TÜVRheinland®
Precisely Right.

CONFIRMATION

of Product Conformity (QAL1)

Approved AMS:	MCS200HW for CO, NO, NO_2, N_2O, SO_2, HCl, NH_3, CH_4, TOC, O_2, H_2O and CO_2
Manufacturer:	Endress+Hauser SICK GmbH + Co. KG Bergener Ring 27 01458 Ottendorf-Okrilla Germany
Test Institute::	TÜV Rheinland Energy & Environment GmbH

This is to certify that the AMS has been tested according to the standards

EN 15267-1 (2009), EN 15267-2 (2023), EN 15267-3 (2007), as well as EN 14181 (2014).

The AMS underwent independent expert testing and was accepted.
This confirmation is valid up to the publication of the certificate,
but no longer than 6 months from the date of issue
(this document contains 5 pages).

This confirmation is valid until: 31 December 2025

TÜV Rheinland Energy & Environment GmbH
Cologne, 4 July 2025

i. V. Dipl.-Ing. G. Baum

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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:	EuL/21266095/A dated 17 February 2025
Initial certification:	26 March 2019
Expiry date:	31 December 2025

Approved application
The tested AMS is suitable for use at plants according to Directive 2010/75/EC, chapter III (combustion plants / 13th BImSchV:2021), chapter IV (waste incineration plants / 17th BImSchV:2023), Directive 2015/2193/EC (44th BImSchV:2022), TA Luft:2021, 30th BImSchV:2019 and 27th BImSchV:2013. 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 twelve month field test (respectively approx. 3 months for the modules „CO (low)“, „NO (low)“, „N_2O (low)“ and „NH_3 (low)“) at a waste incineration.

The AMS is approved for an ambient temperature range of +5 °C to 40 °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 emission limit values and oxygen concentration relevant to the application.

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

Note
The legal regulations mentioned do not correspond to the current state of legislation in every case. Each user should, if necessary, in consultation with the competent authority, ensure that this AMS meets the legal requirements for the intended use. In addition, it cannot be ruled out that legal regulations governing the use of a measuring device for emission monitoring may change during the lifetime of the certificate.

Basis of the confirmation
This confirmation is based on:

- Test report 936/21242470/C dated 06 March 2019 issued by TÜV Rheinland Energy GmbH
- Test report EuL/21266095/A dated 17 February 2025 issued by TÜV Rheinland Energy & Environment GmbH
- The ongoing surveillance of the product and the manufacturing process
- Expert testing and approval by an independent body
- Suitability announced by the relevant body.

AMS designation:
MCS200HW for CO, NO, NO_2, N_2O, SO_2, HCl, NH_3, CH_4, H_2O, CO_2, O_2 and TOC

Manufacturer:
Endress+Hauser SICK GmbH + Co. KG, 01458 Ottendorf-Okrilla

Field of application:
Modular measuring system for plants requiring official approval and for plants according to the 27th BImSchV

Measuring ranges during performance testing:

Component	Module name	Certification range	supple-mentary range	Unit	Maintenance interval
CO	„CO“	0 - 75	0 – 10000	mg/m³	6 Months
CO	„CO (low)“	0 - 30	0 – 10000	mg/m³	4 Weeks
NO	„NO“	0 - 150	0 – 2500	mg/m³	6 Months
NO	„NO (low)“	0 - 50	0 – 2500	mg/m³	4 Weeks
NO_2	„NO_2“	0 - 50	0 – 500	mg/m³	6 Months
N_2O	„N_2O“	0 - 100	0 – 2000	mg/m³	6 Months
N_2O	„N_2O (low)“	0 - 45	0 – 2000	mg/m³	4 Weeks
SO_2	„SO_2“	0 - 75	0 – 2500	mg/m³	6 Months
HCl	„HCl“	0 - 15	0 – 3000	mg/m³	6 Months
NH_3	„NH_3“	0 - 10	0 – 500	mg/m³	6 Months
NH_3	„NH_3 (low)“	0 - 7	0 – 500	mg/m³	4 Weeks
CH_4	„CH_4“	0 - 50	0 – 500	mg/m³	6 Months
CO_2	„CO_2“	0 - 25	-	Vol.-%	6 Months
H_2O	„H_2O“	0 - 40	-	Vol.-%	6 Months
O_2	„O_2“	0 - 25	-	Vol.-%	6 Months
TOC	„TOC“	0 - 15	0 – 50 / 150 / 500	mg/m³	3 Months

Software version:
MCS200HW: 9264565_1.7.7.4R_1C6E
GMS811 FIDORi: 4.003
BCU: 9150883_4.006

Restrictions:
None

Notes:

1. The maintenance interval is six months. When using the TOC module, the maintenance interval is three months. When using the "CO (low)", "NO (low)", "N2O (low)" and "NH3 (low)" modules, the maintenance interval is 4 weeks.
2. Wet and dry test gases can be used to test HCl and NH_3.
3. The measuring system performs zero point checks once every day. This requires suitable instrument air or synthetic air.
4. The integrated GMS811 FIDORi FID performs zero point checks once every day. An integrated zero air generator (version “i”) produces the zero air required for this purpose.
5. The measuring system provides a digital Modbus interface (TCP/IP) in accordance with VDI guideline 4201, parts 1 and 3.
6. Maintenance work must be spread over several days in order to comply with the requirements for outage times specified by the 2010/75/EU, chapters III (13th BImSchV) and chapter IV (17th BImSchV).
7. When verifying correct installation and functionality of a certain combination of modules, the maintenance interval must be determined for that specific configuration.
8. The measuring device can be optionally equipped with an air conditioning unit. With an integrated air conditioning unit, the measuring device can be used in an ambient temperature range of 5°C to 50°C. Without an integrated air conditioning unit, the measuring device can be used in an ambient temperature range of 5°C to 40°C.
9. In addition to the basic display, the measuring system can also be equipped with the larger web display on the front door.
10. The measuring system can also be operated with a revised gas sampling filter (SFU). This can be recognised by the revised housing with protection class IP66.
11. Supplementary test (Reduction of certification areas CO, NO, N_2O und NH_3) as regards Federal Environment Agency notice of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter I number 1.4) and of 2 April 2025 (BAnz AT 19.05.2025 B3, chapter IV notification 20).
12. The supplementary test for the modules "CO (low)", "NO (low)", "N2O (low)" and "NH3 (low)" was carried out in accordance with DIN EN 15267-3:2024.
13. The test report is an integral part of the TÜV Rheinland test report with the number 936/21242470/C dated 06/03/2019.

Test Institute:
TÜV Rheinland Energy & Environment GmbH, Cologne
Report No.: EuL/21266095/A dated 17 February 2025

Tested product

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

The modular MCS200HW measuring system is a measurement rack equipped with a single-beam infrared photometer using the bi-frequency and gas filter correlation method. The MCS200HW can measure up to 10 IR components present in the flue gas emitted by industrial combustion plants.

The MCS200HW operates extractively: a sampling probe extracts flue gas from the duct which is then transported to the analyser via a sample line. All gas-carrying components from the sampling probe to the cell are heated above the dew point. An ejector pump transports the sample gas.

A zirconium dioxide sensor is used to measure oxygen alongside the IR components. As an option, a GMS811 FIDORi flame ionisation detector can be integrated to measure total organic carbon. The optional use of internal adjustment cells facilitates span point checks.

The AMS under test comprises the following individual components:

- Sampling probe Sick sampling filter SFU-BF NI GL heated to 200 °C with zero gas and back purge connection,
- Sample gas filter made of metal mesh SilicoNert® covered,
- Heated sample line, inner diameter 6 mm, heated to 200 °C,
- Analyser rack manufactured by Rittal c/w:
  - Modular analyser comprising the heated sample gas cell with single-beam infra-red photometer with bi-frequency and gas filter correlation method as well as a zirconium dioxide to measure oxygen,
  - GMS811 FIDORi FID analyser for the determination of total organic carbon with integrated zero air conditioning at the inner door of the analyser rack with (optional) BCU control unit located underneath,
  - Display unit at the outer wall of the analyser rack, measured value display and operation of the analyser system,
  - active fan unit installed in the rack door and air intake on top of the analyser rack,
  - Pressure reducer to adjust the instrument air,
  - Electronics unit with analogue interfaces for the output of measured signals and status signals,
  - the measuring system provides a digital Modbus interface (TCP/IP) in accordance with VDI guideline 4201, parts 1 and 3 (optional).

The data output is under standard conditions wet and without offsetting waste gas moisture.