

COLDPACK LED AC + EMERGENCY DRIVER

184502

184503



FEATURES



1. For **normal and emergency** operation of LED load in extreme temperature from **-40°C to +50°C (-40°F to +122°F)**, no need an extra LED driver

2. Phenix Lighting's innovative **Battery Real-time Temperature Control (BRTC) Technology** ensures that the battery can be charged and discharged well even at **-40°C** and the emergency time is over 90 minutes

3. **Preset constant current output** for AC driver function

4. **Constant power output** in emergency mode

5. Slim aluminum housing, built-in **heating and insulation battery pack**

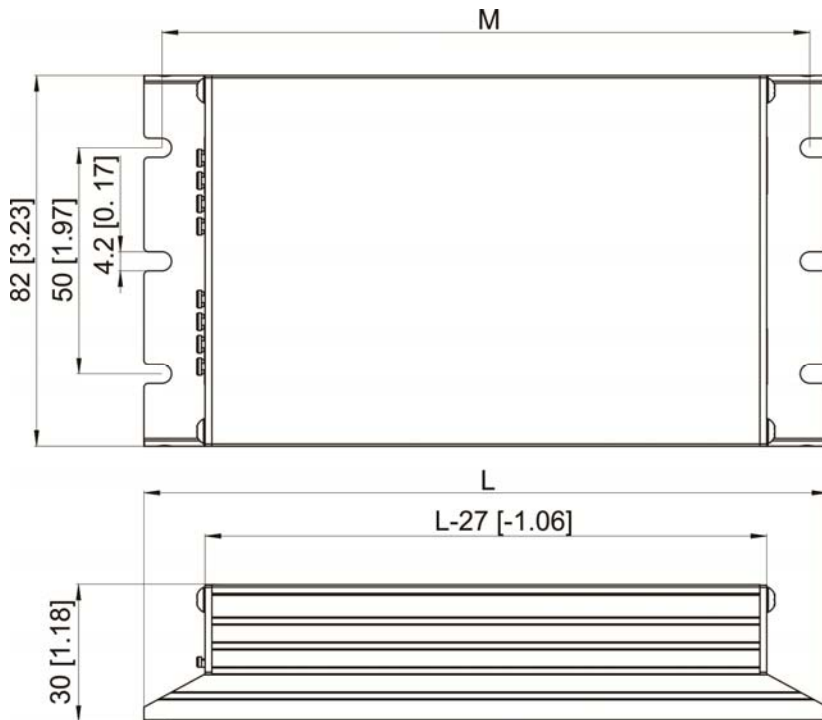
6. Auto Test

7. Suitable for **indoor, dry and damp** applications

CHARACTERISTICS

Type		184502	184503
Rated voltage		100-277V AC 50/60Hz	
Rated current @100V		0.24A	0.43A
Operation frequency		320kHz $\geq$ f $\geq$ 50kHz	
Max. Input Power	Lighting	14W	33W
	Charging	2W	2W
	Heating	8W	8W
Power factor		0.9 @120V	
Output voltage		22-45V DC	
Output current		150-250mA preset	250-600mA preset
Emergency output power		6W	
Battery		Li-ion	
Charging time		24 Hours	
Discharge time		>90 Minutes	
Charging current		0.13A	
Life time		5 years	
Charging cycles		>500	
Operation temperature		-40~50°C (-40-122°F)	
Efficiency		75%	80%
Abnormal protection		Inrush, over voltage, over temperature, charging and discharging, open circuit	
Wire		18AWG/0.75mm ²	
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, EN 61347-2-13, UL924, CSA C.22.2 No. 141	
Meas. mm [inch]		L134 [5.28] x W82 [3.23] x H30 [1.18] Mounting center: 124 [4.88]	L154 [6.06] x W82 [3.23] x H30 [1.18] Mounting center: 144 [5.67]

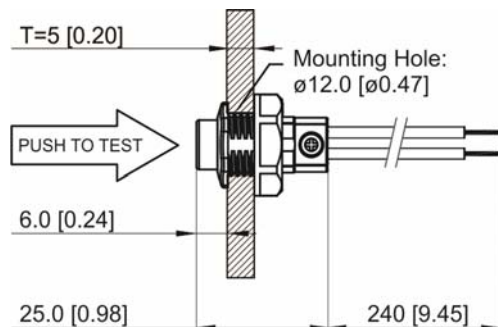
184502/3



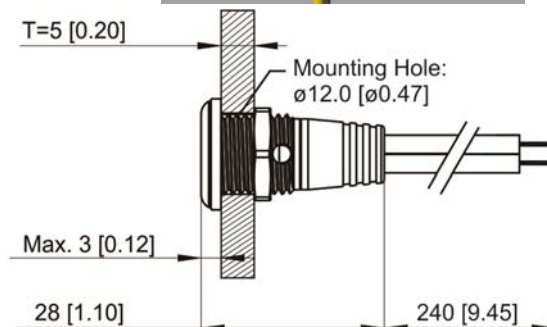
Item No.	L mm [inch]	M mm [inch]	W mm [inch]	H mm [inch]
184502	134 [5.28]	124 [4.88]	82 [3.23]	30 [1.18]
184503	154 [6.06]	144 [5.67]	82 [3.23]	30 [1.18]

LED TEST SWITCH (LTS)

LTS-IP20 (Default)



LTS-IP66 (Optional)



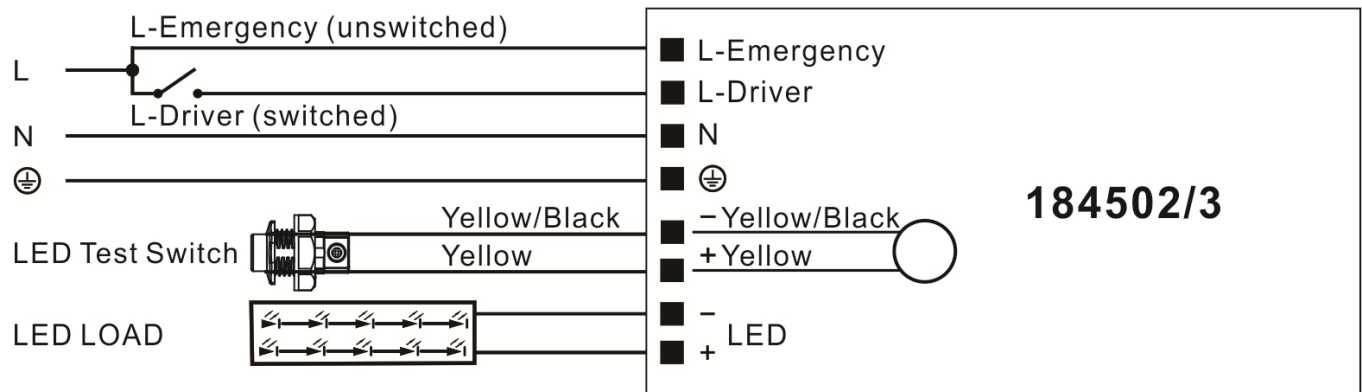
Dimension unit: mm [inch] Tolerance: ± 1 [0.04]

WIRING DIAGRAM

ELECTRIC CONNECTION

Use UL18 AWG wire for input and output connection, min rated 300V, 105°C, copper conductor only.
After connection, the conductors shall not be exposed.

Wiring Diagram



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 184502/3 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 184502/3 switches the system back to normal mode of operation and resumes battery charging. The minimum emergency operation time is 90 minutes. A short term discharge test may be conducted after the 184502/3 has been charging for 1 hour. 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 60-second discharge test by switching off the emergency breaker every month.
3. Conduct a 90-minute discharge test once per year.

AUTO TEST

The 184502/3 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 184502/3 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 60 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

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 un-switched 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. Please apply this product to the corresponding LED loads according to the characteristics and inform the factory of the preset current output for the AC driver function.
6. Do not use outdoors. Do not mount near gas or electric heaters.
7. Suitable for use in -40°C - 50°C ambient temperatures.
8. Use caution when servicing batteries. 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. Use with grounded, Listed, dry or damp location rated fixtures and the case should be grounded.
10. The equipment is intended for ordinary locations and for permanent installation into one or more Listed emergency luminaires.
11. As this product contains batteries, please be sure to store it in an indoor environment between -20°C ~ +30°C. It must be fully charged and discharged every 6 months from the date of purchase until it is officially put into use, then recharged 30-50% and stored for another 6 months, and so on. If the battery is not used for more than 6 months, it may cause excessive self-discharge of the battery, and the resulting reduction of battery capacity is irreversible. For products with separate battery and emergency module, please disconnect the connection between battery and module for storage. Due to its chemical properties, it is a normal situation for the battery capacity to decline naturally during use. Users should take this into account when choosing products.
12. The use of accessories equipment not recommended by the manufacturer may cause an unsafe condition.
13. Do not use this equipment for other than its intended use.
14. Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.
15. Installation and servicing should be performed by qualified personnel.
16. Ensure product compatibility before final installation. Make sure the polarity is correct when connecting the batteries. Wiring should be strictly in accordance with the wiring diagram, wiring errors will damage the product. A case of safety accident or product failure caused by users' illegal operation does not belong to the scope of customer complaint acceptance, compensation or product quality assurance.