

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 ± 3.0 %RH
- Temperature measurement accuracy up to ± 0.5 °C (± 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 ± 3 %RH from 0 ... 90 %RH and ± 5 %RH from 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Sensor to have a stability of ± 2 %RH over a two year period in typical HVAC conditions. Temperature sensor shall be a platinum 1000 Ω RTD with a linear output of 4 ... 20 mA corresponding to -40 ... +60 °C (-40 ... +140°F) with an accuracy of ± 0.3 °C (± 0.54 °F) at +20 °C (+68 °F). Transmitter to be loop powered by 10 ... 28 VDC (at 0 Ω load) or 20 ... 28 VDC (at 600 Ω 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)

HMS83 Outdoor Humidity and Temperature Transmitter for Building Automation



Features/Benefits:

- Reliable transmitters for basic HVAC humidity measurements
- Relative humidity measurement accuracy up to ± 3.0 %RH
- Temperature measurement accuracy up to ± 0.5 °C (± 0.9 °F)
- 3-wire, 0 ... 10 V output signals
- Ingress protection IP65
- User exchangeable INTERCAP® sensor for easy field replacement
- 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 rain
- Easy to install on a pole, horizontal beam, or flat surface
- **Note:** DIP switches available on HMS83 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 ± 3 %RH from 0 ... 90 %RH and ± 5 %RH from 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Sensor to have a stability of ± 2 %RH over a two year period in typical HVAC conditions.

Temperature sensor shall be a platinum 1000 Ω RTD with a linear output of 0 ... 10 V corresponding to -40 ... +60 °C (-40 ... +140 °F) with an accuracy of ± 0.3 °C (± 0.54 °F) at +20 °C (+68 °F).

Transmitter to be powered by 18 ... 35 VDC or 24 VAC ± 20 % 50/60 Hz and provide a linear output signal of 0 ... 10 V 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: HMS83 (Relative Humidity and Dry-Bulb Temperature)

Vaisala Model: HMS83C (Relative Humidity and Dry-Bulb Temperature with NPT ½" conduit fitting)