Sewi KNX L-Pr Presence Detector with Brightness Sensor

Technical specifications and installation instructions

Item numbers 70396 (white), 70696 (jet black)

KNX®

1. Description

The **Sensor Sewi KNX L-Pr** for the KNX building bus system captures brightness and the presence of persons in rooms. The brightness value measured can be used for the control of limit-dependent switching outputs. States can be linked via AND logic gates and OR logic gates. Multi-function modules change input data as required by means of calculations, querying a condition, or converting the data point type.

Functions:

- **Brightness measurement** with **brightness control**
- **Presence of persons is detected**
- **Threshold values** can be adjusted per parameter or via communication objects
- **8 AND and 8 OR logic gates**, each with 4 inputs. All switching events as well as 16 logic inputs in the form of communications objects can be used as inputs for the logic gates. The output of each gate can be configured optionally as 1-bit or 2 x 8-bit
- **8 multi-function modules** (computers) for changing the input data by calculations, by querying a condition or by converting the data point type

Configuration is made using the KNX software ETS. The **product file** can be downloaded from the Elsner Elektronik website on **www.elsner-elektronik.de** in the "Service" menu.

1.0.1. Scope of delivery

- Combined sensor

1.1. Technical data

General:	
Housing	Plastic
Colours	• White similar to signal white RAL 9003 (skirting)/ grey white RAL 9002 (cover) • Jet black RAL 9005
Assembly	Surface, ceiling installation
Dimensions Ø x height	approx. 105 mm x approx. 32 mm
Degree of protection	IP 30
Weight	approx. 50 g
Ambient temperature	-20…+60°C
Ambient humidity	5...95% RH, non-condensing
Storage temperature	-20…+70°C
KNX bus:	
KNX medium	TP1-256
Configuration mode	S-Mode
Group addresses	max. 2000
Assignments	max. 2000
Communication objects	230
Nominal voltage KNX	30 V === SELV
Power consumption KNX	max. 10 mA
Connection	KNX plug terminals
Duration after bus voltage restoration until data is received	approx. 5 seconds
Sensors:	
Brightness sensor:	
Measurement range	0 lux … 2,000 lux (higher values can be measured and output)
Resolution	1 lux at 0…2,000 lux
Presence sensor:	
Detection method	Passive infrared method (PIR)
Coverage angle	approx. 94° × 82° (see also *Coverage area of the presence detector*)
Range	approx. 5 m

The product conforms with the provisions of EU directives.

2. Safety and use instructions

Installation, testing, operational start-up and troubleshooting should only be performed by an authorised electrician.

CAUTION!
Live voltage!
There are unprotected live components inside the device.
- Inspect the device for damage before installation. Only put undamaged devices into operation.
- Comply with the locally applicable directives, regulations and provisions for electrical installation.
- Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.

Operate the device only as a fixed-site installation, i.e. only in assembled condition and after conclusion of all installation and operational start-up tasks, and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

3. Installation

### 3.1. Installation location and preparation

Install and use only in dry interior rooms! Avoid condensation.

The **Sensor Sewi KNX L-Pr** is installed surface mounted on ceilings.

To detect the presence of persons make sure that the desired area is covered by the sensor's coverage angle and that no obstacles obstruct the recording.

3.1.1. Coverage area of the presence detector

Fig. 1

Angle of coverage: approx. 94° × 82°
Range: approx. 5 m
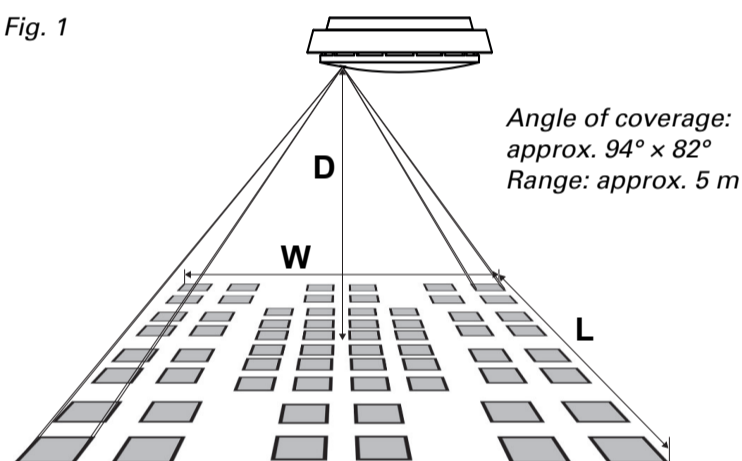
| Distance D	Length L	Width W
2.50 m	approx. 5.40 m	approx. 4.30 m
3.50 m	approx. 7.50 m	approx. 6.10 m

3.2. Connection

For installation and wiring at the KNX connection, the provisions and standards applicable to SELV circuits must be complied with!

The **Sensor Sewi KNX L-Pr** is surface-mounted but at the same time can also be screwed to a flush-mounted socket.

If the **Sensor Sewi KNX L-Pr** is installed on a flush-mounted socket, it must not contain any wiring with 230 V.

3.2.1. Layout of the circuit board

Fig. 2
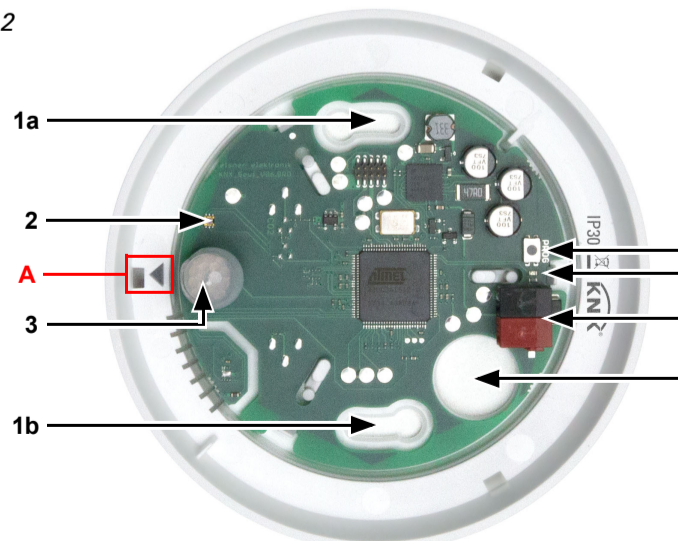
1 a+b Long holes for mounting (hole distance 60 mm)
2 Brightness sensor
3 Presence sensor

4   *Programming button*
5   *Programming LED*
6   *KNX-terminal BUS +/-*
7   *Cable bushing*
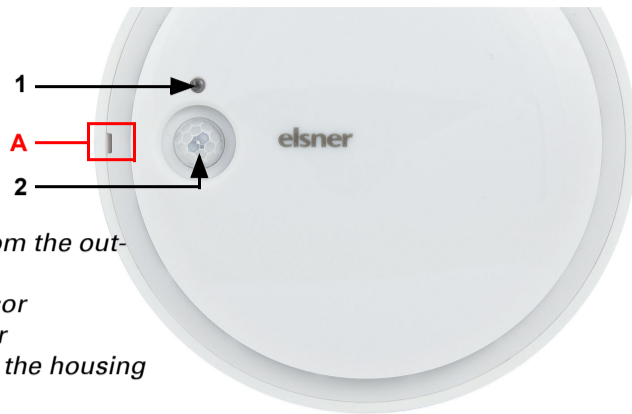A *Mark for aligning the cover*

3.2.2. Assembly

Fig. 3 Housing from the out-
side
1 *Brightness sensor*
2 *Presence sensor*
A *Recess to open the housing*

Fig. 4

Open the housing. To do this, carefully lift the cover from the skirting. Start at the recess, e.g. with a flat-head screwdriver.
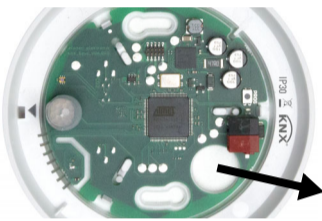

Fig. 5

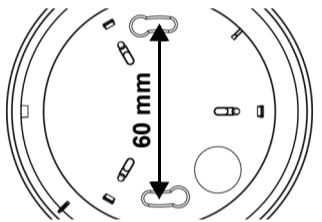Lead the bus cable through the cable bushing in the skirting.

Fig. 6

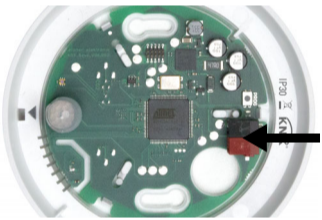Screw the skirting to the ceiling.

Hole distance 60 mm.

Fig. 7

Connect the KNX bus to the KNX terminal.

Fig. 8

Close the housing by positioning the cover and snapping it into place. To do this, align the recess on the cover to the marking on the skirting (the presence sensor must protrude through the opening in the cover).

4.   Commissioning

Brightness sensor, presence sensor and ventilation slots on the side must not be dirty, painted over or covered.

After the bus voltage has been applied, the unit will enter an initialisation phase lasting 5 seconds. During this period, no information can be received or transmitted via the bus.

The presence sensor has a start-up phase of approx. 15 seconds, during which the presence of persons is not detected.

4.1. Addressing the equipment

The individual address is assigned via the ETS. For this purpose there is a button with a control LED on the unit (Fig. 2, No. 4+5).

The equipment is delivered with the bus address 15.15.255. Another address can be programmed using the ETS.

5.   Maintenance

As a rule, it is sufficient to wipe the device with a soft, dry cloth twice a year.

6.   Disposal

After use, the device must be disposed of in accordance with the legal regulations. Do not dispose of it with the household waste!