**ultraPURE**
*indoor air quality solutions*
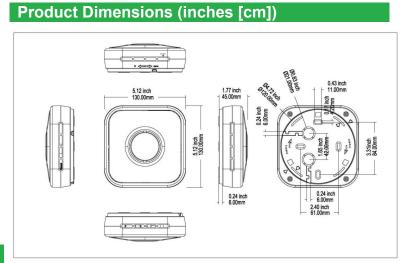
## SEN-0077 - Space IAQ Sensor

### Product Description

Real-time collecting of indoor air quality data in intelligent buildings / green buildings. 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 systems.

### Product Dimensions (inches [cm])



### Product 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 places

### Features

• 24-hour online real-time detecting indoor air quality, upload measurement data.

• The special 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, SEN-0077 has much higher and long-term operation stability, longevity and higher accuracy.

• Providing multiple sensors such as PM2.5, PM10, CO2, TVOC, HCHO, Temperature and humidity.

• Using own patent technologies to minimize the influence from ambiance temperature and humidity to the measured values.

• Two power supplies 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.

• Simple structure and installation make ceiling mounting easy and convenient.

• RESET certified as the grade B monitor for Green Building Assessment and Certification.

• 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.

## General Data

| Detection Parameters(max.) | PM2.5/PM10, $CO_2$, TVOC, Temperature & RH, HCHO |
|---|---|
| Output (Optional) | . RS485 (Modbus RTU or BACnet MSTP)<br>. RJ45/TCP (Ethernet) with an extra RS485 interface<br>. WiFi @2.4 GHz 802.11b/g/n with an extra RS485 interface |
| Operating Environment | Temperature: 0~50 ℃ (32 ~122℉)<br>Humidity: 0~90%RH |
| Storage Conditions | -10~50 ℃ (14 ~122℉)/<br>0~90%RH (No condensation) |
| Power Supply | 12~28VDC/18~27VAC or 100~240VAC |
| Overall Dimension | 130mm(L)×130mm(W)×45mm (H)<br>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 |

## Temperature and Humidity Data

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

## PM2.5/PM10 Data

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

## $CO_2$ Data

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

## TVOC Data

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

## HCHO Data

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