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 BVS 18.0028X**

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Certificate history:
Issue 4 (2022-07-05)
Issue 3 (2021-03-08)
Issue 2 (2019-12-04)
Issue 1 (2019-09-23)
Issue 0 (2018-10-15)

Status: **Current**

Issue No: 5

Date of Issue: 2023-12-15

Applicant: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Equipment: **Luminaire type ExLin ***-* ****** *** *** */***

Optional accessory:

Type of Protection: **Flameproof Enclosures "d", Intrinsic Safety "i", Optical Radiation, Powder Filling “q”, Increased Safety "e", Protection by Enclosure "t", Protection by Encapsulation "m"**

Marking:

NE+ variant:
Ex db eb ib mb op is q IIC T4 Gb
Ex op is tb IIIC T* Db * See thermal data

All other variants:
Ex eb ib op is q IIC T4/T5 Gb
Ex op is tb IIIC T* Db * See thermal data

Approved for issue on behalf of the IECEx Certification Body: **Deniz Pezzutto**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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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:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

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Manufacturer: **Cooper Crouse-Hinds GmbH**
Neuer Weg-Nord 49
69412 Eberbach
Germany

Manufacturing locations: **S.C. Cooper Industries Romania S.R.L**
Zona Industriala Vest, Str. III, Nr. 12
310510 Arad
Romania

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 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 60079-5:2015 Explosive atmospheres –Part 5: Equipment protection by powder filling “q”
Edition:4.0

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/BVS/ExTR18.0072/05

Quality Assessment Report:

DE/BVS/QAR11.0009/14

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

Description

The Luminaire type ExLin***-* ****** *** *** */* consists of a basic housing made of plastic in type of protection Increased Safety “eb” and Protection by Enclosure “tb”.

One or two LED modules type ** *** ** * according to IECEx BVS 18.0029U are attached to the basic housing.

The LED modules are made of a plastic housing with glass pane in the type of protection Increased Safety “eb” and Protection by Enclosure “tb” containing circuits in type of protection Intrinsic Safety “ib” when used in combination with the driver module qTEK ***-*. The electrical supply is realized by the separately certified Driver Module type qTEK ***-* according to IECEx BVS 17.0005U in types of protection Increased Safety “eb” and Powder Filling “q”.

The electrical connection between basic housing and LED module is done via plug and socket carried out in type of protection Increased Safety “eb” and Protection by Enclosure “tb".

Subject and Type

See Annex

Parameters

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Annex

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
-Addition of variants with coloured foils inside the separately certified LED modules.

-Addition of the hot-swap possibility during battery pack replacement.

Annex:

BVS_18_0028X_Cooper _Annex_Issue5.pdf

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Certificate No.: **IECEx BVS 18.0028X Issue No. 5**
Annex

Subject and Type

Luminaire type ExLin***-* ****** *** *** */*

ExLin$^{aaa_a\ bbbbbb\ ccc\ ccc\ d/d}$		
Place	**Description**	**Values**
aaa_a	Types	3L-1 2400 lm minimum; 1 module 4L-1 3600 lm minimum; 1 module 5L-1 4800 lm minimum; 1 module 5L-2 4800 lm minimum; 2 modules each 2400 lm 7L-2 7200 lm minimum; 2 modules each 3600 lm 10L-2 9600 lm minimum; 2 modules each 4800 lm
bbbbbb	Variants	w/o standard variant V-CG-S with emergency control unit NE+ emergency light version with supply unit VE+
ccc ccc	Versions	Versions without influence on explosion protection (e.g. light colour, transparency, etc.)
d/d	Through wiring	1/6 without through-wiring 2/6 with through-wiring 1/5 without through-wiring alternative terminal 2/5 with through-wiring alternative terminal

Parameters

Electrical data

Rated input voltage Types ExLin 3L-1, 4L-1, 5L-* and 7L-2	AC	110 … 277	V, 50/60 Hz
	DC	110 … 277	V

Rated input voltage Type ExLin 10L-2	AC	220 … 277	V, 50/60 Hz
	DC	220 … 250	V

Rated input voltage V-CG-S variants (all types except ExLin 10L-2)	AC	220 … 254	V, 50/60 Hz
	DC	195 … 250	V

Rated input voltage NE+ variants types ExLin 3L-1 and 5L-1	AC	110 … 254	V, 50/60 Hz

Output power (LED-modules) 3L 4L 5L 7L 10L		 22 33 44 67 88	 W W W W W

Depending on the type of the luminaire the LED modules are supplied by the appropriate driver module (type qTEK ***-*). The drivers match with the LED modules. The driver module is available in several types with different power output.
Optionally the driver type qTEK 00*-* can be used which has a V-CG-S function.
See table below for dependencies between luminaires, LED-module and permitted drivers.

<table>
<tr><th>Luminaire</th><th>LED-Module</th><th colspan="5">Permitted drivers</th></tr>
<tr><td>3L-1</td><td>1x LED-Module
24 ** * ***</td><td>qTEK 10*-* [1]
(Low Power)</td><td>qTEK 20*-*
(Mid Power)</td><td rowspan="3">qTEK 30*-*
(High Power)</td><td rowspan="4">----</td><td rowspan="4">qTEK 00*-*
(V-CG-S)</td></tr>
<tr><td>4L-1</td><td>1x LED-Module
36 ** * ***</td><td rowspan="6">----</td><td rowspan="3">qTEK 20*-* [1]
(Mid Power)</td></tr>
<tr><td>5L-1</td><td>1x LED-Module
48 ** * ***</td></tr>
<tr><td>5L-2</td><td>2x LED-Module
24 ** * ***</td></tr>
<tr><td>7L-2</td><td>2x LED-Module
36 ** * ***</td><td rowspan="4">----</td><td>qTEK 30*-* [1]
(High Power)</td></tr>
<tr><td>10L-2</td><td>2x LED-Module
48 ** * ***</td><td>----</td><td>qTEK 40*-* [1]
(High Power Plus)</td><td rowspan="3">----</td></tr>
<tr><td>3L-1 NE+</td><td>1x LED-Module
24 ** * ***</td><td rowspan="2">qTEK 30*-* [1]
(High Power)</td><td>----</td></tr>
<tr><td>5L-1 NE+</td><td>1x LED-Module
48 ** * ***</td></tr>
</table>

[1] standard driver

Parameters

Thermal data

Permitted ambient temperature range and temperature class for **EPL Gb**

T_{amb} range	Temperature class							
	3L-1	4L-1	5L-1	5L-2	7L-2	10L-2	3L-1 NE+	5L-1 NE+
-40 °C … 60 °C [1]	T4 [1) 3)]	---	---	T4 [1) 3)]	---	---	---	---
-40 °C … 55 °C	T4	T4 [3)]	T4 [3)]	T4	T4 [3)]	---	---	---
-40 °C … 50 °C	T4	T4	T4 [3)]	T4	T4	---	---	---
-40 °C … 45 °C	T4	T4	T4	T4	T4	T4 [2) 3)]	T4 [4)]	T4 [4)]
-40 °C … 40 °C	T5 T4 [5)]	T4	T5 T4 [5)]	T5 T4 [5)]	T4	T4 [2)]	T4	T4

1) not permitted if driver qTEK 00*-* with V-CG-S function is used
2) no V-CG-S variants possible
3) in case of alternative terminal not permitted for TW 16 A
4) not permitted for through-wiring
5) if used with driver qTEK 00*-*

Permitted ambient temperature range and max. surface temperature for **EPL Db**

T_{amb} range	Surface temperature							
	3L-1	4L-1	5L-1	5L-2	7L-2	10L-2	3L-1 NE+	5L-1 NE+
-40 °C … 60 °C	95 °C [1) 3)]	---	---	95 °C [1) 3)]	---	---	---	---
-40 °C … 55 °C	90 °C	100 °C [3)]	110 °C [3)]	90 °C	100 °C [3)]	---	---	---
-40 °C … 50 °C	85 °C	95 °C	105 °C [3)]	85 °C	95 °C	---	---	---
-40 °C … 45 °C	80 °C	90 °C	100 °C	80 °C	90 °C	105 °C [2)3)]	100 °C [4)]	100 °C [4)]
-40 °C … 40 °C	75 °C	85 °C	95 °C	75 °C	85 °C	100 °C [2)]	95 °C	95 °C

1) not permitted if driver qTEK 00*-* with V-CG-S function is used
2) no V-CG-S variants possible
3) in case of alternative terminal not permitted for TW 16 A
4) not permitted for through-wiring

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Specific Conditions of Use:

1. Driver module and LED module shall only be used in the following combinations:

Luminaire	LED-Module	Standard driver	Optional	V-CG-S driver
3L-1	1x LED-module 24 ** * ***	qTEK 10* - * (Low Power)	qTEK 20* - * (Mid Power) qTEK 30* - * (High Power)	qTEK 00*-*
4L-1	1x LED-module 36 ** * ***	qTEK 20* - * (Mid Power)	qTEK 30* - * (High Power)	
5L-1	1x LED-module 48 ** * ***	qTEK 20* - * (Mid Power)	qTEK 30* - * (High Power)	
5L-2	2x LED-module 24 ** * ***	qTEK 20* - * (Mid Power)	qTEK 30* - * (High Power)	
7L-2	2x LED-module 36 ** * ***	qTEK 30* - * (High Power)	---	
10L-2	2x LED-module 48 ** * ***	qTEK 40* - * (High Power Plus)	---	---
3L-1 NE+	1x LED-module 24 ** * ***	qTEK 30* - * (High Power)	---	---
5L-1 NE+	1x LED-module 48 ** * ***	qTEK 30* - * (High Power)	---	---

2. Depending on the permitted ambient temperature range **cable glands** with a minimum permissible operating temperature according to the table below shall be used:

T_{amb}	3L-1 and 5L-2			4L-1, 5L-1 and 7L-2			10L-2			3L-1NE+ and 5L-1NE+		
	no TW	TW 10 A	TW 16 A	no TW	TW 10 A	TW 16 A	no TW	TW 10 A	TW 16 A	no TW	TW 10 A	TW 16 A
60 °C	70°C 1)	75°C 1)	85°C 1) 3)	NP	NP	NP	NP	NP	NP	NP	NP	NP
55 °C	70°C	70°C	80°C	70°C	75°C	85°C 3)	NP	NP	NP	NP	NP	NP
50 °C	70°C	70°C	75°C	70°C	70°C	80°C 4)	NP	NP	NP	NP	NP	NP
45 °C	70°C	70°C	70°C	70°C	70°C	75°C	70°C 2)	70°C 2)	75°C 2) 3)	70°C	NP	NP
40 °C	70°C	70°C	70°C	70°C	70°C	70°C	70°C 2)	70°C 2)	70°C 2)	70°C	70°C	70°C

TW Through-wiring
1) not permitted if driver qTEK 00*-* with V-CG-S function is used
2) not possible for V-CG-S Variants
3) not permitted for alternative terminal
4) not permitted for alternative terminal (only type 5L-1)

3. Depending on the permitted ambient temperature range **connection cables** with a minimum permissible operating temperature according to the table below shall be used:

T_{amb}	3L-1 and 5L-2			4L-1, 5L-1 and 7L-2			10L-2			3L-1NE+ and 5L-1NE+		
	no TW	TW 10 A	TW 16 A	no TW	TW 10 A	TW 16 A	no TW	TW 10 A	TW 16 A	no TW	TW 10 A	TW 16 A
60 °C	70°C 1)	75°C 1)	90°C 1) 3)	NP	NP	NP	NP	NP	NP	NP	NP	NP
55 °C	70°C	70°C	85°C	70°C	80°C	90°C 3)	NP	NP	NP	NP	NP	NP
50 °C	70°C	70°C	80°C	70°C	75°C	85°C 4)	NP	NP	NP	NP	NP	NP
45 °C	70°C	70°C	75°C	70°C	70°C	80°C	70°C 2)	70°C 2)	85°C 2) 3)	70°C	NP	NP
40 °C	70°C	70°C	70°C	70°C	70°C	75°C	70°C 2)	70°C 2)	80°C 2)	70°C	70°C	75°C

TW Through-wiring
1) not permitted if driver qTEK 00*-* with V-CG-S function is used
2) not possible for V-CG-S Variants
3) not permitted for alternative terminal
4) not permitted for alternative terminal (only type 5L-1)

4. The luminaire shall only be cleaned with a damp cloth.
5. The LED Module shall not be used in areas with electrostatically intense charging processes.
6. For zone 21 application if dust atmosphere is present: the battery pack NE+ shall only be disconnected from the emergency supply unit VE+ (ExLin luminaire) when the luminaire is disconnected from the mains supply.