

HMP4 Humidity and Temperature Probe for High Pressure/Vacuum



Probe body (top), HMP4 Probe head (center)
HMP4 Probe connected to INDIGO520 (right)

Features/Benefits:

- Uses Vaisala HUMICAP® sensor technology for superior accuracy and stability
- Relative Humidity accuracy up to ± 0.8 %RH
- Temperature accuracy up to ± 0.1 °C (± 0.18 °F)
- Operating pressure of 0 ... 100 bar
- 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
- Threaded fitting options for in-line process measurements
- Corrosion-resistant IP66 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:

Humidity and temperature probe is designed for pressurized or vacuum applications up to 100 bar and can be used as a standalone probe or with one of the Indigo Transmitters. Probe shall incorporate a thin-film polymer capacitive HUMICAP® humidity sensor with accuracy of ± 0.8 %RH (0 ... 90 %RH) at +23 °C (+73.4 °F). Humidity sensor shall be replaceable (re-calibration required to bring sensor within specified accuracy after new sensor is installed). Composite sensor available to allow purge functionalities for use in environments with high concentrations of dust, chemicals, or certain cleaning agents. T_{63} response time of 15 seconds. Temperature sensor shall be a platinum 100 Ω RTD with accuracy up to ± 0.1 °C (± 0.18 °F) at +23 °C (+73.4 °F). Electronics to be protected in an IP66 rated metal probe body with an operating temperature range of -40 ... +80 °C (-40 ... +176 °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 -70 ... +180 °C (-94 ... +356 °F), with relative humidity accuracy specified between -40 ... +180 °C (-40 ... +356 °F). Various threaded fitting connections offered for in-line process connection. 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.