Temperature & Humidity Sensor

Installation & User Manual

SKU: TEMP-HYG-H3020-Stonehouse

Temperature and Humidity Sensor

Product User Manual

Product Overview

The wall-mounted temperature and humidity transmitter utilizes the latest integrated temperature sensor technology.

Humidity measurement technology, through the signal processing of high-performance single-chip microcomputer, the whole machine performance is superior, long-term stability is excellent.

※ This series of transmitters features a professional wall-mounted installation design for easy operation, equipped with dual passive switch channels, making them compatible with most industrial control systems.

This product series is widely used in building automation, climate and heating signal acquisition, greenhouse, and pharmaceutical and chemical industries.

Product Parameter

※ output signal

1、 RS485 interface: MODBUS-RTU protocol

2、 2. Switching quantities: Passive switching nodes (optional feature)

Relay contacts: Load capacity <2A/30VDC (0.5A/125VAC), maximum switching current 2A

※ Operating voltage: DC12~36V or AC24V (±20%)

Power consumption: ≤1 VA (typical value) ※ Maximum permissible airflow velocity: 16 m/s

※ Temperature accuracy

Accuracy: ±0.3℃ (typical value)

Long-term stability: <0.04°C/year※ Relative humidity accuracy

Accuracy: ±3% RH (typical value, at 25°C temperature conditions)

Long-term stability: <0.5% RH/year

Work and storage environment

※ Operating environment temperature: -40~120°C (probe)

-20~ 70℃ (main unit)

Working environment humidity: 0~99% RH (no condensation) ※ Storage temperature: -40~80℃

Storage humidity: 20~60% RH

Note: Electrical connection: 1×2.5 mm² or 2×1.5 mm ² (terminal capacity)

M16×1.5mm (waterproof joint) ※

Standard: Compliant CE EMC Directive 89/336/EEC

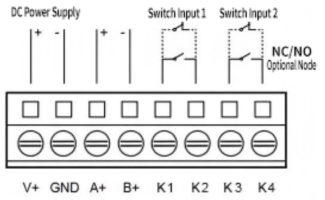
Note: Temperatures above 80 degrees may cause irreversible damage to the sensor.

All parameters were measured at 25℃ unless otherwise specified.

outline dimension

unit （mm）

Electrical Wiring Diagram



Definition diagram of electrical terminal block

pay attention to：

（1） Switch 1 controls temperature, while switch 2 controls humidity.

（2） A switch node can only be set as an upper limit action or a lower limit action (panel settings).

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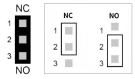
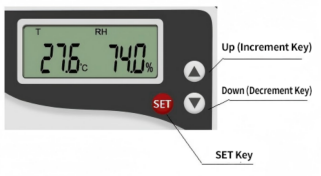
（3）The switch defaults to open and closes when activated. To close normally and open when not activated, simply set the jumper cap status.



System parameter code description and setting

1、Key and LCD Instructions



2、 Description of dew point measurement

In the main interface (displaying temperature and humidity), press the SET button once to switch the temperature display to dew point. Press the SET button again to return to normal air temperature.

3、Access Settings: On the main interface (temperature and humidity display), press and hold the SET button for 3 seconds to enter the system settings. Release the button after 3 seconds to exit.

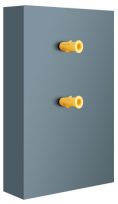
4、The functions of system parameter codes are shown in the table below.

※Parameter code description

Symbol	Function definition	Description
PASS	Set security password	The factory default password for the product is 55. Customers cannot modify it.
Add	Postal address	The slave device's IP address for RS485 network communication ranges from 1 to 255.
bor	Communication baud rate	5 The baud rate is selectable: 48 (4800), 96 (9600),144 (14400),192 (19200),
C-F	Temperature unit switch	0 : °C (1) °F (1)
AL-1	Switch 1 property	Define the upper or lower limit of the temperature switch
1-H	Temperature upper limit	High-temperature alarm value, range-50.0 to 200.0 (℃)
1-L	Lower temperature limit	Low-temperature alarm value, range-50.0 to 200.0 (℃)
1HC	Temperature alarm hysteresis	To prevent the alarm from being triggered by oscillation, set the alarm hysteresis value within the range of 1 to 99°C.
1-F	Temperature correction value	The final temperature value = measured temperature value + temperature correction value, with a range of-20.0 to 20.0°C (-50 to 50°C).
AL-H	Switch 2 Properties	Define the upper or lower limit of the humidity switch action
H-H	Upper Limit of Humidity	High humidity alarm value, range 0–99 (%RH)
H-L	Lower limit of humidity	Low humidity alarm value, range 0–99 (%RH)
HHC	Humidity alarm hysteresis	To prevent the vibration alarm from occurring, set the alarm hysteresis value within the range of 0 to 99 (%RH).
H-F	Humidity correction value	The final humidity value is calculated as the measured humidity value plus the humidity correction value, with a range of-20 to 20 (%RH).

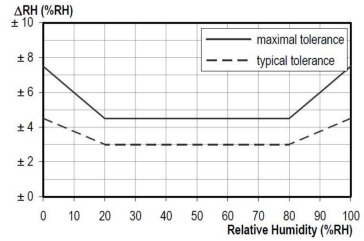
installation instructions

The installation diagra



Note: Refer to the inst

Analysis of Temperature and Humidity Accuracy



maximum error of relative humidity