

Ex-Linear light fitting with metal housing

AB 12...LED

(Zone 1, 2, 21, 22)

The robust lighting concept for hazardous areas

With its flameproof housing made of copper free aluminium (Cu < 0.1 %), high degree of protection IP66 / IP67 and a protective tube made of borosilicate glass with a high mechanical and thermal stability, this luminaire is the ideal solution for harsh and hazardous environments.

The luminaire for all types of applications

The AB 12 LED luminaire series with G13 sockets permit the use of large variety of LED tubes available on the market. The AB12 LED series is available in 3 different sizes intended for their use with LED tubes with different connections, retrofit or both side supplied tubes. The easy-to-open threaded

cover, the large terminal compartment and the lamp assembly on a guide carriage facilitate servicing.

An optional external reflector ensures an application-specific light distribution. The optional protective wire guard made of stainless steel provides added safety.



Features

- Robust Ex-d housing
- For use with standard T8 LED-tubes
- Easy opening due to screwed cover on end
- 2 individual circuits (double lamp version)
- Large terminal compartment with pluggable connector
- High degree of protection IP66 / IP67

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Cable gland/ thread	Threaded plug	Order No.
AB 12... LED for retrofit LED-tubes						
AB 12220 LED 1EF 2N	3 x 2 x 2,5mm ²	x	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	NOR 000 005 060 331E
AB 12240 LED 1EF 2N	3 x 2 x 2,5mm ²	x	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	NOR 000 005 060 332E
AB 12265 LED 1EF 2N	3 x 2 x 2,5mm ²	x	x	2 x 3/4" NPT, metal thread	1 x 3/4" Ex-d	NOR 000 005 060 333E
AB 12220 LED 1EF 2M	3 x 2 x 2,5mm ²	x	x	2 x M25, metal thread	1 x M25 Ex-d	NOR 000 005 060 431E
AB 12240 LED 1EF 2M	3 x 2 x 2,5mm ²	x	x	2 x M25, metal thread	1 x M25 Ex-d	NOR 000 005 060 432E
AB 12265 LED 1EF 2M	3 x 2 x 2,5mm ²	x	x	2 x M25, metal thread	1 x M25 Ex-d	NOR 000 005 060 433E

Scope of delivery without lamp and fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Ordering details / Accessories

AB12

Accessories

Type	Content	Application	Order No.
LED tube 9 W 600 mm	1100 lm / 840	AB 12220 LED 1EF	
LED tube 18 W 1200 mm	2300 lm / 840	AB 12240 LED 1EF	NOR 000 000 506 521
LED tube 27 W 1500 mm	3400 lm / 840	AB 12265 LED 1EF	NOR 000 000 506 522

Accessories

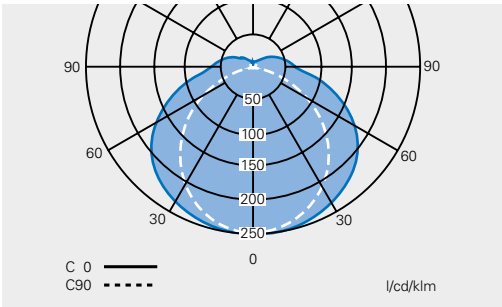
Type	Content	Application	Order No.
Reflector RAB 220 A2	Reflector, AISI 304	for AB 12220 LED...	NOR 003 045 060 403
Reflector RAB 240 A2	Reflector, AISI 304	for AB 12240 LED...	NOR 003 045 060 411
Reflector RAB 265 A2	Reflector, AISI 304	for AB 12265 LED...	NOR 003 045 060 429
Reflector GRAB 220 A2	Reflector + wire guard ANSI 304	for AB 12220 LED...	NOR 003 045 060 479
Reflector GRAB 240 A2	Reflector + wire guard ANSI 304	for AB 12240 LED...	NOR 003 045 060 487
Reflector GRAB 265 A2	Reflector + wire guard ANSI 304	for AB 12265 LED...	NOR 003 045 060 495
Reflector RAB 220 A4	Reflector, AISI 316	for AB 12220 LED...	NOR 003 165 060 403
Reflector RAB 240 A4	Reflector, AISI 316	for AB 12240 LED...	NOR 003 165 060 411
Reflector RAB 265 A4	Reflector, AISI 316	for AB 12265 LED...	NOR 003 165 060 429
Reflector GRAB 220 A4	Reflector + wire guard ANSI 316	for AB 12220 LED...	NOR 003 165 060 479
Reflector GRAB 240 A4	Reflector + wire guard ANSI 316	for AB 12240 LED...	NOR 003 165 060 487
Reflector GRAB 265 A4	Reflector + wire guard ANSI 316	for AB 12265 LED...	NOR 003 165 060 495

2.8

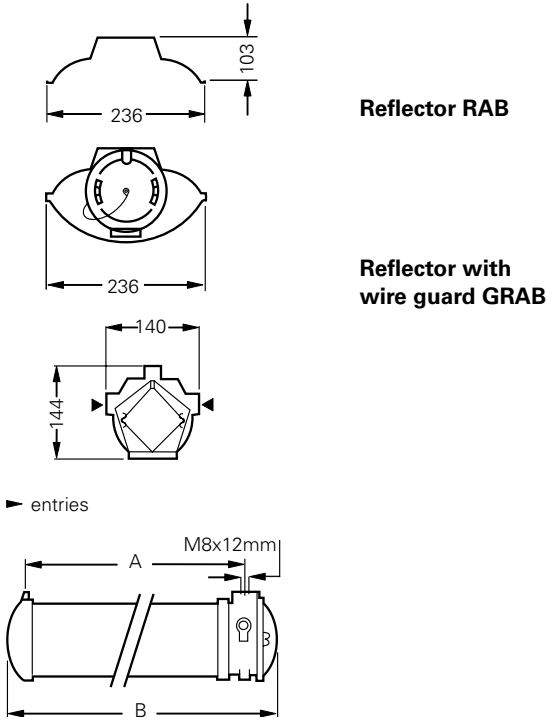
Dimension drawing / Polar curve

AB 12...LED

Polar curve AB 12...LED

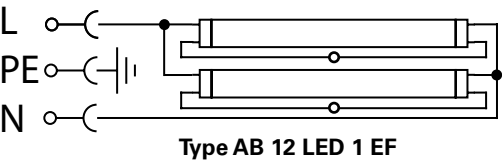


AB 12...



	A	B
AB 12220 ...	652	707
AB 12240 ...	1265	1320
AB 12265 ...	1565	1620

Wiring diagram AB 12 ... LED 1 EF



Dimensions in mm



2

Technical data

AB 12 LED 1EF

EC-Type Examination Certificate	LOM 02 ATEX 2013 X
Marking accd. to 2014/34/EU	II 2 G Ex d IIB T6 Gb II 2 D Ex t IIIC T85°C Db
Permissible ambient temperature	-20 °C up to +40 °C (T6)
Rated voltage	max. 277 V ¹⁾
Frequency	50 - 60 Hz ¹⁾
Power factor cos φ	≥ 0.9 ¹⁾
Circuit	direct
Protection class	I
Lamp / Illuminant	2 x T8 LED-tube up to 56 W, both ends supply voltage (Retrofit) ¹⁾
Lamp cap	G13 accd. to IEC 60061-1
Light output ratio	100 %
Connecting terminals	L, N and PE: 2 x 2, 5 mm ² / PE ext. 2 x 6 mm ²
Enclosure colour	grey RAL 7032 (body), RAL 7016 (cover)
Enclosure material	copper-free aluminium with powder coating
Cable glands / gland plates / enclosure drilling	direct entry: 2 x 3/4" NPT or 2 x M25 1 x Ex-d blanking plug 3/4" NPT or M25
Degree of protection accd. to EN 60529	IP 66/67
Protective cover / protective bowl	borosilicate glass

¹⁾ depends on the used LED-tubes

eLLK 92 LED Light Fittings

Linear light fitting series with new LED module
for hazardous areas Zone 1, 2, 21 and 22



Powering Business Worldwide

Ex-LED-Linear light fitting

eLLK/M 92 LED 400A / eLLK/M 92 LED 800A / eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE
(Zone 1, 2, 21, 22)

The efficient solution for your explosion-protected lighting concept

The explosion-protected linear light fittings series eLLK/M 92 LED 400A/800A combines the latest LED technology with the protection of a reliable housing solution. As a result, this light fitting series is the ideal solution for lighting tasks in harsh and hazardous environments.

Latest lighting technology for a proven lighting concept

As a leading manufacturer of explosion-protected luminaires, we have redesigned our revolutionary LED module to fit into the eLLK/M... linear light fitting series.

With the new Gen2 modules, our LED linear luminaires are even more efficient and brighter than before. In addition, they now also have an extended temperature range from -25 °C to +55 °C. The new eLLK-2/4-C/W LED module can also be used for converting existing eLLK/M 92 light fittings with fluorescent lamps and an electronic ballast (EVG 09) into LED linear light fittings in just few simple steps.

The LED system design and certification allow the use in the proved Ex e technology of the eLLK/M 92 light fittings. With the use of our EVG 09 as the driver, we can rely on more than 20 years successful and safe operation in harsh and hazardous environments.



The advantages of the LED module:

- Environmentally friendly, no mercury
- Shock and vibration resistant, no filament or glass to break
- Immediate start, instant full illumination
- No life time reduction due to switching cycles
- Reduced disposal costs

Energy and cost savings

- >20% energy savings compared to fluorescent lamps
- Additional energy savings due to operation on demand (night/day and presence-mode)
- Reduced maintenance costs compared to standard fluorescent lamps
- Lower overall cost of ownership

Features

- >20 % energy savings compared to similar fluorescent luminaires
- Special LED design with direct light distribution
- Proved technology. The EVG 09 has been used as a driver for more than 20 years
- Various light colour temperatures available - 4000 K / 5700 K
- Selected LED chips with perfect binning, low power loss and long life
- Ex-e technology for easy maintenance
- For ambient temperatures from -25 °C up to +55 °C

Operating life

- The expected operating life of this LED module is up to 110,000 hours. This is a significant improvement compared to traditional light sources.
- Heat sinks are specifically engineered to remove heat from the LEDs to ensure a longer life, better lumen output and accurate colour temperature.

- Fully operational with V-CG-S modules for connection to CEAG central battery emergency lighting systems.
- Also available as self-contained emergency luminaire eLLK 92 LED ... NE.

Easy and cost-effective installation

Like all the luminaires in the eLLK lighting family, our standard LED linear luminaires feature a single-ended through-wiring, which, in conjunction with the generously dimensioned terminal compartment, allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.



Ordering details

Type	Version	Terminals	Through-wiring		Cable gland/ thread	Threaded plug	Blanking plug	Order No for 4000 K	Order No for 5700 K
eLLK 92 LED 400A									
eLLK 92 LED 400A	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2265 505 101	1 2265 504 101
eLLK 92 LED 400A	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2265 505 103	1 2265 504 103
eLLK 92 LED 400A	1/6-1M ¹⁾	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2265 505 109	1 2265 504 109
eLLK 92 LED 400A	2/6-2M ¹⁾	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2265 505 111	1 2265 504 111
eLLK 92 LED 800A									
eLLK 92 LED 800A	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2266 505 101	1 2266 504 101
eLLK 92 LED 800A	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2266 505 103	1 2266 504 103
eLLK 92 LED 800A	1/6-1M ¹⁾	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2266 505 109	1 2266 504 109
eLLK 92 LED 800A	2/6-2M ¹⁾	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2266 505 111	1 2266 504 111
eLLM 92 LED 400A/800A									
eLLM 92 LED 400A	1/3-1K	1 x 3	–	–	1 x M25, Plastic			1 2268 505 101	1 2268 504 101
eLLM 92 LED 800A	1/3-1K	1 x 3	–	–	1 x M25, Plastic			1 2269 505 101	1 2269 504 101
eLLK 92 LED 400 V-CG-S ²⁾									
eLLK 92 LED 400 V-CG-S	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2265 517 103	1 2265 516 103
eLLK 92 LED 400 V-CG-S	2/6-2M ¹⁾	2 x 6	–	x	4 x M20, Metal thread	2 x M25		1 2265 517 111	1 2265 516 111
eLLK 92 LED 800 V-CG-S ²⁾									
eLLK 92 LED 800 V-CG-S	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2266 517 103	1 2266 516 103
eLLK 92 LED 800 V-CG-S	2/6-2M ¹⁾	2 x 6	–	x	4 x M20, Metal thread	2 x M25		1 2266 517 111	1 2266 516 111
eLLK 92 LED 400A NE ³⁾									
eLLK 92 LED 400A NE	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2260 588 101	1 2260 587 101
eLLK 92 LED 400A NE	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2260 588 103	1 2260 587 103
eLLK 92 LED 400A NE	1/6-1M ¹⁾	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2260 588 109	1 2260 587 109
eLLK 92 LED 400A NE	2/6-2M ¹⁾	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2260 588 111	1 2260 587 111
eLLK 92 LED 400A NE	1/6-1M ¹⁾	1 x 6	x	–	2 x M25, Metal thread	2 x M25		1 2260 588 609	1 2260 587 609
eLLK 92 LED 400A NE	2/6-2M ¹⁾	2 x 6	–	x	4 x M25, Metal thread	4 x M25		1 2260 588 611	1 2260 587 611
eLLK 92 LED 800A NE ³⁾									
eLLK 92 LED 800A NE	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2261 588 101	1 2261 587 101
eLLK 92 LED 800A NE	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2261 588 103	1 2261 587 103
eLLK 92 LED 800A NE	1/6-1M ¹⁾	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2261 588 109	1 2261 587 109
eLLK 92 LED 800A NE	2/6-2M ¹⁾	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2261 588 111	1 2261 587 111
eLLK 92 LED 800A NE	1/6-1M ¹⁾	1 x 6	x	–	2 x M25, Metal thread	2 x M25		1 2261 588 609	1 2261 587 609
eLLK 92 LED 800A NE	2/6-2M ¹⁾	2 x 6	–	x	4 x M25, Metal thread	4 x M25		1 2261 588 611	1 2261 587 611
eLLM 92 LED 400A NE ³⁾									
eLLM 92 LED 400A NE	1/3-1K	1 x 3	–	–	1 x M25, Plastic			1 2273 588 101	1 2273 587 101

Scope of delivery including LED-module, without fixing material. Metal cable glands see catalogue part 2: 2.3.12 ff
1) with metal thread, without cable gland / 2) for operation with CEAG-emergency supply system / 3) self-contained emergency light fitting

Accessories

Type		Order No for 4000 K	Order No for 5700 K
eLLK-2	LED module for eLLK/M 92 018/18 incl. conversion kit for standard fluorescent light fittings	CCL 1635 129	CCL 1635 127
eLLK-4	LED module for eLLK/M 92 036/36 incl. conversion kit for standard fluorescent light fittings	CCL 1635 130	CCL 1635 128
eLLK-2	LED module for eLLK/M 92 018/18 LED Ready / eLLK 92 LED 400A	CCL 1634 699	CCL 1634 697
eLLK-4	LED module for eLLK/M 92 036/36 LED Ready / eLLK 92 LED 800A	CCL 1634 700	CCL 1634 698
Type		Order No	
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material		2 2218 602 000	
Battery set Type 2710-12 with LED display for eLL..92..NE		2 2710 906 000	
Single sided through wiring 2/6 with 2 entries M25, incl. terminals and mounting material for eLLM 92 LED 400A/800A		2 2218 602 000	
Protective bowl with green filter for eye wash safety shower facilities (eLLK 92 LED 400A)		2 2215 402 018	
eLLK-2/eLLK-4 Diffusor for LED modul 400A (1pc) or 800A (2pc)		CHLPL1403-01	

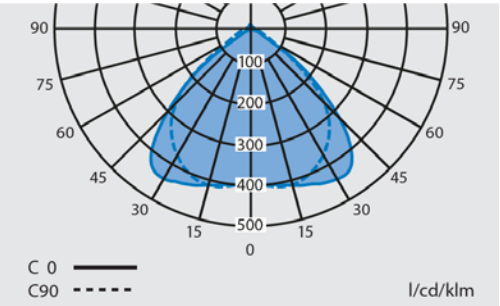
Polar curve / Dimension drawing

eLLK/M 92 LED 400A/800A / NE

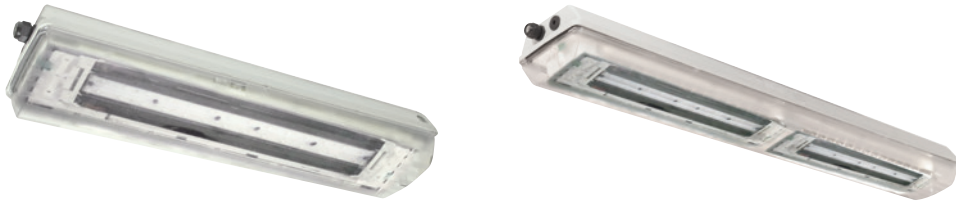
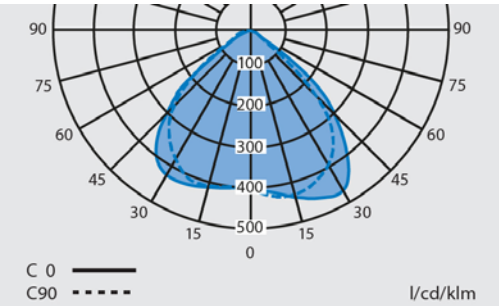
Technical data

eLLK 92 LED 400A/800A

Polar curve eLLK/M 92 LED 400A/800A



Polar curve eLLK/M 92 LED 400A/800A NE in emergency mode

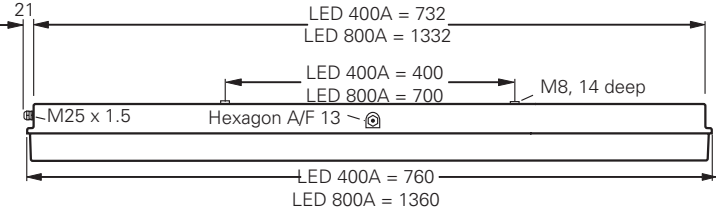


Technical data

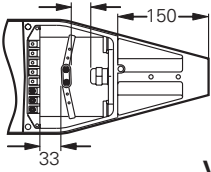
	eLLK/M 92 LED 400A	eLLK/M 92 LED 800A
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	II 2 G Ex db eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T80 °C Db IP66	II 2 G Ex db eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T80 °C Db IP66
Marking accd. to IECEx	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C	-25 °C up to +55 °C
IK-class according to IEC/EN 62262	IK 10 ± 20 J	IK 10 ± 20 J
Rated voltage	110 V - 254 V AC 110 V - 250 V DC	110 V - 254 V AC 110 V - 250 V DC
Power consumption	30 W	50 W
Frequency	50 - 60 Hz	50 - 60 Hz
Life expectancy LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos ϕ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Immunity to surge voltages according to EN 61000-4-5	4 kV, L - N and L - PE	4 kV, L - N and L - PE
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp / Illuminant	eLLK-2-C - 2 x 13 W	eLLK-2-C - 2 x 26 W
Light colour	5700 K or 4000 K	5700 K or 4000 K
Rated luminous flux of the luminaire (typical, ± 10 %)	3230 lm (5700 K) / 3230 lm (4000 K)	6120 lm (5700 K) / 6120 lm (4000 K)
Dimensions (L x W x H)	760 x 188 x 130 mm (eLLK) 1060 x 188 x 130 mm (eLLM)	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	7.2 kg (eLLK) / 9.2 kg (eLLM)	11.1 kg (eLLK) / 13.1 kg (eLLM)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal thread1)	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal thread1)
Degree of protection accd. to EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonate	Polycarbonate

¹⁾ with dustcover if entry/thread is not closed

eLLK 92 LED 400A/800A

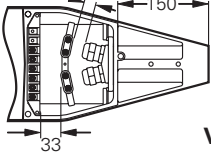
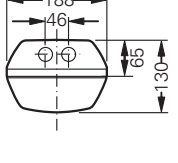
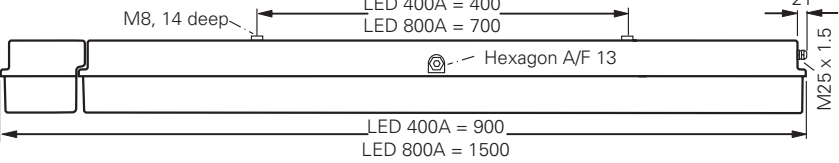


eLLM 92...



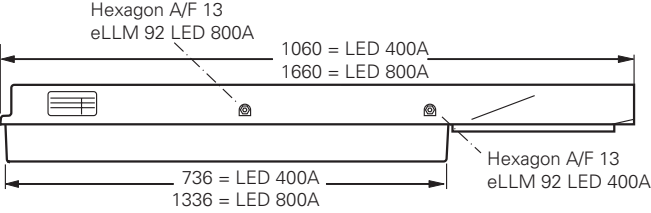
Version 1/3

eLLK 92 LED 400A/800A NE



Version 2/6

eLLM 92 LED 400A/800A



Dimensions in mm

Technical data

eLLK 92 LED 400A V-CG-S / eLLK 92 LED 800A V-CG-S



Technical data

	eLLK 92 LED 400A V-CG-S	eLLK 92 LED 800A V-CG-S
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEX Certificate of Conformity	IECEX BVS 09.0033	IECEX BVS 09.0033
Marking to 2014/34/EU	II 2 G Ex db eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T80 °C Db IP66	II 2 G Ex db eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T80 °C Db IP66
Marking to IECEx	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +50 °C	-25 °C up to +50 °C
IK-class according to IEC/EN 62262	IK 10 ≥ 20 J	IK 10 ≥ 20 J
Rated voltage	220 - 254 V AC 195 - 250 V DC	220 - 254 V AC 195 - 250 V DC
Power consumtion	30 W	50 W
Frequency	50 - 60 Hz	50 - 60 Hz
Lifetime LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos ϕ	≥ 0,95	≥ 0,95
Circuit	EVG/V-CG-S	EVG/V-CG-S
Insulation class	I	I
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp/Illuminant	eLLK-2-C - 2 x 13 W	eLLK-2-C - 2 x 26 W
Light colour	5700K or 4000K	5700K or 4000K
Rated luminous flux of the luminaire (typical, ± 10 %)	3230 lm (5700 K) / 3230 lm (4000 K)	6120 lm (5700 K) / 6120 lm (4000 K)
Rated luminous flux in emergency operation of the luminaire (one LED-row)	1615 lm (5700 k) / 1615 lm (4000 K)	3060 lm (5700 k) / 3060 lm (4000 K)
Rated emergency operating time	-	-
Dimensions (L x W x H)	760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	7.6 kg	11.5 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal thread1)	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal thread1)
Degree of protection accd. EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonate	Polycarbonate

¹⁾ With dustcover if entry/thread is not closed

Technical data

eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE



Technical data

	eLLK/M 92 LED 400A NE	eLLK 92 LED 800A NE
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEX Certificate of Conformity	IECEX BVS 09.0033	IECEX BVS 09.0033
Marking to 2014/34/EU	II 2 G Ex db eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T80 °C Db IP66	II 2 G Ex db eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T80 °C Db IP66
Marking to IECEx	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)
IK-class according to IEC/EN 62262	IK 10 ≥ 20 J	IK 10 ≥ 20 J
Battery	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor	Battery set with 7 Ah-NC battery, with LED display and monitoring via microprocessor
Rated voltage	120 V - 254 V AC	120 V - 254 V AC
Power consumption	34 W	54 W
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Lifetime LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos ϕ	≥ 0,95	≥ 0,95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Insulation class	I	I
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp/Illuminant	eLLK-2-C - 2 x 13 W	eLLK-2-C - 2 x 26 W
Light colour	5700K or 4000K	5700K or 4000K
Rated luminous flux of the luminaire (typical, ± 10 %)	3230 lm (5700 K) / 3230 lm (4000 K)	6120 lm (5700 K) / 6120 lm (4000 K)
Rated luminous flux in emergency operation 1.5 hours	1534 lm (5700 k) / 1534 lm (4000 K)	1989 lm (5700 k) / 1989 lm (4000 K)
Rated luminous flux in emergency operation 3.0 hours	1049 lm (5700 k) / 1049 lm (4000 K)	1377 lm (5700 k) / 1377 lm (4000 K)
Rated emergency operating time	1.5 h or 3 h, adjustable on site	1.5 h or 3 h, adjustable on site
Dimensions (L x W x H)	900 x 188 x 130 mm / 1500 x 188 x 130 mm	900 x 188 x 130 mm / 1500 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm² per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	10.3 kg	14.4 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e-cable glands M25 x 1,5 (plastic), option: M20 x 1,5 metal thread ¹⁾	Ex-e-cable glands M25 x 1,5 (plastic), option: M20 x 1,5 metal thread ¹⁾
Degree of protection accd. EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonate	Polycarbonate

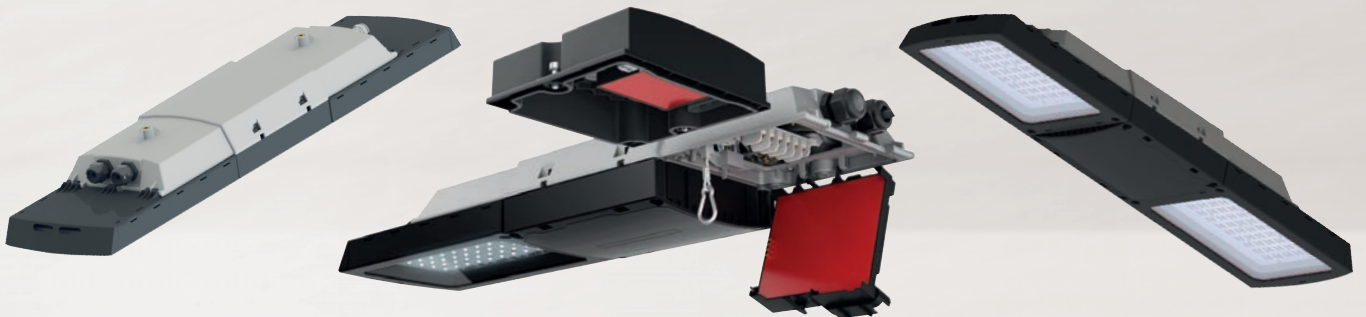
¹⁾ With dustcover if entry/thread is not closed

Explosion protected
linear light fixture

CROUSE-HINDS
SERIES

CEAG ExLin series

LED linear fixtures for hazardous areas



EATON

Powering Business Worldwide



Introducing CEAG ExLin / NE+

A linear LED engineered for use in Zone 1 and 21 hazardous areas.

CEAG ExLin / NE+ delivers longer life, improved efficiency and superior performance with a competitive payback vs. fluorescent fixtures.



The following CEAG ExLin models will replace 2x18 W, 2x36 W and 2x58 W fluorescent fixtures, as well as low bay fixtures above 150 W HID

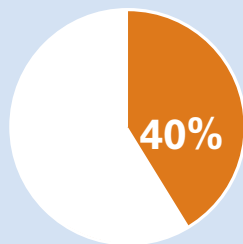
Model	Typical lumens with clear glass lens	Wattage	Lumens per watt	Equivalent fluorescent luminaire	Typical energy savings / lifetime
ExLin 3L-1	2,910	22 W	> 132	2 x 18 W	> 40%
ExLin 5L-1	5,610	44 W	> 127	2 x 36 W	> 40%
ExLin 5L-2	5,810	44 W	> 132	2 x 36 W	> 40%
ExLin 7L-2	8,600	67 W	> 127	2 x 58 W	> 40%
ExLin 10-2	11,230	89 W	> 127	> 2 x 58 W	> 40%

LED vs. fluorescent savings at a glance

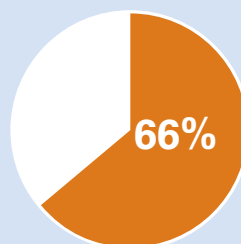
Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

CEAG ExLin vs. x 36W Fluorescent



40% REDUCTION IN ENERGY COSTS



66% LOWER TOTAL COST OF OWNERSHIP



100% LAMP MAINTENANCE REDUCTION

Assumptions: Calculations based on overall life of the LED system. Energy cost of €0.09 per kilowatt; 24 hour per day operation; labor rate of €75 each for 2 workers; average time for fixture maintenance of 2 hours.

Why CEAG ExLin LED?

Safe, reliable, efficient. CEAG ExLin fixtures combine state-of-the-art LED technology with optimised thermal management and a time-tested enclosure to extend service life in extreme environments.



Superior performance and efficiency

- Replaces 2x18 W, 2x36 W and 2x58 W fluorescent fixtures, as well as low bay fixtures over 150 W HID
- Rated life of 100,000 hours at 25 °C based on L90C5 provides long term, low-maintenance operation
- More than 132 lm/W provides up to 40 % energy efficiency compared to traditional fluorescent fixtures
- Operating temperature from -40 °C to +55 °C

Optimised light distribution with optics and lens options

- Standard, narrow and wide beam optics optimise light distribution, providing light where the customer needs it with the potential to reduce the number of fixtures required
- Clear or diffused (frosted) lens available in glass provides application flexibility
- Optional laminated glass lens with extended plastic foil prevents glass from falling - ideal for safe use in critical processes in food and beverage, chemical and pharmaceutical applications

Low profile and lightweight design with drop in mounting compatibility to CEAG eLLK fluorescent

- Decreases footprint in confined applications and reduces installation effort
- Same fixing point as eLLK 2x18 W fixtures and a mounting kit available allowing for easy replacement of 2x36 W and 2x58 W without changing cables

Large connection space and innovative terminal technology for simple and quick electrical installation

- The new 5-pole push-type terminals (optional) enable easy connection of the cables and reduce the amount of work required.

Emergency lighting function with central battery system

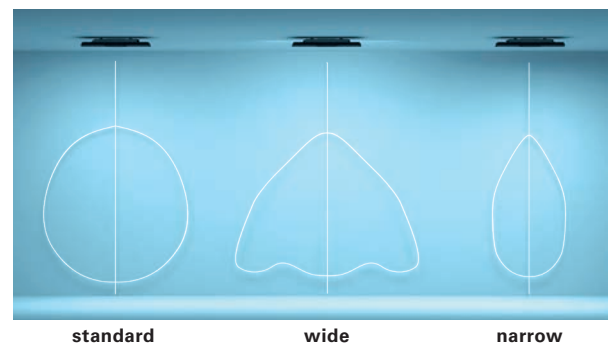
- Available with V-CG-S functionality. Safe and reliable lighting via Eaton's central battery system.
- Each fixture can be set to 25%, 50% or 100% light output in emergency lighting mode. This allows for optimization of the battery capacity to provide a long duration of emergency lighting.

Designed for reliability in the most demanding environments

- Passed dynamic vibration test acc. EN60068-2-6
- Passed windload test up to 316 km/h acc. EN60598-2-3
- Fixture design optimised to avoid water condensation inside the fitting

State-of-the-art LED technology coupled with a long history of hazardous area lighting design expertise

- LED light strings operate independently. Should one string fail, all other strings will continue to work, avoiding complete loss of illumination
- Enclosure material is time-tested and field-proven for durability in harsh and hazardous applications globally
- Optimised thermal management for extending service life in extreme environments



CEAG ExLin technical specifications:

Certifications and compliances:

IECEX / ATEX Standards:

EC-Type Examination Certificate

- BVS 18 ATEX E 037 X

IECEX-Certification of conformity

- IECEX BVS 18.0028X

Marking accd. to 2014/34/EU

- Ex II 2G Ex eb ib op is q IIC T4/T5 Gb
- Ex II 2D Ex tb op is IIIC T80/115°C Db

Marking accd. to IECEX

- Ex eb ib op is q IIC T4 Gb
- Ex tb op is IIIC T80/115°C Db

Permissible ambient temperature, depending on configuration

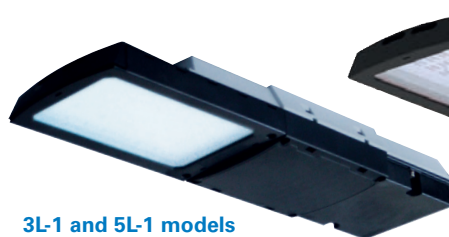
- -40°C up to +55°C* for ExLin 3L, 5L, 7L
- -40°C up to +45°C* for ExLin 10L

Degree of protection accd. to EN 60529

- IP66/67

IK-class according to IEC/EN 62262

- IK10



3L-1 and 5L-1 models



5L-2, 7L-2, 10L-2 models

LED system:

- Light colour / CRI: 5000K / 70 and 80 CRI and 4000K / 80 CRI
- Optics: Standard, narrow beam, wide beam.

Fixture life (IEC 62722):

LED

- L90 ~100,000 h at ta = +25 °C
- L85 ~75,000 h at ta = +55 °C

Control gear

- C5 ~100,000 h at ta = +25 °C
- C10 ~75,000 h at ta = +55 °C

Standard materials:

- Fixture enclosure - Glassfibre reinforced polyester
- LED module cover - toughened glass or plastic-laminated glass, clear or opaque

Dimensions and weights:

ExLin 3L-1 and 5L-1

- 770x201x115 mm
- 6.7 kg

ExLin 5L-2, 7L-2 and 10L-2

- 931x201x115 mm
- 8.0 kg

* Up to +50°C for 3L-1 and 5L-2 with through wiring and plastic cable glands. Up to +45°C for 5L-1 and 7L-2 with through wiring and plastic cable glands.

Electrical ratings:

Model	ExLin 3L-1	ExLin 5L-1 / 5L-2	ExLin 7L-2	ExLin 10L-2
Voltage**	110 up to 277 V AC/DC	110 up to 277 V AC/DC	110 up to 277 V AC/DC	220-277 V AC/DC
Power consumption	22 W	44 W	67 W	88 W
Lumens (clear glass cover) †	2910 lm	5610 / 5810 lm	8600 lm	11230 lm
Lumens (frosted glass cover) †	2490 lm	4940 / 4960 lm	7370 lm	9900 lm
Frequency	0/50 - 60 Hz	0/50 - 60 Hz	0/50 - 60 Hz	0/50 - 60 Hz
Inrush current	5 A for 1 ms	5 A for 1 ms	9 A for 1 ms	9 A for 1 ms
Power factor cos φ @ 230 V	≥ 0.92	≥ 0.95	≥ 0.95	≥ 0.98
Circuit	EVG	EVG	EVG	EVG
Protection class	I	I	I	I
Immunity to surge voltages according to EN6100-4-5	4 kV, L-N and L-PE	4 kV, L-N and L-PE	4 kV, L-N and L-PE	4 kV, L-N and L-PE
THD @230V	8%	5%	5%	5%

** Voltage for V-CG-S models: 220-254 V AC / 195-250 V DC

† Lumen values apply to 5000 K light colour, 70 CRI fixtures. Lumen output may vary slightly for different models.

Catalog Numbering System:

Part number example

ExLin 5L-1 G C S 7 50 T1 1/6 M25K

CEAG ExLin linear, 5300 lumens, glass lens, clear lens, standard light beam, >70 CRI, 5000K, Type 2410-4 terminals, single-ended wiring, M25 plastic cable gland

ExLin

5L-1

G

C

S

7

50

T1

1/6

M25K

Version / LED modules

3L-12750 lm single sided

5L-15300 lm single sided

5L-25480 lm double sided

7L-28120 lm double sided

10L-210600 lm double sided

.Emergency light function

BLANKStandard, without em. Lighting

V-CG-Swith V-CG-S functionality*

NE+see page 1.2.8

Protective cover material

GGlass

FGlass laminated with splitter protection foil

Protective cover type

CClear

FOpaque (Frosted)

CCT

303000 K

404000 K

505000 K

CRI

7>70

8>80

Light distribution

SStandard

NNarrow beam

WWide beam

RStray lighth protection grid

Cable gland / thread

M25KM25 plastic glands

M20MM20 metallic threads

M25MM25 metallic threads

Through wiring

1/6Single-ended

2/6Twin-ended

Terminals

T1Type 2410-4 max 6 mm²

T3Push-type 5-pole max 4 mm²

XXOn request

* Not available for 10L-2

Additional terminal, CCT and CRI options available. Please consult factory or authorized Eaton's Crouse-Hinds Division sales representative.

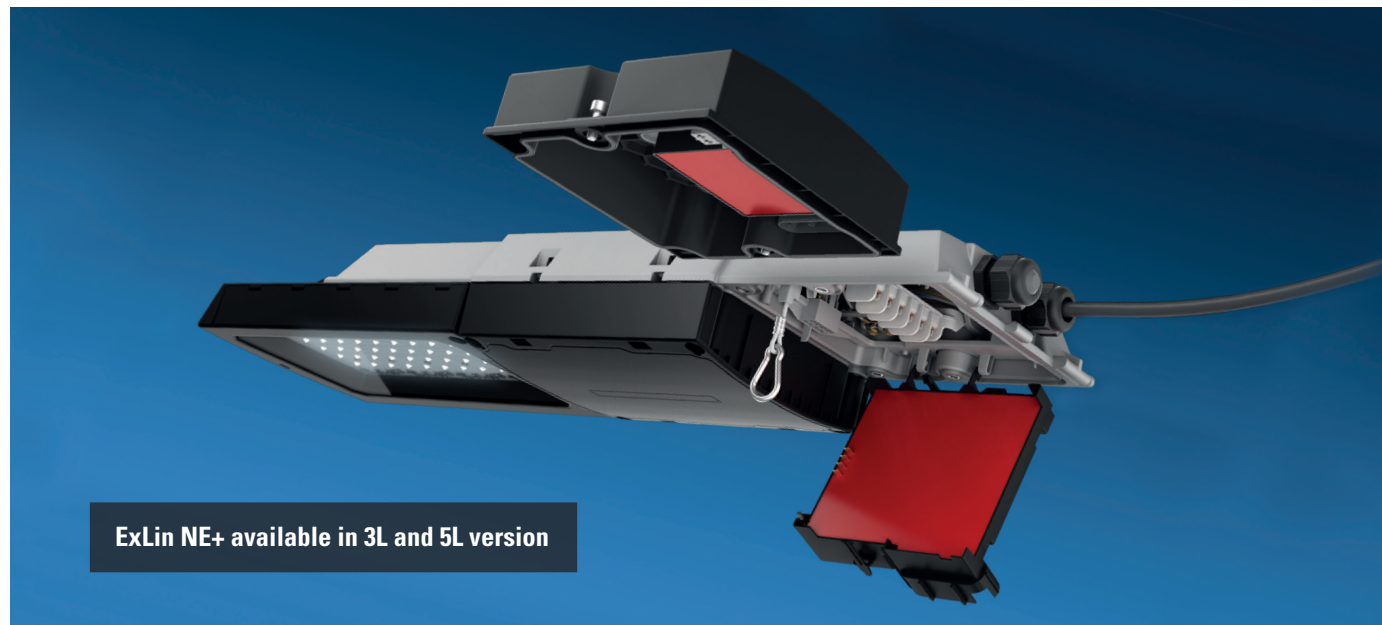
* Not available for 10L-2

Additional terminal, CCT and CRI options available. Please consult factory or authorized Eaton's Crouse-Hinds Division sales representative.

Example: ExLin	5L-1 G C S 7 50 T1 1/6 M25K	Order-No.: Key	Example Order-No.: 12300 1 4 0 101	Example: ExLin description
ExLin	3L-1	xxxxx x 2 x xxx		
ExLin	5L-1	xxxxx x 4 x xxx	x xxx x 4 x xxx	5300lm single sided
ExLin	5L-2	xxxxx x 5 x xxx		
ExLin	7L-2	xxxxx x 7 x xxx		
ExLin	10L-2	xxxxx x 9 x xxx		
ExLin	G	12300 x x x xxx	12300 x x x xxx	Standard, glass cover
ExLin	F	12301 x x x xxx		
ExLin	V-CG-S G	12310 x x x xxx		
ExLin	V-CG-S F	12311 x x x xxx		
ExLin	C S	xxxxx x x 0 xxx	xxxxx x x 0 xxx	Clear cover, standard light beam
ExLin	C N	xxxxx x x 1 xxx		
ExLin	C W	xxxxx x x 2 xxx		
ExLin	C R	xxxxx x x 4 xxx		
ExLin	F S	xxxxx x x 5 xxx		
ExLin	F N	xxxxx x x 6 xxx		
ExLin	F W	xxxxx x x 7 xxx		
ExLin	750	xxxxx 1 x x xxx	xxxxx 1 x x xxx	CRI >70, CCT 5000 K
ExLin	740	xxxxx 2 x x xxx		
ExLin	850	xxxxx 3 x x xxx		
ExLin	840	xxxxx 4 x x xxx		
ExLin	1/6 M25K	xxxxx x x x 101	xxxxx x x x 101	Single ended wiring with M25 plastic glands
ExLin	2/6 M25K	xxxxx x x x 103		
ExLin	1/6 M20M	xxxxx x x x 109		
ExLin	2/6 M20M	xxxxx x x x 111		
ExLin	1/6 M25M	xxxxx x x x 609		
ExLin	2/6 M25M	xxxxx x x x 611		

Why CEAG ExLin NE+ LED?

Safe, reliable, efficient. CEAG ExLin NE+ emergency light fittings combine environmentally friendly batteries and state-of-the-art LED technology with optimised thermal management and a time-tested enclosure to extend service life in extreme environments. Installation and maintenance efforts are significantly reduced thanks to the innovative battery design.



Emergency light fittings with a self-contained battery system

- Decentralized solution for the mandatory emergency lighting in case of power failure via highly efficient LiFePO_4 ¹⁾ ensure a safe and reliable illumination acc. EN EN 60598-2-22
- ExLinNE+ is available as 3L or 5L and delivers appr. 2000 lm / 1000 lm ²⁾ for 1.5 h / 3 h in emergency mode
- Emergency lighting cycle can be set locally for 1.5 or 3 hour

Reliable performance in harsh and hazardous environments

- Temperature range extended significantly: extremely wide operating ambient temperature range of -40 °C to +45 °C with almost homogeneous luminous efficacy
- Improved charging capabilities ensure a more stable and robust charging cycle, thus resulting in longer lifetime
- LiFePO_4 ¹⁾ battery has no memory effect and a more stable capacity for emergency lighting compared to standard NiCd ³⁾ batteries

Tests acc. DIN EN 50172 and clear visualisation

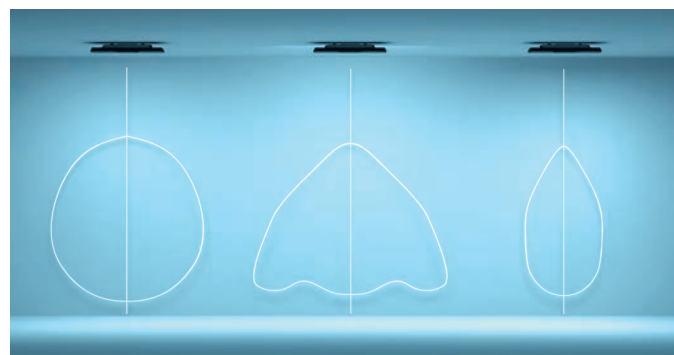
- The luminaires have integrated monitoring software that monitors the functions of the luminaire and performs the prescribed function tests and quarterly, partial duty-cycle test in accordance with DIN EN 50172 and DIN V VDE 0108-100-1 automatically
- 2 diode LED display shows charge and battery status of the luminaire

Simplified installation and maintenance in the Ex area

- Longer storage without recharging compared to NiCd ³⁾ possible
- LiFePO_4 ¹⁾ batteries do not require charging cycle for first conditioning like NiCd ³⁾, so that emergency lighting is quicker fully available
- Hot Swap technology allows an easy exchange of the battery in the Ex area without disconnecting the power supply

Reliable emergency lighting

- In order to achieve the minimum operating time required for the emergency lighting mode, the power consumption and consequently the illuminance is reduced. ExLin NE+ can vary the power consumption of the entire LED module in emergency lighting modus via their electronics. This enables homogeneous illumination of escape routes in accordance with the local conditions, even in the emergency lighting mode.
- Selection of standard, narrow and wide beam optics ensures ideal illumination according to specific environments and applications



standard

wide

narrow

¹⁾ Lithium-Iron-Phosphate
²⁾ ExLin NE+ 3L/5L, GCS 750 temporary measurement
³⁾ Nickel-Cadmium

CEAG ExLin NE+ technical specifications:

Certifications and compliances:

IECEX / ATEX Standards:

EC-Type Examination Certificate

- BVS 18 ATEX E 037 X

IECEX-Certification of conformity

- IECEX BVS 18.0028X

Marking accd. to 2014/34/EU

- Ex II 2G Ex eb ib mb op is q IIC T4/T5 Gb
- Ex II 2D Ex tb op is IIIC T80/115°C Db

Marking accd. to IECEX

- Ex eb ib mb op is q IIC T4 Gb
- Ex tb op is IIIC T80/115°C Db

Permissible ambient temperature, depending on configuration

- -40 °C up to +45 °C* for ExLin NE+ 3L, 5L, specified data 0 °C up to +45 °C

Degree of protection accd. to EN 60529

- IP66/67

IK-class according to IEC/EN 62262

- IK10

* Up to +40 °C with through wiring.



Typ 3L-1 and 5L-1

LED system:

- Light colour / CRI: 5000 K / 70 and 80 CRI and 4000 K / 80 CRI
- Optics: Standard, narrow beam, wide beam.

Battery set

- LiFePO₄ with LED display and monitoring by micro processor

Fixture life (IEC 62722):

LED

- L90 ~100,000 h at ta = +25 °C
- L85 ~75,000 h at ta = +55 °C

Control gear

- C5 ~100,000 h at ta = +25 °C
- C10 ~75,000 h at ta = +55 °C

Standard materials:

- Fixture enclosure - Glassfibre reinforced polyester
- LED module cover - toughened glass or plastic-laminated glass, clear or opaque

Dimensions and weights:

ExLin 3L-1 and 5L-1

- 770x201x115 mm
- 8.3 kg

Electrical ratings:

Model	ExLin 3L-1 NE+	ExLin 5L-1 NE+
Voltage	110 up to 254 V AC	110 up to 254 V AC
Power consumption Ø	23 W	45 W
Lumens (clear glass cover) †	2910 lm	5610 lm
Lumens (frosted glass cover) †	2490 lm	4940 lm
Lumens in emergency mode †	2000 lm (1.5 h) 1000 lm (3 h)	2000 lm (1.5 h) 1000 lm (3 h)
Frequency	50 - 60 Hz	50 - 60 Hz
Inrush current	5 A for 1 ms	5 A for 1 ms
Power factor cos φ @ 230 V	≥ 0.92	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Immunity to surge voltages according to EN6100-4-5	4 kV, L-N and L-PE	4 kV, L-N and L-PE
THD @230V	8%	5%

† Lumen values apply to 5000K light colour, 70 CRI fixtures. Lumen output may vary slightly for different models.

CEAG ExLin NE+ partnumber system:

Part number example
ExLin 3L-1 NE+ G C S 7 50 T1 1/6 M25K

CEAG ExLin linear, 5300 lumens, glass lens, clear lens, standard light beam, >70 CRI, 5000K, Type 2410-4 terminals, single-ended wiring, M25 plastic cable gland

ExLin 3L-1 NE+ G C S 7 50 T1 1/6 M25K

Version / LED Module

3L-1	2910 lm single sided
5L-1	5610 lm double sided

Emergency light function

NE+	with selfcontained battery
-----	----------------------------

Protective cover material

G	Glass
F	Glass laminated with splitter protection foil

Protective cover type

C	Clear
F	Opaque (Frosted)

CCT

30	3000 K**
40	4000 K
50	5000 K

CRI

7	>70
8	>80

Light distribution

S	Standard
N	Narrow beam
W	Wide beam
R	With stray light protection grid

Cable gland / thread

M25K	M25 plastic glands
M20M	M20 metallic threads
M25M	M25 metallic threads

Through wiring

1/6	Single-ended
2/6	Twin-ended

Terminals

T1	Type 2410-4 max 6mm ²
T3	Push-type 5-pole max 4 mm ²
XX	On request

Additional terminal, CCT and CRI options available. Please consult factory or authorized Eaton's Crouse-Hinds Division sales representative

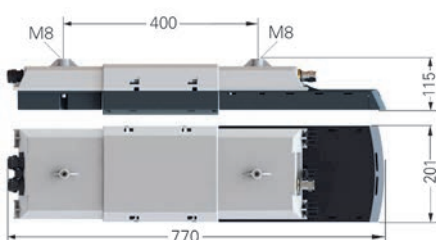
** on request

Example: ExLin NE+	3L-1 NE+ G C S 7 50 T1 1/6 M25K	Order-No.: Key	Example Order No.: 12320 1 2 0 101	Example: ExLin description
ExLin	3L-1	xxxxx x 2 x xxx	xxxxx x 2 x xxx	
ExLin	5L-1	xxxxx x 4 x xxx		5300 lm single sided
ExLin	NE+ G	12320 x x x xxx	12320 x x x xxx	Standard, glass cover
ExLin	NE+ F	12321 x x x xxx		
ExLin	C S	xxxxx x x 0 xxx	xxxxx x x 0 xxx	Clear cover, standard light beam
ExLin	C N	xxxxx x x 1 xxx		
ExLin	C W	xxxxx x x 2 xxx		
ExLin	C R	xxxxx x x 4 xxx		
ExLin	F S	xxxxx x x 5 xxx		
ExLin	F N	xxxxx x x 6 xxx		
ExLin	F W	xxxxx x x 7 xxx		
ExLin	750	xxxxx 1 x x xxx	xxxxx 1 x x xxx	CRI >70, CCT 5000 K
ExLin	740	xxxxx 2 x x xxx		
ExLin	850	xxxxx 3 x x xxx		
ExLin	840	xxxxx 4 x x xxx		
ExLin	1/6 M25K	xxxxx x x x 101	xxxxx x x x 101	Single ended wiring with M25 plastic glands
ExLin	2/6 M25K	xxxxx x x x 103		
ExLin	1/6 M20M	xxxxx x x x 109		
ExLin	2/6 M20M	xxxxx x x x 111		
ExLin	1/6 M25M	xxxxx x x x 609		
ExLin	2/6 M25M	xxxxx x x x 611		

CEAG ExLin / EXLin V-CG-S / ExLin NE+

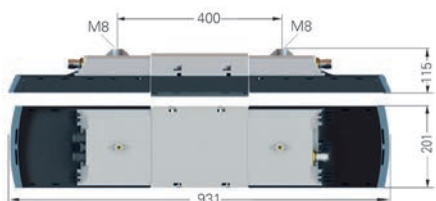
Dimensions & Weight:

CEAG ExLin / ExLin V-CG-S 3L-1 and 5L-1:



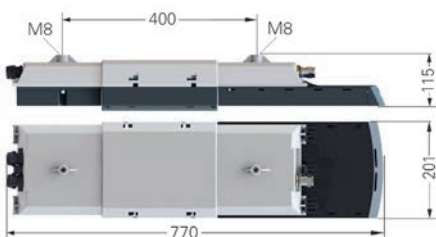
Weight: 6.7 kg

CEAG ExLin / ExLin V-CG-S 5L-2, 7L-2 and 10L-2:



Weight: 8.0 kg

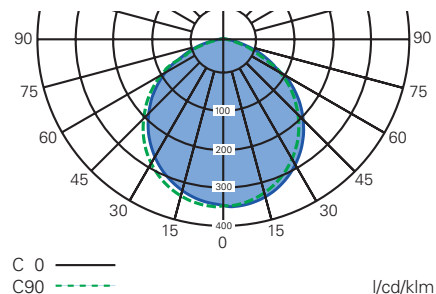
CEAG ExLin NE+ 3L-1 and 5L-1:



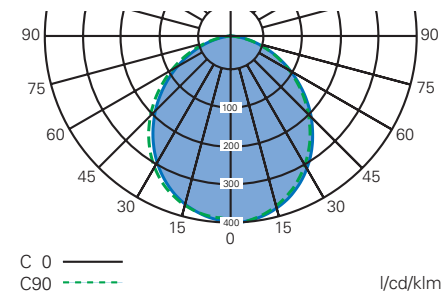
Gewicht: 8.3 kg

Polar Curve:

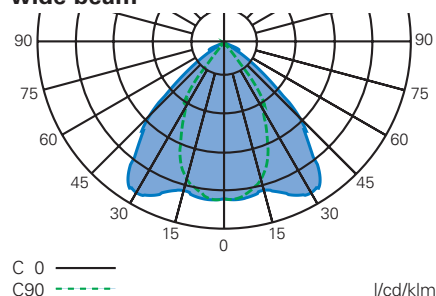
CEAG ExLin / ExLin V-CG-S / ExLin NE+ standard optic with clear cover



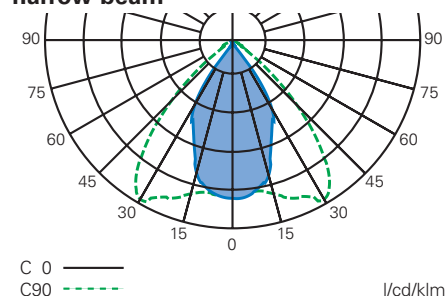
CEAG ExLin / ExLin V-CG-S / ExLin NE+ standard optic with opaque cover



CEAG ExLin / ExLin V-CG-S / ExLin NE+ wide beam



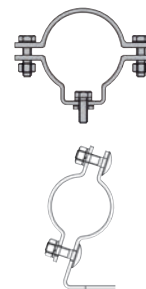
CEAG ExLin / ExLin V-CG-S / ExLin NE+ narrow beam



Mounting Accessories (Order Separately)

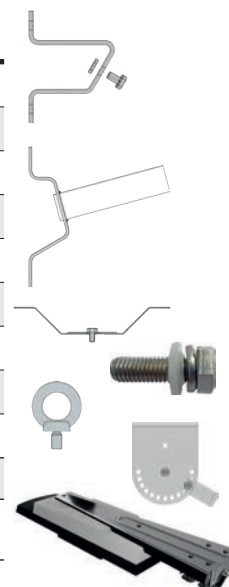
Pipe Clamps

Ordering Code	Description
2 2480 462 000 *	2 pcs. R12 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, hot-dip galvanized
2 2480 472 000 *	2 pcs. R22 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, hot-dip galvanized
2 2480 482 000 *	2 pcs. R32 (2"), Ø 56 - 60 mm with screws and polyamide washer, hot-dip galvanized
NOR 000 005 009 211	1 pcs. A8 (1 1/2") D 47 - 51 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized
NOR 000 005 009 229	1 pcs. A9 (2") D 56 - 60 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized
2 2480 550 010	2 pcs. Two-part, for pipe mounting LB 48 - FT with screws and polyamide washer, hot-dip galvanized



Fixing Accessories

Ordering Code	Description
2 2480 550 013	2 pcs. luminaire mounting bracket with 30° angle, wall mounting LH 30 - FT, hot-dip galvanized
2 2480 550 014	2 pcs. luminaire mounting bracket with 45° angle, wall mounting LH 45 - FT, hot-dip galvanized
2 2480 000 122	2 pcs. wall mounting bracket with 30° angle, with screws and polyamide washer, hot-dip galvanized
NOR 000 005 009 196	1 pcs. wall bracket 45° with screws and polyamide washer, hot-dip galvanized
2 2483 027 000	1 pcs. wall bracket W 27, 15°, for pole-mounting fitting Ø 42 mm, hot-dip galvanized
2 2480 092 000	2 pcs. ceiling mounting bracket D 92 with screws and polyamide washer, stainless steel
2 2480 550 011	2 pcs. C-bracket for luminaire mounting LAB-C50 - ER, stainless steel
2 2480 054 000	2 pcs. hexagon screw M8 x 20 for luminaire mounting, with polyamide washer
2 2480 002 000 *	2 pcs. eye bolt M8 for luminaire mounting, hot-dip galvanized
2 2480 550 022 *	2 pcs. wall mounting bracket with adjustable angle (15° step)
2 2300 050 004	Pole mounting adapter for ExLin 3L-1 and 5L-1 , 42-62 mm diameter, hot-dip galvanised Different pole mounting adapter on request.



* Also available in stainless steel. Consult factory for ordering code.

Metallic Cable Glands (Order Separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable sealing range - Max
ADE1M200NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	2.8	5.5
ADE1M201NPN	M20		4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0



ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
			Min.	Max.	Min.	Max.	Min.	Max.
ADE4M200NPN	M20	SWA, SWB, STA,	2.8	5.5	4.5	8.5	0.2	0.9
ADE4M201NPN	M20	Braided marine shipboard, Type P; Lead	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20	sheathed cable (with addition of earthing washer)	7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3



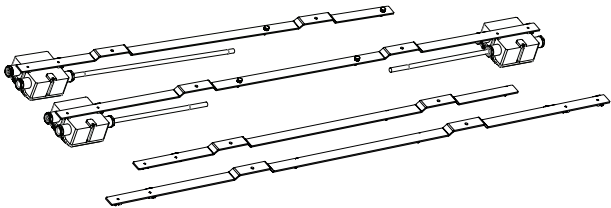
ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, refer to our cable glands section within www.crouse-hinds.de/en/

Adapter Kits for eLLK Retrofits (Order Separately)

CEAG ExLin LED fixtures are designed with the same fixing point as Crouse-Hinds series CEAG eLLK 2x18W fixtures, making retrofits simple and cost-effective.

Adapter kits allow for easy replacement of 2x36W and 2x58W eLLK fixtures without changing already-installed cables or mounting brackets. Adapter kits include a metal bar, junction box and connection cables between the junction box and ExLin fixture.

Ordering Code	Description
2 2300 500 001	2 pcs. ExLin adapter kit for retrofitting to eLLK 2x36 W fixture - includes metal bar, junction box, plastic glands and connection cable between box and fixture
2 2300 500 002	1 pcs. ExLin adapter kit for retrofitting to eLLK 2x58W fixture - includes metal bar, two junction boxes, plastic glands and connection cable between boxes and fixture
3 2300 500 001	1 pcs. ExLin mounting metal bar for retrofitting to eLLK 2x36 W fixture - without junction box and connection cable
3 2300 500 002	1 pcs. ExLin mounting metal bar for retrofitting to eLLK 2x58W fixture - without junction box and connection cable



See for yourself how easy it is to upgrade your eLLK lighting installation to our state-of-the-art ExLin LED solution!



Visit eaton.com/ellk-to-exlin to watch the fast and simple retrofit process using our adapter kit

HLL linear LED lighting-hazardous area

Product introduction

HLL series is an extremely robust liner LED luminaire in an aluminum housing with a high impact polycarbonate diffuser for use in Zone 1, 2, 21 and 22 hazardous environments.

The use of high quality LED chips, along with Crouse-Hinds' industry knowhow in extracting heat from electrical products in hazardous, gaseous environment, ensures benchmark longevity for HLL in operation. With the added benefits of energy savings, lower maintenance, overall lower cost of ownership and importantly, contributes to a greener environment.

Product features

Model	Length	Color temp.	Nominal lumens	Wattage	Equivalent fluorescent luminaire
HLL-2-3L series	735mm	5700K	Approx.2800	<30W	2x18W
HLL-4-5L series	1335mm	5700K	Approx.5700	<60W	2x36W

* Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.

* Tolerance+/-10%

- Reliability
 - Polycarbonate, 4J impact resistant
 - Cooper free aluminum for excellent corrosion and heat transfer properties
 - IP66 protection
 - Suitable for zone 1, 2, 21 and 22 gas and dust atmospheres
 - Highest temperature class T6



- Permissible ambient temperature:
 - Standard luminaire: -40°C~+55°C
 - Emergency luminaire: -25°C~+55°C
 - Standard 5700K, also available for 3000K, 4000K, 5000K, 6500K.
- Anti shock and vibration proof
- Mercury-free
- Instant ON without time delay
- Rated life of 5 years up to 55°C provides long term, low-maintenance operation.

Technical data

IECEX-certification of conformity	IECEX NEP 19.0003X, IECEX SEV 19.0053X, SEV 20 ATEX 0379 X
Ex marking	Ex db eb ib mb IIC T6 Gb or Ex eb ib mb IIC T6 Gb* Ex tb IIIC T80°C Db
Ambient temp	-40°C to 55°C (Normal) -25°C to 55°C (Emergency)
Rated input volt	100~240 VAC; 108~250 VDC
Power factor	>0.9
CRI	Cool white>70 as standard, CRI>80 is optional
LED module	HLL 2 series: 2x14W HLL 4 series: 2x28W
Lumen output*	HLL 2 series: 2800Lm, 5700K HLL 4 series: 5700Lm, 5700K HLL 2 series: 2700Lm, 3000K HLL 4 series: 5600Lm, 3000K
Material	Aluminum
Weight	HLL 2 series Normal: 5kg HLL 2 series Em: 6kg HLL 4 series Normal: 10kg HLL 4 series Em: 12kg
Terminals	6mm ²
Out line dimension	HLL 2 series: 735x180x130(mm) HLL 4 series: 1335x180x130(mm)
Backup duration & lumen percentage	EM1=1.5h, 25% output, EM2=3h, 25% output
IP (IEC60529)	IP66

* Tolerance+/-10%

HLL linear LED lighting-hazardous area

Ordering information

Product Type	Color Temp ¹⁾	Terminals	Through wiring ²⁾		Entry Threaded	Ex e Threaded Plug ³⁾	Part No. ⁴⁾
			Single-ended	Twin-ended			
HLL-3L							
HLL-2-3L-D-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622395U
HLL-2-3L-D-2/6-220		2x6	-	●	4xM20	2	CCL1622411U
HLL-3L Emergency							
HLL-2-3L-D-EM1-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622427U
HLL-2-3L-D-EM1-2/6-220		2x6	-	●	4xM20	2	CCL1622443U
HLL- 5L							
HLL-4-5L-D-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622779U
HLL-4-5L-D-2/6-220		2x6	-	●	4xM20	2	CCL1622795U
HLL- 5L Emergency							
HLL-4-5L-D-EM1-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622811U
HLL-4-5L-D-EM1-2/6-220		2x6	-	●	4xM20	2	CCL1622827U

¹⁾ Tolerance +/- 10%

²⁾ Through wiring 6 x 2.5 mm²

³⁾ Standard version without cable gland. if need, please order separately

⁴⁾ Default=IECEX certified; Suffix A=ATEX certified; Suffix B=GB certified

Any other types, like M25, Coating, Replacement version, please contact Crouse-Hinds sales.

Metallic cable glands (order separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable sealing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0



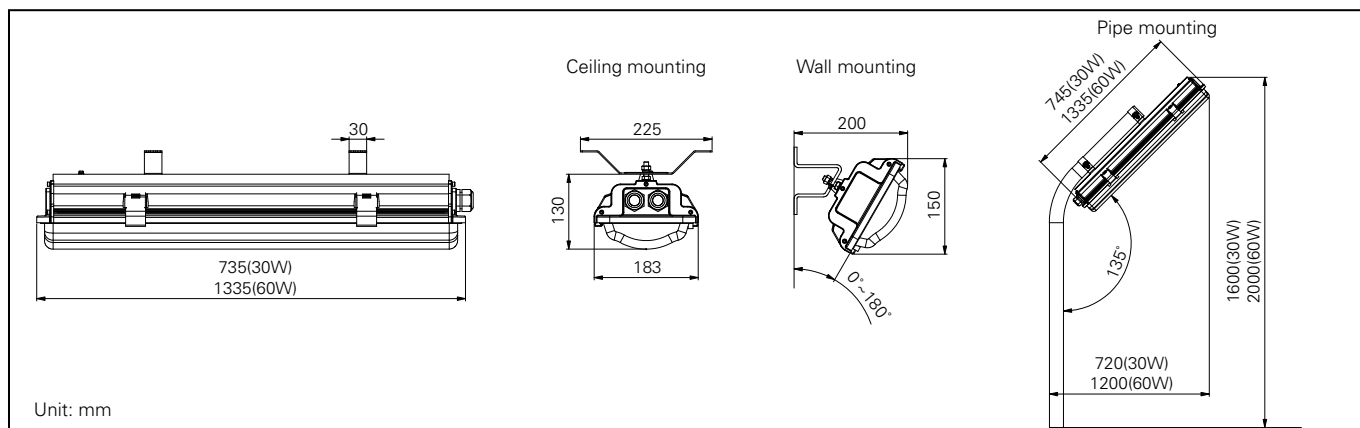
ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
			Min.	Max.	Min.	Max.	Min.	Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3



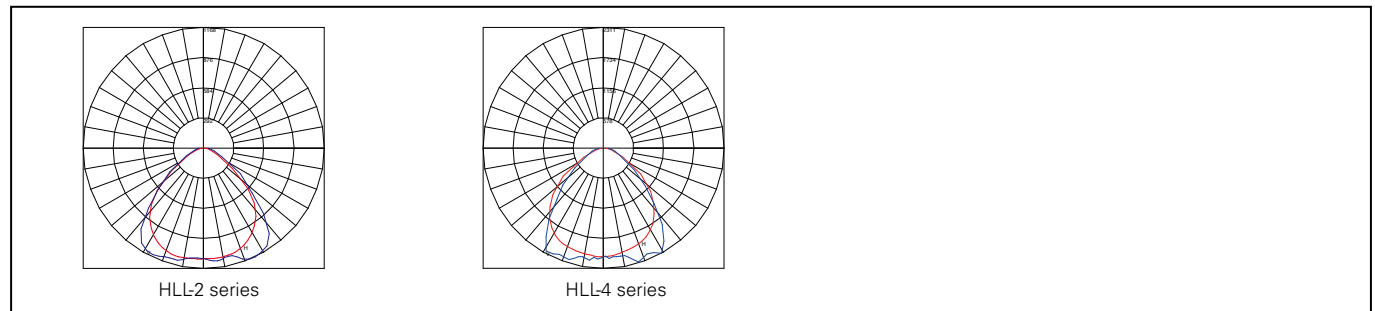
ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

Dimension

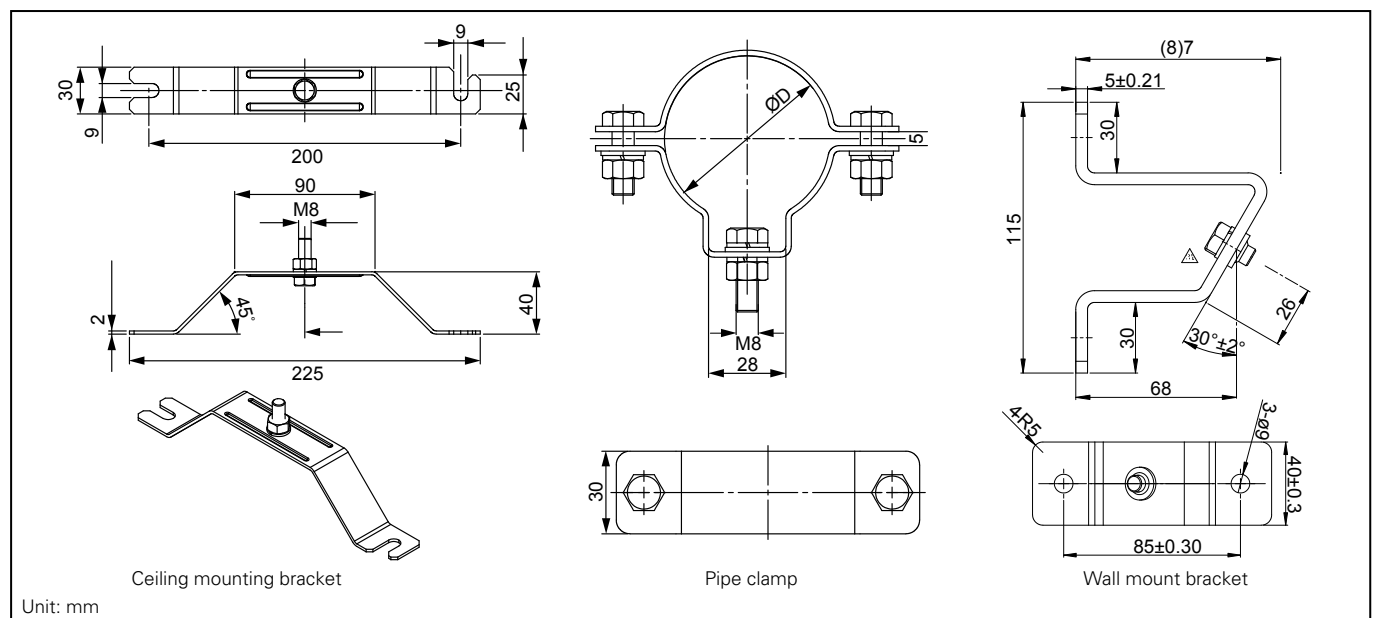


HLL linear LED lighting-hazardous area

Polar curve



Mounting accessories (To be ordered separately)



Pipe mounting

Part No	Description	Qty
CHR11076	Pipe clamp assy D42 316S/S	2
CHR11079	Pipe clamp assy D51 316S/S	2

Wall mounting

Part No	Description	Qty
CHR11073	Wall suspension 316S/S	2

Ceiling mounting

Part No	Description	Qty
CHR11099	Ceiling mounting BKT 316S/S	2

LED lighting for hazardous areas
Zone 1, 2, 21 and 22

CROUSE-HINDS
SERIES

HRL Recessed LED Linear fixtures



Safe. Reliable. Efficient.



Powering Business Worldwide

HRL Recessed LED Linear fixtures

Rugged solutions for complex environments.

Eaton's Crouse-Hinds series HRL recessed LED linear fixtures are engineered to provide maintenance-free illumination in the most demanding environments, along with with a competitive payback vs. fluorescent fixtures.

Available in three common sizes, the HRL is certified for use in Zones 1, 21, 2, and 22 hazardous areas, as well as Class I, Division 2 locations. Manufactured in galvanized steel or stainless steel for additional corrosion protection, HRL fixtures combine state-of-the-art LED technology with optimized thermal management to extend service life in extreme environments.

Primary applications:

- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flying's are present
- Where corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants, chemical or pharmaceutical facilities, platforms

Design features:

Enhance safety and productivity

- Instant illumination and restrike
- T6 temperature rating to safely operate in the most hazardous environments

Reliable performance in any environment

- Outstanding water and dust proof performance (IP66)
- B0 & B15 fire rate

Reliable operation and low quality risks

- T6 rating @ 55°C ambient for standard 100-240VAC fixtures
- 108-250VDC input provision for emergency systems, cranes, etc.
- 25% lumen output in emergency operation

Easy installation

- Quick & easy maintenance- Easy access to drivers and wiring
- Easy installation – Recessed mounting with T-Bar.



Available with self-contained emergency battery backup!

Model number	Nominal lumens†	Watts	Efficacy	Equivalent fluorescent
HRL3060	2950	28W	100 Lm/w	2x18W
HRL3012	6000	54W	110 Lm/w	2x36W
HRL6060	6000	54W	110 Lm/w	4x18W

† Lumen values apply to 4000 light colour, 80 CRI fixtures. Lumen output may vary slightly for different models.

Certifications and compliances:

IECEx / ATEX Standards:

- Ex d e mb IIC T6 Gb, Ex tb IIIC T80°C Db

Permissible ambient temperature

- -40°C to 55°C (standard fixture), -25°C to 55°C (emergency model)

Degree of protection accd. to EN 60529

- IP66

Fixture life (IEC 62722):

LED and Control gear

- Lifetime: L70: 55kh @ 55°C
90kh @ 25°C

LED system:

- Light colour: 4000K

- CRI: 80

Consult factory for other color options

Standard materials:

- Enclosure - steel with white paint finish; stainless steel
- Lens - Translucent PC
- External hardware - Stainless steel

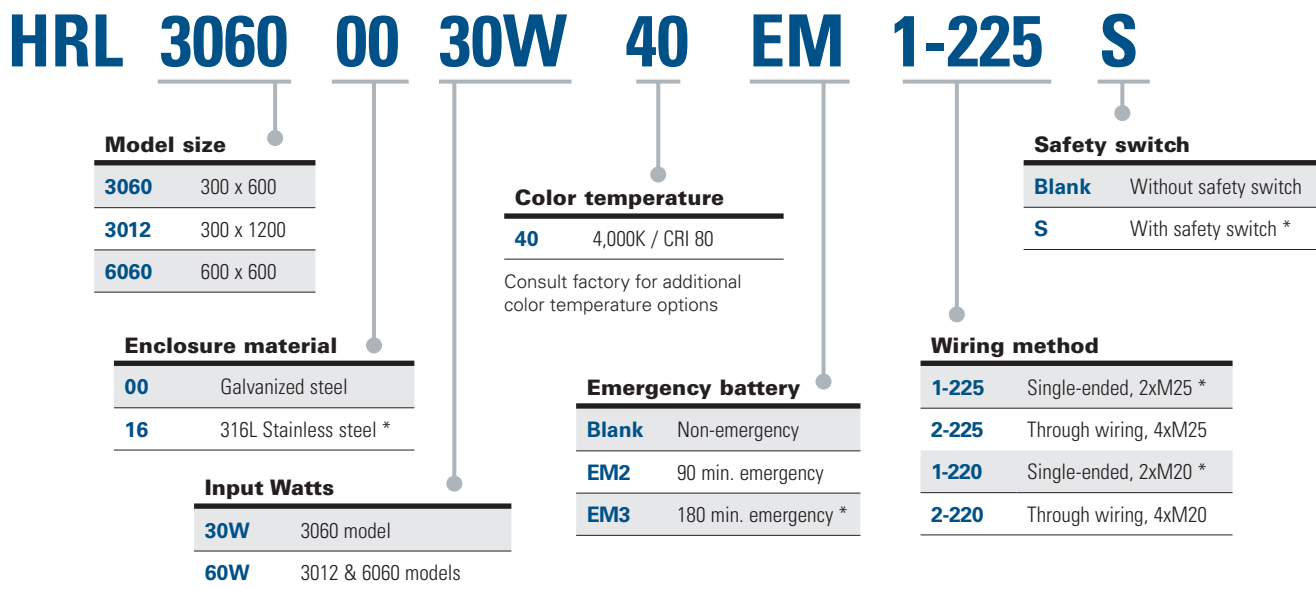
Electrical ratings:

Model	HRL3060	HRL3012	HRL6060	HRL3060 EM	HRL3012 EM	HRL6060 EM
Voltage, VAC	110~240 VAC, 50/60HZ					
Voltage, VDC	108V~250VDC					
Power consumption	28W	54W	54W	29W	60W	60W
Inrush current peak	15A	15A	15A	15A	15A	15A
Inrush current time	0.2ms	0.2ms	0.2ms	0.2ms	0.2ms	0.2ms
Power factor cos ϕ @ 230 V	0.95	0.95	0.95	0.95	0.95	0.95
Protection class	IP66					
ISurge voltages	4Kv					
THD @230V	< 10%					

Catalog Numbering System

Part number example:

HRL fixture, 300mm x 600mm, 2,200 lumens, galvanized steel, 4000K, Non-emergency unit, single-ended M25 wiring, single row terminal, with safety switch

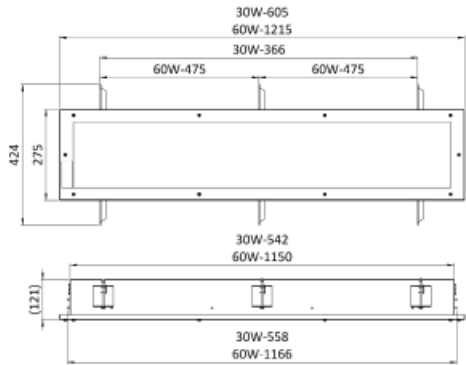


* Available on request

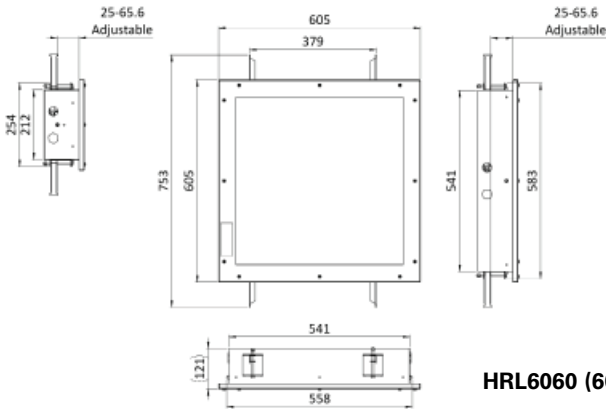
Ordering Information:

HRL Model	Part Number	Power	Lumen	CCT	Gland	Through Wiring	Battery	Duration	Light Output in Emergency
600 x 600 fixture									
HRL/6060/00/60W/40/2-220	CCL1714887	54W	6000lm	4000K	M20	Yes	No	--	--
HRL/6060/00/60W/40/EM2/2-220	CCL1714951	60W	6000lm	4000K	M20	Yes	Yes	1,5h	25%
300 x 600 fixture									
HRL/3060/00/30W/40/2-220	CCL1714057	28W	2950lm	4000K	M20	Yes	No	--	--
HRL/3060/00/30W/40/EM2/2-220	CCL1714121	29W	2950lm	4000K	M20	Yes	Yes	1,5h	25%
300 x 1200 fixture									
HRL/3012/00/60W/40/2-220	CCL1714441	54W	6000lm	4000K	M20	Yes	No	--	--
HRL/3012/00/60W/40/EM2/2-220	CCL1714505	60W	6000lm	4000K	M20	Yes	Yes	1,5h	25%

Dimensions & weights:



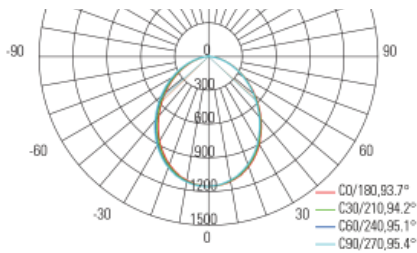
HRL3060 (30W) and HRL3012 (60W)



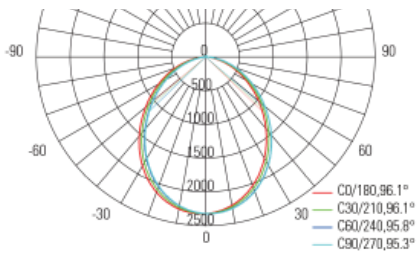
HRL6060 (60W)

Model number	Weight (kg)
HRL3060	8.4 kg
HRL3012	15.0 kg
HRL6060	15.5 kg

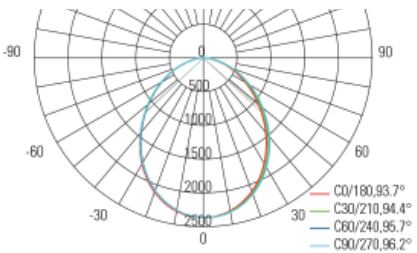
Polar curves:



HRL3060



HRL3012



HRL6060

For more information:

If further assistance is required, please contact an authorized Eaton Distributor, Sales Office, or Customer Service Department.

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nHLL LED metallic linear light fitting
for harsh & hazardous areas



nHLL-2-3L/-4-5L/-4-8L / nHLL-2-3L-EM1 / nHLL-4-5L-EM1 linear light fittings

(Zone 2, 21 and 22)



A robust solution for lighting applications in hazardous areas

Eaton's Crouse-Hinds series nHLL linear LED light fitting is constructed with an aluminium housing and high-impact resistant polycarbonate cover, providing extreme durability and reliability in Zone 2, 21 and 22 hazardous areas.

The use of high-quality LED chips, coupled with our extensive experience in thermal management of electrical components in hazardous areas, ensures long service life of the nHLL series. The extended temperature range of -40 °C to +55 °C allows these luminaires to be used in a wide range of ambient conditions where an explosive atmosphere is to be expected.

With its long service life, low maintenance requirements and low energy consumption, the nHLL provides superior performance with a competitive payback versus traditional fluorescent fixtures. The luminaire series is also available as a single-battery emergency light fitting nHLL-EM for ambient temperatures from -25 °C to +55 °C.

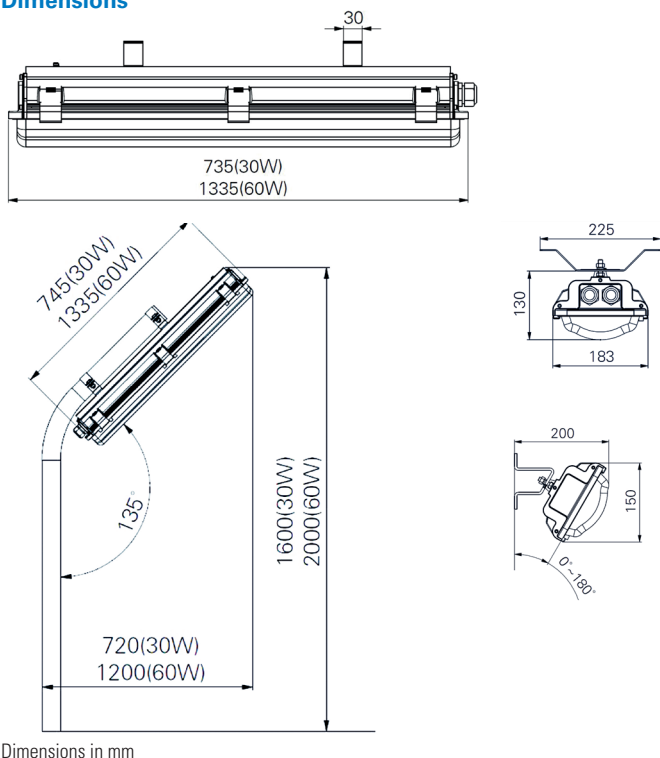
Primary Applications

Designed for use in outdoor and indoor hazardous areas where moisture or corrosion may be a problem, such as offshore oil platforms, pharmaceutical and chemical plants, oil refineries and industrial locations

Design Features

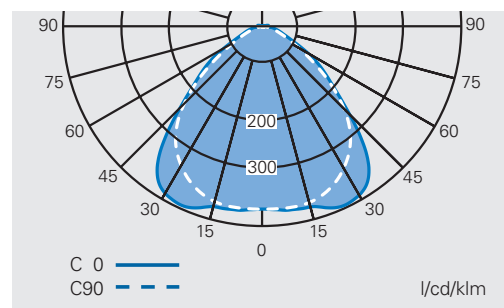
- Polycarbonate, 4J impact resistant lens
- Copper free aluminum housing for excellent corrosion resistance and heat transfer properties
- IP66 rating
- Suitable for Zone 2, 21 and 22 hazardous areas
- Highest temperature class T6
- Ex-e technology for easy maintenance
- Operating ambient temperature:
-40 °C (nHLL-EM: -25 °C) up to +55 °C

Dimensions

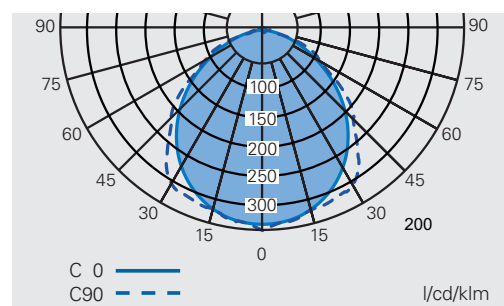


Polar curve

nHLL-2/nHLL-2-EM



nHLL-4/nHLL4_EM



Technical data

nHLL linear LED



Certifications and compliances

	nHLL-2-C2-3L	nHLL-4-C2-5L/8L
EC-Type Examination Certificate	SEV 18 ATEX 0171X	SEV 18 ATEX 0171X
IECEX Certificate of Conformity	IECEX NEP 18.0003X	IECEX NEP 18.0003X
Marking accd. to 2014/34/EU	⚡ II 3 G Ex db ec ib mb IIC T5/T6 Gc ⚡ II 2 D Ex tb IIIC T80°C Db	⚡ II 3 G Ex db ec ib mb IIC T5/T6 Gc ⚡ II 2 D Ex tb IIIC T80°C Db
Marking accd. to IECEx	Ex db ec IIC T5/T6 Gc	Ex ec ib mb IIC T5/T6 Gc Ex tb IIIC T80 °C Db
Permissible ambient temperature	-40 °C up to +55 °C	-40 °C up to +55 °C
Degree of protection accd. to EN 60529	IP66	IP66

LED System

Life expectancy LED module	L70 = 110,000 h at ta=25°C	L70 = 110,000 h at ta=25°C
CRI	> 70	> 70
Rated luminous flux of the luminaire (typical, ± 10 %)	3000 lm	5000 lm / 8000lm
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
Lamp/illuminant	40 W	60 W / 70 W
Light colour	5700 K	5700 K

Electrical Ratings

Rated voltage	100 V - 240 V AC 108 V - 250 V DC	100 V - 240 V AC 108 V - 250 V DC
Power consumption	40 W	60 W / 70 W
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.9	≥ 0.9
Circuit	EVG	EVG
Protection class	I	I
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal

Fixture specifications

Dimensions (L x W x H)	735 x 183 x 130 mm	1335 x 183 x 130 mm
Weight	5 kg	10 kg
Enclosure material	Copper-free Aluminium	Copper-free Aluminium
Enclosure colour	Natural Aluminium / grey	Natural Aluminium / grey
Protective cover / protective bowl	Polycarbonate	Polycarbonate
Degree of protection accd. to EN 60529	IP66	IP66
Cable glands / gland plates / enclosure drilling	M25 x 1.5 thread ²⁾	M25 x 1.5 thread ²⁾

¹⁾ Please ask our sales representatives for the special order number

²⁾ With dustcover if entry/thread is not closed

Delivery without fixing material and cable glands

Mounting accessories see Main catalogue Part 1 Capt. 2.16.

Cable glands see Main catalogue Part 2 Capt. 2.3



Certifications and compliances nHLL-2-C2-3L-EM1

EC-Type Examination Certificate	SEV 18 ATEX 0171X
IECEx Certificate of Conformity	IECEx NEP 18.0003X
Marking accd. to 2014/34/EU	Ex II 3 G Ex ec ib mb IIC T5/T6 Gc Ex II 2 D Ex tb IIIC T80°C Db
Marking accd. to IECEx	Ex ec ib mb IIC T5/T6 Gc Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C
Degree of protection accd. to EN 60529	IP66

nHLL-4-C2-5L-EM1

LED System

Life expectancy LED module	L70 = 110,000 h at ta=25°C	L70 = 110,000 h at ta=25°C
CRI	> 70	> 70
Rated luminous flux of the luminaire (typical, ± 10 %)	3000 lm	5000 lm
Luminous flux in emergency operation 25%	700 lm	1425 lm
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
Lamp/illuminant	40 W	60 W
Light colour	5700 K	5700 K

Electrical Ratings

Rated voltage	100 V - 240 V AC 108 V - 250 V DC	100 V - 240 V AC 108 V - 250 V DC
Power consumption	40 W	60 W
Frequency	50 - 60 Hz	50 - 60 Hz
Power factor cos φ	≥ 0.9	≥ 0.9
Circuit	EVG	EVG
Battery type	Ni-Cd 3 Ah	Ni-Cd 6 Ah
Rated emergency lighting duration	1,5 h	1,5 h
Protection class	I	I
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm ² per terminal

Fixture specifications

Dimensions (L x W x H)	735 x 183 x 130 mm	1335 x 183 x 130 mm
Weight	5 kg	10 kg
Enclosure material	Copper-free Aluminium	Copper-free Aluminium
Enclosure colour	Natural Aluminium / grey	Natural Aluminium / grey
Protective cover / protective bowl	Polycarbonate	Polycarbonate
Degree of protection accd. to EN 60529	IP66	IP66
Cable glands / gland plates / enclosure drilling	M25 x 1.5 thread ²⁾	M25 x 1.5 thread ²⁾

¹⁾ Please ask our sales representatives for the special order number

²⁾ With dustcover if entry/thread is not closed

Delivery without fixing material and cable glands

Mounting accessories see Main catalogue Part 1 Capt. 2.16.

Cable glands see Main catalogue Part 2 Capt. 2.3

Ordering details

nHLL linear LED



Ordering details

nHLL-2-C2-3L

nHLL-4-C2-5L/8I

Type	Through wiring		Cable glands/threads	Order-No.
	single sided	twin sided		
nHLL				
nHLL-2-C2-3L-1/6-225	X		2 x M25	CCL1653760A
nHLL-2-C2-3L-2/6-225		X	2-2 x M25	CCL1653768A
nHLL-4-C2-5L-1/6-225	X		2 x M25	CCL1653920A
nHLL-4-C2-5L-2/6-225		X	2-2 x M25	CCL1653928A
nHLL-4-C2-8L-1/6-225	X		2x M25	CCL1654016A
nHLL-4-C2-8L-2/6-225		X	2-2 x M25	CCL1654024A

Ordering details

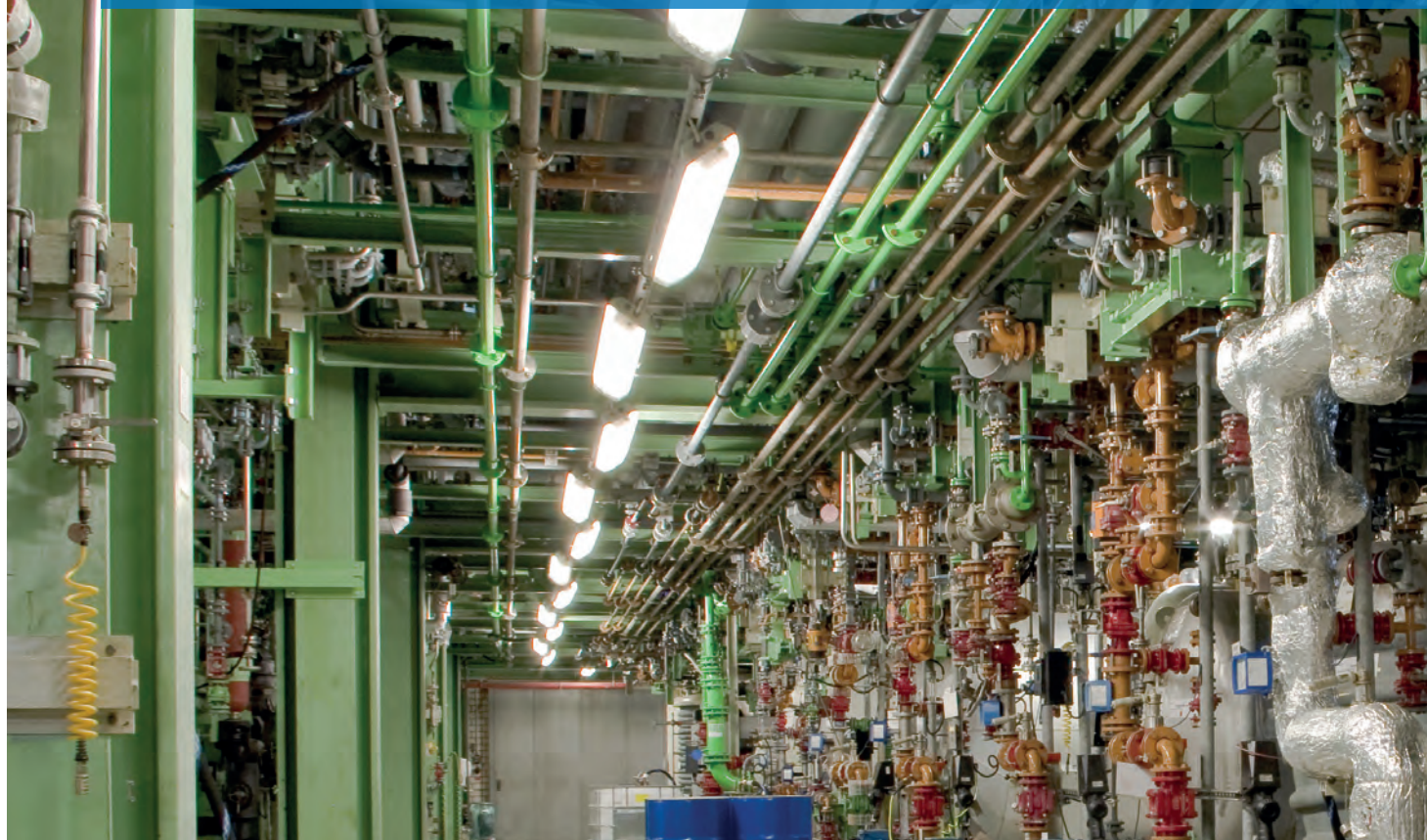
nHLL-2-C2-3L-EM1

nHLL-4-C2-5L-EM1

Type	Through wiring		Cable glands/threads	Order-No.
	single sided	twin sided		
nHLL				
nHLL-2-C2-3L-EM1-1/6-225	X		2 x M25	CCL1653776A
nHLL-2-C2-3L-EM1-2/6-225		X	2-2 x M25	CCL1653784A
nHLL-4-C2-5L-EM1-1/6-225	X		2 x M25	CCL1653936A
nHLL-4-C2-5L-EM1-2/6-225		X	2-2 x M25	CCL1653944A

Explosion protected linear light fittings

CROUSE-HINDS
SERIES



nllk15/nllk15 M/nLLK 15 V-CG-S/nllk15 DALI/nllk15 N
Ex-Linear LED Light Fittings for Zone 2/22



EATON

Powering Business Worldwide

nLLK 15 / nLLM 15 / V-CG-S / DALI / N Ex-Linear LED Light Fittings

Linear LED light fittings (Zone 2 and 22)

The efficient LED solution for your explosion protected lighting engineering

The series of light fittings nLLK 15 LED for Aura UltiLED (Pro) long life LED tubes combines latest lighting engineering with the requirements of harsh and hazardous environments.

This luminaire series is available both as surface-mounted luminaire (nLLK) and as pole-mounted luminaire (nLLM) in various sizes.

The explosion protected luminaires are approved for use in gas- and dust-Ex-areas fulfilling the requirements of the ATEX directive 2014/34/EU.

They are designed and tested according to the latest standards for Ex-equipment for use in Zone 2 gas Ex-areas and Zone 22 of dust Ex-areas.

The nLLK 15 LED luminaires are helping to increase your safety and save energy. The clear energy saving and the higher quality of lighting are made by use of Aura UltiLED (Pro) long life LED tubes in combination with a special designed electronic driver that will sustainably reduce your cost of operations.

A reliable decentralized emergency lighting

The luminaires with a self-contained battery system provide a decentralised solution for the emergency lighting, independent of central systems. In large plants in particular, these luminaires can offer significant cost benefits. The battery is located below the reflector flap within the 1/6 version. A separate battery enclosure is used within the version 2/6. The emergency light operating time is 1.5 or 3 hours.

Central controlled emergency lighting systems with V-CG-S

The V-CG-S light fittings can be connected to a CEAG emergency lighting installation with monitoring system.

This means, that the nLLK 15 LED V-CG-S can be integrated as a system light fitting into the practical monitoring system of CEAG group or central battery installations.

Special feature of the nLLK 15 LED V-CG-S: 100 % light output in emergency mode; both LED tubes are on!

Easy and economically to install

The standard single-sided through-wiring architecture in conjunction with the generously large terminal compartment offers a cost efficient installation. Double-sided lock with latch points allows the protective bow to be hingeable on both sides meaning the fitting can be mounted without having to pay attention to which side is the correct side.

DALI light control

The nLLK 15 LED DALI can be individually controlled and dimmed. This light fittings have an integrated DALI interface for the connection of a 2-wire control line.

Options

The series of light fittings nLLK 15 LED optionally is also available with integrated light switch. This switch automatically ensures the all-pole disconnection from mains of the open light fitting.

We also offer special LED tubes, which are splinter-protected by plastic and therefore ideal for use in the food industry (on request) and protective covers with green light filter (on request).

Features

- Replaceable driver and light source
- Self-contained battery version available
- Connection to CEAG emergency light monitoring systems available (V-CG-S)
- Light controlling via DALI interface as option (DALI)
- Cost efficient installation due to single sided through wiring
- Easy maintenance by double sided safety lock
- High lumen output
- High degree of protection IP 66
- Available with safety switch on request



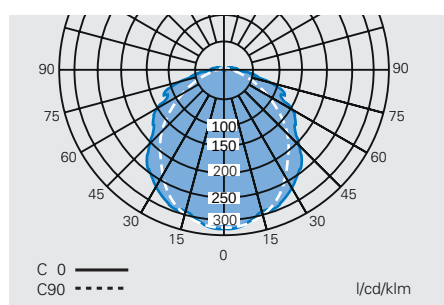
Ordering details LED tubes



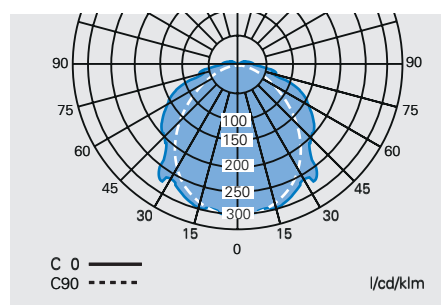
Type	Application	Luminous flux	Light colour / CR	Length	OU	Order No. *)
Aura UltiLED Long Life (G4) 840 8 W	nLLK 15 LED 600	1,100 lm	4,000 K / R _a 80	600 mm	10	2 2475 902 002
Aura UltiLED Long Life (G4) 840 17 W	nLLK 15 LED 1200	2,220 lm	4,000 K / R _a 80	1,200 mm	10	2 2475 902 004
Aura UltiLED Long Life (G4) 840 23 W	nLLK 15 LED 1500	3,000 lm	4,000 K / R _a 80	1,500 mm	10	2 2475 902 006
Aura UltiLED Pro Long Life (G3) 840 26 W	nLLK 15 LED 1200	3,800 lm	4,000 K / R _a 80	1,200 mm	10	2 2475 902 102
Aura UltiLED Pro Long Life (G3) 850 26 W	nLLK 15 LED 1200	3,950 lm	5,000 K / R _a 80	1,200 mm	10	2 2475 902 103
Aura UltiLED Pro Long Life (G3) 840 32 W	nLLK 15 LED 1500	4,750 lm	4,000 K / R _a 80	1,500 mm	10	2 2475 902 105
Aura UltiLED Pro Long Life (G3) 850 32 W	nLLK 15 LED 1500	4,900 lm	5,000 K / R _a 80	1,500 mm	10	2 2475 902 106

*) Order number for one lamp; minimum order quantity 10

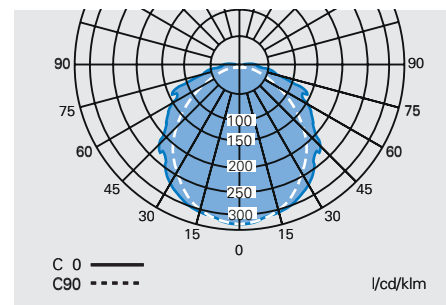
Polar curve 2x8 W nLLK/M 15 LED 600 / DALI nLLK 15 LED V-CG-S 600



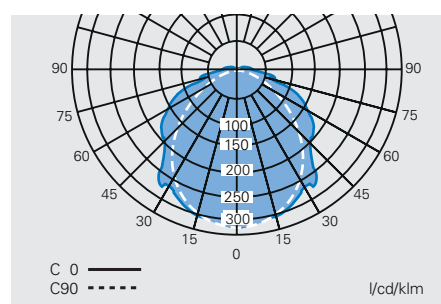
Polar curve 2x17 W nLLK/M 15 LED 1200 / DALI nLLK 15 LED V-CG-S 1200 Pro



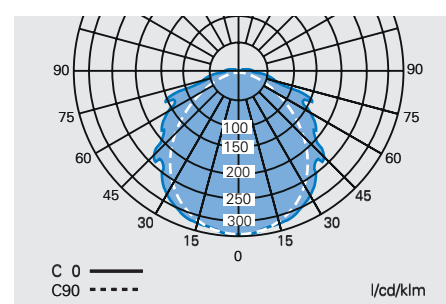
Polar curve 2x32 W Pro nLLK 15 LED 1500 / DALI nLLK 15 LED V-CG-S 1500



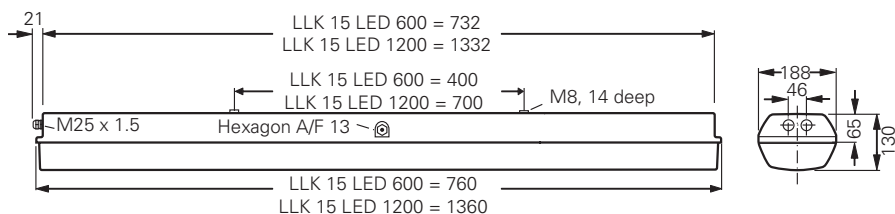
Polar curve 2x26 W nLLK/M 15 LED 1200 Pro nLLK 15 LED V-CG-S 1200 Pro



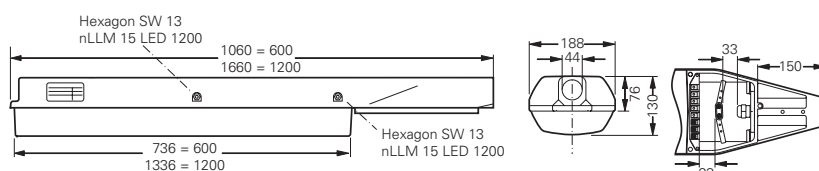
Polar curve 2x23 W Pro nLLK 15 LED 1500 / DALI nLLK 15 LED V-CG-S 1500



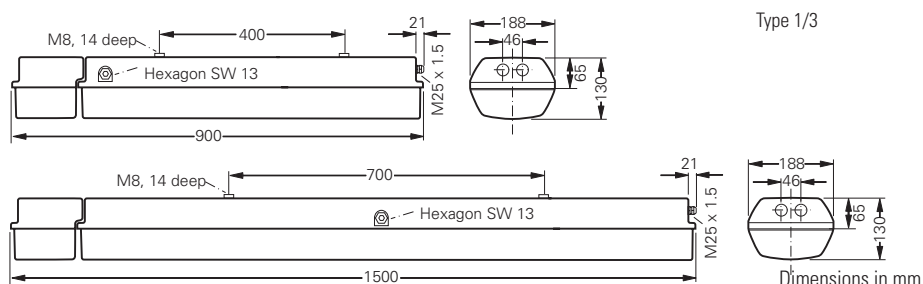
Dimension drawing nLLK 15...



nLLM 15...



nLLMK15... N



Ordering details

nLLK 15 LED / nLLK 15 LED DALI / nLLK 15 V-CG-S LED

Ordering details

Type	Content	Terminals	Through wiring		Cable gland /	Threated	Blanking	Order No.
			single-ended	twin-ended	thread	plug	plug	
	nLLK 15 LED 600							
	nLLK 15 LED 600 (2 x 8 W)	1/6-1K	1 x 6	x	—	1 x M25, Plastic	1 x M 25	1 3475 208 001
	nLLK 15 LED 600 (2 x 8 W)	2/6-2K	2 x 6	—	x	2 x M25, Plastic	2 x M25 1	1 3475 208 011
	nLLK 15 LED 600 (2 x 8 W)	1/6-1M ¹⁾	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3475 208 021
	nLLK 15 LED 600 (2 x 8 W)	2/6-2M ¹⁾	2 x 6	—	x	4 x M20, Metal thread	2 x M20	1 3475 208 031
	nLLK 15 LED 1200							
	nLLK 15 LED 1200 (2 x 17 W / 26 W)	1/6-1K	1 x 6	x	—	1 x M25, Plastic	1 x M 25	1 3475 217 001
	nLLK 15 LED 1200 (2 x 17 W / 26 W)	2/6-2K	2 x 6	—	x	2 x M25, Plastic	2 x M25 1	1 3475 217 011
	nLLK 15 LED 1200 (2 x 17 W / 26 W)	1/6-1M ¹⁾	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3475 217 021
	nLLK 15 LED 1200 (2 x 17 W / 26 W)	2/6-2M ¹⁾	2 x 6	—	x	4 x M20, Metal thread	2 x M20	1 3475 217 031
	nLLK 15 LED 1500							
	nLLK 15 LED 1500 (2 x 23 W / 32 W)	1/6-1K	1 x 6	x	—	1 x M25, Plastic	1 x M 25	1 3475 223 001
	nLLK 15 LED 1500 (2 x 23 W / 32 W)	2/6-2K	2 x 6	—	x	2 x M25, Plastic	2 x M25 1	1 3475 223 011
	nLLK 15 LED 1500 (2 x 23 W / 32 W)	1/6-1M ¹⁾	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3475 223 021
	nLLK 15 LED 1500 (2 x 23 W / 32 W)	2/6-2M ¹⁾	2 x 6	—	x	4 x M20, Metal thread	2 x M20	1 3475 223 031
	nLLK 15 LED 1200 V-CG-S							
	nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	1/6-1K	1 x 6	x	—	1 x M25, Plastic	1 x M 25	1 3475 217 101
	nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	2/6-2K	2 x 6	—	x	2 x M25, Plastic	2 x M25 1	1 3475 217 111
	nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	1/6-1M ¹⁾	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3475 217 121
	nLLK 15 LED V-CG-S 1200 (2 x 17 W / 26 W)	2/6-2M ¹⁾	2 x 6	—	x	4 x M20, Metal thread	2 x M20	1 3475 217 131
  	nLLK 15 LED 600/1200/1500 DALI							
	nLLK 15 LED 600 DALI (2 x 8 W)	2/5-25K	2 x 6	x	—	2 x M25, Plastic	2 x M25 1	1 3475 208 211
	nLLK 15 LED 1200 DALI (2 x 17 W / 26 W)	2/5-25K	2 x 6	—	x	2 x M25, Plastic	2 x M25 1	1 3475 217 211
	nLLK 15 LED 1500 DALI (2 x 23 W / 32 W)	2/5-25K	2 x 6	x	—	2 x M25, Plastic	2 x M25 1	1 3475 223 211

Ordering details

Type	Content	Emergency lighting duration	Terminals	through wiring single-ended twin-ended	Cable gland / thread	Threated plug	Blanking plug	Order No.
nLLK 15 LED 600 N								
nLLK 15 LED 600 N 3,0 h (2 x 8 W)	1/6-1K	3 h	1 x 6	x	—	1 x M25, Plastic	1 x M25	1 3480 208 003
nLLK 15 LED 600 N 1,5 h (2 x 8 W)	1/6-1K	1,5 h	1 x 6	x	—	1 x M25, Plastic	1 x M25	1 3480 208 001
nLLK 15 LED 600 N 3,0 h (2 x 8 W)	2/6-2K	3 h	2 x 6	—	x	2 x M25, Plastic	2 x M25	1 3481 208 013
nLLK 15 LED 600 N 1,5 h (2 x 8 W)	2/6-2K	1,5 h	2 x 6	—	x	2 x M25, Plastic	2 x M25	1 3481 208 011
nLLK 15 LED 600 N 3,0 h (2 x 8 W)	1/6-1M ¹⁾	3 h	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3480 208 004
nLLK 15 LED 600 N 1,5 h (2 x 8 W)	1/6-1M ¹⁾	1,5 h	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3480 208 002
nLLK 15 LED 600 N 3,0 h (2 x 8 W)	2/6-2M ¹⁾	3 h	2 x 6	—	x	4 x M20, Metal thread	2 x M20	1 3481 208 014
nLLK 15 LED 600 N 1,5 h (2 x 8 W)	2/6-2M ¹⁾	1,5 h	2 x 6	—	x	4 x M20, Metal thread	2 x M20	1 3481 208 012
nLLK 15 LED 1200 N								
nLLK 15 LED 1200 N 3,0 h (2 x 17 W / 26 W)	1/6-1K	3 h	1 x 6	x	—	1 x M25, Plastic	1 x M25	1 3480 217 003
nLLK 15 LED 1200 N 1,5 h (2 x 17 W / 26 W)	1/6-1K	1,5 h	1 x 6	x	—	1 x M25, Plastic	1 x M25	1 3480 217 001
nLLK 15 LED 1200 N 3,0 h (2 x 17 W / 26 W)	1/6-1M ¹⁾	3 h	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3480 217 004
nLLK 15 LED 1200 N 1,5 h (2 x 17 W / 26 W)	1/6-1M ¹⁾	1,5 h	1 x 6	x	—	2 x M20, Metal thread	1 x M20	1 3480 217 002
nLLM 15 LED 600/1200								
nLLM 15 LED 600 (2 x 8 W)	1/3-K		1 x 3	—	—	1 x M25, Plastic		1 3475 217 401
nLLK 15 LED 1200 (2 x 17 W / 28 W)	1/3-K		1 x 3	—	—	1 x M25, Plastic		1 3475 208 401

¹⁾ with metal thread, without cable gland / Metal cable glands see catalogue part 2: 2.3.12 ff

Scope of delivery without lamp and fixing accessories. Please order LED tubes separately.



Technical data

	nLLK/nLLM 15 LED 600
EC-Declaration of conformity	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU	II 3 G Ex ec IIC T4 Gc / II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +55 °C
Lifetime electronic driver	>160.000 h @ 25 °C / >100.000 h @ 55 °C
Lifetime LED tubes	L80/B10 >58.000 h @ 25 °C
IK-class according to EN 50102	IK 10 Δ 20 J
Rated voltage	220 - 240 V AC / DC
Rated power consumption	0.088 A
Frequency	18.2 W
Power factor cos φ	0/50 - 60 Hz
Circuit	≥ 0.90
Protection class	Electronic driver
Lamp / Illuminant	I
Light output ratio	2 x Aura UltiLED long life 8 W
Rated luminous flux of the luminaire	2,100 lm ¹⁾
Light output in emergency mode	94.9 %
Lamp cap	G5 accord. IEC 60061-1
Dimensions (L x W x H)	760 x 188 x 130 mm (nLLK) / 736 x 188 x 130 (nLLM)
Connecting terminals	L, L1, L2, L3, N, PE screw terminals max 6 mm ² single wire
Enclosure colour	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester
Weight	3.6 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread ²⁾
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

¹⁾ please order the lamps separately²⁾ with dustcover if entry/thread is not closed



Technical data

	nLLK 15 LED 1200 / nLLK 15 LED 1200 DALI	nLLK 15 LED V-CG-S 1200
EC-Declaration of conformity	CCH 15 ATEX 1044	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU	II 3 G Ex ec IIC T4 Gc II 3 D Ex tc IIIC T80 °C Dc	II 3 G Ex ec mb ib IIC T4 Gc II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +45 °C	-25 °C up to +45 °C
Lifetime electronic driver	>100,000 h @ 25 °C	>100,000 h @ 25 °C
Lifetime LED tubes	L80/B10 >58,000 h @ 25 °C	L80/B10 >58,000 h @ 25 °C
IK-class according to EN 50102	IK 10 $\pm$ 20 J	IK 10 $\pm$ 20 J
Rated voltage	220 - 240 V AC / DC	220 - 240 V AC / DC
Rated current	0.176 A / 0.264 A (Pro)	0.188 A / 0.276 A (Pro)
Rated power consumption	36.5 W / 54.5 W (Pro)	39 W / 57 W (Pro)
Frequency	0/50 - 60 Hz	0/50 - 60 Hz
Power factor cos φ	≥ 0.90	≥ 0.90
Circuit	Electronic driver	Electronic driver
Protection class	I	I
Lamp / Illuminant	2 x Aura UltiLED long life 17 W or 2 x Aura UltiLED Pro long life 26 W ¹⁾	2 x Aura UltiLED long life 17 W or 2 x Aura UltiLED Pro long life 26 W ¹⁾
Light output ratio	94,9 %	94,9 %
Rated luminous flux of the luminaire	4.200 lm / 7.200 lm (Pro) ¹⁾	4.200 lm / 7.200 lm (Pro) ¹⁾
Light output in emergency mode	-	100 % both tubes
Lamp cap	G5 accord. IEC 60061-1	G5 accord. IEC 60061-1
Dimensions (L x W x H)	1360 x 188 x 130 mm (nLLK) / 1360 x 188 x 130 (nLLM)	1360 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm ² single wire	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm ² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	5.8 kg	6.2 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread ²⁾	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread ²⁾
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

¹⁾ please order the lamps separately

²⁾ with dustcover if entry/thread is not closed



Technical data

	nLLK 15 LED 1500 / nLLK 15 LED 1500 DALI
EC-Declaration of conformity	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU	II 3 G Ex ec IIC T4 Gc II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +45 °C
Lifetime electronic driver	>100,000 h @ 25 °C
Lifetime LED tubes	L80/B10 >58,000 h @ 25 °C
IK-class according to EN 50102	IK 10 Δ 20 J
Rated voltage	220 - 240 V AC / DC
Rated current	0.237 A / 0.323 A (Pro)
Rated power consumption	49 W / 67 W (Pro)
Frequency	0/50 - 60 Hz
Power factor cos ϕ	$\geq 0,90$
Circuit	Elektronic driver
Protection class	I
Lamp / Illuminant	2 x Aura UltiLED long life 23 W or 2 x Aura UltiLED Pro long life 32 W
Light output ratio	94,9 %
Rated luminous flux of the luminaire	5,700 lm / 9,300 lm (Pro) ¹⁾
Light output in emergency mode	---
Lamp cap	G5 accord. IEC 60061-1
Dimensions (L x W x H)	1660 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm ² single wire
Enclosure colour	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester
Weight	7.3 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread ²⁾
Degree of protection accd. to EN 60529	IP66
Protective cover / protective bowl	Polycarbonate

¹⁾ please order the lamps separately²⁾ with dustcover if entry/thread is not closed



Technical data

	nLLK 15 LED 600 N	nLLK 15 LED 1200 N
EC-Declaration of conformity	CCH 15 ATEX 1044	CCH 15 ATEX 1044
Marking accd. to 2014/34/EU	Ⓢ II 3 G Ex db ec IIC T4 Gc Ⓢ II 3 D Ex tc IIIC T80 °C Dc	Ⓢ II 3 G Ex db ec IIC T4 Gc Ⓢ II 3 D Ex tc IIIC T80 °C Dc
Permissible ambient temperature	-25 °C up to +50°C (2/6) / +55 °C (1/6) (specified data: -5 °C up to +35 °C)	-25 °C up to +40 °C (specified data: -5 °C up to +35 °C)
Lifetime electronic driver	>100,000 h @ 25 °C	>100,000 h @ 25 °C
Lifetime LED tubes	L80/B10 >58,000 h @ 25 °C	L80/B10 >58,000 h @ 25 °C
IK-class according to IEC/EN 62262	IK 10 ± 20 J	IK 10 ± 20 J
Battery	6 V/4 Ah NC-accumulator	6 V/4 Ah NC-accumulator
Rated voltage	220 V- 240 V AC	220 V- 240 V AC
Rated power consumption	22 W	40.5 W
Frequency	0/50 - 60 Hz	0/50 - 60 Hz
Power factor cos φ	≥ 0.90	≥ 0.90
Circuit	Electronic driver	Electronic driver
Protection class	I	I
Lamp / Illuminant	2 x Aura UltiLED long life 8 W ¹⁾	2 x Aura UltiLED long life 17 W ¹⁾
Light output ratio	94,9 %	94,9 %
Rated luminous flux of the luminaire	2.100 lm	4.200 lm
Light output in emergency mode	1030 lm / 600 lm	1050 lm / 620 lm
Rated emergency lighting duration	1.5 h / 3 h	1.5 h / 3 h
Lamp cap	G5 accord. IEC 60061-1	G5 accord. IEC 60061-1
Dimensions (L x W x H)	760 x 188 x 130 mm (1/6 version) 900 x 188 x 130 mm (2/6 version)	1360 x 188 x 130 mm
Connecting terminals	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm ² single wire	L, L1, L2, L3, N, PE screw-type terminals max. 6 mm ² single wire
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	5.4 kg	7.6 kg
Cable glands / gland plates / enclosure drilling	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread ²⁾	Ex e cable glands M 25 x 1.5 (plastic) optional M 20 x 1.5 metal thread ²⁾
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	Polycarbonate	Polycarbonate

¹⁾ please order the lamps separately

²⁾ with dustcover if entry/thread is not closed

CEAG Products
Explosion protected luminaires

CROUSE-HINDS
SERIES



RLF LED A 600 (N) / 1200 (N)

Explosion-protected LED-recessed ceiling luminaire for Zone 1, 2, 21 and 22



EATON

Powering Business Worldwide

Explosion-protected recessed ceiling LED-light fittings in compact metal design

RLF LED A 600, RLF LED A 1200 and self-contained emergency luminaire RLF LED A 600 N, RLF LED A 1200 N (Zone 1, 2, 21, 22)

The explosion-protected lighting concept for recessed ceiling light fittings.

The new Ex recessed-ceiling light fittings RLF ..LED A are especially used for spraying cabinets and paint shops for installation in ceilings where smooth and flush surfaces are important. The glass pane, which is installed with a metal hinge, allows the use of cleaning solvents, if necessary, in order to remove easily spray mist and paintbrushes. Similar requirements are also encountered in the pharmaceutical and chemical industries as well as in technology labs, where simple cleaning and smooth design are essential.

Designed for easy installation

The housing comprises white-painted steel sheet with an optional cover frame for ceiling mounting. In addition, it can also be fixed by means of two M8 drilled holes on the top of the housing. For an external PE-connection two screw terminals up to 6 mm² are available.



The hinged, frameless pane made of 5 mm thick safety glass is fixed with 2 resp. 3 captive screws and has inside hinges. The EPDM sealing ensures the high degree of protection IP65.

Long-term safety

Thanks to its large input voltage range the electronic driver (110- 254 A AC / 220- 250 V DC) can be used internationally. Due to the low self-heating, ambient temperatures up to +60 °C are possible.

Versatile light

Depending on the application, three luminous flux versions are available in efficient LED technology (2500/5000/10000 lm) in various sizes. Through their variety even demanding lighting tasks can be faced. In addition, the light colour 6000K ensures an illumination similar to daylight, which is a high priority, for example, in paint shops.

Easy to install

The double-sided through-wiring in combination with the generous connecting space provides a cost-saving installation.



Using optional mounting brackets the luminaires can be installed adjustable on walls or ceilings

If you need a reliable and decentralised emergency lighting

The self-contained emergency light fitting RLF LED A... N ensures decentralised emergency lighting, independent of central systems. These luminaires offers in particular significant cost advantages, particularly in large-scale installations.

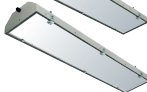
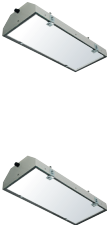
The self-contained emergency light fitting with integrated battery allows an autonomous emergency lighting with 1.5 h or 3 h rated operating time.



Features

- Universal electronic driver for 110 - 254 V AC / 220 - 250 V DC
- Various lumen packages up to 13447 lm in different sizes available
- Suitable for high ambient temperatures up to +60 °C
- Flush installation, especially for spraying cabinets and paint shops with optional mounting bracket
- Toughened safety glass
- With self-contained battery unit (RLF 250 LED...N)
- Suitable for B15 fire resistance ceilings

Ordering details

Type	Content	Luminous flux	Emergency lighting duration	Cable gland/ thread	Screw plugs	Order No.	
	RLF LED A 600						
	RLF LED A 600 3L	2/5-2K	3373 lm	1 x M25, Plastic cable gland	1 x M25	1 2286 111 103	
	RLF LED A 600 3L	2/5-2M ⁽¹⁾	3373 lm	2 x M20, Metal thread	1 x M20	1 2286 111 111	
	RLF LED A 600 7L	2/5-2K	6664 lm	1 x M25, Plastic cable gland	1 x M25	1 2286 141 103	
	RLF LED A 600 7L	2/5-2M ⁽¹⁾	6664 lm	2 x M20, Metal thread	1 x M20	1 2286 141 111	
	RLF LED A 1200						
	RLF LED A 1200 7L	2/5-2K	6742 lm	1 x M25, Plastic cable gland	1 x M25	1 2286 241 103	
	RLF LED A 1200 7L	2/5-2M ⁽¹⁾	6742 lm	2 x M20, Metal thread	1 x M20	1 2286 241 111	
	RLF LED A 1200 13L	2/5-2K	13447 lm	1 x M20, Plastic cable gland	1 x M25	1 2286 271 103	
	RLF LED A 1200 13L	2/5-2M ⁽¹⁾	13447 lm	2 x M20, Metal thread	1 x M20	1 2286 271 111	
	RLF LED A 600 N (self-contained emergency light fitting)						
	RLF LED A 600 N 3L	2/4-2K	3373 lm	1.5 h	1 x M25, plastic cable gland	1 x M25	1 2288 111 103
	RLF LED A 600 N 3L	2/5-2M ⁽¹⁾	3373 lm	1.5 h	2 x M20, Metal thread	1 x M20	1 2288 111 111
	RLF LED A 600 N 3L	2/5-2K	3373 lm	3 h	1 x M25, Plastic cable gland	1 x M25	1 2289 111 103
	RLF LED A 600 N 3L	2/5-2M ⁽¹⁾	3373 lm	3 h	2 x M20, Metal thread	1 x M20	1 2289 111 111
	RLF LED A 600 N 7L	2/5-2K	6664 lm	1.5 h	1 x M25, Plastic cable gland	1 x M25	1 2288 141 103
	RLF LED A 600 N 7L	2/5-2M ⁽¹⁾	6664 lm	1.5 h	2 x M20, Metal thread	1 x M20	1 2288 141 111
	RLF LED A 600 N 7L	2/5-2K	6664 lm	3 h	1 x M25, Plastic cable gland	1 x M25	1 2289 141 103
	RLF LED A 600 N 7L	2/5-2M ⁽¹⁾	6664 lm	3 h	2 x M20, Metal thread	1 x M20	1 2289 141 111
	RLF LED A 1200 N (self-contained emergency light fitting)						
	RLF LED A 1200 N 7L	2/5-2K	6742 lm	1.5 h	1 x M25, Plastic cable gland	1 x M25	1 2288 241 103
	RLF LED A 1200 N 7L	2/5-2M ⁽¹⁾	6742 lm	1.5 h	2 x M20, Metal thread	1 x M20	1 2288 241 111
	RLF LED A 1200 N 7L	2/5-2K	6742 lm	3 h	1 x M25, Plastic cable gland	1 x M25	1 2289 241 103
	RLF LED A 1200 N 7L	2/5-2M ⁽¹⁾	6742 lm	3 h	2 x M20, Metal thread	1 x M20	1 2289 241 111
	RLF LED A 1200 N 10L	2/5-2K	13447 lm	1.5 h	1 x M25, Plastic cable gland	1 x M25	1 2288 271 103
	RLF LED A 1200 N 13L	2/5-2M ⁽¹⁾	13447 lm	1.5 h	2 x M20, Metal thread	1 x M20	1 2288 271 111
	RLF LED A 1200 N 13L	2/5-2K	13447 lm	3 h	1 x M25, Plastic cable gland	1 x M25	1 2289 271 103
	RLF LED A 1200 N 13L	2/5-2M ⁽¹⁾	13447 lm	3 h	2 x M20, Metal thread	1 x M20	1 2289 271 111

Scope of delivery with LED and without fixing accessories
Metal cable glands see catalogue part 2: 2.3.12 ff

Accessories / Polar curve / Dimension drawing

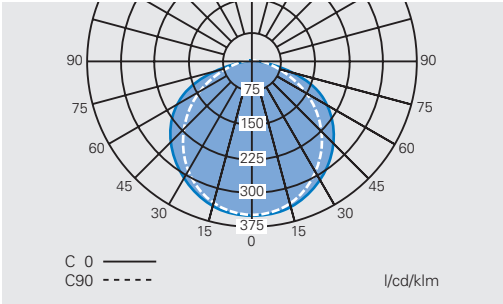
RLF LED A (N)

Accessories

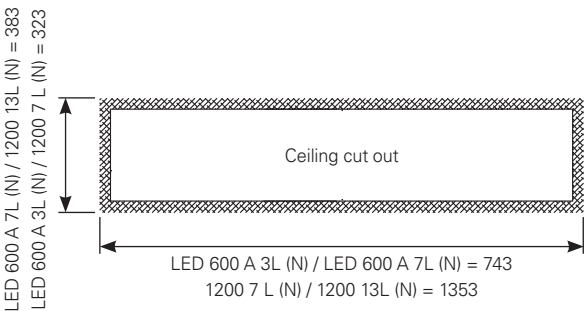
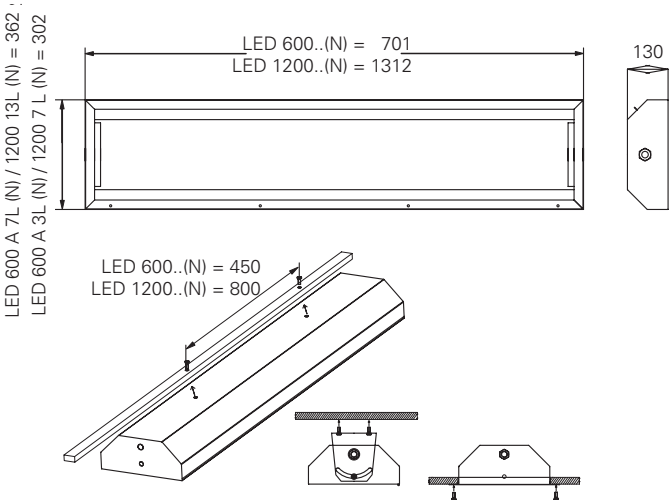


Type	Application	Order No.
Mounting frame for ceiling mounting	for RLF LED A 600 / 600 N 3L	3 2283 000 001
Mounting frame for ceiling mounting	for RLF LED A 600 / 600 N 7L	3 2283 000 002
Mounting frame for ceiling mounting	for RLF LED A 1200 / 1200 N 3L	3 2283 000 003
Mounting frame for ceiling mounting	for RLF LED A 1200 / 1200 N 13L	3 2283 000 004
Set of wall bracket adjustable (2 pcs.)	for RLF LED A....	3 2283 000 007

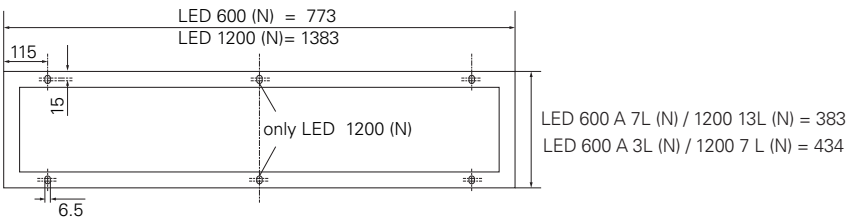
Polar curve RLF... LED A



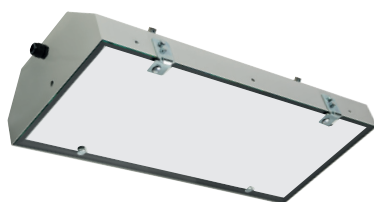
RLF LED A 600 / 1200..(N)



Mounting frame RLF LED A 600 / 1200..(N)



Dimensions in mm



Technical data

	RLF LED A 600 3L / 7L	RLF LED A 1200 7L / 13L
EU-Type Examination Certificate	FTZÚ 17 ATEX 0002X	FTZÚ 17 ATEX 0002X
Marking accd. to 2014/34/EU	II 2 G Ex eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T67°C Db	II 2 G Ex eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T67°C Db
Permissible ambient temperature	-20 °C up to +60 °C	-20 °C up to +55 °C
Rated voltage	110- 254 V AC / 220- 250 V DC	110- 254 V AC / 220- 250 V DC
Rated current	0.13 A / 0.26 A at 230 V	0.24 A / 0.48 A at 230 V
Frequency	50- 60 Hz	50- 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	electronic LED-driver	electronic LED-driver
Protection class	I	I
Lamp / Illuminant	LED module 1 x 25 W / 2 x 25 W	LED module 1 x 50 W / 2 x 50 W
Rated luminous flux of the luminaire	3373 lm (3L) / 6664 lm (7L)	6742 lm (7L) / 13447 lm (13L)
Light colour/ CRI	6000 K / $R_a > 80$ ²⁾	6000 K / $R_a > 80$ ²⁾
Dimensions (L x W x H)	701 x 302 x 130 mm / 701 x 362 x 130 mm	1312 x 302 x 130 mm / 1312 x 362 x 130 mm
Connecting terminals	L1, L2, L3, N, PE; max. 2 x 2.5 mm ² twin-ended through-wiring	L1, L2, L3, N, PE; max. 2 x 2.5 mm ² twin-ended through-wiring
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet ³⁾	painted steel sheet ³⁾
Weight	9.5 kg (3L) / 11.9 kg (7L)	15.6 kg (7L)/ 18.4 kg (13L)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread ¹⁾	Ex-e cable glands M25 x 1.5 (plastic), option: M20 x 1.5 metal thread ¹⁾
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

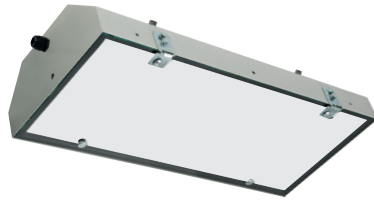
1) with dustcover if entry/thread is not closed

2) 4000 K on request

3) polished stainless steel 304 (1.4301 (Inox) on request

Technical Data

RLF LED 600 N / RLF LED 1200 N



Technical data

	RLF LED 600 N 3L / 7L	RLF LED 1200 N 7L / 13L
EU-Type Examination Certificate	FTZÚ 17 ATEX 0002X	FTZÚ 17 ATEX 0002X
Marking accd. to 2014/34/EU	II 2 G Ex eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T67°C Db	II 2 G Ex eb mb op is IIC T4 Gb II 2 D Ex tb IIIC T67°C Db
Permissible ambient temperature	0 °C up to +40 °C	0 °C up to +35 °C
Rated voltage	110- 254 V AC / 220- 250 V DC	110- 254 V AC / 220- 250 V DC
Rated current	0.14 A / 0.26 A at 230 V	0.25 A / 0.49 A at 230 V
Frequency	50- 60 Hz	50- 60 Hz
Power factor cos φ	≥ 0.95	≥ 0.95
Circuit	electronic LED-driver	electronic LED-driver
Protection class	I	I
Lamp / Illuminant	LED module 1 x 30 W / 2 x 30 W	LED module 1 x 50 W / 2 x 50 W
Rated luminous flux of the luminaire	3373 lm (3L) / 6664 lm (7L)	6742 lm (7L) / 13447 lm (13L)
Light colour/ CRI	6000 K / R _a >80 ²⁾	6000 K / R _a >80 ²⁾
luminous flux in emergency mode	RLF LED A 600 N 1.5h 3L – 515lm RLF LED A 600 N 3.0h 3L – 383lm	RLF LED A 1200 N 1.5h 7L – 829lm RLF LED A 1200 N 3.0h 7L – 447lm
1.5 h, one LED module		
3 h, one LED module	RLF LED A 600 N 1.5h 7L – 746lm RLF LED A 600 N 3.0h 7L – 406lm	RLF LED A 1200 N 1.5h 13L – 829lm RLF LED A 1200 N 3.0h 13L – 455lm
Emergency lighting duration	1.5 h or 3 h	1.5 h or 3 h
Dimensions (L x W x H)	701 x 302 x 130 mm / 701 x 362 x 130 mm	1312 x 302 x 130 mm / 1312 x 362 x 130 mm
Connecting terminals	L, L1,L2, L3, N, PE; max. 2 x 2.5 mm ² twin-ended through-wiring	L, L1,L2, L3, N, PE; max. 2 x 2.5 mm ² twin-ended through-wiring
Enclosure colour	white RAL 9010	white RAL 9010
Enclosure material	painted steel sheet ³⁾	painted steel sheet ³⁾
Weight	11.50 kg 3L (1.5h)/ 12.10 kg 7L (3h) 13.60 kg 7L (1.5h)/ 14.80 kg 13L (3h)	16.40 kg 7L (1.5h)/ 18.40 kg 7L (3h) 18.50 kg 13L (1.5h)/ 19.10 kg 13L (3h)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread ¹⁾	Ex-e cable glands M25 x 1.5 (plastic) , option: M20 x 1.5 metal thread ¹⁾
Degree of protection accd. to EN 60529	IP65	IP65
Protective cover / protective bowl	single-safety glass pane of 5 mm thick	single-safety glass pane of 5 mm thick

1) with dustcover if entry/thread is not closed

2) 4000 K on request

3) polished stainless steel 304 (1.4301 (Inox) on request

Explosion protected linear light luminaire
Zone 1, 2, 21 and 22

CROUSE-HINDS
SERIES

VLL Series

LED linear fixtures for hazardous areas



Safe. Reliable. Efficient.



Powering Business Worldwide

VLL LED GRP linear luminaires

Features & specifications

The VLL product Series LED Luminaires with high-quality LED chips, have extremely long lifespan. Multiple versions of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent luminaires.

Model	Nominal* lumens	Wattage	Efficacy	Equivalent fluorescent
VLL-3L	3100	<25 W	>130~Lm/W	2x18 W
VLL-5L	6400	<50 W	>130~Lm/W	2X36 W
VLL-7L	7400	<58 W	>130~Lm/W	2X54 W

*Lumen values apply to 5700K light color, 70 CRI luminaires. Lumen output may vary slightly for different models.
*Tolerance+/-10%

Application

- Locations where require continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; platforms; loading docks; tunnels



Benefits:

-  **EFFICIENCY**

 - Industry leading lumen efficacy up to 130~lm/w reduces energy consumption and delivers cost savings.
 - Three lumen packages available from 3100 to 7400lm providing a versatile solution for different illumination applications.
-  **SAFETY AND RELIABILITY**

 - Rugged design for extremely harsh environments, IP66 even under vibration.
 - Optional self-contained battery for emergency lighting applications delivers 25% of standard lumen output for 1.5-hours or 3-hours.
-  **EASY INSTALLATION AND MAINTENANCE**

 - Retrofit- friendly with optional sliding rail mounting system, allowing brackets to be easily adjusted to existing mounting holes.
 - Self-monitoring status battery indicator makes easy for maintenance check.
 - Inhibit switch comes as standard for our emergency fitting which is suitable for offshore unmanned platform application.
-  **LATEST POLE MOUNTING**

 - Strengthened reliability with build-in cable gland and no-exposed cables
 - No sideways rotation with strong resistance to heavy winds
 - Externally accessible Ex e chamber for easy termination

LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

VLL-5L vs. 2 x 36 W Fluorescent

40%

REDUCTION IN ENERGY COSTS

66%

LOWER TOTAL COST OF OWNERSHIP

100%

LAMP MAINTENANCE REDUCTION

2

EATON

CROUSE-HINDS SERIES VLL LED GRP LINEAR Luminaires

VLL LED GRP linear luminaires

Standard materials

- Enclosure-Glass Fiber Reinforced Plastic (GRP)
- Diffuser-Polycarbonate (PC)
- Gaskets-Silicone
- Fasteners-All external fasteners stainless steel
- Safety switch as standard

LED system:

- Cold white 5700K
- Optional: 4000K, 5000K
- All series feature field replaceable LED modules
- Fog diffuser with glare protection as standard
- Rated life of 5 years at 55°C provides long term, low-maintenence operation.

Certifications and compliances

- Marking accd.to IECEx (versions with safety switch)
Ex db eb mb IIC T5 Gb
Ex db eb ib mb IIC T5Gb (EM)
Ex tb IIIC T80°C Db
- Marking accd.to ATEX (versions with safety switch)
II2 G Ex db eb mb IIC T5 Gb
II2 G Ex db eb ib mb IIC T5Gb (EM)
II2 G Ex tb IIIC T80°C Db

Technical data

IECEx-certification		IECEx NEP 21.0020X	
EU-type examination certificate		SEV 24ATEX 0708X	
Ambient temp	standard	VLL 3L, 5L, -40 °C ... 55 °C	VLL 7L -40 °C ... 50 °C
	emergency:	VLL 3L, 5L, -25 °C ... 50 °C	VLL 7L -25 °C ... 45 °C
Rated input volt		100 - 240 V AC 50/60 Hz, DC 105 - 250 V	
Power factor		>0.9	
Color Temperature		5700 K as standard 4000 K / 5000 K optional	
CRI		CRI 70 5700 K CRI 80 4000 K / 5000 K	
System watt*		VLL 3L series: <25 W	
		VLL 5L series: <50 W	
		VLL 7L series: <58 W	
Lumen output		VLL 3L series: 3100 lm	
		VLL 5L series: 6400 lm	
		VLL 7L series: 7400 lm	
Material		GRP and PC	
Weight		VLL 3L series Normal and EM: 4.3Kg / 5.8Kg	
		VLL 5L /7L series Normal and EM: 7.5Kg / 9.8Kg	
Terminals		Max 6 mm²	
Entry size		M20 or M25	
Out line dimension		VLL 3L series: 732x178x125 VLL 5L /7L series:1333x178x125	
Backup duration & Lumen percentage		EM1 = 1.5 h, 25% output as standard version	
		EM2 = 3 h, 25% output is available	
IP(IEC60529)		IP66	

*Tolerance+/-5%

CROUSE-HINDS SERIES VLL LED GRP LINEAR Luminaires

EATON

3

VLL LED GRP linear luminaires

Ordering Information standard version

Product Type	Colour Temp ¹⁾	Throughwiring ²⁾			Entry Threaded	Ex e Threaded Plug ³⁾	Part No. ⁴⁾
		Terminals	Single-ended	Twin-ended			
VLL 3L							
VLL-3L-57-1/6-120	5700K	1x6	●	-	2xM20	1	CCL2004125AE
VLL-3L-57-2/6-220		2x6	-	●	4xM20	2	CCL2004129AE
VLL-3L-57-1/6-125		1x6	●	-	2xM25	1	CCL2004127AE
VLL-3L-57-2/6-225		2x6	-	●	4xM25	2	CCL2004131AE
VLL 5L							
VLL-5L-57-1/6-120	5700K	1x6	●	-	2xM20	1	CCL2004173AE
VLL-5L-57-2/6-220		2x6	-	●	4xM20	2	CCL2004177AE
VLL-5L-57-1/6-125		1x6	●	-	2xM25	1	CCL2004175AE
VLL-5L-57-2/6-225		2x6	-	●	4xM25	2	CCL2004179AE
VLL 7L							
VLL-7L-57-1/6-120	5700K	1x6	●	-	2xM20	1	CCL2004221AE
VLL-7L-57-2/6-220		2x6	-	●	4xM20	2	CCL2004225AE
VLL-7L-57-1/6-125		1x6	●	-	2xM25	1	CCL2004223AE
VLL-7L-57-2/6-225		2x6	-	●	4xM20	2	CCL2004227AE

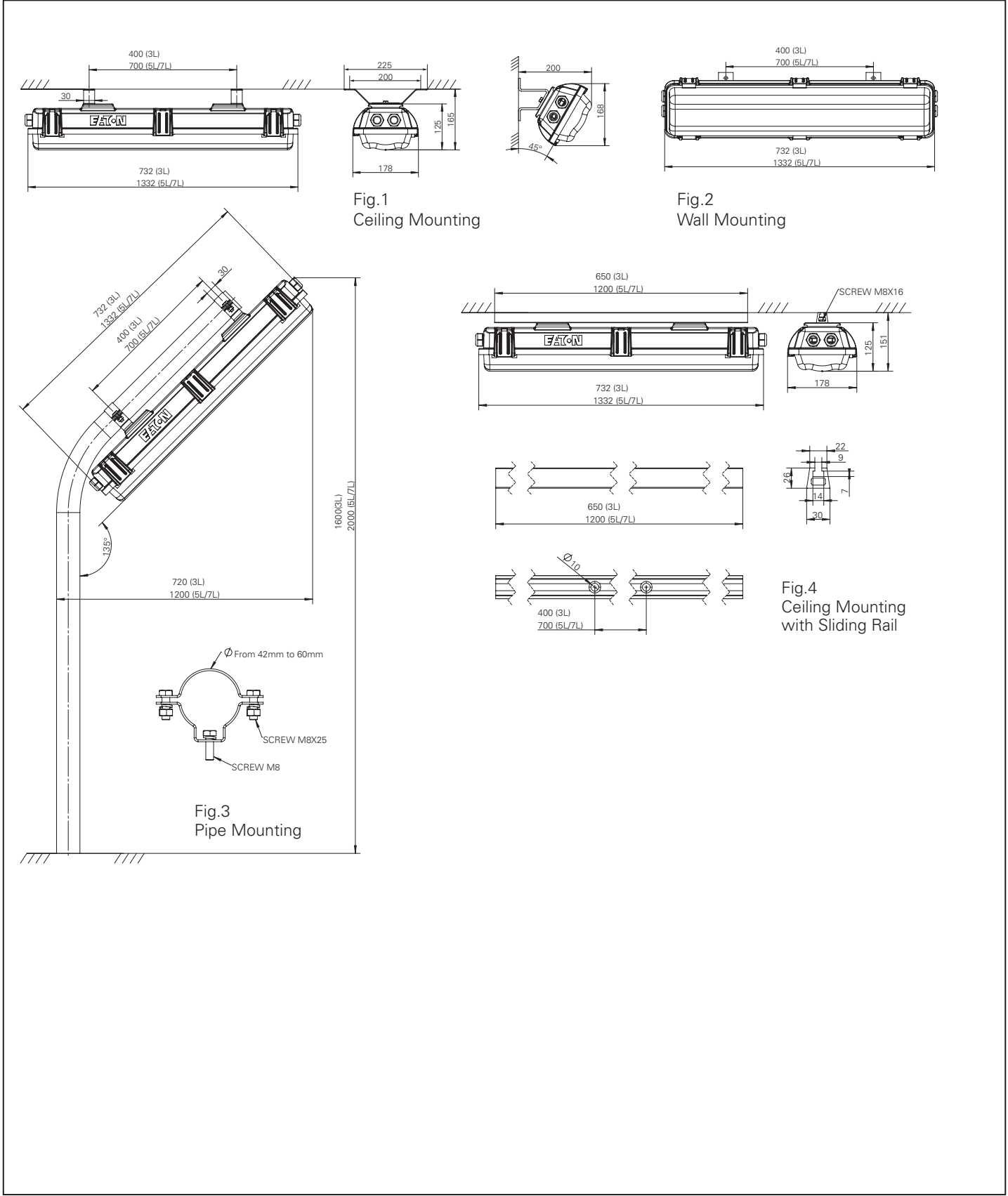
Ordering Information emergency version

Product Type	Colour Temp ¹⁾	Throughwiring ²⁾			Entry Threaded	Ex e Threaded Plug ³⁾	Part No. ⁴⁾
		Terminals	Single-ended	Twin-ended			
VLL 3L Emergency							
VLL-3L-57-EM1-1/6-120	5700K	1x6	●	-	2xM20	1	CCL2004133A
VLL-3L-57-EM1-2/6-220		2x6	-	●	4xM20	2	CCL2004137A
VLL-3L-57-EM1-1/6-125		1x6	●	-	2xM25	1	CCL2004135A
VLL-3L-57-EM1-2/6-220		2x6	-	●	4xM25	2	CCL2004139A
VLL 5L Emergency							
VLL-5L-57-EM1-1/6-120	5700K	1x6	●	-	2xM20	1	CCL2004181A
VLL-5L-57-EM1-2/6-220		2x6	-	●	4xM20	2	CCL2004185A
VLL-5L-57-EM1-1/6-125		1x6	●	-	2xM25	1	CCL2004183A
VLL-5L-57-EM1-2/6-225		2x6	-	●	4xM25	2	CCL2004187A
VLL 7L Emergency							
VLL-7L-57-EM1-1/6-120	5700K	1x6	●	-	2xM20	1	CCL2004229A
VLL-7L-57-EM1-2/6-220		2x6	-	●	4xM20	2	CCL2004233A
VLL-7L-57-EM1-1/6-125		1x6	●	-	2xM25	1	CCL2004231A
VLL-7L-57-EM1-2/6-225		2x6	-	●	4xM25	2	CCL2004235A

¹⁾ Tolerance +/- 10%
²⁾ Through wiring 6 x 2.5 mm²
³⁾ Standard version without cable gland. if need, please order separately
⁴⁾ Contact your local sales representative for special requirements.

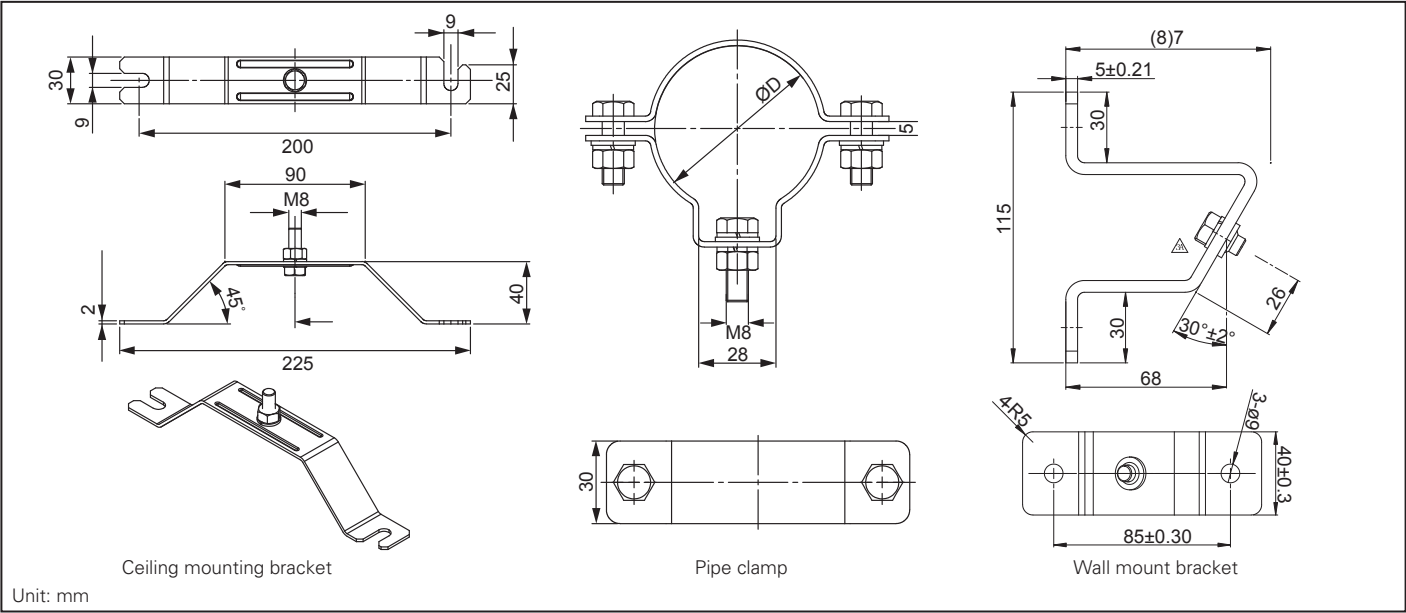
VLL LED GRP linear luminaires

Dimensions (mm)



VLL LED GRP linear luminaires

Mounting accessories (To be ordered separately)



Pipe mounting

Part No	Description	Quantity per luminaire
NOR000005110605	VLL/HLL Pipe clamp assy D42 304S/S	2
NOR000005110600	VLL/HLL Pipe clamp assy D51 304S/S	2

Wall mounting

Part No	Description	Quantity per luminaire
NOR000005110602	VLL/HLL Wall suspension 304S/S	2

Ceiling mounting

Part No	Description	Quantity per luminaire
NOR000005110601	VLL/HLL Ceiling mounting 304S/S	2
CHLMT2372-01	Mounting sliding rail for 3L	1
CHLMT2372-02	Mounting sliding rail for 5L/7L	1

Metallic Cable Glands (Order Separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured,	4.5	8.5
ADE1M202NPN	M20	Marine shipboard, Type P, Tray cable	7.0	12.0
ADE1M203NPN	M20	(armoured)	10.0	16.0



ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
			Min.	Max.	Min.	Max.	Min.	Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard,	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20	Type P; Leadsheathed cable (with addition of earthing washer)	7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3



ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

Polar curve

