

1/2/4-button Proxima series KNX pushbutton

Codes: EK-EZ2-TP-1, EK-EZ2-TP-2, EK-EZ2-TP-4



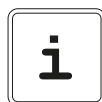
Datasheet STEKEZ2TP_EN

KNX bus device with 1/2/4 independent button function, with integrated room temperature controller. Use in home and building automation systems with KNX standard.



Description

The 1, 2 or 4-button ekinex® EK-EZ2-TP-... Proxima series pushbutton is a KNX S-Mode device for the on/off control of loads, the dimming of lighting devices, the control of motorized drives or other programmable command and control functions. The integrated temperature sensor also allows it to be used as a temperature regulator for a room or a zone. The device is equipped with a KNX bus communication module and is designed for mounting on a flush-mounted box. Each button can be freely programmed to perform a bus function and is equipped with RGB LEDs, which can be used for example as a status indicator or night-time orientation light. The pushbutton must be completed with 1, 2 or 4 buttons and a square plate to be ordered separately. The device is powered at SELV 30 Vdc voltage via the KNX bus and does not require auxiliary power supply.



Note. The metal support, the plastic adapter, the rockers and the plate for completing the device must be ordered separately. For more information on available materials, colours and finishes, see also the ekinex® product catalog or browse www.ekinex.com.

Versions

Code	Number of buttons / position
EK-EZ2-TP-1	1 / central
EK-EZ2-TP-2	2 / left-right
EK-EZ2-TP-4	4 / upper-lower left-right

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.)
- Measuring of room temperature through integrated sensor
- Room temperature regulation
- Logic functions
- Sending of values (temperature, etc.) on the bus
- Switching to forced functioning (lock)
- Recalling and saving of scenes
- Shift register function
- Different functions programmable for short/long press of a button
- Status feedback or orientation nightlight through programmable RGB 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 64 g
- Dimensions 50.5 x 50.5 x 37.5 mm (pushbutton body only)

Technical data

- Power supply 30 Vdc from KNX bus line
- Current consumption < 15 mA (typical)
- Power from bus < 500 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 fixing screws (2 pairs) and the terminal for connection to the KNX bus are included in the delivery of the device. The button must be completed with a metal support for wall mounting, a plastic adapter, a set of buttons and a cover plate (to be ordered separately).

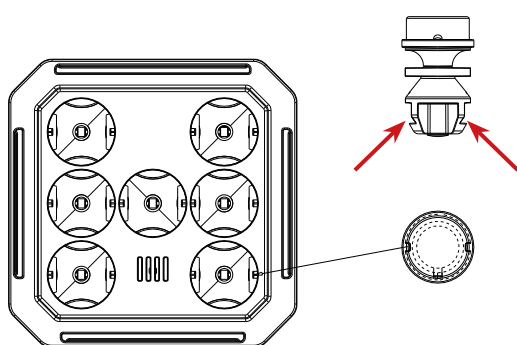
Set of buttons

For installation and operation, the ekinex® button must be completed with a set of finishing buttons, which makes it usable as a 1, 2 or 4 button button. The application program allows to configure the device with ETS. The function performed by the button depends on the configuration performed via ETS.

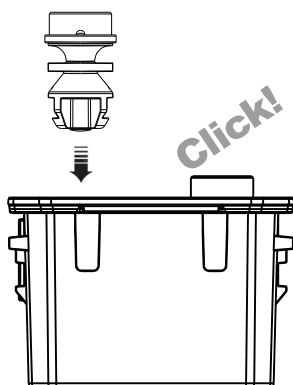


Buttons mounting

To assemble the button, align the tabs on the bottom of the button with the corresponding spaces in the button holes.

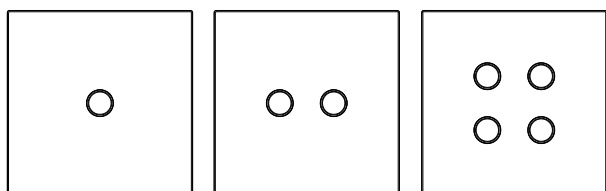


Then, press the button until you hear a "click". The button is now secured to the button body.



Button function customisation

The buttons are equipped with RGB LED backlighting and can be customized with texts or symbols positioned on the plate; for more information on the standard library, consult the ekinex® product catalog or visit the website www.ekinex.com. Upon request, customization with texts indicated by the customer is also possible.



Button kit code (*)	Nr.	Finish
EK-TTP-1-...	1	painted or chromed (normal, satin or special))
EK-TTP-2-...	2	
EK-TTP-4-...	4	
(*) To be completed with the extension for colour and finishing		

Finishing Plate

The button is completed with a square plate provided with ekinex® magnet fixing, with chromed or painted finish, customizable if desired. The plate is used in combination with a plastic adapter for flush or raised wall mounting.

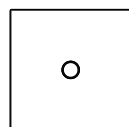


Plate for 1-button device

Code EK-PQA-1-...(*) (EU version)
Code EK-PQM-1-...(*) (UK + Switzerland version)

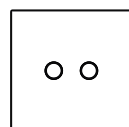


Plate for 2-button device

Code EK-PQA-2-...(*) (EU version)
Code EK-PQM-2-...(*) (UK + Switzerland version)

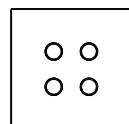


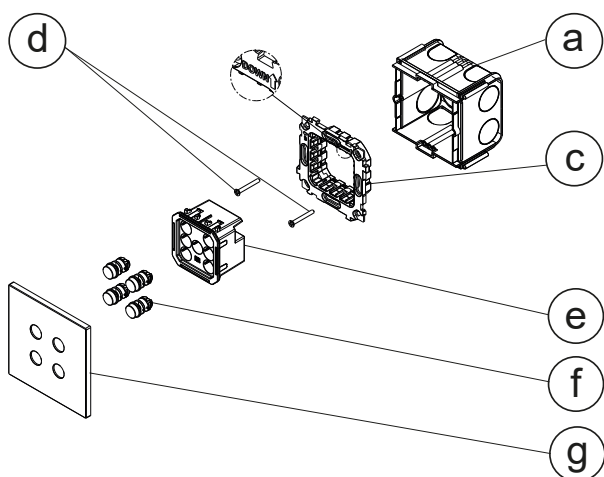
Plate for 4-button device

Code EK-PQA-4-...(*) (EU version)
Code EK-PQM-4-...(*) (UK + Switzerland version)

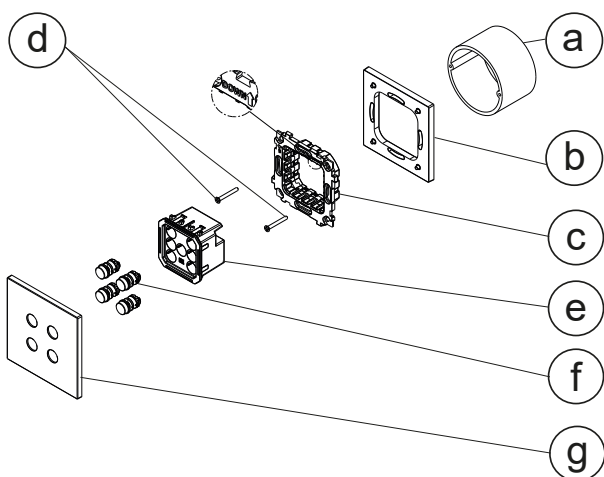
(*) To be completed with the extension for colour and finishing

Mounting

- refore suitable for use in dry interior rooms. The installation of the device can be done with round or square flush mounting box.
- The installation of the device requires the following steps:
 - place the mounting support (c) on the wall-mounted box (a) and fix it with the special screws (d) supplied in the appropriate holes of the box; for mounting with a raised plate, insert the specific adapter (b) between the flush-mounted box (a) and the mounting support (c);
 - insert the bus terminal, previously connected to the bus cable (see: "Connection to the KNX bus network"), in the appropriate seat on the back of the button;
 - snap the button body (e) into the mounting support (c), respecting the DOWN indication (arrowhead pointing upwards) shown on the front of the adapter;
 - fit the buttons (f) as described previously;
 - fit the plate (g) on the button body (e) matching the magnets with the corners of the support.

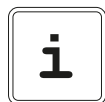


Mounting with flush wall plate

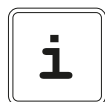


Mounting with raised plate

- a) Round or square flush-mounted box
- b) Specific adapter for mounting with raised plate
- c) Mounting support
- d) Fixing screws
- e) Proxima pushbutton
- f) Proxima series buttons (to be ordered separately)
- g) Square plate (to be ordered separately)



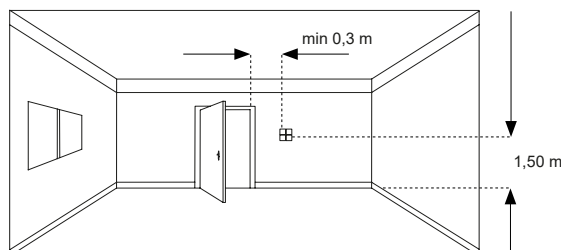
Note. The screws supplied in the package are suitable for standard installations. For more specific applications, where the screws have to be replaced, only flat-head screws must be used.



Note. The screws for the mounting support must be tightened with a max. torque of 1.0 Nm.

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 value between the value measured by the integrated sensor and a value received via bus by another KNX device.



Use as a room temperature controller

The pushbutton can be also used as a room temperature controller for single-stage heating/cooling systems with radiators, radiant panels and electrical heaters. As the device has no user interface, it must receive the operational parameters by the bus (e.g. operating mode, seasonal conduction mode or a change of the setpoint value).

Main functional characteristics (room temperature controller)

- Temperature measuring through integrated sensor with possibility of sending the value on the bus
- 2-point (on/off) or proportional (PWM or continuous) room temperature regulation
- Seasonal conduction modes: heating and cooling with possibility of changeover via bus or automatic depending on the configuration
- Operating modes: comfort, standby, economy and building protection with different setpoint for heating and cooling
- Automatic switching of the operating modes triggered by window opening/closing
- Weighted average of two temperature values
- Temperature control alarm
- Anti-locking function for valves (hydraulic systems)

Switching, display and connection elements

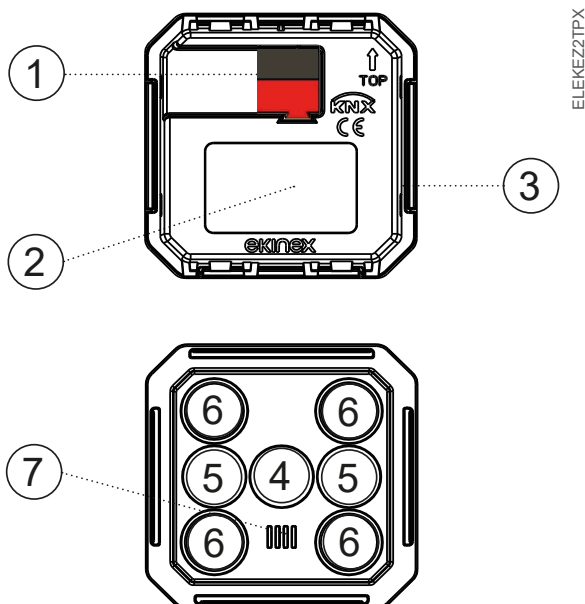
The device is equipped with 1, 2 or 4 buttons for independent operation, 1 programmable RGB LED for each button and a connector for the bus line.

Switching elements

- Buttons (4), (5), (6) for the independent control of user groups to be completed by means of buttons.



Warning! The electrical connection of the device can be carried out only by qualified personnel. The incorrect installation may result in electric shock or fire. Before making the electrical connections, make sure the power supply has been turned off.



ELEKEZ2TPX

- 1) Terminal block for KNX bus line
- 2) Label
- 3) Locking springs for metallic support
- 4) Button for 1-button central version with RGB LED
- 5) Buttons for 2-button version with RGB LED
- 6) Buttons for 4-button version with RGB LED
- 7) Temperature sensor

Display elements

- RGB LED with freely configurable diffusers (4), (5), (6); for example for status indication of controlled users or for night orientation light.

Connection of the KNX bus line

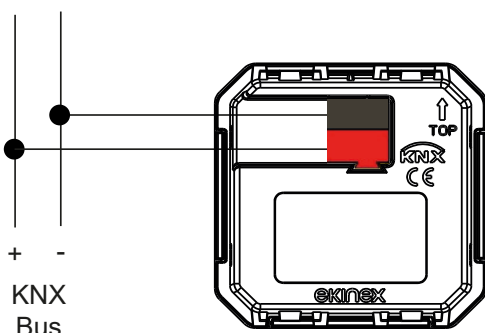
The connection of the KNX bus line is made with the terminal block (1) included in delivery and inserted into the slot of the housing.

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



Note. The configuration and commissioning of KNX devices require specialized skills. To acquire these skills, you should attend the workshops at KNX certified training centers.



Warning! In order to supply the KNX bus lines use only KNX bus power supplies (e.g. ekinex EK-AH1-TP or EK-AM1-TP). The use of other power supplies can compromise the communication and damage the devices connected to the bus.

Configuration and commissioning

Configuration and commissioning of the device require the use of the ETS® (Engineering Tool Software) program V5 or later releases. These activities must be carried out according to the design of the building automation system done by a qualified planner.

Configuration

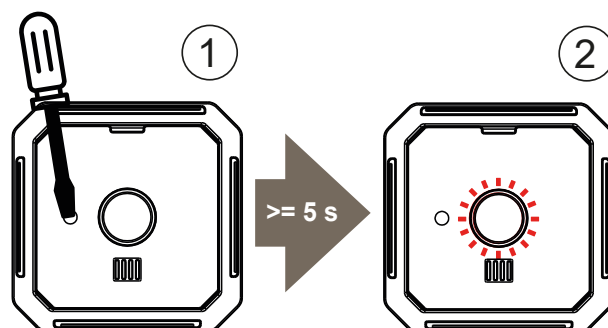
For the configuration of the device parameters the corresponding application program or the whole ekinex® product database must be loaded in the ETS program. For detailed information on configuration options, refer to the application manual of the device available on the website www.ekinex.com.

Commissioning

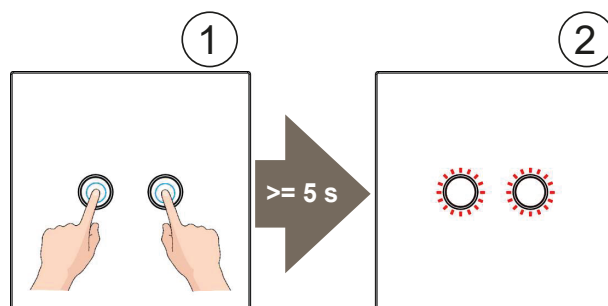
For commissioning the device the following activities are required:

- make the electrical connections as described above;
- turn on the bus power supply;
- switch the device operation to programming mode; the operation to be performed is different depending on the configuration of the device keys:

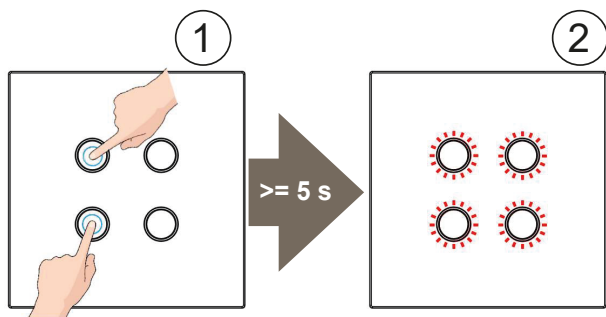
Configuration with 1 button: press the microswitch inserted in the top left through hole (1) for at least 5 seconds and release it as soon as the LED starts to flash red (2);



Configuration with 2 buttons: press the available buttons at the same time for at least 5 seconds (1) and release them as soon as the LEDs start to flash red (2);



Configuration with 4 buttons: press the buttons on the left side at the same time for at least 5 seconds (1) and release them as soon as the LEDs start to flash red (2);



- When all LEDs flash red (2), the device is in programming mode.
- 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 all LEDs work as programmed. Now the bus device is programmed and ready for use.

Reset of the device

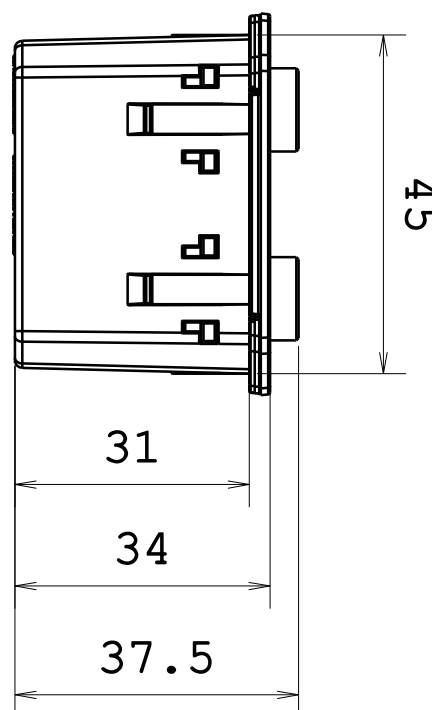
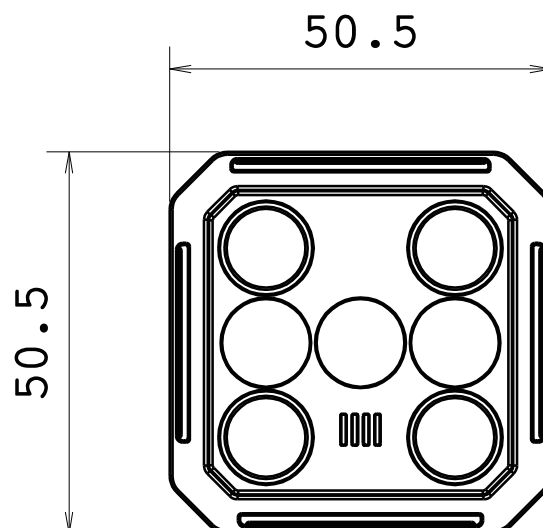
To reset the device, press and hold the same key combination used to enter programming mode for at least 10 seconds; the LEDs will first flash and then turn off: the reset has been performed. At this point, you must address and configure the device again using ETS.



Warning! The reset restores the device back to the state of delivery from the factory. The address and the value of the parameters set during configuration will be lost.

Product code	Application program (## = release)	Communication objects (nr. max)	Group addresses (nr. max)
EK-EZ2-TP-...	APEKEZ2TPX##.knxprod	225	254

Dimensions [mm]



Marks

- KNX
- CE, UKCA: 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 63044-5-1:2019, EN 63044-5-2:2019.

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



At the end of its useful life the product described in this datasheet is classified as waste from electronic equipment in accordance with the European Directive 2012/19/EU (WEEE recast), and cannot be disposed together with the municipal undifferentiated solid waste.



Warning! Incorrect disposal of this product may cause serious damage to the environment and human health. Please be informed about the correct disposal procedures for waste collecting and processing provided by local authorities.

Documentation

This datasheet refers to the release A1.0 of the ekinex® device EK-EZ2-TP-..., and is available for download at www.ekinex.com as a PDF (Portable Data Format) file.

File name	Device release	Updating
STEKEZ2TP_EN.pdf	A1.0	01 / 2025

Warnings

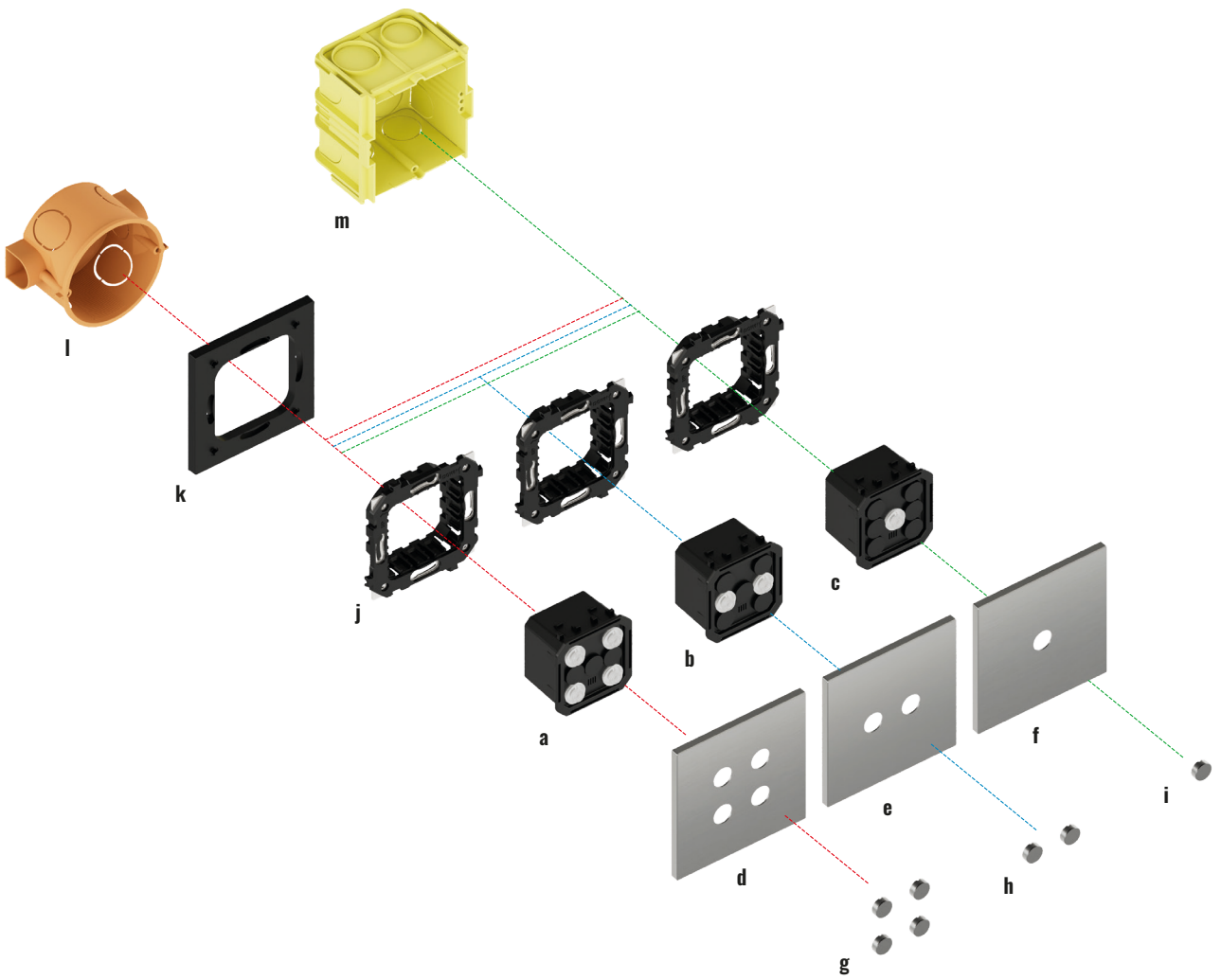
- Installation, electrical connection, configuration and commissioning of the device can only be carried out by qualified personnel in compliance with the applicable technical standards and laws of the respective countries
- Opening the housing of the device causes the immediate end of the warranty period
- 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: EKINEX S.p.A. Via Novara 37, I-28010 Vaprio d'Agogna (NO) Italy

Other information

- This datasheet is aimed at installers, system integrators and planners
- For further information on the product, please contact the ekinex® technical support at the e-mail address: support@ekinex.com or visit the website 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 EKINEX technical support in case of malfunctioning of the device
- KNX® and ETS® are registered trademarks of KNX Association cvba, Brussels

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Annex 1. Installation



Proxima

Description	Code
a) Proxima 4-button pushbutton	EK-EZ2-TP-4
b) Proxima 2-button pushbutton	EK-EZ2-TP-2
c) Proxima 4-button pushbutton	EK-EZ2-TP-1
d) Proxima square magnetic plate (4 buttons)	EK-PQA-4-...
e) Proxima square magnetic plate (2 buttons)	EK-PQA-2-...
f) Proxima square magnetic plate (1 button)	EK-PQA-1-...
g) Set of 4 Keys	EK-TTP-4...

Description	Code
h) Set of 2 Keys	EK-TTP-2...
i) Set of 1 Key	EK-TTP-1...
j) Square mounting bracket	EK-SMP-71-1
k) Additional support for compatibility with round flush-mounted boxes	EK-SMP-Q-1
l) Round flush-mounted box	not supplied by Ekinex®
m) Square flush-mounted box	not supplied by Ekinex®