

In-Duct IAQ Monitor

IN-DUCT AIR MONITORING FOR COMMERCIAL BUILDINGS

PRODUCT DATA

Disclaimer

All images used in this document are for illustrative purposes only and may not match the actual product.



APPLICATION

This monitor is an advanced, configurable device for commercial buildings. It monitors PM2.5/PM10, CO2, TVOC, Temp/RH and their configurations. This device communicates over RS485, easily integrates with the building automation system.

The built-in commercial high-precision sensor module, with proprietary technology, supports long-term stable and reliable application.

Industrial grade shell and structure to satisfy different environment. Removable filter mesh for easy cleaning and reuse. Pitot tube inlet and outlet design, instead of air pump for the long lifetime usage.

FEATURES

- The in-duct air quality monitor is specially designed for monitoring multi-parameter air quality in air duct, Which is installed in wind duct or return air duct.
- The built-in sensor module is designed with enclosed cast aluminium structure. It ensures the stability, air closure and shielding, greatly improves the anti-interference ability.
- Built-in a large air bearing fan, regulate the fan speed automatically, guarantee constant air volume and improve the stability and lifetime in long-term working.
- Special design of pitot tube, instead the air pump mode, adapt to a wider range of wind speeds. To have longer lifetime and no need to change the air pump frequently.
- Easy to clean filter mesh, can be disassembled and used many times
- With temperature and humidity compensation, reduce the impact of environmental change.
- Real-time monitoring parameters: particles (PM2.5 and PM10), carbon dioxide (CO2), TVOC, air temperature and humidity.
- Independently measure the temperature and humidity in the air duct, avoid interference from other sensors and monitoring heating.
- With RS485 Modbus communication interface.

TECHNICAL SPECIFICATIONS

General Data

Table 1. General Data

Part Number	C7355B1052
Power Supply	12~ 28VDC/18~27VAC
Power Consumption	Average 1.65W Maximum 3W
Communication Interface RS485	RS485/RTU,9600bps 8N1(default),15KV Antistatic protection
Data upload interval cycle	Average / 60 seconds
Applicable air speed of duct	2.0~15m/s
Working Condition	-20°C~60°C/ 0~99%RH, (No condensation)
Storage Condition	0°C~50°C/ 10~60%RH
Overall Dimension	180mmX125mmX65.5mm
Pitot tube size	240mm
Net weight	850g
Shell material	PC material

CO2 Data

Table 2. CO2 Data

Sensor	Non-Dispersive Infrared Detector (NDIR)
Measuring Range	0~2000ppm
Output Resolution	1ppm
Accuracy	±50ppm + 3% of reading or ±75ppm (whichever is bigger) (25°C,10%~80%RH)

Particle Data

Table 3. Particle Data

Sensor	Laser particle sensor
Measuring Range	PM2.5: 0~500µg/m ³ ; PM10: 0~500µg/m ³ ;
Output values	moving average/60 seconds, moving average/1 hour, moving average/24 hours
Output Resolution	0.1µg/m ³
Zero Point Stability	<2.5µg/m ³
PM2.5Accuracy (mean per hour)	<±5µg/m ³ +10% reading (0~300µg/ m ³ @10~30°C,10~60%RH)

TVOC Data

Table 4. TVOC Data

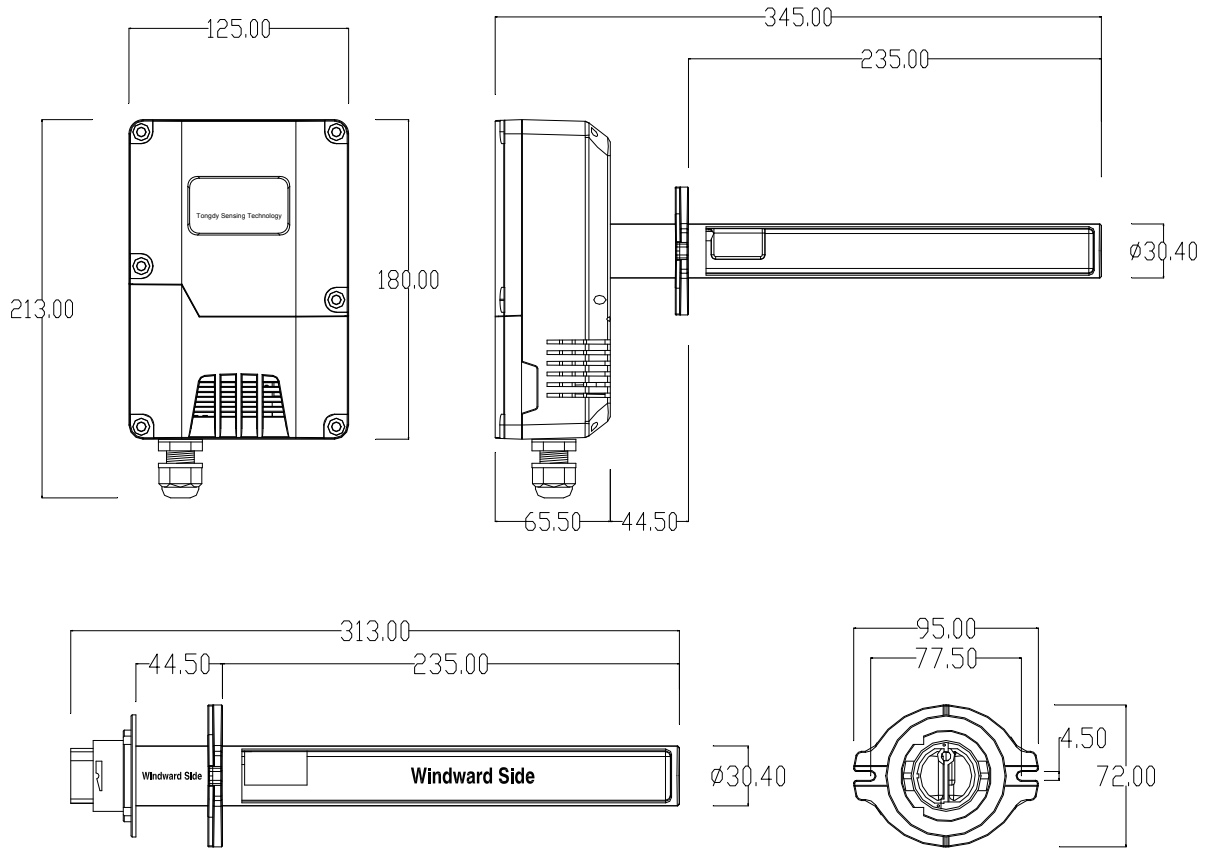
Sensor	Metal oxide sensor
Measuring Range	0~3.5mg/m ³
Output Resolution	0.001mg/m ³
Accuracy	<±0.05mg/m ³ + 15% of reading (25°C, 10%~60%RH)

Temp.&Humi. Data

Table 5. Temp.&Humi. Data

Sensor	Band gap material temperature sensor、Capacitive humidity sensor
Temperature range	-20°C~60°C
Relative humidity range	0~99%RH
Output Resolution	Temperature: 0.01°C humidity:0.01%RH
Accuracy	±0.5°C, 3.5%RH (25°C, 10%~60%RH)

DIMENSIONS



GENERAL SAFETY INFORMATION

- When performing any work (installation, mounting, start-up), all manufacturer instructions and in particular the Installation and Commissioning Instructions are to be observed.
- IAQ monitor may be installed and mounted only by authorized and trained personnel.
- Rules regarding electrostatic discharge should be followed.
- If IAQ monitor is modified in any way, except by the manufacturer, all warranties concerning operation and safety are invalidated.
- Use only accessory equipment which comes from or has been approved by Honeywell.
- It is recommended that devices be kept at room temperature for at least 24 hours before applying power. This is to allow any condensation resulting from low shipping/storage temperatures to evaporate.
- CE declarations according to LVD Directive 2014/35/EU and EMC Directive 2014/30/EU.
- Product standards are EN 50581, EN61010-1 and EN61326-1.
- This monitor has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- This monitor complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- The monitor is Class B digital apparatus and complies with Canadian ICES-003.
- The monitor complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Honeywell Building Solutions

Honeywell International Inc. 1985
Douglas Drive North Golden
Valley, MN 55422
customer.honeywell.com

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