



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 NEP 19.0003X** Page 1 of 4 Certificate history:
Status: **Current** Issue No: 2 Issue 1 (2020-07-28)
Issue 0 (2019-01-08)
Date of Issue: 2022-01-30
Applicant: **Cooper Electric (Changzhou) Co., Ltd.**
No.189 Liuyanghe Road, Xinbei District, Changzhou, 213031, Jiangsu
China
Equipment: **LED Explosion-protected luminaire, Model HLL*******
Optional accessory:
Type of Protection: **Ex db, eb, ib, mb, tb**
Marking: For HLL****-EM1****, HLL****-EM2****:
Ex db eb ib mb IIC T6 Gb, Ex tb IIIC T80°C Db IP66
For HLL*****:
Ex db eb mb IIC T6 Gb, Ex tb IIIC T80°C Db IP66
For HLL****-EM1***-N*, HLL****-EM2***-N*:
Ex eb ib mb IIC T6 Gb, Ex tb IIIC T80°C Db IP66
For HLL*****-N:
Ex eb mb IIC T6 Gb, Ex tb IIIC T80°C Db IP66
Rated ambient temperature range:
-40°C ~+55°C for HLL*****;
-25°C ~+55°C for HLL****-EM1***** and HLL****-EM2*****.

Approved for issue on behalf of the IECEx
Certification Body:

Guo Aihua

Position:

General Manager

Signature:
(for printed version)

Date:

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Certificate issued by:

**Shanghai Inspection and Testing Institute of Instruments
and Automatic Systems Co., Ltd. (SITIIS)/
National Supervision and Inspection Center for Explosion
Protection and Safety of Instrumentation (NEPSI)
103 Cao Bao Road
Shanghai 200233
China**



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Issue No: 2

Manufacturer: **Cooper Electric (Changzhou) Co., Ltd.**
No.189 Liuyanghe Road, Xinbei District, Changzhou, 213031, Jiangsu
China

Additional
manufacturing
locations: **Cooper Crouse-Hinds S.A.**
Avda. de Santa Eulàlia 290
08223 Terrassa, Barcelona
Spain

Eaton Electrical (Australia) Pty Ltd
10 Kent Road
Mascot NSW 2020
Australia

Eaton Electric (Singapore) PTE Ltd.
100G Pasir Panjang Road, #07-08/
#02-09 Interlocal Centre, Singapore,
118523
Singapore

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 60079-31:2013 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:

CN/NEP/ExTR19.0003/00

CN/NEP/ExTR19.0003/01

CN/NEP/ExTR19.0003/02

Quality Assessment Reports:

AU/TSA/QAR06.0020/13

DE/BVS/QAR13.0001/07

GB/BAS/QAR11.0007/08



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The LED Explosion-protected luminaire consist of housing, end caps and PC cover, the end caps are secured to the housing by screws, and the PC cover is secured to the housing by metal hasps. Gaskets are provided between the housing and end caps and between the housing and PC cover in order to meet IP66 rating.

The LED Explosion-protected luminaire is suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21 and Zone 22. The input cord is fed in via certified cable glands. Unused entries are sealed with certified plugs to maintain the degree of protection.

The LED luminaire for type HLL***** employs a separately certified safety switch to disconnect the power of the LED module when the PC cover is opened.

The LED luminaire for type HLL*****-S employs a separately certified 2.5 mm² terminal block to connect the switch which is intended for use in safety area.

Rated voltage: AC 100~240V 50/60 Hz; DC 108~250V

Rated power: HLL-2*****: 30W; HLL-4*****: 60W

Details of type for products refer to Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. Do not open when an explosive dust atmosphere is present.
2. Do not open when energized.
3. Potential electrostatic charging hazard-see Instructions.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 2:

1. Add optional PC cover gaskets (CHN-6300-U or NE-Z250).
2. Update LED module.
3. Add certified LED inverters type ECHI30/075-S, ECHI60/150-S, ECHCI30/075-S, ECHCI60/150-S.
4. Add two additional manufacturing locations.
5. Delete op is marking and update the marking plate.

Annex:

[IECEx NEP 19.0003X Issue No.2 Annex.pdf](#)

Details of type for products:

The complete luminaire catalog number is as follows:

Example Cat. No.	HLL	-2	-W	-2L	-D	-EM1	-1/6-120	-C	-R	-N	-S
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)

(1). HLL — Indicates basic catalog series designation.

(2). Indicates Length

-2 — 2 feet length; -4 — 4 feet length.

(3). Indicates LED CCT.

Blank — 5000K/5700K/6500K; -W — 3000K/4000K.

(4). Indicates Total Luminous Flux.

-2L — 2000 Lm(2 feet length 3000K /4000K); -3L — 3000 Lm(2 feet length 5000K/5700K/6500K);

-4L — 4000 Lm(4 feet length 3000K /4000K); -5L — 5000 Lm(4 feet length 5000K/5700K/6500K).

(5). Indicates Zone Area.

-D — Use for Zone 1.

(6). Emergency Duration.

Blank — Non-Emergency; EM1 — 25% Output 1.5h; EM2 — 25% Output 3h.

(7). Indicates wire and entry type.

-1/6-120 — 6mm² Single-ended 1×M20; -1/6-220 — 6mm² Single-ended 2×M20;
-1/6-125 — 6mm² Single-ended 1×M25; -1/6-225 — 6mm² Single-ended 2×M25;
-2/6-120 — 6mm² Through wiring 1×M20; -2/6-220 — 6mm² Through wiring 2×M20;
-2/6-125 — 6mm² Through wiring 1×M25; -2/6-225 — 6mm² Through wiring 2×M25;
-1/4-120 — 4mm² Single-ended 1×M20; -1/4-220 — 4mm² Single-ended 2×M20;
-1/4-125 — 4mm² Single-ended 1×M25; -1/4-225 — 4mm² Single-ended 2×M25;
-2/4-120 — 4mm² Through wiring 1×M20; -2/4-220 — 4mm² Through wiring 2×M20;
-2/4-125 — 4mm² Through wiring 1×M25; -2/4-225 — 4mm² Through wiring 2×M25;

(8). Indicates Coating.

Blank — No coating; -C — Coating

(9). Indicates Replacement.

Blank — No replace part; -R — Replacement.

(10). Indicates safety switch.

Blank — with safety switch; -N — No safety switch.

(11). Inhibit switch.

Blank — without inhibit switch; -S — with inhibit switch.

Shanghai Inspection and Testing Institute of Instruments and Automatic Systems Co., Ltd. (SITIAs) National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI) 103 Cao Bao Road, Shanghai 200233, China	 
Annex to IECEx Certificate of Conformity of IECEx NEP 19.0003X Issue No.2	

The LED driver, LED inverter, safety switch, terminal block and wire connector used in the luminaire are all separately certified, see below table for details.

Ex components	Ex marking	Model	Certificate
LED driver	Ex mb IIC Gb	ECHD30C300, ECHD60C600	IECEX NEP 19.0001U IECEX CQM 16.0028U
LED inverter	Ex ib mb IIC Gb	ECHI30/075, ECHI60/150, ECHI30/075-S, ECHI60/150-S, ECHCI30/075-S, ECHCI60/150-S	IECEX NEP 19.0002U
		ECHI30/075, ECHI60/150	IECEX CQM 16.0029U
Safety switch	Ex d IIC Gb	SSE-2	IECEX CQM 16.0018U
2.5 mm ² Terminals	Ex eb IIC Gb	BK 2/E	IECEX TUR 18.0019U
4 mm ² Exe terminal	Ex e IIC Gb	Exe T 6P	IECEX CQM 15.0053U DEMKO 15 ATEX 1599U
6 mm ² Terminal strip	Ex eb IIC Gb	2410-*	IECEX BVS 13.0088U BVS 13ATEX E080U
Nipple connector	Ex e IIC Gb	CNC-CE2, CNC-CE5	IECEX CQM 16.0024U

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Assessment of the involved certified components:

Ex components	Standards referenced in component certificates	Relevant Standards referenced in this ExTRs for the HLL series luminaire	Comments
LED driver (IECEx NEP 19.0001U)	IEC 60079-0:2011 IEC 60079-18:2014	IEC 60079-0:2017 IEC 60079-18:2014	Standard difference between old and new versions do not affect the explosion-proof performance of the product
LED driver (IECEx CQM 16.0028U)	IEC 60079-0:2011 IEC 60079-18:2014	IEC 60079-0:2017 IEC 60079-18:2014	Standard difference between old and new versions do not affect the explosion-proof performance of the product
LED inverter (IECEx NEP 19.0001U)	IEC 60079-0:2017 IEC 60079-11:2011 IEC 60079-18:2014	IEC 60079-0:2017 IEC 60079-11:2011 IEC 60079-18:2014	Same version standard
LED inverter (IECEx CQM 16.0029U)	IEC 60079-0:2011 IEC 60079-11:2011 IEC 60079-18:2014	IEC 60079-0:2017 IEC 60079-11:2011 IEC 60079-18:2014	Standard difference between old and new versions do not affect the explosion-proof performance of the product
Safety switch	IEC 60079-0:2011 IEC 60079-1:2014	IEC 60079-0:2017 IEC 60079-1:2014	Standard difference between old and new versions do not affect the explosion-proof performance of the product
2.5 mm ² Terminals	IEC 60079-0:2017 IEC 60079-7:2017	IEC 60079-0:2017 IEC 60079-7:2017	Same version standard
4 mm ² Exe terminal	IEC 60079-0:2011 IEC 60079-7:2006	IEC 60079-0:2017 IEC 60079-7:2017	Standard difference between old and new versions do not affect the explosion-proof performance of the product
6 mm ² Terminal strip	IEC 60079-0:2017 IEC 60079-7:2017	IEC 60079-0:2017 IEC 60079-7:2017	Same version standard
Nipple connector	IEC 60079-0:2011 IEC 60079-7:2006	IEC 60079-0:2017 IEC 60079-7:2017	Standard difference between old and new versions do not affect the explosion-proof performance of the product