

PARTAC

TACTICAL PARTICULATE PROFILER

Met One's PARTAC Tactical Particulate Profiler (P/N 102686) is a robust size-selective particulate sampler used as an NBC agent alarm trigger, an ambient monitor for public and workplaces, and as a ground-truth reference for the verification of standoff particulate detectors. The PARTAC simultaneously monitors airborne particle counts in up to 8 user-selectable channels.

The PARTAC can be programmed to detect the particulate sizes of toxic NBC agents proven to be aspirated deeply into the lungs. Measuring the particulate counts in real-time, the PARTAC can be used to trigger alarms and activate additional samplers and instrumentation. Its compact size, low power consumption, and continuous duty capability allow it to perform this duty continuously in all environments.

As an ambient monitor, it provides the user with a real-time count of particulates in public or workplaces. Its low noise operation allows it to be placed in work environments without disturbing the personnel in the area being monitored. The PARTAC can also be placed in areas where work is being contemplated to measure the background levels before work begins.

The PARTAC sensor uses a laser diode to illuminate the individual particles drawn into the PARTAC through the sampling inlet by the integral pump and mass flow control system. The laser light scattered at right-angles to the incident light beam is collected and focused onto a photodetector using a high-grade elliptical reflector. The signal strength is detected by state-of-the-art electronics and converted to a set of size values for each detected particle. These counts are classified into the size ranges set by the customer prior to installation, at a rate of up to once per second.



FEATURES:

- **NBC Agent Trigger**
- **Ambient Monitor for Public and Work Places**
- **Rugged, Reliable, Affordable**
- **8 Channels, User Selectable**
- **MODBUS or Serial Communication**
- **Sheath Air Technology**

Operating Principle	Counts individual airborne particles utilizing scattered laser light.
Performance	
Particle Size Range	8 Channels, programmable in the range 0.3~m -10~m
Concentration Range	0- 9,000,000 particles per cubic foot (317,700 particles/L)
Accuracy	±10%, to calibration aerosol
Sensitivity	0.3 um @ 2 to 1 peak to valley, 2 to 1 SIN
Flow Rate	1.00 LPM
Sample Time	1 second to 1 hour
Calibration Standards	Factory calibrated in accordance with ASTM F328 and ASTM F649.
Electrical	Laser Diode, 35 mW, 780 nm
Light Source	6-15V DC (12V DC with flow system)
Power	Average: 140mA (400mA with flow system) Max: 190mA (450mA with flow system) Meets or exceeds CE, ISO, ASTM and JIS international certifications.
Certifications	
Communication	
Standards	RS-232C full duplex or RS-485 selectable full or half duplex
Protocol	Serial (comma delimited ASCII) or MODBUS RTU
Settings	9600 Baud rate, 8 Data Bits, No Parity, 1 Stop Bit, No Flow Control Built-in MODBUS registers for laser life time, laser fault, pump life time, pump fault, & filter fault detection.
Physical	
Size	Length: 10.5" (26.7 cm); Diameter: 4.00" (10.2 cm)
Weight	4.0 lb (1.8 kg)
Mounting	Met One's "QuickMount" to 3/4" IPS vertical pipe stub
Environmental	
Operating Temperature	-10° to +60° C
Storage Temperature	-40° to +80° C

Specifications are subject to change at any time.

