

Products & solutions for mining & aggregate



Safe. Reliable. Efficient.

Mining is an around-the-clock operation where employee safety and zero downtime are critical requirements. You need to maximize your efficiency and minimize the risk of damage to equipment or personnel.

You need a partner like Eaton.

Colowyo Mine, Meeker, Colorado Dragline retrofitted with sixteen 25,000 lumen Champ[®] Pro PFMA Series LED floodlights

EATON'S CROUSE-HINDS & B-LINE Solutions for mining &

De-risk by design Solutions designed to perform in the harshest environments



LED lighting

Maintenance-free and energy-efficient

The broadest portfolio of LED luminaires for any industrial or hazardous application.



Plugs & receptacles

Simple and secure powering solutions

Extensive configurations, custom capabilities and numerous interlocked designs provide safe and reliable solutions for fixed and portable power applications in industrial and hazardous environments.



Conduit & cable fittings Rugged connectors for extreme conditions

Time-tested, innovative conduit fittings, cord connectors and cable glands move power where you need it simply and safely in any electrical installation.



Enclosures

Performance and reliability

Available in a comprehensive range of sizes, each with various configurations for a multitude of applications.



Motor control & power distribution

Flexible and modular solutions Innovative, intelligent NEC and

IEC solutions safely and efficiently control power and protect circuits in explosive, wet and corrosive environments worldwide.



Support systems

Reduce complexity on the jobsite with Eaton's cable tray, cable ladder, pipe hangers, strut systems, grating and other support systems.



Conveyor solution systems Rugged and durable

Conveyor belt support, control, alignment and signalling solutions for the harshest conditions.

Find the right solution

Area types

INDUSTRIAL

Areas prone to dust, dirt, grime, vibration, hard use and abuse

WET LOCATIONS

Protection from windblown dust and rain, splashing and hose-directed water and external formation of ice

VIBRATION

Locations that need products designed to withstand continuous movement and may require maintenance and repair

CORROSIVE AREAS

Protection for areas with corrosive chemicals, atmospheres and water

SPACE CONSTRAINTS

Areas with low ceilings, tight spaces and limited footprint potential

CLASS I, DIV. 2/ZONE 2

Explosion protection for areas where flammable gases or vapors are not normally present

CLASS II/ZONES 21 & 22

Protection for areas where ignitable dusts may be present

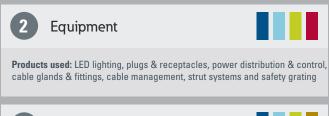
Know your challenges

Every site presents unique hurdles. Eaton provides stock and custom Crouse-Hinds series and B-Line series solutions to meet your application requirements.





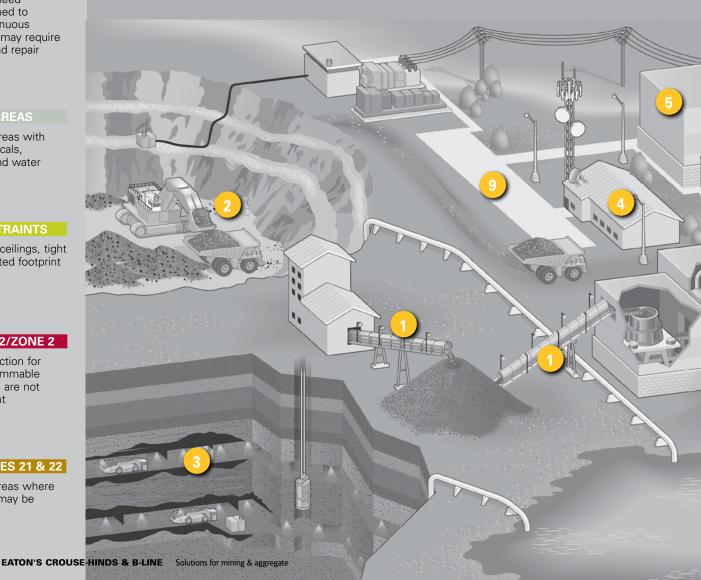
Products used: LED lighting, plugs & receptacles, control & apparatus, cable glands & fittings, cable management, strut systems and safety grating



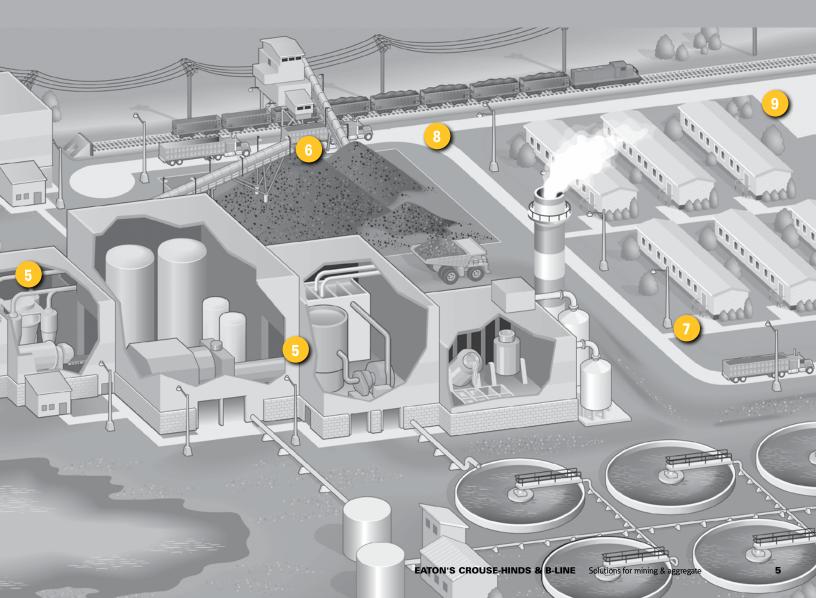
3 Tunnels

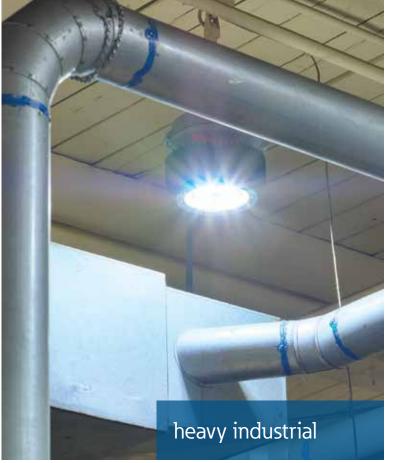


Products used: LED lighting, plugs & receptacles, cable glands & fittings, cable management, strut systems and safety grating









The Champ Pro PVML is the ideal 8.9 [225 fixture for illuminating conveyor belts and walkways. Optics allow for increased visibility and performance. Rai Safety Grating P Port

Champ Pro PVML





PVM3L-PVM11L

Champ Pro PVML LED luminaires

Overview

Champ Pro PVML luminaires are designed to provide full-spectrum, crisp, white light with custom Type I, III and V distribution.

Nine versions of the PVML are available, providing ideal solutions for a wide range of applications.

Certifications

- UL1598; UL1598A
- cUL
- Type 4X
- IP66
- DesignLights Consortium[®] approved for select models*
- cUL Listed to CSA Standard CSA C22.2 No. 250
- IEC standard: CE
- UL approved up to 65°C ambient (3L-11L UNV1; all other models 55°C)
- Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories

Benefits

- Modular design This ٠ contractor-friendly design is ideal for both retrofit and new construction applications
- Safe, reliable heat transfer -Die cast aluminum housing provides safe and effective heat transfer from the LED assembly to the outside environment for reliability and sustained lumen performance
- High efficiency drivers -Designed to provide reliable operation in even the harshest environments
- Type 4X rated The LED housing is constructed of durable die cast aluminum, providing an efficient thermal path to the heat sink assembly
- Custom optics Type I, III and V optics designed to maximize light distribution and intensity
- · Lever-lock connectors and 3-pole terminal block

Up to 75% reduction in energy costs and 200,000 hours of continuous operation.

Model	Typical lumens*	Wattage	Efficacy	Equivalent HID luminaire
PVML-3	3,250	26	123	70W-100W
PVML-5	5,537	43	127	100W-150W
PVML-7	7,442	59	127	150W-175W
PVML-9	9,234	73	126	250W-320W
PVML-11	11,114	91	122	320W-400W
PVML-13	13,100	95	125	400W
PVML-17	17,800	147	121	400W-600W
PVML-21	21,500	172	125	600W-750W
PVML-25	25,000	206	121	750W-1000W

*Tolerance +/- 10%; Type V optics.

Mounting adapters make retrofits easy

12.2 [309

Reliably retrofit Crouse-Hinds series Champ PVM/PVML LED luminaires to mounts from Appleton, Thomas & Betts and GE.

- Smart design saves hours of tear down and ٠ installation time
- Compact design allows for easy conversion to Crouse-Hinds series Champ PVML fixtures
- Easily convert wall and ceiling mounts without accessing conduit system







Champ Pro PFMA LED floodlights

Overview

Champ Pro PFMA floodlights are designed to provide full-spectrum, crisp, white light.

Nine versions of the Champ PFMA LED are available for pole and wall mounting, providing ideal solutions for a wide range of applications.

Certifications

- UL1598; UL1598A; UL875
- cUL
- Type 4X
 - IP66
 - DesignLights Consortium[®] approved for select models*
 - UL approved up to 65°C ambient (3L-15L)
 - cUL Listed to CSA Standard CSA C22.2 No. 250
 - IEC Standards: IEC 60598; CE
 - * Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.

Benefits

- Versatile design Can be used for outdoor or indoor applications, and for a wide range of mounting heights depending on model and light level requirement
- Rugged heat sink Designed to perform in high ambient temperatures up to +65°C and as low as -40°C
- High lumen output Up to 144 lumens per watt
- Full-frame yoke Designed to utilize the SFA6 slipfitter and SWB6 wall mount bracket, making it ideal for retrofit or new installations
- Multiple lens options -Tempered and clear glass standard, polycarbonate and diffused glass options available
- Smaller and lighter 25% smaller and 10 lbs. (4.5 kg) lighter than previous model (3L15L models)

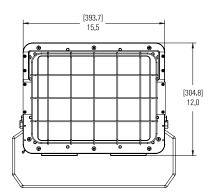
Up to 75% reduction in energy costs and 150,000 hours of continuous operation.

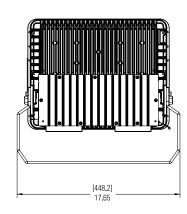
Model	Nominal lumens*	Wattage	Efficacy	Equivalent HID luminaire
PFMA3L	3,312	26	129	70W
PFMA5L	5,381	40	133	100W
PFMA7L	7,274	55	132	175W
PFMA9L	9,479	67	142	250W
PFMA11L	11,776	82	144	320W
PFMA13L	13,362	93	143	400W
PFMA15L	15,183	108	140	500W
PFMA9L PFMA11L PFMA13L	9,479 11,776 13,362	67 82 93	142 144 143	250W 320W 400W

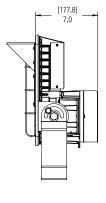
*Tolerance +/- 10%; at 120 VAC, 25°C ambient, 7x6 optics.



Dimensions (3L-15L models)









Champ-Pak WPMV

Overview

Champ-Pak WPMV LED wall packs are engineered to provide maintenance-free illumination, long life and high performance in harsh and heavy industrial areas.

The Champ LED is available from 3,000 to 7,000 lumens and is designed for extreme conditions and heavy duty applications.

Certifications

- DesignLights Consortium[®] Qualified (pending)
- NEC and CEC
- UL Standards: UL1598, UL1598A, UL8750
- CSA Standard: C22.2 No. 250
- Marine and Wet Locations, NEMA 4X and IP66
- Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.

Benefits

- Increased efficiency -Up to 116 lumens per watt
- Multiple mounting options -
- NEMA 4X, marine, wet locations and hose-down environments
- Contractor-friendly design is ideal for both retrofit and new construction
- Impact-resistant lens sealed from the outside environment provides ingress protection against water and dust
- 60,000+ hours of operation at 55°C

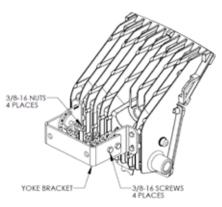
Up to 75% reduction in energy costs and 150,000 hours of continuous operation.

Model	Nominal lumens*	Wattage	Efficacy	Equivalent HID luminaire
WPMV3L	3,400	30.6	111	70W
WPMV5L	5,200	44.8	116	100W
WPMV7L	6,800	58.9	115	150W-175W

*Tolerance +/- 10%; at 120 VAC, 25°C ambient, 7x6 optics.

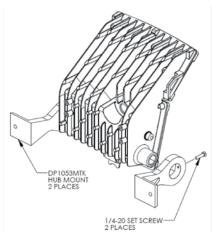


Heavy industrial version also available!

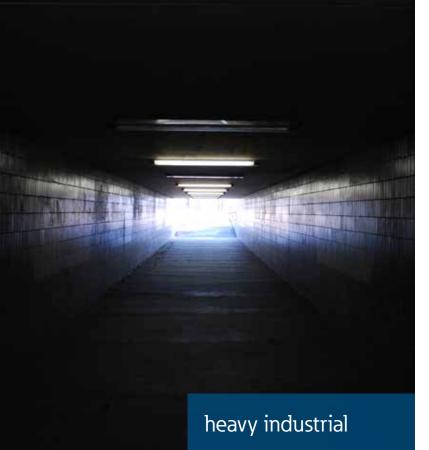


Versatile mounting options

Yoke mount



Hub mount



Champ PLLA linear LED luminaires

Overview

The Champ Pro PLLA Linear LED is specifically designed to replace fluorescent T12, T8 and T5HO lighting in heavy and harsh industrial applications. The rugged and durable design features the industry's most versatile and flexible mounting options. The PLLA is the ideal solution for high vibration, mpact and hose down applications.

Certifications

- Marine and Wet locations, Type 4X, IP66
- UL1598; UL1598A; UL924
- CSA C22.2 No. 250
- DesignLights Consortium[®] approved for select models*
- ABS design assessed
- * Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.
- ‡ One year warranty

Benefits

- Industry-leading efficacy: up to 132 LPW
- -40°C to +65°C ambient operating temperature
- Low profile (<3" height)
- Versatile ceiling/swivel, wall, flush, pole and pendant mounting options
- Wide and narrow optics for uniform illumination
- Four points of secondary retention
- 2,000 psi high pressure hose rated
- High vibration resistance (up to 5Gs)
- Emergency battery back-up (90 minutes) and surge protection options (up to 10kV)‡
- 5 year fixture warranty

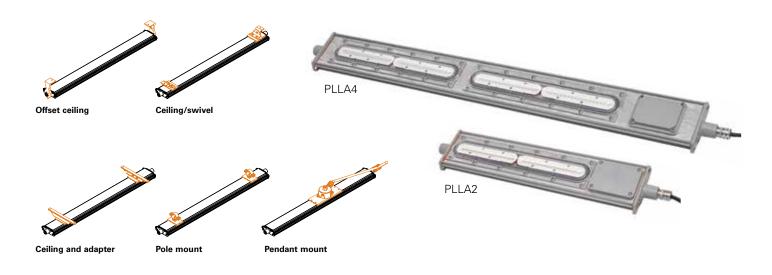


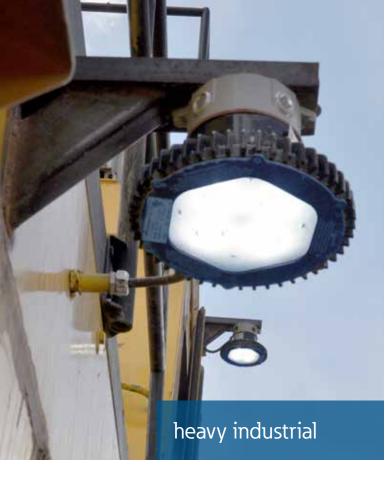
Offset wall

Flush ceiling

Up to 63% reduction in energy costs

Model	Typical lumens	Wattage	Efficacy	Equivalent HID Iuminaire
PLLA2	3,700	28.4	130	2 x 2 ft. T5/T8/ T12H0
PLLA4	7,900	59.8	132	2 x 4 ft. T5/T8/ T12H0





Vaporgard Pro LED

Overview

Vaporgard[™] Pro LED Luminaires are suitable for lower mounting heights, confined spaces, tunnels or utility rooms.

This fixture delivers similar light levels to a 50W HID and is available in cool or warm white lighT.

For applications with DC power requirements such as solar, battery or UPS. The DC power supply is suitable for 10 VDC through 30 VDC.

Certifications

- UL1598; UL1598A
- CSA C22.2 No. 250
- Wet Locations, Type 4X, IP66
- DesignLights Consortium[®]
 (pending)

Benefits

- Instant illumination and re-strike
- Cold temperature operation; no warm-up time
- Lightweight, low profile and cool surface temperatures
- Driver with internal fusing for branch circuit protection
- High efficacy LEDs can save up to 90% in energy costs
- No mercury or hazardous chemicals eliminates disposal concerns
- Mounts to existing Vaporgard mounting modules
- Shock- and vibration-resistant
- Teflon coated lens (suffix S896) option for increased safety in food processing facilities
- Operating ambient:
 - P2L: -30°C to +55°C
 - P3L: -30°C to +55°C

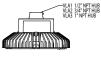
Model	Nominal lumens*	Wattage	Efficacy	Equivalent luminaire
P2LM2C/UNV1	1,772	14	126	
P3LM2C/UNV1	3,335	29	115	50W HID or 100-200W incandescent
P2LM2C/DC	1,772	14	126	
P3LM2C/DC	3,335	29	115	_

*Tolerance +/- 10%; at 120 VAC

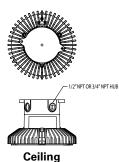


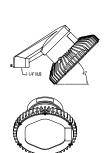
Typical Mounting Options





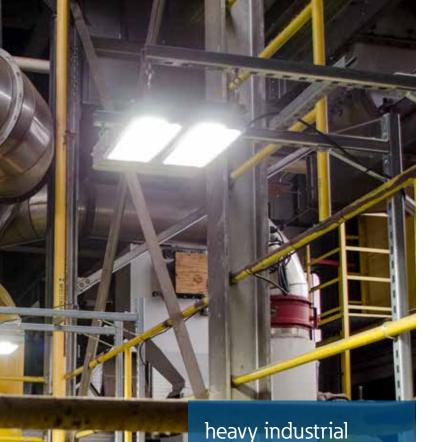
Pendant





Wall

Stanchion



Industrial high bay LED luminaires

Overview

IHB LED luminaires are the perfect replacement for 250W-1,500W HID and 4-10 lamp T5HO fluorescent high bay fixtures. Designed for locations requiring continuous and consistent light levels, requiring frequent on-and-off of lights and that are difficult to re-lamp or that cause production to be stopped during the lamp maintenance process.

Certifications

- UL1598; UL8750
- cULus •
- Damp locations
- DesignLights Consortium® approved for select models

Equivalent luminaires

Benefits

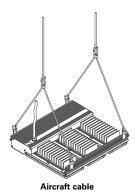
- Increased efficiency -Up to 117 lumens per watt
- Multiple mounting options -Available with pendant, aircraft cable or jack chain mounting
- Aluminum heat sinks for superior thermal management
- Multiple lens options -Tempered and clear glass standard, diffused glass and clear or diffused polycarbonate options available
- Optional occupancy sensor kit available
- Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.

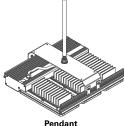
Economic life can range anywhere between 60,000 hours at 40°C to 120,000+ hours at 25°C or 5 to 10 years of maintenance-free operation. L70 >140,000 hours at 60°C and >200,000 hours at 40°C.

	GRANNING
	AN AVAILABLE AVAILAB
	Ò

Versatile mounting options

Jack chain





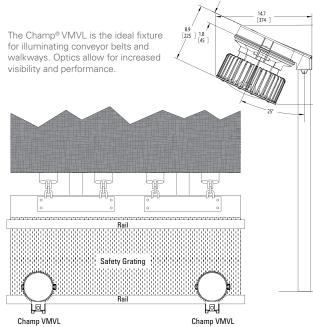
Pendant



Model HID Fluorescent Wattage Lumens† Efficacy IHB16L 250W-500W 4 lamp T5H0 145 16,900 117 IHB24L 400W-750W 25,350 4-6 lamp T5HO 216 117 IHB32L 500W-1,000W 6-8 lamp T5H0 289 33,800 117 IHB48L 750W-1,500W 8-10 lamp T5H0 436 50,700 116 IHB64L 1,000W-1,500W+ 10 lamp T5H0 582 67,600 116



hazardous area rated





VMVL-3-VMVL-11

Champ VMVL LED luminaires

Overview

Champ VMVL luminaires are designed to provide full-spectrum, crisp, white light with custom Type I, III and V distribution.

Nine versions of the VMVL are available, providing ideal solutions for a wide range of hazardous area applications.

Certifications

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, nA nR; Zone 21 tb
- Class II, Groups E, F, G
- Class III ٠
- UL844; UL1598; UL1598A; UL8750; UL50; UL50E
- CSA C22.2 No. 137
- Type 4X, IP66
- IECEx/ATEX Certified; Zone 2/21; CE
- DesignLights Consortium[®] approved for select models*

Benefits

- Modular design This contractor-friendly design is ideal for both retrofit and new construction applications
- Safe, reliable heat transfer -Die cast aluminum housing provides safe and effective heat transfer for reliability and sustained lumen performance
- High efficiency drivers -Designed to provide reliable operation in even the harshest environments
- Type 4X rated The LED housing is constructed of die cast aluminum, providing an efficient thermal path to the heat sink assembly. The impact-resistant lens is sealed and provides ingress protection against water and dust
- Custom optics Type I, III and V optics designed to maximize light distribution and intensity
- Lever-lock connectors and 3-pole terminal block
- Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.

Up to 75% reduction in energy costs and 200,000 hours of continuous operation.

Model	Typical lumens*	Wattage	Efficacy	Equivalent HID luminaire
VMVL-3	3,250	26	123	70W-100W
VMVL-5	5,537	43	127	100W-150W
VMVL-7	7,442	59	127	150W-175W
VMVL-9	9,234	73	126	250W-320W
VMVL-11	11,114	91	122	320W-400W
VMVL-13	13,100	95	125	400W
VMVL-17	17,800	147	121	400W-600W
VMVL-21	21,500	172	125	600W-750W
VMVL-25	25,000	206	121	750W-1000W

*Tolerance +/- 10%; Type V optics.

Mounting adapters make retrofits easy

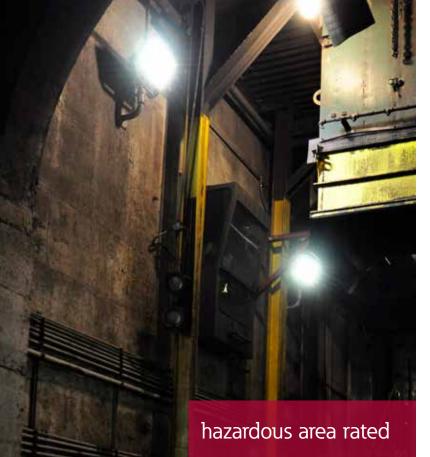
12.2

Reliably retrofit Crouse-Hinds series Champ VMV/VMVL LED luminaires to mounts from Appleton, Thomas & Betts and GE.

- Smart design saves hours of tear down and • installation time
- Compact design allows for easy conversion to Crouse-Hinds series Champ VMV fixtures
- Easily convert wall and ceiling mounts without accessing conduit system







Champ FMVA LED floodlights

Overview

Champ FMVA floodlights are hazardous location rated and are designed to provide fullspectrum, crisp, white light.

Nine versions of the FMVA are available for pole and wall mounting, providing ideal solutions for a wide range of hazardous area applications.

Certifications

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2
- Class II, Groups E, F, G; Simultaneous Presence; Class Ш
- Type 4X, IP66
- UL844; UL1598; UL1598A; UL8750
- CSA C22.2 No. 137
- IECEx/ATEX Certified; Zone 2/22; CE
- DesignLights Consortium[®] approved for select models*

Benefits

- Versatile design Can be used for outdoor or indoor applications, and for a wide range of mounting heights depending on model and light level requirement
- Rugged heat sink Designed to perform in high ambient temperatures up to +65°C and as low as -40°C
- High lumen output Up to 144 lumens per watt
- Full-frame yoke Designed to utilize the SFA6 slipfitter and SWB6 wall mount bracket, making it ideal for retrofit or new installations
- · Multiple lens options -Tempered and clear glass standard, polycarbonate and diffused glass options available
- Smaller and lighter 25% smaller and 10 lbs. (4.5 kg) lighter than previous model (3L-15L models)
- Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories

Up to 75% reduction in energy costs and 150,000 hours of continuous operation.

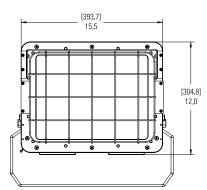
Model	Nominal lumens*	Wattage	Efficacy	Equivalent HID luminaire
FMVA3L	3,312	26	129	70W
FMVA5L	5,381	40	133	100W
FMVA7L	7,274	55	132	175W
FMVA9L	9,479	67	142	250W
FMVA11L	11,776	82	144	320W
FMVA13L	13,362	93	143	400W
FMVA15L	15,183	108	140	500W

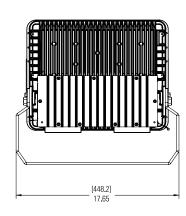
*Tolerance +/- 10%; at 120 VAC, 25°C ambient, 7x6 optics.

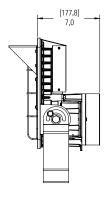


FMVA3L-FMVA15L

Dimensions (3L-15L models)

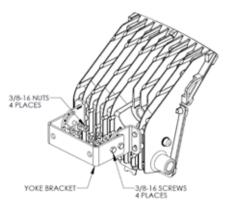




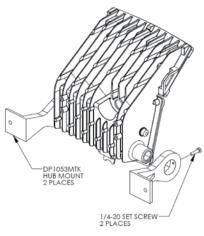




Versatile mounting options



Yoke mount



Hub mount

Champ-Pak CPMV

Overview

Champ-Pak CPMV LED wall packs are engineered to provide maintenance-free illumination, long life and high performance in Class I, Division 2 areas.

The Champ LED is available from 3,000 to 7,000 lumens and is designed for extreme conditions and hazardous applications.

Certifications

- DesignLights Consortium[®] Qualified (pending)
- NEC and CEC
- UL Standards: UL1598, UL1598A, UL 844, UL8750
- CSA Standard: C22.2 No. 137
- Class I, Division 2, Groups A, B, C, D,
- Class II, Division 1, Groups E, F, G
- Class III & Simultaneous
 Presence
- Marine and Wet Locations, NEMA 4X and IP66

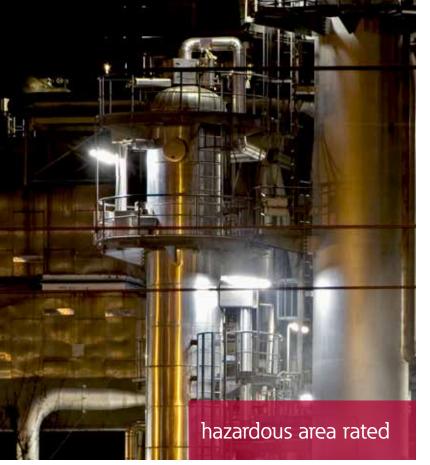
Benefits

- Increased efficiency -Up to 116 lumens per watt
- Multiple mounting options -
- NEMA 4X, marine, wet locations and hose-down environments
- Contractor-friendly design is ideal for both retrofit and new construction
- Impact-resistant lens sealed from the outside environment provides ingress protection against water and dust
- 60,000+ hours of operation at 55°C
- * Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.
- Up to 75% reduction in energy costs and 150,000 hours of continuous operation.

Model	Nominal lumens*	Wattage	Efficacy	Equivalent HID luminaire
CPMV3L	3,400	30.6	111	70W
CPMV5L	5,200	44.8	116	100W
CPMV7L	6,800	58.9	115	150W-175W

*Tolerance +/- 10%; at 120 VAC, 25°C ambient, 7x6 optics.





Champ MLLA linear LED luminaires

Overview

The Champ MLLA linear LED is specifically designed to replace fluorescent T12, T8 and T5HO lighting in harsh and hazardous applications. The rugged and durable design features the industry's most versatile and flexible mounting options. The Champ MLLA is the ideal solution for high vibration, impact and hose down applications.

Certifications

- Class I, Division 2, Groups B, C, D
- Class II, Division 2 Groups F, G
- Marine and Wet locations, NEMA 4X, IP66
- UL844; UL1598; UL1598A; UL924
- CSA C22.2 Nos. 250, 137, 141
- DesignLights Consortium[®] approved for select models*

Benefits

- Industry-leading efficacy: up to 132 LPW
- -40°C to +65°C ambient operating temperature
- Low profile (<3" height)
- Versatile ceiling/swivel, wall, flush, pole and pendant mounting options
- Wide and narrow optics for uniform illumination
- Four points of secondary retention
- 2,000 psi high pressure hose rated
- High vibration resistance (up to 5Gs)
- Emergency battery back-up (90 minutes) and surge protection options (up to 10kV)‡
- 5 year fixture warranty
- * Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.
- ‡ One year warranty

Up to 67% reduction in energy costs

Model	Typical lumens	Wattage	Efficacy	Equivalent HID Iuminaire
MLLA2	3,700	28.4	130	2 x 2 ft. T5/T8/ T12H0
MLLA4	7,900	59.8	132	2 x 4 ft. T5/T8/ T12H0



Versatile mounting options



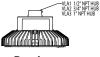
Offset wall

Flush ceiling

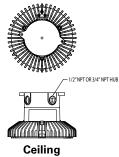


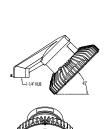
Typical Mounting Options





Pendant





Wall

Stanchion

Vaporgard LED

Overview

Vaporgard™ LED Luminaires are suitable for lower mounting heights, confined spaces, tunnels or utility rooms.

This fixture delivers similar light levels to a 50W HID and is available in cool or warm white light.

For applications with DC power requirements such as solar, battery or UPS. The DC power supply is suitable for 10 VDC through 30 VDC.

Certifications

- Class I, Division 2, Groups A, B, C, D
- Class II, Divisions 1 & 2, Groups F, G*
 *mounting options limited
- UL844; UL1598; UL1598A
- CSA C22.2 No. 137
- NEMA 4X
- IP66
- IEC and ATEX certified
- DesignLights Consortium[®] (pending)

Benefits

- Instant illumination and re-strike
- Cold temperature operation;
 no warm-up time
- Lightweight, low profile and cool surface temperatures
- Driver with internal fusing for branch circuit protection
- High efficacy LEDs can save up to 90% in energy costs
- No mercury or hazardous chemicals - eliminates disposal concerns
- Mounts to existing Vaporgard mounting modules
- Shock- and vibration-resistant
- Teflon coated lens (suffix S896) option for increased safety in food processing facilities
- Operating ambient:
 V2L: -30°C to +55°C
 V3L: -30°C to +55°C

Model	Nominal lumens*	Wattage	Efficacy	Equivalent luminaire
V2LM2C/UNV1	1,772	14	126	
V3LM2C/UNV1	3,335	29	115	50W HID
V2LM2C/DC	1,772	14	126	or 100-200W incandescent
V3LM2C/DC	3,335	29	115	

*Tolerance +/- 10%; at 120 VAC





N2LPS Light-Pak LED emergency lighting system

Overview

N2LPS Light-Pak emergency lighting systems are designed specifically for egress and emergency illumination in the most demanding harsh and hazardous environments.

Certifications

- NEC/CEC: Class I, Division 2, Groups B, C, D, Zone 2; Class II, Division 1, Groups F, G
- UL Standards:1598A; 924; 844
- CSA Standards: C22.2 No. 141-M1985; C22.2 No. 137-M1981
- Life Safety Code NFPA101[®] Section 5-9
- Marine Wet Locations Suitability, NEMA 4, 4X

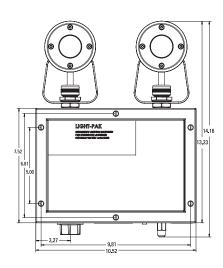
Benefits

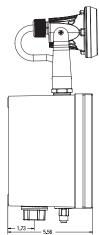
- Non-metallic, enclosed, gasketed housing provides corrosion protection in the most extreme environments.
- Durable and marine rated LED lamp head assemblies provide protection against water ingress, corrosion and impact.
- High temperature rated nickel cadmium battery for reliable operation up to 55°C ambient.
- Self-test, monitoring and diagnostics reduce costly maintenance checks.
- Remote mountable lamp heads can be mounted independently from the enclosure, allowing you to focus light where you need it.
- Solid state battery charger ensures long life and reliable battery operation. Prevents deep discharge by automatically disconnecting the battery from the luminaire.

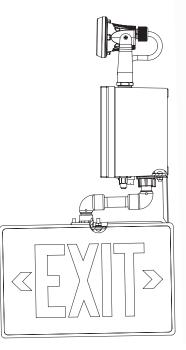
Model Number	Description
N2LPSM212222	28W, 12V power supply, (2) 1W LED lamp heads
N2LPSM212220	28W, 12V power supply, less luminaire heads
N2RFM21221	Remote luminaire assembly, (1) LED lamp head
N2RFM21222	Remote luminaire assembly, (2) LED lamp heads
*N2LPSM212222 UX71SDHAZ	6W, 12V power supply with exit sign (single sided)
*N2LPSM212222 UX72SDHAZ	6W, 12V power supply with exit sign (two sided)

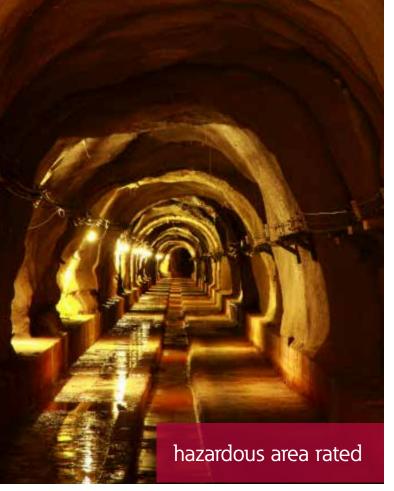


Dimensions

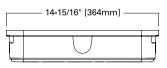


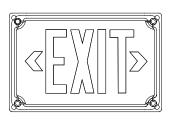


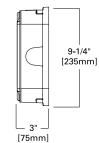




Dimensions

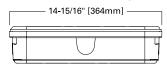


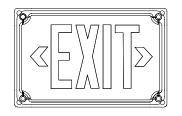




Single face

Double face







UX exit lighting

Design features & benefits

UX7:-30°C to 50°C)

white color

mounting

•

٠

• Wide operating temperature

• Die cast aluminum housing

available in silver, black or

• Field configurable for red or

green letters and chevrons

Pendant or universal surface

Self-diagnostics standard with

self-powered versions

 Heavy duty injection molded polycarbonate lens protects

against impact and corrosion

• Brown-out protection protects

cast housing protects against

battery and reduces labor

• Heavy duty aluminum die

impact and chemical

resistance

range (UX6: -40°C to 50°C;

Overview

UX LED exit signs are designed specifically for marking escape routes and exits in harsh and hazardous environments.

The UX is NEMA 4X and IP66 rated, approved for temperatures from -30°C to 50°C and Class I, Division 2 certified. The housing is die cast aluminum with a vandal-proof shield. The LED source is field configurable for red or green output. The selfpowered version comes standard with a nickel cadmium battery and self-diagnostics.

Certifications

- Class I, Division 2, Groups A, B, C, D
- NEMA 4X, outdoor wet locations suitability
- NEC/OSHA
- UL50; UL844; UL924; UL1598A
- IP66
- Life Safety Code NFPA101– Section 5-9 (Emergency Lighting)
- NSF National Sanitation Foundation/Splash Zone (for food processing)

Model Number	Description
UX61	Single sided exit sign (AC only)
UX71SD	Single sided exit sign (self-diagnostic with battery)



Industrial fittings & glands

V-Spring telescoping safety light pole

Overview

The V-Spring™ telescoping safety light pole increases safety and decreases labor costs associated with lighting installation and routine maintenance. Its innovative design allows for all work to safely take place on the platform or walkway, eliminating the need for portable ladders and fall protection equipment.

Applications include:

- Luminaires installed on industrial walkways, platforms, stairways and conveyors where OSHA/HSE regulations require fall prevention equipment
- Hard to reach or dangerous areas where safety is a big concern
- Hazardous and harsh environments subject to corrosive agents, vibration and extreme temperatures



Condulet conduit bodies, boxes, covers and gaskets

Overview

Condulet[™] boxes are installed in conduit systems to: accommodate wiring devices, act as pull boxes, provide openings to make 90° bends, provide for splices, taps, mounting outlets and provide access to conductors for maintenance and future system changes.

Cable glands & accessories

Overview

Overview



Our global offering provides a termination solution for virtually every type on the market. These cable glands are designed for strict adherence to global specifications. Available in a wide range of materials, including nickel-plated brass, stainless steel, aluminum and impact-resistant nylon.

Myers[™] hubs are used in the

through wall of the enclosure.

outdoors with rigid conduit and

with the presence of chemicals,

Designed for use indoors or

environmentally demanding

applications, including those

such as acetic, citric and salt

water. Also available for use in hazardous (classified) locations.

IMC. Suitable for use in

termination of electrical circuits

Stainless steel fittings



Breathers & drains

Overview Stainless steel fittings deliver

unbeatable corrosion protection where you need it, saving you time and money. Superior resistance to corrosion and heat, combined with unmatched strength, make stainless steel fittings a long-term solution for even the most extreme environments

Myers hubs



Liquidtight fittings – stainless steel

Overview

Liquidtight fittings are used to terminate and seal liquidtight flexible metal conduit to an oiltight, raintight or liquidtight box or enclosure, where superior corrosion resistance and/or strength is required.

Overview Breathers and drains are

installed in enclosures or conduit systems to provide ventilation, minimize condensation and drain accumulated condensate.

EATON'S CROUSE-HINDS & B-LINE Solutions for mining & aggregate



Power distribution and control

EMN 25 & 26 pushbutton motor starters



Overview

Explosionproof, compact, across-the-line manual NEMA starter for single and polyphase VAC or VDC motors. Used for fans and blowers, pumps, compressors and conveyors.

STE main breakers



XDT hazardous area transformers

Overview

STE main breakers for hazardous areas provide overcurrent and short circuit protection for low voltage power, lighting and heat tracing applications.

SynergEX EZFlex panelboards

Control stations

Overview

The SynergEX EZFlex™ panelboard utilizes individually encapsulated circuit breakers to reduce downtime, increase safety and lower maintenance costs in hazardous locations. SynergEX EZFlex provides overcurrent and short circuit protection for low voltage power, lighting and heat tracing applications.



Disconnect switches



Overview

Overview

N2S and GHG43 control stations and selector switches are used for motor control, visual indication, on-off control of circuits and circuit selection.



Overview

operate where volatile flammable liquids or gases are handled, processed or used, and where ignitable concentrations of gases or vapors are normally prevented by positive mechanical ventilation.

XDT hazardous location dry-type

transformers are designed to

Overview

Hazardous area and ordinary location disconnect switches are used in manual "ON" and "OFF" control of single-phase or threephase AC motors where overload protection is not required or is provided separately.

SCSR portable combination motor starter receptacles



The SCSR combination starter with receptacle allows for portable motor control and fault diagnostics. It provides equipment protection from overload and short circuit conditions while offering local and remote motor control, preventing energization under all preceding conditions, and connectivity via a wireless gateway or the hardwire. The SCSR smart combination motor starter receptacle offers a wide range of protection devices and is suitable for a wide range of applications.

Plugs & receptacles

Arktite interlocked receptacles with enclosed disconnect switches



Overview

Arktite[™] interlocked receptacles with enclosed disconnect switches supply power to portable or fixed electrical equipment such as welders, compressors, conveyors, portable tools, lighting systems and similar equipment.

Arktite products also prevent engagement and disengagement of the plug under load, providing safe portable connections and extended product life.

Posi-Max and Posi-Lok power distribution systems, panels and connectors









Overview

Posi-Max power distribution panels provide a quick and safe method of connection to portable generators. The unique Posi-Max design allows for quick and safe restoration of essential power services.

Posi-Max panels are available in 200A to 1200A and the enclosure can be customized to meet specific environmental and configuration needs.

Posi-Lok[™] distribution panels use lightweight, single conductor cables to provide the means for hurried personnel to quickly and safely connect and disconnect power systems without having to use any tools.

Posi-Lok plugs feature recessed electrical contacts that are protected by shatter-resistant insulators and impact-resistant molded sleeves.

Macey 25kV high voltage coupling system



Overview

Macey[®] 25kV high voltage coupling systems are used to supply power to draglines, longwall machines, cranes and other types of equipment.

- No special installation tools
 needed
- Smaller footprint and reduced weight versus the competition
- Intermatable with other manufacturers' couplers
- Accommodates a wide range of cable types with entrance fittings, including fiber optic

IEC 60309 plugs, connectors, receptacles & inlets



Overview

IEC 60309 pin and sleeve devices are the industry's first to offer IP69K rated protection. Each device has been carefully engineered to offer reliability, efficiency and added safety protection in demanding wet locations, particularly where harsh wash downs are a must.

Roughneck multi-pin & single pole connectors



Overview

Roughneck[™] Multi-pin connectors

Heavy duty control and instrumentation multi-pin connectors for hazardous and harsh industrial use.

Single pole connectors Secure, single pole power, rated to 1135A for use in hazardous and normal locations.



receptacles & connectors

Overview

Arktite circuit breaking plugs, receptacles, cord connectors and motor plugs are used to supply power to portable electrical devices such as welders, motors, pumps, conveyors and other similar equipment where electrical loads must be quickly disconnected from power sources.

Arktite 30A-100A non-metallic plugs,

Enclosures

NEMA 4X enclosures



Overview

Broad offering of JIC, wall mount, ground mount and freestanding enclosures with superior ingress protection. Protect against corrosion, circulating and windblown dust, falling dirt, dripping noncorrosive liquids, rain, splashing water and hose-directed water.

enclosures

A globally certified enclosure and termination solution for Type 3S and 4X applications. Over 100 standard sizes in stainless steel and painted steel, featuring unique design features, precision manufacturing and the highest quality materials.

The premier choice for instrumentation and electrical applications across the globe.



Overview

Non-metallic enclosures for non-hazardous

Made of fiberglass-reinforced polyester, non-metallic enclosures are exceptionally durable, corrosion-resistant and can withstand abuse and exposure to chemicals, water and extreme conditions.

Extensive offering of fiberglass enclosures, including: small line, pushbutton, junction box, raised cover, Advantage, wall mount, disconnect and Xtra deep.



NEMA 7 enclosures

Overview

EJB explosionproof enclosures are used as a junction or pull box, enclosure for splices and branch circuit taps, terminal blocks, relays and other electrical devices.

EJB enclosures are certified for use in areas which are hazardous due to the presence of hydrogen or gases and vapors of equivalent hazard, such as those found in process industries.

Cable tray & ladder systems

Overview

As an industry leader in cable tray, Eaton offers one of the widest ranges of B-Line series cable management solutions available in the market today.

With unmatched guality and service, we offer a variety of styles, materials and finishes available to support virtually any commercial and industrial cable management application requirement.

B-Line series High Performance Ladder (HPL) series

Eaton's patent-pending high performance cable ladder reduces weight while increasing load capacity. Designed to literally save tons in overall weight on offshore and modular construction applications, the HPL cable ladder offers a unique combination of low weight and high strength. The high strength to weight ratio allows for increased load capacities and helps keep weight budgets in balance.

Learn more at Eaton.com/HPL



Overview

Ex-CELL stainless steel or sheet steel

Support systems

Safety grating solutions



Overview

Contractor and industry surveys reveal accidents caused by falls are high on the list of disabling and lost-time injuries and even death. In fact, statistics from many states rate this type of accident are second as the cause for industry's loss of man-hours and lower productivity. Eaton's B-Line series safety grating product offering provides superior structural walkways with increased safety and slip-resistance for rugged outdoor and indoor environments.

Learn more at Eaton.com/gratings

Strut systems



Overview

B-Line series strut systems begin with quality and design – they are made from structuralquality steel that help ensure structural integrity and strength. Plus, they come in a wide range of protective finishes with an extensive array of accessories that help save installation time.

- Channel profile, finish and traceability information is stamped inside every channel for identification and easy reference; Material documentation can be provided upon request
- Wide range of protective finishes
- · Channel available in solid, slotted and long slotted hole and welded configuration options

Cut-to-length strut options available upon request

Learn more at Eaton.com/strutsystems

Pipe hangers



Overview

Eaton offers a full line of B-Line series pipe hangers, clevis hangers, beam clamps and other mechanical supports in a variety of materials and finishes.

Applications

Pipe hangers are designed to support insulated or non-insulated pipe allowing for vertical adjustment and limited movement in the piping system. Beam clamps are designed to provide attachment of hanger rods to structural members without drilling or welding.

B3100 Side-Rite clevis hanger

Overview

- Slide-Rite[™] hanger features 15° swing in either direction allows pipe to easily feed through
- Engineered design aligns bolt holes for quicker overhead installation

Conveyor solutions

AFU and AFUX conveyor belt control switches

Overview

AFU and AFUX conveyor control switches are used:

- As emergency or normal "STOP" switch for conveyor lines, cranes, unloaders, bulk handling systems and similar equipment
- In steel mills, mining and ore and coal handling operations, automotive and other assembly lines, warehouses, loading docks and various process industry facilities
- In the control circuit of magnetic motor starters to shut down motor-driven conveyors or other machinery when switch is actuated



switches

Overview

AFA and AFAX conveyor belt alignment

AFA, AFAX conveyor belt alignment switches are used:

- As emergency or normal "STOP" switch for conveyor belts whenever they become misaligned or run off their tracks due to excessive speed, uneven load, leveling, breakage and/or other problems.
- In steel mills, mining and ore and coal handling operations, automotive and other assembly lines, warehouses, loading docks, grain loading and handling facilities, and various other bulk handling operations.
- In the control circuit of magnetic motor starters to shut down motor-driven conveyors in case of abnormal belt misalignment or run-off.

AFU mine signal switch



Overview

AFU mine signal switches are used:

- For signalling circuits or remote control of magnetic motor starters
- In non-hazardous areas of mines or process industry facilities
- Mounted on walls or in shaft ways and actuated by pulling line or cable attached to the loop at the bottom

AFC mine signal switch

AFC mine signal switches are used:

Overview

- For remote control of signaling circuits
- In non-hazardous areas of mines or process industry facilities
- Mounted on walls or in shaft ways and actuated by pulling line or cable attached to the loop at the bottom

AFS mine signal switch



Overview

AFS mine signal switches are used:

- For remote control of signaling circuits
- In non-hazardous areas of mines or process industry facilities
- Mounted on walls or in shaft ways and actuated by pulling line or cable attached to the loop at the bottom

AFM mine signal switch



Overview

AFM mine signal switches are used:

- For audible signaling and remote signaling
- In non-hazardous areas of mines or process industry facilities
- Mounted on walls or in shaft ways and actuated by pulling line or cable attached to the loop at the bottom

Conveyor solutions

AFK mine signal switches



Overview

AFK mine signal switches are used:

- For visible, audible and remote control of signaling circuits
- In non-hazardous areas of mines or process industry facilities
- Mounted on walls or in shaft ways and actuated by pulling line or cable attached to the loop at the bottom

Limberollers

Limberollers are the best choice to decrease conveyor system down time. Constructed of a rubber encapsulated steel rope design with only two bearings per idler, they are used in place of cantenary steel cans. Available in troughing and return configurations, Limberollers provide superior belt alignment, are lightweight enough to be handled by one person, and are self cleaning and non-static.

Limberoller troughing idlers

The Limberoller Troughing Idler consist of a steel wire rope that is completely encapsulated in rubber. The elastomer is molded to the rope, under heat and pressure, so that a virtually impervious sheath of rubber completely covers the rope. This basic design varies depending on belt width, by configuration of the molded rubber jacket.

- LR-100 and LR-150 series troughing idlers with double row ball bearings and slotted to fit into a rigid mounting
- LR-300 and LR-350 series troughing idlers with tapered roller bearing in a trunnion type housing that fits into an oarlock type support
- Troughing Idler consist of a steel wire rope that is completely encapsulated in rubber
- Troughing Brackets feature steel standard, special and training troughing styles

Limberoller return idlers

The Limberoller Return Idler consists of a solid steel shaft completely encapsulated in rubber for a virtually impervious sheath. Return idlers feature bearing housings that are slotted so that they will fit in specially designed hanger and support brackets.

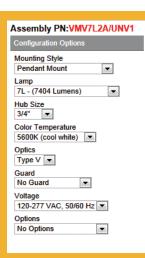
- \bullet Return idlers LR-106 & LR-307 series feature solid shaft return idlers with double row ball bearings
- LR-106 & LR-307 are for high impact of heavy duty
- LR-107 series solid shaft return idlers with double row ball bearings
- Solid steel shaft completely encapsulated in rubber for a virtually impervious sheath
- \bullet Steel hanger and training return brackets for use with LR-106, LR-107, and LR-307 series
- \bullet Synthetic rubber top mount brackets are for use with LR-106 and LR-107 series







CoSPEC Online specification tools



SELECT—Pick products you need to download to the unit level.



VIEW—View your chosen product in 2D or 3D.



DOWNLOAD—Output drawing and parametric data for use on your project.

CoSPEC is a suite of specification support tools that help simplify, streamline and speed up the industrial design and specification process. From lighting designs and drawing support tools to ROI calculators, submittal sheets and spec forms, CoSPEC has you covered in virtually every aspect of the design process.

3D drawing &

design

The CoSpec online 3D drawing catalog gives you the ability to select and view Crouse-Hinds and B-line products in 2D and 3D formats. Then, with just a few clicks, you can download design content and parametric data in one of nearly 100 file formats. File format outputs are native to the selected software, which eliminates translation errors and speeds the integration of content into your project.

Combine this handy tool with our SKU-level submittal sheets for

extra convenience.





SKU-level submittal sheets

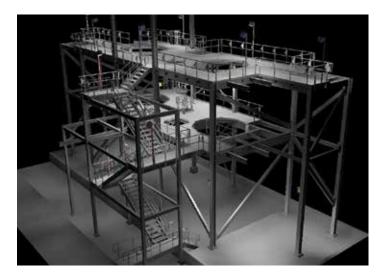
These dynamic PDFs feature both SKU-level specification data and key family specs. The sheets also include a custom text area for unique data such as project name or fixture type, as well as an embedded 3D drawing.

Convenient resources for engineers, designers and drafters

Lighting layouts

From simple layouts to complex drawings, our lighting design engineers deliver precise, efficient, applicationand environment-appropriate lighting designs. Our experts can save you time and money by creating a virtual model of a proposed design, revealing luminaire characteristics and effects within the installation.

- 3D fixture placement with access to alternate fixtures and mounting heights
- Point-by-point footcandle diagram calculations
- AutoCAD[®]-generated floor plan overlays
- Complete bill of material





ROI calculators

Use our interactive online cost calculators to determine how much you or your clients will save with LED luminaires from Eaton's Crouse-Hinds. These handy, intuitive calculators allow you to enter design parameters unique to a project and view the specific savings and payback period realized.

PRODUCT SPECIFICATION GUIDE - LED LUMINAIRES - CHAMP VMV LED SERIES SECTION 26 54 00 - CLASSIFIED LOCATION LIGHTING

Product Specification Guide – Champ® LED VMV Luminaires Hi-Lumen

SECTION 26 54 00 - Classified Location Lighting

PART 1 GENERAL

- 1.01 SCOPE
 - A. Furnishing, installation, and assembly of lighting fixtures for areas classified as hazardous.
- 1.02 REFERENCES
 - A. National Fire Protection Association (NFPA):
 - 1. NFPA 70 National Electrical Code (NEC)

Specification guide forms

Written to CSI guidelines, our specification guide forms are ideal for designers whose customers have out-of-date or incomplete spec libraries. They're a quick and easy way to optimize the safety, reliability and efficiency of your design requirements.



U.S. (global headquarters): Eaton's Crouse-Hinds, B-Line and Oil and Gas business

1201 Wolf Street Syracuse, NY 13208

(866) 764-5454 FAX: (315) 477-5179 FAX Orders Only: (866) 653-0640

crousecustomerctr@eaton.com

For more information:

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

Toll Free: 800-265-0502 FAX: (800) 263-9504 FAX Orders only: (866) 653-0645

Mexico/Latin America/Caribbean 52-555-804-4000 FAX: 52-555-804-4020 ventascentromex@eaton.com

Eaton Middle East

9714-8066100 FAX: 9714-8894813 CHBL-ME@eaton.com

Singapore 65-6645-9888 FAX: 65-6297-4819 chsi-sales@eaton.com

Korea

82-2-3484-6783 82-2-3484-6778 ECHKsales@eaton.com

Australia

61-2-8787-2777 FAX: 61-2-9609-2342 Crousehindsanz@eaton.com

Europe (Germany)

49 (0) 6271 806-500 49 (0) 6271 806-476 info-ex@eaton.com

China

86-21-2899-3600 FAX: 86-21-2899-4055 echsales@eaton.com India

91-124-4683888 FAX: 91-124-4683899 cchindia@eaton.com

Eaton's Crouse-Hinds 1201 Wolf Street Syracuse, NY 13208 Faton.com

Eaton's B-Line 509 W. Monroe Highland, IL 62249 Eaton.com/b-lineseries

Eaton

1000 Eaton Boulevard Cleveland, OH 44122 United States Eaton.com

© 2022 Eaton All Rights Reserved Printed in USA Publication No. BR401008EN January 2022

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.

For additional information,

visit Eaton.com



FATON Powering Business Worldwide