

Contact temperature sensor

For temperature measurement on pipe and arched surfaces. PVC cable and a brass probe for fast response and accuracy.


Type Overview

Type	Output signal passive temperature	Cable length
01ST-1A3	Pt100	2 m
01ST-1B3	Pt1000	2 m
01ST-1C3	Ni1000	2 m
01ST-1D3	Ni1000TK5000	2 m
01ST-1F3	NTC1k8	2 m
01ST-1L3	NTC10k (10k2)	2 m
01ST-1Q3	NTC20k	2 m

Technical data

Electrical data	Electrical connection	Cable 2 m, 2-wire
Functional data	Application	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, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F] Ni.. : $\pm 0.4^{\circ}\text{C}$ @ 0°C [$\pm 0.7^{\circ}\text{F}$ @ 32°F] NTC1k8 : $\pm 0.5^{\circ}\text{C}$ @ 25°C [$\pm 0.9^{\circ}\text{F}$ @ 77°F] NTC.. : $\pm 0.2^{\circ}\text{C}$ @ 25°C [$\pm 0.35^{\circ}\text{F}$ @ 77°F]
	Measuring current	Pt100: $< 1\text{ mA}$ @ 0°C [32°F] Pt1000: $< 0.3\text{ mA}$ @ 0°C [32°F] Ni1000: $< 0.3\text{ mA}$ @ 0°C [32°F] Ni1000TK5000: $< 0.3\text{ mA}$ @ 0°C [32°F] NTC1k8: $< 0.1\text{ mA}$ @ 25°C [77°F] NTC10k (10k2): $< 2\text{ mA}$ @ 25°C [77°F] NTC20k: $< 0.5\text{ mA}$ @ 25°C [77°F]
	Time constant τ (63%) on water pipe	With thermal contact fluid Typical 17 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
	Certification IEC/EN	IEC/EN 60730-1

Safety data	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.

Parts included

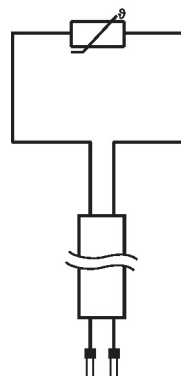
Scope of delivery	Description	Type
	Fixing strap, for pipes Ø 20...110 mm [0.8...4.3"]	A-22P-A47

Accessories

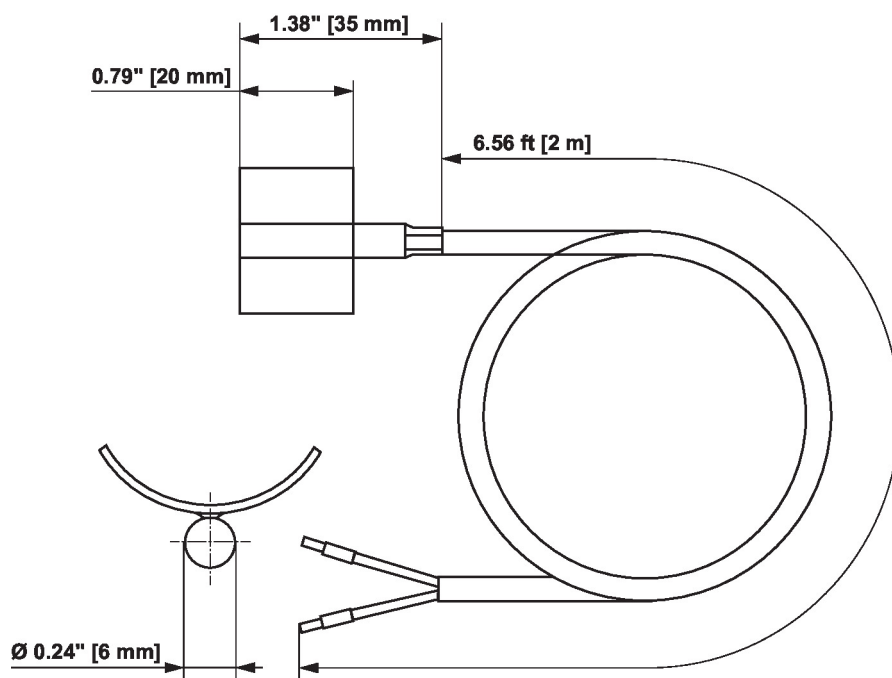
Optional accessories	Description	Type
	Fixing strap, for pipes Ø 20...250 mm [0.8...9.8"]	A-22P-A49
	Syringe with thermal paste	A-22P-A44

Wiring diagram

Sensor



Dimensions



Type	Weight
01ST-1A3	0.08 kg
01ST-1B3	0.08 kg
01ST-1C3	0.08 kg
01ST-1D3	0.08 kg
01ST-1F3	0.08 kg
01ST-1L3	0.08 kg
01ST-1Q3	0.08 kg

Further documentation

- Installation instructions
- Resistance characteristics