

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.

DC coupled charging may be used and is recommended by MPS. Adding DC coupled charging can help in black start situations and can smooth out charging at the end of the charge cycle. When using

DC coupled charging, it is recommended to set the voltage of the DC coupled device at the below voltages then lower the SP pro voltages by 1 volt. This allows the SP pro to do the bulk charging then allow the DC coupled to finish off the charge cycle. Failure to do this will make the charge sources fight each other.

Model number	SPMC1201	SPLC1200	SPLC1202
Maximum AC Load Power from batteries: 30 secs	18kW	33kW	38kW
1 minute	13.0kW	26.0kW	35.0kW
30 minutes	11.25kW	23.0kW	30.0kW
60 minutes	8.0kW	18.0kW	24.0kW
Continuous 24/7	7.5kW	15kW	20kW
Minimum number of MPS-120-12.8 batteries	2	4	5

- 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% or less
- Set “State Of Charge” set points as desired.

 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**

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

Battery Capacity: Ah

Max Charge Current: %

State Of Charge

SoC Support Limit (Generator Start SoC for Off Grid)

% Support Battery Capacity

Inverter Shutdown SoC

% Extra Backup Battery Capacity

Inverter Tab

- DC Shutdown
 - Battery 0% Load – 119.5 volts
 - Battery 100% Load – 118.5 volts
 - Recovery Voltage – 135.0 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 </div> <div> Nominal AC Frequency 50 Hz </div>								

DC Shutdown
Battery 0% Load*
 [99.0 - 132.0 V]
 119.5

Battery 100% Load*
 [99.0 - 132.0 V]
 118.5

Recovery Voltage*
 [114.0 - 138.0 V]
 135.0

SoC Shutdown
 Enabled

Shutdown SoC
 [0 - 100 %]
 10

Battery Tab

- Limits
 - Max Charge Voltage – 141.0 volts
 - Hi Battery Alert – 144 volts
 - Hi Battery Alert Clear – 141.5 volts
- AC Coupled Trip
 - AC Coupled Trip – 145 volts
 - Over Target Charge Voltage Trip – 1%
 - Over Target Charge Current Trip – 2.0%
 - Trip Delay – 2 seconds
- Battery
 - Periodic Equalise – Disabled
 - Periodic Recharge – Disabled
- SoC Setting
 - Peukert's Exponent – 1.02
- Over Temp. Protection
 - Limit Charge above – 40 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* [120.0 - 171.0 V] 141.0 </div> <div> Hi Battery Alert* [135.0 - 171.0 V] 144.0 </div> <div> Hi Battery Alert Clear* [135.0 - 171.0 V] 141.5 </div> </div> <div> AC Coupled Trip AC Coupled Trip* [120.0 - 180.0 V] 145.0 </div> <div> Over Target Charge Voltage Trip [0.0 - 25.0 %] 1.0 </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
 [50.0 - 100.0 %]
 100.0

Periodic Charging
Periodic Charge
 Disabled

Charge Period*
 [2 - 100 d]
 7

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]
 40

Limit Rate
 [0 - 20 %]
 10

Charger Menu

- Charge Settings
 - Max. Charge Current – 33.3%
 - Initial Return Voltage – 135.6 volts
 - Initial Return SOC – 97%
- Initial Stage
 - Voltage – 138.0 volts
 - Current – 100%
 - Time – 1 minute
- Bulk Stage
 - Voltage – 140.0 volts
 - Current – 100%
 - Time – 5 minutes
- Absorption Stage
 - Voltage – 141.0 volts
 - Current – 20 %
- Absorb-Float Transition
 - Net Change – 1%
 - Change Time – 5 minutes
 - Max Time - 10 minutes
- Float Stage
 - Voltage – 140.0 volts
 - Current – 20 %
 - Long Term Voltage – 140.0 volts
- Equalise Stage
 - Voltage – 140.0 volts
 - Current – 10%
 - Time – 2 hours

Inverter*	Battery*	Charger*	AC Source*	Solar Hybrid Control*	System*	Inputs / Outputs	Shunts	Expansion Card	Wiring Diagram
<div>Charge Settings</div> <div> <div>Max. Charge Current* (as % of Battery Capacity) [1.0 - 200.0 %] 33.3% 99.9 A</div> <div>Initial Return Voltage* [114.0 V - Float V] 135.6 V</div> <div>Initial Return Soc* [0 - 99 %] 97%</div> </div> <div> <div>Initial Stage</div> <div> <div>Voltage* [120.0 - 156.0 V] 138.0 V</div> <div>Current (as % of Max Chrg Current) [1 - 100 %] 100% 99.9 A</div> <div>Time* [1 - 240 min] 1 min</div> </div> <div> <div>Bulk Stage</div> <div> <div>Voltage* [120.0 - 156.0 V] 140.0 V</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 100% 99.9 A</div> <div>Time* [1 - 240 min] 1 min</div> </div> <div> <div>Absorption Stage</div> <div> <div>Voltage* [120.0 - 156.0 V] 141.0 V</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 20% 20.0 A</div> <div>Change Time* [1 - 240 min] 5 min</div> <div>Max Time* [1 - 240 min] 10 min</div> </div> <div> <div>Absorb-Float Transition</div> <div> <div>Net Change (as % of Battery Capacity) [0.1 - 5.0 %] 1.0%</div> <div>Change Time* [1 - 240 min] 5 min</div> <div>Max Time* [1 - 240 min] 10 min</div> </div> <div> <div>Float Stage</div> <div> <div>Voltage* [120.0 - 156.0 V] 140.0 V</div> <div>Current (as % of Max Chrg Current) [1 - 100 %] 20% 20.0 A</div> <div>Long Term Voltage* [120.0 - 156.0 V] 140.0 V</div> </div> <div> <div>Equalise Stage</div> <div> <div>Voltage* [120.0 - 162.0 V] 140.0 V</div> <div>Current* (as % of Max Chrg Current) [1 - 100 %] 10% 10.0 A</div> <div>Time [0.1 - 24.0 hours] 2.0 h</div> </div> </div> <div> <div>Battery Temperature Compensation</div> <div> <div>Reference Temp. A [+10 - +REF B+ °C] 25 °C</div> <div>Ref. A Temp. Co.* [+10.0 - 0.0 mV/Cel °C] 0.0 °V/°C</div> <div>Reference Temp. B [+REF A+ - 70 °C] 25 °C</div> <div>Ref. B Temp. Co.* [+10.0 - 0.0 mV/Cel °C] 0.0 °V/°C</div> <div>Min. Comp. Temp. [+10 - +REF A+ °C] 0 °C</div> <div>Max. Comp. Temp. [-REF B+ - 70 °C] 45 °C</div> </div> </div> </div> </div> <div data-bbox="183 2157 509 2195" data-label="Page-Footer"> <p>www.mictronix.com.au</p> </div> <div data-bbox="925 2175 1067 2213" data-label="Page-Footer"> <p>26/6/2025</p> </div> <div data-bbox="1212 2175 1334 2213" data-label="Page-Footer"> <p>Page 5</p> </div> <div data-bbox="1487 2175 1562 2210" data-label="Page-Footer"> <p>V1.2</p> </div></div></div></div>									