

# CONSTANT POWER LED EMERGENCY DRIVER

Class 2 output

LEM-Pxx-060-A-U-Px



## FEATURES



LEM-Pxx-060-A-U-PW

1. Emergency operation of LED luminaires, for both factory and field installation
2. Compatible with most AC LED drivers
3. Constant emergency power output: Class 2 output voltage (13-60V), output current auto-adjusts to match load
4. Various emergency power options:

| LEM-Pxx-060-A-U-Px | Emergency Power |
|--------------------|-----------------|
| LEM-P05-060-A-U-Px | Max. 5W         |
| LEM-P09-060-A-U-Px | Max. 9W         |
| LEM-P15-060-A-U-Px | Max. 15W        |
| LEM-P25-060-A-U-Px | Max. 25W        |



LEM-Pxx-060-A-U-PC

5. Various connection options:

| Type | Connection Type   |
|------|---|
| PW   | External wire, Integrated Battery                           |
| PC   | Lead-wires with Flexible Metal conduits, Integrated Battery |

6. Auto Test
7. Slim aluminum housing
8. Suitable for indoor, dry and damp applications

## CHARACTERISTICS

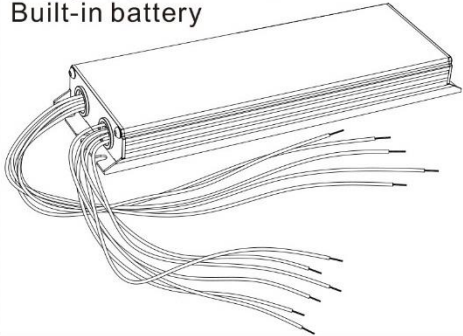
| Type                                     | LEM-P05-060-A-U-Px  | LEM-P09-060-A-U-Px | LEM-P15-060-A-U-Px | LEM-P25-060-A-U-Px |
|--|---|--------------------|--------------------|--------------------|
| Rated voltage                            | 120-277VAC 50/60Hz  |                    |                    |                    |
| Rated current                            | 0.04A   | 0.05A              | 0.07A              | 0.1A               |
| Rated power                              | 2W  | 3W                 | 4.5W               | 5.5W               |
| Emergency output power                   | Max. 5W   | Max. 9W            | Max. 15W           | Max. 25W           |
| Output voltage                           | 13-60VDC  | 14-60VDC           | 15-60VDC           | 25-60VDC           |
| Output current                           | Max. 1A   |                    |                    |                    |
| Output current of AC driver              | Max. 5A   |                    |                    |                    |
| Operation frequency                      | 320kHz $\geq$ f $\geq$ 50kHz  |                    |                    |                    |
| Power Factor                             | 120V $>$ 0.4; 277V $>$ 0.3  |                    |                    |                    |
| Battery                                  | Ni-MH   |                    |                    |                    |
| Charging time                            | 24 Hours  |                    |                    |                    |
| Discharge time                           | $>$ 90Minutes   |                    |                    |                    |
| Charging current                         | 0.08A   | 0.11A              | 0.19A              | 0.23A              |
| Life time                                | 5 years   |                    |                    |                    |
| Charging cycles                          | $>$ 500   |                    |                    |                    |
| Operation temperature                    | 0-50°C  |                    |                    |                    |
| Efficiency                               | 80%   |                    |                    |                    |
| Abnormal protection                      | Over load, Inrush current limiting, over temperature, open circuit, short-circuit protection with auto-reset  |                    |                    |                    |
| Wire                                     | 0.5-1.5mm <sup>2</sup>  |                    |                    |                    |
| EMC/FCC/IC standard                      | EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3; FCC part 15, ICES-005   |                    |                    |                    |
| Safety standard                          | EN 61347-1, EN 61347-2-7, UL924, CSA C.22.2 No. 141   |                    |                    |                    |
| Meas.<br>LEM-Pxx-060-A-U-PW<br>mm [inch] | <b>LEM-P05-060-A-U-PW:</b> L260 [10.24] x W65 [2.56] x H22 [0.87] Mounting Center: 252 [9.92]<br><b>LEM-P09-060-A-U-PW:</b> L307 [12.09] x W65 [2.56] x H22 [0.87] Mounting Center: 299 [11.77]<br><b>LEM-P15-060-A-U-PW:</b> L372 [14.65] x W65 [2.56] x H22 [0.87] Mounting Center: 364 [14.33]<br><b>LEM-P25-060-A-U-PW:</b> L358 [14.09] x W82 [3.23] x H30 [1.18] Mounting Center: 351 [13.82]   |                    |                    |                    |
| Meas.<br>LEM-Pxx-060-A-U-PC<br>mm [inch] | <b>LEM-P05-060-A-U-PC:</b> L260 [10.24] x W65 [2.56] x H22 [0.87] Mounting Center: 252 [9.92]<br><b>LEM-P09-060-A-U-PC:</b> L307 [12.09] x W65 [2.56] x H 22 [0.87] Mounting Center: 299 [11.77]<br><b>LEM-P15-060-A-U-PC:</b> L372 [14.65] x W65 [2.56] x H22 [0.87] Mounting Center: 364 [14.33]<br><b>LEM-P25-060-A-U-PC:</b> L 358 [14.09] x W82 [3.23] x H30 [1.18] Mounting Center: 351 [13.82] |                    |                    |                    |

## WIRING CONFIGURATION

The LEM-Pxx-060-A-U-Px series have different wiring configurations as below.

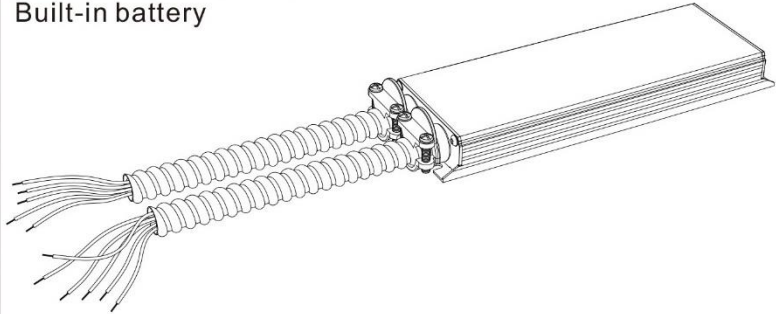
### LEM-P05/09/15-060-A-U-PW

Two group lead wires  
Built-in battery



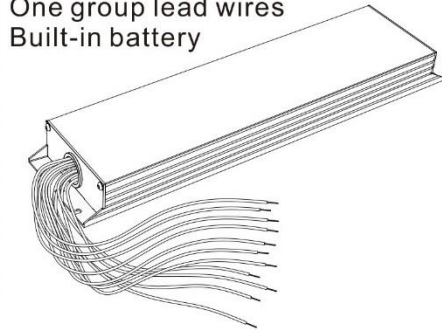
### LEM-P05/09/15-060-A-U-PC

Dual 3/8' flexible conduit  
Built-in battery



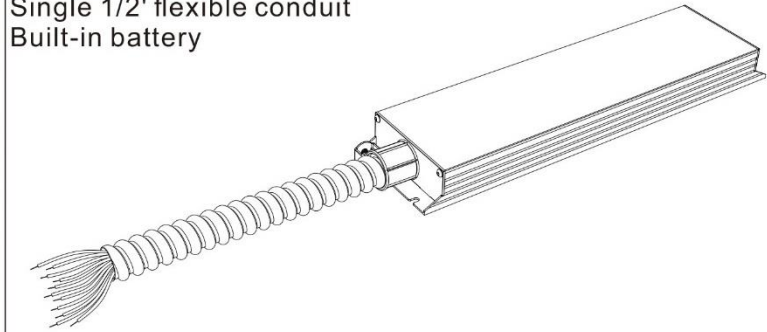
### LEM-P25-060-A-U-PW

One group lead wires  
Built-in battery



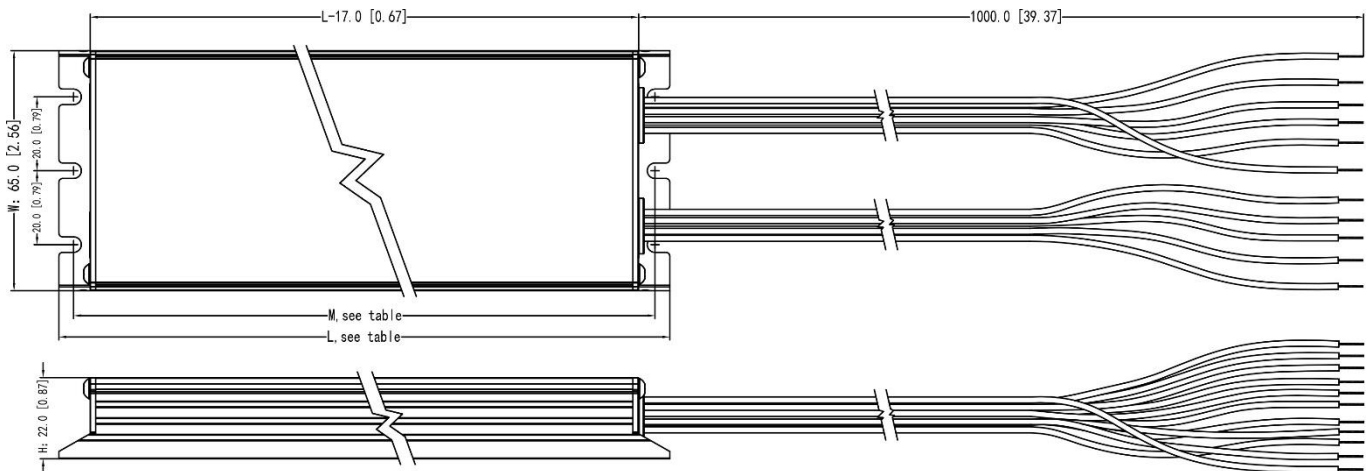
### LEM-P25-060-A-U-PC

Single 1/2' flexible conduit  
Built-in battery



# DIMENSION

## LEM-Pxx-060-A-U-PW



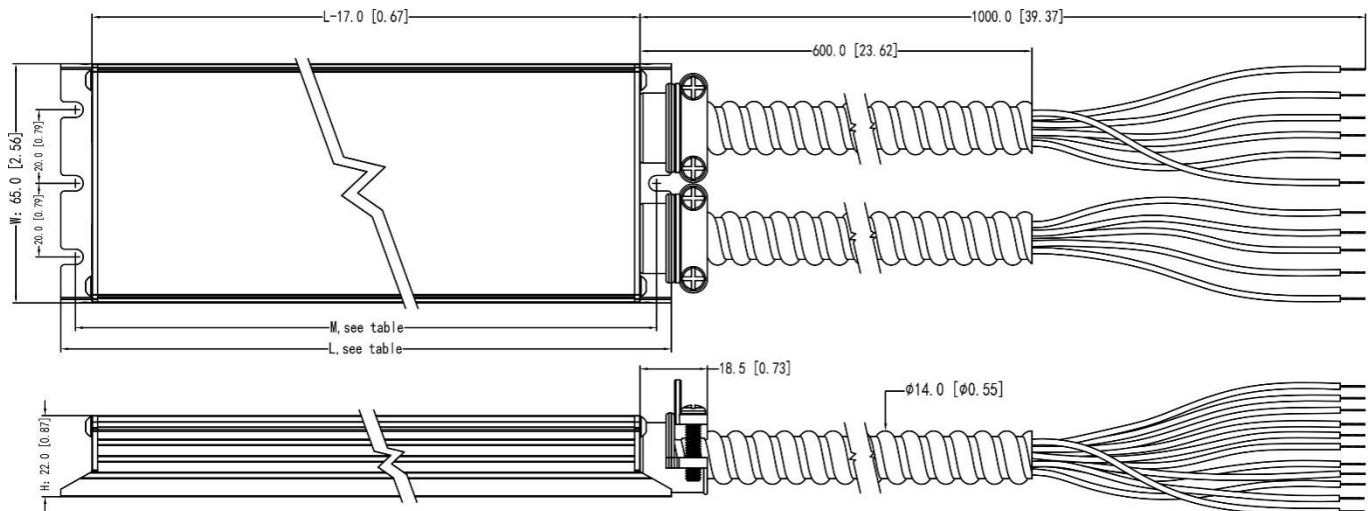
| Item No.           | L<br>mm [inch] | M<br>mm [inch] | W<br>mm [inch] | H<br>mm [inch] |
|--------------------|----------------|----------------|----------------|----------------|
| LEM-P05-060-A-U-PW | 260 [10.24]    | 252 [9.92]     | 65 [2.56]      | 22 [0.87]      |
| LEM-P09-060-A-U-PW | 307 [12.09]    | 299 [11.77]    | 65 [2.56]      | 22 [0.87]      |
| LEM-P15-060-A-U-PW | 372 [14.65]    | 364 [14.33]    | 65 [2.56]      | 22 [0.87]      |
| LEM-P25-060-A-U-PW | 358 [14.09]    | 351 [13.82]    | 82 [3.23]      | 30 [1.18]      |

### Notes:

1. Dimension unit: mm [inch]
2. Dimension tolerance: +/-1[0.04]

## DIMENSION

### LEM-Pxx-060-A-U-PC



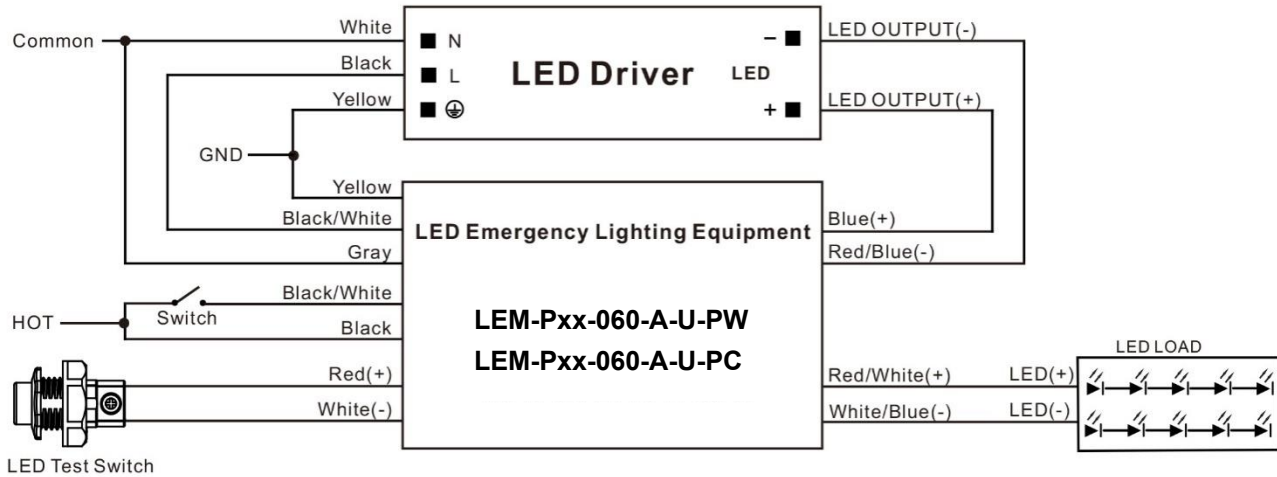
| Item No.           | L<br>mm [inch] | M<br>mm [inch] | W<br>mm [inch] | H<br>mm [inch] |
|--------------------|----------------|----------------|----------------|----------------|
| LEM-P05-060-A-U-PC | 260 [10.24]    | 252 [9.92]     | 65 [2.56]      | 22 [0.87]      |
| LEM-P09-060-A-U-PC | 307 [12.09]    | 299 [11.77]    | 65 [2.56]      | 22 [0.87]      |
| LEM-P15-060-A-U-PC | 372 [14.65]    | 364 [14.33]    | 65 [2.56]      | 22 [0.87]      |
| LEM-P25-060-A-U-PC | 358 [14.09]    | 351 [13.82]    | 82 [3.23]      | 30 [1.18]      |

**Notes:**

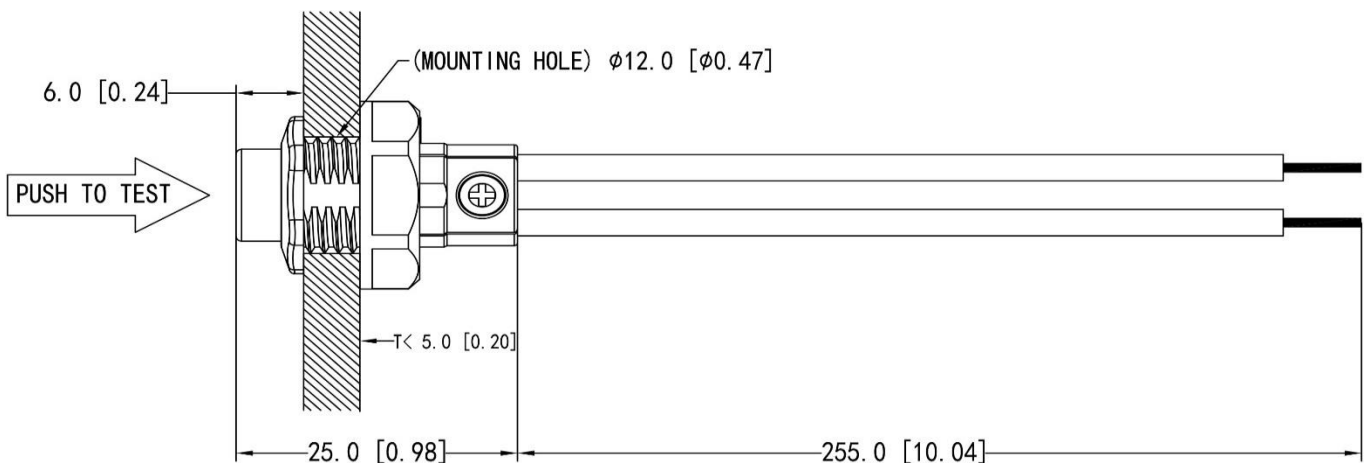
1. Dimension unit: mm (inch)
2. Dimension tolerance: +/-1[0.04]

## WIRING DIAGRAM

### LEM-Pxx-060-A-U-PW or LEM-Pxx-060-A-U-PC



## LED TEST SWITCH



## **OPERATION/TESTING/MAINTENANCE**

### **OPERATION**

When AC power is applied, the LED test switch is illuminated, indicating that the batteries are being charged. When AC power fails, the LEM-Pww-060-A-U-Px automatically switches to emergency power, operating the lighting load at rated emergency power. During power failure, the LED test switch will be off. When the AC power is restored, the LEM-Pww-060-A-U-Px switches the system back to normal mode of operation and resumes battery charging. The minimum emergency operation time is 90 minutes. The charging time for a full discharge is 24 hours.

### **TESTING AND MAINTENANCE**

The following Periodic testing is recommended to ensure the system is working correctly.

1. Visually inspect the LED test switch (LTS) monthly. It should be illuminated when AC power is applied.
2. Conduct a 30-second discharge test by switching off the emergency breaker every month. The LTS will be off during test.
3. Conduct a 90-minute discharge test once per year. The LTS will be off during test.

### **AUTO TEST**

The LEM-Pww-060-A-U-Px has an Auto Test feature which saves cost by reducing the need for manual testing.

1. Initial Auto Test  
When the system is connected properly and powered on, the LEM-Pww-060-A-U-Px will perform an initial Auto Test. If any abnormal conditions exist, the LTS will flash rapidly\*. Once the abnormal condition is corrected, the LTS will function correctly.
2. Monthly Auto Test  
The LEM-Pww-060-A-U-Px will conduct the first Monthly Auto Test after 24 hours and up to 7 days after initial power on. Then monthly tests will be performed every 30 days, and will test transfer function from normal to emergency, emergency function, charging and discharging conditions. Monthly test time is approximately 30 seconds.
3. Annual Auto Test  
Annual Auto Test will occur every 52 weeks after the initial 24 hours full charge, and will test proper initial battery voltage, 90-minute emergency operation, and acceptable battery voltage at the end of the full 90-minute test.  
\*If the Auto Test is interrupted by a power failure, a full 90-minute Auto Test will occur again 24 hours after the power is restored. If the power failure causes the battery to fully discharge, the product will restart the Initial Auto Test, Monthly and Annual Auto Test.

### **MANUAL TEST**

- Press the LTS 1 time to force a one-second emergency test.
- Press the LTS 2 times continuously within 5 seconds to force a 30-second monthly test. After the test is complete, the next (30-day) monthly test will count from this date.
- Press the LTS 3 times continuously within 5 seconds to force a 90-minute annual test. After the test is completed, the next (52-week) annual test will count from this date.
- During any manual test, press and hold the LTS for greater than 3 seconds to terminate a manual test. The Preprogrammed Scheduled Auto Test time will not change.

### **LED TEST SWITCH (LTS) CONDITION\***

- Slow Flash (once per 2 seconds): Normal Charging
- On: Battery Fully Charged - Normal Condition
- Off: Power Failure
- Gradual Change: In Testing Mode
- Rapid Flash (once per second): Abnormal Condition - Corrective Action Required