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**Flush-mounted
Room Temperature Controller UP
6134 - 24 - 102 - 500
GJ B000 6134 A0142**

for ABB Powernet® EIB
and ABB i-bus® EIB

Operating instructions
only for authorized, skilled electricians
with EIB training

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Notes

The respective covering frame (item No. 1721) has been provided with a marking panel (Fig. 1, Pos. 4). For labeling you may use perforated sheets (item No. 1799-03).

The manufacturer database of ABB is continuously updated. It stores the latest applications.

For relevant descriptions see the Technical Manual of the ABB i-bus® EIB or ABB Powernet® EIB and the respective device windows in the EIBATool Software Package ETS2, version 1.1 or higher.

In case you do not have the data base or Technical Manual, please ask for it by contacting the respective agency in your country.

Important Instructions

ATTENTION

When planning and erecting electrical systems the relevant standards and regulations applicable in the country where the equipment is set up and operated must be duly observed.

Work on the 230 V power system may only be performed by qualified electricians.

It is absolutely essential that the EIB bus is installed by an authorized electrician. Laying and connection of the bus line as well as application devices must be in conformity with applicable guidelines specified in the EIB Manual of the European Installation Bus Association (EIBA).

The devices are to be programmed using ETS2 (version 1.1 or higher) or via the ABB Powernet® EIB Controller 6910-500 (operating system version 2.0 or higher).

When mounting the room temperature controller use a suitable UP bus coupler (ABB ibus® EIB) or UP mains coupler (ABB Powernet® EIB) – hereinafter collectively termed UP coupler.

Important Instructions

Using the room temperature controller in conjunction with a Powernet mains coupler 6920 U-500 requires a temperature balance to be performed. For this purpose proceed as described under "Temperature Balancing".

In multiple-device units the room temperature controller must always be mounted at the bottom.

Technical Data

Power Supply

via ABB ibus® EIB
or ABB Powernet® EIB

Connections

1 Bus connection

10-pole connector strip
on the rear side for
UP bus coupler or
UP mains coupler

Control and Indicating Elements

→ "Operation"

Temperature Range

Operation

- 5 °C ... + 45 °C

Measuring range

0 °C ... + 40 °C

Setpoint range

+ 5 °C ... + 30 °C

Type of Protection

IP 20 (acc. to DIN EN 60 529 in
built-in state)

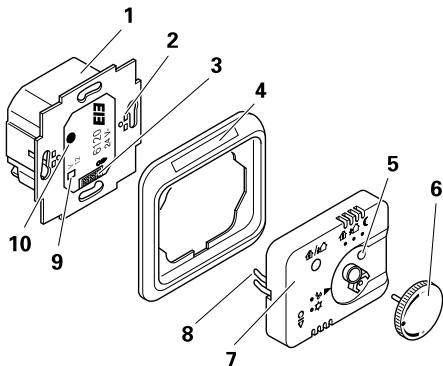
Dimensions

56 x 71 mm (H x W)

Weight

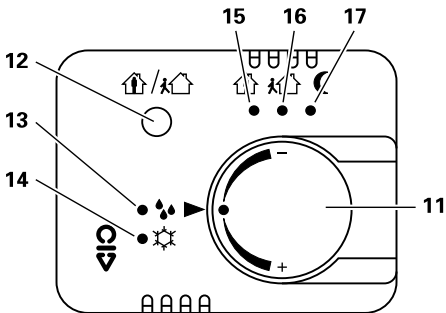
0,05 kg

Fig. 1 / Overall View



- 1 UP Coupler (here, eg., 6120 U-500)
with programming key (item. 9)
and programming LED (item.10)
- 4 Covering frame 1721-2x
- 7 Flush-mounted room temperature controller
6134-24-102-500

Fig. 2 / Control and Indicating Elements



- 11 Rotary knob (adjustable: 0°C, ± 1 °C to ± 10 °C)
- 12 Occupancy button (to select "Stand-by/Comfort")
- 13 yellow indicating LED "dew point alarm"
- 14 red indicating LED "freezing/heat protection operation"
- 15 green indicating LED "convenience operation"
- 16 green indicating LED "standby operation"
- 17 green indicating LED "night operation"

Product Description

The UP room temperature controller is intended for use in an EIB line in the ABB i-bus® or in the ABB Powernet®.

The device serves to control thermal actuators via an EIB line (heating and/or cooling).

Valve control parameters are entered into the system via ETS2 as follows:

- Steady (proportional) control (0 ... 100% → 0 ... 255)
- Two-point control with ON/OFF telegrams.
- PWM control with ON/OFF telegrams
(pulse width modulation)

The control algorithm has a proportional and an integral characteristic (PI controller). The respective parameters are preset and should not be changed.

The room temperature controller has the following modes of operation:

- Convenience operation (= normal operation)
- Standby operation (in case of unoccupied rooms) with a parameter-related temperature lowering (heating) or temperature raising (cooling). Reversing to convenience operation can be effected via the presence button on the room temperature controller or via an EIB sensor.

Product Description

- Night operation with a parameter-based temperature lowering - a change-over can be effected for example by means of an EIB clock timer.
- Freezing/heating protection mode with preset temperatures parameters - eg 7 °C or 35 °C - a change-over by means of contact elements is possible.
- Dew point alarm (the room temperature controller switches off if an appropriate signal is received from an EIB humidity sensor.)

LEDs on the room temperature controller indicate the currently active operating mode. Use the rotary knob on the controller to vary the applicable setpoint temperatures within an adjustable range ($\pm 1\text{ °C}$ to $\pm 10\text{ °C}$ or 0 °C = no local adjustment).

The current switching and operating states are transmitted via the bus line and are thus available to other EIB devices for evaluation.

Mounting / Dismantling

Notes

Make sure the 10-pole connector of the UP coupler is arranged so that the room temperature controller can be mounted as desired.

The physical address of the room temperature controller is set via the room temperature controller. It is recommended to enter this physical address prior to room temperature mounting. For this purpose proceed as described under "Start-up." Subsequent changes can be made. For this purpose you must first disassemble the room temperature controller.

Mounting

Before carrying out mounting work on the UP mains coupler, make sure the 230V power system is disconnected !

- Position the room temperature controller as required for mounting.
- Fix the covering frame (fig.1, item 4) in mounting position (the frame is held in position by the mounted controller).

Mounting / Dismantling

- Mount the controller (fig.1, item 7) onto the flush-mounted UP coupler (fig.1, item 1) in such a way that
 - the rear 10-pole plug connector is not canted;
 - the fixing clips (fig.1, item 8) on the back of the unit engage with the recesses (fig.1, item 2) provided in the carrying ring of the UP coupler.
- Secure the controller in position via the screw (fig.1, item 5) on the carrier ring of the UP coupler as follows:
 - Pull off the rotary knob (fig.1, item 6).
 - Tighten screw connecting controller with the carrier ring of the UP coupler.
 - Replace the rotary knob (fig.1, item 6).

Dismantling

- Pull off the rotary knob (fig.1, item 6)
- Remove the screw located underneath.
- Hold the covering frame and pull the controller off the flush-mounted UP coupler.

Commissioning

- Connect a PC with EIBA Tool Software (ETS2 V1.1) to the EIB via an RS 232 interface or connect a Powernet® EIB Controller to the bus line.
- Switch on the power supply to the EIB bus line or Powernet line.
- Assign a physical address.
 - Press the programming button on the UP coupler; the red programming LED (fig.1, item 10) will become illuminated.
 - After the physical address has been programmed, the red LED will go out.
 - Write the number of the physical address on the device using a smudge-proof pencil.
- Select and parameterize the application.

For the required temperature balancing when operating the room temperature controller via the Powernet® EIB use a balancing value of 8 °C and select “lower measuring value” to preset the balancing direction.
- Assign the group address(es).
- Mount the room temperature controller.

Temperature Balancing

Temperature balancing is a must if the room temperature controller operates in conjunction with a Powernet® UP mains coupler.

Such a temperature balancing has to be carried out for each individual room temperature controller.

- Start up the heating system on which the room temperature controller acts and wait until a constant room temperature has been attained.
- Connect a PC with loaded room temperature software package (see ETS product data base) or a Powernet® EIB controller to the bus line. View the temperature indication T_{RTC} determined by the room temperature controller and the parameterized balancing value BV_{old} .
- Determine the room temperature T_{Room} using a thermometer.
- Determine the new balancing value BV_{new} as follows:
$$BV_{new} = T_{Room} - T_{RTC} + BV_{old}$$

(for example, $BV_{old} = -8\text{ °C}$, see “Start-up”; negative sign denotes “lower measuring value”)
- Parameterize and program the application anew using the new balancing value.

Operation

Indicating Elements

5 LEDs to indicate

- "dew point alarm" (item 13, yellow)
- "Freezing/heat protection mode" (item 14, red)
- "Convenience operation" (item 15, green)
- "Standby operation" (item 16, green)
- "Night lowering" (item 17, green)

The respective LED lights up to signal the active operating mode.

Control Elements

- "Convenience/Standby Operation" button (item 12)
This button enables manual change-over from any operating mode to convenience operation (normal operation) and vice versa.
- Rotary knob (item 11)
Via the rotary knob adjust any desired deviations (eg. +3 °C to -3 °C) from the preset temperature setpoints..