KILLARK®

WARM LED SOLUTIONS

Harsh and Hazardous Products

www.hubbell-killark.com

HUBBELL®

Harsh & Hazardous

Killark
Now Offers

Warm LED Colors!

WARM WHITE

COOL WHITE

LIGHTING INDEX

LOW PROFILE LINEAR ALUMINUM LED • EXCLUSIVE DESIGN FEATURES

Diffused

Clear

High temperature rated silicone gasketing provides Type 4X & IP66 sealing.

2 Lens Choices:
• Clear for maximum lumens
• Diffused for glare control

Looping Terminal Blocks under Wiring Access Plate(s).

Battery

E5, E13 and E26 models include <u>internal</u> Emergency battery systems to 50°C suitability

Optional Through Wiring

2 Access Plates for feed through wiring

Surge

Standard with <u>internal</u> 20kA/10kA Supplemental Surge Protection

Endcaps standard with 1 x 3/4" hub. 1/2" NPT and M20 available.

End Caps include feet for direct **ceiling** mounting and safety cable connection

Shown with LAL-SB Height adjustable Swivel Brackets
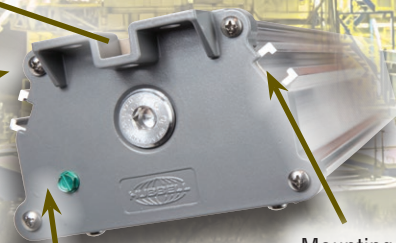
Mounting **Slots** on back and at 45°

Earth

External Earth Ground for IECEx requirement

LINEAR LED TECHNOLOGY

Segurança
N IEx

QUAD APPROVALS
CEC ATEX
NEC IECEx

IECEx

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
AEx nAII, Ex nAII
Wet Locations
Type 4X
IP66
Marine Rated (US only)

c(SP)us Certified - File LR11713

IECEx Rated
Zone 2 and Zone 21 areas
Ex nA IIC T6 to T3, Gc
Ex tb IIC T95°C Db
Tamb -50°C < Tz < +65°C, IP66

IECEx Certificate
QPS 15.0010

ATEX Certificate
CML 15ATEX4081X (nA)
&
CML15ATEX3082X (tb)

LINEAR*LITE*® *
* marca registrada MEXICO

FEATURES-SPECIFICATIONS

Applications

Linear LED Luminaires are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, and Type 3, 4X, IP66 areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC/IECEx & INMETRO.

Typical applications include land based oil rigs, offshore oil platforms, dockside installations, chemical and petrochemical processing facilities, sewage treatment plants, garages, storage facilities, tunnels, and grain/food facilities.

ABS (American Bureau of Shipping) type approval for use on decks, vessels, platforms, barges, ships and boats. Also suitable for docks and marinas.

Compliances

- UL-8750 for LED lighting
- ANSI/UL 1598(A)
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- IEC suffix Zone 2/21 to IEC 60079-0, 60079-15, 60079-31 Standards
- Enclosed and gasketed
- Type 3, 4X
- IP66

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models) **10KA/10KV Surge Protection** (for 347-480 VAC)

Materials

- Housing – one piece natural finish < .1% copper-free aluminum extrusion
- Endcaps & wiring – Access covers are copper-free (< .4%) aluminum with gray baked powder epoxy-polyester finish, electrostatically applied for complete uniform corrosion resistance.
- External screws are 316 stainless steel
- Lens – Impact resistant polycarbonate lens available in diffuse or clear

LAL & LALxE Product Features

- LALxE models have "built-in" battery backup for 90 or 180 minute emergency exit
- Shallow design minimizes profile in work areas with low ceiling heights
- Diffuse Lens Standard to minimize glare; Clear Lens available
- Polycarbonate Single Lens 18W to 60W; Double Lens model 80W & 120W
- Slot Back Design allows multiple mounting access points across length – slots can also be used with 5/16" or 8mm bolts & nuts, 3 housing slots, 1 center back and 2 at 45°.
- Variety of mounting options including swivel brackets, wall, ceiling brackets, or beam clamps
- End Caps each have 2 mounting feet built-in plus a safety strap attachment point

- Standard unit End Caps each have single a ¾" NPT hub, and fixture is furnished with one ¾" close-up plug and two ¾" to ½" reducers – provides out of the box ½" dead-end to ¾" feed-through flexibility. Metric openings are available.
- Standard LALs have one wiring Access Plate for easy access to driver leads.

LED Features and Standards

- Many Midpower LEDs blend light to simulate fluorescent tubes
- Chromaticity outputs:
  standard – 5000K 70 CRI
  3590 option – 3500K 90 CRI
- Energy Savings – High lumens per watt
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -40°C to 65°C (see tables). -20°C to 50°C Ambient suitability for Emergency models.
- Instant On – Including after power interruption
- World Voltage 120 - 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant

KILLARK

CATALOG LOGIC

LAL	45	E13	30	D	L4-2AP	3590

Example

= **Remove 2 fuses, add 3500K 90 CRI LEDs**

Options

L4-2AP –	approx. 4 foot with 2 access covers (Dimension **C**)
F –	Single Fuse (1 pole)
FF –	Two Fuses (2 pole - 2 hot legs)
S52 –	1 Endcap with 1x1/2" NPT and 1xM20 Entries (3/4" NPT Plugged)
D52 –	2 Endcaps with 1x1/2" NPT and 1xM20 Entries (3/4" NPT Plugged)
D50 –	2x1/2" NPT Entries 1 end cap, 3/4" plugged; 2nd end cap std. 1x3/4" NPT
D502 –	2x1/2" Entries 2 end caps, 3/4" NPTs plugged
D20 –	2xM20 Entries 1 end cap, 3/4" plugged; 2nd end cap std. 1x3/4"NPT
D202 –	2xM20 Entries 2 end caps, 3/4" NPTs plugged
LSP –	Less Surge Protector
GH –	Gray Housing
RH –	Red Housing
2AP –	Dual Access Plates (Increases Length by 4.2" [102])
TBL –	Terminal Blocks **Looping through Wiring**
CAH –	Clear Anodized Housing
3590 –	**3500K (CCT) and 90 CRI LEDs**

Specials – Contact Factory for custom configurations and options

LAL(C) – Series Constant

Aluminum Extrusion with Polycarbonate Lens

LAL(R) – Rig Version with Poke out Hubs

Fixture Wattage

18
28
45 } Single Lens – Dimension **B** or **C**
60

80
120 } Two Lens – Dimension **D**

C15
C20
C25
C30
C35 } Compact Lens – See Dimension **A**
C40
C45
C50

Emergency Battery Backup
(LAL 120-277VAC 50/60Hz only)

Blank – No Emergency

E5 – 5 watts LED Power 180 minute egress

E13 – 13 watts LED Power 90 minute egress

E26 – 26 watts LED Power 90 minute egress (2 Lens models only)

Lens

D – Diffuse Polycarbonate

C – Clear Polycarbonate

Voltage

30 – 120V-277VAC 50/60Hz LAL/LALC all models

27 – 12VDC - 24VDC LALC 20W, 25W non-emergency models

33 – 347-480VAC; LAL not available with 60W or 120W; LALC not available with 15W, 20W, or 25W

34 – 125VDC-250VDC; 120-277VAC 50/60Hz LALC 18W, 20W, 23W, 25W and LAL 28W, 60W, 55W, 120W non-emergency models

CABLE GLAND ORDERING OPTIONS

MCX

CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	CABLE ACCEPTANCE DETAILS DIAMETER 'C'	
		MIN.	MAX.
MCX1B	1/2"	0.51" (13.0)	0.63" (16.0)
MCX1C	1/2"	0.60" (15.2)	0.82" (20.8)
MCX2	3/4"	0.73" (18.5)	1.03" (26.2)

For entire series, please see page 32.

ACCESSORIES AND REPLACEMENT PARTS

ACCESSORIES AND REPLACEMENT PARTS	
LAL-SB	Swivel Bracket Set w/ Adjustable Height; includes 5/16" bolts/nuts/lock-washers for attachment to LAL(C) "slots"; can also be attached to end cap mounting feet with FBO bolts.
LZCB	Ceiling Bracket Set with Stainless Steel Bolts to attach to LAL(C) "slots"
LZWB	Wall Bracket Set with Stainless Steel Bolts to attach to LAL(C) "slots"
LAL-BC	Steel/malleable Iron with Zinc electroplate for corrosion resistance; includes Stainless Steel Bolts to attach to LAL(C) "slots"
LAL-EB	Eyebolt Set with Stainless Steel Bolts to attach to LAL(C) "slots"
VMSC10	10' Stainless Steel Safety Cable with loop grip
LALG	Stainless Guard for 1 LAL Lens, order two for 2 lens models
LALCG	LALC Stainless Guard
LAL-LENSCLR	Single Clear Lens with Gasket for LAL Series
LAL-LENSDIF	Single Diffuse Lens with Gasket for LAL Series
LALC-LENSCLR	Single Clear Lens with Gasket for LALC Series
LALC-LENSDIF	Single Diffuse Lens with Gasket for LALC Series
LAL-RIG-CB	Rig Mounting Style Ceiling Bracket
LAL-RIG-WB	Rig Mounting Style Wall Bracket
RIG-LALC	Rig End Caps for LALC
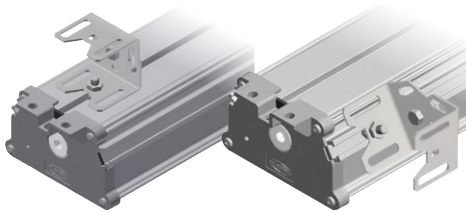
LAL-SB on Center Slot **LAL-SB on 45° Slot**
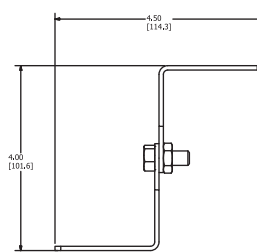
LAL-SB Dimensions – extended shown
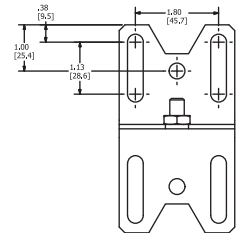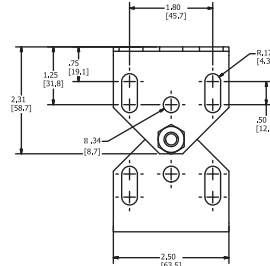
Wall Bracket Set
Part Number LZWB
Stainless Steel (natural finish)
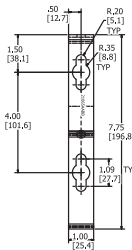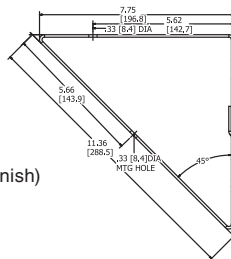
Ceiling Bracket Set
Part Number LZCB
Stainless Steel (natural finish)

VMSC10 Safety Cable

LAL-BC Beam Clamp

5/16"-18

15/16" [23.8]

1-1/2" [38.1]
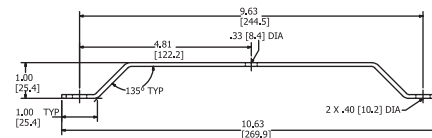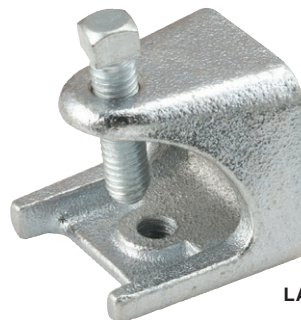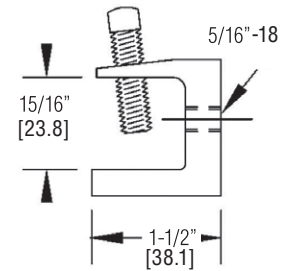
LALFP
Linear LED Food Processing Fixture

- Maintenance free long-lasting LEDs

- NSF Certified with Impact Resistant polycarbonate lens

- All exterior stainless steel hardware

- Large wiring access for ease of installation

- Extremely durable copper-free aluminum mounting feet & access plate with anodized aluminum housing

- 90 or 180 minute emergency with Self-diagnostics in accordance with NFPA 101® Life Safety Code

LINEAR LED TECHNOLOGY

LINEAR*Lite*® *

✳ marca registrada MEXICO

Approved

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models)
10KA/10KV Surge Protection (for 347-480 VAC)

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
AEx nAII, Ex nAII
Wet Locations
Type 4X
IP66/IP67
Marine Rated (US only)
ABS Type Approval
NSF Food Handling

⊖SP⊖us Certified - File LR11713

IECEx Rated
Zone 2 and Zone 21 areas
Ex nA IIC T6 to T3, Gc
Ex tb IIC T95°C Db
Tamb -50°C < Tz < +65°C, IP66

IECEx Certificate
QPS 15.0010

ATEX Certificate
CML 15ATEX4081X (nA)
&
CML15ATEX3082X (tb)

FEATURES-SPECIFICATIONS

Applications

Linear LED Luminaires are designed for food processing installations where moisture, corrosion and vibration may be present, and Type 3, 4X, IP66/IP67. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC.

Typical applications include non-food zones, splash zones, hazardous food processing areas, high and low ambient areas, and hose-down zones.

NSF (National Sanitation Foundation) approved for "Food Handling" areas, typically requiring non-glass lighting.

ABS (American Bureau of Shipping) type approval for use on decks, vessels, platforms, barges, ships and boats. Also suitable for docks and marinas.

Compliances

- UL-8750 for LED lighting
- ANSI/UL 1598(A)
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaires for use in hazardous locations
- Enclosed and gasketed
- Type 3, 4X
- IP66/IP67

Materials

- Housing – one piece clear anodized $\leq$ .1% copper-free aluminum extrusion
- Endcaps & wiring – Access covers are copper-free ($\leq$ .4%) aluminum with natural finish.
- External screws are 316 stainless steel
- Lens – Impact resistant polycarbonate lens available in diffuse or clear

LALFP & LALFPxi**E** Product Features

- LALFPxi**E** models have "built-in" battery backup for 90 or 180 minute battery backup
- Shallow design minimizes profile in work areas with low ceiling heights
- Diffuse Lens Standard to minimize glare; Clear Lens available
- Polycarbonate Single Lens L1 & L3; Double Lens model L5
- Variety of mounting options including swivel brackets, wall, ceiling brackets, or beam clamps
- End Caps each have 2 mounting feet built-in plus a safety strap attachment point
- Standard unit End Caps each have single a ¾" NPT hub, and fixture is furnished with one ¾" close-up plug and two ¾" to ½" reducers – provides out of the box ½" dead-end to ¾" feed-through flexibility. Metric openings are available.
- Standard LALFPs have one wiring Access Plate for easy access to terminal block.

Electronics Includes:

- Self-diagnostics monitors LED status, LED driver circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30-60 minute test once every 6 months. LED indicator provides visible fault detection and charging status
- User initiated 1, or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions (below 80% of nominal AC input voltage)

LED Features and Standards

- Many Midpower LEDs blend light to simulate fluorescent tubes
- Chromaticity outputs: standard – 5000K 70 CRI **3590 option – 3500K 90 CRI**
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -40°C to 65°C (see tables). -20°C to 50°C Ambient suitability for Emergency models.
- Instant On – Including after power interruption
- World Voltage 120 - 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant

KILLARK

CATALOG LOGIC

| W | LALFP | 16 | iE3 | 30 | L5 | D | 3590 |

Example

= Weather only rated, 16,000 Lumen output with 3,000 Lumen output during 90 minute emergency operation, 120-277 VAC, approximately 5 foot length Diffuse Lens, 3500K 90 CRI LEDs

Weather Rated

W – Weather only

Blank – Hazardous Location and Weather rated

LALFP – Series Constant

Aluminum Extrusion with Polycarbonate Lens

Fixture Lumen Output

2 – 2000 Lumen Range
4 – 4000 Lumen Range
6 – 6000 Lumen Range
8 – 8000 Lumen Range
11 – 11,000 Lumen Range
16 – 16,000 Lumen Range

Emergency Battery Backup

Blank – No Emergency
iE05 – 500 Lumen Range during 180 minute emergency
iE1 – 1000 Lumen Range during 90 minute emergency
iE3 – 3000 Lumen Range during 90 minute emergency (only available on L5)

Voltage

30 – 120V-277VAC 50/60Hz all models
27 – 12VDC - 24VDC models only L1 Length and 2 & 3 Lumen Range non-emergency models
33 – 347-480VAC LAL 28W & 55W non-emergency models only
34 – 125VDC-250VDC; 120-277VAC 50/60Hz Lumen Range 2, 4, 8, & 16 non-emergency models

Options

F – Single Fuse (1 pole)
FF – Two Fuses (2 pole - 2 hot legs)
S52 – 1 Endcap with 1x1/2" NPT and 1xM20 Entries (3/4" NPT Plugged)
D52 – 2 Endcaps with 1x1/2" NPT and 1xM20 Entries (3/4" NPT Plugged)
D50 – 2x1/2" NPT Entries 1 end cap, 3/4" plugged; 2nd end cap std. 1x3/4" NPT
D502 – 2x1/2" Entries 2 end caps, 3/4" NPTs plugged
D20 – 2xM20 Entries 1 end cap, 3/4" plugged; 2nd end cap std. 1x3/4"NPT
D202 – 2xM20 Entries 2 end caps, 3/4" NPTs plugged
LSP – Less Surge Protector
GH – Gray Housing
RH – Red Housing
TBL – Terminal Blocks **Looping through Wiring**
3590 – **3500K (CCT) and 90 CRI LEDs**

Specials – Contact Factory for custom configurations and options

Lens

D – Diffuse Polycarbonate
C – Clear Polycarbonate

Length

L1 – Approximately 1 foot (2, 4, 6 Lumen Outputs)
L3 – Approximately 3 feet (2, 4, 6, 8 Lumen Outputs)
L5 – Approximately 5 feet (11, 16 Lumen Outputs)

CABLE GLAND ORDERING OPTIONS

MCX

CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	CABLE ACCEPTANCE DETAILS DIAMETER 'C'	
		MIN.	MAX.
MCX1B	1/2"	0.51" (13.0)	0.63" (16.0)
MCX1C	1/2"	0.60" (15.2)	0.82" (20.8)
MCX2	3/4"	0.73" (18.5)	1.03" (26.2)

For entire series, please see page 32.

ACCESSORIES AND REPLACEMENT PARTS

ACCESSORIES AND REPLACEMENT PARTS	
LAL-SB	Swivel Bracket Set w/ Adjustable Height; includes 5/16" bolts/nuts/lock-washers for attachment to LAL(C) "slots"; can also be attached to end cap mounting feet with FBO bolts.
LZCB	Ceiling Bracket Set with Stainless Steel Bolts
LZWB	Wall Bracket Set with Stainless Steel Bol
LAL-BC	Steel/malleable Iron with Zinc electroplate for corrosion resistance; includes Stainless Steel Bolts to attach to LAL(C) "slots"
LAL-EB	Eyebolt Set with Stainless Steel Bolts
VMSC10	10' Stainless Steel Safety Cable with loop grip
LALG	Stainless Guard for 1 LAL Lens, order two for 2 lens models
LALCG	LALC Stainless Guard
LAL-LENSCLR	Single Clear Lens with Gasket for L3 & L5 Lengths
LAL-LENSDIF	Single Diffuse Lens with Gasket for L3 & L5 Lengths
LALC-LENSCLR	Single Clear Lens with Gasket for L1 Length
LALC-LENSDIF	Single Diffuse Lens with Gasket for L1 Length
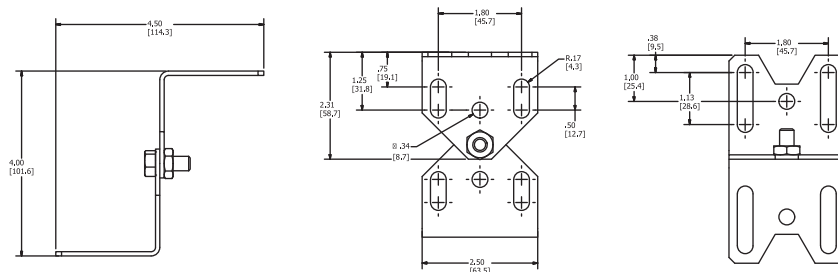
LAL-SB Dimensions – extended shown

Ceiling Bracket Set
Part Number LZCB
Stainless Steel (natural finish)
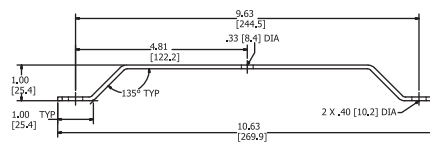
VMSC10 Safety Cable
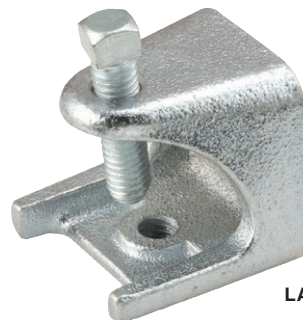
LAL-BC Beam Clamp
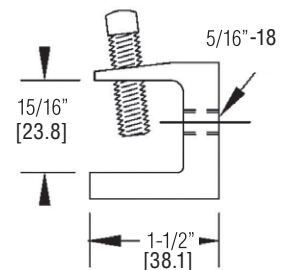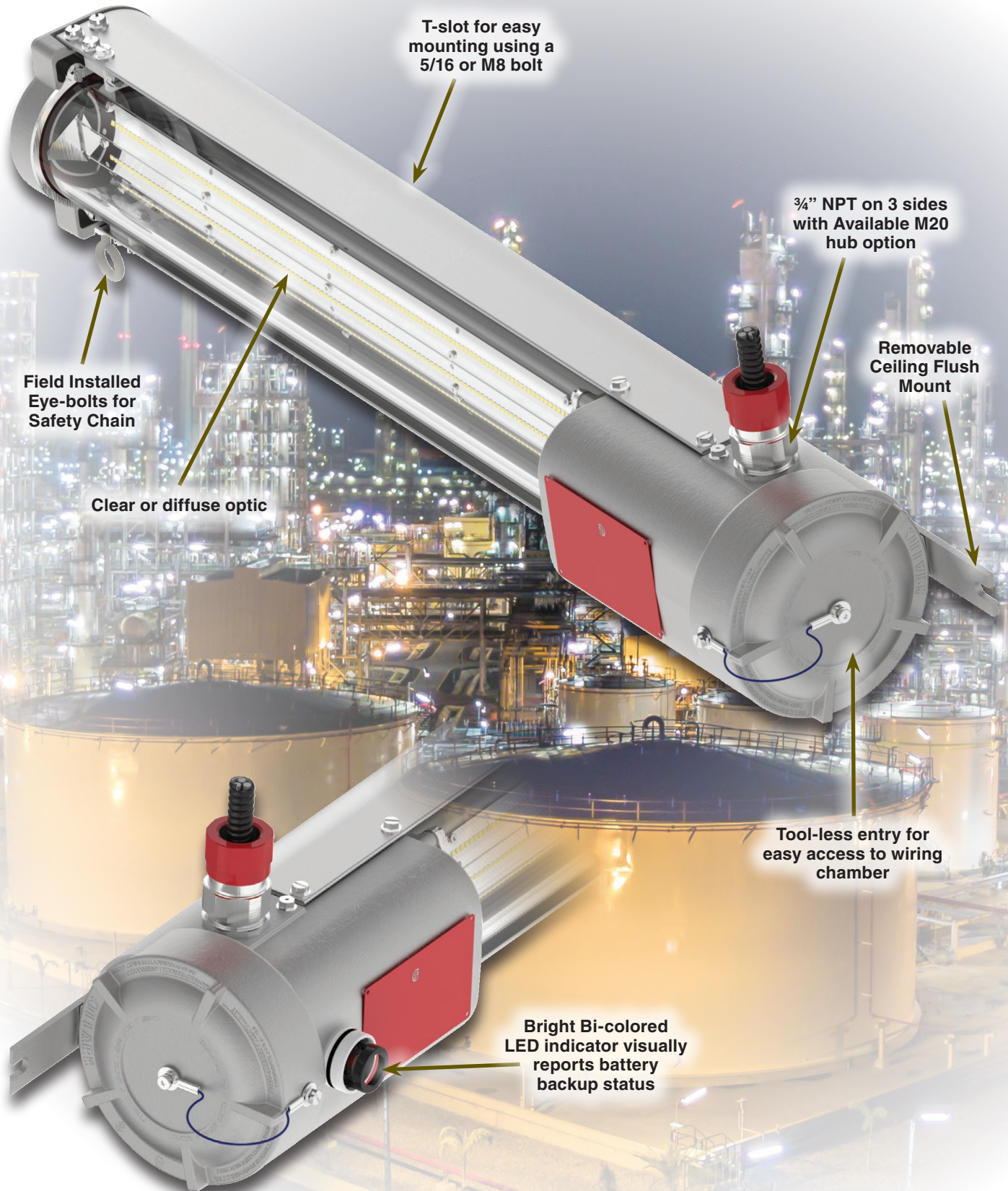
T-slot for easy mounting using a 5/16 or M8 bolt

¾" NPT on 3 sides with Available M20 hub option

Field Installed Eye-bolts for Safety Chain

Removable Ceiling Flush Mount

Clear or diffuse optic

Tool-less entry for easy access to wiring chamber

Bright Bi-colored LED indicator visually reports battery backup status

LED FIXTURES

Class I, Div. 1 & 2, Groups B, C, D
Class I, Zones 1 & 2, Groups IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
Class III, Div. 1 & 2
IP66
Suitable for wet locations
Suitable for paint spray booths

c CSA us

FEATURES-SPECIFICATIONS

LINEAR LITE® *

* marca registrada MEXICO

Applications
- Paint Spray Booths
- Chemical Facilities
- Waste Water Facilities
- Pipeline Pump Stations
- Ammunition Facilities
- Paint Manufacturing Plants
- Oil & Gas Refineries
- Fuel Transfer Facilities

LED Features
- Industry-Leading efficacy
- Corrosion resistant copper-free housing
- Standard 5000K CCT @ 70 CRI minimum
- **Option 3500K CCT @ 90 CRI minimum**
- 20kV / 10kA surge protection on standard fixture
- T-slot mounting for the ultimate in easy mounting

- Self-testing and self-diagnostics on battery backup fixtures
- Angled LED boards for wider mounting distances
- Terminal blocks standard
- Low Profile
- Tool-less access to wiring chamber
- Diffuser option available
- 5 year fixture warranty

ACCESSORIES

Ceiling Bracket Set
Part Number LZCB
Stainless Steel (natural finish)

9.63 [244.5]
.33 [8.4] DIA
4.81 [122.2]
1.00 [25.4]
135° TYP
1.00 [25.4] TYP
2 X .40 [10.2] DIA
10.63 [269.9]

L1L-GUARD

VMSC10 Safety Cable

5/16"-18
15/16" [23.8]
1-1/2" [38.1]

LAL-BC Beam Clamp

KILLARK®

KILLARK

CATALOG LOGIC

| L1L | 14 | iE1 | 30 | D | 3590 |

L1L – Series Constant

Fixture Lumen Output
- **7 –** 7,000
- **10 –** 10,000
- **12 –** 12,000
- **14 –** 14,000

Emergency Battery Backup
- **Blank –** No Emergency
- **iE05 –** 500 Lumen Range during 180 minute emergency
- **iE1 –** 1000 Lumen Range during 90 minute emergency

Voltage
- **30 –** 120V-277VAC 50/60Hz all models
- **33 –** 347-480VAC non-emergency models only
- **34 –** 125VDC-250VDC; 120-277VAC 50/60Hz non-emergency models only

Lens
- **D –** Diffuse
- **C –** Clear

Example

= L1L 14,000 lumen output with 1,000 lumen output during 90 minute emergency operation, 120-277VAC, Diffuse Lens, 3500K 90 CRI LEDs

Options
- **F –** Single Fuse (1 pole)
- **FF –** Two Fuses (2 pole - 2 hot legs)
- **LSP –** Less Surge Protector
- **GH –** Gray Housing
- **RH –** Red Housing
- **WH –** White Housing
- **TBL –** Terminal Blocks **Looping through Wiring**
- **YH –** Yellow Housing
- **3590 –** **3500k LED @ 90 CRI**
- **D20 –** 3 M20 entries
- **D25 –** 3 M25 entries

Specials – Contact Factory for custom configurations and options

CABLE GLAND ORDERING OPTIONS

MCX
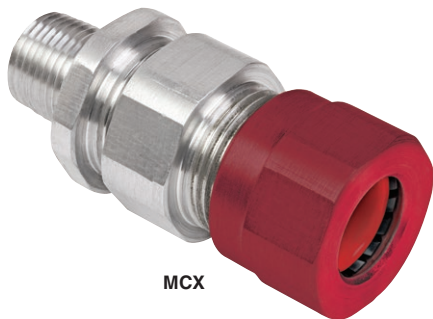
CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	BEND TYPE	CABLE ACCEPTANCE DETAILS		MAX LENGTH
			WIRE DIAMETER		
			MIN	MAX	
MCX1B	1/2"	Straight	0.51" (13.0)	0.63" (16.0)	2.10" (53.3)
MCX1C	1/2"		0.60" (15.2)	0.82" (20.8)	2.40" (61.0)
MCX2	3/4"		0.73" (18.5)	1.03" (26.2)	2.60" (66.0)
MCX14C	1/2"	45°	0.60" (15.2)	0.82" (20.8)	3.25" (82.6)
MCX24	3/4"		0.73" (18.5)	1.03" (26.2)	3.43" (87.1)
MCX19C	1/2"	90°	0.60" (15.2)	0.82" (20.8)	2.51" (63.8)
MCX29	3/4"		0.73" (18.5)	1.03" (26.2)	2.61" (66.3)

For entire series, please see page 32.

KILLARK

COMPACT SIZE – INTRODUCTION & LOGIC

Luminaire w/Glass Refractor and Guard

Luminaire w/Flat Lens
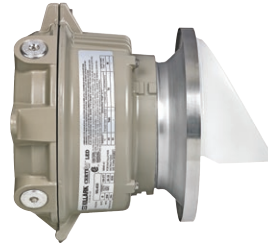
Wall Mount w/VZRF8PR Pathway Reflector

Class I, Div. 2, Groups A,B,C,D
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
Marine Rated (US only)
Type 3, 4X

Certified - File LR11713

CERTILITE® LED

FEATURES-SPECIFICATIONS

Applications

CERTILITE® MBL LED fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC.

Typical applications can low ceiling areas in manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

- UL-8750 for LED lighting; UL 1598A
- UL Marine type lighting fixtures
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaries for use in hazardous locations
- Enclosed and gasketed
- Type 3, 4X

Materials

- Housing, splice box and guards (MBAG, VMAG) corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Reflectors - Polyester reinforced fiberglass

LED Luminaire Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models) **10KA/10KV Surge Protection** (for 347-480 VAC)

- Compact in Size with Traditional Industrial Appearance and Suitability
- Wide variety of optics including globes, globes with reflectors, all-glass refractors, and spin-top refractors
- Optional Mounting arrangements including Pendant, Wall, Ceiling, and Stanchion
- MBL LED Housings can be retrofitted to existing MB splice boxes; upgrade from Fluorescent or HID
- **Warm LED color option available with 3070 option**

- Energy Savings – Less than 50 Watts of Power
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Crisp White Light for Excellent Color Rendering - Chromaticity 5000°K (CCT); 70 CRI
- Ambient suitability -40°C to 40°C (to 55°C for 14W to 22W)
- Instant on – Including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant

Catalog Number Logic

MBL 50 30 A 2 R5 G 3070

Housing Series

LED Wattage
14 - 14W	22 - 22W	50 - 50W
17 - 17W	25 - 25W	
20 - 20W	40 - 40W	

Voltage
05 - 480VAC
15 - 347VAC
27 - 12-24VDC
30 - 120-277VAC

Mounting Style
A – Pendant
X – Ceiling
B – Wall
D – Stanchion 25°

Entry
2 – 3/4" NPT (A, X, B)
3 – 1" NPT (A, X, B)
4 – 1-1/4" NPT (D only)
5 – 1-1/2" NPT (D only)
8 – M20 4 hub (X only)

Options
CP – Component Pack (housing, mount, Optic, Guard if selected)
AN – Assembled Fixture (components as selected)
DDR – Dual Driver Option
3070 – 3000K (CCT) and 70 CRI LEDs

Guard
N – No Guard
G – Guard

Optic
GL – Globe (MBG)
R5 – Type 5 Glass Refractor
S8 – 8" Spin-top Type V Refractor
S5 – 12" Spin-top V Refractor
P5 – 12" Poly Spin-top V Refractor
GF – 8" Glass Flat Lens
PF – 8" Polycarbonate Flat Lens

HUBBELL
Harsh & Hazardous

COMPACT SIZE – COMPONENTS

Pendant   **Ceiling**   **Wall**   **Stanchion**

MB MOUNTING BRACKETS

CATALOG NUMBER				HUB SIZE
PENDANT	CEILING	WALL	STANCHION	
MBA-2	MBX-2	MBB-2	—	3/4"
MBA-3	MBX-3	MBB-3	—	1"
—	MBX-8	—	—	M20
—	—	—	MBD-4	1-1/4"
—	—	—	MBD-5	1-1/2"

MBG **VMR175** **VZRG1550** **VZRG2550 VZRP175** **VZRGF8 VZRPF8** **MBAG** **VMAG17**

Non-Glass Polycarbonate 8" Flat Lens or Spin-top

Patented Design

VMRWG8 **VMRWGS** **VMPSD-17** **VMPA-17** **VMFSPC1** **VEXA100B**

MBL LED OPTICS AND ACCESSORIES

DESCRIPTION	OPTIC LOGIC	GUARD
Globe (glass)	MBG (GL)	MBAG
Refractor (all glass) Type V	VMR175 (R5)	VMAG17
Refractor (spin top) 8" Type V	VZRG1550 (S8)	VMRWG8
Refractor (spin top) 12" Type V	VZRG2550 (S5)	VMRWGS
8" Spin-top flat lens (glass) 14-24W	VZRGF8 (GF)	VZRF8GRD
8" Spin-top flat lens (polycarbonate) 14-24W	VZRPF8 (PF)	VZRF8GRD
Refractor polycarbonate (spin -top) 12" Type V	VZRP175 (P5)	VMRWGS
Pathway Reflector 14-24W	VZRF8PR	NA
Reflector for MBG Globe - DOME	VMPSD-17	NA
Reflector for MBG Globe - ANGLE	VMPA-17	NA
120VAC Photocell with FS Style Cover	VMFSPC1	NA
208-277VAC Photocell with FS Style Cover	VMFSPC2	NA
3-sided EXIT Accessory (use without guard)	VEXA100B	NA

REDUCED PROFILE – INTRODUCTION

Class I, Div. 2, Groups A,B,C,D
Class I, Zone 2, Groups IIC,IIB,IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
Marine Rated (US only)
Type 3, 4X

Certified - File LR11713

CERTILITE V LED

FEATURES-SPECIFICATIONS

Applications

CertiLite®V VM1L LED fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow, or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

- UL-8750 for LED lighting
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminaries for use in hazardous locations
- Enclosed and gasketed
- Type 3, 4X

Materials

- Housing, splice box and cast guards corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Reflectors - Polyester reinforced fiberglass

LED Luminaire Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models) **10KA/10KV Surge Protection** (for 347-480 VAC)

- Reduced profile with Traditional Industrial Appearance and Suitability
- Wide variety of optics including globes, globes with reflectors, all-glass refractors, and spin-top refractors
- Swing-Barrel Nut patented tank mounting system
- Optional Mounting arrangements including Pendant, Wall, Ceiling, Stanchion and others
- VM1L LED Housings can be retrofitted to existing VM splice boxes; upgrade from HID sources
- Energy Savings – less than 55 Watts of Power

- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000°K (CCT); 70 CRI
- Ambient suitability -40°C to 55°C
- Instant on – including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
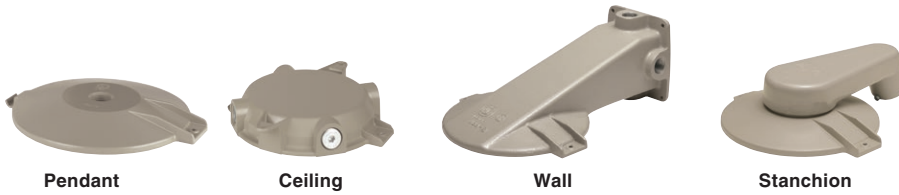- Solder-LESS LED Board Connections – Vibration Resistant
- Dual Driver Option (DDR) – For additional energy savings, half of the fixture can be turned off
- **Warm LED color option available with 3070 option**

Swing-Barrel Nut (Patented)

1 Hang Fixture

2 Swing into Place

3 Tighten
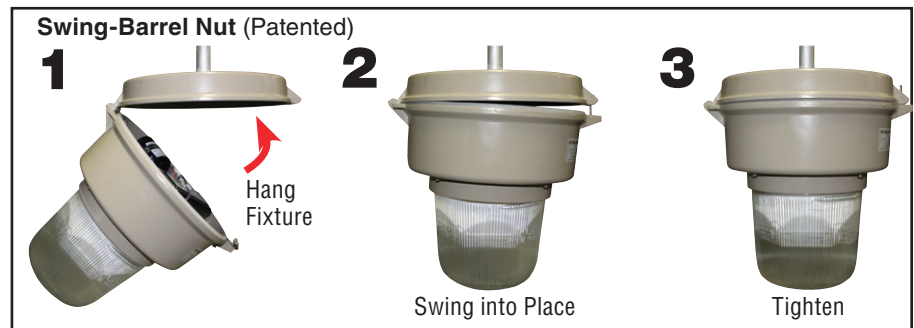
Polycarbonate 12"
Spin-top
Refractor VZRG2550

Photo controls – Class I Div. 2 / N4X areas
Available as Field or Factory Installed to save energy when light not required.

Earthquake Tab –
Built-in attachment point for safety cables.

Safety: Secures fixture to structure in case of conduit failure.

REDUCED PROFILE – CATALOG LOGIC

CERTI*LITE*®V LED

CertiLite®V LED Catalog Number Logic

VM1L   50   30   0   0   00   0   3070

Housing Series
5-1/2" thread w/driver
and LED's

Lamp Wattage
40W – LED
50W – LED

Voltage
05 – 480VAC 50/60 Hz
15 – 347VAC 50/60 Hz
27 – 12-24VDC
30 – 120-277VAC 50/60 Hz

Mounting Type
A – Pendant
X – Ceiling
B – Wall Bracket
C – Cone Top
E – EZ Mount Adapter
D – Stanchion 25°
S – Stanchion Straight 90°
N – None (mount ordered separately)

Entry (Mounts available)
2 – 3/4" NPT (A,B,C,X)
3 – 1" NPT (A,B,C,X)
4 – 1 1/4" NPT (D,S)
5 – 1 1/2" NPT (D,S)
6 – 3/4" NPT 5-Hub (X)
7 – 1" NPT 5-Hub (X)
8 – M20 4-Hub (X)
9 – M20 5-Hub (X)
Z – EZ Mount Adapter
N – None (mount ordered separately)

Options
F – Single Fuse (Not to be used in Canada)
FF – Double Fuse (Not to be used in Canada)
TBX – Terminal Blocks
    X= Variations
    (May be alphanumeric to
    indicate terminals)
P1 – Photocell 120V (C1D2 only)
    Factory Installed
P2 – Photocell 208-277V (C1D2 only)
    Factory Installed
QD – QD Wired at Driver
CP – Component Pack
    (Tank w/mount, optic, guard -
    LED's included in tank)
AN – Assembled
    (Tank w/mount, optic, guard-
    LED's included in tank)
DDR – Dual Driver Option
3070–3000K (CCT) and 70 CRI LEDs

Guard
G – Guard (Globes & Glass refractors)
N – No Guard

Optic
GL – Globe
R5 – Type V Refractor (all glass)
S8 – Type V 8" Spin-Top Refractor
S5 – Type V12" Spin-Top Refractor
P5 – Polycarbonate Type V 12" Spin-Top Refractor

KILLARK

REDUCED PROFILE – COMPONENTS

Pendant

Ceiling

Wall

Cone Top

25° Stanchion

Straight Stanchion

EZ Adapter*
VMEZA

Tank Adapter
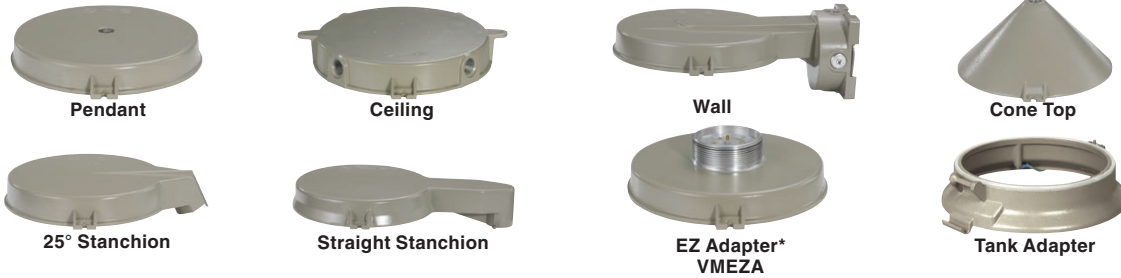
CERTILITE®V VM MOUNTING SPLICE BOXES							
HUB SIZE	**CATALOG NUMBER**						
	PENDANT	**CEILING 4 HUB**	**CEILING 5 HUB**	**WALL**	**CONE TOP**	**25 DEGREE STANCHION**	**90 DEGREE STANCHION**
3/4"	VMA2B	VMX2B	VMX6B	VMB2B	VMC2B	—	—
1"	VMA3B	VMX3B	VMX7B	VMB3B	VMC3B	—	—
1-1/4"	—	—	—	—	—	VMD4B	VMS4B
1-1/2"	—	—	—	—	—	VMD5B	VMS5B
M-20	—	VMX8B**	VMX9B**	VMB8B**	—	—	—

* VMEZA is used between a driver tank and an EZ mount-ordered separately.

** Furnished with ⟨Ex⟩ non-metallic plugs. Also available: VMB10B wall 4xM25 hubs, and VMB810B 2xM20 side hubs and 2xM25 top/bottom

VM1L LED OPTICS AND ACCESSORIES		
DESCRIPTION	**OPTIC LOGIC**	**GUARD**
Globe (glass)	VMG17 (GL)	VMAG17
Refractor (all glass) Type V	VMR175 (R5)	VMAG17
Refractor (spin top) 8"Type V	VZRG1550 (S8)	VMRWG8
Refractor (spin top) 12"Type V	VZRG2550 (S5)	VMRWGS
Refractor polycarbonate (spin-top) 12" Type V	VZRP175 (P5)	VMRWGS
DOME REFLECTOR (Polyester reinforced fiberglass)	VMPSD40	NA
ANGLE REFLECTOR (Polyester reinforced fiberglass)	VMPA40	NA
120VAC Photocell with FS Style Cover	VMFSPC1	NA
208-277VAC Photocell with FS Style Cover	VMFSPC2	NA
3-sided EXIT Accessory (use without guard)	VEXA100B	NA
Tank adapter to Crouse-Hinds® VM Series mounts*	VMCHVM	NA

O P T I C S

VMG17

VMR175

VZRG1550

VZRG2550

A C C E S S O R I E S

VMAG17

VMRWG8
VMRWGS

VMPSD40

VMPA40

VMFSPC1

VEXA100B

TYPICAL WEIGHTS (LBS.) W/ STANDARD GLOBE AND GUARD - VM1L SERIES			
Pendant 23.00	Ceiling 24.10	Wall 27.50	Stanchion 23.90

HOUSING FIXTURE ASSEMBLY GUIDE

MOUNTING TYPE

Pendant

Cone Top

25° Stanchion

EZ Adapter
VMEZA

Tank Adapter

Ceiling

Wall

Straight Stanchion

TANK

VM1L

VM2LC

VM4LC

VM2LB

VM4LB

OPTIC

VMG17 VMR175

VZRG1550

VZRPF
VZRGF

VMG25

VMR255
VMR253
VMR251

VZRG4050
VZRG4020

VMER40

GUARD

VMAG17

VMRWG8
VMRWGS

VMERG

VMAG25S

VMRWGS

VMAGBC

REFLECTOR

VEXA100B VMPSD40 VMPA40

HRD400 VEXA400 HRD400ALZ VMPSD40 VMPA40
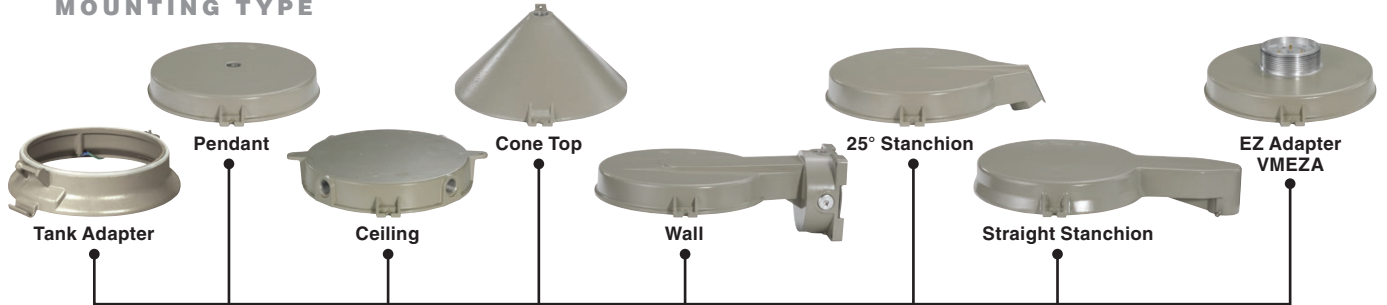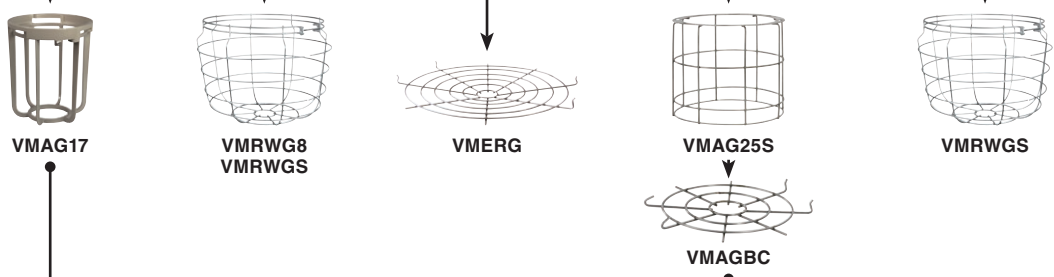
HIGH WATTAGE – INTRODUCTION

VM2LB with Globe/Guard

VM4LB with Globe/Guard

VM4LC with Flat Lens

QUAD APPROVALS
CEC ATEX NEC IECEx

IECEx

Segurança

Class I, Div. 2, Groups A,B,C,D
Class I, Zone 2, Groups IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III
Suitable for wet locations
Type 3, 4X
IP66
Marine Rated (US only)

Certified - File LR11713

IECEx Rated Models (VM4L with IEx suffix)
Ex nA IIC T4, Gc / Ex tb IIC T83°C Db
Tamp -40°C ≤Ta≤+65°C, IP66

IECEx Certificate
QPS 15.0006

INMETRO Certificate
IEx 16.0137

ATEX Certificate
CML 15ATEX4101X(nA)
&
CML 15ATEX3102X(tb)

Contact Factory for other certification details

DLC QPL LISTED

Consult website
for current list of
approved luminaires

CERTILITE V LED

FEATURES-SPECIFICATIONS

Applications

CERTILITE® V VM4L LED fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC/IECEx/ATEX & INMETRO.

Typical applications include manufacturing plants, food processing, certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances
- UL-8750 for LED lighting
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminairies for use in hazardous locations
- Enclosed and gasketed
- Type 3, 4X
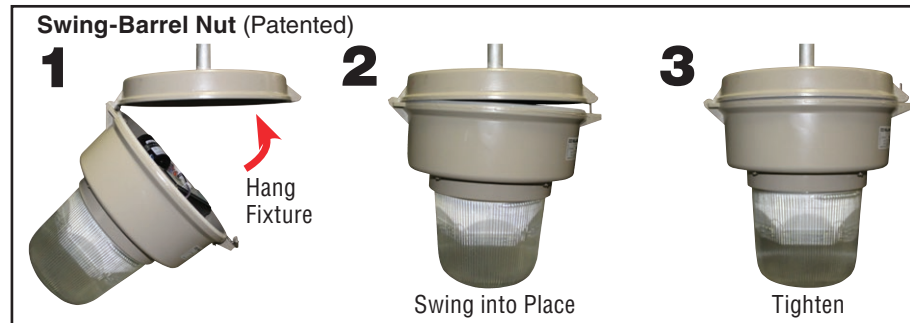- IP66 & Marine
- Self-testing per NFPA 101® Life Safety Code

Materials
- Housing, splice box and cast guards corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware – stainless steel
- Reflectors – Polyester reinforced fiber glass or aluminum

LED Luminaire Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models)
10KA/10KV Surge Protection (for 347-480 VAC)

- Traditional Industrial Appearance, Suitability, and Photometric Performance
- Wide variety of optics including globes, globes with reflectors, all-glass refractors, spin-top refractors and flat lens
- Swing-Barrel Nut patented tank mounting system
- Optional Mounting arrangements including Pendant, Wall, Ceiling, Stanchion and others
- VM4L LED Housings can be retrofitted to existing VM splice boxes; upgrade from HID sources
- VM2Lx housing is 1.56" shallower for low ceilings
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000 K (CCT range); approx. 70 CRI
- Energy Savings – less than 130 Watts of Power
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -40°C to 65°C (see tables). -20°C to 50°C Ambient suitability for Emergency models.
- **Warm LED color option available with 3070**

- Instant On – Including after power interruption
- World Voltage 120 – 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- Dual Driver Option (DDR) – For additional energy savings, half of the fixture can be turned off.
- Two LED internal heat sink styles
  » Bulb VM2LB/VM4LB
  » Concave VM2LC/VM4LC

Swing-Barrel Nut (Patented)

1 Hang Fixture
2 Swing into Place
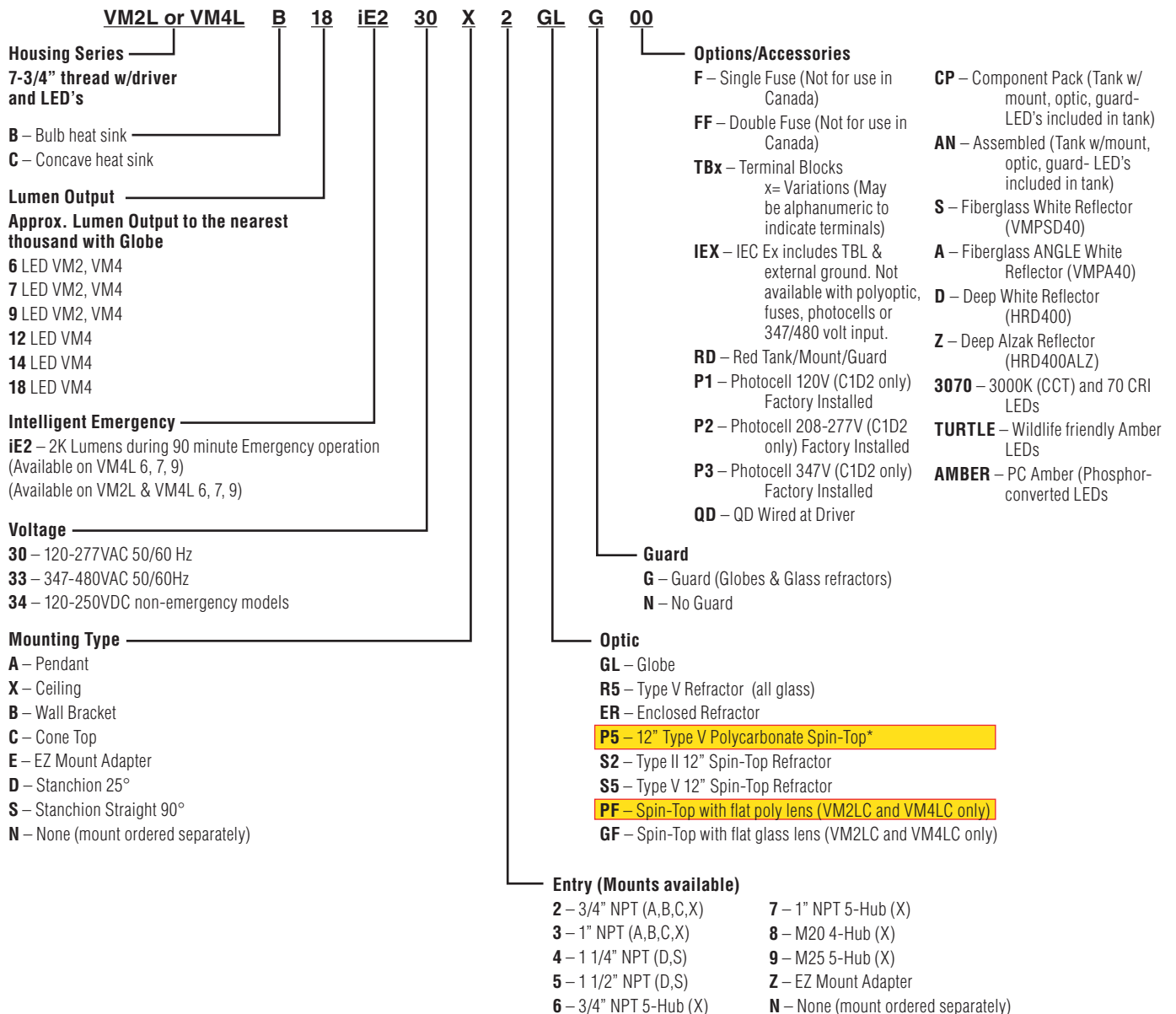**3** Tighten

HUBBELL Harsh & Hazardous

HIGH WATTAGE – CATALOG LOGIC

CERTILITE V LED

> **Killark high efficiency LED Luminaries require NO external heat sink which adds weight and collects dust and other contaminates**

CertiLite®V LED Catalog Number Logic

VM2L or VM4L   B   18   iE2   30   X   2   GL   G   00

Housing Series
7-3/4" thread w/driver and LED's

B – Bulb heat sink
C – Concave heat sink

Lumen Output
Approx. Lumen Output to the nearest thousand with Globe
6 LED VM2, VM4
7 LED VM2, VM4
9 LED VM2, VM4
12 LED VM4
14 LED VM4
18 LED VM4

Intelligent Emergency
iE2 – 2K Lumens during 90 minute Emergency operation
(Available on VM4L 6, 7, 9)
(Available on VM2L & VM4L 6, 7, 9)

Voltage
30 – 120-277VAC 50/60 Hz
33 – 347-480VAC 50/60Hz
34 – 120-250VDC non-emergency models

Mounting Type
A – Pendant
X – Ceiling
B – Wall Bracket
C – Cone Top
E – EZ Mount Adapter
D – Stanchion 25°
S – Stanchion Straight 90°
N – None (mount ordered separately)

Options/Accessories

F – Single Fuse (Not for use in Canada)
FF – Double Fuse (Not for use in Canada)
TBx – Terminal Blocks
  x= Variations (May be alphanumeric to indicate terminals)
IEX – IEC Ex includes TBL & external ground. Not available with polyoptic, fuses, photocells or 347/480 volt input.
RD – Red Tank/Mount/Guard
P1 – Photocell 120V (C1D2 only) Factory Installed
P2 – Photocell 208-277V (C1D2 only) Factory Installed
P3 – Photocell 347V (C1D2 only) Factory Installed
QD – QD Wired at Driver

CP – Component Pack (Tank w/ mount, optic, guard- LED's included in tank)
AN – Assembled (Tank w/mount, optic, guard- LED's included in tank)
S – Fiberglass White Reflector (VMPSD40)
A – Fiberglass ANGLE White Reflector (VMPA40)
D – Deep White Reflector (HRD400)
Z – Deep Alzak Reflector (HRD400ALZ)
3070 – 3000K (CCT) and 70 CRI LEDs
TURTLE – Wildlife friendly Amber LEDs
AMBER – PC Amber (Phosphor-converted LEDs)

Guard
G – Guard (Globes & Glass refractors)
N – No Guard

Optic
GL – Globe
R5 – Type V Refractor (all glass)
ER – Enclosed Refractor
P5 – 12" Type V Polycarbonate Spin-Top*
S2 – Type II 12" Spin-Top Refractor
S5 – Type V 12" Spin-Top Refractor
PF – Spin-Top with flat poly lens (VM2LC and VM4LC only)
GF – Spin-Top with flat glass lens (VM2LC and VM4LC only)

Entry (Mounts available)
2 – 3/4" NPT (A,B,C,X)
3 – 1" NPT (A,B,C,X)
4 – 1 1/4" NPT (D,S)
5 – 1 1/2" NPT (D,S)
6 – 3/4" NPT 5-Hub (X)
7 – 1" NPT 5-Hub (X)
8 – M20 4-Hub (X)
9 – M25 5-Hub (X)
Z – EZ Mount Adapter
N – None (mount ordered separately)

*Non-glass Group G Food Processing Suitability

HIGH WATTAGE – COMPONENTS & RATINGS

"EZ" Mount Adapter
For easy fixture relocation or to repair fixture on 'bench top'.

VMEZA adapter is used between a driver tank and EZ mount ordered separately.

| Pendant | Ceiling | Wall Bracket | 25° Stanchion |

Competitive Adapters

Designed to ease upgrading of other manufacturer's fixtures to KILLARK LEDs where removal of existing mounting screws and conduit would be difficult and time consuming.

MOUNTING BOXES				
CATALOG NUMBER				**HUB SIZE**
PENDANT	**CEILING**	**BRACKET**	**STANCHION**	
EZA2	EZX2	EZB3	—	3/4"
EZA3	EZX3	EZB3	—	1"
—	—	—	EZD4A	1-1/4" / 1/2"*

1-1/2" furnished with 1-1/2"-1-1/4" reducer and extension.

VMAG25S

VMRWGS

VMERG

VMAGBC

VM2L/VM4L LED OPTICS AND ACCESSORIES		
DESCRIPTION	**OPTIC LOGIC**	**GUARD**
Flat Lens (glass spin top) "C" tank only	VZRGF12 (GF)	VZRF12GRD
Flat Lens (**polycarbonate** spin top) "C" tank only	VZRPF12 (PF)	VZRF12GRD
Globe (glass)	VMG25 (GL)	VMAG25S
Refractor (all glass) Type V	VMR255 (R5)	VMAG25S
Enclosed Reflector	VMER40 (ER)	VMERG
Refractor (**polycarbonate** spin top) 12" Type V	VZRP175B (P5)	VMRWGS
Refractor (glass spin top) 12" Type V	VZRG4050 (S5)	VMRWGS
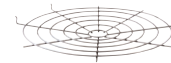
VMPSD40
Standard Dome, Fiberglass White Reflector, Dia: 16"

VMPA40
30° Angle, Fiberglass White Reflector, Dia:16"

VM2L/VM4L LED REFLECTORS AND ACCESSORIES	
DOME REFLECTOR (Polyester reinforced fiberglass)	VMPSD40
ANGLE REFLECTOR (Polyester reinforced fiberglass)	VMPA40
DEEP DOME REFLECTOR (White Painted Aluminum)	HRD400
DEEP DOME REFLECTOR (Anodized Aluminum)	HRD400ALZ
120VAC Photocell with FS Style Cover	VMFSPC1
208-277VAC Photocell with FS Style Cover	VMFSPC2
Bottom Closure for VMAG25S	VMAGBC
4-sided EXIT Accessory (use without guard)	VEXA400

HRD400
Deep Aluminum, White Reflector, Dia: 21"

HRD400ALZ
Deep Aluminum, Anodized Reflector, Dia: 21"
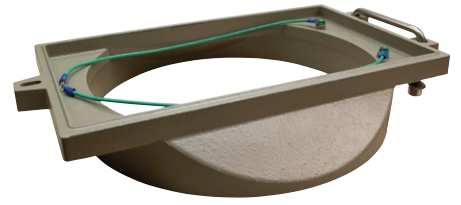
VEXA400
Fixture not included

VMFSPC

FIXTURE ADAPTERS

VMCHVM-DEEP

VMCHVM

VMGEH2

CERTI*LITE*V LED

FEATURES-SPECIFICATIONS

Applications

The Killark VM adapters are designed to ease upgrading of other manufacturer's fixtures to KILLARK LEDs where removal of existing mounting screws and conduit would be difficult and time consuming.

Adapters are used with the Killark Fixture Housing, Globe, guard (if applicable) and the competitive fixture splicebox. The Killark fixtures when used with the Killark adapters and appropriate competitive adapter.

Features

- Fixture and competitive mount are certified together
- Baked powder epoxy/polyester finish, electrostatically applied to match the Killark VM tank
- All external hardware – Stainless Steel

Class I, Div. 2, Groups A, B, C, D
Class II, Div. 1, Groups E, F, G
Class III
Type 4X

VM SERIES COMPETATIVE ADAPTERS		
CATALOG NUMBER	DESCRIPTION	EXAMPLE OF MODEL UTILIZED OR REPLACED
VMCHVM	Tank adapter to Crouse-Hinds® VM Series mounts	VMV S2 C 050 R5
VMCHVM-DEEP	Tank adapter to CH (70's era wall mount with deep box)	VMV S2 TW 050 R5
VMM2LP	Tank adapter to Appleton® MERCMASTER II mounts	LPCL 50 75 J
VMM3KP	Tank adapter to Appleton® MERCMASTER III mounts	KPCL 50 75 J5 MT
VMHLDS	Tank adapter to Hazlux®3 mounts	DS015 H040-TGL-P2 E1 F
VMHPP2	Tank adapter mount to Holophane® Petrolux™	PETL 250HP 27 S25 CD
VMGEH2	Tank adapter H2 mount to GE® H2 Filtr-gard™	H2 4 05L 3C GG
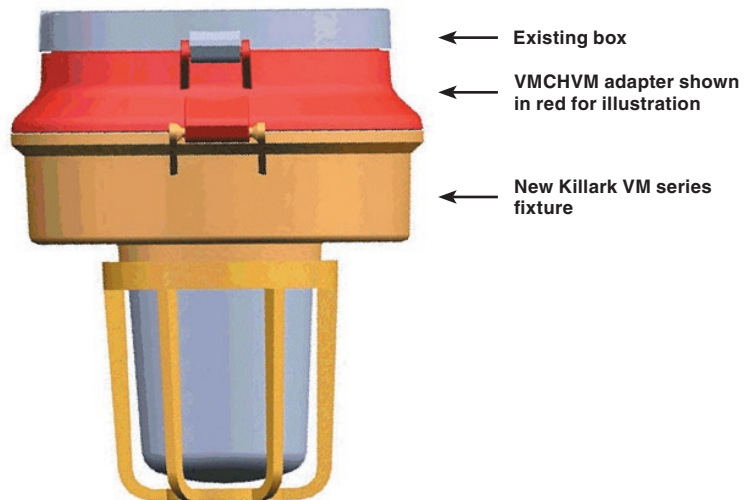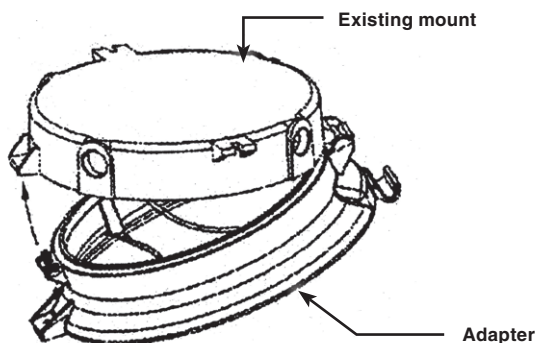
Existing mount

Adapter

Existing box

VMCHVM adapter shown in red for illustration

New Killark VM series fixture

EXPLOSION-PROOF – INTRODUCTION & LOGIC

Class I, Div. 1 & 2, Groups C,D
Class I, Zones 1 & 2, Groups IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III, Div. 1 & 2
Suitable for wet locations
Suitable for Paint Spray Booth
Marine Rated (US only)
Type 3, 4, 4X
Factory Sealed

Certified - File LR11713

HOSTILE*LITE*® LED

FEATURES-SPECIFICATIONS

Applications

HostileLite® EML LED Series fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow, or high ambients can be expected. They can be used in locations made hazardous due to the presence of flammable or explosive gases, vapors and combustible dusts as defined by the NEC.

Applications include classified areas such as paint manufacturing plants, ammunition facilities, oil and gas producing and refining plants, off-shore and dockside installations, tank farms, pipeline pumping stations and marine loading and fuel transfer terminals.

Compliances

- UL-8750 for LED lighting
- UL-844 Electric Lighting Fixtures for use in Hazardous Locations
- UL Marine Type Electric Lighting Fixtures
- CSA C22.2 no. 137-M1981 Electric Luminaires for use in Hazardous Locations
- Type 3, 4, 4X, 7CD, 9EFG

Materials

- Housing, splice box and guards corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electorstatically applied for complete, uniform corrosion protection
- All external hardware – Stainless Steel
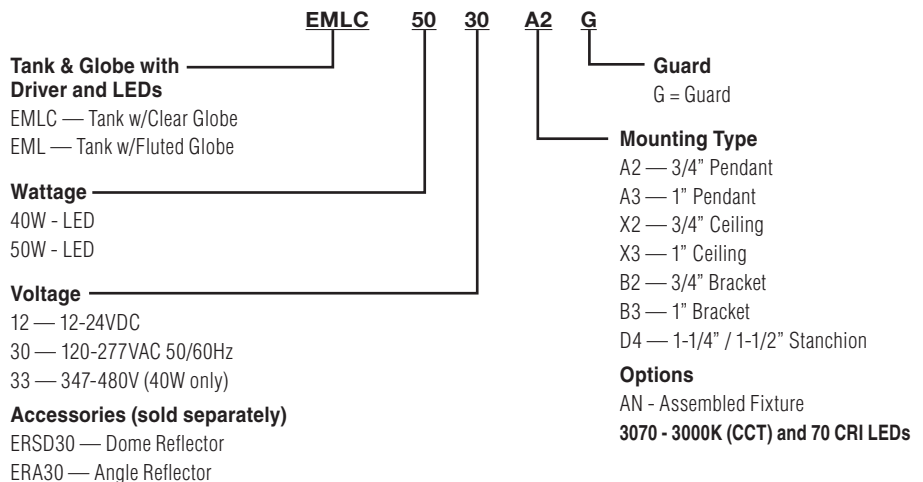- Reflectors are aluminum with white finish

LED Luminaire Features and Standards

- Compact Explosion-proof with Traditional Industrial Appearance and Suitability
- Fluted or Exclusive Clear Globe; Dome or Angle Reflectors
- Optional Mounting arrangements including Pendant, Wall, Ceiling, and Stanchion
- EML LED Housings can be retrofitted to existing EZ splice boxes; upgrade from Incandescent, Fluorescent or HID
- Energy Savings – Less than 55 Watts of Power
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours

- Crisp White Light for Excellent Color Rendering – Chromaticity 5000K (CCT range; approx. 70 CRI
- Ambient suitability -40°C to 55°C
- Instant on – Including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- Factory Sealed Construction – No external seal required, simply wire mouting cap and thread-in fixture to install
- **Warm LED color option available with 3070**

> Suitable for Paint Spray Booth Applications

Catalog Number Logic

```
            EMLC   50   30   A2   G
```

Tank & Globe with Driver and LEDs
EMLC — Tank w/Clear Globe
EML — Tank w/Fluted Globe

Wattage
40W - LED
50W - LED

Voltage
12 — 12-24VDC
30 — 120-277VAC 50/60Hz
33 — 347-480V (40W only)

Accessories (sold separately)
ERSD30 — Dome Reflector
ERA30 — Angle Reflector

Guard
G = Guard

Mounting Type
A2 — 3/4" Pendant
A3 — 1" Pendant
X2 — 3/4" Ceiling
X3 — 1" Ceiling
B2 — 3/4" Bracket
B3 — 1" Bracket
D4 — 1-1/4" / 1-1/2" Stanchion

Options
AN - Assembled Fixture
3070 - 3000K (CCT) and 70 CRI LEDs

EXPLOSION-PROOF – COMPONENTS & RATINGS

Pendant

Ceiling

Wall Bracket

25° Stanchion

EMG2

Factory Sealed Photocell VMHKPC1

EZ MOUNTING BRACKETS				
CATALOG NUMBER				**HUB SIZE**
PENDANT	**CEILING**	**WALL**	**STANCHION**	
EZA2	EZX2	EZB2	—	3/4"
EZA3	EZX3	EZB3	—	1"
—	—	—	EZD4*	1-1/4" / 1-1/2"*

* 1-1/2" furnished with 1-1/2" - 1-1/4" reducer

ERSD30 Standard Dome

ERA30 Angle Dome

EMGS3 EMGS2

EAC/EACH

EML - EMLC LED ACCESSORIES	
DESCRIPTION	**CATALOG NUMBER**
Guard	EMG2
Dome Reflector	ERSD30
Angle Reflector	ERA30
CIDI C2D1 N4X Photocell 120VAC	VMHKPC1
CIDI C2D1 N4X Photocell 208-277VAC	VMHKPC2
Replacement Fluted Globe & Support	EMGS3
Replacement Clear Globe & Support	EMGS2
Adapter to old Killark "H" Series or Crouse Hinds®	EAC/EACH

EML4530 EMLC4530

TYPICAL WEIGHTS (LBS.) W/STANDARD GLOBE AND GUARD - EML (C) SERIES			
Pendant 29.33	Ceiling 31.79	Wall 33.25	Stanchion 30.94

EXPLOSION-PROOF – INTRODUCTION & LOGIC

Class I, Div. 1 & 2, Groups C,D
Class I, Zones 1 & 2, Groups IIB, IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III, Div. 1 & 2
Suitable for wet locations
Suitable for Paint Spray Booth
Marine Rated (US only)
Type 3, 4, 4X
Factory Sealed

c ⒸⓈⒶ us   Certified - File LR11713

HOSTILE*LITE*® LED

FEATURES-SPECIFICATIONS

Applications

HOSTILELITE® EZL Series high wattage LED fixtures are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow or where high ambient temperatures can be expected. They can be used in locations made hazardous due to the presence of flammable or explosive gases, vapors and combustible dusts as defined by the NEC.

Typical applications include classified areas such as paint manufacturing plants, paint spray, oil and gas producing and refining plants, off-shore and dockside installations, tank farms, pipeline pumping stations and marine loading and fuel transfer terminals.

Compliances

- UL-8750 for LED lighting
- UL-844 Electric Lighting Fixtures for use in Hazardous Locations
- UL Marine Type Electric Lighting Fixtures
- CSA C22.2 no. 137-M1981 Electric Luminaires for use in Hazardous Locations
- Type 3, 4, 4X, 7CD, 9EFG

Materials

- Housing, splice box, and guards corrosion resistant copper-free aluminum alloy
- Baked powder epoxy/polyester finish, electorstatically applied for complete, uniform corrosion protection
- All external hardware – Stainless Steel
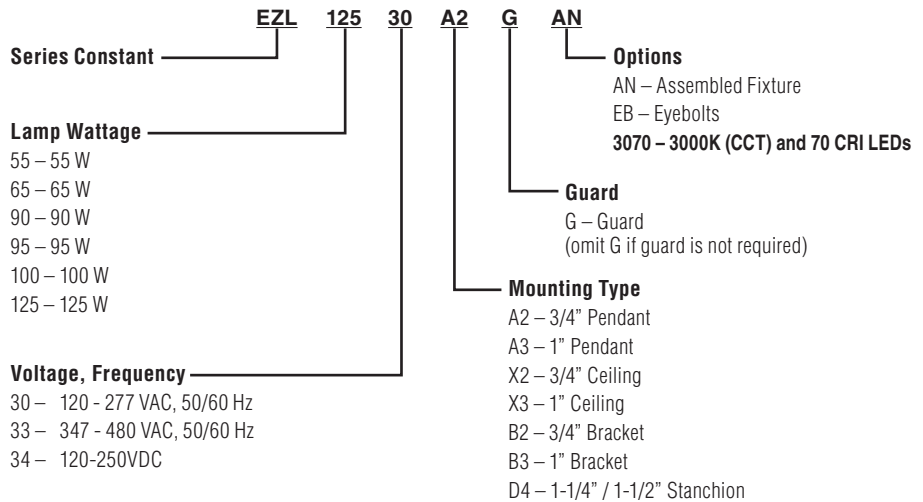- Reflectors are aluminum with white finish

LED Luminaire Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models) **10KA/10KV Surge Protection** (for 347-480 VAC)

- Explosion-proof with Traditional Industrial Appearance and Suitability
- Mounting choice – Pendant, ceiling, 25° stanchion or 90° wall mount, all with "wireless" design that allows fast, easy fixture installation or removal for maintenance.
- Accessories – Available with or without guard, standard dome or angle reflector
- EZL LED Housings can be retrofitted to existing EZ splice boxes; upgrade from Incandescent, Fluorescent or HID
- Energy Savings – Less than 130 Watts of Power

- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Crisp White Light for Excellent Color Rendering – Chromaticity 5000K (CCT range; approx. 70 CRI
- Ambient suitability -40°C to 55°C
- Instant on – Including after power interruption
- "World Voltage" 120-277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- Factory Sealed Construction – No external seal required, simply wire mouting cap and thread-in fixture to install
- **Warm LED color option available with 3070**

Catalog Number Logic

| EZL | 125 | 30 | A2 | G | AN |

Series Constant ——— EZL

Lamp Wattage ——— 125
55 – 55 W
65 – 65 W
90 – 90 W
95 – 95 W
100 – 100 W
125 – 125 W

Voltage, Frequency ——— 30
30 – 120 - 277 VAC, 50/60 Hz
33 – 347 - 480 VAC, 50/60 Hz
34 – 120-250VDC

Mounting Type ——— A2
A2 – 3/4" Pendant
A3 – 1" Pendant
X2 – 3/4" Ceiling
X3 – 1" Ceiling
B2 – 3/4" Bracket
B3 – 1" Bracket
D4 – 1-1/4" / 1-1/2" Stanchion

Guard ——— G
G – Guard
(omit G if guard is not required)

Options ——— AN
AN – Assembled Fixture
EB – Eyebolts
3070 – 3000K (CCT) and 70 CRI LEDs

FIXTURE ADAPTERS

EAC/EACH

EZBA12

Class I, Div. 1 & 2, Group D
Class I, Zones 1 & 2, Groups IIA
Class II, Div. 1 & 2, Groups E,F,G
Class III

c (UL) us Certified

FEATURES-SPECIFICATIONS

### HOSTILE*LITE*®

Applications

EAC Series adapters are designed to ease upgrading of existing Crouse-Hinds® "EV" series or existing Killark "H" series to Killark HOSTILELITE® EML or EZL series. Units are primarily designed to aid replacement of old ceiling or wall mount units where removal of the existing mounting box and conduit would be difficult or time consuming. Adapter & Killark fixtures rated Type 4.

Adapters are used with Fixture Housing, Globe, Globe Support assemblies. Complete fixture with mounting box is not required. Adapters are painted to match Killark beige fixture finish.

Features

- Setscrews permit secure adapter attachment into old mounting box and to new fixture
- Converted fixtures may be easily removed for service using the Killark EZ mounting system. Wire terminals are included in the adapter (EZTB Terminal Block)

EAC / EZBA FIXTURE ADAPTERS		
CATALOG NUMBER	DESCRIPTION	EXAMPLE OF MODEL UTILIZED OR REPLACED
EAC	Killark H series Ceiling or Wall	HXG-2-125 Fixture
EACH12	Crouse old style Ceiling Mount with lamp socket in adapter ring between fixture body and a GUF 12 pitch box	GUF box w/Set Screw
EZBA12	Crouse old style Wall Mount, old style Arm with integral lamp socket (socket in fixture in newer models) attached to GUF 12 pitch mounting box. EZBA12 includes arm	GUF box w/Set Screw
EACH16	Crouse newer style ceiling or wall fixtures w/lamp socket in fixture body; mounted to EV series 16 pitch threaded box; adapter fits in ceiling box or existing arm attached to wall fixture	EVA26/EV22 Box; EVBX240
EAAP-C2	Appleton Code-Master 2	CLC5075
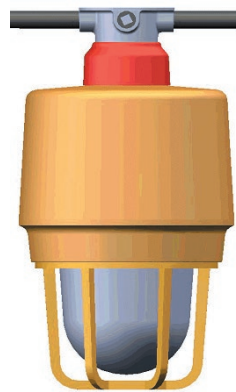
← **Existing box & conduit**

← **Adapter shown in red for illustration**

← **New Killark EML or EZL series fixture**

2.31"   3.30"

2.38"

7.38"

Existing mount

Existing mount

Fixture body

Supply leads

EACH12 or EACH16 adapter

EZTB terminal block (typical)

C1D2 FLOOD – INTRODUCTION & LOGIC

Segurança N IEx

QUAD APPROVALS — CEC · ATEX · NEC · IECEx

IECEx

Class I, Div. 2, Groups A,B,C,D
Class II, Div. 1&2, Groups EFG
Class III
Suitable for wet locations
Marine Rated (US Only)
Type 3, 4X
IP66

c(CSA)us File LR11713

IEC Ex Rated model (w/IEX suffix)
Zone 2 and Zone 21 areas
Ex nA IIC T6…T3, Gc
Ex tb IIIC T160°C Db
Tamb -50°C <Ta<+55°C, IP66

IECEx Certificate
CSA 14.0002X

ATEX Certificate
CML 14ATEX3087/4088

PETROBRIGHT® LED

FEATURES-SPECIFICATIONS

Applications

LED Floods are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow, or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC/IECEx/ATEX & INMETRO.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances

- UL-8750 for LED lighting
- ANSI/UL 1598(A)
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminairies for use in hazardous locations
- Enclosed and gasketed
- Type 3, 4X
- IP66
- IEX suffix Zone 2/21 to IEC 60079-0, 60079-15, 60079-31 Standards

Materials

- Body, end caps and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware - stainless steel
- Thermal shock and impact resistant glass lens
- High temperature silicone gasketing
- Trunnion heavy gauge galvanized steel with painted finish

LED Flood Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models) **10KA/10KV Surge Protection** (for 347-480 VAC)

- Crisp White Light for Excellent Color Rendering - Chromaticity 5000K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -50°C to 55°C up to 125W
- Instant On – Including after power interruption
- World Voltage 120 – 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- Standard Fixture is supplied with a single 3/4" NPT entry
- **Warm LED color option available with 3070 option**
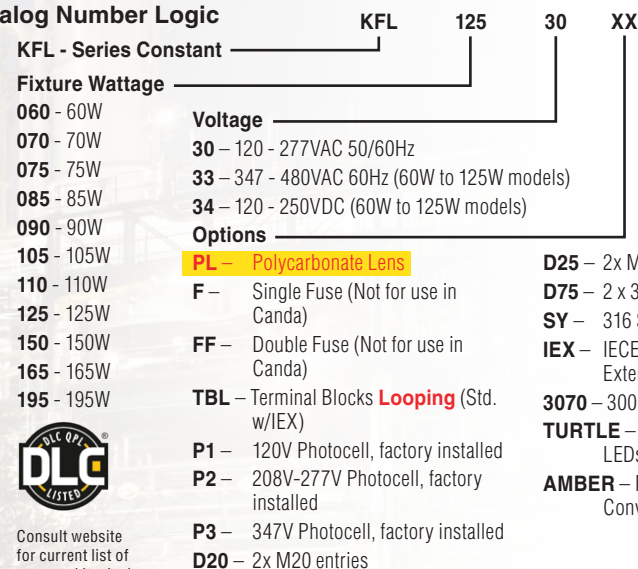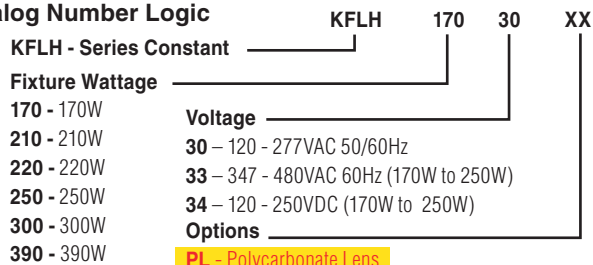
PATENTED LUMINAIRE DESIGN

KFL with KFS-6 Slipfitter mount on 2" pipe

Dark Sky Visor KFL-DARK

IEX Units include Qty. 3 6mm terminals plus external ground as standard

Catalog Number Logic

KFL   125   30   XX

KFL - Series Constant

Fixture Wattage

060 - 60W	
070 - 70W	
075 - 75W	
085 - 85W	
090 - 90W	
105 - 105W	
110 - 110W	
125 - 125W	
150 - 150W	
165 - 165W	
195 - 195W	

DLC QPL LISTED

Consult website for current list of approved luminaires

Voltage

30 – 120 - 277VAC 50/60Hz
33 – 347 - 480VAC 60Hz (60W to 125W models)
34 – 120 - 250VDC (60W to 125W models)

Options

PL – Polycarbonate Lens
F – Single Fuse (Not for use in Canda)
FF – Double Fuse (Not for use in Canda)
TBL – Terminal Blocks **Looping** (Std. w/IEX)
P1 – 120V Photocell, factory installed
P2 – 208V-277V Photocell, factory installed
P3 – 347V Photocell, factory installed
D20 – 2x M20 entries

D25 – 2x M25 entries
D75 – 2 x 3/4" NPT
SY – 316 SS Yoke
IEX – IECEx & ATEX includes TBL and External Ground (to 125W)
3070 – 3000K (CCT and 70 CRI LEDs
TURTLE – Wildlife friendly Amber LEDs
AMBER – PC Amber (Phosphor-Converted) LEDs

C1D2 FLOOD – INTRODUCTION & LOGIC

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 2, IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
Class III
Suitable for wet locations
Marine Rated (US only)
Type 3, 4X
IP66

IEC Ex Rated Model (w/ IEX suffix)
Zone 2 and Zone 21 areas
Ex nA IIC T6…T3, Gc
Ex tb IIC T105°C, Db
Tamb -50°C < Ta < +55°C, IP66

IECEx Certificate
QPS 15.0011

ATEX Certificate
CML 15ATEX4079X (nA)
&
CML 15ATEX3080X (tb)

Segurança

PETROBRIGHT® **LED**

FEATURES-SPECIFICATIONS

Applications

LED Floods are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC/IECEx/ATEX & INMETRO.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

Compliances
- UL-8750 for LED lighting
- ANSI/UL 1598(A)
- UL-844 Standard for lighting fixtures for hazardous locations, Class I, Division 2; Class II, Divisions 1 and 2; Class III
- CSA C22.2 no. 137-M1981 electric luminairies for use in hazardous locations
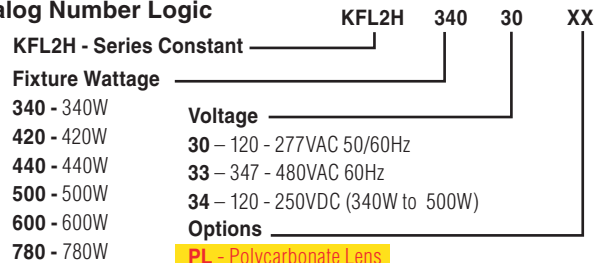- Enclosed and gasketed
- Type 3, 4X
- IP66

Materials
- Body and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware – stainless steel
- Thermal shock and impact resistant glass lens (Polycarbonate available)
- High temperature silicone gasketing
- Trunnion heavy gauge 316 stainless steel

LED Flood Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models)
10KA/10KV Surge Protection (for 347-480 VAC)

- Crisp White Light for Excellent Color Rendering – Chromaticity 5000K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -40°C to 55°C up to 250W to -50°C for non-hazardous applications
- Instant On – Including after power interruption
- World Voltage 120 – 277VAC 50/60Hz
- Solder-LESS LED Board Connections – Vibration Resistant
- Standard fixture is supplied with dual M20 slip holes with 3/4" NPT hub adapters with one plugged
- **Warm LED color option available with 3070**

PATENTED LENS and REFLECTOR DESIGN

KFLH Luminaire

Dark Sky Visor KFLH-DARK

Catalog Number Logic

| KFLH | 170 | 30 | XX |

KFLH - Series Constant

Fixture Wattage
170 - 170W
210 - 210W
220 - 220W
250 - 250W
300 - 300W
390 - 390W

Voltage
30 – 120 - 277VAC 50/60Hz
33 – 347 - 480VAC 60Hz (170W to 250W)
34 – 120 - 250VDC (170W to 250W)

Options
PL - Polycarbonate Lens
F - Single Fuse (Not for use in Canada)
FF - Double Fuse (Not for use in Canada)
TBL - Terminal Blocks **Looping**
P1 - 120V Photocell, factory installed
P2 - 208V-277V Photocell, factory installed
P3 - 347V Photocell, factory installed
3070 - 3000K (CCT) and 70 CRI LEDs
TURTLE - Wildlife Friendly Amber LEDs
AMBER - PC Amber (Phosphor Converted) LEDs

C1D2 FLOOD – INTRODUCTION & LOGIC

Segurança N IEx

QUAD APPROVALS
CEC ATEX NEC IECEx

IECEx

Class I, Div. 2, Groups A, B, C, D
Class I, Zone 2, IIC, IIB, IIA
Class II, Div. 1 & 2, Groups E, F, G
Class III
Suitable for wet locations
Marine Rated (US only)
Type 3, 4X
IP66

IEC Ex Rated Model (w/ IEX suffix)
Zone 2 and Zone 21 areas
Ex nA IIC T6…T3, Gc
Ex tb IIC T105°C Db
Tamb -50°C < Ta < +55°C, IP66

IECEx Certificate
QPS 15.0011

cCSAus

ATEX Certificate
CML 15ATEX4079X (nA)
&
CML 15ATEX3080X (tb)

PETROBRIGHT® LED

FEATURES-SPECIFICATIONS

Applications

LED Floods are designed for installations where moisture, dirt, dust, corrosion and vibration may be present, or Type 3 and 4X areas where wind, water, snow or high ambients can be expected. They can be used in locations made hazardous by the presence of flammable vapors or gases or combustible dusts as defined by the NEC/CEC/IECEx/ATEX & INMETRO.

Typical applications include manufacturing plants, and certain chemical and petrochemical processing facilities, sewage treatment plants, off-shore and dockside installations, garages and storage facilities.

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- CSA C22.2 no. 137-M1981 electric luminairies for use in hazardous locations
- Enclosed and gasketed
- Type 3, 4X
- IP66

Materials

- Body and lens frame corrosion resistant copper-free aluminum alloy with baked powder epoxy/polyester finish, electrostatically applied for complete, uniform corrosion protection
- All external hardware – stainless steel
- Thermal shock and impact resistant glass lens (Polycarbonate available)
- High temperature silicone gasketing
- Trunnion heavy gauge 316 stainless steel

LED Flood Features and Standards

Supplemental **20KA/10KV Surge Protection** is **standard** (for 120-277 VAC models)
10KA/10KV Surge Protection (for 347-480 VAC)

- Crisp White Light for Excellent Color Rendering – Chromaticity 5000K (CCT); approx. 70 CRI
- Energy Savings – High lumens per watt
- LED Array Life – 100,000+ hours with 70% initial lumens
- Long Fixture Life – 50,000 - 55,000 maintenance free hours
- Ambient suitability -40°C to 55°C up to 500W to -50°C for non-hazardous applications
- Instant On – Including after power interruption
- World Voltage 120 – 277VAC 50/60Hz
- **Warm LED color option available with 3070**

PATENTED LENS and REFLECTOR DESIGN

Dark Sky Visor KFLH-DARK

- Solder-LESS LED Board Connections – Vibration Resistant
- Standard fixture is supplied with dual M20 slip holes with 3/4" NPT hub adapters with one plugged

Catalog Number Logic

KFL2H   340   30   XX

KFL2H - Series Constant

Fixture Wattage
340 - 340W
420 - 420W
440 - 440W
500 - 500W
600 - 600W
780 - 780W

Voltage
30 – 120 - 277VAC 50/60Hz
33 – 347 - 480VAC 60Hz
34 – 120 - 250VDC (340W to 500W)

Options
PL - Polycarbonate Lens
F - Single Fuse (Not for use in Canada)
FF - Double Fuse (Not for use in Canada)
TBL - Terminal Blocks **Looping**
P1 - 120V Photocell, factory installed
P2 - 208V-277V Photocell, factory installed
P3 - 347V Photocell, factory installed
IEX - IEXEx includes TBL & External ground
3070 - 3000K (CCT) and 70 CRI LEDs
TURTLE - Wildlife Friendly Amber LEDs
AMBER - PC Amber (Phosphor Converted) LEDs

KILLARK®

KILLARK

ALUMINUM CABLE CONNECTORS
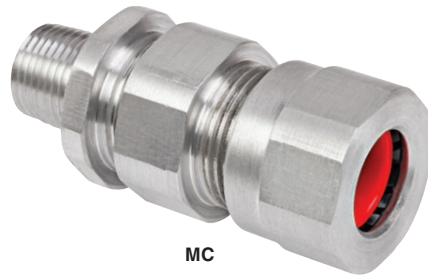
MC

Class II, Div. 1 & 2, Groups E, F, G
Class III
Class I, Zone 2†, Group IIC, Zone 20
Suitable for wet locations
Types 3, 4X IP66
MC5 thru MC0: IPX8 6ft 1hr
Suitable for use in hazardous location applications when installed according to NEC Articles 501.10

CLENCHER®

FEATURES-SPECIFICATIONS

Applications

Designed for use with jacketed interlocked, continuously corrugated and welded armor cable (all types shown in chart below). Install where it is essential to provide positive grounding to the cable and for a Type 3,4 connection.

Features

- 360° armor grounding spring is reusable.
- Robust threads and world class seal enables easy installation with minimal torque required.
- Design meets and exceeds third party requirements for cable retention.
- Provides sealing back nut plus inner O-ring seal to prevent moisture ingress to the cable armor and enclosure.
- Copper free aluminum construction for hostile, corrosive and certain hazardous locations

Materials

- Body – Copper free aluminum (less than 4/10 of 1%)
- Ground Spring – Stainless Steel
- Backnut Seal – Thermoplastic elastomer (silicone)
- Backnut Clamp – Nylon
- Inner and Outer O-rings – Nitrile

Operating Temperature Range

- -50°C to +60°C

Construction Details

Inner o-ring seal

Reuseable Grounding Spring

NEMA 4 Sealing Backnut

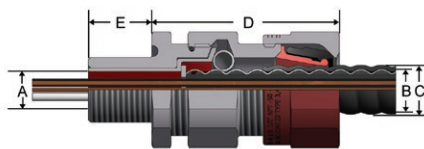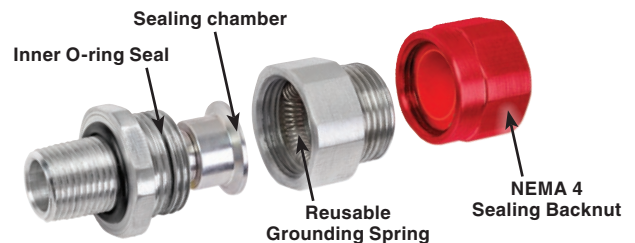| SUITABLE ARMORED/METAL CLAD CABLE TYPES	
AC-	AC90, ACWU90, AC90-HL, ACWU90-HL, ACG90, ACGWU90
MC-	MCC, MCI, MCI-A, MC-HL
RA-	RA90, RA90-HL
TECK-	TECK90, TECK90-HL

CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	CABLE ACCEPTANCE DETAILS						MAX LENGTH 'D'	NPT LENGTH 'E'	HEXAGON DIMENSIONS	
		MAX NUMBER OF CORES	THROUGH DIAMETER 'A'	ARMOR DIAMETER 'B'		DIAMETER 'C'				ACROSS FLATS	ACROSS CORNERS
				MIN.	MAX.	MIN.	MAX.				
MC1B	1/2"	6	.47" (11.9)	0.43" (10.9)	0.55" (14.0)	0.51" (13.0)	0.63" (16.0)	1.7" (43)	0.83" (21.1)	1.06" (26.9)	1.12" (28.4)
MC1C	1/2"	10	0.56" (14.2)	0.52" (13.2)	0.74" (18.8)	0.60" (15.2)	0.82" (20.8)	2.3" (58)	0.83" (21.1)	1.42" (36)	1.50" (38.1)
MC2	3/4"	21	0.80" (20.3)	0.65" (16.5)	0.95" (24.1)	0.73" (18.5)	1.03" (26.2)	2.5" (64)	0.84" (21.3)	1.61" (41)	1.69" (42.9)
MC3	1"	42	1.04" (26.4)	0.89" (22.6)	1.23" (31.2)	0.97" (24.6)	1.31" (33.3)	2.6" (66)	1.03" (26.2)	1.97" (50)	2.13" (254.1)
MC4	1 1/4"	73	1.28" (32.5)	1.15" (29.2)	1.48" (37.6)	1.23" (31.2)	1.56" (39.6)	3.1" (79)	1.05" (26.7)	2.36" (60)	2.50" (63.5)
MC5	1 ½"	80	1.66" (42.2)	1.39" (35.3)	1.62" (41.1)	1.47" (37.3)	1.78" (45.2)	4.5" (114.3)	1.07" (27.2)	2.95" (74.9)	3.06" (77.7)
MC6	2"	80	1.98" (50.3)	1.39" (35.3)	1.89" (48)	1.47" (37.3)	2.04" (51.8)	4.5" (114.3)	1.10" (27.9)	2.95" (74.9)	3.06" (77.7)
MC7	2 ½"	100	2.46" (62.5)	1.85" (47)	2.36" (60)	1.93" (49)	2.51" (63.8)	4.7" (119.4)	1.62" (41.1)	3.54" (89.1)	3.65" (92.7)
MC8	3"	120	2.93" (74.4)	2.19" (55.6)	2.81" (71.4)	2.27" (57.7)	3.01" (76.5)	4.8" (121.9)	1.68" (42.7)	4.06" (103.1)	4.22" (107.2)
MC9	3 ½"	120	3.40" (86.4)	2.69" (68.3)	3.28" (83.3)	2.77" (70.4)	3.46" (87.9)	4.8" (121.9)	1.73" (43.9)	4.53" (115.1)	4.69" (119.1)
MC0	4"	120	3.92" (99.6)	3.28" (83.3)	3.82" (97)	3.46" (87.9)	4.07" (103.4)	5.1" (129.5)	1.78" (45.2)	5.12" (130)	5.33" (135.4)

Cable armor diameter and cable jacket diameter refer to the dimensions across the crest.

† Where explosion proof/flameproof enclosures are being used the MC must be installed in conjunction with an approved sealing fitting. In Division 2 areas the MC can be fitted directly to an enclosure which has no source of ignition.

ALUMINUM CABLE CONNECTORS

MCX
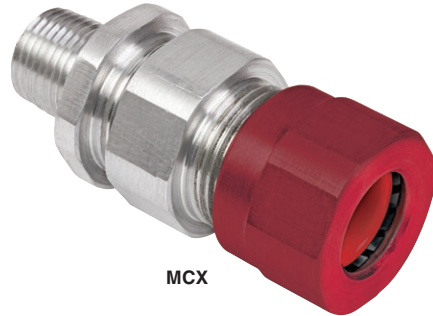
Class I, Div. 1 & 2, Groups A, B, C, D
Class II, Div. 1 & 2, Groups E, F, G
Class III
Class I, Zones 1 & 2, Group IIC, Zone 20
Types 3, 4X IP66
MCX5-MCX0: IPX8 6ft/1hr.

c CSA us

CLENCHER®

FEATURES-SPECIFICATIONS

Applications

Designed for use with jacketed interlocked, continuously corrugated and welded armor cable (all types shown in chart below). Install where it is essential to provide positive grounding to the cable with a complete gas block/explosion proof seal. Also for a Type 3, 4X connection.

Features

- 360° armor grounding spring is reusable.
- Robust threads and world class seal enables easy installation with minimal torque required.
- Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the pro-ducts of an explosion into the cable.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.

- Provides cable retention and a low smoke and fume, zero halogen seal onto the cables outer sheath.
- Provides sealing back nut plus inner O-ring seal to prevent moisture ingress to the cable armor and enclosure
- Copper free aluminum construction for harsh, corrosive and hazardous duty
- Back nut is RED to indicate HAZARDOUS area product

Materials

- Body – Copper free aluminum (less than 4/10 of 1%)
- Ground Spring – Stainless Steel
- Backnut Seal – Thermoplastic elastomer (silicone)
- Backnut Clamp – Nylon
- Inner and Outer O-rings – Nitrile

Operating Temperature Range

- -50°C to +60°C

Construction Details

Sealing chamber

Inner O-ring Seal

Reusable Grounding Spring

NEMA 4 Sealing Backnut

SUITABLE ARMORED/METAL CLAD CABLE TYPES	
AC-	AC90, ACWU90, AC90-HL, ACWU90-HL, ACG90, ACGWU90
MC-	MCC, MCI, MCI-A, MC-HL
RA-	RA90, RA90-HL
TECK-	TECK90, TECK90-HL

CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	CABLE ACCEPTANCE DETAILS							MAX LENGTH 'D'	NPT LENGTH 'E'	HEXAGON DIMENSIONS	
		MAX NUMBER OF CORES	THROUGH DIAMETER 'A'	ARMOR DIAMETER 'B'		DIAMETER 'C'					ACROSS FLATS	ACROSS CORNERS
				MIN.	MAX.	MIN.	MAX.					
MCX1B	1/2"	6	0.39" (9.9)	0.43" (10.9)	0.55" (14.0)	0.51" (13.0)	0.63" (16.0)		2.1" (53.3)	0.83" (21.1)	1.06" (26.9)	1.12" (28.4)
MCX1C	1/2"	10	0.48" (12.2)	0.52" (13.2)	0.74" (18.8)	0.60" (15.2)	0.82" (20.8)		2.4" (61)	0.83" (21.1)	1.42" (36)	1.50" (38.1)
MCX2	3/4"	21	0.71" (18.1)	0.65" (16.5)	0.95" (24.1)	0.73" (18.5)	1.03" (26.2)		2.6" (66)	0.84" (21.3)	1.61" (41)	1.69" (42.9)
MCX3	1"	42	0.96" (26.4)	0.89" (22.6)	1.23" (31.2)	0.97" (24.6)	1.31" (33.3)		2.7" (69)	1.03" (26.2)	1.97" (50)	2.13" (254.1)
MCX4	1 1/4"	73	1.16" (29.5)	1.15" (29.5)	1.48" (37.6)	1.23" (31.2)	1.56" (39.6)		3.2" (81)	1.05" (26.7)	2.36" (60)	2.50" (63.5)
MCX5	1 1/2"	80	1.35" (34.3)	1.39" (35.3)	1.62" (41.1)	1.47" (37.3)	1.78" (45.2)		4.5" (114.3)	1.07" (27.2)	2.95" (75)	3.06" (77.8)
MCX6	2"	80	1.62" (41.1)	1.39" (35.3)	1.89" (48.0)	1.47" (37.3)	2.04" (51.8)		4.5" (114.3)	1.10" (27.9)	2.95" (75)	3.06" (77.8)
MCX7	2 1/2"	100	2.09" (53.1)	1.85" (47.0)	2.36" (59.9)	1.93" (49.0)	2.51" (63.8)		4.7" (119.4)	1.62" (41.1)	3.54" (90)	3.65" (92.8)
MCX8	3"	120	2.52" (64.0)	2.19" (55.6)	2.81" (71.4)	2.27" (57.7)	3.01" (76.5)		4.8" (121.9)	1.68" (42.7)	4.06" (103)	4.22" (107.2)
MCX9	3 1/2"	120	3.01" (76.5)	2.69" (68.3)	3.28" (83.3)	2.77" (70.4)	3.46" (87.9)		4.8" (121.9)	1.73" (43.9)	4.53" (115)	4.69" (119.2)
MCX0	4"	120	3.50" (88.9)	3.28" (83.3)	3.82" (97.0)	3.46" (87.9)	4.07" (103.4)		5.1" (129.5)	1.78" (45.2)	5.12" (130)	5.33" (135.3)

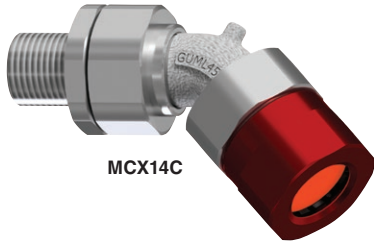*Cable armor diameter and cable jacket diameter refer to the dimensions across the crest.*
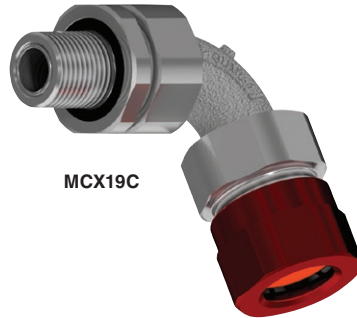
ALUMINUM CABLE CONNECTORS

MCX14C

MCX19C

Class I, Div. 1, Groups A, B, C, D
Class II, Div. 1, Groups E, F, G
Class III,
CL. I Zone 1 GR. IIC. Zone 20
Types 3, 4X, IP66

FEATURES-SPECIFICATIONS

Applications:

Designed for use with jacketed interlock, continuously corrugated and welded armor cable where it is essential to prevent explosive vapors from passing through electrical devices. This series provides a 45 and 90 degree bend for the most compact space. It is rated for indoor and outdoor use.

Features:

- 360° armor grounding spring is reusable
- Provides a barrier seal between the individual insulated cores within the cable
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- Provides a cable retention and low smoke fume, zero halogen seal onto the cables outer sheath
- Copper-free aluminum construction for harsh, corrosive and hazardous areas

- Patent pending combination union elbow that allows proper 360° alignment where space is limited
- Compact 45° & 90° bends for optimized wiring configurations
- Armor is terminated prior to bend allowing for minimal bending radius
- Backnut is anodized RED to indicate HAZARDOUS area product

Materials:

- Body: Copper-free aluminum (less than 4/10 of 1%)
- Backnut Seal: Thermoplastic elastomer (silicone)
- Backnut Clamp: Nylon
- Inner and Outer O-rings: Nitrile

Operating Temperature:

- -50°C to +60°C

Sealing Chamber

Cast Aluminum Body

NPT threads for better sealing

Reusable Grounding Spring

Clencher® Seal for superior grip

Anodized backnut to indicate hazard
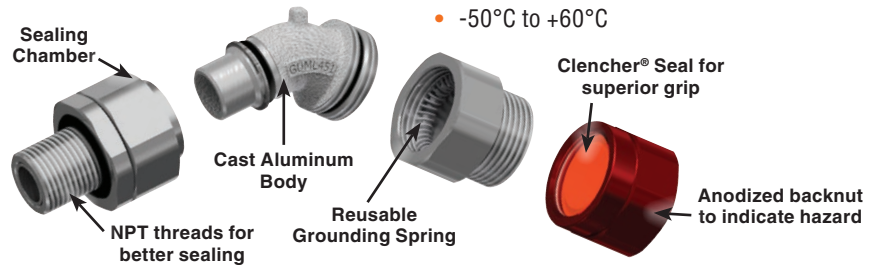
SUITABLE ARMORED/METAL CLAD CABLE TYPES	
AC-	AC90, ACWU90, AC90-HL, ACWU90-HL, ACG90, ACGWU90
MC-	MCC, MCI, MCI-A, MC-HL
RA-	RA90, RA90-HL
TECK-	TECK90, TECK90-HL

CATALOG #	ENTRY THREAD SIZE (NPT)	BEND	CABLE ACCEPTANCE DETAILS							MAX LENGTH 'D'	MAX LENGTH 'E'	MAX LENGTH 'F'
			MAX NUMBER OF CORES	THROUGH DIAMETER 'A'	ARMOR DIAMETER 'B'		DIAMETER 'C'					
					MIN.	MAX.	MIN.	MAX.				
MCX14C	1/2"	45°	10	.48" (12.2)	.52" (13.2)	.74" (18.8)	.60" (15.2)	.82" (20.8)	3.25" (82.6)	4.35" (110.5)	2.05" (52)
MCX24	3/4"	45°	21	.71" (18)	.65" (16.5)	.95" (24.1)	.73" (18.5)	1.03" (26.2)	3.43" (87.1)	4.55" (115.6)	2.19" (55.6)
MCX19C	1/2"	90°	10	.48" (12.2)	.52" (13.2)	.74" (18.8)	.60" (15.2)	.82" (20.8)	2.51" (63.8)	3.62" (91.9)	3.51" (89.2)
MCX29	3/4"	90°	21	.71" (18)	.65" (16.5)	.95" (24.1)	.73" (18.5)	1.03" (26.2)	2.61" (66.3)	3.73" (94.7)	3.60" (91.4)
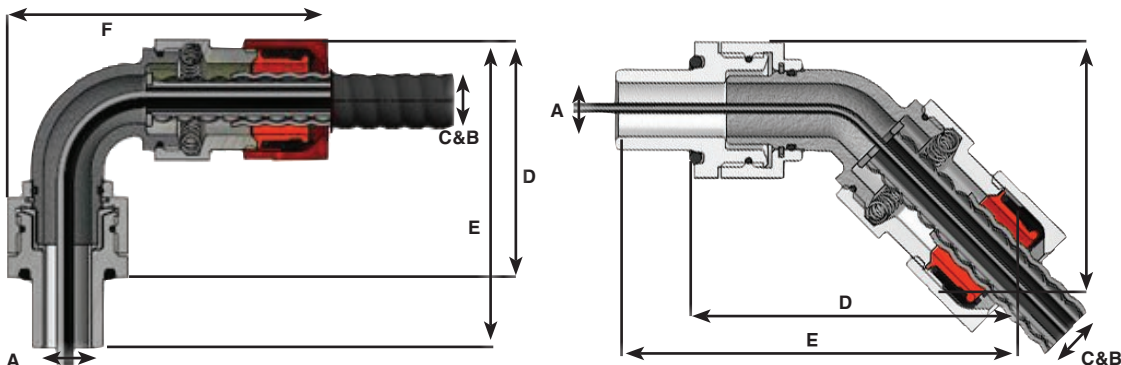
ALUMINUM CABLE CONNECTORS
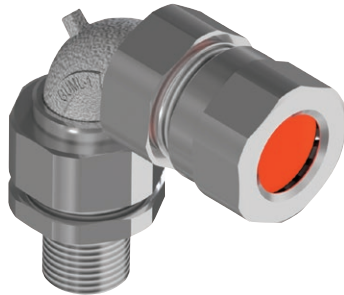
Class II, Div. 1, Groups E, F, G
Class III,
Zone 20, IP66,
Types 3, 4X
Suitable for use in hazardous location application when installed according to NEC Articles 501.10

FEATURES-SPECIFICATIONS

Applications:

Designed for use with jacketed interlock, continuously corrugated and welded armor cable. Rated for indoor and outdoor use and allows for a 45 and 90 degree bend where space is limited.
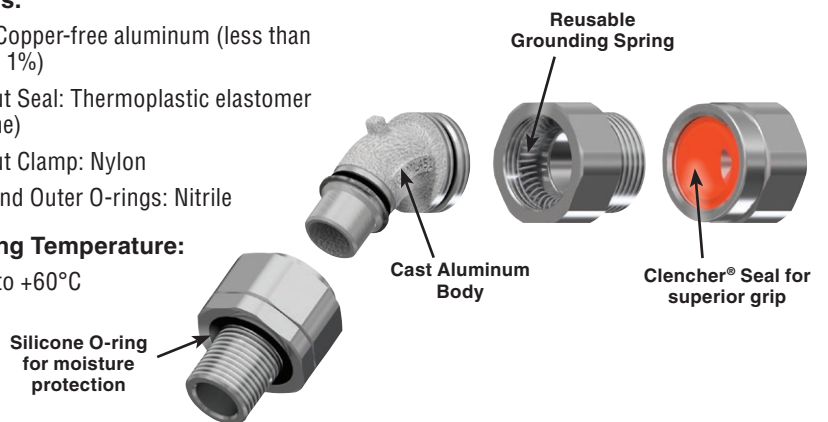
Features:

- 360° armor grounding spring is reusable
- Provides sealing backnut plus inner O-ring seal to prevent moisture ingress to the cable armor and enclosure
- Copper-free aluminum construction for harsh, corrosive and hazardous duty
- Patent pending combination union elbow that allows proper 360° alignment where space is limited
- Compact 45° & 90° bends for optimized wiring configurations
- Armor is terminated prior to bend allowing for minimal bending radius

Materials:

- Body: Copper-free aluminum (less than 4/10 of 1%)
- Backnut Seal: Thermoplastic elastomer (silicone)
- Backnut Clamp: Nylon
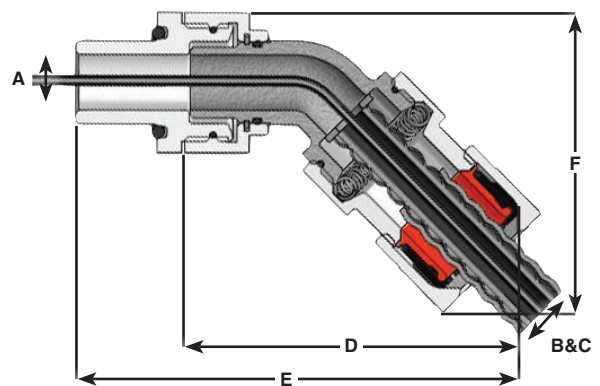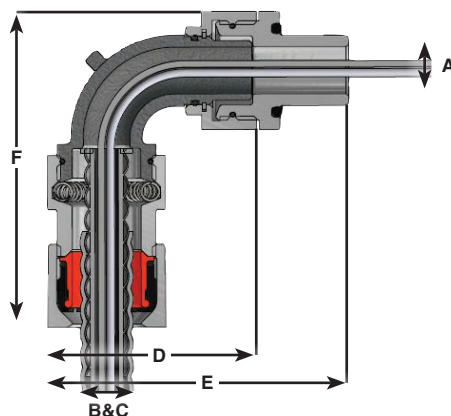- Inner and Outer O-rings: Nitrile

Operating Temperature:

- -50°C to +60°C

Reusable Grounding Spring

Cast Aluminum Body

Clencher® Seal for superior grip

Silicone O-ring for moisture protection

SUITABLE ARMORED/METAL CLAD CABLE TYPES	
AC-	AC90, ACWU90, AC90-HL, ACWU90-HL, ACG90, ACGWU90
MC-	MCC, MCI, MCI-A, MC-HL
RA-	RA90, RA90-HL
TECK-	TECK90, TECK90-HL

CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	BEND	CABLE ACCEPTANCE DETAILS							MAX LENGTH 'D'	MAX LENGTH 'E'	MAX LENGTH 'F'
			MAX NUMBER OF CORES	THROUGH DIAMETER 'A'	ARMOR DIAMETER 'B'		DIAMETER 'C'					
					MIN.	MAX.	MIN.	MAX.				
MC14C	1/2"	45°	10	.48" (12.2)	.52" (13.2)	.74" (18.8)	.60" (15.2)	.82" (20.8)		3.25" (82.6)	4.35" (110.5)	2.05" (52)
MC24C	3/4"	45°	21	.71" (18)	.65" (16.5)	.95" (24.1)	.73" (18.5)	1.03" (26.2)		3.43" (87.1)	4.55" (115.6)	2.19" (55.6)
MC19C	1/2"	90°	10	.48" (12.2)	.52" (13.2)	.74" (18.8)	.60" (15.2)	.82" (20.8)		2.51" (63.8)	3.62" (91.9)	3.51" (89.2)
MC29	3/4"	90°	21	.71" (18)	.65" (16.5)	.95" (24.1)	.73" (18.5)	1.03" (26.2)		2.61" (66.3)	3.73" (94.7)	3.60" (91.4)

KILLARK®

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Hubbell Harsh & Hazardous
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