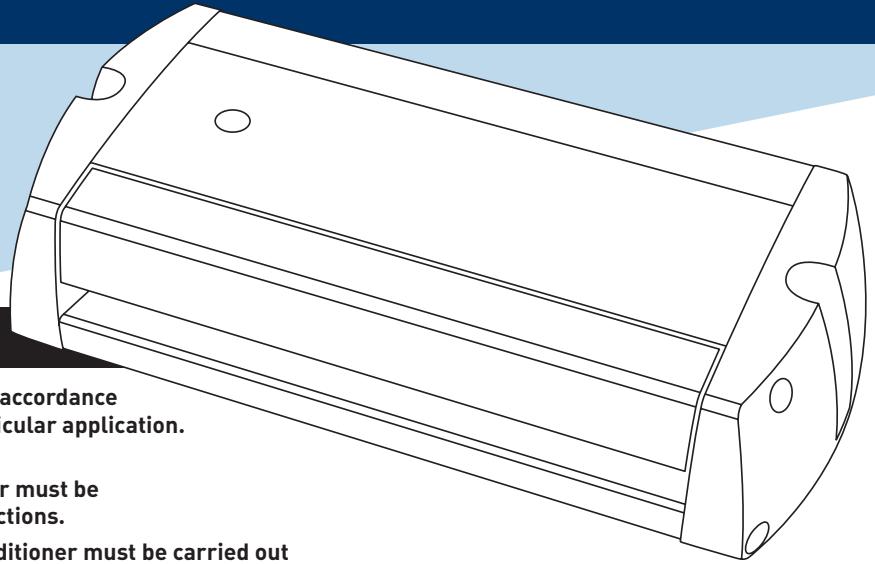


INSTALLATION AND OPERATING GUIDE



IMPORTANT

The SPCi Isolated Power Conditioner 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 SPCi Isolated Power Conditioner must be installed and connected as detailed in the following instructions.

All wiring and connections to the SPCi Isolated Power Conditioner must be carried out by a suitably qualified person according to sound electrical installation practices.

Under no circumstances should the SPCi Isolated Power Conditioner be modified or adjusted. Opening the case by removing the screws will render the warranty void.

APPLICATION

The SPCi Isolated Power Conditioner is designed to be used in 12 or 24 Volt DC electrical systems to stabilize or 'condition' the voltage supply to any auxiliary equipment connected to the output. The input and output are galvanically isolated so there is no common negative connection. The installer should check to ensure the equipment being connected to the output of the SPCi unit is capable of operating at either 13.6VDC or 12.5VDC for the 12VDC version and 27.2 or 25.0 for the 24VDC version. These output voltage settings are user selectable and provided for different requirements (see reverse). The selector switch is located under the terminal cover to the right of the terminals and can be set to HI or LO.

Likewise the installer should confirm that the continuous operating current of the equipment does not exceed that of the continuous rating of the SPCi Isolated Voltage Converter.

Model	Continuous Rating	Peak Rating	Input Fuse Rating
SPCi121207	7 Amps @ 13.6VDC @ 30°C (86°F) max.	10 Amps @ 13.6VDC @ 30°C (86°F) max.	7.5 Amps
SPCi242405	5 Amps @ 27.2VDC @ 30°C (86°F) max.	7 Amps @ 27.2VDC @ 30°C (86°F) max.	5 Amps

INSTALLATION

NOTE: Terminal Cover should be removed prior to mounting the SPCi Isolated 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 SPCi Isolated 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 SPCi must have clearance from the surface to ensure adequate heat dissipation.
2. Ensure the SPCi 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 SPCi is facing downward and that there is adequate clearance to connect the wiring to the terminals.
4. Fix the SPCi with appropriate fasteners ensuring both anchor holes are utilized. Do not overtighten.

WIRING

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

1. Disconnect the DC supply at the source before attempting any connection to the SPCi or auxiliary equipment.
2. Install an appropriately rated fuse or circuit breaker (see chart above) as the input protection for the DC supply cable to the SPCi.
3. Connect all circuits to the SPCi 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).
4. Connect the auxiliary equipment to the output terminals of the SPCi 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 SPCi and the auxiliary equipment) if specified by the manufacturer.
5. Re-connect the input supply at the source and turn on the circuit breaker or switch. The LED Diagnostic indicator on the SPCi should now be flashing green intermittently. This indicates the SPCi 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.

MOUNTING

UP

CLEARANCE
50mm
TOP

50mm
BOTTOM
CLEARANCE

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

WIRING

TYPICAL INSTALLATION FOR 12 VDC SYSTEMS

TYPICAL INSTALLATION FOR 24 VDC SYSTEMS

OUTPUT VOLTAGE SELECTOR SWITCH:
HI POSITION: Standard setting for 12V or 24V equipment with wide input voltage tolerances.
LO POSITION: Optional setting for 12V or 24V equipment sensitive to input voltage variation.

IMPORTANT: ENSURE ALL WIRING IS ADEQUATELY RATED FOR APPLICABLE LOADS

TERMINATION

IMPORTANT: USE FULLY INSULATED CRIMP TYPE CONNECTORS FOR WIRE TERMINATION

PROTECTION

The SPCi Isolated 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 SPCi. The SPCi is protected in the following situations:

- **Low Input Voltage.** If the input voltage falls below the factory preset level the SPCi 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 SPCi 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 SPCi 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 SPCi 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 SPCi 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.

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.

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 Continuously exceeding maximum load rating	Check to ensure ventilation to SPCi is adequate Check loads to ensure they do not exceed rating of SPCi
Red – Pulsing	Short Circuit or overload	Short circuit on output (auxiliary equipment) Continuously exceeding maximum load rating	Remove load and check for short circuit Check loads to ensure they do not exceed rating of SPCi
No Indication	Out Of Service	No input supply Internal fault	Check circuit breaker/switch to ensure circuit is on. Return to authorised service centre