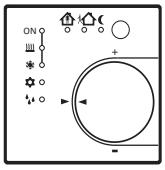
GB

Schneider Electric

KNX Room temperature control unit, flush-mounted/PI with 4-gang push-button interface

Operating instructions



Art.no. MTN6167.., MTN6168.., MTN6169..

For your safety

DANGER
Risk of fatal injury from electrical current.
All work on the device should only be carried out by trained and skilled electricians. Observe the country-specific regulations as well as the valid KNX guidelines.

CAUTION
The device could be damaged.
Only operate the device according to the specifications stated in the Technical data.

Getting to know the room temperature control unit

The KNX Room temperature control unit, flush-mounted/PI with 4-gang push-button interface refferes to below as the **room temperature contol unit**.

Proper use

– Individual room temperature control in KNX installations
– Flush mounting in cavity walls or in solid walls.

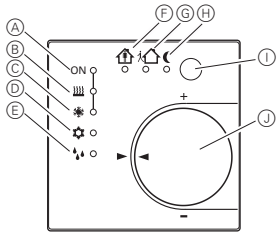
Product properties

– Measurement of room temperature and comparison with temperature setpoint
– Specification of setpoint by selection of operating mode
– Operating modes comfort, standby, night economy, frost/heat protection
– Heating and cooling
– Heating and cooling with base and additional levels
– Adjusting wheel for setpoint correction
– Presence key
– Status LED
– Push-button interface with four inputs or two outputs, for example, for window contacts, push-buttons, LEDs, etc.
– Functions of the inputs: switching, dimming, blinds control, light scene extension unit, brightness or temperature valuator
– Optional: remote sensor for room temperature measurement (art. no. MTN616790)

Operating modes and status LED

The controller compares the current room temperature with the setpoint temperature selected and operates the heating and cooling equipment in accordance with current requirements. The temperature setpoint depends on the current operating mode and can be changed via the adjusting wheel. The operating modes and the current controller status are shown by the status LED.

Connections, displays and operating elements



Ⓐ Display (LED) heating / cooling active
Ⓑ Display (LED) heating
Ⓒ Display (LED) cooling
Ⓓ Operating mode (LED) frost / heat protection
Ⓔ Display controller disabled (LED) (dewpoint operation)
Ⓕ Operating mode (LED) comfort
Ⓖ Operating mode (LED) standby
Ⓗ Operating mode (LED) night
Ⓘ Presence key
Ⓙ Adjusting wheel

Status LEDs	Operating mode
Ⓕ and Ⓗ light up	Comfort extension, night
Ⓕ and Ⓓ light up	Comfort extension, frost/heat protection

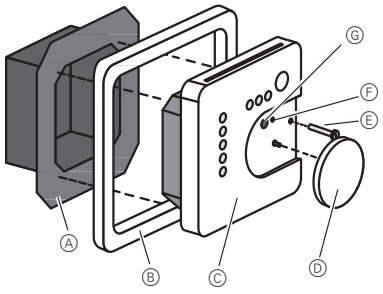
How to install the room temperature control unit

Note the following prior to mounting

Do not route input cables parallel with power cables, otherwise there may be problems with EMC interferences.

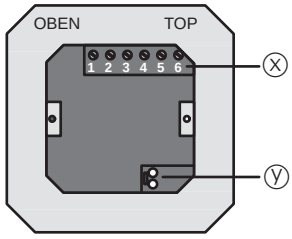
- Do not install the controller in multiple combinations with electrical devices as the heat they produce will influence temperature measurement by the controller.
- Do not install the controller close to heat sources such as electric ovens or refrigerators or in direct sunlight as this will influence temperature measurement by the controller.
- The optimum mounting height is approx.1.5 m.
- Installation in flush-mounted box conforming to DIN 49073 or in surface-mounting box.
- Recommendation: use a deep box.
- You should comply with the routing requirements for SELV circuits.

Installation



Ⓐ Terminal insert
Ⓑ Design-Frame
Ⓒ Electronics attachment (Controller)
Ⓓ Adjusting wheel
Ⓔ Safty screw
Ⓕ Status LED: Programming
Ⓖ Programming button

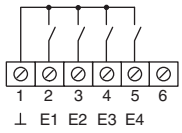
① Separate the terminals insert and the electronics attachment.



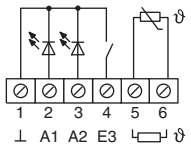
Ⓧ Terminal strip, connection binary inputs and outputs and remote sensor.
Ⓨ Connection KNX

② Connect KNX.

Connection examples:



Binary inputs E1...E4: Connect window contact, make or break pushbutton to the terminal strip between terminals 1 and 2…5.



Binary outputs A1, A2: Connect LED or electronic relay to terminal strip between terminals 1 and 2...3.
Connect remote sensor between terminals 5 and 6.

Route the remote sensor in an empty pipe as far as measurement input. When installing the remote sensor in the floor use a sensor protection pipe and seal it so that the remote sensor does not get damaged by tile cement or screed. Install the remote sensor in a place where it can measure the temperature without external influence.

Note:
Extension of the sensor cable up to a maximum length of 50 m with twisted two-wire cable such as J-Y(St)Y-2x2x0.8. When the KNX bus line is used: use a second core pair (yellow and white).

③ Insert the terminals insert into the flush-mounted box. Comply with the OBEN/TOP marking. The bus connection should be bottom right.
④ Fit the design frame on the terminals insert.
⑤ Insert the electronics attachment correctly positioned into the terminals insert.
⑥ Pull off the adjusting wheel.
⑦ Secure the electronics attachment with the fastener screw.
⑧ Push the adjusting wheel back on.

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How to operate the room temperature control unit

Physical address and application software

Use start-up software ETS2 Version 1.2 or later.

① Pull off the adjusting wheel.

② Press the programming button

The programming LED lights up.

③ Assign a physical address

The programming LED goes out.

④ Make a note of the physical address on the terminals insert and on the rear of the electronics attachment. To do so it may be necessary to reverse the installation sequence.

Note:
In the event of painting or wallpapering work, make sure the inserts and attachments are matched properly when reinstalled.

⑤ Push the adjusting wheel back on.

⑥ Download application software, parameters and so on.

How to operate the room temperature control unit

Setting the operating mode

Operating elements are provided for setting the operating mode such as tactile sensors, panels, and so on.

– Activate the operating mode you want at the operating element in question.
– The status LEDs indicate the new operating mode.
– The setpoint temperature for the room is set in accordance with the new operating mode.

Changing the room temperature

– Turn the adjusting wheel clockwise.

This raises the setpoint temperature.

– Turn the adjusting wheel anti-clockwise.

This lowers the setpoint temperature.

Room temperature control unit function

All heating systems require a certain amount of time to bring a room which has cooled down back up to the desired temperature. This is why in the case of brief absence the room temperature can only be lowered a little (by 2 °C, for example) but somewhat more at night (by approx. 4 °C, for example).

Activating comfort extension

When operating modes are changed over automatically by a timer, comfort mode can still be retained for a while. The comfort extension is used for this. Comfort extension is time-limited.

The controller is either in night or frost/heat protection mode.

① Press the presence key .

The LED or light up.

The setpoint temperature of comfort mode is set for the time specified.

Once the programmed period of time has elapsed the original night or frost/heat protection operating mode is restored.

Note:
The comfort extension can also be activated automatically, for example, via a presence detector.

Technical data

KNX medium:	TP1
Startup mode:	S mode
KNX power supply:	21...32 V DC
KNX power consumption:	max. 10 mA
KNX connection:	Connecting terminal
Binary outputs Load types:	LED or electronic relay
Output voltage / current:	5 V / 0.8 mA
Cable type Binary inputs and outputs:	J-Y(St)Y 2 x 2 x 0.8 mm
remote sensor:	Prefabricated connecting cable 0.75 mm² J-Y(St)Y 2 x 2 x 0.8 mm
Cable length of	
binary inputs:	max. 5 m
binary outputs:	max. 5 m
remote sensor:	max. 50 m
Ambient temperature:	-5 °C to +45 °C
Storage temperature:	-25 °C to +70 °C

Schneider Electric Industries SAS

If you have technical questions, please contact the Customer Care Center in your country.

www.schneider-electric.com

This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations. As standards, specifications and designs develop from time to time, always ask for confirmation of the information given in this publication.

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