

CERTIFICATE

of Product Conformity (QAL1)

Certificate No.: 0000074633_00

AMS designation: DUSTHUNTER SP30 DM (Dust Monitor)

Manufacturer: SICK Engineering GmbH
Bergener Ring 27
01458 Ottendorf-Okrilla
Germany

Test Laboratory: TÜV Rheinland Energy GmbH

**This is to certify that the AMS has been tested
and found to comply with the standards
EN 15267-1 (2009), EN 15267-2 (2009), EN 15859 (2010)
and EN 14181 (2014).**

Certification is awarded in respect of the conditions stated in this certificate
(this certificate contains 6 pages).



Suitability Tested
EN 15267
QAL1 Certified
Regular
Surveillance

www.tuv.com
ID 0000074633

Publication in the German Federal Gazette
(BAnz) of 05 August 2021


This certificate will expire on:
04 August 2026

German Federal Environment Agency
Dessau, 03 September 2021

TÜV Rheinland Energy GmbH
Cologne, 02 September 2021



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Test institute accredited to EN ISO/IEC 17025 by DAkkS (German Accreditation Body).
This accreditation is limited to the accreditation scope defined in the enclosure to certificate D-PL-11120-02-00.

Test Report:	936/21244739/A of 12 February 2021
Initial certification:	03 September 2021
Expiry date:	04 August 2026
Publication:	BAnz AT 05.08.2021 B5, chap. I No. 1.1

Approved application

The tested AMS is suitable for use as a dust monitor for filter control downstream of dust collectors at installations requiring approval (13th BImSchV, 17th BImSchV, 30th BImSchV, 44th BImSchV, TA Luft) as well as at installations of the 27th BImSchV. The measured ranges have been selected so as to ensure as broad a field of application as possible.

The suitability of the AMS for this application was assessed on the basis of a laboratory test and a field test lasting more than three months at an industrial drying plant for the production of ceramic floor coverings.

The AMS is approved for an ambient temperature range of -40 °C to +60 °C.

The notification of suitability of the AMS, performance testing and the uncertainty calculation have been effected on the basis of the regulations applicable at the time of testing. As changes in legal provisions are possible, any potential user should ensure that this AMS is suitable for monitoring the dust concentrations relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this AMS is suitable for the intended purpose.

Basis of the certification

This certification is based on:

- Test report 936/21244739/A of 12 February 2021 by TÜV Rheinland Energy GmbH
- Suitability announced by the German Federal Environment Agency (UBA) as the relevant body
- The ongoing surveillance of the product and the manufacturing process

Publication in the German Federal Gazette: BAnz AT 05.08.2021 B5, chap. I No. 1.1 ,
UBA announcement dated 29 June 2021 :

AMS designation:

DUSTHUNTER SP30 DM

Manufacturer:

SICK Engineering GmbH, Ottendorf-Okrilla

Field of application:

Dust monitor for filter control downstream of dust separators on plants requiring approval and installations according to the 27th BImSchV

Measuring range during performance testing:

Component	Certification range	Supplementary measuring ranges			Unit
Dust	0 - 15	0 - 50	0 - 100	0 - 500	mg/m ³
		0 - 1.000	0 - 3.000		mg/m ³

The set certification range 0 to 15 mg/m³ (scattered light units) was confirmed by the manual parallel measurements carried out.

Software versions:

Sensor: 02.00.10
SOPAS ET: 3.2.4 build 1103

Restriction:

The measuring system may only be used on installations where falling below the water dew point can be ruled out.

Notes:

1. The maintenance interval is four weeks.
2. The dust concentration is determined in wet test flue gas under operational conditions.
3. The tested ambient temperature range for use of the measuring system is -40 to +60°C.

Test Report:

TÜV Rheinland Energy GmbH, Cologne
Report no.: 936/21244739/A of 12 February 2021

Certified product

This certification applies to automated measurement systems conforming to the following description:

The measuring system uses scattered light as its measuring principle (forward scattering). A laser diode irradiates the dust particles in the gas flow with modulated light in the visible range (wavelength approx. 650 nm). The light scattered by the particles is detected by a highly sensitive detector, electrically amplified and fed to the measurement channel of a microprocessor as the central part of the measuring, control and evaluation electronics.

The measured scattered light intensity [SI] is proportional to the dust concentration [c]. However, since the scattered light intensity depends not only on the number and size of the particles but also on their optical properties, the measuring system must be calibrated through gravimetric parallel measurements in order to guarantee an exact measurement of dust concentrations.

The tested version of the AMS is available in the following two versions:

- DUSTHUNTER SP30 DM measuring system for use in ducts with diameters larger than 150 mm. The DUSTHUNTER SP30 DM can be attached to a flange with a quick-release fastener (Tri-Clamp®) or a 1" thread on the duct.
- DUSTHUNTER SP30 DM measuring system for use in ducts with a diameter greater than 250 mm. Assembly on the duct takes place via a flange with pipe.

The DUSTHUNTER SP30 DM measuring system consists of the components:

- Transceiver unit (probe)
- Connection cable for connection of the transceiver unit for 24V power supply on site and output of the data by analogue output and Modbus via RS485 interface
- Assembly components: Flange with tube, 1" thread or flange with quick release Tri-Clamp
- Purge air supply
A well-functioning purge air supply is essential for the function of an optically working dust measuring system.

The purge air supply for the DUSTHUNTER SP30 DM measuring system depends on the pressure conditions in the measurement channel. At a pressure difference of -50 to +10 hPa, the integrated purge air supply can be used; at differential pressures of -50 to +30 hPa, an external purge air supply with purge air reduction must be used; at differential pressures of -50 to +100 hPa, an external compressed air supply (free of dust, oil, moisture and non-corrosive) must be used.

The measuring system can be used in accordance with the specifications of EN 17389:2020-07 (Emissions from stationary sources - Quality assurance and quality control procedures for automatic dust collector monitoring equipment). The specifications of the standard must be taken into account during maintenance, calibration and operation of the measuring system.

The versions of the measuring system covered by the certification result from the following type code:

Device identification type:

DHSP30 - T 2 V 2 F NN NN NNXX S

DUSTHUNTER scattered light measurement probe

- T: Sender/receiver unit

Probe material resistance

- 2: 220 °C

- 4: 400 °C

Material

- V: Probe + protective tube, stainless steel

- K: Probe + protective tube, non-corrosive coating

Nominal length (NL)

- B: 280 mm

- 2: 735 mm

Version

- F: Flange with tube

- T: Tri-Clamp

- G: 1" thread

Purge air supply

- N: Without

- P: With integrated purge air

Display

- D: With integrated display

Approval

- DM: Dust monitor for filter check

Ex identification

- NNXX: Without

Special and sample devices

- S: Standard

General remarks

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that ongoing production complies with the requirements of the EN 15267. The manufacturer is required to maintain an approved quality management system controlling the manufacturing process for the certified product. Both the product and the quality management systems shall be subject to regular surveillance.

If a product of the current production does not conform to the certified product, TÜV Rheinland Energy GmbH must be notified at the address given on page 1.

A certification mark with an ID-Number that is specific to the certified product is presented on page 1 of this certificate.

This document as well as the certification mark remains property of TÜV Rheinland Energy GmbH. Upon revocation of the publication the certificate loses its validity. After the expiration of the certificate and on request of TÜV Rheinland Energy GmbH this document shall be returned and the certificate mark must no longer be used.

The relevant version of this certificate and its expiration date are also accessible on the internet at qal1.de.

Document history

Certification of the DUSTHUNTER SP30 DM measuring system is based on the documents listed below and the regular, continuous surveillance of the manufacturer's quality management system:

Initial certification according to EN 15267

Certificate no. 0000074633_00: 03 September 2021
Expiry date of the certificate: 04 August 2026
Test report 936/21244739/A of 12 February 2021
TÜV Rheinland Energy GmbH, Cologne
Publication: BAnz AT 05.08.2021 B5, chap. I No. 1.1
UBA announcement dated 29 June 2021