



HD 9008.21.2 +
HD 9008.26/14



HD 9008.21.1 +
HD9008.26/14



HD 9008.31



TEMPERATURE AND HUMIDITY TRANSMITTERS, MULTIPLATE RADIATION SHIELD

HD 9809T COMPACT TEMPERATURE AND HUMIDITY TRANSMITTER

APPLICATIONS

The HD 9809T offers a low cost solution for combined temperature and relative humidity measurement. The transmitter's calibration and setting have been executed in factory so it is ready for installation. The output signal is 0-1V for both temperature and humidity. Power is 7 to 35 Vdc.

HUMIDITY MEASUREMENT

The HD9809T uses a very reliable capacitive sensor which covers a wide range of humidity 5...98% RH (2 seconds to reach 63% of final value). The sensor has fast response time also when saturation has occurred. Low hysteresis and long term stability guarantee accurate measurements along with long calibration intervals.

TEMPERATURE MEASUREMENT

A thick film class A Pt100 sensor is used for the temperature measurement. Linearity and repeatability are excellent.

HOUSING AND INSTALLATION

The HD 9809T is fit into a small housing diameter 14mm, length 94 mm plus a cable outlet. This housing is sealed protection class IP64 and a M12x1 thread is provided at the bottom of the transmitter for the ease of mounting. A screened cable of 1.5 meters is attached to the transmitter for power supply and output signals. The output tolerates capacitive loads due to long cables or indicator/regulator input circuitry without problems

TECHNICAL DATA

RELATIVE HUMIDITY	Sensor type	Capacitive 500 pF typ.
	Sensor protection	Stainless steel filter 20µm
	Measuring range	5-98 % RH
	Sensor working temperature	-35°C...+80°C
	Accuracy	2,5 % RH
	Temperature dependence	0.04 % RH/°C
	Hysteresis and repeatability	1%RH
	Long term stability	1 %/Year
	Output signal	0.0 %RH = 0.00V
	100.0 %RH = 1.00V	
TEMPERATURE	Sensor type	Pt100 class A
	Measuring range	-35°C...+60°C
	Accuracy	0,2°C ±0,15 % of the measure
	Long term stability	0.2°C/Year
	Output signal	-40°C = 0.00V
	+60°C = 1.00V	
POWER SUPPLY	Supply voltage	7-35 Vdc
	Supply current	2 mA
OPERATING TEMPERATURE	Electronics	-35...+60°C
CONNECTIONS	Cable	4 wires + screen / length 1.5 m / diameter 5mm
	Power supply	Red
	Humidity signal	Blue
	Temperature signal	Black
	Signal gnd	White (connected to shield inside the transmitter)
	Power gnd	Brown (connected to copper braid)
HOUSING	Dimensions	14x94mm without the membrane filter
	Protection class	IP64
	Mounting	M12 x 1 thread

ORDERING CODES

HD9809T: passive double transmitter for temperature and humidity, output 0÷1 Vdc in the range 0÷100% R.H., -40°C...+60°C.

HD75: saturated salt solution 75% R.H. with adapter M 12x1.

HD33: saturated salt solution 33% R.H. with adapter M 12x1.

HD9008.21.1: holder for vertical sensor, wall distance 250mm, hole Ø 26.

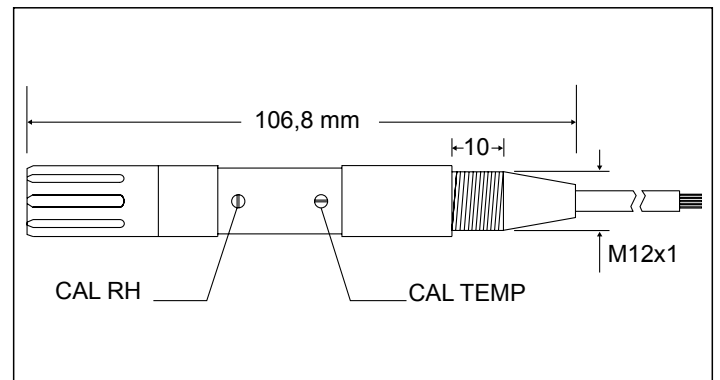
Use with reduction HD9008.26.14

HD9008.21.2: holder for vertical sensor, wall distance 125mm, hole Ø 26.

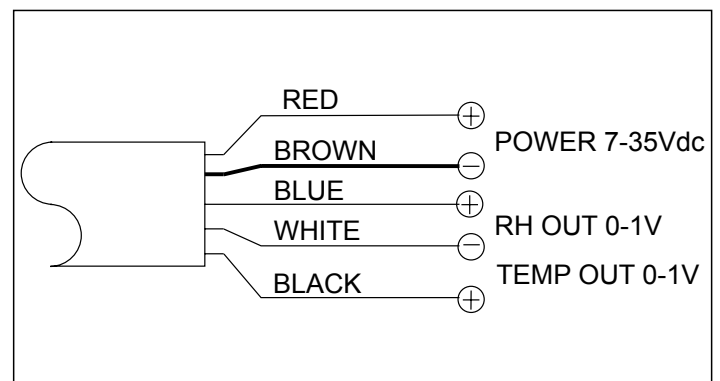
Use with reduction HD9008.26.14

HD9008.26/14: reduction for Ø 26 and Ø 14mm holes, for HD9008.21.1 and HD9008.21.2

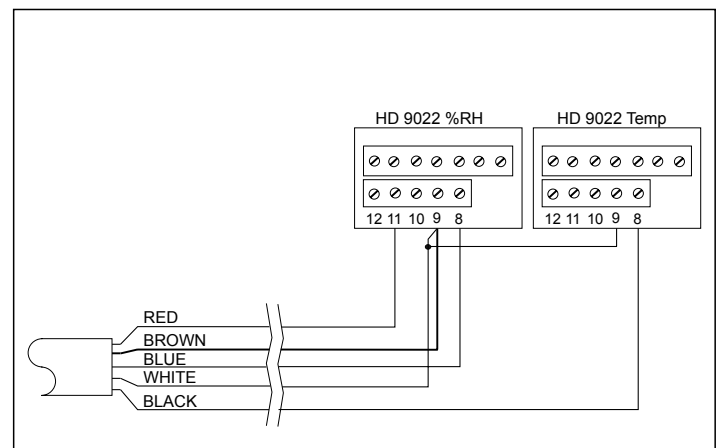
HD9008.31: flange with sensor block Ø 14mm for duct sensors of the series TC and TO.



Dimensions in mm:



Connection diagram:



Example of a connection with HD 9022: