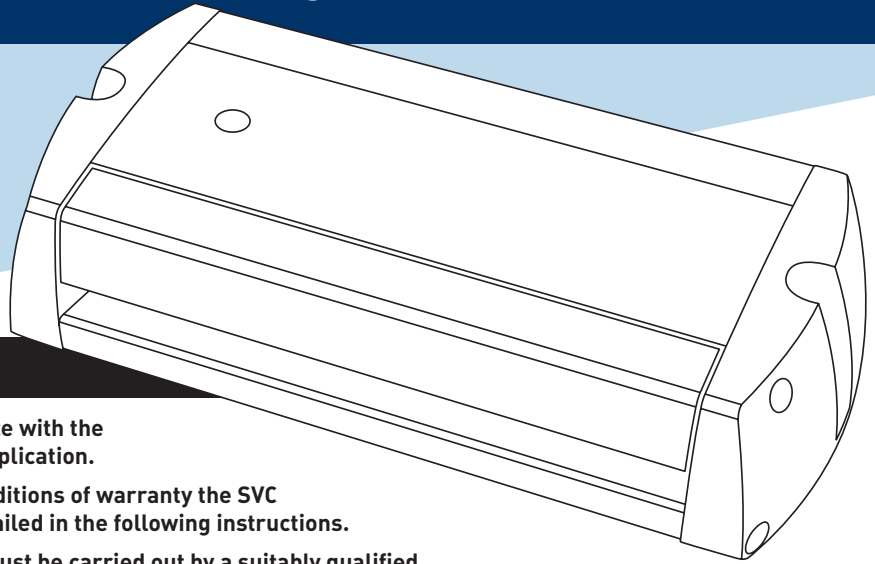


## INSTALLATION AND OPERATING GUIDE



### IMPORTANT

The SVC Voltage Converter must only be used in accordance with the directives and standards associated with the particular application.

In order to comply with the manufacturer's terms and conditions of warranty the SVC Voltage Converter must be installed and connected as detailed in the following instructions.

All wiring and connections to the SVC Voltage Converter must be carried out by a suitably qualified person according to sound electrical installation practices.

Under no circumstances should the SVC Voltage Converter be modified or adjusted. Opening the case by removing the screws will render the warranty void.

### APPLICATION

The SVC Voltage Converter is designed to be used in 24 Volt DC electrical systems to operate auxiliary equipment with a nominal operating voltage of 12VDC. The installer should check to ensure the equipment being connected to the output of the SVC Voltage Converter is capable of operating up to a maximum of 13.8VDC. Likewise the installer should confirm that the continuous operating current of the equipment does not exceed that of the continuous rating of the SVC Voltage Converter.

| Model     | Continuous Rating                    | Peak Rating                            | Input Fuse Rating |
|-----------|--------------------------------------|--|-------------------|
| SVC241207 | 7 Amps @ 13.7VDC @ 30°C (86°F) max.  | 10.5 Amps @ 13.7VDC @ 30°C (86°F) max. | 7.5 Amps          |
| SVC241210 | 10 Amps @ 13.7VDC @ 30°C (86°F) max. | 15 Amps @ 13.7VDC @ 30°C (86°F) max.   | 10 Amps           |

### INSTALLATION

NOTE: Terminal Cover should be removed prior to mounting the SVC Voltage Converter. Using a small flat-headed screwdriver or similar tool, gently lever the terminal cover at the position(s) marked LEVER HERE. The terminal cover should click open without undue force. Select a suitable location where the SVC Voltage Converter can be mounted. It is important that the following conditions are adhered to:

1. The surface must be vertical, hard and flat. Do not install on an upholstered or insulated surface as the rear of the SVC must have clearance from the surface to ensure adequate heat dissipation.
2. Ensure the SVC is located in a well ventilated position, free from excessive moisture, dust, vibration and heat. A minimum of 50mm clearance should be allowed to other equipment at the top and bottom only (see diagram).
3. Ensure that the termination side of the SVC is facing downward and that there is adequate clearance to connect the wiring to the terminals.
4. Fix the SVC with appropriate fasteners ensuring both anchor holes are utilized. Do not overtighten.

### WIRING

In order to ensure safety, good service and long life the SVC Voltage Converter should be wired and connected according to the following method:

1. Disconnect the 24VDC supply at the source before attempting any connection to the SVC or auxiliary equipment.
2. Install an appropriately rated fuse or circuit breaker (see chart above) as the input protection for the 24VDC supply cable to the SVC.

3. The unit draws minimal current on standby and as such does not necessarily require isolation from the power supply. The fitting of an isolating switch is entirely optional and at the discretion of the installer.
4. Connect all circuits to the SVC as per the diagram overleaf. Ensure that the correct wire sizes are used for the model installed (consult your wire supplier for appropriate current ratings).
5. Connect the auxiliary equipment to the output terminals of the SVC ensuring correct polarity is observed. Consult the specification of the auxiliary equipment and install a fuse or circuit breaker in the line (between the output of the SVC and the auxiliary equipment) if specified by the manufacturer.
6. Re-connect the input supply at the source and turn on the circuit breaker or switch (if fitted). The LED Diagnostic indicator on the SVC should now be flashing green intermittently. This indicates the SVC is operational and ready to use. The terminal cover can now be re-fitted. No tools are required – simply click in place by hand. If there is no indication refer to the fault finding section overleaf.

### OPERATION

The SVC Voltage Converter is designed to be permanently connected to the auxiliary equipment being operated. The SVC will deliver a smooth, clean and regulated 13.7 VDC supply upon demand and as such, there is no specific operating requirements.

### MOUNTING

**UP**

50mm  
CLEARANCE  
TOP

50mm  
CLEARANCE  
BOTTOM

**IMPORTANT: MOUNT ON HARD, FLAT, VERTICAL SURFACE. ENSURE ADEQUATE VENTILATION.**

### WIRING

#### TYPICAL UNGROUNDED INSTALLATION

#### TYPICAL GROUNDED INSTALLATION

**IMPORTANT: ENSURE ALL WIRING IS ADEQUATELY RATED FOR APPLICABLE LOADS**

### TERMINATION

**IMPORTANT: USE FULLY INSULATED CRIMP TYPE CONNECTORS FOR WIRE TERMINATION**

## PROTECTION

The SVC Voltage Converter is protected from a variety of connection and application errors by a range of built in devices. In most situations these errors are revealed by the diagnostic indicator and can be corrected without having caused damage to the SVC. The SVC is protected in the following situations:

- **Low Input Voltage.** If the input voltage falls below the factory preset level the SVC will be disabled. When the input voltage again rises above this setting the output supply will subsequently be restored.
- **Thermal Overload.** In the event the SVC exceeds the factory preset temperature limit the unit will be disabled. When the temperature decreases to the appropriate level the output will automatically be restored.
- **Output Short Circuit.** If the output (auxiliary equipment) is short circuited the SVC will be disabled. When the short circuit is fixed/removed, normal output supply will be restored.
- **Output Overload.** If the output (auxiliary equipment) is continually overloaded the SVC will be disabled. When the overload is fixed/removed, normal output supply will be restored.
- **Input Reverse Connection.** If the input terminals are reverse connected the SVC will become inoperable. The input circuit is diode controlled and protected by an internal fuse which is not user serviceable.
- **Output Over Voltage.** Purpose designed circuitry protects the output supply from over voltage.
- **Transient Input Voltage.** A purpose designed circuit will filter any undesirable, spikes, surges and transient voltages.

## DIAGNOSTICS AND FAULT FINDING

| Indication                      | Status                    | Cause   | Remedy  |
|---------------------------------|---------------------------|---|---|
| Green – Pulsing                 | System Normal             | N/A   | N/A   |
| Green/Red – Pulsing Alternately | Low Input Voltage         | Input voltage has dropped below preset limit  | Check voltage of battery supply   |
| Amber – Pulsing                 | Thermal Overload          | Lack of ventilation<br>Continuously exceeding maximum load rating                           | Check to ensure ventilation to SVC is adequate.<br>Check loads to ensure they do not exceed rating of SVC |
| Red – Pulsing                   | Short Circuit or overload | Short circuit on output (auxiliary equipment)<br>Continuously exceeding maximum load rating | Remove load and check for short circuit<br>Check loads to ensure they do not exceed rating of SVC         |
| No Indication                   | Out Of Service            | No input supply<br>Internal fault   | Check circuit breaker/switch to ensure circuit is on.<br>Return to authorised service centre              |

## WARRANTY POLICY

interVOLT products are warranted for a period of 24 months against faulty materials and/or workmanship from date of last sale or a maximum of 36 months from the date of manufacture subject to the following terms and conditions:

- The goods must be installed and operated in accordance with the manufacturers recommendations and instructions set out within this guide.
- In the event of a claim the goods are returned to the original point of purchase with a copy of the merchant invoice or the relevant merchant invoice number.
- In the event of a claim any associated expenses including diagnosis, removal, and/or installation of the goods is the responsibility of the client including any freight costs.
- The warranty shall be void where the goods have been used for a purpose for which they are not intended, or altered in any way that is detrimental, or opened or tampered with by an unauthorized party, or damaged by mechanical abuse, or contaminated by water or other substances, or damaged by incorrect application.
- Save and except for the express warranty set out above and to the maximum extent permitted by law, all conditions and warranties which may at any time be implied by the common law, Trade Practices Act, Fair Trading Act or any other State or Federal Act are excluded. To the extent that these cannot be excluded and where the law permits, the manufacturer in respect of any such condition or warranty shall be limited at their option to the repair or the replacement of the goods or the supply of equivalent goods or refunding the cost of the goods.