



RELATIVE HUMIDITY/TEMPERATURE SENSOR

FEATURES:

- **Inexpensive**
- **Excellent Long-Term Stability**
- **Wide Operating Temperature Range**
- **Contamination Resistant**
- **4-20 Ma or 0-1 Vdc Output**
- **Compact Size**
- **Optional NIST certification**

Climatronics' relative humidity and temperature sensor, P/N 102669 uses a capacitive relative humidity transducer and is specifically designed for industrial meteorological monitoring systems. Relatively low power consumption makes this sensor ideal for integration with data acquisition systems or for interfacing directly to a SCADA system terminal. The outputs from the sensor are either a linear 4-20 mA or 0-1 VDC signals corresponding to 0 - 100% relative humidity and the selected temperature range.

The voltage output version of the sensor has built-in cable length compensation that allows signal transmission over distances of up to 100 m (330 ft) without signal degradation. The linear current output version of the sensor allows transmission over even greater distances, only limited by the overall loop resistance.

The sensor requires a minimum of maintenance or calibration and features exceptional resistance to contaminants. Repeatability is also excellent, even after complete sensor saturation. The sensor maintains its accuracy over the full range of humidity, even in conditions close to condensation. This is accomplished by electronic temperature compensation of the humidity element and an IP65 (NEMA 4) protected probe.

Field calibration is easy. The probe head containing the transducer and electronics can be quickly removed from the probe body, a replacement installed and the measurements continued while the other sensor head is calibrated in a laboratory. Calibration of the humidity sensor head is fully digital with no potentiometer adjustments required. Calibration accessories and software are available from Climatronics.



SPECIFICATIONS

PERFORMANCE:

Operating Range:

0 - 100 %

-40° to 60°C

Accuracy:

$\pm 1.5\%$ RH @ 23°C

-30° to 70°C (OPTIONAL)

Repeatability:

$\pm 0.5\%$ RH

± 0.2 °C

± 0.1 °C

ELECTRICAL

Excitation Power:

3.6... 35 VDC, 10 mA (voltage output)

5 VDC + 0.02 x load, 45 mA max (current output)

Output Range:

0 – 100% = 0 – 1 Vdc or 4-20 mA

-40° to 60°C = 0 – 1 VDC or 4-20 mA

-30° to 70°C = 0 – 1 VDC or 4-20 mA (OPTIONAL)

Active Output Load:

>1K Ohm for voltage output and <500 Ohm for current output

PHYSICAL

Length:

232 mm (9.13")

Transducer Diameter:

15 mm (0.59")

Base Diameter:

25 mm (0.98")

Weight:

210 g (0.47 lb)

PART NUMBER

102669-G0H0

0-100%, -40° to 60°C = 0 – 1 VDC

102669-G1H0

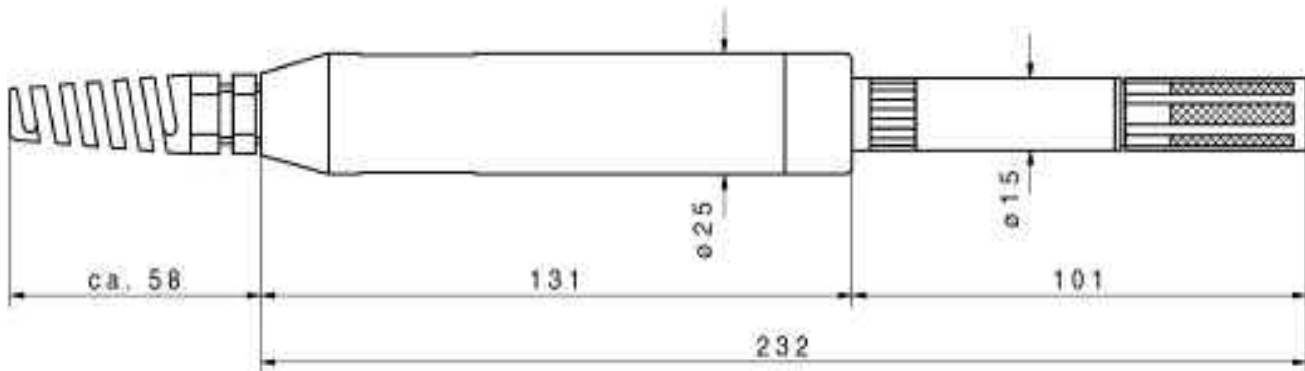
0-100%, -30° to 70°C = 0 – 1 VDC

102669-G0H1

0-100%, -40° to 60°C = 4 – 20 mA

102669-G1H1

0-100%, -30° to 70°C = 4 – 20 mA



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