



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 5	<u>Certificate history:</u>
Status:	Current	Issue No: 7	Issue 6 (2020-07-27)
Date of Issue:	2021-10-18		Issue 5 (2019-11-08)
Applicant:	R. STAHL Schaltgeräte GmbH Am Bahnhof 30 74638 Waldenburg Germany		Issue 4 (2018-08-30)
Equipment:	LED Linear Luminaire		Issue 3 (2017-08-31)
Optional accessory:	6002/1., 6002/2. and 6002/4.		Issue 2 (2016-03-15)
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 1 (2015-10-30)
	Ex db eb op is IIC T4 Gb	(type 6002/2.)	Issue 0 (2014-08-25)
	Ex db eb ib mb op is IIC T4 Gb	(type 6002/4. with Ex-i module 6047)	
	Ex db eb ib op is IIC T4 Gb	(type 6002/4. with LED control gear 6045/3)	
	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.
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Certificate issued by:

IBEXU Institut für Sicherheitstechnik GmbH
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09599 Freiberg
Germany

IBEXU



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Manufacturer: **R. STAHL Schaltgeräte GmbH**
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74638 Waldenburg
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Additional manufacturing locations: **R. STAHL Schaltgeräte GmbH**
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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 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

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/ExTR13.0058/07](#)

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

Quality Assessment Report:

[DE/BVS/QAR10.0002/17](#)



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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 intended for use in areas with potentially explosive gas and dust atmospheres that require equipment protection level (EPL) Gb, Gc, Db or Dc. 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).

The Ex-i module can be implemented as separate component (type 6047) or as integrated part of the LED control gear (type 6045/3).

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 and 6045/3.-1

(***) only for LED control gear 6045/2.-...2 and 6045/3.-1.2 with integrated control unit (ADR)

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

SPECIFIC CONDITIONS OF USE: NO



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Equipment (continued):

Safety instructions:

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



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The luminaire type 6002/4. can also be equipped with a new LED control gear type 6045/3..-1 with integrated Ex-i module.

Corresponding change of marking

The luminaire type 6002 can also be equipped with a new integral thread adapter for connection of a separately certified protective vent.

Conformity with current standard IEC 60079-18:2017 (Ed. 4.1)

Annex:

[Annex_to_IBE14.0035_7.pdf](#)



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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 6045/11.	T_a -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.)	



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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. 6045/21., 6045/31.-1 6045/21.-.2, 6045/31.-1.2 with integrated control unit (ADR)		(110 V...240 V AC; 110 V...250 V DC) (100 V...240 V AC; 110 V...250 V DC) (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