PXLED - Power Floodlight Series for Hazardous Areas
Explosion-protected LED floodlight series for Zone 1, 2, 21 and 22

F·T·N

Powering Business Worldwide

Ex-Floodlight PXLED

(Ex-Zone 1, 2, 21 and 22)

Lighting under harsh conditions

The new modular LED floodlight series PXLED is suited for nearly every kind of lighting task in hazardous areas, including applications in On- and Offshore, heavy industrial, chemical, petrochemical, oil and gas, pharmaceuticals, shipyards, dockyards, power generation, paper mills and wastewater treatment indoor and outdoor with potentially explosive areas under harsh conditions like vibrations, dust, moisture or corrosive atmospheres and extreme temperatures. The PXLED comes with a standard U-shaped mounting bracket for ceiling and wall mounting

Replacement of conventional light fittings up to 600 W

With a luminous flux from 5,000 lm up to 32.000 lm this floodlight series can be used to replace nearly every floodlight with conventional light sources with an equivalent power consumption from 70 W up to 600 W.

High efficient LED technology

High efficient power LED module with 110 Lumen/Watt enables up to 70 % energy-cost savings compared to conventional HID lamp.

Safety first

All PXLED multi-module floodlights from size 10L to 30L are equipped with a multichannel LED driver. This driver provides for each LED-module a separate power channel circuit. Even if one circuit fails, all other LED-modules are still working.

Modular design - just use the size you need

Thanks to the modular design of the PXLED series you can exactly choose the lumen output you need. There is no need to over/underdesign your lighting project. Six sizes are available from nominal 5.000 lm to more than 30.000 lm with a stepwide of 5000 lm.
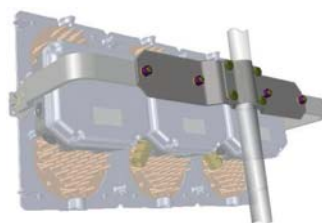
Easy to install

A stainless steel swivel bracket with adjustable setting angle allows an easy alignment of the floodlight. A fixing screw

secures the alignment. The swivel bracket provides up to five Ø13 mm fixing holes for a safe assembly.

Different mounting accessories enable easy and safe mounting whereever required.

Together with two cable gland a large terminal compartment in Ex-e design allows cost saving through-wiring without additional terminal boxes.

The used Ex-e terminals can clamp up to 6 mm² wiring.

Internal and external PE-terminals allows nearly all cabling technique.

Features

- High efficiency: up to 110 lm/W

- Operating temperature -50 °C up to +55 °C

- Suitable for Explosion Group IIC / IIIC environment

- Broad range of light output from 5,000 lm up to 32,000 lm

- Wide and narrow beam pattern (asymmetric beam on request)

- Long lifetime

- Ex-e compartment for driver & terminal for easy installation and maintenance

Designed for long lifetime

High ambient temperatures can drive the LED chip-temperature into a not permissible range. This would reduce the life-span of the LEDs tremendously. Eaton provides an enclosure design with large cooling pipes and a innovated heat reduction design.

Tests done under the worst test conditions have shown that the LED-chip temperature is always below critical values. The designed life span for the LED (L80) is more than 60,000 h even at +55°C ambient temperature

The Eaton-LED driver is especially designed for the harsh conditions of hazardous environments. According to EN 61000-4-5 an electronic device must withstand a surge pulse of 1 kV between L- N, our LED driver is designed to withstand 4 kV between L- N and L, N - PE.

All electronic components with self-heating are over dimensioned to ensure a maximum maintenance-free period. The driver has an own Ex-certification "q" and is mounted within the Ex-e compartment.

In the very unlikely cause of an driver failure this unit can be changed separately from the floodlight.

Light distribution for various applications

Beside the various lumen output packages different light distributions can be realized with the PXLED-series.

A wide beam pattern as well as a narrow beam pattern is realized by the use of special designed lens caps for the LEDs. In addition, asymmetric light distributions are also available for special applications.

With a light transmission factor of more that 90 % we are able to offer a system efficiency of more than 110 lm/W.

The laminated glass version with external plastic foil, either in clear or frosted version, prevents any glass splitters from falling, allowing safe use in critical application such as food & beverage, chemical and pharmaceutical Industries
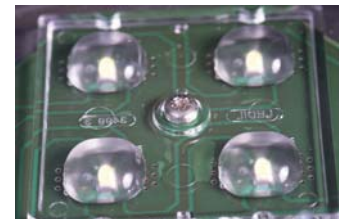
wide beam lens caps
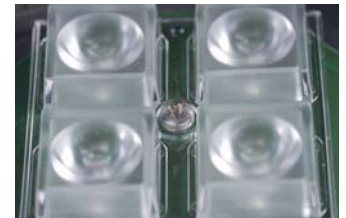
narrow beam lens caps

Type key for PXLED floodlight series

PXLED 10L W 7 57 GC T0 E01

| Type of fitting:
PXLED | Size of fitting[1]:
5L = 5000 lm
10L=10000 lm
15L=15000 lm
20L=20000 lm
25L=25000 lm
30L=30000 lm | Light distribution:
W = wide beam
N = narrow beam
C = asymetric1
D = asymetric2 | CRI [2]:
7 = CRI >70
X = other on request | CCT [3]:
57 = 5700 K
XX = other on request | Front glass:
GC = clear
FC = laminated, clear
(on request)
FF = laminated, frosted
(on request) | Terminals:
T0 = type 2410 - max. 6 mm²
TX= others on request | Cable entries/glands:
E01= 2 x M25 metal gland type ADE 1F2
E05= 2 x M25 plastic threaded plug
E11= 1 x M25 metal gland type ADE 1F2,
1 x M25 plastic threaded plug
EXX= others on request |

5L

10L

15L

20L

25L

30L

type V W

type VII N

type I C

type III D
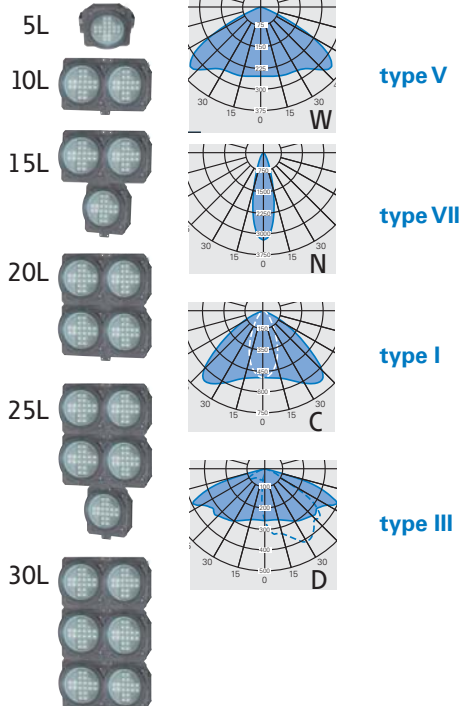
1) the lumen value is a design value and will not show the actual lumen output
2) CRI = Colour Rendering Index
3) CCT= Correlated Colour Temperature

Ordering details

PXLED, PXLED LV for Ex-Zone 1, 2, 21 and 22
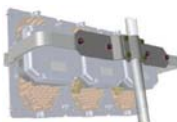
Ordering details PXLED

	Type	Lamp / illuminant	Light distribution *)	Description / Power	Cable glands	Order No..
	PXLED 5L N 757 GC E01	LED system 5.386 lm	narrow beam	LED floodlight with swivel bracket 49 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 110 001**
	PXLED 5L N 757 GC E05				2 x M25 plastic threaded plug	**1 3042 110 005**
	PXLED 5L W 757 GC E01	LED system 5.207 lm	wide beam	LED floodlight with swivel bracket 49 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 111 001**
	PXLED 5L W 757 GC E05				2 x M25 plastic threaded plug	**1 3042 111 005**
	PXLED 10L N 757 GC E01	2 LED systems 10.772 lm	narrow beam	LED floodlight with swivel bracket 98 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 210 001**
	PXLED 10L N 757 GC E05				2 x M25 plastic threaded plug	**1 3042 210 005**
	PXLED 10L W 757 GC E01	2 LED systems 10.414 lm	wide beam	LED floodlight with swivel bracket 98 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 211 001**
	PXLED 10L W 757 GC E05				2 x M25 plastic threaded plug	**1 3042 211 005**
	PXLED 15L N 757 GC E01	3 LED systems 16.158 lm	narrow beam	LED floodlight with swivel bracket 147 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 310 001**
	PXLED 15L N 757 GC E05				2 x M25 plastic threaded plug	**1 3042 310 005**
	PXLED 15L W 757 GC E01	3 LED systems 15.621 lm	wide beam	LED floodlight with swivel bracket 147 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 311 001**
	PXLED 15L W 757 GC E05				2 x M25 plastic threaded plug	**1 3042 311 005**
	PXLED 20L N 757 GC E01	4 LED systems 21.544 lm	narrow beam	LED floodlight with swivel bracket 196 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 410 001**
	PXLED 20L N 757 GC E05				2 x M25 plastic threaded plug	**1 3042 410 005**
	PXLED 20L W 757 GC E01	4 LED systems 20.828 lm	wide beam	LED floodlight with swivel bracket 196 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 411 001**
	PXLED 20L W 757 GC E05				2 x M25 plastic threaded plug	**1 3042 411 005**
	PXLED 25L N 757 GC E01	5 LED systems 26.930 lm	narrow beam	LED floodlight with swivel bracket 245 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 510 001**
	PXLED 25L N 757 GC E05				2 x M25 plastic threaded plug	**1 3042 510 005**
	PXLED 25L W 757 GC E01	5 LED systems 26.035 lm	wide beam	LED floodlight with swivel bracket 245 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 511 001**
	PXLED 25L W 757 GC E05				2 x M25 plastic threaded plug	**1 3042 511 005**
	PXLED 30L N 757 GC E01	6 LED systems 32316 lm	narrow beam	LED floodlight with swivel bracket 294 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 610 001**
	PXLED 30L N 757 GC E05				2 x M25 plastic threaded plug	**1 3042 610 005**
	PXLED 30L W 757 GC E01	6 LED systems 31242 lm	wide beam	LED floodlight with swivel bracket 294 W	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3042 611 001**
	PXLED 30L W 757 GC E05				2 x M25 plastic threaded plug	**1 3042 611 005**

*) Asymmetric light distribution on request

## Ordering details PXLED LV (Low Voltage)

|	Type	Lamp / illuminant	Light distribution *)	Description / Power	Cable glands	Order No..
	PXLED 5L W 757 GC T0 E01 LV	LED system 5.000 lm	wide beam	LED floodlight with swivel bracket 49 W low voltage	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3046 111 001**
	PXLED 5L W 757 GC T0 E05 LV	LED system 5.000 lm	wide beam	LED floodlight with swivel bracket 49 W low voltage	2 x M25 plastic screw plug	**1 3046 111 005**
	PXLED 5L W 757 GC T0 E15 LV	LED system 5.000 lm	wide beam	LED floodlight with swivel bracket 49 W low voltage	1 x M25 plastic trompet shaped cable gland, 1 x plastic blanking plug	**1 3046 111 015**
	PXLED 5L N 757 GC T0 E01 LV	LED system 5.000 lm	narrow beam	LED floodlight with swivel bracket 49 W low voltage	2 x M25 metal cable gland ADE 1F2 for Ø 10 - 17 mm	**1 3046 110 001**
	PXLED 5L N 757 GC T0 E05 LV	LED system 5.000 lm	narrow beam	LED floodlight with swivel bracket 49 W low voltage	2 x M25 plastic screw plug	**1 3046 110 005**

Ordering details Accessories

	Type	Description	PXLED		Pole diameter (d)		Order No.
	MH03		5L-20L	1 1/2"	47-51mm		**2 3042 000 003**
	MH04		25L-30L	1 1/2"	47-51mm		**2 3042 000 004**
	MH05	Pole adapter	5L-20L	2"	56-60mm		**2 3042 000 005**
	MH06		25L-30L	2"	56-60mm		**2 3042 000 006**
	MH07		5L-20L	2 1/2"	70mm		**2 3042 000 007**
	MH08		25L-30L	2 1/2"	70mm		**2 3042 000 008**
	WH01	Angle adapter	5L-20L				**2 3042 000 009**
	WH02		25L-30L				**2 3042 000 010**

Dimension drawing PXLED mounting accessories
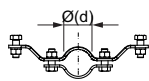
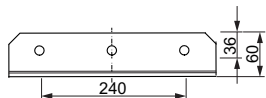**Pole adaptor short MH03/05/07**

Pole adaptor short MH03/05/07
270
100
240
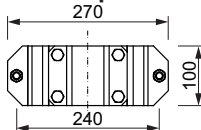
Pole adaptor long MH04/06/07

Pole adaptor long MH04/06/07
575
100
240
540

Angle adaptor short WH 01
36
60
240
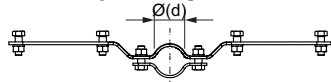
Angle adaptor short WH 01
280
Ø13
36
60
200
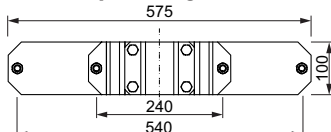
Angle adaptor short WH 01

Angle adaptor long WH 02
36
60
240
540

Angle adaptor long WH 02
580
Ø13
36
60
200
500

Angle adaptor long WH 02

Dimension drawing
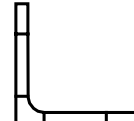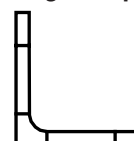
PXLED 5L
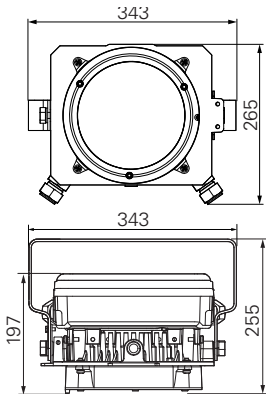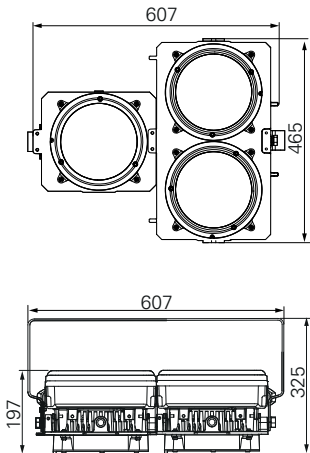
PXLED 15L

PXLED 25L
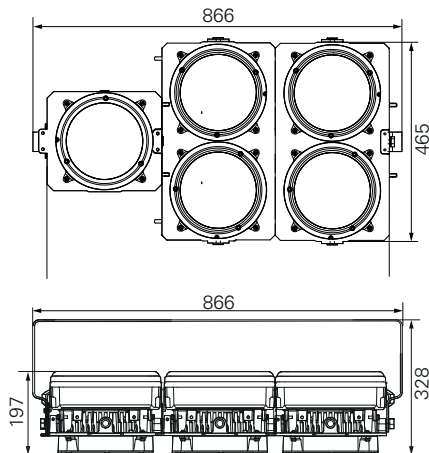
PXLED 10L
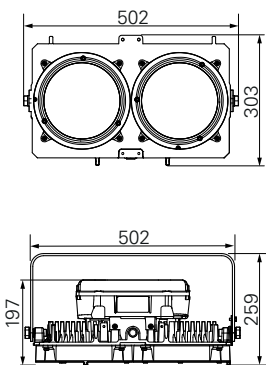
PXLED 20L
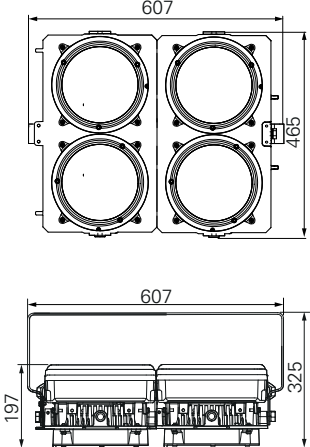
PXLED 30L
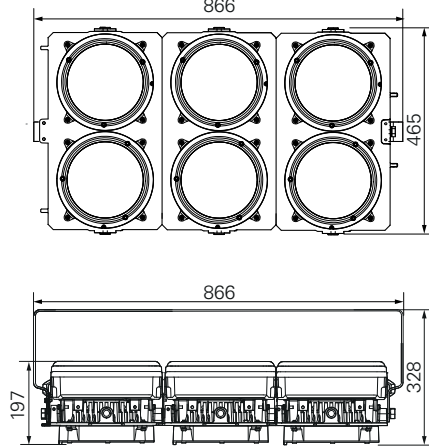
Dimensions in mm

Swivel bracket
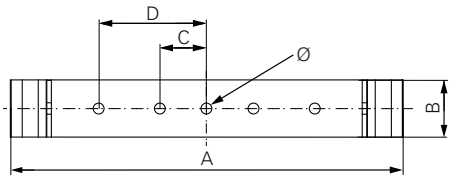
Swivel bracket for PXLED - Dimensions					
Dimensions in mm	A	B	C	D	Ø
PXLED 05	343	50	120	-	13
PXLED 10	476	50	120	-	13
PXLED 15	606	50	120	-	13
PXLED 20	606	50	120	-	13
PXLED 25	858	50	120	270	13
PXLED 30	858	50	120	270	13

Technical data

	PXLED 5L	PXLED 10L	PXLED 15L	PXLED 20L	PXLED 25L	PXLED 30L	PXLED 5L LV
Type Examination Certificate	BVS 17 ATEX E 013 X						
IECEx Certificate of conformity	IECEx BVS 17.0004 X						
Marking accd. 2014/34/EU	⟨Ex⟩ II 2 G Ex db eb op is q IIC T4 Gb/ ⟨Ex⟩ II 2 D Ex tb op is IIIC T100°C Db						
Marking accd. to IECEx	Ex db eb op is q IIC T4 Gb/ Ex tb op is IIIC T100°C Db						
Salt water resistance test acc. to EN 60068-2-52	Level IV						
Vibration test acc. to EN 60068-2-6	4,26 G						
Certification accd. to TR CU 012/2011 EAC [1]	RU C-DE.AA87.B.00780 (-55 °C certified)						
IK-class according to IEC/EN 62262	IK 10 ≙ 20 J						
Permissible ambient temperature	-50 °C up to +55 °C						
LED lifetime	L90 / L80 >100,000 h @ 25 °C / 60,000 h @ +55 °C						
Driver lifetime	C10 >100,000 h @ 25 °C / 60,000 h @ +55 °C						
Rated voltage	110 - 277 V AC / 127 - 270 V DC						24 - 48 V AC/DC
Frequency	0/50 - 60 Hz						
Rated current	0.24 A [2]	0.48 A [2]	0.72 A [2]	0.96 A [2]	1.20 A [2]	1.44 A [2]	1.1 A [3]
Inrush current	20 A/50 µs	20 A/50 µs	20 A/100 µs	20 A/100 µs	20 A/150 µs	20 A/150 µs	4 A/10 ms [4]
THD	<10 %	<10 %	<10 %	<10 %	<10 %	<10 %	0 [5]
Power factor cos φ [1]	≥ 0.93	≥ 0.95	≥ 0.95	≥ 0.95	≥ 0.95	≥ 0.95	1 [6]
Circuit	Electronic driver						
Protection class	I						
Light distribution	Wide beam and narrow beam (asymmetric beam on request)						
Light colour / CRI	5700 K / R_a >70 (other colours on request)						
Enclosure colour	Dark grey						
Connecting terminals	6 poles standard (L, L1, L2, L3, N, PE / up to 6 mm² / others on request)						
Enclosure material	Anodized copper-free Aluminium						
Weight	9,9 kg	14,4 kg	24,3 kg	28,7 kg	38,5 kg	41,1 kg	9,9 kg
Cable glands / gland plates / enclosure drilling	2 x M25 metal thread nickel plated (E01) or 2 x M25 threaded plug (E05) (others on request)						
Degree of protection accd. to EN 60529	IP66/67						
Protective cover / protective bowl	Toughened glass, clear						
Swivel bracket	AiSi 316L stainless steel						

[1] Please ask our sales service for the special Order No. [2] Typical value at 230 VAC
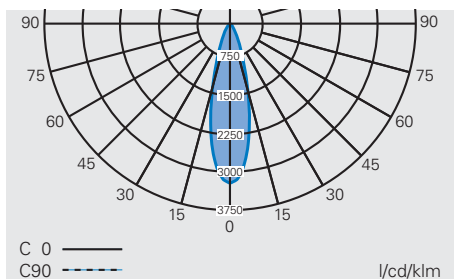[4] Value at 24 VDC = 4 A/10 ms; 48 VDC = 8 A/10ms; 24 VAC = 8 A/5 ms; 48 VAC = 20 A/ 5 ms

[3] Value at 48 VDC = 1.1 A / 24 VDC = 2.3 A / 48 VAC = 1.85 A / 24 VAC = 3.5 A
[5] Value at 24 VDC = 0; 48 VDC = 0; 24 VAC = 120 % ; 48 VAC = 175 %
[6] Value at 24 VDC = 1; 48 VDC = 1; 24 VAC = >0.6 ; 48 VAC = >0.48

Polar curve

Polar curve PXLED 5L - 30L, narrow beam

C 0 ———
C90 - - - - -   l/cd/klm
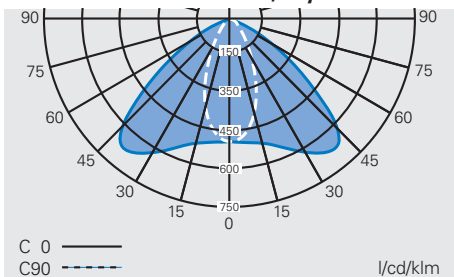
Polar curve PXLED 5L (LV) - 30L, wide beam

C 0 ———
C90 - - - - -   l/cd/klm

Polar curve PXLED 5L - 30L, asymmetric 1

C 0 ———
C90 - - - - -   l/cd/klm

Polar curve PXLED 5L - 30L, asymmetric 2

C 0 ———
C90 - - - - -   l/cd/klm
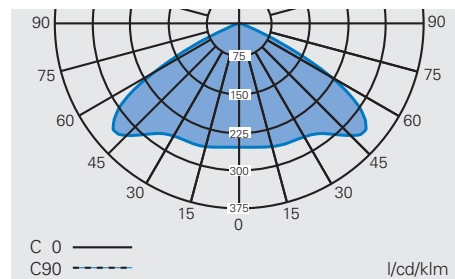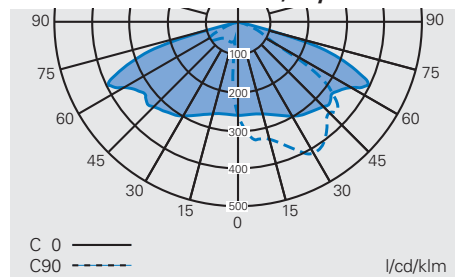
Champ FMVA

LED FLOODLIGHTING for hazardous areas

Safe. Reliable. Efficient.
9,000 to 15,000 lumens

F·T·N

Powering Business Worldwide

Design features

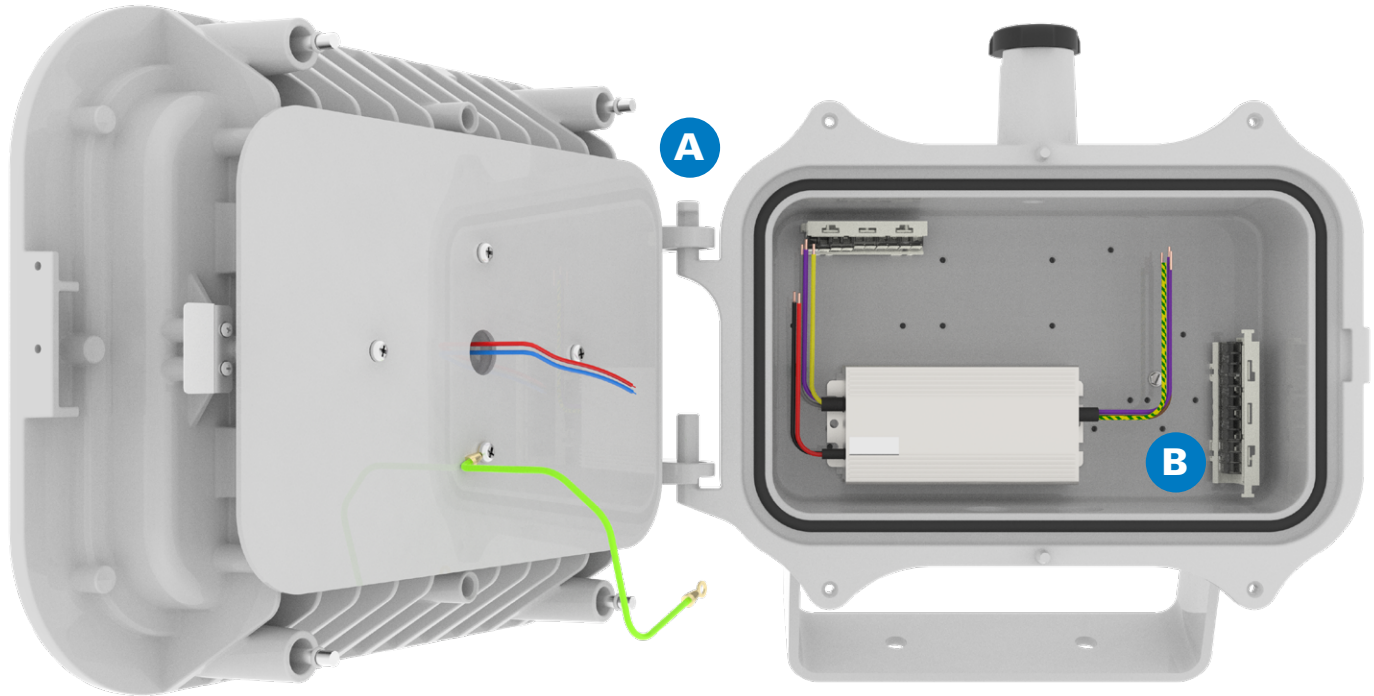Our Champ LED floodlight is a field-proven design that helps ensure safety, reliability and performance in harsh and hazardous rated areas. Champ products are engineered to deliver more operational value and better total cost of ownership.

INSTALLATION EASE

A Light weight & easy access
- Driver and LED engine are field replaceable for extended life even beyond the warranty
- Removable cover for LED engine and hinged driver compartment enables faster installation, access to wiring and field maintenance
- 22% weight reduction from previous generation Champ floodlight models

B Now supports up to 10 AWG wire for easier, less costly retrofits!
- Customers with 10 AWG wire already running through their facility from older, higher power HID fixtures can reuse the same wiring
- Plug and play wiring helps speed installation
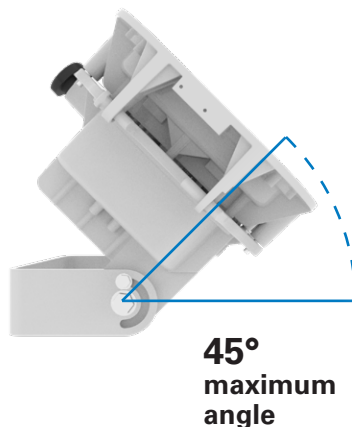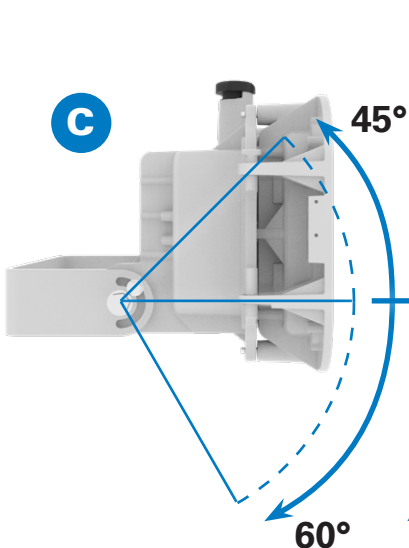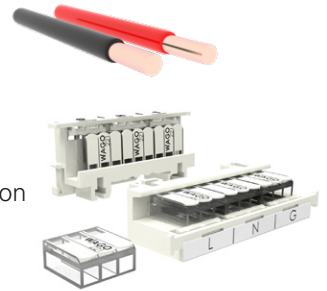
C Versatile mounting options
- Yoke mount and accessories help ensure the fixtures are installed in the correct location to properly light your facility

45°

45°
maximum angle

60°
maximum angle

60°
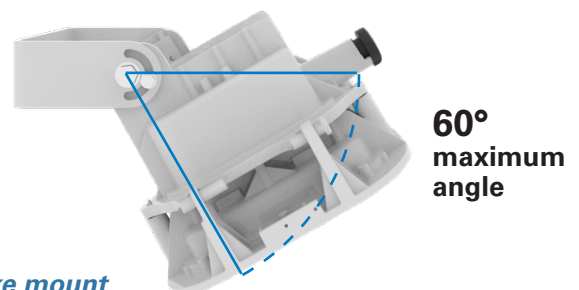
All units come standard with a yoke mount

RELIABLE PERFORMANCE

D Thermal management

- Heat fins help ensure proper air flow and facilitate dust-shedding for effective heat dissipation and thermal management of LED engine and driver

E Performance in extreme environments

- Operating ambient -40°C to 65°C
- Type 4X, IP67
- 6kV surge protection
- Corrosion resistant aluminum housing with Corro-free™ epoxy powder coating
- Vibration tested in accordance with Section 33 of UL844
- Impact tested in accordance with IEC/EN/UL/CSA 60079-0 Section 26.4.2

OPTIMIZED LIGHT & QUALITY

F Custom optics & colors

- Directs light where you need it, helping eliminate gaps and dark spots.
- Can potentially reduce the number of light fixtures required in your application
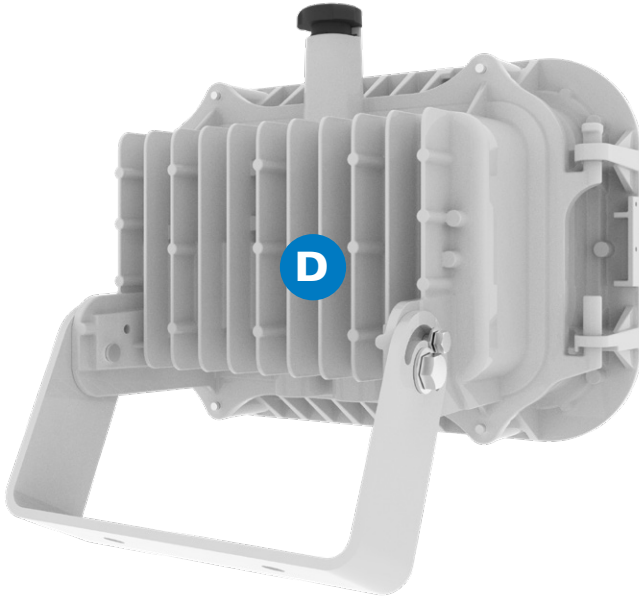- 2200K–DEEP WARM, 3000K–WARM, 4000K–NEUTRAL and 5000K–COOL color options available

NEMA 4x4
Narrow uniform pattern for use at larger distances
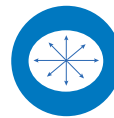
NEMA 7X6
Wide flood distribution provides a large and uniform light pattern

5000K – COOL
Crisp, bright white with a blue hue
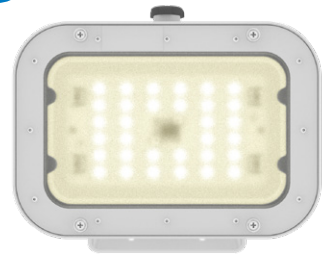
3000K – WARM
Soft, warm white with a yellow hue

G Multiple lens & epoxy powder coat options

- Clear glass lens (standard)
- Diffused glass and clear polycarbonate lenses optional
- Corro-free epoxy powder coat available in gray

Specifications

Applications:

- For general area illumination of locations with mounting heights from 15 to 30 feet

- Locations requiring continuous and consistent light levels where extremely corrosive, wet, dusty, hot and/or cold conditions exist

- IP67, Type 4X, marine, wet locations and hose-down environments

- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels

NEC and CEC:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, IIC
- Class II, Division 2 Groups F and G
- Class II, Zone 22
- Maine and wet locations, Type 4X, IP66/67
- Class I, Zone 2, AEx ec IIC T4 Gc, Class I Zone 2, Ex ec IIC T4 Gc X Tamb -40 - +40°C* , +55°C*, +65°C*
- Class II Zone 21, AEx tb IIIC T85°C Db; Class II Zone 21, Ex tb IIIC T85°C Db X Tamb -40°C - +40°C* , +55°C*, +65°C*

IECEx & ATEX*:

- IECEx UL24.0069X
- UL 24 ATEX 3277X
- UL 24 ATEX 3278X
- II 3 G Ex ec IIC T4 Gc Tamb -40° - +40°C , +55°C, +65°C
- Ex ec IIC T4 Gc Tamb -40°C - +40°C , +55°C, +65°C
- II 2 D Ex tb IIIC T85°C Db Tamb -40°C - +40°C , +55°C, +65°C
- Ex tb IIIC T85°C Db Tamb -40°C - +40°C , +55°C, +65°C
- $C\epsilon$ 0539 (Marking - Refer IF1883)
- IP66/67

UL standards:

- UL 844 Hazardous (Classified), UL1598 Luminaires, UL1598A Marine, UL8750

IEC standards*:

- IEC 60079-0, Edition 7.0 (2017-12)
- IEC 60079-7, Edition 5.1 (2017-08),
- IEC 60079-31, Edition 2.0 (2013-11)
- EN IEC 60079-0:2018
- EN IEC 60079-7:2015/A1:2018
- EN 60079-31:2014
- UL 60079-0, 7th edition
- UL 60079-7 , 5th edition
- UL 60079-31, 2nd edition,
- CSA C22.2 No. 60079-0:19, 4th edition
- CSA C22.2 No. 60079-7:16, 2nd edition,
- CSA C22.2 No. 60079-31:15 2nd edition
- IEC 60598-1:2008/EN60598-1:2008
- IEC 60598-2:2008/EN60598-2:2008

CSA standards:

- CSA C22.2 NO. 137-M1981 – The Standard for Electric Luminaires for Use in Hazardous Locations
- CSA C22.2 NO. 250.0 – The Standard for Luminaires

FCC:

- FC CAN ICES-005 (A) / NMB-005 (A)

* Not applicable for UNV3 models.

Electrical ratings:

Model	Weight lbs. (kg.)	Nominal lumens	Efficacy† lm/W	Wattage	Voltage	Amps	Power Factor	THD	Surge protection
FMVA-9-UNV1	24.92 (11.30)	9,261	162	58.12	100-277 VAC, 50/60 Hz	0.59 - 0.22	0.90	≤ 20%	6kV
FMVA-11-UNV1	24.92 (11.30)	11,602	158	77.35	100-277 VAC, 50/60 Hz	0.79 - 0.28	0.90	≤ 20%	6kV
FMVA-13-UNV1	24.92 (11.30)	13,581	154	89.60	100-277 VAC, 50/60 Hz	0.91 - 0.32	0.90	≤ 20%	6kV
FMVA-15-UNV1	24.92 (11.30)	15,845	154	106.78	100-277 VAC, 50/60 Hz	1.07 - 0.38	0.90	≤ 20%	6kV
FMVA-9-UNV3	24.95 (11.32)	9,261	162	58.34	347-480 VAC, 50/60 Hz	0.17 - 0.12	0.90	≤ 20%	6kV
FMVA-11-UNV3	24.95 (11.32)	11,602	158	75.01	347-480 VAC, 50/60 Hz	0.22 - 0.16	0.90	≤ 20%	6kV
FMVA-13-UNV3	24.95 (11.32)	13,581	154	90.38	347-480 VAC, 50/60 Hz	0.26 - 0.19	0.90	≤ 20%	6kV
FMVA-15-UNV3	24.95 (11.32)	15,845	154	105.38	347-480 VAC, 50/60 Hz	0.30 - 0.22	0.90	≤ 20%	6kV

†Consult IES files for exact performance data.

LED system:

- High intensity discrete power emitters
- Standard: cool white (5000K, 70 CRI);
- Available options: deep warm (2200K, 70 CRI), warm white (3000K, 80 CRI) or neutral white (4000K, 80 CRI)
- Dimmable driver, 0-10v

- NEMA 7x6 or 4x4 optical patterns available
- Rated life of 60,000 hours continuous operation at 55°C operating ambient temperature
- 5 year fixture warranty*

*Refer to terms & conditions on Eaton.com for Crouse-Hinds series solutions.

Standard materials:

- Lamp housing - die cast aluminum with Corro-free™ epoxy powder coat
- Lens - heat and impact-resistant glass or polycarbonate

- Gaskets - silicone
- External hardware - 316 stainless steel
- Factory-sealed, no external seals required

Ordering information

Champ FMVA LED, 9,000 lumens, 3000K warm white, yoke mount, diffused glass lens, 100-277 VAC driver, gray epoxy powder coat paint

Part number example: FMVA-9-W-76-M20-DG-UNV1-M2

FMVA - 9 - W - 76 - M20 - DG - UNV1 - ___ - M2

Light source/intensity

9	9,261 nominal lumens
11	11,602 nominal lumens
13	13,581 nominal lumens
15	15,845 nominal lumens

Beam pattern

76	NEMA 7x6
44*	NEMA 4x4

*Consult customer service for lead time.

Entries

BLANK	3/4" NPT
M20	20mm
M25	25mm

Voltage

UNV1	100-277 VAC, 50/60 Hz
UNV3	347-480 VAC, 50/60 Hz

Epoxy powder coat

BLANK	Gray

Color temperature

BLANK	5000K, 70 CRI *(cool white)*
N*	4000K, 80 CRI *(neutral white)*
W	3000K, 80 CRI *(warm white)*
22*	2200K, 70 CRI *(deep warm)*

*Consult customer service for lead time.

Lens material

BLANK	Clear glass
DG	Diffused glass
PC*	Clear polycarbonate

*Consult customer service for lead time.

Accessories *(ordered separately)*

BLHN2	Bull horn, 2 tenon, gray
BLHN3	Bull horn, 3 tenon, gray
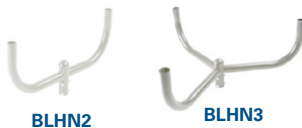
SC831	Safety cable
SFA6	Slip fitter
SWB6	Slip fitter wall mount adapter

BLHN2   BLHN3

SC831   SFA6   SWB6
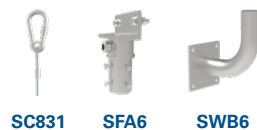
Replacement driver kits *(ordered separately)*

FMVA-9-UNV1-M2-DRIVER KIT	UNV1 M2 replacement driver kit for FMVA-9
FMVA-11-UNV1-M2-DRIVER KIT	UNV1 M2 replacement driver kit for FMVA-11
FMVA-13-UNV1-M2-DRIVER KIT	UNV1 M2 replacement driver kit for FMVA-13
FMVA-15-UNV1-M2-DRIVER KIT	UNV1 M2 replacement driver kit for FMVA-15
FMVA-9-UNV3-M2-DRIVER KIT	UNV3 M2 replacement driver kit for FMVA-9
FMVA-11-UNV3-M2-DRIVER KIT	UNV3 M2 replacement driver kit for FMVA-11
FMVA-13-UNV3-M2-DRIVER KIT	UNV3 M2 replacement driver kit for FMVA-13
FMVA-15-UNV3-M2-DRIVER KIT	UNV3 M2 replacement driver kit for FMVA-15

Photometrics

For IES photometric files – please refer to the resource tab of the FMVA LED product page on Eaton.com
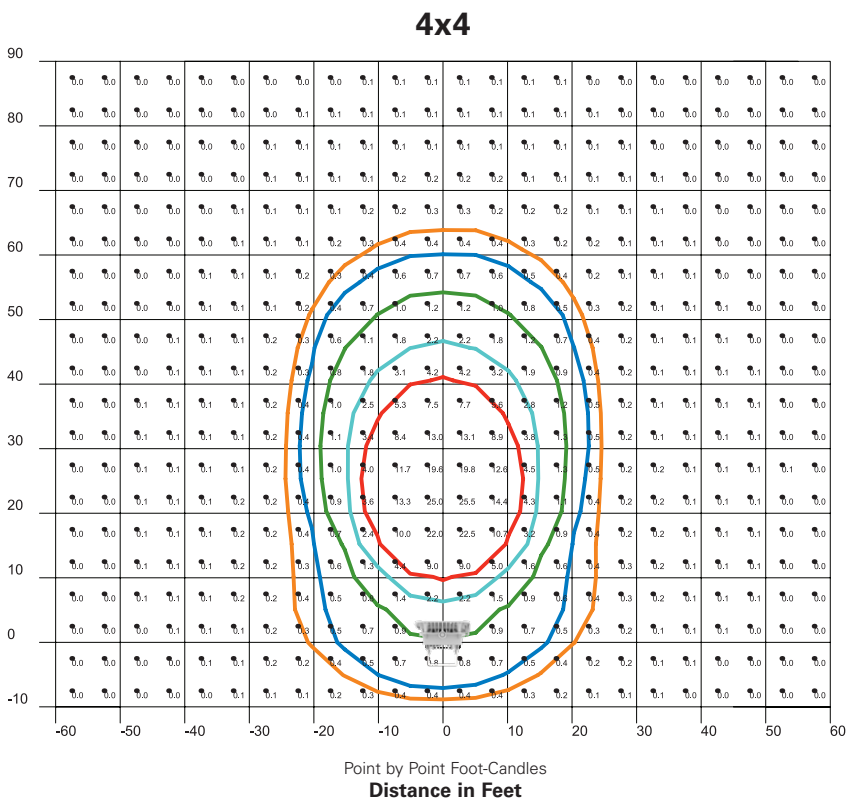
7x6

Point by Point Foot-Candles
Distance in Feet
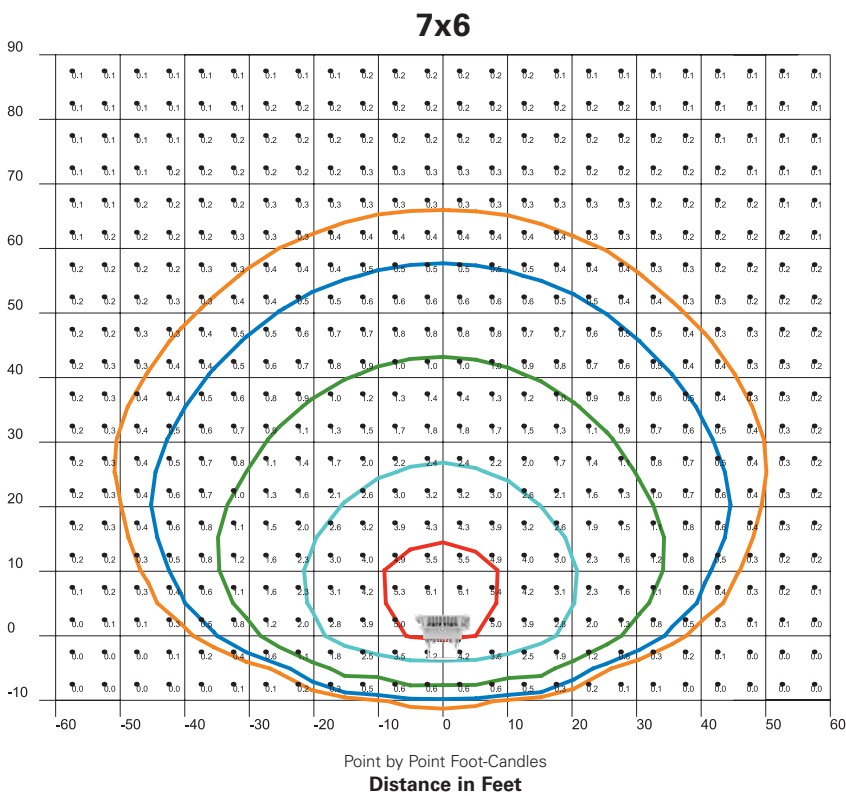
7x6 optics

FMVA-15 Height: 25 ft.; Tilt angle: 45°

Illuminance (Fc)		
Average	0.82	**Mounting height – 25 ft.**
Minimum	0.00	
Maximum	6.10	**Tilt – 45°**

PFMA-15 fixture with UNV1 driver and clear glass lens

0.35 Fc	0.50 Fc	1.00 Fc	2.50 Fc	5.00 Fc

4x4

Point by Point Foot-Candles
Distance in Feet

4x4 optics

FMVA-15 Height: 25 ft.; Tilt angle: 45°

Illuminance (Fc)		
Average	0.95	**Mounting height – 25 ft.**
Minimum	0.00	
Maximum	25.5	**Tilt – 45°**

PFMA-15 fixture with UNV1 driver and clear glass lens

0.35 Fc	0.50 Fc	1.00 Fc	2.50 Fc	5.00 Fc

Specifications

Temperature codes:

Model	Ambient temperature	Class I, Div. 2	Class II, Div. 2	Simultaneous rating Class I, Div. 2, Class II, Div. 2	Minimum supply wire temperature
FMVA9L-FMVA11L (UNV1 and UNV3)	40°C	T5	T4	T2D	90°C
	55°C	T5	T4	T2D	90°C
	65°C	T5	T4	T2D	90°C
FMVA13L-FMVA15L (UNV1)	40°C	T5	T4	T2D	90°C
	55°C	T5	T4	T2D	90°C
	65°C	T4A	T3C	T2C	90°C
FMVA13L-FMVA15L (UNV3)	40°C	T4A	T4	T2D	90°C
	55°C	T4A	T4	T2D	90°C
	65°C	T4A	T3C	T2C	90°C

Dimensions: Fixture with standard yoke mount

(409.4) 16.12

(288.1) 11.34

(377.1) 14.85

(260.6) 10.26

(125.1) 4.93

(249.7) 9.83

Ø= (13.9) 0.55

(120.7) 4.75

(mm)
All dimensions: inches
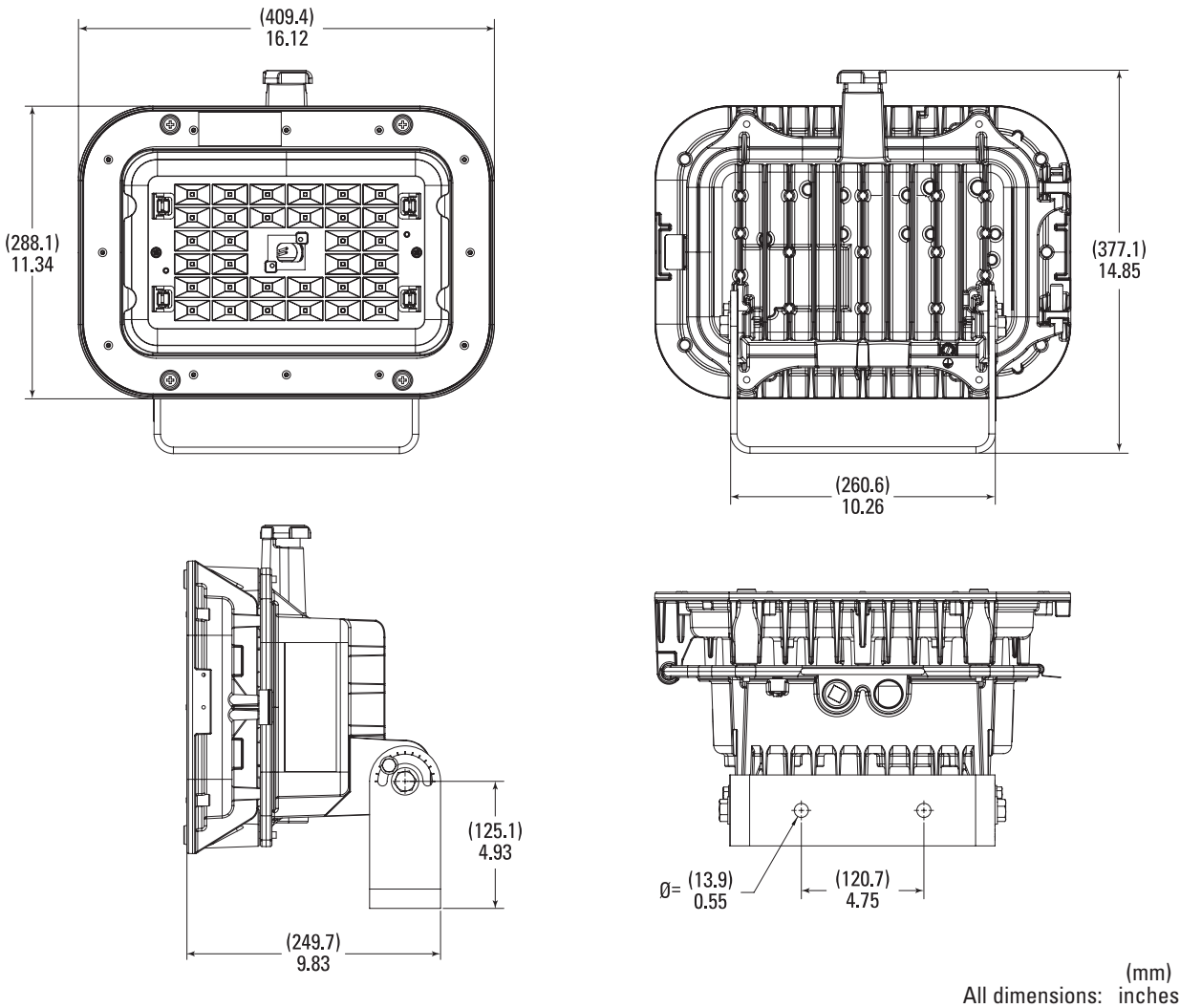
Mounting method	Angle range	Mounting surface
Yoke (standard)	+45° to -60°	Wall, Ceiling, Horizontal Surface/Ground

Additional Champ LED lighting solutions

Champ VMVL & PVML
LED lighting

Safe. Reliable. Efficient.
3,000 to 25,000 lumens

Champ FMVA & PFMA
LED floodlights

Safe. Reliable. Efficient.
3,000 to 50,000 lumens

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

F·T·N
Powering Business Worldwide

HFL LED floodlights
for hazardous areas

F·T·N
Powering Business Worldwide

Safe.
Reliable.
Efficient.

Featuring the industry's broadest range of LED luminaires for harsh and hazardous environments, Eaton's Crouse-Hinds can deliver a lighting solution that performs reliably in even the worst operating conditions. All the while reducing your energy, maintenance and manpower costs.

Why LED?

Useful life
Rated life of 50,000 hours of maintenance-free and safe operation

Energy efficiency LED
Average energy consumption is 65% less than HID and 90% less than incandescent

Start/restart time
Instant illumination compared to 10 minute restrike time for HID

Light quality
Higher color rendering and color temperature compared to fluorescent

Environmental benefits
Mercury-free LED eliminates disposal costs and lower energy consumption for a smaller carbon footprint

Why Crouse-Hinds?

Industry-best reliability
Built to withstand extreme temperatures, vibration, water and dust

Thermal management
Effective heat sinking ensures longer life

Quality of light
Custom optics designed to maximize light distribution and intensity

Design features

High Efficiency and Energy Saving
· Up to 140lm/w lumen efficacy

High-Quality Enclosure Materials
· C5-M rated corrosion
· IK10

Outstanding Optical Performance
· Multiple beam angles with optimal light distribution
· Various color temperature
· Great intensity uniformity to avoid uneven light

Frosted lens option to reduce glare
· Tempered clear glass standard
· Diffused glass lens optional

Strong Water Ingress protection
· IP66 under 5G vibration

Reliable Environmental Adaptability
· Wide temperature range
· Corrosion resistance
· Vibration and impact resistance
· Wind load
· Wet location

Surge protection
· Standard 6kV surge protection; optional 10kV available

Convenient Installation and Maintenance
· Smart bracket mounting size design

Easy-to-Maintain Design
· Replaceable LED module, driver and key components

Why choose HFL LED lighting?

Reliable floodlights. HFL LED luminaires are engineered to deliver high lumen output and maintenance-free long life in the toughest conditions.

HFL 20L vs 400 watt HID

65%
REDUCTION IN ENERGY COSTS

77%
TOTAL COST OF OWNERSHIP

100%
MAINTENANCE REDUCTION
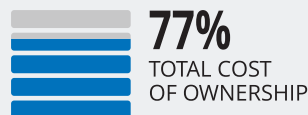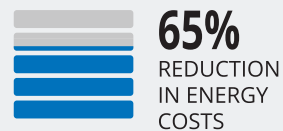
Assumptions: Calculations based on overall life of the LED system. Energy cost of $.09 per kilowatt; 24 hour per day operation; labor rate of $75 each for 2 workers; average time for fixture maintenance of 1 hour.

HFL LED floodlights for hazardous areas

HFL LED luminaires

The HFL series is a harsh and hazardous area floodlight for use in Zone 1,2,21 and 22 areas designed to provide up to 40L with outstanding lumen efficacy and easy installation. Compared with traditional HID floodlights, the HFL features high efficacy and long life at high ambient temperatures combined with a robust marine grade housing to reduce the total cost of ownership.

Four versions of the HFL and a variety of optics are available catering for a wide range of applications and a high installed efficacy.

Model	Nominal lumens*	Wattage*	Equivalent HID luminaire	Evergy savings
HFL-12L	12556	89W	250W	Up to 64%
HFL-20L	19319	133W	250-400W	Up to 65%
HFL-30L	31541	220W	400-600W	Up to 63%
HFL-40L	37215	260W	600-1000W	Up to 74%

* Tolerance+/- 10%, nominal lumen data for 5700K, clear glass, wide beam angle

Applications

- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent switching of lights
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present.

Certification and compliance

- Marking accd.to IECEx:
  Ex db eb mb IIC T4...T3 Gb
  Ex eb mb IIC T4...T3 Gb
  Ex tb IIIC T80°C/ T85°C Db

- Marking accd.to 2014/34/EU:
  II 2 G Ex db eb mb IIC T4...T3 Gb,
  II 2 G Ex eb mb IIC T4...T3 Gb
  II 2 D Ex tb IIIC T80°C/T85°C Db

- Certificate No.
  IECEx NEP 24.0045X
  SGSNA25ATEX031301X
  IECEx NEP 25.0009X

Standard Materials

- Enclosure: copper-free aluminum with C5-M coating
- Lens: tempered and impact resistant glass lens
- Gaskets: silicon
- Guard: standard without guard but SS316L guard is available as option
- Bracket: galvanized steel and SS316L available

Key features

- Instant on and cold temperature operation/no warm-up requirement
- Ambient temperature: -40°C to +55°C
- IP66
- Anti-vibration DNV 2-4
- IK10 enclosure

LED system

- Lumen efficacy up to 140lm/w to save more energy
- 5700K, CRI 70 & 3000K CRI80 as standard (4000K and 5000K optional)
- Type V: 120° wide beam and 30° narrow beam
- Asymmetric Type II option
- Asymmetric Type IV option
- Foggy diffuser with harmful glare protection
- L70: 120,000h@25°C
- L70: 50,000h@55°C

HFL LED floodlights for hazardous areas

Technical data

	HFL 12L	HFL 20L	HFL 30L	HFL 40L
IECEx Certificate of conformity	IECEx NEP 24.0045X			
EC-Type Examination Certificate	SGSNA25ATEX031301X			
GB Certificate	GYB25.1457X			
Voltage Range	100~277Vac 50/60Hz, 125-300Vdc			
Wattage @ 230V	89W	133W	220W	260W
Rated current @230V	394mA	605mA	1009mA	1188mA
Efficiency	>140lm/w (5700K clear)			
Temperature range	Standard -40°C to 55°C; -40°C to 65°C version available			
Power factor	≥0.95			
Ingress Protection	IP66			
Impact Protection	IK10 (the enclosure)			
Optics	Wide Beam 120° type V			
	Narrow Beam 30° Type V			
	Asymmetric Type II			
	Asymmetric Type IV			
CCT	Standard: 5700K & 3000K; 4000K and 5000K are available			
CRI	Cool white>70 and warm white >80			
Surge protection	Standard 6kv; 10kv is as optional			
Material	Enclosure: copper free aluminum (coating); Glass: tempered glass			
Enclosure color	RAL 7035			
Weight	12L 10kg; 20L 12kg; 30L 19kg, 40L 21kg			
Entry size	2xM20 or 2xM25			
Terminal block	6 poles standard (L, L1, L2, L3, N, PE / up to 6 mm² / others on request)			
DALI	DALI 2 availalbe as option			
Warranty	5 years			

*+/- 10% tolerance
*Detail please refer to certificate and instruction manual

Type key for HFL floodlight series

HFL - 20L - C3 - 2M - * - L - 16

| Type fittings: HFL | Size of fittings: 12L≈12000lm 20L≈20000lm 30L≈30000lm 40L≈40000lm | CCT: C1=4000K C3=5700K | Entry size 1M=M20 2M=M25 | Optics default=Wide (120° type V) N=Narrow(30° type V) AT2: Asymmetric Type II AT4: Asymmetric Type IV | Default=non-handle L=with handle | Default=galvanized steel bracket 16=SS316L bracket |

Ordering information

Order code	Product Type	Color temperature	Optics	Terminals	Entry Threaded	Ex e Threaded Plug
CCL2006778S	HFL-12L-C3-2M-16	5700K	120° wide beam Type V	1x6	2x M25	1
CCL2006810S	HFL-20L-C3-2M-16	5700K	120° wide beam Type V	1x6	2x M25	1
CCL2006842S	HFL-30L-C3-2M-16	5700K	120° wide beam Type V	1x6	2x M25	1
CCL2006874S	HFL-40L-C3-2M-16	5700K	120° wide beam Type V	1x6	2x M25	1

*Standard version without cable gland. If need, please order separately
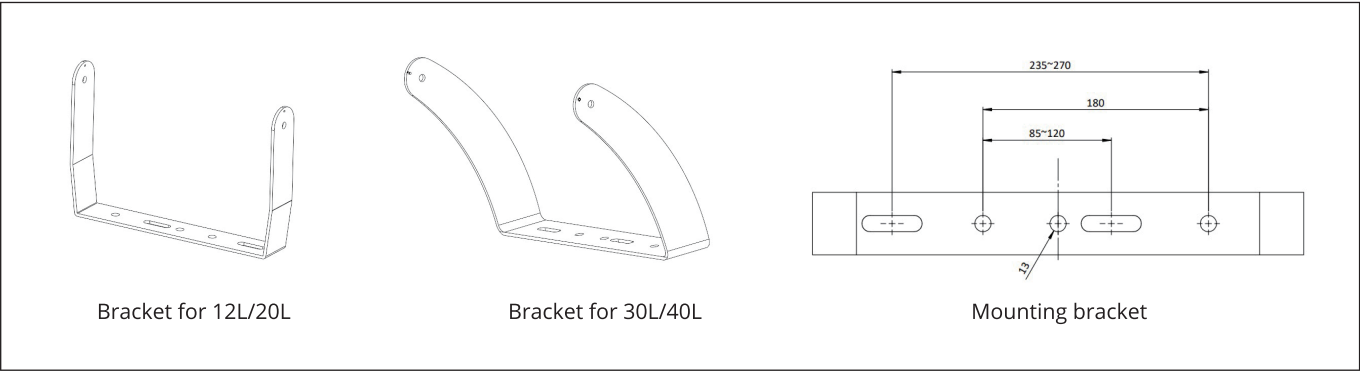*Contact your local sales representatives for special requirements.

HFL LED floodlights for hazardous areas

Dimension

12L

20L

30L

40L
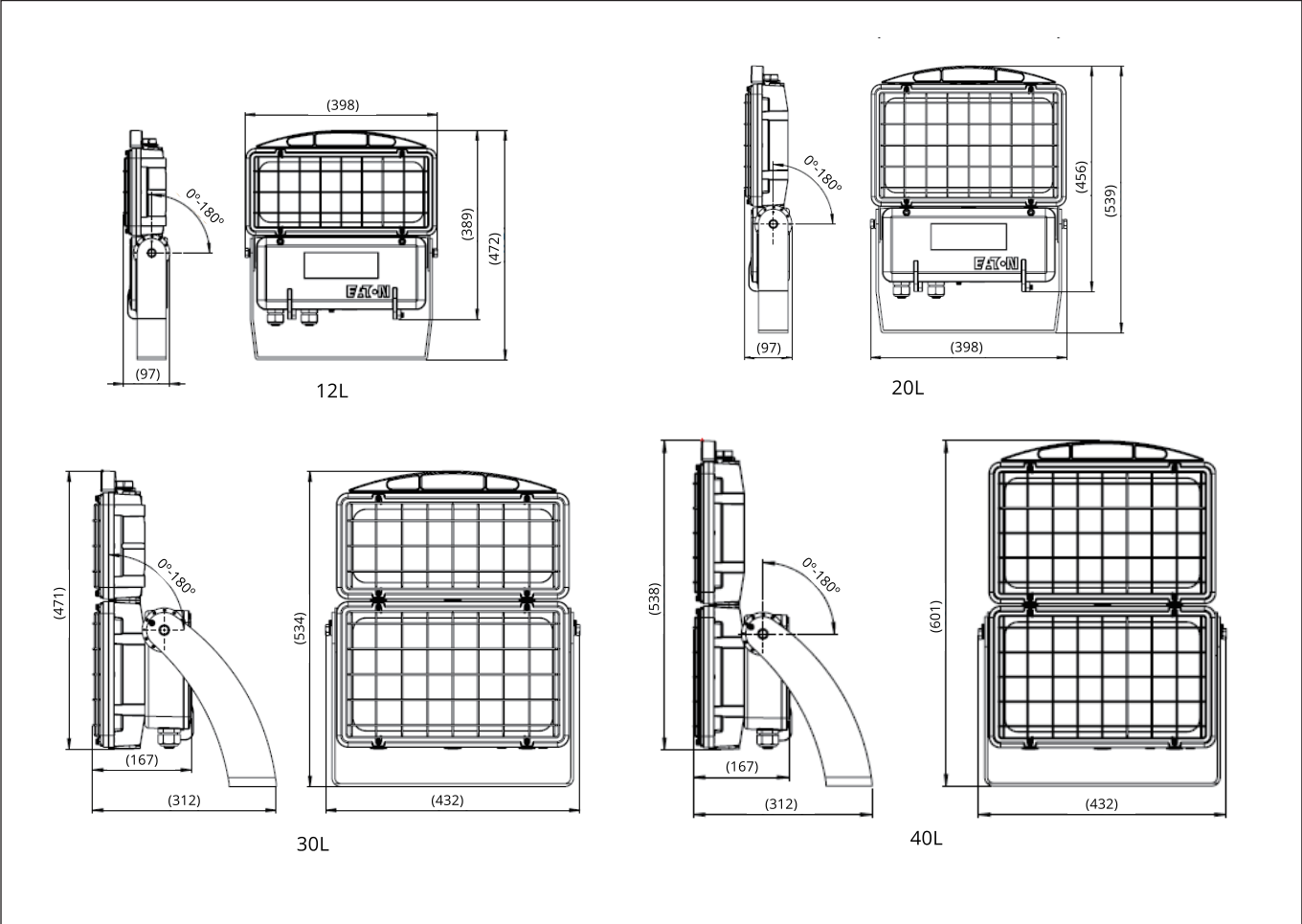
* Standard version comes without guard, please select if needed.

Bracket for 12L/20L

Bracket for 30L/40L

Mounting bracket

HFL LED floodlights for hazardous areas

Accessory can be ordered

Order material number	Description
CHR7005	Safety Chain with eyebolt

Metallic Cable Glands (Order Separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M251NPN	M25	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	7	12
ADE1M252NPN	M25		10	15.5
ADE1M253NPN	M25		13.5	20.5

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.
ADE4M251NPN	M25	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	7	12	10	16	0.2	1.3
ADE4M252NPN	M25		10	15.5	13.5	21	0.2	1.3
ADE4M253NPN	M25		13.5	20.5	18	27.5	0.2	1.6

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

Polar curve

Type V 120° Type V 30° Asymmetric Type II Asymmetric Type IV