

Outside Temperature Sensor

Active sensor (4...20 mA) for measuring temperature in outdoor areas. Typical applications at cold stores, greenhouses, production plants and warehouses. NEMA 4X / IP65 rated enclosure.



Type Overview

Type	Output signal active temperature	Additional features
22UT-54	4...20 mA	external Sensor

Technical Data

Electrical Data	Nominal voltage	DC 24 V			
	Nominal voltage range	DC 13.5...26.4 V			
	Power consumption DC	0.5 W			
	Electrical connection	Removable spring loaded terminal block max. 2.5 mm ²			
	Cable entry	Cable gland with strain relief Ø6...8 mm (1/2" NPT conduit adapter included)			
Functional Data	Sensor Technology	based on Pt1000 1/3 DIN			
	Multirange	8 measuring ranges selectable			
	Output signal active note	current output: max. 500 Ω load			
	Application	air			
Measuring Data	Measuring values	Temperature			
	Measuring range temperature	Active sensor: range selectable Attention: max. measuring temperature is restricted by max. fluid temperature (see Safety data)			
		Setting	range [°C]	range [°F]	Factory setting
		S0	-50...50	-30...130	✓
		S1	-10...120	0...250	
		S2	0...50	40...140	
		S3	0...250	30...480	
		S4	-15...35	0...100	
		S5	0...100	40...240	
		S6	-20...80	40...90	
	S7	0...160	0...150		
	Accuracy temperature active	±0.9°F @ 70°F [±0.5°C @ 21°C]			
	Long-term stability	±0.07°F p.a. @ 70°F [±0.04°C p.a. @ 21°C]			
	Time constant τ (63%) in the room	typical 542 s			
Materials	Cable gland	PA6, black			
	Mounting plate	Lexan, gray RAL7001			
	Housing	Cover: Lexan, grey Bottom: Lexan, grey seal: 0467 NBR70, black UV resistant			
Safety Data	Ambient humidity	max. 95% r.H., non-condensing			

Ambient temperature	-30...120°F [-35...50°C]
Fluid temperature	-30...120°F [-35...50°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 Marking
Certification IEC/EN	IEC/EN 60730-1
Certification UL	cULus acc. to UL60730-1A/-2-9, CAN/CSA E60730-1:02/-2-9
Degree of protection IEC/EN	IP65
Degree of protection NEMA/UL	NEMA 4X
Quality Standard	ISO 9001

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

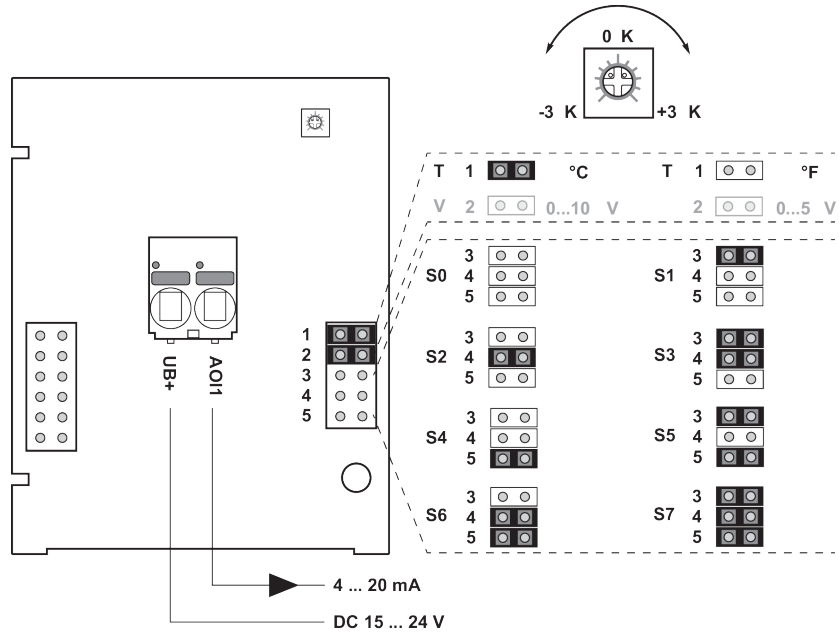
When using lengthy connection wires (depending on the cross section used) the measuring result might be falsified due to a voltage drop at the common GND-wire (caused by the voltage current and the line resistance). In this case, 2 GND-wires must be wired to the sensor - one for supply voltage and one for the measuring current.

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 the 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.

Scope of delivery

Scope of delivery	Description	Type
	Mounting plate S housing	A-22D-A09
	Dowel	
	Screws	
	1/2" NPT conduit adapter	

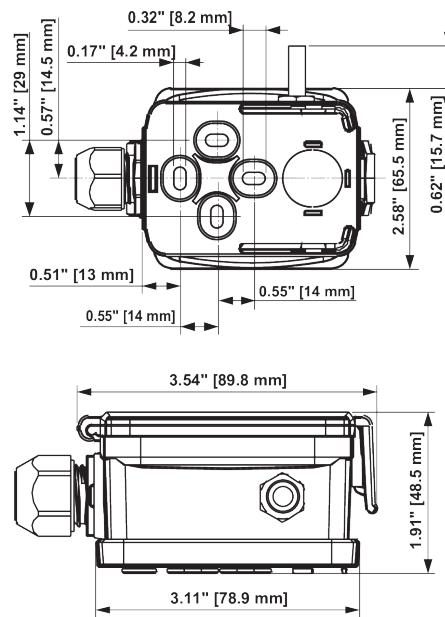
Wiring Diagram



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...50	-30...130	✓
S1	-10...120	0...250	
S2	0...50	40...140	
S3	0...250	30...480	
S4	-15...35	0...100	
S5	0...100	40...240	
S6	-20...80	40...90	
S7	0...160	0...150	

Dimensions



Type	Probe length	Weight
22UT-54	1" [25 mm]	0.29 lb [0.13 kg]