LEFOO

LFH30
TEMPERATURE AND HUMIDITY TRANSMITTER
Product Operation Manual

### 1/Relative humidity

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

2/Temperature

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Sensor	High-precision digital core or passive thermal resistance, see Order Ref No.
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 sensor: 0.3℃ @5~60℃;Thermal resistance type: typical:±0.2~0.4℃@25℃,see Order Ref No.
Power supply	• RS485 type: 9~35VDC/24VAC±20% Voltage type: 12~35VDC/24VAC±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)
Shell material	PC shell, PC probe and polymer filter
Working environment	-20~60℃, 5%-95%RH(Non-condensing)
Protection class	IP65

3/Temperature accuracy curve

SIZE（mm）

LFH302 Dimensions ▲

LFH303 Dimensions ▲

LFH301 Dimensions ▲

WIRING INSTRUCTION

RS485Output — B A GND V+

Voltage Output — RH T GND V+ — 0-10V — Power 12-35VDC 24VAC±20%

Current Output — T V+ RH — 4-20mA — Power 12V+RL*20mA <Uv<35VDC

RT Output — R+ R- — RL RTD

Power 9-35VDC 24VAC±20%
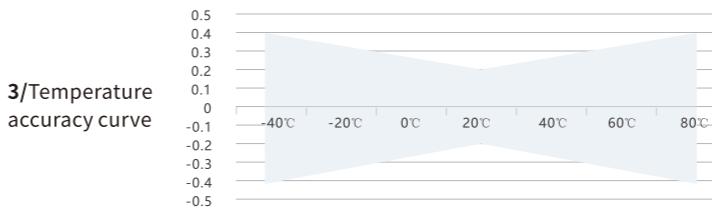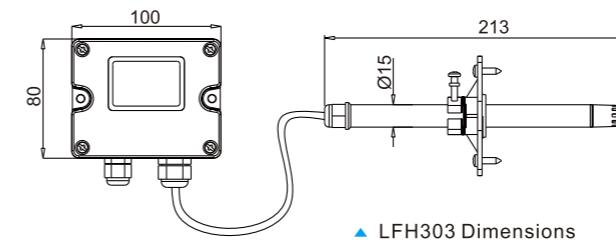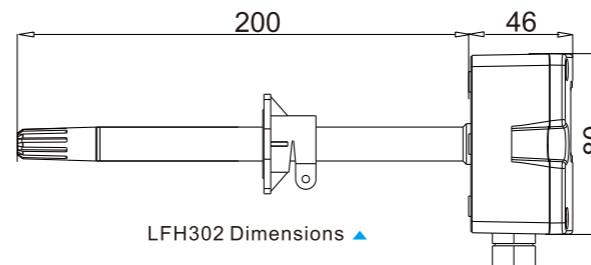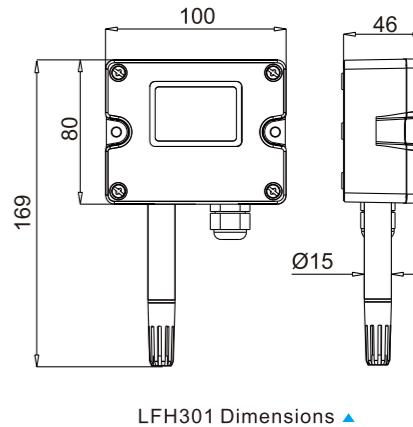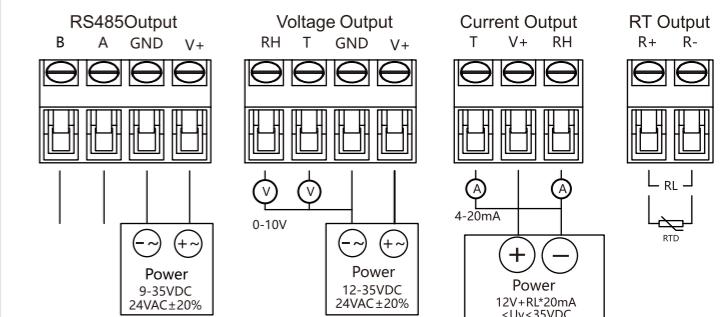
PRODUCT INSTALLATION

• LFH301/303 Wall Mounting Hole

• LFH302/303 Flange Mounting Holes

• LFH301 Instructions

• LFH302 Instructions

• LFH303 Instructions
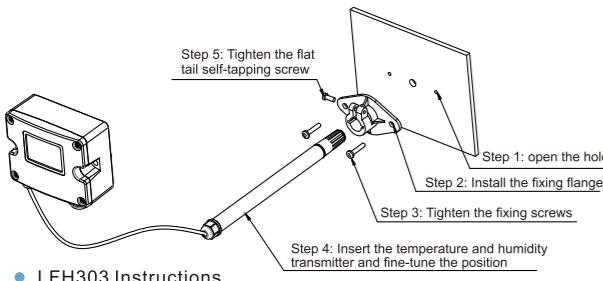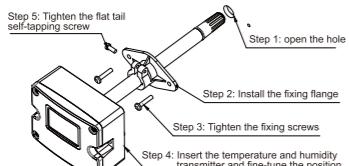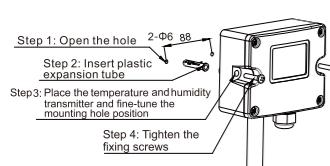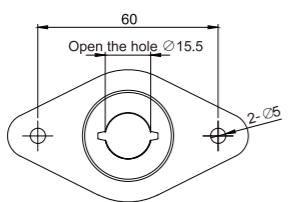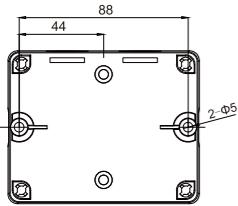
Description:

• 1. LFH302 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 Φ15.1mm. After the probe is installed, the air duct should be sealed to avoid air leakage.

• 2. LFH301/303 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. H303 probe tube installation description is the same as H302 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.

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).
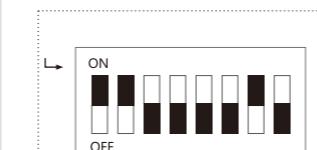
Example: ①
The address is:1*2^0+1*2^1+0*2^2+……=3 and the baud rate is 1.
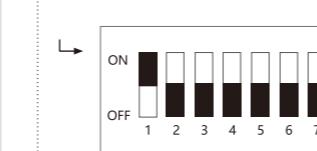
Voltage or current type: 8-digit dial code can select the temperature range each dial code represents a temperature range, 1: 0~50℃, 2: 0~60℃, 3: 0~80℃, 4:0~100 ℃, 5: -20~60℃, 6: -20~80℃, 7: -40~60℃, 8: -40~80℃, for example, At this point, the temperature range is 0~50℃.

Example: ②
At this point, the temperature range is 0~50℃.

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 dial codes are When ON, the temperature range is the default range.

PRECAUTIONS

1. Avoid being close to heat sources, cold sources, or directly in the sun.

2. It should not be used in an environment with oil stains, organic solvents and corrosive gases.

3. When in an environment such as dust, the probe filter membrane must be cleaned regularly.

4. Please store in a dry environment when not in use for a long time.

COMMON PROBLEM HANDLING

Malfunction	Cause Analysis	Method of exclusion
• Transmitter has no output signal	• Transmitter is not powered • There is an error in the output wiring	• Rewire according to the transmitter wiring diagram
• The transmitter output signal does not match the actual temperature	• Not converted according to transmitter temperature range	• Convert to correct transmitter temperature range
• Transmitter output irregular jump	• On-site environmental interference is strong	• Use shielded cables and the cables are well grounded
• Transmitter RS485 signal can not communicate	• Communication is not performed according to the correct communication protocol • Machine number or baud rate setting is incorrect	• Communicate by communication protocol • Use broadcast address to modify parameters