QUICK GUIDE

KA 5578-E EN

Translation of original instructions



TROVIS 5578-E Heating and District Heating Controller
With graphics display

CE

Edition February 2026

Definition of signal words

⚠ DANGER

Hazardous situations which, if not avoided, will result in death or serious injury

⚠ WARNING

Hazardous situations which, if not avoided, could result in death or serious injury

NOTICE

Property damage message or malfunction

Note

Additional information

Tip

Recommended action

Note on this quick guide

This Quick Guide KA 5578-E EN does not replace the mounting and operating instructions for the device. Observe the safety instructions as well as the warnings and caution notes specified in the mounting and operating instructions.

⇨ For the safe and proper use of this quick guide, read it carefully and keep it for later reference.

⇨ If you have any additional questions not related to the contents of this quick guide, refer to the associated mounting and operating instructions.

Device: **TROVIS 5578-E Heating and District Heating Controller**

Associated Mounting and Operating Instructions: **EB 5578-E EN**

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1 Warranty

SAMSON constantly enhances its products and, therefore, reserves the right to change its products at any time without notice.

SAMSON does not assume any liability for the accuracy or completeness of this document. Moreover, SAMSON does not guarantee that the buyer can use products for a particular purpose. SAMSON rejects any liability for claims by the buyer, especially claims for compensation including lost profits or any other financial loss, except the damage was caused intentionally or by gross negligence. If an essential term of the contract is breached by negligence, SAMSON's liability is limited to the foreseeable damage.

2 Safety instructions

The device is to be mounted, started up or operated only by trained and experienced personnel familiar with the product. Proper shipping and storage are assumed.

The device is designed for use in low-voltage installations. For wiring and maintenance, you are required to observe the relevant safety regulations.

This quick guide is intended to provide the necessary information for operating the device.

3 Electrical connection

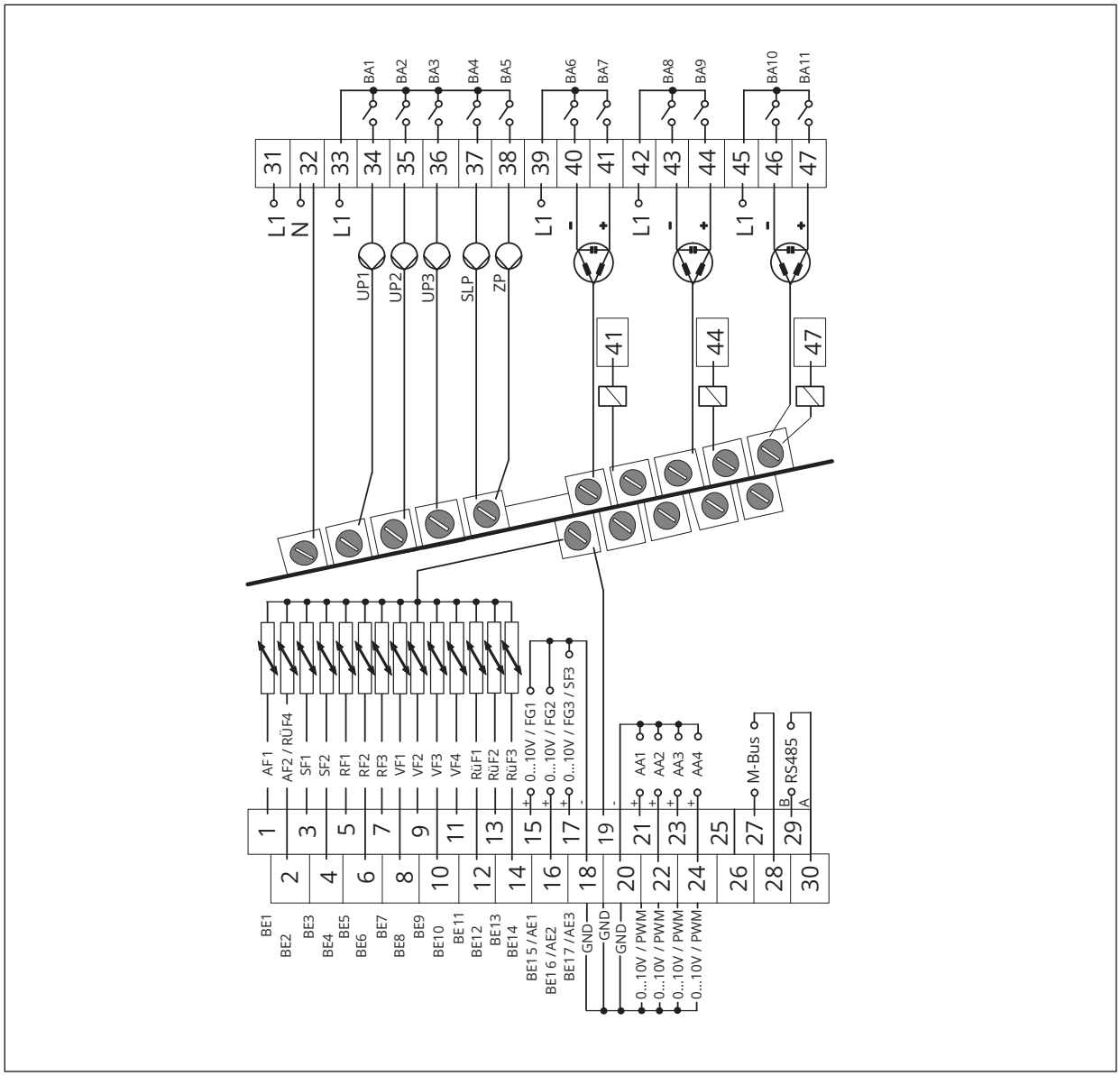


Fig. 1: *Electrical connection · TROVIS 5578-1113*

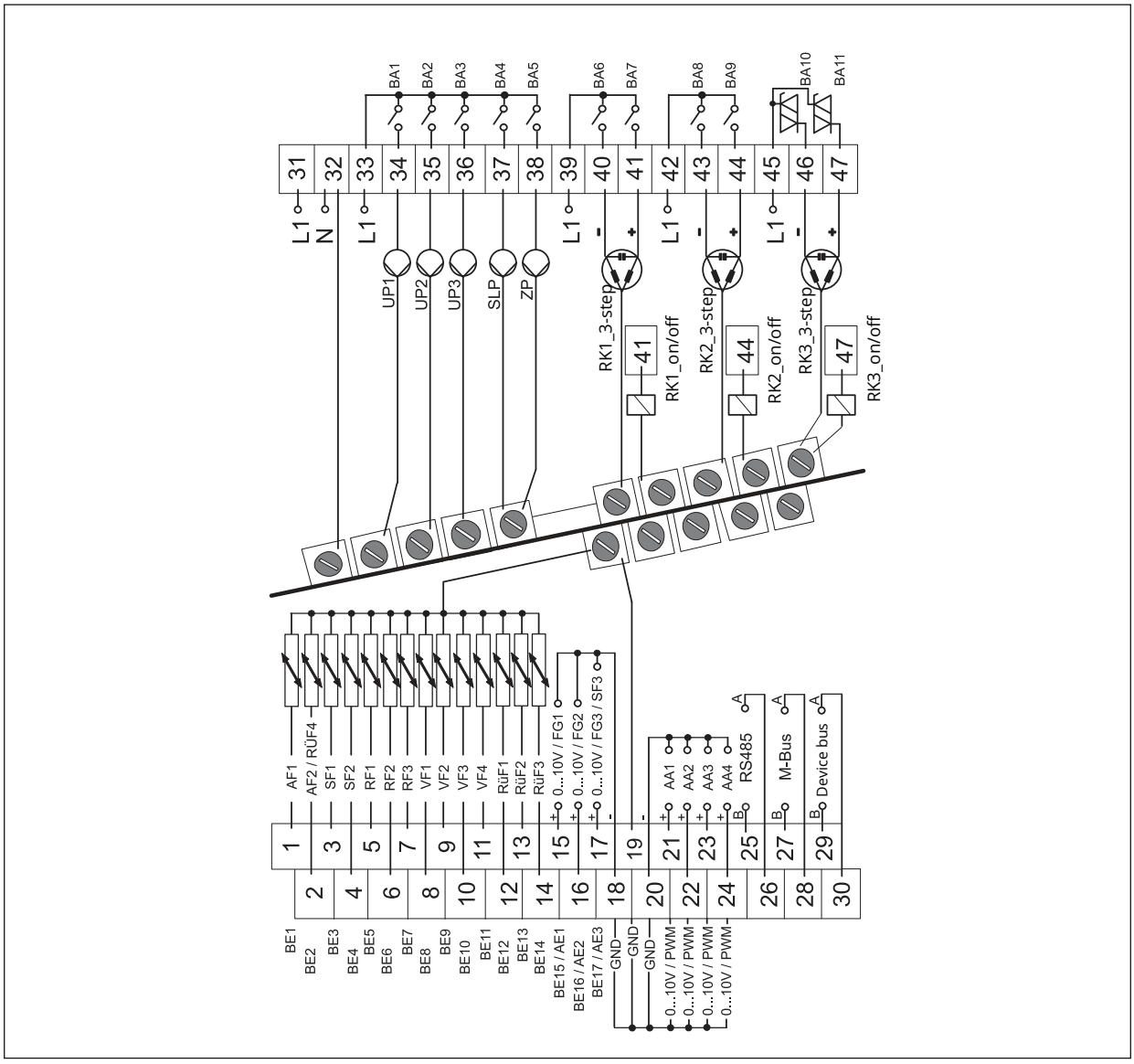


Fig. 2: *Electrical connection · TROVIS 5578-1114/TROVIS 5578-1115*

Abbreviations

AA	Analog output
AE	Analog input
AF	Outdoor sensor
BA	Binary output
BE	Binary input
FG	Potentiometer
PWM	Pulse width modulation
RF	Room sensor
RK	Control circuit
RüF	Return sensor
SF	Storage tank sensor
SLP	Storage tank charging pump
UP	Circulation pump (heating)
VF	Flow sensor
ZP	Circulation pump (DHW)

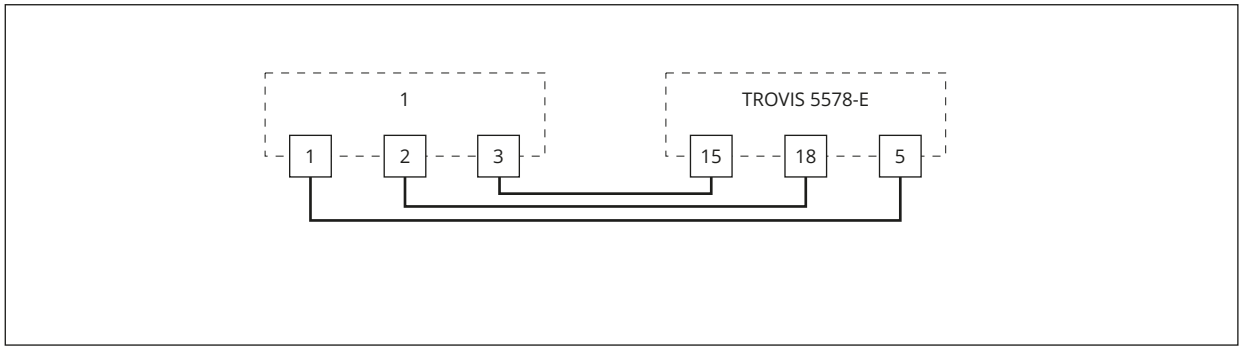


Fig. 3: *Wiring of a room panel for RK1*

1 Type 5257-5(x) Room Panel; Type 5244 no longer available.

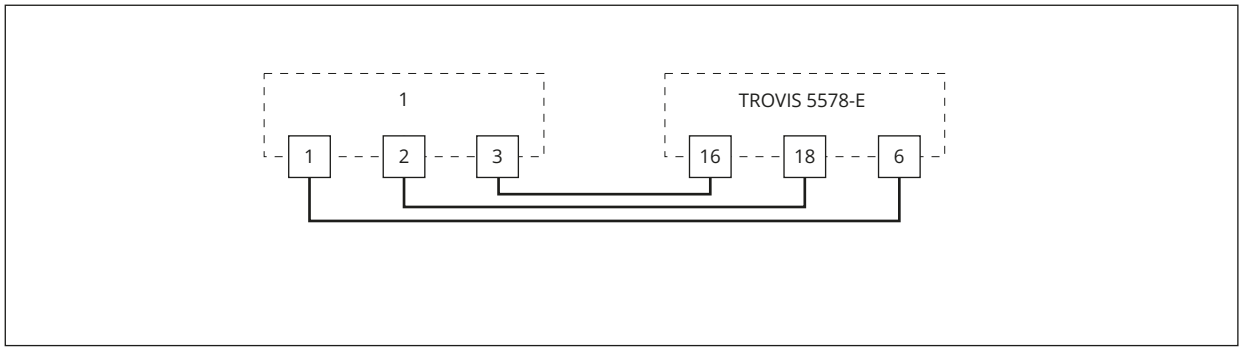


Fig. 4: *Wiring of a room panel for RK2*

1 Type 5257-5(x) Room Panel; Type 5244 no longer available.

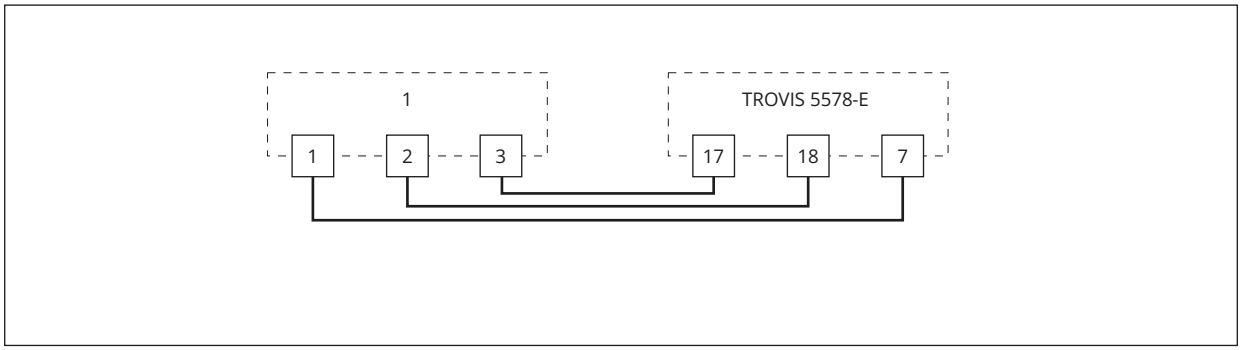


Fig. 5: *Wiring of a room panel for RK3*

1 Type 5257-5(x) Room Panel; Type 5244 no longer available.

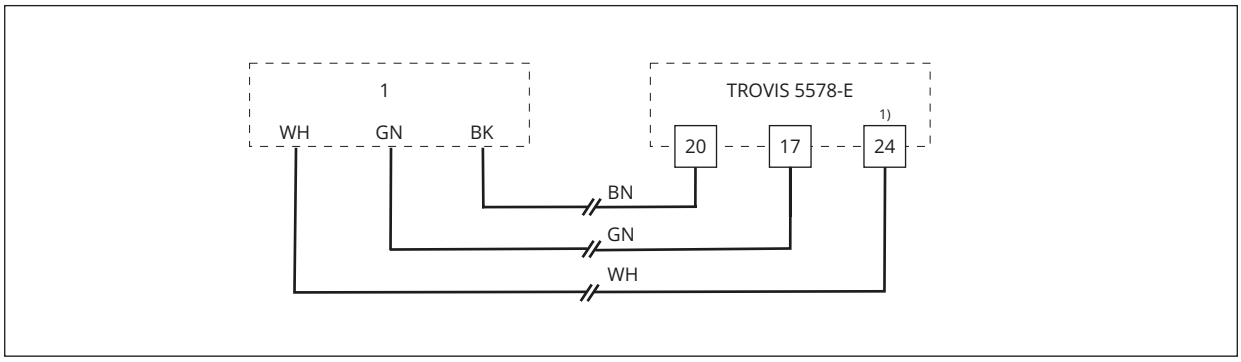


Fig. 6: *Connection of a water flow sensor*

1 Water flow sensor

Table 1: *Permissible conductor cross-section for terminals*

Cable	Conductor cross-section
Single-wire	0.33 to 2 mm²
Multi-wire	0.33 to 2 mm²

Length of insulation to be stripped off the conductor ends: 6 mm

4 Operation

The heating controller is operated on site using the operating controls on the front.

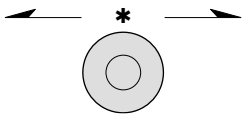
4.1 Operating controls

The operating controls are located in the front panel of the heating controller.

The rotary pushbutton is used to select readings, parameters and function blocks.

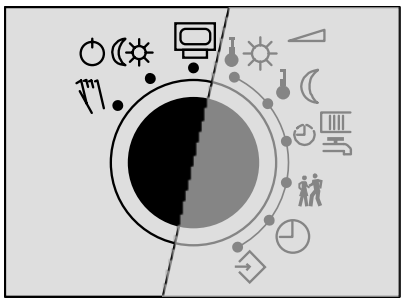
The rotary switch is used to set the operating mode and the key parameters for each control circuit.

Rotary pushbutton

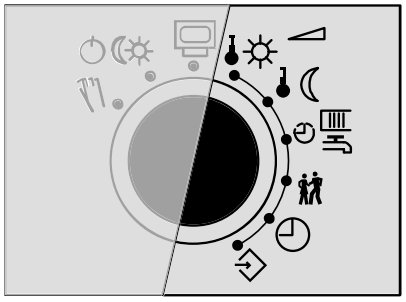


↻	Turn Select readings, parameters and function blocks.
✳	Press Confirm adjusted selection or settings.

Rotary switch



- Operating level
- Operating modes
- Manual level



- Day set point (rated room temperature)
- Night set point (reduced room temperature)
- Times-of-use for heating/DHW
- Special time-of-use
- Time/date
- Settings (parameter and configuration level)

4.2 Operating the heating controller on a smartphone

The TROVIS 5578-E Heating and District Heating Controller can be operated on a smartphone. Access to the myTROVIS app is required in this case.



▶ myTROVIS

5 Set-up

5.1 Selecting the operating mode

The heating controller can be operated in the following modes:

Day mode (rated operation):

Regardless of the programmed times-of-use and summer mode, the set points relevant to rated operation are used by the controller.

Icon:

Night mode (reduced operation):

Regardless of the programmed times-of-use, the set points relevant to reduced operation are used by the controller.

Icon:

Control operation deactivated:

Regardless of the programmed times-of-use, control operation of the heating circuits and DHW heating remains deactivated. The frost protection is activated, if need be.

Icon:

Icons when the frost protection is activated: HC
DHW

Automatic mode:

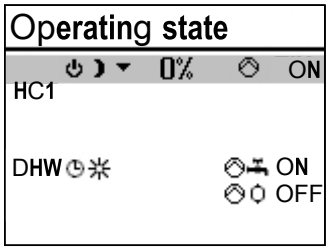
During the programmed times-of-use, the controller works in day mode (rated operation). Outside these times-of-use, the controller is in night mode (reduced operation), provided control operation has not been deactivated due to the outdoor temperature. The heating controller switches automatically between both operating modes.

Icon within the times-of-use:

Icon outside the times-of-use:

Manual mode:

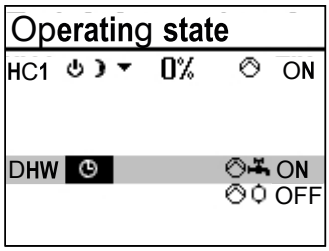
Valves and pumps can be controlled manually (see Chapter 5.6 for further details).

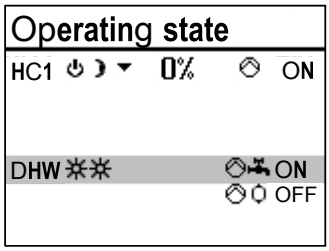


Turn the rotary switch to (operating modes).
The operating states of all system control circuits are displayed:
- Heating circuit HC1
- Heating circuit HC2
- Heating circuit HC3
- Heating circuit HC11
- Heating circuit HC12
- Heating circuit HC13
- DHW heating

Only the control circuits that can be controlled by the selected system are available for selection.

Select the control circuit.





∗ Activate editing mode for the control circuit.
The operating mode is shown inverted on the display.
() Select operating mode:
- Automatic mode
- Day mode
- Night mode
- System deactivated

∗ Confirm the operating mode.

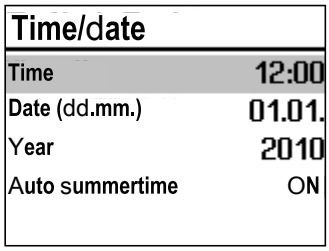
The heating controller is usually in the automatic mode.

5.2 Schedules

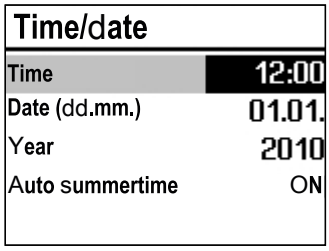
The controller operates according to the programmed schedules in automatic mode.

5.2.1 Setting the time and date

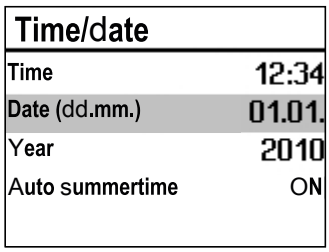
The current time and date need to be set immediately after start-up and after a power failure lasting more than 24 hours. This is the case when the time blinks on the display.



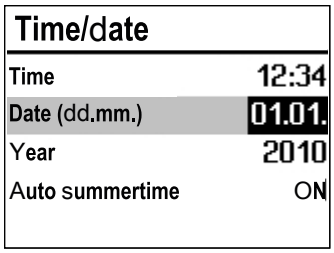
Turn the rotary switch to ⏲ (time/date).
The current time is selected (highlighted in gray).



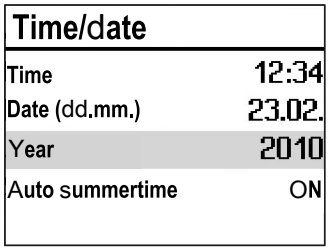
∗ Activate editing mode for the time.
The time reading is inverted.
() Change the time.
∗ Confirm the time setting.



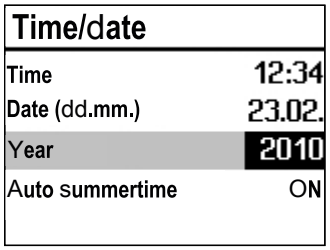
() Select 'Date' (dd.mm).



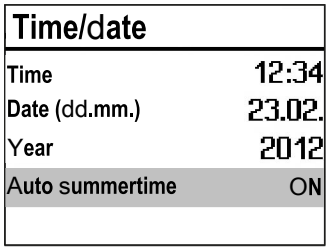
∗ Activate editing mode for the date.
The date reading is inverted.
() Change date (day.month).
∗ Confirm the date setting.



() Select 'Year'.

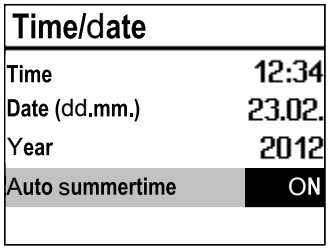


∗ Activate editing mode for the year.
The year reading is inverted.
() Change the year.
∗ Confirm the year setting.



Deactivate or activate the automatic summer/standard time switchover as required.
() Select automatic summer/standard time switchover.

∗ Activate the editing mode for automatic summer/standard time switchover.
The current setting is shown inverted on the display:
ON = Summer/standard time switchover active
OFF = Summer/standard time switchover not active



() Deactivate or activate the automatic summer/standard time switchover.
∗ Confirm deactivation/activation.
Turn the rotary switch to ⧉ (operating level).

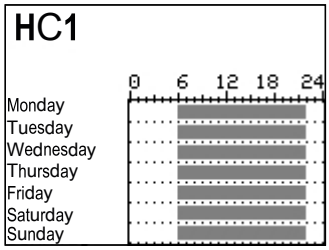
i *Note*

The correct time remains displayed after a power failure of 24 hours. Normally, the time is still correct at least 48 hours after a power failure.

5.2.2 Setting the times-of-use

Three times-of-use can be programmed for each day of the week.

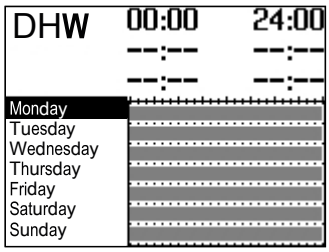
Parameters	Default		Value range
	HC1, HC2, HC3, HC11, HC12, HC13	DHW, ZP	
Start first time-of-use	06:00	00:00	
Stop first time-of-use	22:00	24:00	
Start second time-of-use	--:--	--:--	00:00 to 24:00 h
Stop second time-of-use	--:--	--:--	in steps of 15 minutes
Start third time-of-use	--:--	--:--	
Stop third time-of-use	--:--	--:--	



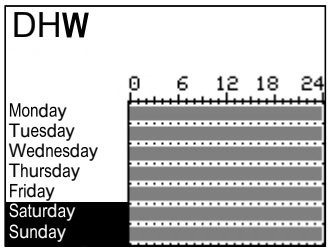
Turn the rotary switch to ⏲ (times-of-use).
The first control circuit is displayed together with its programmed times-of-use.

- ↺ Program the times-of-use of another control circuit, if required:
  - Heating circuit HC2
  - Heating circuit HC3
  - Heating circuit HC11
  - Heating circuit HC12
  - Heating circuit HC13
  - DHW heating
  - Circulation pump ZP

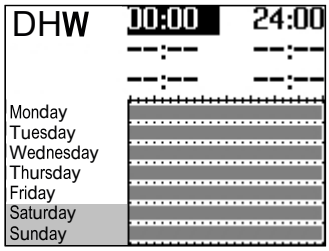
Only the control circuits that can be controlled by the selected system are available for selection.



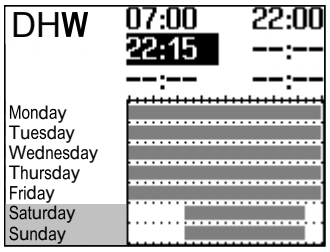
✳ Activate editing mode for the control circuit. The times-of-use for Monday are displayed.



↺ Select period/day for which the times-of-use are to be valid. The times-of-use can be programmed for individual days or for a block of days, e.g. Monday to Friday, Saturday and Sunday or Monday to Sunday. The selected days are shown inverted on the display.

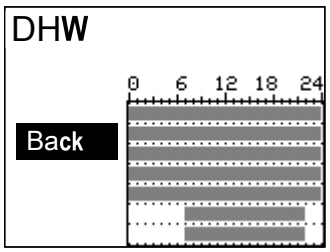


✳ Activate editing mode for the period/day.
The start time of the first time-of-use period can now be edited (inverted reading).
↺ Change start time.
The time is set in steps of 15 minutes.
✳ Confirm the start time.
The stop time of the first time-of-use period can now be edited.
↺ End stop time.
The time is set in steps of 15 minutes.



∗ Confirm the stop time.
The start time of the second time-of-use period can now be edited.

To set the second and third times-of-use periods, repeat steps highlighted in gray. If no further times-of-use are to be programmed for the selected time period/day, exit the menu by confirming the indicated start time twice (2x ∗). Proceed in the same manner to program further periods/days.



After setting all times-of-use:

ↀ Select 'Back'.

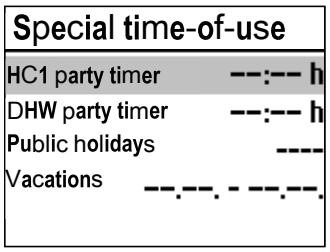
∗ Exit the times-of-use setting.

Turn the rotary switch to ⊟ (operating level).

5.2.3 Setting the party timer (special time-of-use)

Rated operation in the corresponding control circuit (HC1, HC2, HC3 or DHW) is started or continued for the time period set in the party mode. When the countdown has finished, the party timer returns to --:--.

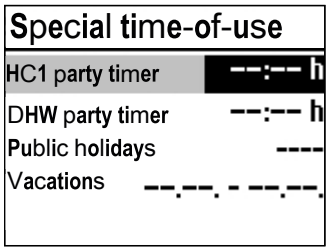
Parameters	Default	Value range
HC1 party timer	--.-- h	0 to 48 h; in steps of 15 minutes
HC2 party timer	--.-- h	0 to 48 h; in steps of 15 minutes
HC3 party timer	--.-- h	0 to 48 h; in steps of 15 minutes
DHW party timer	--.-- h	0 to 48 h; in steps of 15 minutes



Turn the rotary switch to ⚷ (special times-of-use).
The party timer for the first control circuit is now selected.

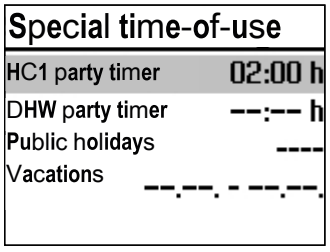
ↀ Program the times-of-use of another control circuit, if required:
- Heating circuit HC2
- Heating circuit HC3
- DHW heating

Only the control circuits that can be controlled by the selected system are available for selection.



∗ Activate editing mode for the party timer.
The party timer is now in the editing mode (inverted display).

ↀ Extend day mode as required.
The time is set in steps of 15 minutes.



∗ Confirm setting.
After setting the party timer:
Turn the rotary switch to ⊟ (operating level).

i ***Note***

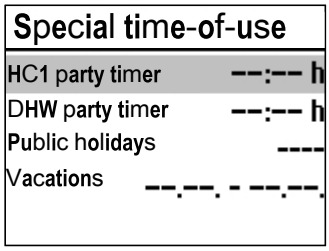
The party timer runs down in steps of 15 minutes.

5.2.4 Programming public holidays (special times-of-use)

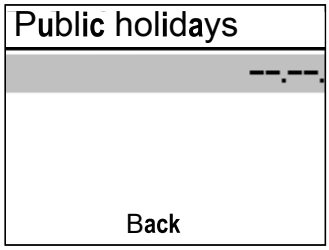
On public holidays, the times-of-use specified for Sunday apply.

A maximum of 20 public holidays can be entered.

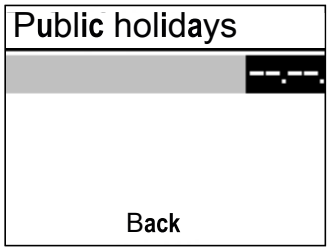
Parameters	Default	Value range
Public holidays	--.--	01.01 to 31.12



Turn the rotary switch to ⚒ (special times-of-use).
The party timer for the first control circuit is now selected.
↻ Select 'Public holidays'.

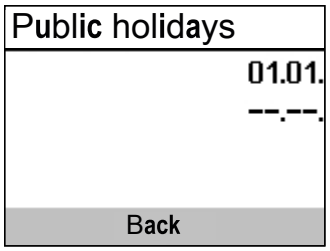


✳ Start the public holiday setting.
The first public holiday setting is now selected. --:-- is displayed if no public holidays (default setting) have been programmed.
↻ If applicable, select '--:--'.



✳ Activate the editing mode for public holidays.
↻ Set the date of the public holiday.
✳ Confirm the date.
Proceed in the same manner to program further public holidays.

Deleting public holidays:
↻ Select the holiday you wish to delete.
✳ Confirm the date.
↻ Select '--:--'.
✳ Confirm setting.
The public holiday is deleted.



After programming all public holidays:
- ↺ Select 'Back'.
- ✳ Exit the public holiday setting.

Turn the rotary switch to ⧉ (operating level).

i *Note*

Public holidays that are not assigned to a specific date should be deleted by the end of the year so that they are not carried over into the following year.

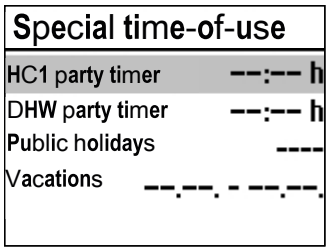
5.2.5 Programming vacation periods (special times-of-use)

The system runs constantly in reduced mode during vacation periods. A maximum of ten vacation periods can be entered. Each vacation period can be separately assigned to the heating circuits HC1, HC2, HC3 and DHW circuit or to all the control circuits in one go.

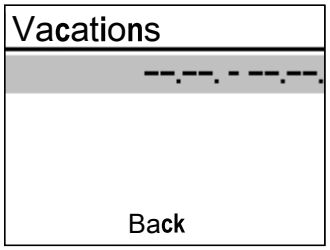
i *Note*

If a vacation period is programmed to apply to all control circuits, it also applies to control circuits HC11, HC12 and HC13.

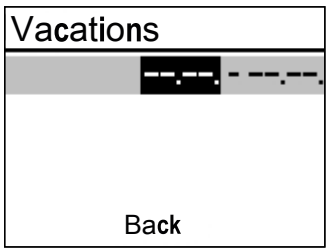
Parameters	Default	Value range
Vacation period	--.-- - --.--	01.01 to 31.12



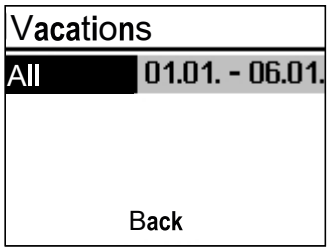
Turn the rotary switch to ⚒ (special times-of-use).
The party timer for the control circuit is now selected.
- ↺ Select 'Vacations'.



- ✳ Start the vacations setting.
  The first vacations setting is now selected. '--.-- - --.--' is displayed if no vacations (default setting) have been programmed.
- ↺ If applicable, select '--.-- - --.--'.



- ✳ Activate the editing mode for vacations.
  The start date can now be edited (inverted reading).
- ↺ Set the start date.
- ✳ Confirm the start date.
- ↺ Set the end date.



∗ Confirm the end date.
'All' is selected.
ʘ If the vacation period is only to be valid for one control circuit, select the required control circuit:
– Heating circuit HC1
– Heating circuit HC2
– Heating circuit HC3
– DHW heating
Only the control circuits that can be controlled by the selected system are available for selection.
The control circuits HC11, HC12 and HC13 are not available.
∗ Confirm.

i *Note*

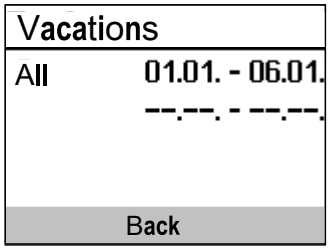
An active vacation period is indicated on the display by the ⩲ icon.

Proceed in the same manner to program further vacation periods.

Deleting vacation periods:

ʘ Select the start date of the period you wish to delete.
∗ Confirm.
ʘ Select '--.-- - --.--'.
∗ Confirm.

The vacation period is deleted.



After programming all public holidays:

ʘ Select 'Back'.
∗ Exit the vacations setting.

Turn the rotary switch to 🖵 (operating level).

i *Note*

Vacations should be deleted by the end of the year so that they are not carried over into the following year.

5.3 Entering day and night set points

The day and night set points can be programmed for each control circuit and for the deactivation values based on the outdoor temperature.

i *Note*

When the four-point characteristic mode without room sensor and the optimizing mode or flash adaptation is used, it is not possible to adjust the set points for the room temperature.

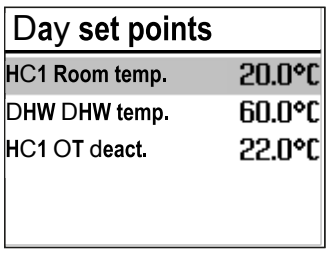
The associated control circuit is immediately switched off in automatic or night mode when the outdoor temperature exceeds the limit 'OT deactivation value' (heating) or falls below the limit 'OT deactivation value' (cooling). The valve is closed and the pump is switched off after t = 2 x Valve transit time. Heating or cooling immediately starts again when the outdoor temperature falls below or exceeds the limit respectively (minus 0.5 °C hysteresis).

Switch position 🌡☼

Parameters	Default	Value range
HC1 room temperature	20.0 °C	0.0 to 40.0 °C
HC1 room temperature	20.0 °C	0.0 to 40.0 °C
HC2 room temperature	20.0 °C	0.0 to 40.0 °C
HC3 room temperature	20.0 °C	0.0 to 40.0 °C
HC11 room temperature	20.0 °C	0.0 to 40.0 °C
HC12 room temperature	20.0 °C	0.0 to 40.0 °C
HC13 room temperature	20.0 °C	0.0 to 40.0 °C
DHW temperature	60.0 °C	Min. to max. DHW temperature
HC1 OT deactivation value	22.0 °C	0.0 to 50.0 °C
HC2 OT deactivation value	22.0 °C	0.0 to 50.0 °C
HC3 OT deactivation value	22.0 °C	0.0 to 50.0 °C
HC11 OT deactivation value	22.0 °C	0.0 to 50.0 °C
HC12 OT deactivation value	22.0 °C	0.0 to 50.0 °C
HC13 OT deactivation value	22.0 °C	0.0 to 50.0 °C

Switch position 🌡☾

Parameters	Default	Value range
HC1 room temperature	15.0 °C	0.0 to 40.0 °C
HC1 room temperature	15.0 °C	0.0 to 40.0 °C
HC2 room temperature	15.0 °C	0.0 to 40.0 °C
HC3 room temperature	15.0 °C	0.0 to 40.0 °C
HC11 room temperature	15.0 °C	0.0 to 40.0 °C
HC12 room temperature	15.0 °C	0.0 to 40.0 °C
HC13 room temperature	15.0 °C	0.0 to 40.0 °C
DHW temperature	40.0 °C	Min. to max. DHW temperature
HC1 OT deactivation value	+15.0 °C	–50.0 to +50.0 °C
HC2 OT deactivation value	+15.0 °C	–50.0 to +50.0 °C
HC3 OT deactivation value	+15.0 °C	–50.0 to +50.0 °C
HC11 OT deactivation value	+15.0 °C	–50.0 to +50.0 °C
HC12 OT deactivation value	+15.0 °C	–50.0 to +50.0 °C
HC13 OT deactivation value	+15.0 °C	–50.0 to +50.0 °C

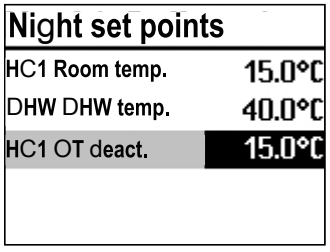


Turn the rotary switch to ☼ (day set point) or ☾ (night set point). The day and night set points appear on the display one after the other.
→ Only those day and night set points that can be controlled by the selected system are available for selection.

i *Note*

The deactivation values are located in a separate menu ('Deactivation values') for systems with three control circuits.

◊ Select the set point.

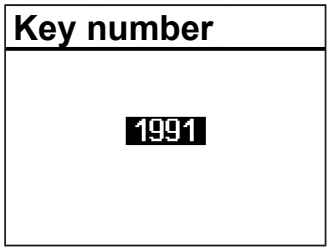


∗ Activate editing mode for the set point.
◊ Adjust the set point.
∗ Confirm setting.
Proceed in the same manner to adjust further set points.

After adjusting all the set points:
Turn the rotary switch to ▣ (operating level).

5.4 Reset to default settings

All parameters set over the rotary switch as well as parameters in the PA1, PA2, PA3, PA11, PA12 and PA13 parameter levels can be reset to their default settings. This does not apply to the maximum flow temperature and the return temperature limits in PA1 and PA2.



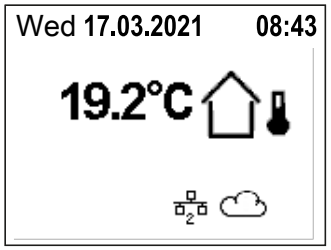
Turn the rotary switch to ⚙ (settings).
( ) Enter key number 1991.
✳ Confirm setting.
The default settings have been restored when the following icon appears on the controller display:



5.5 Information readings

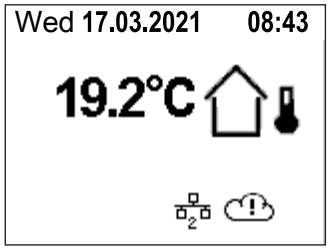
Different kinds of information can read off the heating controller display during operation. The heating controller display usually shows the date, time and a current temperature when the rotary switch is switched to the 'Operating level' position (🖵).

Modbus TCP/IP communication



Modbus TCP/IP connections

Number of active Modbus TCP/IP connections

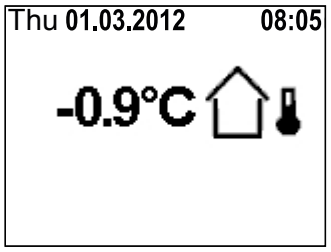


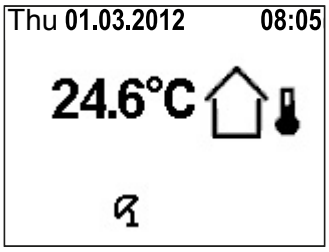
Status of connection to SAM DISTRICT ENERGY

Connection to SAM DISTRICT ENERGY active

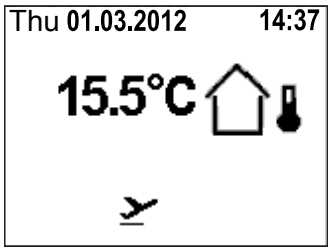
Connection to SAM DISTRICT ENERGY failed

Outdoor-temperature-compensated control · Current temperature = outdoor temperature



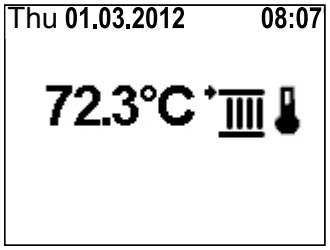


Deactivation depending on outdoor temperature active

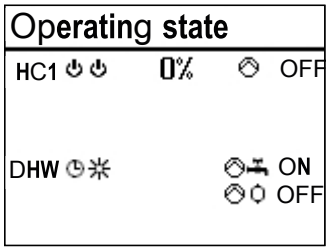


Vacation period active

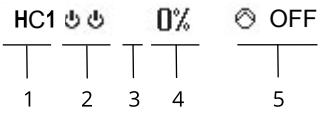
Fixed set point control · Current temperature = Flow temperature



Further information can be displayed by turning the rotary pushbutton:

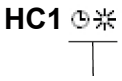


() Operating state:
The following applies for heating circuits HC1, HC2, HC3, HC11, HC12 and HC13:



1 Heating circuit
2 Current operating mode
3 Valve ▲ OPEN/valve ▼ CLOSED
4 Current positioning value
5 Circulation pump (heating) ON/OFF

The following applies for DHW heating:



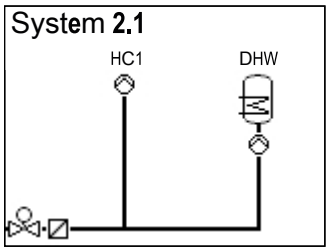
Current operating mode



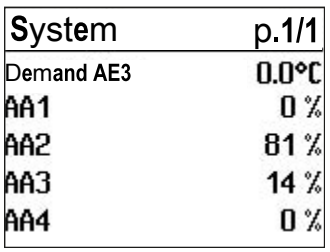
Pump ON/OFF

- Storage tank charging pump
- Circulation pump (DHW)
- Solar circuit pump

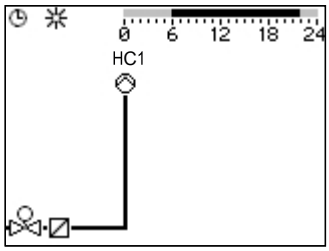
See Chapter 5.1 for further information.



() Selected system code number
See Chapter for further information.

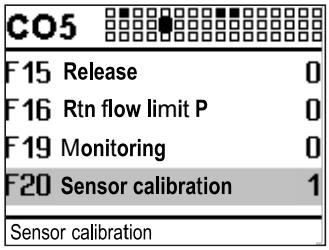


∗ Reading of analog output signals AA1 to AA4 as well as measured values for the entire system (e.g. measured values and limits of a flow rate or power limitation or the demand to be processed), if activated.

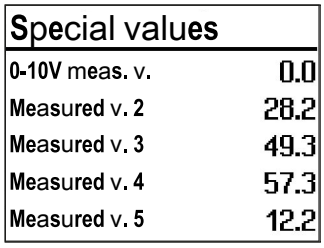


- Times-of-use (depending on system code number)
  - Heating circuit HC1
  - Heating circuit HC2
  - Heating circuit HC3
  - Heating circuit HC11
  - Heating circuit HC12
  - Heating circuit HC13
  - DHW heating

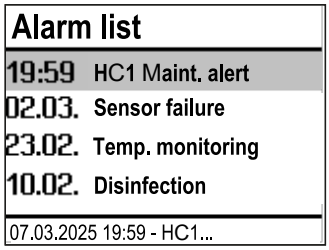
  The day mode times are highlighted in black on the time chart. Night mode and deactivation times are highlighted in gray on the time chart.
- ✳ Measured values, set points and limits of the system section shown are displayed.



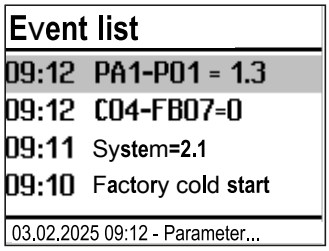
The 'DHW values' screen also includes information on the operating state of the DHW heating.
The following messages are generated:
- 'Standby'
- 'Monitoring'
- 'Circulation' (= circulation losses are compensated for)
- 'Demand'
- 'Charging'
- 'Lag time'
- 'Intermediate heating'
- 'Discharging protection'



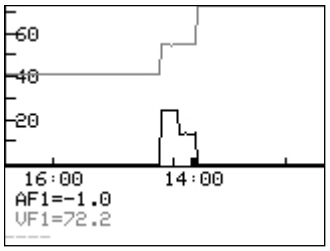
- Special values:
  Measured values from additional sensor inputs (not relevant to the closed-loop control) or from the 0 to 10 V inputs are displayed.



- Alarm list
  The last four alarm entries are listed.
- ✳ Open the alarm list and select further alarm entries [ ]. Further information on an alarm (including time and date when it occurred) runs across the display.



- Event list
  The last four event entries are listed.
- ✳ Open the event list and select further event entries [ ].
  Further information on an event (including time and date when it occurred) runs across the display.



- Trend-Viewer
  The standard graph shows the data measured by the outdoor sensor AF1 and flow sensor VF1 plotted over time.

Further information can be displayed by turning the rotary pushbutton:

Extended operating level

Information	
Modbus ID	5578
Serial number	65535
Software version	2.50
Hardware version	0.09

The following details on the controller version (device identification, serial number, software and hardware versions) and meter bus are displayed in the extended operating level.

Information	p.1/3
Modbus station	1
Logging memory	OFF
Solar operation	0 h
Flow rate 1	0
Special flags	3840

Turn the rotary switch to ⚙ (settings).
- Enter key number 1999.
- ✳ Confirm key number.

Turn the rotary switch to 🖵 (operating level).
- Select 'Information'.

Information	p.2/3
VF1-RüF1	--.-°C
Y1 avg mth bfr lst	10240
Y1 avg last month	0
Y1 avg this month	0
Binary inputs	

The additional 'Meter' screen is displayed, which includes the connection status and further meter data for meters 1 to 3 when the meter bus is activated (see Chapter). When the flow rate and/or power limitation is activated, the respective measured values and limits are also displayed after confirming the system scheme.

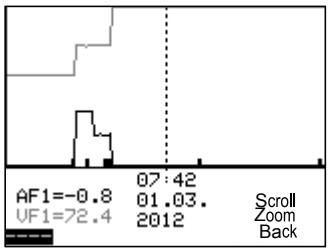
Information	p.3/3
Reason for reset	0x00
Ethernet module v.	2.00
IP addr.	172.30.39.203
Subnet	255.255.0.0

i *Note*

The additional information is hidden when the key number 1999 is entered again.
The key number 1999 cannot be used to change the controller's configuration and parameter settings. A separate key number exists for configuration and parameterization (see Chapter).

5.5.1 Adapting the Trend-Viewer

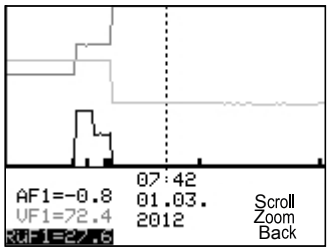
The standard graph shows the data measured by the outdoor sensor AF1 and flow sensor VF1 plotted over time.



∗ Open the Trend-Viewer.

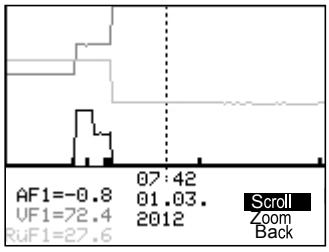
Adding measured values

- Select **– – – –** on the display.
- ∗ Activate editing mode for sensor selection.
- Select the sensor.
- ∗ Confirm.



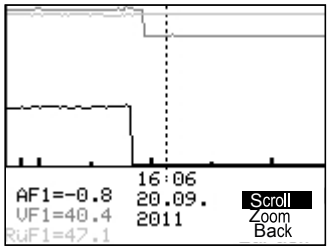
Deleting measured values

- Select the sensor whose measured values are no longer to be displayed.
- ∗ Activate editing mode for the sensor.
- Select **– – – –** on the display.
- ∗ Confirm deletion.

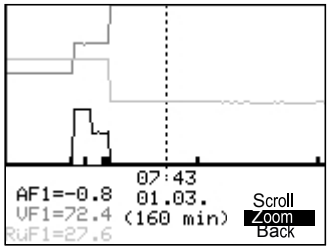


Shifting the time line

- Select 'Scroll'.
- ∗ Activate editing mode for the scroll function.

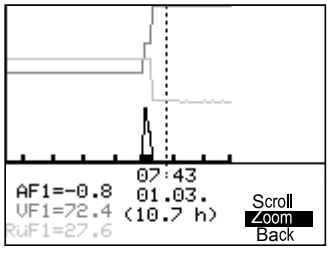


- Shift the time line.
- ∗ Confirm time display.



Zooming in/out

- Select 'Zoom'.
- ∗ Open zoom function.
- Zoom in or out.
- ∗ Confirm display.



Closing the Trend-Viewer

- Select 'Back'.
- ∗ Close the Trend-Viewer.

5.6 Operating the heating controller in manual mode

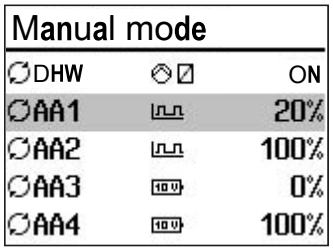
All of the outputs for the heating controller are performed in manual mode.

NOTICE

System damage caused by frost in manual mode.

The frost protection function is deactivated in the manual mode.

⇨ *Do not run the heating during cold weather in the manual mode for long periods of time.*



Turn the rotary switch to ⚒ (manual mode).
The outputs of the configured system are listed one after the other on the display.

- ↻ Select the output:
  - Positioning value
  - Circulation pump (heating)
  - Storage tank charging pump
  - Circulation pump (DHW)
  - Solar circuit pump
  - Analog 0 to 10 V signal
  - PWM signal
  - AA1 0 to 10 V signal
  - AA2 Analog output 2
  - AA3 Analog output 3
  - AA4 Analog output 4
- ✳ Activate editing mode for the output.
- ↻ Change the positioning value/switching state.
- ✳ Confirm the positioning value/switching state.
  The modified values remain active as long as the controller is in manual mode.

Turn the rotary switch to 🖵 (operating level). The manual mode is deactivated.

Note

The outputs of the heating controller are not affected by merely turning the rotary switch to ⚒ (manual mode). The outputs are only changed by entering or changing the positioning values or switching states.

6 Malfunctions

6.1 Error list

Sensor failure	=	Sensor failure
TROVIS I/O failure	=	TROVIS I/O communication error
Disinfection	=	Disinfection temperature not reached (see EB 5578-E EN)
Max. charging temp.	=	Max. charging temperature reached (see EB 5578-E EN)
External error	=	Error message from device bus
Temp. monitoring	=	Temperature monitor alarm
Unauthorized access error	=	Unauthorized access occurred (see EB 5578-E EN)
Binary alarm	=	Error message of a binary input
Meter bus error	=	Meter bus communication error
Heat meter error	=	Heat meter error registered

i *Note*

If error messages that can be confirmed are included in the list shown, you can decide whether you want to confirm them on exiting the error list.

KA 5578-E EN

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