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 09.0049**

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Certificate history:

Issue 4 (2015-02-11)
Issue 3 (2014-11-13)
Issue 2 (2012-10-22)
Issue 1 (2011-03-15)
Issue 0 (2010-01-07)

Status: **Current**

Issue No: 5

Date of Issue: 2021-09-10

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

Equipment: **Control and Distribution Box, type 8150/5-****-****-***-**** and 8150/5-****

Optional accessory:

Type of Protection: **"db", "eb", "ia", "ib", "mb", "q", "op pr", "op is", "tb"**

Marking: Ex db eb ia [ia Ga] ib [ib] mb op pr [op is Ga] q IIC, IIB, IIA T6, T5, T4, T3 Gb
Ex [ia Da] [ib] [op is Da] tb IIIC T80 °C, T95 °C, T130 °C, T135 °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:

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

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
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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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
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 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-5:2015 Explosive atmospheres –Part 5: Equipment protection by powder filling “q”
Edition:4.0

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/ExTR09.0056/05

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 control and distribution box type 8150/5 series consists of an enclosure made of stainless steel in the type of protection increased safety "eb" or protection by enclosure "tb" which can be fitted if required with flanges. Several enclosures can be combined with one another.

The control and distribution box is intended to be used for the installation of control, regulating and measuring devices as well as of terminals for intrinsically safe and non-intrinsically safe circuits and can be equipped with actuators and indicating lamps, if required. The enclosure area for intrinsically safe circuits is marked in light blue color.

The connection is established via Ex cable and cable glands.

The enclosure and all built-in and add-on components are separately certified according to IECEx scheme.

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

Technical data, Nomenclature and Notes for manufacturing and operation: 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:

COCA090049-05_1.pdf

Applicant: R. STAHL Schaltgeräte GmbH
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Germany

Electrical Apparatus: Control and Distribution Box
Type 8150/5-****-****-***-**** and 8150/5-****

Description

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Nomenclature

8150	/	*	-	* * * *	-	* * * *	-	* * *	-	*	*	*	*
a		b		c		d		e		f	g	h	i

a Type series
b Design:
5 – Control and Distribution Box
c Enclosure size, width [mm]:
min. 0100
max. 1200
d Enclosure size, height [mm]:
min. 0100
max. 2200
e Enclosure size, depth [mm]:
min. 060
max. 900
f Material:
1 – 1.0330 (wall thickness 1.5…2 mm)
2 – 1.4301, 304, 304 S17 (wall thickness ≤2 mm)
3 – 1.4404, 316L, 316 S11 or 1.4571 316 Ti, 320 S18 (wall thickness ≤2 mm)
4 - 1.0330 (wall thickness ≤3 mm)
5 - 1.4301, 304, 304 S17 (wall thickness ≤3 mm)
6 - 1.4404, 316L, 316 S11 or 1.4571, 316 Ti, 320 S18 (wall thickness ≤3 mm)

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g Surface:
- 1 – Powder coated
- 3 – Sanded, with grain 240
- 4 – Electro polished

h Design of Cover:
- 1 – Screwed cover
- 2 – with hinge and cam lock (rotary latches)
- 3 – with hinge and screws
- 4 – with continues hinge and cam lock (rotary latches)
- 5 – with hinge and cam lock (rotary latches) – two door version

i Ambient temperature range acc. to gaskets:
- 1 – from -60 °C to 135 °C (Gasket 1 – D0067)
- 2 – from -55 °C to 85 °C (Gasket 2 – D0068)
- 3 – from -25 °C to 76 °C (Gasket 3 – D0069)

8150	/	*
a	/	b

a Type series

b Design:

- 5-C*** Custom series product
- 5-E*** modular mounting (enclosure combination)
- 5-K*** configured control box
- 5-V*** series product such as
  - V11 Load and Motor Switch
  - V12 Portable Control Device
  - V27 Motor protection Circuit Breaker
  - V37 Safety Switch
  - V51 Repair flange socket
  - V75 Grounding monitoring device
  - V88 Cleanroom
  - V* other series product

Note: For customized control and distribution boxes there are different normalized variants (only for in-house use) that have a special marking.

Technical data

Rated voltage*	max.	1100 V AC/DC
Rated current*	max.	630 A
Rated cross-section*	max.	300 mm2

*) depending on the terminal type and Ex components used

Ambient temperature range

Ambient temperature range dependent on the gasket:

Gasket 1 (D0067)	-60 °C to +135 °C
Gasket 2 (D0068)	-55 °C to +85 °C
Gasket 3 (D0069)	-25 °C to +76 °C

Ingress protection according to IEC 60079-0, IEC 60079-7 and IEC 60079-31:
depends on the assembled Ex components or Ex equipments

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 control and distribution 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.

Notes for manufacturing and operation

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, the flange enclosure, the sealing frame 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 control and distribution box with a coating of polyester powder must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust.