LEFOO

LFH10
TEMPERATURE AND HUMIDITY TRANSMITTER

[Product Operation Manual]

OVERVIEW AND PARAMETERS

FEATURES

- New industrial appearance quick installation design, suitable for rapid installation and deployment
- Imported sensors, high precision, fast response, good long-term stability
- Large LCD backlight, dual display of temperature and humidity, multiple installation and output modes are optional
- Excellent anti-interference ability and protection function, CE certification IP65, ROHS

OVERVIEW

Temperature and humidity transmitter is the most commonly used sensor in production and life. It is widely used in meteorology, national defense, scientific research, post and telecommunications, chemical industry, environmental protection, medicine, hotels, food and other materials storage, HVAC, etc field where air temperature and humidity need be controlled.
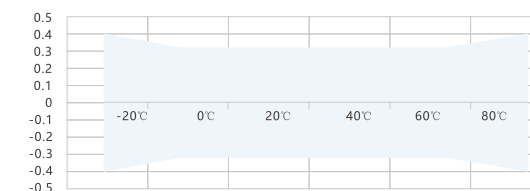
PARAMETERS

1/Relative humidity

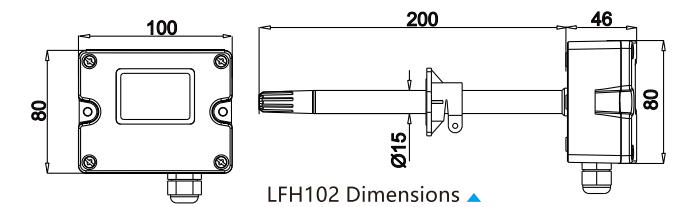| Sensor	Digital
Range	0%~100%
Output	RS485/Modbus,0~10VDC,4~20mA optional
Accuracy	±3%@ 20℃ & 20~80%RH
Response time	≤10s(20℃,slow flow air)

2/Temperature

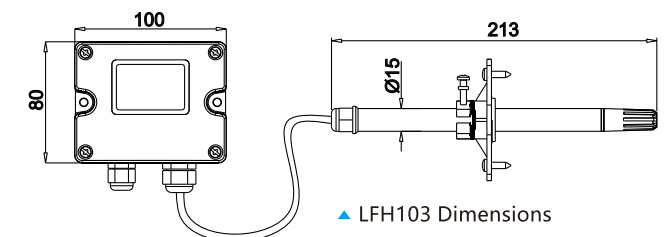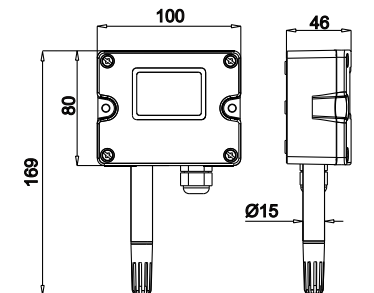|	
Sensor	Digital or thermal resistance, see model selection table
Range	0~50℃, -20~60℃ etc.
Output	4~20mA,0~10VDC, RS485/Modbus Optional
Thermal resistance	See selection table and thermal resistance indexing table
Accuracy	Digital sensor:±0.3℃@(0~60℃) see table below.Thermal resistance: typical ±0.2~0.4℃@25℃, see selection table
Power supply	• Voltage type/RS-485 15~35VDC/24VAC±20% (AC power supply needs to be connected to an isolation transformer) • Current type:18.5~35VDC (RL=500Ω)/8.5~35VDC(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	PC shell, PA6 probe rod and polymer filter (optional stainless steel probe and stainless steel sintered filter)
Working environment	-20~60℃, 5%-95%RH(non-condensing)
Protection class	IP65

3/Temperature accuracy curve

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DIMENSION

SIZE（mm）

LFH102 Dimensions ▲

LFH101 Dimensions ▶

▲ LFH103 Dimensions

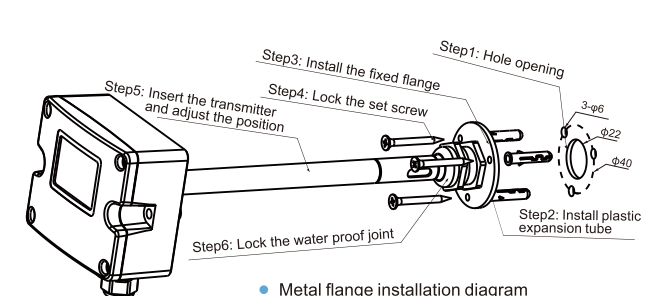03

PRODUCT SELECTION

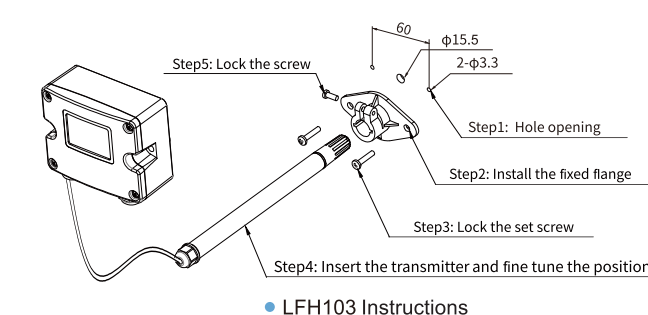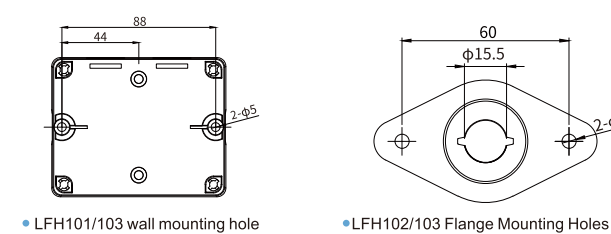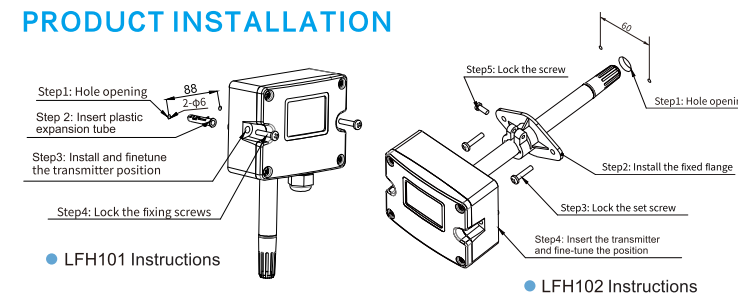### SELECTION

Model	LFH101- LFH102- LFH103-						Wall-mounted temperature & humidity transmitter Duct temperature& humidity transmitter Split temperature& humidity transmitter
Temperature and humidity accuracy		3					±3%RH (0.3℃)
Humidity output			V10 A4 RS					0~10VDC (3 wire) 4~20mA (2 wire) RS485 / Modbus
Temperature output				V10 A4 RS 0 1 2 6			0~10VDC (3 wire) 4~20mA (2 wire) RS485/Modbus PT1000, ±0.2℃@0℃ PT100, ±0.2℃@0℃ NTC20K, ±0.4℃@25℃ NTC10K, ±0.4℃@25℃
Temperature range					0 1 2 8		None 0~50℃ -20~60℃ Other(customized)
Display						0 1	None LCD display

1. The current type of LFH101/102/103 product is powered by the humidity loop, so this loop must be used, otherwise the product cannot work normally.

2. Only when the temperature output option is V10 or A4, you need to select the corresponding temperature range 1 to 8; otherwise, you can only select 0.

3. Take LFH101-3A4A411 for example, it represents the wall-mounted type, the temperature and humidity accuracy is 3%RH (0.3℃), the humidity output is 4~20mA, the temperature output is 4~20mA, and the temperature range is 0~50℃ with display.

4. If the sensor probe of this product is exposed to high-concentration chemical gas for a long time, may cause the transmitter's reading offset.

5. To choose a metal rod temperature and humidity transmitter, you need to clearly write the specifications of the metal rod and the front cover in the remarks.

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INSTALLATION

PRODUCT INSTALLATION

Step1: Hole opening
Step 2: Insert plastic expansion tube
Step3: Install and finetune the transmitter position
Step4: Lock the fixing screws
● LFH101 Instructions

Step5: Lock the screw
Step1: Hole opening
Step2: Install the fixed flange
Step3: Lock the set screw
Step4: Insert the transmitter and fine-tune the position
● LFH102 Instructions

● LFH101/103 wall mounting hole

●LFH102/103 Flange Mounting Holes

Step5: Lock the screw
Step1: Hole opening
Step2: Install the fixed flange
Step3: Lock the set screw
Step4: Insert the transmitter and fine tune the position
● LFH103 Instructions

Step1: Hole opening
Step2: Install plastic expansion tube
Step3: Install the fixed flange
Step4: Lock the set screw
Step5: Insert the transmitter and adjust the position
Step6: Lock the water proof joint
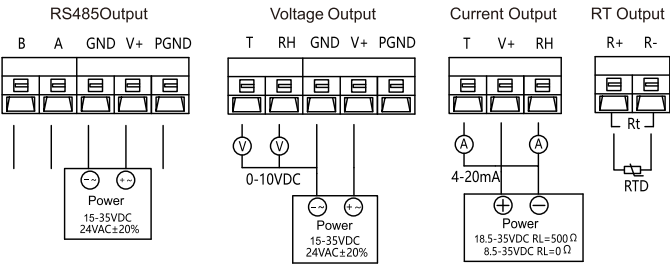● Metal flange installation diagram

Description:

● 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 φ15.5mm. 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 hole size in the installation drawing (see above), and then use 2 screws to fix the bottom box. The LFH103 probe tube installation description is the same as the LFH102 using flanged installation.

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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.

WIRING INSTRUCTION

Note: For the current type output, humidity circuit must be used, other wise the product cannot be used. When the RS485 output type uses AC power, an isolated 24VAC power supply is required.