INSTRUCTION MANUAL

SVP48 Surge Voltage Protector

Revision: 3/03

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SVP48 Surge Voltage Protector

1. Overview

The SVP48 provides transient protection for up to 22 conductors. Typical usage is to place the SVP48 in line between sensors and a Campbell Scientific datalogger to supplement the datalogger's built in surge protection.

The SVP48 is designed to mount on Campbell Scientific's standard enclosure back plates with 1 inch centered, pre-punched square accessory mounting holes.

The SVP48 consists of one or more surge protectors mounted on a DIN rail bracket. A single end plate is used to cover the last surge protector.

1.1 Physical Dimensions

Length: 6.6 inches

Width: 2.6 inches

Height: 2.72 inches

The two mounting holes in the DIN rail are spaced 6 inches apart center to center.

1.2 Specifications

Surge protection is provided by gas filled arrestors that trigger at 110 VAC or 156 VDC. Each surge protector protects one conductor and provides a terminal for shield wires.

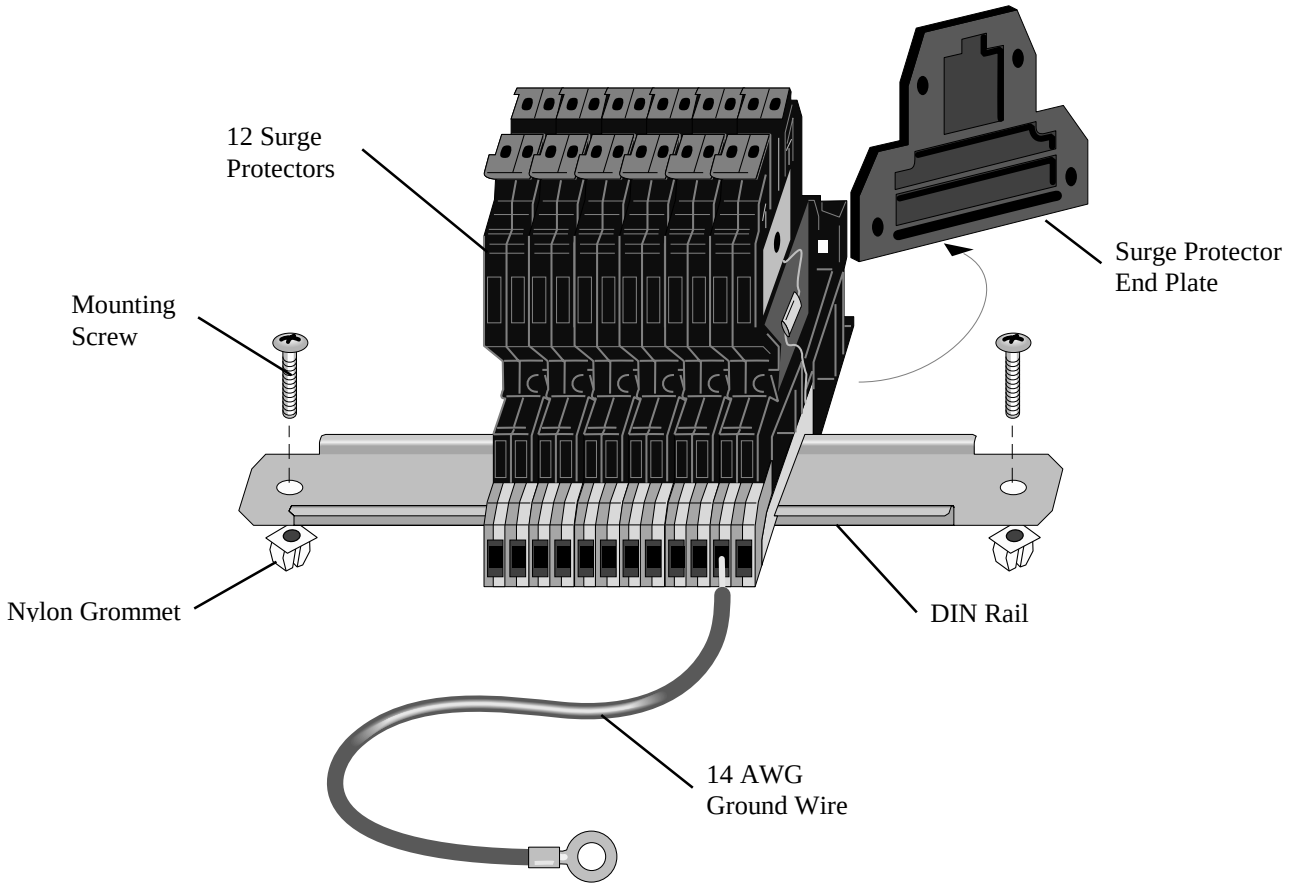

FIGURE 1. SVP48 with Twelve Surge Suppressors

2. Installation

2.1 Mounting the SVP48

Prepare the SVP48 by mounting up to 22 surge protector plates onto the DIN rail as shown in Figure 1. Place the cover plate on the side of the last surge protector. Tighten the clamp screws (yellow/green terminal) on all but one surge protector.

Prepare the enclosure mounting plate to accept the SVP48 by inserting the two square nylon grommets provided into two of the square mounting plate holes, six inches apart, but on the same row or column of holes.

Mount the SVP48 to the enclosure mounting plate, centering the mounting holes over the nylon grommets and securing the DIN rail with the two screws provided.

2.2 Ground Connections

The SVP48 is provided with a green 14 AWG ground wire for connection to the grounding chuck in the ENC 12/14 and ENC 16/18 enclosures. Remove the

top nut on the ground chuck and place the ring end of the ground wire on the chuck. Replace the top nut. Insert the tinned end into the open yellow/green clamp terminal, then tighten the terminal. Ground the enclosure to earth with 14 AWG or larger wire.

2.3 Attaching Sensors to the SVP48

To provide complete protection for the datalogger, all leads must pass through the SVP48. All shield wires terminate in one or more of the yellow/green clamp terminals.

To connect signal or excitation leads, insert the bare end of one lead into the terminal on either side of the surge protector. Run a short length of wire from the other side to the appropriate datalogger terminal. This short length of wire should be of the same gage and insulation type as the sensor leads provided by the manufacturer. Do not use wire with PVC insulation.

3. Maintenance

3.1 Replacement Considerations

When an electrical surge occurs, the surge protectors involved may need to be replaced. Incorrect measurements will indicate that replacement is necessary. With an ohmmeter, confirm that an individual protector needs replacing by measuring the resistance between a top terminal and the yellow/green terminal. An open circuit or infinite resistance indicates that the surge protector is okay. Any other resistance reading indicates that it needs replacing.

3.2 Parts List

Order the SVP48 using "SVP48-X", where X is the number of surge protectors desired (up to 22 per rail). Use the following part numbers for individual replacement items only.

8206	Surge Protector
8207	Surge Protector End Plate
8208	DIN Rail
6044	Nylon Grommet
505	Mounting Screws
5725	14 AWG Ground Wire

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