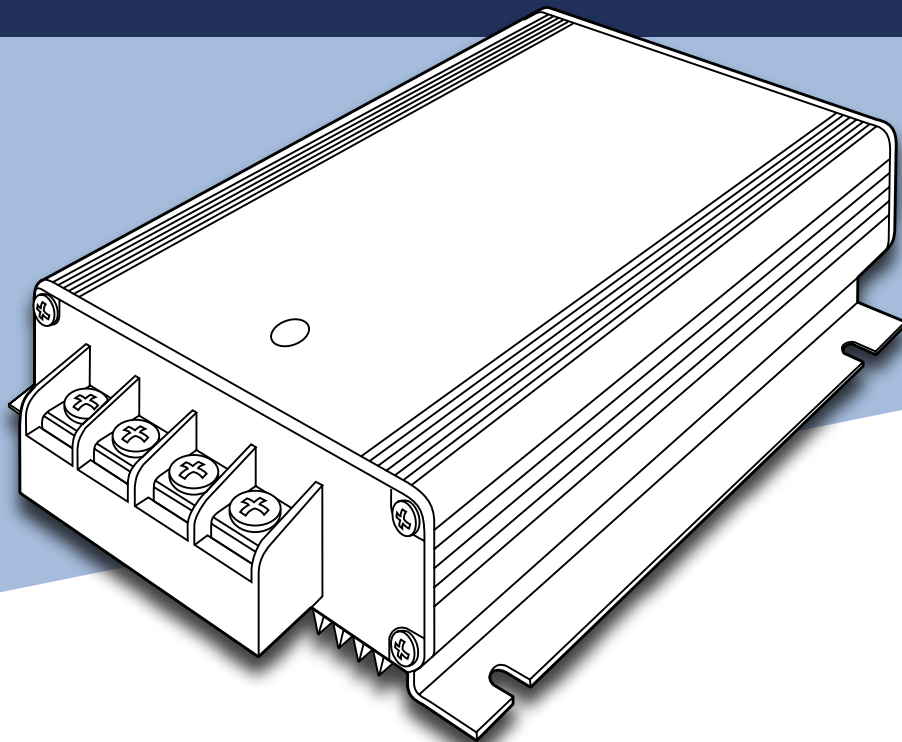


Installation and Operation Guide



GENERAL

Intervolt SPCi Series Isolated Switchmode Power Conditioners are designed for high demand power requirements in both vessel and vehicle applications. They are suitable for powering a large range of auxiliary 12 and 24 VDC equipment including communications, navigation, monitoring, instrumentation, lighting, refrigeration and much more. Another key benefit of this unit is that it can also be used as a float type battery charger.

Intervolt SPCi's incorporate a range of innovative features including an industry first micro-processor controlled, multi-function diagnostic indicator. This feature is designed to help trouble-shoot general installation errors and assist in fault finding common problems.

Intervolt SPCi's are fully protected from typical connection and installation faults by a range of built-in safety devices. These devices protect the units from reverse connection, short-circuiting, overloading, high output voltages and high temperatures. The case of the unit is ungrounded therefore ensuring electrical isolation.

Intervolt SPCi's are designed to cope with the harsh demands of the marine environment. They are constructed of quality marine grade materials and when applied and installed correctly are designed to provide many years of continuous service.

Intervolt SPCi's are manufactured in Australia and comply with both Australian and European Standards for Electro-Magnetic compatibility. They are supported by a 100% factory backed 24 month warranty against faulty components and/or workmanship.

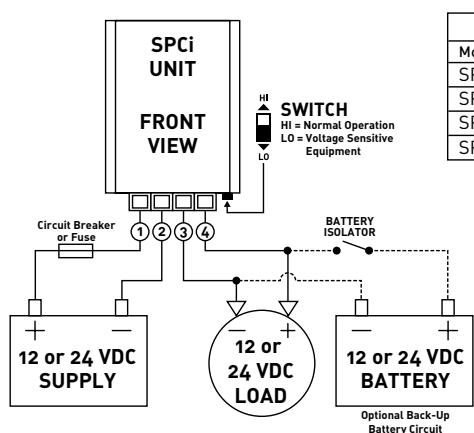
INSTALLATION

The SPCi must be properly mounted in order to comply with environmental considerations and the manufacturer's warranty terms and conditions. As the SPCi is ungrounded it can be mounted directly to any metal surface and maintain electrical isolation.

1. Select a suitable location where the SPCi can be mounted on a vertical surface (i.e.-bulkhead, firewall, etc.) with the connection end facing downward .
2. Ensure SPCi is located in a well ventilated position, free from excessive moisture, dust, vibration and heat.
3. Fix the SPCi with appropriate fasteners ensuring all anchor holes are utilised.
4. Disconnect the input voltage supply at the source before attempting any connection to the SPCi or auxiliary equipment.
5. Install an appropriately rated circuit breaker or fuse (see chart) as the input protection for the input voltage supply cable to the SPCi.
6. Connect all circuits to the SPCi ensuring that adequate cable sizes are used for model installed (consult your cable supplier for correct current ratings).
7. Reconnect the input voltage supply at the source. The LED Diagnostic Indicator on the SPCi-should now be flashing green intermittently. If there is no output supply refer to fault finding section at rear of booklet.

WIRING DIAGRAM

TYPICAL INSTALLATION

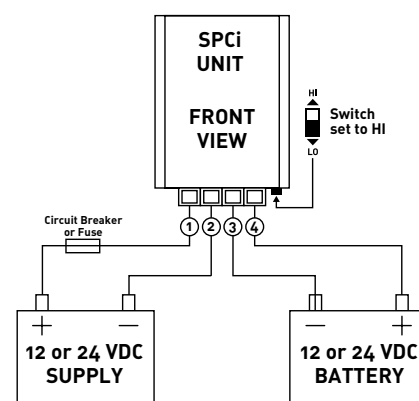


Input Fuse or Circuit Breaker Selection				
Model	Input	Output LO	Output HI	Fuse Rating
SPCi121210	10-16V	12.5V	13.6V	15
SPCi121220	10-16V	12.5V	13.6V	30
SPCi1242410	17-33V	25V	27.2V	15
SPCi1242420	17-33V	25V	27.2V	30

Switch Settings		
	12V	24V
HI	13.6VDC	27.2VDC
LO	12.5VDC	25.0VDC
①	Positive Input	
②	Negative Input	
③	Negative Output	
④	Positive Output	

See installation instructions on previous page for additional information regarding connection

BATTERY CHARGING



OPERATION

The SPCi is designed to provide a constant supply at the rated current for 12 or 24VDC equipment. The SPCi is protected from a variety of connection and application errors by a range of built in devices. In most instances these errors are revealed by the diagnostic indicator and can be corrected without having damaged the unit. The SPCi is protected in the following situations:

- Low Input Voltage** If the input voltage falls below 10VDC in the case of the 12 volt unit or 17VDC for the 24 volt version, the SPCi will be disabled. When the input voltage rises above this setting the output supply will be restored.*
- High Temperature** In the event the SPCi exceeds the preset temperature limit, the unit will be disabled. When the temperature decreases the output supply will be restored.*
- Output Short Circuit** If the output supply is short circuited the SPCi will be disabled. When the short is removed the output supply will be restored.*
- Output Overload** If the maximum current rating is continuously exceeded the unit will be disabled. When the load is reduced the 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 circuits protect the output supply from over voltage.
- Transient Input Voltage** A purpose designed circuit filters out surges and spikes.

*Refer diagnostics and fault finding section on next page for trouble-shooting these problems.

WARRANTY

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 booklet.
- 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 unauthorised 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.

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DIAGNOSTICS AND FAULT FINDING

Indication	Status	Cause	Remedy
Pulsing Green	System Normal	N/A	N/A
Pulsing Amber	Over Temperature	Lack of Ventilation Continuously exceeding Maximum Load rating	Check and ensure ventilation to unit is adequate Check loads to ensure they do not exceed rating of SPCi
Pulsing Red	Short Circuit or Overload	Short Circuit on Output Load Continuously exceeding Maximum Load rating	Remove load and check for short circuit Check loads to ensure they do not exceed rating of SPCi
Pulsing alternately Green/Red	Low Input Voltage	Input Voltage has dropped below preset limit	Check voltage of battery supply
No indication	Out of service	Internal fault	Return to authorised service centre