



# POINT LIGHTING CORPORATION

## POINT OBSTRUCTION LIGHTS POL EX LED v5 HAZARDOUS LOCATION

Compliances: Class I, Division 2, Groups A B C D, T5 at -40 deg C to +55 deg C\*  
 Class I, Zone 2, Groups IIA IIB+H2 IIC, T5 at -40 deg C to +55 deg C\*  
 Certified FAA L-810 by Intertek Testing Service (ETL) per FAA AC 150/5345-43H  
 Complies with ICAO Annex 14 Low Intensity Types A (10 cd) & B (32 cd)  
 ETL Listed to UL 844 & UL 1598; Report No. 3110856CRT-009c  
 ETL Listed to UL 1598A Marine Vessels  
 ETL Listed to CSA C22.2 No. 137-M1981 & No. 250.0-04 Canada  
 Registered ISO 9001:2015  
 Compliance to UK CAP 168 Table 6A.1 Low Intensity (Group A)  
 American Bureau of Shipping (ABS) Type Approved Product



The POL HAZARDOUS LOCATION series of red LED aviation obstruction lights presents the highest grade technical features and the most options available in the industry. POL steady-burning obstruction lights are used to mark tall structures that present hazards to air navigation. At night, these lights warn pilots when installed in accordance with FAA AC 70/7460-1 and applicable FCC and ICAO rules.

Note: FAA approved "lamp" number 631 See important alarms note on specifications page.

Point Type	Power Supply	Photometric Specification	Color	Entry	Classified Area	Style & Options
POL-21005	1: 120v 2: 220v 3: 12v DC 4: 24v DC 5: 48v DC 6: 277v	F: FAA L-810 F: ICAO Type A B: Trans. Canada B: ICAO Type B B: UK CAP 168 Group A	R: Red	10B: 1-inch, Bottom 34B: 3/4-inch, Bottom M20B: Metric, Bottom M25B: Metric, Bottom	EX: Explosion-Proof Class I, Division 2 Class I, Zone 2	D: Double ** NC: NVG Compatible S3: w/Junction Box single only ** MT: Green Marine Treatment

\* T6 at -40 deg C to +40 deg C  
 \*\* 1-inch thread only  
 For alarm, transfer, flashing and other control options, see page 2



POL-21005-1F-R-10B-EX-D-MT

POL-21005-1F-R-10B-EX  
WITH STANDARD YELLOW MARINE TREATMENT

With -S3-MT Options



Our yellow Marine Treatment finish is standard at no additional charge which tolerates marine, high salt content air and other corrosive environments. The FAA specified finish used by competitors flakes and fails in a short time under such conditions.  
*The Marine Treatment finish shall be bonded to the metal. The fixture shall be treated for marine conditions by cleaning per US Department of Defense TT-C-490 method III, pretreated with chrome-free aluminum conversion coating per US MIL-C-5541 type II, epoxy powder base coat primer and glossy polyester powder coat finish. Powder coating per US Department of Defense MIL-PRF-24712A type VI and oven cured.*



CONTROL & MONITORING  
OPTIONS

POINT OBSTRUCTION LIGHTS  
POL EX LED v5  
HAZARDOUS LOCATION

ADD THE SELECTED UNIT TO EACH POL LIGHT \*

FOR SINGLE LIGHTS: -x voltage -1: 120v -2: 220-240v -3: 12V DC -4: 24V DC

-S1	Flashes at the FAA specified flash rate of 30 +/- 10 per minute
PL10760-x-S2	Non-isolated failure alarm. Upon failure, an alarm relay activates remote alarm contacts powered by the POL's normal line voltage. Required for alarm monitoring with a POC Controller.
PL10760-x-S4	Isolated failure alarm. Upon failure, an alarm relay activates remote alarm contacts. The alarm contacts are isolated "dry" (voltage free) normally open and normally closed.

FOR DOUBLE LIGHTS: -x voltage -1: 120v -2: 220-240v -3: 12V DC -4: 24V DC

PL10760-x-DT	One head operating & one head standby. Upon failure of the operating head, power is transferred to the standby head. No alarm function.
PL10760-x-D2	One head operating & one head standby. Upon failure of the operating head, power is transferred to the standby head & to a primary head failure alarm line powered by the POL's normal line voltage.
PL10760-x-D2.2	Both heads operating. Upon failure of the first head, the alarm contacts are activated powered by the POL's normal line voltage.
PL10760-x-D4	One head operating & one head standby. Upon failure of the operating head, power is transferred to the standby head and to alarm contacts. The alarm contacts are isolated (voltage free) normally open and normally closed.
PL10760-x-D4.2	Both heads operating. Upon failure of one head, the alarm contacts are activated. The alarm contacts are isolated "dry" (voltage free) normally open and normally closed.
PL10760-x-D7	Both heads operating & flashing simultaneously. No alarm function.
PL10760-x-D8	One operating head that is flashing and one standby head. Upon failure of the operating head, power is transferred to the standby head and it flashes. No alarm function.
PL10760-x-D10	One operating head is flashing and one standby head. Upon failure of the operating head, the standby head activates & flashes and a failure alarm line is activated powered by the POL's normal line voltage.
PL10760-x-D14	Both heads operating & flashing simultaneously. Upon failure of the first head, the alarm contacts are activated. The alarm contacts are isolated "dry" (voltage free) normally open and normally closed.
PL10760-x-D15	Both heads operating & flashing simultaneously. Upon failure of the first head, the alarm line is activated powered by the POL's normal line voltage.

\* The PL10760-xx Control Unit is Class I, Division 2 and must be installed within 3-ft (1-meter) of its associated POL-EX obstruction light. Proper installation and sealing in accordance with all applicable standards is the responsibility of the installer. See page 4 for enclosure details.



# POINT OBSTRUCTION LIGHTS POL EX LED v5 HAZARDOUS LOCATION



## POL EX SPECIFICATIONS

The red LED lighted (specify: voltage) aviation obstruction light shall be tested and certified FAA L-810 (ICAO low intensity Type B). The obstruction light shall operate properly at 50 or 60 Hz at an input voltage supply of 120V (93V to 144V) or 220V units (176V to 250V). Within the preceding ranges, the output to the LED board shall be a controlled, stabilized constant current.

The obstruction lights shall be listed and labeled for use in hazardous locations: Class I, Division 2, Groups A, B, C, D & T5 and Class 1, Zone 2, Groups IIA, IIB+H, IIC with a temperature rating of T5 at max +55-deg C per UL 844 & CSA C22.2 No. 137-M1981.

The AC obstruction lights shall be listed *Suitable for Use in Wet Locations* to UL1598A Marine Vessels (for AC), UL1598 2nd Edition Luminaries; CSA C22.2 No. 250.0-08, 2nd Edition; UL50 11th Edition Standard for Enclosures for Electrical Equipment and CSA C22.2 No. 94-M91 Special Purpose Enclosures for use at -40 deg C to +55 deg C and sealed to IP66 ingress protection.

The unit shall have passed the FAA certification tests: the constant high temperature test to +130 deg F (+55 deg C) and the constant low temperature test to -67 deg F (-55 deg C) conducted in accordance with US MILSTD-810F, Method 501.4, Procedure II; the wind-blown rain test conducted in accordance with US MIL-STD-810E, Method 506.3, Procedure I; and the humidity test shall be in accordance with US MIL-STD-810E, Method 507.3, Procedure I. The complete test regime shall exceed the requirements of NEMA 4X and IP 66. The light head shall be marine treated for corrosion resistance certified by the manufacturer to comply with the US Military Standard Salt Fog Test conducted per MIL-STD-810F, Method 509.4, Procedure I, paragraph 4.5.2.

*The Marine Treatment finish shall be bonded to the metal. The fixture shall be treated for marine conditions by cleaning per US Department of Defense TT-C-490 method III, pretreated with chrome-free aluminum conversion coating per US MIL-C-5541 type II, epoxy powder base coat primer and glossy polyester powder coat finish. Powder coating per US Department of Defense MIL-PRF-24712A type VI and oven cured.*

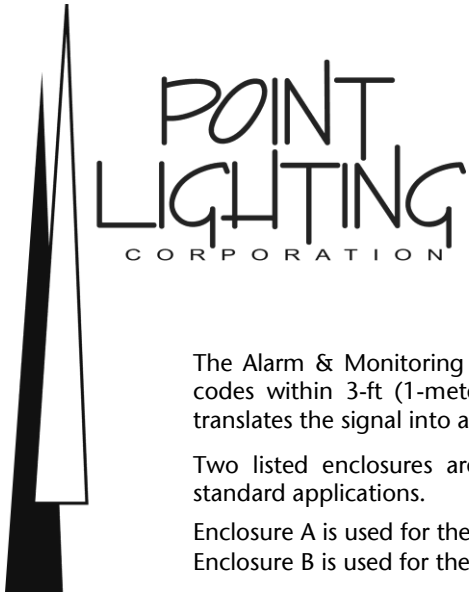
The lens shall be strong soda lime glass and shall be smooth and rounded to reduce the adhesion of dirt, ice and snow. The glass shall be clear to maximize light transmissivity.

The red emitting LEDs shall meet the chromaticity requirements of US MIL-C-25050. The high output LED's be the latest technology providing uniform light output in 360 degrees horizontal. The LED average life shall exceed 100,000 hours. The LEDs shall be soldered in a factory set position to insure consistent light output. Wire mounted raised LEDs that can be bent out of position shall be unacceptable and cause for rejection. The LED board shall be treated with a protective dielectric conformal coating for protection from moisture and corrosion.

The power supply board shall include short circuit and open circuit protection and the unit shall be protected from line surges by metal oxide varistors (MOVs). There shall be a clear design element for the dissipation of LED heat to insure the LEDs do not fail prematurely.

The red LED aviation obstruction light shall be POINTSPEC Series POL-21005-EX manufactured by Point Lighting Corporation.

Important Note: Alarm and other control options must be selected at time of initial order by adding the proper PL10760 unit. The POL-EX LED light can only be monitored by 3<sup>rd</sup> party systems or controllers by selecting a POL-EX with a PL10760 monitoring unit.



# POINT OBSTRUCTION LIGHTS POL EX LED v5 HAZARDOUS LOCATION

## PL10760 ALARM & MONITORING UNIT

The Alarm & Monitoring Unit must be installed in accordance with all applicable local electrical codes within 3-ft (1-meter) of the POL EX light fixture. The PL10760 monitors the LEDs and translates the signal into a form usable by a POC controller or other alarm scheme.

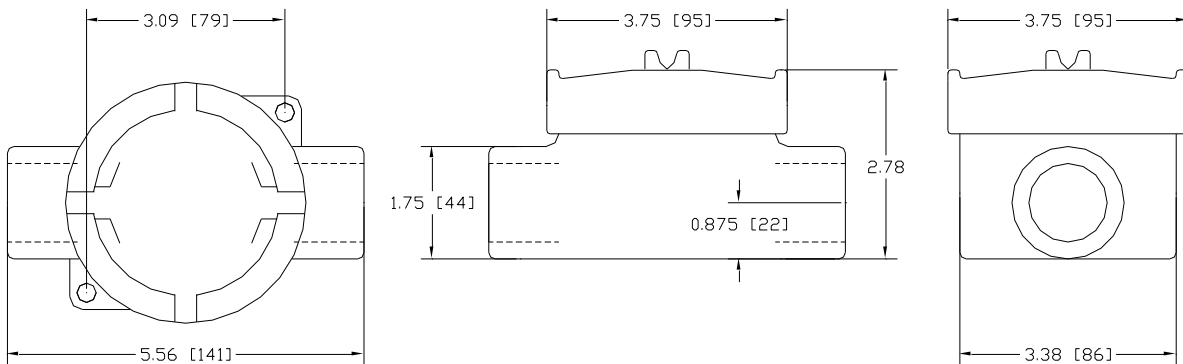
Two listed enclosures are used depending on the functions required. The following are the standard applications.

Enclosure A is used for the following versions: S2 S4 DT D2 D4 D7

Enclosure B is used for the following versions: D2.2 D4.2 D8 D10 D14 D15

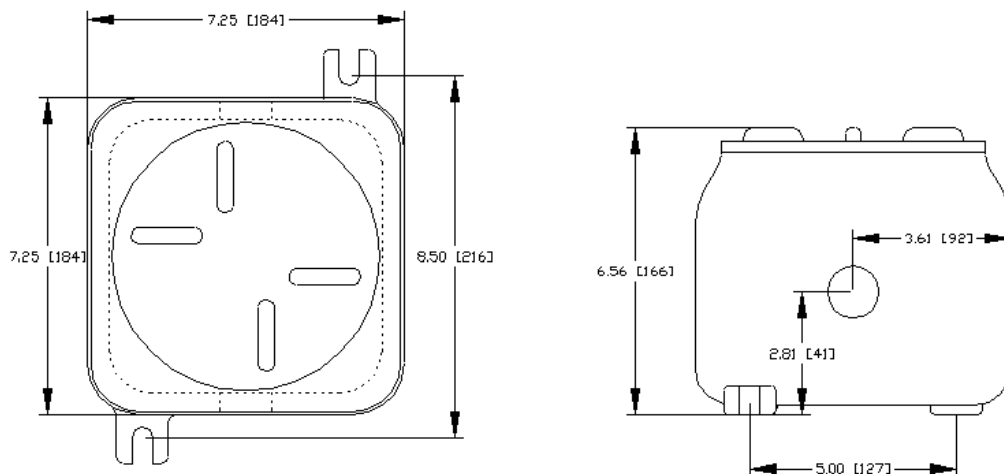
### PL10760 ENCLOSURE A

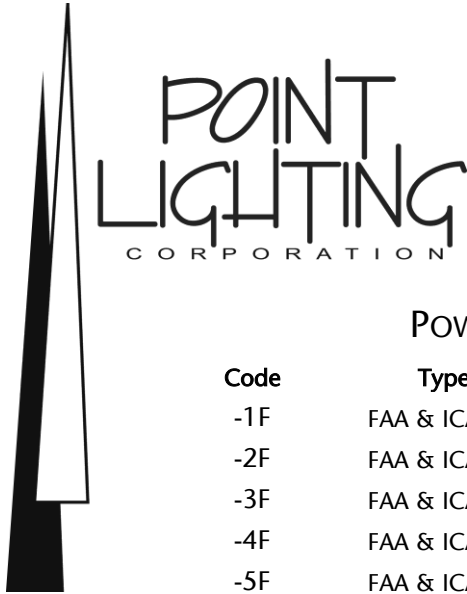
Manufacturer: Crouse-Hinds File: QBCR.E10518  
Class I, Divisions 1 & 2, Groups A B C D



### PL10760 ENCLOSURE B

Manufacturer: Akron File: E139669  
Class I, Divisions 1 & 2, Groups B C D  
NEMA 4X, 7, 9





# POINT OBSTRUCTION LIGHTS POL EX LED v5 HAZARDOUS LOCATION

## POWER CONSUMPTION PER POL EX LIGHT HEAD

Code	Type	Voltage	Frequency	Watts*	mA	VA*
-1F	FAA & ICAO A	120 AC	50/60 Hz	1.5	25	2.9
-2F	FAA & ICAO A	220 AC	50/60 Hz	2.1	25	5.5
-3F	FAA & ICAO A	12 DC	---	1.2	96	1.2
-4F	FAA & ICAO A	24 DC	---	1.5	62	1.5
-5F	FAA & ICAO A	48 DC	---	1.2	25	1.2
-6F	FAA & ICAO A	277 AC	50/60 Hz	1.9	24	5.9
-1B	ICAO B & TRAN CAN	120 AC	50/60 Hz	6.9	63	7.6
-2B	ICAO B & TRAN CAN	220 AC	50/60 Hz	6.9	34	7.4
-3B	ICAO B & TRAN CAN	12 DC	---	4.3	470	4.3
-4B	ICAO B & TRAN CAN	24 DC	---	4.3	230	4.3
-5B	ICAO B & TRAN CAN	48 DC	---	5.0	104	5.0
-6B	ICAO B & TRAN CAN	277 AC	50/60 Hz	6.9	28	7.9

Note: For option -NC, add 1.0 watts (1.1 VA)

\*Power consumption for AC units includes the effect of the unit's power factor which accounts for the difference between watts and volt-amperes. Measurements were made at the nominal AC voltages. The operating range for 120v units: 93 - 144v; for 220v units: 176 - 250v; for 277v units: 263 -291v.

## REPLACEMENT PARTS

Note: Single POLs and the fixture heads of double POLs are permanently sealed. In the event of failure, the fixture must be returned to the factory for evaluation and repair.

Note: Failure caused by surge normally requires fixture replacement

## WEIGHT, DIMENSIONS & SHIPPING DATA

inches (mm)	Weight	Height	Width	Depth	Multi-Pack Carton		
					Qty	Weight	Dim (inches)
POINTSPEC Single:	3.5 lbs 1.6 kg	8.6 (210)	6.0 (152)	5.0 (127)	12	47 lbs 21.3 kg	22 x 15 x 17
POINTSPEC Double:	11.8 lbs 5.4 kg	13.3 (337)	14.9 (378)	5.0 (127)	2	27 lbs 12.3 kg	19 x 19 x 19
Wind Loading:	Effective Projected Area (EPA) for POINTSPEC Double				0.69 square feet		

## POINT LIGHTING CORPORATION

Mail: P.O. Box 686, Simsbury, CT 06070  
Tel 01 860.243.0600  
email: Info@PointLighting.com

Plant: 61-65 W. Dudley Town Rd, Bloomfield, CT  
USA  
Fax 01 860.243.0665  
website: www.PointLighting.com