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> Eaton Crouse Hinds Zone Defender Pro 20Ka Surge Protector SP16101 Instruction Manual

CUTLER HAMMER SP16101

Eaton Crouse Hinds Zone Defender Pro 20Ka Surge Protector SP16101 Instruction Manual

Model: SP16101 | Brand: CUTLER HAMMER

1. INTRODUCTION

This manual provides essential information for the safe and effective installation, operation, and maintenance of the Eaton Crouse Hinds Zone Defender Pro 20Ka Surge Protector, Model SP16101. Please read this manual thoroughly before attempting any installation or operation.

The Zone Defender Pro SP16101 is a Type 2 Surge Protective Device (SPD) designed to protect electrical systems from transient overvoltages. It features indicators for power and protection status and is rated for 20kA nominal discharge current.

2. SAFETY INFORMATION

WARNING: HIGH VOLTAGE

- Installation and maintenance of this unit must be performed by qualified personnel only.
- Filter capacitors within the unit may store hazardous voltages even after power is disconnected.
- Always discharge capacitors before servicing the unit to prevent electrical shock.
- Ensure all power sources are disconnected before installation or maintenance.

Failure to follow these safety instructions can result in serious injury or death.

3. SETUP AND INSTALLATION

The Eaton Crouse Hinds Zone Defender Pro SP16101 is designed for permanent installation within an electrical system. Refer to local and national electrical codes for proper installation procedures.

3.1 Pre-Installation Checks

- Verify that the supply voltage and system configuration match the SPD's ratings (120/208V, 60Hz, 3-Phase).
- Ensure the installation location is suitable for a UL Type 1 / MFG Type 4 enclosure.

- Confirm that the short circuit current rating of the system does not exceed 100,000 AIC.

3.2 Mounting

Mount the unit securely to a stable surface using appropriate hardware. Ensure adequate clearance for wiring and ventilation.

3.3 Wiring

Connect the SPD to the electrical system according to the wiring diagram provided with the unit and local electrical codes. Ensure proper grounding. All connections must be tight and secure.

Note: This manual provides general guidance. Always consult the specific wiring diagrams and instructions included with your product packaging for detailed connection information.

4. OPERATING INDICATORS

The Zone Defender Pro SP16101 features indicator lights to provide operational status at a glance:

- **GREEN ON:** Indicates that the unit has power and is providing surge protection.
- **RED ON:** Indicates that the unit requires replacement. The surge protection components have been compromised.

Regularly check these indicators to ensure continuous protection.

5. MAINTENANCE

The Eaton Crouse Hinds Zone Defender Pro SP16101 is designed for minimal maintenance. However, periodic checks are recommended.

5.1 Routine Inspection

- Visually inspect the unit and its connections for any signs of damage, corrosion, or loose wiring.
- Check the indicator lights (Green/Red) to confirm operational status.

5.2 Unit Replacement

If the **RED** indicator light is illuminated, the surge protector has absorbed a significant surge and its protective capacity is diminished or exhausted. The unit must be replaced by qualified personnel to maintain protection.

WARNING: Always disconnect power and discharge capacitors before attempting to replace the unit.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Green indicator light is OFF.	No power to the unit, or internal fault.	Check power supply to the SPD. Ensure circuit breaker is ON. If power is present and light remains off, contact qualified personnel for inspection.
Red indicator light is ON.	Surge protection components are compromised.	The unit requires replacement. Disconnect power and have qualified personnel replace the SPD.

Problem	Possible Cause	Solution
Frequent tripping of upstream circuit breaker.	Possible internal fault within the SPD or system overcurrent.	Disconnect the SPD and test the circuit. If tripping stops, the SPD may be faulty and requires replacement. Consult qualified personnel.

For issues not listed here, or if troubleshooting steps do not resolve the problem, contact a qualified electrician or the manufacturer's support.

7. SPECIFICATIONS

The following are the technical specifications for the Eaton Crouse Hinds Zone Defender Pro 20Ka Surge Protector, Model SP16101:

- **Model Number:** SP16101
- **Ratings:** 120/208V, 60Hz, 3-Phase
- **Serial Number:** 4110V1144 (Example, actual serial number varies per unit)
- **UL Listing:** UL1449 E315509
- **SPD Type:** Type 2
- **Nominal Discharge Current (In):** 20kA
- **Maximum Surge Current (per phase):** 80kA
- **Short Circuit Current Rating (SCCR):** 100,000 AIC
- **Maximum Continuous Operating Voltage (MCOV):** 130/260V
- **Voltage Protection Rating (VPR):**
 - L-N: 600V
 - L-G: 600V
 - N-G: 500V
 - L-L: 900V
- **Enclosure Type:** UL Type 1 / MFG Type 4
- **Product Dimensions:** 8.5 x 5 x 3 inches
- **Item Weight:** 6 pounds
- **Manufacturer:** Cooper Industries
- **Date First Available:** January 1, 2014



Image 1: Product Label. This image displays the product label of the Eaton Crouse Hinds Zone Defender Pro SP16101 surge protector. The label provides critical information including the model number (SP16101), electrical ratings (120/208 60Hz 3PH), serial number (4110V1144), UL listing (UL1449 E315509), SPD Type 2, 80kA per phase rating, and a short circuit current rating of 100,000 AIC. It also includes important safety warnings regarding high voltage and the need for qualified personnel for installation and maintenance. Suppression levels (In=20kA), enclosure type (UL TYPE1 / MFG TYPE4), MCOV (130/260), and Voltage Protection Ratings (L-N=600V, N-G=500V, L-G=600V, L-L=900V) are also visible.

8. WARRANTY INFORMATION

Specific warranty details for the Eaton Crouse Hinds Zone Defender Pro SP16101 are typically provided with the product packaging or can be obtained from the manufacturer. Generally, surge protective devices come with a limited warranty covering defects in materials and workmanship under normal use.

Please retain your proof of purchase for warranty claims. For detailed warranty terms and conditions, refer to the documentation included with your unit or visit the manufacturer's official website.

9. CUSTOMER SUPPORT

For technical assistance, installation questions, or warranty inquiries, please contact the manufacturer or your authorized

distributor.

Manufacturer: Cooper Industries (now part of Eaton Corporation)

For the most current support contact information, please visit the official Eaton website or refer to the contact details provided in your product documentation.