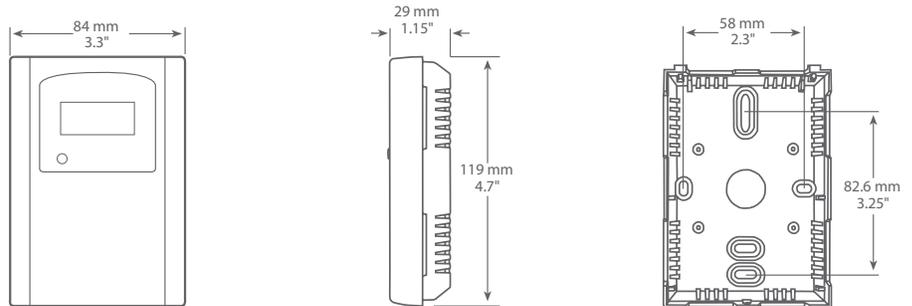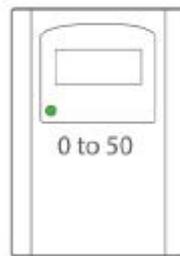## SEN-0074 - Space PM Sensor

Product Description

The SEN-0074 Particulate Matter Sensor uses an optical sensor based on laser scattering principles and features innovative contamination resistance technology to perform highly accurate and reliable PM measurements. The replaceable sensor measures particles of PM1.0, PM2.5, PM4.0, and PM10, with a continuous operation lifetime of more than 8 years. The sensor will provide long-term reliability and high resolution particle size binning for the detection of environmental dust and other particles.
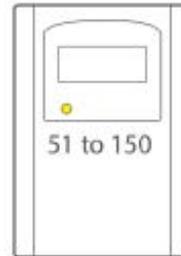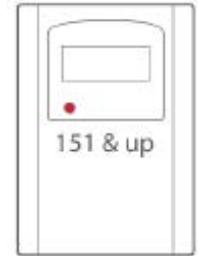
Product Dimensions (mm)

84 mm
3.3"

29 mm
1.15"

58 mm
2.3"

119 mm
4.7"

82.6 mm
3.25"

LED Display: Air Quality Index Values

0 to 50

51 to 150

151 & up

0 to 50: Good

51 to 100: Moderate
101 to 150: Unhealthy for Sensitive Groups

151 and higher: Unhealthy

MCERTS Certification

The SEN-0074 incorporates the SPS30 PM sensor for accurate and reliable PM sensing. The SPS30 particulate matter sensor has achieved MCERTS certification, which proves the performance of the PM sensor. In addition, the certification confirms that the SPS30 can be easily integrated into applications that comply with the European Air Quality Standard DIN EN 15267.

The MCERTS certification scheme was established by the UK's Environment Agency and is built around international and European standards to ensure high-quality environmental data monitoring. The SPS30 underwent laboratory and field tests and has been proven to fulfill the latest MCERTS and associated DIN EN 15267 European air quality standards. Compliance with the above-mentioned standards requires low intra-model variability (≤ 5 µg/m3), making the SPS30 the first choice for integration into applications requiring high precision. The certification is issued by the Sira Certification Service, one of the leading notified bodies in Europe. They are also accredited according to ISO/IEC 17065 UKAS and are part of the Canadian Standards Association (CSA Group).

Learn more about the MCERTS certification on the website of CSA Group or have a look at the certificate as linked below..
Website: https://www.csagroupuk.org/services/mcerts/mcerts-product-certification/mcerts-certified-products/mcerts-certified-products-indicative-ambient-particulate-monitors/
Certificate: https://www.sensirion.com/fileadmin/user_upload/customers/sensirion/Dokumente/9.6_Particulate_Matter/Datasheets/Sensirion_PM_Sensors_Datasheet_SPS30_MCERTS-Certificate_2020.pdf

SENSOR	Laser scatter method (field replaceable)
PARTICULATE SIZE	PM1.0, PM2.5, PM4.0, or PM10 (selectable)
MASS CONCENTRATION RANGE	0 - 1000 ug/m³
RESOLUTION	1 ug/m³
ACCURACY	±10 ug/m³ (0 - 100 ug/m³), ±10% (100 - 1000 ug/m³)
RESPONSE TIME	1 second
SENSOR LIFETIME	>8 years
ANALOG MODEL	**Consumption:** 75 mA max @ 24 Vdc, 100 mA max @ 24 Vac **Output Signals:** 4-20 mA (sourcing) or 0-5 Vdc / 0-10 Vdc (selectable) **Output Drive Capability:** *Current* - 550Ω max Voltage - 5,000Ω min **Output Scale:** 0 to 1000 ug/m³ (menu selectable)
BACnet MODEL	**Consumption:** 50 mA max @ 24 Vdc, 80 mA max @ 24 Vac **Interface:** MS/TP, 2 wire RS-485 **Baud Rate:** 9600, 19200, 38400, 57600, 76800 or 115200 (menu selectable) **Address Range:** 0 - 127 (menu selectable)
TRI-COLOR LED	**Good:** Green (0 to 50 ug/m³) **Moderate:** Yellow (51 to 150 ug/m³) **Poor:** Red (151 to 1000 ug/m³)
LCD SIZE	35mm W x 15mm H (1.4" x 0.6")
LCD BACKLIGHT	Enable or disable via menu
DISPLAY VALUE	**Mass Concentration:** 0 - 1000 ug/m³ **Air Quality Index:** 0 - 500 AQI Good/Moderate/Poor (menu selectable)
POWER SUPPLY	24 Vac/dc ±20% (non-isolated half-wave rectified)
PROTECTION CIRCUITRY	Reverse voltage protected, over-voltage protected
OPERATING CONDITIONS	0 to 50 C (32 to 122 F), 20 to 80% RH non-condensing
STORAGE CONDITIONS	-30 to 60 C (-22 to 140 F)
ENCLOSURE	**Material:** Polycarbonate, Grey, UL95-V0, IP65, (NEMA 4X) **Dimensions:** 84mm W x 117mm H x 29mm D (3.3" x 4.6" x 1.15")
WIRING	Screw terminal block (14 to 22 AWG)Screw terminal block (14 to 22 AWG)
WEIGHT	150 gm (5.3 oz)
COUNTRY OF ORIGIN	Canada