

KHT Duct/Wall Type T&H Transmitter Manual

KHT-D/W series temperature and humidity transmitter adopts advanced imported macromolecule handicap as humidity measuring component and Pt resistance as temperature sensitive competent. Matching precise operational amplifier of the meter, with professional V/I chip etc signals to deal the loop, the transmitter can change environmental air temperature and humidity to standard analog signals. The transmitter is with features: small size, lightness, high-precision measurement, prompt response rate and long time stability. The transmitter can be used widely for all kinds of areas measuring and controlling the environmental air temperature and humidity.

1. Order Code

Function	Order Code	Description
Item no.	KHT	Temperature and humidity transmitter as a unit
	KH	Temperature transmitter
	KT	Humidity transmitter
Mounting mode	-W	Wall type
	-D	Duct type
Output signal	-I	4-20mA analog output
	-V	0-5VDC analog output
	-S	0-10VDC analog output
Process temperature range	B	-20 to 80deg C

2. Parameter Specification

- Power supply: 12VDC-24VDC
- Protection class: IP65
- Process Temperature: -20C ~ 80°C Process Humidity: 0%-100RH%
- Storage condition: Temperature: -10 ~ 60°C Humidity: below 90%RH
- Humidity accuracy: ±2%RH (When 25°C , within 40~80%RH range)
 ±3%RH (10%-40% , 80-100%RH)
 Humidity sensor:CHR-01
- Humidity Output Signal Output: 0~5V (0-10V can be optional) ,4-20mA
 (Humidity range:0 ~100%RH)

Humidity (%RH)	20	30	40	50	60	70	80	90
Voltage output (V)	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5
Current output (mA)	7.2	8.8	10.4	12	13.6	15	16.6	18

- Temperature accuracy: $\pm 0.3^{\circ}\text{C}$
Temperature Sensitive Component: Pt resistance “HONEYWELL” PT1000 B class
- Temperature Signal output: 0~5V (0-10V can be optional), 4-20Ma

e.g. KHT-D-B

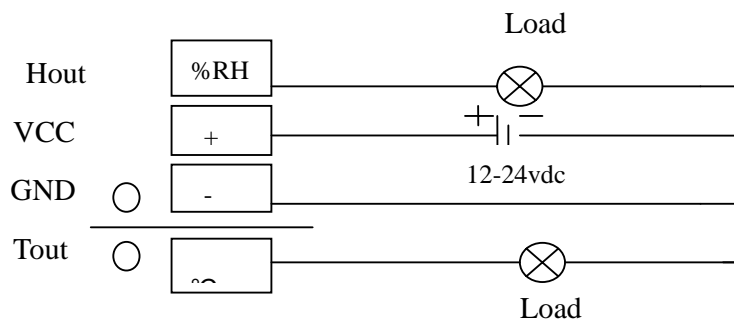
Temperature ($^{\circ}\text{C}$)	-20	-10	0	10	20	30	40	50	60	70	80
Voltage output(V)	0	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Current output (mA)	4	5.6	7.2	8.8	10.4	12	13.6	15.2	16.8	18.4	20

3. Standard testing condition and testing way for reference:

GB/T15768-95: General rules for capacity type humicap component and humidity sensor
 SJ/T10431-93: Humicap component adopts humidity generator and humidity testing way.
 SJ20760-99: General rules for macromolecule humidity sensor

4. Connection :

Hout: Humidity signal output: +; Tout: Temperature signal output: +
 VCC: 12-24VDC power: + ; GND: 12-24VDC power: -



E.g . It is assumed it is temperature and humidity transmitter, 4-20mA output, connection as follows:

Temperature output connection:

Tout	pin “+” of 4-20mA input of load or device
VCC	Pin “+” of 12 or 24VDC power supply
GND	Pin “-” of 12 or 24VDC power supply

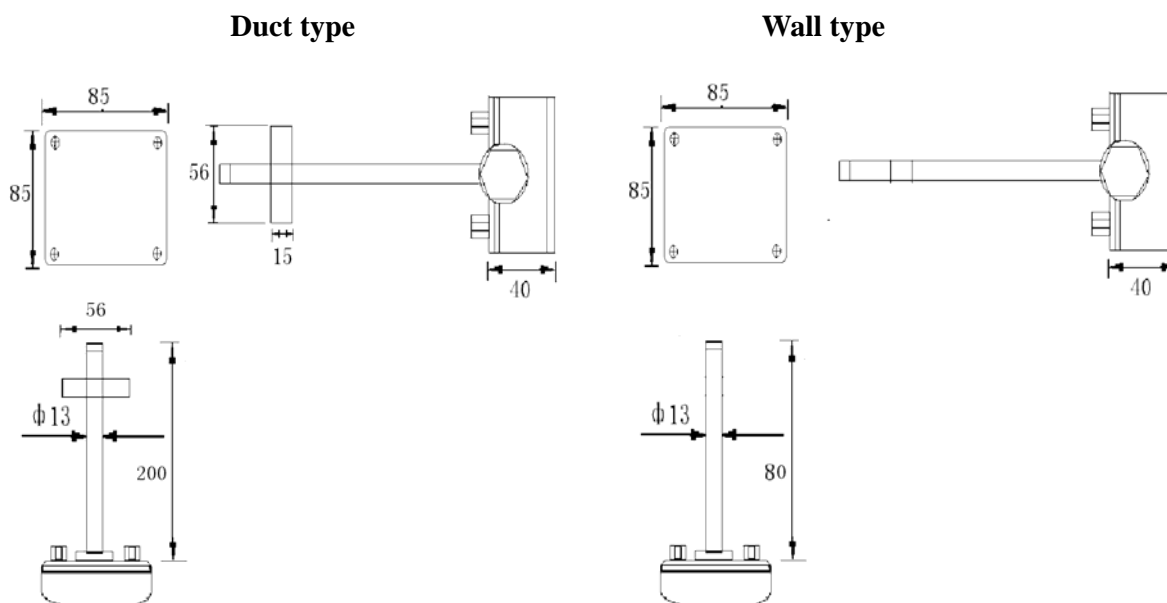
pin “-” of 4-20mA input of load or device	Pin “-” of 12 or 24VDC power supply
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Humidity output connection:

Hout	pin “+” of 4-20mA input of load or device
VCC	Pin “+” of 12 or 24VDC power supply
GND	Pin “-” of 12 or 24VDC power supply
GND	Input pin “-” of 4-20mA input of load or device

pin “-” of 4-20mA input of load or device	Pin “-” of 12 or 24VDC power supply
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5. Size (Unit : mm)



6. Installation:

6.1 Duct type mounting

a. Flange connection: Please insert the probe of sensor into the pipe. Then fix the flange with 4 pcs of M4 screw. After open the housing, please connect the wire with terminal through the water-proof connector. After confirming the connection correct, close the housing and tighten the water-proof connector.

b. Without flange connection: Please put the transmitter probe into the pipe and open the housing. Then please fix the transmitter by screw through the four holes in button of the housing. Please connect the wire with terminal through the water-proof connector. After confirming the connection correct, close the housing and tighten the water-proof connector.

6.2. Wall-hanging mounted:

After opening the housing, please fix the transmitter with M5 screw through the four holes in button of the housing. Please connect the wire with terminal through the water-proof connector. After confirming the connection correct, close the housing and tighten the water-proof connector.

7. Notices

- 1) The transmitter should not be used in condensation, organic solvent and corrosive environment
- 2) Should not keep the transmitter in dry environment for long time.
- 3) Please put the sensor in normal environment for one hours and then measure in order to avoid measuring mistake lead by temperature difference.
- 4) All potentiometers are calibrated and sealed when ex-work. Please contact our technical's if adjustments. And under our technical's guide to make adjustment. Otherwise Kehao will be not responsible for the destroy.