VAISALA

Bid Specification

2024-02-28

HMP1 Humidity and Temperature Probe for Space Monitoring

HMP1 Probe (top), HMP1 Probe with Indigo200 (bottom left), and HMP1 Probe with Indigo520 (bottom right)

Features/Benefits:

- Vaisala HUMICAP® I sensor for great stability and superior response time
- Relative Humidity accuracy up to ± 1.0 %RH
- Temperature accuracy up to ± 0.2 °C (± 0.36 °F)
- Plug & play compatibility with all Vaisala Indigo Transmitters (Indigo520, Indigo510, Indigo300, Indigo201, Indigo202, Indigo80) for analog outputs, local display, and/or additional features
- Digital communication - Modbus® RTU protocol over RS-485
- Sensor purge provides superior chemical resistance for harsh conditions
- Corrosion-resistant IP50 electronics housing
- Calculated moisture parameter options: Relative humidity, absolute humidity, dew/frost point temperature, enthalpy, mixing ratio, water concentration, water mass fraction, wet-bulb temperature, water vapor pressure, water vapor, saturation pressure, etc.
- Compatible with Vaisala's Insight PC Software through USB connection
- Traceable calibration certificate included

Summary:

Probe shall incorporate a thin-film polymer capacitive HUMICAP® I humidity sensor with accuracy of ± 1.0 %RH (0 ... 90 %RH) at 23 °C (73.4 °F). Chemical purge functionality allows for use in environments with high concentrations of dust, chemicals, or cleaning agents. Temperature sensor shall have accuracy up to ± 0.2 °C (± 0.36 °F) at +23 °C (+73.4 °F). Electronics to be protected in an IP50 rated metal probe body with an operating temperature range of -40 ... +60 °C (-40 ... +140 °F). Probe to be powered by 15 ... 30 VDC with Modbus® RTU communication protocol over RS-485. Probe head shall have a temperature operating range of -40 ... +60 °C (-40 ... +140 °F), with relative humidity accuracy specified between -40 ... +60 °C (-40 ... +140 °F). Probe can be connected directly to INDIGO200 or INDIGO300 Transmitters to form single wall-mounted, fixed probe system. Probe shall be able to calculate and directly output relative humidity, temperature, absolute humidity, dew/frost point temperature, enthalpy, mixing ratio, water concentration, water mass fraction, wet-bulb temperature, water vapor pressure, and water vapor saturation pressure. Probe shall have the ability to be calibrated in the field via PC connection. Traceable calibration certificate included.

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