



MIP LM 3188 LASER DUST MONITOR

LASER LIGHT SOURCE-ULTIMATE WAVELENGTH STABILITY, EXCELLENT COLLIMATION AND HIGH SENSITIVITY

- Minimum optics needed - less maintenance
- Optimal for stacks up to 20 meters
- No moving parts-minimal maintenance
- Large operation range (0 ... 90 %)
- Good stability and reliability

ADVANTAGES OF USING A LASER LIGHT SOURCE

- Measuring path up to 20 meters possible, due to a narrow and intense laser light beam.
- Excellent beam collimation (0,04 °) - no need to use lenses or mirrors in the transmitter making the system reliable and simple
- Standard wavelength guarantees long-term accuracy and stability
- The analyser can be transferred to another location without factory calibration.
- The alignment of the beam is easy because the beam is narrow.

PRINCIPLE OF OPERATION

The measuring system is based on the single pass principle. The light beam crosses the measuring section once only and the receiver unit measures and evaluates the light beam's weakening caused by the dust content. The optical value will be shown as opacity % on analogue display and digital display. Manual-calibration check can be done by using optical filter.

FEATURES OF THE MONITOR UNIT

- 4 operator selectable measuring ranges
- Analogue and digital display
- Settable alarm relay
- 0 ... 1 V DC and 4 ... 20 mA current outputs

TYPICAL APPLICATIONS

- Power plants
- Cement factories
- Tunnels



MEASUREMENT FUNCTIONS AND RANGES

Range switch position	D-value	Opacity %	Massrange *) mg/m ³ Dist. 1 meter	Massrange *) mg/m ³ Dist. 2,5 meter	Massrange *) mg/m ³ Dist. 5 meter
1	0...0.03	0...6.7	0...24	0...9,6	0...4,8
2	0...0.1	0...20	0...80	0...32	0...16
3	0...0.3	0...50	0...240	0...96	0...48
4	0...1.0	0...90	0...800	0...320	0...160
Option:	0...3.0	0...99	0...2400	0...960	0...480

(* Depends on the size and density of the particles, values given with the size of ave. 1 µm and 1 kg/dm³)

MONITOR UNIT

Communication	Analogue, Windows-base monitoring software as option available
Display	Analog display for optical density, 0 ... 100 % linear scale Digital display, 3-digit LCD for mg/m ³
Controls	Range switch, calibration and alarm settings
Alarms and mode indicators	Relay 115 or 230 VAC, 1A max, with led indicator
Outputs/Inputs	Current 4 ... 20 mA for real-time D-value/mg/m ³ Voltage 0 ... 1 V DC for real-time D-value/mg/m ³
Environmental	Ambient temperature 0 ... 70° C, Power 115/230 VAC, 14 VA
Dimensions	Size: 180 x 215 x 130 mm, weight 1,5 kg

TRANSMITTER

Light type	Semicond laser
Wavelength	655 nm, visible light
Ambient temperature	-20 ... +60° C
Purge flow requirement	Min. 10l/min
Dimensions	125 x 80 x 145 mm, weight 1,0 kg

RECEIVER UNIT

Detection	Optically matched semicond. detector, Ø 50 mm
Power	From monitor unit
Ambient temperature	-20 ... +80° C
Purge flow requirement	Min. 30l/min
Dimensions	170 x 110 x 125 mm, weight 1,25 kg