



**KILLARK®**

## INSTALLATION, OPERATION & MAINTENANCE DATA SHEET

### L1L SERIES LED LUMINAIRE



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#### CAUTION:

Before installing, make sure you are compliant with area classifications, failure to do so may result in bodily injury, death and property damage. Do not attempt installation until you are familiar with the following procedures. All installation must comply with the applicable Electrical Code.

Make sure that the circuit is de-energized before starting installation or maintenance.

Verify that the installation is grounded. Failure to ground will create electrical shock hazards, which can cause serious injury and or death.

#### IMPORTANT:

Technical information, advice and recommendations contained in these documents are based on information that Killark believes to be reliable. All the information and advice contained in these documents is intended only for use by persons having been trained and possessing the requisite skill and know-how and to be used by such persons only at their own discretion and risk.

The nature of these instructions is informative only and do not cover all of the details, variations or combinations in which this equipment may be used, its storage, delivery, installation, check out, safe operation, and maintenance. Since conditions of use of the product are outside of the care, custody and control of Killark, the purchaser should determine the suitability of the product for its intended use, and assumes all risk and liability whatsoever in connection therewith.

#### ATTENTION:

Avant d'installer le luminaire, s'assurer que le luminaire est conforme à la classification des zones, le non-respect de cette règle risque d'entraîner des dommages corporels et / ou matériels. Ne pas tenter d'entreprendre l'installation avant d'être familiarisé avec les procédures suivantes. Toute installation doit être conforme au code électrique local et / ou national et être effectuée par un électricien qualifié.

Veiller à ce que le circuit soit mis hors tension avant de commencer l'installation ou la maintenance.

Vérifier si le luminaire est mis à la terre. S'il n'est pas mis à la terre il pourrait causer des risques de choc électrique susceptibles d'entraîner des blessures graves ou la mort.

#### WARNING:

Incorrect installation of this Luminaire might cause potential ignition sources from optical radiation. Follow INSTALLATION, OPERATION & MAINTENANCE DATA SHEET.

**KILLARK®**



2112 Fenton Logistics Park Blvd.

Fenton, MO 63026 USA

P/N KIL00921498 FORM NO. K1498 ECO6-081-20 R9/20

Luminaires are designed to be installed in Hazardous Locations: Class I, Division 1 & 2, Groups A, B, C and D; Class 1, Zones 1 & 2, Groups IIB, IIA; Class II, Div. 1 & 2, Groups E, F, G; Class III; IP66 Suitable for Wet Locations; Suitable for paint spray booths. T-Code T6 40C & 55C CID1; T6 CIID1 40C; T5 CIID1 55C.

IECEX certificate IECEX QPS 19.0005X. ATEX certificate CML 19ATEX1289X

**STANDARD VERSION**

Ex db op is IIB+H2 T6...T5 Gb Ta: -20°C to +40°C, or Ta: -20°C to +55°C  
 Ex tb op is IIIC T85°C... T100°C Db -20°C to +40°C, or Ta: -20°C to +55°C

**EMERGENCY VERSION**

Ex db op is IIB+H2 T6...T5 Gb Ta: -20°C to +40°C, or Ta: -20°C to +50°C  
 Ex tb op is IIIC T85°C... T100°C Db -20°C to +40°C, or Ta: -20°C to +50°C

Light Output Rating: 50Watts-100 Watts. (IECEX and ATEX Certifications are for 120-277VAC 50-60 Hz. 1.22A-.95A input versions only.)

Protection Standards: IECEX: (IEC) 60079-0:2017, Edition 7.0; 60079-1:2014, Edition 7.0;60079-28:2015, Edition 2.0;60079-31:2013, Edition 2.0. ATEX: (EN) 60079-0:2017; 60079-1:2012; 60079-28:2006; 60079-31:2010.

ATEX Declaration: The equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the EC Type Examination and compliance with the Essential Health and Safety Requirements. T. Michalski : Certifications Manager

**Special Conditions for Safe Use**

The Luminaire shall only be installed where there is a low risk of mechanical damage.

Note: Due to the surge protection provided in the fixture to protect the internal electronics and LEDs, a branch circuit with the LED fixture may false fail a megohmmeter test (sometimes referred to as a megger test). If a megohmmeter test is required, the LED fixture should be removed from the branch circuit.

Note: Multiple fluorescent or LED fixtures attached to a single Ground Fault Circuit Interrupter (GFCI) may cause nuisance tripping of the GFCI. Regulatory agencies allow a small amount of leakage current because of the circuitry required to mitigate possible issues with electromagnetic compatibility (reference UL8750 and EN61347). The summation of these leakage currents from multiple fixtures may be enough to trip a GFCI.

**NOTE- For Class I, Division 1 / Class II, Division 1 / Class I, Zone 1 Hazardous Locations, use rigid conduit or appropriate cable connectors/ glands rated for Class I, Division 1 Groups BCD**

**NOTE – Pour les endroits dangereux Classe I, Division 1 / Classe II, Division 1 / Classe I, Zone 1 utiliser des Conduits rigides.**

**L1L INSTALLATION INSTRUCTIONS:**

- A. A channel is incorporated in the housing for 5/16" or M8 hex bolts or nuts. (See **Figure 1**)
  - 1. 5/16" or M8 hex bolts can be slid into channels for direct mounting; or used to attach brackets which include L- brackets, Wall Brackets, Ceiling Brackets, Beam Clamps, and Suspension Chains etc...
  - 2. 5/16" hex nuts or M8 hex nuts can be slid into channels and used with eyebolts, threaded rod etc...
- B. The End Caps also have provisions for surface or suspension mounting. (See **Figure 2**)
- C. The "Earthquake Safety Chain" can be attached to the housing using an optional eye bolt. (See Figure 2).

In environments with high dust, the dust will cover the lens and increase the temperature of the fixture. In a high dust environment make sure the fixture is mounted at an angle so that the aluminum housing will block dust from accumulating on the lens.



Figure 1

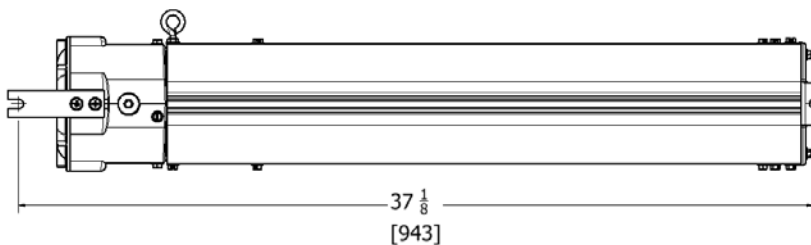


Figure 2 (Top View)

**IMPORTANT NOTE:**

Turn off electricity to circuit at main fuse or at circuit breaker.

1. For NEC installation connection to the black (Line), white (Neutral) and green (Ground/Earth) can be made with appropriate wire connectors outside of the fixture, the connectors can be placed in the fixture through the hub. If the terminal blocks are going to be used, remove the housing cover.
2. If terminal blocks are used, discard the wires on the entry side of the terminal block. Run supply wire to fixture through applicable hub. Make watertight joint using sealing fittings at appropriate hole. The hub in the endcap is for ¾"-14NPT (or 2 x M20 may be ordered).
3. Pull the supply wires into housing through the conduit hub and connect the appropriate leads using insulated wire nuts or use the terminal blocks present. See below for wiring battery backup fixtures.
4. Replace the housing cover.
5. Turn on electricity to verify fixture is operating properly.

**Battery Backup Fixtures:**

IMPORTANT: To turn the fixture completely off, an un-switched AC power source of 120VAC to 277VAC is required for the yellow/black and white leads. If the yellow/black and white leads are attached to switched power, the fixture will go into battery backup mode if the switch is turned off.

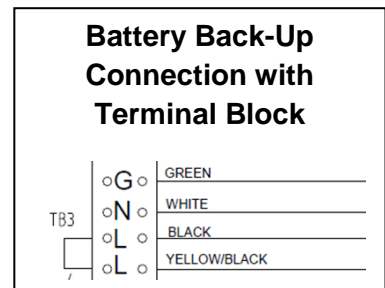
IMPORTANT: A switched or un-switched AC power source of 120VAC to 277VAC is acceptable for the black lead. Fixtures with terminal blocks are shipped with a jumper between the terminals of the black and yellow/black wire. Remove the wire link (jumper) and attach the yellow black wire to line voltage when local switching is required.

The battery must be charged for at least 12 hours prior to testing.

The battery switch must be turned to the "ON" position for the fixture to operate correctly. The fixture will not light up in battery backup mode until AC power is supplied once while the battery switch is in the "ON" position. Thereafter, the fixture will operate in battery backup mode when the AC power is off.

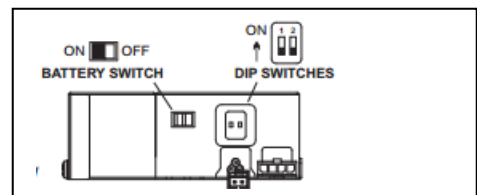
SELF DIAGNOSTIC INSTRUCTIONS / OPERATION: The self diagnostic feature is set from the factory. The emergency LED driver will conduct a self check for thirty (30) minutes every thirty (30) days; and ninety (90) minutes or one hundred eighty (180) minutes self check every 12 months. After every self check the LED indicator light will indicate a status signal. To disable this feature set the Dip Switch 2 to the OFF Position. Dip Switch 1 in the ON position will power the fixture in battery backup mode at 10W for a minimum of 30 minutes. Dip Switch 1 in the OFF position will power the fixture in battery backup mode at 5W for a minimum of 60 minutes.

LED Indicators Status	EM Driver Status/Mode
• Solid Green	System OK/AC OK(Self-diagnostic Enabled or Disabled).
• Slow Flashing Red, 4s on/1s off	Battery not detected, check battery switch or connection.
• Flashing Red, 1s on/1s off	Battery Failure, replace battery.
• Flashing Green, 1s on/1s off	Self-Diagnostic test underway.
• Fast Flashing Red, 0.1s on/0.1s off	Abnormal driver performance, replace driver.
• Very Slow Flashing Red, 4s on/4s off	Over temperature.
• None. Both LEDs OFF	Normal working in EM mode.
• Green/Red alternative flashing, 1s green/1s red.	No load or output over voltage protection triggered.



**Battery Changing Procedure:**

1. Remove the housing cover.
2. Slide the gear tray out of the housing until the emergency driver is exposed. Remove wires from lever nuts as necessary. To remove a wire from a lever nut, fully push up the lever and remove the conductor.
3. Remove the two screws that hold the driver to the gear tray.
4. Remove the two screws that hold the battery compartment cover to the driver.
5. Disconnect the connector and replace the new battery.
6. Reassemble

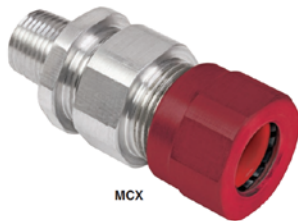


New fixtures with batteries can be stored for 2 years in a -20°C to 30°C ambient without a need of recharge. A fully discharged unit should not be stored more than 6 months without being recharged. There is low voltage disconnect of the battery to the emergency drivers, however as the batteries still have self-discharge they should be recharged within 6 months to prevent the cells from permanent capacity loss. For long term storage, turn the battery switch to the “off” position to prevent the cells from permanent capacity loss.

### ACCESSORIES



### CABLE GLAND ORDERING OPTIONS



CATALOG NUMBER	ENTRY THREAD SIZE (NPT)	BEND TYPE	CABLE ACCEPTANCE DETAILS		MAX LENGTH
			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 Catalog Section F



Snap on Wire Guard

### MAINTENANCE INSTRUCTIONS:

#### CAUTION:

Disconnect the supplying circuit before opening fixture or removing optics. To maintain maximum light output, this fixture should be cleaned periodically. Maintenance procedures sometimes require fixtures to be hosed down for good housekeeping. The supply circuit **must** be turned **OFF** and the fixture lens **must** be allowed to cool to the ambient room temperature before cleaning. Only mild, non-abrasive cleaning agents should be used. The force of water applied by a hose must not exceed 65 gallons per minute coming from a 1" diameter hose applied at a distance of 10 feet.

#### HIGH VIBRATION AREAS:

Periodic inspection of fastener tightness is required; recommended every six (6) months.

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**REMEMBER TO SAVE ONE OF THESE SHEETS FOR MAINTENANCE PERSONNEL**