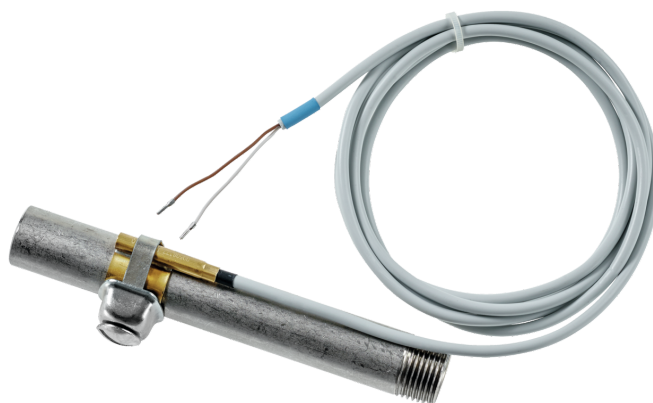


Contact temperature sensor

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	Medium	Water
	Measuring data	Measured values	Temperature
	Specification temperature active	Time constant τ (63%) on water pipe	With thermal contact fluid Typical 17 s
Specification temperature passive	Measuring range	-35...100°C [-30...210°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]	
	Accuracy temperature	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]	
	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	
	Quality Standard	ISO 9001	

Technical data

Safety data	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.
Remark surface measurements	When measuring temperature, humidity or condensation on a surface, both the temperature of the surface and that of the ambient air influence the measurement result. When measuring on a pipe surface, the influence of the ambient air can be minimised by using thermal contact fluid.

Parts included

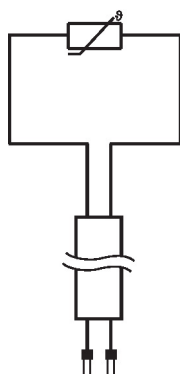
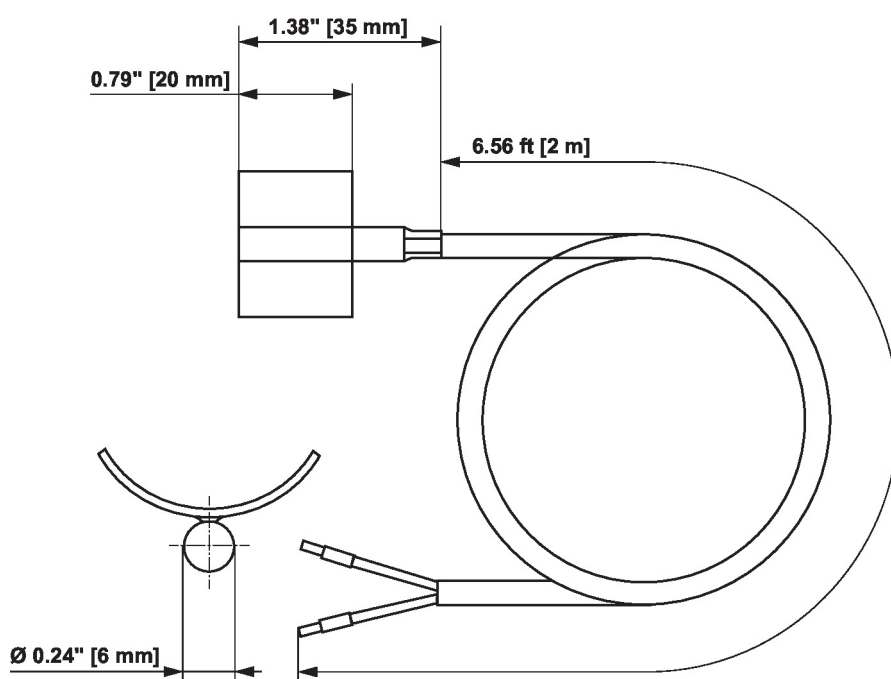
Description	Type
Fixing strap, for pipes ø20...110 mm [0.8...4.3"]	A-22P-A47

Accessories

Optional accessories	Description	Type
	Fixing strap, for pipes ø20...250 mm [0.8...9.8"]	A-22P-A49
	Thermal contact fluid	A-22P-A44

Wiring diagram

Sensor


Dimensions


Type	Weight
01ST-1A3	0.078 kg
01ST-1B3	0.078 kg
01ST-1C3	0.078 kg
01ST-1D3	0.078 kg
01ST-1F3	0.50 kg
01ST-1L3	0.078 kg
01ST-1Q3	0.080 kg

Further documentation

- Installation instructions
- Resistance characteristics