

# CERTIFICATE

## of Product Conformity (QAL1)

Certificate No: 0000040334\_02

**Evaluation device:** MEAC300

**Manufacturer:** SICK AG  
Gisela Sick Straße 1  
79276 Reute  
Germany

**Test Institute:** TÜV Rheinland Energy & Environment GmbH

**This is to certify that the data acquisition and handling system (DAHS) has been tested and found to comply with the standards Uniform practice in monitoring emissions 2017\* and EFÜ interface definition 2017 (remote emission control) as well as EN 14181 (2014), EN 15267-1 (2009) and EN 15267-2 (2009).**

Certification is awarded in respect of the conditions stated in this certificate (this certificate contains 12 pages).

The present certificate replaces certificate 0000040334\_01 dated 5 November 2019.



Suitability Tested  
EN 15267  
QAL1 Certified  
Regular  
Surveillance

www.tuv.com  
ID 0000040334

Publication in the German Federal Gazette  
(BAnz) of 22 July 2019

German Environment Agency

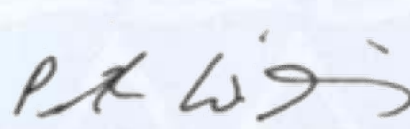
Dessau, 3 July 2024

This certificate will expire on:  
21 July 2029

TÜV Rheinland Energy &  
Environment GmbH  
Cologne, 2 July 2024



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51105 Köln

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 the certificate D-PL-11120-02-00.

\*Uniform practice in monitoring emissions 2017 - Circular of the FME 23.01.2017- IG I 2 -45053/5  
[info@qal.de](mailto:info@qal.de)

<b>Test report:</b>	936/21243486/B dated 28 February 2019
<b>Initial certification:</b>	5 August 2014
<b>Expiry date:</b>	21 July 2029
<b>Certificate:</b>	Renewal (of previous certificate 0000040334_01 of 5 November 2019 valid until 21 July 2024)
<b>Publication:</b>	BAnz AT 22.07.2019 B8, chapter IV No. 1.2

### Approved application

The tested emission data evaluation system is suitable for the continuous recording and evaluation of emission measurement data at installations in accordance to Directive 2010/75/EU chapter III (13<sup>th</sup> BImSchV 2021), chapter IV (17<sup>th</sup> BImSchV 2021), plants according to the 1<sup>st</sup> BImSchV (2017), according to the 2<sup>nd</sup> BImSchV (2020), plants according to the 27<sup>th</sup> BImSchV (2013), plants according to the 30<sup>th</sup> BImSchV (2017), plants according to the 31<sup>th</sup> BImSchV (2017) and plants compliance with TA-Luft (2002).

The test was carried out in accordance with the Federal Standard Practice (2017). Data transmission between the AMS and the evaluation system is analogue (0 - 20 mA) and digital (VDI 4201 Modbus (2012)).

The system also includes remote emission data monitoring via Modem / FTPS.

The tests were carried out as a performance test in the laboratory and as a three-month long-term test at a waste incineration plant. In the laboratory test, different types of installations were simulated.

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

The notification of suitability of the DAHS, 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 DAHS is suitable for monitoring the emission limit values relevant to the application.

Any potential user should ensure, in consultation with the manufacturer, that this DAHS is suitable for the installation at which it will be installed.

### Note

The legal regulations mentioned correspond to the current state of legislation during certification. Each user should, if necessary, in consultation with the competent authority, ensure that this DAHS meets the legal requirements for the intended use. In addition, it cannot be ruled out that legal regulations governing the use of a data acquisition system for emission monitoring may change during the lifetime of the certificate.

### Basis of the certification

This certification is based on:

- Test report 936/21243486/B dated 28 February 2019 of 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 22.07.2019 B8, chapter IV No. 1.2,  
Announcement by UBA dated 28 June 2019:

**Data acquisition and handling system:**

MEAC300

**Manufacturer:**

SICK AG, Hamburg

**Field of application:**

Emission data acquisition, evaluation and remote emission control for plants with continuous monitoring

**Tested features during the performance test:**

- analogue data transmission
- digital data transmission in line with VDI standard 4201, parts 1 (general) and 3 (Modbus)
- remote emission control via modem and FTPS

**Software version:**

4.1.34.17

**Restrictions:**

At IP20 and IP21, the DAHS enclosure did not meet the requirement for the degree of protection during the performance test. The DAHS must be installed in an enclosure for evaluation systems which provides a sufficient degree of protection for the intended site of installation. This must be verified in the context of correct installation.

**Notes:**

1. The data acquisition and handling system comprises a system for the acquisition of analogue and status signals (DAE unit and Wago module, types: 750 - 400/1, 750 - 402/3, 750 - 465, 750 - 504, 750 - 552) and a PC operating the MEAC300 suite.
2. The DAHS comes with a digital Modbus interface (serial and TCP/IP) in accordance with VDI 4201, parts 1 (general) and 3 (Modbus).
3. Supplementary test (in accordance with BEP2017 and moving monthly average for refineries under the 13<sup>th</sup> BImSchV) as regards Federal Environment Agency notices of 12 February 2013 (BAnz AT 05.03.2013 B10, chapter III number 1.1) and of 3 July 2018 (BAnz AT 17.07.2018 B9, chapter III 3<sup>rd</sup> notification).

**Test Institute:**

TÜV Rheinland Energy GmbH, Cologne

Report No.: 936/21243486/B dated 28 February 2019

Publication in the German Federal Gazette: BAnz AT 24.03.2020 B7, Chap. IV notification 60, Announcement by UBA dated 24 February 2020:

**60 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2)**

The software version of the MEAC300 emission evaluation system manufactured by SICK AG provides a redundancy feature for computers and DAE units.

The current software version is:  
Version 4.1.34.18.

Statement issued by TÜV Rheinland Energy GmbH dated 30 September 2019

Publication in the German Federal Gazette: BAnz AT 31.07.2020 B10, Chap. II notification 17, Announcement by UBA dated 27 May 2020:

**17 Notification as regards Federal Environment Agency (UBA) notice of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2)**

The software version of the MEAC300 emission calculator manufactured by SICK AG, Hamburg, now is:

Version 4.1.34.21

Versions 4.1.34.19 and 4.1.34.20 may also be used.

Statement issued by TÜV Rheinland Energy GmbH dated 09 March 2020

Publication in the German Federal Gazette: BAnz AT 03.05.2021 B9, Chap. III notification 54, Announcement by UBA dated 31 March 2021:

**54 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 27 May 2020 (BAnz AT 31.07.2020 B10, chapter II notification 17)**

The latest software version of the MEAC300 emission evaluation system manufactured by SICK AG is:

4.1.34.25

Versions 4.1.34.18 to 4.1.34.21 may no longer be used. With these versions, invalid measured values are sometimes assigned a wrong status. In installations with remote data transmission, the new version must be used, as in the older versions data transmission is sometimes incomplete.

Statement issued by TÜV Rheinland Energy GmbH dated 27 August 2020

Publication in the German Federal Gazette: BAnz AT 05.08.2021 B5, Chap. IV notification 18, Announcement by UBA dated 29 June 2021:

**18 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 31 March 2021 (BAnz AT 03.05.2021 B9, chapter III notification 54)**

The latest software version for the MEAC300 emission evaluation system from SICK AG is:  
4.1.34.27

The versions up to 4.1.34.26 are no longer to be used, as incorrect output may occur in the logs.  
The new version must be used in systems with remote data transmission, since messages and time identifiers are sometimes not transmitted correctly in the older versions.

Statement issued by TÜV Rheinland Energy GmbH dated 3 May 2021

Publication in the German Federal Gazette: BAnz AT 11.04.2022 B10, Chap. VI notification 46, Announcement by UBA dated 9 March 2022:

**46 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 29 June 2021 (BAnz AT 05.08.2021 B5, chapter IV notification 18)**

The current software version for the measuring device MEAC300 (ID = 0000040334) for emission evaluation system of the company SICK AG is:  
4.1.34.30

The versions up to 4.1.34.29 are no longer to be used, as incorrect output may occur in the logs.

Statement issued by TÜV Rheinland Energy GmbH dated 6 January 2022

Publication in the German Federal Gazette: BAnz AT 28.07.2022 B4, Chap. III notification 36, Announcement by UBA dated 28 June 2022:

**36 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 9 March 2022 (BAnz AT 11.04.2022 B10, chapter VI notification 46)**

The current software version for the MEAC300 emission evaluation system (ID = 0000040334) from SICK AG is:  
4.1.34.33.

The versions up to 4.1.34.31 are no longer to be used, since errors may occur during the evaluation of input values above 20 mA, depending on the parameterized plausibility limit.

Statement issued by TÜV Rheinland Energy GmbH dated 27 April 2022

Publication in the German Federal Gazette: BAnz AT 20.03.2023 B6, Chap. IV notification 56, Announcement by UBA dated 21 February 2023:

**56 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 28 June 2022 (BAnz AT 28.07.2022 B4, chapter III notification 36)**

The current software version of the MEAC300 emission data evaluation system (ID = 0000040334) from SICK AG is:

Software version: 4.2.0.13

The emission data evaluation system has been extended to meet the requirements of the amended 13th BImSchV (2021). The results are documented in test report 936/21255944/A dated 15 September 2022.

Statement issued by TÜV Rheinland Energy GmbH dated 15 September 2022

Publication in the German Federal Gazette: BAnz AT 02.08.2023 B7, Chap. III notification 33, Announcement by UBA dated 5 July 2023:

**33 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 21 February 2023 (BAnz AT 20.03.2023 B6, chapter IV notification 56)**

The current software version for the MEAC300 emission data evaluation system (ID = 0000040334) from SICK AG is:

Software version: 4.2.0.14

The function of the emission data evaluation system has been improved by software updates and bug fixes.

Statement issued by TÜV Rheinland Energy GmbH dated 31 March 2023

Publication in the German Federal Gazette: BAnz AT 10.05.2024 B7, Chap. V notification 42, Announcement by UBA dated 19 March 2024:

**42 Notification as regards Federal Environment Agency (UBA) notices of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.2) and of 5 July 2023 (BAnz AT 02.08.2023 B7, chapter III notification 33)**

The current software version for the MEAC300 emission data evaluation system (ID = 0000040334) from SICK AG is

Software version MEAC300: 4.2.0.16

A new interference suppression filter was installed in the data acquisition unit (DAE) due to a component discontinuation.

The function of the emission data evaluation system has been improved by software updates and bug fixes:

- Corrections to the limit value monitoring of moving monthly averages for data post-processing and introduction of the alternative O<sub>2</sub> reference value calculation for waste co-incineration plants in accordance with the amended 17th BImSchV.
- Correction of the EFÜ-FTP transfer of Hg in the conversion from µg to mg.

Plants that monitor Hg for official purposes and use data transmission via EFÜ must have a software version higher than 4.2.0.14 installed.

Statement by TÜV Rheinland Energy GmbH dated 15 December 2023

## Certified product

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

The MEAC300 system consists of:

- Data acquisition unit DAE or Wago modules
- Evaluation system with MEAC300 software

### Features of the data acquisition unit (DAE)

DAEs are micro-processor controlled devices for data input. They can be installed decentrally and are used for the following tasks:

- Acquiring mA-input signals and averaging them over 5 seconds
- Logging of status input signals
- Transfer of the calculated analogue and status signals to the computer
- Intermediate storage of all input values in the case of a computer malfunction (Capacity e.g. 30 days for 16 analogue and 32 status inputs)

### Features of the data acquisition unit (Wago)

Within the WAGO field bus node, it is possible to connect inputs and outputs to the evaluation system either directly (serially) or via an AS interface level, e.g. Ethernet or PROFIBUS,

- Number of I/O modules 99 with repeater
- Number of I/O points 6000 (depending on the master)

### Standard configuration of the emission evaluation system

- MS Windows 7 or 10
- 4 GB RAM, hard drive 2x 1 TB hard drive
- DCF77 radio clock
- Interfaces: COM, USB, network, Video, SATA
- Monitor, keyboard, mouse, printer
- Analogue or ISDN modem for remote maintenance and remote emission control (EFÜ)
- USP unit (optional)

### Features of the MEAC300 PC

- Acquisition of measurement signals
- A MEAC300 evaluation system can handle up to
  - o 800 analogue inputs and 400 analogue outputs
  - o 2000 status inputs and 1000 status outputs

### Characteristics of the MEAC300 software

- Storage, processing, presentation of measurement data
- Information and integration of operational values
- Data output and remote transmission



### **General notes**

This certificate is based upon the equipment tested. The manufacturer is responsible for ensuring that on-going production complies with the requirements of the EN 15267. The manufacturer is required to maintain an approved quality management system controlling the manufacture of 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 & Environment 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 certification mark may be applied to the product or used in advertising materials for the certified product.

This document as well as the certification mark remains property of TÜV Rheinland Energy & Environment GmbH. With revocation of the publication the certificate loses its validity. After the expiration of the certificate and on requests of the TÜV Rheinland Energy & Environment GmbH this document shall be returned and the certificate mark must not be employed anymore.

The relevant version of this certificate and its expiration is also accessible on the internet: **[qal1.de](http://qal1.de)**.

### **History of documents**

Certification of MEAC300 is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

### **Basic test**

Test report: 628172 dated 23 December 2005  
TÜV Süd Industrie Service GmbH  
Publication: BAnz. 08 April 2006, No. 70, p. 2653, chapter III number 1.5  
UBA announcement dated 21 February 2006

### **Supplementary testing**

Test report: 1724510 dated 9 January 2013  
TÜV Süd Industrie Service GmbH  
Publication: BAnz AT 05.03.2013 B10, chapter III number 1.1  
UBA announcement dated 12 February 2013

### **Notifications**

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 25 March 2013  
Publication: BAnz AT 23.07.2013 B4, chapter IV notification 12  
UBA announcement dated 3 July 2013

Statement issued by TÜV Süd Industrie Service GmbH dated 30 September 2013  
Publication: BAnz AT 01.04.2014 B12, chapter VI notification 5  
UBA announcement dated 27 February 2014  
(Software changes)

### **Initial certification according to EN 15267**

Certificate No. 0000040334\_00: 9 September 2014  
Expiry date of the certificate: 4 August 2019  
Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 3 April 2014  
Test report: 1724510 dated 9 January 2013  
Publication: BAnz AT 05.08.2014 B11, chapter V number 28  
UBA announcement dated 17 July 2014

### **Notifications**

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 24 March 2015  
Publication: BAnz AT 26.08.2015 B4, chapter V notification 1  
UBA announcement dated 22 July 2015  
(Software changes)

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 14 October 2015  
Publication: BAnz AT 14.03.2016 B7, chapter V notification 19  
UBA announcement dated 18 February 2016  
(Software correction)

Statement issued by TÜV Rheinland Energie und Umwelt GmbH dated 6 February 2016  
Publication: BAnz AT 01.08.2016 B11, chapter V notification 2  
UBA announcement dated 14 July 2016  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 6 December 2017  
Publication: BAnz AT 26.03.2018 B8, chapter V notification 2  
UBA announcement dated 21 February 2018  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 2 May 2018  
Publication: BAnz AT 17.07.2018 B9, chapter III notification 3  
UBA announcement dated 3 July 2018  
(Software changes)

**Supplementary testing according to EN 15267**

Certificate No. 0000040334\_01: 5 November 2019  
Expiry date of the certificate: 21 July 2024  
Test report: 936/21243486/B dated 28 February 2019  
TÜV Rheinland Energy GmbH  
Publication: BAnz AT 22.07.2019 B8, chapter IV number 1.2  
UBA announcement dated 28 June 2019

**Notifications**

Statement issued by TÜV Rheinland Energy GmbH dated 30 September 2019  
Publication: BAnz AT 24.03.2020 B7, chapter IV notification 60  
UBA announcement dated 24 February 2020  
(Software changes and extension with redundance function)

Statement issued by TÜV Rheinland Energy GmbH dated 9 March 2020  
Publication: BAnz AT 31.07.2020 B10, chapter II notification 17  
UBA announcement dated 27 May 2020  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 27 August 2020  
Publication: BAnz AT 03.05.2021 B9, chapter III notification 54  
UBA announcement dated 31 March 2021  
(Software changes, versions 4.1.34.18 to 4.1.34.21 may no longer be used.)

Statement issued by TÜV Rheinland Energy GmbH dated 3 May 2021  
Publication: BAnz AT 05.08.2021 B5, chapter IV notification 18  
UBA announcement dated 29 June 2021  
(Software changes (the versions up to 4.1.34.26 are not longer valid))

Statement issued by TÜV Rheinland Energy GmbH dated 6 January 2022  
Publication: BAnz AT 11.04.2022 B10, chapter VI notification 46  
UBA announcement dated 9 March 2022  
(Software changes (the versions up to 4.1.34.29 are not longer valid))

Statement issued by TÜV Rheinland Energy GmbH dated 27 April 2022  
Publication: BAnz AT 28.07.2022 B4, chapter III notification 36  
UBA announcement dated 28 June 2022  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 15 September 2022  
Publication: BAnz AT 20.03.2023 B6, chapter IV notification 56  
UBA announcement dated 21 February 2023  
(Software changes, comply with 13. BImSchV (2021))

Statement issued by TÜV Rheinland Energy GmbH dated 31 March 2023  
Publication: BAnz AT 02.08.2023 B7, chapter III notification 33  
UBA announcement dated 5 July 2023  
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 15 December 2023  
Publication: BAnz AT 10.05.2024 B7, chapter V notification 42  
UBA announcement dated 19 March 2024  
(Software change, software version 4.2.0.14 may no longer be used if Hg must be monitored)

**Renewal of certificates**

Certificate No. 0000040334\_02: 3 July 2024  
Expiry date of the certificate: 21 July 2029