

SP PRO CHARGE & DISCHARGE SETTINGS

The SP Pro inverter charger can be used with MPS batteries

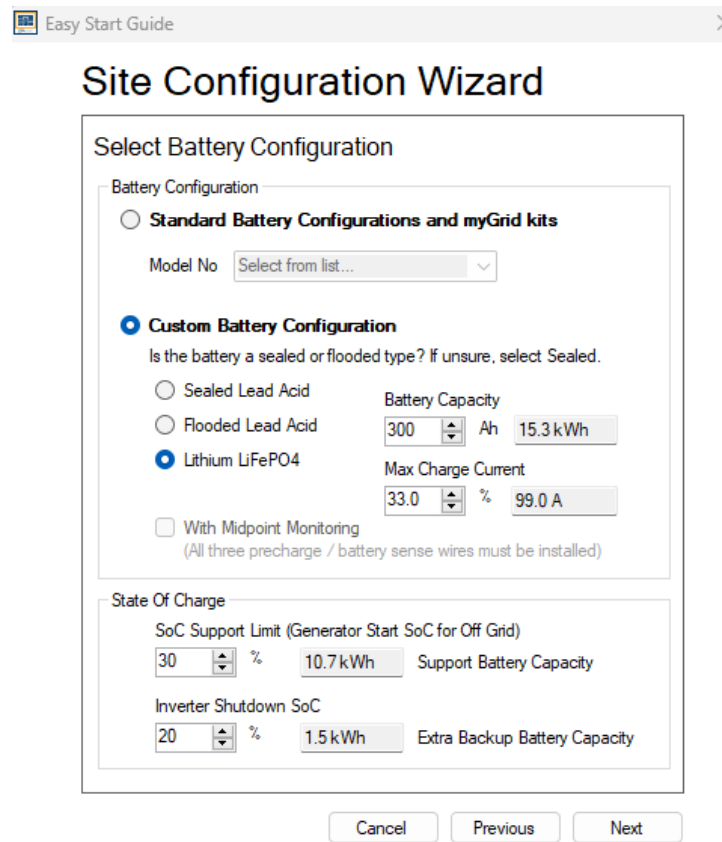
Care should be taken to adjust settings accordingly when having multiple charging sources.

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.



The screenshot shows a window titled "Easy Start Guide" with a close button. Inside is the "Site Configuration Wizard" dialog box. The "Select Battery Configuration" section 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." with three radio buttons: "Sealed Lead Acid", "Flooded Lead Acid", and "Lithium LiFePO4" (selected). To the right of these are input fields for "Battery Capacity" (300 Ah, 15.3 kWh) and "Max Charge Current" (33.0 %, 99.0 A). There is also an unchecked checkbox for "With Midpoint Monitoring" with a note "(All three precharge / battery sense wires must be installed)". The "State Of Charge" section has two rows of settings. The first row is "SoC Support Limit (Generator Start SoC for Off Grid)" with a dropdown set to 30 %, a text field for 10.7 kWh, and a label "Support Battery Capacity". The second row is "Inverter Shutdown SoC" with a dropdown set to 20 %, a text field for 1.5 kWh, and a label "Extra Backup Battery Capacity". At the bottom are "Cancel", "Previous", and "Next" buttons.

Easy Start Guide

Site Configuration Wizard

Select Battery Configuration

Battery Configuration

☐ Standard Battery Configurations and myGrid kits

Model No

☒ Custom Battery Configuration

Is the battery a sealed or flooded type? If unsure, select Sealed.

☐ Sealed Lead Acid

☐ Flooded Lead Acid

☒ Lithium LiFePO4

Battery Capacity Ah

Max Charge Current %

☐ With Midpoint Monitoring
(All three precharge / battery sense wires must be installed)

State Of Charge

SoC Support Limit (Generator Start SoC for Off Grid)

% Support Battery Capacity

Inverter Shutdown SoC

% Extra Backup Battery Capacity

Cancel Previous Next

Inverter Tab

- DC Shutdown
 - Battery 0% Load – 48.0 volts
 - Battery 100% Load – 46.0 volts
 - Recovery Voltage – 50.0 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 Nominal AC Frequency* 50 Hz </div> <div> DC Shutdown Battery 0% Load* [39.6 - 52.8 V] 48.2 Battery 100% Load* [39.6 - 52.8 V] 46.0 Recovery Voltage* [45.6 - 55.2 V] 50.0 SoC Shutdown* Enabled Shutdown SoC* [0 - 100 %] 10 </div>									

Battery Tab

- Limits
 - Max Charge Voltage – 58.0 volts
 - Hi Battery Alert – 59 volts
 - Hi Battery Alert Clear – 58.4 volts
- AC Coupled Trip
 - AC Coupled Trip – 58 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 – 1.02
- 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] 58.0 </div> <div> Hi Battery Alert* [54.0 - 68.4 V] 59.0 </div> <div> Hi Battery Alert Clear* [54.0 - 68.4 V] 58.4 </div> </div> <div> AC Coupled Trip AC Coupled Trip* [48.0 - 72.0 V] 58.0 </div> <div> Over Target Charge Voltage Trip* [0.0 - 25.0 %] 2.0 </div> <div> Over Target Charge Current Trip* [0.0 - 25.0 %] 2.0 </div> <div> Trip Delay* [0.2 - 20.0 s] 2.0 </div>									

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

Current Target Scale*
 [90.0 - 100.0 %]
 100.0

Battery
Periodic Equalise*
 Disabled

Equalise Period*
 [2 - 100 d]
 28

Periodic Recharge*
 Disabled

Recharge Period*
 [2 - 100 d]
 28

 Soft Battery
 Disabled

Mid Point
Monitoring*
 Disabled

Mid Point Range*
 [2 - 10 %]
 5

Equalise Request*
 Enabled

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 – 33.3%
 - Initial Return Voltage – 56 volts
 - Initial return SOC – 95%
- Initial Stage
 - Voltage – 56.8 volts
 - Current – 100%
 - Time – 1 minute
- Bulk Stage
 - Voltage – 57.6 volts
 - Current – 100%
 - Time – 15 minutes
- Absorption Stage
 - Voltage – 57.6 volts
 - Current – 15 %
- Absorb-Float Transition
 - Net Change – 1%
 - Change Time – 15 minutes
 - Max Time - 60 minutes
- Float Stage
 - Voltage – 57.2 volts
 - Current – 1 %
 - Long Term Voltage – 57.2 volts
- Equalise Stage
 - Voltage – 57.6 volts
 - Current – 1%
 - Time – 1 hour

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 %] 33.0 99.0 A</div> <div>Initial Return Voltage* [45.6 V - Float V] 56.0</div> <div>Initial Return SoC* [0 - 99 %] 95</div>									
<div>Initial Stage</div> <div>Voltage* [48.0 - 62.4 V] 56.8</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100 99.0 A</div> <div>Time* [1 - 240 min] 1</div>									
<div>Bulk Stage</div> <div>Voltage* [48.0 - 62.4 V] 57.6</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100 99.0 A</div> <div>Time* [1 - 240 min] 15</div>									
<div>Absorption Stage</div> <div>Voltage* [48.0 - 62.4 V] 57.6</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 15 14.9 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] 15</div> <div>Max Time* [1 - 240 min] 60</div>									
<div>Float Stage</div> <div>Voltage* [48.0 - 62.4 V] 57.2</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 1 1.0 A</div> <div>Long Term Voltage* [48.0 - 62.4 V] 57.2</div>									
<div>Equalise Stage</div> <div>Voltage* [48.0 - 64.8 V] 57.6</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 1 1.0 A</div> <div>Time* [0.1 - 24.0 hours] 1.0</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 [-10 - <Ref A> °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>									