



KT-EMRG-LED-20SD-2000-EN /DF

CONSTANT POWER EMERGENCY LED DRIVER

DESCRIPTION

Constant Power Emergency LED Driver | 20W Output | 120–277V Input



DRIVER TYPE: Constant Power Emergency LED Driver

MAX. OUTPUT POWER: 20W

INPUT VOLTAGE: 120–277Vac $\pm 10\%$

NUMBER OF OUTPUTS: One

SAFETY STANDARD: UL 924, Complies with CEC Title 20 Efficiency Standards

LOCATION: IP20 design for dry and damp location

WARRANTY: 5 Years

PASS-THROUGH CURRENT: 3A max.



ELECTRICAL SPECIFICATIONS

| | |
|--------------------------|---|
| Input voltage range | 120–277Vac $\pm 10\%$ |
| Frequency | 50/60Hz |
| Power factor | >0.9 under 120–277Vac input |
| Inrush current | 20A @ 120V |
| Max input current | 60mA @120V, 35mA @240V, and 30mA @277V |
| THD | <20% under 120–277Vac input |
| Output voltage | 20–60Vdc Class 2 compliant Remarks: the output power is valid for output voltage ≤ 58 Vdc; above that power will drop |
| Output current | 1000mA @ 20Vdc, 333mA @ 60Vdc |
| Output power | 20W (constant) |
| Turn-on Delay Time | <1s |
| Overshoot | <10% |
| Ripple & Noise (pk-pk) | <10% |
| Withstand voltage | Input to output, 2800Vdc, 2mA |
| Leakage current | Maximum 0.5mA at 277Vac, 60Hz input |
| Protection | <p>Over voltage protection: Hiccup mode. Protection will trigger when load voltage exceeds specified output voltage and will auto recover after the fault mode is removed.</p> <p>Over current protection: Hiccup mode. Protection will trigger when load current exceeds specified output current and will auto recover after the fault mode is removed.</p> <p>Short circuit protection: Hiccup mode. Protection will trigger when short circuit and will auto recover after the fault mode is removed.</p> <p>Over charge and discharge protection: Monitor battery voltage to prevent over charge of the battery and deep discharge which may damage battery.</p> |
| Emergency Operation | 90 minutes |
| Battery | High-temperature, maintenance-free, LiFePO ₄ battery, 16Vdc, 5 cell |
| Recharge Time | 24 hours |
| Battery Charging Current | 295mA |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-----------------------------|--------------------------|
| Operating temperature | 0°C/32°F to 55°C/131°F |
| Storage temperature | –20°C/–4°F to 55°C/131°F |
| Humidity | 5% to 95% |
| MTBF | TBD |
| Life rating | TBD |
| Maximum ambient temperature | 55°C/131°F |

SAFETY AND EMC COMPLIANCE

| | |
|--------------------|--|
| UL/cUL | UL 924 |
| FCC, 47CFR Part 15 | ANSI C63.4:2009 Class B (consumer limit) |
| EN61000-3-2 | Harmonic current emissions Class C |

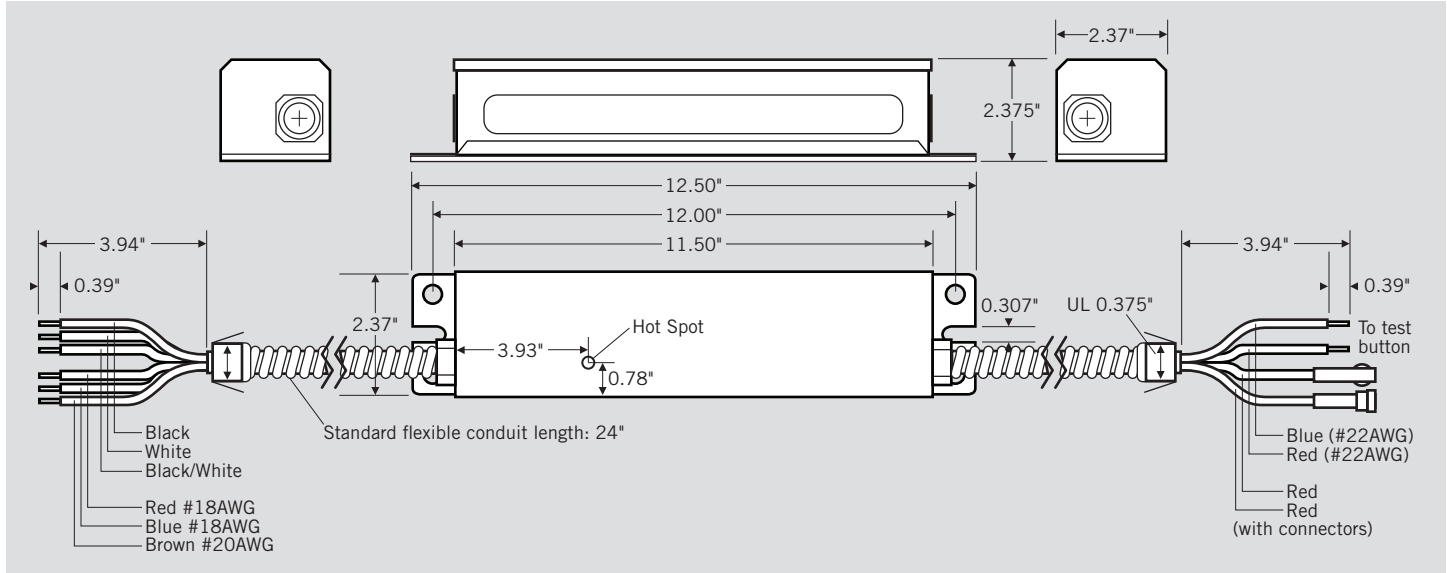


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DIMENSIONS AND WIRING SPECIFICATIONS

EMERGENCY LED DRIVER SPECIFICATIONS



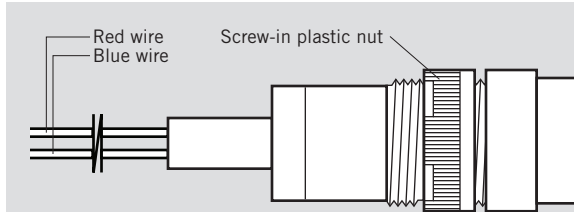
LED DRIVER DIMENSIONS

| | |
|--------------|------------------|
| Length (L) | 12.50" (317.5mm) |
| Width (W) | 2.37" (60.2mm) |
| Height (H) | 2.375" (60.3mm) |
| Mounting (M) | 12.00" (304.8mm) |

WIRE SPECIFICATIONS

| | |
|------------------------------------|---------------|
| Black, White (Input) | UL1316 #18AWG |
| Red, Blue (Output to LED module) | UL1316 #18AWG |
| Brown | UL1430 #20AWG |
| Red, Black (Battery connection) | UL1015 #18AWG |
| Red, Blue (Test switch connection) | UL1430 #22AWG |

TEST SWITCH (2-WIRE) SPECIFICATIONS



Suitable for 0.5" hole diameter or existing knockout on fixture

Test switch light indication

- Green color flashing: Charging battery (battery connector in contact)
- Green color light: Standby or in emergency mode
- Red color flashing 1 time: Cannot charge up battery
- Red color flashing 2 times: Battery voltage too low
- Red color flashing 3 times: Loading voltage too low (less than 20V)

Manual test sequences

- Quick discharge test: Press 1 time and hold; LED load will light up for a second
- 30-second test: Press 2 times and hold; LED load will light up for 30 seconds
- 90-minute test: Press 3 times and hold; LED load will light up for 90 minutes

Notes:

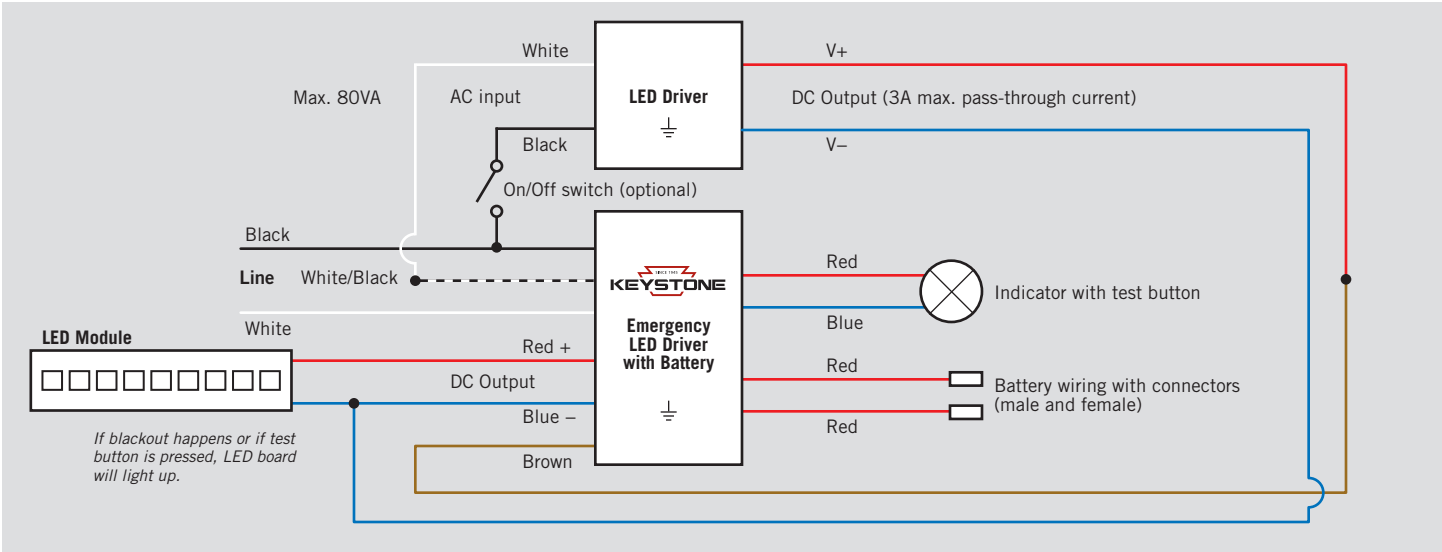
1. To maintain good battery lifespan during storage, recharge emergency driver annually.
2. For operation, wiring, installation, regular check, and maintenance, please refer to installation instruction and Life Safety Code.
3. Automatic Monthly and Annual Testing: Automatically conduct a 30-second test every month and a 90-minute test every year. The test button will flash RED if an issue is detected.
4. Once conducted, the quick discharge test mode requires 2 hours to recharge battery before performing other tests.
5. Once entering emergency mode or after conducting other test modes, 24 hours are required to recharge battery before performing other tests.
6. The internal timer of the emergency driver starts once power is applied to the unswitched hot lead. The internal timer will not reset due to power loss as long as there is enough battery power to maintain the emergency driver's internal memory.
7. The internal timer of the emergency driver resets after 12 automatic tests. The 12th test conducted is a 90-minute test, which occurs every 377 days. The first 11 tests conducted are 30-second tests and occur once every 30 days (if the 90-minute test occurs within the 30-day time period, the duration will increase to 31 days).
8. If the emergency driver has a manual test (test button pushed) during the time of the auto-test, the auto-test will delay for 24 hours.
9. Regardless if the switched hot is on or off (if applicable), automatic tests will still occur and will power the LED load at 20W.
10. If a power outage were to occur during the time of an automatic test, the emergency driver will continue the automatic test until completed. After the test is done, it will continue to operate the load in emergency mode until power is restored.



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WIRING DIAGRAM



ORDERING INFORMATION

| ORDER CODE | DESCRIPTION | PACKAGING STYLE | PACK QTY. | ITEM STATUS |
|---------------------------------|--------------------------------------|-----------------------|-----------|-------------|
| KT-EMRG-LED-20SD-2000-EN /DF-IP | LED Emergency Back-Up, CEC Compliant | Individually Packaged | TBD | Active |

CATALOG NUMBER BREAKDOWN

KT-EMRG-LED-20SD-2000-EN /DF-IP

1 2 3 4 5 6 7 8 9

- 1 Keystone Technologies
- 2 Emergency Back-Up
- 3 LED Driver
- 4 Nominal Wattage
- 5 Self Diagnostic
- 6 Nominal Lumen Output
- 7 1-Piece Enclosure
- 8 Dual Flex Cables
- 9 Packaging Style