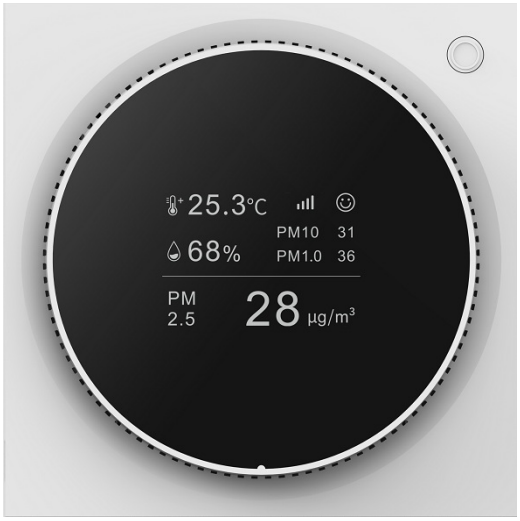
Air Quality Sensor

Datasheet



MSQP-BMxx-KT.17

Please scan the QR code above to check the latest version of datasheet!

Before using this product, please read this datasheet carefully and keep it properly!

Document Version：C

◇◆ Overview

Airkit2 Pro Air Quality Sensor (hereinafter referred to as the “product” or “device”) can be used to detect and display indoor air quality, including air quality indicators such as environmental temperature and humidity, Lux, PM2.5, PM1.0, PM10, CO_2, TVOC and HCHO. By displaying numerical values on the screen, remote real-time viewing and linkage with other devices can be achieved to improve the air environment, playing an important role in device control, scene management and execution, and big data analysis.

Main functions:

1. Built-in temperature and humidity detection
2. Built-in illuminance detection
3. Built-in PM1.0, PM2.5, PM10 detection
4. Built-in CO_2 detection
5. Built-in HCHO detection
6. Built-in TVOC detection
7. Built-in microwave distance detection, automatically turns on the screen when a human body is detected, and automatically turns off the screen when the human body leaves
8. Support custom level threshold for air quality
9. Support mixed calculation of internal and external inputs for testing projects
10. It has 5 logical block functions, each logical block can set 10 target outputs, and supports logical locking

* Detection functions vary with different models. Please follow the actual hardware features.

Function	MSQP-BMDH-KT.17	MSQP-BMC-KT.17	MSQP-BM-KT.17
Temperature	✓	✓	✓
Humidity	✓	✓	✓
Illuminance	✓	✓	✓
PM2.5	✓	✓	✓
PM1.0	✓	✓	✓
PM10	✓	✓	✓
CO2	✓	✓	
HCHO	✓		
TVOC	✓		

◇◆ Appearance

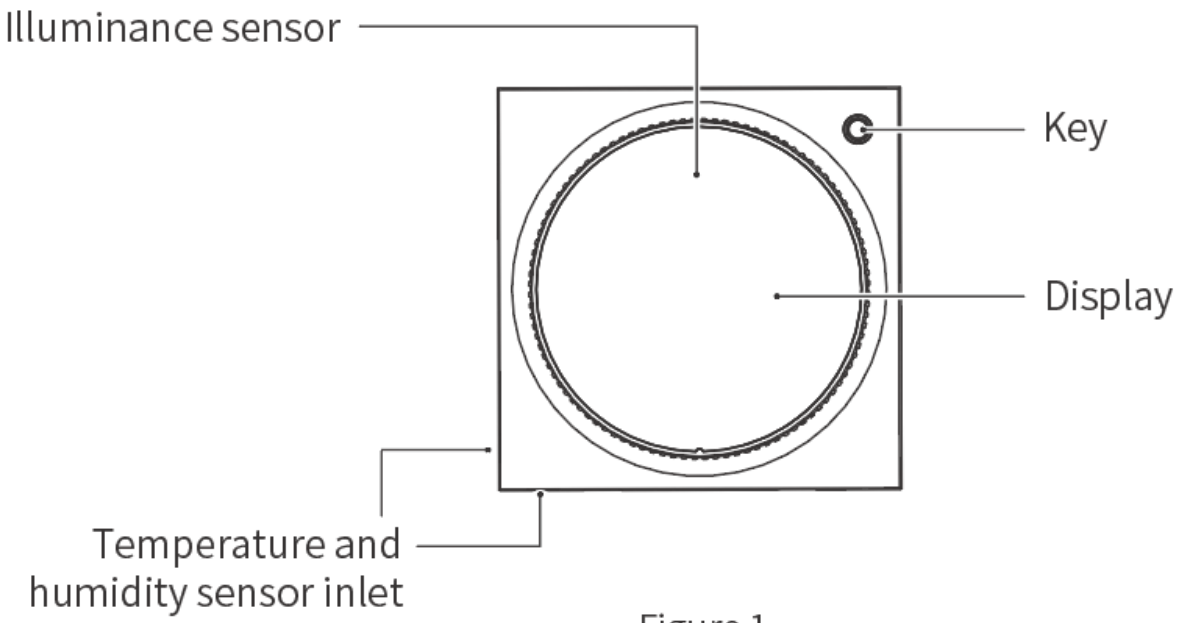


Figure 1

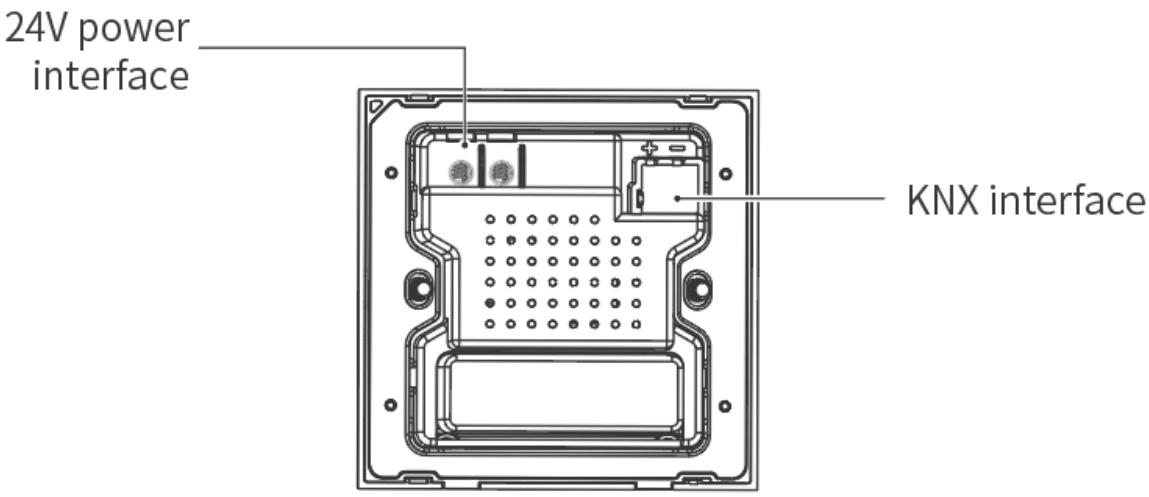


Figure 2

◇◆ Technical Data

Item	Parameter
Basic parameter	
Rated Voltage	30V DC
Rated Current	10mA/30V DC
Auxiliary Voltage	20~30V DC
Auxiliary Power Consumption	50mA/24V DC
Communication Protocol	KNX

Measuring Ranges	
Temperature	-10.0~55.0°C
Humidity	0~99.9%RH
Illuminance	1~999 lux
CO_2	400~5000 ppm, Non-Dispersive Infrared Absorption(NDIR)
HCHO	0~1.00 mg/m³, electrochemical technology
TVOC	0~6.00 mg/m³, electrochemical technology
PM2.5 / PM1.0 / PM10	0~999 μg/m³, laser diffraction(25±5°C, 50±10%RH, Standard Test Environment)
Specifications	
Dimensions (L*W*H)	86mm*86mm*49.5mm
Display	TFT Screen
Main Material	Plastic
Mounting Method	86 Wall Box

* Detection functions vary with different models. Please follow the actual hardware features.

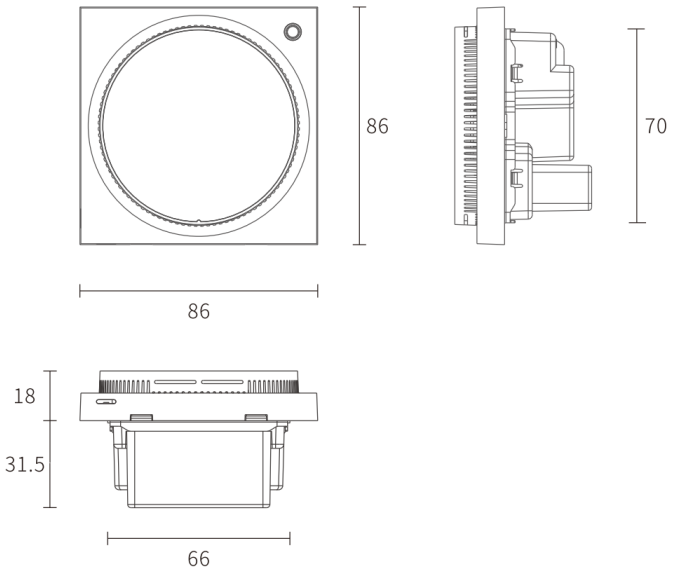


Figure 3 - Product Dimension (Unit: mm)

◇◆ Safety Precaution

Please do not privately disassemble or replace any parts of the product. Otherwise, it may cause mechanical fault, electric shock, fire or personal injuries.

Warning:

- Installation and commissioning of this equipment must be carried out by us or by an organization appointed by us. The planning and construction of the electrical connection of this equipment must comply with the relevant local safety

standards and regulations.

- Any consequences caused by failure to install and wire according to this instruction are not related to our company.
- Please refer all maintenance work to our after-sales department or designated organization, the warranty of this product does not apply to the failure caused by the user's disassembly of the product.

Caution:

- Before performing any installation or disassembly procedures, any maintenance or cleaning procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.
- To protect this device and loads, it is recommended that a 10A circuit breaker be connected to each circuit.
- Do not use corrosive liquid to wipe the device body, especially the interface, so to avoid damage to the device.
- Prior to performing maintenance or cleaning on the device, disconnect the device from all voltage sources, to avoid electric leakage and electric shock.
- For Buspro connection, a hand-in-hand connection is recommended.
- After all of the cables are terminated, check for correct and good terminations.
- This product needs to be preheated for about 10 minutes each time it is turned on, and then it can be used normally.
- Do not use for a long time in high temperature, high humidity, and heavy oil fume environments.
- Do not use for a long time in areas with high PM2.5 concentration.
- Do not use in highly corrosive environments such as H_2S, SO_X, Cl_2, HCl, etc.
- Do not subject the product to strong impact and vibration, in order to avoid damaging the product and its accessories and causing product failure.
- When not in use for a long time, it should be stored in a sealed bag that does not contain volatile silicides.
- PM2.5 particles and HCHO in the air are not evenly distributed, so it is normal for there to be deviations in the measurement values at different measurement points in the same room. The overall value can reflect the air quality situation here.
- An increase in temperature can promote the emission of HCHO, and the HCHO value may be higher during hot summer or winter heating.
- Two products cannot be placed side by side tightly, otherwise it will block the ventilation opening and cause inaccurate measurement.
- The effective service life of HCHO detection components in normal environments is two years, and there may be detection deviations in the data after exceeding the service life.
- TVOC value is an estimated value calculated by adding HCHO value and algorithm, for reference only.
- The sensor needs to be reset after 48 hours of power on to ensure accuracy of CO_2 detection.
- This product is a non measuring device.

◇◆ Installation

- **Warning:** Before installation, please cut off the power supply, it is strictly prohibited to operate with electricity.
- **Note:** Before installation, please get the necessary cables ready in the wall box. Only 86 type wall box with depth≥60mm is supported.

Step 1. Before installation, if the bracket has not been separated from the panel assembly, place a screwdriver between the gap of the panel and power interface, then loosen the panel.

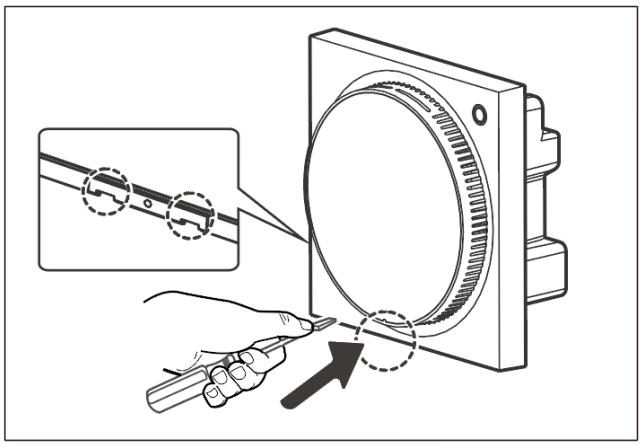


Figure 4

Step 2. Make an opening in the wall to mount the wall box into it.

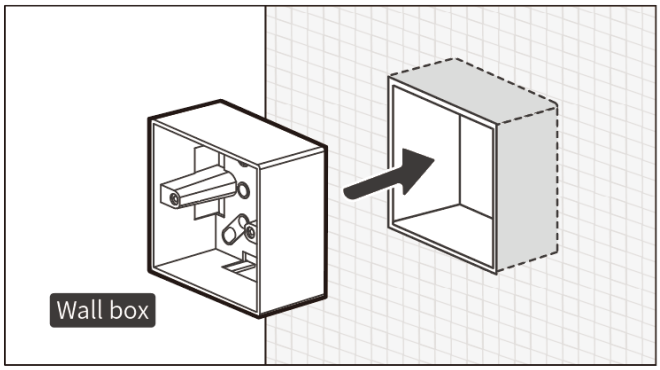


Figure 5

Step 3. Insert the power interface into the frame, aim the screws on both sides of the power interface at the holes in the wall box, install them together and lock the screws.

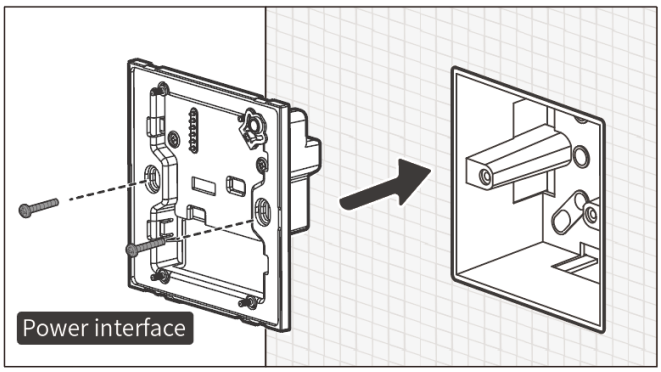


Figure 6

Step 4. Align the panel pins with the power interface holes, press gently and install on the interface.

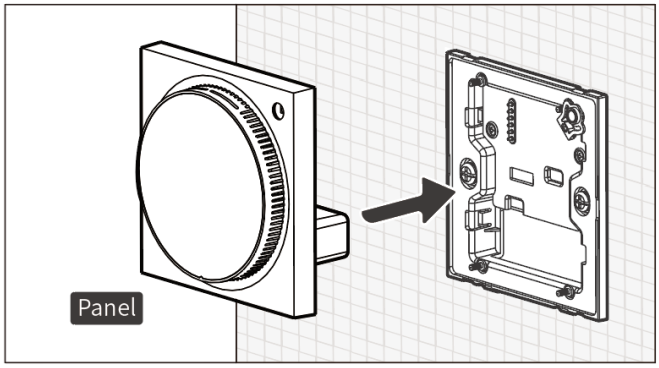


Figure 7

◇◆ Disassembly

Warning: Before performing any disassembly procedures on the device, it is crucial to disconnect the device from all voltage sources. This step is necessary to ensure the safety of the technician and prevent any potential damage to the device.

Step 1. It is recommended to use a screwdriver to pry the panel open from the bottom.

Step 2. To remove the panel and power base, please refer to the section Installation and do it reversely.

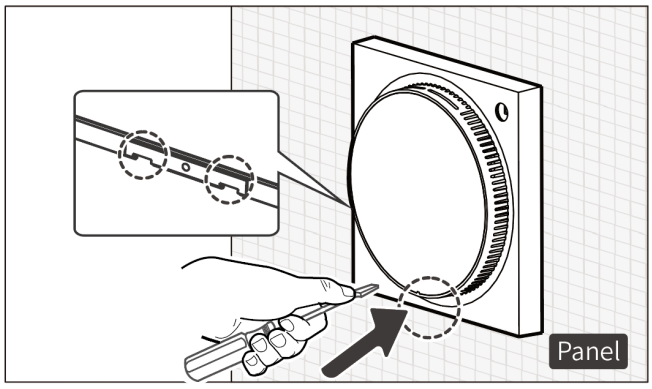


Figure 8

◇◆ Operation

- **Measurement page**

The measurement value page refreshes the data at regular intervals.

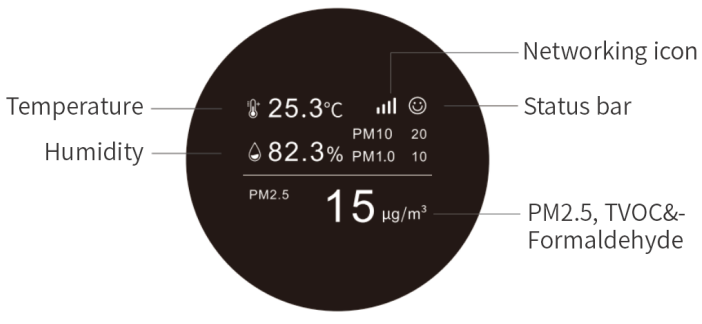


Figure 9

- **Functions & Operations**

Function	Operation
Wake up Screen	Short press (<1s) when screen is sleeping; screen will light up.
Turn off Screen	Short press (<1s) when screen is awake; screen will turn off.
Enter Programming Mode	Long press (5s) until all network icons light up; device enters programming mode.
Auto Sleep	When screen is awake, it can be configured to sleep after a set delay time if no object is detected in front.
Proximity Sensor	When an object approaches within approximately 50cm (±20cm) of the screen, the LCD wakes up.

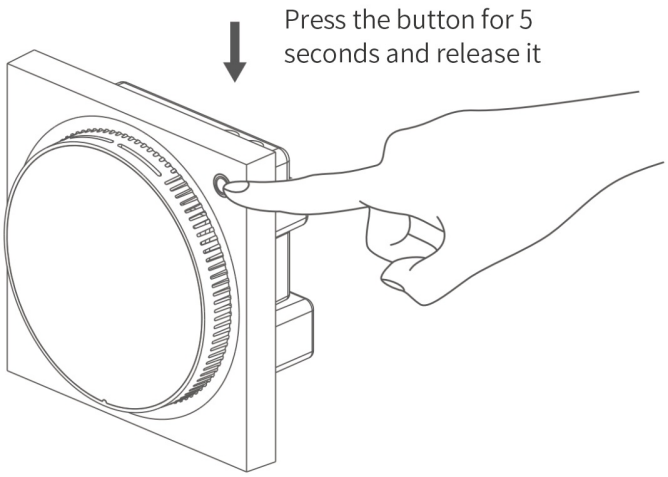


Figure 10

◇◆ Packing List

- Airkit2 Pro Air Quality Sensor*1
- Screws*2
- Datasheet QR code card*1

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Update History:

The form below contains the information of every update. The latest version contains all the updates of all former versions.

Version	Update Information	Date
V1.0	Initial release	August 8, 2025

◇◆ Technical Support

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