

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 314ah)
- Set the “Max Charge Current” to 48%
- Set “State Of Charge” set points as desired.

The screenshot shows a window titled "Easy Start Guide" with a close button. Below the title bar is the "Site Configuration Wizard" header. The main content area is titled "Select Battery Configuration". It has two radio buttons: "Standard Battery Configurations and myGrid kits" (unselected) and "Custom Battery Configuration" (selected). Under "Custom Battery Configuration", there is a question: "Is the battery a sealed or flooded type? If unsure, select Sealed." Below this are three radio buttons: "Sealed Lead Acid", "Flooded Lead Acid", and "Lithium LiFePO4" (selected). To the right of these are two input fields: "Battery Capacity" with a value of 314 Ah and 16.0 kWh, and "Max Charge Current" with a value of 48.0 % and 150.7 A. Below these is a checkbox for "With Midpoint Monitoring" with a note: "(All three precharge / battery sense wires must be installed)". At the bottom of the wizard is a "State Of Charge" section with two input fields: "SoC Support Limit (Generator Start SoC for Off Grid)" with a value of 30 % and 11.2 kWh, and "Inverter Shutdown SoC" with a value of 20 % and 1.6 kWh. At the bottom of the window are three buttons: "Cancel", "Previous", and "Next".

Inverter Tab

- DC Shutdown
 - Battery 0% Load – 49.0 volts
 - Battery 100% Load – 48.0 volts
 - Recovery Voltage – 51.2 volts
- SoC Shutdown
 - Enabled
 - 10%

Inverter*	Battery*	Charger*	AC Source*	Solar Hybrid Control*	System*	Inputs / Outputs*	Shunts	Expansion Card Wiring Diagram
<div> <div> Econo Power Save Mode Econo Mode Disabled </div> <div> Econo Transition Level [5 - 50 W] 10 </div> <div> Econo Pulse Period [0.2 - 1 s] 0.5 </div> </div> <div> Inverter Output Nominal AC Voltage [210 - 240 V] 240 </div> <div> Nominal AC Frequency 50 Hz </div>								

DC Shutdown
Battery 0% Load*
 [39.6 - 52.8 V]
 49.0

Battery 100% Load*
 [39.6 - 52.8 V]
 48.0

Recovery Voltage*
 [45.6 - 55.2 V]
 51.2

SoC Shutdown*
 Enabled

Shutdown SoC*
 [0 - 100 %]
 10

Battery Tab

- Limits
 - Max Charge Voltage – 57.6 volts
 - Hi Battery Alert – 57.6 volts
 - Hi Battery Alert Clear – 57 volts
- AC Coupled Trip
 - AC Coupled Trip – 57.2 volts
 - Over Target Charge Voltage Trip – 0.5%
 - Over Target Charge Current Trip – 2.0%
 - Trip Delay – 5.0 seconds
- Battery
 - Equalise Period – 28 days
 - Periodic Recharge – Disabled
- SoC Setting
 - Peukert's Exponent – 1.02
- 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
<div> <div> Limits Max Charge Voltage* [48.0 - 68.4 V] 57.6 </div> <div> Hi Battery Alert* [54.0 - 68.4 V] 57.6 </div> <div> Hi Battery Alert Clear* [54.0 - 68.4 V] 57.0 </div> </div> <div> AC Coupled Trip AC Coupled Trip* [48.0 - 72.0 V] 57.2 </div> <div> Over Target Charge Voltage Trip* [0.0 - 25.0 %] 0.5 </div> <div> Over Target Charge Current Trip* [0.0 - 25.0 %] 2.0 </div> <div> Trip Delay* [0.2 - 20.0 s] 5.0 </div>									

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

Current Target Scale
 [50.0 - 100.0 %]
 100.0

Periodic Charging
Periodic Charge
 Disabled

Charge Period
 [2 - 100 d]
 28

Periodic Recharge When On Float
 Disabled

Recharge Period
 [2 - 100 d]
 28

Soft Battery
 Disabled

Mid Point Monitoring
 Disabled

Mid Point Range
 [2 - 10 %]
 5

Periodic Charge Request*
 Disabled

SoC Setting
Peukert's Exponent*
 [1.00 - 1.50]
 1.02

Over Temp. Protection
Limit Charge above*
 [35 - 70 °C]
 45

Limit Rate*
 [0 - 20 %]
 10

Charger Menu

- Charge Settings
 - Max. Charge Current – 48%
 - Initial Return Voltage – 54.2 volts
 - Initial return SOC – 95%
- Initial Stage
 - Voltage – 56.7 volts
 - Current – 100%
 - Time – 1 minute
- Bulk Stage
 - Voltage – 56.7 volts
 - Current – 100%
 - Time – 1 minute
- Absorption Stage
 - Voltage – 56.8 volts
 - Current – 100 %
- Absorb-Float Transition
 - Net Change – 1%
 - Change Time – 10 minutes
 - Max Time - 30 minutes
- Float Stage
 - Voltage – 56.8 volts
 - Current – 100 %
 - Long Term Voltage – 56.8 volts
- Equalise Stage
 - Voltage – 56.8 volts
 - Current – 100%
 - Time – 2 hours

Inverter*	Battery*	Charger*	AC Source*	Solar Hybrid Control*	System*	Inputs / Outputs*	Shunts	Expansion Card	Wiring Diagram
<div>Charge Settings</div> <div>Max. Charge Current* (as % of Battery Capacity) [1.0 - 200.0 %] 48.0 ▾ 150.7 A</div> <div>Initial Return Voltage* [45.6 V - Float V] 54.2 ▾</div> <div>Initial Return SoC [0 - 99 %] 95 ▾</div>									
<div>Initial Stage</div> <div>Voltage* [48.0 - 62.4 V] 56.7 ▾</div> <div>Current (as % of Max Chrg Current) [1 - 100 %] 100 ▾ 150.7 A</div> <div>Time* [1 - 240 min] 1 ▾</div>									
<div>Bulk Stage</div> <div>Voltage* [48.0 - 62.4 V] 56.7 ▾</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100 ▾ 150.7 A</div> <div>Time* [1 - 240 min] 1 ▾</div>									
<div>Absorption Stage</div> <div>Voltage* [48.0 - 62.4 V] 56.8 ▾</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100 ▾ 150.7 A</div>									
<div>Absorb-Float Transition</div> <div>Net Change (as % of Battery Capacity) [0.1 - 5.0 %] 1.0 ▾</div> <div>Change Time* [1 - 240 min] 10 ▾</div> <div>Max Time* [1 - 240 min] 30 ▾</div>									
<div>Float Stage</div> <div>Voltage* [48.0 - 62.4 V] 56.8 ▾</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100 ▾ 150.7 A</div> <div>Long Term Voltage* [48.0 - 62.4 V] 56.8 ▾</div>									
<div>Equalise Stage</div> <div>Voltage* [48.0 - 64.8 V] 56.8 ▾</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100 ▾ 150.7 A</div> <div>Time [0.1 - 24.0 hours] 2.0 ▾</div>									
<div>Battery Temperature Compensation</div> <div>Reference Temp. A [-10 - <Ref B> °C] 25 ▾</div> <div>Ref. A Temp. Co.* [-10.0 - 0.0 mV/Cell/°C] 0.0 ▾ 0 V/°C</div> <div>Reference Temp. B [<Ref A> - 70 °C] 25 ▾</div> <div>Ref. B Temp. Co.* [-10.0 - 0.0 mV/Cell/°C] 0.0 ▾ 0 V/°C</div> <div>Min. Comp. Temp. [-10 - <REF A> °C] 0 ▾</div> <div>Max. Comp. Temp. [<REF B> - 70 °C] 45 ▾</div>									