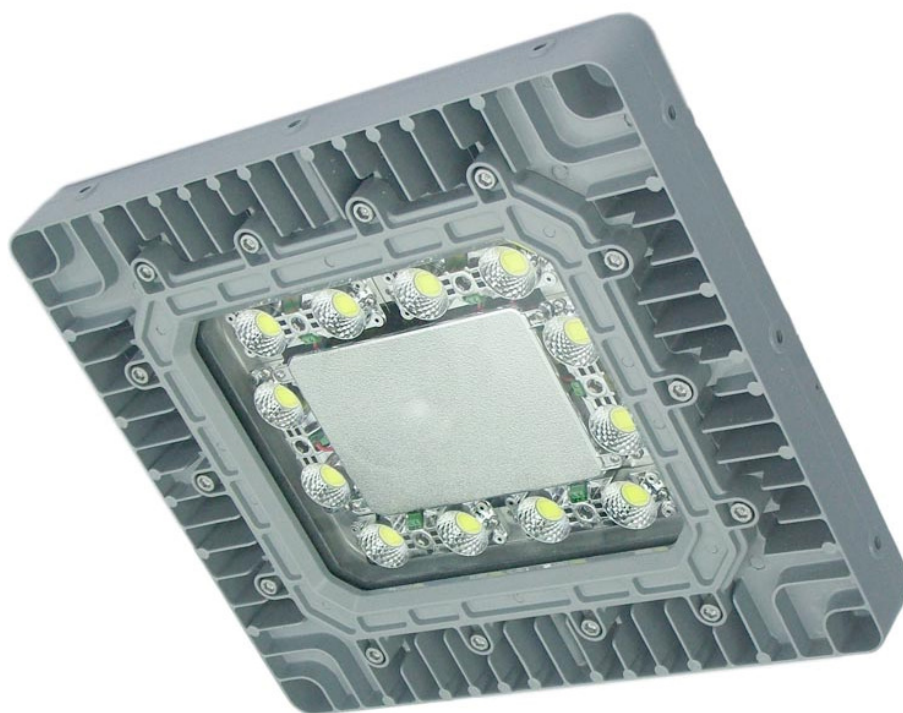


# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

**HIGH PERFORMANCE HAZARDOUS LOCATION XCOB™LED LUMINAIRE  
FOR INTERIOR & EXTERIOR INDUSTRIAL APPLICATIONS.**

**APPLICATION IN OIL, GAS & PETROCHEMICAL,  
TEST CHAMBERS, MINING, HEAVY INDUSTRY, CHEMICAL PLANTS**



**IMPORTANT: READ CAREFULLY BEFORE INSTALLING LUMINAIRE.  
RETAIN FOR FUTURE REFERENCE.**

FOR TECHNICAL ASSISTANCE PLEASE CALL LEDRays @ 514 484-8462 or email  
[info@ledrays.com](mailto:info@ledrays.com)

# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### FEATURES:

- CAD optimized cast Aluminium housing
- XCOB™ LED engines
- TMS™ structure for exceptional thermal efficiency
- Low heat, no UV or IR
- Precise optical control
- Vibration & shock resistant
- Fully sealed against fluids, environmental & atmospheric pollutants
- 6 X Isolated drivers with digital protection
- Power quality with high PF & low THD
- 13mm tempered glass facia

### LISTED:

- Class I Div. 1 & 2, Group C, D
- Class II Div. 1 & 2, Group E, F,G
- Class III Div. 1 & 2
- Temperature Class T5
- Suitable for locations having deposits of readily combustible paint residues.
- cETLus,
- UL844-UL1598-UL1993
- CAN/CSA 22.2
- CE
- NEMA4X
- IP67



### Warnings

- Verify the shipped contents please do not proceed with the installation if any damage is found, please contact us in such an event.
- Verify that the correct mounts, accessories, parts & hardware are available prior to starting work.
- All work should be done by a qualified electrician in accordance with the National Electrical Code, applicable local codes and ordinances. Always check with the Authority Having Jurisdiction (AHJ) to confirm acceptable procedures.
- Confirm the operating voltage of your system with the label on the luminaire. Unless otherwise stated the standard input voltage range is **AC100-277V**
- Do not operate in extreme heat or high humidity environments (Operating temperature range between **-30°C and +45°C/-22°F and +113°F** in wet, damp & dry applications IP65-67 rating)
- Do not modify or operate with dimmers or other non approved control circuits unless the luminaire is equipped with that option.
- This luminaire is designed to operate in a free air environment any immediate enclosed space will reduce its lifespan and may void the warranty. Do not operate luminaire in packing carton.
- Mains voltage must be off during the installation.
- Turn off the breakers for the circuit and affix a warning label before proceeding.
- Please use supplied original packing for protection when transporting luminaire.

**HLX luminaires contain no user serviceable parts inside and no field replaceable parts.**

# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### STEP 1: Checking contents

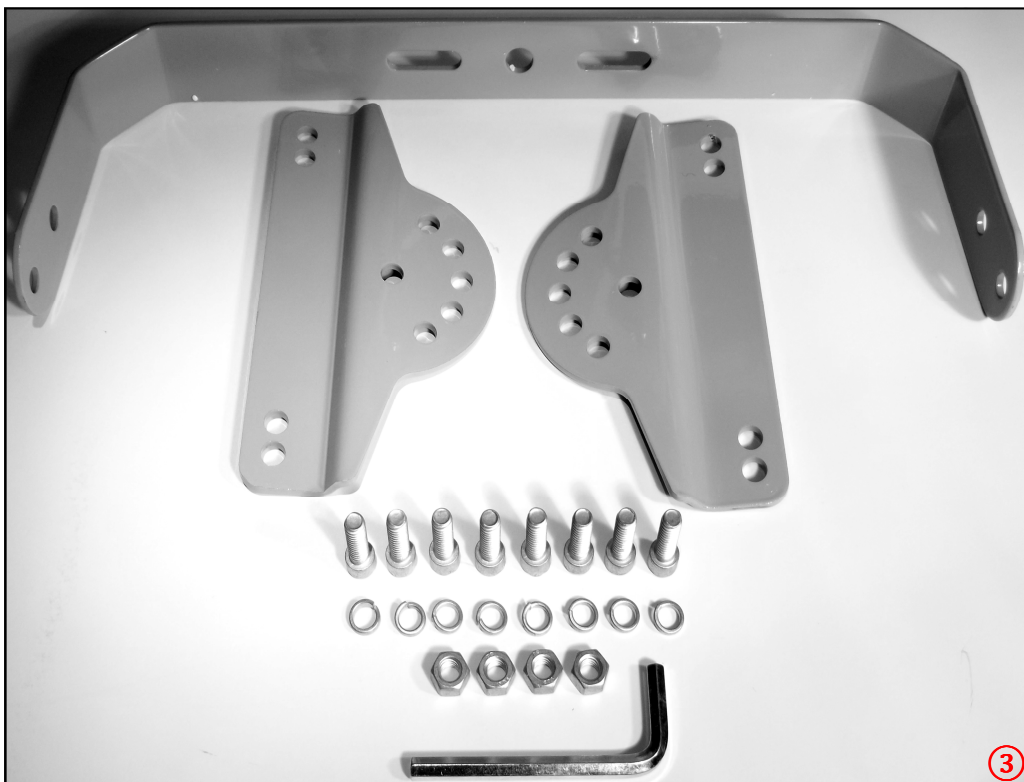
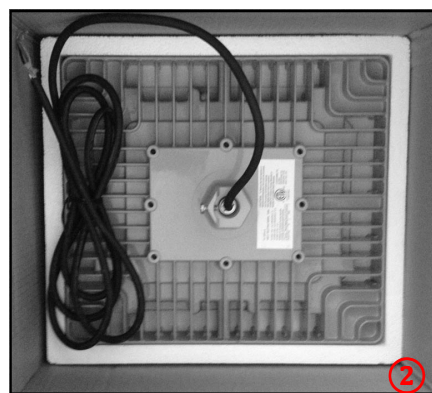
Identify the contents of package. ① ②

Verify that the correct mount is included as per your order as well as the bolts for locking the bracket to the luminaire.

Included in the standard HLX version: ③

1. A horizontal bracket
2. 2 x vertical angle adjustable plates (offset)
3. 8 x M8 x 1.25 x 22mm security bolts with 8 x spring washers and 4 x M8 nuts
4. A matching 6mm HEX security key is included with each luminaire.

Standard mount is trunnion. The luminaire is also factory equipped with standard 3/4" NPT threads. (Various slipfitter, yoke and custom mounts are available please check with your local dealer)



# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### STEP 2: Bracket & mounting options

Various fixed and articulated mounting options can be used. Please use the most suitable mounting method based on the physical requirements and desired light beam control.

The luminaire bracket can be used directly along the length of the fixture sides offering 180° of adjustment.

The bracket can be positioned on any of the 3 bolt cavities provided along the length of the fixture.

Use 2 x M8 bolts & spring washers for mounting bracket directly to the length of the fixture. **④**

The bracket can also be used with the two vertical plates with various angle adjustments along the length of the fixture by using any two bolt cavities. This provides additional vertical mount to fixture clearance and fixed angle positions of **30°, 60°, 90°, 120° and 150°** **⑤**

Please note only the treaded bolt cavities along the length of the luminaire should be used for either direct bracket mounting or articulated mounting. **⑥**

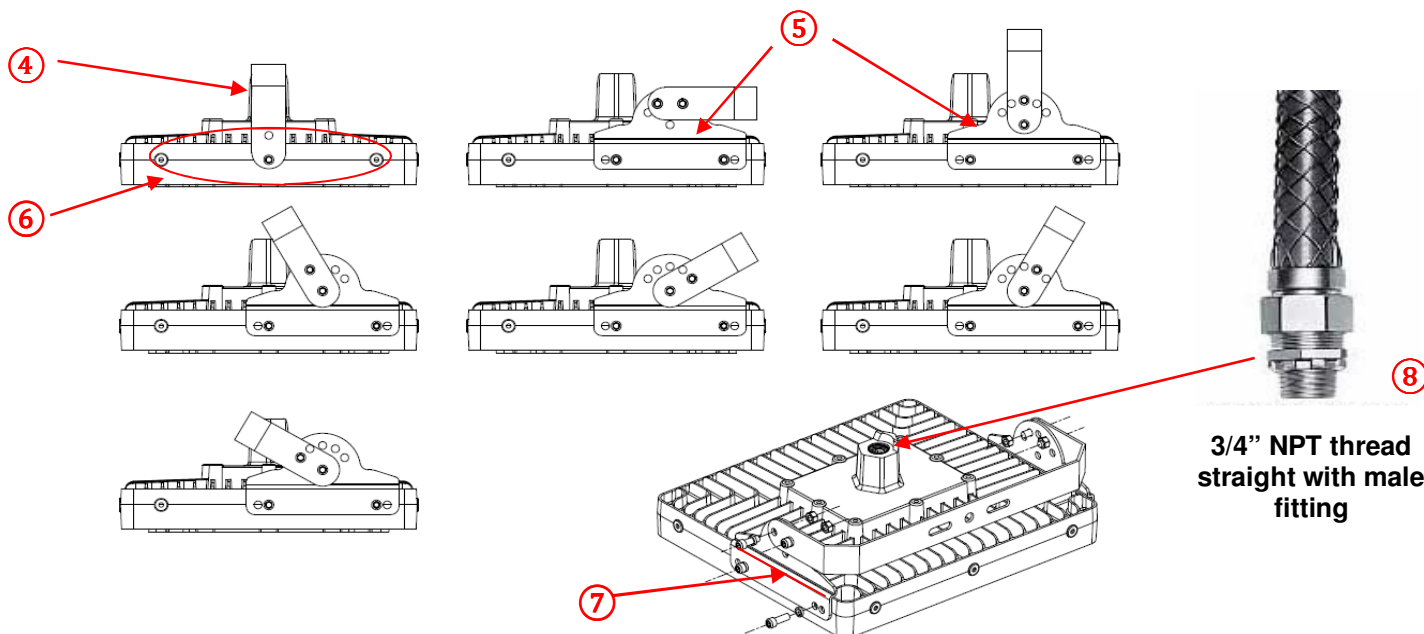
When using the vertical plates the offsets must face towards the center of the luminaire. **⑦**

Select the most suitable bracket angle position for the application. Move the bracket along the vertical plate to align it with the adjustment slots. The slots provide for up to  $\pm 60$  degrees of adjustment from the 0 degree centerline. Each arc slot provides for 30 degree of incremental adjustment.

The vertical plates provide for various angle adjustments by using the lower bolt slot and any top multi-angle arc adjustment slot. Slide bracket into position over the vertical plate holes insert 2 x M8 bolts, spring washers and nuts. One M8 bolt is for the center pivot the other is for setting the angle adjustment. Once fixture is in the desired position tighten all M8 bolts to a maximum of 40ft/lbs or 60 Nm.

For rigid pipe or conduit fitting use the 3/4" NPT female threaded insert on top of the fixture. A set screw is provided and must be secured when using this mounting method. **⑧**

**Do not tamper, remove or otherwise breach by mechanical force the sealing cable gland located inside the threaded insert as this can potentially introduce flame propagation to the atmosphere.**



# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### STEP 2: Continued Mounting Position

HLX luminaires can be mounted in any position including ceiling, wall, pole and at any projection angle.

However be aware that a horizontal position with the light beam fully vertical (Facing up) will lower the fixture's thermal efficiency and reduce the product lifespan. This luminaire position is not recommended and may void your warranty.

### STEP 3: Electrical

Electrical connections. Wire the open end of the input cable to the junction box and electrical circuit. 10 feet (3.0M) of SJOOW 18AWG/3C cable is provided as standard as per color code below.

Professional electrical installation is required for the HLX luminaires. Electrician must have all necessary training in both hazardous and explosive environments to perform the installation. Use only approved equipment and accessories.

**All work should be done by a qualified electrician in accordance with the National Electrical Code, applicable local codes and ordinances. Always check with the Authority Having Jurisdiction (AHJ) to confirm acceptable procedures.**

Use the appropriate cable gauge for the application, current handling requirements (including inrush) and for the worst case environmental conditions. Install an approved cable protective sheath.

All wiring must be performed with mains voltage off, follow all applicable safety procedures.

WIRING COLOR CODES			
WIRING TO MAINS	HLX TYPE		
	A	B	C
LINE	BLACK	BROWN	RED
NEUTRAL	WHITE	BLUE	BLACK
GROUND	GREEN	YELLOW OR YELLOW/GREEN	YELLOW

### STEP 4: Securing

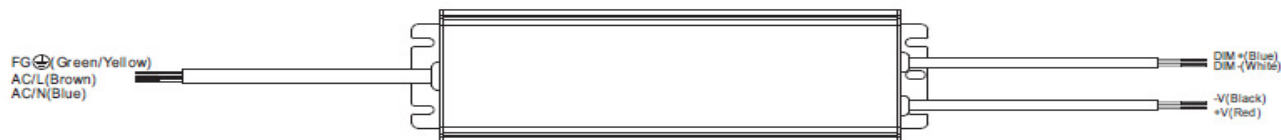
Use proper fasteners to secure luminaire to structure. Luminaire position must take into account desired light beam projection, required luminous intensity, coverage, obstructions, serviceability, snow/ice & wind loading and sun exposure. When used in exterior applications light pollution and beam cut off must be taken into account.

The heatsink fins should be maintained with the slots in a vertical position to optimize thermal capability, to facilitate drainage and limit debris accumulation. In normal operation heat flows from the front to the rear of the housing.

# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### ■ DIMMING OPERATION (for B-type only)



※ Built-in 3 in 1 dimming function, IP67 rated. Output constant current level can be adjusted through output cable by connecting a resistance or 1 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	10K $\Omega$	20K $\Omega$	30K $\Omega$	40K $\Omega$	50K $\Omega$	60K $\Omega$	70K $\Omega$	80K $\Omega$	90K $\Omega$	100K $\Omega$	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※ 1 ~ 10V dimming function for output current adjustment (Typical)

Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

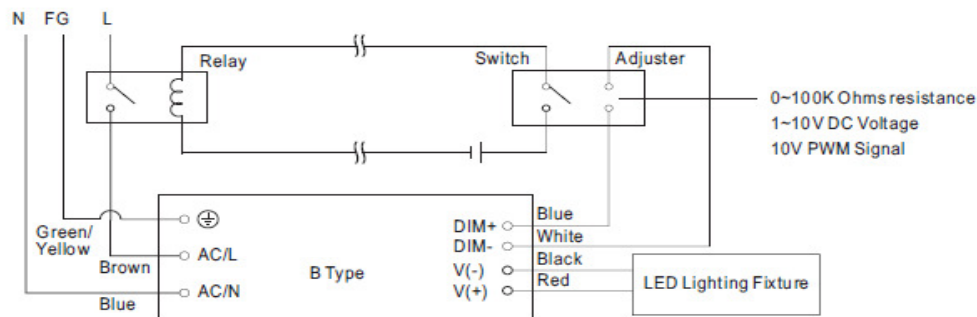
※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Percentage of rated current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95%~108%

※Using the built-in dimming function on B-type model can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

※Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

Dimming connection diagram for turning the lighting fixture ON/OFF :



Using a switch and relay can turn ON/OFF the lighting fixture.

1. Output constant current level can be adjusted through output cable by connecting a resistance or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.

2. The LED lighting fixture can be turned ON/OFF by the switch.

**The dimming input conductor is shipped as a flying lead by default.**

# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### GENERAL SPECIFICATIONS

Optical Parameters		Electrical Parameters	
LED Chip Brand	XCOB EPI	Input Voltage	AC 100~277V
LED Chip Type	15W Single XCOB	Power Frequency	47~63Hz
LED Chip Quantity	10-12	Output Voltage	DC 24~36V
Color Temperature	3000~6500K	Output Current	3.5 ~ 4.8A (Constant Current)
Fixture Efficiency	≥91%	Total Power Consumption	94W ~ 150W±5W
Light Efficiency	90lm/W	LED Power Consumption	90 ~ 145W±5W
Luminous Flux	9500~14000lm	Power Efficiency	85 ~ 92%
Color Rendering Index	≥72-80	Power Factor	≥0.98
Beam Angle	H80/V110°	Total Harmonic Distortion	≤12.9%
Other			
Heat Sink Surface Temperature	48°C ~ 50°C (Ambient Temperature 30°C)	L70	≥60000Hrs
Luminaire Base Temperature	47°C ~ 49°C (Ambient Temperature 30°C)	Fixture Material	Aluminum Alloy (copper free) + tempered glass 13mm
Operating Temp. (Ambient)	-30~+45°C	IP Level	IP67
Operating Humidity	15 ~ 90%RH	Dim option	PWM, 0-10V & resistance

Weight: LR-HLX-150 version 15.25kg ±0.5Kg

Please note unless otherwise stated the HLX series luminaires ship with a IP67 rating.

The HLX series luminaires feature fully sealed and electrically isolated drivers.

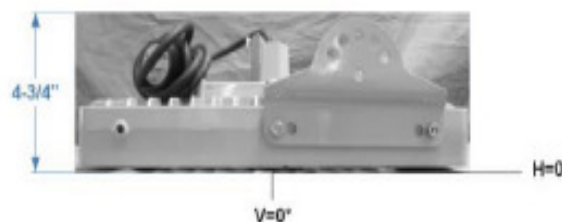
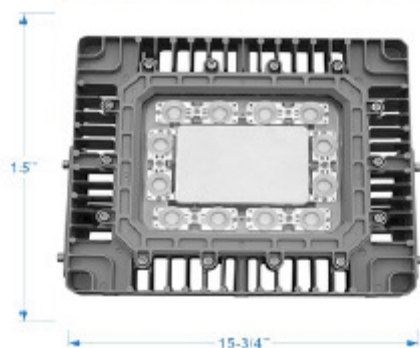
Auto resettable electronic fusing is provided with the driver. In case of fault cycle power to the luminaire.

# INSTALLATION INSTRUCTIONS

## LR-HLX Series Hazardous Location LED Luminaires

### Dimensions

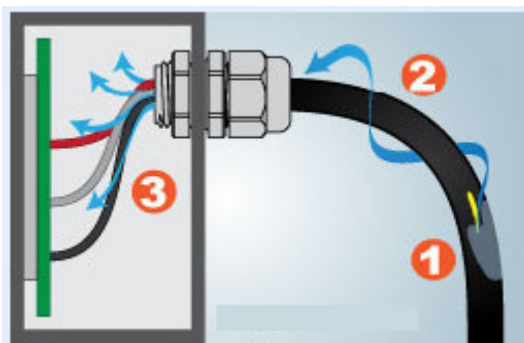
L400mm x W381mm x H121mm



### PRECAUTIONS

#### How Micro Cracks Can Cause Major Problems

WICKING is one of the most common causes for electrical devices to fail when operating in moist environments. Often confused with just a crack in the outer casing or leakage into the housing of a machine, this simple yet complex phenomenon can mean the difference between long term reliability and short term failures and frequent servicing.



#### What is Wicking?

Wicking is caused by moisture entering a crack in the outer jacket of a cable (common with age, stress and temperature variations) or through the wire strands.

Wicking is most common when the equipment and wires cool down after operation. Any air that expanded with heat now condenses and creates a vacuum. Much like an oil lamp or pocket lighter draws fuel from a reservoir, this vacuum causes moisture to be pulled up through the strands of wire into the housing or assembly causing rapid failure.

**HLX luminaires contain no user serviceable parts inside and no field replaceable parts. Drivers and XCOB LED modules are replaceable by authorized factory technicians. Improper installation, operation or servicing of this luminaire may void your warranty.**

For service please contact [info@lumia-agency.com](mailto:info@lumia-agency.com) or [info@ledrays.com](mailto:info@ledrays.com)