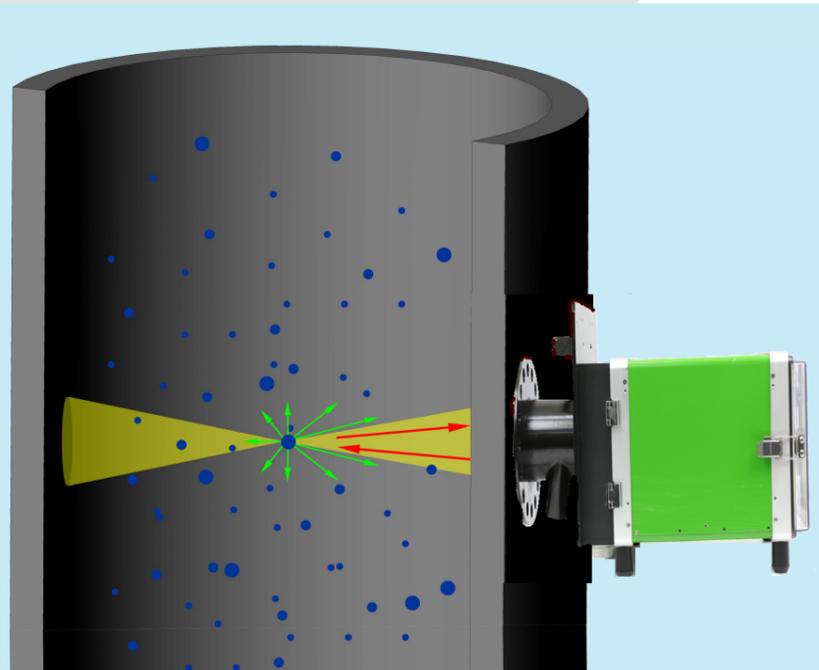
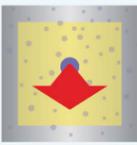


The new scattered light dust monitor P-5FA

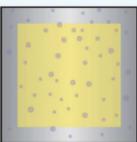
High-sensitivity measurement even at the lowest concentrations of dust



Stray light measurement redefined



The light of a white laser diode (eye safe) illuminates the dust particles in the measuring volume of the flue gas duct. The light is reflected by the particles and also generates background light in the stack. Straylight plus background light are received in one half of the integrated double detector.



At the same time the other half of the detector receives only the background light from the same area of the stack, without the stray light portion.



After subtraction of the background light the pure amount of stray light is available. Since both parts of the integrated double detector share the same optics unit, no adjustment of the beam paths is necessary. The P-5FA is ready for operation directly after mounting and can easily be operated at another measurement point.

The new SPTC dust monitor P-5FA 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-5FA 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-5FA 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-5FA 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-5FA 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-5FA 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-5FA is comfortable and extremely flexible. Different operating options are available to the user of the P-5FA:

- local via USB interface
- by means of the external operation unit P-5FA 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-5FA 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-5FA is optimally protected for reliable use even under overpressure conditions.

Universal Operation Unit P5F RCU

The universal operation unit P-5FA RCU allows for the connection of up to 2 P-5FA measuring heads and enables the combination of dust and flow measurements. The P-5FA 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
- Supply unit with integrated purge air supply

P-5FA

PS11 Continuous Particulate Matter Measurement