



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 PTB 17.0026X** Page 1 of 5 Certificate history:
Status: **Current** Issue No: 2 [Issue 1 \(2019-04-11\)](#)
[Issue 0 \(2017-07-03\)](#)
Date of Issue: 2021-04-28
Applicant: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30, 74638 Waldenburg, Germany
Germany
Equipment: **Socket, type 9496/3*-03-00 and type 9496/3*-04-00**
Optional accessory:
Type of Protection: **Intrinsic Safety**
Marking: **Ex ia IIC T4 Gb**
or
Ex ia IIC T4 Gc

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. F. Lienesch

Position:

**Head of Department "Explosion Protection in Sensor Technology
and Instrumentation"**

Signature:
(for printed version)

Date:

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:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany





IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 17.0026X**

Page 2 of 5

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

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

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 Reports:

[DE/PTB/ExTR17.0025/00](#)

[DE/PTB/ExTR17.0025/01](#)

[DE/PTB/ExTR17.0025/02](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/16](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 17.0026X**

Page 3 of 5

Date of issue: 2021-04-28

Issue No: 2

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Sockets of types 9496/3*-03-00 and 9496/3*-04-00 serve as the basis of the Remote I/O System, type IS1 / IS1+ and they are used for establishing the electrical connections between plugged-on separately certified system-modules and to the BusRail, type 9494/**-** that is also separately certified as part of the Remote I/O-System.

For further information reference is made to the annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Inside the hazardous area the Socket, type 9496/3*-0*-00 shall be installed into an enclosure that corresponds to an acknowledged type of protection according to EN 60079-0 and that provides a minimum degree of protection of IP 54 according to EN 60529.
2. Outside the hazardous area the Socket, type 9496/3*-0*-00 shall be installed into an enclosure that provides a minimum degree of protection of IP 54 according to EN 60529 or inside an area having a maximum pollution degree 2 / overvoltage category III.
3. Only the separately certified system-modules of the Remote I/O System, type IS1 / IS1+ may be connected to the Socket, type 9496/3*-0*-00.
4. For maximum number of connectable modules reference is made to the operating instructions manual.
5. The Socket, type 9496/3*-0*-00 shall be safely connected to the local equipotential bonding system.
6. The Socket, type 9496/3*-0*-00 shall only be plugged or unplugged in a de-energized state and if it is ensured that a potentially explosive atmosphere does not exist.



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 17.0026X**

Page 4 of 5

Date of issue: 2021-04-28

Issue No: 2

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Adaptation to the current state of standards
- Revision of the safety-relevant descriptions regarding the updated test specification and the application range of the modules
- Measurements to check the surface temperature at the base for various configurations of the modules
- Adaptation of the operating instructions regarding the changes made



IECEX Certificate of Conformity

Certificate No.: **IECEX PTB 17.0026X**

Page 5 of 5

Date of issue: 2021-04-28

Issue No: 2

Additional information:

For thermal and electrical information reference is made to the annex.

Annex:

[COCA170026X-02.pdf](#)



Applicant: R. STAHL Schaltgeräte GmbH

Electrical apparatus: Socket, type 9496/3*-03-00 and type 9496/3*-04-00

Description of equipment

The Sockets of types 9496/3*-03-00 and 9496/3*-04-00 serve as the basis of the Remote I/O System, type IS1 / IS1+ and they are used for establishing the electrical connections between plugged-on separately certified system-modules and to the BusRail, type 9494/**-** that is also separately certified as part of the Remote I/O-System. The types of sockets differ in the number of slot connectors for these modules (9496/3*-03-00: 3 slot connectors, and 9496/3*-04-00: 4 slot connectors) and hence in their design size. The sockets consist of an aluminum body that is either clamped (and fixed) onto a DIN-mounting rail (BusRail) or mounted on a carrier plate by means of 4 or 6 screws respectively. A PCB is mounted on the front side of the socket using guiding slots and screws for fixation. This PCB provides the slot connectors on the front side to accept the system modules and a plug connector for connection of the BusRail on the rear side. There are 3 address switches being the only operating elements on the PCB. The entire Remote I/O-System is supplied by one or two system-internal Power Modules which are plugged into the slot connectors on the front, hence supplying also the electronic circuitry on the PCB of the socket. Here, a μ -controller circuitry serves for control of the backplane communication. A sense circuitry having its circuit and limiting elements on the connected system modules enables plugging or unplugging of modules during operation. The socket itself must not be plugged or unplugged when in operation.

The permissible range of the ambient temperature depends on the installation as follows:

Ta = - 40 °C ... + 75 °C	Mounted on a DIN-mounting rail (Bus Rail) and bolted onto a carrier plate
Ta = - 40 °C ... + 65 °C	Mounted on a DIN-mounting rail (Bus Rail) without carrier plate

Electrical data

The Sockets of types 9496/3*-03-00 and 9496/3*-04-00 provide only system-internal intrinsically safe circuits. These are generated in the system-internal modules which are plugged into the slot connectors on the front. The supply voltage of $U_o = 26,2 \text{ V}$ from a connected power module is interconnected with the supply circuit of the BusRail (plug connector on rear side). An additional circuit of $U_o = 6,6 \text{ V}$ as part of the data circuits and address bus is generated on the PCB of the socket. The complete electrical parameters are determined by the type and the number of connected system-modules.



Slot connector 0 ... 3 (front side):	all circuits of type of protection Intrinsic Safety Ex ia IIC
Supply circuit:	$U_i = 26.2 \text{ V}$
Sense circuit:	$U_i = 26.2 \text{ V}$
Data circuits and address bus:	$U_i/U_o = 6.6 \text{ V}$
Backplane bus:	$U_i = 5 \text{ V}$
BusRail-connector (rear side):	all circuits of type of protection Intrinsic Safety Ex ia IIC
Supply circuit:	$U_i = 26.2 \text{ V}$
Data circuits and address bus:	$U_i/U_o = 6.6 \text{ V}$

Specific conditions of use

1. Inside the hazardous area the Socket, type 9496/3*-0*-00 shall be installed into an enclosure that corresponds to an acknowledged type of protection according to IEC 60079-0 and that provides a minimum degree of protection of IP 54 according to IEC 60529.
2. Outside the hazardous area the Socket, type 9496/3*-0*-00 shall be installed into an enclosure that provides a minimum degree of protection of IP 54 according to EN 60529 or inside an area having a maximum pollution degree 2 / overvoltage category III.
3. Only the separately certified system-modules of the Remote I/O System, type IS1 / IS1+ may be connected to the Socket, type 9496/3*-0*-00.
4. For maximum number of connectable modules reference is made to the operating instructions manual.
5. The Socket, type 9496/3*-0*-00 shall be safely connected to the local equipotential bonding system.
6. The Socket, type 9496/3*-0*-00 shall only be plugged or unplugged in a de-energized state and if it is ensured that a potentially explosive atmosphere does not exist.