

Single Pass Particulate Monitor

(With DDP) Model : DSL - 240 / 230



Protects **Personnel, Plant
& Assets**

OFFERS AN IDEAL SOLUTION TO YOUR EMISSIONS MONITORING OR PROCESS CONTROL REQUIREMENT



SINGLE PASS PARTICULATE MONITOR, A OPTICAL BASED INSTRUMENTS DESIGNED FOR MONITORING DUST AND PARTICULATE CONCENTRATIONS (mg/m^3) IN THE EXHAUST GAS OF INDUSTRIAL COMBUSTION OR AIR FILTRATION PROCESSES

TECHNOLOGY

These continuous particulate monitors use either the standard obscuration opacity technique with zero and span checking, or the innovative Dynamic Detection Principle (DDP) technique, which eliminates the need for zero and span checking through an immunity to drift with dirty optics.

These reliable particulate monitors have no moving parts and are of rugged design, both the transmitter and receiver are supplied with an air purge body, which when connected to a high volume source of clean air will resist particle deposition on the lenses.

The Single Pass Models (DSL-240/230) use the standard transmission measurement technique (transmitter/receiver arrangement) in which a light beam emitted from the transmitter passes across the stack to a receiver, which then measures the intensity of the received light. Increased particulate or smoke density in the stack gas attenuates the transmitted light and causes the intensity of the received light to fall. When calibrated against standard reference measurements, this reduction in intensity can be used to calculate the particulate concentration and present a reading in mg/m^3 .

DSL SERIES ORDERING DETAILS

X X X X

A : Aluminium air-purge heads
S : Stainless steel air-purge heads

D : 24 V DC powered
A : 90-260 V AC powered

N : No Controller
W : Wall mounted Controller
R : Rack mounted Controller

L : Short path length version (0.5 - 5m flange to flange separation)
S : Long path length version (3 - 20m for single pass, 2.5 -12m for double pass)

DSL SERIES MODELS

240/230 : Particulate monitor with DDP (single pass)
340/330 : Particulate monitor with DDP (double pass)
460 : Particulate monitor with Auto-calibration

APPLICATIONS

- Boilers, Diesel engines
- Wood burners, Furnaces
- Electrostatic precipitators
- Filter bag houses, Incinerators

HNL Systems Pvt. Ltd.

Administrative & Sales Office: 25/N, Laxmi Industrial Estate, New Link Road, Andheri (W), Mumbai – 400 053, India. Tel : +91 22 4295 2180 / 81.

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Single Pass Particulate Monitor

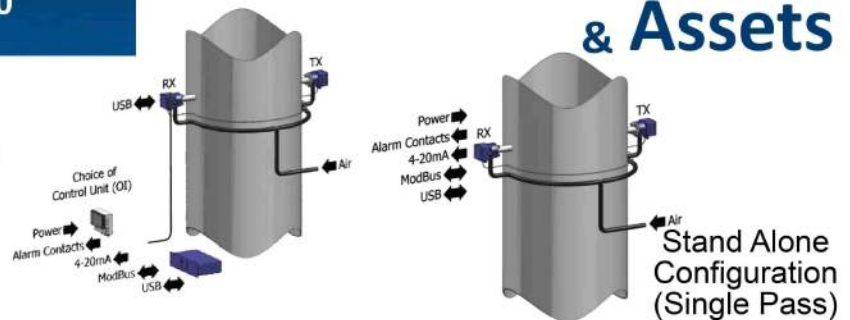
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CONFIGURATION OPTIONS

Configured with controller : Wall or rack mounting



SPECIFICATIONS

Type	Field / wall mounted
Features	Optical transmission, selectable range SP (0.5 - 5 meters) and LP (3 - 20 meters)
Detectable gases / parameters	Opacity / PM
Electronics / processor	Micro-controller
Power supply	24 V DC for DSI sensor (230 V AC / 50 Hz for Receiver)
Display / alarm	Graphic LCD / Integral visual alarm or remote alarm
Output	Relay, 4-20 mA analog, RS 485
Sensor technology	Optical
Range resolution and accuracy	%, mg/m ³ / Accuracy: ± 2%
Response time	Instantaneous
Operating temperature	(-) 20 - 55 °C
Sampling / input	In situ
Housing / case	SS 316 powder coated & ABS plastic for receiver
Optional accessories	Mounting flange, Laser alignment tool, Air purge blower kit, Reference filters for routine
Applications	Opacity monitoring, particulate monitoring
Industries	Boilers, OEM marine systems, diesel engines, other industrial and combustion processes, incinerators

OTHER SPECIFICATIONS

Measurement performance	
Path length (flange to flange)	0.5 - 20 m (flange to flange separation)
Measuring range / damping	0-1000 mg/m ³ (user selectable), damping:1- 60 s (selectable)
Drift with temperature	± 2 % (over any 20 °C in the operating range)
Operating wavelength	510 - 540 μm (green LED)
Power & air requirements	
Air supply volume	5 - 60 m ³ /h (optimum : 40 m ³ /h)
Air supply pressure	500 mbar (must exceed maximum stack pressure)
Air supply fitting	1" BSP threaded aperture in each (air - purge Head)
Cable and wire : Cable type	6 cores for TX/RX Interconnection (screened multi-core)
	4 cores for Controller/RX Interconn. (screened multi-core)
Terminal connections wire size	28-14 AWG
Serial comm. interface options	1. Modbus RTU (on terminals in Controller or Transmitter)
	2. Internal USB (Controller), External USB (Receiver)
	3. ProfiBus, DeciceNet, Ethernet etc. on request
Physical specifications	
Ingress protection-TX/RX heads	IP 65 (for external use)
Regulatory compliance	89/336/EEC (electromagnetic radiation), 73/23/EEC (low voltage)
Dimensions	250 X 200 X 100 mm

Note : Specifications and Features will vary with application. Due to HNL's commitment to research, design and product improvement, specifications are subject to change without notice.

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