Outdoor sensor Temperature


5 YEAR WARRANTY

CE LISTED 94 D5 TEMP. IND. & REG. EQUIP. c UL us

## Type Overview

| Type | Output signal active temperature | Additional features |
|---|---|---|
| 22UT-52 | 0...5 V, 0...10 V | External sensor |

## Technical data

| | | |
|---|---|---|
| **Electrical data** | Nominal voltage | AC/DC 24 V |
| | Nominal voltage range | AC 21.6...26.4 V / DC 13.5...26.4 V |
| | Power consumption AC | 0.8 VA |
| | Power consumption DC | 0.4 W |
| | Electrical connection | Pluggable spring loaded terminal block max. 2.5 mm² |
| | Cable entry | Cable gland with strain relief ø6...8 mm (1/2" NPT conduit adapter included) |
| **Functional data** | Application | Air |
| | Multirange | 8 measuring ranges selectable |
| | Voltage output | 1 x 0...5 V, 0...10 V, min. resistance 5 kΩ |
| | Output signal active note | Output 0...5/10 V with Jumper adjustable |
| **Measuring data** | Measured values | Temperature |
| **Specification temperature active** | Sensing element technology | Based on Pt1000 1/3 DIN |
| | Measuring range temperature settings | Active sensor: range selectable<br>Attention: The maximum measuring range listed does not indicate the allowable fluid temperature for the sensor. Refer to safety data for the maximum fluid temperature limits. |

| 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 | ±0.5°C @ 21°C [±0.9°F @ 70°F] @ measuring range setting S2 and S4 |
| | 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 |

## Technical data

| | | |
|---|---|---|
| **Safety data** | Protection class IEC/EN | III, Protective Extra-Low Voltage (PELV) |
| | Power source UL | Class 2 Supply |
| | Degree of protection IEC/EN | IP65 |
| | Degree of protection NEMA/UL | NEMA 4X |
| | Enclosure | UL Enclosure Type 4X |
| | EU Conformity | CE Marking |
| | Certification IEC/EN | IEC/EN 60730-1 |
| | Quality Standard | ISO 9001 |
| | UL 2043 Compliant | Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC |
| | Type of action | Type 1 |
| | Rated impulse voltage supply | 0.8 kV |
| | Pollution degree | 3 |
| | Ambient humidity | Max. 95% RH, non-condensing |
| | Ambient temperature | -35...50°C [-30...120°F] |
| | Fluid temperature | -35...50°C [-30...122°F] |
| | Housing surface temperature | Max. 70°C [160°F] |
| **Materials** | Housing | Cover: PC, orange<br>Bottom: PC, orange<br>Seal: NBR70, black<br>UV resistant<br>UL94 5VA |
| | Cable gland | PA6, black |
| | Mounting plate | PC, grey RAL 7001 |

## 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 with 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**

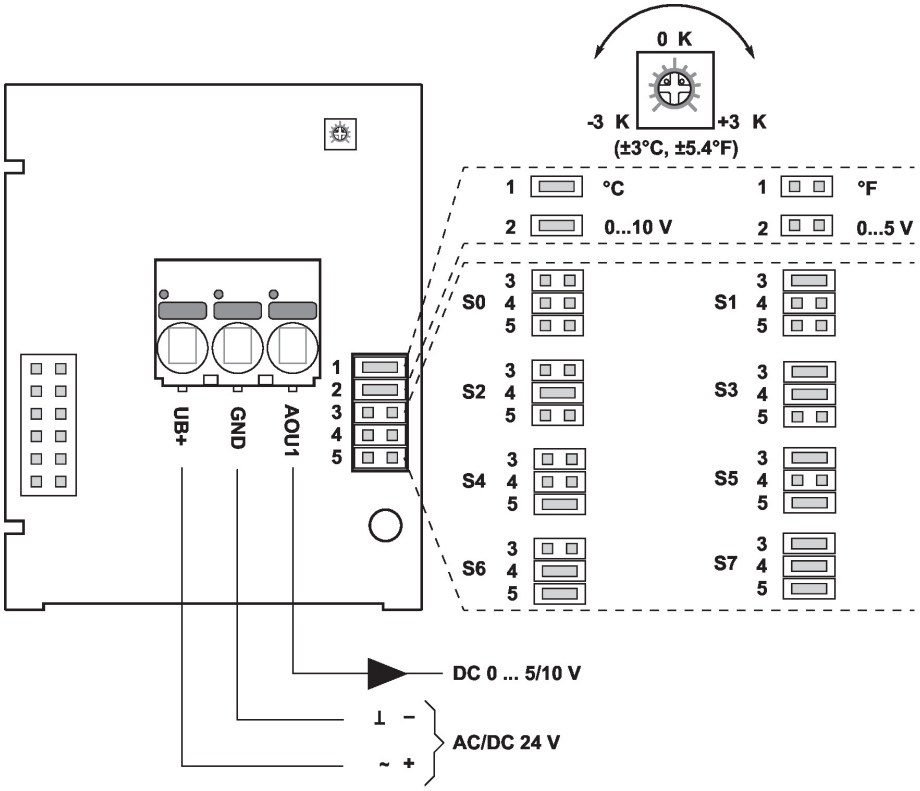
When using lengthy connection wires (depending on the cross section used) the measuring result might be falsified due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one 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 (±0.2 V). When switching the supply voltage on/off, onsite power surges must be avoided.

## Parts included

| Description | Type |
|---|---|
| Mounting plate S housing | A-22D-A09 |
| Dowels | |
| Screws | |
| 1/2" NPT conduit adapter | |

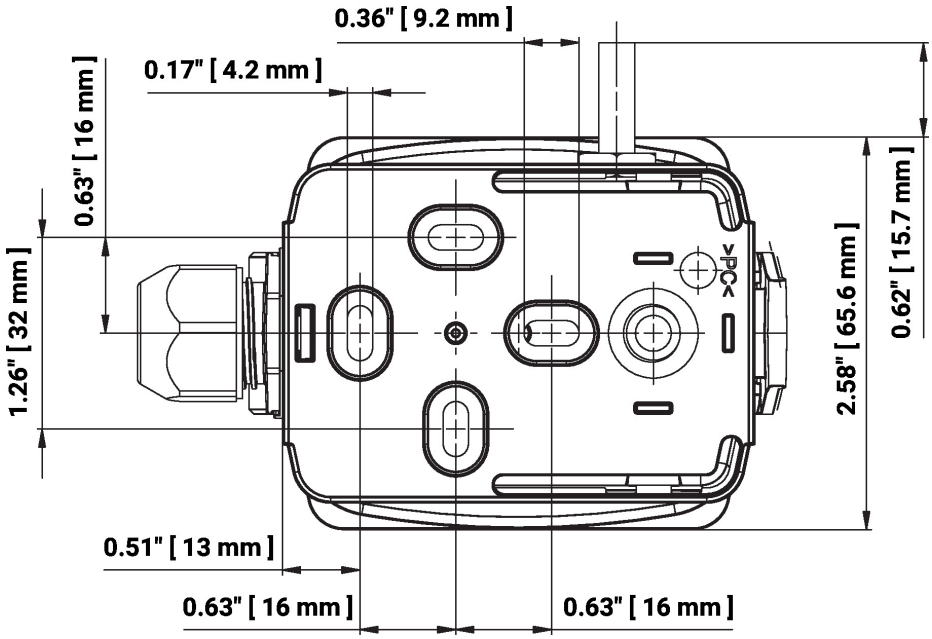
## Wiring diagram

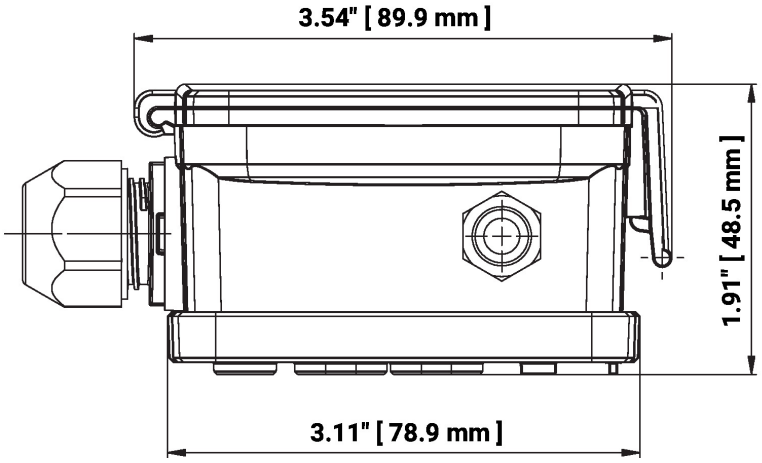



The following measuring ranges can be adjusted through the jumper settings:

| 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-52 | 25 mm | 0.13 kg |

## Further documentation

• Installation instructions