



PHANTOM™ SERIES

The Unseen Solution
12V up to 100W Capacities – Generator Capable
Lead-Calcium or Nickel-Cadmium battery

FEATURES

Housing

- 20 gauge galvanized steel back-box
- Head assembly designed for easy access to internal components
- Head assembly door and trim plate powder coated in a white finish
- Finish can be customized on site with paint or wallpaper
- Provision for 2 lighting heads
- Choice of MR16 Halogen or MR16 LED Lamp types and wattages
- Complete 360° head assembly door rotation: 180° to open, 180° to close
- Slip gear mechanism protects unit and objects against forcibly stop

Mounting

- Recessed mount into ceiling or wall with cavities
- Special bar hangers included for installation in dry wall or T-bar ceilings
- Includes the electrical junction box
- Installed on the wall stud or ceiling beam with simple, U-shape bracket.
- Head assembly includes keyhole slot and quick-connect plugs for easy installation

Electronics

- Automatic, temperature-compensated, pulse-type charger
- High capacity, automatic, dust-tight instantaneous transfer relay
- Low voltage disconnect prevents over discharge of battery
- Automatic brownout protection is provided
- Battery lock-out prevents battery discharge during installation
- Fused output circuit

Improved Diagnostics option

- Units equipped with Improved Diagnostics shall self-test, by simulating a power failure, in accordance with NFPA101, Life Safety Code one minute monthly, 30 minutes every six months and 90 minutes annually. For complete information refer to page 7.

Controls

- Recessed illuminated push button serves as test switch and status indicator

Choice of Sealed Maintenance-Free Battery

- 12V Lead-Calcium battery
- 12V Nickel-Cadmium battery

Approval

- CSA-US

Warranty (subject to proper installation and maintenance)

- Unit has a five year full warranty (excluding lamps and fuses)¹
- Lead-Calcium battery has a three year full, plus three year pro-rata warranty
- Nickel-Cadmium battery has a five year full, plus five year pro-rata warranty

¹ For LED lamps warranty, refer to page 168 paragraph 3.2

ACCESSORIES (Order as a separate item)

Remote Test Switch (Metal Faceplate)	PSW
Remote Test Switch (Plastic Faceplate)	PSW-1

SPECIFICATIONS

Supply and install Lightalarms® Phantom™ Series.

The emergency lighting unit shall be a self-contained fixture including a sealed maintenance-free Lead-Calcium or Nickel-Cadmium battery of 12V, wattage as specified in the unit rating chart. The unit shall supply the rated wattage load for a minimum of 90 minutes to 87-1/2% of rated battery voltage. The unit shall be rated 120/277VAC, 60Hz and be CSA-US approved.

The unit charger shall utilize an micro-controller which samples the battery in relation to temperature, state of charge and input voltage fluctuations. The charger shall be current limited, temperature compensated, short-circuit protected and reverse polarity protected. The unit shall be furnished with an electronic lockout circuit which will connect the battery when the AC circuit is activated, and an electronic brownout circuit which will activate the unit when utility power dips below 80-85% of nominal voltage. A low voltage battery protection circuit shall be provided and will disconnect the load and circuitry from the battery when it reaches 87-1/2% of its nominal voltage. The unit shall be capable of full recharge in compliance with UL 924 specifications. The unit shall be furnished with sealed dust-tight relay, recessed illuminated combination test switch and indicator light.

The unit shall be designed to be concealed in walls or ceilings with a cavity, including T-bar suspended ceilings. Bar hanger brackets shall be provided with the unit. The equipment shall consist of a metal back box containing the batteries, the lamp assembly and a charging circuitry. The back box shall be constructed of heavy-duty galvanized steel. The unit utilizes a modular design and comes with quick-connect plugs for easy installation into the back box. The unit equipment shall be completely concealed in the wall or ceiling during normal power conditions.

Upon a power failure the unit will expose the emergency heads by rotating its door by 180° and then will power the lamps. At the restoration of the AC power or the end of the battery discharge, the lamps will turn off and the unit will retract the heads in the wall or ceiling by rotating the door by 180°. The unit shall not require the presence of AC power in order to rotate the door closed, returning the lamps inside the housing. Under normal conditions, the only visible parts of the unit will be the flat door and trim plate, coated with a high-quality off-white finish that can be customized on site with paint or other suitable wall covering. The light source shall be MR16 halogen or MR16 LED lamps of specified voltage and wattage.

Units specified with Improved Diagnostics shall continuously monitor every critical function of the unit. If a malfunction occurs, if audible, a high-pitch audible alarm will sound; as well and, the recessed illuminated combination test switch and indicator light located on the front of the unit will change color from solid green to a flashing red light, indicating a fault. If non-audible, only the recessed illuminated combination test switch and indicator light located on the front of the unit will change color from solid green to a flashing red light, indicating a fault. A detailed diagnostic legend is available on the door back side and provides fault identification as battery, charger circuitry or lamps failure. The microcontroller shall automatically self-test by simulating a power failure, in accordance with NFPA101, Life Safety Code for one minute monthly, 30 minutes every six months and 90 minutes annually.

Every Phantom™ Series unit shall be fully warranted for five years, subject to proper installation and maintenance.

Unit shall be Lightalarms® catalog number _____.

TYPE _____

CATALOG # _____

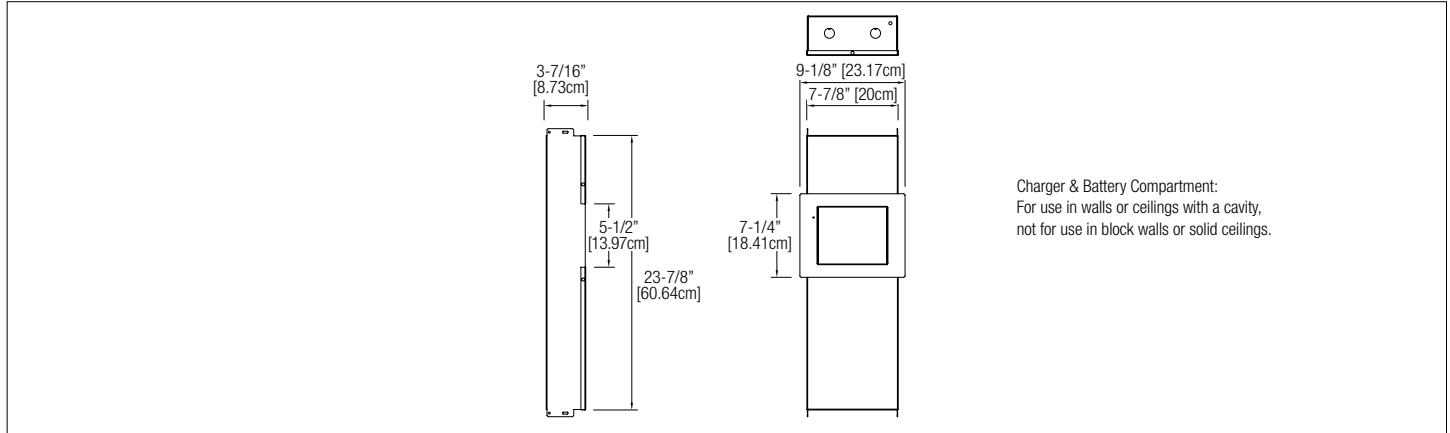
NOTES _____

Visually invisible and architecturally designed for unobtrusive use in walls with cavity (dry wall with 4-inch studs) or un-insulated ceilings with horizontal beams or T-bar structures



DIMENSIONS

Dimensions are approximate and subject to change.



POWER CONSUMPTION / UNIT RATING CHART

SERIES	DC SPECS						AC SPECS				
	BATTERY TYPE	DC VOLTAGE	87.5% BATTERY CAPACITY (IN WATTS) ¹				UNITS DUAL VOLTAGE ²	CURRENT		POWER ³	
			90 MIN.	2 HRS.	3 HRS.	4 HRS.		MAXIMUM	STAND BY	MAXIMUM	STAND BY
PHM40	Lead-Calcium	12V	40	30	24	12	120VAC 277VAC	0.25A 0.12A	0.10A 0.05A	30W 30W	11W 11W
PHM70		12V	70	50	40	24					
PHM100		12V	100	70	50	40					
PHN40	Nickel-Cadmium	12V	40	30	24	12					
PHN70		12V	70	50	40	24					
PHN100		12V	100	70	50	40					

¹ National Electrical Code Specification
² All units 120/277 dual voltage, information based on wiring to specific voltage type
³ Stand-by power consumption is 50% lower for Lead-Calcium Batteries

ORDERING FORMAT

	SERIES	BATTERY TYPE	UNIT CAPACITY	# OF HEADS	LAMP TYPE		OPTIONS
BATTERY UNIT	PH	M= Lead-Calcium N= Nickel-Cadmium	40= 12V-40W 70= 12V-70W 100= 12V-100W	-2= Two lamps	MR16 Halogen (12)= 12V-12W (20)= 12V-20W (35)= 12V-35W (50)= 12V-50W MR16 LED (LD7)= 12V-4W (LD9)= 12V-5W (LD10)= 12V-6W	MR16 Halogen High Output (20H)= 12V-20W (35H)= 12V-35W (50H)= 12V-50W	Blank= No Options -ID= Improved Diagnostics (audible) ¹ -IDNA= Improved Diagnostics (non audible) ¹ -T1= Time Delay (5 minute) -T2= Time Delay (10 minute) -T3= Time Delay (15 minute) -DL= Damp Location ² -X= Back box shipped separate
					For complete 12V MR16 lamp information refer to page 100 Remote Fixture, Phantom™ Series, Lamp Selection Chart		¹ -ID & -IDNA include a time delay feature that can be enabled/disabled in the field or set by the factory by including -ID-TD* or -IDNA-TD* ² -DL option not available with PHN100 unit

EXAMPLE: PHM100-2(20)DL

	SERIES	INPUT VOLTAGE	# OF HEADS	LAMP TYPE
GENERATOR UNIT	PHG	1= 120VAC, 60Hz 2= 277VAC, 60Hz	-2= Two lamps	MR16 Halogen (12)= 12V-12W (20)= 12V-20W (35)= 12V-35W (50)= 12V-50W MR16 LED (LD7)= 12V-4W (LD9)= 12V-5W (LD10)= 12V-6W
				MR16 Halogen High Output (20H)= 12V-20W (35H)= 12V-35W (50H)= 12V-50W
				For complete 12V MR16 lamp information refer to page 100 Remote Fixture, Phantom™ Series, Lamp Selection Chart

EXAMPLE: PHG1-2(20)