



PM01

PARTICULATE MATTER DETECTOR

The Futuristic PM01 Particulate Matter Detector is equipped with a clear 2-line 4-digit LED display, this instrument provides accurate readings of particulate matter concentrations, including PM1, PM2.5, and PM10, in various environments such as indoor, outdoor, and ambient settings.



Utilizing a laser and optical sensor, the PM sensor measures light scattered from particles passing through the laser beam. The optical sensor transforms this scattered light into electrical signals, which are then processed to yield mass measurements of PM1, PM2.5, and PM10. The PM Detector's 2-line display allows simultaneous monitoring of PM2.5 and PM10, or it can be configured to display PM1 and PM10 together as per field requirements.

FEATURES

- LED Display: Clear 2-line 4-digit LED display for easy readability.
- Measurement Range: Accurately measures PM1, PM2.5, and PM10 concentrations.
- Dual Analog Output: 4-20mA analog output for integration with BMS/PLC systems.
- Alarm Conditions: Individual LEDs for PM1, PM2.5, and PM10 alarm conditions, triggered by programmable set limits.
- Buzzer Alarm: Integral field-programmable buzzer alarm for audible alerts.
- Communication Options: Optional RS 485 Modbus RTU protocol communication for enhanced connectivity

PARAMETERS

Measuring Principle	Laser and optical sensor to measure light scattered from particles passing the rough the laser beam
Measuring Range PM 1	0-1000 ug/m3
Measuring Range PM 2.5	0-1000 ug/m3
Measuring Range PM 10	0-1000 ug/m3
Display	2 line, 4 digit each, 0.56" height 7 segment red LED display (Field selectable combination of PM 2.5 & PM 10 or combination of PM 1 & PM 10)
Sensor Working Life	> 4 years @22-25deg C & 50-75%RH for general applications (or highly contaminated rooms & smoking rooms with continuous readouts > 400ug/m3, recommended change of sensor every 2 years)
Accuracy	Max of ± 15 ug/m3 and $\pm 15\%$ reading @25deg C and 50%RH
Analog Outputs	2X4-20 mA outputs, 1 each for PM 2.5 & PM 10 or alternatively 1 each for PM 1 & PM 10
Alarm (Audio)	In Built Buzzer Alarm, freely programmable from front keys with acknowledgement key & buzzer enable/disable feature
Alarm (Visual)	Poor LED for PM 1 & Unhealthy LED for PM 1
	Poor LED for PM 2.5 & Unhealthy LED for PM 2.5
	Poor LED for PM 10 & Unhealthy LED for PM 10
	(Programmable Set Limits for Each LED from front keys)
Communication	RS 485 Modbus RTU protocol communication
Warm-up Time	30 seconds for first reasonable readings, 2 minutes for accurate readouts as per specifications
Power Supply	24 VDC, 350 mA
Operating Conditions	Temperature : 0..50 °C Humidity : 5..95% RH (non condensing)
Enclosure Type	Wall Mounting Type IP54 Rating compliant ABS Plastic Body with wall Bracket accessory
Enclosure Size	120 (W) x 80 (H) x 60 (D) mm



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