

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-1NH5	NTC10k Carel	6 m	50 mm	6 mm

Technical data

Electrical data	Electrical connection	Cable 6 m, 2-wire	
Functional data	Application	Air Water	
	Output signal passive temperature	NTC10k Carel	
Measuring data	Measured values	Temperature	
Specification Temperature	Measuring range	-35...100°C [-30...210°F]	
	Measuring current	<2 mA @ 25°C [77°F]	
	Accuracy temperature passive	±0.26°C @ 25°C [±0.48°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	
	Time constant τ (63%) in the air duct	Typical 155 s @ 0 m/s Typical 35 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	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	
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.

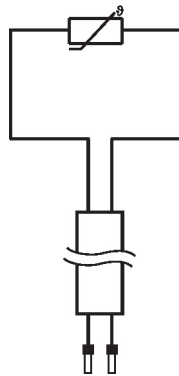
When using lengthy connecting cables (depending on the cross section used), the cable resistance must be taken into account. The lower the impedance of the sensor used, the greater the effect of the line resistance on the measurement, because it generates an offset.

Accessories

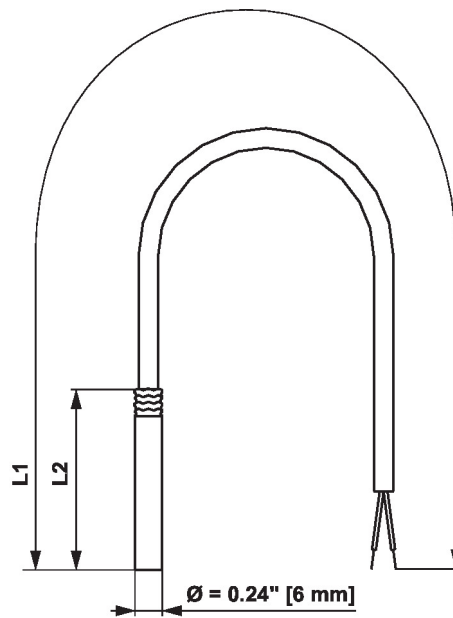
Optional accessories air	Description	Type
	Mounting flange for sensor probe 6 mm, up to max. 120°C [248°F], Plastic	A-22D-A03
	Mounting flange for sensor probe 6 mm, up to max. 260°C, Brass	A-22D-A05
Recommended accessories water	Description	Type
	Thermowell Stainless steel, 50 mm, G 1/2", SW27	A-22P-A06
	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
	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 = 19.69 ft [6 m]

L2 = 1.97" [50 mm] / 3.94" [100 mm] / 7.87" [200 mm]

Type	Probe length	Weight
01CT-1NH5	50 mm	0.19 kg

Further documentation

- Installation instructions
- Resistance characteristics