Installation Instructions for Eaton Surge Protective Device XXCNXXX30

Contents

<table>
<thead>
<tr>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 Setup</td>
<td>2</td>
</tr>
<tr>
<td>1.1 Before Installation</td>
<td>2</td>
</tr>
<tr>
<td>1.2 Installation</td>
<td>2</td>
</tr>
<tr>
<td>1.2.1 DIN Rail Kits</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Wiring</td>
<td>2</td>
</tr>
<tr>
<td>1.3.1 Series Wiring Applications</td>
<td>3</td>
</tr>
<tr>
<td>1.3.2 Parallel Wiring Applications</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Apply Power</td>
<td>3</td>
</tr>
<tr>
<td>1.5 Specifications</td>
<td>4</td>
</tr>
<tr>
<td>1.6 Warranty</td>
<td>4</td>
</tr>
</tbody>
</table>
### 1.1 Before Installation

**REMOVE POWER FROM ELECTRICAL SYSTEM BEFORE MOUNTING DEVICE.**

- These devices must be mounted within an enclosure to assure personnel safety from exposed terminals.

### 1.2 Installation

**DEVICE MUST BE CONNECTED TO ELECTRICAL SYSTEM WITH A CIRCUIT BREAKER:**

**For AC Applications**


  **Note:** Pre-existing breaker of the rated load size may be utilized if provision for multi-conductor connections are made according to N.E.C. 110-14A.

- If Neutral wire is to be utilized as NEU/HOT 2 then another circuit breaker should be provided for that phase.

**For DC Applications**

- DC units to be installed after an overcurrent protective device that is rated not to exceed 100% of the current rating of the unit.

**REMOVE POWER FROM ELECTRICAL SYSTEM BEFORE INSTALLING DEVICE.**

Mechanically mount device.

- Mount device using mounting flange holes or optional DIN bracket listed below.

### 1.3 Wiring

**NOTICE**

**AN INSULATED GROUNDING CONDUCTOR THAT IS IDENTICAL IN SIZE AND INSULATION MATERIAL AND THICKNESS TO THE GROUNDED AND UNGROUNDED CIRCUIT SUPPLY CONDUCTORS, EXCEPT THAT IT IS GREEN WITH OR WITHOUT ONE OR MORE YELLOW STRIPES, IS TO BE INSTALLED AS PART OF THE CIRCUIT THAT SUPPLIES THE DEVICE. SEE TABLE 250-122 OF THE NATIONAL ELECTRIC CODE (NEC) REGARDING THE APPROPRIATE SIZE OF THE GROUNDING CONDUCTOR.**

**THE GROUNDING CONDUCTOR IS TO BE GROUNDED TO EARTH AT THE SERVICE EQUIPMENT OR OTHER ACCEPTABLE BUILDING EARTH GROUND SUCH AS THE BUILDING FRAME IN THE CASE OF HIGH-RISE STEEL FRAME STRUCTURE.**

**ANY ATTACHMENT-PLUG RECEPTACLES IN THE VICINITY OF THE DEVICE ARE TO BE GROUNDING TYPE, AND THE GROUNDING CONDUCTORS SERVING THESE RECEPTACLES ARE TO BE CONNECTED TO EARTH GROUND AT THE SERVICE EQUIPMENT OR OTHER ACCEPTABLE BUILDING EARTH GROUND SUCH AS THE BUILDING FRAME IN THE CASE OF HIGH-RISE STEEL FRAME STRUCTURE.**

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**Catalog Number**

- XXCN02430
  - 5 - 36 Vdc
  - L-N
  - 20kA

- XXCN04830
  - 24 - 65 Vdc
  - L-N
  - 65kA

- XXCN12030
  - 48 - 149 Vdc
  - 240V/415V, 10kA Min.
  - AIC Rating.

- XXCN23030
  - 150 - 300 Vdc
  - L-N
  - 8kA

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**Voltage Range**

- 5 - 36 Vdc
- 24 - 65 Vdc
- 48 - 149 Vdc
- 150 - 300 Vdc

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**Mode**

- L-N
- L-G
- N-G

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**SVR**

- N/A

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**SCCR**

- N/A

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**Peak Surge Current**

- 20kA
- 65kA
- 8kA

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**Note:** UL 1449 4th Edition does not list SPD products rated less than 110 Vac or DC voltages.

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**For AC Applications**


**Note:** Pre-existing breaker of the rated load size may be utilized if provision for multi-conductor connections are made according to N.E.C. 110-14A.

- If Neutral wire is to be utilized as NEU/HOT 2 then another circuit breaker should be provided for that phase.

---

**For DC Applications**

- DC units to be installed after an overcurrent protective device that is rated not to exceed 100% of the current rating of the unit.

---

**REMOVE POWER FROM ELECTRICAL SYSTEM BEFORE INSTALLING DEVICE.**

Mechanically mount device.

- Mount device using mounting flange holes or optional DIN bracket listed below.

---

**Device must be mounted within an enclosure to assure personnel safety from exposed terminals.**

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**IMPORTANT**

**DEVICE SHOULD BE LOCATED SO THAT THE SHORTEST POSSIBLE CONDUCTOR LENGTH MAY BE USED.**
NOTICE

PRESSURE TERMINAL OR PRESSURE SPlicing CONNECTORS AND SOl-DErING LUGS USED IN THE INSTALLATION OF THE DEVICE SHALL BE IDENTIFIED AS BEING SUITABLE FOR THE MATERIAL OF THE CONDUCTORS. CONDUCTORS OF DISSIMILAR METALS SHALL NOT BE INTERMIXED IN A TERMINAL OR SPlicing CONNECTOR WHERE PHYSICAL CONTACT OCCURS BETWEEN DISSIMILAR CONDUCTORS UNLESS THE DEVICE IS IDENTIFIED FOR THE PURPOSE AND CONDITIONS OF USE.

CONDUCTORS SHOULD BE TWISTED TOGETHER TO REDUCE IMPEDANCE FACTOR. EXCESSIVE WIRE LENGTH AND SHARP BENDS DEGRADE FILTER PERFORMANCE; THEREFORE, AVOID EXCESSIVE WIRE LENGTH AND SHARP BENDS.

1.3.1 Series Wiring Applications

• Connect incoming system GROUND wire to terminal labeled GND on unprotected end (labeled as LINE).
• Connect load side GROUND wire to terminal labeled GND on protected end (labeled as EQUIP).

For AC Applications

• Connect incoming system NEUTRAL wire to terminal labeled NEU/HOT 2 on unprotected end (labeled as LINE).
• Connect load side NEUTRAL wire to terminal labeled NEU/HOT 2 on protected end (labeled as EQUIP).
• Connect incoming system HOT wire to terminal labeled HOT 1 on unprotected end (labeled as LINE).
• Connect load side HOT wire to terminal labeled HOT 1 on protected end (labeled as EQUIP).

For DC Applications

• Connect incoming system NEGATIVE wire to terminal labeled NEU/HOT 2 on unprotected end (labeled as LINE).
• Connect incoming system POSITIVE wire to terminal labeled HOT 1 on unprotected end (labeled as LINE).

1.3.2 Parallel Wiring Applications

IMPORTANT

DEVICE SHOULD BE LOCATED SO THAT THE SHORTEST POSSIBLE CONDUCTOR LENGTH MAY BE USED. CONDUCTORS SHOULD BE TWISTED TOGETHER TO REDUCE IMPEDANCE FACTOR. EXCESSIVE WIRE LENGTH AND SHARP BENDS DEGRADE DEVICE PERFORMANCE; THEREFORE, AVOID EXCESSIVE WIRE LENGTH AND SHARP BENDS.

• Connect incoming system GROUND wire to terminal labeled GND on unprotected end (labeled as LINE).

For AC Applications

• Connect incoming system NEUTRAL wire to terminal labeled NEU/HOT 2 on unprotected end (labeled as LINE).
• Connect incoming system HOT wire to terminal labeled HOT 1 on unprotected end (labeled as LINE).

For DC Applications

• Connect incoming system NEGATIVE wire to terminal labeled NEU/HOT 2 on unprotected end (labeled as LINE).
• Connect incoming system POSITIVE wire to terminal labeled HOT 1 on unprotected end (labeled as LINE).

Note: For ungrounded or isolated control transformer secondary, DO NOT CONNECT Ground terminal on either LINE or EQUIP side.

1.4 Apply Power

Apply power to system. Indicator light should glow. If the light does not glow, remove power and contact supplier.
1.5 Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency Approvals</td>
<td>XXCNXXX30</td>
</tr>
<tr>
<td>Terminal Connections</td>
<td>Wire clamping terminals, 10-18 AWG (UL), 10-22 AWG (CSA) Torque 12 in-lb</td>
</tr>
<tr>
<td>System voltages DC</td>
<td>5 - 38 Vdc, 24 - 85 Vdc, 48 - 149 Vdc, 150 - 300 Vdc</td>
</tr>
<tr>
<td>AC</td>
<td>100 - 127 Vac, 200 - 230 Vac</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40F(-40C) to +140F(+60C)</td>
</tr>
<tr>
<td>Circuit Breaker</td>
<td>40A, 240V/415V, 10kA Min. AIC Rating (Eaton P/N:FAZ-C40/1-NA-SP)</td>
</tr>
<tr>
<td>Amps*</td>
<td>30</td>
</tr>
<tr>
<td>Input Power Frequency</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Warranty</td>
<td>5 Years, 10 Years if registered on <a href="http://www.eaton.com/spd">www.eaton.com/spd</a></td>
</tr>
<tr>
<td>RoHS Compliant</td>
<td>Yes</td>
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* Amp rating is for series connection only. Parallel connection is not current dependent.

1.6 Warranty

Eaton warrants these products for a period of 5 years from the date of delivery to the purchaser, 10 years if registered on www.eaton.com/spd, to be free from defects in both workmanship and materials. Eaton assumes no risk or liability for results of the use of the products purchased from it, including but without limiting the generality of the foregoing; (1) The use in combination with any electrical or electronic components, circuits, systems, assemblies, or any other materials or substances; (2) Unsuitability of any product for use in any circuit or assembly.

Purchaser’s right under the warranty shall consist solely of requiring Eaton to repair, or at Eaton’s sole discretion, replace, free of charge, F.O.B. factory, and defective items received at said factory or failure to give any advice or recommendations by Eaton shall not constitute any warranty by or impose any liability upon Eaton. The foregoing constitutes the sole and exclusive liability of Eaton AND IS IN LIEU OF ANY AND ALL OTHER WARRANTIES EXPRESSED, IMPLIED OR STATUTORY AS TO THE MERCHANTABILITY, FITNESS FOR PURPOSE SOLD, DESCRIPTION, QUALITY, PRODUCTIVENESS OR ANY OTHER MATTER.

In no event shall Eaton be liable for special or consequential damages or for delay in performance of the warranty.

This warranty does not apply if the product has been misused, abused, altered, tampered with, or used in applications other than specified on the nameplate. At the end of the warranty period, Eaton shall be under no further warranty obligation expressed or implied.

The product covered by this warranty certificate can only be repaired or replaced by the factory. For help on troubleshooting the Critical Protection Product, or for warranty information, call 1-800-809-2772, Option 4, sub-option 2. Repair or replacement units will be returned collect. If Eaton finds the return to be a manufacturer’s defect, the product will be returned prepaid.