

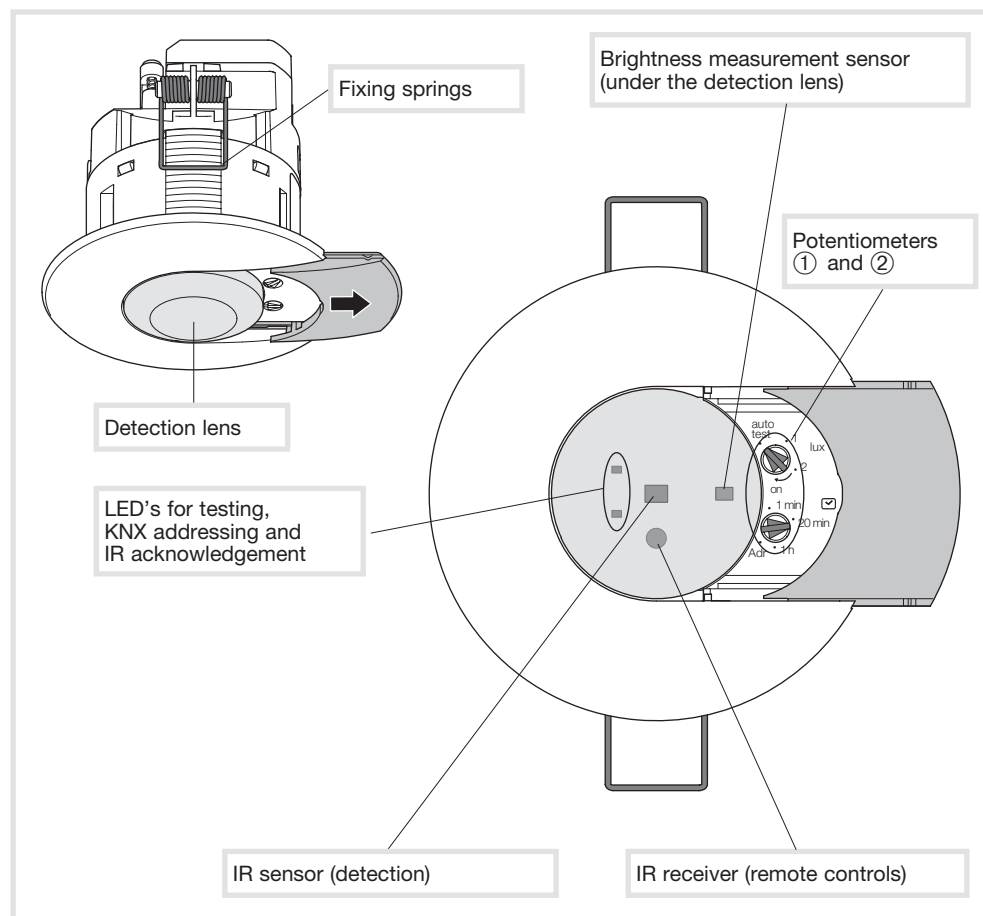
(EN)

Pluggable digital
PIR Occupancy sensors
3m/ 5m lead with KNX



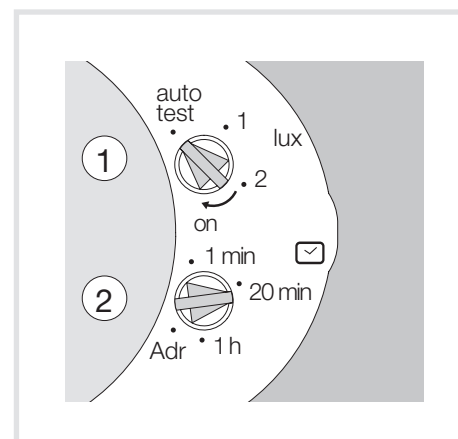
TKK523PE, TTK525PE

Description



User instructions

Settings

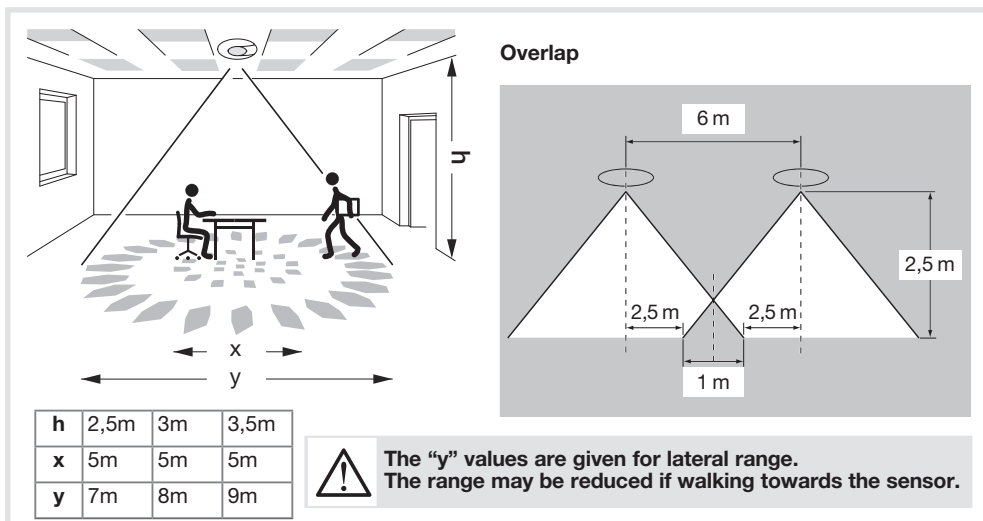


Instances of lighting levels

Position of potentiometer	Lux value approximate *	Application
auto test	preset	
1	200	Corridor
>1 ... 2 <	> 200 ... 400 <	
2	400	Offices
>2 ... On <	> 400 ... 1000 <	
On	1000	Offices

* The light measurement accuracy (Lux) is affected by the environment (furniture, ground, walls...). If necessary, the level has to be adjusted by potentiometer or remote control.

Detection areas



Remote control for settings

The installer remote control EEK001 can be used to set the following features if the potentiometer is set on "auto test":

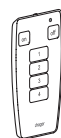
- Lux levels (☀, ☾, 🚶, 🏠, -, +)
- Time (⌚)
- Absence/presence detection (🏠)
- Power up behaviour (↶)



Override remote control

The user remote control EEK002 allows operators to:

- Switch on/off the light (short press, on off)
 - Dim up/down the light (long press > 5s.).
 - to control scenes 1, 2, 3, 4
- A short push recalls a luminosity level and a long push (> 5s.) memorizes a new level.
- Direct/ indirect lighting





This device must be installed by a suitably qualified electrician according to the installation's standards.

Product description and operation principles

Occupancy sensors TKK are presence detectors designed to detect low amplitude movements (e.g. person sitting at a desk).

Two models with pre-wired lead (3m or 5m) and klik system plug are available.

Detection is by means of a pyro-electric sensor located under detection lens.

The occupancy sensor measures the brightness in the room on a continuous basis and compares it to the level preset on the potentiometer, by means of the remote control EEK001 or ETS parameter.

These products are part of the tebis installation system.

Configuration

- S-mode ETS: Application software STCC521E. Database and description available from manufacturer.

Physical addressing

Set potentiometer ② to "Adr." position, the red LED switches on. To exit this state, move the potentiometer to another value.

Features

- One lighting control channel on the KNX/EIB bus.
- Control of presence/ absence mode.
- Time and brightness adjustment via ETS or remote control EEK001.
- Area linking: the occupancy sensor in a room can switch the light on in another room or the opposite.
- 2 monitoring channels (work independently of the light measurement).

Settings

The Lux threshold and time out period can be set with the potentiometers, by using the installer IR remote control (EEK001) or via ETS.

Test Mode

This mode makes it possible to validate the detection area. To select this mode, set the potentiometer ① to the position "auto test". The green or red LED behind the lens is on for 2 seconds after detection.

The red LED indicates that the light level measured is lower than current setting.

If the green LED is on, the light level measured is higher than current setting.

There is a time out during 2 minutes which is reactivated after each detection.

The output (remote KNX and DALI load) is also switched during 2s. after each detection.

It is also possible to use the remote control EEK001 to set the detector in test mode.

Functional modes

The detector has 2 different modes.

- Presence detection (automatic).
- Absence detection (semi-automatic).

The power up and cell operation can be set for each mode. These modes are available for the 3 lighting regulation modes.

A KNX pushbutton linked to the product makes it possible to reverse the lighting output state.

This state is maintained for the time period set by the potentiometer ② or the remote control EEK001.

Presence detection (automatic mode)

In this mode the light is controlled by motion in the detection area and ambient light levels.

If presence is detected whilst the light levels are below the required Lux level, the sensor is activated and regulates the light whilst there is still occupancy and for the time out period afterwards.

Once the sensor has deactivated the lights, it will require new occupancy whilst the ambient light levels are below the required Lux level to activate the lights again.

The used mode can be changed via the IR remote control EEK001 (default mode is presence detection: automatic).

Absence detection (semi automatic mode)

The sensor needs to be activated by a pushbutton or a user remote control input. Once the sensor is activated, it will regulate the lights whilst there is still occupancy and for the time out period afterwards. Once the sensor has deactivated the lights, it will require another input from the wallswitch or the remote control to switch the lights on.

Power Up

A parameter of the detector allows the choice of state for the lighting after power up (mains return).

During warm up phase, the green or red LED blinks.

In the Power up ON state, the lighting will automatically be energised when mains power is initially supplied or returned to the sensor. In the Power up OFF state, the lighting will not be energised and the sensor will not operate during warm up period.

This parameter is modified using the installer remote control EEK001.

States:

- **ON:** The light is immediately switched on for 30s. after power up.
In case of detection, the light (in automatic mode) remains on during the time delay; otherwise the light is switched off.
- **OFF:** The detector switches to the selected mode after warm up.

DALI/ DSI recognition

The green LED blinks for this period if a DALI load is recognised.

The red LED blinks during warm up in case of DALI bus error (unplugged wiring, ...) or DSI load.

Lighting regulation modes

In association with Digital Regulating Ballasts (DALI and DSI), these products offer lighting control functions.

The used protocol is automatically recognised.

Adjustment potentiometers are used to select the operating mode of the occupancy sensor.

- Mode 1: regulation active in auto mode
- Mode 2: regulation active with local set point
- Mode 3: regulation not active.

Mode 1	Mode 2	Mode 3
regulation active	regulation active	regulation inactive

Mode 1: regulation active in automatic mode

After detection, the DALI output controls the lighting level according to the value set, using the pushbutton input.

This value is memorised as the new setpoint.

The default set point is 400 Lux.

The output is controlled for the time set by the potentiometer ②.

Mode 2: regulation active with local set point

After detection, the DALI output controls the lighting level according to the value set by the potentiometer ① or the remote control.

This level can be temporarily adjusted via a pushbutton. Then, the light level is fixed.

The output is controlled for the time set by the potentiometer ②.

Mode 3: regulation inactive.

During presence detection, the detector controls its output at a preset level (100% by default), which can be modified by a pushbutton. The new instructions are saved.

The output is controlled for the length of time set by the potentiometer ② or the remote control.

At the end of this time delay, the output is set to a minimum level for 15 min. and is then switched off.

Use of override input

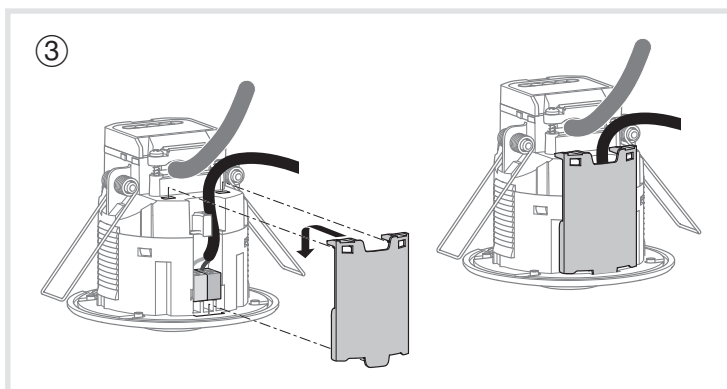
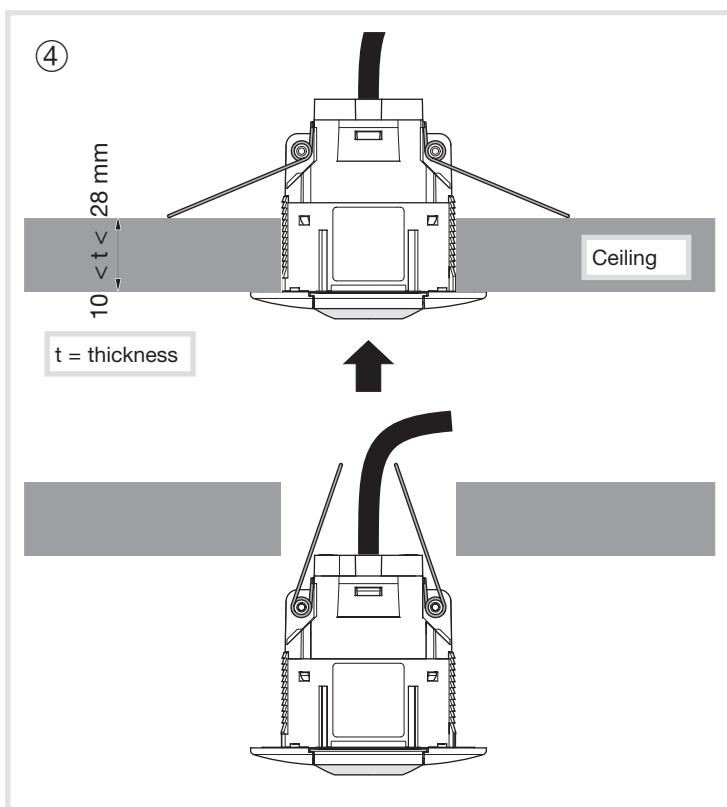
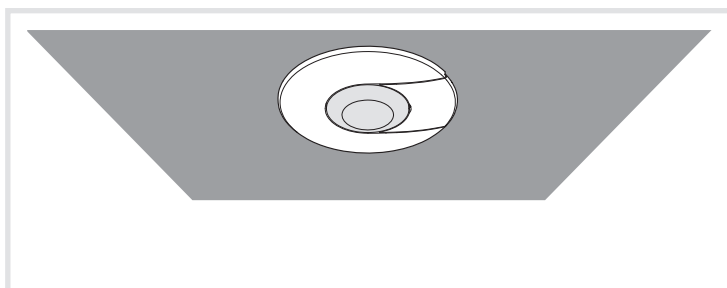
A KNX pushbutton can be used to modify the state of the output.

Short presses override the state of output for the time period set by the potentiometer ②. Long presses are used to modify the level of the set point.

Action	Settings	Potentiometer
Use Auto settings (factory) or set by the remote control or via ETS to switch the light automatically for a defined time.	Auto Settings Put the Lux potentiometer on "auto test". The settings are predefined: Lux = 400, time = 20min, : test mode for 2min. Remote control settings EEK001 (manual settings inhibited).	
Automatically switch on the light for a defined time.	Installer settings	
Test and validate the detection zone.	Test mode Move the potentiometer ① to "auto test". On this position, the remote control EEK001 can be used.	
KNX addressing	Move the potentiometer ② to "Adr." or use remote control EEK001 (long push > 5s. on the SET key).	

Setting instructions

Mounting



Ceiling mounting

1. Cut out a 60-63mm diameter hole using a hole saw.
2. Wire the detector according to the recommended connection diagram or plug into the klik.system marshalling box.
3. Protect the KNX lead with the protection cover
4. Fix the detector by pushing both springs upward then insert them into the hole.
5. Set potentiometers according to the desired values.

Note:

The thickness of the support ceiling (t) must be within 10 to 28mm range.

Factory settings

Luminosity threshold	400 lux
Lighting time	20 min.
Mode	Presence
Power Up	OFF
Active cell (Luminosity Cell)	Cell ON

Technical features

Electrical characteristics

Supply voltage (for the product): KNX bus (25 V \pm 5 V)

Supply voltage (DALI/DSI bus): 230V \sim +10/-15% 50/60Hz
240V \sim +/-6% 50/60Hz

Consumption with no load: 345 mW on the bus / 60mW on mains
DALI/ DSI output capacity: 24 ballasts

Functional characteristics

Lighting output operating time: 1 min. \rightarrow 1 h

Brightness level: 5 \rightarrow 1000 Lux

Recommended installation height: 2,5 m \rightarrow 3,5m

Detection range: \varnothing 7m

(installed product height: 2.5m)

Fixing accessories: Screws (No 8), Protective cover

Products can be connected in parallel.

Hole size required : 60mm

Environment

Operating temperature: -10 °C \rightarrow +45 °C

Storage temperature: -20 °C \rightarrow +60 °C

Class of insulation: II

IK 03

Index of protection: IP41

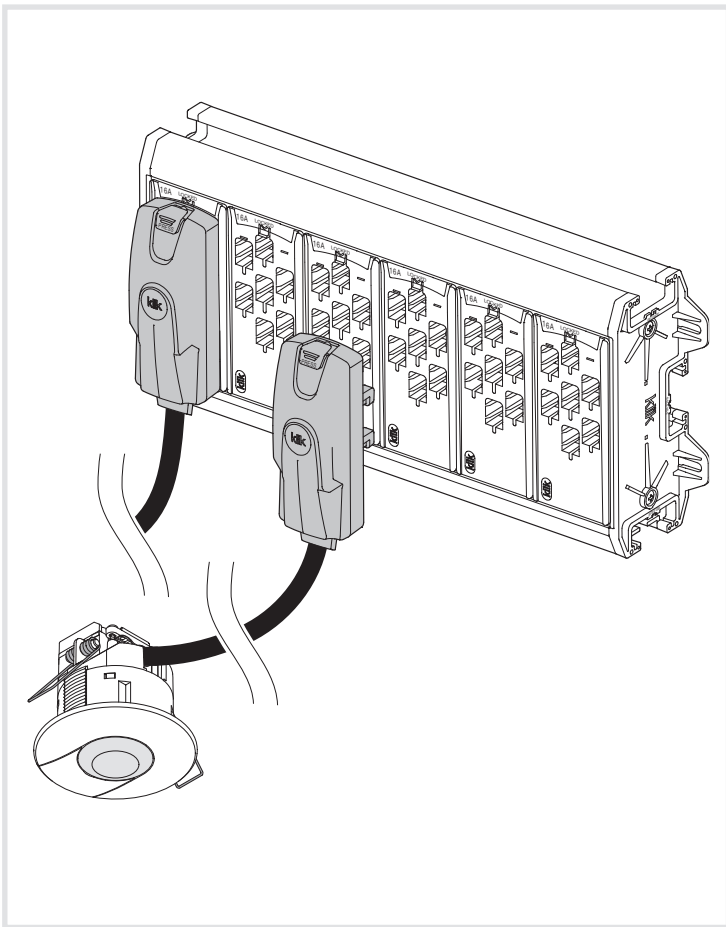
Fire resistance: 650°C

KNX medium : TP1

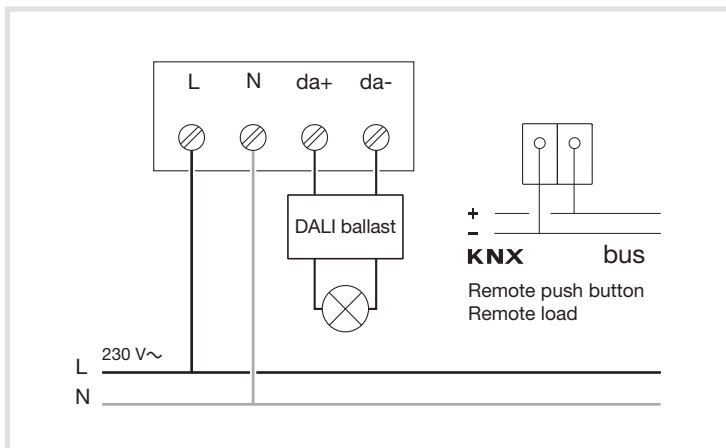
KNX Configuration Mode : S-mode

Connection diagrams

With klik.system KLMB marshalling boxes



Direct wiring to a luminaire



Implementation requirements

Requirements for optimal detection:

- Recommended installation distance from ground: 2.5 m → 3.5 m
- In offices, the detector must be installed above the workstation
- When associating several detectors, detection areas shall overlap
- Keep away from environmental disturbances (heat sources, partitions, houseplants, ventilation,...)

Trouble shooting

- False switching of lighting point:

Check that the detector is not exposed directly to a heat source or a lighting source, or is not placed above a ventilation grid...

- The range of the detector is too short:

Check whether the distance of the device from the ground is sufficient and its location is optimal.

- The light regulation on low brightness levels may fluctuate:

check the dimming range of the used ballasts and use preferably 1-100% devices.



Correct Disposal of This product (Waste Electrical & Electronic Equipment)

(Applicable in the European Union and other European countries with separate collection systems).

This marking shown on the product or its literature indicates that it should not be disposed with other household waste at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes of disposal.

Usable throughout Europe  and in Switzerland