



## Description

ekinex® Touch&See (EK-EC2-TP) is a KNX S-Mode device for switching, controlling and displaying bus functions.

It is equipped with an integrated KNX bus communication module and is designed for wall installation on a flush mounting box. Through a 3,5" touch-screen and a user interface structured in a sequence of graphical pages, it is possible to control and monitor KNX actuators and display information received from KNX actuators and sensors in a simple and intuitive way.

The device can also operate as a room temperature controller receiving values from up to 4 KNX temperature sensors. The device is powered by the KNX bus line and requires an auxiliary power supply 30 Vdc SELV.

The version EK-EF2-TP is provided with a temperature sensor and an integrated 2-fold pushbutton. Each channel can be freely programmed to carry out 1 or 2 bus functions and is equipped with four LED, programmable for example as status feedback or orientation nightlight. Pressing a rocker, the device sends on the bus a telegram, which is received and executed by one or more KNX actuators depending on the configuration.

**Note.** The set of functions that may be controlled as well as the information that may be displayed by the device depend on the KNX bus devices connected to the bus installation and the configuration carried out with the ETS software tool.

## Graphical pages

The Touch&See unit offers a series of main graphical pages that can be used for switching, controlling, monitoring or displaying bus functions of the room in which it is installed or other rooms controlled by the same KNX installation. The following graphical pages are available:

- home;
- room thermostat (8 independent zones);
- switching and control of bus devices (8 pages);
- calendar;
- display meteo information;
- multimedia;
- service functions (presence simulation, timer, alarms).

## Direct access

Each graphical page may be directly accessed through the home page whose icon is present in the vertical left stripe.

## Main functional characteristics

Depending on the version, the device may be configured to carry out a set of different functions such as:

- room chronothermostat (8 independent zones);
- ON/OFF switching of single or groups of loads;
- dimming of lighting devices;
- control of motor drives (for roller shutters, blinds, curtains, etc.);
- displaying of the status of auxiliary contacts (from safety/security devices, etc.);
- displaying of time and date of the internal clock or sent by a KNX timer;
- displaying of values sent by a KNX weather station such as temperature, wind speed, rain presence, brightness, etc.
- displaying of alarm messages;
- recalling and saving of scenes;
- sending on the bus of values (temperature, brightness, etc.);
- locking of the functions through password;
- temporary block for screen cleaning.

## Other characteristics

- Plastic casing for wall mounting
- Integrated temperature sensor (EK-EF2-TP only)
- Protection degree IP20 (according to EN 60529)
- Classification climatic 3K5 and mechanical 3M2 (according to EN 50491-2)

Code	Weight [g]	Dimensions [mm]
EK-EC2-TP	100 (115*)	82 x 80 x 37
EK-EF2-TP	110 (130*)	122 x 80 x 35

(\*) Including mounting support

## Technical data

- 30 Vdc power supply through KNX bus
- Current consumption from bus 18 mA
- SELV 30 Vdc auxiliary power supply

## Environmental conditions

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

## Completion of the device

The device can be completed with a frame of the ekinex® form o flank series (not for 'NF version). A metallic support, the fixing screws (only for EK-EF2-TP) and the terminals for connection of the KNX bus line and the auxiliary power supply are delivered with the device. The integrated 2-fold pushbutton (only for EK-EF2-TP) has to be completed with two square rockers (to be ordered separately).

Code	Component	Dimensions [mm]
EK-FOQ-...	square frame form series	86 x 86 x 8
EK-FLQ-...	square frame flank series	94 x 80 x 8
EK-FOR-...	rectangular frame form series	126 x 86 x 8
EK-FLR-...	rectangular frame flank series	135 x 80 x 8
EK-TSQ-...	square rocker	40 x 40

Base-codes of frame and rockers have to be completed by adding extensions for material, colour and finishing.

**Note.** Frame and rockers (only for EK-EF2-TP version) for the completion of the device have to be ordered separately. For further information about materials, colours and finishing available see also the ekinex® product catalog or browse [www.ekinex.com](http://www.ekinex.com).

## Customization of rockers

The rockers may be customized with symbols and texts. For more information see also the standard library on the ekinex® catalog or the website [www.ekinex.com](http://www.ekinex.com). On request symbols and texts chosen by the customer are also possible.

## 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:

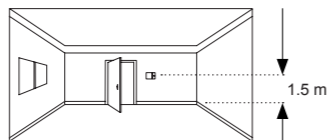
- fix the metallic support (d) with the screws supplied (c) on the wall box (e) provided with suitable fixing holes;
- snap a frame (b) of the form or flank series, inserting it from the rear of the device (a);
- insert the terminals for the bus (red/black) and the auxiliary power supply (yellow/white), previously connected to the related cables, in their slots on the rear side (see also: "Connection of the KNX bus line" and "Connection of the auxiliary power supply"). 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;
- mounting the EK-EC2-TP version on the metallic support (d) through the spring system. The version EK-EF2-TP requires instead to be tightened with the screws (g) included in the delivery. For mounting the device follow also the indication TOP (arrow tip pointing up) on the rear side of the device.
- snap the two rockers (f) onto the device for the operation of the pushbutton (only EK-EF2-TP).

The version EK-EC2-TP can be mounted on a round or square wall flush mounting box. The version EK-EF2-TP can be mounted on a round, a square or a rectangular wall flush mounting box. If necessary, the metallic support for mounting on the wall box can also be ordered separately using the code shown in the table.

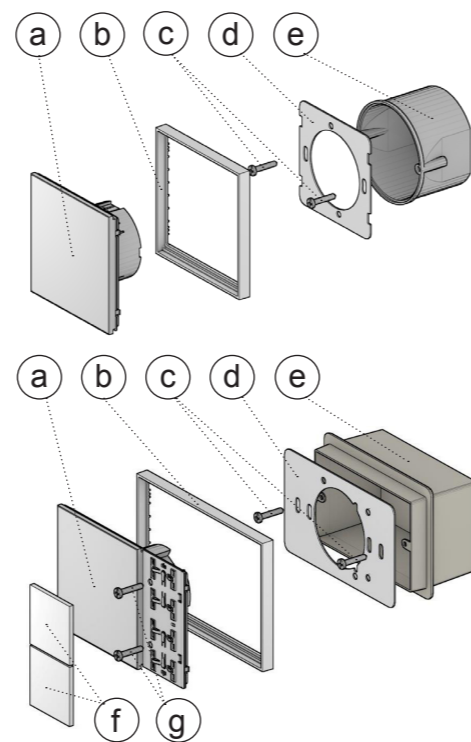
Device code	Wall box	Distance between fixing holes	Support code
EK-EC2-TP	round or square	60 mm	EK-SMQ
EK-EF2-TP	round or square	60 mm	EK-SMR
	rectangular	83,5 mm	

## Use as room temperature controller

Using the temperature value measured by the integrated sensor (only for EK-EF2-TP) for an optimal regulation the device must be installed preferably on an inside wall at a height of 1.5 m. The device cannot be mounted near heat sources such as radiators or electrical appliances; positions where the device is subject to direct sunlight must be avoided as well.



**Note.** For the mounting of the EK-EF2-TP version it is recommended to use only the screws delivered with the device. The use of other screws can damage the various components and compromise the appearance of the device installed.



- Device
- Frame of form or flank series (to be ordered separately)
- Screws for fixing the support on the wall box
- Mounting support for wall box
- Wall box (not delivered by ekinex)
- Square rockers 40x40 mm (to be ordered separately)
- Screws for fixing the device on the mounting support

**Note.** Programming pushbutton and LED are only accessible from the rear side of the device. It is better addressing the device before the final assembly of rockers and frame. Once the addressing has been performed, the device configuration can be later downloaded without pressing the programming pushbutton.

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

## Switching and display elements

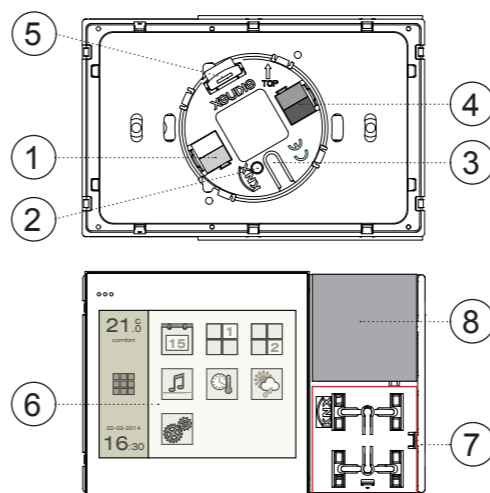
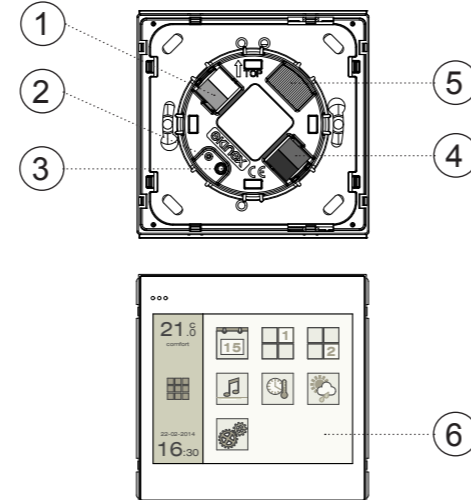
The device is equipped with a programming LED and a programming pushbutton, a control and visualisation surface (touch-screen) and a 2-fold pushbutton (only for EK-EF2-TP version) with four LED for each channel.

## Switching elements

- Pushbutton (3) for switching between the normal and programming operating mode
- Touch-screen surface (6) with graphical page configurable for switching, controlling and displaying bus functions
- Mechanisms to be completed with rockers (8) for independent switching of single or group of loads (only for EK-EF2-TP)

## Display elements

- Red LED (2) for indication of the active operating mode (on = programming, off = normal operation)
- Eight LED with light guide (7) freely programmable e.g. for feedback status or orientation nightlight (only for EK-EF2-TP)



- 1) Connection terminal block for 30 Vdc auxiliary power supply
- 2) Programming LED
- 3) Programming pushbutton
- 4) Connection terminal block for KNX bus line
- 5) Slot for micro SD card
- 6) Active 3,5" surface (touch-screen)
- 7) Light guide (for integrated LEDs)
- 8) Rockers (to be ordered separately) for operating the pushbutton

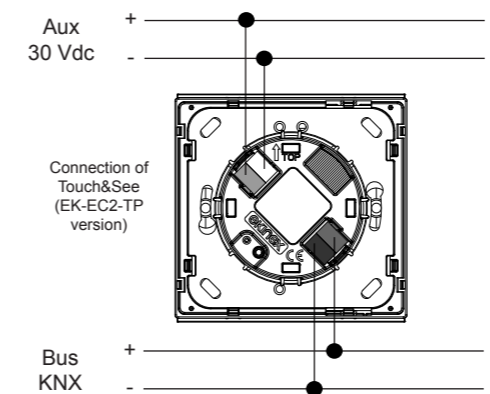
## Connection of the KNX bus line

The connection of the KNX bus line is made with the terminal block (red/black) included in delivery and inserted into the slot of the casing.

## 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

**Warning!** In order to supply the KNX bus lines use only KNX bus power supplies (e.g. ekinex EK-AB1-TP or EK-AG1-TP). The use of other power supplies can compromise the communication and damage the devices connected to the bus.



**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.

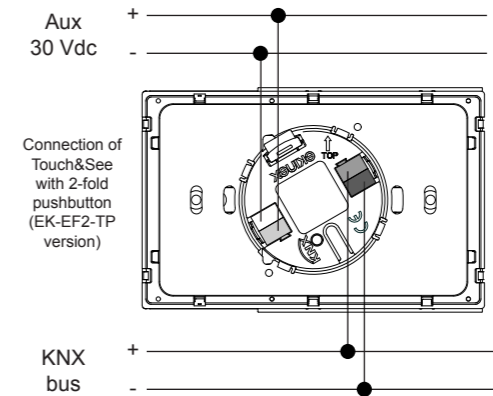
## Connection of the auxiliary power supply

The connection of the 30 Vdc auxiliary power supply is made with the terminal block (yellow/white) included in delivery and inserted into the slot of the casing.

## Characteristics of the SELV terminal block

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

**Warning!** The connection to the device of an auxiliary power supply with voltage different than 30 Vdc is not allowed.



## 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.

**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.

## 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).

## 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 rear 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.

## 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 it 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.

## 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 EU directives,

## Touch&See Control and visualization unit

Codes: EK-EC2-TP-...  
EK-EF2-TP-... (with 2-fold pushbutton)



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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

- 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 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 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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## Versions

Code	Version	
EK-EC2-TP	Mounting with square frame of Form or Flank series	
EK-EC2-TP-00-NF	Mounting without frame ('NF series), housing in black plastic	
EK-EC2-TP-00-NFW	Mounting without frame ('NF series), housing in white plastic	
Code	Led colours	Version
EK-EF2-TP	blue / green	Mounting with rectangular frame of Form or Flank series
EK-EF2-TP-RW	red / white	