

Sinusoidal (Sine Wave) Output
 50 VA Output Power Maximum
 Emergency backup with small size inverter
 Automatic Dimming (0 to 10V) of Connected Load (maximum 320 W*)

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Qty: _____
 Notes: _____

Product order number: ELIS50J2UK50C1ADI1
12 NC number: 913702493801

Specifications

Regulatory Certifications

UL Listed to UL 924
 Factory or Field Installation (Indoor and Damp)
 Input Title 20 CEC Compliant

Maximum Output Power

50 VA

Maximum Connected Load Power

320 W*

Illumination Time

90 Minutes

AC Input Voltage and Current (charging only)

120-277 VAC, 50/60 Hz, 170 mA

Surge Withstand

4 kV (ANSI C82.77-5)

Battery:

Maintenance-Free Li-ion Battery

Recharge Time

36 Hours

Output Voltage and Frequency

120 VAC +/- 10%, 60 Hz ± 5%

Transfer Time

2 to 5 seconds

Loads Operated

LED (per NEMA 10410, formerly NEMA 410)
 Fluorescent
 Incandescent

Temperature Rating

Ambient: 32-122°F (0-50°C)
 Case Tc (max): 65°C

Test Switch / Charging Indicator

Light Two-Wire, Bi-Color Illuminated Test Switch**
 IP65 rated for ingress protection to dust and water jets
 UL 2043 plenum rated test switch cable assembly

Dimensions

21.92" x 3.58" x 1.32" (556 mm x 91 mm x 33.5 mm)
 Mounting center 21.50" (546 mm)

Conduit and Fitting

3/8" Conduit, 24" (610mm) Long; 3/8" Fitting

Mounting Bracket Option

PRT00269 (12NC 913702493401)

See [PRT00269 Spec Sheet](#) for more information



Weight

6 lbs. (2.72 kg)

Warranty

5 years (NOT pro-rata)

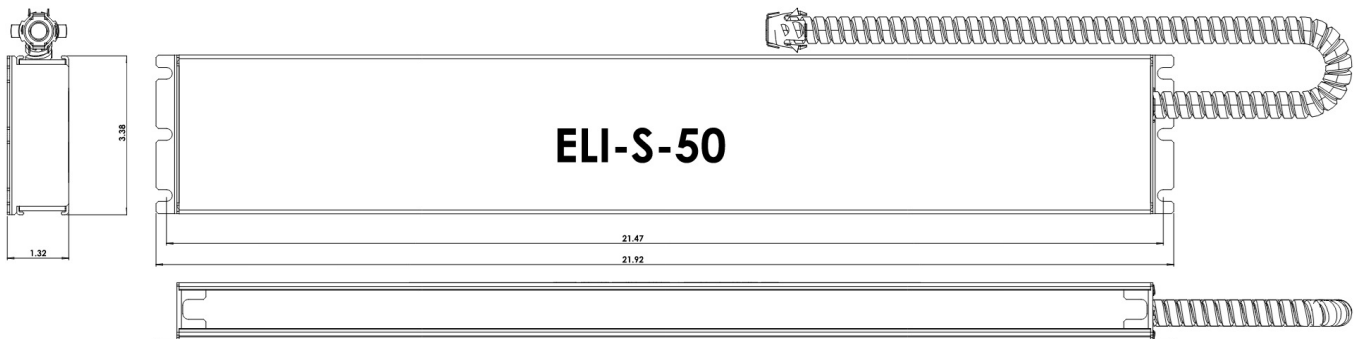


Benefits

- Automatic dimming (0 to 10 V) of connected load (when used)
- Automatic code-compliant testing (self-testing)
- Automatic load monitoring after commissioning (new UL 924 requirement)
- Meets Title 20 CEC (California Energy Commission) efficiency standards
- Works with LED, fluorescent and incandescent fixtures
- Ideal for (but not limited to) screw-base LED lamps
- Compatible with AC (line voltage) driven TLED lamps (Type B)
- Remote-mounting up to 250 feet maximum

Dimensions

21.92" x 3.58" x 1.32" (mounting center - 21.50")



* Note: A total connected load of 320 W is only possible with very specific loads that have been tested at the factory. Other loads rated at this maximum power level may be possible, but they should be pre-tested at the factory or by the local electrical shop before specification or field installation.

**The bi-color illuminated test switch is a Class 2 device.

ELI-S-50

Sinusoidal dimmable emergency backup micro-inverter

Application

The Bodine ELI-S-50 Emergency Lighting Inverter works in conjunction with fluorescent, LED, or incandescent fixtures to create an emergency lighting system. The ELI-S-50 operates at a maximum output power of 50 VA. It allows the connected fixture(s) to be on, off, switched or dimmed without affecting emergency operation. Each unit consists of a Li-ion battery, charger and electronic circuitry in one extruded aluminum case. The ELI-S-50 provides power to the input side of the fixture, including the AC ballast/driver, and can be used with indoor or outdoor emergency fixture applications. The ELI-S-50 is NOT suitable for use with HID lighting nor is it rated for outdoor mounting locations.

Operation

Upon failure of normal power (AC mains), the ELI-S-50 begins providing emergency power to the connected lighting load for a minimum of 90 minutes. A low voltage disconnect circuit protects the inverter battery from damage by deep discharge during prolonged power failures. When normal power is restored, the ELI-S-50 automatically returns to charge mode. The battery capacity is fully restored in 24 hours.

ABCConnect

ABCConnect (Automatic Bodine Connect) simplifies shipping, storage, installation, and commissioning of the emergency lighting luminaire. It allows for the luminaire to be installed and made ready for use without needing to reopen the luminaire when AC power is available, also avoiding unnecessary drain on the battery. Once activated, the product can also be manually disabled, allowing the product the luminaire to be safely stored for extended periods of time. In the situation where the user manually deactivates the emergency operation for shipping or storing product via the test switch, the Automatic Bodine Connect feature reactivates power when the driver senses that AC current is applied. This feature saves time, labor and the potential to overlook the enable connector step. This reduces the possibility of inadvertently discharging the battery prior to installation, whether in transit or storage.

Installation

The ELI-S-50 does not affect normal fixture operation and may be used with a switched or unswitched fixture. It can be installed in close proximity to the fixture or remote from the fixture (using suitable wiring).

Commissioning

The ELI-S-50 requires initial calibration as part of the full product installation in order to accurately monitor the load for changes (new UL 924 requirement). See installation instructions for details.

Dimming

The ELI-S-50 features a dimming control output of 0-10 volts. This dimming capability allows a string of multiple fixtures to be driven in emergency mode at a combined 50 VA maximum. For example, two 100W LED fixtures may be connected to one ELI-S-50 and automatically dimmed for emergency operation to 25% of normal power input, providing each LED fixture with approximately 25 W of input power. See diagram below.* The emergency mode output dimming voltage is automatically controlled by the ELI-S-50 electronic circuitry to maintain a total of 50 VA output throughout the emergency event. The ELI-S-50 passes the normal room dimming control voltage (0 to 10V) where used, in the normal (non-emergency) mode so normal dimming operation of the connected fixtures is not affected.

Emergency Illumination

The ELI-S-50 supports 50 VA of emergency power for a minimum of 90 minutes.

Code Compliance

The ELI-S-50 has been tested by Underwriters Laboratories in accordance with the standards set forth in UL 924, "Emergency Lighting and Power Equipment". The ELI-S-50 is UL Listed for field installation. Emergency illumination time exceeds the National Electrical Code (NEC), Life Safety Code (NFPA-LSC) and UL 90-minute requirements.

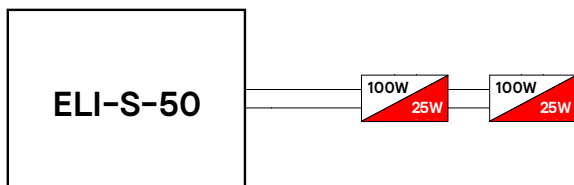
Specification

Emergency lighting shall be provided by using a standard fixture or group of fixtures powered with a Bodine ELI-S-50. Each ELI-S-50 unit consists of a maintenance-free Li-ion battery, and electronic battery charging and output generation circuitry contained in one 21.92" H x 3.58" W x 1.32" D metal case. Electronic circuitry shall be self-testing in design and automatically test emergency lighting for a minimum of 30 seconds every 28 days and 90 minutes once a year. The ELI-S-50 unit shall be capable of powering any combination of dimmable fluorescent and/or LED lighting fixtures rated at a total of 320 W input power at 0 to 50°C for a minimum of 90 minutes by the use of 0 to 10V dimming control to reduce the input power of the connected luminaire(s) to a total of 50 VA during emergency operation, regardless of local switch or dimmer position. The ELI-S-50 shall allow the connected fixture(s) to be on, off, switched or dimmed without affecting emergency operation. The ELI-S-50 unit shall exceed emergency standards set forth by the current NEC. The device shall comply with Part 15 of the FCC Rules and meet California Energy Commission Title 20 efficiency requirements. It shall be UL Listed for the US, suitable for damp locations, and warranted for five years from date of manufacture.

Warranty

The ELI-S-50 is warranted for five (5) years from the date of manufacture. This warranty covers only properly installed Bodine ELI-S-50 emergency units used under normal conditions. For the warranty period, Bodine Emergency Lighting will, at its option, repair or replace without charge a defective inverter provided it is returned to the factory transportation prepaid on inspection will be conducted to determine if the unit is defective under the terms of the warranty. Repair or replacement, as stated above, shall constitute the purchaser's exclusive warranty, which does not extend to transportation, installation, labor or any other charges; nor does it apply to any equipment of another manufacturer used in conjunction with the inverter.

* Note. AC input power to an LED or Fluorescent Driver/Ballast is always more than the output power. Furthermore, dimming drivers are less efficient at reduced power. This inefficiency must be accounted for in the design.



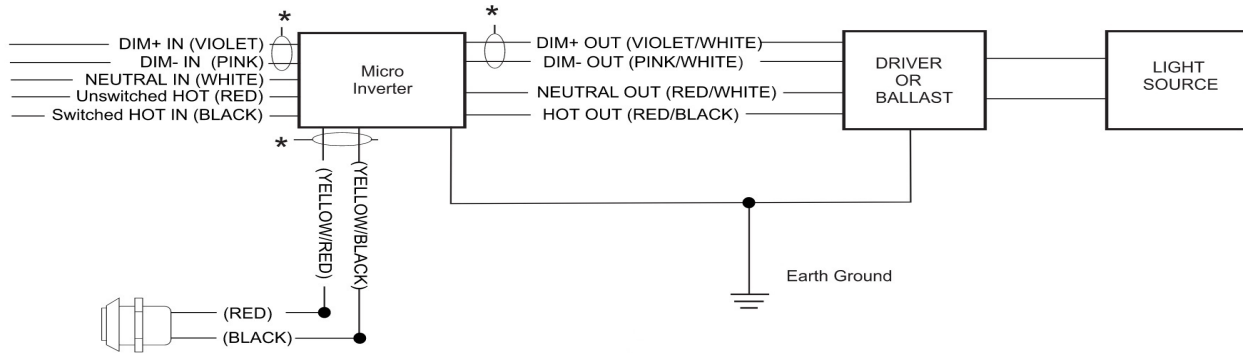
*Two (2) 100 W fixtures at 25% dim level in emergency mode



ELI-S-50

Sinusoidal dimmable emergency backup micro-inverter

Schematic



- Apply AC power to enter charging mode.
- Remove AC power to enter emergency mode.

For incandescent or non-dimming loads no greater than 50 VA (ELI-S-50), cap off all unused dimming (DIM) leads separately.

*** These connections have been evaluated to comply with requirements for UL1310 Class 2 Power Units.**

Accessories (sold separately)

This inverter can be used with Bodine accessory part PRT00269, inverter mounting bracket, to facilitate installation with suspended high-bay luminaires (see <https://www.signify.com/en-us/brands/bodine/products/prt-emergency-accessories/prt00269> for more information).

Ordering Guide

example: ELIS50J2UK50C1AD11

Product Category	VA	Case	Input Voltage	Temperature	Type/ Harness	Special Features	Packaging	Generation	
ELIS	50	J2	U	K	50	C1	I	1	
ELIS Emergency Lighting Inverter Sinusoidal	50	J2 see page 1 for case dimensions)	U 120-277V	K Min. Temp. 0°C	50 Max. Temp. 50°C	C1 Conduit out one end	AD Automatic Dimming	I Individual Pack	1 Gen 1

Lithium Battery Shipping Regulations

To comply with IATA provisions for air transporting lithium batteries, and for a step by step guidance through the shipping process, please visit <https://www.iata.org/en/publications/store/lithium-battery-shipping-regulations>.

To view a Classification Flowchart for package marking requirements, please visit <http://www.iata.org/whatwedo/cargo/dgr/Pages/lithium-batteries.aspx>. Scroll to the "Guidance Material" section and click on the provided "Guidance Document" PDF link. The Classification Flowchart will be found on page 5. The ELI-S-50 battery cell capacity is less than 20Wh, and the battery pack capacity is less than 100 Wh.

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