



Dust Measuring Devices  
DUSTHUNTER SP100, Scattered light dust  
measuring device

DUSTHUNTER SP100



Type > **DUSTHUNTER SP100**



The DUSTHUNTER SP100 is a type-approved measuring device with probe for very low to medium dust concentrations. Installation from one side makes it ideal for thick-walled or double-walled ducts. The measurement is based on the forward scattering of light. An automatic check of the zero and reference point as well as a contamination check are on board in the device.

**At a glance**

- One-side installation
- For very low to medium dust concentrations
- Automatic check of zero and reference point
- Contamination check
- Hastelloy probe available for corrosive gas environments
- For small to medium duct diameters

**Your benefits**

- Ideal for thick- or double-walled ducts
- Approved according to EN 15267
- Low maintenance due to self-monitoring and contamination check
- Quick installation - no alignment required

**Fields of application**

- Emissions monitoring at power plants and waste incineration plants
- Monitoring of filter systems
- Measurements in exhaust gas or exhaust ventilation ducts

**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.

**Technical data**

Measurement principles:	Scattered light forward
Measured values:	Dust concentration (after gravimetric comparison measurement) Scattered light intensity
Performance-tested measurands:	Scattered light intensity
Max. number of measurands:	1
Measuring ranges:	Dust concentration: 0 ... 5 mg/m <sup>3</sup> / 0 ... 200 mg/m <sup>3</sup>
Remark measuring ranges:	Other measuring ranges on request

Process temperature:	High temperature version DHSP-T2xx: -40 ... +400 °C Standard version DHSP-T2xx: -40 ... +220 °C
Process pressure:	With external purge air unit: -50 ... 30 hPa With instrument air (provided by the customer): -50 ... 100 hPa With MCU-P control unit: -50 ... 10 hPa
Process gas humidity:	non-condensing
Duct diameter:	≥0.25 m
Ambient temperature:	Sender/receiver unit, MCU-N control unit: -40 ... +60 °C MCU-P control unit: -40 ... +45 °C intake temperatures for purge air
Conformities:	2000/76/EC (17. BImSchV) 2001/80/EC (13. BImSchV) 2010/75/EU 27. BImSchV EN 14181 EN 15267 MCERTS TA-Luft (Prevention of Air Pollution) 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 and bus protocols:	Ethernet: Modbus TCP via optional interface module Ethernet: OPC via optional interface module Ethernet: SOPAS ET via optional interface module RS-485: Modbus RTU via optional interface module RS-485: PROFIBUS DP via optional interface module RS-485: SOPAS ET via optional interface module USB: SOPAS ET
Operation:	Via LC-display (option) or software SOPAS ET
Device version:	Measuring probe version
System components:	Measuring probe MCU control unit
Test functions:	Automatic self-test (linearity, contamination, drift, aging) Manual linearity test with reference filter Contamination limits: at 30% warning, at 40% failure
Options:	External purge air unit, I/O module(s), Interface module(s)

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