VAISALA

Bid Specification

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HMP9 Humidity and Temperature Probe for Rapidly Changing Environments

HMP9 Probe (top), HMP9 probe with Indigo201 (bottom)

Features/Benefits:

- Vaisala HUMICAP® I sensor for superior accuracy and stability
- Relative Humidity accuracy up to ± 0.8 %RH
- Temperature accuracy up to ± 0.1 °C (± 0.18 °F)
- Compact 5 mm diameter probe for small spaces and superior temperature response time
- 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 IP65 probe body
- 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:

Humidity and temperature probe is designed for installation into small spaces and where fast response time is desired. Probe shall incorporate a thin-film polymer capacitive HUMICAP® I humidity sensor with accuracy of ± 0.8 %RH (0 ... 90 %RH) at +23 °C (+73.4 °F). Sensor purge functionality allows for use in environments with high concentrations of dust, chemicals, or certain cleaning agents. T_{63} response time of 15 seconds. Temperature sensor shall have accuracy up to ± 0.1 °C (± 0.18 °F) at +23 °C (+73.4 °F). T_{63} response time of 70 seconds. Electronics to be protected in an IP65 rated 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. Remote probe head shall have a temperature operating range of -40 ... +120 °C (-40 ... +248 °F), with relative humidity accuracy specified between -40 ... +120 °C (-40 ... +248 °F). 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, and water vapor pressure, 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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