



# 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 06.0031U issue No.:1

Certificate history:

Issue No. 1 (2015-1-23)

Issue No. 0 (2006-4-10)

Status: **Current**

Date of Issue: **2015-01-23**

Page 1 of 4

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

Electrical Apparatus: **Control unit, type 8453/\*-\***  
*Optional accessory:*

Type of Protection: **Flameproof enclosure "d", Increased Safety "e"**

Marking: Ex d e IIC Gb

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

Dr. Ing. Uwe Klausmeyer

*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 the Official IECEx Website.

Certificate issued by:

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





# IECEx Certificate of Conformity

Certificate No.: IECEx PTB 06.0031U

Date of Issue: **2015-01-23**

Issue No.: **1**

Page 2 of 4

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:

**IEC 60079-0 : 2011** Explosive atmospheres - Part 0: General requirements  
Edition: 6.0

**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6

**IEC 60079-7 : 2006-07** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition: 4

*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/ExTR06.0036/01

##### Quality Assessment Report:

DE/BVS/QAR10.0002/03



# IECEx Certificate of Conformity

Certificate No.: IECEx PTB 06.0031U

Date of Issue: **2015-01-23**

Issue No.: **1**

Page 3 of 4

## Schedule

### EQUIPMENT:

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

#### Description of equipment

The control unit type 8453/\*-\* is a flameproof component which is designed to accommodate electronic, electrical or electromechanical components.

Connection is by means of the integrated screw or cage clamp terminals.

For more informations see Annex.

### CONDITIONS OF CERTIFICATION: NO

Special conditions of safe use apply and are specified in the attachment to the Certificate which is available from the On-Line Version.





# IECEx Certificate of Conformity

Certificate No.: IECEx PTB 06.0031U

Date of Issue: **2015-01-23**

Issue No.: **1**

Page 4 of 4

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

1. Minimum ambient temperature is decreased to -60 °C
2. Maximum service temperature is increased to +100 °C
3. New test according to IEC 60079-0:2011 (Ed. 6), IEC 60079-1:2007 (Ed. 6), IEC 60079-7:2006 (Ed. 4)
4. List of material is added
5. New marking

**Annex:** CoCA 06.0031 U Issue No. 1.pdf



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

Electrical Apparatus: Control Unit type 8453/\*-\*)

### Description:

The control unit type 8453/\*-\*) is a flameproof component which is designed to accommodate electronic, electrical or electromechanical components.

Connection is by means of the integrated screw or cage clamp terminals.

### Nomenclature:

8453	/	*	-	*
1		2		3

- 1) type series
- 2) type of connection;  
1 = screw terminals  
2 = cage clamp terminal
- 3) additional information without reference to explosion-protection

### Technical data:

Rated insulation voltage	max.	500 V
Rated operating voltage	max.	550 V
Rated cross section	max.	2.5 mm <sup>2</sup>
Terminal cross section		1 x 0.75 mm <sup>2</sup> single and finely wire up to 2 x 2.5 mm <sup>2</sup> single and finely wire Same wire and cross section per connection terminal
Locking torque of screw terminals		1.2 Nm

### Dimensions:

type	length [mm]	width [mm]	height [mm]	volume [cm <sup>3</sup> ]
8453/1-*	52	14	43	ca. 5
8453/2-*	50	14	43	ca. 5



**Temperature data:**

Rated current $I_e$	max.	1.1 W
Surface temperature	max.	30.0 K
Material temperature	Max.	36.8K

**Vertical mounting:**

Maximum surface temperature	Maximum permissible power dissipation depending on ambient temperature		
	$-60\text{ °C} \leq T_a \leq +50\text{ °C}$	$-60\text{ °C} \leq T_a \leq +60\text{ °C}$	$-60\text{ °C} \leq T_a \leq +75\text{ °C}$
80 °C (T6)	1.1 Watt <sup>1)</sup>	0.8 Watt <sup>2)</sup>	Not applicable
95 °C (T5)	1.1 Watt <sup>1)</sup>	1.1 Watt <sup>1)</sup>	0.8 Watt <sup>2)</sup>
100 °C <sup>3)</sup> (T4)	1.1 Watt <sup>1)</sup>	1.1 Watt <sup>1)</sup>	0.8 Watt <sup>2)</sup>

Note: : <sup>1)</sup> 27 K - Max. temperature increase  
<sup>2)</sup> 20 K - Max. temperature increase  
<sup>3)</sup> 100 °C - Max. permissible service temperature (material limitations)

**Horizontal mounting:**

Maximum surface temperature	Maximum permissible power dissipation depending on ambient temperature		
	$-60\text{ °C} \leq T_a \leq +50\text{ °C}$	$-60\text{ °C} \leq T_a \leq +60\text{ °C}$	$-60\text{ °C} \leq T_a \leq +75\text{ °C}$
80 °C (T6)	1.1 Watt <sup>1)</sup>	Not applicable	Not applicable
95 °C (T5)	1.1 Watt <sup>1)</sup>	1.1 Watt <sup>1)</sup>	Not applicable
100 °C <sup>3)</sup> (T4)	1.1 Watt <sup>1)</sup>	1.1 Watt <sup>1)</sup>	0.8 Watt <sup>2)</sup>

Note : <sup>1)</sup> 30 K - Max. temperature increase  
<sup>2)</sup> 23 K - Max. temperature increase  
<sup>3)</sup> 100 °C - Max. permissible service temperature (material limitations)