LEFOO

LFH10 Temperature and Humidity Transmitter

FEATURES

- High-precision sensor, long-term stability and anti-interference ability;
- A variety of installation methods and output methods are optional;
- Compact shell design, LCD backlight display, easy to use;
- Power supply and output have overvoltage and reverse connection protection, high protection level IP65;
- Multiple temperature ranges optional.

DESCRIPTION

LFH10 Temperature and Humidity Transmitter is specially designed for industrial applications.There are three installation methods: wall-mount, duct type, and split type. Three output models of current, voltage, and Rs485 are optional, with flexiable site installation adaptability. The terminal design is suitable for quick installation. It can be widely used in data room, HVAC, buildings, warehouses and other places need to measure temperature and humidity.

SPECIFICATION

1)Relative humidity

Sensor	Digital type
Measuring Range	0%~100%RH
Output	RS485/Modbus, 0~10VDC, 4~20mA optional
Accuracy	±3%@ 20℃ & 20~80%RH
Response time	≤10s (20℃，slow flow air)

2)Temperature

Transducer	Digital type or thermal resistance, see Order Ref No.	
Measuring 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	Digital type: ±0.3℃@0~60℃ Thermal resistance:typical±0.2~0.4℃@25℃,see Order Ref No.	
Power Supply	Voltage type/485 type: 15~35VDC/24VAC±20% (AC power supply needs to be isolated power supply)	Current type 19.5~35VDC （RL=500Ω)/9.5~35VDC(RL=0Ω)
Output Load	≤500Ω(Current type)，≥2KΩ(Voltage type)	
Display	LCD display optional, with unit display and backlight (4~20mA without backlight)	
Shell Material	ABS housing, PC probe and polymer filter (stainless steel probe and sintered/stainless steel wire mesh filter optional	
Working Environment	-20~60℃,5%-95%RH(Non-condensing)	
Protection Grade	IP65	

TEMPERATURE ACCURACY CURVE
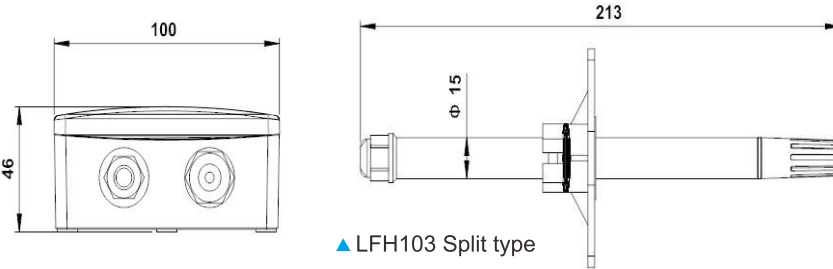

Temperature & accuracy curve
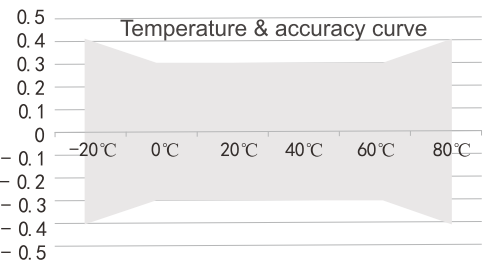
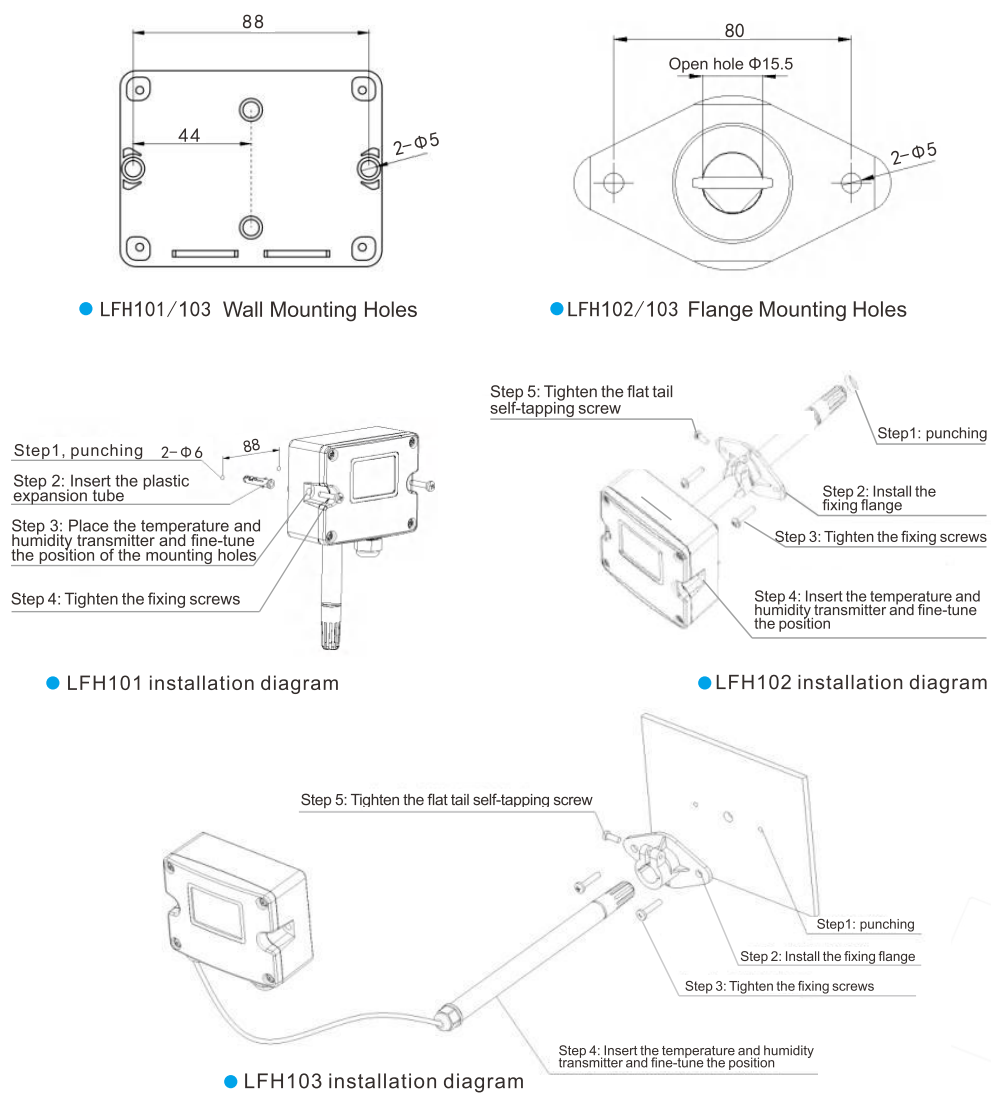## DIMENSION (mm)
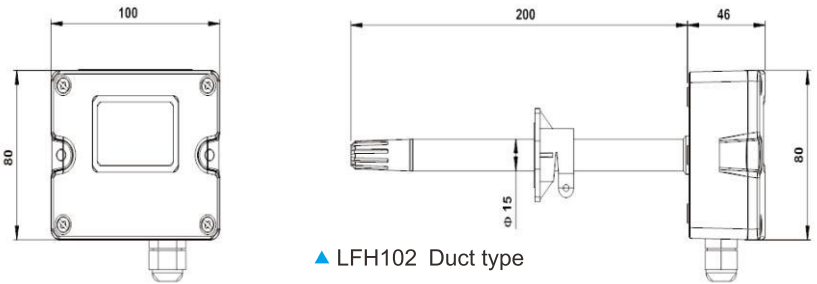
▲ LFH102 Duct type

LFH101 Wall-mounted type ▶
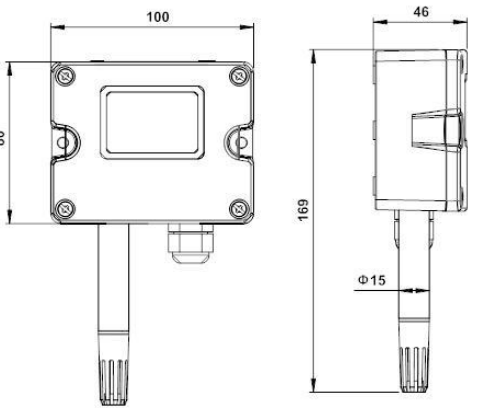
▲ LFH103 Split type

WIRING INSTRUCTIONS

RS485 output	Voltage output	Current output	RT output
B A GND V+ PGND	T RH GND V+ PGND	T V+ RH	R+ R−

RS485 output:
power supply
15~35VDC
24VAC±20%

Voltage output:
0-10VDC
power supply
15~35VDC
24VAC±20%

Current output:
4-20mA
Power supply
18.5~35VDC RL=500Ω
9.5~35VDC RL=0Ω

RT output:
RT
RTD

PRODUCT INSTALLATION

88
44
2−Φ5

● LFH101/103 Wall Mounting Holes

80
Open hole Φ15.5
2−Φ5

● LFH102/103 Flange Mounting Holes

Step1, punching 2−Φ6
88
Step 2: Insert the plastic expansion tube
Step 3: Place the temperature and humidity transmitter and fine-tune the position of the mounting holes
Step 4: Tighten the fixing screws

● LFH101 installation diagram

Step 5: Tighten the flat tail self-tapping screw
Step1: punching
Step 2: Install the fixing flange
Step 3: Tighten the fixing screws
Step 4: Insert the temperature and humidity transmitter and fine-tune the position

● LFH102 installation diagram

Step 5: Tighten the flat tail self-tapping screw
Step1: punching
Step 2: Install the fixing flange
Step 3: Tighten the fixing screws
Step 4: Insert the temperature and humidity transmitter and fine-tune the position

● LFH103 installation diagram

1. LFH102 is recommended to be installed with flange accessories, and the insertion depth can be adjusted. Fix the mounting flange on the air duct with two screws, the screws on the flange can lock the inserted probe. The opening of the air duct is Φ 15.1mm. After the probe is installed, the air duct should be sealed to avoid air leakage.

2. LFH101/103 should be vertical when wall-mounted, and pay attention to the probe facing down. The installation location should be far away from the factors that affect the measurement, such as cold and heat sources, etc., and should avoid direct sunlight or rain, and if necessary, install a sunshade or rain cover. On the installation plane, open 2 fixing holes according to the opening size of the installation drawing (see the above picture), and then use 2 screws to fix the bottom box. The LFH103 probe tube mounting description is the same as the LFH102 using flange mounting.

3. Open the top cover, connect the power cord and signal line to the bottom box through the waterproof connector, complete the wiring according to the wiring diagram, and install the top cover back to its original state. Pay attention to the sealing between the waterproof connector 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
LFH101-	Wall-mounted temperature and humidity transmitter					
LFH102-	Duct type temperature and humidity transmitter					Model
LFH103-	Split type temperature and humidity transmitter					
	3	±3%RH(0.3°C)				Accuracy range
		V10	0~10VDC(3-wire)			
		A4	4~20mA(2-wire)			Humidity output
		RS	RS485/Modbus			
			V10	0~10VDC(3-wire)	0	PT1000,±0.2°C@0°C
			A4	4~20mA(2-wire)	1	Pt100,±0.2°C@0°C
			RS	RS485/Modbus	2	NTC20K,±0.4°C@25°C	Temperature output
					6	NTC10K,±0.4°C@25°C
				0	NO	
				1	0~50°C	
				2	-20~60°C	Temperature range
				8	Others (customer specified)	
					0	NO	Display mode
					1	LCD display
LFH101-	3	A4	A4	1	1	Selection Example

NOTE:

1. Only when the temperature output option is V10 or A4, the corresponding temperature range 1-8 needs to be selected; otherwise, only 0 can be selected.

2. Long time exposure of the Transmitter probe to high concentrations of chemical gases may cause the Transmitter reading to shift.

3. The example LFH101-3A4A411 represents wall-mounted type, temperature and humidity accuracy ±3%RH (±0.3°C), humidity output 4~20mA, temperature output 4~20mA, and the temperature range 0~50°C with display.