

## HMS82 Humidity and Temperature Outdoor Transmitter for Building Automation Applications



### Features/Benefits:

- Reliable transmitters for basic HVAC humidity measurements
- Relative humidity measurement accuracy up to  $\pm 3.0$  %RH
- Temperature measurement accuracy up to  $\pm 0.5$  °C ( $\pm 0.9$  °F)
- Loop powered, 4 ... 20 mA output signals
- User exchangeable INTERCAP® sensor for easy field replacement
- Ingress protection IP65
- Output parameters available: relative humidity, temperature, dew point temperature, wet-bulb temperature, and enthalpy
- Shield protects temperature and humidity probes from scattered, as well as direct solar radiation, and precipitation
- Easy to install on a pole, horizontal beam, or flat surface
- **Note:** DIP switches available on HMS82 model to control humidity output parameter and scaling

### Summary:

Outdoor mounted transmitter shall incorporate a thin-film polymer capacitive INTERCAP® relative humidity sensor. Sensor is to be interchangeable in the field without requiring calibration. Transmitter probe is to be integrated in a naturally aspirated solar radiation and precipitation shield. Accuracy is to be  $\pm 3$  %RH from 0 ... 90 %RH and  $\pm 5$  %RH from 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Sensor to have a stability of  $\pm 2$  %RH over a two year period in typical HVAC conditions. Temperature sensor shall be a platinum 1000  $\Omega$  RTD with a linear output of 4 ... 20 mA corresponding to -40 ... +60 °C (-40 ... +140°F) with an accuracy of  $\pm 0.3$  °C ( $\pm 0.54$  °F) at +20 °C (+68 °F). Transmitter to be loop powered by 10 ... 28 VDC (at 0  $\Omega$  load) or 20 ... 28 VDC (at 600  $\Omega$  load) and provide a linear output signal of 4 ... 20 mA corresponding to 0 ... 100 %RH. Shall have options to calculate and output additional parameters: dew point temperature, wet-bulb temperature, and enthalpy. Available models are listed below:

**Vaisala Model:** HMS82 (Relative Humidity and Dry-Bulb Temperature)

**Vaisala Model:** HMS82C (Relative Humidity and Dry-Bulb Temperature with NPT ½" conduit fitting)

**Vaisala Model:** HMS82TD (Dew point Temperature and Dry-Bulb Temperature)

**Vaisala Model:** HMS82W (Wet-bulb Temperature and Dry-Bulb Temperature)

**Vaisala Model:** HMS82H (Enthalpy and Dry-Bulb Temperature)

**Vaisala Model:** TMS82 (Dry-Bulb Temperature Only, 1 analog output channel)