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 BVS 17.0081X**

Certificate history:
Issue 0 (2017-10-09)

Status: **Current**

Issue No: 1

Date of Issue: 2023-08-10

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

Equipment: **Transmitter Supply Unit type 9260/19-11-10 and 9260/23-11-10**

Optional accessory:

Type of Protection: **Intrinsic Safety "i", Increased Safety "e"**

Marking: [Ex ia Da] IIIC
[Ex ia Ma] I
Ex ec [ia Ga] IIC T4 Gc

Approved for issue on behalf of the IECEx Certification Body: **Dr Franz Eickhoff**

Position: **Senior Lead Auditor, Certification Manager and officially recognised expert**

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
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Manufacturing locations: **R. STAHL Schaltgeräte GmbH**
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74638 Waldenburg
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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 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

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/BVS/ExTR17.0074/01

Quality Assessment Report:

DE/BVS/QAR10.0002/18

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

Subject and Type

Transmitter Supply Unit types 9260/19-11-10 and 9260/23-11-10

Description

The Transmitter Supply Unit is used for transmission of 0(4) … 20 mA signals between intrinsically safe and non-intrinsically safe signal circuits. Additionally, digital communication signals (HART) can be modulated and bi-directional transmitted.

The Transmitter Supply Unit can be installed outside the hazardous area or in Zone 2.

The intrinsically safe circuits type of protection Ex ia can be led into areas which require EPL Ga or EPL Da equipment.

Ratings:

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:
The devices must be mounted within the hazardous area (EPL Gc) in an IP54 enclosure that meets the requirements of IEC 60079-0.

The temperature range differs depending on the installation; refer to the parameters.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Additional type 9260/23-11-10 as two-channel variant
- Evaluation according to the current standards incl. change of the protection class Ex nA to Ex ec
- Approval of intrinsically safe circuits for Group I
- Extension of the temperature range
- De-ratings for temperature and safety maximum voltage U_m in relation to the use in height
- Adaptation of L_o values; and addition of maximum values for external inductances and capacitances for Groups IIA and I

Annex:

BVS_17_0081X_RStahl_Annex_issue1_.pdf

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Annex

Parameters:

1 Non-intrinsically safe power supply circuit (terminals 5 – 6 or pac-Bus)

Nominal voltage	U_n	DC	19.2 … 30	V
Maximum voltage	U_m	AC	253	V
		DC	125	V

2 Non-intrinsically safe signal circuits (terminals 3 – 4 and 1 – 2)

Nominal signal			0(4) … 20	mA
Maximum voltage	U_m	AC	253	V
		DC	125	V

3 Maximum voltage U_m of the non intrinsically safe circuits depend on the operating height (above sea level)

Height	Maximum voltage U_m
≤ 2000 m	AC 253 V, DC 125 V
≤ 3000 m	AC 190 V, DC 110 V
≤ 5000 m	AC 60 V, DC 60 V

4 Intrinsically safe circuits
The intrinsically safe circuits are galvanically isolated from the non-intrinsically safe circuits and from earth.

4.1 Intrinsically safe output circuit
Connection via terminals 10 – 11 for type 9260/19-11-10
Connection via terminals 10 – 11 and 12 – 13 for type 9260/23-11-10

Maximum output voltage	U_o	DC	25.2	V
Maximum output current	I_o		93	mA
Maximum output power	P_o		587	mW

Maximum external inductivity and capacity with separated connection of C_o and L_o, see table

	group I	group IIA	group IIB/III	group IIC
C_o	4.8 µF	2.9 µF	820 nF	107 nF
L_o	40 mH	26 mH	14 mH	3 mH

Maximum external inductivity and capacity if concentrated C_o and L_o are connected, see tables

For Group IIA

C_o	470 nF	570 nF	630 nF	720 nF	1.1 µF	2.9 µF
L_o	26 mH	20 mH	1 mH	0.5 mH	0.1 mH	5 µH

For Group IIB and III

C_o	370 nF	430 nF	510 nF	660 nF	820 nF
L_o	16 mH	1 mH	500 µH	200 µH	100 µH

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For Group IIC

C_o	47 nF	49 nF	63 nF	80 nF	107 nF
L_o	2.2 mH	2 mH	1 mH	500 µH	200 µH

For Group I

C_o	0.54 µF	1.1 µF	2.8 µF	4.15 µF
L_o	37 mH	0.2 mH	10 µH	1 µH

4.2 Intrinsically safe input circuit
Connection via terminals 12 – 13 (only for type 9260/19-11-10)

Maximum input voltage	U_i	DC	30 V
Maximum input current	I_i		150 mA
Maximum internal capacitance	C_i		negligible
Maximum internal inductance	L_i		negligible

5 Ambient temperature range

≤ 2000 m above sea level	-40 °C ≤ T_a ≤ +60 °C/+70 °C*
> 2000 m ≤ 3000 m above sea level	-40 °C ≤ T_a ≤ +54 °C/+63 °C*
> 3000 m ≤ 4000 m above sea level	-40 °C ≤ T_a ≤ +48 °C/+56 °C*
> 4000 m ≤ 5000 m above sea level	-40 °C ≤ T_a ≤ +42 °C/+49 °C*

* Higher ambient temperatures are permitted when mounted in vertical position (≙ DIN rail in horizontal mounted position) with a spacing to other devices and separation walls of at least 6 mm around the enclosure.