

ARM ENVIRONMENTS INDUCT IAQ SENSOR RELAYS REAL-TIME PARAMETERS FOR TEMP / RH / PMs & TVOCs, ALLOWING THE BUILDING OWNER TO ENSURE SUPPLY AIR IS ALWAYS AT ITS OPTIMUM CLEANLINESS



### KEY FEATURES

- Online real-time detecting indoor air quality.
- Green Building Assessment
- BAS and HVAC
- Smart Home System
- Fresh Air Controlling System

The Induct IAQ detector is specifically designed for monitoring multi-parameter air quality in duct; suitable for mounting in both the supply and return ducts. Through its smart control & BMS functionality, the sensor can regulate fan speed and adjust amount of airflow dependant upon air quality. This could offer energy savings.

The sensor requires limited maintenance. You can connect the sensor to your BMS and collect and analyse your air quality to give a realtime assessment of your buildings supply or return air quality.

Approved by CE, RESET, RoHS, FCC, REACH and ICES.

### GENERAL DATA

Power Supply	12-28VDC/18-27VAC or 100-240VAC (optional)
<b>Communication Interface:</b>	
a. RS485 RTU	9600bps (default), 15KV Antistatic Protection.
b. RJ45 (Ethernet TCP)	MQTT protocol or Modbus TCP optional With an extra RS485
c. WiFi@2.4 GHz 802.11b/g/n	MQTT protocol or Modbus TCP optional With an extra RS485
Data upload interval cycle	Average / 60 seconds
Applicable air speed of duct	2.0~15m/s
Working Conditions	-20°C~60°C(-4°F-140°F)/ 0~99%RH (No condensation)
Storage Conditions	0°C~50°C (32°F-122°F) / 10~60%RH
Overall Dimension	180 x 125 x 65.5mm (7.09X4.92X20.58in)
Pitot tube size	240mm (9.45in)
Net weight	850g (1.87lb)
Shell material	PC material

\* Scientific tests have demonstrated the use of ReSPR surface and air purifiers substantially reduce microbial populations on surfaces. These products are not intended to diagnose, treat, or cure any disease.

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### CO<sub>2</sub> DATA

Sensor	Non-Dispersive Infrared Detector (NDIR)
Measuring Range	0-2,000ppm
Output Resolution	1ppm
Accuracy	±50ppm + 3% of reading or ±75ppm (whichever is bigger)

### PARTICLE DATA

Sensor	Non-Dispersive Infrared Detector (NDIR)
Measuring Range	0-2,000ppm
Output Values	moving average/60 seconds, moving average/1 hour, moving average/24 hours
Output Resolution	0.1ug/m <sup>3</sup>
Zero Point Stability	<2.5ug/m <sup>3</sup>
Accuracy	PM2.5: 8% of reading (10%-80%RH,@25°C) PM10: 12% of reading (0-500µg/m <sup>3</sup> , 10%-80%RH,@25°C)

### TEMP & HUMIDITY 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@5-35°C ±3%RH (20%-80%RH)

### CO DATA (OPTIONAL)

Sensor	Electrochemical CO sensor
Measuring Range	0-100ppm
Output Resolution	0.1ppm
Accuracy	±1ppm+ 5% of reading (10% 80%RH,@25°C)

### OZONE DATA (OPTIONAL)

Sensor	Electrochemical ozone sensor
Measuring Range	0-2000ug/m <sup>3</sup> (0-1000ppb)
Output Resolution	1ug/m <sup>3</sup>
Accuracy	±15ug/m <sup>3</sup> +10% of reading (10%-80%RH,@25°C)

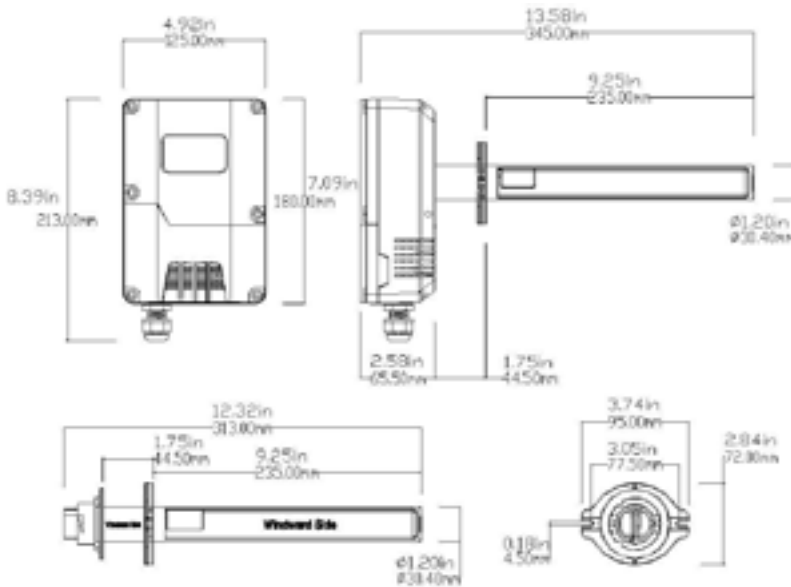
### HCHO DATA (OPTIONAL)

Sensor	Electrochemical formaldehyde sensor
Measuring Range	0.001-0.6mg/m <sup>3</sup>
Output Resolution	0.001mg/m <sup>3</sup>
Accuracy	±0.005mg/m <sup>3</sup> +5% of reading (10%-80%RH,@25°C)

### TVOC DATA

Sensor	Metal oxide sensor
Measuring Range	0.001-4.00mg/m <sup>3</sup>
Output Resolution	0.001mg/m <sup>3</sup>
Accuracy	±0.05mg/m <sup>3</sup> + 10% of reading (0-2mg/m <sup>3</sup> @10%-80%RH, 20-30°C)

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CO <sub>2</sub> DATA	PM2.5 PM10	CO <sup>2</sup>	TVOC	TEMP / RH	HCHO	CO	COMMUNICATION INTERFACE	EXTEND RS485 INTERFACE
PMD-1818C/D	•	•	•	•			RS485 (Modbus RTU or BACnet MS/TP)	No
PMD-1819C/D	•	•	•	•	•			
PMD-1816C/D	•	•	•	•		•		
PMD-1810C/D	•	•	•	•	•	•		
PMD-1828C/D	•	•	•	•			WiFi@2.4 GHz 802.11b/g/n	Yes
PMD-1829C/D	•	•	•	•	•			
PMD-1826C/D	•	•	•	•		•		
PMD-1820C/D	•	•	•	•	•	•		
PMD-1838C/D	•	•	•	•			RJ45 (Ethernet TCP)	Yes
PMD-1839C/D	•	•	•	•	•			
PMD-1836C/D	•	•	•	•		•		
PMD-1836C/D	•	•	•	•	•	•		

C: 24VAC/VDC power supply  
D: 100~240VAC power supply

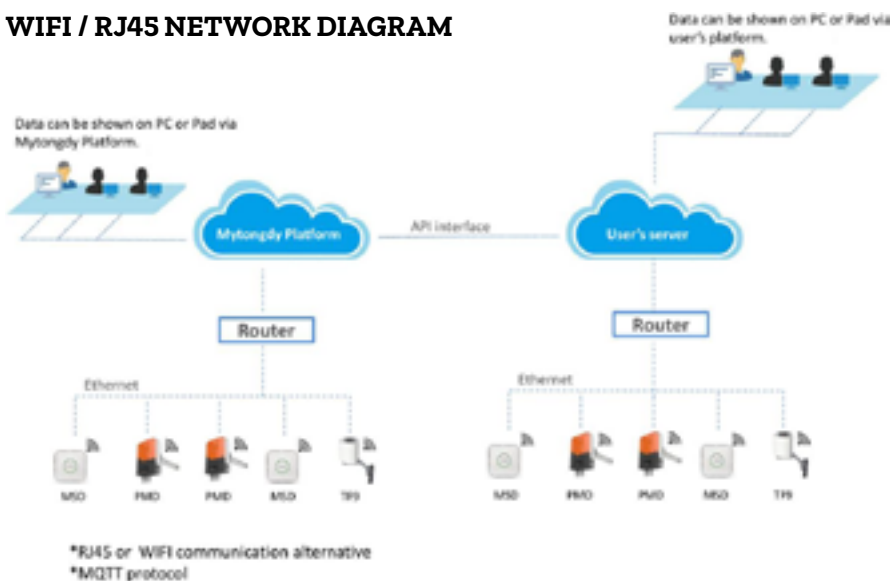
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### NETWORK DIAGRAM

- Professional designing and manufacturing IAQ products more than 14 years, long-term exportation to global markets with powerful performances guaranteed
- Built-in commercial high-precision sensor module, with proprietary technology, 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
- Regulate fan speed automatically to guarantee constant air volume
- Provide a variety of communication interface to select and connect a monitoring and analysis software platform, for data storage, analysis and comparison
- Optional two power supply, more convenient for installation
- RESET Certificate
- CE-Approval, FCC, ICES

### WIFI / RJ45 NETWORK DIAGRAM



### RS485 MODBUS NETWORK DIAGRAM

