

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 housing.



Picture may differ from product


Type Overview

Type	Output signal	Probe length	Probe diameter	Accuracy temperature	Measuring current
01DT-1AH	Pt100	50 mm	6 mm	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	<1 mA @ 0°C [32°F]
01DT-1AL	Pt100	100 mm	6 mm	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	<1 mA @ 0°C [32°F]
01DT-1AN	Pt100	150 mm	6 mm	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	<1 mA @ 0°C [32°F]
01DT-1AP	Pt100	200 mm	6 mm	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	<1 mA @ 0°C [32°F]
01DT-1AR	Pt100	300 mm	6 mm	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	<1 mA @ 0°C [32°F]
01DT-1AT	Pt100	450 mm	6 mm	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	<1 mA @ 0°C [32°F]

Technical data

	Electrical data	Electrical connection	Pluggable spring loaded terminal block max. 2.5 mm ²
		Cable entry	Cable gland with strain relief $\varnothing 6...8$ mm
	Functional data	Medium	Air Water
	Measuring data	Measured values	Temperature
Specification temperature passive		Measuring range	-50...160°C [-60...320°F]
		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
		Time constant τ (63%) in the air duct	Typical 210 s @ 0 m/s Typical 46 s @ 3 m/s
	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

Technical data

Safety data	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	-50...160°C [-60...320°F]
	Housing surface temperature	Max. 90°C [195°F]
Materials	Housing	Cover: PC, orange Bottom: PC, orange Seal: NBR70, black UV resistant
	Cable gland	Plug Adapter: PA66, black Nut: PA6, black
	Probe material	V4A (1.4404)

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 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

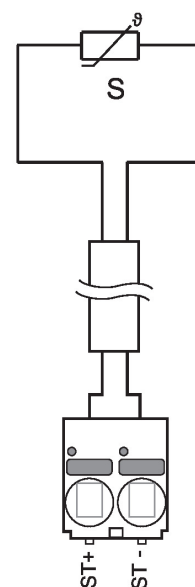
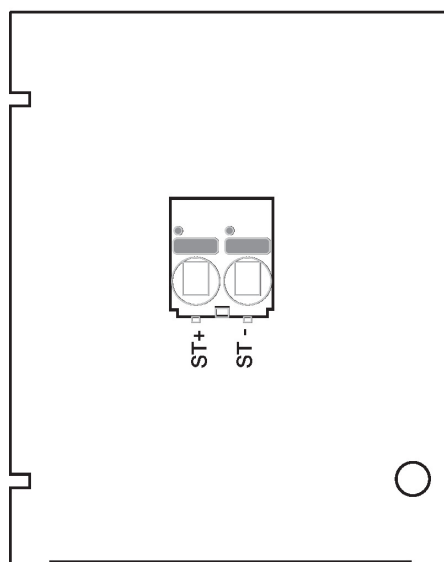
Description	Type
Mounting clip, with screws and adhesive foil	A-22D-A11

Accessories

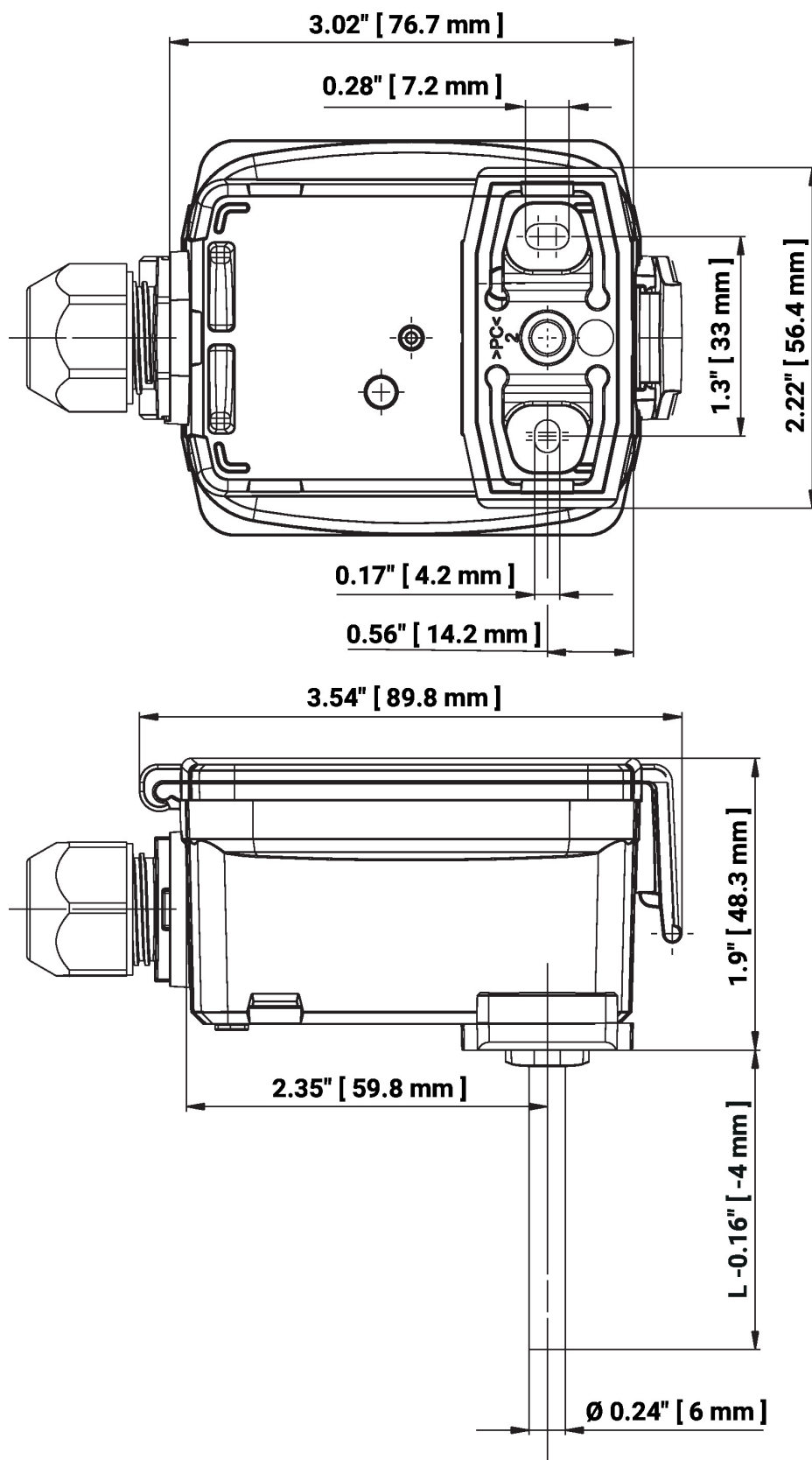
Optional accessories	Description	Type
	Mounting plate S housing	A-22D-A09
	Connection adapter flex conduit, M20x1.5, for cable gland 1x 6 mm, Multipack 10 pcs.	A-22G-A01.1
Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Multipack 50 pcs., Plastic	A-22D-A03.1
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05
Recommended accessories water	Description	Type
	Thermowell Stainless steel, 50 mm, G 1/2", SW27	A-22P-A06
	Thermowell Brass, 50 mm, R 1/2", SW22	A-22P-A18
	Thermal contact fluid	A-22P-A44

Accessories

Description	Type
Compression fitting, G 1/4" (external thread) for 6 mm, with cutting ring	A-22P-A45
Thermowell Stainless steel, 100 mm, G 1/2", SW27	A-22P-A08
Thermowell Brass, 100 mm, R 1/2", SW22	A-22P-A20
Cold barrier, L 50 mm, for thermowell A-22P-A..	A-22P-A51
Adapter for Siemens thermowell	A-22P-A53
Thermowell Stainless steel, 150 mm, G 1/2", SW27	A-22P-A10
Thermowell Brass, 150 mm, R 1/2", SW22	A-22P-A22
Thermowell Stainless steel, 200 mm, G 1/2", SW27	A-22P-A12
Thermowell Brass, 200 mm, R 1/2", SW22	A-22P-A24
Thermowell Stainless steel, 300 mm, G 1/2", SW27	A-22P-A14
Thermowell Brass, 300 mm, R 1/2", SW22	A-22P-A26
Thermowell Stainless steel, 250 mm, G 1/2", SW27	A-22P-A29
Thermowell Brass, 250 mm, R 1/2", SW22	A-22P-A30
Thermowell Stainless steel, 450 mm, G 1/2", SW27	A-22P-A16
Thermowell Brass, 450 mm, R 1/2", SW22	A-22P-A28

Wiring diagram


Dimensions



Type	Probe length	Weight
01DT-1AH	50 mm	0.12 kg
01DT-1AL	100 mm	0.12 kg
01DT-1AN	150 mm	0.13 kg
01DT-1AP	200 mm	0.13 kg

Dimensions

Type	Probe length	Weight
01DT-1AR	300 mm	0.14 kg
01DT-1AT	450 mm	0.15 kg

Further documentation

- Installation instructions
- Resistance characteristics
- Sensor length calculator