EN

T-UP basic and TH-UP basic

Temperature and humidity sensors

Technical specifications and installation instructions

Article numbers 30520 (T), 30525 (TH)

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1. Description

The **T-UP basic and TH-UP basic indoor sensors** are indoor climate sensors specially designed for the KNX B8-TH interface. T-UP basic measures temperature. TH-UP basic measures temperature and air humidity.

The housing is supplemented with a frame of the switch series used in buildings, and thus fits seamlessly into the interior fittings.

Functions:

- Measuring of **temperature** and/or **air humidity**

1.0.1. Deliverables

- Sensor board/baseplate
- 55 mm housing

Additionally required (not included in the deliverables):

- Junction box Ø 60 mm, 42 mm deep
- Frame (for insert 55 x 55 mm), compatible to the switch scheme used in the building

1.1. Technical specifications

Housing	Plastic
Colours	• White, glossy (similar to RAL 9016 traffic white) • Special colours on request
Assembly	Flush mounting (wall mounting inside junction box Ø 60 mm, 42 mm deep)
Protection category	IP 20
Dimensions	Housing approx. 55 x 55 (W x H, mm), Mounting depth approx. 15 mm Baseplate/board approx. 71 x 71 (W x H, mm),
Total weight	approx. 45 g
Ambient humidity	max. 95% RH, avoid condensation

T-UP basic:

Ambient temperature	Operation -25…+80°C, storage -40…+85°C
Temperature measuring range	-25…+80°C
Temperature resolution	0.1°C
Temperature accuracy*	±0,8°C at -25…-10°C ±0,5°C at -10...+65°C ±0,6°C at +65...+80°C

TH-UP basic:

Ambient temperature	Operation -40...+125°C, storage -40...+125°C
Temperature measuring range	-40...+125°C
Temperature resolution	0.1°C
Temperature accuracy*	±1,0°C at -40...-10°C ±0,5°C at -10...+65°C ±1,0°C at +65...+125°C
Humidity measuring range	0...100% RH
Humidity resolution	0.1% RH
Humidity accuracy	±7,5% RH at 0...10% RH ±4,5% RH at 10...90% RH ±7,5% RH at 90...100% RH
Humidity drift	± 0.5% RH per year in normal atmosphere

* **Accuracy of measurement:** Measurement deviations due to sources of interference (see chapter *Installation location*) must be corrected in the ETS in order to ensure the specified accuracy of the sensor (offset).

The product is compliant with the provisions of EC guidelines.

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

The sensor is installed in a flush-mounted box (Ø 60 mm, 42 mm deep).

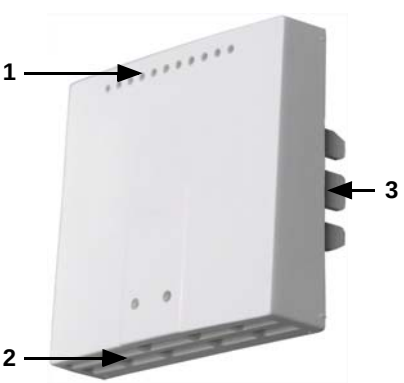
The sensor may only be installed and used in dry interior spaces. Avoid condensation.

When selecting an installation location, please ensure that the measurement results are affected as little as possible by external influences. Possible sources of interference include:

- Direct sunlight
- Draughts from windows and doors
- For flush-mounted fitting: Draughts from ducts which lead to the junction box in which the sensor is mounted from other rooms.
- Warming or cooling of the building structure on which the sensor is mounted, e.g. due to sunlight, heating or cold water pipes
- Connection lines, which lead from warmer or colder areas to the sensor

2.3. Construction of the sensor

2.3.1. Housing



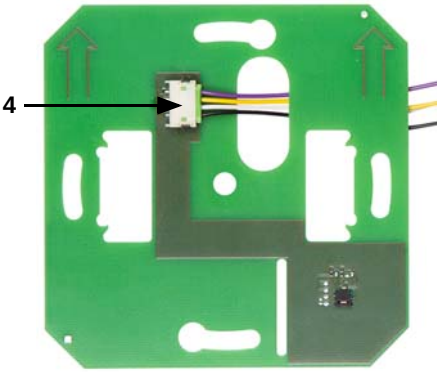


Fig. 1
Housing:
1 Openings for air circulation
2 Openings for air circulation (LOWER)
3 Catches

Board/baseplate:
4 Connection socket with connection line

2.4. Sensor assembly

First, install the box with the supply connection. Seal the inlet tubes in order to prevent draughts.

Connect the sensor to the KNX B8-TH interface using the supplied connection line. Then screw the board/baseplate to the box. Make sure that the front side of the connection socket points away from the wall and that the arrows are pointing upward. Move the frame into place. Insert the sensor housing firmly into the metal frame using the catches, so that the housing and frame are fixed together.

2.5. Notes on mounting and commissioning

Never expose the device to water (e.g. rain) or dust. This can damage the electronics. You must not exceed a relative humidity of 95%. Avoid condensation.