Room controller display compact module
Art. no.: 4093 KRM TS D
Room controller display compact module
Art. no.: 4093KRC

Operating instructions

1 Safety instructions

Electrical devices may only be mounted and connected by electrically skilled persons.

Failure to observe the instructions may cause damage to the device and result in fire and other hazards.

Use only the enclosed plastic screws for fastening to the supporting frame! Otherwise safe operation cannot be ensured. Electrostatic discharges can cause defects in the device.

These instructions are an integral part of the product, and must remain with the end customer.

2 Device components

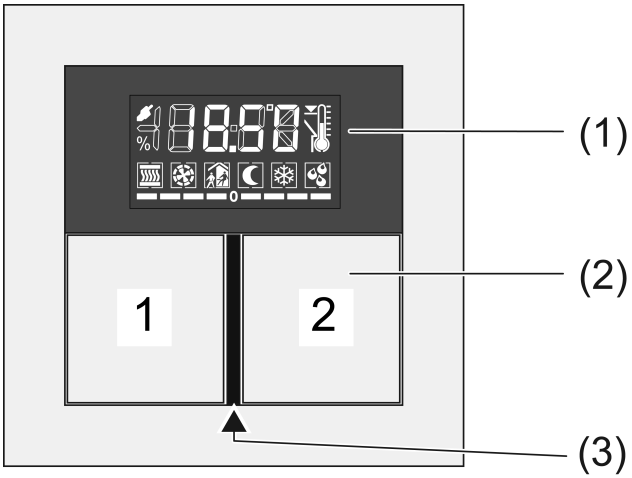

Figure 1

(1) LCD with button
(2) Buttons **1** and **2**
(3) Operating and status LED

3 Function

System information

This device is a product of the KNX system and complies with the KNX directives. Detailed technical knowledge obtained in KNX training courses is a prerequisite to proper understanding.

The function of this device depends upon the software. Detailed information on loadable software and attainable functionality as well as the software itself can be obtained from the manufacturer´s product database. Planning, installation and commissioning of the device are carried out with the aid of KNX-certified software. The latest versions of product database and the technical descriptions are available on our website.

Intended use

– Operation of loads, e.g. light on/off, dimming, venetian blinds up/down, brightness values, temperatures, calling up and saving light scenes, etc.

– Measurement and feedback control of the room temperature
– Mounting in appliance box according to DIN 49073

Product characteristics

All buttons can be assigned with push-button sensor functions or functions for controller operation.

– Four red status LEDs
– A blue operation LED as an orientation light and to indicate the programming status
– Integrated bus coupling unit
– Completion with set of buttons (see accessory)
– Connection of push-button extension module for expansion to include four additional buttons
– Integrated room temperature sensor
– Room temperature control with setpoint value specification
– Indication of room or setpoint temperature
– Indication of outdoor temperature – with external sensor, e.g. weather station
– Indication of time, in conjunction with KNX time encoder
– The pushbutton functions switching, dimming, controlling blinds, value transmitter, calling up moods, etc.
– Button function or rockers function, vertical or horizontal

4 Operation

Operating a function or load

Depending on the programming, a button can have up to three functions assigned to it – upper/left, lower/right, entire surface. Operation depends on the specific function.

- Switch: Short press on button.
- Dim: Long press on the button. The dimming process ends when the button is released.
- Move Venetian blind: Long press on button.
- Stop or adjust Venetian blind: Short press on button.
- Call up light scene: Short press on button.
- Save light scene: Long press on button.
- Set value, e.g. brightness or temperature setpoint: Short press on button.

Operating modes and display icons

The device compares the current room temperature with the setpoint temperature and controls heating or cooling devices according to the current demand. The setpoint temperature depends on the current operating mode and can be changed by the user, depending on the programming. The operating modes and the current controller status are shown in the display.

– : Operating mode Comfort
– : Operating mode Standby
– : Operating mode Night
– : Operating mode Frost/heat protection
The icon flashes if the room temperature drops below 5 °C / 41 °F.
– : Display dewpoint operation; controller blocked
– : Comfort extension, night
– : Comfort extension, frost protection
– ...: Fan controller with fan level display. = Fan off.
– : Manual fan control
– ...: Heating mode with display of the heating stage
– ...: Cooling mode with display of the cooling step
– : Indoor temperature

– : Outdoor temperature
– : Setpoint temperature
– **...--0** or **0--...**: Setpoint temperature reduced or increased manually

When switched on, the display shows, next to the icon for the current operating mode, either:
– the current time: the seconds mark flashes.
– the current room temperature: icon
– the current outdoor temperature: icon
– the current setpoint temperature: icon

The display switches the information over automatically or at the press of a button, depending on the programming.

Second operating level

In the second operating level the following settings are available in sequence. Some items are not visible, depending on the programming of the device.
– Presence mode
– Setpoint shift
– Basic temperature for Comfort mode
– Lowering for standby mode, heating
– Raising for standby mode, cooling
– Lowering for night mode, heating
– Raising for night mode, cooling
– Changing the operating mode
– Fan controller
– Displaying the time
– Displaying the current room temperature
– Displaying the current temperature setpoint
– Displaying the current outdoor temperature
– Display contrast
– Display illumination
– OK – Exit and save settings
– ESC – Exit without saving settings

Operating second operating level

The second operating level is programmed and not disabled.
- Open: Press the buttons **1** and **2** at the top (Figure 1).
- Press button **1**at top or bottom.
  The current setting is switched or the displayed value is increased or decreased.
- Press button **2**at top or bottom.
  The display switches to the previous or next menu entry.

5 Information for electrically skilled persons

5.1 Fitting and electrical connection

DANGER!

Electrical shock on contact with live parts in the installation environment.

Electrical shocks can be fatal.

Before working on the device, disconnect the power supply and cover up live parts in the working environment.

Snapping on the adapter frame

The adapter frame is required depending on the switch design range.

- With the adapter frame (7) in the correct orientation, snap it from the front onto the module (8) (Figure 2). Note the **TOP** marking.

Mounting and connecting the device

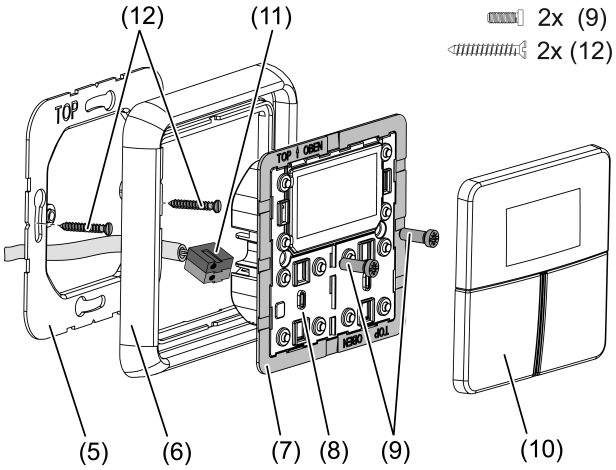

Figure 2: Mounting the controller module

(5) Supporting frame
(6) Design frame
(7) Adapter frame
(8) Controller module
(9) Fastening screws
(10) Design control surfaces
(11) KNX connection terminal
(12) Box screws

Supporting frame side **A** for A design ranges, CD design ranges and FD design. Supporting frame side **B** for LS design ranges.

Recommended installation height: 1.50 m.

When the push-button extension module is used (Figure 3): Preferably mounted vertically. Use large supporting frame (13). When mounting on only one appliance box, countersink the lower screws into the wall, e.g. with a ø 6 x10 mm hole. Use supporting frame as template.

DANGER!

When mounting with 230 V devices under a common cover, e.g. socket outlets, there is a danger of electrical shocks in the event of a fault!

Electrical shocks can be fatal.

Do not install any 230 V devices in combination with a push-button sensor extension module under a common cover!

- Mount supporting frame (5) or (13) in the correct position onto an appliance box. Note marking **TOP=**; marking **A** or **B** in front. Use only the enclosed box screws (12).
- Push frame (6) onto supporting frame.
- Mount push-button extension module (14) preferably below. Route connecting cable (16) between supporting frame and intermediate web.
- Push-button extension module: Insert connecting cable (16) in the correct orientation into slot (15) in the controller module. Do not crimp the connecting cable (Figure 3).

- Connect controller module (8) to the KNX using KNX device connection terminal (11) and push onto the supporting frame.
- Fasten controller module (8) and push-button extension module (12) to supporting frame using the enclosed plastic screws (8). Tighten the plastic screws only lightly.
- Before mounting the control surfaces (10), load the physical address into the device (see chapter 5.2. commissioning).

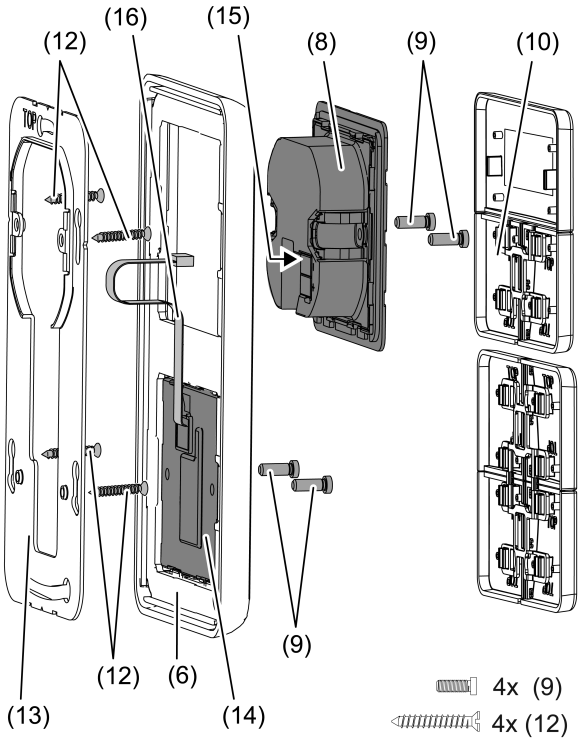

Figure 3: Mounting with push-button extension module

(13) Supporting frame for mounting with push-button extension module
(14) Push-button extension module
(15) Slot for push-button extension module
(16) Push-button extension module connecting cable

5.2 Commissioning

Loading the physical address and application software

Project design and commissioning with ETS3.0d with Patch A or more recent.

The device is connected and ready for operation.

The buttons are not mounted yet.

If the device does not receive any application software, or the wrong application software, then the blue operation LED flashes slowly.

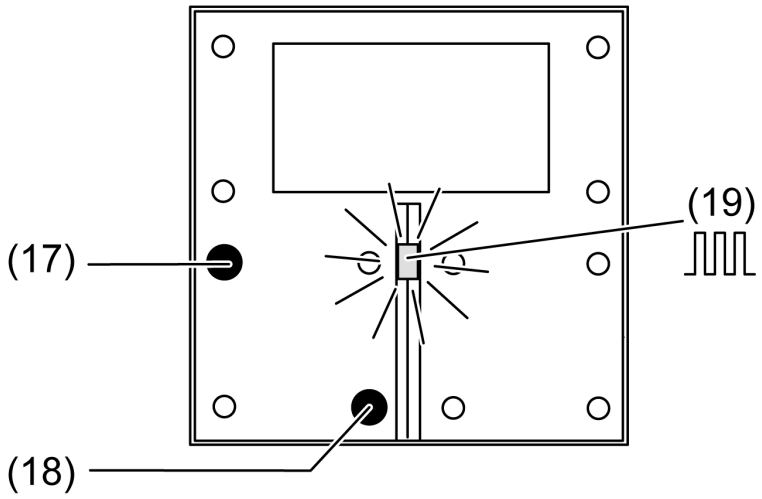

Figure 4: Activating programming mode

- Activate programming mode: Press and hold push-button (17). Then press push-button (18).
  The operation LED (19) flashes quickly.
- Load the physical address into the device.
  The operation LED (19) returns to its previous state – off, on, or flashing slowly.
- Write the physical address on the device label.
- Load application software into the device.

Fitting the control surfaces

The buttons (10) are available as a complete set of buttons. Individual buttons can be replaced using buttons with icons.

i The mounting spider is not required to mount the buttons.

The physical address is loaded into the device.

- Place the buttons (10) on the device in the correct orientation and snap in with a short push.
  Note the **TOP =** marking.

6 Appendix

6.1 Technical data

KNX medium	TP 1
Commissioning mode	S-mode
Rated voltage KNX	DC 21 ... 32 V SELV
Current consumption KNX	max. 25 mA
Connection mode KNX	device connection terminal
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +70 °C
Protection class	III

6.2 Accessories

Cover kit for Room controller module	Art.-no.: ..4093 TSA..
Push-button extension module, 1-gang	Art.-no.: 4091 TSEM
Push-button extension module, 2-gang	Art.-no.: 4092 TSEM
Push-button extension module, 3-gang	Art.-no.: 4093 TSEM

Push-button extension module, 4-gang	Art.-no.: 4094 TSEM
Cover kit 1-gang	Art.-no.: ..501 TSA..
Cover kit 2-gang	Art.-no.: ..502 TSA..
Cover kit 3-gang	Art.-no.: ..503 TSA..
Cover kit 4-gang	Art.-no.: ..504 TSA..

6.3 Warranty

The warranty is provided in accordance with statutory requirements via the specialist trade.

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