PSL-SH-1260 12.8V 6.2 AH
Rechargeable Lithium Battery
PSL SH – High-Rate Series

BATTERY FEATURES
• Super safe lithium iron phosphate (LiFePO4) chemistry reducing the risk of explosion or combustion due to high impact, over-charging or short circuit situation
• Protection Circuit Module (PCM) controls the parameters of the battery to provide optimum safety by protecting against over-charging and over-discharging
• PCM contains a balance circuit, optimizing battery performance
• Higher voltage capability through serial connections
• Delivers twice the power of lead acid batteries, even at high discharge rates, while maintaining constant power
• Faster charging and lower self-discharge
• Up to 10 times more cycles than lead acid batteries
• Compact and only 40% of the weight of comparable lead acid batteries
• Rugged impact resistant ABS case

APPROVALS
• UL 1642 cell certificate
• IEC 62133 cell certificate
• UN 38.3 certified
• ISO9001:2015 - Quality management systems

PERFORMANCE SPECIFICATIONS
Nominal Voltage 12.8 V
Rated Capacity 6.2 AH at a Constant Current of 0.2C to 10V
Stored Energy 79.36 Wh
Cycle Life (@DOD100%) 1000 Cycles
Approximate Weight 1.76 lbs. (0.8 kg)
Internal Resistance ≤50 mΩ
Max Charge Current 6 A
Max Discharge Current 20 A
Charge Cut-off Voltage 14.6 V
Recommended Discharge Cut-Off Voltage 10 V
Series & Parallel Connection 2 batteries can be connected in series, parallel connection not recommended

APPLICATIONS
• Medical
• Solar
• Wind
• Mobility
• Data Center
• Transport
• Sports & Recreation
• Utility

OPERATING TEMPERATURE RANGE
Charge
Discharge
Recommended
32°F (0°C) to 113°F (45°C)
14°F (-10°C) to 140°F (60°C)
59°F (15°C) to 95°F (35°C)

SELF-DISCHARGE RATE
3%/month

LONG TERM STORAGE
Charge every 6 months or as soon as OCV is 12.8V

POWER SONIC CHARGERS
Contact us for information on a suitable charger

LIFE EXPECTANCY (YEARS)
2 years at one cycle per day

SHORT CIRCUIT PROTECTION
Automatically recover after removal of short

DIMENSIONAL TOLERANCES
+/- 0.04 in. (+/- 1mm) for length and width
+/- 0.08 in. (+/- 2mm) for height dimensions

TERMINAL TYPE
F2

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To ensure safe and efficient operation always refer to the latest edition of our Technical Manual, as published on our website.

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Rechargeable Lithium Battery
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**BENEFITS OF LITHIUM**
Lithium offers several performance benefits versus its sealed lead acid (SLA) equivalent. A lithium battery’s capacity is independent from the discharge rate and provides constant power throughout its discharge. The degradation of a lithium battery at a high temperature is significantly reduced in comparison to SLA.
Lithium has ten times the cycle life as SLA at room temperature. Even at an elevated temperature, lithium still has increased cycle life over SLA at room temperature.
Lastly, Lithium charging follows a similar charging profile as SLA, Constant Current Constant Voltage (CC/CV). However, lithium can be charged faster, without the need for a maintenance float charge.

**PCM TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over-charge</td>
<td></td>
</tr>
<tr>
<td>Over-charge voltage for each cell</td>
<td>3.80 V</td>
</tr>
<tr>
<td>Over-charge release voltage for each cell</td>
<td>3.60 V</td>
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<tr>
<td>Over-charge release method</td>
<td>Protection releases when all cell voltages drop below the over-charge release voltage</td>
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<tr>
<td>Over-discharge</td>
<td></td>
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<tr>
<td>Over-discharge voltage for each cell</td>
<td>2.00 V</td>
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<tr>
<td>Over-discharge release voltage for each cell</td>
<td>2.50 V</td>
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<tr>
<td>Over-discharge release method</td>
<td>Protection releases upon charging</td>
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<tr>
<td>Over current</td>
<td></td>
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<tr>
<td>Discharge over current protection</td>
<td>80-100 A</td>
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<tr>
<td>Over-current delay time</td>
<td>50-150 ms</td>
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<tr>
<td>Over current release method</td>
<td>Remove load for the over-current protection to release</td>
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<tr>
<td>Battery temperature</td>
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<tr>
<td>Over-temperature protection</td>
<td>65° C</td>
</tr>
<tr>
<td>Release temperature</td>
<td>48° C</td>
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</tbody>
</table>

**FURTHER INFORMATION**
Please refer to our website [www.power-sonic.com](http://www.power-sonic.com) or email us at technical-support@power-sonic.com for a complete range of useful downloads, such as product catalogs, material safety data sheets (MSDS), ISO certification, etc.