

Millennium Smoke & Oil Mist Detector

APM - Airbourne Particle Monitor

The Millennium Smoke & Oil Mist Detector (Air Particle Monitor - APM) is the industry's only infrared optical monitor that is certified for use in hazardous areas for constant, reliable monitoring of ambient air for products of combustion such as smoke, oil mist, carbon, dust and ash.

This unique product is the **ONLY** detector of it's kind that's certified explosion proof — ideally suited for a wide variety of industrial applications. Proven installed base includes Class 1, Division 1 areas requiring accurate air particle monitoring such as air ducts, battery rooms, engine rooms, compressor stations, offshore living quarters and HVAC air intake points, to name just a few.



- Explosion-proof, Class 1, Division/Zone 1 Approved
- 2nd Generation Infrared Optical Sensor Technology
- Operating Temperature Range -40°C to +75°C
- 4-20mA Analog & Relay Output Configurations
- Remote Sensor Separation - 600m (2000ft) And A Variety of Duct Mount Assemblies
- Intuitive Menu System, Zero in 60 Seconds From Start to Finish
- Field Adjustable Sensitivity Settings
- Not Affected By High Volume Air Velocity
- Multi-language, Bright Scrolling LED Display Allows Operators To Fine Tune At Installation Site

The advanced sensor technology has several key performance features: it utilizes a powerful, single-beam IR lamp with no mirrors to ever become contaminated — sensor performance is not effected by high volume air velocity — it's field adjustable zero level of obscuration and multiple sensitivity settings allows for fine tuning within specific application conditions to optimize performance and eliminate false alarms — and it comes available with multiple installation options to suit any application.

The Millennium Series controller is an innovative line of explosion-proof industrial detectors. It's microcontroller provides fast, accurate and continuous monitoring in hazardous area environments. The 4-20 analog signal and Form 'C' mechanical relays easily integrate into industrial safety systems. The compact controller with power disconnect switch simplifies

maintenance, a scrolling LED simplifies calibration and configuration, meter jacks for easy current loop monitoring and optical self-test. The industrial micro-controller based circuits are conformally coated for mold and humidity protection.

Net Safety Millennium Smoke and Oil Mist Detector is market proven within a variety of specialized applications worldwide, providing superior performance and effectiveness.

APPLICATIONS

Gas Compressor Stations, FSPO/Tanker Hull Chambers, Gas Turbine Engine Enclosures, Marine Battery Rooms, Engine Rooms, Duct Monitoring, Chemical Storage, Industrial Manufacturing, and HVAC Systems.

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Specifications

MILLENNIUM APM SENSOR SPECIFICATIONS	
Temperature Range	-40°C to +75°C (-40°F to +167°F)
Weight	Aluminum: 0.9 Kg (2.0 lbs.) Stainless Steel: 1.4 Kg (3.0 lbs.)
Enclosure Material	Anodized / Powder coated aluminum (optional stainless steel)
Certifications	CSA NRTL/C — Class I, Division 1, Groups B, C and D, Ex d II B+H2 T5. ATEX — Ⓜ II 2 G Ex d II B+H2 T5 IEC Rating — Ex d IIB+H2 T5 (Class I, Zone 1 Group IIB+H2 T5) Temperature code T4A Enclosure Type NEMA 4X
Sensor Warranty	2 Years

MILLENNIUM TRANSMITTER/CONTROLLER	
Operating Voltage Range	10.5 to 32.0 V dc
Power Consumption	Nominal 74 mA, 2.0 W — Maximum 132 mA, 3.24 W @ 24 Vdc (with APM Sensor)
Operating Temperature and Humidity Range	Operational -50°C to +85°C (-58°F to +185°F) / Certified -40°C to +85°C (-40°F to +185°F) 0 to 100% Relative humidity, non-condensing
Output(s)	Analog 4-20 mA: Max. loop impedance of 800 Ohms at 32 V dc or 150 Ohms at 10.5 V dc. Isolated or non-isolated loop supply Relays: 3 Form C contacts for Fault, Window Condition, and Smoke Status. Rated 5 Amp at 30Vdc / 250 Vac Selectable energized/de-energized, latching/non-latching
Enclosure Material	Powder coated Copper Free Cast Aluminium (316 Stainless Steel Optional)
Weight	3.2 Kg (7.0 lbs)
Electronics Warranty	3 Years
Alpha-numeric display	Bright 8-digit LED scrolling type display - English, French and Spanish languages available
Unique Features	Local Power Switch and Meter Test Jacks on faceplate for easy maintenance. Easy to read instructions for one-person, non-intrusive calibration.
Certifications	CSA NRTL/C — Class I, Division 1, Groups B, C and D IEC Rating — Ex d IIB T5 Temperature code T5 Enclosure Type NEMA 4X

ORDERING INFORMATION

MLP-AR-APM-OP-SEP 4-20mA Analog and Relay Outputs, APM Sensor with Separation Box Included

ADDITIONAL APPROVAL : -X (ATEX/IECEx)

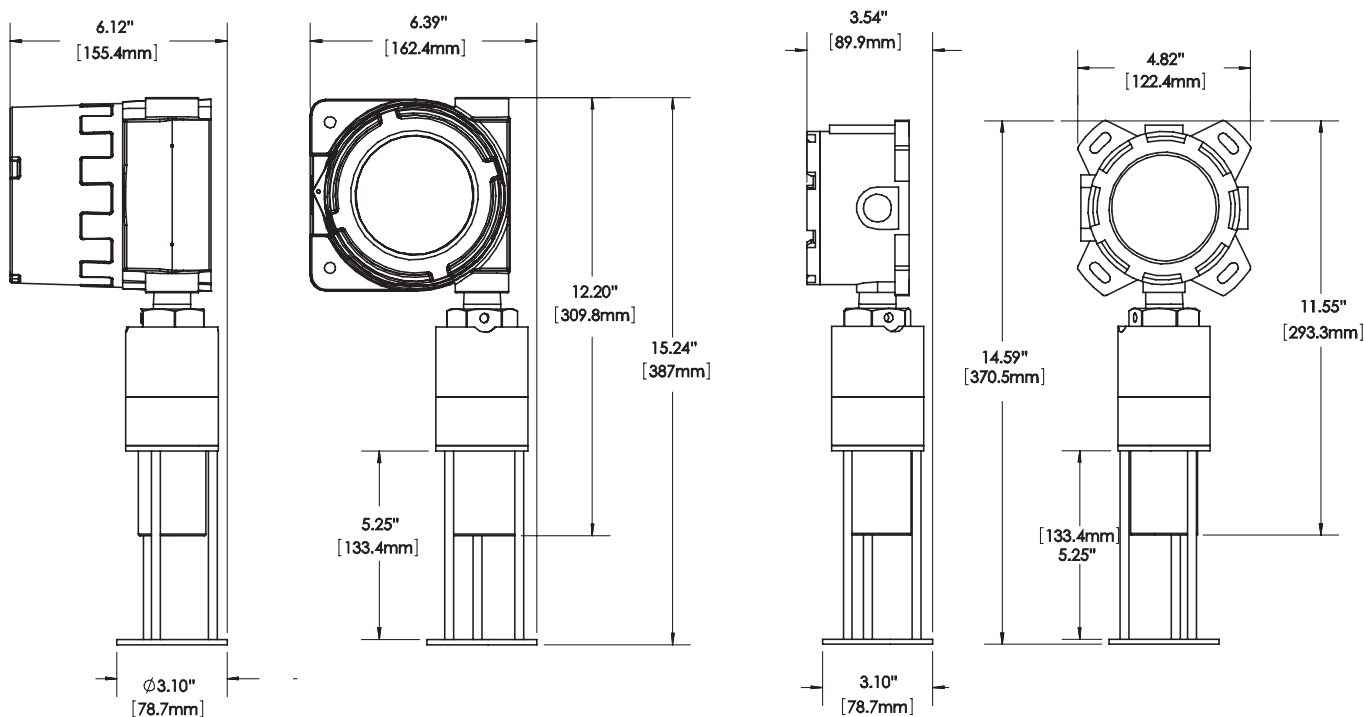
ENCLOSURE MATERIAL: Stainless Steel (-S) [Aluminum is Standard]

Ordering Matrix Example:

MLP-AR-APM-OP-SEP-X-S (Transmitter - Output - Sensor - Separation Box - Additional Approval - Optional Enclosure Material)

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Specifications con't - Accessories



ACCESSORIES

UN-MK-31	1" Pipe Mounting kit - Stainless steel
UN-MK-32	2" Pipe Mounting kit - Stainless steel
UN-MK-33	3" Pipe Mounting kit - Stainless steel
SSK-51	1" Pipe Mounted Sun shade kit/rain guard, stainless steel - includes UN-MK-31
SSK-52	2" Pipe Mounted Sun shade kit/rain guard, stainless steel - includes UN-MK-32
SSK-53	3" Pipe Mounted Sun shade kit/rain guard, stainless steel - includes UN-MK-33
UDM-001	Universal duct mount assembly with 1m inlet sampling pipe, stainless steel
UDM-002	Universal duct mount assembly with 1.5m inlet sampling pipe, stainless steel
UDM-003	Universal duct mount assembly, stainless steel
UDM-EX1	1M extension - for use the UDM-001 & UDM-002, stainless steel
UDM-EX2	1.5M extension - for use the UDM-001 & UDM-002, stainless steel

HEADQUARTERS:
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