

184501

A1

# INSTRUCTION MANUAL

LED EMERGENCY LIGHTING EQUIPMENT  
INTEGRATED LED AC + EMERGENCY DRIVER  
UNIVERSAL INPUT  
SELV OUTPUT



## IMPORTANT SAFEGUARDS

WHEN USING ELECTRICAL EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED, INCLUDING THE FOLLOWING

### READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. To prevent electric shock, switch off the mains power supply until installation is complete and AC power is supplied to this product.
2. This product requires an unswitched AC power supply of 120-277V, 50/60Hz.
3. Make sure all connections are in accordance with the National or Canadian Electrical code and any local regulations.
4. To reduce the risk of electrical shock, disconnect both normal and emergency power supplies and connector of this product before servicing.
5. The product can operate with most LED lamps. For normal operation and emergency operation of LEDs, no need an extra LED driver. The emergency power and time are selectable.
6. This product is suitable for use in dry or damp locations. Do not mount it near gas, heaters, air outlets or other hazardous locations.
7. Use this product in 0°C minimum, 50°C maximum ambient temperatures (Ta).
8. Do not attempt to dismantle the batteries. Batteries acid can cause burns to skin and eyes. If acid is spilled on skin or in eyes, flush acid with fresh water and contact a physician immediately.
9. The use of accessories equipment not recommended by the manufacturer may cause an unsafe condition.
10. Do not use this product for other than intended use.
11. The product should be mounted at locations and at heights where it will not be easily accessible to unauthorized personnel.
12. Installation and service should be performed by qualified personnel.



Ni-cd

THIS PRODUCT CONTAINS A RECHARGEABLE NICKEL-CADMIUM BATTERY.  
THE BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY.

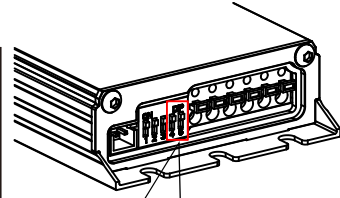
# INSTALLATION



**CAUTION: MAKE CERTAIN THE AC POWER IS OFF UNTIL THE INSTALLATION IS COMPLETE.**

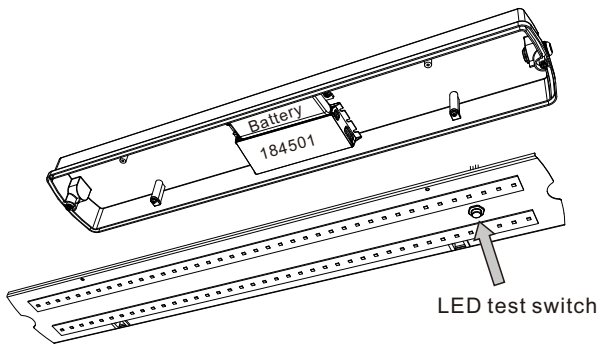
## 1. SPECIFICATION OF 184501 MODEL

		AC Driver Current Selection			Emergency Power Selection		
SEC	SEC	1	2	3	Power	4	5
18-60V	600mA	-	-	-	25%	-	-
18-60V	700mA	ON	-	-	50%	ON	-
18-56V	750mA	-	ON	-	75%	-	ON
18-52V	800mA	-	-	ON	100%	ON	ON
18-49V	850mA	ON	ON	-	- Min. emergency time 90 minutes - Max. emergency output power 17W - Before use, always check dipswitch settings		
18-46V	900mA	ON	-	ON			
18-44V	950mA	-	ON	ON			
18-42V	1000mA	ON	ON	ON			



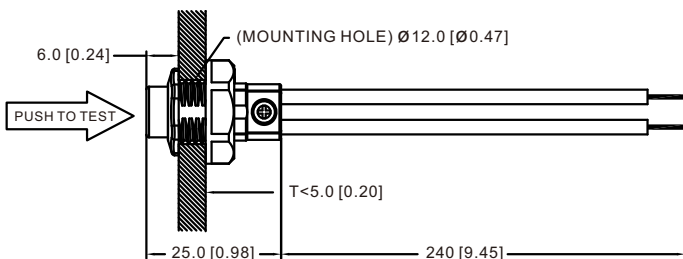
	4	5	Battery Model	Spec.	Power
O	O	O	8C1.0	9.6V 1Ah	3.5W
●	O	O	8C2.0	9.6V 2Ah	7W
O	●	O	8C4.0	9.6V 4Ah	14W
●	●	O	8C5.0	9.6V 5Ah	17W

## 2. INSTALLING THE 184501



## 3. INSTALLING THE LED TEST SWITCH (LTS)

Select a convenient location for the LTS so that it can be seen after installation. Drill a 1/2"(12 mm) hole for mounting the LTS. Connect the wires from LTS to the 184501 model according to the wiring diagram on page 3.



Dimension unit: mm [inch]  
Tolerance: ±1 [0.04]

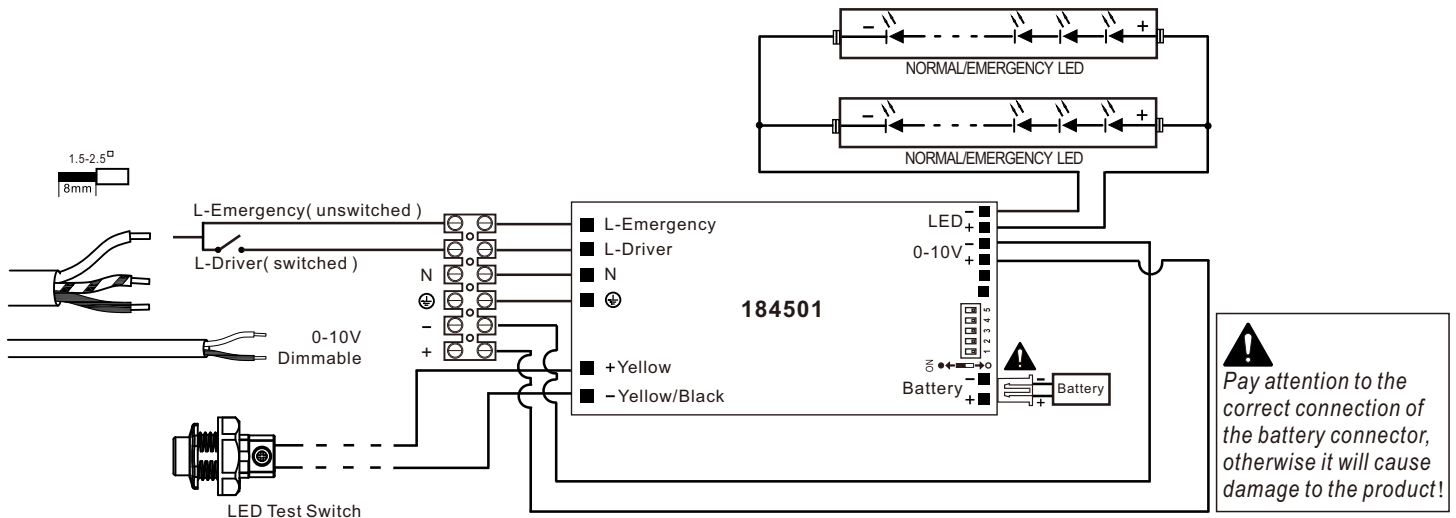
# WIRING / DIMENSION

## WIRING

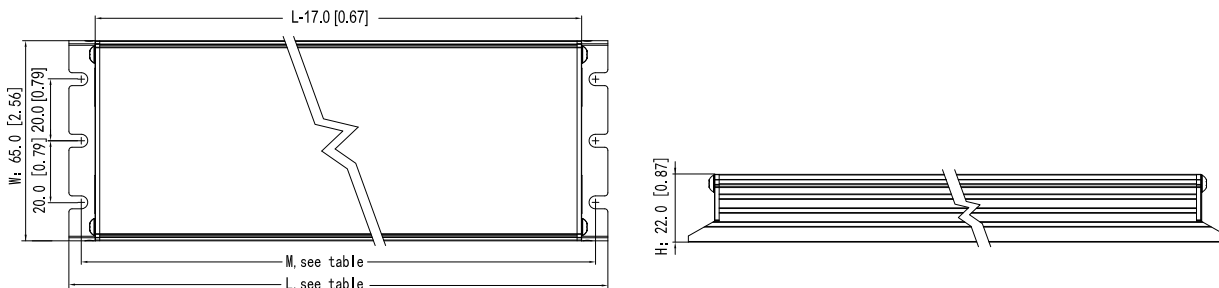


**CAUTION: MAKE CERTAIN THE AC POWER IS OFF UNTIL THE INSTALLATION IS COMPLETE.**

1. The 184501 requires an unswitched AC power supply of 120-277 volt, 50/60Hz.
2. Refer to the wiring diagrams below for wiring. Consult the factory for other wiring diagrams.

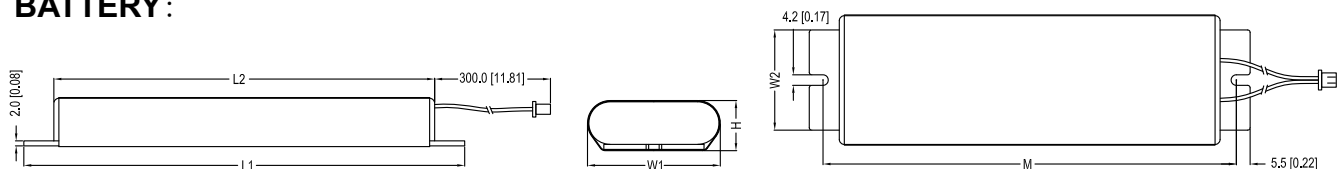


## DIMENSION



Item No.	L mm [inch]	M mm [inch]	W mm [inch]	H mm [inch]
184501	195 [7.68]	187 [7.36]	65 [2.56]	22 [0.87]

## BATTERY:



Battery Model	Spec.	L1 mm [inch]	L2 mm [inch]	M mm [inch]	W1 mm [inch]	W2 mm [inch]	H mm [inch]
8C1.0	9.6V/1.0AH	228 [8.98]	195 [7.68]	217 [8.54]	30 [1.18]	20 [0.79]	17 [0.67]
8C2.0	9.6V/2.0AH	195 [7.68]	170 [6.69]	184 [7.24]	45.5 [1.79]	40 [1.57]	24.5 [0.96]
8C4.0	9.6V/4.0AH	263 [10.35]	236 [9.29]	252 [9.92]	65 [2.56]	40 [1.57]	35 [1.38]
8C5.0	9.6V/5.0AH	263 [10.35]	236 [9.29]	252 [9.92]	65 [2.56]	40 [1.57]	35 [1.38]

Dimension unit: mm [inch]

## OPERATION

When AC power is applied, the LED test switch is illuminated, indicating that the batteries are being charged. When AC power fails, the 184501 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 emergency 184501 switches the system back to normal mode of operation and resumes battery charging. The charging time for a full discharge is 24 hours. A short term discharge test may be conducted after the 184501 has been charging for 1 hour. Charge for 24 hours before conducting a long term discharge test.

## 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.
3. Conduct a 90-minute discharge test once per year.

## AUTO TEST

The 184501 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 184501 will perform an initial Auto Test. If any abnormal conditions exist, the LTS will blink quickly. Once the abnormal condition is corrected, the LTS will function correctly.

### 2. Preprogrammed Scheduled Auto Test

- a) The unit 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.

- b) Annual Auto test will occur every 52 weeks after initial power on.

#### - Monthly Auto Test

The Monthly Auto Test shall be executed every 30 days, and will test; Normal to emergency transfer function, emergency, charging and discharging conditions are normal. Monthly test time is approximately 30 seconds.

#### - 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 discharge.

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 and Preprogrammed Scheduled Auto Test.

## MANUAL TEST

- Press the LTS one time to simulate emergency mode.
- Press the LTS 2 times continuously within 3 seconds to force a monthly test. After the test is completed, the next (30-day) monthly test will count from this date.
- Press the LTS 3 times continuously within 3 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 CONDITIONS

- LTS Slow Blinking: Normal Charging
- LTS On: Battery Fully Charged - Normal Condition
- LTS Off: Power Failure
- LTS Gradual Change: In Testing Mode
- LTS Quickly Blinking: Abnormal Condition - Corrective Action Required