bodine

Emergency Driver

LED

BSL14B2 - 2 Hour

Emergency LED Driver
14 Watts Output Power
2 Hour Extended Run-Time
Class 2 Output or High Voltage Output
With or Without Conduit

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

Product order number:	12NC number:
BSL14B2UAK55C12HI1	913702487001
BSL14B2UAK55L12HI1	913702487201
BSL14B2UCK55C12HI1	913702487401
BSL14B2UCK55L12HI1	913702487601

Specifications

Regulatory Certifications
UL Listed to UL 924 and tested to CSA 22.2,No.141
Factory or Field Installation (Indoor and Damp)
Output Class 2 Compliant
Input Title 20 CEC Compliant

Illumination Time
120 Minutes

Full Warranty
5 Years (NOT pro-rata)

Universal Input Voltage
120-277 VAC, 50/60 Hz

Output Voltage
15-54 or 54-200 VDC (see Ordering Guide)

Output Power
14 W

Test Switch/Charging Indicator Light
Plenum rated metal test switch assembly
Test switch is IP65 rated for ingress protection to dust and water jets
Test switch assembly is UL 2043 plenum-rated
Test switch can be mounted up to 50 feet from fixture
Lead length 35.43" (900 mm)

Battery
High-Temperature, Maintenance-Free
Lithium ion Battery Recharge Time
24 Hours

Temperature Rating
Ambient: 0-55°C (32-131°F)
Case Tc (Max): 65°C

Dimensions
B2 Enclosure:
15.34" x 2.25" x 1.16" (369 mm x 58 mm x 30 mm)
Mounting Center: 15.0" (356 mm)

B6 Enclosure:
9.37" x 2.20" x 1.05" (238 mm x 55.9 mm x 26.7 mm)
Mounting Center: 8.9" (226 mm)

Maximum Weight
BSL20B2:
With conduit - 3.07 lbs (1.39 kg)
Without conduit - 2.67 lbs (1.21 kg)

Initial Illumination Levels
See guide on Page 2

Benefits

- Meets Title 20 CEC (California Energy Commission) efficiency standards.
- Smart Charger Technology with low energy consumption helps meet Title 24 building requirements.
- Self-Test automatically performs the code required testing per the latest standard (UL 924, 10th edition, May 5th, 2022).
- Allows for luminare to be completely installed prior to AC mains availability (ABConnect).
- Easily disabled for storage and fool proof commissioning (ABConnect).
- Test switch is IP65 rated for protection to dust and water ingress.
- Small size, with and without conduit, and separate battery variants provides maximum flexibility during installation.
- No conduit is needed for plenum rated test switch assembly.

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BSL14B2 2HR

Emergency LED Driver, 2-Hour Run-time

Application

These Bodine emergency LED drivers are UL Listed for field or factory installations in the US and Canada and allows the same LED luminaire to be used for normal and emergency operation. These emergency LED drivers works in conjunction with an AC LED driver that has an output current not to exceed five amps (5 A). These products consist of a battery and electronic circuitry in one compact galvanized steel case. These products can be used with an LED lighting load up to 54 Vdc or 200 Vdc, depending on the variant selected, delivering an initial minimum power of 14 watts for 120 minutes. If used in an emergency-only fixture, no AC driver is necessary. These products are suitable for damp locations and for sealed and gasketed fixtures. These products are not suitable for air handling heated air outlets or wet or hazardous locations. For more information about specific LED and AC driver compatibility, please contact Technical Support

Operation

When AC power fails, the Bodine emergency driver immediately switches to the emergency mode, operating the LED load for a minimum of 120 minutes. When AC power is restored, the emergency driver automatically returns to the charging mode. While charging, the product will perform the required 30-second test once a month and a 120-minute test once per year. During this test, the product will monitor its operation, and alert building occupants to a possible issue through flashing of the charge indicator LED. The product shall be provided with self-test and ABConnect functionality.

ABConnect

ABConnect (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 be manually disabled, allowing the product or the drain on the battery. Once activated, the product can also be manually disabled, allowing the product or 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 converter connector step. This reduces the possibility of inadvertently discharging the battery prior to installation, whether in transit or storage.

Self-Test

These emergency drivers include self-test functionality. The self testing feature automatically performs the required 30-second est once every month and the required 120-minute, full discharge, once per year. The product monitors the performance of the battery, the charging system, the LED load, and the temperature of the installation. Test results are reported to maintenance personnel via flashing of the charge indicator light. A solidly lit charging indicator light (no flashing) means that the unit detected no issues during the self-test routine. If the unit has encountered a problem after installation and during the selftest, then it will flash an error code using the indicator light. The number of flashes indicates an issue with specific functionality of the unit. Full details on the error codes are found in the unit installation instructions. The user can also manually initiate a 30-second self-test at any time by simply pressing and holding the test switch for 5 seconds. At the conclusion of the self-test, the unit will return to the normal mode and indicate any errors, if detected.

Installation

These products do not affect normal fixture operation and may be used with either a switched or unswitched fixture. If a switched fixture is used, an unswitched hot lead must be connected to the emergency driver. The emergency driver must be fed from the same branch circuit as the AC driver. Installation is not recommended with fixtures where the ambient temperature may fall below 0°C . These products are suitable for installation in sealed a gasketed fixtures.

Emergency Illumination

This product operates an LED load, delivering an initial minimum 14 watts of power for a minimum of 120 minutes.

Specification

Emergency lighting shall be provided by using a standard LED fixture equipped with a Bodine BSL14B2 emergency LED driver. This emergency driver shall consist of a high-temperature, maintenance-free ithium ion battery separate from, or included with, the electronic circuitry, which is contained in a metal chassis. Installation hardware, an IP65 test switch, and a plenum rated test switch cable assembly shall also be provided. The emergency driver shall be capable of operating an LED load for a minimum of 120 minutes and of delivering an initial minimum output power of 14 watts, following a battery charging period of at least 24 hours. It is suitable for damp locations andsealed and gasketed fixtures. The unit contains a smart charger system that initially charges the battery within the rated time then reduces power consumption to a lower standby power mode. The unit shall automatically perform the code required monthly and annual testing (self-testing) and employ technology to automatically enable charging, sensing, and emergency operation of the inverter by means of detecting when AC power is first applied (ABConnect). The unit shall comply with emergency standards set forth by the current NEC, Part 15 of the FCC Rules, and also meets Title 20 CEC (California Energy Commission) efficiency standards. The emergency driver shall be UL Listed for field or factory installation and shall be suitable for temperature environments ranging from 0°C to +55°C.

Warranty

The products covered by this specification are warranted for five (5) full years from date of manufacture. Please see detailed warranty information on our website.

Lumen Output Guide

These products are suitable for installation with a wide variety of LED light engines. To estimate the egress lighting illumination levels achieved by a system incorporating these products, follow the steps below.

1. Find the efficacy of the LED load which will be given as lumens/watt (lm/w). This data can be found by direct measurement, accessing of 3rd party test data, or from the luminaire supplier directly. Typically, the efficacy data found will be on the whole system, which includes losses due to driver efficiency and LED array temperatures. Actual lumens achieved may be higher. However, using these numbers in the following calculations will provide worst-case lumen estimations.

2.Determine the initial lumens delivered in the emergency mode by multiplying the LED load efficacy by the amount of power delivered by the emergence driver when running in the emergency mode.

LUMENS IN THE EMERGENCY MODE = LUMENS PER WATT OF FIXURE x OUTPUT POWER OF EMERGENCY LED DRIVER

3.Using this result and industry standard lighting design tools, the estimated path of egress illumination levels can be calculated.

Example Efficacy (lumens per watt)	BSL20B2/B6 Lumen Output
110	1,540
130	1,820
150	2,100
170	2,380

BSL14B2 2HR

2 Hour Run-time Emergency LED Driver

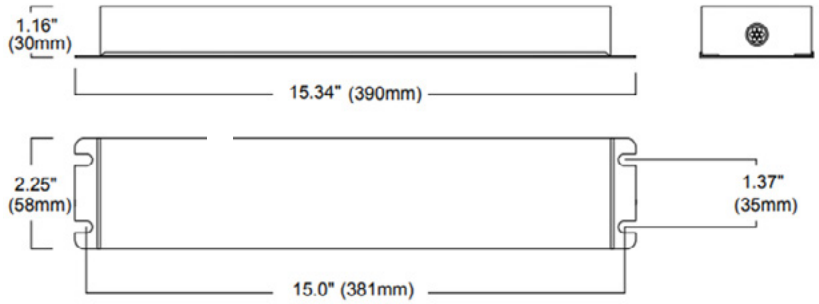
Lithium Battery Shipping Regulations

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/.

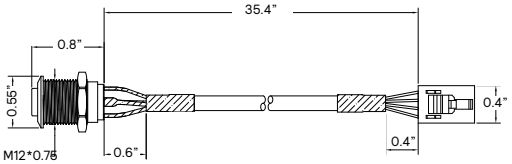
To view a Classification Flowchart for package marking requirements, please visit http://www.iata.org/whatwedo/cargo/dgr/Pages/lithium-batteries.aspx. Scroll to the "Guidance Material" section and click on the provided "Guidance Document" PDF link. The Classification Flowchart will be found on page 5. The BSL20B6 and BSL14B6 battery cell capacity is less than 20Wh, and the battery pack capacity is less than 100 Wh.

Drawings

B2 Enclosure Dimensions (without conduit version shown below)
15.34" x 2.25" x 1.16" Mounting center - 15.0"



Plenum-Rated Test Switch Assembly



Note: Required hole is 0.5 inches (12.5mm).

Ordering Guide

example: BSL14B2UAK55C12HI1

Product Category	Watts	Case	Input Voltage	Output Voltage	Temperature		Type/Harness	Special Features	Packaging	Generation
BSL	14	B2	U	A	K	55	C1	2H	1	1
BSL Bodine Solid State Lighting	**14**	**B2** (see Drawings for case dimensions)	**U** 120-277 Vac	**A** 20-54 Vdc	**K** Min. Temp. 0°C	**55** Max. Temp. 55°C	**C1** Conduit, out one end **L1** No conduit, leads out one end	**2H** 2 hour runtime	**1** Individual	**1**
BSL Bodine Solid State Lighting	**14**	**B2** (see Drawings for case dimensions)	**U** 120-277 Vac	**C** 54-200 Vdc	**K** Min. Temp. 0°C	**55** Max. Temp. 55°C	**C1** Conduit, out one end **L1** No conduit, leads out one end	**2H** 2 hour runtime	**1** Individual	**1**

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