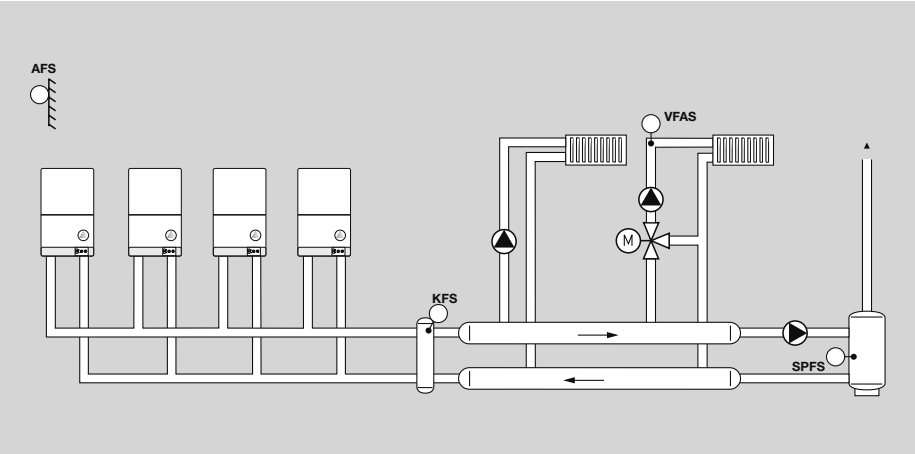
AFS	Outdoor sensor	1 AFS or 2 AFS	
KFS/VFAS	Boiler/flow sensor	Boiler/header temperature	
VFAS 4 Stück	Flow sensor	Mixer circuits	
SPFS	Storage tank sensor	Hot-water storage tank	
FBR1	Remote control/room sensor	on request	
BM	Intelligent room station	on request (for E6... only)	Page 56

Example 16

Weather and/or room temperature-dependent heating control

Boiler and flow temperature regulated by switching burner, for systems with up to four boilers or two boilers with two-stage burners.
Flow temperature of second heating circuit regulated via motorised adjustable mixer.
Hot-water temperature regulated by switching feed pump and adjusting header temperature.
On calorific value units the hydraulic valve may reduce the efficiency of the condensation mode.



Applicable controllers

Type	Notes
E6.4401	Four-stage digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit and hot-water circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Option to program different boiler sequences. Automatic sequence change. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.

Technical data
Page 42

Required sensors and accessories

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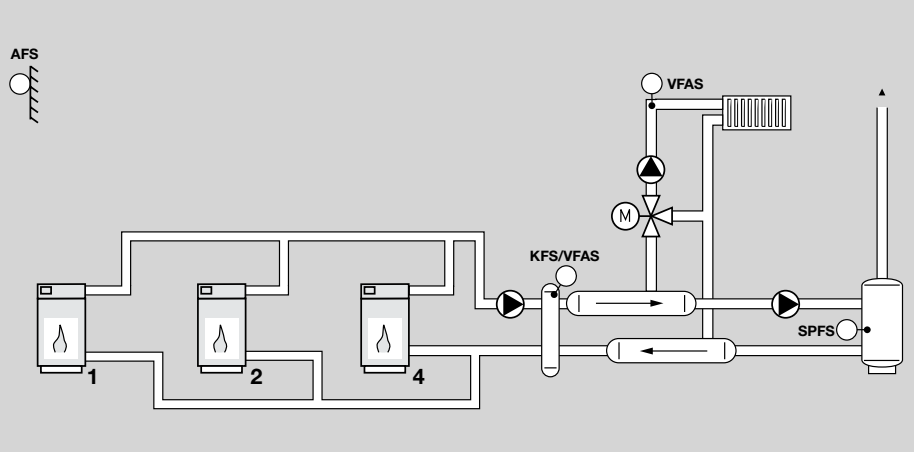
AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Header temperature
VFAS	Flow sensor	Mixer circuit 2
SPFS	Storage tank sensor	Hot-water storage tank
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 17

Weather and/or room temperature-dependent heating control

Boiler cascades in heating systems regulated by switching burner, for systems with up to four boilers or two boilers with two-stage burners.
Boiler and header temperature regulated by switching burners.
Flow temperature regulated via motorised adjustable mixer.
Hot-water temperature regulated by switching feed pump.



Applicable controllers

Type	Notes
E6.4401	Four-stage digital controller with single-dial operation. Integrated timer (week program) freely programmable for heating circuit and hot-water circuit. Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Option to program different boiler sequences. Automatic sequence change. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1). Integrated test functions. Optical service interface.

Technical data
Page 42

Required sensors and accessories

Page 62

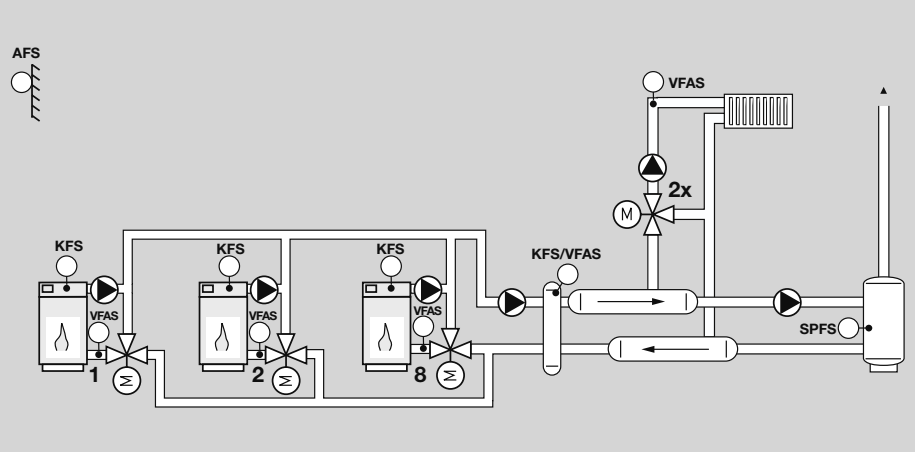
AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Header temperature
VFAS	Flow sensor	Mixer circuit 2
SPFS	Storage tank sensor	Hot-water storage tank
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 18

Weather and/or room temperature-dependent cascade control

Boiler and header temperature regulated by switching burners. Flow temperatures of heating circuits regulated via motorised adjustable mixers. Suitable for systems with up to eight boilers or four boilers with two-stage burners.
Hot-water temperature regulated by switching feed pump.
Header pump only if no boiler pump is fitted.



Applicable controllers

Type	Notes	Technical data
E6.4831 with up to 8 KM2	Cascade manager for controlling the boiler modules KM2. Digital controller with single-dial operation. Integrated timer freely programmable for heating circuit and hot-water temperature control. For heating circuits: Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Output relay for circulation pump with separate timer channel. Integrated data bus to connect boiler modules KM2, intelligent room stations (BM) and other mixer modules (E6.1111, MM1 or ME80-MM1).	Page 43 Page 45
KM2	Boiler module for gas or oil boilers with an actuation system for the boiler pump and integrated return temperature increase system via mixer or bypass pump.	

Required sensors and accessories

Page 62

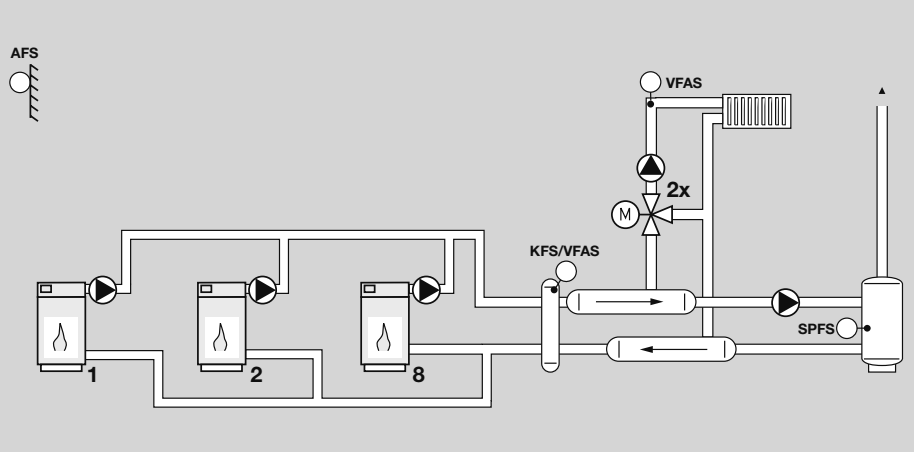
AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Header temperature
KFS max. 8 St.	Boiler sensor	Boiler temperature KM2
VFAS max. 8 Stück	Flow sensor	Return temperature KM2
VFAS	Flow sensor	Mixer circuit 1
VFAS	Flow sensor	Mixer circuit 2
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 19

Weather and/or room temperature-dependent cascade control

Boiler and header temperature regulated by modulating burners. Flow temperatures of heating circuits regulated via motorised adjustable mixers. Suitable for systems with up to eight boilers.
Hot-water temperature regulated by switching feed pump.



Applicable controllers

Type	Notes
E6.4031 with up to 8 boilers with integrated boiler module KM6/7	Cascade manager for controlling boilers with integrated boiler module KM6/7 (cannot be retrofitted). Digital controller with single-dial operation. Integrated timer freely programmable for heating circuit and hot-water temperature control. For heating circuits: Heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Output relay for circulation pump with separate timer channel. Integrated data bus to connect intelligent room stations (BM) and other mixer modules (E6.1111 or MM1). Connection via interface converter CoCo1 with boiler module KM 6/7.

KM 6/7 is part of the standard equipment for the boiler and is not suitable for retrofitting boilers.
The boilers with KM 6/7 must be certified.

Technical data
Page 44

Required sensors and accessories

Page 62

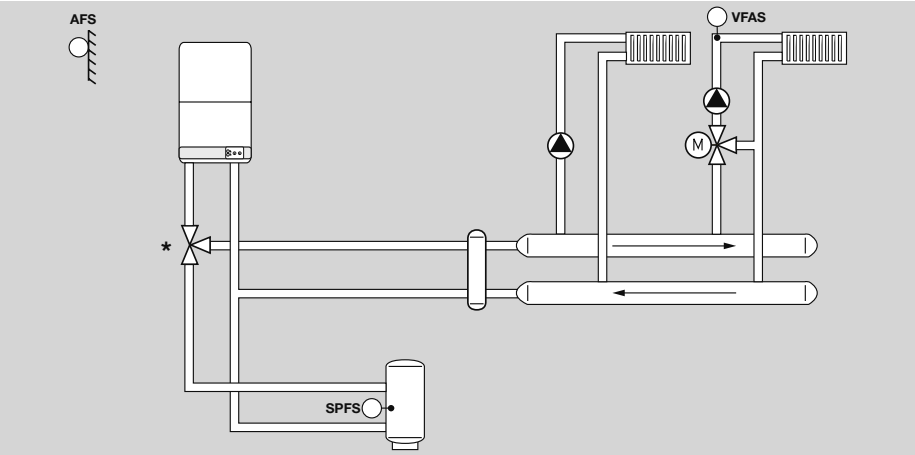
AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Header temperature
VFAS	Flow sensor	Mixer circuit 1
VFAS	Flow sensor	Mixer circuit 2
SPFS	Storage tank sensor	
FBR1	Remote control/room sensor	on request
CoCo1	Interface converter	
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 20

Weather and/or room temperature-dependent heating control

Modulating boiler with one mixed and one direct heating circuit.
Hot-water temperature regulated by switching feed pump.



* The hot-water change-over valve is integrated in the modulating boiler

Applicable controllers

Type	Notes
CoCo1+ E6.1111	Modulating boiler with integrated boiler module KM6/7. With heating optimisation. Heating curve adaptation (with BM only). Pump blocking protection. Integrated test functions.

KM 6/7 is part of the standard equipment for the boiler and is not suitable for retrofitting boilers.
The boilers with KM 6/7 must be certified.

Technical data
Page 50

Required sensors and accessories

Page 62

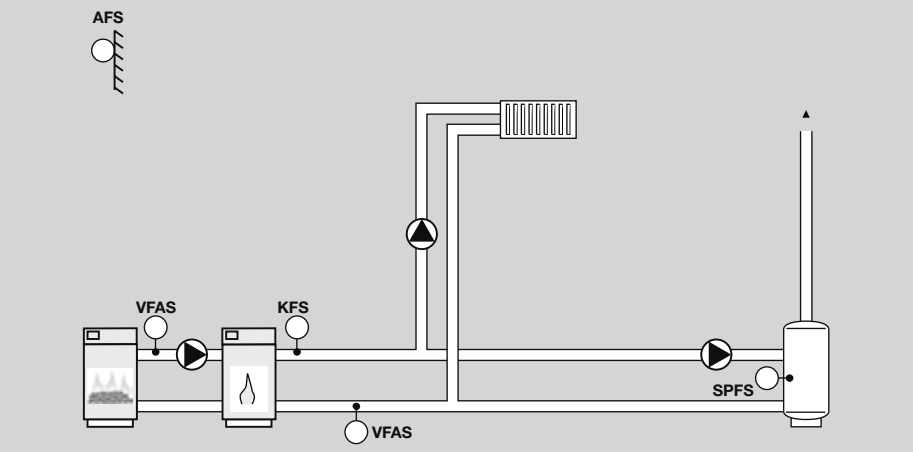
AF	Outdoor sensor	KM6/7 only
KF/STB	Boiler sensor	KM6/7 only
VFAS	Flow sensor	Flow temperature
SPF	Storage tank sensor	KM6/7 only
CoCo1	Interface converter	
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 21

Weather and/or room temperature-dependent heating control with gas/oil and solid fuel boiler

Boiler (gas/oil) temperature regulated by switching burner.
Hot-water temperature regulated by switching feed pump.
Differential temperature control for integrating the solid fuel boiler.



Applicable controllers

Type	Notes	Technical data
E6.0231	Digital controller with single-dial operation.	Page 46
or E6.0321	Integrated timer (week program) freely programmable for each heating circuit.	Page 47
or E6.0631	Heating optimisation. Heating curve adaptation (with BM only). Output relay for circulation pump with separate timer channel. Integrated data bus with connection for intelligent room station (BM) or analogue remote control (FBR1). Pump blocking protection. Integrated test functions. Optical service interface.	Page 49
E6.1111	Digital controller for two mixer circuits to extend systems with existing E6... controllers.	Page 50

Required sensors and accessories

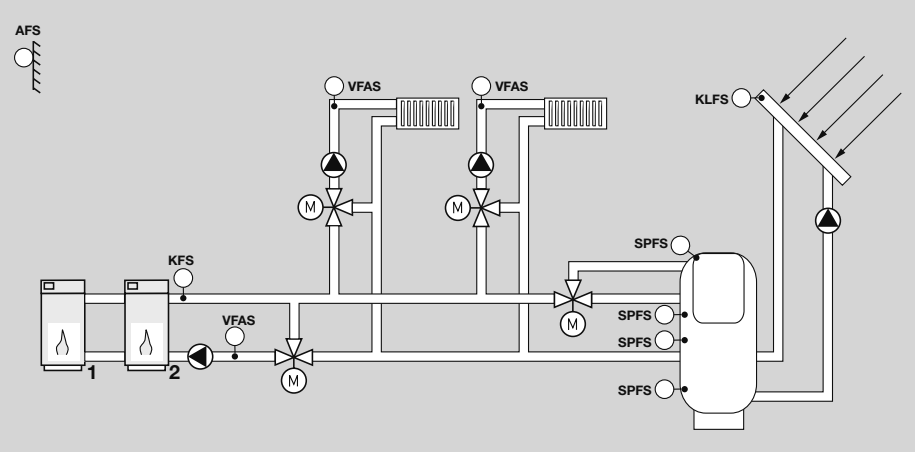
Page 62

AFS	Outdoor sensor		
KFS/VFAS	Boiler/header sensor	Gas/oil boiler	
KFS/VFAS	Boiler sensor	Solid fuel boiler	
SPFS	Storage tank sensor	Hot-water storage tank	
FBR1	Remote control/room sensor	on request	
BM	Intelligent room station	on request (for E6... only)	Page 56

Example 22

Weather and/or room temperature-dependent heating control integrating a solar system (combination buffer)

Boiler and buffer temperature regulated by switching burner for systems with two boilers or two-stage burner.
Hot-water temperature regulated by switching change-over valve and collector pump.



Applicable controllers

Type	Notes	Technical data
E6.6641	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Boiler control by gradient evaluation. Boiler cooling function. Fixed value control is possible. Adjustable hot-water hysteresis. Operation without burner is possible. Heating curve adaptation (with BM only). Pump blocking protection. Output relay for buffer storage tank feed pump. Collector pump. Integrated data bus. Optional connection for intelligent room station (BM) or analogue remote control (FBR1, only without buffer). Integrated test functions. Optical service interface.	Page 48
MM2	MM2 return temperature increase with fixed value (adjustable)	Page 60

Required sensors and accessories

Page 62

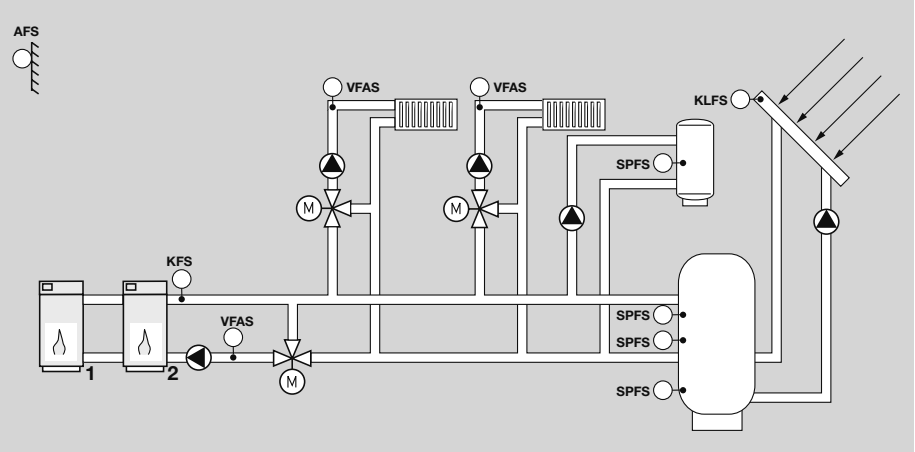
AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Boiler circuit
VFAS	Flow sensor	Return temperature increasing function
SPFS	Storage tank sensor	Hot-water storage tank
SPFS	Storage tank sensor	Buffer top
SPFS	Storage tank sensor	Buffer bottom
SPFS	Storage tank sensor	Collector circuit (storage tank)
KLFS	Collector sensor	Collector circuit (collector)
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 23

Weather and/or room temperature-dependent heating control integrating a buffer storage and a solar system, with external hot-water storage tank.

Boiler and buffer temperature regulated by switching burner for systems with two boilers or two-stage burner.
Hot-water temperature regulated by switching feed pump.



Applicable controllers

Type	Notes	Technical data
E6.6641	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Boiler control by gradient evaluation. Boiler cooling function. Fixed value control is possible. Adjustable hot-water hysteresis. Operation without burner is possible. Heating curve adaptation (with BM only). Pump blocking protection. Output relay for buffer storage tank feed pump. Collector pump. Integrated data bus. Optional connection for intelligent room station (BM). Integrated test functions. Optical service interface.	Page 48
MM2	MM2 return temperature increase with fixed value (adjustable)	Page 60

Required sensors and accessories

Page 62

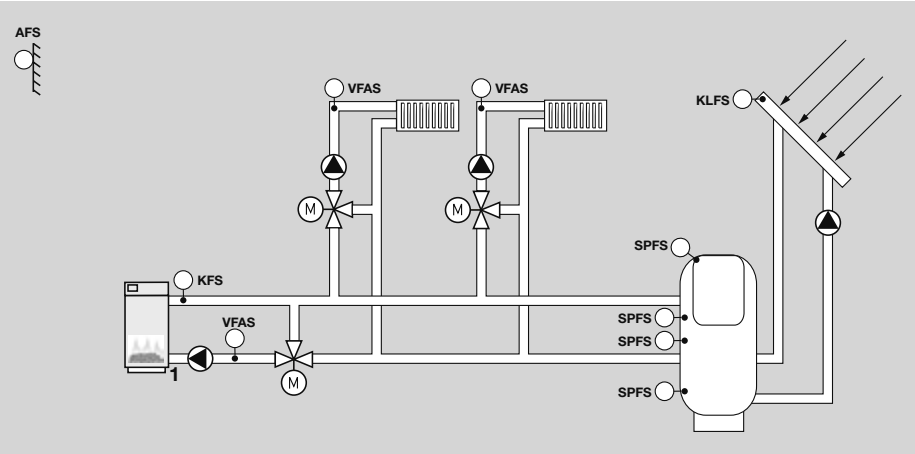
AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Boiler circuit
VFAS	Flow sensor	Return temperature increasing function
SPFS	Storage tank sensor	Hot-water storage tank
SPFS	Storage tank sensor	Buffer top
SPFS	Storage tank sensor	Buffer bottom
SPFS	Storage tank sensor	Collector circuit (storage tank)
KLFS	Collector sensor	Collector circuit (collector)
BM	Intelligent room station	on request (for E6... only)

Page 56

Example 24

Weather and/or room temperature-dependent heating control
Solid fuel boiler with buffer storage

Hot-water temperature regulated by switching feed pump.
Flow temperature regulated via motorised adjustable mixers.



Applicable controllers

Type	Notes	Technical data
E6.6641	Digital controller with single-dial operation. Integrated timer (week program) freely programmable for each heating circuit. Heating curve adaptation (with BM only). Pump blocking protection. Output relay for buffer storage tank feed pump. Collector pump. Integrated data bus. Optional connection for intelligent room station (BM). Integrated test functions. Optical service interface.	Page 48
MM2	MM2 return temperature increase with fixed value (adjustable)	Page 60

Required sensors and accessories

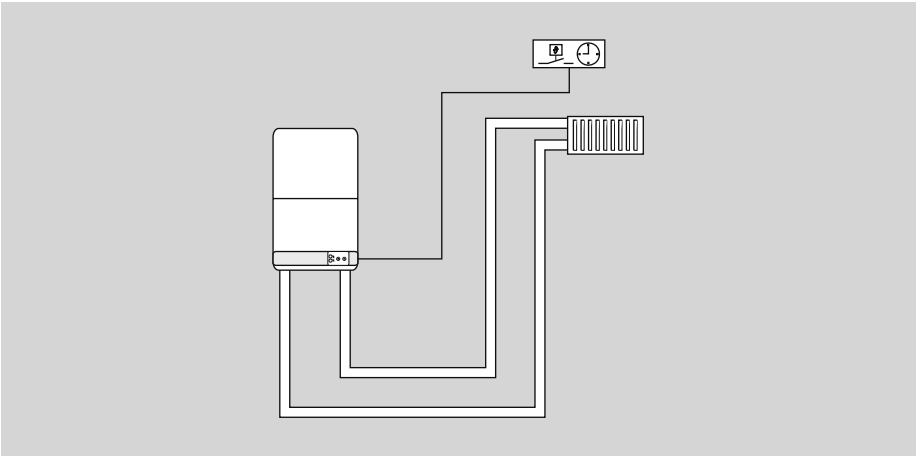
Page 62

AFS	Outdoor sensor	
KFS/VFAS	Boiler sensor/flow sensor	Boiler circuit
SPFS	Storage tank sensor	Buffer top
SPFS	Storage tank sensor	Buffer bottom
SPFS	Storage tank sensor	Hot-water storage tank
SPFS	Storage tank sensor	Collector circuit (storage tank)
KLFS	Collector sensor	Collector circuit (collector)
FBR1	Remote control/room sensor	on request, but only without buffer
BM	Intelligent room station	on request (for E6... only) Page 56

Example 25

Room temperature-dependent control

Room temperature regulated e.g. by switching boiler or heating circulation pump.



Applicable controllers

Type	Notes	Technical data
Como	Digital timer thermostat. Timer with day/week program. Max. three switching times per day, individually programmable. Connection for external sensor.	Page 54
Como OpenTherm*	Like Como, but for direct connection to the wall-mounted boiler with OpenTherm interface via two-core communication cable. Intelligent room station for weather and/or room temperature-dependent control e.g. of modulating wall-mounted gas devices (customer-specific).	Page 55
BM BME**	Intelligent room station for weather and/or room temperature-dependent control e.g. of modulating wall-mounted gas devices (boiler-specific). Data exchange between boiler electronics and BM via customer-specific communication interface.	Page 56

* COMO OpenTherm only for OpenTherm certified wall-mounted boilers
** BME only for certified boilers with integrated KM6/7

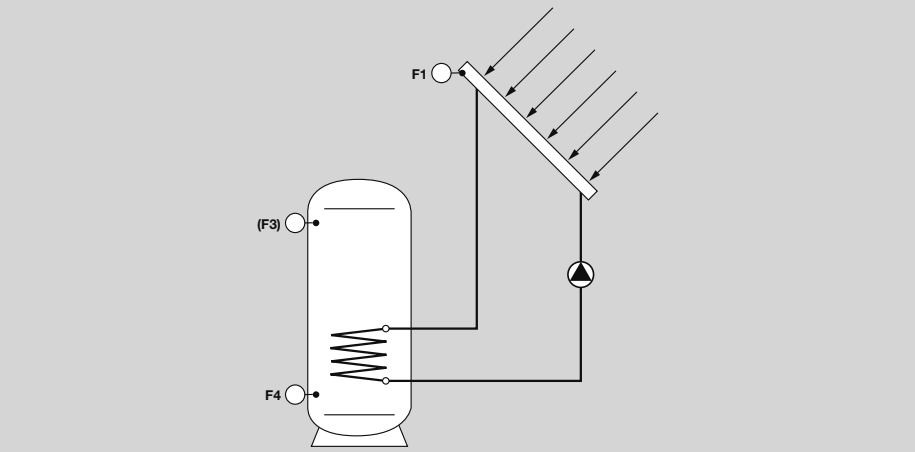
Required sensors

Page 62

RFB	External room sensor for Como, Como OpenTherm and BM	on request

Example 26

Solar buffer charging



Applicable controllers

Type	Notes
SD1 SD2	Differential temperature controller for solar systems with buffer storage. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation.

Technical data
Page 57
Page 58

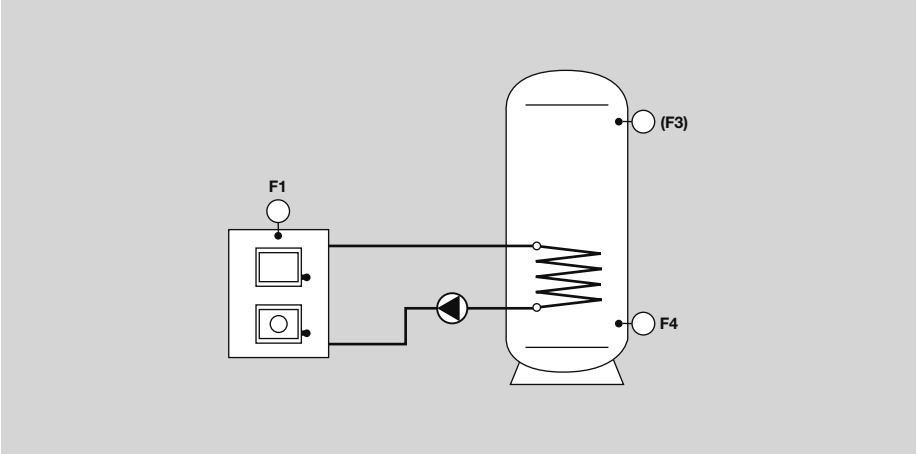
Required sensors and accessories

Page 62

F1	Collector sensor	KLF 1000
(F3)	Top buffer sensor (optional)	SPF
F4	Bottom buffer sensor	SPF

Example 27

Buffer charging by means of solid fuel boiler



Applicable controllers

Type	Notes
SD1 SD2	Differential temperature controller for systems with solid fuel boiler and buffer storage. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation.

Technical data
Page 57
Page 58

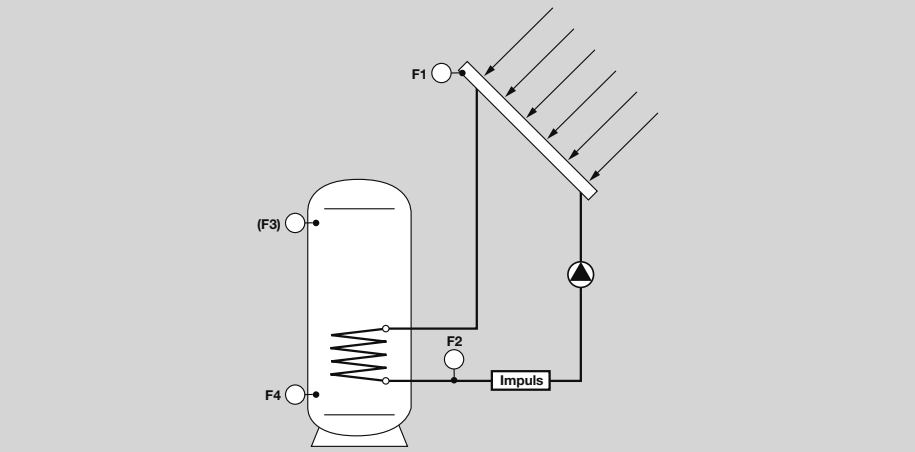
Required sensors and accessories

Page 62

F1	Boiler sensor	KLF1000
(F3)	Top buffer sensor (optional)	SPF
F4	Bottom buffer sensor	SPF

Example 28

Solar buffer charging with heat volume metering



Applicable controllers

Type	Notes
SD2	Differential temperature controller for solar systems with buffer storage. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation with flow rate metering.

Technical data
Page 58

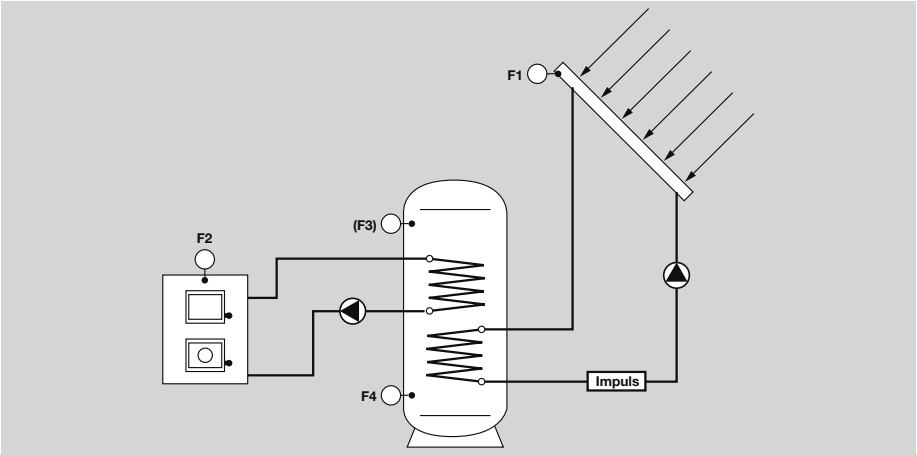
Required sensors and accessories

Page 62

F1	Collector sensor	KLF1000
F2	Solar return sensor	KLF1000
(F3)	Top buffer sensor (optional)	SPF
F4	Bottom buffer sensor	SPF

Example 29

Solar buffer charging with heat volume metering and supplementary solid fuel boiler



Applicable controllers

Type	Notes
SD2	Differential temperature controller for solar systems with buffer storage and solid fuel boiler. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation with flow rate metering.

Technical data
Page 58

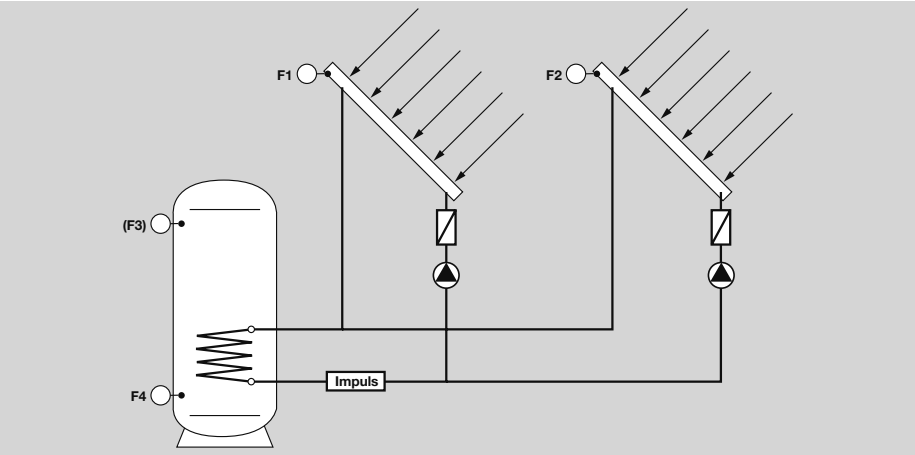
Required sensors

Page 62

F1	Collector sensor	KLF1000
F2	Boiler sensor	KLF1000
(F3)	Top buffer sensor (optional)	SPF
F4	Bottom buffer sensor	SPF

Example 30

Solar buffer charging for twin collector systems with heat volume metering



Applicable controllers

Type	Notes
SD2	Differential temperature controller for solar systems with two collectors (east/west-facing roofs) with a buffer storage. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation with flow rate metering.

Technical data
Page 58

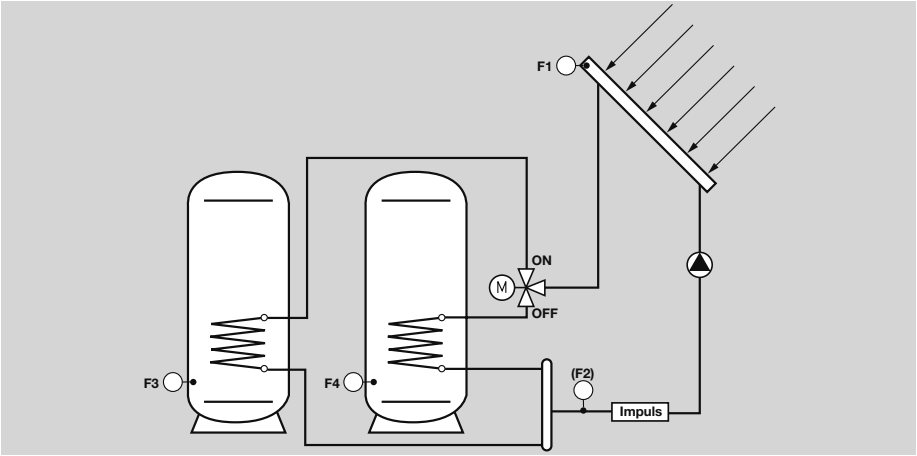
Required sensors and accessories

F1	Collector sensor 1	KLF1000
F2	Collector sensor 2	KLF1000
(F3)	Top buffer sensor (optional)	SPF
F4	Bottom buffer sensor	SPF

Page 62

Example 31

Solar buffer charging for twin buffer systems (hot-water/heating buffer) with heat volume metering



Applicable controllers

Type	Notes
SD2	Differential temperature controller for solar systems with two buffer storages. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation with flow rate metering.

Technical data
Page 58

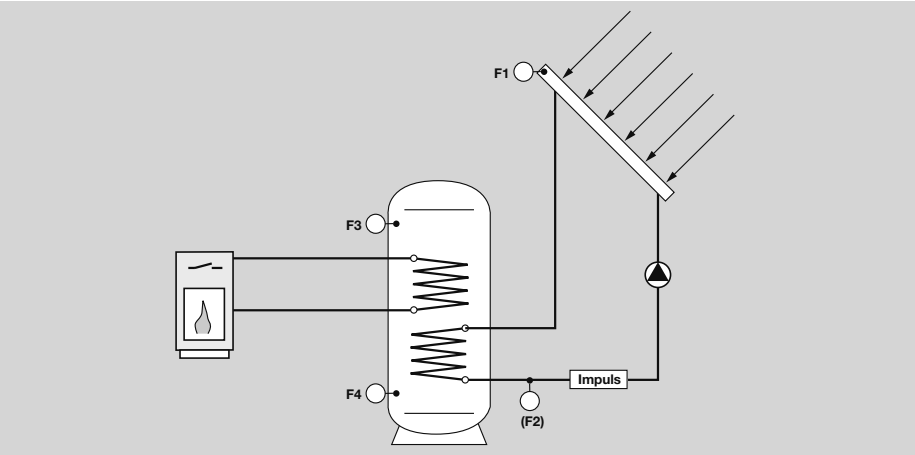
Required sensors and accessories

F1	Collector sensor	KLF1000
(F2)	Flow sensor (optinonal)	VF1000
F3	Top buffer sensor	SPF
F4	Bottom buffer sensor	SPF

Page 62

Example 32

Solar buffer charging with heat volume metering and reheating function



Applicable controllers

Type	Notes
SD2	Differential temperature controller for solar systems with buffer storage and reheating function. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation with flow rate metering.

Technical data
Page 58

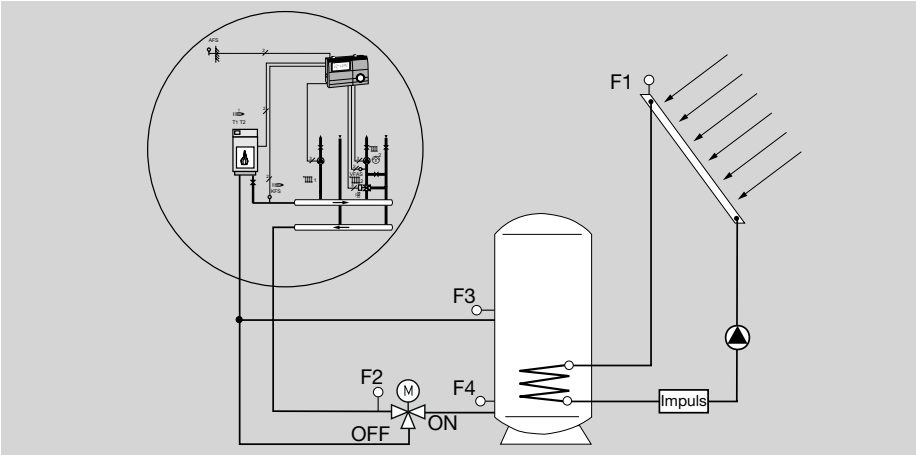
Required sensors and accessories

Page 62

F1	Collector sensor	KLF1000
(F2)	Flow sensor (optional)	VF1000
F3	Top buffer sensor	SPF
F4	Bottom buffer sensor	SPF

Example 33

Solar buffer charging with heat volume metering and return temperature increasing function for heating circuits



Applicable controllers

Type	Notes
SD2	Differential temperature controller for solar systems with buffer storage. Return temperature increasing function for heating circuits. Selection of system diagrams saved in the memory. Automatic sensor configuration. Adjustable switching temperatures. Adjustable differential temperature. Heat yield calculation with flow rate metering.

Technical data
Page 58

Required sensors and accessories

Page 62

F1	Collector sensor	KLF1000
F2	Flow sensor	VF1000
F3	Top buffer sensor	SPF
F4	Bottom buffer sensor	SPF

Heating controller E25.0100

- Boiler minimum temperature limitation
- Automatic boiler start-up relief
- Dynamic hysteresis for improving burner operating time and reducing burner start-up
- Demand-related pump switching / automatic summer/winter switchover
- Pump runs on when burner “OFF”
- Automatic function recognition via sensors connected, with error message in case of sensor error

Basic functions

Digital heating controller with analogue interface for:

– Wall mounting, control panel and boiler attachment
– Weather or room temperature-dependent boiler/burner control for oil or gas boilers with hot-water temperature control
– Regulating boiler and flow temperature by switching burner
– Regulating hot water by switching feed pump
– Available either with analogue timer with day/week program or two-channel digital timer with week program

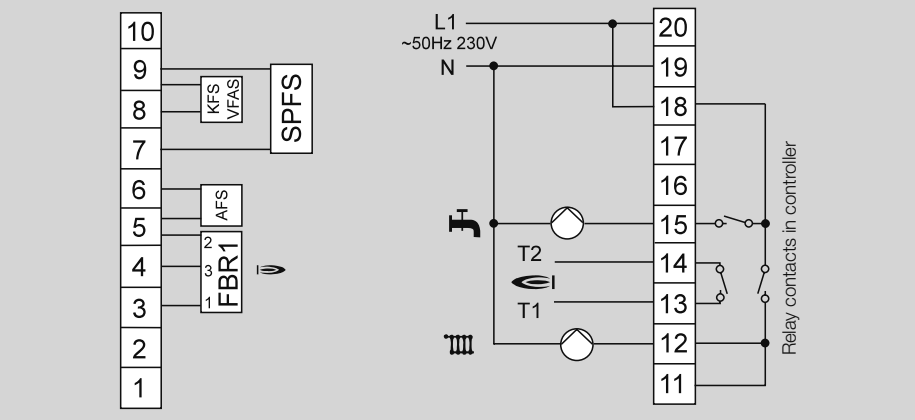
Features

E25.0100 has the following features as standard:

– Analogue controls for all settings
– LED function display for burner, pumps, etc.
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Dynamic switching hysteresis for burner
– Minimum boiler temperature
– Automatic boiler start-up relief
– Hot water regulated either in parallel or priority mode
– Separate programs for heating and hot water if digital timer used
– Adjustable room sensor influence when remote control FBR1 connected
– Integrated sensor monitor

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	automatic (depends on minimum temperature set)
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Hot-water temperature	10°C to 60°C
Heating curve	0.2 to 3
Pump run-on	10 minutes after burner is switched off
Frost protection temperature	0°C
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Heating controller E25.0200

- Boiler minimum temperature limitation
- Automatic boiler start-up relief
- Dynamic hysteresis for improving burner operating time and reducing burner start-up
- Adjustable blocking time for burner 2
- Demand-related pump switching / automatic summer/winter switchover
- Pump runs on when burner “OFF”
- Automatic function recognition via sensors connected, with error message in case of sensor error

Basic functions

Heating controller with analogue controls for:

– Wall mounting, control panel and boiler attachment
– Weather or room temperature-dependent boiler/burner control for two-stage oil or gas boilers with hot-water temperature control
– Regulating boiler and flow temperature by switching burner via 2 voltage-free output relays
– Regulating hot water by switching feed pump, in either priority or parallel mode
– Available either with analogue timer with day/week program or two-channel digital timer with week program

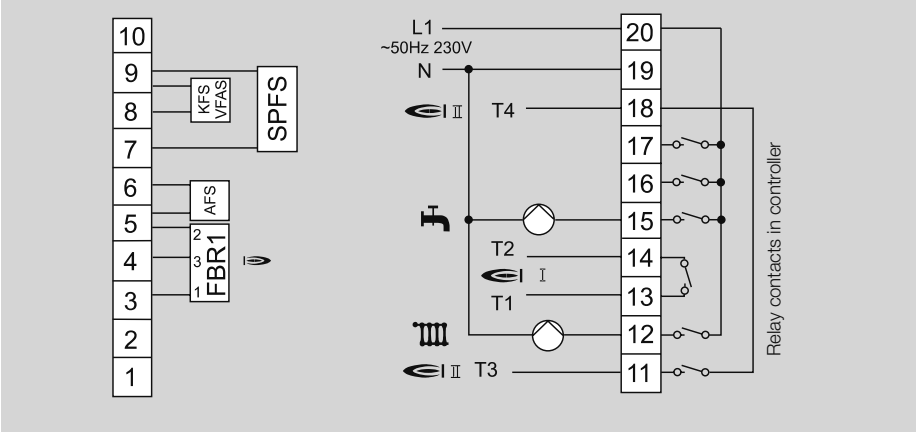
Features

E25.0200 has the following features as standard:

– Analogue controls for all settings
– LED function display for burner, pumps, etc.
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Dynamic switching hysteresis for burner
– Minimum boiler temperature
– Automatic boiler start-up relief
– Hot water regulated either in parallel or priority mode
– Separate programs for heating and hot water if digital timer used
– Adjustable room sensor influence when remote control FBR1 connected
– Integrated sensor monitor

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	automatic (depends on minimum temperature set)
Blocking time of 2nd burner stage	0 to 30 min.
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Hot-water temperature	10°C to 60°C
Heating curve	0.2 to 3
Pump run-on	10 minutes after burner is switched off
Frost protection temperature	0°C
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Heating controller E25.0300

- Boiler minimum temperature limitation
- Automatic boiler start-up relief
- Dynamic hysteresis for improving burner operating time and reducing burner start-up
- Demand-related pump switching / automatic summer/winter switchover
- Pump runs on when burner “OFF”
- 2 remote controls/room sensors FBR1 can be connected
- Automatic function recognition via sensors connected, with error message in case of sensor error

Basic functions

Digital heating controller with analogue controls for:

– Wall mounting, control panel and boiler attachment
– Weather or room temperature-dependent controller for two heating circuits and hot-water circuit
– Regulating boiler and flow temperature (heating circuit 1) by switching burner
– Regulating flow temperature (heating circuit 2) via motorised adjustable mixer
– Regulating hot water by switching feed pump
– Available either with analogue timer with day/week program or two-channel digital timer with week program

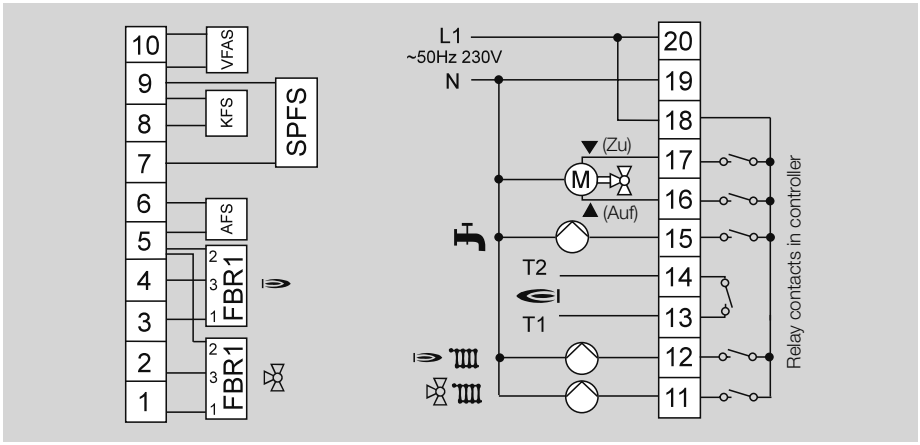
Features

E25.0300 has the following features as standard:

– Analogue controls for all settings
– LED function display for burner, pumps, etc.
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Dynamic switching hysteresis for burner
– Minimum boiler temperature
– Automatic boiler start-up relief
– Hot water regulated either in parallel or priority mode
– Free assignment of timer channels if digital timer used
– Room sensor influence can be separately set for each heating circuit if remote control FBR1 used
– Integrated sensor monitor

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	automatic (depends on minimum temperature set)
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Hot-water temperature	10°C to 60°C
Heating curves	0.2 to 3
Pump run-on	10 minutes after burner is switched off
Frost protection temperature	0°C
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Heating controller E25.0400

- Boiler minimum temperature limitation
- Automatic boiler start-up relief
- Dynamic hysteresis for improving burner operating time and reducing burner start-up
- Adjustable blocking time for burner 2
- Demand-related pump switching / automatic summer/winter switchover
- Pump runs on when burner “OFF”
- 2 remote controls/room sensors FBR1 can be connected
- Automatic function recognition via sensors connected, with error message in case of sensor error

Basic functions

Digital heating controller with analogue controls for:

- Wall mounting, control panel and boiler attachment
- Weather or room temperature-dependent control for two heating circuits and one hot-water circuit
- Two-stage burner control
- Regulating boiler and flow temperature (heating circuit 1) by switching burner
- Regulating flow temperature (heating circuit 2) via motorised adjustable mixer
- Regulating hot water by switching feed pump
- Available either with analogue timer with day/week program or two-channel digital timer with week program

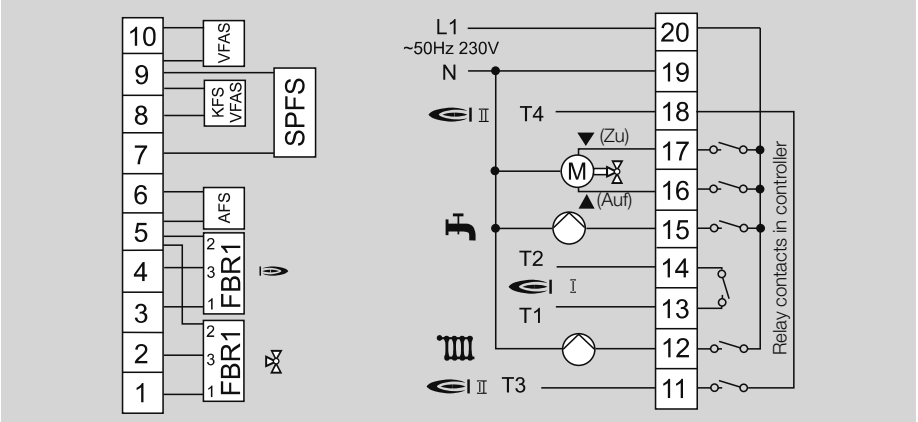
Features

E25.0400 has the following features as standard:

- Analogue controls for all settings
- LED function display for burner, pumps, etc.
- Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
- Dynamic switching hysteresis for burner
- Minimum boiler temperature
- Automatic boiler start-up relief
- Hot water regulated either in parallel or priority mode
- Free assignment of timer channels if digital timer used
- Room sensor influence can be separately set for each heating circuit if remote control FBR1 used
- Integrated sensor monitor

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	automatic (depends on minimum temperature set)
Blocking time of 2nd burner stage	0 to 30 min.
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Hot-water temperature	10°C to 60°C
Heating curves	0.2 to 3
Pump run-on	10 minutes after burner is switched off
Frost protection temperature	0°C
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Heating controller E25.1000

- Demand-related pump switching / automatic summer/winter switchover
- Pump run-on
- Remote controls/room sensors FBR1 can be connected
- Automatic function recognition via sensors connected, with error message in case of sensor error

Basic functions

Digital heating controller with analogue controls for:

– Wall mounting, control panel and boiler attachment
– Weather or room temperature-dependent control for systems with three or four-way mixers
– Regulating flow temperature via motorised adjustable mixer
– Available either with analogue timer with day/week program or two-channel digital timer with week program

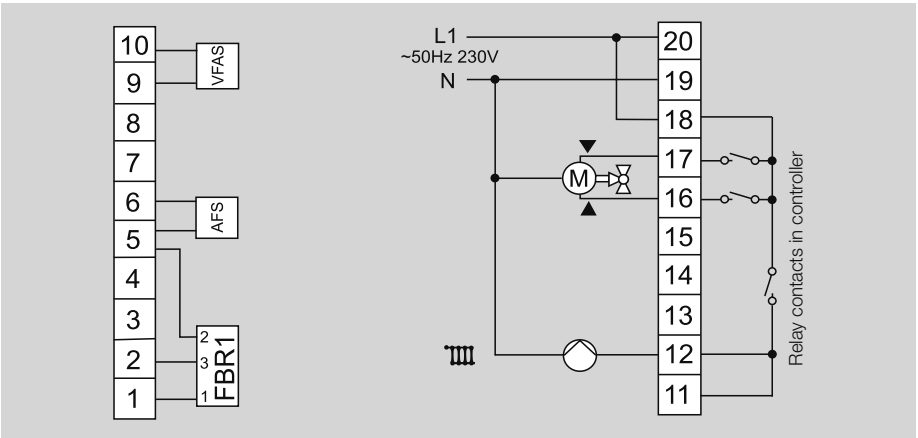
Features

E25.1000 has the following features as standard:

– Analogue controls for all settings
– LED function display for mixer and pump
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Second timer channel on digital timer is automatically faded out
– Room sensor influence can be adjusted if remote control FBR1 used
– Integrated sensor monitor

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Heating curve	0.2 to 3
Frost protection temperature	0°C
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Digital cascade controller E6.4401

- Easy to program with single-dial operation
- Automatic configuration via sensor detection
- Various boiler capacities can be entered
- Uniform boiler load by controlling the switch-on sequence in conjunction with the boiler operating times
- Connection for DCF receiver (radio clock)
- Integrated data bus for controlling KM2 modules and for extending system, e.g. with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting control parameters
- Holiday program
- Frost protection function

Basic functions

Three-channel digital controller for:

- Boiler cascades consisting of max. 4 single-stage controlled boilers, max. 2 two-stage controlled boilers
- Weather or room temperature-dependent control of header temperature and heating circuits
- Regulating one mixer circuit via motorised adjustable mixer
- Regulating hot water by switching feed pump
- Two freely adjustable temperature/time programs with 3 heating times per day
- Hot-water program with two heating times and one nominal value per heating time

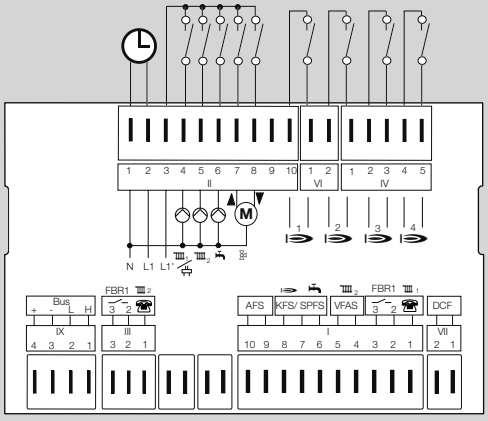
Features

E6.4401 has the following features as standard:

- Three-channel week timer with max. 3 switching times per channel and day
- 4 different operating modes relative to the boiler sequence
- Pump blocking protection
- Hot-water control by switching feed pump
- Integrated test functions for relays, sensors, etc.
- Telephone switch

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Relay load	250 V AC, 2(2) A
Enclosure (DIN 40050)	IP 40 pursuant to EN 60529
Safety class	II (totally insulated) pursuant to EN 60730
Ambient temperature in operation	0°C to 50°C
Storage temperature	-30°C to 60°C
EMC conditions	EN 50081 / 50082 complied with
Control panel installation	138 x 92 mm recess pursuant to DIN 43700



Digital cascade controller E6.4831

- Easy to program with single-dial operation
- Automatic configuration via sensor detection
- Various boiler capacities can be entered
- Uniform boiler load by controlling the switch-on sequence in conjunction with the boiler operating times
- Connection for DCF receiver (radio clock)
- Integrated data bus for extending system, e.g. with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting control parameters
- Holiday program
- Frost protection function

Basic functions

Four-channel digital controller for:

– Boiler cascades constisting of max. 8 single-stage controlled boilers with boiler module KM2 plus reserve boiler or
max. 4 two-stage controlled boilers each with one boiler module KM2 plus reserve boiler
– Weather or room temperature-dependent control of header temperature and heating circuits
– Regulating two mixer circuits via motorised adjustable mixers
– Regulating hot water by switching feed pump
– Relay output with separate time program, e.g. for circulation pump
– Two freely adjustable temperature/time programs with 3 heating times per day
– Hot-water program

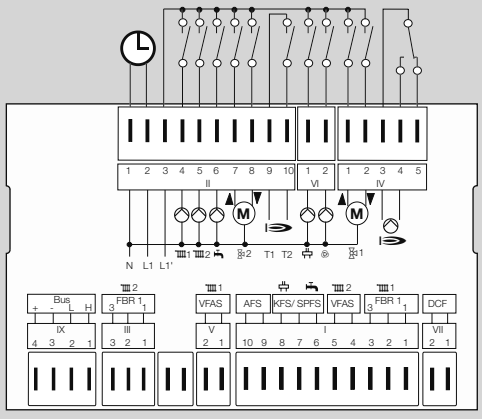
Features

E6.4831 has the following features as standard:

– Four-channel week timer with max. 3 switching times per channel and day
– 4 different operating modes relative to the boiler sequence
– Pump blocking protection
– Boiler for hot-water preparation can be selected separately
– Integrated test functions for relays, sensors, etc.
– Telephone switch

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Relay load	250 V AC, 2(2) A
Enclosure (DIN 40050)	IP 40 pursuant to EN 60529
Safety class	II (totally insulated) pursuant to EN 60730
Ambient temperature in operation	0°C to 50°C
Storage temperature	-30°C to 60°C
EMC conditions	EN 50081 / 50082 complied with
Control panel installation	138 x 92 mm recess pursuant to DIN 43700



Digital cascade manager E6.4031

- Easy to program with single-dial operation
- Automatic configuration via sensor detection
- Various boiler capacities can be entered
- Uniform boiler load by controlling the switch-on sequence in conjunction with the boiler operating times
- Holiday program
- Frost protection function
- Connection for DCF receiver (radio clock)
- Integrated data bus for extending system, e.g. with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting control parameters

Basic functions

Four-channel digital controller for:

- Control panel and boiler attachment
- Boiler cascades constisting of
  max. 8 single-stage controlled boilers each with one boiler module KM2 plus reserve boiler or
  max. 4 two-stage controlled boilers each with one boiler module KM2 plus reserve boiler
- Weather or room temperature-dependent control of header temperature and heating circuits
- Regulating two mixer circuits via motorised adjustable mixers
- Regulating hot water by switching feed pump
- Relay output with separate time program, e.g. for circulation pump
- Two freely adjustable temperature/time programs with 3 heating times per day
- Hot-water program

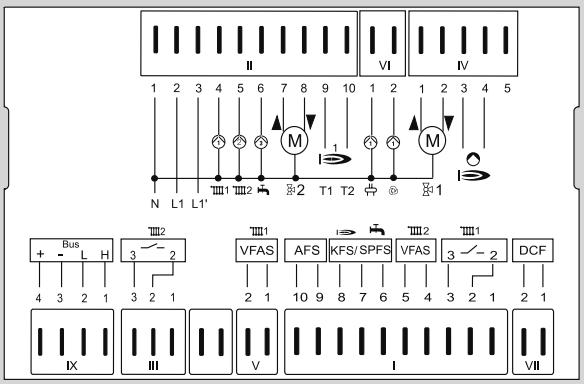
Features

E6.4031 has the following features as standard:

- Four-channel week timer with max. 3 switching times per channel and day
- 4 different operating modes relative to the boiler sequence
- Pump blocking protection
- Boiler for hot-water preparation can be selected separately
- Integrated test functions for relays, sensors, etc.
- Telephone switch

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Relay load	250 V AC, 2(2) A
Enclosure (DIN 40050)	IP 40 pursuant to EN 60529
Safety class	II (totally insulated) pursuant to EN 60730
Ambient temperature in operation	0°C to 50°C
Storage temperature	-30°C to 60°C
EMC conditions	EN 50081 / 50082 complied with
Control panel installation	138 x 92 mm recess pursuant to DIN 43700



Boiler module KM2

- Adjustable return temperature increase either via mixer or pump
- Automatic configuration via sensor detection

Basic functions

Cascade controller for boiler cascades, controlled by E6.4831 for:

- Control panel and boiler attachment
- Regulating the boiler temperature by switching burner
- Controlling one and two-stage oil and gas burners
- Controlling up to eight KM2 modules via E6.4831
- Fixed value control for operation without E6.4831 or with no bus connection

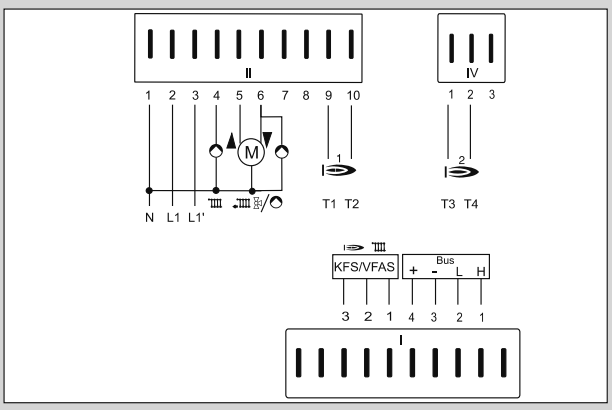
Features

KM2 has the following features as standard:

- One or two-stage burner control
- Actuation of a boiler pump
- Relay output for return temperature increase either via mixer or pump
- Pump blocking protection
- LED function display

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Relay load	250 V AC, 2(2) A
Enclosure (DIN 40050)	IP 40 pursuant to EN 60529
Safety class	II (totally insulated) pursuant to EN 60730
Ambient temperature in operation	0°C to 50°C
Storage temperature	-30°C to 60°C
EMC conditions	EN 50081 / 50082 complied with
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Digital heating controller E6.0231

- Easy to program with single-dial operation or with text support when used with operation-control module
- Automatic configuration via sensor detection
- Two different heating programs for the heating circuit can be entered (shift workers)
- Only one outdoor sensor needed for up to six controllers
- Connection for DCF receiver (radio clock)
- Heating can be switched on via remote telephone switch
- Integrated data bus for extending system or for connecting intelligent room station (operation-control module BM)

Basic functions

Three-channel digital controller for:

- Control panel and boiler attachment
- Two-stage boiler/burner control
- Regulating flow temperature by switching burner
- Regulating hot water by switching feed pump
- Freely programmable relay output, e.g. as header pump, return temperature increase or differential temperature control (additional sensor may be needed)
- Separate timer channel for circulation pump in hot-water circuit
- System can be extended with additional mixer circuits with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting parameters

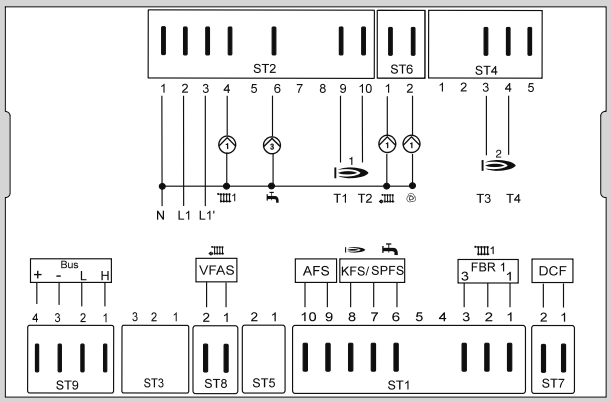
Features

E6.0231 has the following features as standard:

- Three-channel week timer with max. 3 switching times per channel and day
- Automatic summer/winter switchover
- Heating curve adaptation (with BM only)
- Heating optimisation dependent on room temperature (with BM only) or outdoor temperature
- Dynamic switching hysteresis for burner
- Minimum boiler temperature
- Boiler start-up relief
- Pump blocking protection
- Hot-water control either in parallel or partial priority mode
- Adjusts to building and system dynamics
- Integrated test functions for relays, sensors, etc.

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	10°C to 60°C
Blocking time of burner 2	0 to 30 min.
Heating curves	0 to 3
Room sensor influence	0 to 20
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Digital heating controller E6.0321

- Easy to program with single-dial operation or with text support when used with operation-control module
- Automatic configuration via sensor detection
- Two different heating programs for heating circuits 1 and 2 can be entered (shift workers)
- Only one outdoor sensor needed for up to six controllers
- Connection for DCF receiver (radio clock)
- Heating can be switched on via remote telephone switch
- Integrated data bus for extending system or for connecting intelligent room stations (operation-control modules BM)
- System can be extended with additional mixer circuits with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting control parameters

Basic functions

Four-channel digital controller for:

– Control panel and boiler attachment
– Regulating boiler and flow temperature (heating circuit 1) by switching burner
– Regulating flow temperature (heating circuit 2) via motorised adjustable mixer
– Regulating hot water by switching feed pump
– Freely programmable relay output, e.g. for header pump, return temperature increase or differential temperature control (additional sensor required). If used to control a circulation pump, an additional timer channel is activated automatically.

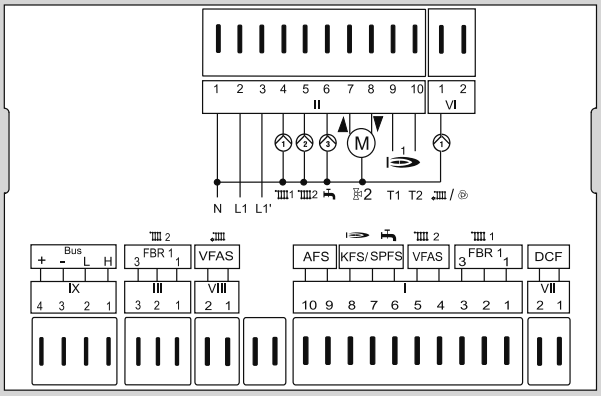
Features

E6.0321 has the following features as standard:

– Four-channel week timer with max. 3 switching times per channel and day
– Automatic summer/winter switchover
– Heating curve adaptation (with BM only)
– Heating optimisation dependent on room temperature (with BM only) or outdoor temperature
– Dynamic switching hysteresis for burner
– Minimum boiler temperature
– Boiler start-up relief
– Pump blocking protection
– Hot-water control either in parallel or partial priority mode
– Adjusts to building and system dynamics
– Integrated test functions for relays, sensors, etc.

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated) pursuant to EN 60730
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	10°C to 60°C
Heating curves	0 to 3
Room sensor influence	0 to 20
Mixer control	3 – 24 K P range
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Digital heating controller E6.6641

- Easy to program with single-dial operation or with text support when used with operation-control module
- Automatic configuration via sensor detection
- Two different heating programs for heating circuits 1 and 2 can be entered (shift workers)
- Only one outdoor sensor needed for up to six controllers
- Connection for DCF receiver (radio clock)
- Heating can be switched on via remote telephone switch
- Integrated data bus for extending system or for connecting intelligent room stations (operation-control modules BM)
- System can be extended with additional mixer circuits with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting parameters

Basic functions

Four-channel digital controller for:

- Control panel and boiler attachment
- Regulating the boiler temperature by gradient evaluation
- Boiler cooling function
- Buffer storage tank feed pump
- Regulating two heating circuits via motorised adjustable mixers
- Regulating hot water by switching feed pump
- Hot-water hysteresis can be set from 5 to 20 K
- Freely programmable relay output, e.g. as header pump, return temperature increase or differential temperature control (additional sensor may be needed)

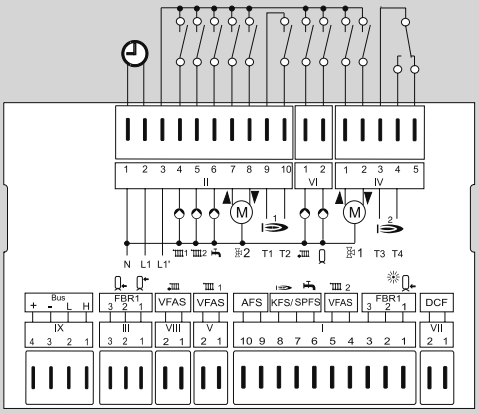
Features

E6.6641 has the following features as standard:

- Four-channel week timer with max. 3 switching times per channel and day
- Automatic summer/winter switchover
- Heating curve adaptation (with BM only)
- Heating optimisation dependent on room or outdoor temperature
- Dynamic switching hysteresis for burner
- Minimum boiler temperature
- Boiler start-up relief
- Pump blocking protection
- Hot-water control either in parallel or partial priority mode
- Adjusts to building and system dynamics
- Integrated test functions for relays, sensors, etc.

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	10°C to 60°C
Blocking time of burner 2	0 to 30 min.
Heating curves	0 to 3
Room sensor influence	0 to 20
Mixer control	3 – 24 K P range
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Digital heating controller E6.0631

- Easy to program with single-dial operation or with text support when used with operation-control module
- Automatic configuration via sensor detection
- Two different heating programs for heating circuits 1 and 2 can be entered (shift workers)
- Only one outdoor sensor needed for up to six controllers
- Connection for DCF receiver (radio clock)
- Heating can be switched on via remote telephone switch
- Integrated data bus for extending system or for connecting intelligent room stations (operation-control modules BM)
- System can be extended with additional mixer circuits with E6.1111
- Integrated optical interface to PC, e.g. for system monitoring or setting parameters

Basic functions

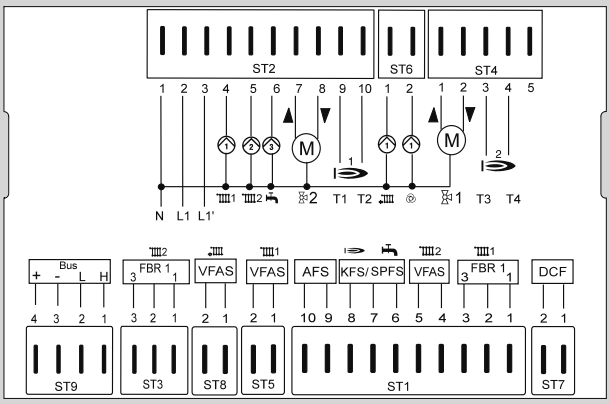
Four-channel digital controller for:
- Control panel and boiler attachment
- Two-stage boiler/burner control
- Regulating two heating circuits via motorised adjustable mixers
- Regulating hot water by switching feed pump
- Separate timer channel for circulation pump in hot-water circuit
- Freely programmable relay output, e.g. as header pump, return temperature increase or differential temperature control (additional sensor may be needed)

Features

E6.0631 has the following features as standard:
- Four-channel week timer with max. 3 switching times per channel and day
- Automatic summer/winter switchover
- Heating curve adaptation (with BM only)
- Heating optimisation dependent on room temperature (with BM only) or outdoor temperature
- Dynamic switching hysteresis for burner
- Minimum boiler temperature
- Boiler start-up relief
- Pump blocking protection
- Hot-water control either in parallel or partial priority mode
- Adjusts to building and system dynamics
- Integrated test functions for relays, sensors, etc.

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Minimum temperature	10°C to 60°C
Boiler start-up relief	10°C to 60°C
Blocking time of burner 2	0 to 30 min.
Heating curves	0 to 3
Room sensor influence	0 to 20
Mixer control	3 – 24 K P range
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Digital heating controller E6.1111

- Easy to program with single-dial operation or with text support when used with operation-control module
- Automatic configuration via sensor detection
- Second mixer circuit can also be used as heating circuit or fixed value control if required
- Two different heating programs for heating circuits 1 and 2 can be entered (shift workers)
- Only one outdoor sensor needed for up to six controllers
- Connection for DCF receiver (radio clock)
- Heating can be switched on via remote telephone switch
- Integrated data bus for extending system or for connecting intelligent room stations (operation-control modules BM)
- Integrated optical interface to PC, e.g. for system monitoring or setting parameters

Basic functions

Two-channel digital controller for:

- Control panel and boiler attachment
- Regulating two heating circuits via motorised adjustable mixers
- Can be used to extend models such as E6.0631 to max. 15 mixer circuits

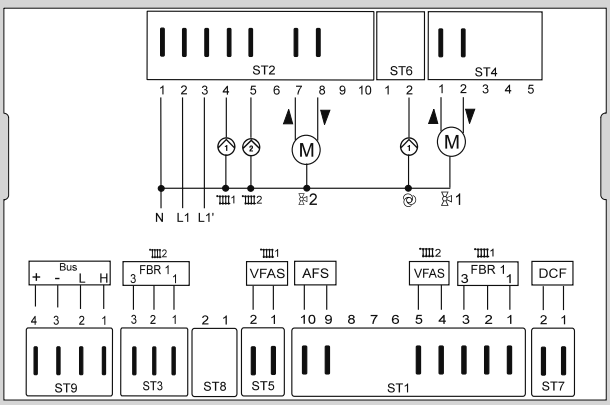
Features

E6.1111 has the following features as standard:

- Two-channel week timer with max. 3 switching times per channel and day
- Automatic summer/winter switchover
- Heating curve adaptation (with BM only)
- Heating optimisation dependent on room temperature (with BM only) or outdoor temperature
- Pump blocking protection
- Adjusts to building and system dynamics
- Integrated test functions for relays, sensors, etc.

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Heating curves	0 to 3
Room sensor influence	0 to 20
Mixer control	3 – 24 K P range
Control panel installation	138 x 92 mm, pursuant to DIN 43700



Heating controller K1

- Boiler minimum temperature limitation
- Adjustable boiler start-up relief temperature
- Dynamic hysteresis for improving burner operating time and reducing burner start-up
- Demand-related pump switching / automatic summer/winter switchover
- Pump runs on when burner “OFF”
- Automatic function recognition via sensors connected, with error message in case of sensor error
- Optional connection for remote control with room sensor

Basic functions

Digital heating controller with analogue controls for:

– Wall mounting
– Can be used as boiler controller with hot water or as mixer controller if required
– Weather-dependent boiler temperature control by switching burner (for ZPW)
– Weather-dependent flow temperature control by motorised mixer adjustment (for MP)
– Regulating hot water by switching feed pump
– Available either with analogue timer with day program or two-channel digital timer with week program

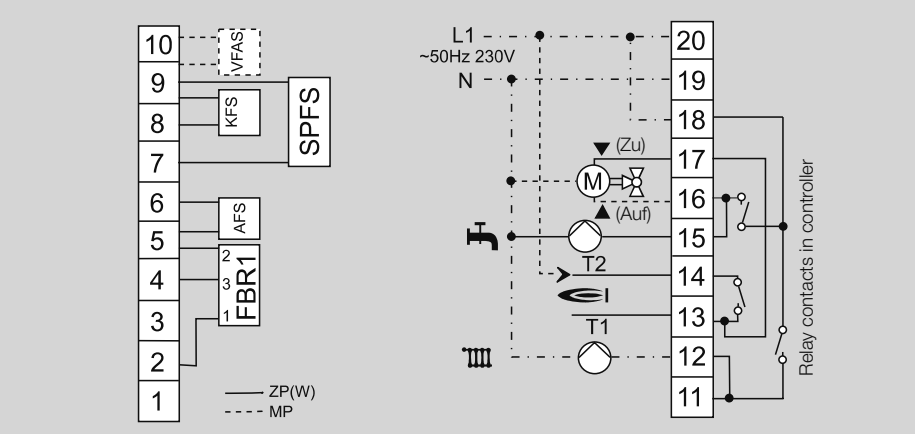
Features

K1 has the following features as standard:

– Analogue controls for all settings
– LED function display for burner, pumps
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Dynamic switching hysteresis for burner
– Minimum boiler temperature
– Adjustable boiler start-up relief temperature
– Hot water regulated either in parallel or priority mode
– Separate programs for heating and hot water if digital timer used (for ZPW)
– Adjustable room sensor influence when remote control FBR1 connected
– Integrated sensor monitor

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Switching hysteresis for mixer	± 0.5 K (PI setting)
Minimum temperature	10°C to 60°C
Boiler start-up relief	0°C to 50°C
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Hot-water temperature	10°C to 60°C
Heating curve	0.2 to 3
Pump run-on	10 minutes after burner is switched off
Frost protection temperature	-3°C
Dimensions	140 x 94 mm



Heating controller K3

- Maximum mixer temperature limitation
- Dynamic hysteresis for improving burner operating time and reducing burner start-up
- Demand-related pump switching / automatic summer/winter switchover
- Adjustable heating curve distance
- Connection for remote control/room sensor FBR1 for mixer circuit
- Automatic function recognition via sensors connected, with error message in case of sensor error
- Rates of rise for each heating circuit can be adjusted separately

Basic functions

Digital heating controller with analogue controls for:

- Wall mounting
- Weather-dependent controller for two heating circuits
- Weather-dependent boiler/flow temperature control (heating circuit 1) by switching burner
- Weather or room temperature-dependent flow temperature control (heating circuit 2) via motorised adjustable mixer
- Available either with analogue timer with day program or two-channel digital timer with week program

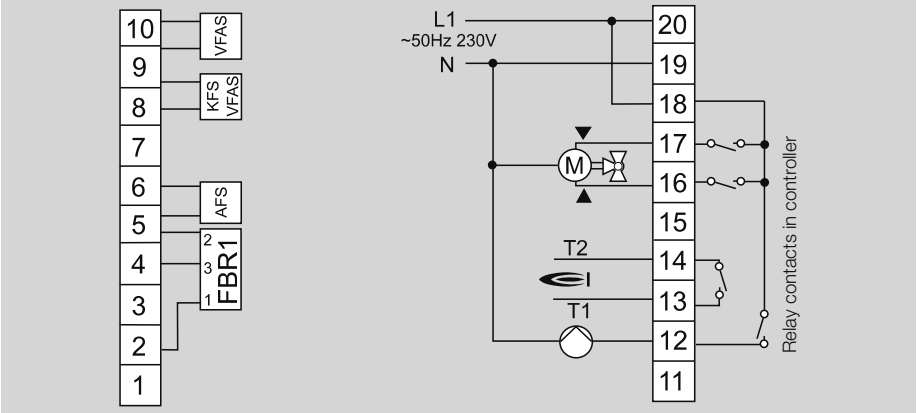
Features

K3 has the following features as standard:

- Analogue controls for all settings
- LED function display for burner, pumps, etc.
- Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
- Dynamic switching hysteresis for burner
- Separate programs for heating circuits when digital timer used
- Room sensor influences mixer circuit
- Integrated sensor monitor
- Special features on request: boiler temperature regulated via 0 – 5 V output (other voltage ranges possible)

Technical data

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Dynamic switching hysteresis	5 K to 20 K, 5 K after 5 minutes
Switching hysteresis for mixer	± 0.5 K (PI setting)
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Heating curve	0.2 to 3
Pump run-on	10 minutes after burner is switched off
Frost protection temperature	-3°C
Dimensions	140 x 94 mm



Heating controller ME

- ME supplied with mains cable, flow sensor and outdoor sensor connected
- Demand-related pump switching
- Automatic summer/winter switchover
- Automatic function recognition via sensors connected, with error message in case of sensor error
- Optional connection for remote control with room sensor

Basic functions

Digital heating controller with motor electronics and analogue controls for mounting directly on mixer:
ME80 for conventional flanged and threaded mixers
ME50 for miniature brass mixers such as Minimix

– Three-point mixer control
– Weather-dependent flow temperature control by motorised mixer adjustment
– Available either with analogue timer with day program or two-channel digital timer with week program

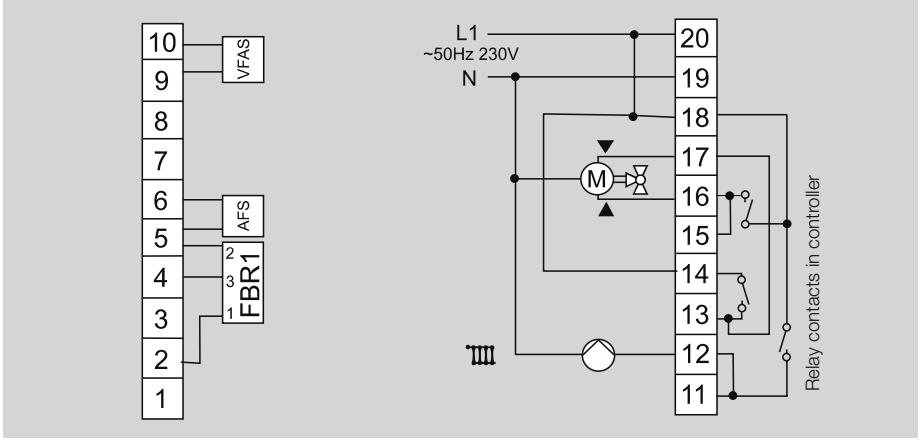
Features

ME has the following features as standard:

– Analogue controls for all settings
– LED function display for pumps
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Adjustable room sensor influence when remote control FBR1 connected
– Integrated sensor monitor

Technical data

	ME50	ME80
Mains connection	50 Hz, 230 V AC, 5 VA	Like ME50
Enclosure	IP 40 pursuant to EN 4711	Like ME50
Safety class	II (totally insulated)	Like ME50
Relay load	250 V AC, 2(2) A	Like ME50
Switching hysteresis	± 0.5 K (PI setting)	Like ME50
Room temperature	12°C to 28°C	Like ME50
Minimum temperature	4°C to 20°C	Like ME50
Heating curve	0.2 to 3	Like ME50
Frost protection temperature	-3°C	Like ME50
Torque	6 Nm	10 Nm
Dimensions	140 x 94 mm	Like ME50



Digital room temperature controller COMO

- An individual room temperature can be set for each heating time
- Time, heating programs, operating status and room temperature are permanently displayed
- Party function (time program extension)
- ECO function
- Holiday program for up to 99 days
- Frost protection function

Basic functions

Digital room temperature controller for:

- Wall mounting
- Room temperature-dependent temperature control
- Simple operation with text display and selection of various languages
- Two heating programs, switchable
- Up to three heating times can be set each day

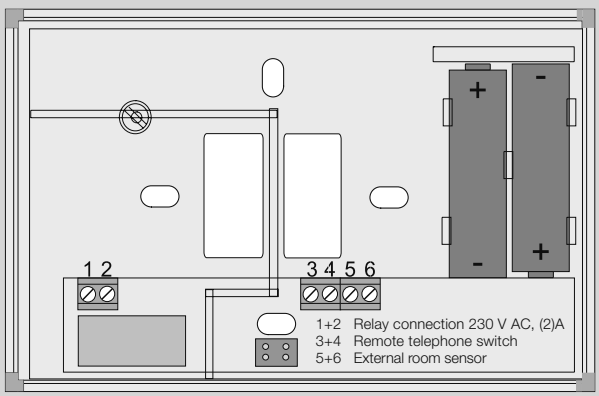
Features

COMO has the following features as standard:

- Proportional control or two-point control selectable
- Timer function (without room temperature controller influence)
- Heating optimisation
- Adjustable switching hysteresis and cycle times
- Display of switch-on time and switching frequency
- Additional connection for external room sensor RFB and remote telephone switch

Technical data

Supply voltage	Battery 2 x 1.5 V (mignon)
Relay switching capacity	2(2) A, 250 V AC
Power consumption	Batteries 2 x AA (mignon)
Battery service life	≥ 1 year
Enclosure	IP 40 pursuant to EN 60529
Safety class	III (safety extra low voltage) pursuant to VDE 0100
Power reserve when changing the battery	> 10 min.
Ambient temperature	
in operation	0°C to 50°C
Storage temperature	-30°C to 60°C
no condensation permitted	
Structure complies with	EN 60730 and EN 60335
EMC conditions pursuant to	EN 50081 and EN 50082 complied with
Permitted burst voltage coupling to sensor or mains cables (requirement as per EN 50081)	≤ 4 kV > 1 kV)
Complies with EU Directives	89/336/EEC (EMC) and 73/23/EEC (Low-Voltage Directive)
Connection equipment	Screw terminals
Dimensions	144 x 96 mm



Digital room temperature controller COMO OpenTherm

- An individual room temperature can be set for each heating time
- Permanent display of time, room temperature, heating programs and operating status
- Party function (time program extension)
- ECO function
- Holiday program for up to 99 days
- Frost protection function

Basic functions

Digital room temperature controller for:

- Wall mounting
- Plug & Play using standardised **OpenTherm** protocol
- Weather or room temperature-dependent temperature control
- Simple operation with text display and selection of various languages
- Two freely adjustable temperature/time programs with 3 heating times per day
- Hot-water program

Features

COMO OpenTherm is particularly suitable for wall-mounted modulating gas devices and has the following features:

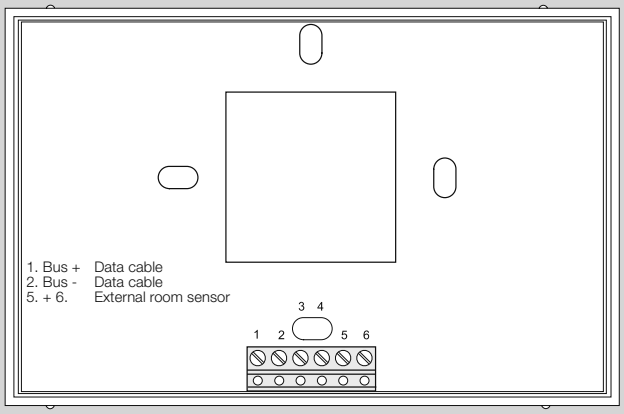
- Heating curve adaptation
- Integrated heating optimisation dependent on room or outdoor temperature
- Display of modulation level
- Display of the water pressure in the heating system (boiler-specific)
- Automatic filling of heating system (boiler-specific)
- Display of error messages in plain text
- Additional connection for external room sensor RFB

Communication

- 2-wire OpenTherm
- For OpenTherm-certified boilers only

Technical data

Supply voltage	max. 18 V DC
Supply	OpenTherm interface (max. 23 mA)
Enclosure	IP 40 pursuant to EN 60529
Safety class	III (< 24 V) pursuant to EN 60730
Ambient temperature in operation	0°C to 50°C
Storage temperature	-30°C to 60°C
EMC conditions pursuant to	EN 50081 / 50082 complied with
Permissible burst voltage coupling to Bus and sensor cables Requirement as per EN 50081	≤ 4 kV > 1 kV
Room sensor	NTC 5 kΩ at 25°C
Connection equipment	Screw terminals
Dimensions	144 x 96 mm



Operation-control module BM/BME

- Intelligent remote control for E6 series controllers
- Simple operating philosophy similar to E6 series controllers
- Text-supported display (multilingual)
- Room temperature setting can be changed by means of rotary knob
- Heating time can be extended at the touch of a button (party circuit)
- 3 freely programmable pairs of switching times per day
- Max. 3 normal temperatures and 1 minimum temperature

Basic functions

Intelligent operation-control module for:

- Wall mounting
- Regulating room temperature in connection with E6 series controllers
- Scanning and programming of heating circuit data such as temperatures, heating curve, heating program, etc.
- Room temperature-dependent heating optimisation

Features

BM has the following features as standard:

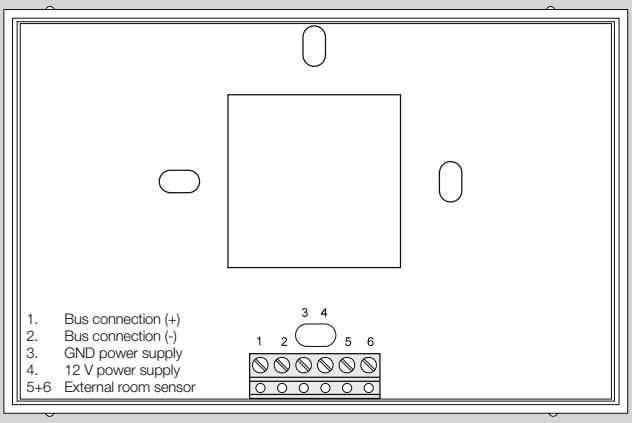
- Easy-to-read LCD display showing time, temperature and system status
- Easy to operate with just three buttons and text support
- Automatic switching between standard display and information/programming mode by opening front flap
- Programmed room temperature can be temporarily changed by means of rotary knob
- Power supply via communication wire (data bus) to E6
- Additional connection for external room sensor RFB

Communication

- BM: 4-wire CAN-BUS
- BME: 2-wire BUS

Technical data

Supply voltage	= 12 V DC ± 15%
Enclosure	IP 40 pursuant to EN 60529
Safety class	III (< 24 V DC)
Power reserve	< 10 hours
EMC conditions	EN 50081 / 50082 complied with
Permissible burst voltage coupling to Bus and sensor cables Requirement as per EN 50081	 ≤ 4 kV > 1 kv
Room sensor	NTC 5 kΩ at 25°C
Dimensions	144 x 96 mm



Solar differential controller SD1

- Display
- Simple operating philosophy
- For use with flat and tubular collectors

Basic functions

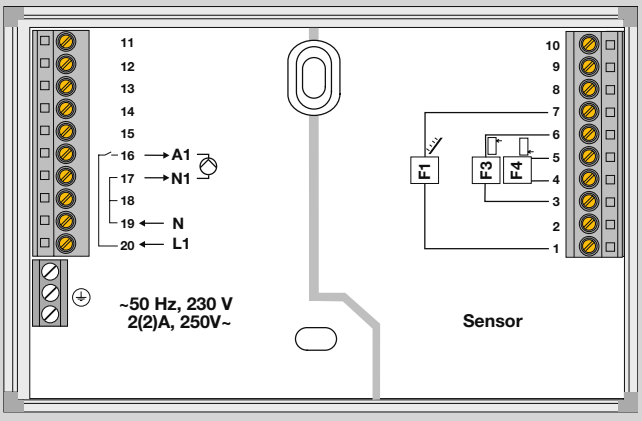
- Wall-mounted housing
- Selectable hydraulic diagrams
- Hysteresis adjustable from 1 to 30 K
- Adjustable switching thresholds
- Pump kick function can be activated
- Pump blocking protection
- Heat volume calculation
- Daily yield
- Total yield

Features

- Easy-to-read LCD display to show temperatures, operating statuses and heat yield
- 3 sensor inputs; collector sensor with PT1000 test resistance can be connected
- 1 relay output

Technical data

Mains connection	230 V ± 10%; 50 Hz; 4 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC; 2(2) A
Hysteresis	Can be set from 1 to 30 K
Sensor resistance	F1 test resistance PT1000, 1 kOhm ±0.2% at 0°C F3 and F4 test resistance 5 kOhm ±1% at 25°C
Dimensions	148 x 96 mm



Solar differential controller SD2

- Display
- Simple operating philosophy
- For use with flat and tubular collectors

Basic functions

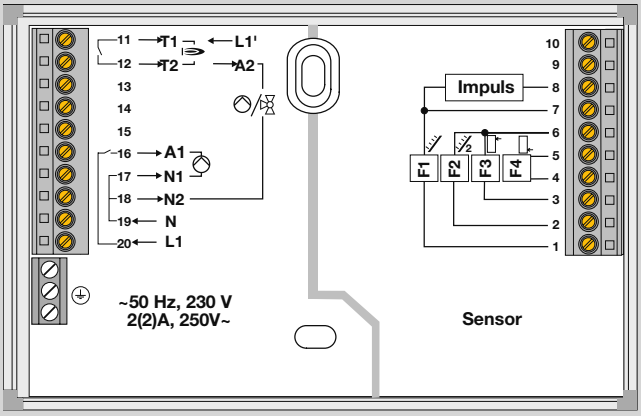
- Wall-mounted housing
- Selectable hydraulic diagrams
- Hysteresis adjustable from 1 to 30 K
- Adjustable switching thresholds
- Pump kick function can be activated
- Pump blocking protection
- Heat volume calculation
- Flow rate measurement sensor can be connected
- Daily yield
- Total yield

Features

- Easy-to-read LCD display to show temperatures, operating statuses and heat yield
- 4 sensor inputs; collector sensor with PT1000 test resistance can be connected
- 2 relay outputs; floating contact, switching, for second heat generator

Technical data

Mains connection	230 V ± 10%; 50 Hz; 4 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V AC; 2(2) A
Hysteresis	Can be set from 1 to 30 K
Sensor resistance	F1 and F2 test resistance PT1000, 1 kOhm ± 0.2% at 0°C F3 and F4 test resistance 5 kOhm ± 1% at 25°C
Dimensions	148 x 96 mm



Mixer module MM1/ME80-MM1

- Demand-related pump switching
- Automatic summer/winter switchover
- Automatic function recognition via sensors connected, with error message in case of sensor error
- Only in conjunction with operation-control module BM

Basic functions

– Digital heating controller with analogue controls
– Three-point mixer control
– Weather-dependent flow temperature control by motorised mixer adjustment

Features

MM1 has the following features as standard:

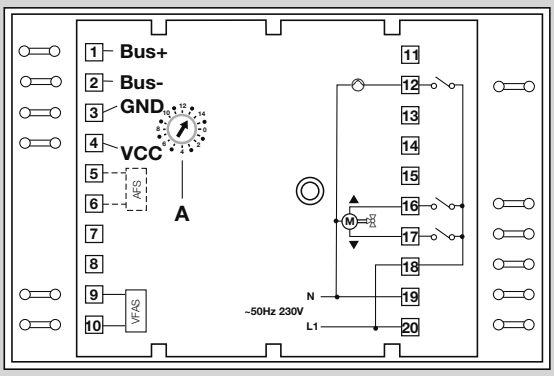
– Analogue controls for all settings
– LED function display for pumps
– Automatic summer/winter switchover (heating “OFF” when outdoor temperature > set room temperature)
– Room sensor influence can be adjusted in operation-control module BM
– Integrated sensor monitor
– Mode-selector switch

Versions

– MM1 for wall mounting in surface-mounted housing incl. flow sensor
– ME80-MM1 for mounting directly on mixer, incl. connected flow sensor and mains cable, universal adapter plate

Technical data ME80

Mains connection	50 Hz, 230 V AC, 5 VA
Enclosure	IP 40 pursuant to EN 4711
Safety class	II (totally insulated)
Relay load	250 V AC, 2(2) A
Switching hysteresis	± 0.5 K (PI setting)
Room temperature	12°C to 28°C
Minimum temperature	4°C to 20°C
Heating curve	0.2 to 3
Frost protection temperature	-3°C
Torque	6 Nm
Dimensions	140 x 94 mm



Fixed value controller MM2

Digital heating controller with analogue controls

- For use as wall-mounted controller or attached to servo motor
- Return temperature increase by pump (injection method)
- or return temperature increase by mixer
- or fixed flow temperature control for low-temperature systems
- or fixed flow temperature control for air heating systems
- or fixed flow temperature control for swimming pools.

Special features

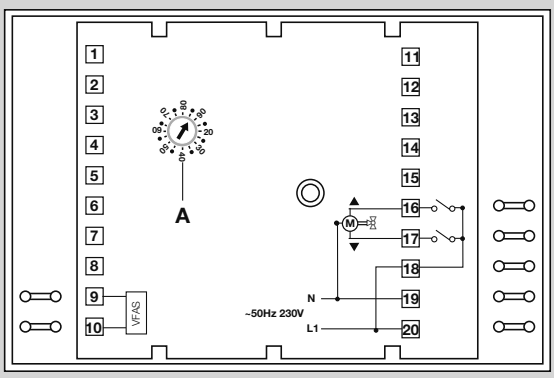
– Adjustable temperature setpoint (20°C to 90°C)

Features

– LED function display Mixer closed, Mixer open/Pump on
– Mode-selector switch: standby, normal operation

Technical data

Mains connection	50 Hz, 230 V, 5 VA
Enclosure	IP 40 pursuant to EN 60529
Safety class	II (totally insulated)
Relay load	250 V, 2(2) A
Default temperature setpoint	50°C



Servo motors

Servo motor SM 70

with universal attachment plate and retractable mixer lever. Mounted with mixer-specific attachments sets (order separately).

Adjustment angle:	15° – 345°, adjustable
Mains connection:	230 V AC, 50 Hz, 3.5 VA
Adjustment time:	130 s/90°
Torque:	10 Nm, with blocking protection
Safety class:	I pursuant to EN 60730 (VDE 0100)
Enclosure:	IP 41 pursuant to EN 60730 (DIN 40050)

Servo motor SM 70/3

As SM 70 but with additional limit switch

SM 70, ME 80 attachment sets

Attachment set 1:	universal
Attachment set 3:	Centra Compact, ZRK and DRK
Attachment set 4:	Viessmann NW 25 and AXA NW 20-32
Attachment set 5:	Elesta, ESBE, PAW, L + S
Attachment set 6:	Centra
Attachment set 9:	Centra ZR, DR
Attachment set 11:	Centra DRU

Servo motor SM 40

The SM 40 is particularly suitable for miniature mixers, e.g. the Minimix. The servo motor can be used with a number of different makes of mixer with the corresponding adapters (order separately). The motor is mounted directly on the mixer and is fitted with a 2 m connection cable in the factory.

Adjustment angle:	90°
Mains connection:	230 V AC; 50 Hz; 1.3 VA
Adjustment time:	150 s/90°
Torque:	6 Nm, with blocking protection
Safety class:	I pursuant to EN 60730 (VDE 0100)
Enclosure:	IP 41 pursuant to EN 60730 (DIN 40050)

Installation parts SM 40 for:

Kromschröder, WITA, H mixer
ESBE, Thermomix
Holter Compact
L&S
Honeywell
Pommerening

Installation parts SM 50 for:

H and Minimix
ESBE, Thermomix
Holter Compact, Kromschröder
PAW, Pommerening

Accessories

Sensors / Remote controls

Outdoor sensor AFS
with 1010 Ω PTC metering element at 25°C
Measuring range: -39°C to +60°C
Two-core connection

Flow sensor VFAS
with 1010 Ω PTC metering element at 25°C
Measuring range: 0°C to +105°C
3 m two-core connection cable

Boiler sensor KFS
with 1010 Ω PTC metering element at 25°C
Measuring range: 0°C to +105°C
2 m two-core connection cable

Storage tank sensor SPFS
With 1010 Ω PTC metering element at 25°C with pressure spring for immersion tubes up to 1"
Measuring range: 0°C to +105°C
3 m two-core connection cable

Collector sensor KLFS
with 1010 Ω PTC metering element at 25°C
Measuring range: -40°C to +180°C
3 m two-core silicon cable

Sensors for SD controllers

Flow sensor VF
with 5000 Ω NTC metering element at 25°C
Measuring range: 0°C to +105°C
2 m two-core connection cable

Storage tank sensor SPF
with 5000 Ω NTC metering element at 25°C
Measuring range: 0°C to +105°C
3 m two-core connection cable

Collector sensor KLF1000
with 1010 Ω PT 1000 metering element at 0°C
Measuring range: -40°C to +180°C
2.5 m two-core silicon cable

Flow sensor VF1000
with 1010 Ω PT 1000 metering element at 0°C
Measuring range: -40°C to +180°C
3 m two-core connection cable

Remote control with room sensor FBR1
for changing the room temperature setting
Poti sun setting range: ±5 K with heating program switch
– Constant normal temperature
– Constant minimum temperature
– Timer program (automatic mode)
Three-core connection

External room sensor RFB for Como, Como OpenTherm and BM

DCF receiver
For automatic time setting for the heating system using the time signal that is broadcast continuously. Keeps to the exact time always and requires no manual summertime / wintertime switchover.

Wall-mounted housing for E6
For simple wall mounting of the heating controller E6. Completely pre-wired connection terminals. Comfortable installation due to its large wiring space. Mains and extra low voltage separate in compliance with EN 60730. Enclosure: IP 40.

Interface converter CoCo1
To convert a 2-wire interface into a 4-wire interface

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