

**Outdoor sensor Temperature**

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.



5-year warranty


**Type Overview**

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

**Technical data**

<b>Electrical Data</b>	Nominal voltage	DC 24 V																																			
	Remark about nominal voltage range	DC 13.5...26.4 V																																			
	Power consumption DC	0.5 W																																			
	Electrical connection	Pluggable spring loaded terminal block max. 2.5 mm <sup>2</sup>																																			
	Cable entry	Cable gland with strain relief $\varnothing 6...8$ mm (1/2" NPT conduit adapter included)																																			
<b>Functional Data</b>	Sensor technology	based on Pt1000 1/3 DIN																																			
	Application	air																																			
	Multirange	8 measuring ranges selectable																																			
	Current output	1x 4...20 mA, max. resistance 500 $\Omega$																																			
<b>Measuring Data</b>	Measured values	Temperature																																			
<b>Specification Temperature</b>	Measuring range	Active sensor: range selectable Attention: max. measuring temperature is restricted by max. fluid temperature (see Safety data)																																			
		<table border="1"> <thead> <tr> <th>Setting</th> <th>Range [°C]</th> <th>Range [°F]</th> <th>Factory setting</th> </tr> </thead> <tbody> <tr> <td>S0</td> <td>-50...50</td> <td>-30...130</td> <td>✓</td> </tr> <tr> <td>S1</td> <td>-10...120</td> <td>0...250</td> <td></td> </tr> <tr> <td>S2</td> <td>0...50</td> <td>40...140</td> <td></td> </tr> <tr> <td>S3</td> <td>0...250</td> <td>30...480</td> <td></td> </tr> <tr> <td>S4</td> <td>-15...35</td> <td>0...100</td> <td></td> </tr> <tr> <td>S5</td> <td>0...100</td> <td>40...240</td> <td></td> </tr> <tr> <td>S6</td> <td>-20...80</td> <td>40...90</td> <td></td> </tr> <tr> <td>S7</td> <td>0...160</td> <td>0...150</td> <td></td> </tr> </tbody> </table>	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
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	Accuracy temperature active	$\pm 0.5^{\circ}\text{C}$ @ 21°C [ $\pm 0.9^{\circ}\text{F}$ @ 70°F] @ measuring range setting S2 and S4																																			
	Long term stability	$\pm 0.07^{\circ}\text{F}$ p.a. @ 70°F [ $\pm 0.04^{\circ}\text{C}$ p.a. @ 21°C]																																			
	Time constant $\tau$ (63%) in the room	Typical 542 s																																			
<b>Materials</b>	Cable gland	PA6, black																																			

**Technical data**

<b>Materials</b>	Mounting plate	PC, grey RAL 7001
	Housing	Cover: PC, orange Bottom: PC, orange Seal: NBR70, black UV resistant UL94 5VA
<b>Safety Data</b>	Protection class IEC/EN	III, Protective Extra-Low Voltage (PELV)
	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 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Type of action	Type 1
	Rated impulse voltage supply	0.8 kV
	Pollution degree	3
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-35...50°C [-30...122°F]
	Fluid temperature	-35...50°C [-30...122°F]
Housing surface temperature	max. 160°F [70°C]	

**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. Unauthorized 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 authorized 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** 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 transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage ( $\pm 0.2$  V). When switching the supply voltage on/off, onsite power surges must be avoided.

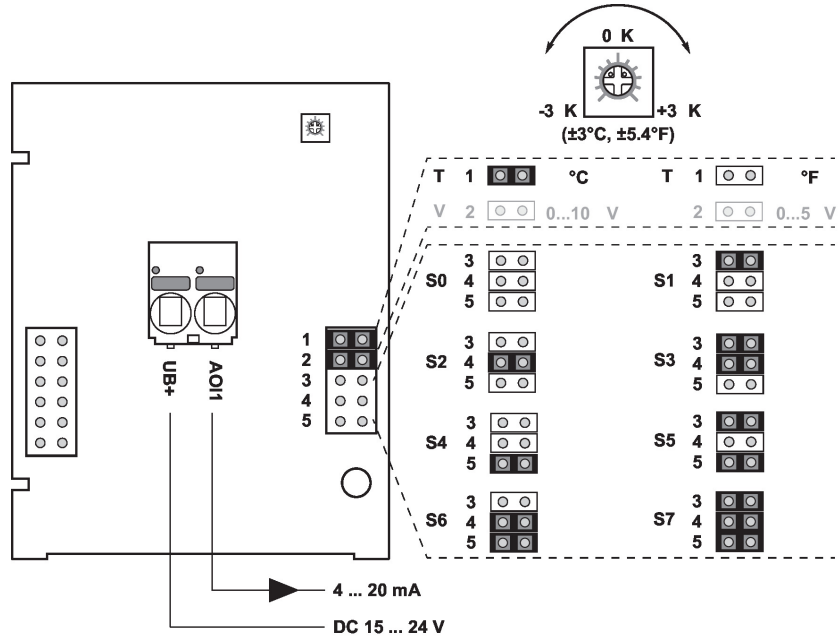
**Parts included**

Description	Type
Mounting plate S housing	A-22D-A09

Parts included

- Dowels
- Screws
- 1/2" NPT conduit adapter

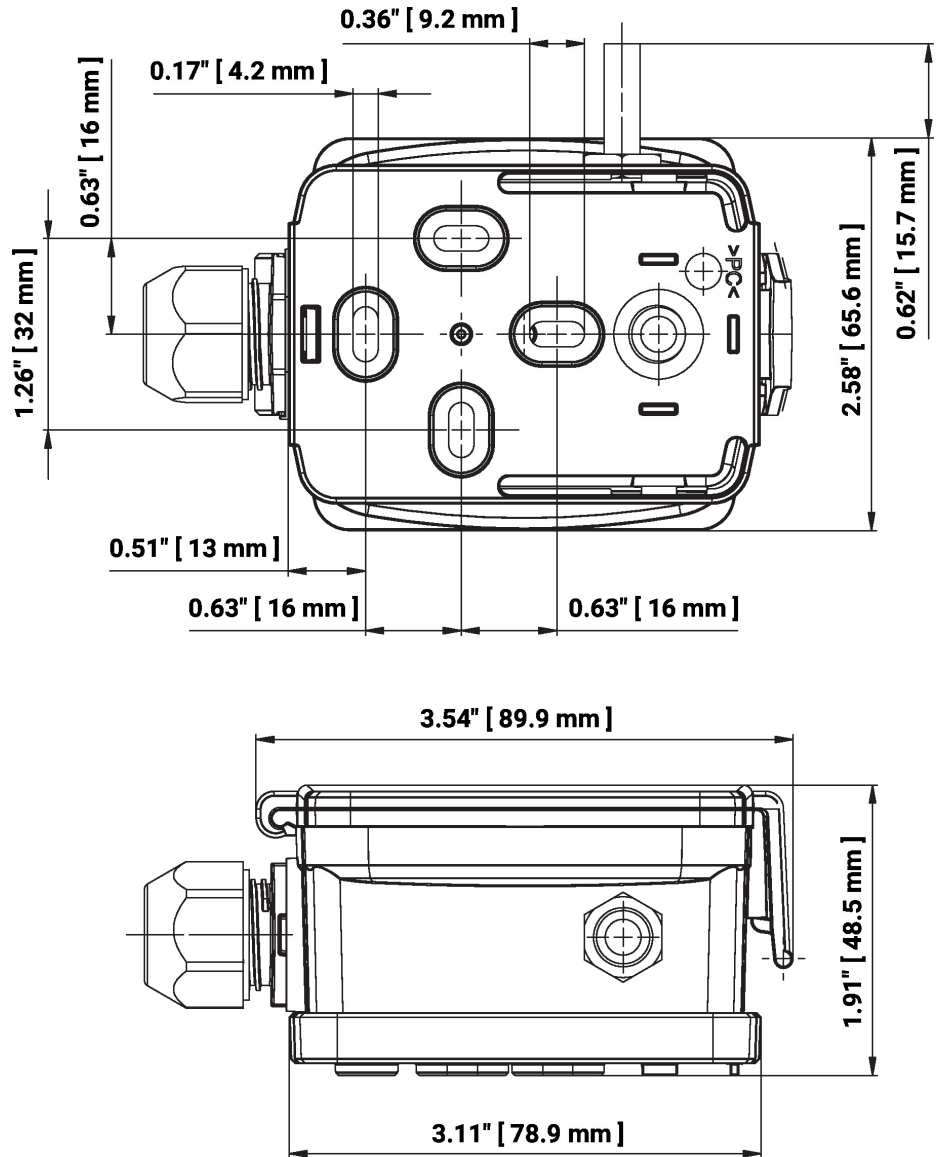
Wiring Diagram



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.

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S0	-50...50	-30...130	✓
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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]

Further documentation

- Installation instructions