kahan controls
HVAC - R Controls & Technologies

Combined Temperature and Humidity Transmitter



FEATURES

- Humidity accuracy up to ±2%RH
- Imported high precision digital core, strong anti-interference ability
- Passive temperature output optional
- CE certification, IP65, ROHS

DESCRIPTION

Combined Temperature and RH Transmitter sensitive components use imported high-precision digital core, and the integrated structure ensures the overall anti-interference ability. At the same time, the factory adopts mature humidity and temperature measurement technology to calibrate it before leaving the factory, ensuring that the accuracy of each product is suitable for application in high-standard intelligent buildings, incubation rooms, industrial dehumidifiers and other fields.

SPECIFICATION

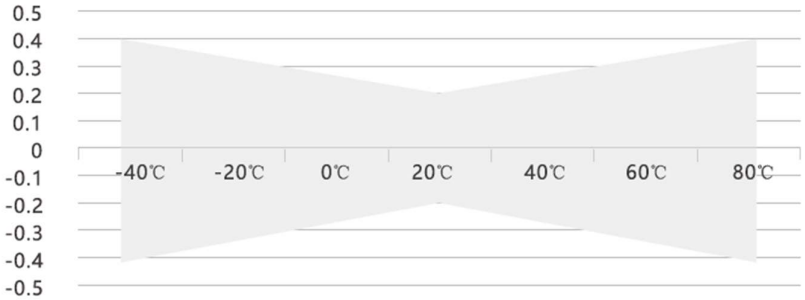
1. Relative humidity

Sensor	High-precision digital core
Range	0%~100%RH
Output	RS485/Modbus, 0~10VDC, 4~20mA option
Accuracy	±2%@ 20℃ & 20~80%RH
Response time	≤10s (20℃, slow air flow)

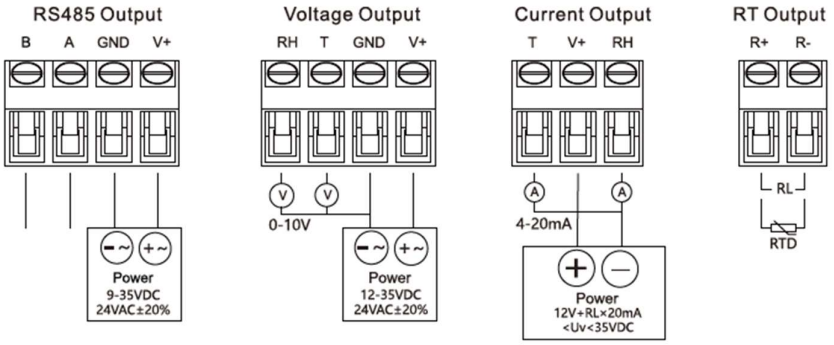
2. Temperature

Sensor	High-precision digital core or passive thermal resistance, see Order Ref. No
Measurement range	0~50℃, -20~60℃ etc
Output	4~20mA, 0~10VDC, RS485/Modbus optional
Thermal resistance	See order Ref no. and Thermal Resistance Indexing Table
Accuracy	±0.2℃ @20℃; Passivity RTD: typical: ±0.2~0.4℃@25℃, see order Ref No.
Power supply	RS485 type 9~35VDC/24VAC±20% Voltage type: 12~35VDC/24VDC±20% Current type 12V+RL*20mA<UV<35VDC
Output load	≤500Ω (Current type), ≥10KΩ (Voltage type)
Display	Optional LCD display with unit display and backlight (4~20mA without backlight)
Case Material	PC shell, PA6 probe rod and polymer filter
Working environment	-20~60℃,5%-95% RH (Non-condensing)
Protection Grade	IP65

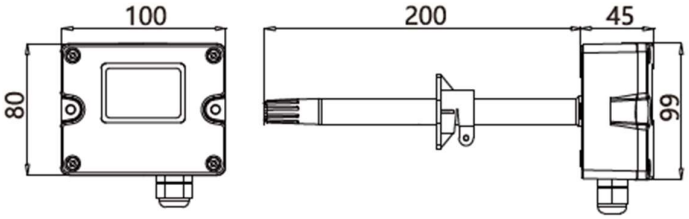
DIGITAL SENSOR TEMPEATURE ACCURACY CURVE



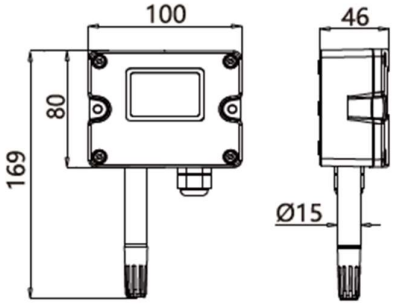
WIRING INSTRUCTION



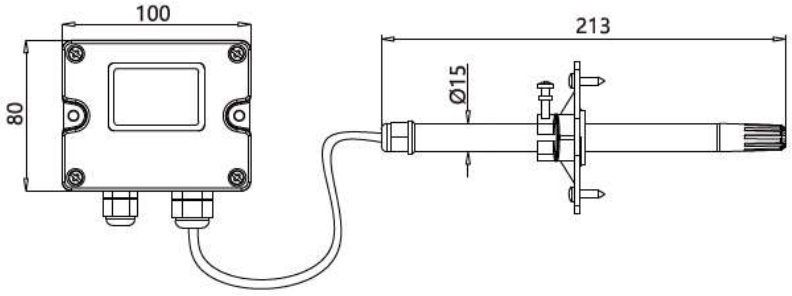
SIZE (mm)



KC-DTH2 Duct type Dimension

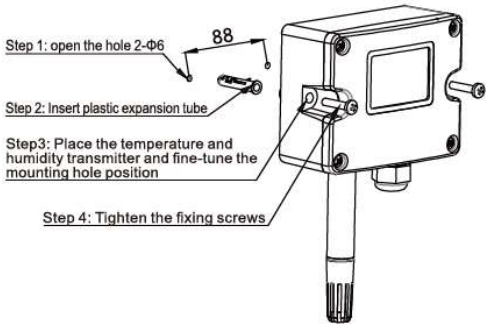


KC-WTH2 Wall Mounted type Dimension

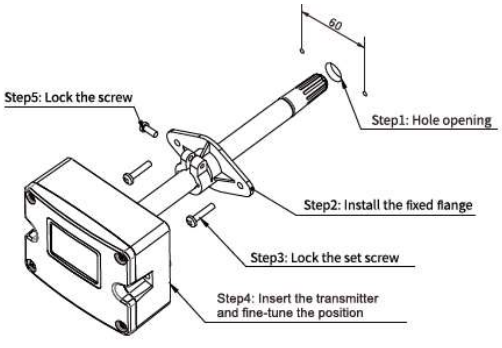


KC-STH2 Split type Dimension

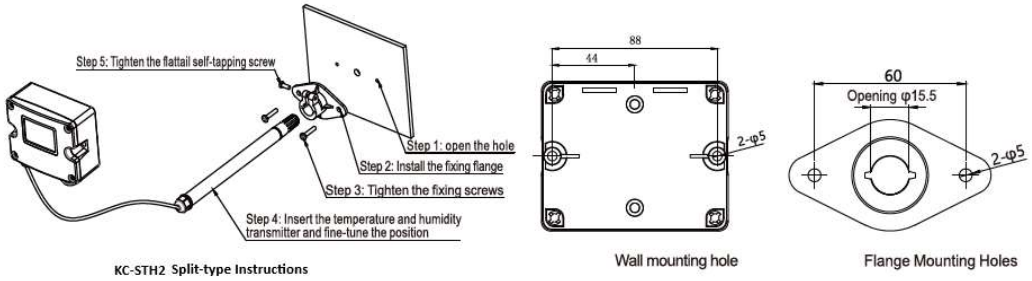
PRODUCT INSTALLTION



KC-WTH2 Wall-mounted Instruction



KC-DTH2 Duct-type Instruction



KC-STH2 Split-type Instructions

Wall mounting hole

Flange Mounting Holes

1. KC-DTH2 is recommended to be installed with flange accessories and the insertion depth can be adjusted. Use two screws to fix the mounting flange on the air duct, and the screws on the flange can lock the inserted probe. The opening of the air duct is ∅15.5mm. After the probe is installed, the air duct should be sealed to avoid air leakage.
2. KC-WTH2/KC-STH2 should be installed vertically when hanging on the wall and pay attention to the probe facing down. If necessary, install a sun visor or rain cover. Drill 2 fixing holes on the installation plane according to the opening size of the installation diagram (see the picture above), and fix the bottom box with 2 screws. KC-STH2 probe tube installation description is the same as KC-DTH2 using flange installation.
3. Open the upper cover, connect the power line and signal line into the bottom box through the waterproof connector, complete the wiring according to the wiring diagram, and install the upper cover back to its original state. Pay attention to the sealing between the waterproof joint and the bottom box (with a sealing ring), and the sealing between the upper cover and the bottom box (with a sealing ring), so that the overall protection level can reach IP65.

ORDER REF NO.

Code and description						Remark
KC-WTH2	Wall-mounted Temperature and Humidity transmitter					Main Model
KC-DTH2	Duct-type Temperature and Humidity transmitter					
KC-STH2	Split-type Temperature and Humidity transmitter					
	V	0~10VDC (3-wired)				Humidity Output
	C	4~20mA(2-wired)				
	R	RS485/Modbus				
		V	0~10VDC (3-wired)	P	PT1000, ±0.2℃@0℃	Temperature Output
		C	4~20mA(2-wired)	N	NTC10K, ±0.4℃@25℃	
		R	RS485/Modbus			
			0	None		Display Mode
			1	LCD display		
KC-WTH2	V	V	0			Model Selection Example

1. Only when the temperature output option is V or C, you need to select the temperature range 1-8; otherwise, you can only choose 0.
2. Model example KC-WTH2-VV-0 represents the wall-mounted type, humidity output 4~20mA, temperature output 4~20mA without display.
3. Prolonged exposure of the product's sensor probe to high concentrations of chemical gases may cause sensor readinas to shift.

DIP SWITCH DESCRIPTION

485 type: the first 6 digits of the 8-digit code are the address, the address can be set to 1-63, the factory default is set to 1, the 7/8 digits are the baud rate, which can be set to 1-3, respectively representing 1:9600 2:19200 3 : 38400 The setting method is as follows: (ON represents 1, OFF represents 0, and numbers 1~8 on the dial panel represent low to high).



Example:
The address is:1*2^0+1*2^1+0*2^2+.....=3 and the baud rate is 1.

Voltage or current type: 8-digit dial code can select the temperature range, each dial code represents a temperature range, 1: 0~50˚C,2: 0~60˚C,3: 0~80˚C, 4:0~100 °C, 5: -20~60˚C, 6: -20~80˚C, 7: -40~60˚C, 8: -40~80˚C, for example, At this point, the temperature range is 0~50˚C.



Example:
At this point, the temperature range is 0~50˚C.

Note: After all the dial codes are changed, the power must be re-powered to make the changes effective. When the address or baud rate dial code is 0, the 485 type can be changed by software. The voltage or current type dial codes are all OFF or more than two dia codes are When ON, the temperature range is the default range.