Duct / Immersion Temperature Sensor

Active sensor (0 to 5/10 V) for measuring temperature in duct applications. Can also be used in combination with a stainless steel or brass thermowell which is also applicable for pipe applications.
NEMA 4X / IP65 rated enclosure.

5 YEAR WARRANTY

Type Overview

Type	Output signal active temperature	Probe length	Probe diameter
22DT-52H	DC 0...5 V, DC 0...10 V	2" [50 mm]	0.24" [6 mm]
22DT-52L	DC 0...5 V, DC 0...10 V	4" [100 mm]	0.24" [6 mm]
22DT-52N	DC 0...5 V, DC 0...10 V	6" [150 mm]	0.24" [6 mm]
22DT-52P	DC 0...5 V, DC 0...10 V	8" [200 mm]	0.24" [6 mm]
22DT-52R	DC 0...5 V, DC 0...10 V	12" [300 mm]	0.24" [6 mm]
22DT-52T	DC 0...5 V, DC 0...10 V	18" [450 mm]	0.24" [6 mm]

Technical Data

Electrical Data	Power supply DC	15...24 V, ±10%, 0.35 W
	Power supply AC	24 V, ±10%, 0.82 VA
	Electrical connection	removable spring loaded terminal block max. 11 GA [2.5 mm²]
	Cable entry	Cable gland with strain relief Ø6...8 mm (1/2" NPT conduit adapter included)
Functional Data	Multirange	8 fields selectable
	Output signal active note	output DC 0 to 5/10 V with jumper adjustable voltage output: min. 5 kΩ load
	Media	air water

Measuring Data	Measuring values	temperature
	Measuring range temperature	Active sensor: range selectable Attention: max. measuring temperature is restricted by max. medium temperature (see Safety data)

Setting	range [°C]	range [°F]	Factory setting
S0	-50°C to 50°C	-30°F to 130°F	
S1	-10°C to 120°C	0°F to 250°F	
S2	0°C to 50°C	40°F to 140°F	
S3	0°C to 250°C	30°F to 480°F	
S4	-15°C to 35°C	0°F to 100°F	
S5	0°C to 100°C	40°F to 240°F	
S6	-20°C to 80°C	40°F to 90°F	
S7	0°C to 160°C	0°F to 150°F	✓

	Accuracy temperature active	±0.9 °F @ 70 °F [±0.5 °C @ 21 °C]
Materials	Cable gland	PA6, black
	Housing	cover: lexan, orange base: lexan, orange seal: 0467 NBR70, black
Safety Data	Ambient humidity	85% RH non-condensing
	Ambient temperature	-30...120 °F [-35...50 °C]
	Medium temperature	-60...320 °F [-50...160 °C]
	Housing surface temperature	max. 160°F [70°C]
	Protection class IEC/EN	III protective extra-low voltage (pelv)
	Protection class UL	UL Class 2 Supply
	EU Conformity	CE-Kennzeichnung
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-9
	Certification UL	cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1:02/-2-9, CE acc. to 2004/108/EC and 2006/95/EC, NEMA 4X, IP65, UL Enclosure Type 4X
	Degree of protection IEC/EN	IP65
	Degree of protection NEMA/UL	NEMA 4X
	Quality Standard	ISO 9001

Safety Notes

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The installation and assembly of electrical equipment should only be performed by authorized personnel.

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 human, animals or assets.
Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with
• Local laws, health & safety regulations, technical standards and regulations
• Condition of the device at the time of installation, to ensure safe installation
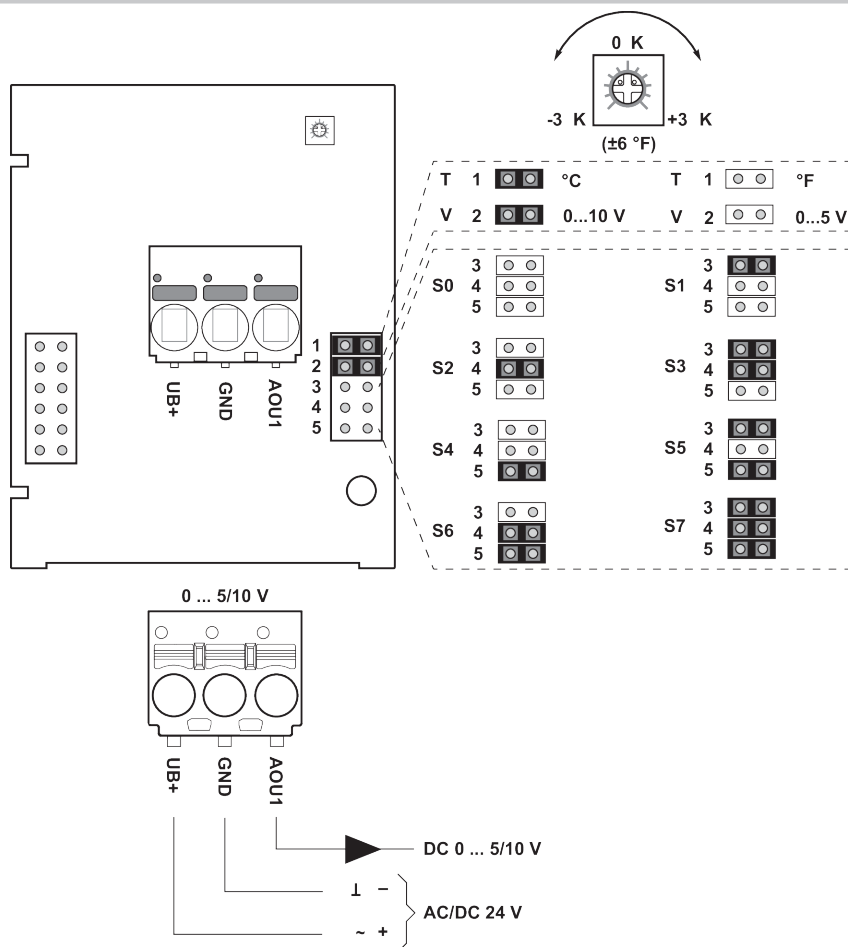• This data sheet and installation manual

Scope of delivery

mounting clip
screws
adhesive foil
1/2" NPT conduit adapter

Accessories

Optional accessories air	Description	Type
	Mounting flange 0.24" [6 mm], Plastic (adjustable), up to max. 80 °C	A-22D-A03
	Mounting flange 0.24" [6 mm], brass, up to max. 500°F [260°C]	A-22D-A05

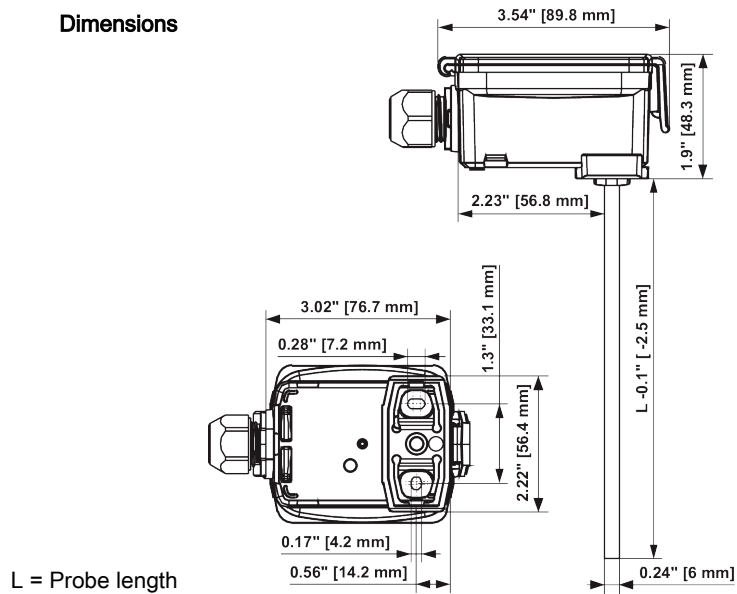| Recommended accessories water	Description	Type
	thermowell pocket, stainless steel (fabricated), 2" [50 mm], 1/2" NPT, wrench size 3/4"	A-22P-A05
	thermowell pocket, brass (fabricated), 2" [50 mm], 1/2" NPT, wrench size 3/4"	A-22P-A17
	thermowell pocket, stainless steel (machined), 2" [50 mm], 1/2" NPT, wrench size 3/4"	A-22P-A36
	thermowell pocket, stainless steel (fabricated), 4" [100 mm], 1/2" NPT, wrench size 3/4"	A-22P-A07
	thermowell pocket, brass (fabricated), 4" [100 mm], 1/2" NPT, wrench size 3/4"	A-22P-A19
	thermowell pocket, stainless steel (machined), 4" [100 mm], 1/2" NPT, wrench size 3/4"	A-22P-A37
	thermowell pocket, stainless steel (fabricated), 6" [150 mm], 1/2" NPT, wrench size 3/4"	A-22P-A09
	thermowell pocket, brass (fabricated), 6" [150 mm], 1/2" NPT, wrench size 3/4"	A-22P-A21
	thermowell pocket, stainless steel (machined), 6" [150 mm], 1/2" NPT, wrench size 3/4"	A-22P-A38
	thermowell pocket, stainless steel (fabricated), 8" [200 mm], 1/2" NPT, wrench size 3/4"	A-22P-A11
	thermowell pocket, brass (fabricated), 8" [200 mm], 1/2" NPT, wrench size 3/4"	A-22P-A23
	thermowell pocket, stainless steel (machined), 8" [200 mm], 1/2" NPT, wrench size 3/4"	A-22P-A39
	thermowell pocket, stainless steel (fabricated), 12" [300 mm], 1/2" NPT, wrench size 3/4"	A-22P-A13
	thermowell pocket, brass (fabricated), 12" [300 mm], 1/2" NPT, wrench size 3/4"	A-22P-A25
	thermowell pocket, stainless steel (fabricated), 18" [450 mm], 1/2" NPT, wrench size 3/4"	A-22P-A15
	thermowell pocket, brass (fabricated), 18" [450 mm], 1/2" NPT, wrench size 3/4"	A-22P-A27
	syringe thermal contact fluid	A-22P-A44

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	-50°C to 50°C	-30°F to 130°F	
S1	-10°C to 120°C	0°F to 250°F	
S2	0°C to 50°C	40°F to 140°F	
S3	0°C to 250°C	30°F to 480°F	
S4	-15°C to 35°C	0°F to 100°F	
S5	0°C to 100°C	40°F to 240°F	
S6	-20°C to 80°C	40°F to 90°F	
S7	0°C to 160°C	0°F to 150°F	✔

Dimensions

Dimensions

L = Probe length

Type	Probe length	Weight
22DT-52H	2" [50 mm]	0.23 lb [0.10 kg]
22DT-52L	4" [100 mm]	0.24 lb [0.11 kg]
22DT-52N	6" [150 mm]	0.25 lb [0.11 kg]
22DT-52P	8" [200 mm]	0.26 lb [0.12 kg]
22DT-52R	12" [300 mm]	0.28 lb [0.13 kg]
22DT-52T	18" [450 mm]	0.31 lb [0.14 kg]