

Contact temperature sensor

Surface contact temperature sensor for pipe applications. Spring loaded brass contact pin to ensure fast response and accurate reading.



Picture may differ from product


Type Overview

Type	Output signal passive temperature	Accuracy temperature	Measuring current
01HT-1A	Pt100	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	$< 1 \text{ mA}$ @ 0°C [32°F]
01HT-1B	Pt1000	Class B, $\pm 0.3^{\circ}\text{C}$ @ 0°C [$\pm 0.5^{\circ}\text{F}$ @ 32°F]	$< 0.3 \text{ mA}$ @ 0°C [32°F]
01HT-1C	Ni1000	$\pm 0.4^{\circ}\text{C}$ @ 0°C [$\pm 0.7^{\circ}\text{F}$ @ 32°F]	$< 0.3 \text{ mA}$ @ 0°C [32°F]
01HT-1D	Ni1000TK5000	$\pm 0.4^{\circ}\text{C}$ @ 0°C [$\pm 0.7^{\circ}\text{F}$ @ 32°F]	$< 0.3 \text{ mA}$ @ 0°C [32°F]
01HT-1F	NTC1k8	$\pm 0.5^{\circ}\text{C}$ @ 25°C [$\pm 0.9^{\circ}\text{F}$ @ 77°F]	$< 0.1 \text{ mA}$ @ 25°C [77°F]
01HT-1L	NTC10k (10k2)	$\pm 0.5^{\circ}\text{C}$ @ 25°C [$\pm 0.9^{\circ}\text{F}$ @ 77°F]	$< 2 \text{ mA}$ @ 25°C [77°F]
01HT-1M	NTC10k Pre (10k3)	$\pm 0.5^{\circ}\text{C}$ @ 25°C [$\pm 0.9^{\circ}\text{F}$ @ 77°F]	$< 2 \text{ mA}$ @ 25°C [77°F]
01HT-1Q	NTC20k	$\pm 0.5^{\circ}\text{C}$ @ 25°C [$\pm 0.9^{\circ}\text{F}$ @ 77°F]	$< 0.5 \text{ mA}$ @ 25°C [77°F]

Technical data

	Electrical data	Electrical connection	Pluggable spring loaded terminal block max. 2.5 mm^2
		Cable entry	Cable gland with strain relief $\varnothing 6...8 \text{ mm}$
	Functional data	Medium	Water
	Measuring data	Measured values	Temperature
Specification temperature active		Time constant τ (63%) on water pipe	With thermal contact fluid Typical 16 s
Specification temperature passive		Measuring range	$-35...90^{\circ}\text{C}$ [$-30...195^{\circ}\text{F}$]
		Time constant τ (63%) on water pipe	With thermal contact fluid Typical 16 s
	Safety data	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)
		Power source UL	Class 2 Supply
		Degree of protection IEC/EN	IP54
		Degree of protection NEMA/UL	NEMA 1
		Housing	UL Enclosure Type 1
		EU Conformity	CE Marking
		Certification IEC/EN	IEC/EN 60730-1
		Quality Standard	ISO 9001
		UL Approval	cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1/-2-9
		Type of action	Type 1
		Rated impulse voltage supply	0.8 kV
		Method of mounting control	Surface mounted

Technical data

Safety data	Pollution degree	2
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-35...50°C [-30...120°F]
	Fluid temperature	-35...90°C [-30...195°F]
	Housing surface temperature	Max. 90°C [195°F]
Materials	Housing	Cover: PC, orange Bottom: PC, orange Seal: NBR70, black UV resistant
	Cable gland	PA6, black

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.

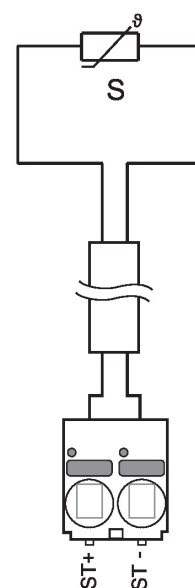
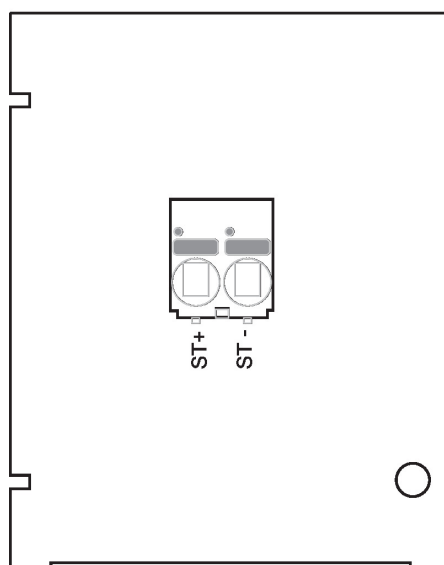
Parts included

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

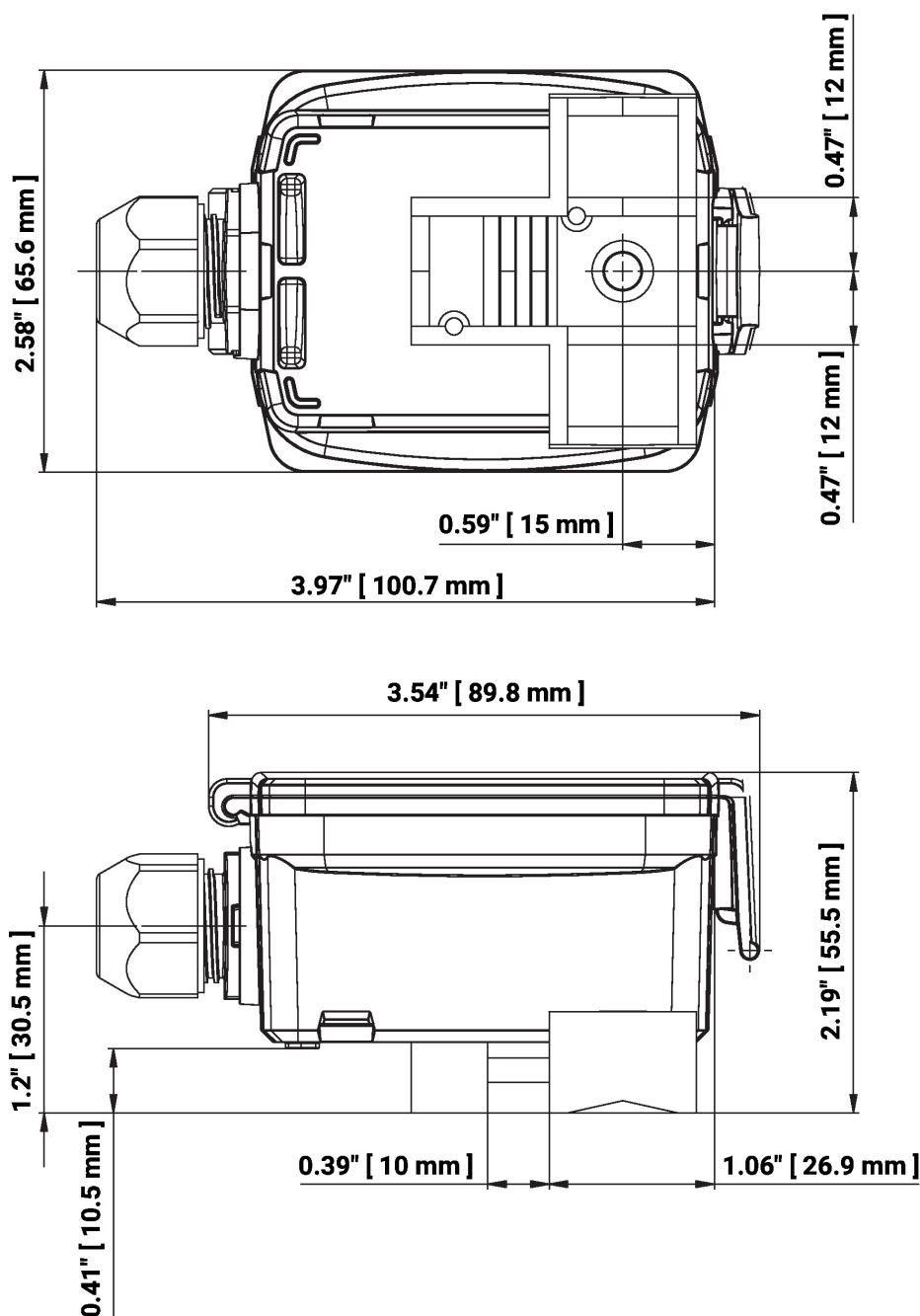
Accessories

Optional accessories	Description	Type
	Fixing strap, for pipes ø20...250 mm [0.8...9.8"]	A-22P-A49
	Thermal contact fluid	A-22P-A44
	Connection adapter flex conduit, M20x1.5, for cable gland 1x 6 mm, Multipack 10 pcs.	A-22G-A01.1

Wiring diagram



Dimensions



Type	Weight
01HT-1A	0.15 kg
01HT-1B	0.15 kg
01HT-1C	0.15 kg
01HT-1D	0.15 kg
01HT-1F	0.12 kg
01HT-1L	0.15 kg
01HT-1M	0.15 kg
01HT-1Q	0.15 kg

Further documentation

- Installation instructions
- Resistance characteristics