

## Description

The ekinex® pushbutton with thermostat of FF series is a S-Mode KNX device for on/off switching of loads, dimming of lighting devices, controlling of motor drives or other programmable switching and control functions. The integrated temperature sensor allows to use it as a temperature controller for a room or a zone. It is equipped with an integrated KNX bus communication module and is designed for wall installation on a flush mounting box. The device has two LEDs for each channel configurable for example as a status signal or orientation nightlight. Pushing a rocker, the device sends on the bus a telegram, which is received and carried out by one or more KNX actuators. The integrated temperature sensor allows the use as a temperature controller. The device is powered by the KNX bus line with a SELV voltage 30 Vdc and does not require auxiliary power.

### Main functional characteristics

- On/off switching of single loads or groups of loads
- Dimming of lighting devices
- Control of motor drives (for roller shutters, blinds, curtains, etc.)
- Room temperature regulation
- Logic functions
- Sending of values (temperature, brightness, etc.) on the bus
- Recalling and saving of scenes
- Switching to forced functioning (lock)
- Measuring of light brightness through integrated sensor (not available with the EK-T1Q-Mxx rockers' kit)
- Different functions programmable for short pressure / long pressure of a rocker
- Status feedback or orientation nightlight through configurable LEDs

### Other characteristics

- Housing in plastic material
- Wall installation in flush mounting box
- Protection degree IP20 (installed device)
- Classification climatic 3K5 and mechanical 3M2 (according to EN 50491-2)
- Pollution degree 2 (according to IEC 60664-1)
- Weight 80 g (with mounting support)
- Dimensions 82 x 79 x 19 mm

### Technical data

- Power supply 30 Vdc from KNX bus line
- Current consumption < 15 mA
- Power from bus < 360 mW

### Environmental conditions

- Operating temperature: - 5 ... + 45°C
- Storage temperature: - 25 ... + 55°C
- Transport temperature: - 25 ... + 70°C
- Relative humidity: 95% not condensing

### Delivery




The metallic support, the fixing screws (2 pairs) and the KNX terminal block for connection of the bus line are delivered with the device. The pushbutton must be completed with a set of rockers and a frame (to be ordered separately), except for the 'NF (No Frame) version, which do not require any frame.

### Set of rockers

The pushbutton has to be completed with a set of rockers in plastic material that allows the use as a 2-fold or 4-fold pushbutton. In the 4-fold configuration it may have square or rectangular rockers, the latter disposed horizontally.

Set code *	Rocker form	Nr.	Mod. W x H [mm]
EK-TRV-xxx	rectangular	2	40 x 80
EK-TQQ-xxx	square	4	40 x 40
EK-TRO-xxx	rectangular	4	80 x 20

(\*) To be completed with the extension for colour and material

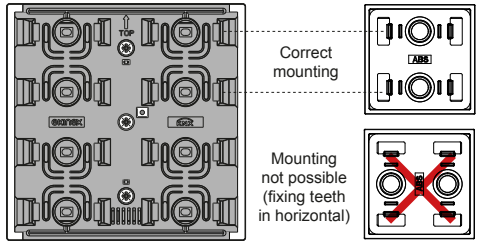
		
2 rectangular rockers (EK-TRV-...)	4 square rockers (EK-TQQ-...)	4 rectangular rockers (EK-TRO-...)

The application program allows to configure the device with ETS taking into account the number and type of rockers chosen. The three-positions rockers have central neutral position. The function carried out by the rocker depend on the configuration done with ETS. Pushing one side of a rocker (for example the upper one), the pushbutton sends on the bus a telegram for switching on, increasing the brightness of luminaires or raising the blinds, while pushing the other side (for example

the lower one), it sends a telegram for switching off, reducing the brightness of luminaires or lowering the blinds.

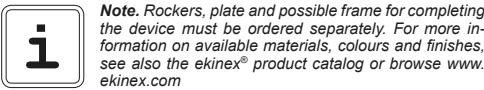
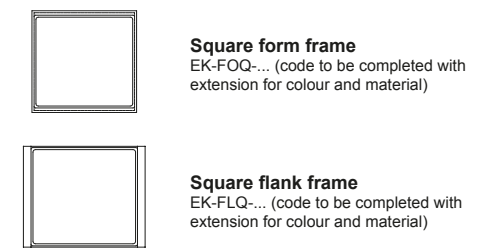
### Note on installation of rockers

To assemble the rockers on their seats, the fixing teeth must be aligned vertically.



### Finishing frame

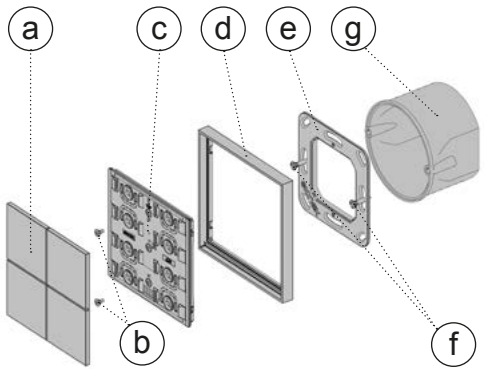
The pushbutton is completed with a square ekinex® frame of the form or flank series in plastic material or metal. The 'NF (No Frame) versions have to be mounted without any frame.



### Mounting

The device has degree of protection IP20, and is therefore suitable for use in dry interior rooms. The installation of the device requires the following steps:

- fix the metallic support (e) with the screws (f) on a wall-mounting box (g) provided with suitable fixing holes;
- if required by the device version, snap a frame (d) of the form or flank series, inserting it from the rear of the device (c);
- enter the bus terminal, previously connected to the bus cable in its slot on the rear side (see also: "Connection of the KNX bus line"). At this point it is recommended to carry out the commissioning of the device (see also "Configuration and commissioning") or at least the download of the physical address;
- install the device (c) on the metallic support (e) through the spring system, tightening then the two screws (b). Mounting the device follow also the indication TOP (arrow tip pointing up) on the front side of the device.
- snap the rockers (a) on the device.

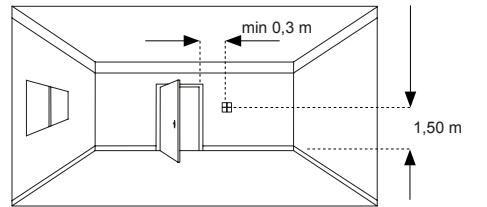


- a) Rockers (to be ordered separately)
- b) Screws for device (included in the delivery)
- c) Device
- d) Frame (to be ordered separately, not for 'NF versions)
- e) Mounting support (included in the delivery)
- f) Screws for mounting support (included in the delivery)
- g) Wall mounting box (not delivered by SBS)

The pushbutton has to be mounted on a round or square flush-mounting box with distance between fixing holes of 60 mm. If necessary, the metallic support for mounting on the wall box can also be ordered separately using the code EK-SMQ-71.

### Mounting position

If the integrated sensor is used for temperature regulation, the device has to be installed preferably on an internal wall at the height of 1,5 m and at least 0,3 m far from doors. The device can not be installed close to heat sources such as radiators or household appliances or in position subjected to direct sunlight. If necessary, for the regulation can be used a weighted average between the value measured by the integrated sensor and a value received via bus by another KNX device.



### Switching, display and connection elements

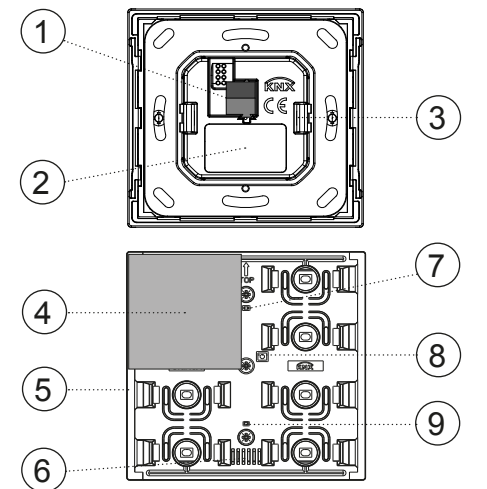
The device is equipped with four mechanisms for switching, 2 LEDs for each channel, a programming LED and a programming pushbutton and a terminal block for connection of the bus line.

#### Switching elements

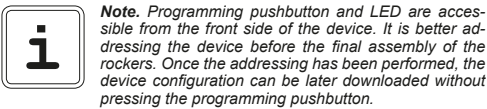
- Pushbutton (8) for switching between the normal and programming operating mode
- Mechanisms for independent switching of single or group of loads to be completed with 2 or 4 rockers (4)

#### Display elements

- Red LED (9) for indication of the active operating mode (on = programming, off = normal operation)
- Freely programmable LEDs with lightguide (5) e.g. for feedback status or orientation nightlight



- 1) Terminal block for KNX bus line
- 2) Label
- 3) Fixing springs
- 4) Rocker (example: 40 x 40 mm square)
- 5) Lightguide for LED
- 6) Position of the temperature sensor
- 7) Brightness sensor
- 8) Programming pushbutton
- 9) Programming LED

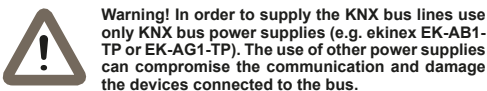


### Connection of the KNX bus line

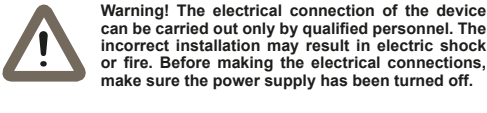
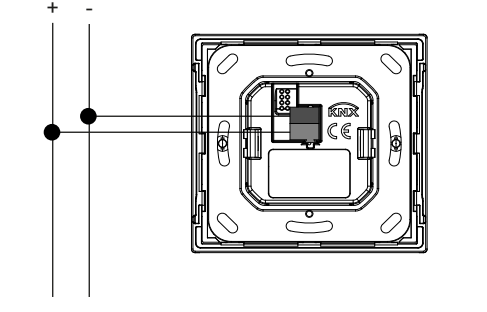
The connection of the bus line is made with the KNX terminal block (1) included in delivery and inserted into the slot of the housing.

#### Characteristics of the KNX terminal block

- spring clamping of conductors
- 4 seats for conductors for each polarity
- terminal suitable for KNX bus cable with single-wire conductors and diameter between 0.6 and 0.8 mm
- recommended wire stripping approx. 5 mm
- color codification: red = + (positive) bus conductor, black = - (negative) bus conductor

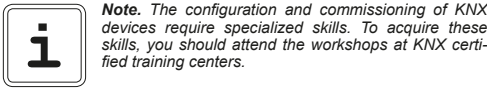


### KNX bus



### Configuration and commissioning

Configuration and commissioning of the device require the use of the ETS® (Engineering Tool Software) program V4 or later releases. These activities must be carried out according to the design of the building automation system done by a qualified planner.



#### Configuration

For the configuration of the device parameters the corresponding application program or the whole ekinex® product database must be loaded in the ETS program. For detailed information on configuration options, refer to the application manual of the device available on the website [www.ekinex.com](http://www.ekinex.com)

Product code	Application software (## = release)	Comm. objects (max nr.)	Group adresses (max nr.)
EK-ED2-TP	APEKED2TP##.knxprod	222	222

#### Commissioning

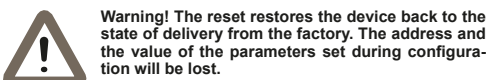
For commissioning the device the following activities are required:

- make the electrical connections as described above;
- turn on the bus power supply;
- switch the device operation to the programming mode by pressing the programming pushbutton located on the front side of the housing. In this mode of operation, the programming LED is turned on;
- download into the device the physical address and the configuration with the ETS® program.

At the end of the download the operation of the device automatically returns to normal mode; in this mode the programming LED is turned off. Now the bus device is programmed and ready for use.

### Reset of the device

To reset the device remove the bus connection by extracting the bus terminal from its seat. Keeping pressed the programming pushbutton, reinsert the bus terminal in his seat; the programming LED blinks fast. Release the programming button and remove the bus terminal again; the reset was carried out. Now you need to address and configure again the device via ETS.



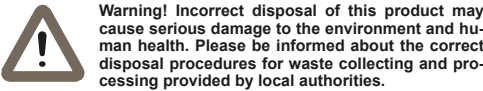
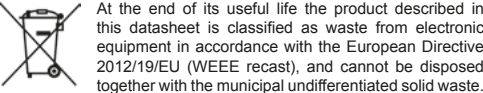
### Marks

- KNX
- CE: the device complies with the Low Voltage Directive (2014/35/EU) and the Electromagnetic Compatibility Directive (2014/30/EU). Tests carried out according to EN 50491-5-1:2010 and EN 50491-5-2:2010

### Maintenance

The device is maintenance-free. To clean use a dry cloth. It must be avoided the use of solvents or other aggressive substances.

### Disposal



### Warnings

- Installation, electrical connection, configuration and commissioning of the device can only be carried out by qualified personnel in compliance with the applicable technical standards and laws of the respective countries
- Opening the housing of the device causes the immediate end of the warranty period
- In case of tampering, the compliance with the essential requirements of the applicable directives, for which the device has been certified, is no longer guaranteed
- ekinex® KNX defective devices must be returned to the manufacturer at the following address: SBS S.p.A. Via Circonvallazione s/n, I-28010 Miasino (NO) Italy

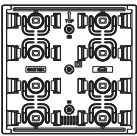
### Other information

- The instruction sheet must be delivered to the end customer with the project documentation
- For further information on the product, please contact the ekinex® technical support at the e-mail address: [support@ekinex.com](mailto:support@ekinex.com) or visit the website [www.ekinex.com](http://www.ekinex.com)
- Each ekinex® device has a unique serial number on the label. The serial number can be used by installers or system integrators for documentation purposes and has to be added in each communication addressed to the SBS technical support in case of malfunctioning of the device
- ekinex® is a registered trademark of SBS S.p.A.
- KNX® and ETS® are registered trademarks of KNX Association cvba, Brussels

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### KNX pushbutton serie FF with thermostat

Code: EK-ED2-TP-...



EK-ED2-TP-...

ekinex is a registered brand of sbs

### SBS S.p.A.

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FISPED2TPIEXX00

### Versions

Code	LED colours	Version
EK-ED2-TP	blue / green	Mounting with frame (form or flank series)
EK-ED2-TP-RW	red / white	
EK-ED2-TP-BG-NF	blue / green	Mounting without frame ('NF series) with black side profile
EK-ED2-TP-RW-NF	red / white	
EK-ED2-TP-BG-NFW	blue / green	Mounting without frame ('NF series), with white 'NF side profile
EK-ED2-TP-RW-NFW	red / white	



EK-ED2-TP

#### Direct access to documentation

The QR code allows the direct access to the technical documentation of EK-ED2-TP using mobile devices (smart phones, tablets) with a standard QR code reader.