

2020-12-02

HMP9 Humidity and Temperature Probe for Rapidly Changing Environments



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

Features/Benefits:

- Relative Humidity accuracy up to ± 0.8 %RH
- Temperature measurement range $-40 \dots +120$ °C ($-40 \dots +248$ °F)
- Vaisala HUMICAP® I sensor for superior accuracy and stability
- Compact 5 mm diameter probe for superior response time
- Sensor purge provides superior chemical resistance for harsh conditions
- Corrosion-resistant IP65 probe body
- Traceable calibration (certificate included)
- Modbus RTU over RS-485
- Plug & play compatible with INDIGO200 Series Transmitters for display, relays or analog outputs
- Plug & play compatible with INDIGO520 Series Transmitters for interactive display, relays, analog outputs, data logging, and ethernet
- Humidity parameter options: Relative humidity, temperature, dew point temperature, wet-bulb temperature, absolute humidity, mixing ratio, water concentration, water mass fraction, water vapor pressure, enthalpy
- Compatible with Vaisala's INSIGHT software

Summary:

Probe is designed for small spaces and superior response time. 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). Temperature sensor shall be a platinum 100Ω RTD with accuracy up to 0.1 °C (0.18 °F) at $+23$ °C ($+73.4$ °F). Electronics to be protected in an IP65 rated probe body with an operating temperature range of $-40 \dots +60$ °C ($-40 \dots +140$ °F). Probe to be powered by $15 \dots 30$ VDC with Modbus RTU communication protocol over RS-485. Remote probe head shall have a temperature operating range of $-40 \dots +120$ °C ($-40 \dots +248$ °F), with relative humidity accuracy specified between $-40 \dots +120$ °C ($-40 \dots +248$ °F). Standard cable length 2 meters (optional 1, 3, 5, 10 meter extension cables). Probe shall calculate and directly output dew point temperature, wet-bulb temperature, absolute humidity, mixing ratio, water concentration, water mass fraction, water vapor pressure, and enthalpy. Probe shall have the ability to be calibrated in the field via PC connection. Traceable calibration certificate included.