KNX R sl
Precipitation Sensor

Technical specifications and installation instructions
Item number 70165

1. Description

The **Precipitation Sensor KNX R sl** for the KNX building bus system detects precipitation. Two switching outputs, AND logic gates and OR logic gates are available.

The compact housing of the **KNX R sl** accommodates the sensors, evaluation circuits and bus-coupling electronics.

Functions:

- **Precipitation detection**: The sensor surface is heated, so that only drops and flakes are recognised as precipitation, but not mist or dew. When the rain or snow stops, the sensor is soon dry again and the precipitation warning ends
- **2 switching outputs** (communication objects)
- **4 AND and 4 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

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. Deliverables

- Sensor
- Connection cable approx. 3 m, with plug
- Surface-mounted junction box (IP 55)
- Worm drive hose clips Ø 40-60 mm
- 4×50 mm stainless steel roundhead screws and 6×30 mm dowels for wall mounting. Use fixing materials that are suitable for the base!

1.1. Technical specification

Housing	Plastic
Colour	White / Translucent
Assembly	Surface mount
Protection category	IP 44
Dimensions	approx. 62 × 71 × 145 (W × H × D, mm)
Weight	approx. 80 g
Ambient temperature	Operation -25…+85°C, storage -30…+85°C
Auxiliary supply	12…40 V DC, 12…28 V AC. An appropriate power supply unit can be purchased from Elsner Elektronik.
Auxiliary current	at 12V DC: max. 185 mA at 24V DC: max. 90 mA at 24V AC: max. 82 mA
Bus current	max. 10 mA
Data output	KNX +/-
BCU type	Integrated microcontroller
PEI type	0
Group addresses	max. 254
Assignments	max. 254
Communication objects	54

The product conforms with the provisions of EU directives.

2. Installation and start-up

2.1. Installation notes

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

CAUTION!
Live voltage!
There are unprotected live components inside the device.

- National legal regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled 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.

2.2. Installation location

Select an installation position on the building where the sensor can measure rain without hindrance. No structural elements should be mounted above the weather station, from which water could continue to drop on the precipitation sensor even after it has stopped raining or snowing.

The mounting position must be selected so that the precipitation sensor cannot be touched by persons.

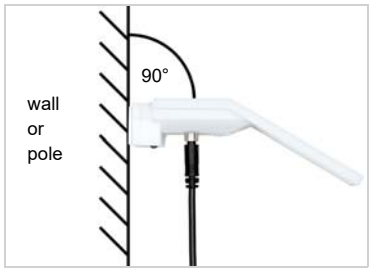

Fig. 1
The device must be attached to a vertical wall (or a pole).

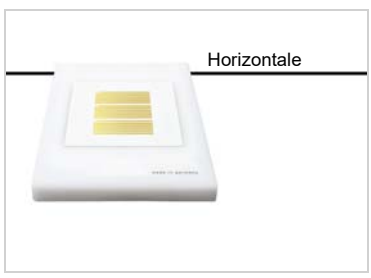

Fig. 2
The device must be mounted in the horizontal (transverse) direction.

2.3. Position of the rain sensor

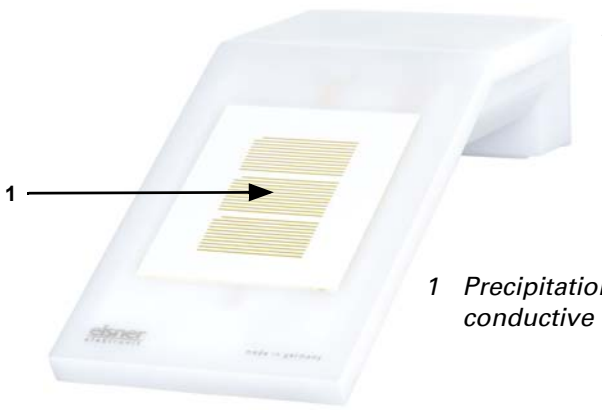

Fig. 3

1 Precipitation sensor (Area with conductive tracks)

2.4. Sensor assembly

2.4.1. Attaching the mount

First mount the bracket for wall or pole mounting. To do this, loosen the screw connection of the holder with a cross-headed screwdriver.

Wall mounting

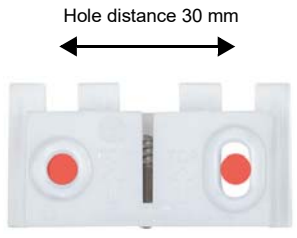

Fig. 4 Front view
Screw the holder to the wall with two screws. Use fixing materials (dowels, screws) that are suitable for the base.
Make sure that the arrows point upwards.

Pole mounting

The device is mounted to the pole with the enclosed clamp.

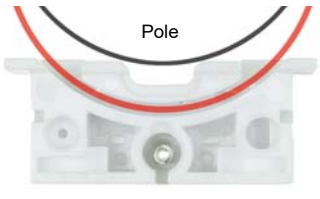

Fig. 5 Botttom view
Insert the clamp through the recess in the bracket. Tighten the clamp on the pole.
Make sure that the arrows point upwards.

2.4.2. Fitting and connecting the device

Fig. 6

1. Slide the device onto the mounting from above.
2. Tighten the screw of the mounting to secure the device.
3. Screw the M8 connector of the connection cable to the connection socket on the bottom of the device.

Connect the loose end of the connection cable to the KNX bus and auxiliary voltage. Use the supplied connection box and the terminals.

KNX bus:	Auxiliary voltage:
+ *red* - *black*	+ *yellow* - *white*

2.5. Instructions for assembly and initial start-up

After the auxiliary voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received or sent via the bus.

3. Addressing the equipment

The equipment is delivered ex works with the bus address 15.15.255. You program a different address in the ETS by overwriting the address 15.15.255 or teach the device using the programming button.

The programming button can be reached through the opening on the underside of the housing; it is recessed by approx. 15 mm. Use a thin object to reach the key, e. g. a 1.5 mm² wire.

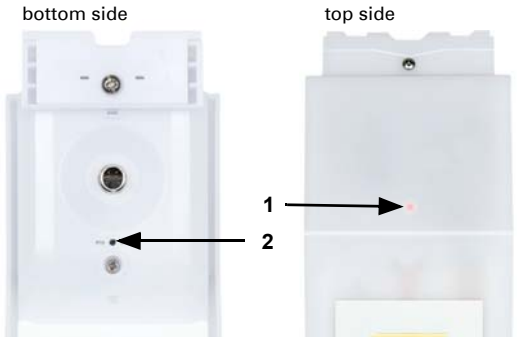

Fig. 7
1 Programming LED (under the semi-transparent lid)
2 Programming button for teaching the device

4. Maintenance

WARNING!
Risk of injury caused by components moved automatically!
The automatic control can start system components and place people in danger (e.g. moving windows/awnings if a rain/wind alarm has been triggered while cleaning).
- Always isolate the device from the mains for servicing and cleaning.

The device must regularly be checked for dirt twice a year and cleaned if necessary. In case of severe dirt, the sensor may not work properly anymore.

ATTENTION
The device can be damaged if water penetrates the housing.
- Do not clean with high pressure cleaners or steam jets.