

STACK DUST ANALYSIS EP 1000 A

SERES
environnement



SERES Environnement
360 rue Louis de Broglio - La Duranne - BP 20087
13793 Aix en Provence Cedex 3
France

Tel. : +33 (0)4 42 97 37 37 / Fax. : +33 (0)4 42 97 30 30
email : seres-france@seres-france.com
www.seres-france.com

siret : 490 619 319 00018 / NAF 332 B
VAT FR 48490619319

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SERES ENVIRONNEMENT, THE SOLUTION FOR YOUR DUST MEASUREMENT

The EP 1000 A laser technology is SERES environnement high performance solution for classified industries required to fit their stacks with systems strictly conforming to emission air regulations in force. This system has been qualified by the French Ministry for Industry and Environment.

The EP 1000 A can be configured to suit all customers' needs, is easy to install and to operate with a high flexibility. It benefits from outstanding features among which its extremely low life cycle cost, thanks to the laser back-scattering technology : no drift in the measurement and no predictive maintenance required over the years.

Moreover it is fully compatible with all emission gas monitoring solutions of the SERES environnement range of analysers.

EP 1000 A SERES environnement

OUTSTANDING FEATURES AND PERFORMANCES

INCREASED PROTECTION

Insensitive to thermal variations thanks to an internal regulation

Insensitive to ambient light thanks to the beam modulation

Protection against dust thanks to an integral, ventilated double sleeve

Easy to install, single piece aluminium housing

QAL 1 TÜV CERTIFICATION

Conforming to European directives

PRECISE AND RELIABLE MEASUREMENT

Excellent signal linearity, especially at low concentrations

No drift in the measurement

Relative insensitivity to stack emission flowrate and temperature

Relative insensitivity to water droplets

Receiver is not sensitive to alignment

VERY FLEXIBLE TO USE

Instantaneous and continuous measurement requiring no sampling system or receiver

Continuous microprocessor control of the laser diode

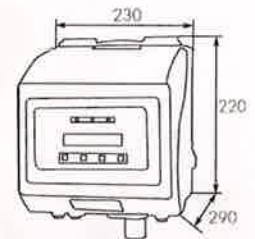
In situ measurement, directly in the emission flow

Easy installation, limited maintenance (an annual routine check only is recommended)

TECHNICAL SPECIFICATIONS

Measuring element	Laser diode 1 mW average 660 nm, Class 3A laser	Relay	Built in (RCT contact, 440 VA-2A, 220 VAC)
Dust particles detected	All types	Alarms and faults	Relay indicator light and digital output
Sensitivity	Automatic gain switching	Metrological advantages	- Several possibilities of calibration for various types of processes on a single site - Auto zero on keypad - Several measuring ranges from mg/Nm ³ to g/Nm ³
Measurement drift	Negligible	Protection against dust return	- Overpressure with air turbine - Shut off valve (optional)
Operating temperature	-25°C to +55°C	Mains power control	Indicator light
Transmission	4-20 mA signal output to an acquisition unit RS 485 or RS 422 MODBUS	Safety	Positive safety for faults relays
Power supply	230 V AC (+ 6, -10 %) or 110 VAC		
Power consumption	20 W		
Average life of the laser diode	3 to 5 years		

Dimensions
230 x 220 x 290 mm



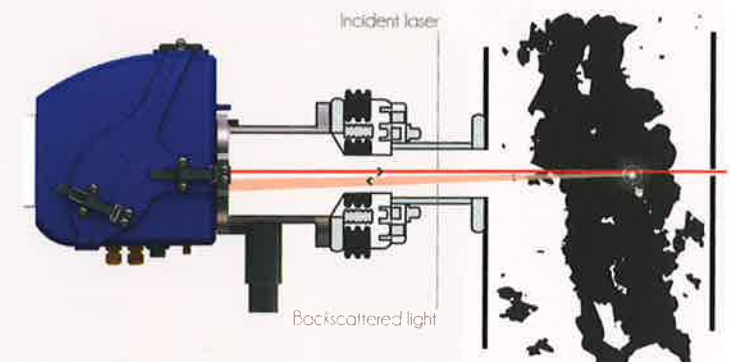
Ingress protection IP 65
Assembly DN 80 flanges
Weight 15 kg
Housing Aluminium

OPERATION PRINCIPLE

The dust analyser consists of an emitter and an optic receiver fitted in a single device mounted at one side of the chimney.

The emitter points a laser beam throughout the stack and the receiver measures the quantity of light backscattered by the suspended dust particles present in the flue.

To prevent any disturbance, the laser beam can be either captured in a light trap or exited outside of the stack.



ACCESSORIES & OPTIONS

AIR TURBINE

- Blowing unit required for air sweeping of the optics
- Built-in air filters
- Flowrate, power supply and power are adapted to your specifications

REMOTE DISPLAY KEYPAD

- To access all functions in parallel mode
- Autonomous power supply

SUPERVISION SOFTWARE

- The supervision software enables full dialogue with one or more EP 1000 A
- Configuration adapted to customer needs

LIGHT TRAP

- With air turbine for stack overpressure
- With protective device for very low concentrations or stack underpressure