



Indoor Air Quality Monitor

COMMERCIAL GRADE IAQ PRODUCT

Specification Data



APPLICATION

- Online real-time detecting indoor air quality.
- Green Building Assessment
- BAS and HVAC
- Smart Home System
- Fresh Air Controlling System
- Building Energy Saving Reconstruction and Assessment System
- Classroom, office, exhibition hall, shopping mall, other public place



FEATURES

- 24-hour online real-time detecting indoor air quality, upload measurement data.
- The special and core multi-sensor module is inside, which is designed for the commercial grade monitors. The whole sealed cast aluminum structure ensures the stability of detection and improves the anti-jamming capability.
- Unlike other particle sensors, with a built-in large flow bearing blower and the control technology of automatic constant flow, MSD has the much higher and long-term operation stability and life, of course more accuracy.
- Providing multiple sensors such as PM2.5, PM10, CO2, TVOC, HCHO, Temperature and humidity.
- Using own patent technologies to minimize the influence from ambience temperature and humidity to the measured values.
- Two power supply selectable: 24VDC/VAC or 100~240VAC
- Communication interface is optional: Modbus RS485, WIFI, RJ45 Ethernet.
- Supply an extra RS485 for WiFi/ Ethernet type to configure or check the measurements.
- Three-color light ring indicating different level of indoor air quality. The light ring can be turned off.
- Ceiling mounting and wall mounting with the tasteful appearance in different decoration styles.
- Simple structure and installation, make easy ceiling mounting easy and convenient.
- Over 15-year experience in IAQ product design and production, abundantly applied in European and American market, mature technology, good manufacturing practice and high quality ensured.
- RESET certified as the grade B monitor for Green Building Assessment and Certification.
- Approved by CE, RESET, RoHS, FCC, REACH and ICES.

TECHNICAL SPECIFICATIONS

General Data

Detection Parameters(max.)	PM2.5/PM10, CO2, TVOC, Temperature & RH, HCHO
Output (Optional)	. RS485 (Modbus RTU or BACnet MSTP) . RJ45/TCP (Ethernet) with an extra RS485 interface . WiFi @2.4 GHz 802.11b/g/n with an extra RS485 interface
Operating Environment	Temperature: 0~50 °C (32 ~122°F) Humidity: 0~90%RH
Storage Conditions	-10~50 °C (14 ~122°F)/ 0~90%RH (No condensation)
Power Supply	12~28VDC/18~27VAC or 100~240VAC
Overall Dimension	130mm(L)×130mm(W)×45mm (H) 7.70in(L)×6.10in(W)×2.40in(H)
Power consumption	Average 1.9w (24V) 4.5w(230V)
Material of Shell & IP Level	PC/ABS fire-proof material / IP20
Certification Standard	CE, FCC, ICES

PM2.5/PM10 Data

Sensor	Laser particle sensor, light scattering method
Measuring Range	PM2.5: 0~500µg/m3 PM10: 0~800µg/m3
Output Resolution	0.1µg /m3
Zero Point Stability	±3µg /m3
Accuracy (PM2.5)	10% of reading (0~300µg/m3 @25°C , 10%~60%RH)

CO2 Data

Sensor	Non-Dispersive Infrared Detector (NDIR)
Measuring Range	0~5,000ppm
Output Resolution	1ppm
Accuracy	±50ppm +3% of the reading (25 °C, 10%~60%RH)

Temperature and Humidity Data

Sensor	High precision digital integrated temperature and humidity sensor
Measuring Range	Temperature : -20~60 °C (-4~140°F) Humidity : 0~99%RH
Output Resolution	Temperature : 0.01 °C (32.01 °F) Humidity : 0.01%RH
Accuracy	Temperature : <±0.6°C @25°C (77 °F) Humidity : <±4.0%RH (20%~80%RH)

TVOC Data

Sensor	Metal oxide gas sensor
Measuring Range	0.01~3.5mg/m3
Output Resolution	0.001mg/m3
Accuracy	±0.05mg/m3 +10% of reading (0~2mg/m3 @25°C, 10%~60%RH)

HCHO Data

Sensor	Electrochemical Formaldehyde sensor
Measuring Range	0~0.6mg/m3
Output Resolution	0.001mg/m³
Accuracy	±0.005mg/m³+5% of reading (25°C, 10%~60%RH)

MODELS GUIDE

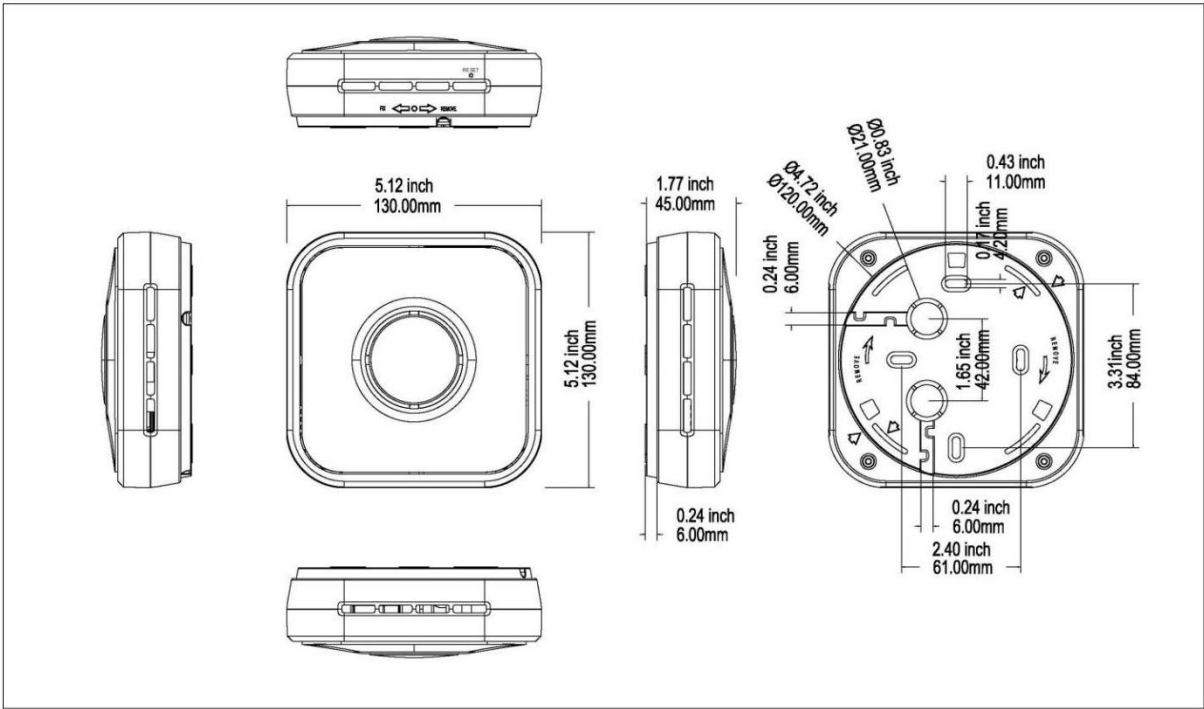
Model	PM2.5	PM10	Temp/ RH	CO2	TVOC	HCHO	Output	Extra interface
MSD-1813C	•	•	•	•			RS485 (Modbus RTU) or Postix:-BN (BACnet MS/TP)	None
MSD-1818C	•	•	•	•	•			
MSD-1819C	•	•	•	•	•	•		
MSD-1833C/D	•	•	•	•			Ethernet RJ45 (POE available)	RS485
MSD-1838C/D	•	•	•	•	•			
MSD-1839C/D	•	•	•	•	•	•		
MSD-1823C/D	•	•	•	•			WIFI	RS485
MSD-1828C/D	•	•	•	•	•			
MSD-1829C/D	•	•	•	•	•	•		

C/D power supply select: C means 12~28VDC/18~27VAC; D means 100~240VAC power supply

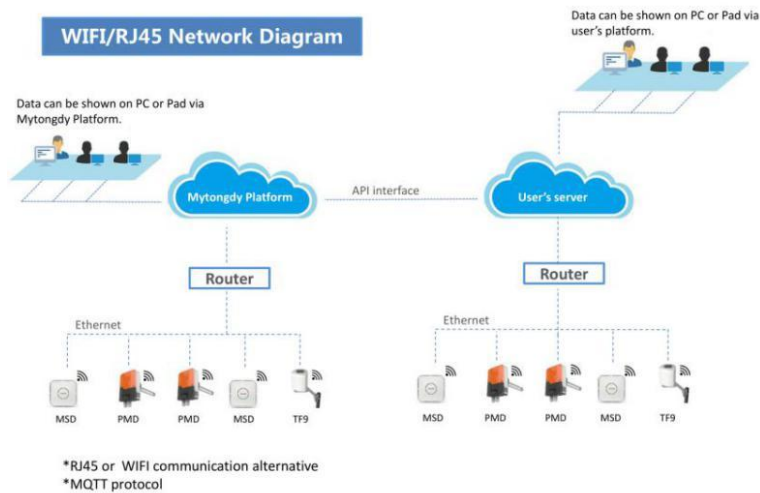
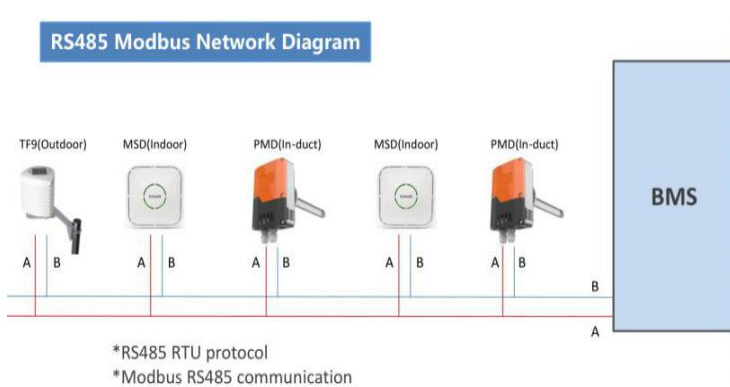
Examples

Model	Communication interface	Protocol	Power Supply
MSD-1813C; MSD-1818C	RS485	Modbus RTU	24VAC/VDC
MSD-1818C-BN ; MSD-1819C-BN	RS485	BACNet MS/TP	24VAC/VDC
MSD-1838C-POE	Ethernet RJ45	1. 24VAC/VDC power supply 2. Power Over Ethernet (48VDC by POE switch)	
MSD-1829D	WIFI		100~230VAC

DIMENSIONS

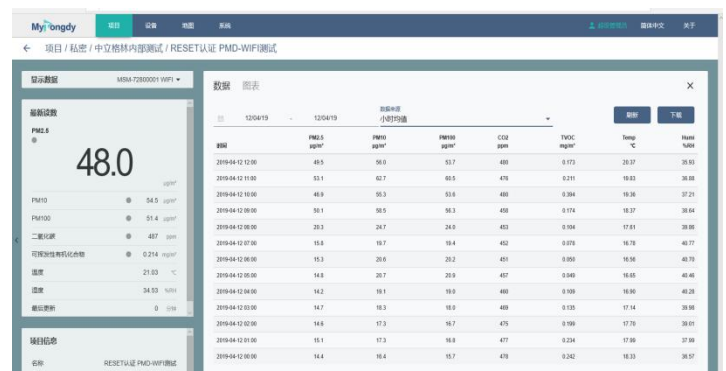
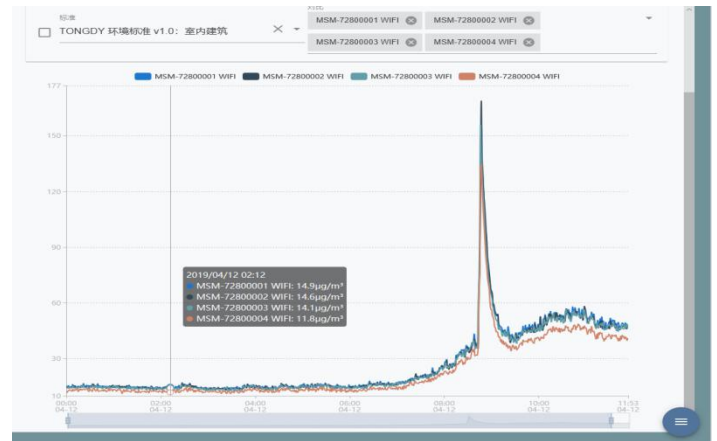


NETWORK DIAGRAM



DATA APPLICATIONS

Real-time collecting indoor air quality data of intelligent buildings/green buildings, also collecting outdoor data or official release data, upload the data to Cloud through monitoring analysis platform. Read and analyze the data using computer or cellphone. Achieve multi-parameter and all-direction real-time monitoring and assessment of indoor air quality, and use it to control building ventilation and air conditioning system, etc.



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