

LL90 Series

THERMOPLASTIC EMERGENCY LIGHTING UNIT

Model Number: Accessories: Job:	Approvals: Type:
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FEATURES

- Completely self-contained, compact, low-profile design
- Rugged, injection-molded UL94 V-0 flame retardant, high-temperature thermoplastic housing
- Remote capabilities (6 volt) - up to 8 watts
- AC lockout for ease of installation and installer protection
- Low voltage disconnect eliminates deep discharge
- Brown-out, short circuit and voltage surge protection
- Charge rate/power "ON" LED indicator light with test button
- UL recognized maintenance-free lead acid battery
- Optional NiCad battery available
- UL listed 90 minute emergency run time, 24 hour recharge time
- Universal J-Box mounting system
- Optional Self Test/Self Diagnostics (G2) available
- Standard finishes: Black and white
- 120/277V dual primary, 60Hz input
- Suitable for damp location



The LL90 Series combines a low-profile, contemporary appearance with economy and dependability. Both incorporate fully adjustable designer heads to complement any environment.

WARRANTY

Any component that fails due to manufacturer's defect is guaranteed for 1 year with a separate 5 year pro-rated warranty on the battery. The warranty does not cover physical damage, abuse or acts of God. Manufacturer reserves the right to charge for such repairs if deemed necessary.



SPECIFICATIONS ARE SUBJECT
TO CHANGE WITHOUT NOTICE

ORDERING INFORMATION Example: LL90H-G2-R

Series	Finish	Options (Factory Installed)
LL90 = 6V, 5.4W Tungsten Lamps	BLANK = White	G2 ¹ = Self Test / Diagnostics
LL90H = 6V, 5W Halogen Lamps	BL = Black	R = Remote Capacity (6V, 8W)
		KRP = Krypton Lamps
		NC ² = NiCad Battery
		LC = 3' Line Cord

¹ G2 option is not compatible with NiCad battery option
² NiCad option is not available on LL90H

CONSTRUCTION

The LL90 is a precision molded unit with lamp housings constructed of UV stable UL 924 V-0 flame retardant, corrosion proof thermoplastic. Units resist denting, peeling, scratching and corrosion. Not recommended for outdoor use. Tool-less access provided for easy maintenance, universal J-box mounting pattern and keyhole slots provided for simple installation.

ILLUMINATION

Two fully adjustable, attractive, square shaped lamp heads with rounded corners and vacuum metalized reflectors allow for maximum light to be delivered to the path of egress.

Emergency lights consist of two 6 volt, 5.4 watt high intensity incandescent lamp heads. Units with remote capability utilize two 6v, 4.6 watt high intensity incandescent lamp heads. Halogen units are illuminated with two 6v, 5.0 watt high intensity halogen lamps. Krypton lamps (6V, 5.4W) may be substituted (Option: KRP).

ELECTRICAL

Input

Dual-voltage input 120 or 277VAC @ 60Hz.

Sealed Lead Acid Battery – SLA

Sealed lead acid batteries are maintenance-free with a life expectancy of 5 years. Sealed lead acid batteries provide a relatively large power-to-weight ratio making them ideal for emergency applications. Lead Acid batteries are constructed of a series of plates stacked with separators designed to optimize the efficiency and prolong the life of the battery. Lead Acid batteries perform optimally in temperatures ranging from 15-40 degrees C.

Sealed Nickel Cadmium Battery – NiCad (Option: NC)

Sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. Nickel cadmium batteries offer high discharge rates and continue to perform in a vast temperature range from 0-40 degrees C. NiCad technology provides long lasting, safe and reliable performance by utilizing the jelly-roll design and allows a Ni-Cad cell to deliver a much higher maximum current than an equivalent size alternative battery. As a relatively larger area of the electrode is in contact with the active material in each cell, the internal resistance for an equivalent sized NiCad cell is lower which increases the maximum current that can be delivered.

Brownout Circuit

The brownout circuit monitors the flow of AC current to the unit and triggers the emergency lighting system once a set reduction of AC power occurs. This dip in the voltage will cause many fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Low Voltage Disconnect

When the battery's terminal voltage falls below predetermined levels, the low-voltage circuit disconnects the emergency lighting load. The disconnect remains in effect until normal power is restored, preventing deep battery discharge and improving the life of the battery. The disconnect will also automatically reconnect the load circuit once the battery voltage returns to a normal value after charging.

Solid-State Transfer

The unit features a solid-state switching transistor which eliminates damaged contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC power and automatically energizes the lamps. Upon restoration of the AC voltage, the emergency lamps will switch off and the charger will automatically recharge the battery.

Overload and Short-Circuit Protection

The solid-state overload monitoring system in the DC circuit disconnects the lamp load from the battery should excessive wattage demands be made and automatically resets when the overload or short-circuit is removed. This overload current protective characteristic eliminates the need for fuses or circuit breakers for the DC load.

Test Button

Our easily located test button allows for manual verification of proper operation of the transfer circuit and emergency lamps.

INSTALLATION

Units are mountable in any orientation, on wall or ceilings. A universal mounting pattern and rear keyhole slots are provided.

Damp Location Rated

Damp location rating ensures the fixture is designed to operate safely in outdoor locations that are protected from the direct elements. Damp location rated fixtures may be installed indoors. Products with damp location ratings are not designed to withstand constant or significant moisture or direct contact with water or steam.

Guardian Self-Test/Self-Diagnostics (Option: G2)

The Guardian circuit continuously monitors the operating condition of the AC power, battery supply voltage, emergency lamp continuity and charging circuit.

The purpose of this option is to provide visual signaling in response to a fault at the EXIT sign battery and/or battery charger. If a failure is detected, visual status will occur immediately via the CHARGER LED and/or the BATTERY FAULT LED. The LEDs will stay illuminated until the fault is corrected.

The Guardian circuit also monitors the transfer circuit as well as performing automatic code compliant testing. The Guardian circuit will perform a 30 second discharge and self-test every 28-30 days. A 90 minute discharge and self-test is performed every 6 months.

Remote Capable (Option: R)

The R option provides this unit with an additional 8 watts of remote for use with any remote traditional lamps. The LL90-R series is also RENEGADE compatible – 3.6W LED per head.

CONFORMANCE TO CODES & STANDARDS

The LL90 Series is UL listed and meets or exceeds the following: UL 924, NEC requirements and NFPA 101.

DIMENSIONS

