

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

Technical data

Electrical data	Electrical connection	Cable 2 m, 2-wire
Functional data	Application	Air Water
	Output signal passive temperature	Pt100 Pt1000 Ni1000 Ni1000TK5000 NTC1k8 NTC10k (10k2) NTC20k
Measuring data	Measured values	Temperature
	Measuring range temperature	-35...100°C [-30...210°F]
	Accuracy temperature passive	Passive sensors depending on used type Pt.. : Class B, ±0.3°C @ 0°C [±0.5°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]
	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]
	Time constant τ (63%) in air duct	Typical 155 s @ 0 m/s Typical 35 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

Safety data	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
	Certification IEC/EN	IEC/EN 60730-1
	Quality Standard	ISO 9001
	Type of action	Type 1
	Rated impulse voltage supply	0.8 kV
	Installation method	Independently mounted control
	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 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

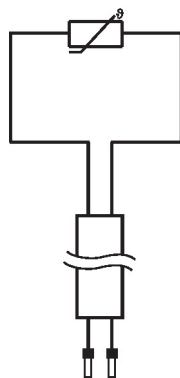
Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05

Recommended accessories water

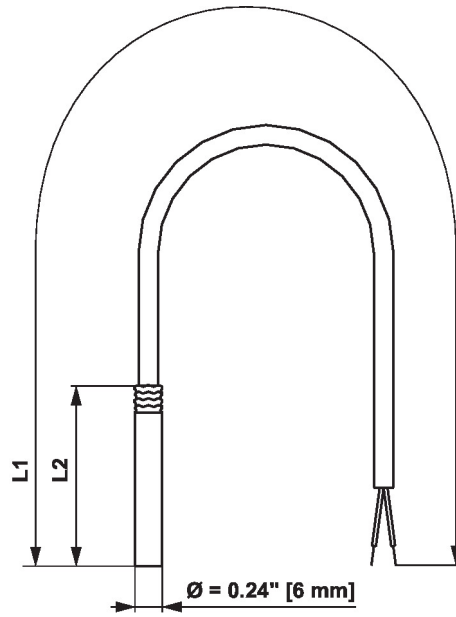
Description	Type
Thermowell Stainless steel, 50 mm, G 1/2", SW27	A-22P-A06
Thermowell Stainless steel, 100 mm, G 1/2", SW27	A-22P-A08
Thermowell Stainless steel, 150 mm, G 1/2", SW27	A-22P-A10
Thermowell Stainless steel, 200 mm, G 1/2", SW27	A-22P-A12
Thermowell Stainless steel, 250 mm, G 1/2", SW27	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
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

Wiring diagram

Sensor



Dimensions



L1: cable length **L1 = 6.56 ft [2 m]**
 L2: pocket length **L2 = 1.97\" [50 mm] / 3.94\" [100 mm] / 7.87\" [200 mm]**

Type	Probe length	Weight
01CT-1AH	50 mm	0.065 kg
01CT-1BH	50 mm	0.065 kg
01CT-1CH	50 mm	0.065 kg
01CT-1DH	50 mm	0.065 kg
01CT-1FH	50 mm	0.065 kg
01CT-1LH	50 mm	0.065 kg
01CT-1QH	50 mm	0.065 kg

Further documentation

- Installation instructions
- Resistance characteristics