



Global Solutions Personal Focus

TERMS OF WARRANTY

Innovative Energies Ltd warrants its power supplies for 24 months (two years) from date of shipment against material and workmanship defects.

Innovative Energies' 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.

Thank you for purchasing from Innovative Energies.

We trust your power supply will exceed your expectations and perform for years to follow.

Sincerely, The Innovative Energies team.

Innovative Energies Limited

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User manual

ELS250-24-1/ CAB150/ SN ....S,TR

SR250... DC power supply/chargers in cabinet or 19" rack



24 month warranty (not incl. batteries)

## 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

The EMI suppression circuits causes earth leakage currents which may be to the maximum allowable of 3.5mA.

## Ventilation

High operating temperature is a major cause of power supply failures, for example it has been well documented that a 10°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 and cooling fans also suffer shortened lifetimes if subjected to high ambient temperatures - both should be included in a routine maintenance schedule to check for signs of reduced efficiency.

## 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 cable 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.

## Fuse ratings

Check that the wiring and fuses or MCBs match the rating of the PSU or converter. Note that the Innovative Energies *No-Break™* DC chargers are able to deliver up to 2.5 times the rated current when mains power is on.

## Connection polarity

It is critical to check the polarity carefully when connecting DC devices. Some Innovative Energies models have reverse polarity protection (RPP), for example, the *Smartchargers* have electronic (non-destructive) RPP, the *No-Break™* DC range has an internal fuse which needs to be replaced if the battery is connected in reverse. Usually, however, a reverse polarity connection results in instant destruction of the device, especially if there is a battery involved.

## 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



16 x 1A fused outlets, fuses front accessible

- SR250 DC Power Supply in 2U rack
- 16 sets of individual load output terminals (available on the rear)
- Includes internal tray and wiring for 2 x 7Ah sealed lead acid batteries
- Remove Batteries on tray easily via front panel (remove 4 screws)
- Removable fuses available from front panel for easy access
- ISO9001 certified quality management system
- Batteries supplied separately

## ◆ 24 Month Warranty

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

ELECTRICAL		PHYSICAL	
AC Input	180~264VAC (standard) 80~132VAC (optional)	AC Input connector	IEC320 input socket , 1.5m mains lead supplied
Input Fusing	AC input fuse	Output Connectors	16 sets of 2 way 2.5mm <sup>2</sup> Screw/ Clamp terminal blocks at back
Output Fusing	Up to 16 fuses may be fitted	Enclosure	2U x 19" rack
Isolation	1KV DC input- output / earth	Weight	5kg without batteries
Output Power	250W	Dimensions	2U x 19" X 340mm deep
Output Voltage	13.8, 27.6, 41.4, 55.2V		
Indication	16 LEDS on front panel (Green: output OK) (Red : fuse blown)		
ENVIRONMENTAL		TYPICAL MODEL CODE	
Operating temperature	0°C to 50°C, max. 60°C at 50% load	SN27/09TR-16	Uses SR250C24TFXL <i>No-Break™</i> DC PSU/ charger
Storage temperature	-10 to 70 °C ambient		
Humidity	0 - 95% relative humidity non-condensing		
STANDARDS			
Safety	To IEC950 / EN60950		

SN27/09TR-16  
Charging voltage temperature compensated



Internal battery tray for 2 x 7Ah

Individual output terminals



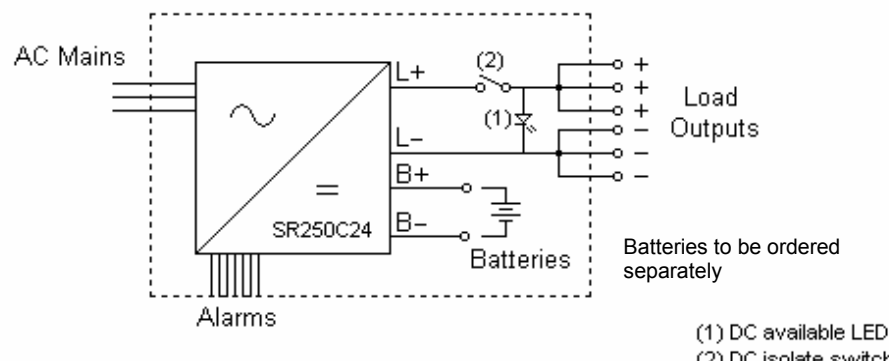
SN27/10SA shown, includes distribution terminals

- SR250 power supply in wall mount enclosure
- Refer to power supply data sheets for full specifications
- 3 sets load output terminals
- Room for 4 x 7Ah or 2 x 12Ah sealed lead acid batteries
- Lockable enclosure
- ISO9001 certified quality management system
- Batteries to be ordered separately

◆ 24 Month Warranty

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

ELECTRICAL		PHYSICAL	
<b>Input</b>	180~264VAC, 200~375VDC 80~132VAC (optional)	<b>AC Input connector</b>	1.5m long with Australasian 3 pin plug
<b>Fusing / Protection</b>	Internal input fuse	<b>DC Connections</b>	Screw type terminal block
<b>Isolation</b>	1KV DC input - output / earth	<b>Enclosure</b>	White powder coated steel enclosure with lockable door (lock & 2 keys included)
<b>Output Power</b>	250W	<b>Indicators &amp; control</b>	Power supply dependent
<b>Output Voltage</b>	13.8, 27.6, 41.4, 55.2V	<b>Alarm outputs</b>	Power supply dependent
		<b>Dimensions (mm)</b>	335Hx 313W x 133 D
		<b>Weight (approx)</b>	5.3 kg excluding batteries

TYPICAL CONNECTION DIAGRAM	ADDITIONAL NOTES
 <p>Batteries to be ordered separately</p> <p>(1) DC available LED (2) DC isolate switch</p>	<p>The models listed below use the SR250... No-Break™ DC power supplies but any SR250 unit may be fitted into this enclosure.</p> <p>Enclosure only: <b>RMWCASECU/1</b> +Cam lock <b>RHWCAMINTKX1</b></p>

CODES	DC Output				Power Supply Used
	Output Voltage Load	Output Voltage Charger	Peak Load Current	PSU Rated Current	
SN12/20S	13.8V	13.8V	27A	18A	SR250C12TFSL
SN27/10SA	27.6V	27.6V	13A	9.0A	SR250C24TXL

**For full information on the power supply/charger used please refer to its specific user manual.**



**FUNCTION**  
Cabinet containing battery charger, batteries and controls for emergency lighting system.

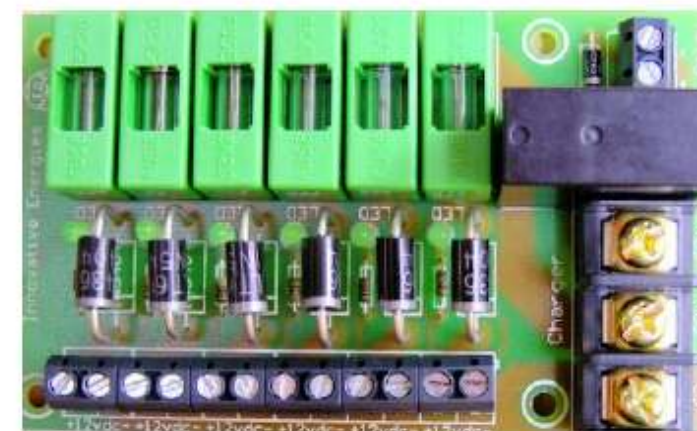
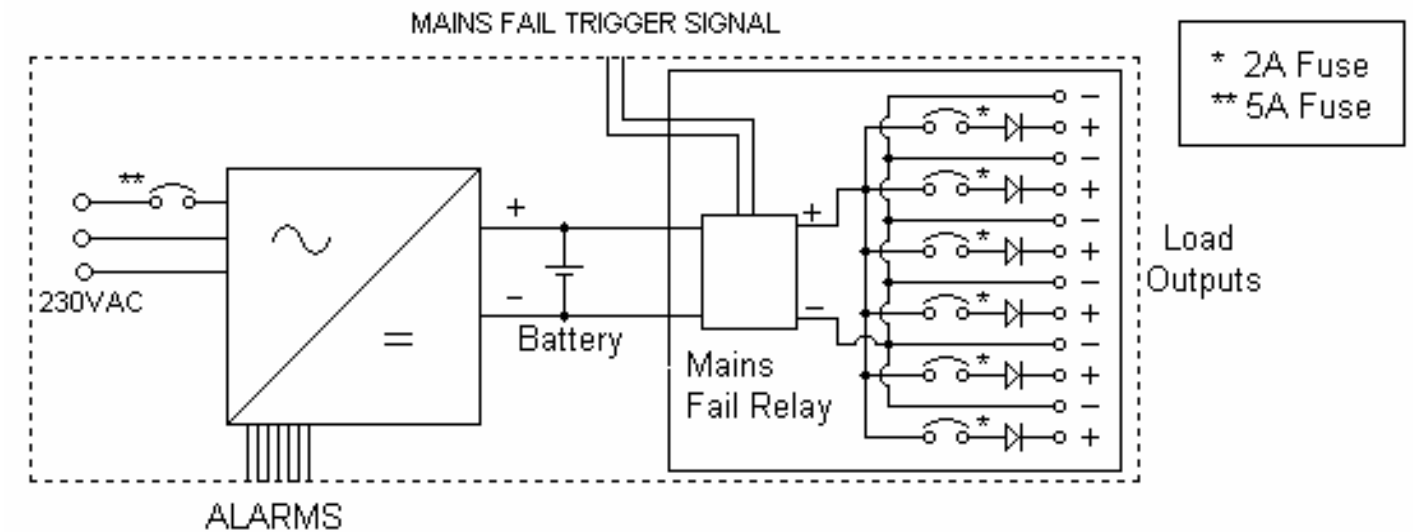
**SPECIFICATIONS FOR ELS250-24-1**

<b>Charger:</b>	SR250D24XL with special microprocessor (see below)
<b>Input:</b>	180~264VAC
<b>Output:</b>	27.6V, 9A, 250W
<b>Load Outputs:</b>	4 pairs x 10Amp MCBs
<b>Indication:</b>	Mains ON, Charger ON, Charger current, Battery Voltage
<b>Control:</b>	Test switch pushbutton - activates timer and turns on lights for preset time set by timer T1 (adjustable)
<b>Alarm Outputs:</b>	Battery Low Mains Fail (used to activate Emergency Lighting System)
<b>Microprocessor:</b>	SFMCT-OA v1.1 (battery low alarm activates when mains power is on or off)
<b>Battery Operation:</b>	Automatic when the AC mains fail
<b>Battery:</b>	2 x 12Vdc, 100Ah
<b>Anti-Tamper Switch:</b>	Contacts rated 250VAC, 20A
<b>Battery MCB:</b>	20A
<b>Enclosure Dimensions:</b>	1255H x 500W x 250D mm overall
<b>Battery Compartments:</b>	330H x 440W x 200D (internal dimensions)



Dimensions: 500H x 495W x 245mm

**CAB 150 DESCRIPTION**  
CAB150 comprises of a **SR250E12TFSL** boost charger, housed in a security cabinet with the back up battery in the bottom of the cabinet.  
  
Originally designed for use on closed circuit TV and security alarm systems on bank premises but may be used in any situation requiring secure uninterruptible DC power.  
  
A boost charger is used to ensure fast recharging of the battery after a mains power failure.



**INPUT SELECTION DEPENDING ON INPUT TRIGGER**

- \* Normally Close (N/C)
- \* Normally Open (N/O)
- NEG INPUT
- POS INPUT FROM CHARGER