

# EMS-ENV1220

## Industrial Temperature and Humidity Transmitter

### Overview



A key factor for maximizing uptime and extending the useful life of critical electronic equipment is the maintaining of proper environmental conditions surrounding the equipment. With the Tridium Enhanced Monitoring System, temperature and humidity conditions are monitored in real time to insure environmental

conditions that do not meet the electronic equipment specifications are alarmed. Not only are actual temperature and humidity values monitored and alarmed, the rate-of-change of these same variables can also be monitored, alarmed, and displayed to assist in prioritizing service response.

The EMS-ENV1220 is a rugged dual output 4-20 mA temperature and humidity transmitter designed for installation in or around critical equipment spaces such as equipment racks as well as in ducts, ceilings, and other spaces requiring environmental surveillance.

The EMS-ENV1220 is a microprocessor-controlled device that is digitally calibrated. RH is calibrated for 2% accuracy. The temperature sensor is a platinum RTD with an accuracy of 0.25C or better. The on-board temperature reading is used to compensate the RH reading for temperature effects.

The on-board processor also monitors for fault conditions. A fault detected with the temperature or humidity reading will cause that output to be driven to about 22.4 mA to indicate an error condition. All electronics are environmentally sealed. The ends of the probe are also sealed to prevent moisture from entering the electronics compartment.

## Ordering Information

Part Number	Description
EMS-ENV1220	Industrial Temperature and Humidity Transmitter, 3 wire, 4-20ma

## Specifications

### Communications

- Input Power 12 to 30VDC at 22.4 mA maximum
- Input Protection Input power is fused; outputs are reverse voltage protected and transient protected. (Fuses do not need to be replaced).

### Temperature

- Sensing Element Class A Platinum RTD
- Accuracy  $\pm 0.25^{\circ}\text{C} + 0.002^{\circ}\text{T C}$
- Temperature Range  $-40$ – $85^{\circ}\text{C}$
- Resolution  $0.06^{\circ}\text{C}$

### Relative Humidity

- Accuracy  $\pm 2\%$  RH, 5–95% RH,  $0$ – $50^{\circ}\text{C}$  —  $\pm 3\%$  RH,  $-20$ – $80^{\circ}\text{C}$
- Resolution 0.04%
- Sensor Stability  $\pm 1\%$  RH typical at 50% RH in 5 years

### Dimensions

- 8.5" x 1.05" without 1/2" NPT female coupling on wiring end
- 9.5" x 1.05" with 1/2" NPT female coupling on wiring end
- Housing Material Body is aluminum, filter is Polyethylene Flange 2.8" x 2.8"

### Environment

- Operating temperature range:  $-40^{\circ}$  to  $85^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $185^{\circ}\text{F}$ ).
- Relative humidity range: 5% to 95%, non-condensing.

### Agency Listings

- CE 89/336/EEC, CE 92/31/EEC, CE 73/23/EEC, CE93/68/EEC
- RoHS
- CLEI Code: SUMYAAPCRA