

Outdoor Humidity, Temperature Sensor with weather shield

Active humidity and temperature sensor (0...10 V) for outside applications. The radiation shield protects the outside sensors from rain and radiated heat. With the curved shape and color of the plates air flow is able to move across the sensors to keep radiated temperatures from rooftops and surrounding surfaces from affecting humidity readings.


Type Overview

Type	Output signal active temperature	Output signal active humidity
22UTH-110X	DC 0...5 V, DC 0...10 V	DC 0...5 V, DC 0...10 V

Technical Data

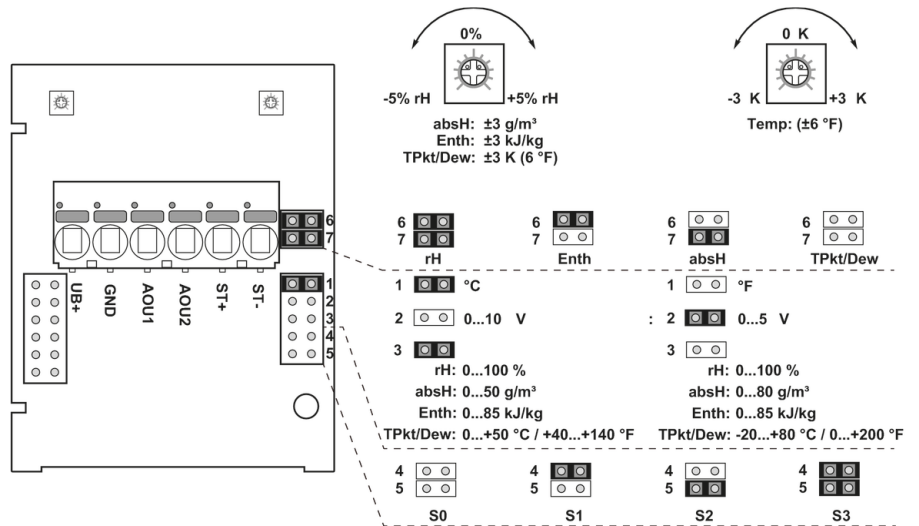
Electrical data	Power Supply DC	15...24 V, $\pm 10\%$, 0.4 W			
	Power Supply AC	24 V, $\pm 10\%$, 0.8 VA			
	Electrical connection	Removable spring loaded terminal block max. 2.5 mm ²			
	Cable entry	Cable gland PG11 $\varnothing 6...10$ mm, with strain relief $\varnothing 6...8$ mm			
Functional data	Multirange	4 measuring ranges selectable			
	Output signal active note	Output DC 0...5/10 V with Jumper adjustable Voltage output: min. 10 k Ω load			
Media		Air			
Measuring data	Measured values	Temperature Humidity Dew point Enthalpies Absolute humidity			
	Measuring range humidity	0...100% rH non-condensing			
	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	-40...60 °C	-40...160 °F	
		S1	0...50 °C	40...140 °F	
		S2	-15...35 °C	0...100 °F	
		S3	-20...80 °C	0...200 °F	✓
	Measuring range absolute humidity	adjustable at the transducer: 0...50 g/m ³ (default setting) 0...80 g/m ³			
	Measuring range enthalpy	0...85 kJ/kg			
Measuring range dew point	adjustable at the transducer: 0...50 °C (default setting) -20...80 °C				
Accuracy humidity	$\pm 2\%$ between 10...90% r.H. @ 21 °C				
Accuracy temperature active	± 0.5 °C @ 25 °C				
Operating condition air flow	max. 12 m/s				
Materials	Cable gland	PA6, white			
	Housing	Cover: Lexan, white Bottom: Lexan, white Seal: 0467 NBR70, black			

Safety data	Ambient humidity	85% r.H., non-condensing
	Ambient temperature	-35...50 °C [-30...120 °F]
	Medium temperature	-35...50 °C [-30...120 °F]
	Operating condition air flow	max. 12 m/s
	Protection class IEC/EN	III Safety Extra-Low Voltage (SELV)
	Protection class UL	UL Class 2 Supply
	EU Conformity	CE Marking
	Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-13
	Certification UL	pending
	Degree of protection IEC/EN	IP65
	Degree of protection NEMA/UL	NEMA 4X
	Quality Standard	ISO 9001
	Weight	0.24 kg

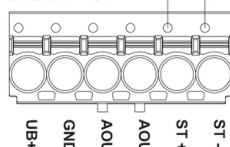
Accessories

Scope of delivery	Dowel Screws	
Optional accessories	Description	Type
	Replacement filter Stainless steel, wire mesh	A-22D-A06

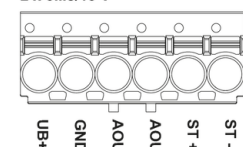
Wiring diagram



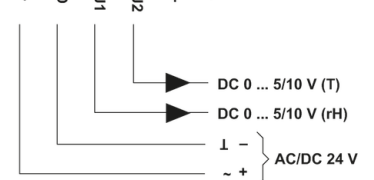
22..TH-..1..
0...5/10 V + ST



22..TH-..1..
2 x 0...5/10 V



rH Relative humidity
absH Absolute humidity
Enth Enthalpy
TPkt/Dew Dew point



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	-40...60 °C	-40...160 °F	
S1	0...50 °C	40...140 °F	
S2	-15...35 °C	0...100 °F	
S3	-20...80 °C	0...200 °F	✓

Dimensions

