

HST-E & HSH-E series

Wall mounted Temp. & Relative Humidity Sensors

Honeywell HST-E and HSH-E series wall mounted temperature & relative humidity sensors are applied to measure temperature and relative humidity of inside and outside air

The HST-E and HSH-E series outside temperature & relative humidity sensors have a variety of control signal outputs and can be compatible with a variety of automatic control systems.



Basic Parameters

Measuring Temp. Range		-40°C to 60 °C
Working Environment		-40°C to 60°C, 0 to 95%RH (Non condensation)
Humidity Accuracy @ 25°C and 24VDC	2%	20% to 80%: ±2%, 0 to 20% and 80% to 95% : ±3%
	3%	20% to 80%: ±3%, 0 to 20% and 80% to 95% : ±5%
	5%	20% to 80%: ±5%, 0 to 20% and 80% to 95% : ±9%
Power Supply	0-10V	24 VDC/24VAC±20%
	4-20mA	24 VDC ±20%
Output Load		0-10V output: ≥ 10K Ohms 4-20mA output: ≤500 Ohms
Current Consumption		≤70 mA
Response Time		Temperature: ≤ 7 Minutes Humidity: ≤ 45 Seconds
Humidity Stability		±1%RH / Year
IP Rated		IP65
Storage Environment		-40°C to 70 °C, 0 to 95%RH (Non condensation)
Housing Material		PC (Fire rating: UL94-V0)
Electromagnetic Compatibility (Applications)		EN IEC 61326-1:2021: For use in residential, commercial and light-industrial environments.
Certification		EN IEC 61326-1:2021

Order information and Technical Specification

SKU	RH Output	RH accuracy	Temp. Output	Temp. sensor element type	Temp. Accuracy*
HST-EB	N/A	--	Resistance Value	20K NTC	0.3K @ 25°C
HST-EM-E	N/A	--	4-20mA	Digital	0.3K @ 25°C
HST-EM-P	N/A	--	4-20mA	PT1000	0.3K @ 25°C
HST-EV-E	N/A	--	0-10V	Digital	0.3K @ 25°C
HST-EV-P	N/A	--	0-10V	PT1000	0.3K @ 25°C
HSH-EM2M-P	4-20mA	2%	4-20mA	PT1000	0.3K @ 25°C
HSH-EM2M-E	4-20mA	2%	4-20mA	Digital**	0.3K @ 25°C
HSH-EM3B	4-20mA	3%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EM3M-E	4-20mA	3%	4-20mA	Digital	0.3K @ 25°C
HSH-EV2V-P	0-10V	2%	0-10V	PT1000	0.3K @ 25°C
HSH-EV3B	0-10V	3%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EV3V-E	0-10V	3%	0-10V	Digital	0.3K @ 25°C
HSH-EV5V-E	0-10V	5%	0-10V	Digital	0.3K @ 25°C

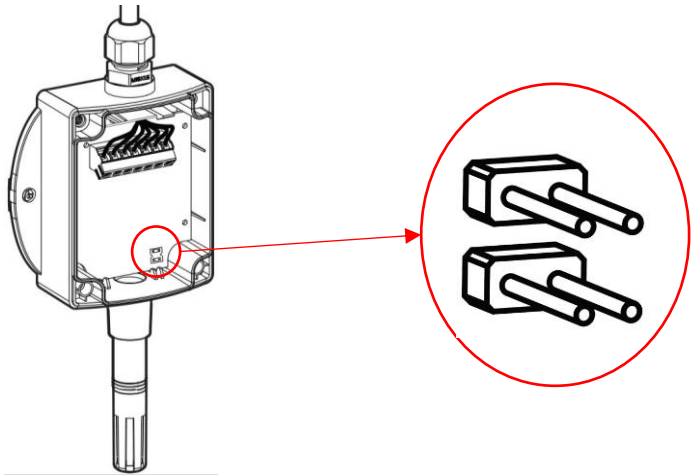
* 1. For the passive output type sensors, the temperature accuracy is the sensing element temperature accuracy. For the current and voltage signal output type sensors, the temperature accuracy is the transmitter accuracy when the power supply is 24VDC.

* 2. The temperature accuracy in the table above is the accuracy of the specified temperature point.

** Temperature sensor element type is **Digital** refers to the sensor type is PN junction type digital temperature sensing element, **Digital** is for short.

Temperature range setting and Wiring diagrams

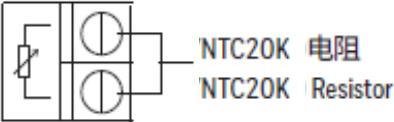
1. Measure Temperature range setting (only for 0-10V and 4-20mA output)



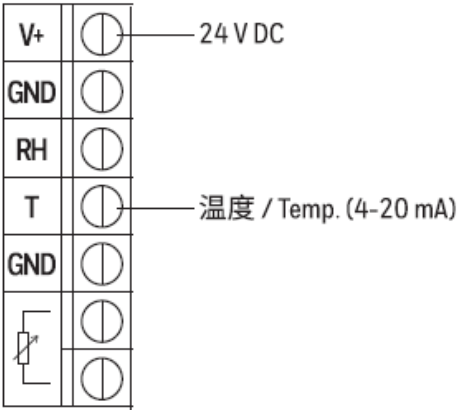
Jumper	Temp. Range
	-40°C to 60 °C (default)
	-20°C to 50 °C
	0°C to 50 °C

2. Wiring Diagrams: Wiring according to the wiring diagram corresponding to the model.

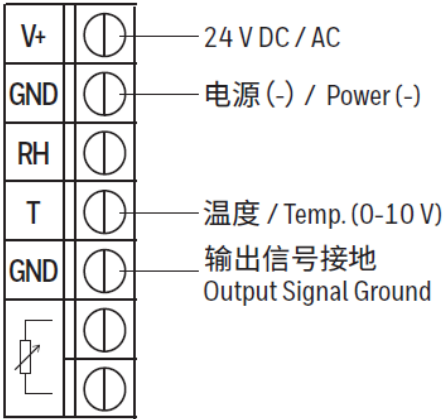
SKU
HST-EB



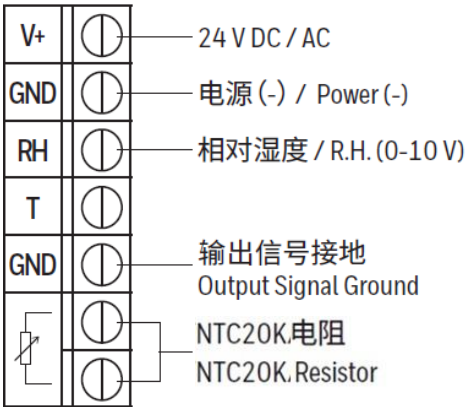
SKU
HST-EM-P
HST-EM-E



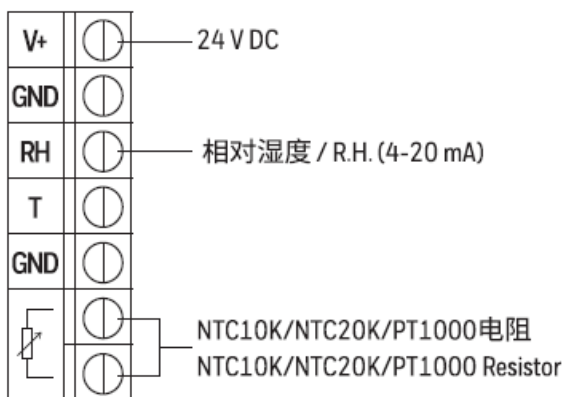
SKU
HST-EV-P
HST-EV-E



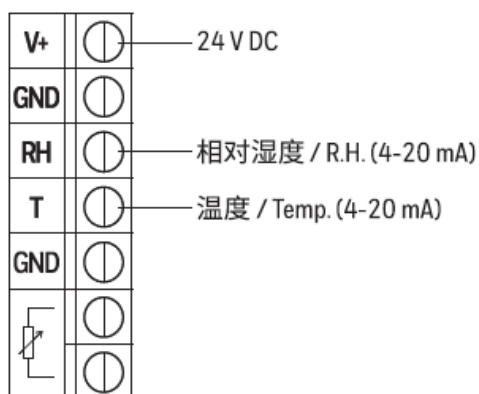
SKU
HSH-EV3B



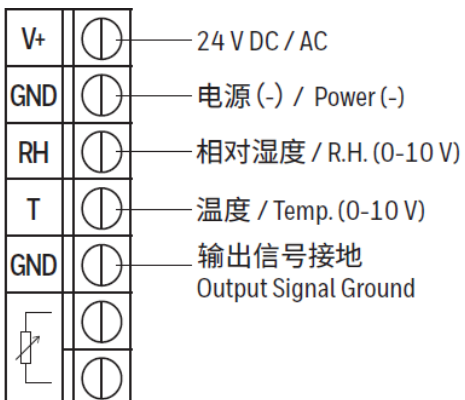
SKU
HSH-EM3B



SKU
HSH-EM2M-X
HSH-EM3M-X



SKU
HSH-EV2V-X
HSH-EV3V-X
HSH-EV5V-X

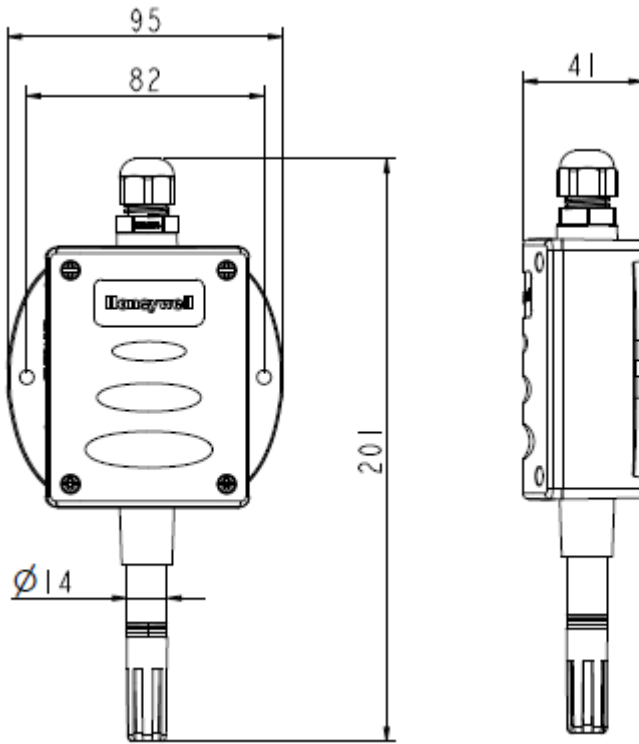


Tips:

1. Connection terminals are suitable for AWG15 to AWG22.
2. Due to the influence of wire resistance, the length of the cable between the sensor and the controller will cause the temperature drift. The details are as follows.

Wire gauge	permissible cable length	PT1000 Temp. drift every 10 meters cable	NTC10K / NTC20K Temperature shift
AWG 22	50m	0.272K	Negligible
AWG 20	150m	0.173K	
AWG 18	150m	0.109K	
AWG 17	150m	0.086K	
AWG 16	300m	0.069K	
AWG 15	300m	0.054K	

Dimension



Unit: mm

Installation and Application Instructions

1. The seal between the bottom box and the cover cannot be removed, the screws need to be installed in place after wiring, and the outlet position needs to be sealed, otherwise the IP65 protection level will no longer be guaranteed.
2. The sensing element in the probe is highly sensitive to impact, and any such impact should be avoided during installation.
3. The humidity sensor is a very sensitive measuring device, and it is very important to choose the correct installation location and environment. It should be avoided that the sensor is installed in an environment containing volatile chemicals, strong acids, strong alkalis, detergents, etc. Certain chemicals substances and substance groups can cause contamination to the sensor, resulting in accuracy deviation, measurement value offset or permanent damage. Special attention should be paid to the following substances, but not limited to the following substances:
 - Volatile (polar) molecules, such as methanol, ethanol, acetone, isopropanol, etc.;
 - Glues, adhesives, plasticizers and other materials that may release volatile molecules

