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 14.0080**

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Certificate history:

Issue 4 (2020-05-04)
Issue 3 (2019-06-04)
Issue 2 (2018-10-01)
Issue 1 (2015-09-10)
Issue 0 (2014-12-16)

Status: **Current**

Issue No: 5

Date of Issue: 2022-11-11

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

Equipment: **LED Linear Luminaire type 6402/2. and 6402/4.**

Optional accessory:

Type of Protection: **Increased safety "e" in combination with flameproof enclosure "d" and sealed device "nC", or dust ignition protection by enclosure "t"**

Marking:

	Ex ec IIC T4 Gc	without all-pole shutdown
	Ex db ec IIC T4 Gc	with all-pole shutdown or with LED control gear in Ex d
	Ex ec nC IIC T4 Gc	with control unit; without all-pole shutdown
	Ex db ec nC IIC T4 Gc	with control unit and all-pole shutdown or with LED control gear in Ex d
	Ex tc IIIC T100 °C Dc	
or	Ex tb op is IIIC T100 °C Db	
	-40 °C ≤ T_a ≤ +60 °C	(maximum values)

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

Position: **Head of department Certification Body**

Signature:
(for printed version)

Date:
(for printed version)

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

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Certificate No.: **IECEx IBE 14.0080**

Date of issue: 2022-11-11 Issue No: 5

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

Manufacturing locations:

R. STAHL (P) LTD.
Plot No. -5, Malrosapuram Road
Sengundram Ind. Area
Singaperumal Koil, Kanacheepuram Dist.
Talmilnadu - 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 Edition:7.0	Explosive atmospheres - Part 0: Equipment - General requirements
IEC 60079-1:2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-15:2017 Edition:5.0	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-28:2015 Edition:2	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
IEC 60079-31:2022-01 Edition:3.0	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7:2017 Edition:5.1	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

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/ExTR14.0072/00
DE/IBE/ExTR14.0072/01
DE/IBE/ExTR14.0072/02
DE/IBE/ExTR14.0072/03
DE/IBE/ExTR14.0072/04
DE/IBE/ExTR14.0072/05

Quality Assessment Report:

DE/BVS/QAR10.0002/18

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The LED linear luminaire type 6402/2. and 6402/4. is suitable for use in areas with potentially explosive gas and dust atmospheres requiring equipment protection level (EPL) Gc and Dc or Db. 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.

High-power LEDs are used in type 6402/2. and mid-power LEDs in type 6402/4.

Technical data

The technical data depends on the components used and 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)
Addition of alternative LED control gear

Addition of a new integral thread adapter for connection of a separately certified protective vent

Conformity with current standard IEC 60079-31 (Ed. 3)

Annex:

Annex_to_IBE14.0080_5.pdf

IECEx Certificate of Conformity - Annex

Certificate No: IECEx IBE 14.0080 Issue No: 5

Date of Issue: 2022-11-11

Additional technical information

Variants

Type 6402/2. *(with high-power LEDs)*

Luminaire type	6402/21.	6402/22.	6402/26.	6402/27.
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 [b])	52 W (54 W [b])
Luminaire size [a]	Size 2	Size 4	Size 2	Size 4
LED control gear *(Nominal input voltage)*	3 C 180 08. *(220 V…240 V AC; 200 V…250 V DC)* [4] 6045/11. or 6045/2. *(110 V…240 V AC; 110 V…250 V DC)* [5] 3 C 148 08 1 *(220 V…240 V AC; 196 V…250 V DC)*		6062/.9.-23.-11.-99. 6062/.9.-53.-11.-99. 6062/.9.-93.-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)* 3 C 180 08. *(220 V…240 V AC; 200 V…250 V DC)* [4] 6045/11. or 6045/2. *(110 V…240 V AC; 110 V…250 V DC)* [5] 3 C 148 08 1 *(220 V…240 V AC; 196 V…250 V DC)*	
Ambient temperature T_a	LED control gear / T_a 3 C 180 08. / -40 °C…+55 °C [1] -40 °C…+60 °C [3] 6045/11. or /2. / -40 °C…+50 °C [1] -40 °C…+60 °C [3] 3 C 148 08 1 / -40 °C…+50 °C [1] -40 °C…+55 °C [3]		LED control gear / T_a 6062/.9.-.3. / -30 °C…+50 °C [1] -30 °C…+55 °C [2] 6062/.9.-24. / -30 °C…+50 °C [1] -30 °C…+55 °C [3] 3 C 180 08. / -30 °C…+55 °C [1] -30 °C…+60 °C [3] 6045/11. or /2. / -30 °C…+50 °C [1] -30 °C…+60 °C [3] 3 C 148 08 1 / -30 °C…+50 °C [1] -30 °C…+55 °C [3]	

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Deviations at luminaires with control unit ADR20-ILS-Z2		
Nominal input voltage	220 V…230 V AC; 194 V…250 V DC 220 V…230 V AC; 196 V…250 V DC (d)	220 V…230 V AC; 194 V…250 V DC 220 V…230 V AC; 200 V…250 V DC (c) 220 V…230 V AC; 196 V…250 V DC (d)
Ambient temperature T_a	-30 °C…+45 °C (1) -30 °C…+50 °C (3)	-30 °C…+45 °C (1) -30 °C…+50 °C (3)

Type 6402/4. *(with mid-power LEDs)*

Luminaire type	6402/412.	6402/414. 6402/416.	6402/418.	6402/419.
Number of LEDs	96 or 120 LEDs	192 or 240 LEDs	96 or 120 LEDs	192 or 240 LEDs
Rated input power	28 W	52 W	28 W	52 W
Luminaire size (a)	Size 2	Size 4 (6402/414.) Size 6 (6402/416.)	Size 2	Size 4
LED control gear *(Nominal input voltage)*	3 C 180 08. *(220 V…240 V AC; 200 V…250 V DC)* (4) 6045/11. or 6045/2. *(110 V…240 V AC; 110 V…250 V DC)* (5) 3 C 148 08 1 *(220 V…240 V AC; 196 V…250 V DC)*		6062/.9.-23.-11.-99. 6062/.9.-53.-11.-99. 6062/.9.-93.-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)* 3 C 180 08. *(220 V…240 V AC; 200 V…250 V DC)* (4) 6045/11. or 6045/2. *(110 V…240 V AC; 110 V…250 V DC)* (5) 3 C 148 08 1 *(220 V…240 V AC; 196 V…250 V DC)*	
Ambient temperature T_a	LED control gear / T_a 3 C 180 08. / -40 °C…+55 °C (1) -40 °C…+60 °C (3) 6045/11. or /2. / -40 °C…+50 °C (1) -40 °C…+60 °C (3)		LED control gear / T_a 6062/.9.-.3. / -30 °C…+50 °C (1) -30 °C…+55 °C (2) 6062/.9.-24. / -30 °C…+50 °C (1) -30 °C…+55 °C (3)	

	3 C 148 08 1 <u>for type 6402/416. (Size 6)</u> 3 C 180 08. 6045/11. or /2. 3 C 148 08 1	-40 °C…+50 °C (1) -40 °C…+55 °C (3) -20 °C…+55 °C (1) -20 °C…+60 °C (3) -20 °C…+50 °C (1) -20 °C…+60 °C (3) -20 °C…+50 °C (1) -20 °C…+55 °C (3)	3 C 180 08. 6045/11. or /2. 3 C 148 08 1	-30 °C…+55 °C (1) -30 °C…+60 °C (3) -30 °C…+50 °C (1) -30 °C…+60 °C (3) -30 °C…+50 °C (1) -30 °C…+55 °C (3)
LED module configuration (e)	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)
Deviations at luminaires with control unit ADR20-ILS-Z2				
Nominal input voltage	220 V…230 V AC; 194 V…250 V DC 220 V…230 V AC; 196 V…250 V DC (d)		220 V…230 V AC; 194 V…250 V DC 220 V…230 V AC; 200 V…250 V DC (c)	
Ambient temperature T_a	-30 °C…+45 °C (1) -30 °C…+50 °C (3) <u>for type 6402/416. (Size 6)</u> -20 °C…+45 °C (1) -20 °C…+50 °C (3)		-30 °C…+45 °C (1) -30 °C…+50 °C (3)	

(1) with through-wiring 3 x 16 A

(2) with through-wiring 3 x 8 A

(3) with through-wiring 3 x 10 A

(4) Nominal input voltage: 100 V…240 V AC; 110 V…250 V DC for LED output current ≤ 300 mA

(5) Nominal input voltage: 100 V…240 V AC; 110 V…250 V DC for type 6045/2

220 V…240 V AC; 194 V…250 V DC for type 6045/2..-..2. with integrated control unit (ADR)

(a) Size 2: 700 mm × 184 mm × 125 mm (width × depth × height)
Size 4: 1310 mm × 184 mm × 125 mm (width × depth × height)
Size 6: 1610 mm × 184 mm × 125 mm (width × depth × height)

(b) with LED control gear 6062/.9.-24.-11.-99.

(c) with LED control gear 6062/.9.-23.-11.-99., 6062/.9.-53.-11.-99. or 6062/.9.-93.-11.-99.

(d) with LED control gear 3 C 148 08 1

(e) [Number of LED blocks connected in series] x [Number of parallel LEDs per block]