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## HMP7 Humidity and Temperature Probe for High Temperature and/or Humidity



HMP7 Probe (top), HMP7 Probe with Indigo201 Transmitter (bottom)

### Features/Benefits:

- Uses Vaisala HUMICAP® sensor technology for superior accuracy and stability
- Relative Humidity accuracy up to  $\pm 0.8$  %RH
- Temperature accuracy up to  $\pm 0.1$  °C ( $\pm 0.18$  °F)
- Plug & play compatibility with all Vaisala Indigo Transmitters (Indigo520, Indigo510, Indigo300, Indigo201, Indigo202, Indigo80) for analog outputs, local display, and/or additional features
- Condensation prevention functionality for high humidity environments (probe reads temperature independent parameters only when probe warming is active)
- Sensor purge provides superior chemical resistance for harsh conditions
- Digital communication - Modbus® RTU protocol over RS-485
- Optional accessories to accommodate duct and outdoor installations, as well as threaded Swagelok® connectors for process connections
- 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 high humidity and high temperature applications with integrated probe warming functionality to minimize condensation on probe; probe can be used as a standalone probe or as a remote probe with one of the Indigo Transmitters. Probe shall incorporate a thin-film polymer capacitive HUMICAP® humidity sensor with accuracy of  $\pm 0.8$  %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  $\Omega$  RTD with accuracy up to  $\pm 0.1$  °C ( $\pm 0.18$  °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). Suitable for use in air, nitrogen, hydrogen, argon, helium, oxygen, and vacuum conditions. Probe to be powered by 18 ... 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 0 ... 100 %RH and -40 ... +180 °C (-40 ... +356 °F). Optional flange style duct installation kit, solar radiation shield for outdoor installations, or Swagelok® fittings for threaded installations. 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.