

Duct/Immersion sensor Temperature

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



Type Overview

Type	Output signal	Probe length	Probe diameter
01DT-1NN	NTC10k Carel	150 mm	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
Functional data	Application	Air Water
	Output signal passive temperature	NTC10k Carel
Measuring data	Measured values	Temperature
	Measuring range temperature	-50...150°C [-60...300°F]
	Accuracy temperature passive	±0.26°C @ 25°C [±0.48°F @ 77°F]
	Measuring current	<0.2 mA @ 25°C [77°F]
	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
	Probe material	V4A (1.4404)
Materials	Cable gland	Plug Adapter: PA66, black Nut: PA6, black
	Housing	Cover: PC, orange Bottom: PC, orange Seal: NBR70, black UV resistant
	Probe material	V4A (1.4404)
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
	EU Conformity	CE Marking
	Certification IEC/EN	IEC/EN 60730-1
	Quality Standard	ISO 9001
	UL Approval	cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1/-2-9
	Type of action	Type 1
	Rated impulse voltage supply	0.8 kV

Safety data	Installation method	Independently mounted control
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-35...50°C [-30...122°F]
	Fluid temperature	-50...150°C [-60...300°F]
	Housing surface temperature	Max. 90°C [195°F]

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** 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.

Parts included

Parts included	Description	Type
	Mounting clip, with screws and adhesive foil	A-22D-A11

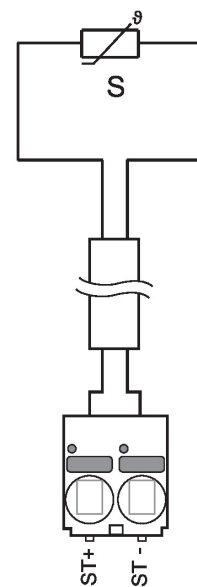
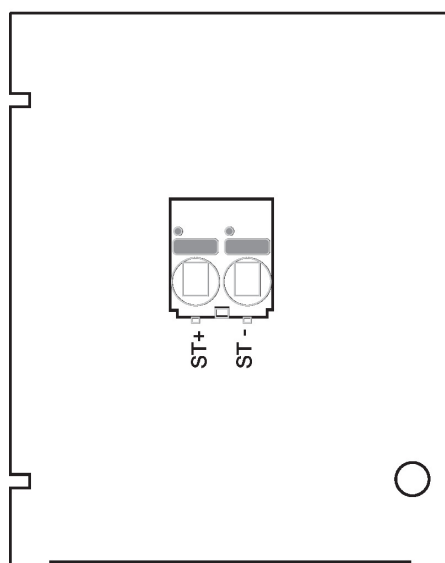
Accessories

Optional accessories	Description	Type
	Mounting plate S housing	A-22D-A09
	Connection adapter flex conduit, M20x1.5, for cable gland 1 x 6 mm, Multipack 10 pcs.	A-22G-A01.1

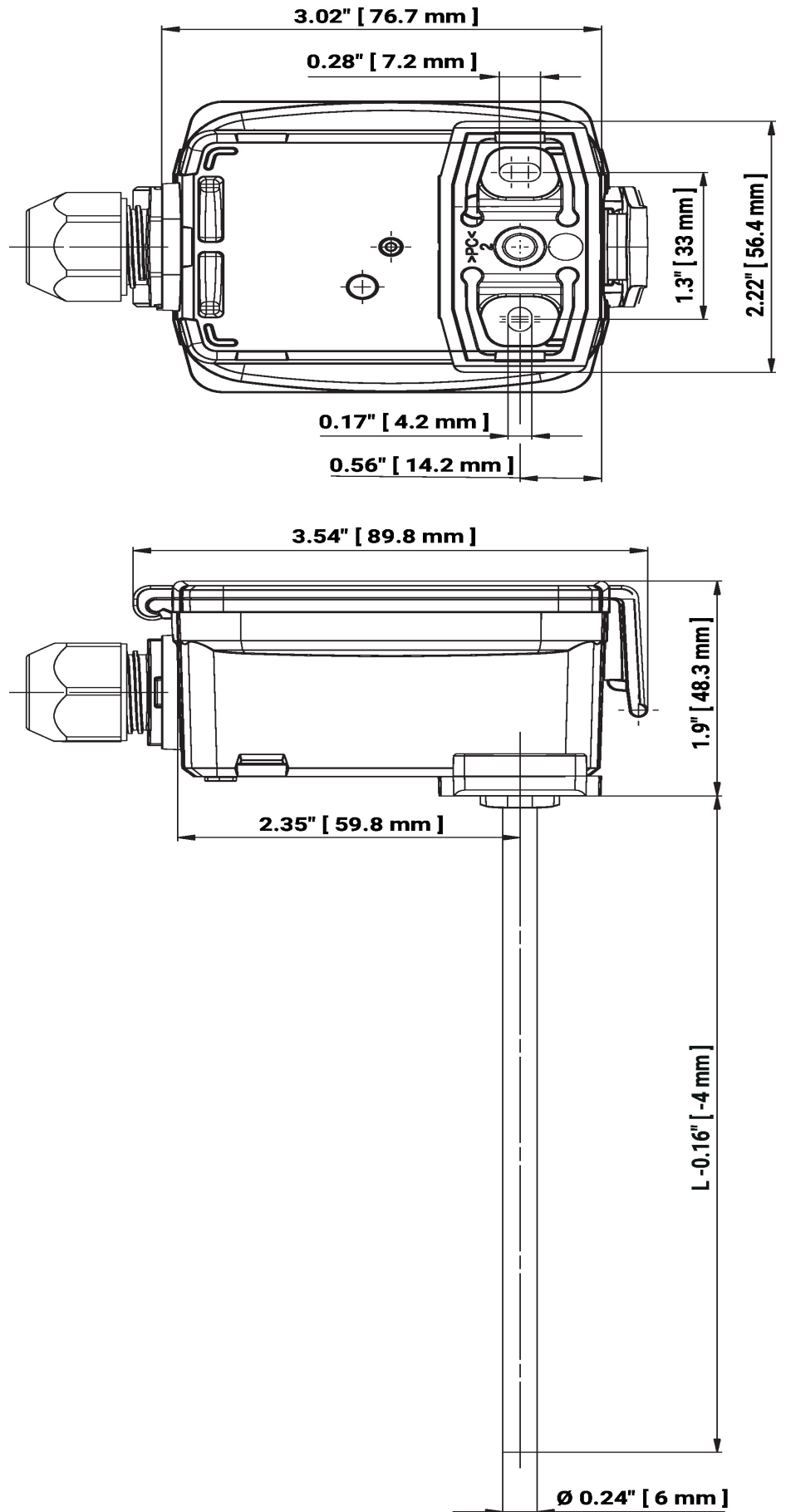
Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05

Recommended accessories water	Description	Type
	Thermowell Stainless steel, 150 mm, G 1/2", SW27	A-22P-A10
	Thermowell Brass, 150 mm, R 1/2", SW22	A-22P-A22
	Syringe with thermal paste	A-22P-A44
	Compression fitting, Stainless steel, G 1/4" (external thread) for 6 mm, with cutting ring	A-22P-A45
	Cold barrier, Plastic, L 50 mm, for thermowell A-22P-A..	A-22P-A51
	Thermowell Stainless steel, 100 mm, G 1/2", SW27	A-22P-A08
	Thermowell Brass, 100 mm, R 1/2", SW22	A-22P-A20
	Adapter for Siemens thermowell	A-22P-A53

Wiring diagram



Dimensions



L = Probe length

Type	Probe length	Weight
01DT-1NN	150 mm	0.13 kg

Further documentation

- Installation instructions
- Resistance characteristics
- Sensor length calculator