

Description and Application

The THE-1002 duct-mounted humidity transmitter is designed for use with automation systems in commercial buildings, hospitals, museums, or other facilities requiring accurate measurement of relative humidity and temperature. It transmits separate relative humidity (RH) and temperature signals for use in temperature, humidity, or enthalpy-based control applications.

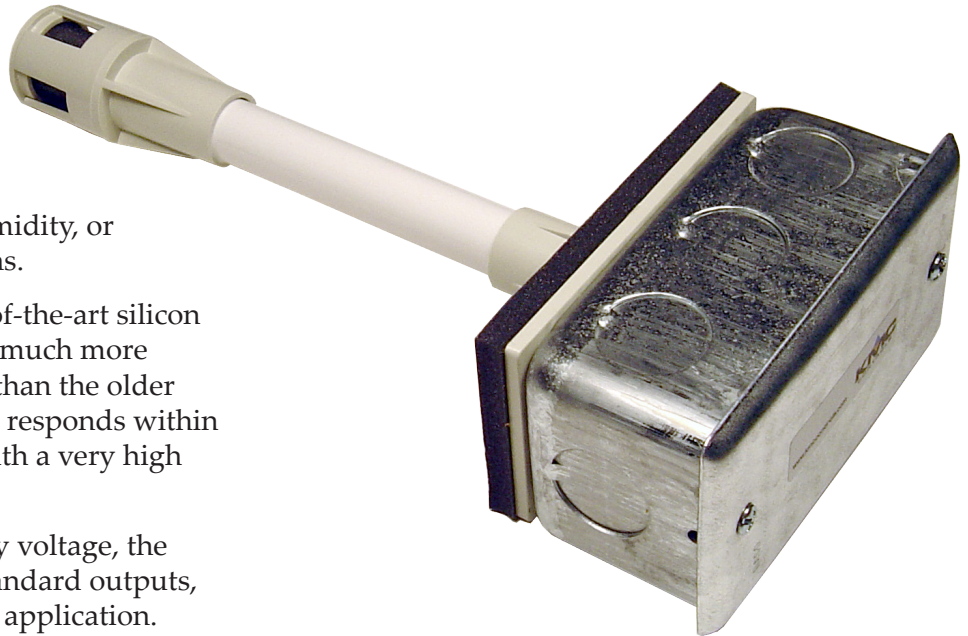
This transmitter now uses a state-of-the-art silicon CMOS chip sensor. This provides much more durable and reliable performance than the older capacitive polymer sensor. Plus, it responds within seconds to changes in humidity with a very high degree of accuracy.

Able to accept VAC or VDC supply voltage, the THE-1002 offers three different standard outputs, any one of which may be used per application. This reduces the need to stock multiple transmitters to accommodate several output requirements.

The THE-1002 also contains a thermistor for measuring duct temperature. The 10,000 ohm (@ 77° F) thermistor provides precise, stable temperature sensing.

The sensor probe is filtered to reduce the possibility of contamination from airborne dirt and dust.

An integral housing affords multiple 1/2-inch conduit knockouts for ease of wiring during installation.

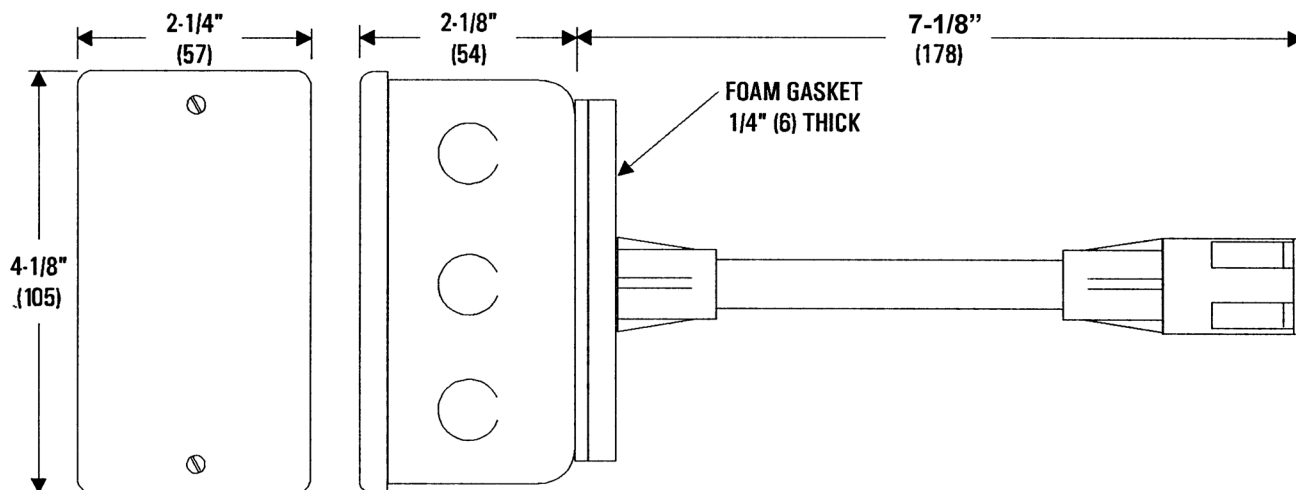


Features

- ◆ CMOS chip humidity sensor provides excellent linearity, sensitivity, and reliability
- ◆ Type II 10,000 ohm thermistor for temperature sensing
- ◆ Transmits separate temperature and humidity signals
- ◆ Accepts 24 VAC or 28 VDC supply voltage
- ◆ Three standard outputs
- ◆ Filtered sensor probe

Details

All dimension are in inches (mm).



Specifications

Supply Voltage	24 VAC -15%, +20%; 28 to 40 VDC
Supply Power	0.75 VA at 24 VAC 12.5 mA at 28 VDC
Humidity Element	
• Output Range	0 to 100% RH
• Sensing Accuracy	@ 25° C ±2% RH over the 10% to 90% RH range
Output Signal over 0 to 100% RH	0 to 5 VDC, 0 to 10 VDC, or 4 to 20 mA
Output Capacity	
• 0-5 or 0-10 VDC	capable of driving 1,000 ohms or greater
• 4-20 mA	(24 VAC or 28 VDC supply) 250 ohm min. to 650 ohm max.

Temperature Sensor

• Type	Type II thermistor
• Accuracy	±0.36° F (±0.20° C)
• Resistance	10,000 ohm @ 77° F (25° C)
• NTC	4.37%/° C @ 25° C
• Dissipation	2 mW/° C
Constant	

Wire Size 18 to 22 AWG with a 250-foot length, maximum

Material ABS UL Flame Class 94

Weight 12 oz. (34 kg)

Temperature Limits

• Operating	40° to 120° F (4° to 49° C)
• Shipping	-40° to 140° F (-40° to 60° C)
• Humidity	0 to 100% relative humidity, non-condensing

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