

Model BL798 Precision Humidity and Temperature Probe



The BL798 is a rugged, accurate temperature and relative humidity probe. It measures relative humidity over the range of 0 to 100% RH and temperature over the range of -40°C to +160°C. Alternatively, the range can be expanded from -40°C to +180°C.

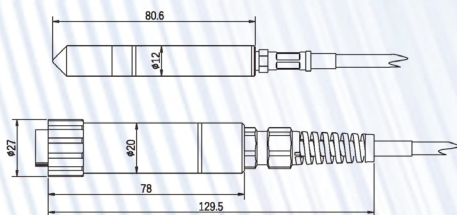
FEATURES

- RH accuracy up to 1.0%RH
- Temperature accuracy up to 0.6°C
- Temperature measuring range -40°C~+180°C
- Full 0~100%RH measure, +80°C measure
- Modbus RTU over RS-485
- Easy Installation and connection
- Sensor purge improves long-term stability and chemical resistance
- Chemical purge function (option)

APPLICATION

- Industrial applications where periodic recalibration alone is not sufficient for maintaining the probe performance.
- Industrial HVAC systems, cleanrooms, and environmental chambers. HVAC Systems

DIMENSION



SPECIFICATION

Relative Humidity Measurement

- Sensor type: Thin film capacity

- Range: 0~100%RH
- Accuracy @23°C : $\pm 1.0\%$ RH (0~90%RH)
- T63 response time: 20 seconds
- Uncertainty: $\pm 0.6\%$ RH (<40%RH); $\pm 1\%$ RH (40~95%RH)

Temperature Measurement

- Sensor type: Pt100 RTD1/3 Class B IEC751
- Range: -40°C~+160°C, -40°C~+180°C (option)
- Accuracy @23°C : $\pm 0.6^\circ\text{C}$ (<40%RH), $\pm 1^\circ\text{C}$ (40~95%RH)
- Calibration uncertainty: $\pm 0.1^\circ\text{C}$

Operating Environment

- Operating temperature of probe head: -40°C~+160°C, -40°C~+180°C (option)
- Operating temperature of probe body: -40°C~+60°C
- Storage temperature: -40°C~+80°C
- Operating environment: Suitable for outdoor use
- Measurement environment: For air, N₂, H₂, Ar, He, O₂
- IP rating of probe body: IP66

Input and Output

- Operating voltage: 18 to 28VDC
- Current consumption: 10mA typical, 500mA max
- Digital Output: RS485, non-isolated
- Protocols: Modbus RTU

Other Specification

- Connector: M12-pin A-coded male
- Weight: 250g
- Probe cable length: 2 meter
- Probe material: 316L
- Probe body material: 316L
- Cable jacket material: FEP

SCOPE OF DELIVERY

- Humidity & temperature probe w/ 2m cable
- Analog part

OPTIONAL ACCESSORIES AND SERVICE

- ISO17025 accredited calibration certificate (SN: 9000-7330)
- BL7330 temperature & humidity transmitter (SN: BL7330)
- Chemical purge function (SN: 798-CP)

HOW TO ORDER

- BL798-160: Standard range from -40°C to +160°C
- BL798-180: Expanded range from -40°C to +180°C