

HSH-E SERIES OUTSIDE TEMP. & RELATIVE HUMIDITY SENSORS

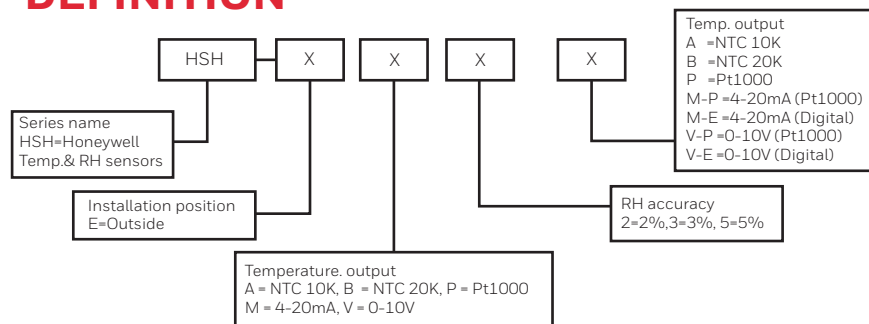
Honeywell HSH-E series Outside temperature & relative humidity sensors are applied to measure the outside air temperature and relative humidity. The HSH-E series outside temperature & relative humidity sensors have a variety of control signal outputs and can be compatible with a variety of automatic control systems.

Basic Parameter

Measuring Temp. Range		-40 ~ 60 °C
Working Environment		-40 ~ 60 °C 0~95%RH (Non condensation)
Humidity Accuracy @ 25 °C and 24VDC	2%	20~80%: ±2%; 0-95%: ±3%
	3%	20~80%: ±3%; 0-95%: ±5%
	5%	20~80%: ±3%; 0-95%: ±9%
Power Supply	0-10V	24 VDC/24VAC±20%
	4-20mA	24 VDC±20%
IP Rated		IP65
Wire conduct Diameter		0.33~1.65mm ²
Storage Temp.		-40 ~ 70 °C
Housing Material		PC (Fire rating UL94 V0)
Housing Material		EN IEC 61000-6-3:2021, EN IEC 61000-6-2:2019 EN IEC 60730-1:2016+A1, EN IEC 60730-2 9:2019+A1



DEFINITION



Honeywell

ORDER INFORMATION AND TECHNICAL SPECIFICATION

SKU	RH Output	RH accuracy	Temp. Output	Temp. sensor element type	Temp. Accuracy*
HSH-EM2A	4~20mA	2%	Resistance Value	10K NTC	0.3K @ 25°C
HSH-EM2B	4~20mA	2%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EM2P	4~20mA	2%	Resistance Value	PT1000	0.2K @ 0°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-EM3A	4~20mA	3%	Resistance Value	10K NTC	0.3K @ 25°C
HSH-EM3B	4~20mA	3%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EM3P	4~20mA	3%	Resistance Value	PT1000	0.2K @ 0°C
HSH-EM3M-P	4~20mA	3%	4~20mA	PT1000	0.3K @ 25°C
HSH-EM3M-E	4~20mA	3%	4~20mA	Digital	0.3K @ 25°C
HSH-EM5A	4~20mA	5%	Resistance Value	10K NTC	0.3K @ 25°C
HSH-EM5B	4~20mA	5%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EM5P	4~20mA	5%	Resistance Value	PT1000	0.2K @ 0°C
HSH-EM5M-P	4~20mA	5%	4~20mA	PT1000	0.3K @ 25°C
HSH-EM5M-E	4~20mA	5%	4~20mA	Digital	0.3K @ 25°C
HSH-EV2A	0~10V	2%	Resistance Value	10K NTC	0.3K @ 25°C
HSH-EV2B	0~10V	2%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EV2P	0~10V	2%	Resistance Value	PT1000	0.2K @ 0°C
HSH-EV2V-P	0~10V	2%	0-10V	PT1000	0.3K @ 25°C
HSH-EV2V-E	0~10V	2%	0-10V	Digital	0.3K @ 25°C
HSH-EV3A	0~10V	3%	Resistance Value	10K NTC	0.3K @ 25°C
HSH-EV3B	0~10V	3%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EV3P	0~10V	3%	Resistance Value	PT1000	0.3K @ 25°C
HSH-EV3V-P	0~10V	3%	0-10V	PT1000	0.3K @ 25°C
HSH-EV3V-E	0~10V	3%	0-10V	Digital	0.3K @ 25°C
HSH-EV5A	0~10V	5%	Resistance Value	10K NTC	0.3K @ 25°C
HSH-EV5B	0~10V	5%	Resistance Value	20K NTC	0.3K @ 25°C
HSH-EV5P	0~10V	5%	Resistance Value	PT1000	0.2K @ 0°C
HSH-EV5V-P	0~10V	5%	0-10V	PT1000	0.3K @ 25°C
HSH-EV5V-E	0~10V	5%	0-10V	Digital	0.3K @ 25°C

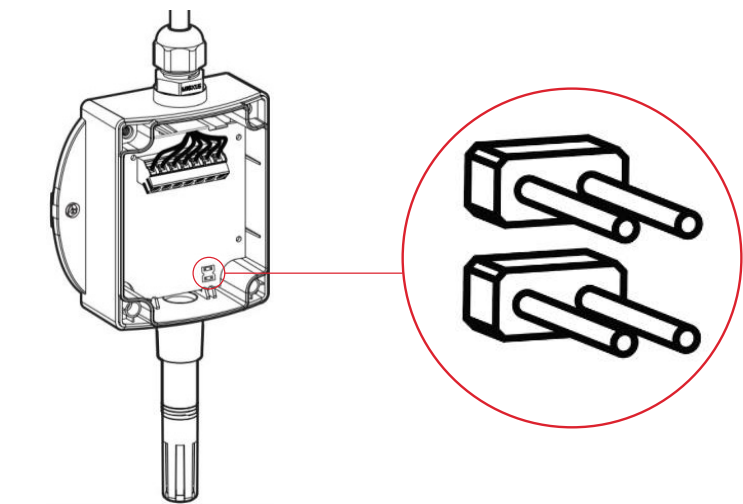
* 1. For the passive output type sensors, the temperature accuracy is the sensing element temperature accuracy. For the current and voltage signal output type sensors, the temperature accuracy is the transmitter accuracy when the power supply is 24VDC.

* 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

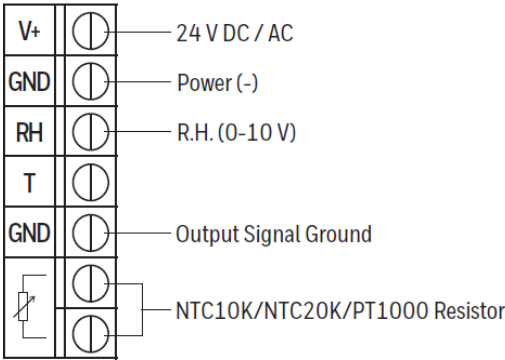
1. Measure Temperature range setting (only for 0-10V and 4-20mA output)



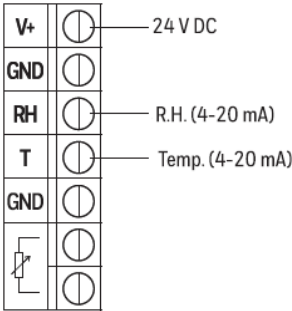
Jumper	Temp. Range
	-40 ~ 60 °C (default)
	-20°C ~ 50°C
	0°C ~ 50°C

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

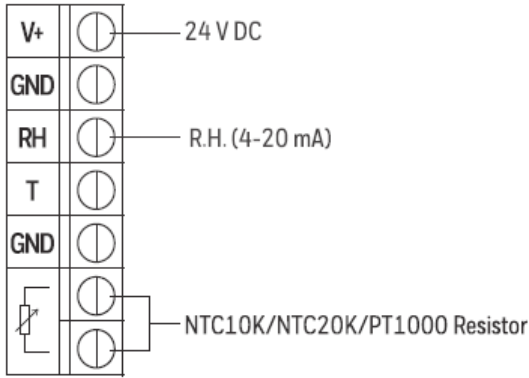
SKU
HSH-EV2A
HSH-EV2B
HSH-EV2P
HSH-EV3A
HSH-EV3B
HSH-EV3P
HSH-EV5A
HSH-EV5B
HSH-EV5P



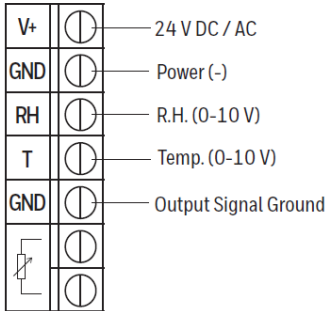
SKU
HSH-EM2M-X
HSH-EM3M-X
HSH-EM5M-X



SKU
HSH-EM2A
HSH-EM2B
HSH-EM2P
HSH-EM3A
HSH-EM3B
HSH-EM3P
HSH-EM5A
HSH-EM5B
HSH-EM5P



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

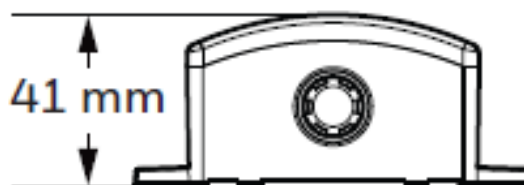
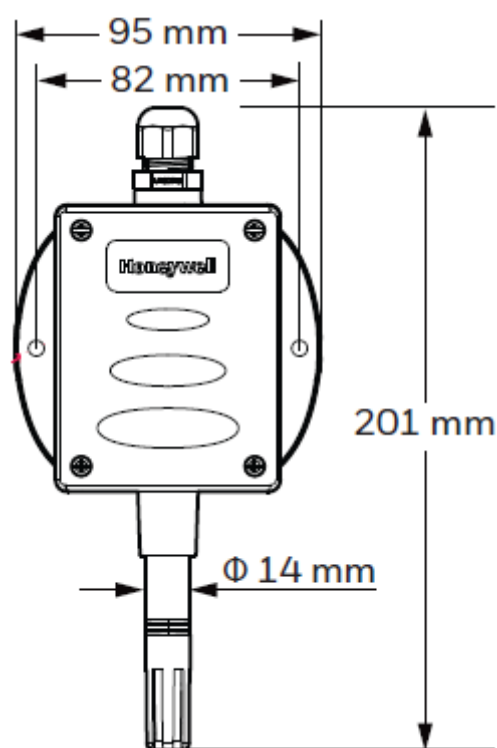


Tips:

1. Connection terminals are suitable for AWG15~22.
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	

DEFINITION



For more information,
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