



## SPECIFICATIONS

### Measuring Probe:

Measuring Technique:	Back-scatter Optical Detection
Light Source:	Laser 850 nm, Class 3R
Measurement Range:	0-15mg / m <sup>3</sup> to 0-200 mg / m <sup>3</sup>
Detection Limit:	< 0.1 mg / m <sup>3</sup>
Operation Temperature:	-20 °C to 50 °C / -4 °F to 122 °F
Max. Flue Gas Temperature:	250 °C (480 °F) standard; 500 °C (930 °F) with high temperature option
Insertion Depth:	550 mm (21.7 in.)
Stack Mounting Flange:	DN100 PN10/16 or 4 in. 150 lb ANSI; minimum hole diameter 88 mm (3.5 in.)
Materials:	Enclosure: Powder-coated aluminum Probe: 316 stainless steel
Air Purge:	30 - 40 liter/minute (1.05 to 1.41 cfm)
Sealing:	IP66
Power Supply:	100~240V AC, 1A
Compliance:	PS-11, 40 CFR 1040.10, 1040.11

### Remote Controller Unit

Sensor Channels:	1
Display:	7" TFT Touch Screen LCD
4-20mA Outputs:	1 ch
Filter Diagnostics:	Pulse-log review
Data Logs:	Depends on log rate 7 days @ 1 minute
Ethernet:	1 port
Outputs:	1x RS485, 1x RS232
Size (H x W x D):	8.7 in. x 4.8 in. x 3.2 in.
Power:	12~24 V DC provided by Probe

# P-SF

## PS11 Continuous Particulate Matter Measurement

PM-CEMS • PM-CPMS

0~5mg / 0~20000 mg / World Oldest



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# P-SF

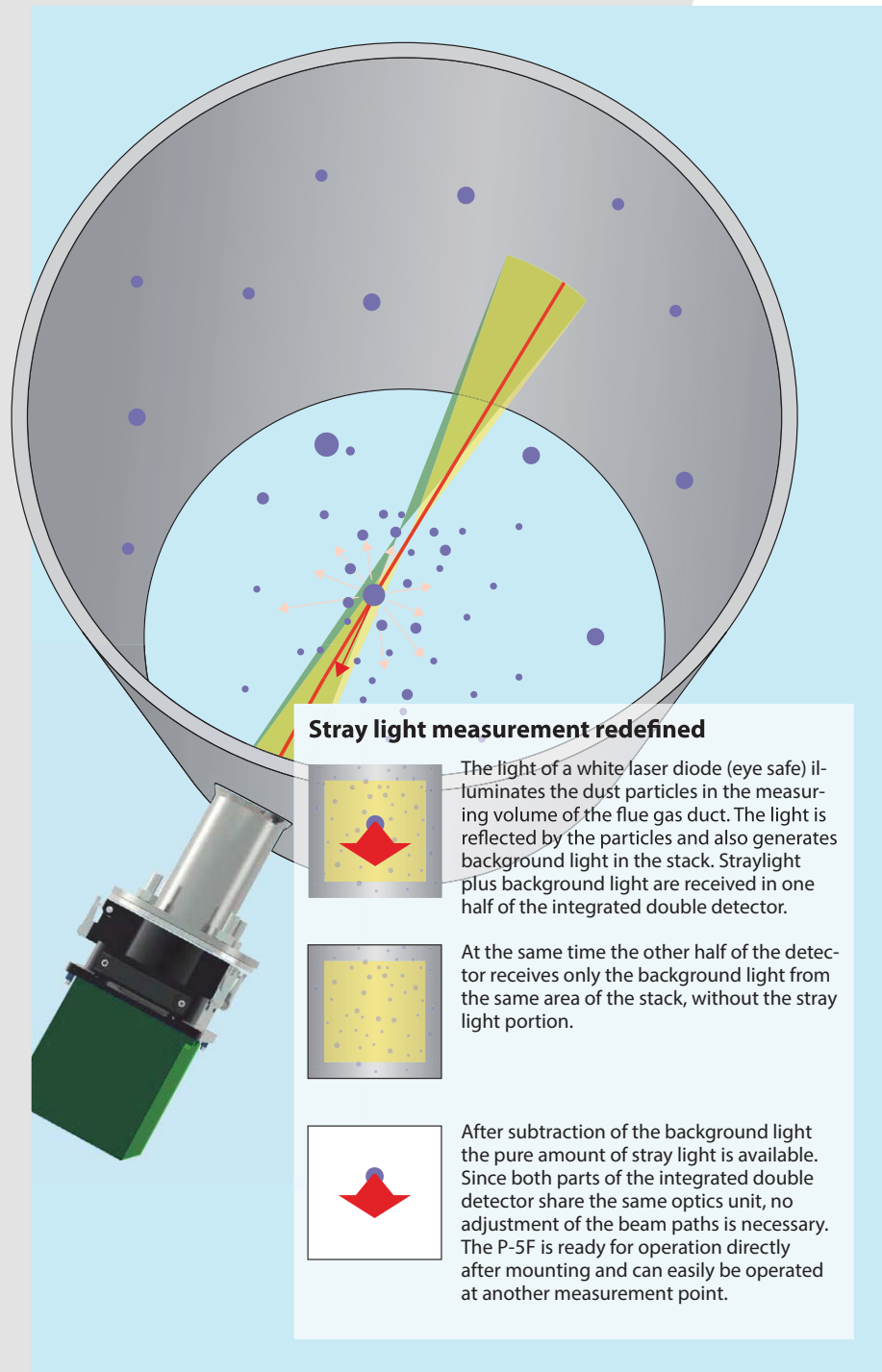
PS11 Continuous Particulate Matter Measurement

# SPTC

"A Special Company For Environmental Instrument"

# The new scattered light dust monitor P-5F

## High-sensitivity measurement even at the lowest concentrations of dust



The new SPTC dust monitor P-5F is based on the backscattering principle and is ideally suited for monitoring smallest to medium dust concentrations. The measurement takes place continuously in the flue gas stream. Naturally the P-5F is compliant with the high requirements of the new European standards and therefore suitable for measurements according to official regulations.

### Startup without adjustment due to unique optical design

The P-5F does not require a light trap. The background light in the stack is detected by means of a special optical system with dual detector and automatically compensated without the need of any manual adjustment.

Advantage of this new design is the quick and uncomplicated installation, completely without adjustment at site. So the P-5F is ready for operation directly after installation and flexible for different applications. Even after a conversion to a different measurement point the device is operational immediately again.



### Single-sided installation on standard flanges without light trap

The P-5F allows single sided installation at the stack and requires just a small wall opening. It can be mounted in any orientation via a rotatable connection on existing DN 100 or 4" standard flanges. This reduces time and costs for installation.

### Long life due to integrated purge air regulation and purge air control

The P-5F is continuously purged and therefore the optical system is not in contact with the exhaust gas. The integrated purge air control ensures the optimum amount of purge air. This ensures a long life and long maintenance intervals. A purge air failure is immediately indicated by the device. The maintenance of the device is minimal.

### Convenient operation, readings anywhere accessible

The operation of the P-5F is comfortable and extremely flexible. Different operating options are available to the user of the P-5F:

- local via USB interface
- by means of the external operation unit P5F RCU
- remote access with RS-485 interface via MODBUS RTU / MODBUS TCP protocol.

### Automatic control functions ensure reliable measuring values

Reliability has the highest priority when measuring emissions. For that reason the P-5F automatically performs zero and span check as well as contamination check in regular intervals and on demand. The device features an automatic contamination correction. Need for maintenance is immediately indicated by the electronics.

### Options

- Weather protection covers
- Fully integrated failsafe shutter as protection for the measuring device in case of a purge air failure.



With the fully integrated fail safe shutter the P-5F is optimally protected for reliable use even under overpressure conditions.

### Universal Operation Unit P5F RCU

The universal operation unit P5F RCU allows for the connection of up to 2 P-5F measuring heads and enables the combination of dust and flow measurements. The P5F RCU offers convenient operation and parameterization of the connected devices. The display provides an immediate overview of the current measurements and the status of the devices.

- Connection of up to 2 measuring heads
- Local operation with keypad, through USB port or remotely through RS-485, 232 interface.
- Modular design, many extension modules available.

### Features

- Continuous measurement of dust concentration
- Easy installation on a standard flange
- Easy startup without adjustment
- Automatic background light compensation without light trap
- Convenient operation, remote access possible
- Automatic control functions
- Integrated purge air regulation and purge air control
- Long service intervals
- Compliant with EN 15267
- Data transfer via Modbus compliant with VDI 4201-3.

### Applications

#### Continuous emission monitoring, e.g.:

- on incineration plants generally
- on plants according to IED 2010/75/EU (2000/76/EC WID) / 17. BlmschV
- on plants according to 2001/80/EC LCPD
- on waste, hazardous waste and sewage sludge incineration plants
- on cement manufacturing plants
- on power plants with gas, oil, coal or co-firing
- on plants for the incineration of biomass

#### Monitoring of:

- ventilation units
- filter units.



### System components

- Measuring Probe
- Mounting flange
- Universal control unit P5F RCU
- Supply unit with integrated purge air supply

# P-5F

PS11 Continuous Particulate Matter Measurement