



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 06.0026** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 [Issue 1 \(2011-12-09\)](#)
[Issue 0 \(2006-03-30\)](#)
Date of Issue: 2022-09-01
Applicant: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74683 Waldenburg (Württ.)
Germany
Equipment: **Junction Box and Terminal Box Type 8118/***(-*)**
Optional accessory:
Type of Protection: **Increased Safety "e", Intrinsic Safety "i", Protection by Encapsulation "m", Protection by enclosure "t"**
Marking: Ex eb ia ib [ia Ga] mb IIC, IIB, IIA T6...T4 Gb
Ex tb IIIC T80°C, T95°C, T130°C Db

Approved for issue on behalf of the IECEx
Certification Body:

Dr.-Ing. Detlev Markus

Position:

Head of Department "Explosion Protection in Energy Technology"

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

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





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

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 60079-18:2017](#) Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

[IEC 60079-31:2022-01](#) Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
Edition:3.0

[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/PTB/ExTR06.0048/03](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/17](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Description

The junction and terminal box type 8118/***(-*) is a polyester-resin enclosure for stationary installation in hazardous locations in the type of protection Increased safety "eb" and Protection by Enclosure "tb". The box is equipped with separately certified terminals, fuses and cable glands. It is used either for non-intrinsic or for intrinsic circuits. A combination of more than one enclosure is not possible.

For more information see annex.

SPECIFIC CONDITIONS OF USE: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- 1) Additional Ex components added to list of components
- 2) Standard update to latest IEC standards
- 3) New Certification Instruction

Annex:

[COCA060026-02.pdf](#)



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

Electrical Apparatus: Junction Box and terminal Box
Type 8118/***(-*)

Description

The junction and terminal box type 8118/***(-*) is a polyester-resin enclosure for stationary installation in hazardous locations in the type of protection Increased safety "eb" and Protection by Enclosure "tb". The box is equipped with separately certified terminals, fuses and cable glands. It is used either for non-intrinsic or for intrinsic circuits. A combination of more than one enclosure is not possible.

Nomenclature

8118	/	*	*	*	(-*)
a	/	b	c	d	e

- a Type series
- b Design:
 - 1 – Ex e
 - 2 – Ex i
- c Enclosure size (L x W x H):
 - 1 – 85 x 85 x 55 mm
 - 2 – 115 x 115 x 64 mm
 - 3 – 145 x 145 x 71 mm
- d Specification:
 - 0 – Empty enclosure
 - 1 – Junction boxes
 - 2 – Terminal boxes
 - 3 – Junction boxes with Fuse
 - 4 – Terminal boxes with Fuse
- e Additional parameters that do not affect the explosion protection of the equipment.
 - (-*) May contain additional digits or characters, including “-“, “/” or “.”.



Technical data:

Rated insulation voltage:	max.	1.100 V for terminal boxes without fuse
	max.	550 V for terminal boxes with fuse
	max.	750 V for junction boxes
Rated current:	max.	50 A
Rated cross section:	max.	1 or 2 x 1.5 ... 10 mm ² rigid wires or flexible wires with or without end core sleeve

Tightening torque for all screwable covers: 1.4 Nm

Ambient temperature:

$-60\text{ °C} \leq T_{\text{amb}} \leq +75\text{ °C}$

The maximum ambient temperature range depends on the maximum ambient temperatures for the built-in components, the power dissipations of the built-in components and the temperature class rating.

Service temperature:

$-60\text{ °C} \leq T_s \leq +76\text{ °C}$

Ingress protection according to IEC 60079-0, IEC 60079-7 and IEC 60079-31: IP66

Notes for installation and operation

The rated values are maximum values, the actual electrical values depend on the electrical equipment incorporated. Within the scope of these maximum permissible values and with due regard to the standards, the manufacturer specifies the final rated values dependent on the system conditions, mode of operation, utilization category, etc. The characteristic values of the intrinsically safe circuits are to be given by the manufacturer on his own responsibility. The maximum permissible ambient temperature range of the junction and terminal box can be limited by the maximum permissible service temperature ranges of the separately certified components.

The composition of the type of protection marking will be based on the types of protection of components actually used.



Components attached or installed have to be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions and have a separate examination certificate. The special conditions specified for the components must be complied with and may have to be included in the type test. This also applies to components already specified in the technical description.

In order to ensure the ingress protection IP, the cover of the empty enclosure and other Ex-components must be properly installed and with the appropriate torque.

Equipment of the type of protection intrinsic safety "i" is to be installed in such a way that the distances, creepage distances and clearances between intrinsically safe circuits and non-intrinsically safe circuits comply with the requirements of IEC 60079-11.

When more than one intrinsically safe circuit is used, the rules for interconnection are to be observed.

When components are installed into the empty enclosure, clearance and creepage distances specified in the standard IEC 60079-7 and IEC 60079-11 shall duly be complied with.

The user shall be informed of the following conditions in an appropriate form, e.g. with a note included in the operating instructions:

"WARNING – DO NOT OPEN WHEN ENERGIZED"

"WARNING – POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS"

The word "Warning" must be added to the text of the warning label.