

LaserDust™ MP, LP and XLP Monitors



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NEO Monitors LaserDust™ Medium Path (MP), Long Path (LP), and Extra Long Path (XLP) Monitors are compact, optical dust monitors for true continuous in-situ measurement of dust concentration or opacity. The monitors are designed for measurement across pipes, stacks, and ducts with typical path lengths of 0.5 – 10 m LaserDust™ Monitors use a transmitter/ receiver configuration to measure the dust concentration along the optical line of sight. Our true non-contact approach is superior to point type dust meters.

Features	Applications	Customer benefits
<ul style="list-style-type: none"> • Response time down to one second • Suitable for high temperatures • Cross stack measurement up to 10 m • High dynamic range (mg or g with one instrument) • Scattered light detection for high sensitivity • Non-contact measurement • No moving parts 	<p>LaserDust™ the ideal choice for obtaining the best measurement data. Monitors are most typically used in:</p> <ul style="list-style-type: none"> • Aluminum smelters and steel works • Waste incinerators, power plants or cement kilns • Scrubber and filter optimization • Bag house filter surveillance • Dust explosion prevention 	<ul style="list-style-type: none"> • In-situ monitoring • Highly reliable real time analyzer • Low maintenance cost • Reduce emission to the environment • Easy to install and operate • Reduce daily operation costs • Optimize process • Well proven measurement techniques

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Technical Data

Specifications	Ratings	Calibration:	Recommended every 12 months (against gravimetric analysis)
Process temperature: Above dew point up to 700 °C	Input power supply unit: 100 – 240 VAC, 50/60 Hz, 0.36 – 0.26 A	Validation:	Integrated zero and span check
Process pressure: 0.1 – 1.5 BarA (optional windows for up to 5 bar)	Output power supply unit: 24 VDC, 900 – 1000 mA	Approvals	IECEX/ATEX zone 2: II 3 GD T100 °C Ex nA nC II T5
Detection limit: < 0.5 mg/Nm ³ (in scattered mode)	Input transmitter unit: 18 – 36 VDC, max. 20 W	Dimension and weight	Transmitter unit: (MP, LP, XLP) 200 mm (plus 100 mm for purge unit) x 270 mm x 170 mm, 6.2 kg
Measurement range: min. 0 – 15 mg/Nm ³ (scattered mode), particle size >1micron max. 0 – 10.000 mg/Nm ³ (transmission mode), particle size >1micron	4 – 20 mA output: 500 Ohm max. isolated	Transmitter unit:	(Ex version) 200 mm (plus 100 mm for purge unit) x 270 mm x 310 mm, 7.9 kg
Resolution: 0.05 mg/Nm ³	Relay output: 1 A at 30 V DC/AC	Receiver unit (MP):	300 mm (plus 100 mm for purge unit) x 120 mm x 120 mm, 3.9 kg
Optical path length**: MP: 0.5 – 3 m LP: 3 – 6 m XLP: 6 – 10 m	Safety	Receiver unit (LP):	380 mm (plus 100 mm for purge unit) x 120 mm x 120 mm, 5 kg
Response time: 1 – 2 sec Pulse mode: 50 ms	Laser class: Class IIIb according to IEC 60825-1	Receiver unit (XLP):	410mm (plus 100 mm for purge unit) x 270 mm x 170 mm, 8 kg
Environmental conditions	CE: Certified	Power supply unit:	180 mm x 85mm x 70 mm, 1.6 kg
Operating temperature: -20 °C to +55 °C	EMC: Conformant with directive 2014/30/EU	** Other OPLs on request	
Storage temperature: -20 °C to +55 °C	Installation and Operation	Protection classification: IP66	
Inputs / Outputs	Flange dimension: MP: DN50/PN10 LP: DN80/PN10 XLP: DN150/PN10 Optional ANSI or other sizes on request	Analog output: 4 – 20 mA current loop (concentration, transmission)	
Digital output:	Alignment tolerances: Flanges parallel within 1.5°	Digital output: TCP/IP, MODBUS, Optional fibre optic	
Relay output:	Purging of windows: Dry and oil-free pressurised air or gas, or by fan	Relay output: High dust-, Warning - and Fault relays (normally closed-circuit relays)	
Analog input:	Purge flow: 50 – 100 l/min (application dependent)	Analog input: 4 – 20 mA process temperature and pressure reading	
			Maintenance
			Visual inspection: Recommended every 6 – 12 months (no consumables needed) Remote instrument check by Ethernet connection or external modem possible

* NEO Monitors reserve the right to change specifications without prior notice

Your local distributor:



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