HELIOS
POWER SOLUTIONS

SR500-750i SERIES

No-Break DC UPS System with Communications

24 Month Warranty

FEATURES AND BENEFITS

- **Battery detection - regular battery presence and battery circuit integrity checks**
- **Deep discharge protection for battery**
- **Battery circuit overload , short circuit protection and reverse polarity protection for battery.**
- **Automatic temperature compensated output**
- **Battery condition test BTC automatic or user controlled via comms.**
- **LED flash codes for precise state indication**
- **"Mains" & "Battery System" alarm relay outputs.**
- **LAN supervision output for Ethernet versions.**
- **Suitable for use with all types of lead acid batteries (batteries external to power supply)**
- **Adjustable charge current limit**

COMMUNICATIONS INTERFACES

- **Ethernet**
- **RS485**
- **RS232**

PROTOCOLS

- **SNMP**
- **Modbus RTU, TCP/HTTP (using external protocol converter**
- **Innovative Energies ASCII code**

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

MODEL / SPECS	SR500i	SR750i
ELECTRICAL		
Input	180V - 264VAC	
Input Optional	88V - 132VAC (internal link select) 88-135VDC (specify at time of order)	
Frequency	45-65Hz	
Fusing	Internal AC input fuse	
Overcurrent protection	Constant current limit under overload and short circuit conditions	
Isolation	1KV DC input - output / earth	
Efficiency	> 85%	
Inrush current	soft start circuit	
Output power	500W	750W
Output voltages	13.8, 27.6, 34.5, 41.4, 55.2VDC	
Voltage adj. range	85 - 115% of Vout	
Temperature Compensation	Temperature sensor on 1.7m lead with adhesive pad: -4mV / °C / cell ±10%	
Current limit	PSU: 100% rated current - Battery: 25-100% PSU current	
Line regulation	<0.2% over input range	
Load regulation	<0.4% open circuit to 100% load	
Noise	<1%	
Hold-up time	15 - 20 ms without batery	
Thermal Protection	Yes, self-resetting	
ENVIRONMENTAL		
Operating temperature	0 - 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 - 95% relative humidity non-condensing	

MODEL / SPECS	SR500i	SR750i
No-Break™ FUNTIONS AND ALARMS		
Battery charge current limit	See Model Table for default settings - may be increased to PSU rated current	
Reverse polarity protection	Battery reverse connection will open internal fuse (and produce alarm)	
Battery monitoring	Detects for presence of battery on start up, then every 60 minutes when charge current < 200mA	
Battery circuit protection	Electronic circuit breaker (ECB) operates under the following conditions:	
- low battery volts	battery voltage drops to 1.67V/cell - auto reset on power on	
- overload	< 300ms for I bat > 6 x I PSU rated , allows ~1.5x rated PSU current from battery without acting,	
- short circuit	< 2ms, backed up by fuse	
LED indication	Green: Power OK - Green: Battery OK	
Alarms	- Power OK (Mains/PSU fail) - Battery System OK - alarms when battery voltage low (on mains fail) , battery missing, battery circuit wiring faulty, BCT fail (if enabled)	
Alarm relay contacts	C - NO - NC full changeover rated 30VDC,2A /110VDC,0.3A/125VAC,0.5A	
Battery condition test (BCT)	Standard on SR500- 750i - 20mins/28days unless otherwise specified on ordering.	
Standby Mode	Turns off DC output of PSU & allows load to run off battery	
MECHANICAL		
Dimensions	225W x 304D x 70H mm	
Weight	4.4kg	
AC Input Connector	IEC320 inlet socket	
DC Connections	M6 brass studs or plug-in socket with screw terminals	
STANDARDS		
Emi	To CISPR 22 / EN55022 class A	
Safety	To IEC950 / EN60950 / AS/NZS3260	

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SR500i TABLE

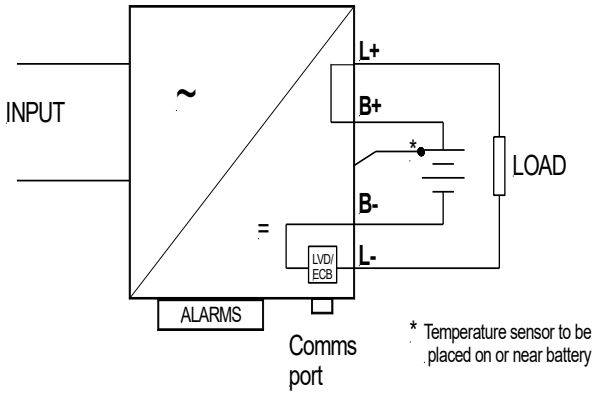
Model	DC Output				
	Output (V)	PSU Rated (A)	Charge Limit (A) *1	Recomm. Load (A)	Peak load on power
SR500***i12***	13.8	36	36	30	54
SR500***i24***	27.6	18	18	13	27
SR500***i30***	34.5	14.5	14.5	10	22
SR500***i36***	41.4	12	12	8	18
SR500***i48***	55.2	9	9	6	13.5

SR750i TABLE

Model	DC Output				
	Output (V)	PSU Rated (A)	Charge Limit (A) *1	Recomm. Load (A)	Peak load on power fail (A)
SR750***i12***	13.8	54	54	42	81
SR750***i24***	27.6	27	27	19	40
SR750***i30***	34.5	21	21	14	31
SR750***i36***	41.4	18	18	12	27
SR750***i48***	55.2	13.5	13.5	8.5	20

***1** Factory default setting unless differently specified at time of ordering

SCHEMATIC BLOCK DIAGRAM



ADDITIONAL OPTIONS

Battery Condition Test: May be enabled or disabled on start up. BTC relay provided to control an external test load or to provide BTC interlock when 2 units are connected for redundancy. Please ask our sales staff for assistance with system design.

Communication Port: Choice of RS485 , RS232 , Ethernet.

+PROTOCONMB-x : Protocol Converter (MODBUS via RS485) with programming port for PC. Power MBLink setup software supplied.

LVD: Low voltage disconnected level may be customized .Please call us for further information.

Parallel Redundancy: Use external output diode, eg +P50.

Digital V/I meter: Add code +INT-METER

CABINET OPTIONS

19" Rack Mount 2U sub rack option: add **SR-RM2U**. Optional V/I meter for subrack: **SR-METER.**

Wall Mount Enclosure PSU may be fitted into enclosure with MCBs and terminals

Parallel Redundancy: Use external output diode, **+P50**.

Modbus Protocol Converter

+PROTOCONMB-x

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MODEL CODING AND SELECTION CHART

MODEL	INPUT VOLTAGE	OUTPUT CONECTOR	TEMPERATURE COMPENSATION	COMMUNICATION & PROTOCOL	QUANTITY
SR500i12	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR500i24	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR500i30	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR500i36	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR500i48	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR750i12	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR750i24	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR750i30	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR750i36	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		
SR750i48	☐ 230vac ☐ 110vac ☐ 110vdc	☐ YES ☐ NO	☐ YES ☐ NO		

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