

# Stack dust analysis

**EP 1000 A**

■■■■ Continuous measurement  
of dust concentrations

■■■■ Excellent sensitivity

■■■■ Reliable stable  
and linear signal

■■■■ Greater protection

■■■■ Very low life cycle cost



CE ATEX TÜV

**OLDHAM**  
Group

Gas detection / stack gas monitoring



Example of application : site of incineration

## *Together we'll reduce your stack emissions*

The EP 1000 A laser type dust meter is OLDHAM's high-performance solution for industries classified as being required to fit their stacks with approved systems. Its principle of laser backscattering ensures the continuous analysis of very low concentrations and allows measurements to be read instantaneously. In fact, this system has been qualified by the French Ministry for Industry and the Environment. The authorized thresholds for emissions from paper mills, cement and incinerators are becoming ever lower. So it is now impossible for the industries concerned to rely on obsolete technologies to measure low dust concentrations.

## *Laser backscattering : for perfect measurement and real savings*

An item of capital expenditure should not generate never-ending expenses and, so, EP 1000 A requires only minimal maintenance. It also offers a very low life cycle cost and its range of functions is further increased by its many accessories.

This is why Oldham has developed the principle of the backscattering of a laser beam onto dust particles.

Not only can this system measure very low concentrations but it also provides immediate measurements with a constant degree of accuracy over its entire measuring range.

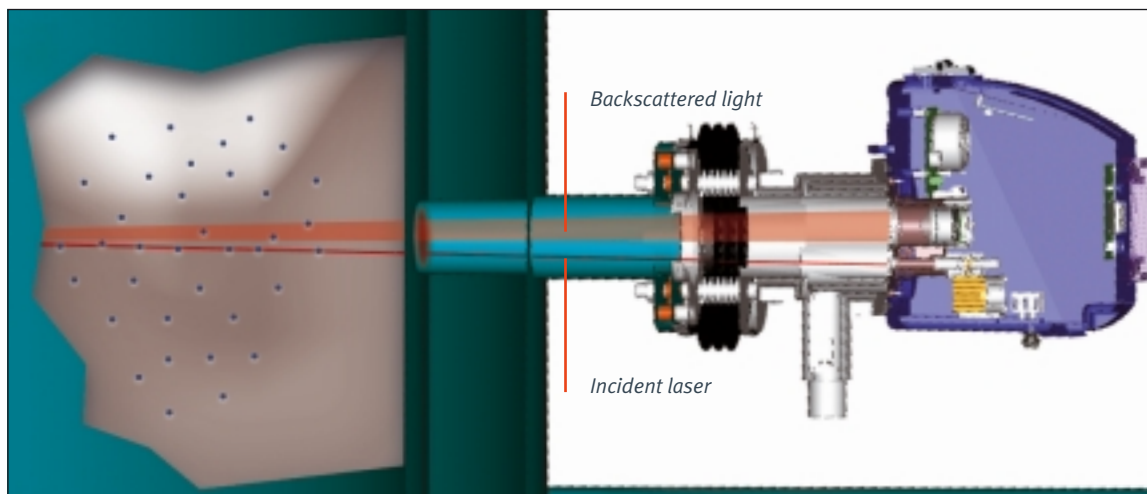
Based on the backscattering of light and not on absorption like standard appliances, the EP 1000 A dust meter guarantees :

- excellent signal linearity, especially at low concentrations,
- no drift in measurements with the passing time
- relative insensitivity to the flow rate and temperature of emissions
- relative insensitivity to water droplets

The EP 1000 A can be configured for all your requirements, is easy to install and is extremely flexible to use.

Its many advantages include, in particular, its extremely low life cycle cost.

No predictive maintenance is required for the EP 1000 A.





## Increased performance and ergonomics

### Greater protection

- Insensitive to thermal variations thanks to its internal regulation
- Insensitive to ambient light thanks to its beam modulation system
- Built-in dust protection by means of its ventilated double sleeve

### Mechanical performances

- Single-piece aluminium housing that is easy to install

### Multiple configurations

- EP 1000 A observer without keypad on front panel
- EP 1000 A observer with remote keypad
- EP 1000 A observer with keypad on front panel
- EP 1000 A observer with keypad on front panel and remote keypad

### Very flexible to use

- Several measuring ranges are available
- Measuring range can be changed at any time from  $\text{mg}/\text{Nm}^3$  to  $\text{g}/\text{Nm}^3$
- Instantaneous and continuous measurement with no sampling system or receiver
- Wide ambient temperature range ( $-25^\circ\text{C}$  to  $+55^\circ\text{C}$ )
- 4-20 mA output for recorder or processing system, and RS 485 or RS 422 MODBUS digital output
- Laser diode controlled by microprocessor in continuous mode
- Alarm activated by exceeding of threshold or faults



## Options for more functions

### Blower unit\*

- Indispensable for sweeping of lenses
- Built-in dust filters
- Sealing : IP 65

### Light traps

- With blower devices for stacks under overpressure
- With single deflector for very low concentrations ( $\text{mg}/\text{Nm}^3$ ) or stacks under negative pressure

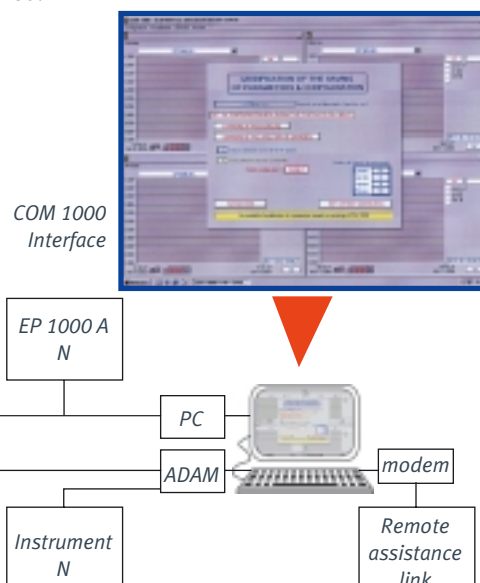
### Remote keypads

- Allowing access to all functions in parallel mode
- Integrated power supply



### COM 1000

Supervisory software allowing complete dialogue with one or more EP 1000 A appliances. Great flexibility on installation and during operation are ensured by the use of bus and MODBUS protocol. Other instruments can also be connected to the device via analog links (through the ADAM module). This software package includes a module for the creation of calculated channels (to express weights, for example) and statistics so as to provide an environmental regulations. What is more, a modem link is used to provide, especially efficient, remote assistance.



\* Flow rate, power supply and power suitable for the characteristics of your installation

# Technical characteristics

## General characteristics

|                                       |   |
|---------------------------------------|---|
| Manufacturer :                        | • OLDHAM SA   |
| Type :                                | • EP 1000 A   |
| Function:                             | • Dust measurement  |
| Measuring element :                   | • Laser diode : 1 mW average<br>• 660 Nm, laser class 3A  |
| Dust detected :                       | • All types   |
| Sensitivity :                         | • Automatic gain switching  |
| Linearity :                           | • Better than 0,5% of range   |
| Measurement drift :                   | • Negligible  |
| Average service life of laser diode : | • 3 to 5 years  |
| Operating ambient temperature :       | • -25°C to +55°C  |
| Metrological advantages :             | • Several calibrations possible for various types of processes on a single site<br>• Autozero on keypad |

## Electrical characteristics

|                     |   |
|---------------------|---|
| Transmission :      | • 4-20 mA to any measurement signal acquisition unit<br>• RS 485 or RS 422 MODBUS |
| Power supply :      | • 230 V AC (+6, -10 %), 110 V AC (option)   |
| Power consumption : | • 20 VA   |

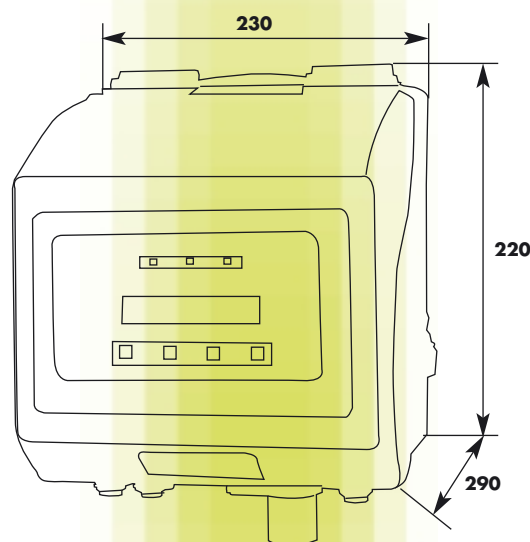
## Alarm management

|                            |  |
|----------------------------|--|
| Alarm and faults :         | • One relays and indicator lights, also available on digital channel |
| Relay :                    | • Built in (RCT contact, 440 VA-2A, 220 V AC)                        |
| Safety :                   | • Positive safety for fault relays                                   |
| Main power on monitoring : | • On specific indicator light  |

*Subject to operation conditions*

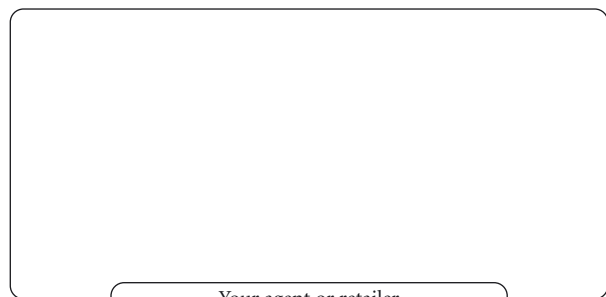
## Mechanical characteristics

|                                  |   |
|----------------------------------|---|
| Protection against dust return : | • Overpressure by blower device<br>• Shutt off value (optional) |
| Housing :                        | • Aluminium   |
| Dimensions :                     | • 230 long x 220 high x 290 wide (mm)                           |
| Ingress protection :             | • IP 65   |
| Fastening :                      | • Flanges DN 80   |
| Weight :                         | • 15 kg   |
| Certification :                  | • TÜV   |



**EP 1000 A**

*Guaranteed 2 years except consumables (cells, filters)*



Your agent or retailer



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