

# HIPOWERLED EMERGENCY DRIVER

## 18440X-SUR



## FEATURES



1. Fast wiring and installation without opening the housing of the luminaire or the emergency driver
2. Auto dimming (0-10V) of connected load up to 10 times of emergency power
3. High voltage DC output
4. Constant emergency power output
5. Auto Test
6. Extremely slim aluminium housing and light in weight, built-in battery

### Order type No. Description

**18440X-SUR**      -YYY

X=1: 20W or below      -LVD: Input 120-277VAC Dimmable

                              -HVD: Input 277-480VAC Dimmable

X=2: 40W or below

X=3: 60W or below

**-(Z)ZZ**

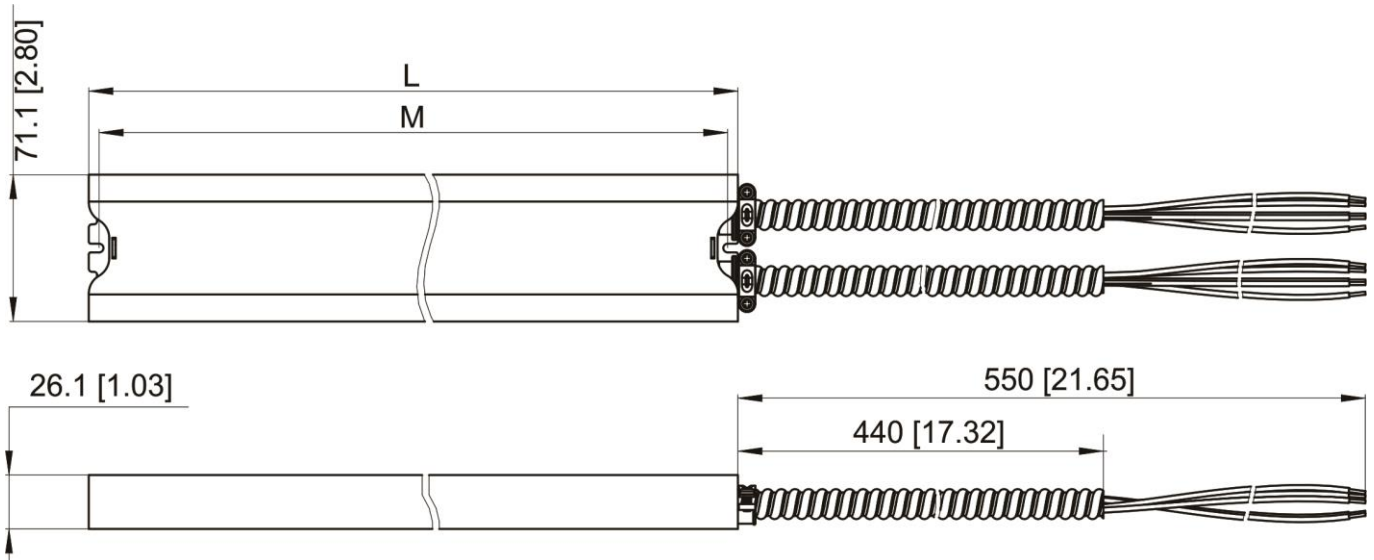
-(SalesCode) + emergency power

## CHARACTERISTICS

Type	184401-SUR -LVD-20	184402-SUR -LVD-40	184403-SUR -LVD-60	184401-SUR -HVD-20	184402-SUR -HVD-40	184403-SUR -HVD-60
Lamp type	LED High-bay or UFO luminaire					
Rated voltage	120-277VAC 50/60Hz			277-480VAC 50/60Hz		
Output voltage	170VDC			400VDC		
Rated current (A)	0.04-0.09	0.045-0.11	0.05-0.14	0.035-0.08	0.04-0.085	0.045-0.09
Rated power (W)	6-9	7.5-11	10-14.5	6.5-12.5	7.5-14.5	11-17
Power Factor	>0.75@120V			>0.6@277V		
Max. Output power	20W	40W	60W	20W	40W	60W
Max. power of 0-10V dimming load	200W	400W	600W	200W	400W	600W
	The luminaire's minimum dimming power should be less than or equal to the Max. Output power of LED emergency driver.					
Battery	Li-ion					
Charging time	24 Hours					
Discharge time	90 Minutes					
Charging current	500mA	600mA	825mA	500mA	600mA	825mA
Life time	5 Years					
Charging cycles	>1000					
Operation temperature	0-50°C(32°F-122°F)					
Efficiency	85%					
Abnormal protection	Over load, over current, inrush, over temperature, charging and discharging, short circuit protection with auto reset					
Wire	18-14AWG/0.75-2.5mm <sup>2</sup>					
EMC/FCC/IC standard	FCC part 15, ICES-005					
Safety standard	UL924, CSA C.22.2 No. 141					
Meas. mm [inch]	184401-SUR-LVD: L280 [11.02] x W71.1 [2.80] x H26.1 [1.03]mm Mounting center: 270 [10.63] 184402- SUR -LVD: L350 [13.78] x W71.1 [2.80] x H26.1 [1.03]mm Mounting center: 340 13.39] 184403- SUR -LVD: L420 [16.54] x W71.1 [2.80] x H26.1 [1.03]mm Mounting center: 410 [16.14] 184401- SUR -HVD: L310 [12.20] x W71.1 [2.80] x H26.1 [1.03]mm Mounting center: 300 [11.81] 184402- SUR -HVD: L380 [14.96] x W71.1 [2.80] x 26.1 [1.03]mm Mounting center: 370 [14.57] 184403- SUR -HVD: L450 [17.72] x W71.1 [2.80] x 26.1 [1.03]mm Mounting center: 440 [17.32]					

## DIMENSION

### 18440X-SUR



Item No.	Lmm [inch]	Mmm [inch]	Wmm [inch]	Hmm [inch]
184401-SUR-LVD	280 [11.02]	270 [10.63]	71.1 [2.80]	26.1 [1.03]
184402-SUR-LVD	350 [13.78]	340 [13.39]	71.1 [2.80]	26.1 [1.03]
184403-SUR-LVD	420 [16.54]	410 [16.14]	71.1 [2.80]	26.1 [1.03]
184401-SUR-HVD	310 [12.20]	300 [11.81]	71.1 [2.80]	26.1 [1.03]
184402-SUR-HVD	380 [14.96]	370 [14.57]	71.1 [2.80]	26.1 [1.03]
184403-SUR-HVD	450 [17.72]	440 [17.32]	71.1 [2.80]	26.1 [1.03]

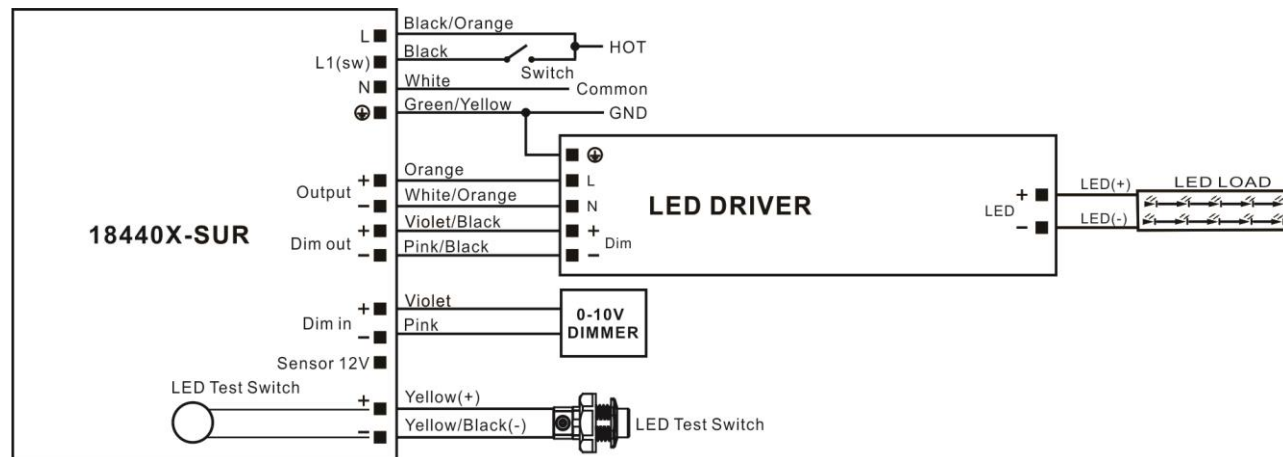
Dimension unit: mm [inch]

Tolerance:  $\pm 1$  [0.04]

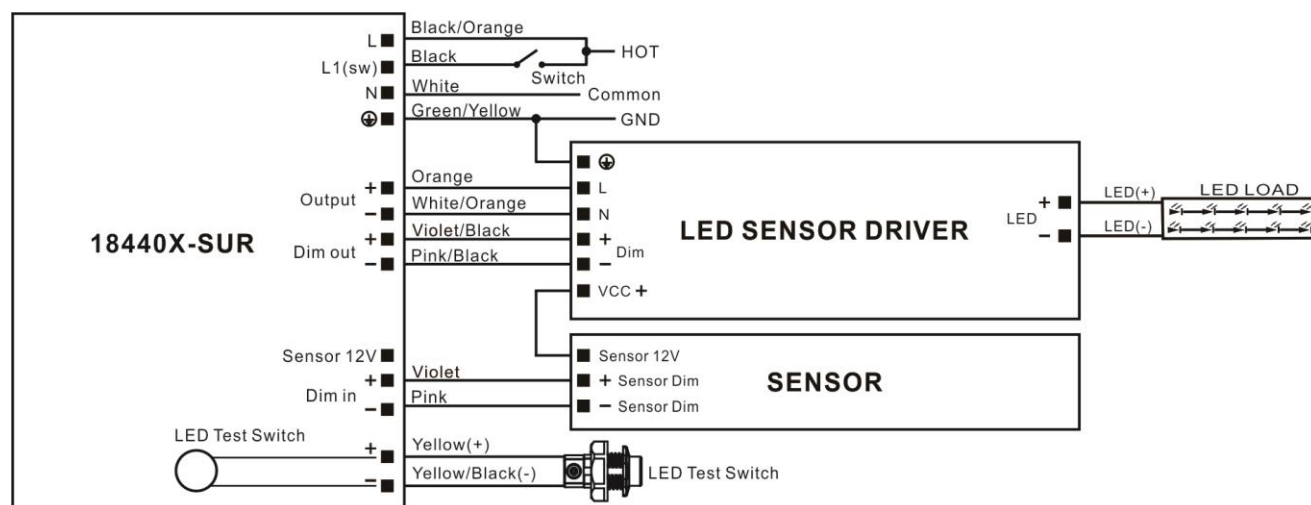
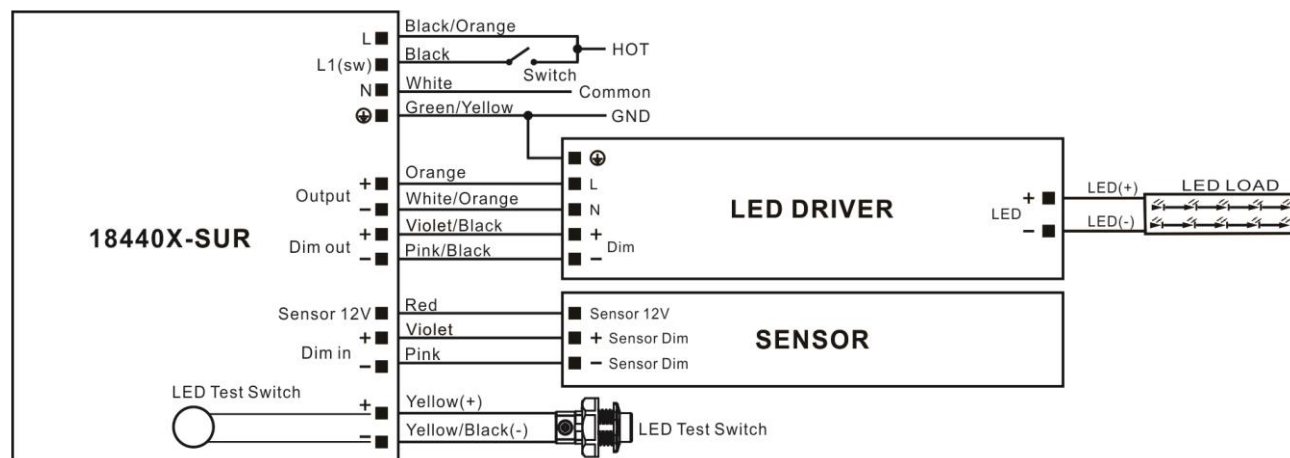
## WIRING DIAGRAM

The luminaire must have a 0-10V dimmable driver when its power is bigger than the max. Output power of the emergency Driver.

### For 0-10V Dimmable Luminaire

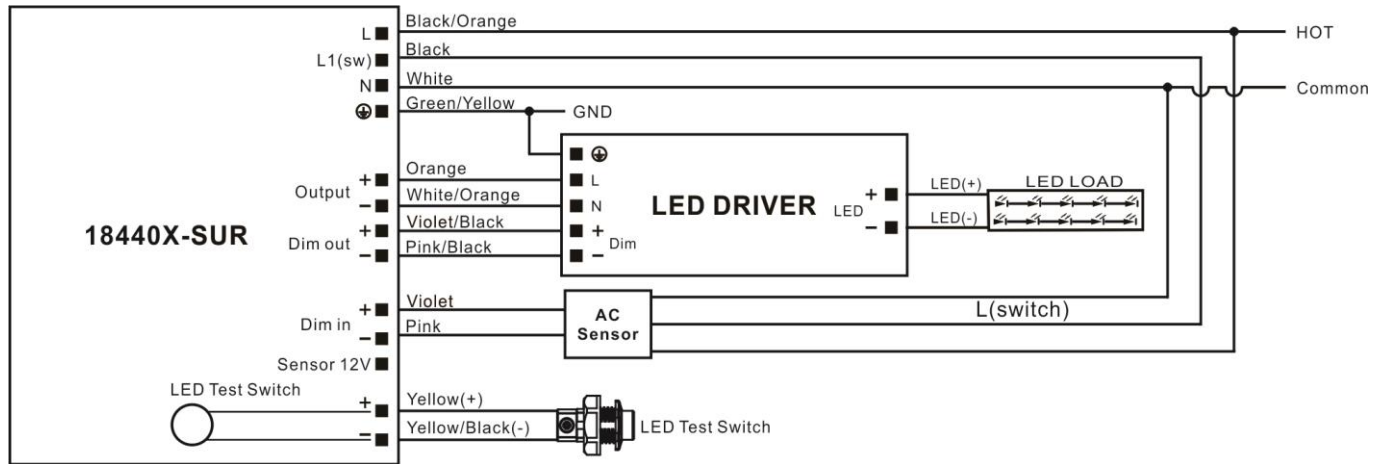


### For 0-10V Dimmable Luminaire with DC Sensor

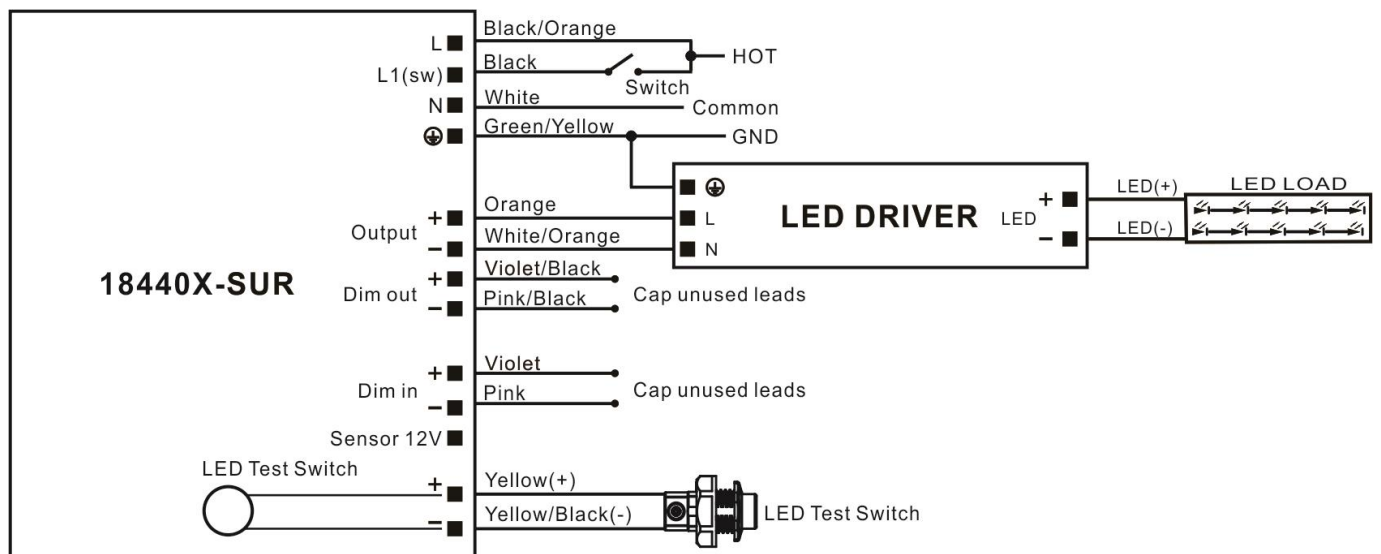


## WIRING DIAGRAM

### For 0-10V Dimmable Luminaire with AC Sensor



### For Non Dimmable Luminaire



The input power of Non dimmable luminaire shall be equal to or less than the 18440X-SUR's emergency output power.

## **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 18440X-SUR 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 18440X-SUR 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. A short term discharge test may be conducted after the 18440X-SUR 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 60-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. The LTS will be off during test.

### **AUTO TEST**

The 18440X-SUR 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 18440X-SUR 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 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 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 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 an 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 input power is supplied to this product.
2. This product requires an un-switched AC power supply of 120-277V or 277-480V, 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 power, emergency power supplies and unit connector of this product before servicing.
5. For emergency operation of LED, incandescent, fluorescent fixtures and screw-base lamps.
6. Use this product in 0°C minimum, 50°C maximum ambient temperatures (Ta). It can provide minimum 90 minutes illumination under the emergency mode.
7. This product is suitable for use in dry or damp locations. Do not use outdoors. Do not mount it near gas, heaters, air outlets or other hazardous locations.
8. Do not attempt to service the batteries. A sealed, non-maintenance battery is used that is not field replaceable. Contact the manufacturer for information or service.
9. As this product contains batteries, please be sure to store it in an indoor environment of -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.
10. The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition and void warranty.
11. Do not use this product for other than intended use.
12. Installation and service should be performed by qualified service personnel.
13. This product should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
14. 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.