

Technical data sheet

Average temperature sensor

Active sensor (4...20 mA) for measuring the average temperature in duct applications. IP65 / NEMA 4X rated enclosure. Supplied with one continuous sensing element across the whole length of the probe to ensure optimum accuracy and eliminate air stratification problems.





Type Overview

Туре	Output signal active temperature	Probe length
22MT-144	420 mA	3 m
22MT-145	420 mA	6 m

Technical data

Electrical data	Nominal voltage	DC 24 V	
	Nominal voltage range	DC 1535 V 0.5 W	
	Power consumption DC		
	Electrical connection	Pluggable spring loaded terminal block max. 2.5 mm ²	
	Cable entry	Cable gland with strain relief ø68 mm	
Functional data	Sensor technology	Based on Pt1000 1/3 DIN	
	Application	Air	
	Multirange	8 measuring ranges selectable	
	Current output	1x 420 mA, max. resistance 500 Ω	
Measuring data	Measured values	Temperature	
Specification Temperature	Measuring range		
		Active sensor: range selectableAttention: max. measuring temperature is restricted by max. fluid temperature (see Safety data)SettingRange [°C]Range [°C]Range [°F]S0 -5050 51 -10120 52 0250 S2 050 40140 S3 0250 S4 -1535 54 -1535 56 -2080 4090 57 0160 0150	
	Accuracy temperature active	±0.5°C @ 21°C [±0.9°F @ 70°F] @ measuring range setting S2 and S4	
	Long term stability	±0.06°C p.a. @ 21°C [±0.11°F p.a. @ 70°F] Typical 100 s @ 0 m/s	
	Time constant τ (63%) in the air duct		
Safety data	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)	



afety data	Power source UL	Class 2 Supply	
	Degree of protection IEC/EN	IP65	
	Degree of protection NEMA/UL	NEMA 4X	
	Enclosure	UL Enclosure Type 4X	
	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	Туре 1	
	Rated impulse voltage supply	0.8 kV	
	Pollution degree	3	
	Ambient humidity	Max. 95% RH, non-condensing	
	Ambient temperature	-3550°C [-30122°F]	
	Fluid temperature	-3550°C [-30122°F]	
	Housing surface temperature	Max. 70°C [160°F]	
Materials	Cable gland	PA6, black	
	Housing	Cover: PC, orange	
		Bottom: PC, orange	
		Seal: NBR70, black	
		UV resistant	

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

Sensing devices with a transducer should always be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage (± 0.2 V). When switching the supply voltage on/off, onsite power surges must be avoided.

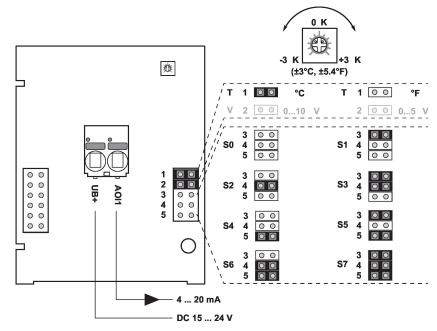
Remark: Occurring draft leads to a better carrying-off of dissipative power at the sensor. Thus temporally limited fluctuations might occur upon temperature measurement.



Remarks		
Build-up of self-heating by electrical dissipative power		
Parts included		
	Description	Туре
	Mounting plate S housing	A-22D-A09
	Mounting kit, with 6 mounting brackets	A-22D-A08
Accessories		
Optional accessories	Description	Туре
	Connection adapter flex conduit, M20x1.5, for cable gland 1x 6 mm, Multipack 10 pcs.	A-22G-A01.1



Wiring diagram



The adjustment of the measuring ranges is made by changing the bonding jumpers. The output value in the new measuring range is available after 2 seconds.

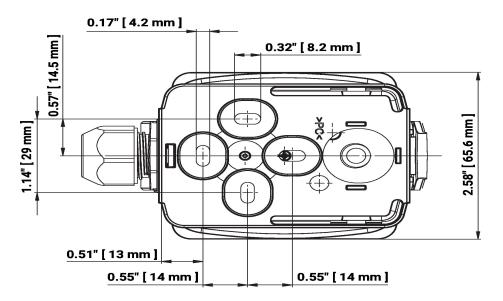
Setting	Range [°C]	Range [°F]	Factory setting
S0	-5050	-30130	
S1	-10120	0250	
S2	050	40140	
S3	0250	30480	
S4	-1535	0100	
S5	0100	40240	
S6	-2080	4090	\checkmark
S7	0160	0150	

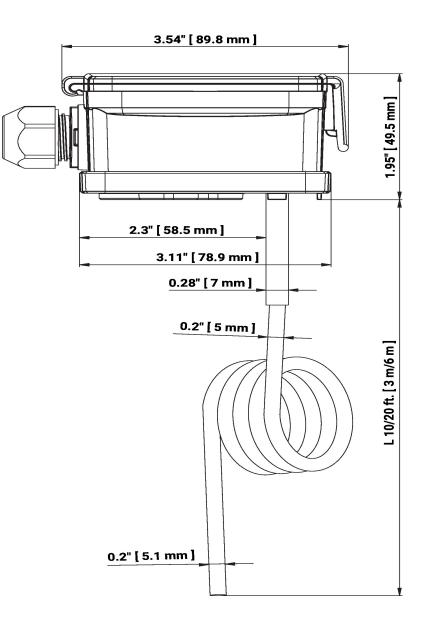


Dimensions











Dimensions

L = Probe length

Туре	Probe length	Weight
22MT-144	3 m	0.22 kg
22MT-145	6 m	0.28 kg

Further documentation

• Installation instructions