MODEL 650

%RH and Temperature Transmitter

Accurate Humidity measurements are becoming increasingly important, especially in energy savings, indoor air quality, environmental testing, and process control.

Highly accurate and reliable measurement and control of humidity and temperature is required for many industrial processes. The integrated microprocessor accepts the linearization and compensation for humidity over the whole range from -40 to 180°C. This guarantees highest accuracy of up to ±1%RH. In addition to relative humidity and temperature, dew point can also be calculated. Up to 32 transducers can be analyzed on a PC. The optional LED display is easy to read.

Benefits

- *Highest precision ±1%RH*
- *Housing with LED display*
- *4&2 wire technology, 4 to 20 mA for signal and power*
- *Variable cable lengths up to 10m*
- *Variable scaling of outputs signals possible*
- *Parallel analysis of up to 32 transducers via PC (RS485) (Optional)*

Model 650

The Model 650 incorporates a ±1% maintenance free humidity probe ideal for checking humidity measurements for validation of critical environments. It's rugged, compact and protected by a waterproof plastic housing. The humidity measuring range is 0-100%RH. The accuracy of this probe has been tested and proven time and again in worldwide laboratory tests. The probe is equipped with a patented %RH sensor.

The precision temperature/humidity measuring instrument includes the basic parameters: temperature, dew point and % RH.

- Rapid measurement with accurate temperature probes. The measuring instrument extrapolates the final value.
- Highest precision due to system calibration (measuring instrument & probe) Calibration data is saved in the probe.
- Calculates the physical humidity parameters:
  - Relative humidity (%RH)
  - Dew point, pressure dew point (tp, tdp)
  - Absolute humidity (g/m3)
  - Humidity levels (g/kg pressure-compensated)
- Guaranteed long-term stability < 1% over 2 years.
- Highest accuracy up to ±1%.

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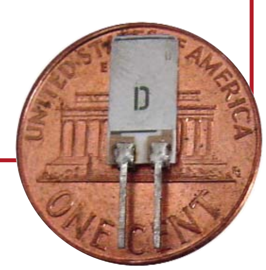

Model 650 - %RH and Temperature Transmitter

MEASUREMENT

RANGE:

Humidity: 0 - 100 %RH
Temperature: -40°C to 180°C (-40°F to 356°F)

ACCURACY:

%RH: 10-90% ± 1%RH
Remaining Range: ± 2%RH
Temperature: ±0.2°C (-20 to 60°C) 1% of m.v. remaining range

OPTIONS

Electronically Isolated Outputs: CE: EMC to industrial standard EN 61326-A1

Output Signals Available: %RH, dew point, g/kg

Power: 115VAC, 230VAC

Factory Scalable Outputs

Cable Extension up to 30ft

Optional LED Display, 2 x 4 Digits

RS485

FUNCTIONALITY

Sensor: Capacitance polymer humidity sensor

Power: 24 VDC

Outputs: 4 to 20 mA (2 or 4 wire)
0.2 to 1 VDC / 2 to 10 VDC via shunt resistors external

Storage Temperature: -40 to 60°C

Housing: IP 65/NEMA-4

Load Current Outputs: 500Ω

Long Term Stability: 1%RH; Guaranteed for two years under normal conditions

Typical Service Life: 10 years

Warranty: 1 year

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