

POINT HELIPORT LIGHTING PHC HELIPORT LIGHTING CONTROLLER

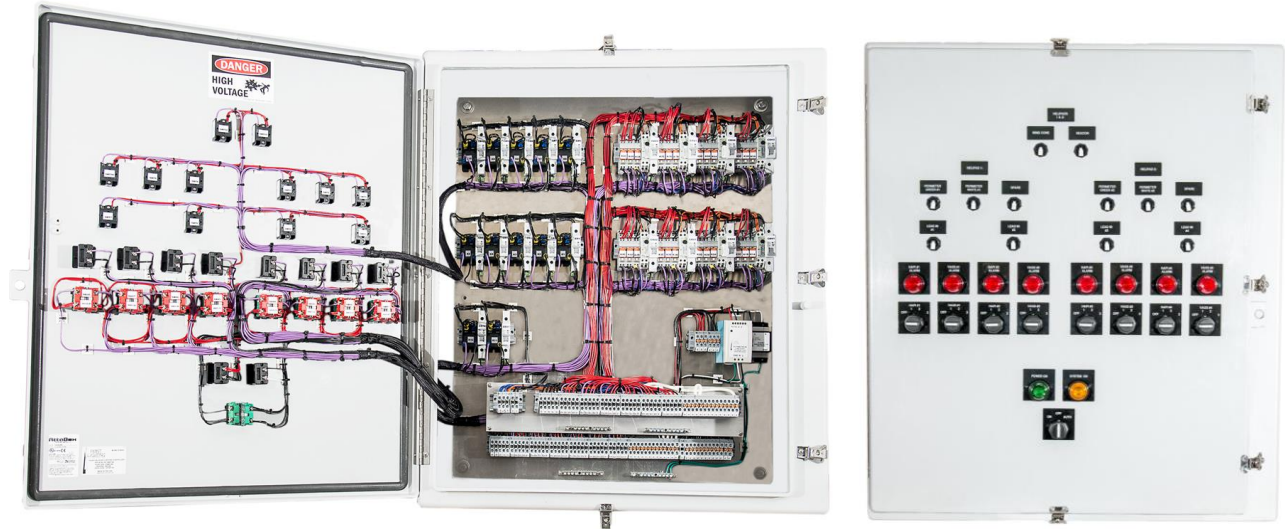
POINT LIGHTING CORPORATION IS AN INTERTEK ETL CERTIFIED BUILDER OF INDUSTRIAL CONTROL PANELS UNDER UL 508A 2ND AND CSA C22.2 NO. 14. PHC PANELS ARE LABELED WITH THE ETL LISTED MARK.

The PHC controller provides manual and automatic operation of the heliport lighting system. In the AUTO position, the controller operates automatically from a pilot actuated FAA radio controller or an FAA photoelectric controller that activates per FAA light level requirements. Load switches on the door allow for manual control of individual circuits. The fiberglass reinforced polyester enclosure is rated NEMA 4X and IP66. There are two industrial grade pilot lights on the door: green POWER ON indicating power presence and amber (yellow) SYSTEM ON. The PHC and lighting circuits are protected from transient voltage spikes by a 50kA interrupting surge suppressor and each load output is protected by a current limiting circuit breaker. The standard circuit layout may be modified to accommodate the actual heliport lighting system.

Note: For touchscreen and/or brightness control, see file HL409PHC for PHC-66002.

Point Type	— Voltage	— Options	— Serial Number
PHC-61001	AC: 96 – 264V DC: 24V	See list on page 2	xxxxxxx

HELIPORT LIGHTING SYSTEM CONTROLLER PHC-61001-AC-HC2-VC2 For two helipads each with HAPI (2) and VAGS-SAGA (2)



PHC HELIPORT LIGHTING CONTROLLER AVAILABLE OPTIONS

EX	Class I, Division 2 (Zone 2) Enclosure
AX	ATEX Zones 1 & 2 Enclosure
SS	Stainless Steel 316L Enclosure
HC	HAPI Controls for one (1) approach Includes ON-OFF, 3-step brightness control and alarm indication
HC2	HAPI Controls for two (2) approaches
VC	VAGS-SAGA Controls for one (1) approach Includes ON-OFF, 3-step brightness control and alarm indication
VC2	VAGS-SAGA Controls for two (2) approaches
SC	Segmented Circle (PTPS) Controls. See file HL500PTPS
SEQ	Sequence flashing landing direction lights. See file HL137SEQ
LA	Lightning Arrestor for safe area or stainless steel enclosures
UPS	Uninterruptible Power Supply (UPS) (see below)

Uninterruptible Power Supply: Option –UPS

This option acts as an uninterruptible power supply battery backup for the LED lighting system supplied by Point Lighting Corporation. Upon failure of the normal power, the UPS will automatically switch to its standby power source with a run-time of at least **30 minutes***. Upon restoration of power, the UPS automatically returns to steady-state.

The standard system will handle a load of at least 700 watts. For any AC power available, the lighting must be ordered as 120V AC. For an offshore helideck, the UPS will power an LED system that includes:

- ...the circle-H lighting system (PTPS)
- ...the perimeter lights (PRL)
- ...up to eight (8) surface floodlights (PSF)
- ...the status light system with two main lights (PSL)
- ...The lighted wind cone (PWC)
- ...the lighting system controller (PHC)

*Additional third party loads must not be connected to the UPS. Contact Point Lighting Corporation for review of customization feasibility for longer time periods and different loads.

The voltage code used for the PHC catalog number is the normally available input voltage. For AC power, the PHC-UPS will output 120V AC to the load circuits. For 24v DC power, the output will be 24V DC. In general, the UPS will be in a separate enclosure mounted next to the PHC enclosure and the normal system power will be connected at the UPS.

See the next page for more options

PHC HELIPORT LIGHTING CONTROLLER AVAILABLE OPTIONS

RADIO & REMOTE CONTROL OPTIONS

HWC	Helipad Web Control Direct control of the lighting system by mobile device or computer workstation. Connects to the site's internet server by means of Ethernet cable (by others) into the PHC and password logon.
RC	Radio Control ON-OFF Incorporates into the PHC a passive VHF radio receiver that permits the pilot to remotely activate the lighting system ON-OFF by keying the microphone on the controller's fixed frequency when the PHC master switch is preset to the AUTO mode. All PHC circuits preset to ON will activate. The timer will reset the system to OFF after fifteen (15) minutes. The antenna (included) must be within 50-ft of the PHC and that cable cannot be lengthened. If that is not possible, specify a separate PRC-65001 radio controller.
RC3	Radio Control 3-Circuit Same as option -RC except there are three (3) circuit relays activated in turn based on 3, 5 & 7 keys of the microphone by the pilot.
SA	System Activity Status Adds relay and terminal blocks for NO/NC (normally open/normally closed) contacts. The user can connect their BMS, BAS or other remote indication to the contacts to tell them when the lighting system is ON. That means when the PHC output circuits to the lights are energized. This remote method of indication is in addition to the standard yellow pilot light on the door for "System ON".
RT	Remote Signal Note: The PHC must also have option -RC For remote activation using a radio signal and/or a normally open relay or switch (by others). When the PHC-RC main switch is in the AUTO position, the system may be activated by the usual radio control signal or the remote line voltage contact. The operation by radio keying will time-out as usual; the operation by remote switch signal will remain ON until the switch turned off. The -RT (non-radio) signal must be line voltage.
ROS	Remote Override Station Provides for remote manual operation of the helideck lighting system. When ordered, this station uses line voltage and connects to the PHC controller. When the PHC main switch is set in the AUTO position, the ROS will be active for switching the PHC ON-OFF. It will switch ON whatever circuits are preset in the ON position at the PHC. It simply "remotes" the ON-OFF function at the PHC.

OPTIONS SPECIFIC TO OFFSHORE MARINE HELIDECKS

M	Marine Helideck Required for electrical safety on all offshore marine helidecks.
PSS	Power Source Selector – Manual (safe area only) A DNV requirement to accommodate selecting between two external power sources.
PTS	Power Transfer Switch – Automatic A DNV requirement to accommodate selecting between two external power sources. When the primary power experiences under or over voltage, the system will transfer to the backup power.
SL	Combination Marine Status Light System Control Add this option for integrated control of an offshore helideck lighting system and a status light system. The PSL marine status light system control unit will be integral with the PHC. The PHC enclosure is safe area unless option -EX or -AX are added to the PHC.
-15CMx	Option -15CM1 or -15CM2 means there are 1 or 2 status light power supplies integrated into the PHC. These apply only when the PSL status light system is using 15 cm tall main lights.



POINT HELIPOINT LIGHTING PHC HELIPOINT LIGHTING CONTROLLER

POINT HELIPAD WEB CONTROL PHC-61001-AC-HWC

The optional Helipad Web Control permits direct control of the lighting system by mobile device or computer workstation. Connects to the site's internet server by means of Ethernet cable (by others) into the PHC. Any authorized person may securely logon to the dedicated website using a password. The main override switch on the PHC door is labeled: "ON - OFF - HWC".



"System OFF" switch position at the PHC: The HWC relay will be powered down, website control will not function and "HWC Output OFF" will appear in red at remote device.

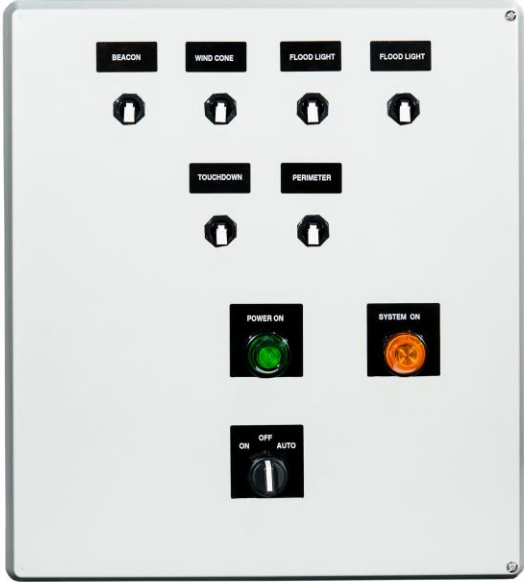
"HWC" switch position at the PHC: The system is awaiting activation via the remote device. At the remote mobile device or workstation, the operator clicks "ON" to enable the system. Or the operator may click "ON Cycle (15m)" to enable the system for a 15-minutes timed period. "System ON" is displayed in GREEN at the remote device. The PHC output circuits are enabled so any switch that was left ON will activate.



"ON" switch position at the PHC: This is the manual system override mode. The HWC has power so you can see that the system has been remotely enabled. The PHC output circuits are controlled manually at the PHC. "System ON" is displayed in GREEN at the remote device. "HWC Output OFF" is displayed in RED.



POINT HELIPORT LIGHTING PHC HELIPORT LIGHTING CONTROLLER



HELIPORT LIGHTING CONTROLLER
PHC-61001-AC

MARINE HELIDECK LIGHTING CONTROLLER
PHC-61001-AC-M-SL
Integral PSL Status Light System Control Unit



PHC HELIPORT CONTROLLER

FIXED BRIGHTNESS

FOR INCANDESCENT AND LED SYSTEMS

PHC-61001 SPECIFICATION

The heliport lighting system shall be controlled by means of a POINT LIGHTING CORPORATION system controller type PHC-61001. The standard circuit layout shall be modified to accommodate the lighting system per the project plans.

The controller manufacturer shall be an Intertek ETL certified builder of Industrial Control Panels under UL 508A 2nd and CSA C22.2 No. 14 that are labeled with the ETL Listed Mark.

The PHC enclosure shall be rated NEMA 4X (IP66) fiberglass reinforced polyester in gray (RAL 7036) with stainless steel piano hinged door and seamless gasket. The door is to be secured by two captive screws. All components shall be panel mounted. The dimensions in inches (mm): 19.3 (490) x 17.3 (440) x 9.6 (243). The enclosure may be punched or drilled for conduit entry. The enclosure shall be manufactured by Vynckier and certified to IEC 529, CSA, KEMA and UL 508A Type 4X & 12, IP66 watertight and dust tight.

All internal wiring and component spacing shall comply with the US National Electric Code. All components shall be prewired to IEC terminal blocks. Power shall be single phase measured line to neutral, 50 or 60 Hz.

The PHC and lighting circuits shall be protected from transient voltage spikes by a DIN-rail mounted surge suppressor with a 50kA maximum surge current to IEC 61643-1.

There shall be two 30mm industrial grade pilot lights on the door: green **POWER ON** indicating power is present at the input terminals of the contactor and amber (yellow) **SYSTEM ON** indicating that the unit is activated and power is available to the loads. There are no alarm functions and the lighting brightness is not adjustable. All door mounted components shall be rated for outdoor installation.

There shall be a three (3) position master switch mounted on the door for ON-OFF-AUTO operation. In the AUTO position, the controller shall operate automatically from a pilot actuated FAA radio controller or an FAA photoelectric controller that operates per FAA light level requirements (order PRC or PPC separately).

The PHC shall include six (6) ON-OFF two-position switches mounted on the door designated for specific lighting loads. These switches shall be available to independently control separate circuits as determined by the installer. The power to these circuits shall be controlled by the master switch.

Each load output shall be protected by a DIN-rail mounted current limiting circuit breaker providing thermal magnetic overcurrent protection in accordance with UL, CSA and IEC standards. There shall be one circuit rated for a 4.8 KW floodlight load with a lighting contactor and circuit breaker. The UL and IEC rated short circuit capacity shall be 5,000 amps. The breaker is resettable and the status is color coded.

Terminals shall be provided to power obstruction lights which may be required. Separate FAA photoelectric control must be provided in the obstruction light circuit which will remain energized at all times.

A wiring schematic shall be included with each PHC. Legend plates for all devices shall be included.

Option –RC: AIR-TO-GROUND RADIO CONTROL*

The PRC radio controller is a special VHF radio receiver that permits the pilot to remotely activate the heliport lighting system. The PRC is often used for a heliport lighting system that may be unattended for periods of time. The lighting system is remotely activated by the aircraft pilot keying the microphone on the controller's preset frequency. Three "clicks" of the microphone within five seconds activates the controller. The timer will reset the system to OFF after fifteen (15) minutes. At any time during the fifteen minutes, the microphone may be rekeyed in the proper sequence to reinitiate the fifteen minute cycle.

The remote mounting antenna is included with a 50-ft coaxial cable and connectors. The facility owner must obtain the frequency assignment from local aviation authorities. The double conversion super heterodyne receiver is preset to the specified frequency between 118.000 and 136.000 MHz.

* For complete details on the –RC option, see file HL416PRC. PHC with option –RC has the PRC integrated into the PHC system controller enclosure.

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