



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

Certificate No.: IECEx PTB 14.0035 Issue No: 2 Certificate history:
Issue No. 2 (2018-02-14)
Status: **Current** Issue No. 1 (2016-06-09)
Date of Issue: **2018-02-14** Page 1 of 5 Issue No. 0 (2014-10-10)

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

Equipment: **Linear light fitting of type 6401/...-.....-...**
Optional accessory:

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

Marking:
Ex ec IIC T4 Gc
Ex db ec IIC T4 Gc
Ex ec nC IIC T4 Gc
Ex db ec nC 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. F. Lienesch

Position:

Head of Department 3.6

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





IECEX Certificate of Conformity

Certificate No: IECEX PTB 14.0035 Issue No: 2
Date of Issue: 2018-02-14 Page 2 of 5
Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

Additional Manufacturing location(s):

R. STAHL Schaltgeräte GmbH
Nordstr. 10
99472 Weimar
Germany

R. STAHL (P) LTD
Plot No.-5
Malrosapuram Road, Sengundram Indl. Area
Singaperumal Koil, Kanacheepuram Dist.
Talmilnadu - 603204
India

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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	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/ExTR14.0040/02](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/13](#)



IECEX Certificate of Conformity

Certificate No: IECEx PTB 14.0035

Issue No: 2

Date of Issue: **2018-02-14**

Page 3 of 5

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The light fitting of type 6401 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 light fitting consists of an enclosure made of polyester resin and a light-transmitting protective cover 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 6401 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), Single and double lamp 58 W (IEC 60081) or 40 W (ANSI IEC C78.81) LED-modules (28 W resp. 52 W). Rated cross section: 0,75 mm² to 4 mm² / 6 mm² depending on the used connection terminal

Technical data see attachment

SPECIFIC CONDITIONS OF USE: NO



IECEX Certificate of Conformity

Certificate No: IECEX PTB 14.0035

Issue No: 2

Date of Issue: 2018-02-14

Page 4 of 5

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

1. It is possible to use LED-modules as a light source.
2. It is possible to use other types of components.



IECEX Certificate of Conformity

Certificate No: IECEx PTB 14.0035

Issue No: 2

Date of Issue: 2018-02-14

Page 5 of 5

Additional information:

see attachment

Annex:

[6401_Attach_CoC_Iss02.pdf](#)



Description of equipment

The linear light fitting of type 6401 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 linear light fitting consists of an enclosure made of polyester resin and a light-transmitting protective cover 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 6401 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), Single and double lamp 58 W (IEC 60081) or 40 W (ANSI IEC C78.81) LED-modules (28 W resp. 52 W).

The linear light fitting features an electronic control gear (6042/14., 6042/2., 6042/9., 3C 180 78, ELXe 2x8.55x) and, optionally, can be fitted with contact element of type 8080. All components have been certified separately.

The ambient temperature range, depending on the assembly

- 30 °C to + 40 °C / +45 °C / +50 °C / +55 °C / +60 °C (18 W)
- 30 °C to + 40 °C / +45 °C / +50 °C / +55 °C (36 W)
- 20 °C to + 40 °C / +45 °C / +50 °C / +55 °C (58 W)
- 30 °C to + 40 °C (17 W/ 32 W)
- 20 °C to + 40 °C (40 W)
- 30 °C to + 45 °C / +50 °C / +60 °C (LED 28 W/ 52 W)

Nomenclature

Light fitting 6401/abc-defg-hi-jkl

- a version
 - 1 = LED
 - 5 = with lamp holder G13
- b light source / nominal power
 - 1 = 28 W (LED)
 - 2 = 18 W
 - 3 = 17 W
 - 4 = 36 W
 - 5 = 32 W
 - 6 = 58 W
 - 7 = 40 W
 - 8 = 52 W (LED)
- c Light distribution
 - 1 = 1 lamp
 - 2 = 2 lamps, 1 electronic ballast
 - 3 = 2 lamps, 2 electronic ballasts
 - 4 = 120° x 120°
 - 8 = 120° x 120° with diffusor
- d control interface/ method of switching
 - 1 = electronic ballast with single/ dual channel with control device ADR20-ILS-Z2
 - 2 = electronic ballast with single/ dual channel with control device 6048
 - 4 = LED control gear with DALI
 - 5 = LED control gear without DALI
 - 6 = electronic ballast with single channel with DALI
 - 8 = electronic ballast with single channel without DALI
 - 9 = electronic ballast with dual channel without DALI

Physikalisch-Technische Bundesanstalt (PTB)



- e through wiring/ cross section
0 = without through wiring
5 = 2,5 mm²
8 = 4,0 mm²
- f contact element
0 = without contact element
1 = with contact element
- g Input voltage/ electronic control gear
0 = 220 ... 240 V/ 1 x DC¹⁾
1 = 220 ... 240 V/ 2 x DC²⁾
2 = 110 ... 240 V /1 x DC¹⁾
3 = 110 ... 240 V /2 x DC²⁾
6 = 110 ... 240 V
8 = 220 ... 240 V
9 = 120 ... 277 V/ 1 x DC¹⁾
- h to l numerals or letters without influence on explosion-protection

¹⁾ 1 x DC = reduced output power at DC supply

²⁾ 2 x DC = without reduced output power at DC supply

The maximum surface temperature is T80 °C; the temperature class is T4.

Additions to the light fitting, such as breathing glands, metal entries, bi-pin fluorescent lamps (G13) with a diameter ≤ 38 mm to (IEC 60081 or ANSI C78.81) are permissible. The linear 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 light fitting shall be used in accordance with the marking.

Rated cross section: 0,75 mm² to 4 mm² / 6 mm², depending on the used connection terminals.

Technical data

Type	6401/1		
Input power	28 W (6401/11.) 52 W (6401/18.)		
LED Control gear	3 C 180 78		
Control device	without	6048/1	ADR20-ILS-Z2
Nominal input voltage	220 ... 240 V AC 200 ... 250 V DC	220 ... 240 V AC 200 ... 250 V DC	220 ... 230 V AC 200 ... 250 V DC
Input voltage range	198 ... 264 V AC 180 ... 275 V DC	198 ... 264 V AC 180 ... 275 V DC	198 ... 253 V AC 180 ... 275 V DC
Line frequency (AC)	50 ... 60 Hz	50 ... 60 Hz	50 ... 60 Hz
Through wiring	three wires loaded with I ≤ 16 A (2,5 mm ² / 4 mm ²) (see restrictions within the ambient temperature range)		
Ambient temperature range	-30 ... +50 °C -30 ... +60 °C ¹⁾	-20 ... +50 °C -20 ... +60 °C ¹⁾	-30 ... +45 °C -30 ... +50 °C ¹⁾

¹⁾ with through wiring, three wires loaded with I ≤ 10 A (2,5/ 4 mm²)



Type	6401/52.			
Lamp	IEC 60081			
Lamp power	2 x 18 W			
Through wiring	three wires loaded with $I \leq 16$ A (2,5 mm ²) or $I \leq 20$ A (4 mm ²) (see restrictions within the ambient temperature range)			
Control gear	6042/2.	6042/92. ELXe 218.551	6042/14.	6042/91.
Line Frequency (AC)	50 ... 60 Hz		50 ... 60 Hz	50 ... 60 Hz
Nominal input voltage	220 ... 240 V AC 196 ... 240 V DC		220 ... 240 V AC 196 ... 246 V DC	110 ... 240 V AC 116 ... 240 V DC
Input voltage range	198 ... 264 V AC 176 ... 264 V DC		198 ... 264 V AC 176 ... 270 V DC	99 ... 264 V AC 104 ... 264 V DC
Ambient temperature range	-30 ... +50 °C -30 ... +55 °C ¹⁾ -30 ... +60 °C ³⁾	-30 ... +50 °C -30 ... +55 °C ²⁾ -30 ... +60 °C ³⁾	-30 ... +50 °C -30 ... +55 °C ²⁾	-30 ... +40 °C -30 ... +45 °C ²⁾
<i>Deviations in version with control device 6048/1</i>				
Nominal input voltage	220 ... 240 V AC 196 ... 240 V DC			
Input voltage range	198 ... 264 V AC 176 ... 264 V DC			
Ambient temperature range	-20 ... +50 °C -20 ... +55 °C ¹⁾ -20 ... +60 °C ³⁾	-20 ... +50 °C -20 ... +55 °C ²⁾ -20 ... +60 °C ³⁾	-20 ... +50 °C -20 ... +55 °C ²⁾	-20 ... +40 °C -20 ... +45 °C ²⁾
<i>Deviations in version with control device ADR20-ILS-Z2</i>				
Nominal input voltage	220 ... 230 V AC 196 ... 240 V DC		-	
Input voltage range	198 ... 253 V AC 176 ... 264 V DC		-	
Ambient temperature range	-30 ... +45 °C -30 ... +50 °C ¹⁾		-	

¹⁾ with through wiring, three wires loaded with $I \leq 10$ A (2,5/ 4 mm²)

²⁾ with through wiring, three wires loaded with $I \leq 8$ A (2,5 mm²) or $I \leq 10$ A (4 mm²)

³⁾ with through wiring, three wires loaded with $I \leq 4$ A (2,5/ 4 mm²)



Type	6401/54.			
Lamp	IEC 60081			
Lamp power	2 x 36 W			
Through wiring	three wires loaded with $I \leq 16 \text{ A}$ (2,5 mm ²) or $I \leq 20 \text{ A}$ (4 mm ²) (see restrictions within the ambient temperature range)			
Control gear	6042/2.	6042/94. ELXe 218.552	6042/14.	6042/98.
Line Frequency (AC)	50 ... 60 Hz		50 ... 60 Hz	50 ... 60 Hz
Nominal input voltage	220 ... 240 V AC 196 ... 240 V DC		220 ... 240 V AC 196 ... 246 V DC	110 ... 240 V AC 116 ... 240 V DC
Input voltage range	198 ... 264 V AC 176 ... 264 V DC		198 ... 264 V AC 176 ... 270 V DC	99 ... 264 V AC 104 ... 264 V DC
Ambient temperature range	-30 ... +50 °C -30 ... +55 °C ¹⁾	-30 ... +50 °C -30 ... +55 °C ²⁾	-30 ... +50 °C -30 ... +55 °C ²⁾	-30 ... +40 °C -30 ... +45 °C ³⁾
<i>Deviations in version with control device 6048/1</i>				
Nominal input voltage	220 ... 240 V AC 196 ... 240 V DC			
Input voltage range	198 ... 264 V AC 176 ... 264 V DC			
Ambient temperature range	-20 ... +50 °C -20 ... +55 °C ¹⁾	-20 ... +50 °C -20 ... +55 °C ²⁾	-20 ... +50 °C -20 ... +55 °C ²⁾	-20 ... +40 °C -20 ... +45 °C ³⁾
<i>Deviations in version with control device ADR20-ILS-Z2</i>				
Nominal input voltage	220 ... 230 V AC 196 ... 240 V DC		-	
Input voltage range	198 ... 253 V AC 176 ... 264 V DC		-	
Ambient temperature range	-30 ... +45 °C -30 ... +50 °C ¹⁾		-	

¹⁾ with through wiring, three wires loaded with $I \leq 10 \text{ A}$ (2,5/ 4 mm²)

²⁾ with through wiring, three wires loaded with $I \leq 8 \text{ A}$ (2,5 mm²) or $I \leq 10 \text{ A}$ (4 mm²)

³⁾ with through wiring, three wires loaded with $I \leq 8 \text{ A}$ (2,5/ 4 mm²)



Type	6401/53.	6401/55.	6401/57.	6401/56.
Lamp	ANSI C78.81			IEC 60081
Lamp power	2 x 17 W	2 x 32 W	2 x 40 W	2 x 58 W
Through wiring	three wires loaded with $I \leq 16$ A (2,5 mm ²) or $I \leq 20$ A (4 mm ²) (see restrictions within the ambient temperature range)			
Control gear	6042/93.	6042/95.	6042/97.	6042/96. ELXe 218.553
Line Frequency (AC)	50 ... 60 Hz			50 ... 60 Hz
Nominal input voltage	120 ... 277 V AC 125 ... 267 V DC			220 ... 240 V AC 196 ... 240 V DC
Input voltage range	108 ... 305 V AC 113 ... 294 V DC			198 ... 264 V AC 176 ... 264 V DC
Ambient temperature range	-30 ... +40 °C	-30 ... +40 °C	-20 ... +40 °C	-20 ... +50 °C -20 ... +55 °C ¹⁾
<i>Deviations in version with control device 6048/1</i>				
Nominal input voltage	220 ... 240 V AC 196 ... 250 V DC			220 ... 240 V AC 196 ... 240 V DC
Input voltage range	198 ... 264 V AC 176 ... 275 V DC			198 ... 264 V AC 176 ... 264 V DC
Ambient temperature range	-20 ... +40 °C	-20 ... +40 °C	-20 ... +40 °C	-20 ... +50 °C -20 ... +55 °C ¹⁾
<i>Deviations in version with control device ADR20...</i>				
Nominal input voltage	-			220 ... 230 V AC 196 ... 240 V DC
Input voltage range	-			198 ... 253 V AC 176 ... 264 V DC
Ambient temperature range	-			-20 ... +40 °C -20 ... +45 °C ¹⁾ -20 ... +50 °C ²⁾

¹⁾ with through wiring, three wires loaded with $I \leq 8$ A (2,5 mm²) or $I \leq 10$ A (4 mm²)

²⁾ without load on through-wiring