

## FEATURES

- Built-in high-precision sensor, stable measure of air quality;
- To simultaneously detect and display multiple air quality parameters to meet more demands, including temperature & humidity, CO<sub>2</sub>, PM2.5, PM10, VOC, and formaldehyde;
- 3-color LED indicator light can visually show air quality situation, optional turn-off;
- Perfect overvoltage and reverse connection protection, long-term reliability;
- Optional isolated/non-isolated RS485 output;
- Indoor or top suction installation, convenient application of different scenarios.



## DESCRIPTION

LFG60 All-In-One Air Quality Transmitter is used to detect a variety of air quality parameters, including temperature and humidity, CO<sub>2</sub>, PM2.5, PM10, VOC, formaldehyde, up to 7 parameters; optional isolated/non-isolated RS485 output, built-in Modbus protocol, realize real-time detection of multi-point distribution data. Indoor type can be equipped with display screen and keys, and the split screen can display air quality parameters. By configure communication parameters, the three-color LED indicator can be equipped to directly indicate the air quality situation; both indoor type and top suction type can configure RS485 communication address through dialing code. The product has wide power supply range and perfect overvoltage and reverse connection protection; it can be widely used in multi-parameter air quality monitoring in various commercial complexes, intelligent building, office environment, hotels, airports and schools.

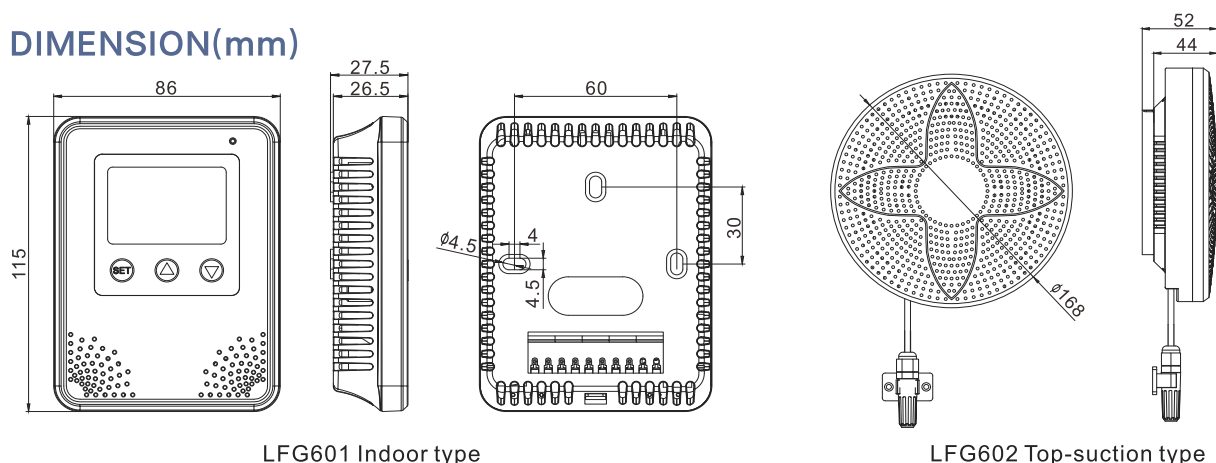
## SPECIFICATION

Temperature		Relative humidity	
Sensor	Digital temperature sensor	Sensor	Digital humidity sensor
Range	0~50℃	Range	0~100%RH
Accuracy	±0.5℃@20℃；≤±1℃@0~50℃	Accuracy	Typical±3%RH@20℃&20to80%RH
Response time	10~30S (20℃, slow flow air)	Response time	≤10S (20℃, slow flow air)
PM2.5/PM10			
Sensor	Laser dust sensor, detection particle size 0.3~10μm		
Range	PM2.5:0~500μg / m <sup>3</sup> , with a particle size of 0.3~2.5μm		
	PM10:0~600μg / m <sup>3</sup> , particle size 0.3~10μm		
Precision/consistency	PM2.5: ±10μg / m <sup>3</sup> @0~100μg / m <sup>3</sup> , ±10%FS@100~500/600μg / m <sup>3</sup> , @25℃		
Resolution ratio	1μg / m <sup>3</sup>		
Response time	Continuous measurement mode with single response time <1S, Integrated response time <10S		
CO2			
Sensor	The NDIR sensor, with the ABC self-check function		
Range	0~5000ppm		
Accuracy	(±40ppm±3%MV)ppm		
Response time (T <sub>90</sub> )	2min		
VOC		Formaldehyde	
Sensor	Metal oxide semiconductor gas sensor	Sensor	Electrochemical-type gas sensor
Range	0~2ppm	Range	0~1ppm
Resolution ratio	1ppb	Accuracy	±10%FS@25℃
Preheating time	First power-up for 1 hour; pre-heat for 3min	Response time (T <sub>90</sub> )	<120S

Power Supply Voltage	12~36VDC / 24VAC±20%
Output Signal	Isolation / non-isolated RS485
Work Environment	0~50℃ & 0 ~ 95% RH (no condensation)
Storage Temperature	-20~60℃ & 0 ~ 95% RH (no condensation)
Display and Buttons	Indoor type can be optional
LED pilot lamp	Indoor type can be optional    Green: good air quality yellow: air quality is generally red: poor air quality
Levels of Protection	IP30
Way to Install	Indoor type, Top-suction type
Case Material	Indoor type: PC    Top-suction type: ABS
Weight	Indoor type: 148g    Top-suction type: 235g

Note: When using 24VAC as the power supply, it need be an isolated power supply.

## DIMENSION(mm)

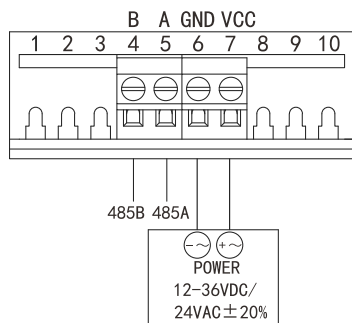


LFG601 Indoor type

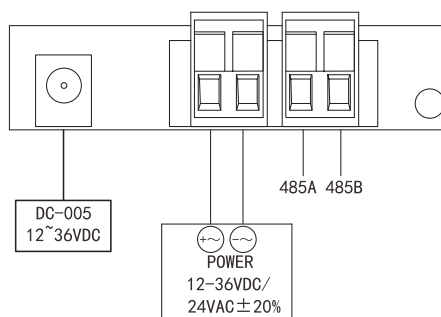
LFG602 Top-suction type

## WIRING

According to the different types, the following indoor type and top suction connection mode. The top suction type is equipped with DC-005(5.5\*2.1mm) power socket, can be powered by either power adapter (12~36VDC), or by direct terminals wiring (12~36VDC / 24VAC  $\pm$  20%), but these two power supply mode can not be connected at the same time!



LFG601 Indoor Type



LFG602 Top-suction Type

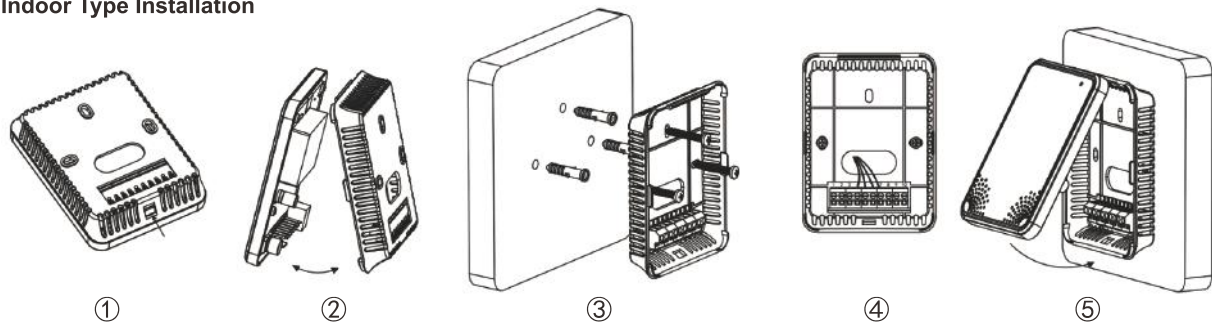
## ORDER REF NO.

Code and description		Remarks
LFG60	ALL-IN-ONE AIR QUALITY TRANSMITTER	Model
1	Indoor type	Installation method
2	Top suction type	
0	N/A	Temp&RH
1	T&RH	
0	N/A	CO2
1	CO2	
0	N/A	PM
1	PM2.5&PM10	
0	N/A	VOC
1	VOC	
0	N/A	Formaldehyde
1	HCHO	
RS0	Non-isolated RS485	Output
RS1	Isolation type of RS485	
D	With display	Display
N	Without display	
L	With 3-color LED	Indication light
N	None	
LFG60	1 - 1 1 1 1 1 - RS0 - D - L	Selection Example

- Only if the Installation Method option is indoor, you can choose with or without the display and indicator light;
- Example LFG601-11111-RS0-D-L represents the indoor type, the detection parameters include temperature, relative humidity, CO2, PM2.5, PM10, VOC, formaldehyde in a total of seven parameters, non-isolated RS485 output, with display, with three-color LED indicator light;
- The top suction is not optional display or indicator, the two types of selection can only be [-N][-N].

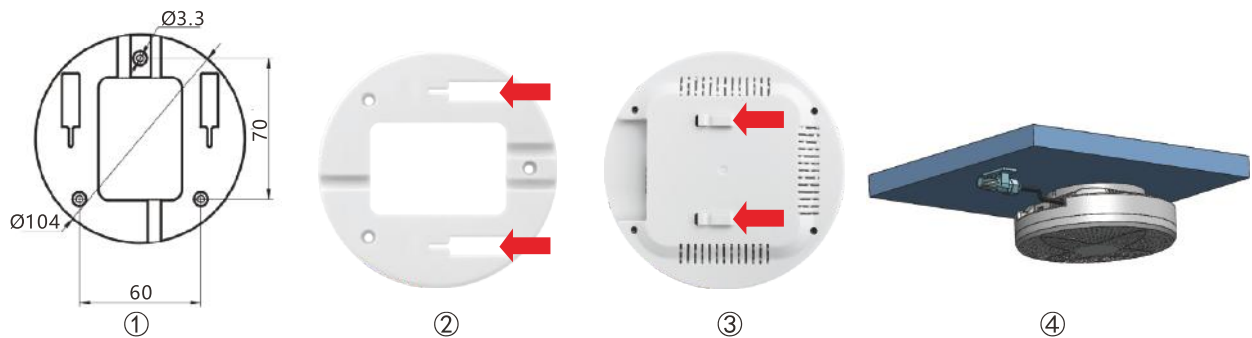
## INSTALLATION

### Indoor Type Installation



1. Press the open cover button under the back cover of the transmitter to open the transmitter (as shown in Figure 1 and 2);
2. Complete the electrical connection according to the wiring diagram, and pass the cable from the hole;
3. There are three mounting holes in the back cover of the transmitter, which shall be fixed on the wall with expansion screws (see Figure 3), or into the switch box embedded in the wall with screws (see Figure 4);
4. Align the front cover and the bottom to complete the installation (see Figure 5).

### Top-Suction Installation



1. Drill 25mm deep holes in the wall, fix the mounting base to the wall or roof, install the hose space as shown in Figure 1 (provided with ST3 \* 20 screws and  $\phi 4 \times 20$  plastic expansion tubes);
2. Complete the electrical connection according to the wiring diagram;
3. After fixing the mounting base, clip the transmitter into the mounting base, as shown in Figure 2 and 3, once heard clipped sound means it has been installed in place;
4. Fix the external temperature and humidity clip with expansion screws to complete the installation, as Figure 4.