



# 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](http://www.iecex.com)

Certificate No.: **IECEX PTB 14.0043** Page 1 of 4 [Certificate history:](#)  
Issue 1 (2019-07-25)  
Issue 0 (2014-11-26)

Status: **Current** Issue No: 2

Date of Issue: 2020-06-22

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

Equipment: **Emergency light fitting for fluorescent lamps of type 6409/5...-.....-.....-**

Optional accessory:

Type of Protection: **Equipment protection by increased safety "ec", dust ignition protection by enclosure "t"**

Marking: Ex db ec mb IIC T4 Gc  
Ex tc IIIC T80 °C Dc  
Ex tb IIIC T80 °C Db

Approved for issue on behalf of the IECEx  
Certification Body:

**Dr.-Ing. Detlev Markus**

Position:

**Head of Department 3.5 "Explosion Protection in Energy  
Technology"**

Signature:  
(for printed version)

Date:

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**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: **R. STAHL (P) LTD., Plot No.-5**  
Malrosaparum Road  
Sengundram Indl. Area  
Singaperumal Koil, Kanacheepuram Dist.  
Tamilnadu - 603204  
**India**

**R. STAHL Schaltgeräte GmbH**  
Nordstrasse 10  
99427 Weimar  
**Germany**

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 60079-18:2017** Explosive atmospheres - Part 18: Protection by encapsulation "m"  
Edition:4.1

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

**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/ExTR14.0052/02](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/15](#)



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The emergency light fitting of type 6409/5... is an explosion-protected light fitting for use in Zone 2, Zone 21 and Zone 22. It is available for wall, ceiling or pole mounting. The enclosure is made of polyester resin and the light-transmitting protective cover is made of polycarbonate.

The joint surface between the enclosure and the cover is fitted with a seal, thus making it water- and dust-tight.

The series 6409/5 emergency light fitting is available in the following versions:

- single and double lamp 18 W (IEC 60081) or 17 W (ANSI IEC C78.81)

- single and double lamp 36 W (IEC 60081) or 32 W (ANSI IEC C78.81)

The emergency light fitting with an additional flanged battery box features a flameproof electronic ballast with emergency light electronics of type 6043/7., indicator lamp of type 8412 and contact blocks of type 8080 resp. of type 8082.

Listing of all components used referring to older standards

Certificate	Manufacturer	Subject and type	Based standards
IECEX PTB 06.0027 U	R. Stahl Schaltgeräte GmbH	Lamp holder 6041/4	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 08.0060 U	R. Stahl Schaltgeräte GmbH	Electronic balast 6043/79	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 08.0060 U	R. Stahl Schaltgeräte GmbH	Electronic balast 6043/78	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 08.0060 U	R. Stahl Schaltgeräte GmbH	Electronic balast 6043/75	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 07.0025 U	R. Stahl Schaltgeräte GmbH	Indicating light 8412/..	IEC 60079-0:2011 Ed.6 <sup>1)</sup> IEC 60079-18:2014 Ed.4 <sup>1)</sup>
IECEX PTB 05.0025 U	R. Stahl Schaltgeräte GmbH	Contact block 8080	IEC 60079-0:2011 Ed 6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 06.0011 U	R. Stahl Schaltgeräte GmbH	Contact block 8082	IEC 60079-7:2015 Ed 5 <sup>1)</sup>
IECEX PTB 06.0056 U	R. Stahl Schaltgeräte GmbH	Fuse base 8560	IEC 60079-0:2004 Ed.4 <sup>1)</sup> , IEC 60079-7:2006 Ed.4 <sup>1)</sup> , IEC 60079-18:1992 Ed.1 <sup>1)</sup>
IECEX PTB 14.0011 X	R. Stahl Schaltgeräte GmbH	Cable gland 8161	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 06.0028	R. Stahl Schaltgeräte GmbH	Breathing gland 8162	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 05.0017 U	R. Stahl Schaltgeräte GmbH	Terminal block 8184	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2006 Ed.4 <sup>1)</sup>
IECEX PTB 05.0013	R. Stahl Schaltgeräte GmbH	Stopping plug 8290	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2006 Ed.4 <sup>1)</sup> , IEC 60079-31:2008 Ed.1 <sup>1)</sup>
IECEX PTB 06.0095 U	R. Stahl Schaltgeräte GmbH	Conduit hub 8166	IEC 60079-0:2011 Ed.6 <sup>1)</sup> , IEC 60079-7:2006 Ed.4 <sup>1)</sup> , IEC 60079-31:2008 Ed.1 <sup>1)</sup>
IECEX CML 18.0177 X	CMP Products Ltd	Conduit hub 737/797	IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 04.0003 U	WAGO Kontakt. GmbH & Co. KG	Line-up term. 264-...	IEC 60079-0:2011 Ed.6.0 <sup>1)</sup> IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 05.0014 U	WAGO Kontakt. GmbH & Co. KG	Line-up term. 2006-...	IEC 60079-0:2011 Ed.6.0 <sup>1)</sup> IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX PTB 05.0033 U	WAGO Kontakt. GmbH & Co. KG	Line-up term. 2004-...	IEC 60079-0:2011 Ed.6.0 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>
IECEX KIWA 17.0026 U	PHOENIX CONTACT Deutschland GmbH	Line-up terminals PC PTS4	IEC 60079-0:2011 Ed.6.0 <sup>1)</sup> , IEC 60079-7:2015 Ed.5 <sup>1)</sup>

<sup>1)</sup> No applicable technical difference.

**SPECIFIC CONDITIONS OF USE: NO**



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

The ambient temperature range is -30°C to +50°C and  
-30°C to +55°C with through wiring  $I \leq 8$  A.

**Annex:**

[6409\\_Attach\\_CoC\\_ExTR\\_iss02\\_STAHL.pdf](#)



## Description of equipment

The emergency light fitting of type 6409/5 is an explosion-protected electrical equipment for use in Zone 2, Zone 21 and Zone 22. It is available for wall, ceiling or pole mounting.

The emergency light fitting consists of light fitting type 6001 and additional flanged battery box. The enclosure is made of polyester resin and the light-transmitting protective cover is made of polycarbonate.

The joint surface between the enclosure and the cover is fitted with a seal, thus making it water- and dust-tight.

Additions to the emergency light fitting, such as breathing glands, metal entries, bi-pin fluorescent lamps with a diameter of  $\leq 38$  mm (to IEC 60081 or ANSI C78.81) are permissible.

The emergency light fittings are suitable for use in explosive gas atmospheres and in combustible dust atmospheres.

Depending upon the assembly parts and the additional features, the emergency light fitting shall be used in accordance with the marking.

The series 6409/ light fitting is available in the following versions:

Single and double lamp 18 W (IEC 60081) or 17 W (ANSI IEC C78.81)

Single and double lamp 36 W (IEC 60081) or 32 W (ANSI IEC C78.81)

The emergency light fitting with an additional flanged battery box features a flameproof electronic ballast with emergency light electronics 6043/7, indicator lamp 8412 and contact blocks 8080 and 8082. All components have been certified separately.

In consultation with the manufacturer, breathing plugs can be retrofitted; their specification should be inquired at the manufacturer.

## Technical data

Type	6409/52		6409/54		6409/53	6409/55
Lamp	IEC 60081		IEC 60081		ANSI C78.81	
Lamp power	2 x 18 W		2 x 36 W		2 x 17 W	2 x 32 W
EB	6043/79	6043/78	6043/79	6043/78	6043/75	
Nominal input voltage	220...253 V	110...127 V	220...253 V	110...127 V	120 V	
Input voltage range	198...279 V	99...140 V	198...279 V	99...140 V	108...132 V	
Line Frequency	50 ... 60 Hz					
Through wiring	three wires loaded with $I \leq 16$ A (2,5 mm <sup>2</sup> ) or $I \leq 20$ A (4 mm <sup>2</sup> )					
Ambient temperature range	-30 ... +50 °C -30 ... +55 °C (Through wiring $I \leq 8$ A)					
Battery	6 V / 7 Ah NiCd					

Maximum surface temperature:

T80°C

Temperature class:

T4

Rated cross section:

0,75 mm<sup>2</sup> to 4 mm<sup>2</sup> / 6 mm<sup>2</sup>, depending on the used components and the used connection terminals.



Attachment to Certificate  
IECEX PTB 14.0043 / 02



### Nomenclature

Emergency light fitting 6409/abc-defg-hijk-l

- a version
  - 5 = with lamp holder G13
- b light source / nominal power
  - 2 = 18 W
  - 3 = 17 W
  - 4 = 36 W
  - 5 = 32 W
- c Light distribution
  - 1 = 1 lamp
  - 2 = 2 lamps
- d Method of switching
  - 9 = dual-channel (1 or 2 electronic ballasts)
- e to l numerals or letters without influence to explosion-protection