

SP PRO CHARGE & DISCHARGE SETTINGS

The SP Pro inverter charger can be used with MPS batteries

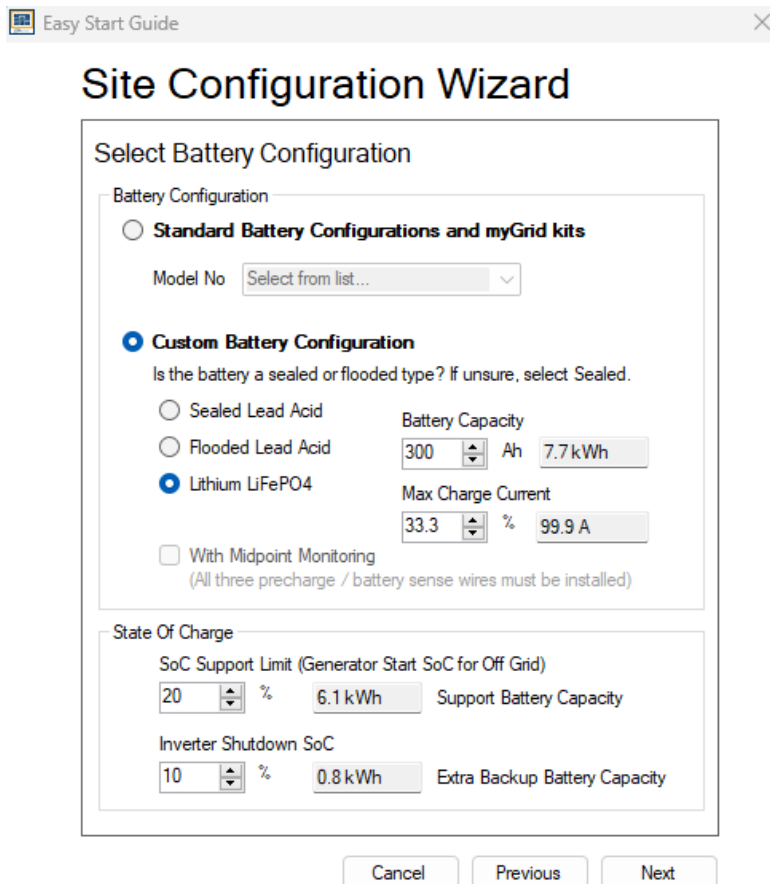
Care should be taken to adjust settings accordingly when having multiple charging sources.

It is recommended to attach the Selectronic SP Pro battery temperature sensor to the case of the battery that will be the hottest. The use of the temperature sensor will increase the life expectancy of the battery.

The SP Pro pre charge circuit must be used to avoid damage to the batteries.

These settings are correct at the time of creation and are subject to change.

- Select “Custom Battery Configuration”
- Select “Lithium LiFePO4”
- Set the “Battery Capacity” to the battery bank capacity (qty x 100ah)
- Set the “Max Charge Current” to 33.3%
- Set “State Of Charge” set points as desired.



Inverter Tab

- DC Shutdown
 - Battery 0% Load – 24.0 volts
 - Battery 100% Load – 23.0 volts
 - Recovery Voltage – 25.0 volts
- SoC Shutdown
 - Enabled
 - 10%

Inverter*	Battery*	Charger*	AC Source*	Solar Hybrid Control*	System*	Inputs / Outputs*	Shunts	Expansion Card Wiring Diagram
Econo Power Save Mode Econo Mode Disabled			Inverter Output Nominal AC Voltage* [210 - 240 V] 240			DC Shutdown		
Econo Transition Level [5 - 50 W] 10			Nominal AC Frequency 50 Hz			Battery 0% Load* [19.8 - 26.4 V] 24.0		
Econo Pulse Period [0.2 - 1 s] 0.5						Battery 100% Load* [19.8 - 26.4 V] 23.0		
						Recovery Voltage* [22.8 - 27.6 V] 25.0		
						SoC Shutdown* Enabled		
						Shutdown SoC* [0 - 100 %] 10		

Battery Tab

- Limits
 - Max Charge Voltage – 29.0 volts
 - Hi Battery Alert – 29.5 volts
 - Hi Battery Alert Clear – 29.2 volts
- AC Coupled Trip
 - AC Coupled Trip – 29 volts
 - Over Target Charge Voltage Trip – 2.0%
 - Over Target Charge Current Trip – 2.0%
 - Trip Delay – 2.0 second
- Battery
 - Periodic Equalise – Disabled
 - Equalise Period – 28 days
 - Periodic Recharge – Disabled
- SoC Setting
 - Peukert's Exponent – 1.00
- Over Temp. Protection
 - Limit Charge above – 45 degrees Celsius
 - Limit Rate 10%

Inverter*	Battery*	Charger*	AC Source*	Solar Hybrid Control*	System*	Inputs / Outputs*	Shunts	Expansion Card	Wiring Diagram
Limits Max Charge Voltage* [24.0 - 34.2 V] 29.0 Hi Battery Alert* [27.0 - 34.2 V] 29.5 Hi Battery Alert Clear* [27.0 - 34.2 V] 29.2 AC Coupled Trip AC Coupled Trip* [24.0 - 36.0 V] 29.0 Over Target Charge Voltage Trip* [0.0 - 25.0 %] 2.0 Over Target Charge Current Trip* [0.0 - 25.0 %] 2.0 Trip Delay* [0.2 - 20.0 s] 2.0									

BMS Charger Adjustment
Float Voltage Adjust*
 [-20.0 - 0.0 %]

Current Target Scale*
 [90.0 - 100.0 %]

Battery
Periodic Equalise*
 Disabled

Equalise Period*
 [2 - 100 d]

Periodic Recharge*
 Disabled

Recharge Period*
 [2 - 100 d]

 Soft Battery
 Disabled

Mid Point
Monitoring*
 Disabled

Mid Point Range*
 [2 - 10 %]

Equalise Request*
 Disabled

SoC Setting
Peukert's Exponent*
 [1.00 - 1.50]

Over Temp. Protection
Limit Charge above*
 [35 - 70 °C]

Limit Rate*
 [0 - 20 %]

Charger Menu

- Charge Settings
 - Max. Charge Current – 33.3%
 - Initial Return Voltage – 28.0 volts
 - Initial Return SOC – 95%
- Initial Stage
 - Voltage – 28.4 volts
 - Current – 100%
 - Time – 1 minute
- Bulk Stage
 - Voltage – 28.8 volts
 - Current – 100%
 - Time – 15 minutes
- Absorption Stage
 - Voltage – 28.8 volts
 - Current – 15 %
- Absorb-Float Transition
 - Net Change – 1%
 - Change Time – 15 minutes
 - Max Time - 60 minutes
- Float Stage
 - Voltage – 28.6 volts
 - Current – 1 %
 - Long Term Voltage – 28.6 volts
- Equalise Stage
 - Voltage – 28.8 volts
 - Current – 1%
 - Time – 1 hour

Inverter*	Battery*	Charger*	AC Source*	Solar Hybrid Control*	System*	Inputs / Outputs	Shunts	Expansion Card	Wiring Diagram
Charge Settings Max. Charge Current* (as % of Battery Capacity) [1.0 - 200.0 %] 33.3 99.9 A Initial Return Voltage* [22.8 V - Float V] 28.0 Initial Return SoC* [0 - 99 %] 95									
Initial Stage Voltage* [24.0 - 31.2 V] 28.4 Current* (as % of Max Chrg Current) [1 - 100 %] 100 99.9 A Time* [1 - 240 min] 1									
Bulk Stage Voltage* [24.0 - 31.2 V] 28.8 Current* (as % of Max Chrg Current) [1 - 100 %] 100 99.9 A Time* [1 - 240 min] 15									
Absorption Stage Voltage* [24.0 - 31.2 V] 28.8 Current* (as % of Max Chrg Current) [1 - 100 %] 15 15.0 A									
Absorb-Float Transition Net Change* (as % of Battery Capacity) [0.1 - 5.0 %] 1.0 Change Time* [1 - 240 min] 15 Max Time* [1 - 240 min] 60									
Float Stage Voltage* [24.0 - 31.2 V] 28.6 Current* (as % of Max Chrg Current) [1 - 100 %] 1 1.0 A Long Term Voltage* [24.0 - 31.2 V] 28.6									
Equalise Stage Voltage* [24.0 - 32.4 V] 28.8 Current* (as % of Max Chrg Current) [1 - 100 %] 1 1.0 A Time* [0.1 - 24.0 hours] 1.0									
Battery Temperature Compensation Reference Temp. A [-10 - <Ref B> °C] 25 Ref. A Temp. Co.* [-10.0 - 0.0 mV/Cell °C] 0.0 0 V/°C Reference Temp. B [-REF A> - 70 °C] 25 Ref. B Temp. Co.* [-10.0 - 0.0 mV/Cell °C] 0.0 0 V/°C Min. Comp. Temp. [-10 - <REF A> °C] 0 Max. Comp. Temp. [-REF B> - 70 °C] 45									