



(1) **EU-Type Examination Certificate**

(2) Equipment or protective system intended for use in potentially explosive atmospheres - **Directive 2014/34/EU**

(3) Certificate number: **SEV 19 ATEX 0101 X**

(4) Product: Hazardous recessed LED lighting Type: HRL series

(5) Manufacturer: Cooper Electric (Changzhou) Co., Ltd

(6) Address: No. 189, Liuyanghe Road, Xinbei District, Changzhou  
Jiangsu Province, CHINA, 213031

(7) The equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) Eurofins, notified body No. 1258, in accordance with article 17 of Directive 2014/34/EU of the European parliament and of the council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no 19-Ex-0002.X01

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

**EN 60079-0:12 + A11:13**

**EN 60079-1:14**

**EN 60079-18:15**

**EN 60079-28:15**

**EN 60079-31:14**

**EN 60079-7:15**

**EN 60079-11:12**

Except in respect of those requirements listed at item 18 of the schedule.

(10) If the sign «X» is placed after the certificate number, it indicates that the product is subjected to special conditions for safe use specified in the schedule to this certificate.

(11) This EU type examination certificate relates only to design and construction of the specified product. Further requirements of this directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:

**See page 2: (20) Marking**

**Eurofins Electrosuisse Product Testing AG**  
**Notified Body ATEX**

Martin Plüss

Product Certification

(13)

## Appendix

(14)

**EU-Type Examination Certificate no. SEV 19 ATEX 0101 X**

(15) **Description of product**

This HRL series of hazardous recessed LED lighting are suitable for use in hazardous location classified as Zone 1, Zone 2, Zone 21, Zone 22. The luminaire consists of case which is made of galvanized steel or SS316L and PC cover. It has an Ex eb chamber. Inside the chamber, the LED arrays are encapsulated by lens using sealing compound. The Ex mb LED driver and LED emergency inverter are installed in the housing, the Ex eb terminal block is installed to provide electrical connection while the Ex db safety switch is installed above the reflector to control luminaire. In the wall of chamber, four threaded holes are provided to install with cable gland/blanking elements. Only certified cable glands have to be used to wire the device and the unused entries need be blanked with suitable certified plugs. Both external and internal earthings are provided. The degree of protection of the enclosure is IP66, according to IEC 60079-0 and IEC 60529.

Classification of installation and use:	Stationary
Ingress protection:	IP66
Rated ambient temperature range (°C):	-40 °C ... +55 °C (Normal version) -25 °C ... +55 °C (EM version)
Rated ambient temperature range (°C) for Ex Components:	N/A

Ratings:  
 Rated voltage: 100~240 V ac 50/60 Hz or 108~250 V dc  
 Rated power: 30 W/60 W  
 Battery: 9.6 V 3 Ah Ni-Cd or 9.6 V 6 Ah Ni-Cd

16) **Report number** 19-Ex-0002.X01

(17) **Specific conditions of use**

- POTENTIAL ELECTROSTATIC CHARGING HAZARD – SEE INSTRUCTIONS

(18) **Essential health and safety requirements**


In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
None	

(19) **Drawings and Documents**

See test report "Manufacturer's Documents"

(20) **The marking of the product shall include the following:**

	II 2 G Ex db eb ib mb op is IIC T6 Gb	(EM Version with Safety Switch)
	II 2 G Ex db eb mb op is IIC T6 Gb	(Normal version with Safety Switch)
	II 2 G Ex eb ib mb op is IIC T6 Gb	(EM Version w/o Safety Switch)
	II 2 G Ex eb mb op is IIC T6 Gb	(Normal version w/o Safety Switch)
	II 2 D Ex op is tb IIIC T80 °C Db	(All types)

**Catalog number definition:**

Example Cat. No.	HRL	/3060	/00	/30W	/57	/EM	/1-225	/T1	/S
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)

(1). HRL: Indicates basic catalog series designation.

(2). Indicates Outline Size:

/3060, (only for 30W models)

/3012, (only for 60W models)

/6060, (only for 60W models)

(3). Indicates Enclosure Material:

/00=Galvanized Steel

/16=SS316L

(4). Indicates Lighting Wattage:

/30W=30W

/60W=60W

(5). Indicates LED color temperature:

/30=3000K

/40=4000K

/50=5000K

/57=5700K

(6). Indicates Emergency Duration:

/Default= Non-Emergency

/EM2=25% Output 1.5h

/EM3=25% Output 3h

(7). Indicates wire and entry type:

/1-225=Single-ended 2×M25

/2-225=Through wiring 4×M25

/1-220=Single-ended 2×M20

/2-220=Through wiring 4×M20

(8). Indicates Terminal Type:

/Default=Double Row Terminal

/T1=Single Row Terminal

(9). Indicates safety switch:

/Default=W/O Safety Switch

/S=W/ Safety Switch

**Models similarities and differences:**

Catalog No.	Power	Driver		Inverter		Battery	LED Qty	LED parameter	Ta
		IECEX NEP 19.0001U		IECEX NEP 19.0002U					
HRL/3060/*/*/* *****	30W	ECHD30C300		N/A		N/A	56		-40 °C ~ +55 °C
		Input	Output						
		100-240 VAC, 50/60 Hz or 108-250 VDC	30 W 72-100 VDC						
HRL/3060/*/*/E M/*****	30W	ECHD30C300		ECHI30/075		9.6V 3Ah Ni-Cd or 9.6V 6Ah Ni-Cd	56	Current If=300 mA Voltage Vf=6~6.2 V Or Current If=600 mA Voltage Vf=6~6.2 V	-25 °C ~ +55 °C
		Input	Output	Input	Output				
		100-240 VAC, 50/60 Hz or 108-250VDC	30 W 100 VDC	100-240 VAC, 50/60 Hz or 108-250 VDC	30 W 100 VDC				
HRL/3012/*/*/* ***** HRL/6060/*/*/* *****	60W	ECHD60C600		N/A		N/A	112		-40 °C ~ +55 °C
		Input	Output						
		100-240 VAC, 50/60 Hz or 108-250 VDC	60 W 70-100 VDC						
HRL/3012/*/*/E M/***** HRL/6060/*/*/E M/*****	60W	ECHD60C600		ECHI60/150		9.6 V 3 Ah Ni-Cd or 9.6 V 6 Ah Ni-Cd	112		-25 °C ~ +55 °C
		Input	Output	Input	Output				
		100-240 VAC, 50/60 Hz or 108-250 VDC	60 W 70-100 VDC	100-240VAC, 50/60Hz or 108-250VDC	60 W 70-100 VDC				

**Used certified components**

Ex component	Certificate No.	Ex classification
Cooper Crouse-Hinds GmbH Terminal strep type 2410-*	BVS 13 ATEX E 080 U IECEX BVX 13.0088U	II 2 G Ex e IIC Gb Ex eb IIC Gb
Cooper Electric (Changzou) Co. Ltd. Exe terminal type Exe T 6P	DEMKO 15 ATEX 1599U IECEX CQM 15.0053U	II 2 G Ex e IIC Gb Ex e IIC Gb
Cooper Electric (Changzhou) Co., Ltd. LED Driver, ECHD30C300, ECHD60C600	IECEX NEP 19.0001U	Ex mb IIC Gb
Cooper Electric (Changzhou) Co. LED Inverter ECHI30/075, ECHI60/150, ECHI30/075-S, ECHI60/150-S	IECEX NEP 19.0002U	Ex ib mb IIC Gb
Cooper Electric (Changzhou) Co. Nipple connector CNC-CE2, CNC-CE5	IECEX CQM 16.0024U	Ex e IIC Gb
Cooper Electric (Changzhou) Co. Safety Switch SSE-2	IECEX CQM 16.0018U	Ex db IIC