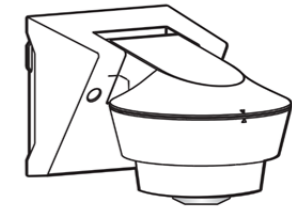


**Presence sensor with 360° detection area**

Code: EK-DH4-TP

**CE** Instruction sheet

KNX bus device for movement and presence detection intended for use in outdoor KNX installations.



**EKINEX S.p.A.**  
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FISPDH4TPIEXX00

Now the bus device is programmed and ready for use.

**IMPORTANT:** After a download, it takes approximately 60 s for the sensor to stabilize before it enters normal operation mode. During this settling period, the sensor may not appear to react or perform its programmed functions.

The programming pushbutton is placed on the rear side of the device, close to the KNX connector; it is therefore recommended to program at least the physical address before the device is installed on the ceiling. Once the physical address has been assigned, the device configuration can be later downloaded without pressing the programming pushbutton. If a further activation of the programming button should become necessary, the device can be switched in programming mode through the IR remote (available separately).

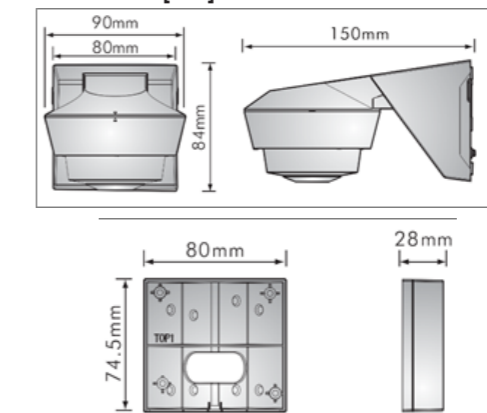
**Package contents**

EK-DH4-TP Sensor	Lens shield	Instruction sheet

**Optional accessories**

EK-QR6-IR IR Remote controller	Corner mounting bracket

**Dimensions [mm]**



**Markings**

- KNX
- CE: the device complies with the Low Voltage Directive (2006/95/EC) and the Electromagnetic Compatibility Directive (2004/108/EC).

Tests carried out according to:

- EN 61000-3-2
- EN 61000-3-3
- IEC/EN 61000-6-1
- IEC/EN 61000-6-3
- EN 55014
- EN 50491

**Maintenance**

The device is maintenance-free. To clean it, use only a dry cloth; avoid the use of detergents, solvents or other aggressive substances, particularly on the lens.

This datasheet refers to the release A1.0 of the ekinex® device EK-DH4-TP, and is available for download at [www.ekinex.com](http://www.ekinex.com) as a PDF (Portable Data Format) file.

Nome file	Versione dispositivo	Aggiornato il
STEKDH4TP_EN.pdf	A1.0	01 / 2020

**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 2002/96/EC (WEEE), and cannot be disposed together with the municipal undifferentiated solid waste.

When the device is installed in place, make sure that the shield is in the correct position according to the required area masking.

**Installation**

**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.

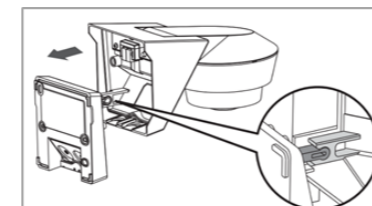
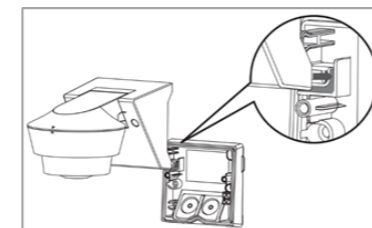
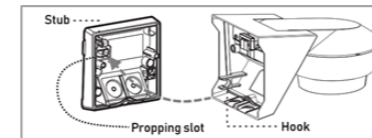
**Warning!** In order to supply the KNX bus lines use only KNX bus power supplies (e.g. ekinex EK-AB1-TP or EK-AG1-TP). The use of other power supplies can compromise the communication and damage the devices connected to the bus.

**Warning!** The sensor is a low voltage circuit; never connect it with the 230V line network. Do not run the KNX wiring in the same conduit used by line network wiring.

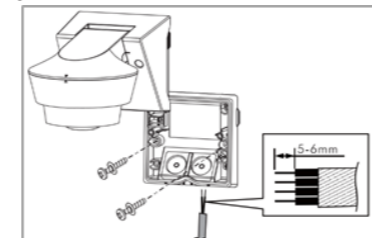
The device has degree of protection IP55 (Wall mount) / IP54 (Ceiling mount), and is therefore suitable for use in an outdoor environment. During the fixing of the base plate, until the wiring is connected and possibly the sensor is tested for accuracy and correct positioning, the device can be temporarily mounted by locking it on the baseplate through a plastic hook. Once all adjustments have been made, the sensor can be eventually mounted on the base plate. For application on inner or outer corners, a corner mounting support is available as an accessory.

**Installation procedure - Standard mount**

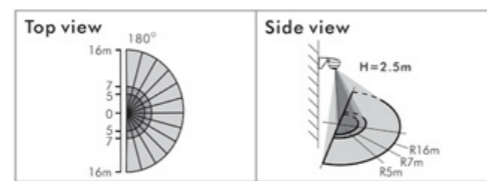
Apply the device body to the base plate by means of the support hook:



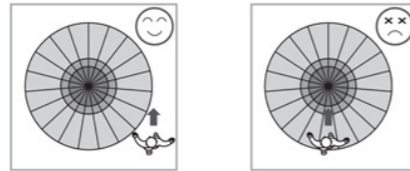
Mount the base plate on the wall / ceiling in the desired position by means of the supplied screw anchors. Drive the incoming bus cable through the rubber perforation cable guides and connect the device.



At this point it is recommended to carry out the commissioning of the device (see "Commissioning"), or at least the download of the physical address, using the programming button placed close to the bus connector; alternatively, programming mode can be activated later when the device is already installed by means of the EK-QR6-IR remote controller. Fix the sensor body to the base plate securely through its own mounting screws and finally adjust the position of the sensor head.



The optimal range is achieved walking through several portions of the detection area.



**i** The recommended mounting height varies from 2 m up to 3 m. Since the detector responds to temperature change, be aware that following conditions may cause lower sensitivity:

- In very foggy days, the sensitivity may be less due to moisture collecting on the lens.
- In very hot days, the sensitivity may be less since high ambient temperature is close to body temperature.
- In very cold days when heavy clothing is worn, especially if the facial area is covered, very little heat will be emitted from the body causing the unit to be less sensitive.

Please also verify following conditions during installation:

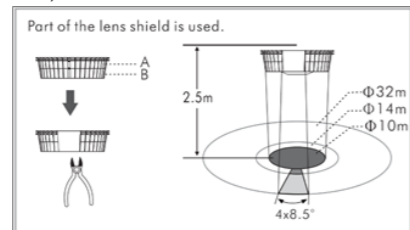
- Avoid pointing the detector toward objects with highly reflective surfaces, such as mirrors, glass, etc.
- Avoid mounting the detector very close to heat sources, such as heating vents, air conditioners, lights, etc.
- Avoid pointing the detector toward objects which may sway in air currents, such as curtains, tall plants, etc.

**Limitation of the detection area**

The detection area can be limited, in order to avoid unwanted activations, by means of the supplied optical shielding filters.

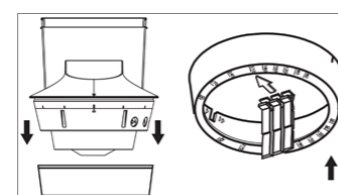


Cut the supplied shield to limit the detection area as in following figure. The shield can be cut both in sections (for radial limitation) and in length (for range diameter limitation):



Section of shield applied	Active range (h=2.5m)
(h = 2.5m)	-8.5° per section
A + B	Ø 10 m
A	Ø 14 m
None	Ø 32 m

In order to apply the shield, first remove the decorative bezel from the body. Insert the clip of the shield section on the edge of the bezel, so that it extends below. Re-apply the bezel making the shield cover part of the lens; the bezel secures the shield edge against the body.



360°.

**Main features**

- Semi-automatic or fully automatic operation
- Two independent Light control channels
- Two independent HVAC control channels
- One alarm channel
- An additional device can be used as slave for any of the channels
- Detection span of 360°, sectors can be masked through optical shields
- Adjustable Sensitivity, with "Walk test" to verify detection range
- Most parameters can be set from ETS or through an IR remote

**Technical data:**

- Rated voltage: 24 Vdc (21 - 30 Vdc) supplied by KNX bus
- Current consumption (on KNX bus): max 10 mA (operation) / 5 mA (Standby)
- Detection range: 360° circular (maskable), up to 9m diameter at 2.5m mounting height
- Light measurement range: 10..2000 Lux
- Housing, lens and frame in plastic material
- Safety standards: IEC 61000-6-1 / IEC 61000-6-3 / EN 55014 / EN 50491

**Dimensions:**

- Body diameter: Ø 60 mm
- Rim diameter: Ø 75 mm
- Total height: 78 mm

**Condizioni Ambientali:**

- Operating temperature: -20 ... +50°C
- Environmental protection: IP55 (wall mount) / IP54 (ceiling mount)

**Switching, display and detection elements**

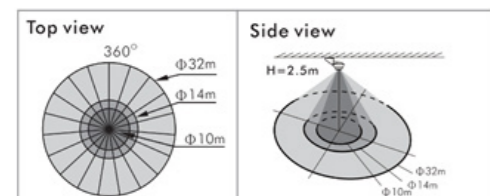
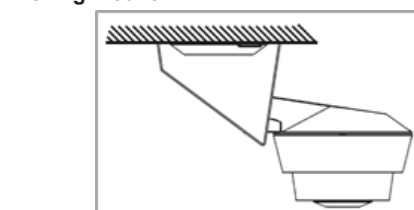
The device is equipped with:

- on the rear side, a programming pushbutton
- visible through the plastic lens, a blue programming LED, a red signalling LED, a PIR sensor, a brightness sensor and an IR receiver.

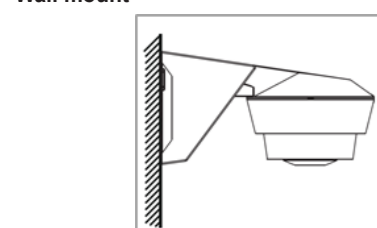
**Positioning**

The actual detection range of the sensors depends on the mounting height. For the EK-DH4-TP sensor, at a standard mounting height of 2.5 m, presence detection range (for small movements) is about 10 to 14 meters of diameter, while movement detection range (person walking through the detection area) is about 32 meters of diameter.

**Ceiling mount**



**Wall mount**



**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.
- 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](mailto:support@ekinex.com) or visit the website [www.ekinex.com](http://www.ekinex.com)
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