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 KEM 08.0038X**	Page 1 of 4

Issue No: 4

Status: **Current**

Date of Issue: 2022-10-18

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

Equipment: **CPU / Power Module 9440/12-01-11 with Base 9490/11-11 or CPU / Power Module 9440/22-01-11 or 9440/22-01-21 with Base 9490/11-12 or 9490/13-12**

Optional accessory:

Type of Protection: **Ex d, Ex e, Ex i and Ex m**

Marking:
Ex db [ia Ga] [ib Gb] IIC T4 Gb
Ex db eb [ia Ga] [ib Gb] IIC T4 Gb
Ex db mb [ia Ga] [ib Gb] IIC T4 Gb

Approved for issue on behalf of the IECEx Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

DEKRA

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

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
Edition:7.0   Explosive atmospheres - Part 0: Equipment - General requirements

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011
Edition:6.0   Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

IEC 60079-18:2017
Edition:4.1   Explosive atmospheres - Part 18: Protection by encapsulation "m"

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

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:

NL/KEM/ExTR08.0035/04

Quality Assessment Report:

DE/BVS/QAR10.0002/18

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

The CPU / Power Module Type 9440/12-01-11 together with its belonging Base Type 9490/11-11 and CPU / Power Module Type 9440/22-01-11 or Type 9440/22-01-21 with its belonging Base Type 9490/11-12 or Type 9490/13-12, serve for supply and data communication to the certified I/O Modules of the certified Remote I/O - I.S. 1 System.
The Base is provided with an LCD-display and buttons belonging thereto.

For detailed information see Annex 1 to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:
The terminals of the Base may only be connected to wires with a maximum cross section of 2.5 mm².
All equipment connected to the RS 485 circuits shall be galvanically isolated from each other and from all other circuits.

When installed in potentially explosive atmospheres, the CPU / Power Module with its belonging Base shall be installed into an enclosure which meets the requirements of a recognized type of protection in accordance with IEC 60079-0.

In case Base Type 9490/13-12 is used, the free end of the permanently connected power supply cable shall be connected by using a suitable certified junction box.

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Minor constructional changes.

Annex:

225690600-Annex1.pdf

Description

General product information:

The CPU/Power Module Type 9440/12-01-11 together with its belonging Base Type 9490/11-11 and CPU/Power Module Type 9440/22-01-11 or Type 9440/22-01-21 with its belonging Base Type 9490/11-12 or Type 9490/13-12, serve for supply and data communication to the certified I/O Modules of the certified Remote I/O - I.S. 1 System.
The Base is provided with an LCD-display and buttons belonging thereto.

The Base is provided with circuits in types of protection increased safety in accordance with IEC 60079-7 (except Type 9490/13-12) and intrinsic safety in accordance with IEC 60079-11.
Base Type 9490/13-12 is in type of protection encapsulation in accordance with IEC 60079-18 for the external connections (provided with an integral cable).
The CPU/Power Module is built into a housing in type of protection flameproof enclosure in accordance with IEC 60079-1. A part of the internal connections to the Base is also in type of protection flameproof enclosure in accordance with IEC 60079-1.

The CPU/Power Module may be disconnected or connected while in operation.
With that, the Base has a degree of ingress protection of IP30 according to IEC 60529.

Ambient temperature range -20 °C to +65 °C.

Electrical data

General

Power supply (output/secondary); Terminals X5.11, X5.13, X5.15 (+), X5.12, X5.14, X5.16 (-):
in type of protection intrinsic safety Ex ia IIC, with the following maximum value:
U_o = 26.2 V.
The circuits require an external current limitation (which is guaranteed by the certified I.S. 1 system, including the required separations).

Power supply (output/secondary); Plug to BusRail Pin 27, 28, 29, 30 (+), Pin 7, 8, 9, 10 (-):
in type of protection intrinsic safety Ex ia IIC, with the following maximum value:
U_o = 26.2 V.
The circuits require an external current limitation (which is guaranteed by the certified I.S. 1 system, including the required separations).

Address- and Databus (secondary) Plug connection to BusRail Pin 1, 4, 5, 11, 14, 15, 16, 21, 24:
in type of protection intrinsic safety Ex ib IIC, with the following maximum values:
U_o = 6.5 V; I_o = 116 mA; P_o = 188 mW; C_o = 25 µF; L_o = 2.5 mH.
Only for connection to the internal Address-/Databus of the I.S. 1 System with the following maximum value:
U_i = 6.6 V; C_i = 0 nF; L_i = 0 mH.

All intrinsically safe circuits are infallibly galvanically isolated from earth and up to a peak voltage of 375 V from the Power supply circuit (input/primary).

All intrinsically safe circuits are infallibly galvanically isolated from each other.

The intrinsically safe circuits Power supply (output/secondary) and Address- and Databus (secondary) are connected to each other over their common reference.

<u>CPU / Power Module Type 9440/22-01-21 with Base Type 9490/11-12 or Type 9490/13-12</u>

Power supply (input/primary); Terminals X5.4 (Neutral), X5.6 (Phase):
in type of protection increased safety Ex e (with Base Type 9490/11-12) or in type of protection encapsulation (with Base Type 9490/13-12), based on the following values:
U_H = 90...253 Vac (45...66 Hz); I_{HN} = 800 mA (U_H = 110 Vac); I_{HN} = 400 mA (U_H = 230 Vac);
U_m = 253 Vac.

Input/output RS 485 I, II, III; D-Sub Connectors X1, X2 and X3 Pin 3, 5, 6, 8:
in type of protection intrinsic safety Ex ib IIC, with the following maximum values:
U_o = 3.7 V; I_o = 134 mA; P_o = 124 mW; C_o = 1000 µF; L_o = 1,9 mH.
Only for connection to certified Fieldbus systems in type of protection intrinsic safety Ex ia/ib, with the following maximum values:
U_i = +4.2 V and -4.2 V; C_i = 0 nF; L_i = 0 mH.

<u>CPU/Power Module Type 9440/22-01-11 with Base Type 9490/11-12 or Type 9490/13-12</u>

Power supply (input/primary); Terminals X5.1 (+), X5.2 (-):
in type of protection increased safety Ex e (with Base Type 9490/11-12) or in type of protection encapsulation (with Base Type 9490/13-12), based on the following values:
U_H = 20...35 Vdc; I_{HN} = 2.5 A (U_H = 24 Vdc); U_m = 253 Vac.

Input/output RS 485 I, II, III; D-Sub Connectors X1, X2 and X3 Pin 3, 5, 6, 8:
in type of protection intrinsic safety Ex ib IIC, with the following maximum values:
U_o = 3.7 V; I_o = 134 mA; P_o = 124 mW; C_o = 1000 µF; L_o = 1,9 mH.
Only for connection to certified Fieldbus systems in type of protection intrinsic safety Ex ia/ib, with the following maximum values:
U_i = +4.2 V and -4.2 V; C_i = 0 nF; L_i = 0 mH.

<u>CPU/Power Module Type 9440/12-01-11 with Base Type 9490/11-11</u>

Power supply (input/primary); Terminals X5.1 (+), X5.2 (-):
in type of protection increased safety Ex e, based on the following values:
U_H = 20...35 Vdc; I_{HN} = 2.5 A (U_H = 24 Vdc); U_m = 253 Vac.

Input/output RS 485 I, II, III; D-Sub Connectors X1, X2 and X3 Pin 3, 5, 6, 8:
in type of protection intrinsic safety Ex ib IIC, with the following maximum values:
U_o = 3.7 V; I_o = 94.8 mA; P_o = 87.7 mW; C_o = 3 µF; L_o = 5 mH.
Only for connection to certified Fieldbus systems in type of protection intrinsic safety Ex ia/ib, with the following maximum values:
U_i = +3.75 V and -3.75 V; C_i = 0 nF; L_i = 0 mH.