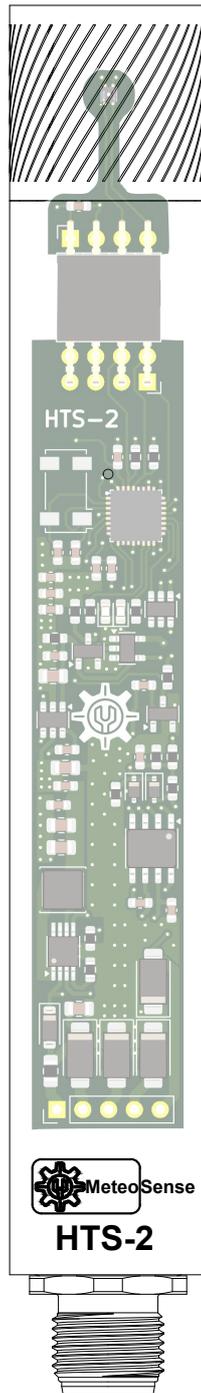


HTS-2



HIGH-PRECISION HUMIDITY AND TEMPERATURE FOR METEOROLOGICAL APPLICATIONS

PRODUCT OVERVIEW | DOCUMENT No. MS-HTS-2—PO0001-03 | © 2025 METEOSENSE





General Description

The HTS-2 is a high-precision temperature and humidity sensor engineered for maximum reliability in both mobile and stationary meteorological applications. Encased in a durable, aluminium housing. With ultra-low power consumption and multiple digital interfaces, the HTS-2 seamlessly integrates into weather stations, climate research systems, and environmental monitoring networks.

Functionality & Data Handling

- Real-time temperature and humidity values available on-demand
- Long-term averages auto-updated every 10 min
- Configuration via USB or digital interface (baud rate, parity, slave address, send interval)
- Internal FIFO buffering with oversampled precision
- All settings persist after power loss
- USB supports data streaming and batch logging to PC
- Compensation values readable/writable by us

Typical Application

- Meteorological stations (national, regional, remote)
- Environmental and climate research observatories
- Helipad and runway weather instrumentation
- Mobile survey and air-quality trailers
- Calibration reference for pressure measurements

Low Power Features

The HTS-2 includes an intelligent sleep management system. It detects master polling behavior and dynamically adjusts wake-up timing, minimizing energy use. Typical sleep consumption: 14 μ A, ideal for solar or battery-powered deployments.



HTS-2 Electrical & General Specifications	
Dc Input Voltage	5 VDC ... 45 VDC (Peak up to 60 VDC)
ESD Protection I/O	15 kV
Reverse Polarity Protection	Yes
Power Consumption	14µA at 12V
Power Consumption always on	0,6mA at 12V
Number of Sensors	1
Temperature Compensation Range	-40°C ... +80°C
Temperature Range	-40°C ... +80°C
Temperature Units	°C, °F, K
Temperature Accuracy	±0,1°C
Temperature Repeatability (High)	±0.023°C
Temperature Resolution	0.01°C
Temperature Response Time (τ63%)	~15 – 20 s
Long-term Temperature Drift	<0.03°C/year
Humidity Range	0...100 RH%
Relative Humidity Accuracy	±1.0 (typ.) RH%
Relative Humidity Repeatability (High)	±0.05 RH%
Relative Humidity Resolution	0,01 RH%
Relative Humidity Response Time (τ63%)	~4 – 7 s
Long-term Relative Humidity Drift	<0.2 %RH/year
Interfaces	RS-485, SDI-12, USB
Protocols	Modbus RTU/ASCII, SDI-12
Baud Rate RS-485	9.6, 34, 56, 96, 115.2 kbit/s
Baud Rate SDI-12	1.2, 2.4, 4.8 kbit/s
Output Interval Continuous Mode RS-485/SDI-12	1 s ... 86400 s
Output Interval USB Streaming	1s ... 3600s
Housing	Anodized Aluminium/316L
Housing dimensions	Ø20mm x 130mm
Connection	M12x5

Notes: All output intervals and settings are user-configurable via USB