Concept OPL 100S

Smoke Density /Opacity Monitoring Systems

- Opacity
- Optical Density
- Dust (mg/m³)

- Double pass technology
- Dual outputs and alarms
- Push button calibration & testing
- Total system package
- Complete range of accessories
- Optional oxygen sensor output
CONTROL UNIT

Enclosure: IP 65 Weatherproof
Weight: 1.8kg
Ambient Temperature: -20 to +50 Deg C
Power Supply: 120 or 230v, 50/60Hz, 125va
Display: Alphanumeric, two line x 16 character x 4mm LCD, backlit
Top Line Display: Opacity %, resolution 0.1%
Lower Line Display: Selectable—oxygen, lens dirt %, alarm and system status, dust (mg/m3)
Operator Indicating LED's: Power, Alarm active, Setup mode, Opacity autozero in progress
Output—analogue: Dual 4 –20mA output channels with selectable outputs
  i) Linearised Opacity %, scaleable span 10-100% opacity
  ii) Optical Density, scaleable span 0.05—2.0
  iii) Quantitive (mg/m3), scaleable span 10 - 500mg/m3
Output Signal Averaging: Standard: 1—20 seconds   EPA version: 1—60 minutes
Outputs—Relay: Four (4) programmable SP-NC, 0.5A at 24 vdc (50vac/30vdc maximum)
Alarms: Transmissometer Fail, Service Mode, lens Dust High, High Emissions, probe fail
Control Features: Manual Or automatic lens dirt compensation

OPTICAL SYSTEM

Technology: Double pass transmissometer using high power LED light source with electronic light modulation
Enclosure: IP65 weatherproof
Weight (total): 2.5Kg transceiver, 0.8Kg reflector
Installation: Flange mount purge modules—50NB flange with 4 x 12mm holes on 100pcd
Path length: 300mm to 400mm
Lens Protection: 38mm air hose connection for air blower (Optional 10mm plant air hose connection kit).
Control Features: 4—20mA signal testing sockets at stack location, push button calibration.
Ambient Temperature: -10 to +55°C
Process Temperature: Up to 250°C standard (refer factory for higher temperatures)
Ambient Light Immunity: Nil effect from sunlight or artificial light sources.
Accuracy: Less than or equal to +/-2% opacity
Special Response: 515 to 585 nm, less than 10% of peak response outside 400 to 700nm
Angle of View and Projection: <4.0° from optical axis
Response Time: <2 seconds, to 90% of actual value
Zero and Span Calibration: Push button calibration to clear stack (0%) and blocked stack (100%) opacity.
Cable Data: Standard: 2 metre flex with quick release plug. (Maximum 120 metres x 6 core screened.)
  Optional: 2 to 10 metre conduited cable with termination box.

ACCESSORIES

Audit Test Kit: Carry case includes clip on audit module and 3 x factory certified test filters.
Air Blowers: 75m3/hr filtered purge blower, suitable for wall mounting. Includes 4 metres x 38mm flexible air hose.
Optical Alignment module: Clip on fitment, required for off stack transceiver alignment.
Weather Cover Set: Clamps between stub flange and purge/ alignment flange—designed for direct sunlight protection.
Oxygen Sensor: System permits connection of a zirconia oxygen sensor for combustion process applications.

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