



## Dust Measuring Devices

### Combined dust measuring device, DUSTHUNTER C200

DUSTHUNTER C200



Type [> DUSTHUNTER C200](#)



The DUSTHUNTER C200 is a type-approved measuring device which combines the advantages of the measuring principles transmittance and scattered light forward. It is ideal for measurement of very low to high dust concentrations. The automatic self-alignment optimizes the position of the measuring beam and prevents incorrect measurement. An automatic check of zero and reference point as well as a contamination monitoring is integrated in the device.

**At a glance**

- Combination of transmittance and scattered light measurement
- For very low to high dust concentrations
- Automatic check of zero and reference point
- Contamination monitoring and compensation on both sides
- Automatic self-alignment
- For medium to large duct diameters

**Your benefits**

- Suitable for highly fluctuating dust concentrations
- Reliable application due to redundant measurement
- Low maintenance due to self-monitoring function
- Prepared for the future to monitor decreasing limit values
- Type-approved according to EN 15267

**Fields of application**

- Emission monitoring of power stations and waste incineration plants
- Monitoring of filter plants
- Measurement of dust concentrations in exhaust gas and exhaust air ducts up- and downstream of a filter

**Note**

The exact device specifications and performance data of the product may deviate from the information provided here, and depend on the application in which the product is being used and the relevant customer specifications.

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**Technical data**

Measurement principles: Scattered light forward, Transmittance measurement

Measured values:	Extinction Opacity Relative opacity Dust concentration (scattered light) Dust concentration (transmittance) Scattered light intensity Transmittance
Performance-tested measurands:	Extinction, Scattered light intensity
Max. number of measurands:	1
Measuring ranges:	Extinction: 0 ... 0.045/0 ... 2 Opacity: 0 ... 10%/0 ... 100 % Relative opacity: 0 ... 10%/0 ... 100 % Dust concentration (scattered light): 0 ... 5 mg/m <sup>3</sup> /0 ... 200 mg/m <sup>3</sup> Dust concentration (transmittance): 0 ... 200 mg/m <sup>3</sup> /0 ... 10,000 mg/m <sup>3</sup> Transmittance: 100 ... 90%/100 ... 0 %
Comment:	The transmittance measurement depends on measuring distance and dust properties
Process temperature:	-40 ... +300 °C
Process pressure:	With external purge air unit: -50 ... 30 hPa With control unit MCU-P: -50 ... 2 hPa
Process gas humidity:	non-condensing
Duct diameter:	With reflector/scattered light receiver DHC-R0: 0.5 ... 3 m With reflector/scattered light receiver DHC-R1: 2.5 ... 8 m
Ambient temperature:	Sender/receiver unit, reflector/scattered light receiver, control unit MCU-N: -40 ... +60 °C MCU-P control unit: -40 ... +45 °C intake temperatures for purge air
Conformities:	2000/76/EC 2001/80/EC 27. BImSchV EN 14181 EN 15267 MCERTS German Clean Air Regulations U.S. EPA PS-1 compliant U.S. EPA PS-11 compliant Approved for plants requiring approval
Electrical safety:	CE
Enclosure rating:	IP 66
Analog outputs:	3 outputs: 0/2/4 ... 20 mA, 750 Ω electrically isolated; two additional outputs if using I/O modules (option)
Analog inputs:	2 inputs: 0 ... 20 mA not electrically isolated; two additional inputs if using I/O modules (option)
Digital outputs:	5 relay contacts: 48 V, 1 A potential-free; for status signals
Digital inputs:	4 potential-free contacts
Interfaces:	RS-232 (service interface) RS-485 (via optional interface module) Interface module (option) USB (service interface)
Bus protocol:	Ethernet TCP/IP (via optional interface module) Modbus (via optional interface module) PROFIBUS DP (via optional interface module)
Operation:	Via LC-display or software SOPAS ET
Device version:	Cross-duct version
System components:	Reflector/scattered light receiver Sender/receiver unit MCU control unit

Test functions:

Automatic self-test (linearity, contamination, drift, aging)

Manual linearity check with reference filter

Contamination limits: at 30% warning, at 40% failure

Corrective functions:

Automatic self-alignment

Options:

External purge air unit, I/O module(s), Interface module(s)

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