

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 flexible 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

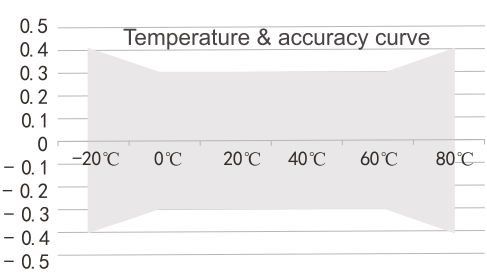
1)Relative humidity

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

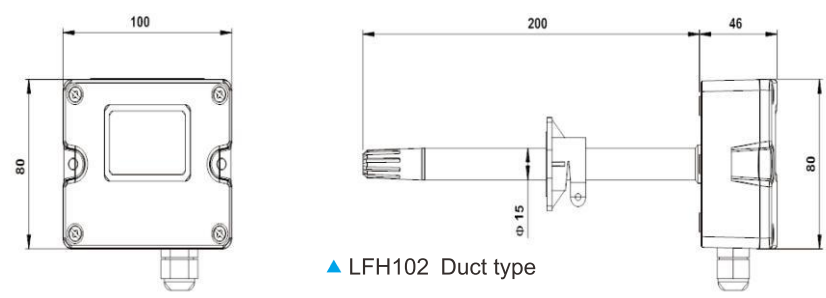
2)Temperature

|                     |                                                                                                                         |                                                       |
|---------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Transducer          | Digital type or thermal resistance, see Order Ref No.                                                                   |                                                       |
| Measuring Range     | 0~50°C, -20~60°C 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°C@0~60°C Thermal resistance: typical ±0.2~0.4°C@25°C, see Order Ref No.                              |                                                       |
| Power Supply        | Voltage type/485 type: 15~35VDC/24VAC±20%<br>(AC power supply needs to be isolated power supply)                        | Current type 19.5~35VDC<br>(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°C, 5%~95%RH(Non-condensing)                                                                                      |                                                       |
| Protection Grade    | IP65                                                                                                                    |                                                       |

TEMPERATURE ACCURACY CURVE

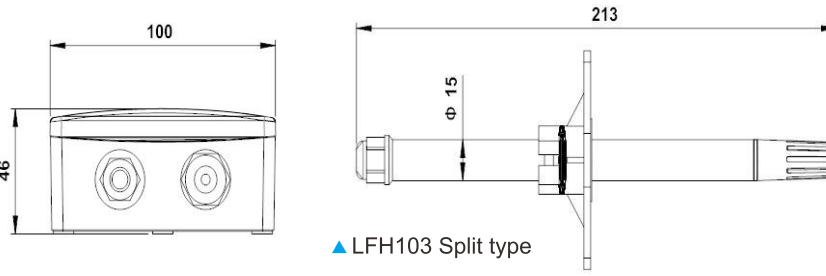
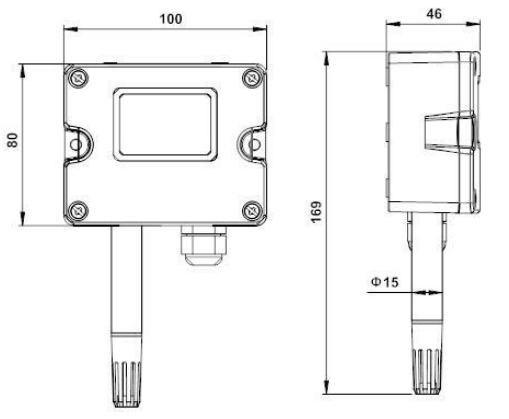


DIMENSION (mm)



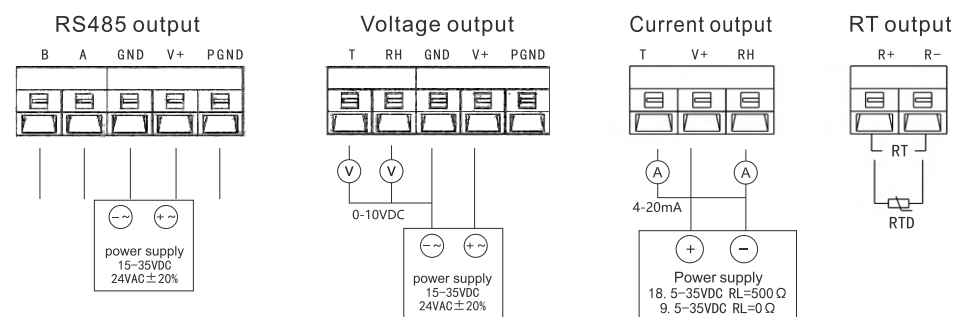
▲ LFH102 Duct type

LFH101 Wall-mounted type

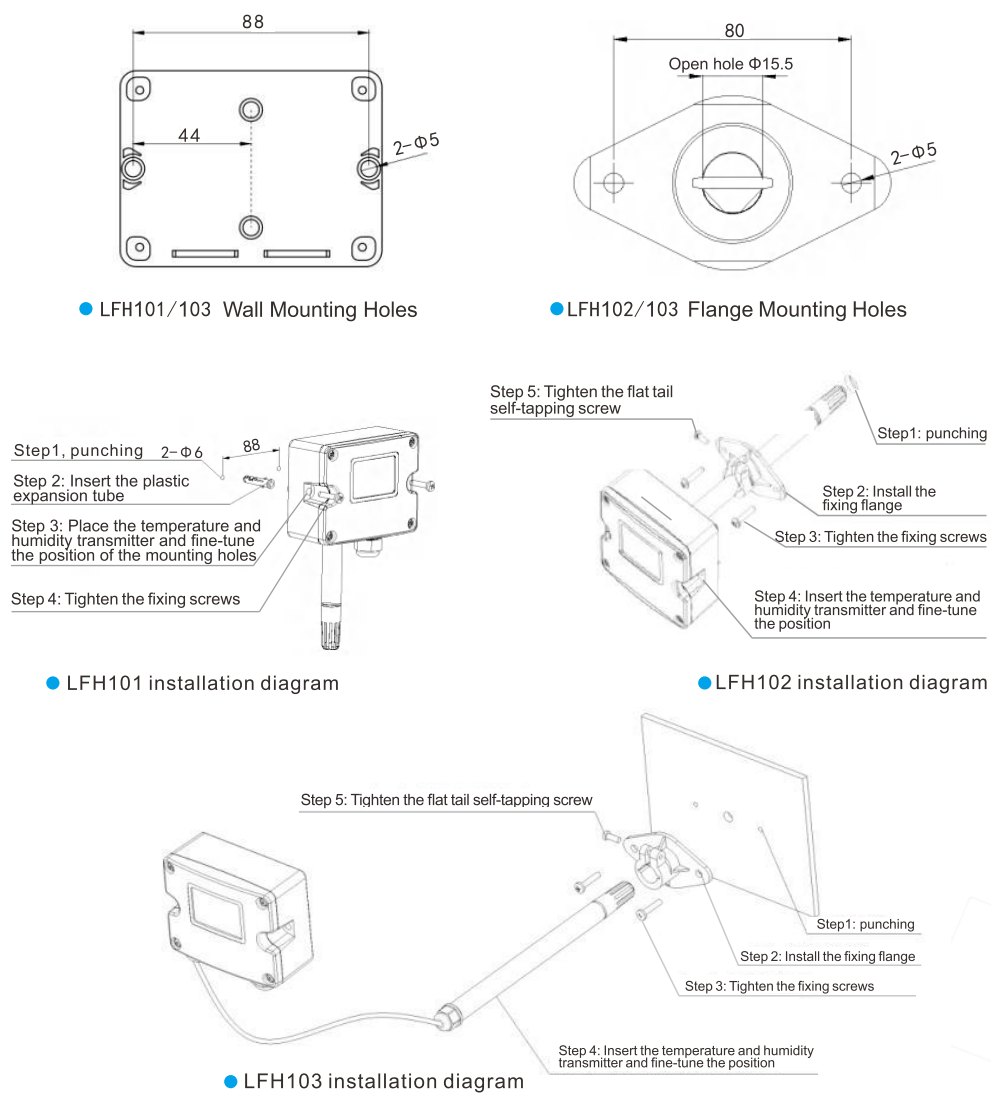


▲ LFH103 Split type

WIRING INSTRUCTIONS



PRODUCT INSTALLATION



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 |             |                             |   |                  |                   | Model              |                   |
| LFH102-              | Duct type temperature and humidity transmitter    |             |                             |   |                  |                   |                    |                   |
| LFH103-              | Split type temperature and humidity transmitter   |             |                             |   |                  |                   |                    |                   |
|                      | 3                                                 | ±3%RH(0.3℃) |                             |   |                  |                   | Accuracy range     |                   |
|                      |                                                   | V10         | 0~10VDC(3-wire)             |   |                  |                   | Humidity output    |                   |
|                      |                                                   | A4          | 4~20mA(2-wire)              |   |                  |                   |                    |                   |
|                      |                                                   | RS          | RS485/Modbus                |   |                  |                   |                    |                   |
|                      |                                                   | V10         | 0~10VDC(3-wire)             | 0 | PT1000,±0.2℃@0℃  |                   | Temperature output |                   |
|                      |                                                   | A4          | 4~20mA(2-wire)              | 1 | Pt100,±0.2℃@0℃   |                   |                    |                   |
|                      |                                                   | RS          | RS485/Modbus                | 2 | NTC20K,±0.4℃@25℃ |                   |                    |                   |
|                      |                                                   |             |                             | 6 | NTC10K,±0.4℃@25℃ |                   |                    |                   |
|                      |                                                   | 0           | NO                          |   |                  |                   |                    | Temperature range |
|                      |                                                   | 1           | 0~50℃                       |   |                  |                   |                    |                   |
|                      |                                                   | 2           | -20~60℃                     |   |                  |                   |                    |                   |
|                      |                                                   | 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℃), humidity output 4~20mA, temperature output 4~20mA, and the temperature range 0~50℃ with display.