

PS36L-EX Battery Pack



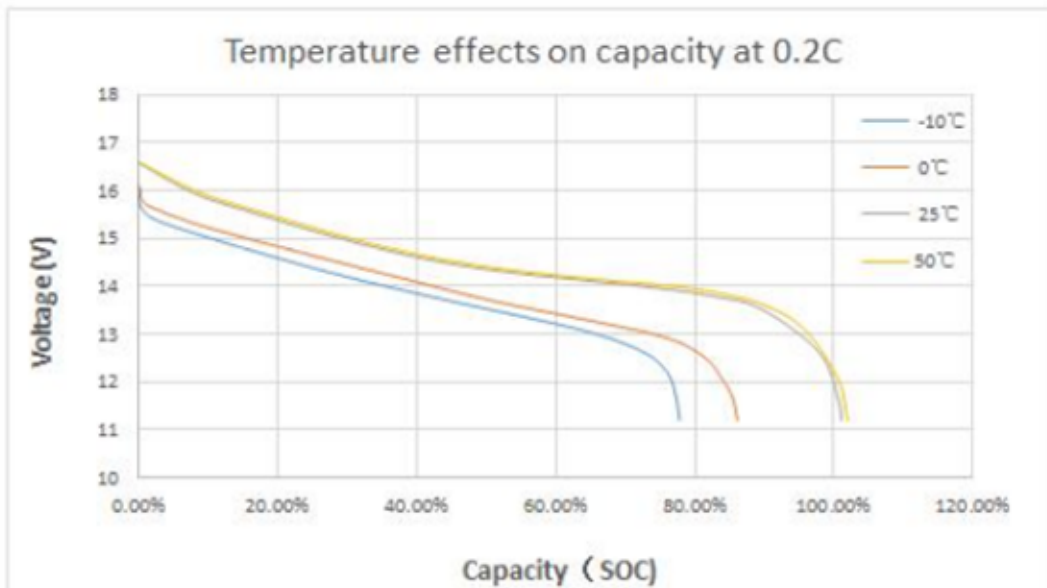
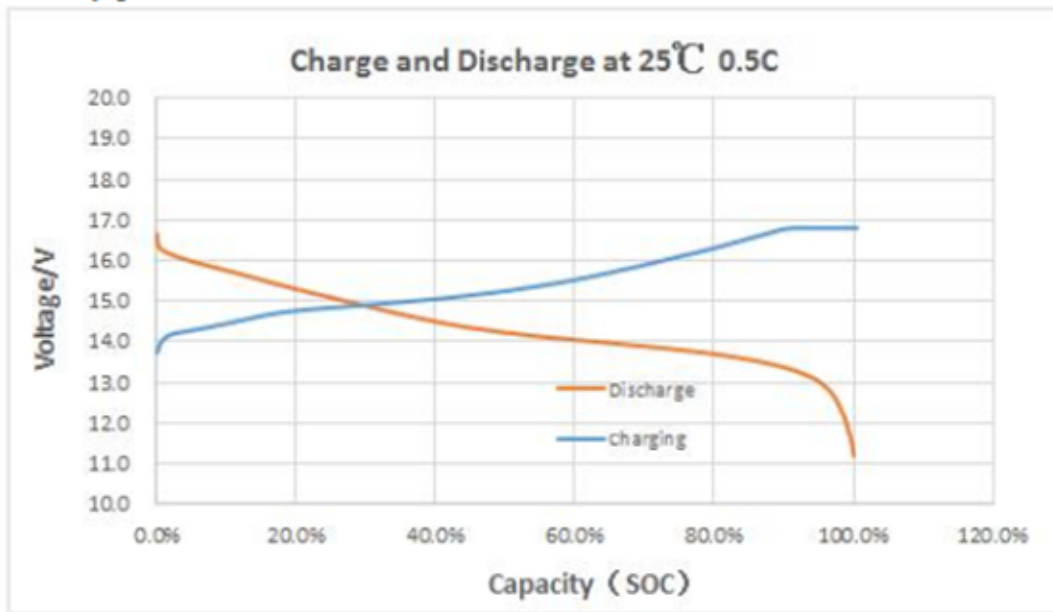
- Versatile design allows for World’s easiest wall-mountable solution or out-of-the-box desktop install.
- Providing the Industry’s only reverse surge protection on VDC output connection to offer a fully protected solution for any indoor deployment.
- Install as stationary UPS or charge and use portable battery power for off-grid applications.

Item	Specification
Typical Capacity::	5200 mAhr
Minimum Capacity:	5100 mAhr
Nominal Voltage:	14.8 Vdc
Charge Modes:	Constant Current (CC), Constant Voltage (CV)
Maximum Charge Voltage	16.8V (+/- 0.5) V
Maximum Continuous Charge Current:	2600 mA
Charging Cut Off Current:	156 +/- 20 mA
Maximum Continuous Discharging Current	5000 mA
Discharging Ending Voltage:	12Vdc
Recommended Charge and Discharge Temperatures:	Charge: 32F ~ 113F (0c~45C) Discharge: -4F ~ 140F (-20C ~ 60C)
Humidity Range	0 to 90% RH (non-condensing)
Battery System Dimensions:	6.1" X 3.5" X 1.3" (Max 155mm X 89mm X 34mm)
Weight:	1.1lbs +/- 0.02 lbs.(505 +/- 10 g)
Cycle Life:	~ 300 cycles
Self-Discharge Rate:	< 5% per month.
Cell Type	18650E2600
Battery Pack Configuration:	4S2P



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Electrical/BMS Characteristics	
Cell Over Voltage Protection:	Over Voltage Protection (Max: 4.25 +/- 0.025V Over Charge Detection Delay: 0.5S ~ 1.5s Over Charge Release Voltage: 4.15 +/- 4.15 +/- 0.08V
Cell Over Discharge Protection:	Over Discharge Detection Voltage: 2.50 +/- 0.08V Over Discharge Detection Delay: 50 ~ 150 ms Over Discharge Release Voltage: 3.0V +/- 0.1V
Over Current Protection:	Over Current Detection Voltage: 0.1 +/- 0.025V Over Current Detection Circuit: 6 ~ 10 A Detection Delay Time: 5 ~ 15ms Release Condition: No Load
Short Circuit Protection:	Detection Condition: Hard short to battery pack. Detection Delay Tims: 100 to 600 microseconds Release Condition: Short removed.
Main Loop resistance:	RSS \leq 40 milliohm
BMS Current Consumption:	40 microamps (Max)
Max Discharging Current:	\leq 5A
Thermal Safety Switch	
Temperature Control Swich Part Number:	TB02-BB8D -65C (Thermal Safety Switch)
Device Temperature Resistance:	392F (200C)
Combustion Grade:	V-0
Thermal Cutoff Temperature:	149F +/- 9F (65C +/- 5C)
Reset Temperature:	118F +/- 18F (48C +/- 10C)
Temperature Fuse Protection	
Fuse Part Number:	F00093C
Fusing Temperature:	199.4F (93C)
Maximum Ambient Temp.	172.4F (78C)
Max Current:	10A, 250Vac
Recovery Temperature:	NONE, the fuse is permanently damaged once it is triggered.
Over Voltage Protection	
Reverse Stand-off Voltage:	22Vdc
Breakdown Voltage (VBR):	24.4Vdc (min), 26.9 (max)
Test Current:	1 mA
Max Clamping Voltage:	35.5Vdc
Max Peak Pulse Current:	11.27A
Max Reverse Leakage:	5 microamps





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Procedure for Recommended Storage and Maintenance of Lithium-Ion Battery Packs

1. Storage Conditions

1.1. Temperature:

- 1.1.1. Store batteries in a cool, dry place.
- 1.1.2. Optimal storage temperature is between 15°C and 25°C (59°F to 77°F).
- 1.1.3. Avoid storing in temperatures above 40°C (104°F) or below 0°C (32°F).

1.2. Humidity:

- 1.2.1. Keep batteries in a low-humidity environment.
- 1.2.2. Ideal relative humidity is between 20% and 60%.

1.3. Ventilation:

- 1.3.1. Ensure storage area is well-ventilated to prevent heat accumulation.

1.4. Isolation:

- 1.4.1. Store batteries away from flammable materials and direct sunlight.

2. Charge State

2.1. Storage Charge Level:

- 2.1.1. Store batteries at around 50% charge (3.7-3.8V per cell; 14.8-15.2 per pack).
- 2.1.2. Avoid storing fully charged (4.2V per cell or 16.8V per pack) or completely discharged (below 3.0V per cell or 12V per pack).

2.2. Periodic Maintenance:

- 2.2.1. Check the charge level every 6 months.
 - 2.2.1.1. Typically, the PS36L-EX battery packs can last up to one year.
- 2.2.2. Recharge to 50% if the charge level drops below 20%.

3. Physical Handling

3.1. Protection:

- 3.1.1. Use protective casings or covers to prevent physical damage.
- 3.1.2. Avoid placing heavy objects on top of stored batteries.

3.2. Orientation:

- 3.2.1. Store batteries in a stable orientation to prevent them from falling or being knocked over.
- 3.2.2. Avoid stacking batteries directly on top of one another without protective layers in between.

4. Inspection and Maintenance

4.1. Regular Inspection:

- 4.1.1. Inspect batteries for signs of damage, leakage, or swelling every 3 months.
- 4.1.2. Remove and properly dispose of any damaged batteries immediately.

4.2. Cleaning:

- 4.2.1. Keep battery contacts clean and free of dust or debris.
- 4.2.2. Use a dry cloth to wipe contacts if necessary.

4.3. Battery Testing:

- 4.3.1. Test battery voltage and capacity periodically to ensure they are within safe operating ranges.
- 4.3.2. Use a multimeter or battery analyzer for accurate measurements.

5. Disposal

5.1. End of Life:

- 5.1.1. Follow local regulations for battery disposal.
- 5.1.2. Recycle batteries at designated recycling centers to prevent environmental harm.

5.2. Safe Handling:

- 5.2.1. Discharge batteries to around 50% before disposal if possible.
- 5.2.2. Use protective gloves and goggles when handling damaged or leaking batteries.



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By following these procedures, you can ensure the safe storage and maintenance of lithium-ion batteries, prolonging their lifespan and reducing the risk of accidents or damage.