500W Battery Charger / Power Supply
NSR500F Series

NSR500F Series - 500W Battery Charger / Power Supply

Following on from the tried and tested SR-series, the NSR500F series is upgraded and re-engineered to provide robust and reliable DC battery charging for your critical systems.

The NSR500F is one of the most robust Battery Charger / Power Supplies you can buy.

Key Features

- Automatic temperature compensated charging voltage (programmable via RS-485 / Ethernet).
- Precision power supply voltage configurable (automatic power supply operation with no battery connected).
- Battery detection - regular battery presence and battery circuit integrity checks.
- Power loss & battery system alarms through relays and LED indications.
- Different output connector options - M8 studs or Phoenix connectors.
- Rugged design and construction for long life and challenging environments.
- Thermal reliability improved by using double fan cooling system.

NSR500FxxSx Rear Panel

NSR500FxxTx Rear Panel

Unique Features

Universal Input Voltage
- The NSR series accommodates a wide input voltage with AC input 90 ~ 264Vac.

Intuitive Web Management Interface
- Ethernet/SNMP-optioned models provide access to an intuitive and comprehensive web interface for monitoring and configuration.

High Efficiency
- Up to 90% power efficiency.

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NSR500 Series Options

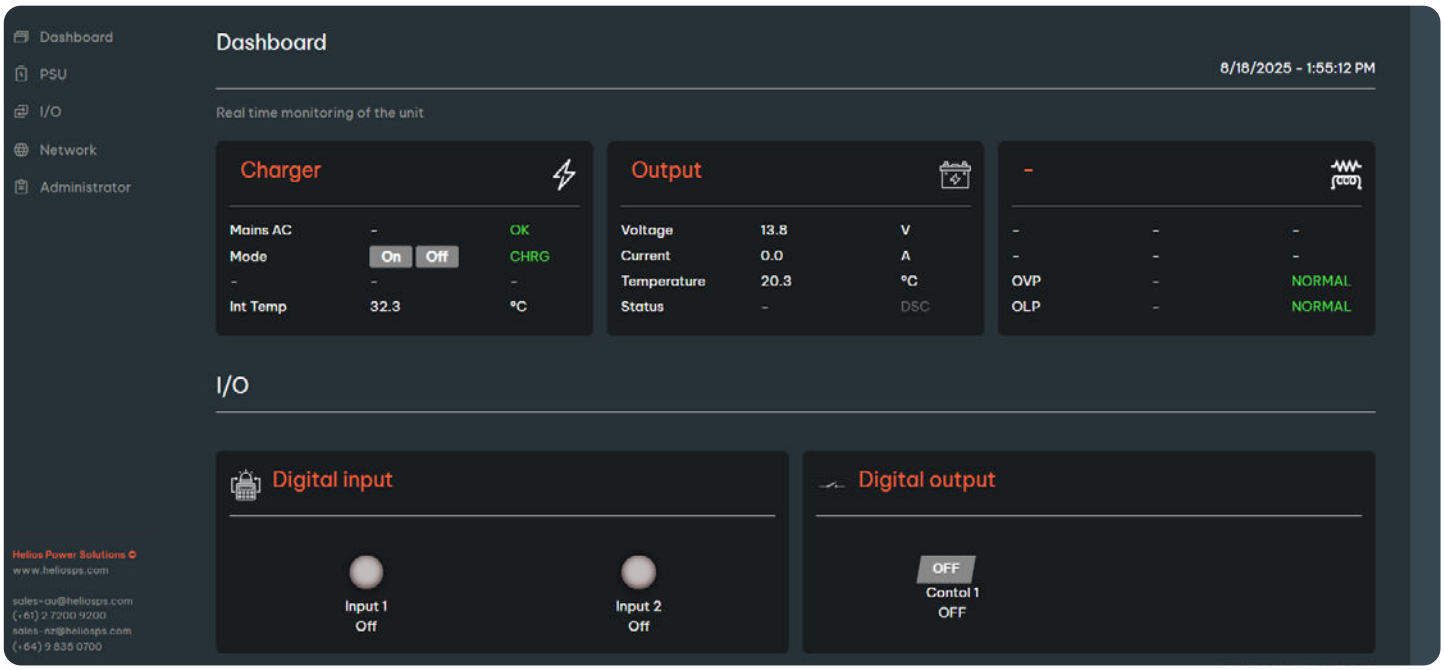
Base Model	Output Power (W)	Operation Mode	Battery Nom. Voltage	Output Terminals	Communications
NSR	100 250 **500** 750	U **F**	12 24 48	**S** **T**	(blank) **C**

Output Power (W)	Operation Mode	Battery Nom. Voltage	Output Terminals	Communications
100 - *100W* 250 - *250W* **500** - *500W* 750 - *750W*	U - *UPS/Charger* **F** - *Charger Only*	**12** - *12Vdc* **24** - *24Vdc* **48** - *48Vdc*	**S** - *M8 Studs* **T** - *Phoenix Terminals*	**(blank)** - *RS-485* **C** - *Ethernet/SNMP*

Example: NSR500F12SC
500W Charger, 12Vdc Nominal Battery Voltage with Stud Terminals and Ethernet/SNMP

Intuitive Web Interface

On SNMP/Ethernet-optioned models, the intuitive web-interface provides simple programming and monitoring of the NSR500. *(Programming and monitoring via MODBUS-RTU with RS-485 is provided on all models).*



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Specifications

Model	NSR500F12xxxx	NSR500F24xxxx	NSR500F48xxxx
Output			
Output Voltage	13.8Vdc nominal	27.6Vdc nominal	55.2Vdc nominal
PSU Rated (A)	36A	18A	9A
Charge Limit (A)[1]	36A	18A	9A
Power			
Input Voltage	90-264Vac		
Frequency	47-63Hz		
Output Power (Max)	500W		
Output Voltage (Programmable)	12Vdc	24Vdc	48Vdc
Voltage Adjustment Range (via RS-485 / Ethernet)	80 - 120% of $V_{nominal}$		
Safety			
Fusing Protection	Input fuse and varistor Battery fuse for battery circuit		
Overcurrent Protection	Constant current limit under overload and short circuit conditions		
Isolation	I/P-O/P: 2121VDC / I/P-FG:2121VDC / O/P-FG: 707VDC		
Efficiency	Up to 90%		
Noise	<1%		
Operating Temperature	-10 ~ 50°C		
Over Voltage Protection	130% of $V_{nominal}$		
Humidity	20-90% relative humidity non-condensing		
Cooling	Fan cooled		
LED Indication	Green: Batt OK Green: Power OK Red: Standby Flash code for different operating states		
Alarms Relay	Form C contacts 30VDC, 2A/110VDC, 0.3A, 125VAC, 0.5A AUX (Activated by LVD condition) POWER (mains fail, PSU fails) BATTERY (batt missing, batt low)		
Battery Charging			
Temp. Compensation	Temperature sensor on 1.7m lead with adhesive pad: -4mV/°C ±10% (customisable)		
Battery Charge Current Limit	100% Charger rating		
Battery Circuit Protection	Fuse protection		
Options			
Communication Options	RS-485 (Modbus RTU) Default on All Models Ethernet (Modbus RTU, SNMP, Web Interface) - Optional		
Digital Inputs/Outputs	Isolated digital input *(pins 1,2)* / Open drain output *(pin 3)* / Return *(pin 4)*		
EMC	CISPR 32:2015, Amdt 1:2020 Class A		
Safety	AS/NZS 60335.2.29		
Dimension	225(W) x 304(D) x 70(H)mm *(excluding mounting feet and terminals)*		
Weight	4kg		
Protection	IP20		

1. Default is 100% PSU rating current, can be customisable.

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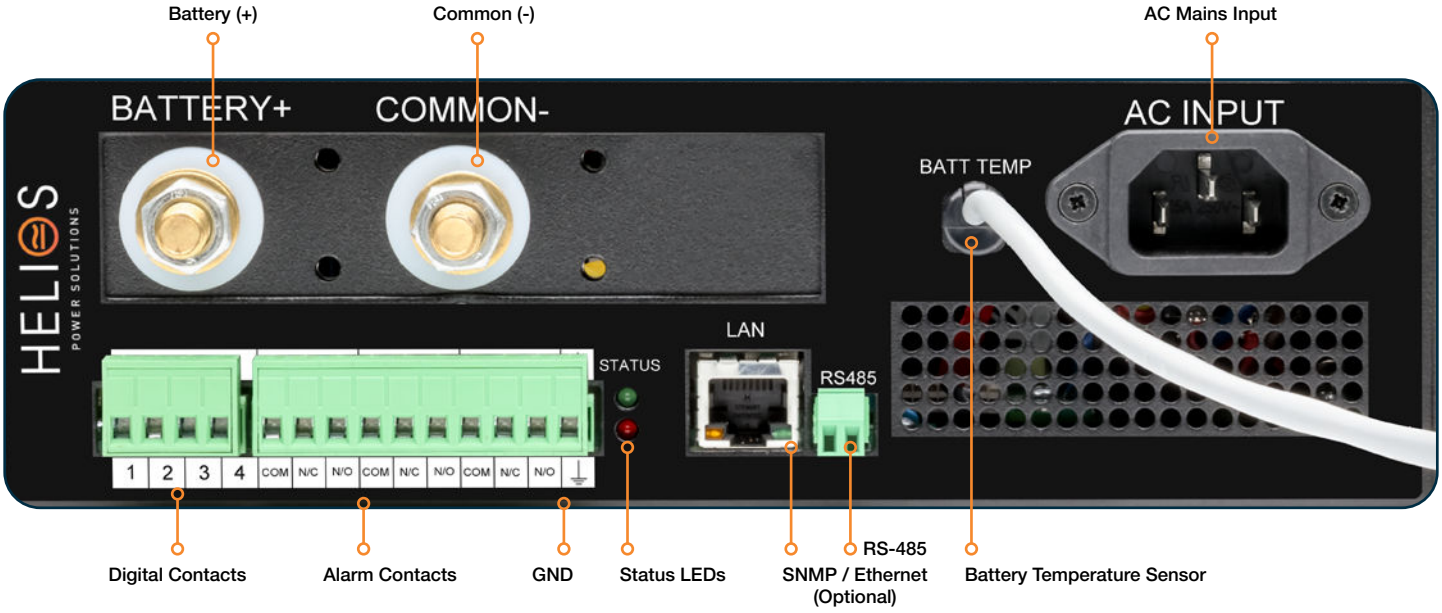
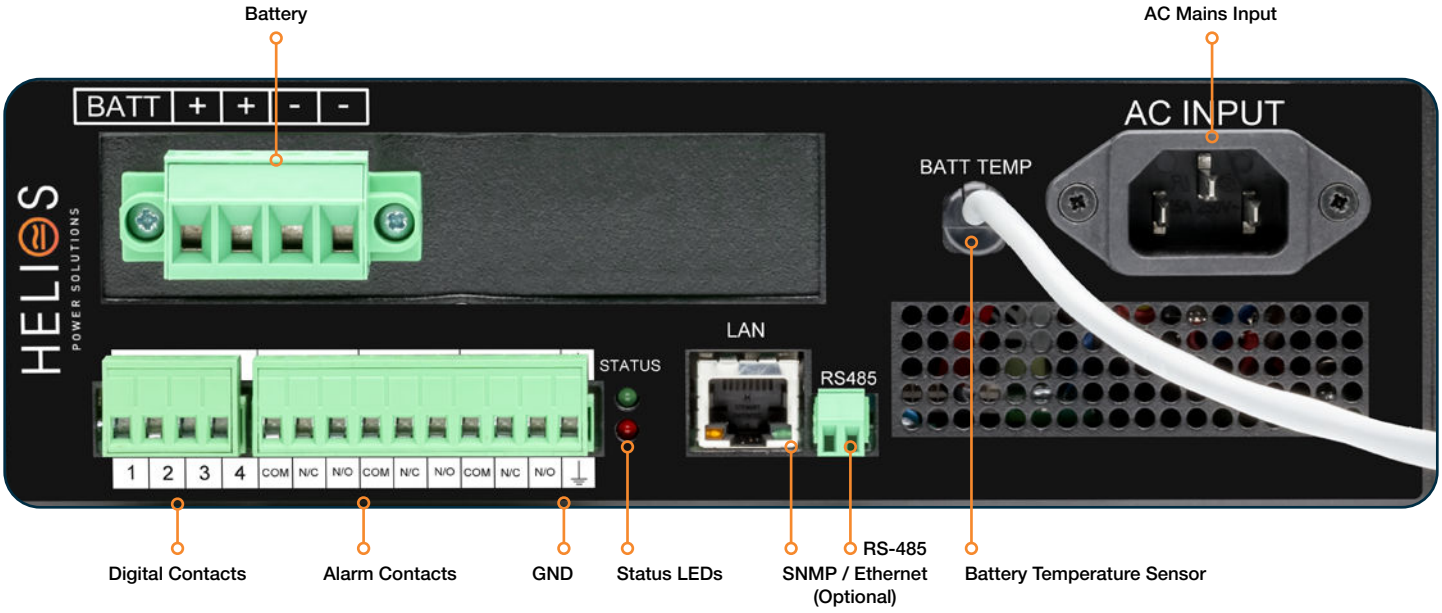
NSR500FxxS Rear Panel

with M8 Studs



NSR500FxxT Rear Panel

with Phoenix Terminals



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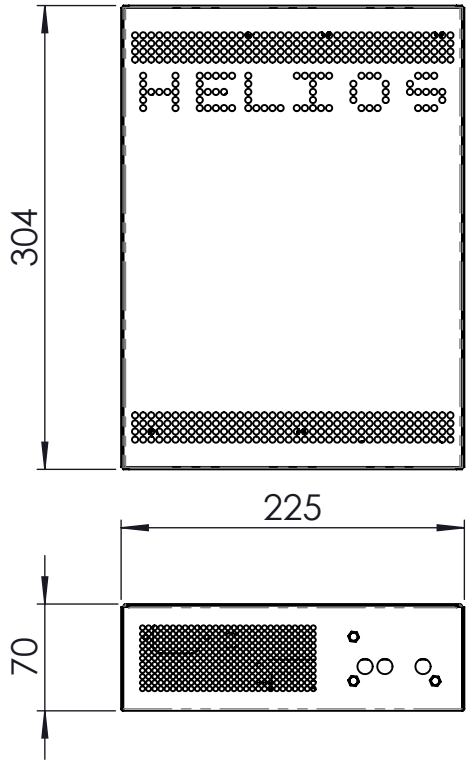
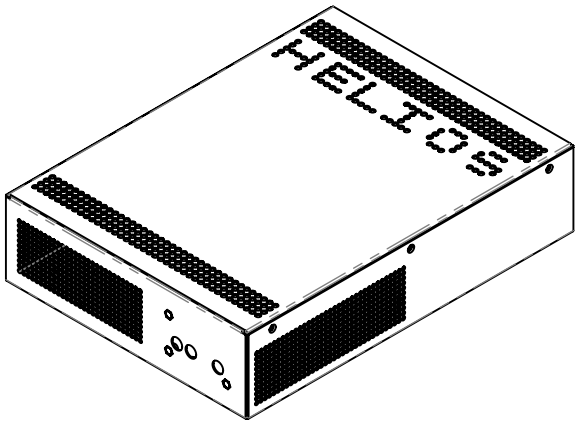
Technical Drawings

Units shown in millimetres (mm)





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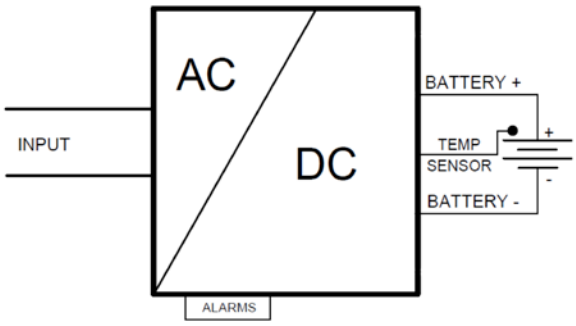
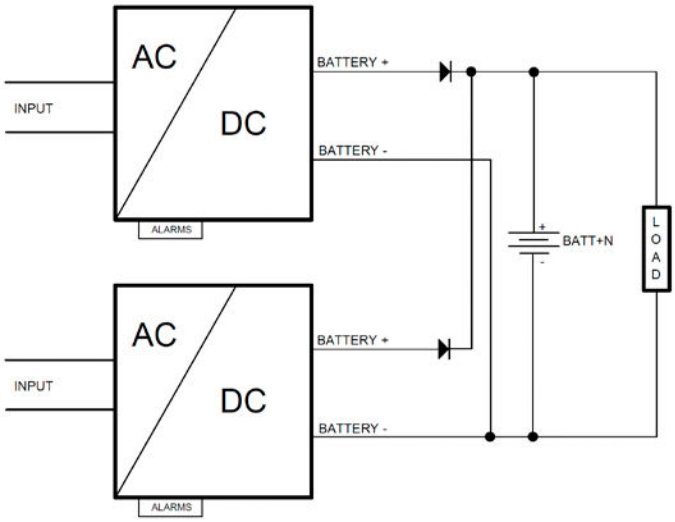
(NTS)

Circuit Block Diagram

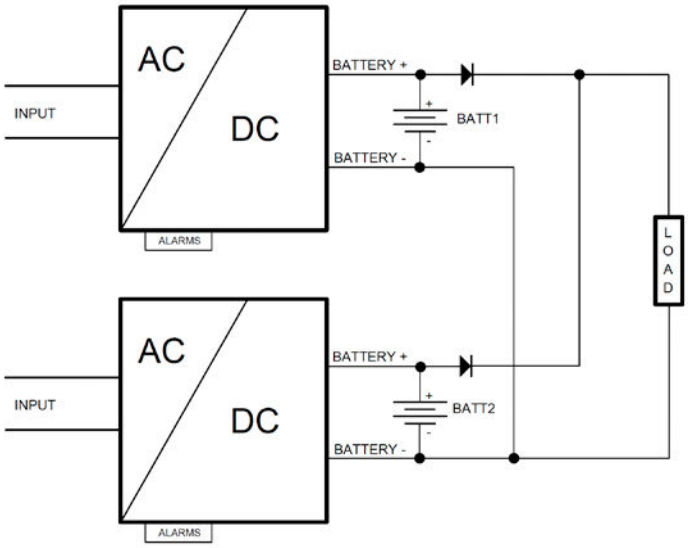


N+1 Redundancy with 2 x NSR Units

Common Battery



Independent Batteries



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