

## Outdoor sensor Temperature

Active sensor (4...20 mA) for measuring temperature in outdoor areas. Typical applications at cold stores, greenhouses, production plants and warehouses. NEMA 4X / IP65 rated enclosure.



## Type Overview

| Type    | Output signal active temperature | Additional features |
|---------|----------------------------------|---------------------|
| 22UT-14 | 4...20 mA                        | External sensor     |

## Technical Data

|                        |                                   |  |            |            |                 |
|------------------------|-----------------------------------|--|------------|------------|-----------------|
| <b>Electrical data</b> | Nominal voltage                   | DC 24 V  |            |            |                 |
|                        | Nominal voltage range             | DC 13.5...26.4 V   |            |            |                 |
|                        | Power consumption DC              | 0.5 W  |            |            |                 |
|                        | Electrical connection             | Pluggable spring loaded terminal block max. 2.5 mm <sup>2</sup>  |            |            |                 |
|                        | Cable entry                       | Cable gland with strain relief Ø6...8 mm   |            |            |                 |
| <b>Functional data</b> | Sensor Technology                 | Based on Pt1000 1/3 DIN  |            |            |                 |
|                        | Multirange                        | 8 measuring ranges selectable  |            |            |                 |
|                        | Current output                    | 1x 4...20 mA, max. load 500 Ω  |            |            |                 |
|                        | Application                       | Air  |            |            |                 |
| <b>Measuring data</b>  | Measuring values                  | Temperature  |            |            |                 |
|                        | Measuring range temperature       | Active sensor: range selectable<br>Attention: max. measuring temperature is restricted by max. fluid temperature (see Safety data) |            |            |                 |
|                        |                                   | Setting  | range [°C] | range [°F] | Factory setting |
|                        |                                   | S0   | -50...50   | -30...130  | ✓               |
|                        |                                   | S1   | -10...120  | 0...250    |                 |
|                        |                                   | S2   | 0...50     | 40...140   |                 |
|                        |                                   | S3   | 0...250    | 30...480   |                 |
|                        |                                   | S4   | -15...35   | 0...100    |                 |
|                        |                                   | S5   | 0...100    | 40...240   |                 |
|                        |                                   | S6   | -20...80   | 40...90    |                 |
|                        | S7                                | 0...160  | 0...150    |            |                 |
|                        | Accuracy temperature active       | ±0.5°C @ 21°C [±0.9°F @ 70°F]  |            |            |                 |
|                        | Long-term stability               | ±0.04°C p.a. @ 21°C [±0.07°F p.a. @ 70°F]  |            |            |                 |
|                        | Time constant τ (63%) in the room | Typical 542 s  |            |            |                 |
| <b>Materials</b>       | Cable gland                       | PA6, white   |            |            |                 |
|                        | Mounting plate                    | Lexan, grey RAL7001  |            |            |                 |
|                        | Housing                           | Cover: Lexan, white<br>Bottom: Lexan, white<br>Seal: 0467 NBR70, black<br>UV resistant   |            |            |                 |
|                        |                                   |  |            |            |                 |
| <b>Safety data</b>     | Ambient humidity                  | Max. 95% r.H., non-condensing  |            |            |                 |
|                        | Ambient temperature               | -35...50°C [-30...120°F]   |            |            |                 |

|                              |   |
|------------------------------|---|
| Fluid temperature            | -35...50°C [-30...120°F]                |
| Housing surface temperature  | Max. 70°C [160°F]                       |
| Protection class IEC/EN      | III Protective extra-low voltage (PELV) |
| Protection class UL          | UL Class 2 Supply                       |
| EU Conformity                | CE Marking                              |
| Certification IEC/EN         | IEC/EN 60730-1                          |
| Degree of protection IEC/EN  | IP65                                    |
| Degree of protection NEMA/UL | NEMA 4X                                 |
| Quality Standard             | ISO 9001                                |

**Safety notes**


This device has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application. Unauthorised modifications are prohibited. The product must not be used in relation with any equipment that in case of a failure may threaten humans, animals or assets.

Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.

The device contains electrical and electronic components and must not be disposed of as household refuse. All locally valid regulations and requirements must be observed.

**Remarks**
**General remarks concerning sensors**

When using lengthy connection wires (depending on the cross section used) the measuring result might be falsified due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one for the measuring current.

Sensing devices with a transducer should always be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage ( $\pm 0.2$  V). When switching the supply voltage on/off, onsite power surges must be avoided.

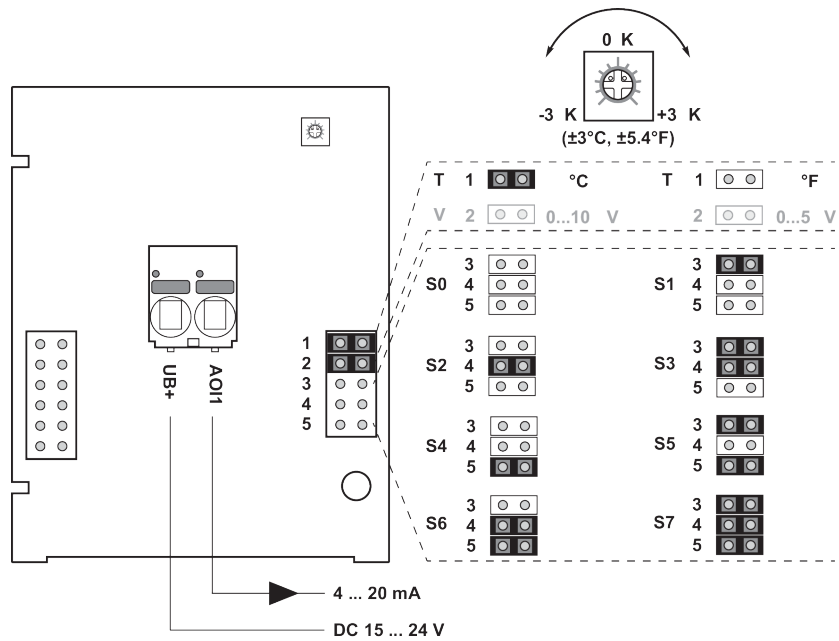
**Scope of delivery**

| Scope of delivery | Description              | Type      |
|-------------------|--------------------------|-----------|
|                   | Mounting plate S housing | A-22D-A09 |
|                   | Dowel                    |           |
|                   | Screws                   |           |

**Accessories**

| Optional accessories | Description  | Type        |
|----------------------|--|-------------|
|                      | Connection adapter, M20x1.5, for cable 1x6 mm, Multipack 10 pcs. | A-22G-A01.1 |

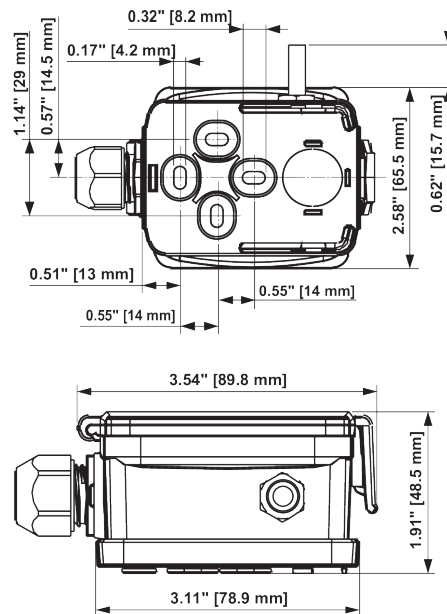
**Wiring diagram**



The adjustment of the measuring ranges is made by changing the bonding jumpers. The output value in the new measuring range is available after 2 seconds.

| Setting | range [°C] | range [°F] | Factory setting |
|---------|------------|------------|-----------------|
| S0      | -50...50   | -30...130  | ✓               |
| S1      | -10...120  | 0...250    |                 |
| S2      | 0...50     | 40...140   |                 |
| S3      | 0...250    | 30...480   |                 |
| S4      | -15...35   | 0...100    |                 |
| S5      | 0...100    | 40...240   |                 |
| S6      | -20...80   | 40...90    |                 |
| S7      | 0...160    | 0...150    |                 |

**Dimensions**



| Type    | Probe length | Weight  |
|---------|--------------|---------|
| 22UT-14 | 25 mm        | 0.13 kg |