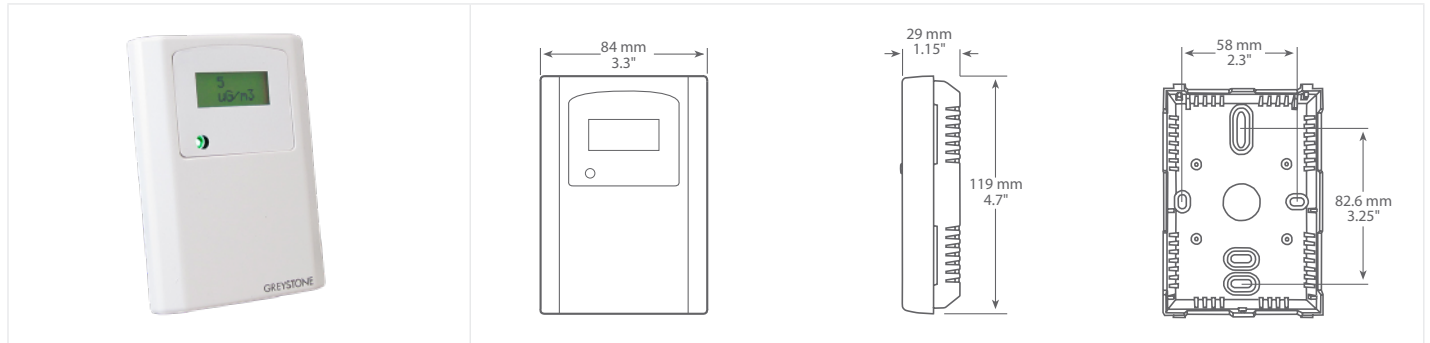




ROOM PARTICULATE MATTER SENSOR



PMRMC SERIES

PRODUCT DESCRIPTION

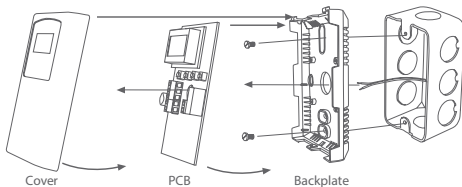
The PMRMC Particulate Matter Sensor uses an optical sensor based on laser scattering principles and features innovative contamination resistance technology to perform highly accurate and reliable PM measurements. The replaceable sensor measures particles of PM1.0, PM2.5, PM4.0, and PM10, with a continuous 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.

TYPICAL INSTALLATION

For complete installation and wiring details, please refer to the product installation instructions.

The PMRMC series can be mounted directly to a single gang electrical box or directly to a wall. The backplate includes many mounting hole configurations to allow for mounting on a variety of electrical boxes.

The basic PMRMC has a screw block terminal provided for connection to the Building Automation System.



SPECIFICATIONS

SENSOR	Laser scatter method (field replaceable)
PARTICULATE SIZE	PM1.0, PM2.5, PM4.0, or PM10 (selectable)
MASS CONCENTRATION RANGE	0 - 1000 ug/m ³
RESOLUTION	1 ug/m ³
ACCURACY	±10 ug/m ³ (0 - 100 ug/m ³), ±10% (100 - 1000 ug/m ³)
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/m ³ (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)
MODBUS MODEL	Consumption: 50 mA max @ 24 Vdc, 80 mA max @ 24 Vac Interface: MS/TP, 2 wire RS-485, RTU Baud Rate: 9600, 19200, 38400, 57600, 76800 or 115200 (menu selectable) Address Range: 1-255 (menu selectable)
TRI-COLOR LED (OPTIONAL)	Good: Green (0 - 50 ug/m ³) Moderate: Yellow (51 - 150 ug/m ³) Poor: Red (151 - 1000 ug/m ³)
PM ALARM RELAY (OPTIONAL)	Contact Ratings: Form C (NO + NC), 2A @ 140 Vac, 2A @ 30 Vac Setpoint + Hysteresis: Programmable via menu Time Display: Programmable via menu
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/m ³ 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, overvoltage 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	White ABS, UL94-V0, IP30 (NEMA 1)
ENCLOSURE 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)
WEIGHT	150 gm (5.3 oz)
COUNTRY OF ORIGIN	Canada



MCERTS CERTIFICATION

The PMRMC series 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.

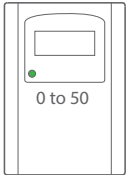
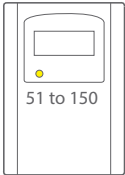
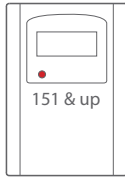
The MCERTS certification scheme was established by the UK's Environment Agency and is built around international and European standards to ensure high-quality environmental data monitoring. The SPS30 underwent laboratory and field tests and has been proven to fulfill the latest MCERTS and associated DIN EN 15267 European air quality standards. Compliance with the above-mentioned standards requires low intra-model variability ($\leq 5 \mu\text{g}/\text{m}^3$), 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.

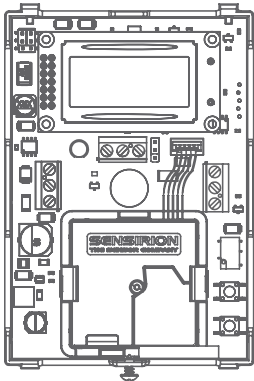
Website: <https://www.csagroupuk.org/services/mcerts/mcerts-product-certification/mcerts-certified-products/mcerts-certified-products-indicative-ambient-particulate-monitors/>

Certificate: https://www.sensirion.com/fileadmin/user_upload/customers/sensirion/Dokumente/9.6_Part particulate_Matter/Datasheets/Sensirion_PM_Sensors_Datasheet_SPS30_MCERTS-Certificate_2020.pdf

LED DISPLAY: AIR QUALITY INDEX VALUES

 <p>0 to 50</p>	 <p>51 to 150</p>	 <p>151 & up</p>
0 to 50: Good	51 to 100: Moderate 101 to 150: Unhealthy for Sensitive Groups	151 & up: Unhealthy
Tri-color system developed in relation to the EPA Air Quality Index as found at: https://airnow.gov/index.cfm?action=aqibasics.aqi		

WIRING INFORMATION

	TERMINAL	FUNCTION
	PWR COM OUT	+ 24 Vdc/24 Vac (HOT) Common Analog Output
	NO R. COM NC	Digital Output Digital Output Digital Output
	If BACnet® or Modbus Output Selected	
	B(+) A(-) SHLD	Network Output Network Output Network Output

ORDERING

PRODUCT	PMRMC Room Particulate Matter Sensor
LCD DISPLAY	C Concealed V Viewable
LED	X None L Viewable Tri-Color LED
RELAY	X None R Alarm Relay
OUTPUT	X Analog Output Only B BACnet® and Analog Outputs M Modbus and Analog Outputs

NOTE: Greystone Energy Systems, Inc. reserves the right to make design modifications without prior notice.

ACCESSORIES	PMFRSM Replaceable sensor module and wire harness
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PART NUMBER

PMRMC