

DATA SHEET: TH-30R Temperature and Humidity Sensor

High-Stability Digital Monitoring for Air and Neutral Gas Environments

1. PRODUCT OVERVIEW

The **TH-30R** is a precision temperature and humidity sensor characterized by stable performance, high measurement accuracy, and a clear digital interface. Engineered for long-term reliability in diverse environmental conditions, it provides alternating displays of real-time data. This sensor is widely utilized across electronics, pharmaceuticals, biotechnology, and aerospace industries for both production oversight and scientific research.

2. KEY FEATURES

- Compact & Robust:** Portable design housed in a solid aluminum alloy shell with an IP65 ingress protection rating.
- Stable Performance:** Anti-vibration and low-drift architecture designed for industrial and laboratory longevity.
- On-site Calibration:** Supports field calibration to maintain accuracy and extend the operational service life of the unit.
- Intuitive Interface:** Features a **4-digit LED display** providing clear, alternating readings of temperature and humidity.
- Standardized Communication:** Supports Modbus RTU (RS485) as standard, with options for 4-20mA or 0-5V analog outputs.
- Regulatory Compliance:** Fully complies with Cleanroom GMP standards and FDA requirements (USA and EU).

3. TECHNICAL SPECIFICATIONS

Feature	Specification
Model	TH-30R
Measurement Medium	Air or neutral gas
Measurement Range	Temperature: -20 to 80°C / Humidity: 0 to 100% RH
Accuracy	Temperature: $\pm 0.3^{\circ}\text{C}$ / Humidity: $\pm 3\%$ RH
Resolution	Temperature: 0.1°C / Humidity: 0.1% RH
Ingress Protection	IP65

Feature	Specification
Power Supply	24V DC \pm 20%
Communication Protocol	Modbus RTU
Housing Material	Aluminum Alloy
Dimensions (LWH)	135 \times 37 \times 91 mm
Net Weight	0.23 kg

4. APPLICATIONS

- **Cleanroom Validation:** Continuous environmental monitoring in sterile pharmaceutical and biotech zones.
- **Industrial Manufacturing:** Climate oversight in sensitive electronics and aerospace production areas.
- **Laboratory Research:** High-precision data collection for environmental and material studies.
- **HVAC Systems:** Integration into building management systems for precise climate control.

5. STANDARD ACCESSORIES

- TH-30R Sensor Unit
- **Factory Calibration Report**
- User Manual

Manufactured by:
Honri Airclean Technology (Suzhou) Co., Ltd.