Fulham FHSAC1UNV40C

Fulham Lighting FHSAC1UNV40C FireHorse Hot Spot Plus All-in-One LED Driver & Emergency System User Manual

Model: FHSAC1UNV40C | Brand: Fulham

1. Introduction

This manual provides essential instructions for the safe installation, operation, and maintenance of the Fulham Lighting FHSAC1UNV40C FireHorse Hot Spot Plus All-in-One LED Driver & Emergency System. This unit integrates an LED driver with an emergency lighting system, offering 0-10V dimming and programmable output for various LED applications. Please read this manual thoroughly before installation and retain it for future reference.

2. Safety Information

WARNING: Risk of electric shock. Installation and servicing must be performed by qualified personnel only. Disconnect power before servicing.

- Ensure all wiring complies with national and local electrical codes.
- Do not install in locations where the ambient temperature exceeds the specified operating range.
- This device is designed for dry and damp locations only.
- Proper grounding is required to prevent electric shock.
- Do not attempt to open or modify the unit. There are no user-serviceable parts inside, except for the replaceable battery.

3. Product Overview

The FHSAC1UNV40C is a compact, all-in-one solution for LED lighting, combining a high-performance LED driver with an integrated emergency backup system. It features a replaceable battery and supports 0-10V dimming. The output current is programmable, allowing for flexible application with various LED modules.

Image 3.1: The Fulham FHSAC1UNV40C FireHorse Hot Spot Plus unit, showing the integrated LED driver and emergency battery components.

4. Specifications

Feature	Description
Model Number	FHSAC1UNV40C
Input Voltage	120-277VAC
Output Voltage	11-55VDC
Normal Operation Power	Up to 40W
Emergency Power Output	5W or 10W (User-selectable)
Programmable Output Current	250mA - 1400mA
Dimming	0-10V Dimming
Emergency Run Time	700 lumens for 180 min or 1400 lumens for 90 min (using 140LPW LED module)
Battery Type	LiFePO4, 3200mAh
Battery Charge Time	12 Hours
Dimensions	6.32 x 3.05 x 1.14 inches (Unit)
Weight	1.67 pounds
Operating Temperature	0-55°C (32-131°F)

Image 4.1: Key features of the FireHorse Hot Spot Plus system, including compatibility, installation flexibility, and emergency illumination duration.

5. Setup and Installation

IMPORTANT: All installation procedures must be performed by a qualified electrician in accordance with the National Electrical Code and local regulations.

5.1 Pre-Installation Checks

- Verify that the input voltage (120-277VAC) matches the building's electrical supply.
- Ensure the LED module's voltage and current requirements are compatible with the FHSAC1UNV40C's output range.
- Confirm the installation environment is suitable (dry/damp location, within specified ambient temperature).

5.2 Wiring Instructions

Refer to the wiring diagram provided on the unit label for specific connections. General wiring steps include:

1. **Input Power:** Connect the AC input wires (Black, White, Green/Ground) to the building's electrical supply.
2. **LED Output:** Connect the LED output wires (typically Red/Positive, Blue/Negative) to the LED module.
3. **Dimming Control:** Connect the 0-10V dimming wires (Purple/Dim+, Gray/Dim-) to a compatible 0-10V dimmer or control system.
4. **Test Switch:** Connect the illuminated test switch wires as indicated. This switch is used for manual testing of the emergency function.
5. **Battery Connection:** Ensure the internal battery is properly connected. The unit will begin charging the battery upon initial power-up.

5.3 Programmable Output Current

The output current can be programmed to match the specific requirements of the LED module. Consult the product datasheet or contact Fulham Lighting support for detailed instructions on programming the output current. This typically involves a specific programming device or procedure.

6. Operating Instructions

6.1 Normal Operation

When AC power is supplied, the FHSAC1UNV40C operates as a standard LED driver, providing power to the connected LED module. The 0-10V dimming input allows for adjustment of the LED brightness.

6.2 Emergency Operation

In the event of an AC power failure, the unit automatically switches to emergency mode, powering the LED module from its internal battery. The emergency power level (5W or 10W) is user-selectable during installation.

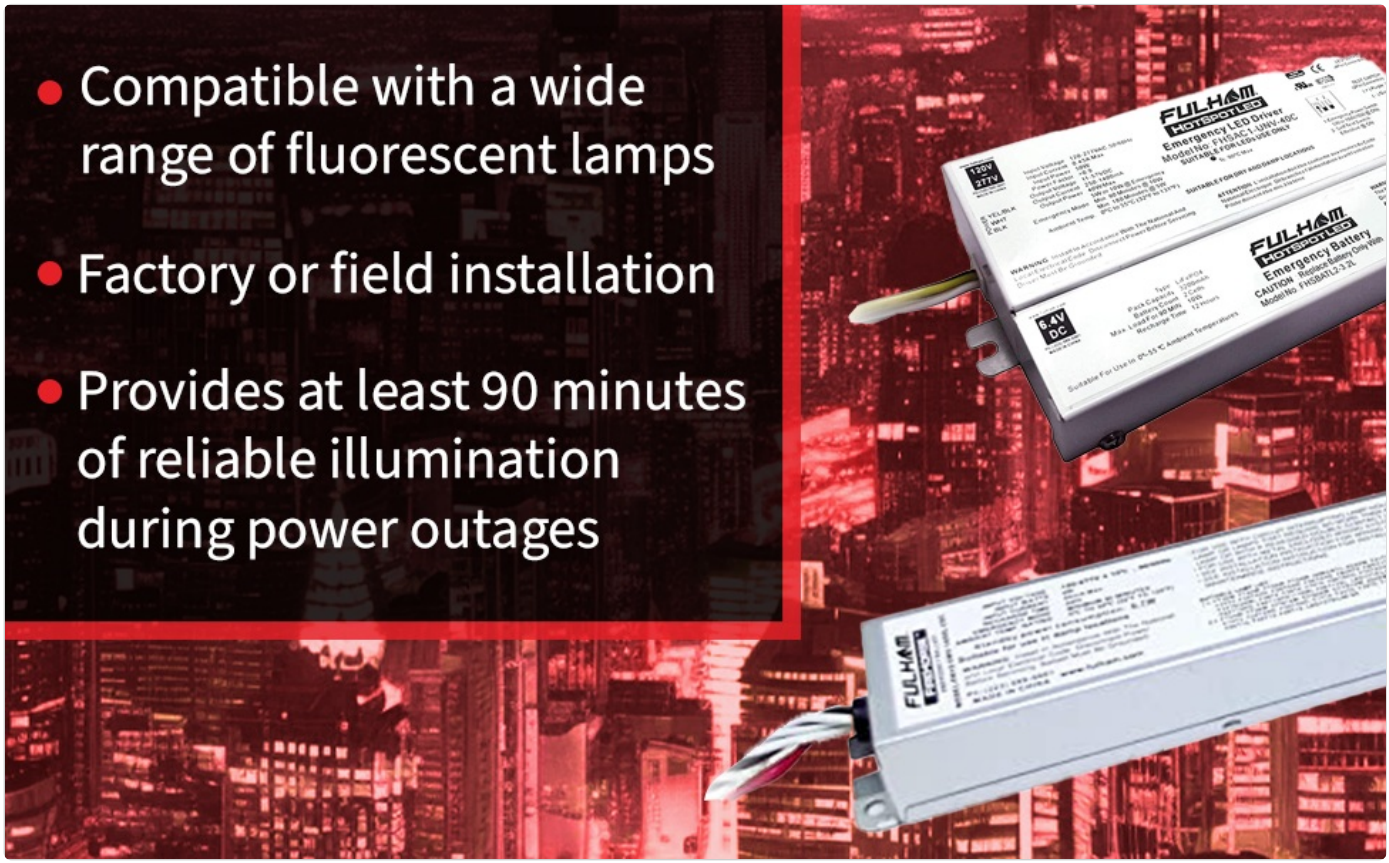


Image 6.1: Illustration of emergency lighting functionality, where lights illuminate during a power failure.

6.3 Test Switch and Self-Diagnostics

The illuminated test switch provides visual indication of the unit's status and allows for manual testing of the emergency function. The unit also features switchable self-diagnostics, which automatically perform periodic tests of the battery and emergency circuitry. Refer to the unit's label for specific diagnostic indicator patterns.

7. Maintenance

7.1 Battery Charging

The internal LiFePO4 battery requires a minimum of 12 hours to fully charge after installation or a prolonged power outage. Ensure continuous AC power is supplied to allow for proper battery charging.

7.2 Monthly Testing

Perform a monthly 30-second functional test by pressing and holding the test switch. The LED module should illuminate in emergency mode. Release the switch, and the unit should return to normal operation.

7.3 Annual Testing

Conduct an annual 90-minute (or 180-minute, depending on selected output) full discharge test. Interrupt AC power to the unit for the specified duration. The LED module should remain illuminated for the entire test period. If the LED module does not remain illuminated for the full duration, the battery may need replacement.

7.4 Battery Replacement

The battery is replaceable. When replacement is necessary, use only the specified Fulham replacement battery (Model FHSBATL2-3.2L). Disconnect AC power before replacing the battery. Dispose of old batteries according to local regulations.

8. Troubleshooting

Problem	Possible Cause	Solution
LED module does not illuminate in normal mode.	No AC power, incorrect wiring, faulty LED module, incorrect output current programming.	Check AC power supply. Verify wiring connections. Test LED module. Confirm output current programming.
LED module does not illuminate in emergency mode.	Battery not charged, battery faulty, incorrect wiring, faulty emergency circuit.	Allow 12 hours for battery charging. Perform battery test. Verify wiring. Replace battery if necessary.
Emergency run time is shorter than specified.	Battery not fully charged, battery nearing end of life.	Ensure full 12-hour charge. Replace battery if it fails annual test.
LED module flickers or dims unexpectedly.	Unstable AC power, dimming control issue, incompatible LED module.	Check AC power quality. Verify 0-10V dimming connections and dimmer compatibility. Ensure LED module is compatible.

If troubleshooting steps do not resolve the issue, contact Fulham Lighting technical support.

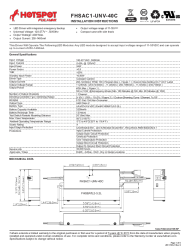
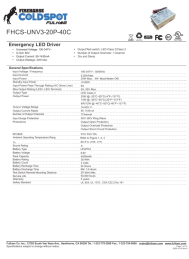
9. Warranty and Support

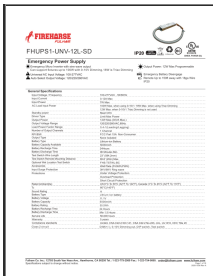
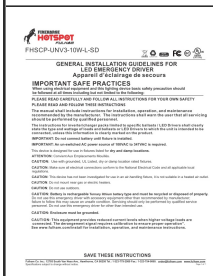
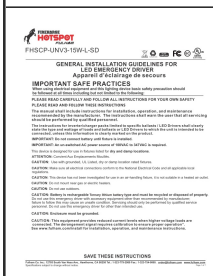
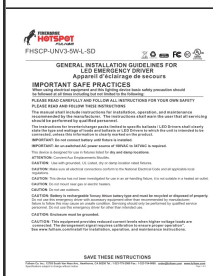
For specific warranty information and technical support, please refer to the official Fulham Lighting website or contact their customer service department. Keep your purchase receipt as proof of purchase.

Fulham Lighting Contact Information:

Visit www.fulham.com for support and product information.

Related Documents - FHSAC1UNV40C

	Fulham FHSAC1-UNV-40C LED Emergency Driver Installation Instructions Installation instructions for the Fulham FHSAC1-UNV-40C LED emergency driver, featuring universal voltage input (120-277V~), 40W max output, 250-1400mA programmable current, 11-55VDC output range, LiFePO4 battery, and 0-10V dimming. Includes safety guidelines, wiring diagrams, mounting instructions, battery replacement procedures, illumination calculation guidance, and self-diagnostic features.
	Fulham FHCS-UNV3-20P-40C Emergency LED Driver Technical Specification Detailed technical specifications, features, and operational data for the Fulham FHCS-UNV3-20P-40C Universal Voltage Emergency LED Driver. Includes power derating tables, mechanical dimensions, wiring diagrams, and self-diagnostic information.

	[Fulham FHUPS1-UNV-12L-SD Emergency Power Supply: Specs, Installation, and Guidelines] Comprehensive technical specifications, installation guidelines, wiring diagrams, and safety practices for the Fulham FHUPS1-UNV-12L-SD Emergency Micro Inverter. Learn about its features, operation, and integration with Hexmodal systems.
	[Fulham FHSCP-UNV3-10W-L-SD LED Emergency Driver Installation Guidelines] Comprehensive installation guide for the Fulham FHSCP-UNV3-10W-L-SD LED Emergency Driver. Includes safety practices, mechanical data, wiring diagrams, and illumination calculation guidelines.
	[Fulham FHSCP-UNV3-15W-L-SD LED Emergency Driver Installation Guidelines] Comprehensive installation, safety, and operational guidelines for the Fulham FHSCP-UNV3-15W-L-SD LED Emergency Driver, including technical specifications, wiring diagrams, and self-diagnostic features.
	[Fulham FHSCP-UNV3-5W-L-SD LED Emergency Driver Installation Guidelines] Comprehensive installation, operation, and safety guidelines for the Fulham FHSCP-UNV3-5W-L-SD LED Emergency Driver. Includes wiring diagrams, mechanical data, and illumination calculation guidance.