

Technical Datasheet

TEMPERATURE & HUMIDITY TRANSMITTER ClimaTRANS[®] RHT100



Temperature & Humidity Transmitter with Display

ClimaTRANS[™] RHT100

Wall / Duct Mount

ClimaTRANS RHT100 is a high-performance, industrial-grade Temperature & Humidity Transmitter engineered to deliver precise and reliable environmental monitoring in critical applications where accuracy, stability, and consistency are essential. Built with advanced digital sensing technology, the device accurately measures ambient temperature and relative humidity and converts them into industry-standard output signals such as 4–20 mA, 0–10 V, and RS485 Modbus RTU, enabling seamless integration with BMS, PLC, SCADA, and IoT-based monitoring systems. The transmitter features a clear, high-contrast LCD display that provides real-time visualization of both parameters, allowing operators to monitor environmental conditions instantly without the need for external devices. Its intelligent signal processing ensures fast response time, excellent repeatability, and minimal drift over long operational periods.

Features

- **High accuracy digital Temperature & RH sensor**
- **Dual parameter measurement (Temperature + Humidity)**
- **User-Friendly Interface**
- **Compact & Lightweight Design**
- **Fast response time**
- **Compact, rugged industrial design**
- **Easy installation (Wall / Duct Mount)**
- **long-term stability and low drift**
- **Bright Color display**
- **Cost-effective solution for environmental monitoring**



Applications

RHT100 is designed various applications, including:

- HVAC systems & BMS integration
- Cleanrooms & pharmaceutical environments
- Warehouses & cold storage
- Laboratories & research facilities
- Hospitals & healthcare facilities
- Food & beverage industry
- Data centers & server rooms





Technical Details

Parameters	Temperature & Humidity
Accuracy	Temperature: $\pm 0.3\text{ }^{\circ}\text{C}$ ($0\text{ }^{\circ}\text{C}$ to $60\text{ }^{\circ}\text{C}$)
	Relative humidity: $\pm 1.8\text{ \%RH}$ to $23\text{ }^{\circ}\text{C}$ ($0\text{ \%}$ to $90\text{ \%RH}$)
	Temperature effect over $5\text{...}50\text{ }^{\circ}\text{C}$ and $10\text{--}90\text{ \%RH}$
Measuring Range	Temperature : $-40\text{...}110\text{ }^{\circ}\text{C}$
	Humidity : $0\text{...}100\text{ \%}$
Measuring Units	$^{\circ}\text{C}$ / $^{\circ}\text{F}$ & $\text{\%RH}$
Display	Color TFT Display
Temperature Drift	$\leq 0.1^{\circ}\text{C}/\text{year}$
Supply Voltage	12 VDC to 30 VDC ; maximum consumption 70 mA $\pm 10\%$ @ 24 Vdc
Output	RS485 MODBUS RTU
Color	White Grey
Dimensions:	$120\text{ x }80\text{ x }55\text{ mm}$
Protection Standard	IP65 (Standard)
Mounting	Wall Mount / Duct Mount
Operating Temperature	-20°C to $+60^{\circ}\text{C}$
Storage Temperature	-40°C to $+85^{\circ}\text{C}$
Operating Humidity	$0\text{--}95\text{ \% RH}$ (Non-condensing)
Compliance & Standards	CE Certified, EMC Compliance (Industrial Environment), RoHS Compliant & GMP

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Temperature & Humidity Transmitter ClimaTRANS

Unlimited Applications

Typical application fields of the ClimaTRANS RHT100

- Food services (refrigerated containers, cold storage, production and carriage of food)
- Health (storage of medicines, vaccines, blood, monitoring of incubators and operating rooms)
- Greenhouses and agriculture
- Environmental analyses (Air quality, meteorology and hydrology)
- Monitoring of solar panels
- Museums and document archives
- Transportation of perishable goods
- Air conditioning
- Clean rooms
- Laboratories
- Industrial processes
- Buildings, offices, schools

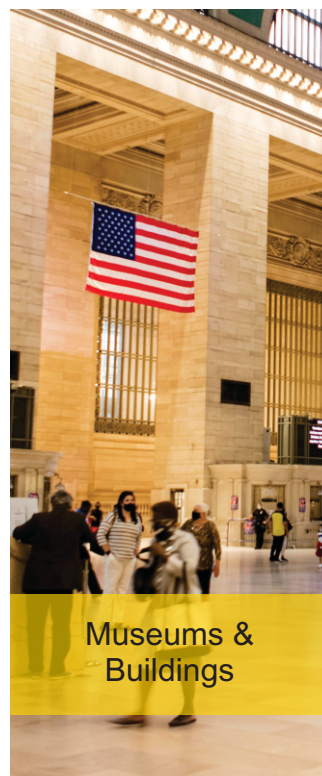
Agriculture & Greenhouses



Storage &
Warehouse



Food &
Hotels



Museums &
Buildings



Other
Industries



Industry: Pharmaceutical Manufacturing

Application: GMP Cleanroom Monitoring

Background: A leading pharmaceutical manufacturer operating a Class 10,000 cleanroom facility faced challenges in maintaining tightly controlled environmental conditions. Temperature and humidity variations were affecting product stability and raising compliance concerns during regulatory audits.

Challenge:

- Inconsistent humidity levels due to HVAC fluctuations
- Lack of real-time local monitoring for operators
- Frequent manual recording leading to human errors
- Difficulty in maintaining audit-ready environmental logs

Outcome:

- Achieved highly stable environmental conditions with minimal variation
- Significant reduction in manual intervention
- Improved audit readiness with automated data records
- Enhanced operator efficiency through on-site display visibility

Impact:

The implementation ensured regulatory compliance, improved product quality, and operational reliability, making the facility fully aligned with GMP standards.

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Polwax International Co.

Contrada De Angelis 953,
Piano 1, Giordano laziale, KR 11432 Italy
export@polwax.it
www.polwax.it

Poland

Apt. 324 al. Modzelewski 9940,
Sedziszów Małopolski, ZP 44-153
www.global.polwax.it

China

10th floor, 5C Building Idea Park,
Guangming District, Shenzen City,
Guangdong province, China

Vietnam

Subida Marilu, 86,
Cornellá de Llobregat, Ext 27926
www.global.polwax.it

Norway

Kr Bikerlands gate 77,
Porsgrunn, 3936
www.global.polwax.it

India

Polwax Engineering India Pvt. Ltd.
ASTON PLAZA, 303&304, 3rd Floor,
Ambegaon Budruk, Pune- 411 046,
Maharashtra, India
www.polwax.in

