



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 IBE 14.0035	Page 1 of 6	<u>Certificate history:</u>
Status:	Current	Issue No: 6	Issue 5 (2019-11-08)
Date of Issue:	2020-07-27		Issue 4 (2018-08-30)
Applicant:	R. STAHL Schaltgeräte GmbH Am Bahnhof 30 74638 Waldenburg Germany		Issue 3 (2017-08-31)
Equipment:	LED Linear Luminaire		Issue 2 (2016-03-15)
Optional accessory:	6002/1., 6002/2. and 6002/4.		Issue 1 (2015-10-30)
Type of Protection:	Increased safety "e" in combination with flameproof enclosure "d", encapsulation "m" and intrinsic safety "i" or dust ignition protection by enclosure "t", inherently safe optical radiation "op is"		
Marking:	Ex db eb op is IIB+H2 T4 Gb (type 6002/1.)		Issue 0 (2014-08-25)
	Ex db eb op is IIC T4 Gb (type 6002/2.)		
	Ex db eb ib mb op is IIC T4 Gb (type 6002/4.)		
	Ex tb op is IIIC T100°C Db (all types)		
	-40 °C ≤ Ta ≤ +60 °C (max.; depends on type)		

Approved for issue on behalf of the IECEx
Certification Body:

Dipl.-Ing. Alexander Henker

Position:

Deputy Head of Certification Body

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:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany





IECEX Certificate of Conformity

Certificate No.: **IECEX IBE 14.0035** Page 2 of 6

Date of issue: 2020-07-27 Issue No: 6

Manufacturer: **R. STAHL Schaltgeräte GmbH**
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74638 Waldenburg
Germany

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R. STAHL (P) LTD.
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Tamilnadu - 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 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 60079-18:2014 Explosive atmospheres – Part 18: Equipment protection by encapsulation "m"
Edition:4.0

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 60079-7:2017 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 Reports:

[DE/IBE/ExTR13.0058/00](#)
[DE/IBE/ExTR13.0058/03](#)
[DE/IBE/ExTR13.0058/06](#)

[DE/IBE/ExTR13.0058/01](#)
[DE/IBE/ExTR13.0058/04](#)

[DE/IBE/ExTR13.0058/02](#)
[DE/IBE/ExTR13.0058/05](#)



IECEx Certificate of Conformity

Certificate No.: **IECEx IBE 14.0035**

Page 3 of 6

Date of issue: 2020-07-27

Issue No: 6

Quality Assessment Report:

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



IECEx Certificate of Conformity

Certificate No.: **IECEx IBE 14.0035**

Page 4 of 6

Date of issue: 2020-07-27

Issue No: 6

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The LED Linear Luminaire of type 6002/1., 6002/2. and 6002/4. is suitable for use in areas with potentially explosive gas and dust atmospheres of zone 1, 2, 21 and 22. The luminaire consists of a polyester enclosure, an assembly plate / reflector with LED modules, LED control gear and terminals, and a light-transmitting cover made of polycarbonate. The luminaire is intended for indoor and outdoor use.

In luminaire type 6002/1. and 6002/2. separately certified LED assemblies with high-power LEDs are applied. The LEDs are protected in type of protection flameproof enclosure "db".

In luminaire type 6002/4. integral LED modules with mid-power LEDs are applied. The individual LEDs are protected in type of protection intrinsic safety "ib", which is provided in combination with a separately certified Ex-i module (current limiter).

In addition to white LEDs, mid-power LEDs with different colors (red, amber, green and blue) can be applied.

Technical data:

Nominal input voltage: 110 V...240 V AC; 110 V...250 V DC for types 6002/1. and /2.
100 V...277 V AC; 141 V...272 V DC*

110 V...240 V AC; 110 V...250 V DC for type 6002/4.
100 V...240 V AC; 110 V...250 V DC**
220 V...240 V AC; 194 V...250 V DC***

Rated input power: 28 W / 30 W* (luminaire size 2)
52 W / 54 W* (luminaire size 4 / size 6)

Through-wiring: up to 3 x 16 A

Optional DALI interface: ≤ 22.5 V DC; typ. ≤ 2 mA (250 mA short-time)
(acc. to IEC 62386-207)

Control input of integrated control unit (ADR; optional): 220 V...240 V AC; 194 V...250 V DC;
1 mA (at 230 V AC)

Ambient temperature: -40 °C...+60 °C (max.; depends on type)

(*) only for LED control gear 6062/9.-24.-11.-99.

(**) only for LED control gear 6045/2.

(***) only for LED control gear 6045/2...2. with integrated control unit (ADR)

Detailed information regarding technical data and luminaire variants is mentioned in the Annex.

SPECIFIC CONDITIONS OF USE: NO



IECEx Certificate of Conformity

Certificate No.: **IECEX IBE 14.0035**

Page 5 of 6

Date of issue: 2020-07-27

Issue No: 6

Equipment (continued):

Safety instructions:

The plastic housing has to be protected against intense electrostatic charging processes. Cleaning is permitted only with a damp cloth.



IECEx Certificate of Conformity

Certificate No.: **IECEX IBE 14.0035**

Page 6 of 6

Date of issue: 2020-07-27

Issue No: 6

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The luminaire type 6002/4. can also be equipped with mid-power color LEDs. The total number of color LEDs is 100, or resp., 200 per luminaire (depends on variant).

The luminaire can optionally be equipped with an additional protective earthing terminal.

Annex:

[Annex_to_IBE14.0035_6.pdf](#)



IECEX Certificate of Conformity - Annex



Certificate No: IECEx IBE 14.0035 Issue No: 6
 Date of Issue: 2020-07-24 Page 1 of 2

Additional technical information

Variants

Type 6002/1. and 6002/2. (with high-power LEDs)

Luminaire type	6002/11. 6002/21.	6002/12. 6002/22.	6002/16. 6002/26.	6002/17. 6002/27.
Number of LED assemblies	2 (24 LEDs)	4 (48 LEDs)	2 (24 LEDs)	4 (48 LEDs)
Rated input power	28 W	52 W	28 W (30 W ⁽⁵⁾)	52 W (54 W ⁽⁵⁾)
Luminaire size ⁽⁴⁾	Size 2	Size 4	Size 2	Size 4
LED control gear (Nominal input voltage)	6045/11. (110 V...240 V AC; 110 V...250 V DC)		6045/11. (110 V...240 V AC; 110 V...250 V DC) 6062/.9.-.3.-11.-99. (220 V...240 V AC; 200 V...250 V DC) 6062/.9.-24.-11.-99. (100 V...277 V AC; 141 V...272 V DC)	
Ambient temperature T_a	-40 °C...+60 °C ⁽²⁾ -40 °C...+50 °C ⁽³⁾		LED control gear	T_a
			6045/11.	-30 °C...+60 °C ⁽²⁾ -30 °C...+50 °C ⁽³⁾
			6062/.9.-.3.	-30 °C...+55 °C ⁽¹⁾ -30 °C...+50 °C ⁽³⁾
			6062/.9.-24.	-30 °C...+55 °C ⁽²⁾ -30 °C...+50 °C ⁽³⁾
LED assembly	6062/19. – 090 – 000 – ... 6062/29. – 090 – 000 – ...		(type 6002/1.) (type 6002/1. and 6002/2.)	
Group	IIB+H ₂ and IIIC IIC and IIIC		(type 6002/1.) (type 6002/2.)	



IECEx Certificate of Conformity - Annex



Certificate No: IECEx IBE 14.0035

Issue No: 6

Date of Issue: 2020-07-24

Page 2 of 2

Type 6002/4. (with mid-power LEDs)

Luminaire type	6002/412.	6002/414. 6002/416.	6002/418.	6002/419.
LED module configuration ⁽⁶⁾ - White LEDs -	24 x 4 LEDs or 24 x 5 LEDs (one LED module)	48 x 4 LEDs or 48 x 5 LEDs (two LED modules)	24 x 4 LEDs or 24 x 5 LEDs (one LED module)	48 x 4 LEDs or 48 x 5 LEDs (two LED modules)
LED module configuration ⁽⁶⁾ - Color LEDs -	20 x 5 LEDs "PCamber", "blue", "green" ⁽⁷⁾ (one LED module)	40 x 5 LEDs "red", "PCamber", "blue", "green" ⁽⁷⁾ (two LED modules)	20 x 5 LEDs "PCamber", "blue", "green" ⁽⁷⁾ (one LED module)	40 x 5 LEDs "red", "PCamber", "blue", "green" ⁽⁷⁾ (two LED modules)
Rated input power	28 W	52 W	28 W	52 W
Luminaire size ⁽⁴⁾	Size 2	Size 4 (6002/414.) Size 6 (6002/416.)	Size 2	Size 4
LED control gear (Nominal input voltage)	6045/11. (110 V...240 V AC; 110 V...250 V DC) 6045/21. (100 V...240 V AC; 110 V...250 V DC) 6045/2...2. with integrated control unit (ADR) (220 V...240 V AC; 194 V...250 V DC)			
Ambient temperature T_a	-40 °C...+60 °C ^{(2), (8)} -40 °C...+50 °C ⁽³⁾ for 6002/416: -20 °C...+60 °C ^{(2), (8)} -20 °C...+50 °C ⁽³⁾		-30 °C...+60 °C ^{(2), (8)} -30 °C...+50 °C ⁽³⁾	
Group	IIC and IIIC			

- (1) with through-wiring 3 x 8 A
- (2) with through-wiring 3 x 10 A
- (3) with through-wiring 3 x 16 A
- (4) Size 2: 700 mm x 184 mm x 125 mm (width x depth x height)
Size 4: 1310 mm x 184 mm x 125 mm (width x depth x height)
Size 6: 1610 mm x 184 mm x 125 mm (width x depth x height)
- (5) with LED control gear 6062/.9.-24.-11.-99.
- (6) [Number of LED blocks connected in series] x [Number of parallel LEDs per block]
- (7) A combination of green mid-power LEDs with white mid-power LEDs is possible.
- (8) not for variant with green mid-power LEDs