IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx TUR 23.0019X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2023-08-21

Applicant: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

Equipment: **USB RS485 Converter, Type 9787/1*-11-*2**

Optional accessory:

Type of Protection: **Ex i**

Marking: **Ex ia [ia Ga] IIC T4 Gb**

resp. Ex ec [ia Ga] IIC T4 Gc

[Ex ia Da] IIIC

Approved for issue on behalf of the IECEx Certification Body: **Christian Mehrhoff**

Position: **Assigned certifier**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany

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Certificate No.: **IECEx TUR 23.0019X** Page 2 of 3

Date of issue: 2023-08-21 Issue No: 0

Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2023 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:7.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/TUR/ExTR23.0019/00

Quality Assessment Report:

DE/BVS/QAR10.0002/18

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The USB RS485 converter is an accessory for the remote I/O system "IS1+" and serves to convert USB data into serial RS485 service data.

Since the Zone 1 CPU 9442/32 does not contain RS485 interface for the service bus, the converter 9787/12-11-22 is used to convert the USB data (intrinsically safe) into serial RS485 service data (RS485-IS).

The USB RS485 Converter 9787/13-11-12 can be used when USB data (standard USB) must be converted to serial RS485 service data (RS485-IS).

In addition, the USB RS485 Converter can also be used in other applications: RS485 interfaces are in wide use for service purposes, but only few data processing systems have RS485 interfaces. Wherever a RS485 interface is missing, the USB RS485 Converter can compensate this absence.

Type 9787/12-11-22 is designed for use in Zone 1, Zone 2 or outside the hazardous area.

Type 9787/13-11-12 is intended for use in Zone 2 or outside the hazardous area. For this type, the special conditions for safe use shall be considered.

SPECIFIC CONDITIONS OF USE: YES as shown below:

For installation in hazardous atmospheres of zone 2, the USB RS485 Converter 9787/13-11-12 shall be installed within an enclosure which has a minimum rating of IP54 in accordance with EN/IEC 60079-0, with a pollution degree of 1 or 2, as defined in EN/IEC 60664-1.

The USB socket shall be secured (e.g. with a cable tie).

Annex:

IECEx_TUR_23.0019X_Attachment rev 01.pdf

Device: USB RS485 Converter,
Type: 9787/1*-11-*2

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30,
D-74638 Waldenburg, Germany

Type designation:

USB Converter **9787/ 1 * - 1 1 - * 2**
a b c d e f

Hardware-Version:
- 1 — 1

Hazardous area:
- Zone 1 / category 2 — 2
- Zone 2 / category 3 — 3

Number of USB ports Interface 1 (USB)
- 1 port — 1

Number of other ports Interface 2 (Other)
- 1 port — 1

Design of USB ports
- Standard (Type B) — 1
- USB-IS (Type B) — 2

Design of other ports
- RS485-IS — 2

Type	Interface X001	Interface X002
9787/12-11-22 (Zone 1)	RS485-IS [1] $U_o \leq 3.73$ V $I_o \leq 89$ mA $U_i = \pm 4.2$ V $C_i = 0$ µF $L_i = 0$ µH	USB-IS $U_i = 5.55$ V $I_i = 1$ A $P_i = 2$ W $C_i = 8$ µF $L_i = 9$ µH
9787/13-11-12 (Zone 2)	RS485-IS [1] $U_o \leq 3.73$ V $I_o \leq 133$ mA $U_i = \pm 16$ V [2] $C_i = 0$ µF $L_i = 0$ µH	Standard USB $U_m = 30$ V $U_n = 5$ V $I_n = 55$ mA

[1] RS485-IS interface according to PROFIBUS Guideline – Order No. 2.262 – Version 1.1 / June 2003.
[2] If the interface is used according to PROFIBUS Guideline the maximum input voltage is $U_i = \pm 4.2$ V.

T_a = - 40°C ... + 75°C