



## DUST MONITORS

Dual Pass Transmissometer Dust Monitor BI 7000 is an optical instrument designed to measure the concentration of dust or particulate matter suspended in exhaust gas passing through a duct or stack of industrial process.

Dust Monitor uses the double pass transmission measurement technology. Light beam emitted from the transmitter passes across the stack to a reflector, which then return the light to the transceiver where the intensity of the received light is measured.

When calibrated against standard reference measurements, the amplitude of this signal relates directly to the particulate concentration in the stack, and can be used to present a reading in  $\text{mg}/\text{m}^3$ . The advantage of is that it is significantly less susceptible to drift with time, temperature or dirtying optics, than traditional dust monitors.

The BI-7000 has no moving parts and with SS body is of rugged design and has an excellent reliability record. With minimum maintenance and excellent performance BI-7000 dust monitor is best suited for dust concentration measurement.

Transmitter are supplied with an air purge facility which when connected to a high volume source of instrument quality air will resist particle deposition on the lenses for accurate measurement.

## SPECIFICATIONS :

Path Length	1 – 20 m flange to flange separation
Measuring Range	0 –1000 $\text{mg}/\text{m}^3$ user selectable
Units of measurement	$\text{mg}/\text{m}^3$ , $\text{mg}/\text{Nm}^3$ , % Opacity
Accuracy	$\pm 1\%$ relative to the maximum range
Resolution	$1\text{mg}/\text{m}^3$
Drift with Temperature	$\pm 1\%$ over any $20^\circ\text{C}$ in the operating range
Operating Wavelength	510 – 540 nm Green LED
Stack Temperature	$300^\circ\text{C}$
Power Supply	110 – 230 VAC
Air Supply	5 – 10 $\text{m}^3/\text{hr}$ Flow & 500 mbar Pressure. Must exceed maximum stack pressure.

### Features:-

Direct measurement in exhaust flue gas flow – In situ  
 Dual Pass for accurate reading  
 Unit programmable in  $\text{mg}/\text{m}^3$ ,  $\text{mg}/\text{Nm}^3$ , % Opacity  
 RS 485, MODBUS protocol  
 Rugged design with no moving parts so low maintenance  
 Green LED source for long lifetime stability  
 IP65 rating Enclosure  
 The best price performance on the market – designed with user requirements foremost in mind