

CERTIFICATE

of Product Conformity (QAL1)

Certificate number: 0000051687

Certified AMS: CEM-DAS

Manufacturer: ABB Automation GmbH
Stierstädter Str. 5
60488 Frankfurt/Main
Germany

Test Institute: TÜV Rheinland Energy GmbH

**This is to certify that the Emissions data evaluation (DAHS)
has been tested and certified according to the standards**

**Uniform Practice in monitoring emissions 2010*,
Teletransmission definition 2014,
EN 14181 (2004), EN 15267-1 (2009) and EN 15267-2 (2009)**

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 0000051687

Publication in the German Federal Gazette
(BAnz.) of 1 August 2016

German Federal Environment Agency
Dessau, 19 August 2016



Dr. Marcel Langner
Head of Section II 4.1

This certificate will expire on:
31 July 2021

TÜV Rheinland Energy GmbH
Cologne, 18 August 2016



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Test institute accredited to EN ISO/IEC 17025:2005 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,
- Circular from Federal Environment Ministry of 2005-06-13 - IG I 2 - 45053/5 and from 2010-08-04 - Az.: IG I 2- 51134/0

Certificate:
0000051687 / 19 August 2016

Test report: 936/21230570/B of 26 February 2016
Initial certification: 1 August 2016
Expiry date: 31 July 2021
Publication: BAnz AT 01.08.2016 B11, chapter II number 1.1

Approved application

The tested data acquisition and handling system (DAHS) is suitable for continuous emissions data acquisition, evaluation at plants with continuous monitoring.

The data transmission can carry out analogous (0 - 20 mA + status signal) or over a digital interface (modbus, EIA-485, serial and TCP/IP).

The system contains also the tele transmission of emission data via modem.

The suitability of the data acquisition system for this application was assessed on the basis of a laboratory test and a three months field test at a waste incineration plant. Additionally the different further possible installation types of the evaluating-software were simulated in the field test with the collected data. The test work was done during the performance test of the data acquisition system UmweltOffice of the company Siempelkamp NIS Ingenieurgesellschaft mbH.

The AMS is approved for a temperature range of +5 °C to +40 °C.

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

Basis of the certification

This certification is based on:

- Test report 936/21230570/B of 26 February 2016 of TÜV Rheinland Energie und Umwelt 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 01.08.2016 B11, chapter II number 1.1,
Announcement by UBA from 14 July 2016:

AMS designation:

CEM-DAS

Manufacturer:

ABB Automation GmbH Process Automation, Frankfurt am Main

Field of application:

Emission data acquisition and handling system (DAHS) with remote data transmission for plants with continuous monitoring.

Measuring ranges during the performance test:

- analog data transmission
- digital data transmission according to VDI 4201 part 1 and part 3 (Modbus, serial and TCP/IP)
- remote data transmission

Software version:

Data evaluation:	CEM-DAS:	1.2.0
	Oracle-Database:	11.2
Data acquisition:	DAA	1.2 (000)

Restrictions:

None

Notes:

1. The emission data acquisition and -evaluation consist of two parts, the Talas/7-IO-modules for the acquisition of analog and status signals and a PC with the program package CEM-DAS.
2. For analog data transmission are the Talas/7-IO-modules IO8/AI, IO8/DI, IO8/AIDI, IO4/AI, IO4/DI, IO4/AIDI, IO4/DIDO are available.
3. The digital data transmission according to VDI 4201 part 1 and part 3 (Modbus, serial and TCP/IP) are possible.

Test report:

TÜV Rheinland Energie und Umwelt GmbH, Cologne
Report No.: 936/21230570/B of 26 February 2016

Certified product

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

The parts of the data acquisition and handling system (DAHS) CEM-DAS are:

- TALAS/7-IO-Modules for analog and digital data transmission,
- digital data transmission according to VDI 4201 part 1 and part 3 (Modbus, serial and TCP/IP),
- one or more PC
- DAA-Software
 - for linking from TALAS/7-IO-Module and
 - the digital interface according to VDI 4201 and
 - for data evaluation,
- software package CEM-DAS for data transfer from DAA, classification, report creation and data tele transmission

For the takeover of analogous and status signals **TALAS/7-IO** modules are used, the modules carry out the analog/digital transformation and have a sampling rate from 40/sec and use 16 bit analog-digital converters. The TALAS /7-IO-modules are connected over TCP/IP-Ethernet to the PC. These Talas/7-IO modules are purchased unchanged from the company Siempelkamp NIS Ingenieurgesellschaft mbH.

There are **TALAS/7-IO modules** in following versions:

Modules	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 = analog input, DI = digital input, AO,DO = analog, digital output

The TALAS/7-IO modules have the following technical data:

- protection class : IP20
- galvanic isolation : 1500 Volt (air break >= 2 mm)
- network : 10BaseT

Analogues input

- AD converter : each input with T - correction
- Resolution : 0,763 µA (15 Bit)
- accuracy : 0,04 % FSR (Full Scale Range: 25 mA)
- Sampling interval : ca. 25 ms
- Measuring range : 0 ... > 24 mA
- Internal resistance : 50 Ohm
- non-polar, galvanic isolated to one another and to the modul

Digital input

- External voltage : 12 ... 230 V AC/DC
- Potential-free contact : require a 24 V power supply
- Internal resistance : > 50 KOhm
- Sampling interval : ca. 2 ms
- non-polar, galvanic isolated to one another and to the module

The takeover of measured values and status signals can also over a digital interface, works with **Modbus protocol according to VDI 4201 part 1 and 3**, occur. The data transfer occurs here via TCP/IP directly to the computer with the DAA-software. At a digital data transfer over EIA-485 serial, a Modbus protocol converter that moves serial to TCP/IP is used.

The program **DAA** take over the data input for the analogous input modules as for the digital interface (IO-modules and the digital interface). It do the averaging, the conversion according to the calibrating-function, the standardization and the validation of the measured values and transmit the data to the CEM-DAS software. Furthermore also the raw signals as 5 sec averages for the data archiving are transmit passed on. The program DAA can run on the same computer or on an independent computer.

The PC with the program-package **CEM-DAS** takes over the data for the storage and for the further processing. The computer do the evaluation and classification according to the rules and generates the demanded announcements and protocols.

The PC with the program- package **CEM-DAS** can take over the data from several data acquisition units and process the data. The data evaluation can be carried out for several installations. This is valid also for the data tele transmission.

Following minimum configuration for the industrial PC with the software DAA and CEM-DAS:

- Intel Dual Core 2 or equivalent processor
- 2 GB for 32bit Windows 7 or 4 GB for 64bit Windows 7 / Server 2008
- 2 hard discs > 160 GB
- Ethernet interface for TALAS/net and TALAS/7-IO-Module
- serial (RS 232) / USB interface for TALAS/e and modem
- parallel interface / USB interface for printer
- Operating system Windows7 or Windows Server 2008
- DCF77 receiver
- external modem
- CD / DVD-ROM (optional: burner)

For data saving the PC needs to be equipped with a second hard disc for data mirroring and a backup drive or an Ethernet interface for data storage on a second PC.

The tests of the data evaluating-system CEM-DAS occurred on basis of following requests:

- Uniform Practice in monitoring emissions, Circular from Federal Environment Ministry of 2005-06-13 - IG I 2 - 45053/5 and from 2010-08-04 - Az.: IG I 2- 51134/0
- Teletransmission for emission data (EFÜ) / interface definition revised edition dated April 2014
- Digital data transmission according to VDI 4201 part 1 and 3 (Modbus, serial and TCP/IP)
- EN 14181 2004 (Stationary source emissions - Quality assurance of automated measuring systems) with regard to the data evaluating of emission measuring systems as well as EN 14181 2014 with regard to the calibration range monitoring
- Technical guideline VDI 4201
Performance criteria on automated measuring and electronic data evaluation systems for monitoring emissions - Digital interface -
part 1 - General requirements
part 3 - Specific requirements for Modbus

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 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 can be applied to the product or used in publicity material for the certified product.

This document as well as the certification mark remains property of TÜV Rheinland Energy 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 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.

Certification of CEM-DAS 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: 19 August 2016
Expiry date of the certificate: 31 July 2021

Test report: 936/21230570/B of 26 February 2016
TÜV Rheinland Energie und Umwelt GmbH, Cologne,

Publication: BAnz AT 01.08.2016 B11, chapter II number 1.1
Announcement by UBA from 14 July 2016