

Bodine Electric ELI-S-20

Bodine ELI-S-20 ELI SERIES Emergency Ballast Lighting Inverters User Manual

Model: ELI-S-20 | Brand: Bodine Electric

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of the Bodine ELI-S-20 ELI Series Emergency Ballast Lighting Inverter. This unit is designed to provide emergency power to fluorescent and LED lighting fixtures during power outages, ensuring continued illumination for safety and egress.

The ELI-S-20 features auto-select (120/277 VAC) sine wave output at 60Hz and provides 90 minutes of emergency run time. It includes fused output load connections and an LED charging indicator light.

2. IMPORTANT SAFETY INSTRUCTIONS

WARNING: To prevent high voltage from being present on the output leads prior to installation, inverter connector must be open. Close inverter connector only after all installation and maintenance has been completed and before the AC power is supplied. This unit contains a rechargeable battery. Do not attempt to replace. Replace entire unit when necessary.

- Read all instructions before installation.
- Do not mount near gas or electric heaters.
- Equipment should be mounted in locations and at heights where it will not be readily subjected to tampering by unauthorized personnel.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this equipment for other than its intended use.
- Servicing should be performed by qualified service personnel.
- Disconnect AC power before servicing.

3. SETUP AND INSTALLATION

The Bodine ELI-S-20 is designed for easy integration into existing or new lighting systems. Ensure all local and national electrical codes are followed during installation.

3.1 Unpacking

Carefully remove the inverter from its packaging. Inspect the unit for any signs of damage during transit. If damage is found, do not proceed with installation and contact your supplier.



Figure 3.1: The Bodine ELI-S-20 unit as packaged, showing the model number label.

3.2 Mounting

The inverter should be mounted securely. The unit's dimensions are approximately 16.6 x 2.8 x 2.8 inches. Ensure adequate ventilation around the unit.





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ELI-S-20

**ELI SERIES BACKUP
MICRO INVERTER**

Emergency Lighting Equipment
Inverter Sinusoidal

Provides 90 minutes of input power
to AC ballast/driver for
emergency lighting applications



20 W (0°C to 55°C) UL and CSA
25 W (0°C to 45°C) UL only

09-05-14

Assembled in USA

CAUTION

For units with fluorescent LED or
high-intensity discharge (HID) ballast
driven up to 20 W (or 25 W at 45°C) at unity
power factor. Supplies input power to the
ballast/driver to maintain the lamp load in
emergency mode for a minimum 90 minutes.
See installation instructions for installation
operation and maintenance information.

- The backup micro inverter and AC ballast must be fed from the same branch circuit. See installation instructions for wiring diagrams.
- Locations for lamp locations, feet for use with air handling heated air outlets, and wet or hazardous location.

This unit has more than one power supply connection point. To reduce the risk of electric shock, disconnect all power sources before installing or servicing this unit.

WARNING

To prevent high voltage from being present on the orange/black and yellow/black (output leads) prior to installation, inverter connector must be open. Join inverter connector after the backup micro inverter has been installed and before the AC power is supplied. This is a sealed unit. Integral battery is not replaceable. Replace entire unit when necessary.

- Ambient temperature: 0°C minimum to 50°C maximum (0°C minimum to 45°C maximum for 25 W)
- Battery: 14.4 V, 4000 mAh. Charging current: 250 mA
- Recharging time: 24 hours
- Input Rating: 120 / 277 VAC, 60 Hz, 90 mA, 8.5 W
- Feed Through Rating: 120 / 277 VAC, 60 Hz, 210 mA, 20 or 25 W
- Output Rating: 120 / 277 VAC (Auto Switch), 120V, 60 Hz, 185 or 210 mA, 277 V, 60 Hz, 72 or 90 mA, PF: 0.5 leading to 0.5 lagging

NOTE: Input power rating specified does not include AC ballast/driver



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UNIT EQUIPMENT - CERTIFIED TO CSA STANDARD C22.2 NO. 141, AND RECOGNIZED BY SECTION 46, CANADIAN ELECTRICAL CODE, PART I.

APPAREIL INTEGRAL - CERTIFIÉ SELON LA NORME C22.2 NO. 141 ET RECONNU PAR LA SECTION 46 DU CODE CANADIEN DE L'ÉLECTRICITÉ, PARTIE I.



Figure 3.2: The Bodine ELI-S-20 inverter, showing its main body, flexible conduit, and exposed wiring for connection.

3.3 Wiring Connections

The ELI-S-20 supports both 120 VAC and 277 VAC input. Refer to the wiring diagram provided with the unit for specific connections. Ensure all connections are secure and insulated.

- Connect the AC input wires to the appropriate building circuit.
- Connect the output wires from the inverter to the emergency lighting load.
- Ensure the inverter connector is open during wiring to prevent high voltage.





Figure 3.3: Detailed view of the product label on the Bodine ELI-S-20, displaying electrical specifications and safety warnings.

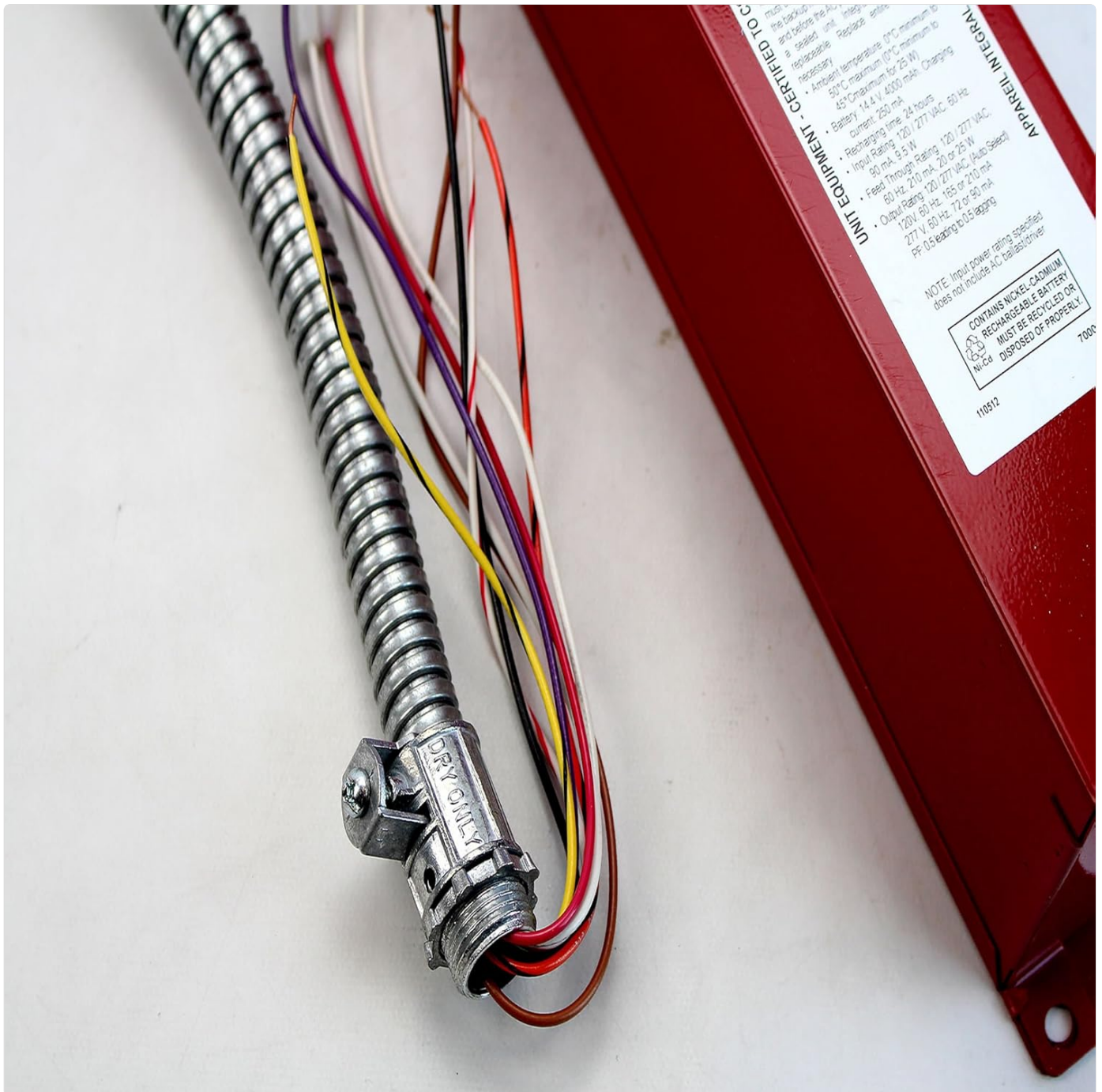


Figure 3.4: Close-up of the flexible conduit connection point and the various colored wires extending from the Bodine ELI-S-20, indicating connection points.

4. OPERATING INSTRUCTIONS

4.1 Initial Operation

After completing all wiring connections and ensuring the inverter connector is closed, restore AC power to the circuit. The LED charging indicator light should illuminate, indicating that the battery is charging.

4.2 Emergency Mode

In the event of an AC power failure, the ELI-S-20 will automatically switch to emergency mode, providing power to the connected lighting load for a minimum of 90 minutes.

4.3 Test Button

A test button is typically provided on the unit or a remote test switch. Pressing this button simulates an AC power failure,

allowing you to verify the emergency operation of the unit and connected lights. Release the button to return to normal operation.

5. MAINTENANCE

Regular maintenance ensures the reliable operation of your emergency lighting inverter.

5.1 Monthly Testing

Perform a monthly functional test by pressing the test button for at least 30 seconds. The emergency lights should illuminate. Release the button; the lights should return to normal operation (if AC power is present) and the charging indicator should be on.

5.2 Annual Testing

Conduct an annual full discharge test. Disconnect AC power to the unit for 90 minutes. The emergency lights should remain illuminated for the entire duration. If the lights dim significantly or extinguish before 90 minutes, the battery may need replacement (which requires replacing the entire unit).

5.3 Cleaning

Keep the unit clean and free of dust. Use a dry, soft cloth for cleaning. Do not use liquid cleaners or solvents.

6. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your ELI-S-20 inverter.

Problem	Possible Cause	Solution
Emergency lights do not illuminate during test or power outage.	No AC power to unit; Battery not charged; Faulty wiring; Unit failure.	Check AC power supply; Allow 24 hours for initial charge; Verify all wiring connections; Contact qualified service personnel.
LED charging indicator is off.	No AC power; Unit malfunction.	Ensure AC power is supplied to the unit; Contact qualified service personnel.
Emergency lights do not stay on for 90 minutes.	Battery nearing end of life.	The unit contains a non-replaceable battery. Replace the entire unit.

7. SPECIFICATIONS

Attribute	Value
Model Number	ELI-S-20
Manufacturer	Bodine
Input Voltage	120/277 VAC (Auto Select)
Frequency	60Hz
Output Type	Sine Wave
Emergency Run Time	90 Minutes

Attribute	Value
Item Weight	7.2 pounds
Product Dimensions	16.6 x 2.8 x 2.8 inches
Material	Copper
Battery Type	Nickel-Cadmium (Non-replaceable)

8. WARRANTY INFORMATION

Specific warranty details are typically provided with the product packaging or on the manufacturer's official website. Bodine products generally come with a limited warranty covering defects in materials and workmanship. Please retain your proof of purchase for warranty claims.

Note: The internal battery is not user-replaceable. The unit must be replaced if the battery fails or reaches its end of life.

9. CUSTOMER SUPPORT

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Bodine Electric customer support.

You can find contact information on the official Philips Bodine website or through your product supplier. When contacting support, please have your model number (ELI-S-20) and purchase date available.

Web: www.philips.com/bodine

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