



Humidity Transmitter

H290

- Accuracy of ± 2 %RH from 0 to 100%RH
- Temperature range at the probe: -5..320°F (-20..160°C)
- Survival limits at probe: -100..390°F (-75..200°C)
- Temperature compensated humidity signal
- Compatible with most makes of controllers
- Ready for direct 3-wire RTD connection
- Easy field calibration



rotronic
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Specifications

Humidity Sensor.....	ROTRONIC HYGROMER® C94
Operating Temperature at Electronics	20..122°F (-5..50°C)
Humidity Measuring Range.....	0..100 %RH
Operating Temperature at Sensors.....	-5 to 320°F (-20 to 160°C)
Survival Temperature Limit at Sensors	-100 to 390°F (-75 to 200°C)
Humidity Limits at Sensors.....	100 %RH up to 176°F (80°C) 90 %RH at 194°F (90°C) 50 %RH at 250°F (120°C) 25 %RH at 300°F (150°C)
Output Signal (specify when ordering).....	4..20mA (max. load 500 Ω) 0..5VDC (min. load 1000 Ω) ± 2%RH from 0 to 100%RH
Accuracy at 68..77°F (20..25°C)	± 0.5%RH
Repeatability	better than 1%RH over a year
Humidity Sensor Stability	10 seconds
Response Time (without filter)	35, 80 and 10%RH
Calibration Potentiometers	10-35 VDC/30 mA or 24 VAC
Supply Voltage	3 Wires
Electrical Connections	12 AWG
Terminals	6 feet (2 meter), including probe
Probe Cable Length	SS Slotted Cap with Screen Filter
Sensor Protection	9.84 x 0.59" (250 x 15 mm) / PPS
Probe Dimension/Material	3.54 x 2.83" (90 x 72 mm)
Board Dimensions.....	0.5 lbs (220g)
Weight	QMA15 (Order Separately)
Probe Holder.....	ER15 (Order Separately)
Calibration Device.....	

General Information

The H290 humidity transmitter consists of a humidity probe that is hard wired to a small open circuit board with a 6 ft (2 meter) cable. The probe has provisions for adding an RTD temperature sensor and is pre-wired for a direct 3-wire RTD connection to an external temperature measurement device.

The H290 series was specifically designed for OEM applications that require accurate humidity measurement within the temperature range of -5 to 320°F (-20 to 160°C). The probe survives exposure to temperature up to 390°F (200°C) and down to -100°F (-75°C). To maintain accuracy, the H290 series features a fully temperature compensated humidity output signal. Because of this, the H290 can be directly used with most makes of controllers, even low cost units. Humidity is measured with the ROTRONIC HYGROMER® C94 capacitive humidity sensor. This sensor offers fast response and exceptional stability, even in high humidity environments. Sensor durability has been proven excellent in a wide range of industrial applications. Reliability is further enhanced by the easy-to-perform field calibration.

The H290 is a 3-wire device that operates either from a 10..35 VDC or from a 24 VAC power supply. The H290 can be ordered with a 4..20mA current output or with a 0..5V voltage output.