

Cable temperature sensor

Used as a duct temperature sensor with a mounting flange or as an immersion temperature sensor in combination with a thermowell. With stainless steel probe and PVC cable.


Type Overview

Type	Output signal	Cable length	Probe length	Probe diameter
01CT-1AH	Pt100	2 m	50 mm	6 mm
01CT-1BH	Pt1000	2 m	50 mm	6 mm
01CT-1CH	Ni1000	2 m	50 mm	6 mm
01CT-1DH	Ni1000TK5000	2 m	50 mm	6 mm
01CT-1FH	NTC1k8	2 m	50 mm	6 mm
01CT-1LH	NTC10k (10k2)	2 m	50 mm	6 mm
01CT-1QH	NTC20k	2 m	50 mm	6 mm
01CT-1RH	Pt1000 class AA	2 m	50 mm	6 mm

Technical data

Specification temperature passive	Electrical data	Electrical connection	Cable 2 m, 2-wire
	Functional data	Medium	Air Water
	Measuring data	Measured values	Temperature
	Measuring range	Measuring current	Pt100: <1 mA @ 0°C [32°F] Pt1000: <0.3 mA @ 0°C [32°F] Ni1000: <0.3 mA @ 0°C [32°F] Ni1000TK5000: <0.3 mA @ 0°C [32°F] NTC1k8: <0.1 mA @ 25°C [77°F] NTC10k (10k2): <2 mA @ 25°C [77°F] NTC20k: <0.5 mA @ 25°C [77°F]
		Accuracy temperature	Passive sensors depending on used type Pt.. : Class B, ±0.3°C @ 0°C [±0.5°F @ 32°F] Pt.. : Class AA, ±0.1°C @ 0°C [±0.17°F @ 32°F] Ni.. : ±0.4°C @ 0°C [±0.7°F @ 32°F] NTC1k8 : ±0.5°C @ 25°C [±0.9°F @ 77°F] NTC.. : ±0.2°C @ 25°C [±0.35°F @ 77°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
	Safety data	Time constant τ (63%) in the air duct	Typical 155 s @ 0 m/s Typical 35 s @ 3 m/s
		Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)
		Power source UL	Class 2 Supply
		Degree of protection IEC/EN	IP67
		Degree of protection NEMA/UL	NEMA 4X

Technical data

Safety data

Certification IEC/EN	IEC/EN 60730-1
Quality Standard	ISO 9001
Type of action	Type 1
Rated impulse voltage supply	0.8 kV
Method of mounting control	Surface mounted
Pollution degree	3
Ambient humidity	Max. 95% RH, non-condensing
Ambient temperature	-35...100°C [-30...210°F]
Fluid temperature	-35...100°C [-30...210°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 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.

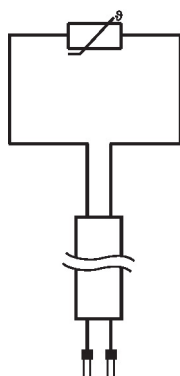
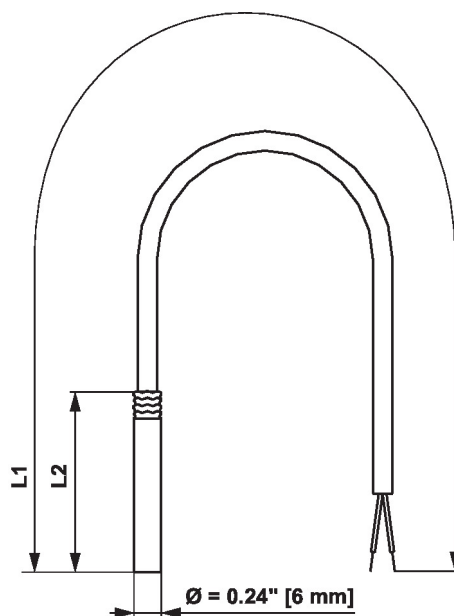
Accessories

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, 50 mm, G 1/2", SW27	A-22P-A06
Thermowell Stainless steel, 100 mm, G 1/2", SW27	A-22P-A08
Thermowell Stainless steel, 150 mm, G 1/2", SW27	A-22P-A10
Thermowell Stainless steel, 200 mm, G 1/2", SW27	A-22P-A12
Thermowell Stainless steel, 250 mm, G 1/2", SW27	A-22P-A29
Thermowell Stainless steel, 300 mm, G 1/2", SW27	A-22P-A14
Thermowell Stainless steel, 450 mm, G 1/2", SW27	A-22P-A16
Thermowell Brass, 50 mm, R 1/2", SW22	A-22P-A18
Thermowell Brass, 100 mm, R 1/2", SW22	A-22P-A20
Thermowell Brass, 150 mm, R 1/2", SW22	A-22P-A22
Thermowell Brass, 200 mm, R 1/2", SW22	A-22P-A24
Thermowell Brass, 250 mm, R 1/2", SW22	A-22P-A30
Thermowell Brass, 300 mm, R 1/2", SW22	A-22P-A26
Thermowell Brass, 450 mm, R 1/2", SW22	A-22P-A28
Thermal contact fluid	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

Wiring diagram
Sensor

Dimensions

L1 = 6.56 ft [2 m]
L2 = 1.97" [50 mm] / 3.94" [100 mm] / 7.87" [200 mm]

Type	Probe length	Weight
01CT-1AH	50 mm	0.064 kg
01CT-1BH	50 mm	0.064 kg
01CT-1CH	50 mm	0.064 kg
01CT-1DH	50 mm	0.064 kg
01CT-1FH	50 mm	0.062 kg
01CT-1LH	50 mm	0.064 kg
01CT-1QH	50 mm	0.064 kg
01CT-1RH	50 mm	0.064 kg

Further documentation

- Installation instructions
- Resistance characteristics