

Humidity & Temperature Sensors

The Global Water WE600 Humidity Sensor is a precise, durable unit. Humidity sensors are composed of a solid state capacitive element with a linear amplifier. The humidity sensor output is 4-20 mA with a three wire configuration. The Global Water WE700 Temperature Sensor is a high quality, rugged instrument, precision RTD calibrated to US National Standards. The temperature sensor output is 4-20 mA with a two wire configuration. Each sensor is mounted on 25 ft of marine grade cable, with lengths up to 500 ft available upon request. The electronics are completely encapsulated in marine grade epoxy within a stainless steel housing.

- 4-20 mA output
- Marine grade cable with strain relief
- Fully encapsulated electronics

What is Relative Humidity?

Air moisture content is typically described by a relative humidity measurement. Relative humidity is the ratio of the water vapor content to the concentration of water vapor that the atmosphere could hold. In general, the relative humidity will vary inversely with air temperature so that the relative humidity is highest when the temperature is lowest, and vice versa. Typically after sunrise, when the air warms, the relative humidity falls. Relative humidity is typically given in a percentage reading. The vapor in the air is considered at 100% relative humidity when the concentration of water vapor in air is equal to the water vapor concentration at saturation.

Why Measure Relative Humidity?

Relative humidity has a major effect on the environment. Humidity readings provide a chance to control these effects. Effects include causing discomfort in people or animals, damaging materials in warehouses or other storage facilities, affecting the climates for optimal production processes, impacting the quality of construction materials and many others.

What is Temperature and How is it Affected?

Temperature is typically measured in degrees Celsius or Fahrenheit. To accurately measure temperature the temperature sensor should be shielded from direct sunlight or precipitation and it should be adequately ventilated. Usually "surface" air temperature is measured approximately two meters above the surface.

The factors that affect temperature sensors include latitude, the movement of air masses, solar radiation, and nearby bodies of water or land. Typically solar radiation and latitude are the biggest influences on the temperature reading.



WE600-700 Rugged Humidity & Temperature Sensors with optional Solar Shield

Specifications

Humidity Sensor

Type	Capacitance
Output	4-20 mA
Range	0 to 100% RH
Accuracy	±2% RH
Operating Voltage	10-36 VDC
Current Draw	3mA plus sensor output
Warm Up Time	3 seconds minimum
Operating Temp	-40 to +131°F (-40 to +55°C)
Operating Temperature	14 to 122°F (-10 to +50°C) (Sensor); 32 to 122°F (0 to +50°C) (Meter)
Sensor Size	1-1/8 inch diameter x 7 inch (2.9 cm dia. x 18 cm)
Weight	0.5 lb. (227 g)

Temperature Sensor

Type	Precision RTD
Output	4-20 mA
Range	-58 to +122°F (-50 to +50°C)
Accuracy	±0.2°F or ±0.1°C
Operating Voltage	10-36 VDC
Current Draw	Same as sensor output
Warm Up Time	3 seconds minimum
Storage Temperature	-58 to +212°F (-50 to +100°C)
Sensor Size	3/4 inch diameter x 4-1/2 inch (2 cm diameter x 11.4 cm)
Weight	0.5 lb. (227 g)

For Ordering information and Options; please visit www.globalw.com/products/WE700.html