



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx PTB 09.0049

Issue No: 4

Certificate history:

Status: **Current**

Issue No. 4 (2015-02-11)

Issue No. 3 (2014-11-13)

Date of Issue: **2015-02-11**

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Issue No. 2 (2012-10-22)

Issue No. 1 (2011-03-15)

Issue No. 0 (2010-01-07)

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: **"d", "e", "ia", "ib", "mb", "q", "op is", "op pr", "tb"**

Marking:

Ex d e ia/ib [ia Ga] mb op pr/op is q IIA, IIB, IIC T6, T5, T4, T3 Gb

Ex tb IIIA, IIIB, IIIC T80 °C, T95 °C, T130 °C Db

*Approved for issue on behalf of the IECEx  
Certification Body:*

Dr. Ing. D. Markus

*Position:*

Head of Working Group Flame Transmission Processes

*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 the [Official IECEx Website](http://www.iecex.com).

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 location(s):

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 electrical apparatus 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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-11 : 2011</b> Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
<b>IEC 60079-18 : 2009</b> Edition:3	Explosive atmospheres Part 18: Equipment protection by encapsulation "m"
<b>IEC 60079-28 : 2006-08</b> Edition:1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2008</b> Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 60079-5 : 2007-03</b> Edition:3	Explosive atmospheres - Part 5: Equipment protection by powder filling "q"
<b>IEC 60079-7 : 2006-07</b> Edition:4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical 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/ExTR09.0056/04](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/02](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

#### Description

The control and distribution box of the type series 8150/5-\*\*\*\*-\*\*\*\*-\*\*\*-\*\*\*\* and 8150/5-\*\*\*\* consists of enclosures out of steel or stainless steel in the type of protection Increased Safety "e" and protection by enclosures "tb", which may be provided with flanges. Several boxes can be combined with each other.

It is to accommodate switch and control gear, measuring instruments, as well as terminals for intrinsically safe and non-intrinsically safe circuits. Where required it may be fitted with actuator elements and pilot lamps. The box section for intrinsically safe circuits will be identified, e.g. by a light-blue colour.

Connection is by means of explosion-proof cable entries.

All internally and externally fitted elements are tested and certified under separate examination certificates.

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 were added to the list of built in component.

**Annex:**

[Annex-IECEX PTB 09.0049 Issue 4.pdf](#)



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

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

### Description

The control and distribution box type 8150/5-\*\*\*\*-\*\*\*\*-\*\*\*-\*\*\*\* and 8150/5-\*\*\*\* consists of enclosures out of steel or stainless steel in the type of protection Increased Safety “e” and protection by enclosures “tb”, which may be provided with flanges. Several boxes can be combined with each other.

It is to accommodate switch and control gear, measuring instruments, as well as terminals for intrinsically safe and non-intrinsically safe circuits. Where required it may be fitted with actuator elements and pilot lamps. The box section for intrinsically safe circuits will be identified, e.g. by a light-blue colour.

Connection is by means of explosion-proof cable entries.

All internally and externally fitted elements are tested and certified under separate examination certificates.

### Technical data

Rated voltage*	up to 1100 V
Rated current*	max. 630 A
Rated cross section*	max. 300 mm <sup>2</sup>

\*) depending on the type of terminal and Ex-components used

Ambient temperature	dependent on the gasket
Gasket 1 (D0067)	-60 °C to +135 °C
Gasket 2 (D0068)	-58 °C to +55 °C
Gasket 3 (D0069)	-25 °C to +55 °C

Protection against contact,  
foreign bodies and water IP66 acc. to EN 60529

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 terminal housing can be limited by the maximum permissible ambient temperature ranges of the separately certified equipment.

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



## Nomenclature

### General type code:

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

a	Control and Distribution Box		
b	Design	5	= Switchgear combination Ex e...
c	Enclosure, width [mm]:	0100	= 100 mm
		to	
		1200	= 1200 mm
d	Enclosure, height [mm]:	0100	= 100 mm
		to	
		2200	= 2200 mm
e	Enclosure, depth [mm]:	060	= 60 mm
		to	
		800	= 800 mm
f	Material	1	= 1.0330
		2	= 1.4301
		3	= 1.4404 or 1.4571
g	Coating	1	= powder coated
		3	= polished 240 grain
		4	= electro polished
h	Version	1	= screw
		2	= hinge / cam lock
		3	= hinge / screw
i	Gasket Material	1	= (D0067)
		2	= (D0068)
		3	= (D0069)

### Serial type code:

8150	/	*
a	/	b

a	Control and Distribution Box		
b	Design	5-C***	= customer-specific serial product
		5-E***	= modular construction (Enclosure combination)
		5-K***	= configured control box
		5-V***	= serial product for example
		5-V11	= load and motor switch
		5-V37	= safety switch
		5-V*	= other



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### Notes for manufacturing and operation

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.

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.