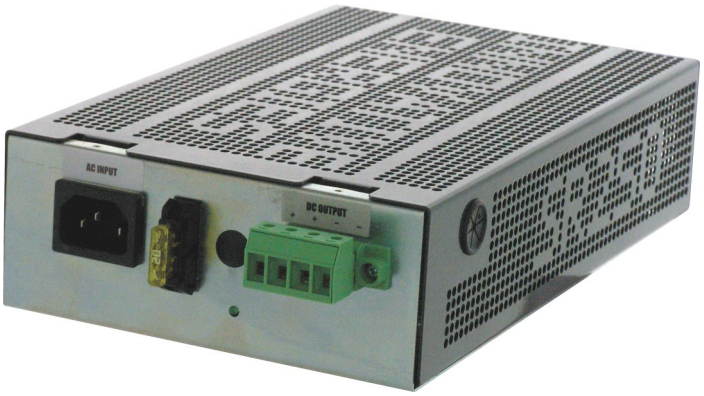
HELIOS
POWER SOLUTIONS

ISO9001
Certified

User Manual

SR250K

250W PSU / Float Charger



Z367

15/09/2016

Installation & Safety

Safety
The user is responsible for ensuring that input and output wiring segregation complies with local standards and that in the use of the equipment, access is confined to operators and service personnel. A low resistance earth connection is essential to ensure safety and additionally, satisfactory EMI suppression (see below).

HAZARDOUS VOLTAGES EXIST WITHIN A POWER SUPPLY ENCLOSURE AND ANY REPAIRS MUST BE CARRIED OUT BY A QUALIFIED SERVICEPERSON.

Electrical Strength Tests
Components within the power supply responsible for providing the safety barrier between input and output are constructed to provide electrical isolation as required by the relevant standard. However EMI filtering components could be damaged as result of excessively long high voltage tests between input, output and ground. Please contact our technicians for advice regarding electric strength tests.

Earth Leakage
Where fitted, EMI suppression circuits cause earth leakage currents which may be to a maximum of 3.5mA.

Ventilation
High operating temperature is a major cause of power supply failures, for example, a 10^{o}C rise in the operating temperature of a component will halve its expected life. Therefore always ensure that there is adequate ventilation for the equipment. Batteries in particular suffer shortened lifetimes if subjected to high ambient temperatures.

Water / Dust
Every effort must be made in the installation to minimise the risk of ingress of water or dust. Water will almost always cause instant failure. The effects of dust are slower in causing failure of electronic equipment but all electrical equipment should be cleaned free of any dust accumulation at regular intervals.

Electromagnetic Interference (EMI)
Switching power supplies and converters inherently generate electrical noise. All wiring should be as short as practicable and segregated from all equipment wiring which is sensitive to EMI. Residual noise can be reduced by looping DC wiring through ferrite cores (sleeves). These are most effective as close to the power supply as possible and as many turns of the wire taken through the core (+ and - in the same direction) as the core will accommodate.

External fuse protection
Fuses or circuit breakers must be used in all battery circuits to protect against short circuits. External fuses should be used for power supplies/ chargers even though they are usually internally protected.

Connection polarity
It is critical to check the polarity carefully when connecting DC devices even with models which have non-destructive reverse polarity protection.

Glossary of terms used in our user manuals

PSU = power supply unit

BCT = battery condition test

ECB = electronic circuit breaker

ELVD = electronic low voltage disconnect

RPP = reverse polarity protection

EMI = electromagnetic interference

SNMP = Simple Network Management Protocol

LAN = local area network

DOD = depth of discharge

HELIOS POWER SOLUTIONS

SR250K

250W PSU/Charger

Z367

- **Based on our SR250A.. Industrial range**
- **Low cost fanless 12V model especially for motor homes**
- **Can be used as PSU or float charger**
- **Constant current limit**
- **Standalone - bench top or fixed mounting**
- **Fuse for reverse polarity protection**
- **Designed, made and serviced in NZ**

♦ 24 Month Warranty

SPECIFICATIONS

All specifications are typical at nominal input, full load and at 20°C unless otherwise stated.

ELECTRICAL

Input Voltages **▪ standard**	180 - 264V, 45-65Hz
▪ optional	88 - 132V , 45-65Hz (internal link select)
Fusing	Internal input fuse, output fuse
Overcurrent Protection	Constant current limit under overload and short circuit conditions
Reverse battery connection protection	Blows output fuse
Isolation	1KV DC input - output / earth
Efficiency	≥ 85%
Inrush current	Soft start circuit
Output Power	250W (derate to 210W for 12V at above 30degC)
Line Regulation	<0.2% over AC input range
Load Regulation	<0.4% open circuit to 100% load
Thermal Protection	Yes
OVP	130% of nominal output voltage

PHYSICAL

AC Input connector	IEC320 socket
DC Connections	*'Phoenix combicon'* plug-in / screw terminal block
Enclosure	Steel, powder coat/ zinc plate
Dimensions	150W x 61H x 242D (excl. terminals)
Weight	1.7 Kg
Indication LED	**Green :** Power On

ENVIRONMENTAL

Operating temperature	**12V:** 0 to + 30°C ambient (derate to 210W at 40°C) **24V:** 0 to + 50°C ambient
Storage temperature	-10 to 85 °C ambient
Humidity	0 - 95% relative humidity non-condensing
Cooling	Convection cooled

STANDARD MODEL TABLE

MODEL CODE	Output Voltage	Output Current
SR250K12X	13.8V*	18A
	12V	20A
SR250K24X	27.6V*	9A
	24V	10A

* Default settings

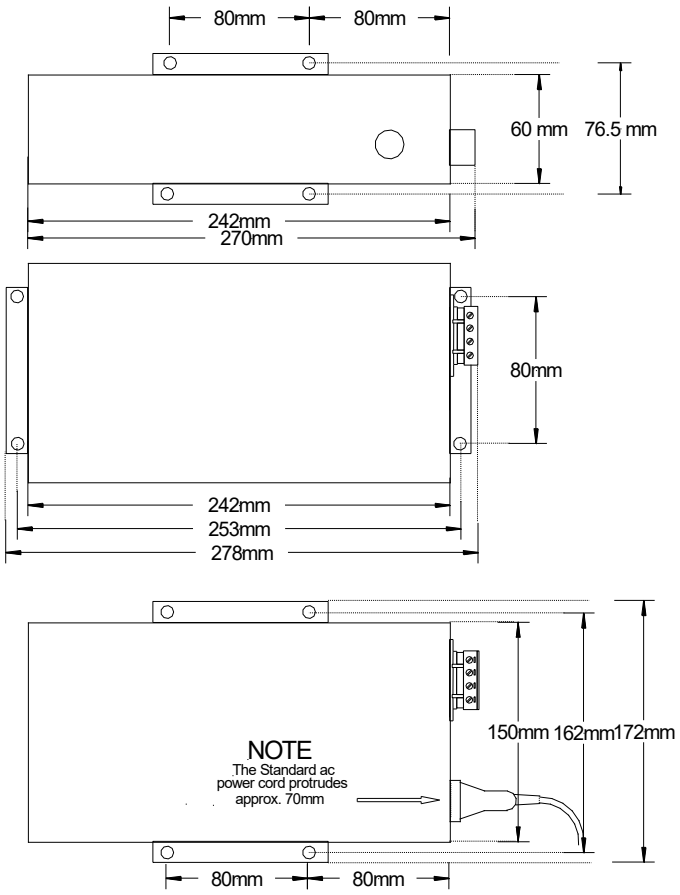
ACCESSORIES SUPPLIED

Mounting feet together with screws
AC power cord 1.5m with IEC320 socket and NZ/Aust plug
DC screw terminal plug-in connector

STANDARDS

EMI	To CISPR 22 / EN55022 class A
Safety	To IEC950 / EN60950 / AS/NZS3260

Dimensions



TERMS OF WARRANTY

Helios Power Solutions warrants this product for 24 months from date of shipment against material and workmanship defects. Liability under this warranty is limited to the replacement or repair of the defective product as long as the product has not been damaged through misapplication, negligence, or unauthorized modification or repair.