



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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx PTB 06.0097U**

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Certificate history:

Status: **Current**

Issue No: 2

[Issue 1 \(2012-01-27\)](#)

[Issue 0 \(2006-11-21\)](#)

Date of Issue: 2021-06-08

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

Ex Component: Busbar system type 8188/**

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Increased safety "eb"**

Marking: Ex eb IIC Gb
Ex eb I Mb

Approved for issue on behalf of the IECEx
Certification Body:

Dr. D. Markus

Position:

Head of Department "Explosion Protection in Energy Technology"

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





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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
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 60079-7:2017 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/ExTR06.0097/01](#)

Quality Assessment Report:

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



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Ex Component(s) covered by this certificate is described below:

Description of the component

The busbar system, type 8188/**, is intended for installation in separately certified enclosures of type of protection Increased Safety “eb” and for switchgear combinations of multiple enclosure assemblies.

For more technical information see annex.

SCHEDULE OF LIMITATIONS:

The use of this component requires a further assessment by an ExCB.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

1) New test according to IEC 60079-0:2017 and IEC 60079-7:2017.

Annex:

[COCA060097U-02_1.pdf](#)



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

Equipment: Busbar system type 8188/**

Description:

The busbar system, type 8188/**, is intended for installation in separately certified enclosures of type of protection Increased Safety “eb” and for switchgear combinations of multiple enclosure assemblies.

Nomenclature:

8188	/	*	*
a	/	b	c

- a Type / Series
- b Version
 - 2 - Enclosure made of moulded mat. (e.g. type 8146)
 - 3 - Enclosure made of metal (e.g. type 8150)
- c Busbar
 - 1 – Single busbar (20 mm x 10 mm, ≤ 400 A)
 - 2 – Double busbar 2 x (20 mm x 10 mm, ≤ 630 A)
 - 4 - Single busbar (12 mm x 6 mm, ≤ 160 A)

Service temperature range

-60 °C ≤ T_s ≤ +130 °C

Tightening torque for all terminals:

See operating instruction

Terminals and accessories

See operating instructions.

Electrical Data

Main contacts (channels/poles)	160 A: maximum 5 rails with 12 x 6 mm 200 A & 400 A: maximum 6 rails with 20 x 10 mm 630 A: maximum 6 rails with each 2 pieces with 20 mm x 10 mm Maximum number of terminals depends on the individual application.
Terminal type	Screw terminals with a specified tightening torque. See operating instructions.
Connection cross section	Depending on the busbar terminals used. See chapter 6.3 of the description



Type of wire	Depending on the terminal: Single or double connections with - single or solid wire - stranded wire - stranded wire with end ferrule - flat conductors (laminated copper bands) See operating instructions
Rated insulation voltage	800 VAC
Rated operational voltage	690 VAC
Rated current	160 A, 200 A, 400 A, 630 A
Rated frequency	50/60 Hz
Rated impulse withstand voltage	6 kV
Short-circuit conditions (I _{cn} , I _q , I _{cu} , I _{cs})	Depending on the system used and the implemented holder spacing - see table in operating instructions
Diversity factor (or simultaneity factor)	Max. 1.0

Mechanical requirements

Rails dimensions	160 A: 12 x 6 mm 200 A & 400 A: 20 x 10 mm 630 A: 2 pieces 20 mm x 10mm
Materials	Holder: Material with the data sheet number: D0065-03 Rail: copper, tin-plated (160 A: additionally perforated)
Length of a subunit	160 A: max. 3 m 200 A – 630 A: max. 5 m
Apposition	Maximum 2 subunits (rail sections)

Installation conditions

Installation of the busbar systems only to enclosures in the type of protection “increased safety” Ex “eb” and “protection by enclosures” Ex “tb” with a wall thickness no less than 1.5 mm for metal enclosures and not less than 2.6 mm for non-metal enclosures.
For more information see operating instructions.

Notes for installation and operation

1. The busbar system type 8188/** shall be mounted in an enclosure that meets the requirements of an approved type of protection as specified in IEC 60079-0, section 1 and has an ingress protection of at least IP54 according to IEC 60079-0 and IEC 60079-7.



2. Only use terminals that complies with the specifications on the cover sheet. They must be suited for the operating conditions. The special conditions specified for the terminals must be complied with and may have to be included in the type test.
3. When installing the busbar system type 8188/** in an enclosure designed to Increased Safety “e” type of protection in compliance with IEC 60079-7, the clearance and creepage distances shall be maintained.
4. The connecting cables of the busbar system type 8188/** shall be fixed and routed so that it will be adequately protected against mechanical damage.
5. Active / Hot cables that cause a higher maximum service temperature in the busbar system type 8188/** as approved in the documentation must not be used.
6. The thermal effects of the busbar system type 8188/** must be taken into account when assembling the entire unit.

This information must accompany each device in an adequate form.

Schedule of Limitations:

The use of this component requires a further assessment by an ExCB.