

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-5LH	NTC10k (10k2)	2" [50 mm]	0.24" [6 mm]
01DT-5LL	NTC10k (10k2)	4" [100 mm]	0.24" [6 mm]
01DT-5LN	NTC10k (10k2)	6" [150 mm]	0.24" [6 mm]
01DT-5LP	NTC10k (10k2)	8" [200 mm]	0.24" [6 mm]
01DT-5LR	NTC10k (10k2)	12" [300 mm]	0.24" [6 mm]
01DT-5LT	NTC10k (10k2)	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	NTC10k (10k2)
Measuring Data	Measured values	Temperature
	Measuring range temperature	-60...300°F [-50...150°C]
	Accuracy temperature passive	±0.35°F @ 77°F [±0.2°C @ 25°C]
	Measuring current	<2 mA @ 77°F [25°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	Plug Adapter: PA66, black Nut: PA6, black
	Housing	Cover: PC, orange Bottom: PC, orange Seal: NBR70, black UV resistant
	Probe material	AISI 316L
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

Safety Data	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
	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	-60...300°F [-50...150°C]
Housing surface temperature	max. 195°F [90°C]	

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.

Parts included

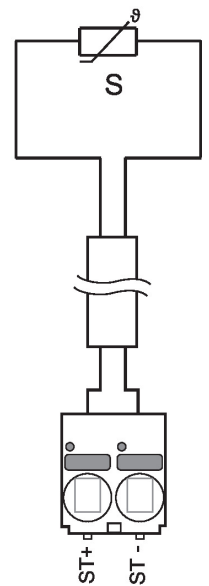
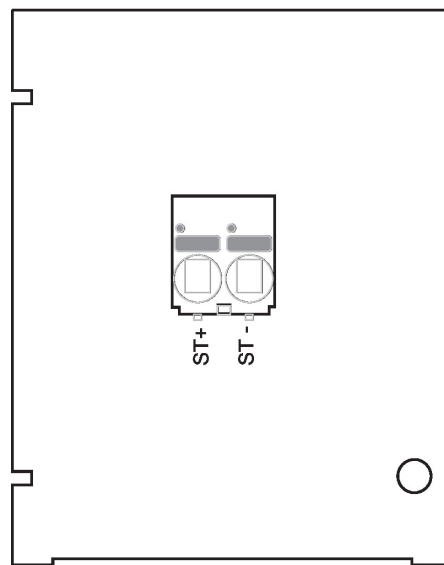
Scope of delivery	Description	Type
	Mounting clip, with screws and adhesive foil	A-22D-A11
	1/2" NPT conduit adapter	

Accessories

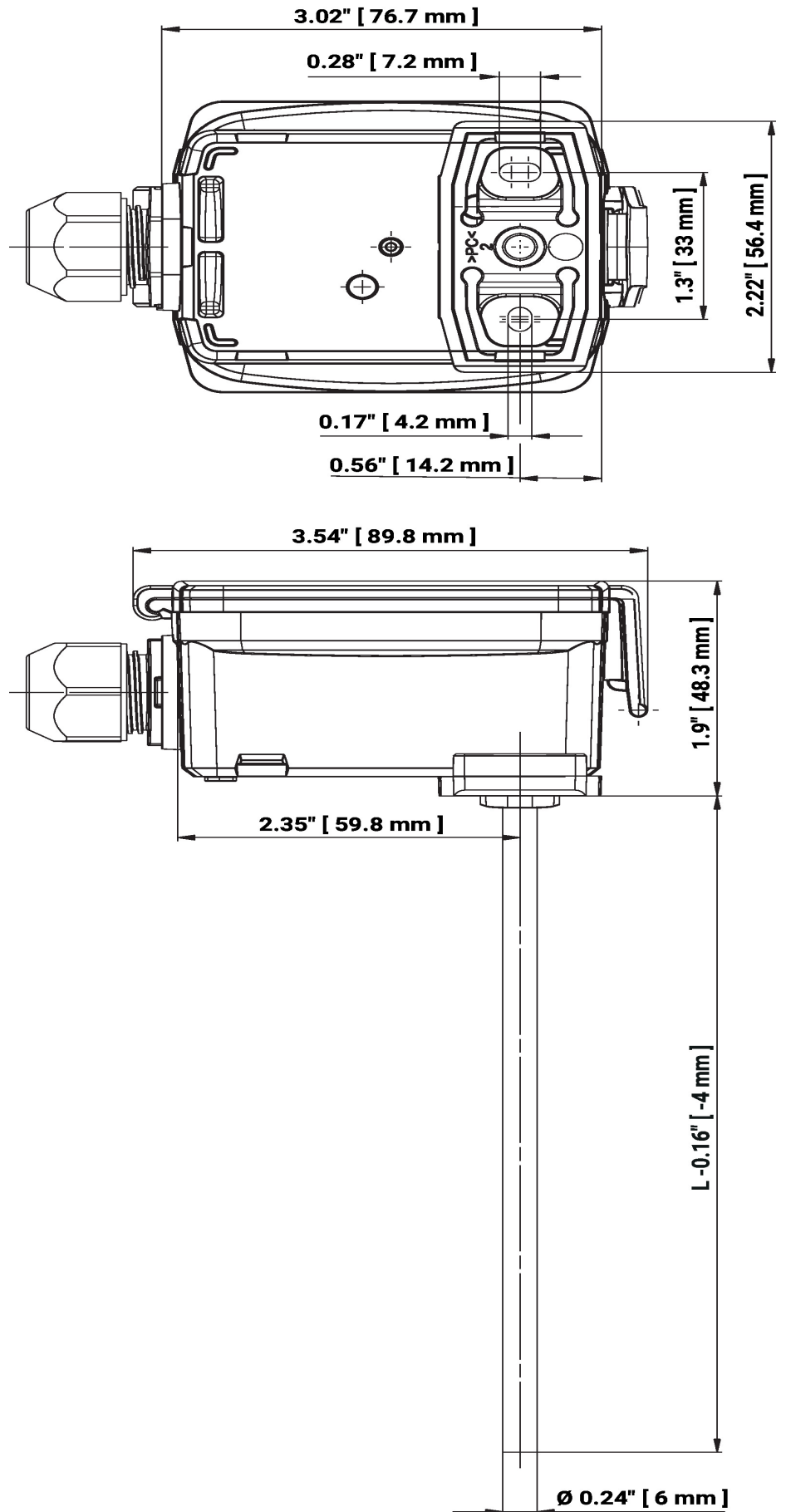
Optional accessories	Description	Type
	Mounting plate S housing	A-22D-A09
	Connection adapter flex conduit, M20x1.5, for cable gland 1 x 6 mm, Multipack 10 pcs.	A-22G-A01.1
Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting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

Recommended accessories water

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

Wiring Diagram


Dimensions



L = Probe length

Type	Probe length	Weight
01DT-5LH	2" [50 mm]	0.26 lb [0.12 kg]
01DT-5LL	4" [100 mm]	0.26 lb [0.12 kg]
01DT-5LN	6" [150 mm]	0.29 lb [0.13 kg]
01DT-5LP	8" [200 mm]	0.29 lb [0.13 kg]
01DT-5LR	12" [300 mm]	0.31 lb [0.14 kg]
01DT-5LT	18" [450 mm]	0.33 lb [0.15 kg]

Further documentation

- Installation instructions
- Resistance characteristics
- Sensor length calculator