VAISALA

Bid Specification

2024-02-28 1 (1)

HMW82 Humidity and Temperature Transmitters for Building Automation Applications

Features/Benefits:

- Reliable wall-mounted transmitter 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
- IP30 rated enclosure
- User exchangeable INTERCAP® sensor for easy field replacement; optimized for easy installation and low maintenance

Summary:

Wall-mounted transmitters shall incorporate a thin-film polymer capacitive INTERCAP® relative humidity sensor. Humidity sensor is to be calibration-free and interchangeable in the field. Instrument must be able to measure 0 ... 100 %RH with accuracy of ± 3 %RH from 0 ... 70 %RH and ± 5 %RH from 70 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Humidity sensor must have a stability of at least ± 2 %RH over a two year period in typical HVAC applications. Temperature sensor shall be digital (or Pt100 if using HMW82P100 model) with a linear output of 4 … 20 mA corresponding -5 °C to 55 °C (+23 ... +131 ºF). Transmitter is 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. Available models are listed below:

Vaisala Model: HMW82 (Relative Humidity and Dry-Bulb Temperature)
Vaisala Model: TMW82 (Dry-Bulb Temperature Only)
Vaisala Model: HMW82P100 (Relative Humidity and Dry-Bulb Temperature with additional Pt100 temperature sensor)

Vaisala Inc.
1-888-VAISALA (824-7252)
instruments@vaisala.com
www.vaisala.com

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Bid Specification

2024-02-28

HMW83 Humidity and Temperature Transmitters for Building Automation Applications

Features/Benefits:

- Reliable wall-mounted transmitter 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
- IP30 rated enclosure
- User exchangeable INTERCAP® sensor for easy field replacement; optimized for easy installation and low maintenance

Summary:

Wall-mounted transmitters shall incorporate a thin-film polymer capacitive INTERCAP® relative humidity sensor. Humidity sensor is to be calibration-free and interchangeable in the field. Instrument must be able to measure 0 ... 100 %RH with accuracy of ± 3 %RH from 0 ... 70 %RH and ± 5 %RH from 70 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Humidity sensor must have a stability of at least ± 2 %RH over a two year period in typical HVAC applications. Temperature sensor shall be digital with a linear output of 0 … 10 V corresponding to -5 ... 55 °C (+23 ... +131 ºF). 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. Available models are listed below:

Vaisala Model: HMW83 (Relative Humidity and Dry-Bulb Temperature)

Vaisala Model: TMW83 (Dry-Bulb Temperature Only)

Vaisala Inc.
1-888-VAISALA (824-7252)
instruments@vaisala.com
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HMW88 Humidity and Temperature Transmitter for Building Automation Applications

Features/Benefits:

- Reliable wall-mounted transmitter for basic HVAC humidity measurements
- Relative humidity measurement accuracy up to ± 3.0 %RH
- Temperature measurement accuracy up to ± 0.3 °C (± 0.54 °F)
- Loop-powered, 4 ... 20 mA output signals
- User exchangeable INTERCAP® sensor for easy field replacement; optimized for easy installation and low maintenance
- Optional display available with HMW88D model
- IP65 rated enclosure
- Output parameters available: relative humidity, temperature, dew point temperature, wet-bulb temperature, enthalpy
- **Note:** DIP switches available on HMW88 & HMW88D to control humidity output parameter and scaling

Summary:

Wall-mounted transmitters shall incorporate a thin-film polymer capacitive INTERCAP® relative humidity sensor. Humidity sensor is to be calibration free and interchangeable in the field. Instrument must be able to measure 0 ... 100 %RH with accuracy of ± 3% RH from 0 ... 90 %RH and ± 5 %RH from 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Humidity sensor must have a stability of at least ± 2 %RH over a two year period in typical HVAC applications. 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 is 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. Instrument must have options to calculate and output additional parameters such as: dew point temperature, wet-bulb temperature, and enthalpy. Available models are listed below:

Vaisala Model: HMW88 (Relative Humidity and Dry-Bulb Temperature)

Vaisala Model: HMW88D (Relative Humidity and Dry-Bulb Temperature with Display)

Vaisala Model: HMW88TD (Dew point and Dry-Bulb Temperature)

Vaisala Model: HMW88W (Wet-Bulb Temperature and Dry-Bulb Temperature)

Vaisala Model: HMW88H (Enthalpy and Dry-Bulb Temperature)

Vaisala Model: TMW88 (Dry-Bulb Temperature Only)

Vaisala Inc.
1-888-VAISALA (824-7252)
instruments@vaisala.com
www.vaisala.com

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HMW89 Humidity and Temperature Transmitter for Building Automation Applications

Features/Benefits:

- Reliable wall-mounted transmitter for basic HVAC humidity measurements
- Relative humidity measurement accuracy up to ± 3.0 %RH
- Temperature measurement accuracy up to ± 0.3 °C (± 0.54 °F)
- 3-wire, 0 ... 10 V output signals
- User exchangeable INTERCAP® sensor for easy field replacement; optimized for easy installation and low maintenance
- Optional display available with HMW89D model
- IP65 rated enclosure
- Output parameters available: relative humidity, temperature, dew point temperature, wet-bulb temperature, enthalpy
- **Note:** DIP switches available on HMW89 & HMW89D to control humidity output parameter and scaling

Summary:

Wall-mounted transmitters shall incorporate a thin-film polymer capacitive INTERCAP® relative humidity sensor. Humidity sensor is to be calibration free and interchangeable in the field. Instrument must be able to measure 0 ... 100 %RH with accuracy of ± 3% RH from 0 ... 90 %RH and ± 5 %RH from 90 ... 100 %RH between +10 ... +30 °C (+50 ... +86 °F). Humidity sensor must have a stability of at least ± 2 %RH over a two year period in typical HVAC applications. 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. Instrument must have options to calculate and output additional parameters such as: dew point temperature, wet-bulb temperature, and enthalpy. Available models are listed below:

Vaisala Model: HMW89 (Relative Humidity and Dry-Bulb Temperature)
Vaisala Model: HMW89D (Relative Humidity and Dry-Bulb Temperature with Display)

Vaisala Inc.
1-888-VAISALA (824-7252)
instruments@vaisala.com
www.vaisala.com