

CERTIFICATE

of Product Conformity (QAL1)

Certificate No: 0000051687_02

Evaluation device: CEM-DAS/DAA

Manufacturer: ABB AG
Stierstädter Str. 5
60488 Frankfurt/Main
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 (2023).**

Certification is awarded in respect of the conditions stated in this certificate
(this certificate contains 9 pages).

The present certificate replaces certificate 0000051687_01 dated 5 November 2019.



Suitability Tested
EN 15267
QAL1 Certified
Regular
Surveillance

www.tuv.com
ID 0000051687

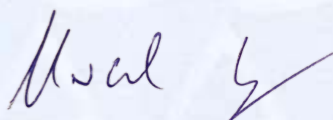
Publication in the German Federal Gazette
(BAnz) of 22 July 2019

German Environment Agency

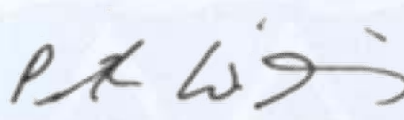
Dessau, 3 July 2024

This certificate will expire on:
21 July 2029

TÜV Rheinland Energy &
Environment GmbH
Cologne, 2 July 2024



Dr. Marcel Langner
Head of Section II 4



ppa. Dr. Peter Wilbring

www.umwelt-tuv.eu
tre@umwelt-tuv.eu
Tel. + 49 221 806-5200

TÜV Rheinland Energy & Environment GmbH
Am Grauen Stein
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
qal1.de info@qal.de

Test report: 936/21242378/B dated 1 March 2019
Initial certification: 1 August 2016
Expiry date: 21 July 2029
Certificate: Renewal (of previous certificate 0000051687_01 of 5 November 2019 valid until 21 July 2024)
Publication: BAnz AT 22.07.2019 B8, chapter IV No. 1.4

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 (13th BImSchV 2017), chapter IV (17th BImSchV 2013), plants according to the 1st BImSchV (2017), plants according to the 2nd BImSchV (2017), plants according to the 27th BImSchV (2013), plants according to the 30th BImSchV (2017), plants according to the 31st 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 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 test was part of the performance test of the UmweltOffice evaluation system manufactured by Siempelkamp NIS Ingenieurgesellschaft mbH.

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 936/21242378/B dated 1 March 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. 1.4,
Announcement by UBA dated 28 June 2019:

AMS designation:

CEM-DAS/DAA

Manufacturer:

ABB Automation GmbH, Frankfurt am Main

Field of application:

Data acquisition, evaluation and remote emission control at continuously monitored plants

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:

Data evaluation and parameterisation

CEM-DAS: 1.3.1

Oracle data base: 11.2, 11.2 Express or 12.2

Data acquisition:

DAA 1.3 (001)

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 emission data acquisition and evaluation consists of two parts: the front end system for recording analogous and digital status signal and a PC on which the programme suite CEM-DAS as well as the DAA programme for data acquisition are installed. The following Talas/7 I/O modules are available as frontend systems: IO8/AI, IO8/DI, IO8/AIDI, IO4/AI, IO4/DI, IO4/AIDI, IO4/DIDO.
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. The programme is also offered as small edition "CEM-DAS sE" with 12 analogue inputs and without remote emission control. It is also possible to operate the DAA programme for data acquisition on a separate PC.
4. Supplementary test (adaptation to BEP2017 and moving monthly average for refineries under the 13th BImSchV) as regards Federal Environment Agency notices of 14 July 2016 (BAnz AT 01.08.2016 B11, chapter II number 1.1) and of 3 July 2018 (BAnz AT 17.07.2018 B9, chapter III 1st notification).

Test Institute:

TÜV Rheinland Energy GmbH, Cologne

Report No.: 936/21242378/A dated 1 March 2019

Publication in the German Federal Gazette: BAnz AT 24.03.2020 B7, Chap. IV notification 9,
Announcement by UBA dated 24 February 2020:

**9 Notification as regards Federal Environment Agency (UBA) notice
of 28 June 2019 (BAnz AT 22.07.2019 B8, chapter IV number 1.4)**

ABB Automation GmbH have updated the software of their CEM-DAS emission data
evaluation system.

The latest software versions of the CEM-DAS emission data evaluation system are:

Data acquisition:	DAA 1.3 (002)
Data evaluation:	CEM-DAS 1.3.2
Oracle Data base:	11.2, 11.2 XE, 12.2, 18c XE or 18c SE

Statement issued by TÜV Rheinland Energy GmbH dated 24 September 2019

Certified product

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

The CEM-DAS/DAA DAHS comprises the following parts:

- TALAS/7 IO modules for analogue and digital data transmission,
- digital data transmission according to VDI 4201 parts 1 and 3,
- one or more PCs
- DAA software
 - for connecting the TALAS/7 I/O modules and
 - the digital interface as defined in VDI 4201 and
 - for data evaluation,
- CEM-DAS software package for data transfer from DAA, classification, report creation and data transmission

TALAS/7 IO modules are used to receive analogue and status signals; the modules perform analog-to-digital conversion and have a sampling rate of 40/sec and use 16-bit analog-to-digital converters. The TALAS/7 IO modules are connected to the computer via TCP/IP Ethernet. These TALAS/7 IO modules keep being purchased from Siempelkamp NIS Ingenieurgesellschaft mbH.

The **TALAS/7 IO** modules are available in the following versions:

Module	AI	DI	AO	DO
TALAS/7 – IO8/AI	28	1		1
TALAS/7 – IO8/DI		29		1
TALAS/7 – IO8/AIDI	14	15		1
TALAS/7 – IO8/AO		1	14	1
TALAS/7 – IO4/AI	12	1		1
TALAS/7 – IO4/DI		13		1
TALAS/7 – IO4/AIDI	6	7		1
TALAS/7 – IO4/DIDO		7		7
TALAS/7 – IO4/AO		1	6	1
TALAS/7 – IO4/DO		1		13

AI = analogue input; DI = digital input, AO = analogue output, DO = digital output

The **TALAS/7 IO** modules have the following technical specifications:

- Degree of protection: IP20
- Galvanic isolation: 1500 Volt (air break ≥ 2 mm)
- Network: 10BaseT on RJ45

Analogue inputs

- A/D converter: per input with T correction
- Resolution: 0.763 μ A (15 Bit)
- Accuracy: 0.04 % FSR (Full Scale Range: 25 mA)
- Scan rate: ~ 25 ms
- Measured range: 0 ... > 24 mA
- Load: 50 Ohm
- Protected against polarity reversal, galvanic isolation between pins and from the module

Digital inputs

- External voltages: 12 ... 230 V AC/DC
- Potential-free contacts: require a 24V power supply
- Internal resistance: > 50 kOhm
- Scan rate: ~ 2 ms
- Protected against polarity reversal, galvanic isolation between pins and from the module

Measured values and status signals can also be transferred via a digital interface which works with the **Modbus protocol according to VDI 4201 parts 1 and 3**. The data transfer takes place via TCP/IP directly to the computer operating the DAA software. A Modbus protocol converter is used for digital data transmission according to EIA-485 serial, which converts "serial to TCP/IP".

The **DAA** program carries out the data transfer (from the IO modules and the digital interface), the averaging, the conversion according to the calibration function, the standardization and the validation of the measured values for both the analogue input modules and the digital interface and forwards these to the CEM-DAS program package. Moreover, raw signals are transferred as 5 sec-averages for the purpose of documenting data. The DAA program can run on the same computer as the CEM-DAS as well as on a stand-alone computer.

The computer with the **CEM-DAS** program suite takes over the data for storage and further processing. The computer classifies and evaluates data in accordance with the applicable provisions and generates the required messages and protocols.

The PC operating CEM-DAS is able to receive and process data from several data recording units. For this purpose, clusters are set up in the programme for each and assigned to a data acquisition unit. Data evaluation can thus be performed for each cluster individually or for several clusters combined. This also applies to remote emission control.

The following minimum configuration of the computers with the programs DAA and the CEM-DAS suite are required:

- Intel Dual Core 2 or equivalent processor
- 2 GB for 32bit Windows 7 or 4 GB for 64bit Windows 7/Server 2008
- 2 hard drives \geq 500 GB
- Ethernet interface for TALAS/7 IO modules and digital interfaces
- serial (RS232)/USB port for modem
- Parallel interface/USB interface for printer
- Windows 7 or Windows Server 2008 operating system
- DCF77 receiver
- External modem
- CD/DVD ROM (optional writer)

For backup purposes, the PC has been equipped with a second hard drive for data mirroring, a backup drive (e.g. CD writer) and/or an Ethernet interface to backup data on a separate PC.

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: gal1.de.

History of documents

Certification of CEM-DAS CEM-DAS/DAA is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

Initial certification according to EN 15267

Certificate No. 0000051687_00: 19 August 2016
Expiry date of the certificate: 31 July 2021
Test report: 936/21230570/B dated 26 February 2016
TÜV Rheinland Energie und Umwelt GmbH
Publication: BAnz AT 01.08.2016 B11, chapter II number 1.1
UBA announcement dated 14 July 2016

Notifications

Statement issued by TÜV Rheinland Energy GmbH dated 12 October 2016
Publication: BAnz AT 15.03.2017 B6, chapter V notification 12
UBA announcement dated 22 February 2017
(Software changes, Notice: version 1.2.0 may no longer be used.)

Statement issued by TÜV Rheinland Energy GmbH dated 8 March 2017
Publication: BAnz AT 31.07.2017 B12, chapter II notification 1
UBA announcement dated 13 July 2017
(Software changes)

Statement issued by TÜV Rheinland Energy GmbH dated 2 May 2018
Publication: BAnz AT 17.07.2018 B9, chapter III notification 1
UBA announcement dated 3 July 2018
(Software changes)

Supplementary testing according to EN 15267

Certificate No. 0000051687_01: 5 November 2019
Expiry date of the certificate: 21 July 2024
Test report: 936/21242378/B dated 1 March 2019
TÜV Rheinland Energy GmbH
Publication: BAnz AT 22.07.2019 B8, chapter IV number 1.4
UBA announcement dated 28 June 2019

Notifications

Statement issued by TÜV Rheinland Energy GmbH dated 24 September 2019
Publication: BAnz AT 24.03.2020 B7, chapter IV notification 9
UBA announcement dated 24 February 2020
(Software changes)

Renewal of certificates

Certificate No. 0000051687_02: 3 July 2024
Expiry date of the certificate: 21 July 2029