

CERTIFICATE

on Product Conformity (QAL1)

Number of Certificate: 0000035011

Certified AMS: UmweltOffice

Manufacturer: NIS Ingenieurgesellschaft mbH
Industriestr. 13
63755 Alzenau
Germany

Test Institute: TÜV Rheinland Energie und Umwelt GmbH

**This is to certify that the DAHS has been tested
and found to comply with:**

**Uniform Practice in monitoring emissions 2010,
Remote data transmission (EFÜ) definition 2005,
Emissions data evaluation according to EN 14181: 2004,
EN 15267-1: 2009, EN 15267-2: 2009.**

Certification is awarded in respect of the conditions stated in this certificate
(also see the following pages).



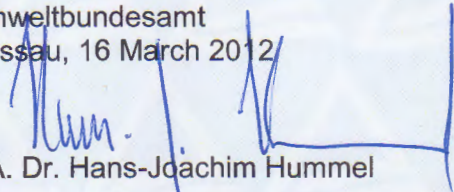
- German Type Approval (Suitability Tested)
- QAL1 certified
- TUV approved
- Annual inspection

Publication in the German Federal Gazette
(BAnz.) of 02 March 2012

The certificate is valid until:
01 March 2017

Umweltbundesamt
Dessau, 16 March 2012

TÜV Rheinland Energie und Umwelt GmbH
Köln, 15 March 2012


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Accreditation according to EN ISO/IEC 17025 and certified according to ISO 9001:2008.

Certificate:
0000035011 / 16 March 2012

Test report: 936/21216122/A vom 19 October 2011
First certification: 02 March 2012
Validity ends: 01 March 2017
Publication: BAnz. 02 March 2012, No. 36, p. 920, chapter III, No. 1.1

Approved application

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

The suitability of the data acquisition system for this application was assessed on the basis of a laboratory test and a more than three months field test at a coal fired power plant. Additionally a waste incinerator was simulated.

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

Any potential user should ensure, in consultation with the manufacturer that this AMS is suitable for ambient air applications at which it will be installed.

Basis of the certification

This certification is based on:

- Test report 936/21216122/A dated 19 October 2011 of TÜV Rheinland Energie und Umwelt GmbH
- suitability announced by the German Environmental Agency (UBA) as the relevant body
- the ongoing surveillance of the product and the manufacturing process
- publication in the German Federal Gazette (BAnz. 02 March 2012, No. 36, page 920, chapter III, No. 1.1, announcement by UBA from 23 February 2012)

AMS name:

UmweltOffice

Manufacturer:

NIS Ingenieurgesellschaft mbH, Alzenau

Field of application:

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

Measuring ranges during suitability test:

- Analog data transmission
- Emission remote data transmission

Software version:

Data evaluation	UmweltOffice:	7.0.7
	Oracle-Datenbank:	11.2
Data acquisition:	TALAS/e:	4.2 (018)
	TALAS/net:	5.2 (020)
	TALAS/7:	7.0 (002)
Test and configuration:	TService:	5.3 (002)
	TAP42:	4.2 (017)
	TAP52:	5.2 (020)

Restrictions:

none

Note:

The emission data acquisition and -evaluation consist of two parts, the front-end system for the acquisition of analog and status signals and a PC with the program package UmweltOffice. As front-end-systems TALAS/e, TALAS/net, TALAS/7-CMR-Box and the TALAS/7-IO-modules IO8/AI, IO8/DI, IO8/AIDI, IO4/AI, IO4/DI, IO4/AIDI, IO4/DIDO are available.

Test report:

TÜV Rheinland Energie und Umwelt GmbH, Köln
Report No.: 936/21216122/A of 19 October 2011

Certified product

This certificate applies to systems confirming to the following description:

The data acquisition and handling system (DAHS) comprises the UmweltOffice program pack and various frontend systems for the acquisition of analog and status signals.

The following systems serve for analog and status signal acquisition:

- TALAS/e
- TALAS/net
- CMR-Box
- TALAS/7-IO-Module

The **TALAS/e** and **TALAS/net** systems are used for recording analog and status signals. The analog signals change into digital signals via 12-bit analog-digital converters. The temporal resolution of the analog signals is 100/sec. In addition, the modules allow for averaging, conversion according to the calibration function, normalisation and validation of the measured values.

The normalised and validated mean values as well as the status signals are passed on to a downstream computer for further processing. The raw signals are also forwarded as 5-sec mean values for data archiving.

The ring memory saves all incoming mean values for 5 days. Additionally, TALAS/e saves the measured raw values for >70 min, while TALAS/net does this for >36 hours (depending on the parameterized number of channels). In the event that the connection to the downstream computer is down, the pending data transmission takes place after the connection is restored.

The **CMR-Box** and **TALAS/7-IO-Module** serve for A/D-conversion. The CMR-Boxes have a sample rate of 1/sec and 12-bit analog-digital converters, while the sample rate of the TALAS /1-IO-Modules is 40/sec and they are equipped with 16-bit analog-digital converters. The program TALAS/7 performs the acquisition of data from the input modules, averaging, conversion according to the calibration function, normalisation and validation of measured values, and transfers these to the UmweltOffice. The raw signals are also forwarded as 5-sec mean values for data archiving. TALAS/7 can run on the same PC as UmweltOffice as well as on an independent PC.

The PC connected downstream of the data acquisition modules is equipped with the UmweltOffice program pack, and serves the functions of data storage and further processing. The computer carries out data classification and evaluation in compliance with the regulations, and generates the required messages and protocols.

The PC equipped with the program UmweltOffice can obtain and process data from many data acquisition units. For this purpose, clusters are set up in the program for each data acquisition unit. Data acquisition can be thus performed for each cluster individually or for many clusters combined. The same is applied to remote data transmission.

TALAS/e comprises:

- an analog input card with 7 analog input units (optional: up to 5 additional A/D cards)
- two cards with 16 digital input units (optional: up to 4 additional digital cards)
- optional: up to 4 analog output cards with 8 output units each
- optional: up to 6 digital output cards with 16 output units each
- processor: Motorola 68.000 12,5 MHz
- multi-user multitasking real-time operating system OS-9/68K
- 640 kByte CMOS-RAM for data (battery-buffered, power supply $\hat{=}$ 14 Tage)
- EPROM for programs
- programmable Watchdog
- serial interface

TALAS/net is equipped with:

- an analog input card with 7 analog input units (optional: up to 3 additional A/D cards)
- two cards with 12 digital input units (optional: up to 4 additional digital cards)
- optional: up to 2 analog output cards with 4 output units each
- optional: up to 2 digital output cards with 7 output units each
- processor: Motorola MC68EN302 25 MHz
- multi-user multitasking real-time operating system OS-9/68K
- 1 MByte static RAM
- 1,5 MByte program memory, split into:
 - 0,5 MByte system EPROM for operating system
 - 1 MByte Flash EPROM for application software
- 8 MByte Flash EPROM as data storage (non-volatile)
- up to 16 MByte dynamic RAM
- internal temperature monitor
- programmable Watchdog
- Ethernet interface
- serial interface

The **CMR-Boxes** consist of:

A single CMR-Box can contain a maximum of 16 input and output cards.

- an analog-digital converter card A805
- analog input cards A1004 with 8 analog input units each
- digital input cards M8993 with 16 digital input units each
- optional: analog output cards 2G-M00JA with 2 output units each
- optional: digital output cards M8994 with 16 output units each

The following **TALAS/7-IO-Module** versions are available:

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

Analog inputs

- Resolution : 0,763 μ A (15 Bit)
- Sampling interval : ca. 25 ms
- Measuring range : 0 ... > 24 mA
- Resistance : 50 Ohm
- non-polar, galvanically isolated to one another and to the module

Digital inputs

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

The downstream computer with the UmweltOffice program pack is an industrial PC with the following minimum configuration:

- 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)

The data are saved on the PC's second hard disc for data mirroring, on a backup drive such as CD burner, and/or through an Ethernet interface for data storage on a second PC. A printer connected to the PC is required for issuing daily protocols, messages and limit value exceedances.

Certificate:
0000035011 / 16 March 2012

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 Energie und Umwelt GmbH must be notified at the given address 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 is presented on page 1 of this certificate.

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

The relevant version of this certificate and the validity is also accessible on the internet Address: **qal1.de**.

Certification of data acquisition and handling system (DAHS) UmweltOffice is based on the documents listed below and the regular, continuous monitoring of the Quality Management System of the manufacturer:

Requirements:

Uniform Practice in monitoring emissions; circular of the BMU dated 13.6.2005 - IG I 2 - 45053/5 and 04.8.2010 - IG I 2 - 51134/0.

Emissions data teletransmission (EFÜ) definition in the copy of the resolution of the LAI dated 28.09.2005 (corrected copy dated 15 November 2006).

Initial certification according to EN 15267:

Certificate No. 0000035011: 16 March 2012

Validity of the certificate until: 01 March 2017

Test report: 936/21216122/A of 19 October 2011
TÜV Rheinland Energie und Umwelt GmbH

Publication: BAnz. 02 March 2012, No. 36, p. 920, chapter III, No. 1.1,
Announcement by UBA from 23 February 2012