

2024-02-28

HMD110 Humidity and Temperature Transmitters for High-Accuracy Measurements in Building Automation Applications



Features/Benefits:

- Proven HUMICAP® 180R sensor for superior long-term stability
- Relative Humidity accuracy up to ± 2 %RH
- Temperature accuracy up to ± 0.2 °C (± 0.36 °F)
- Analog (4 ... 20mA) or digital (Modbus® RTU) outputs available
- Output parameters available: relative humidity, temperature, dew point temperature, wet-bulb temperature, and enthalpy
- Compatible with [Insight PC Software](#) through USB connection
- Traceable calibration certificate included

Summary:

Duct mounted transmitter shall incorporate a thin-film polymer capacitive HUMICAP® relative humidity sensor that is field replaceable (re-calibration required to bring sensor within accuracy specification after sensor replacement). Electronics to be protected in an enclosure rated to be IP65. Humidity sensor accuracy to be ± 2 %RH in the range of 0 ... 90 %RH and ± 3 %RH in the range of 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Humidity sensor shall have a stability of ± 0.5 %RH/year in typical HVAC applications. Transmitter with analog output(s) to be loop powered by 10 ... 28 VDC ($R_L = 0 \Omega$) or 20 ... 28 VDC ($R_L = 600 \Omega$) and provide a linear output signal of 4 ... 20 mA corresponding to 0 ... 100 %RH. Temperature sensor is to be a platinum 1000 Ω RTD having a linear output signal of 4 ... 20 mA corresponding to -40 ... +60 °C (-40 ... +140 °F). Temperature sensor accuracy to be ± 0.2 °C (± 0.36 °F) at +20 °C (+68 °F). Transmitter with Modbus® output to be powered by 10 ... 28 VDC and interface over RS-485 with Modbus® RTU protocol. Transmitter shall have the ability to calculate and output additional parameters including dew point temperature, wet-bulb temperature, and enthalpy. Transmitter shall have the ability to calibrate relative humidity, without disturbing operation, using a single point electronic field calibrator. Traceable calibration certificate included. Available models are listed below:

Vaisala Model: [HMD110](#) (configurable features, parameters/scaling, and outputs)

Vaisala Model: [HMD112](#) (pre-configured for Relative Humidity and Dry-Bulb Temperature, analog outputs)

Vaisala Model: [TMD110](#) (Dry-Bulb Temperature only - configurable features, scaling, and outputs)

Vaisala Model: [TMD112](#) (Dry-Bulb Temperature only - pre-configured scaling, optional display in model TMD112D)

HMS110 Outdoor Humidity and Temperature Transmitters for High-Accuracy Measurements in Building Automation Applications



Features/Benefits:

- Uses HUMICAP® 180R sensor for superior long-term stability
- Relative Humidity accuracy up to ± 2 %RH
- Temperature accuracy up to ± 0.2 °C (± 0.36 °F)
- Analog (4 ... 20mA) or digital (Modbus® RTU) outputs available
- Output parameters available: relative humidity, temperature, dew point temperature, wet-bulb temperature, and enthalpy
- Ingress protection, rated to IP65
- Easy to install on a pole, horizontal beam or flat surface
- Compatible with [Insight PC Software](#) through USB connection
- Traceable calibration certificate included

Summary:

Reliable outdoor mounted transmitter with professional-grade radiation shield. Transmitter shall incorporate a thin-film polymer capacitive HUMICAP® relative humidity sensor that is field replaceable (re-calibration required to bring sensor within accuracy specification after sensor replacement). Electronics to be protected in a IP65 rated enclosure. Rated for flow speed up to 30 m/s (67 mph). Humidity sensor accuracy to be ± 2 %RH in the range of 0 ... 90 %RH and ± 3 % RH from 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 ° F). Humidity sensor shall have a stability of ± 0.5 %RH/year in typical HVAC applications. Transmitter with analog output(s) to be loop powered by 10 ... 28 VDC ($R_L = 0 \Omega$) or 20 ... 28 VDC ($R_L = 600 \Omega$) and provide a linear output signal of 4 ... 20 mA corresponding to 0 ... 100 %RH. Temperature sensor is to be a platinum 1000 Ω RTD having a linear output signal of 4 ... 20 mA corresponding to -40 ... +60 °C (-40 ... +140 °F). Temperature sensor accuracy to be ± 0.2 °C (± 0.36 °F) at +20 °C (+68 °F). Transmitter with Modbus® output to be powered by 10 ... 28 VDC and interface over RS-485 with Modbus® RTU protocol. Transmitter shall have the ability to calculate and output additional parameters including dew point temperature, wet-bulb temperature, and enthalpy. Transmitter shall have the ability to calibrate relative humidity, without disturbing operation, using a single point electronic field calibrator. Traceable calibration certificate included. Available models are listed below:

Vaisala Model: [HMS110](#) (configurable parameters/scaling, outputs)

Vaisala Model: [HMS112](#) (pre-configured for Relative Humidity and Dry-Bulb Temperature, analog outputs)

HMW110 Humidity and Temperature Transmitters for High-Accuracy Measurements in Building Automation Applications



Features/Benefits:

- Proven HUMICAP® 180R sensor for superior long-term stability
- Relative Humidity accuracy up to ± 2 %RH
- Temperature accuracy up to ± 0.2 °C (± 0.36 °F)
- Analog (4 ... 20mA) or digital (Modbus® RTU) outputs available
- Optional display available
- Output parameters available: relative humidity, temperature, dew point temperature, wet-bulb temperature, and enthalpy
- Compatible with [Insight PC Software](#) through USB connection
- Traceable calibration certificate included

Summary:

Wall mounted transmitter shall incorporate a thin-film polymer capacitive HUMICAP® relative humidity sensor that is field replaceable (re-calibration required to bring sensor within accuracy specification after sensor replacement). Electronics to be protected in an enclosure rated to be IP65. Humidity sensor accuracy to be ± 2 %RH in the range of 0 ... 90 %RH and ± 3 %RH in the range of 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Humidity sensor shall have a stability of ± 0.5 %RH/year in typical HVAC applications. Transmitter with analog output(s) to be loop powered by 10 ... 28 VDC ($R_L = 0 \Omega$) or 20 ... 28 VDC ($R_L = 600 \Omega$) and provide a linear output signal of 4 ... 20 mA corresponding to 0 ... 100 %RH. Temperature sensor to be a platinum 1000 Ω RTD having a linear output signal of 4 ... 20 mA corresponding to -40 ... +60 °C (-40 ... +140 °F). Accuracy to be ± 0.2 °C (± 0.36 °F) at +20 °C (+68 °F). Transmitter with Modbus® output to be powered by 10 ... 28 VDC and interface over RS-485 with Modbus® RTU protocol. Transmitter shall have the ability to calculate and output additional parameters including dew point temperature, wet-bulb temperature, and enthalpy. Transmitter shall have the ability to calibrate relative humidity, without disturbing operation, using a single point electronic field calibrator. Traceable calibration certificate included. Available models are listed below:

Vaisala Model: [HMW110](#) (configurable features, parameters/scaling, and outputs)

Vaisala Model: [HMW112](#) (pre-configured for Relative Humidity and Dry-Bulb Temperature, analog outputs)

Vaisala Model: [TMW110](#) (Dry-Bulb Temperature only - configurable features, scaling, and outputs)