

LaserDust™ MP, LP and XLP Monitors



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

LaserDust™ MP, LP and XLP Monitors

Technical Data

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

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

Your local distributor:

BERNT
MESSTECHNIK

40472 Düsseldorf
Wahlerstr. 12
Tel: +49 211 6696998-0
info@berntgmbh.de

81245 München
Petzetstr. 8
Tel: +49 89 8110330
www.berntgmbh.de

76646 Bruchsal
Werner-von-Siemens-Str. 2 - 6
Tel: +49 7251 3084436



neomonitors

NEO Monitors as • A subsidiary of Norsk Elektro Optikk

Prost Stabels vei 22 • N-2019 Skedsmokorset, Norway • Phone +47 67 97 47 00 • www.neomonitors.com