



Sinusoidal (Sine Wave) Output
400 VA Output Power Maximum
Extended Run-Time (2 hours)
Automatic Code-Compliant Testing
Automatic Dimming (0 to 10V) of Connected Load
Reduced Enclosure Size

Product order number:
ELIS400I2UO30AD2HI

12 NC number:
913702486001

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

Specifications

UL Listed for Installation in US and Canada

Listed to UL 924 for Field Installation
(Indoor and Damp)

California Title 20

Input CEC Title 20 Compliant

Maximum Output Power

400 VA

Maximum Connected Load Power

800 W*

Illumination Time

120 Minutes

AC Input Voltage

120 VAC, 60 Hz or 277 VAC, 60 Hz

AC Input Current, (battery charging)

1000 mA Max, 120Vac or
360 mA Max, 277Vac

Battery (4 ea. required)

12V (nominal), 22Ah
Maintenance-Free Lithium-Ion Battery

Recharge Time

24 Hours

Charging Indicator Light / Test Switch

Integrated LED Test Switch

Output Voltage, Automatically Selected

120 VAC +/- 10%, or 277 VAC +/- 10%

Output Frequency

60 Hz, ± 5%

Transfer Time

500 ms (approx.)

Temperature Rating (Ambient)

68° F to 86° F (20° C to 30° C)

Dimensions

12.0" H x 12.5" W x 10.0" D
(317mm x 305mm x 254mm)

Weight

Enclosure and Electronics only: 16 lbs. (7.26 kg)

Batteries: 6.1 lb. ea. (2.8 kg)

Batteries total: 24.4 lb. (11.1 kg)

Warranty

Electronics: 5 years full

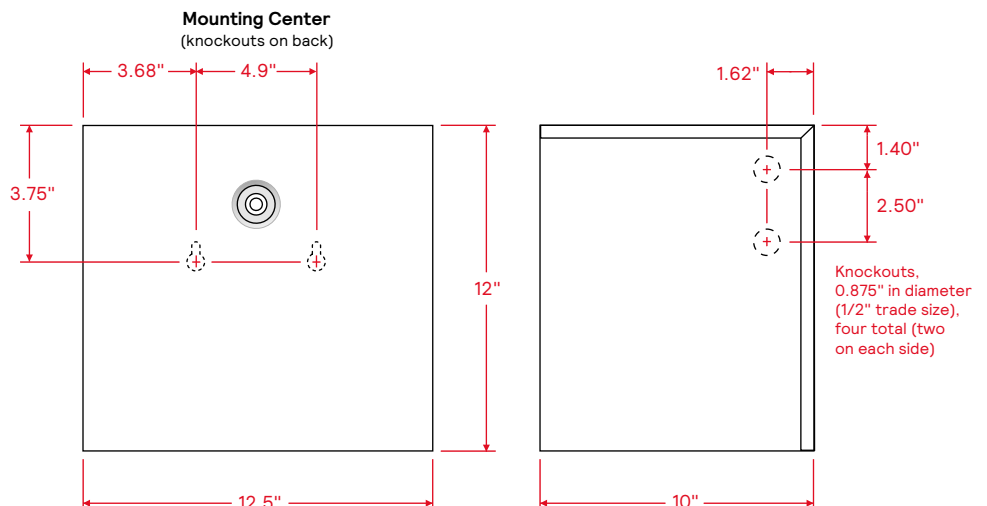
Battery: 3 years full plus 4 years pro rata



Benefits

- Automatic output voltage select
- Automatic dimming (0 to 10V) of connected load
- Automatic code-compliant testing
- Automatic load monitoring after commissioning (new UL 924 requirement)
- Meets CEC Title 20 (California Energy Commission) efficiency standards
- Meets FEMA emergency lighting operating time requirements (2 hours)
- Works with LED and fluorescent fixtures
- Ideal for (but not limited to) screw-base LED lamps
- Compatible with AC (line voltage) driven TLED lamps
- Remote-mounting up to 1,000 feet maximum

Dimensions



*Note: A total connected load of 800W 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.

ELI-S-400-2HR

Sinusoidal emergency backup inverter

Application

The Bodine ELI-S-400-2HR Emergency Lighting Inverter works in conjunction with fluorescent, LED, or incandescent fixtures to create an emergency lighting system. The ELI-S-400-2HR operates at a maximum output power of 400 VA. It allows the connected fixture(s) to be on, off, switched or dimmed without affecting emergency operation. Each unit consists of lithium-ion batteries, charger and electronic circuitry in one steel case. The ELI-S-400-2HR 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-400-2HR is NOT suitable for use with HID lighting nor is it rated for outdoor mounting locations.

Operation

Upon failure of normal power, the ELI-S-400-2HR begins providing emergency power to the connected lighting load for a minimum of 120 minutes. A low voltage disconnect circuit protects the inverter batteries from damage by deep discharge during prolonged power failures. When normal power is restored, the ELI-S-400-2HR automatically returns to charge mode. The battery capacity is fully restored in 24 hours. During automated testing, the ELI-S-400-2HR simulates an AC power outage. This causes the inverter to switch to emergency mode and conduct a discharge test to monitor battery voltage and load operation. If the ELI-S-400-2HR detects a problem, the status indicator light flashes. When testing is complete, the ELI-S-400-2HR returns to the charging mode. Automatic testing is conducted for 30 seconds once a month and 120 minutes once a year.

Installation

The ELI-S-400-2HR 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

Commissioning the ELI-S-400-2HR 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-400-2HR 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 400 VA maximum. For example, fifteen 40W (input) LED fixtures may be connected to one ELI-S-400-2HR and automatically dimmed for emergency operation to 67% of normal power input, providing each LED fixture with approximately 26W of input power. See diagram below.* The emergency mode output dimming voltage is automatically controlled by the ELI-S-400-2HR electronic circuitry to maintain 400 VA output throughout the emergency event. The ELI-S-400-2HR 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.

Specification

Emergency lighting shall be provided by using a standard fixture or group of fixtures powered with a Bodine ELI-S-400-2HR self-testing/self-diagnostic emergency lighting inverter. Electronic circuitry shall be self-testing in design and automatically test emergency lighting for a minimum of 30 seconds every 28 days and 120 minutes once a year. Each ELI-S-400-2HR unit consists of four maintenance-free lithium-ion batteries, and electronic battery charging and output generation circuitry contained in one 12.0"H x 12.5"W x 10.0"D metal case. The ELI-S-400-2HR unit shall be capable of powering any combination of fluorescent and/or LED lighting fixtures rated at a total of up to 800W input power at 20°C to 30°C for a minimum of 90 minutes at an output power of 400VA during emergency operation, regardless of local switch or dimmer position. The ELI-S-400-2HR shall allow the connected fixture(s) to be on, off, switched or dimmed without affecting emergency operation. The ELI-S-400-2HR unit shall exceed emergency standards set forth by the current NEC. This device complies with Part 15 of the FCC Rules and meets CEC Title 20 (California Energy Commission) efficiency standards. It shall be UL Listed, suitable for damp locations, and warranted for five years from date of manufacturing.

Emergency Illumination

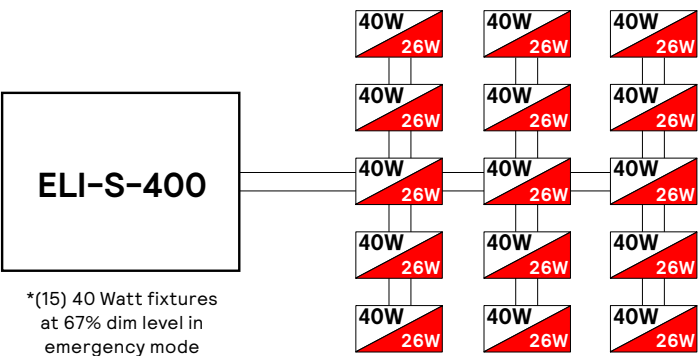
The ELI-S-400-2HR supports 400 VA of emergency power for a minimum of 120 minutes. It is left to the lighting designer to ensure the output power is distributed properly to each luminaire along the path of egress to ensure emergency illumination levels meet Life Safety Code (NFPA 101) requirements.

Code Compliance

The ELI-S-400-2HR has been tested by Underwriters Laboratories in accordance with the standards set forth in UL 924, "Emergency Lighting and Power Equipment". The ELI-S-400-2HR 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.

Warranty

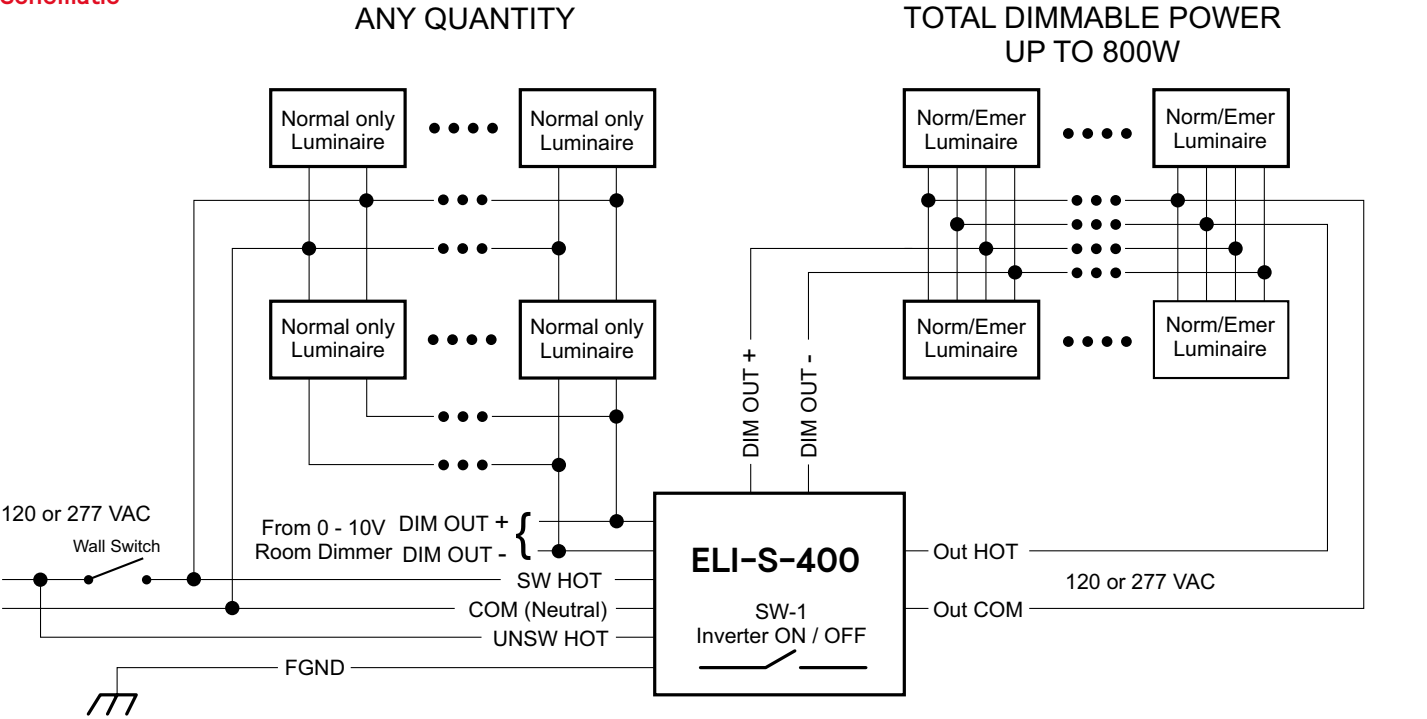
The ELI-S-400-2HR is warranted for five (5) years from the date of manufacture. This warranty excludes the batteries, which have a warranty of three (3) years full plus four (4) additional years pro rata. This warranty covers only properly installed Bodine ELI-S-400-2HR emergency units used under normal 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. An 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.



ELI-S-400-2HR

Sinusoidal emergency backup inverter

Schematic



Ordering Guide

example: ELIS400I2UO30AD2HI

| Product Category | VA | Case | Input Voltage | Temperature | Type/Harness | Packaging |
|---|-----|-------------------------------------|---------------|---|---|-------------------|
| ELIS | 400 | I2 | U | O 30 | AD 2H | I |
| ELIS Emergency Lighting Inverter Sinusoidal | 400 | I2 (see page 1 for case dimensions) | U 120-277V | O 20°C Min. Temp. 30 30°C Max. Case Temp. | AD Automatic Dimming 2H Two-Hour Run-Time | I Individual Pack |

Lithium Battery Shipping Regulations

To comply with IATA provisions for air transporting lithium batteries, and for general information on shipping Li-ion batteries, please visit <https://www.iata.org/en/programs/cargo/dgr/lithium-batteries/>.

To view a Classification Flowchart for package marking requirements, please visit <https://www.iata.org/contentassets/05e6d8742b0047259bf3a700bc9d42b9/lithium-battery-guidance-document.pdf>. Scroll to the Classification Flowchart on Page 7 of the 2023 version of this document.

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