



Fast and Safe recharging of lead acid batteries (sealed or flooded)



◆ 24 Month Warranty

- Auto or Manual initiated boost mode
- Manual forced float mode
- Automatic temperature compensation
- Short Circuit and reverse polarity protection
- Operating state and fault indication
- Fully programmable microprocessor control
- Can safely be left permanently connected to battery, will maintain 'float'
- Optional relay alarm outputs (SR500E)
- ISO9001 Design management system
- Fully Designed and manufactured in NZ

The **SR SmartCharger** is designed to recharge your battery in the shortest practicable time with special features to protect against over-charging. They are suited to both 'cyclic' (eg. wheelchairs, golf carts) or 'standby' (eg. emergency lighting, standby generators) applications.

**SPECIFICATIONS** Please contact our sales office if you have a standing load, see warning on next page

ELECTRICAL	
AC Input	230V AC: 180V - 264V (standard) 110V AC: 88V - 132V (on request)
Frequency	45- 65 Hz
DC Input	200 - 375V (contact factory for other voltages)
Fusing / Protection	Internal AC input fuse
Isolation	3.5KV AC 1 min. input / output 1KV DC input / earth
Efficiency	≥ 85%
Inrush current	Soft start circuit
Output Power	500W continuous (0 - 50°C)
Output Voltages	Refer model table
Voltage adj. range	Approx 95 - 105% of V nominal
Temp. Compensation	Temperature sensor on 1.7m lead with adhesive pad: -4mV / °C / cell ±10%
Current Limit	Straight line current limit profile (output side)
Reverse Polarity	Automatic shutdown if battery leads reversed (except for high voltage voltage models-fuse)
Line Regulation	< 0.2% over AC input range
Load Regulation	< 0.4% open circuit to 100% load
Noise	< 1%
Drift	0.03% / °C
Hold-up time	15 - 20 mS (nom. - max. Vin) without battery
Thermal Protection	Automatic current reduction if > 50° C. Self-resetting
OVP	Over-voltage protection on output at ~ 130% of nominal output voltage

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

FEATURES	
Switch/ LED Indication & function	<b>BOOST:</b> Red (Push button to boost) <b>FLOAT:</b> Green (Push button to 'force' float) <b>STANDBY:</b> Red (Push button to turn output off)
Factory programmable parameters (default settings shown in brackets) Please note that some parameters are interdependent of each other.	- Start up in boost or float mode ( <b>Boost</b> ) - Current terminated boost ( <b>Yes</b> ) - Current initiated boost ( <b>Yes</b> ) - Start boost on mains return ( <b>Yes</b> ) - Pre-boost state timer 1-255 minutes ( <b>1</b> ) - Max boost charge time 0-48 hours ( <b>24</b> ) - Pre-float state timer 1-255 minutes ( <b>1</b> ) - Resume prior state upon mains return timer 1-255 minutes ( <b>10</b> ) - Resume on boost charge upon mains return 0-255 hours ( <b>24</b> ) - Pre-forced float timer 1-255 minutes ( <b>1</b> ) - Delay before mains fail recognition 4sec - 8.5minutes( <b>5 minutes</b> )

PHYSICAL	
AC Input Connection	IEC320 inlet socket (AC power cord supplied)
DC Output Connection	M6 brass stud, or 'Phoenix combicon' Plug-in style socket & mating screw terminal block: (max. wire 4mm <sup>2</sup> / way)
Alarm Connections	Plug in screw terminal block (max. wire 2.5mm <sup>2</sup> )
Enclosure	Powder coated or zinc plated steel / anodised aluminium
Weight	4.3 kg

ENVIRONMENTAL	
Operating temperature	0 to 50°C ambient at full load De-rate linearly >50° C to no load @ 70° C
Storage temperature	-10 to 85 °C ambient
Humidity	0 to 95% relative humidity non-condensing
Cooling	Natural or fan cooled depending on model
Temperature Compensation	For accurate battery charging/float output voltage is automatically adjusted according to ambient temperature

# 500 Watt AC/DC Stand Alone Switch Mode SmartCharger



## STANDARD PREFERRED MODEL TABLE

MODELS	Output Voltage <sup>2</sup> (float)	Output Voltage (max boost)	Output Current <sup>3</sup> (continuous)	Min - Max Battery Size <sup>4</sup>
SR500B12	13.8V	15.0V	33.3A	130-600 Ah
SR500B24	27.6V	30.0V	16.7A	65-300 Ah
SR500B36	41.4V	45.0V	11.1A	44-200 Ah
SR500B48	55.2V	60.0V	8.3A	30-150 Ah
SR500B91 *	110.4V	120.0V	4.2A	16-75 Ah
SR500B92 *	124.2V	135.0V	3.7A	15-65 Ah
SR500B93 *	138.0V	150.0V	3.3A	13-60 Ah

\* **SR750B91, 92, 93** are not available with automatic operation. Initiation of equalising /boost charge is via manual or remote request (contact closure). Termination is by manual push button or when the internal timer times out (default set to 24 hours)

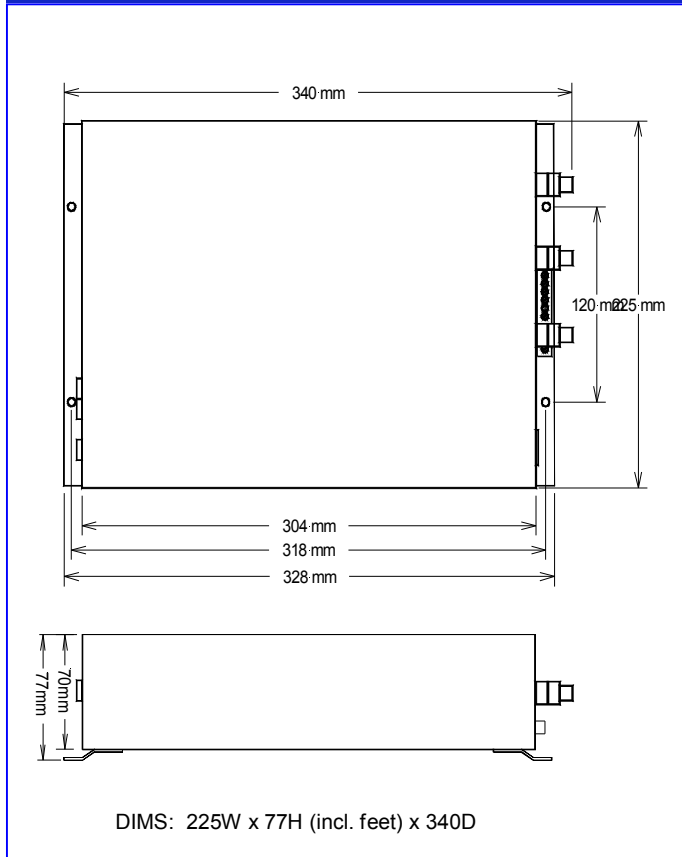
These versions have **mains fail** and **battery low** alarms as standard but no boost/float indication relay.

<sup>2</sup> Other voltages available on request, please contact sales office for further details

<sup>3</sup> Can be lowered to suit max battery charging current

<sup>4</sup> Guidelines only. Check manufacturer's recommendations!

## MOUNTING DETAILS / DIMENSIONS



## ADDITIONAL OPTIONS (Physical / Electrical)

- Rack Mount** 2RU x 19" rack - (rear connection)  
*Refer page 112*
- Wall Mount Enclosure** *Refer page 114*
- Temperature Probe** Can be deleted or specify different length when ordering
- Alarm & boost/float indication relays (SR750E...)**
  - **Mains fail**
  - **Batt low** (set at 1.83V/cell)
  - **Boost/float**
- **Relay Contacts** C - NO - NC full changeover  
Rated 1A @ 24V DC or 250VAC
- Output Volts** Slightly different boost and float voltages can be specified on ordering for special circumstances.
- Adjustable Parameters** All firmware parameters listed under features may be adjusted at time of ordering

## WARNING

- If the SmartCharger is connected to operating equipment during charging:**
1. equipment will be subjected to 1.25 times the nominal voltage.
  2. the standing load must be taken into account for the correct operation of the charger. Please contact our sales office if you have any standing load.

## MODEL CODING AND SELECTION CHART

