

CERTIFICATE

of Product Conformity (QAL1)

Certificate number: 0000090028_00

Data acquisition and analysis system: D-EMS 2020

Manufacturer: DURAG data systems GmbH
Kollastr. 105
22453 Hamburg
Germany

Testing body: TÜV Rheinland Energy & Environment GmbH

This is to certify
that the data acquisition and handling system has been tested and found to comply with the standards DIN EN 17255-1 (2019), DIN EN 17255-2 (2020), DIN EN 17255-3 (2021), BEP (2023)*, IED 2010/75/EU, EFÜ (2017)*, DIN EN 14181 (2015) as well as DIN EN 15267-1 (2023) and DIN EN 15267-2 (2023)

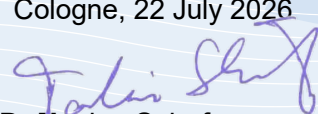
The certification applies to the conditions set out in this certificate and the accompanying document in the change history for the equipment certificate (0000090028)
(this certificate comprises 7 pages).



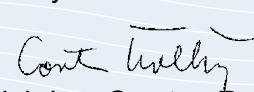
Eignungsgeprüft
DIN EN 15267
QAL1 zertifiziert
Regelmäßige
Überwachung

www.tuv.com
ID 0000090028

TÜV Rheinland Energy & Environment GmbH
Cologne, 22 July 2026


Dr. Tobias Schäfer
Local Field Manager

Certificate valid until:
21 July 2031


Dipl.-Ing. Carsten Röllig
Head of the QAL1 Certification Body

QAL1 Certification Body
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TÜV Rheinland Energy & Environment GmbH
Am Grauen Stein
51105 Cologne

Certification body accredited by DAkkS in accordance with DIN EN ISO/IEC 17065.
The accreditation applies only to the scope of accreditation listed in Annex D-ZE-11120-02-00 to the certificate scope of accreditation listed in the annex to the certificate D-ZE-11120-02-00.

*BEP (2023) Uniform Practice in monitoring emissions 2023
*EFÜ (2017) teletransmission definition 2017 (remote emission control)

Test report:	EuL/21264486/B issued by TÜV Rheinland Energy & Environment GmbH on 14 January 2026 and 936/21226273/D issued by TÜV Rheinland Energy GmbH on 12 April 2019
Initial certification:	22 July 2026
Certificate valid until:	21 July 2031
Publication:	22 July 2026, official database www.qal1.de

Approved application

The certified emissions data acquisition and handling system (DAHS) is suitable for recording and analysing emissions measurement data from installations in accordance with TA-Luft (2021), 1st BImSchV (2021), 2nd BImSchV (2020), 13th BImSchV (2021), 17th BImSchV (2024), 44th BImSchV (2022), 27th BIm-SchV (2013), 30th BImSchV (2022), 31st BImSchV (2024) and IED 2010/75/EU Chapters III (2016), IV (2014) and V (2014). The assessment was carried out in accordance with the Uniform Federal Practice (2023). Data transmission between the AMS and the evaluation system takes place via analogue (0–20 mA) and digital (VDI 4201 Modbus, 2012) channels.

The system also includes remote transmission of emissions data via modem and FTPES.

The tests were carried out as a suitability test in the laboratory. The various plant types were simulated in the laboratory test.

The emission data analysis system is approved for an ambient temperature range of +5 °C to +40 °C.

The DAHS was approved and the suitability test was carried out on the basis of the regulations in force at the time of the test. Due to possible changes in the legal framework, every user should ensure, prior to using the DAHS, that it is suitable for monitoring the legal requirements relevant to them.

Every potential user should consult the manufacturer to ensure that this DAHS is suitable for the intended purpose.

Basis of certification

This certificate is based on:

- Test report EuL/21264486/B dated 14 January 2026 from TÜV Rheinland Energy & Environment GmbH, and the basic test 936/21226273/D dated 12 April 2019 from TÜV Rheinland Energy GmbH
- Audit report 936/21240641/A dated 18 September 2017 issued by TÜV Rheinland Energy GmbH, and audit report EuL/21266792/A dated 23 September 2024 issued by TÜV Rheinland Energy & Environment GmbH
- Certification decision by the QAL1 certification body, accredited in accordance with DIN EN ISO/IEC 17065, certification body TÜV Rheinland Energy & Environment GmbH
- Monitoring of the product and the manufacturing process

Evaluation system:

D-EMS 2020

Manufacturer:

DURAG DATA SYSTEMS GmbH,
Hamburg

Suitability:

For the collection, analysis and remote transmission of emission data in accordance with DIN EN 17255, BEP2023, IED 2010/75/EU and TEHG for installations with continuous monitoring.

Functions tested during suitability assessment:

- analogue data transmission
- digital data transmission in accordance with VDI 4201 Part 1 (General), Part 2 (Profibus), Part 3 (Modbus) and Part 4 (OPC-UA)
- Remote transmission of emission data via modem and FTPES
- Emissions analysis

Software version:

2.0.2407.22560

Restrictions:

none

Notes:

1. Emissions data acquisition and analysis comprises the system for recording analogue and status signals (D-MS 500KE and D-MS 500FC, IO modules types: 750-453, 750-436, 750-553, 750-536) and a PC running the D-EMS 2020 software package.
2. Supplementary examination (examination in accordance with EN 17255 and BEP2023) relating to the notices issued by the Federal Environment Agency on 28 June 2019 (BA nz AT 22 July 2019 B8, Chapter IV, point 1.1) and of 2 April 2025 (BA nz AT 19 May 2025 B3, Chapter IV, 2nd notice).

Testing body:

TÜV Rheinland Energy & Environment GmbH, Cologne

Report No.: EuL/21264486/B issued by TÜV Rheinland Energy & Environment GmbH on 14 January 2026 and 936/21226273/D issued by TÜV Rheinland Energy GmbH on 12 April 2019

Certified product

The certificate applies to the AMS that complies with the following description:

The certificate applies to the emissions data acquisition and analysis system, which corresponds to the following description:

The emissions data acquisition and analysis system consists of the communication and/or DIN rail units and a PC. The communication (D-MS 500 KE) and/or DIN rail units (D-MS 500 FC/S(P)) are used to receive the analogue and status signals. The analogue signals are converted into digital signals via 12-bit analogue-to-digital converters. The signals are sampled and the raw data stored at a rate of 1/sec.

Data acquisition with the D-MS 500 KE for analogue and status signals

Potential-independent inputs for current signals in the range 0–20 mA are used for data acquisition. A 100-ohm resistor is located in the input circuit to convert the input current into a measurement voltage. The measurement circuits are converted, independently of potential, into a 12-bit data word by an analogue-to-digital converter in each case.

The status signals are acquired via binary input terminals and transmitted as digital signals.

The D-MS 500 KE features data storage for 30 days (standard), with an optional capacity of 96 days on a CompactFlash card. A maximum of 11 input/output modules are possible per D-MS 500 KE.

Overview of technical specifications:

- Top-hat rail mounting
- Power supply 24 V DC / max. 550 mA
- 1 serial interface RS232 / RS485
- 1 PROFIBUS DP slave interface
- 1 service interface (behind cover plate)
- 2 Ethernet TCP/IP ports
- Protocols: Modbus RTU, Modbus TCP, Elan Master, PROFIBUS, OPC UA, Mode 4 Master
- Up to 256 analogue inputs 0 / 4–20 mA / 100 Ω / 20 mA (4 per module)
- Up to 256 analogue outputs 0 / 4–20 mA / load 0 ... 300 Ω or 300 ... 600 Ω (4 per module)
- Up to 256 digital inputs (8 per module)
- Up to 256 digital outputs 24 V / 0.5 A (8 per module)

Modules

- Header module: 750-8202
(without Profibus slave interface)
- Head module: 750-8206
(with Profibus slave interface)
- Module with 4 analogue inputs: 750-453
- Module with 8 digital inputs: 750-436
- Module with 4 analogue outputs: 750-553
- Module with 8 digital outputs: 750-536
- Module with RS232/RS485 interface: 750-652
- Terminal module: 750-600

Input cards (per card)

- 8 analogue inputs with 12-bit resolution, 0–20 mA, 100 ohm internal resistance
- 15 digital inputs with 24 V internal supply voltage

Digital interfaces

- Modbus TCP/IP; Modbus RTU
- Profibus
- OPC/UA

Data processing unit

Measurement data analysis runs on an industrial PC with the following minimum configuration:

- Operating system: Windows 11 or WinServer 2025
- Processor: Intel Core i5 or higher
- Hard drives: at least 1 TB
- Main memory: 8 GB RAM
- Ethernet interface
- Serial (RS 232) optional / USB ports
- DCF77 receiver
- Standard printer (optional)
- Internet connection
- External standard V92 analogue modem for data transmission or remote maintenance (optional)
- CD/DVD-ROM (optional burner) or external hard drive.

Alternatively, the measurement data analysis can be carried out on a compact computer such as the D-EMS 2020 CS with the following minimum configuration and specifications:

- Operating system: Windows 8.1 and 10
- Processor: Intel Atom N2600 or higher
- Hard drives: at least 300 GB
- Main memory: 2048 MB RAM
- Ethernet interface
- 3 serial (RS 232) ports (optional) / USB ports
- DCF77 receiver
- Modem (standard external V92 analogue modem) for data transmission or remote maintenance, optional
- External hard drive, optional
- Up to 12 analogue inputs 0/4–20 mA / 100 ohms (8 per D-MS 500 No 51/50 plug-in card) (=>max. 16 components: 12 analogue inputs + 4 calculation channels)
- Up to 24 digital relay inputs (15 per D-MS 500 No. 51/50 plug-in card)
- Up to 24 digital relay outputs 24 V/5 VA (16 per D-MS 285 No. 13 plug-in card)
- Up to 12 analogue outputs 0/4–20 mA/500 ohms (8 per D-MS 500 No. 16 plug-in card)

For data backup, the PC is equipped with a backup drive (e.g. external hard disk) and/or an Ethernet interface for backing up data to another PC or network.



General remarks

This certificate is based on the tested unit. The manufacturer is responsible for ensuring that production continues to comply with the requirements of DIN EN 15267. The manufacturer is obliged to maintain a certified quality management system to control the manufacture of the certified product. Both the product and the quality management systems must be subject to regular monitoring.

If it is found that the product from current production no longer conforms to the certified product, TÜV Rheinland Energy & Environment GmbH must be informed at the address given on page 1.

The certification mark, bearing the product-specific ID number, which may be affixed to the certified product or used in promotional materials for the certified product, is shown on page 1 of this certificate.

This document and the certification mark remain the property of TÜV Rheinland Energy & Environment GmbH. This certificate ceases to be valid upon revocation of the notification. Upon expiry of the certificate's validity and at the request of TÜV Rheinland Energy & Environment GmbH, this document must be returned and the certification mark must no longer be used.

The current version of this certificate and its validity can also be viewed at the website qal1.de.

Document history

The history of the certified measuring system D-EMS 2020 from DURAG DATA SYSTEMS GmbH is based on the change history documents associated with the certificate number, as well as the regular ongoing monitoring of the manufacturer's quality management system:

Initial certification in accordance with DIN EN 15267-1:2023

Certificate No. 0000090028_00
Certificate valid until: 21 July 2031
Test report: EuL/21264486/B issued by TÜV Rheinland Energy & Environment GmbH on 14 January 2026 and 936/21226273/D issued by TÜV Rheinland Energy GmbH on 12 April 2019
Date of issue of the certificate: 22 July 2026
Official certificate database: www.qal1.de