

SEMARS DIGITAL

SEMARS

Smart Equipment Monitoring
and Resolution System

SENSORS DATA SHEET

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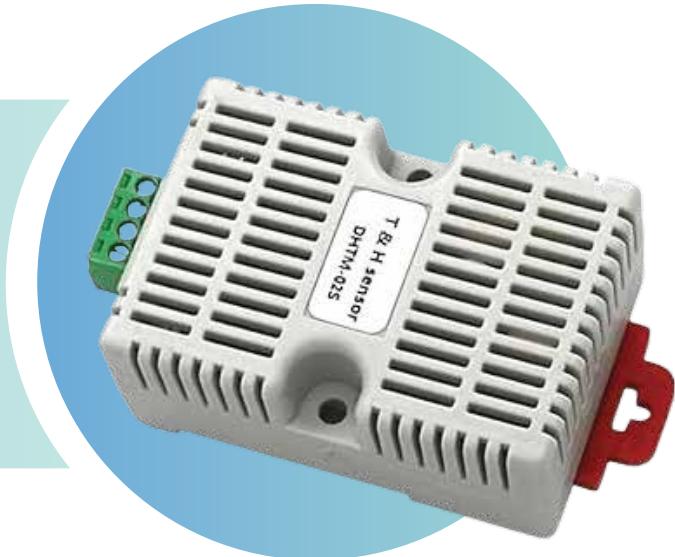
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01

Temperature & Humidity Sensor

The sensor is a compact, rail-mountable transmitter equipped with a built-in temperature and humidity sensor.



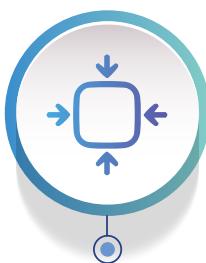
Its features and applications are as follows:

1.1 Key Features:



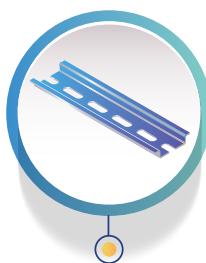
Built-in Sensor

Measures both temperature and humidity.



Compact Design

Suitable for installations where space is limited.



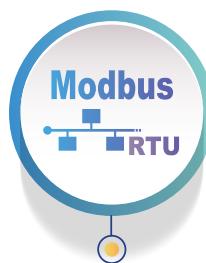
Standard DIN35 Rail Mounting

Facilitates easy rail installation.



RS485 Communication Interface

Enables reliable data transmission.



Modbus-RTU Protocol

Ensures compatibility with standard industrial systems.

1.2 Applications:

Cabinet Monitoring

Ideal for managing environmental conditions inside control cabinets.

Shelter Monitoring

Useful for maintaining optimal conditions in telecom shelters or similar environments.

This type of sensor is particularly suitable for industrial or commercial environments requiring precise monitoring and integration with existing systems.

1.3 Specifications

SL No.	Specification	Value
1	Input Power	10-30V DC
2	Maximum power	0.1W
3	Measuring Parameters	Temperature and Humidity
4	Measuring Accuracy	$\pm 3\%$ RH (60%RH, 25°), $\pm 0.5^\circ$ (25°)
5	Operating Temperature & Humidity range	-40° ~+60°, 0%RH~95%RH (non-condensing)
6	Communication Interface	Modbus RTU
7	Measuring Resolution	0.1°, 0.1%RH
8	Long term stability	Temperature: $\leq 0.1^\circ$ /y, Humidity: $\leq 1\%$ RH/y
9	Mounting	DIN Mount

1.4 Note:

Operating and storage conditions :

- It's not recommended to apply RH-range beyond the temperature range stated in this specification. The module's sensors can recover after working in abnormal operating condition to calibrated status, but will accelerate sensor's aging.
- The module and sensor are suitable to measure RH of vapours only. Please ensure that vapour does not condense on the sensor.

Attentions to chemical materials :

- Vapour from chemical materials may interfere the module's sensitive-elements and degrade the sensitivity.

Attention to temperature :

- Relative humidity strongly depends on temperature, the module uses temperature compensation technology to ensure accurate measurement of RH. It is still recommended to keep the sensor at same temperature when sensing.
- Long-time exposure to strong light and ultraviolet may debase module's performance.
- Module should be mounted at the place as far as possible from parts that may cause change major change to temperature.
- Avoid using the sensor under dew condition.
- Do not use this product in safety or emergency stop devices or any other occasion that failure of this module may cause personal injury.



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