

Application

Control of max. three control circuits. To control more circuits, several controllers can be linked by a device bus.
M-bus interface for three M-bus units.



The TROVIS 5578 Heating and District Heating Controller is used to control max. three control circuits:

- Control of a primary heat exchanger or boiler
Max. two mixing and one non-mixing heating circuit (all weather-compensated)/control of DHW heating in the secondary circuit
- Weather-compensated buffer storage tank control with solid-fuel boiler and solar circuit control and max. two mixing heating circuits
- Control of two weather-compensated heating circuits and a DHW heating with three valves in the primary circuit
- Control of three weather-compensated heating circuits with three valves in the primary circuit

Special features


- Rotary switches for direct access to the operating modes and essential parameters of the control circuits
 - Intuitive data retrieval and input by pressing and turning the pushbutton
 - 365-day clock with max. four time schedules and automatic summer time/winter time changeover; maximum three times-of-use per day (input in steps of 15 minutes)
 - Room panels may be connected for each heating circuit:
 - Convenient room panels for adjustment of the operating mode, the day and night set points, the times-of-use for heating, the controller clock and party mode. Additional outdoor and room temperature readings. Connection over device bus
 - Room panel to override operating mode and rated room temperature
 - Demand-driven control by set point demand by subsequent controllers over a device bus or 0 to 10 V signal: the primary circuit controls the maximum flow temperature demanded plus adjustable boost.
 - Heating characteristics optionally based on the gradient or based on four points; variable return flow temperature limitation
 - Adaptation: automatic adaptation of the heating characteristic (room temperature sensor required)
- Optimization: calculation of the best possible activation and deactivation times for the heating (room temperature sensor required)
 - Drying of jointless floors function with adjustable parameter settings
 - Updatable flash memory in controller (operating system)
 - Configuration and parameterization either using a memory module
 - Data logging function: analysis on the graphics display of the data saved in the operating data memory



Fig. 1: TROVIS 5578 Heating and District Heating Controller

Operation

The TROVIS 5578 Heating and District Heating Controller is adapted to the specific system by setting the appropriate system code number. To select the code number, refer to the system schematics described in the associated mounting and operating instructions. Additional sensors and/or functions which are not part of the system's basic configuration may be selected over function blocks.

Place the rotary switch to  and enter the code number to get to the different levels. For trained staff, the configuration levels used to set function blocks are indicated by "CO" and the parameter levels are indicated by "PA". For example, a clear distinction is made between two heating circuit levels and the domestic hot water level. Data is retrieved and entered at the controller using a rotary pushbutton. This process is facilitated by icons and plain text displayed on the LCD. The rotary switch is used to set the operating mode and the relevant parameters for each control circuit (Fig. 2).

M-bus interface

A maximum of three meters conforming to EN 1434-3 may be connected for data transfer. In addition, heat meter WMZ 1 for control circuit RK1 and heat meter WMZ 2 for control circuit RK2 for flow rate and/or capacity limitation can be used. Various limits can be adjusted for the different operating modes "Heating control only", "Heating control with DHW heating" and "DHW heating only" in control circuit RK1. Weather-compensated flow rate or capacity limitation can also be implemented.

Electrical connection and installation

The controller consists of the housing containing the electronics and a separate terminal board for electrical connection. Two wires of max. 1.5 mm² may be connected to each terminal. The sensor connection lines must be installed separately from the lines carrying the power supply. For wall mounting, screw the terminal board to the wall. After wiring the controller, place the controller housing onto the terminal board and fasten it with two screws. Two adjustable fixing clamps attached to the controller are used for panel mounting.

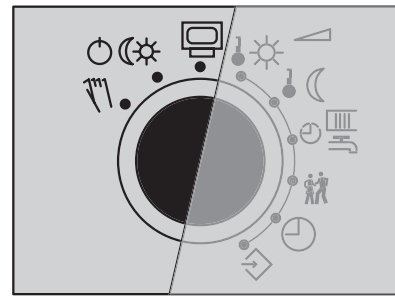
Ordering text




TROVIS 5578 Heating and District Heating Controller

Options

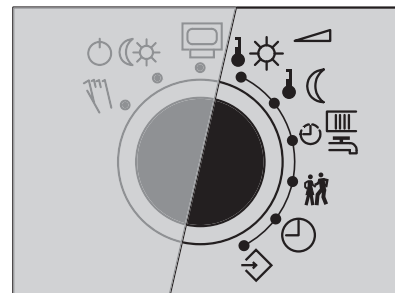
| | |
|---------------------------------------|-------------|
| RS-232 to PC communications module | (8812-2003) |
| RS-232 to modem communications module | (8812-2004) |
| RS-485 communications module | (8812-2002) |

- Accessories:**
- Type 5257-5 Room Panel
 - TROVIS 5570 Room Panel with display
 - Memory module (1400-9379)
 - Mini module (1400-7436)
 - Data logging module (1400-9378)
 - USB converter 3 together with data log viewer software (1400-9377)
 - TROVIS-VIEW Software



-  Information level
-  Operating modes
-  Manual level

Parameters









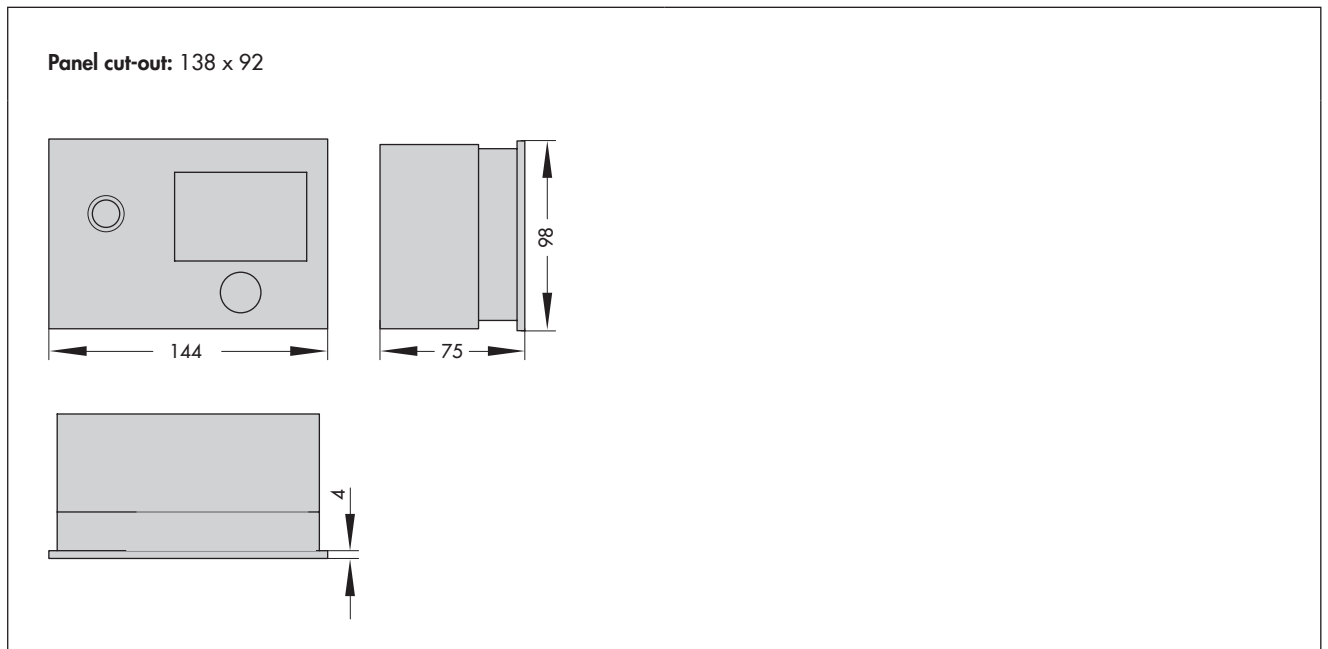
-  Day set point
-  Night set point
-  Times-of-use for heating/DHW
-  Party mode: setting of special times-of-use in steps of 15 minutes. Timer starts working immediately after it is set.
-  Controller clock: setting of time, date and year
-  Access to parameter and configuration levels

Fig. 2: Switch positions and their meaning

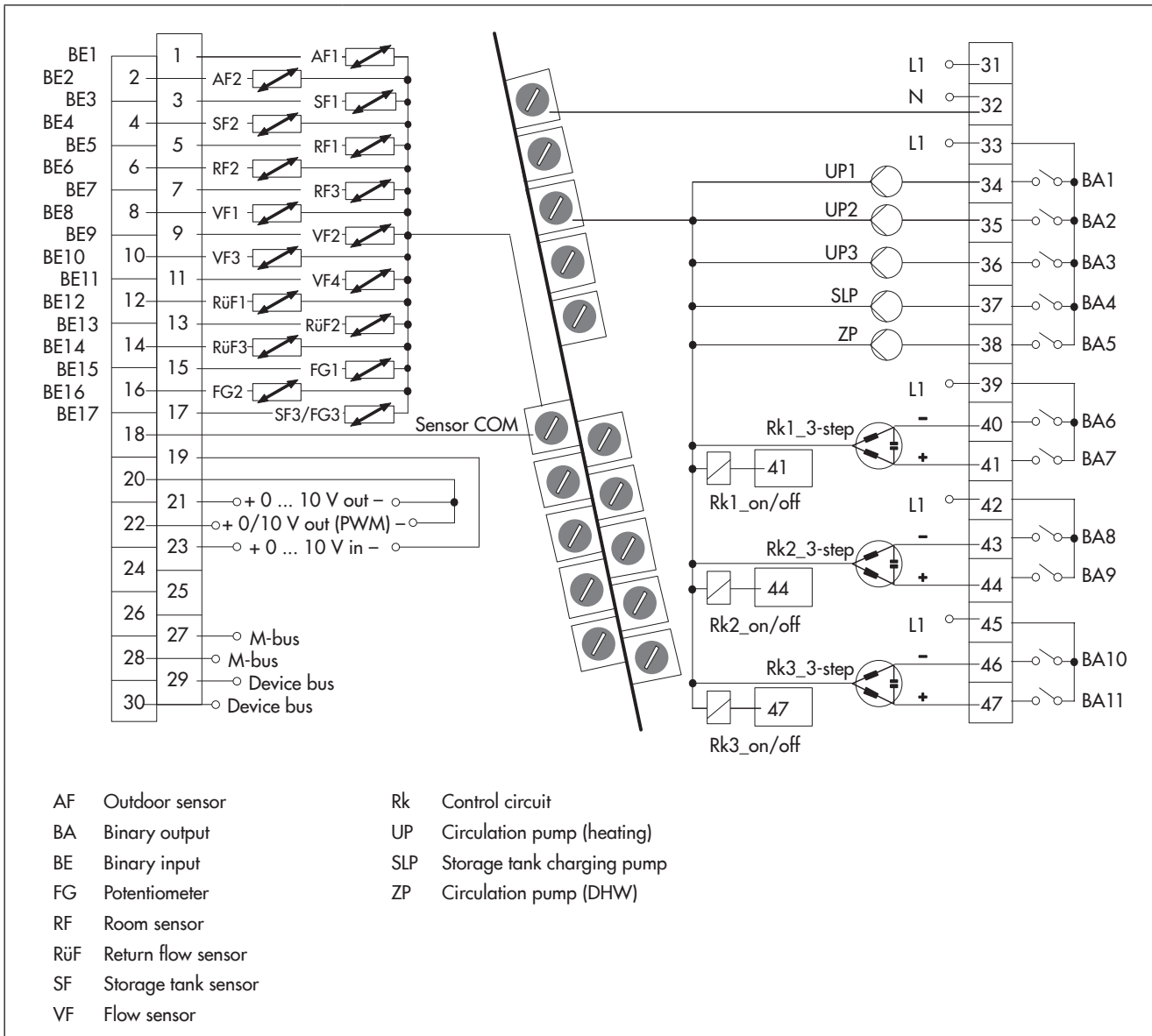
Technical data

| | |
|-------------------------|--|
| Inputs | 17 configurable inputs for Pt 1000 temperature sensors and binary inputs, one input can be used for 0 to 10 V signal for external demand or outdoor temperature signal Input 17 configurable for a 3 to 800 pulse/h signal of a heat meter for capacity limitation in RK1 |
| Outputs | 3 x three-step signal: load max. 250 V AC, 2 A; switch-on surge, max. 16 A Alternatively 3 x on/off signal: load max. 250 V AC, 2 A; switch-on surge, max. 16 A 5 x pump output: load max. 250 V AC, 2 A; switch-on surge, max. 16 A; all outputs are relay outputs with varistor suppression One 0 to 10 V output for continuous-action control for control circuit RK1 or signal for external demand, load > 5 k Ω One 0/10 V output for PWM signal for pump speed control |
| Interfaces | - M-bus for max. 3 M-bus units, protocol according to EN 1434-3 - Device bus interface (RS-485) for max. 32 bus devices (two-wire bus, reverse polarity protection) |
| Optional interfaces | - Modbus RS-232 interface for modem using RS-232 to PC communications module - Modbus RS-485 interface for two-wire bus using RS-485 communications module (Modbus RTU protocol, data format 8N1, RJ 45 connector socket at the side) |
| Power supply | 165 to 250 V, 48 to 62 Hz, max. 4 VA |
| Ambient temperature | 0 to 40 °C (operation), -10 to 60 °C (storage and transport) |
| Degree of protection | IP 40 according to IEC 60529 |
| Class of protection | II according to VDE 0106 |
| Degree of contamination | 2 according to VDE 0110 |
| Overvoltage category | II according to VDE 0110 |
| Humidity rating | F according to VDE 40040 |
| Noise immunity | According to EN 61000-6-1 |
| Noise emission | According to EN 61000-6-3 |
| Weight | Approx. 0.5 kg |

Dimensions in mm



Terminal assignment



Specifications subject to change without notice



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