

DMP PM Monitor

How it works

The DMP (Dust Master Pro) realtime particulate monitor uses laser technology for simultaneous real-time PM monitoring of up to 5 PM fractions: PM10, PM4, PM2.5, PM1 and Total PM.

The advanced pump system provides accurate data with quiet operation due to consistent 5LPM flow rate and pulsation dampening technology.

The quick deploy design, graphical display, and dedicated keypad with intuitive menu simplifies on-site operation, while the new Visual Master Pro Software gives remote users unprecedented capabilities.



Weather & Meteorological Sensors

The DMP PM Monitor has Plug 'n' Play integration with up to 3 Lufft Meteorological Sensors, which means no additional costly data loggers for your weather monitoring requirements. The DMP has the capability to record up to 47 distinct parameters, including:

- Wind Speed and Direction
- Air Temperature
- Relative Humidity
- Barometric Pressure
- Precipitation Type, Intensity and Quantity
- Solar Radiation
- Lightning Strikes
- and more.

Perfect for:

- Governments & Authorities
- Consultants & Engineering
- Civil & Construction
- Mining & Quarries
- Logistics, Ports & Terminals.



- Manufactured in Australia with premium quality and service you can trust

- PM10, PM4, PM2.5, TSP and more
- Advanced pump system with high 5LPM flow rate and quiet operation

- Automatic Field Calibration Mode - with a BIOS - makes calibration in the field simple and easy
- Capacity to hot-swap optical engines to minimise instrument downtime
- Mains, battery or solar power options
- In-built data logging capability
- Remote data access via modem
- Easy to set alarm capabilities through SMS messaging to mobile phone, external siren or visual beacon.

Visual Master Pro Data Software

VMP Data Logging Software (valued at \$1,799) is included with your DMP purchase. The remote interface software requires no coding and makes it simple for both non-technical and expert users to access data and adjust instrument setting at an advanced level.



Proudly Manufactured in Australia by TES

Developed specifically for outdoor monitoring in Australia's harsh conditions, the DMP PM Monitor is built for ease-of-use, robustness and suitability for a wide range of applications. Since 2008, we have continually strived to make it the highest quality instrument on the market. With years of field operation and a strong positive response from our users, we are proud that the TES range has become a leader in monitoring, construction, mining and industrial monitoring applications.

DMP PM MONITOR			
Particle Size Range	0.2um to 18um	Relay Contacts	3 relay contacts (NC/COM/NO), Alarm 1 set point, Alarm 2 set point, Instrument fault alert, Max. contact switching 5A for Alarm Capabilities
Dust Measurement Range	0.001 to 10mg/m ³ (internal dilution available)	Alarm Capabilities	SMS messaging to mobile phone, external siren, visual strobe light and email alerts. Carrier charges may apply.
Simultaneous PM Fraction Measurements	Simultaneously measures all 3 popular PM fractions; PM2.5, PM10 and Total PM with option to add PM4 and PM1. Other PM fractions available upon request.	Enclosure Type	NEMA4 / IP63 rated, excluding heated inlet and exhaust Display Type: 128 x 64 bit low energy graphical LCD display
Measurement Resolution	0.001mg/m ³ (1ug/m ³)	Keypad / User Interface	12 button function with keys
Flow Rate Flow Accuracy Single Pump System	5.0 litre per minute (default), user adjustable from 3 to 8 lpm Precision automatic flow control to within +/- 2.5% With internal solenoid valve to control internal purge cycle every 30 minutes as standard	Tripod or Post Mounting	May be easily mounted on a 50mm diameter post or on a TES transportable heavy duty tripod
Barometric Pressure	Built in barometer for ambient static pressure measurements for precise flow control	Heated Inlet	Precision heated inlet with user-selectable RH control (~35-45% RH), optimised for accurate measurements and low-power, solar-powered operation.
Data Download	Data is polled or, upon special request, automatically and continually pushed to your server. Ability to fully synchronise data with the use of Visual Master Pro Software	Calibration Method	Fully calibrated to ISO12103-1 international standards by TES
Gravimetric Filter Sampling	Integrated filter holder, 37mm filter cartridge (optional)	Power Options	<p>Mains Power - Operates from 80 to 260 VAC and is fully weatherproof.</p> <p>Battery Power - Standard or Portable. Includes rechargeable battery, regulator and battery box. 'Standard Battery System' provides approx 210 hours of operation with the inlet heater OFF or 70 hours with the inlet heater ON.</p> <p>Solar Power System provides continuous operation based on average of >4.5 hours of sunlight per day, and will continue for up to 3 days no sun. System includes Solar Panel & Stand, Battery & Battery box, Regulator</p>
Data Logging Interval and Internal Memory	Fully user adjustable from 5 to 999s Ability to store over 2 years of date-stamped data captures at 10-minute intervals from a single PM channel. Actual storage capacity varies depending on the specific application's parameters.		
NIOSH 5040 Capable Sampling	Available, using optional 37mm filter cassette	Weight	System 7Kg Heated inlet 1.5Kg
Web Based Data Collection	Optional. For more information, contact tes@thomsongroup.com.au	Dimensions - System	Width 300mm Depth 200mm Height 350mm
Meteorological Inputs	Up to 3 Lufft instruments can be integrated - each with multiple channels including wind speed, wind direction, humidity, temperature, precipitation, barometric pressure, solar radiation, evaporation, sigma theta, lightning & more.	Dimensions - Heated Inlet	Length 500mm Width 48mm
Digital Inputs/Inputs	3 optically isolated inputs, voltage free 1 x RS232, 2 x Analogue (0 to 2.5 volt standard, 0 - 5 volt optional, or 4-20mA [jumper selectable]), 2 x Counter Channels, 2 x PT100 & 1 x RH sensor included.	Operating Conditions	-10 to 50°C temperature range 0 to 95% humidity range
Communications	1 x RS232 digital port Analogue Modbus TCP (optional)	Annual Calibration	<p>TES' unique design gives you a low-cost for calibration. Instead of returning the entire monitor, you can choose to return only the optical engine for annual calibration.</p> <p>To minimise downtime, a newly-calibrated optical engine is sent to you with a new pump and a replacement internal filter. You replace the optical engine and perform temperature, pressure and flow calibrations and return the replaced parts to us. Alternatively, TES can perform the entire calibration.</p>
Outputs	3 x Analogue Outputs (0 to 2.5 volt standard, 0 - 5 volt optional, or 4-20mA [jumper selectable]), 1 x RS232 Output, Ethernet Module Optional, 3 x Solid State Relays for Audio and Visual Alarms		