



POINT LIGHTING CORPORATION

POINT STATUS LIGHTS PSL LED HELIDECK STATUS LIGHT SYSTEM SAFE AREA & CLASS I, DIVISION 2 (ZONE 2)

Compliances: ETL Listed to UL 1598 at $\pm 55^{\circ} \text{C}$
 ETL Listed to CSA C22.2 No.250.0-04 Canada
 ETL Listed to UL 1598A Marine Vessels at $\pm 55^{\circ} \text{C}$ & IP66
 UK CAA CAP 437 Offshore Helideck Status Light System
 Class I, Division 2, Groups A B C D, T5 at $\pm 55^{\circ} \text{C}$ (option -EX)
 Class I, Zone 2, Groups IIA IIB+H2 IIC, T5 at $\pm 55^{\circ} \text{C}$ (option -EX)
 Registered ISO 9001:2015
 IMO 2009 MODU Code (2010) paragraph 13.5.26
 American Bureau of Shipping (ABS) Type Approved Product
 ABS Green Passport per MEPC179 (59)

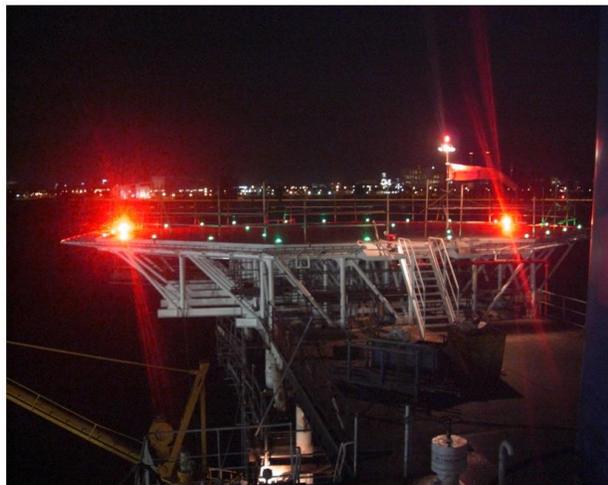
The Status Light system consists of one or two PFB flashing red LED main status lights visible from any direction of approach and on any landing heading. Additional PRL-LSM repeater lights may be placed at the helideck. If a condition exists on an installation which may be hazardous for the helicopter or its occupants a visual warning system should be installed. The aeronautical meaning of the flashing red light is either *Do not land, aerodrome not available for landing or Move clear of landing area*. The system may be automatically initiated by means of a remote alarm signal (by others) as well as manual activation. All exterior metal beacon parts are treated for corrosion resistance that meets the US Military Standard Salt Fog Test conducted per MIL-STD-810F, Method 509.4, Procedure I, paragraph 4.5.2.



System	Color	Voltage	Main Lights	Options
PSL-35002	R: Red	1: 120 volts $\pm 20\%$ 2: 220 volts $\pm 20\%$ 4: 24 volts DC	1B: One (1) 2B: Two (2)	1R: One (1) Repeater Light 2R: Two (2) Repeater Lights EX: Class I, Div 2 (lights only)* EX2: Class I, Div 2 (system)* ROS: Remote Override Station^ ROSEX: Remote Override Station^* LTP: Lamp Test Pushbutton R24: Remote Digital 24V DC Control Signal WM: Control Unit Wire Markers PSS: Power Source Selector (DNV) for two power lines

Consists of a combination of lights as shown on page 6.
 To have the PSL control unit integrated into a PHC system controller, see page 3 & file HL-4.1.1

PSL SYSTEM UNDERGOING COMMISSIONING TEST IN SINGAPORE

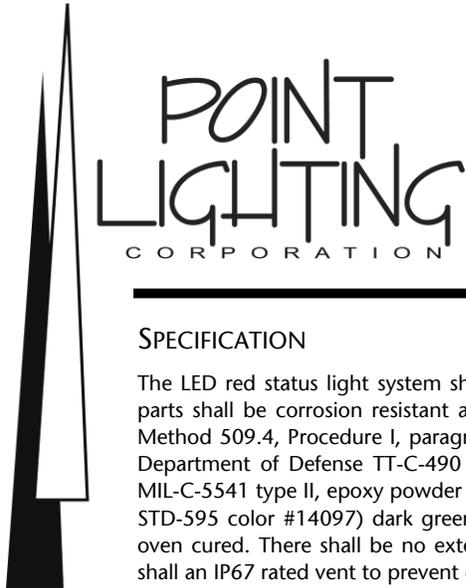


All external hardware is grade 316 (A4) stainless steel.
 Metal castings are copper-free (< 0.4%) heat treated aluminum.

* Class I, Zone 2, T5 $\pm 55^{\circ} \text{C}$
 ^ Remote operation:
 See details on page 2.

PSL SYSTEM MAIN LIGHT





POINT STATUS LIGHTS

PSL LED

HELIDECK STATUS LIGHT SYSTEM

SAFE AREA & CLASS I, DIVISION 2 (ZONE 2)

SPECIFICATION

The LED red status light system shall comply with UK CAA CAP 437 and IP66. All exterior aluminum cast beacon parts shall be corrosion resistant and meet the US Military Standard Salt Fog Test conducted per MIL-STD-810F, Method 509.4, Procedure I, paragraph 4.5.2. 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 in color RAL 6003 (FED-STD-595 color #14097) dark green. Powder coating per US Department of Defense MIL-PRF-24712A type VI and oven cured. There shall be no exterior plastic parts; all shall be cast aluminum, glass and stainless steel. The light shall have an IP67 rated vent to prevent condensation by pressure equalization.

The main status lights shall flash in sync if two or more are installed. For each main status light there shall be a reduced intensity setting which will similarly synchronize flashing when in use. Additional repeater lights may be installed at the landing area and shall not exceed 150 mm in height. The repeater lights shall be at the reduced intensity level. The main light shall not exceed 250 mm in height.

The system may be switched ON by a remote signal or manually. When ON, the system may be manually switched to reduced intensity. After 30 minutes, the system will automatically revert to normal intensity. Failure of any light will display as an alarm at the controller.

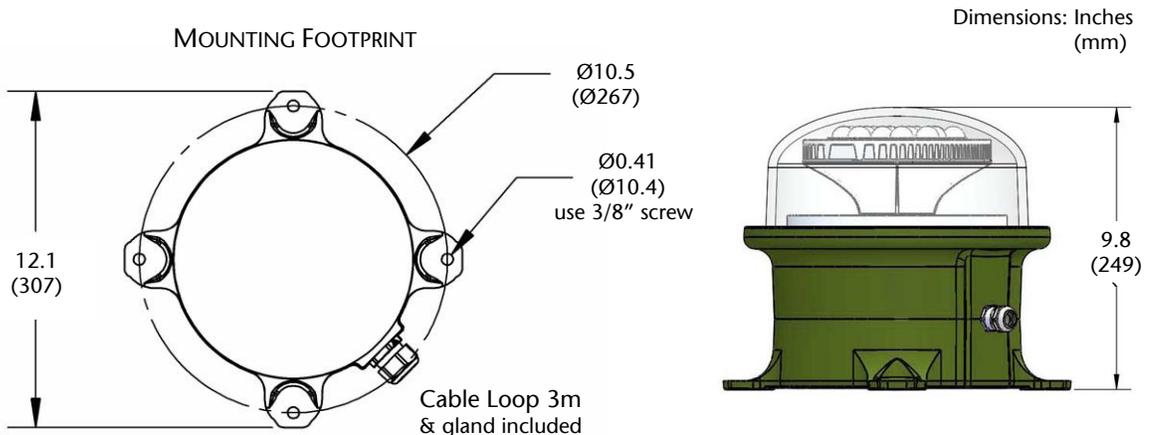
Main Light:	Intensity:	Flash Rate:
Normal mode	> 700 candelas	120 fpm
Reduced Intensity mode	< 60 candelas	Selectable: 120 or 60 fpm
Main Status Light	watts VA	Voltage
Peak Power:	70.1 116.8	120V AC
	68.5	220V AC
	58.4	24V DC
Average Power:	35.1 58.4	120V AC
	34.3	220V AC
	29.2	24V DC
Input Voltage Range*:	120V AC unit ± 20%	
	220V AC unit ± 20%	
	24V DC unit ± 10%	
Temperature Rating:	± 55° C	

* The AC upper limit for the repeater light is 250V.

Options –ROS and –ROSEX Remote Override Station

Provides for emergency remote manual operation of the status light system. When ordered, this station uses line voltage and connects to the "RTO" terminal block in the PSL system control unit. For a third party detection system intended to automatically activate the PSL system, the detection system control wire must provide line voltage matching the PSL to the ROS. The ROS switch will normally be set in the AUTO position, but may be manually switched to ON.

Note: For PSL systems without the ROS option, the third party detection system control wire connects directly to the "RTO" terminal block in the PSL system control unit.



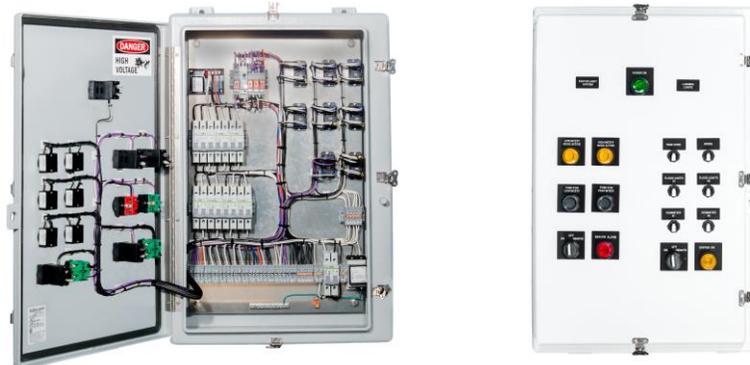
TYPICAL PSL CONTROL UNIT PL10870

The control unit is included in the PSL status light system catalog number. Typically left in the AUTO position, the system operates automatically upon a signal from the third party gas detection or other monitoring system. This photo at right is a "safe area" enclosure NEMA 4X for wall-mounted installation indoors or outdoors. Class I, Division 2 (Zone 2) and ATEX & IECEx hazardous area enclosures are available.



TYPICAL COMBINATION PHC HELIDECK LIGHTING SYSTEM CONTROLLER WITH INTEGRAL PSL CONTROL UNIT

The PSL status light system control unit is integral with the PHC helideck lighting controller when ordered specifically as a combination controller. The photos below are of a "safe area" enclosure NEMA 4X for wall-mounted installation indoors or outdoors. We can also add a switch for the PTPS Circle-H lighting system operation. The PHC must be ordered with option -M for Marine Vessels and option -SL or -SLA depending on the PSL main light classification. Class I, Division 2 (Zone 2) and ATEX & IECEx hazardous area enclosures are available.



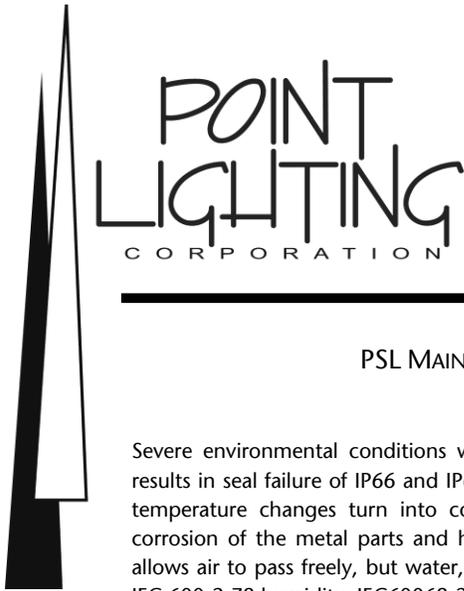
**NEW SAFETY FEATURE - OPTIONAL FLASHING RED PERIMETER LIGHTS
GREEN TO RED COLOR SWITCHING PERIMETER LIGHTS INTEGRATED WITH THE STATUS LIGHT SYSTEM**

Point Lighting offers a unique and proprietary design option for integrating the PRL perimeter lights with the PSL status light system. When the status lights activate, the perimeter lights automatically switch color to red and flash in sync with the main lights giving unmistakable warning to the pilot not to land on the helideck. This is applicable to all mounting forms of the PRL in both safe area and hazardous location Class I, Division 2.

Option -SC is required for the PRL perimeter lights and this system requires installation of the combination heliport controller PHC-61001 with integral PSL control unit option -SL and with color switching option -SCSL.

Typical catalog numbers: PRL-97004-1C-G+R-LSM-MT-SC Perimeter Light (Green + Red)
PHC-61001-1-M-SCSL-SL Heliport Lighting Controller

Set in the AUTO position the default color for the lights is green, but upon emergency activation of the PSL Status Light System the perimeter lights switch to flashing red. The perimeter lights may be manually switched to steady-burning red or back to green regardless of the mode of the status lights by means of a rotary switch on the PHC door: "OFF - GREEN - AUTO - RED"



POINT STATUS LIGHTS PSL LED HELIDECK STATUS LIGHT SYSTEM SAFE AREA & CLASS I, DIVISION 2 (ZONE 2)

PSL MAIN LIGHT VENTED TO IP67 & HAZARDOUS LOCATIONS FOR PREVENTION OF MOISTURE INGRESS

Severe environmental conditions with varying temperatures and humidity cause an air pressure differential that results in seal failure of IP66 and IP67 enclosures. Certified fixtures and enclosures begin to leak moist air which the temperature changes turn into condensation. This water can cause failure of the electronic components and corrosion of the metal parts and housing. Point Lighting Corporation uses a very fine pore membrane vent that allows air to pass freely, but water, dust and dirt are prevented from entering. The vent is certified to IP66 & IP67, IEC 600-2-78 humidity, IEC60068-2-11 salt fog, GR-3108-CORE corrosive gases and other IEC standards.

Main Light PFB-37002-R-x-SL
with PL10961-M12-HF Vent
Installed above the cable entry gland



PFB BEACON & PSL MAIN LIGHT FREEZE & HEAT CYCLING TEST PROGRAM TO CONFIRM PREVENTION OF MOISTURE INGRESS CALIBRATED ENVIRONMENTAL CHAMBER

Turn on the chamber, humidity control, dry air purge and ramp to 75°F (24°C) and 70% humidity for baseline readings.

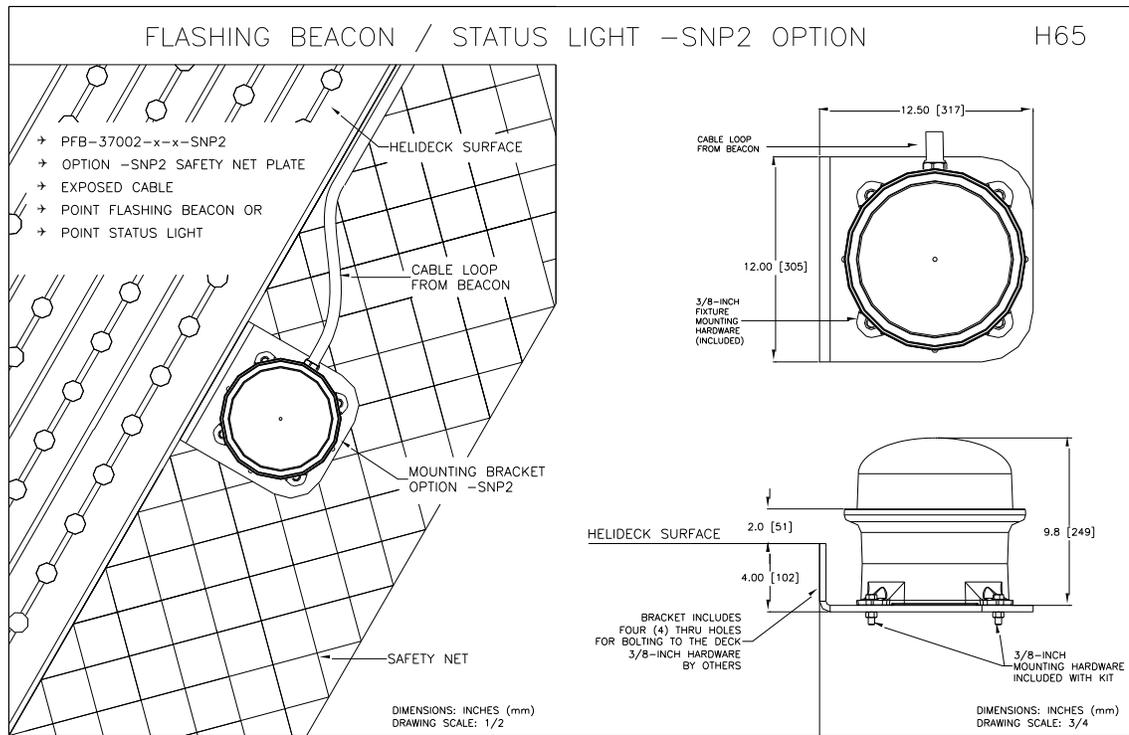
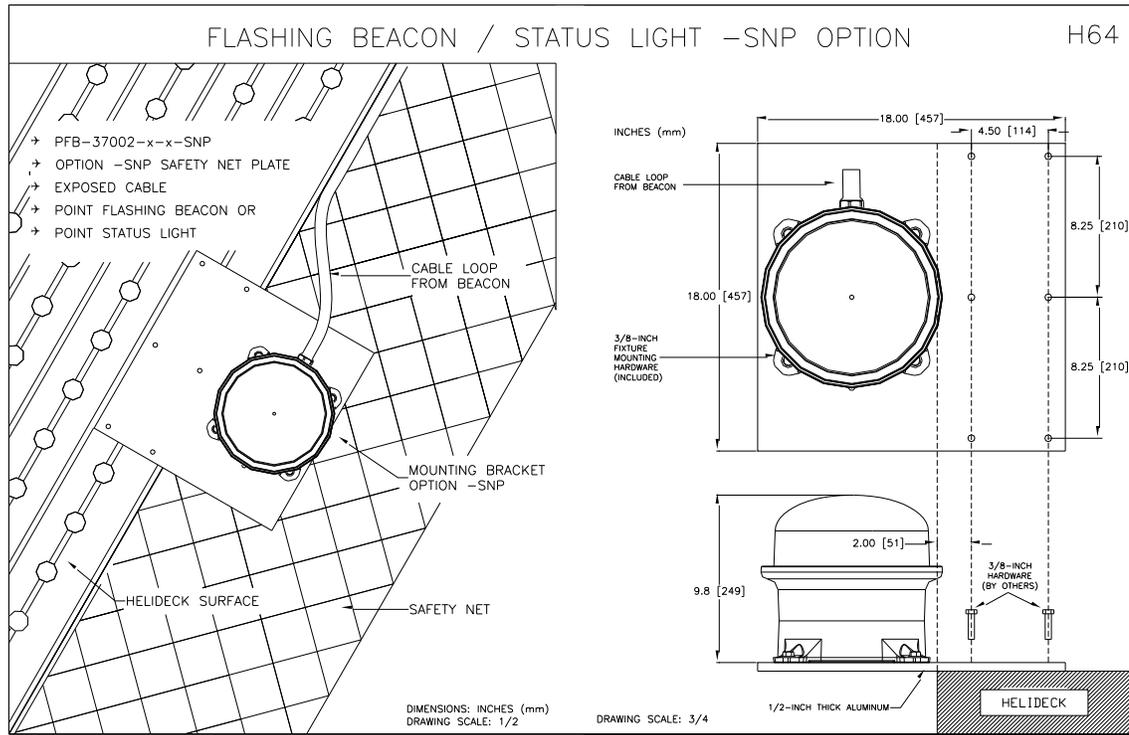
Ramp to -67°F (-55°C) and 50% humidity at the rate of 2.5°F/min (1h 15m).

Hold at -67°F (-55°C) for 1 hour.

Ramp to 130°F (+55°C) and 95% humidity at a rate of 2.5°F/min (1h 15m).

Hold at 130°F (+55°C) and 95% humidity for 1 hour.

Repeat steps 2 - 5 Twenty (20) times



POINT STATUS LIGHTS PSL LED

TYPICAL ARRANGEMENT

NOTE: Customers with existing PSL-35001 status light systems may use the PFB-37002 main light as a direct replacement for PFB-37001 main light without any programming or other control changes.

NOTE: Repeater lights should rarely be necessary because the PSL Main Lights are less than 25 cm tall and may be installed outside the edge of the D-value circle.



MAIN LIGHT
PORT SIDE
PFB-37002-R-X-SL



MAIN LIGHT
STARBOARD SIDE
PFB-37002-R-X-SL

