

Duct/Immersion sensor Temperature

For measuring temperature in duct applications. In connection with a stainless steel or brass thermowell also applicable for pipe applications. NEMA 4X / IP65 rated enclosure.



5-year warranty

Type Overview

| Type | Output signal | Probe length | Probe diameter |
|----------|---------------|--------------|----------------|
| 01DT-5EH | Ni1000 (JCI) | 2" [50 mm] | 0.24" [6 mm] |
| 01DT-5EL | Ni1000 (JCI) | 4" [100 mm] | 0.24" [6 mm] |
| 01DT-5EN | Ni1000 (JCI) | 6" [150 mm] | 0.24" [6 mm] |
| 01DT-5EP | Ni1000 (JCI) | 8" [200 mm] | 0.24" [6 mm] |
| 01DT-5ER | Ni1000 (JCI) | 12" [300 mm] | 0.24" [6 mm] |
| 01DT-5ET | Ni1000 (JCI) | 18" [450 mm] | 0.24" [6 mm] |

Technical Data

| | | |
|------------------------|-------------------------------------|---|
| Electrical Data | Electrical connection | Pluggable spring loaded terminal block max. 2.5 mm ² |
| | Cable entry | Cable gland with strain relief Ø6...8 mm (1/2" NPT conduit adapter included) |
| Functional Data | Application | air water |
| | Output signal passive temperature | Ni1000 (JCI) |
| Measuring Data | Measured values | Temperature |
| | Measuring range temperature | -60...320°F [-50...160°C] |
| | Accuracy temperature passive | ±0.7°F @ 32°F [±0.4°C @ 0°C] |
| | Measuring current | <5 mA @ 70°F [21°C] |
| | Time constant τ (63%) in air duct | Typical 210 s @ 0 m/s Typical 46 s @ 3 m/s |
| | Time constant τ (63%) in water pipe | With thermowell A-22P-A.. and thermal contact fluid Typical 7 s with thermowell brass Typical 9 s with thermowell stainless steel |
| | Materials | Cable gland |
| | Housing | cover: PC, orange base: PC, orange seal: NBR70, black UV resistant |
| | Probe material | AISI 316L |
| Safety Data | Ambient humidity | max. 95% RH, non-condensing |
| | Ambient temperature | -30...120°F [-35...50°C] |
| | Fluid temperature | -60...320°F [-50...160°C] |
| | Housing surface temperature | max. 195°F [90°C] |

| | | |
|--------------------|------------------------------|--|
| Safety Data | Protection class IEC/EN | III, Protective Extra-Low Voltage (PELV) |
| | Power source UL | Class 2 Supply |
| | EU Conformity | CE Marking |
| | Certification IEC/EN | IEC/EN 60730-1 |
| | Certification UL | cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1/-2-9 |
| | Degree of protection IEC/EN | IP65 |
| | Degree of protection NEMA/UL | NEMA 4X |
| | Quality Standard | ISO 9001 |
| | Mode of operation | Type 1 |
| | Control pollution degree | 3 |
| | Rated impulse voltage supply | 0.8 kV |
| | Construction | Independently mounted control |

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. Unauthorized 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 authorized 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 Due to self-heating with 2 wire passive sensors, the supply wire current affects the measurement accuracy. So the supply current should not be higher than the measuring current values specified in this data sheet.

When using lengthy connecting cables (depending on the cross section used), the cable resistance must be taken into account. The lower the impedance of the sensor used, the greater the effect of the line resistance on the measurement, because it generates an offset.

Scope of delivery

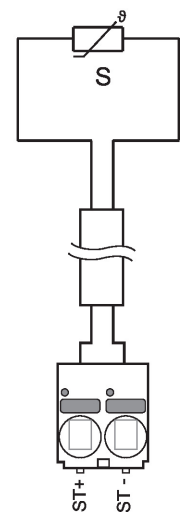
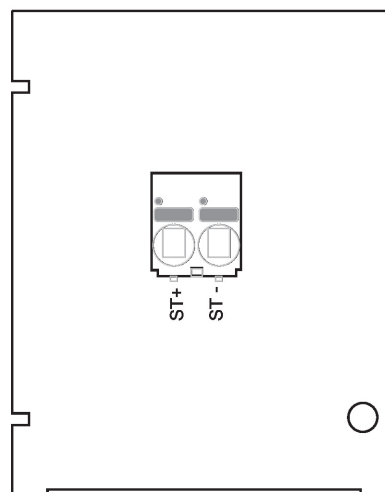
| Scope of delivery | Description | Type |
|-------------------|--|-----------|
| | Mounting clip, with screws and adhesive foil | A-22D-A11 |
| | 1/2" NPT conduit adapter | |

Accessories

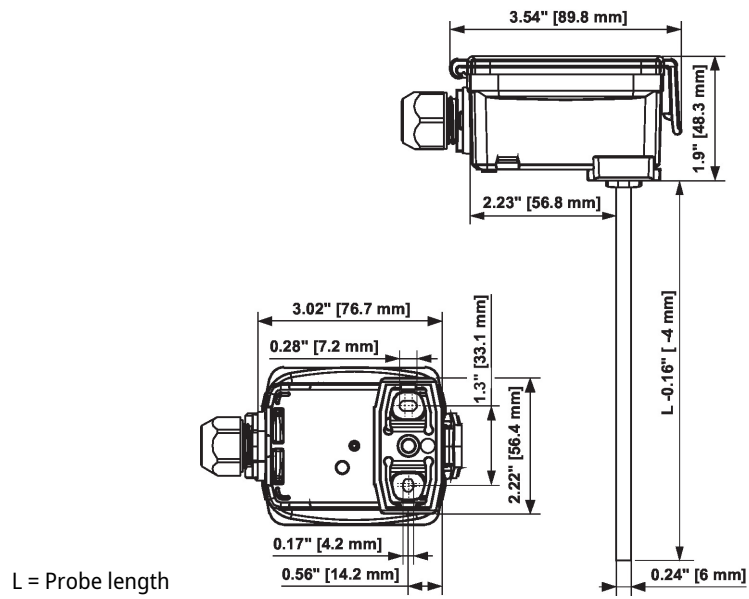
| Optional accessories | Description | Type |
|--------------------------|--|-------------|
| | Mounting plate S housing | A-22D-A09 |
| | Connection adapter, M20x1.5, for cable 1x6 mm, Multipack 10 pcs. | A-22G-A01.1 |
| Optional accessories air | Description | Type |
| | Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic | A-22D-A03 |
| | Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass | A-22D-A05 |

Recommended accessories water

| Description | Type |
|--|-----------|
| Thermowell pocket (fabricated) Stainless steel, 2" [50 mm], 1/2" NPT, wrench size 3/4" | A-22P-A05 |
| Thermowell pocket (fabricated) Stainless steel, 4" [100 mm], 1/2" NPT, wrench size 3/4" | A-22P-A07 |
| Thermowell pocket (fabricated) Stainless steel, 6" [150 mm], 1/2" NPT, wrench size 3/4" | A-22P-A09 |
| Thermowell pocket (fabricated) Stainless steel, 8" [200 mm], 1/2" NPT, wrench size 3/4" | A-22P-A11 |
| Thermowell pocket (fabricated) Stainless steel, 12" [300 mm], 1/2" NPT, wrench size 3/4" | A-22P-A13 |
| Thermowell pocket (fabricated) Stainless steel, 18" [450 mm], 1/2" NPT, wrench size 3/4" | A-22P-A15 |
| Thermowell pocket (fabricated) Brass, 2" [50 mm], 1/2" NPT, wrench size 3/4" | A-22P-A17 |
| Thermowell pocket (fabricated) Brass, 4" [100 mm], 1/2" NPT, wrench size 3/4" | A-22P-A19 |
| Thermowell pocket (fabricated) Brass, 6" [150 mm], 1/2" NPT, wrench size 3/4" | A-22P-A21 |
| Thermowell pocket (fabricated) Brass, 8" [200 mm], 1/2" NPT, wrench size 3/4" | A-22P-A23 |
| Thermowell pocket (fabricated) Brass, 12" [300 mm], 1/2" NPT, wrench size 3/4" | A-22P-A25 |
| Thermowell pocket (fabricated) Brass, 18" [450 mm], 1/2" NPT, wrench size 3/4" | A-22P-A27 |
| Thermowell pocket (machined) Stainless steel, 2" [50 mm], 1/2" NPT, wrench size 3/4" | A-22P-A36 |
| Thermowell pocket (machined) Stainless steel, 4" [100 mm], 1/2" NPT, wrench size 3/4" | A-22P-A37 |
| Thermowell pocket (machined) Stainless steel, 6" [150 mm], 1/2" NPT, wrench size 3/4" | A-22P-A38 |
| Thermowell pocket (machined) Stainless steel, 8" [200 mm], 1/2" NPT, wrench size 3/4" | A-22P-A39 |
| Syringe with thermal paste | A-22P-A44 |
| Cold barrier, Plastic, L 50 mm, for thermowell A-22P-A.. | A-22P-A51 |

Wiring Diagram


Dimensions



| Type | Probe length | Weight |
|----------|--------------|-------------------|
| 01DT-5EH | 2" [50 mm] | 0.26 lb [0.12 kg] |
| 01DT-5EL | 4" [100 mm] | 0.26 lb [0.12 kg] |
| 01DT-5EN | 6" [150 mm] | 0.29 lb [0.13 kg] |
| 01DT-5EP | 8" [200 mm] | 0.29 lb [0.13 kg] |
| 01DT-5ER | 12" [300 mm] | 0.31 lb [0.14 kg] |
| 01DT-5ET | 18" [450 mm] | 0.33 lb [0.15 kg] |