## SVP110 SURGE VOLTAGE PROTECTOR INSTRUCTION MANUAL

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# WARRANTY AND ASSISTANCE

The **SVP110 SURGE VOLTAGE PROTECTOR** is warranted by CAMPBELL SCIENTIFIC (CANADA) CORP. ("CSC") to be free from defects in materials and workmanship under normal use and service for **twelve (12) months** from date of shipment unless specified otherwise. CSC's obligation under this warranty is limited to repairing or replacing (at CSC's option) defective products. The customer shall assume all costs of removing, reinstalling, and shipping defective products to CSC. CSC will return such products by surface carrier prepaid. This warranty shall not apply to any CSC products which have been subjected to modification, misuse, neglect, accidents of nature, or shipping damage. This warranty is in lieu of all other warranties, expressed or implied, including warranties of merchantability or fitness for a particular purpose. CSC is not liable for special, indirect, incidental, or consequential damages.

Products may not be returned without prior authorization. To obtain a Return Merchandise Authorization (RMA), contact CAMPBELL SCIENTIFIC (CANADA) CORP., at (780) 454-2505. An RMA number will be issued in order to facilitate Repair Personnel in identifying an instrument upon arrival. Please write this number clearly on the outside of the shipping container. Include description of symptoms and all pertinent details.

CAMPBELL SCIENTIFIC (CANADA) CORP. does not accept collect calls.

Non-warranty products returned for repair should be accompanied by a purchase order to cover repair costs.



# 1. Overview

The SVP110 provides transient protection for up to 22 conductors. Typical usage is to place the SVP110 in line between sensors and a Campbell Scientific datalogger to supplement the datalogger's built in surge protection.

The SVP110 is designed to mount on Campbell Scientific's standard enclosure back plates with 1 inch centered, pre-punched square accessory mounting holes.

The SVP110 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

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. SVP110 with Twelve Surge Suppressors

# 2. Installation

#### 2.1 Mounting the SVP110

Prepare the SVP110 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 SVP110 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 SVP110 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 SVP110 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 SVP110

To provide complete protection for the datalogger, all leads must pass through the SVP110. 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 SVP110 with up to 22 surge protectors per rail. Use the following part numbers for individual replacement items only.

SVP110T	Surge Protector
L8207	Surge Protector End Plate
SVP110	DIN Rail
L6044	Nylon Grommet
L505	Mounting Screws