

12.8V-42Ah-538Wh-SP-U1

LiFePO₄ | Voltage: 12.8V | Capacity: 42Ah | Energy: 538Wh

IEC 62133, UN 38.3, UL 2054, CE



FEATURES:

Teviot Technology introduces an innovative LiFePO₄ battery pack that sets new standards in efficiency, safety, and performance. Designed for demanding applications, our battery pack offers unmatched advantages over traditional lead acid batteries, ensuring it is the optimal choice for a wide array of applications.

Unparalleled Efficiency and Safety

Superior Capacity: This Lithium-Ion Technology battery pack delivers double the capacity of comparable lead acid batteries in a similar size, significantly enhancing operational efficiency.

Lightweight Design: With half the weight of traditional batteries, our pack ensures easier handling and installation, reducing the overall system weight for mobile applications.

Enhanced Safety: Featuring UL IECC 26650 cells with ceramic coated separators, our battery pack offers higher reliability and safety, minimizing risks and ensuring peace of mind.

Robust Battery Management System (BMS): Exclusively designed and built by Teviot Technology, the BMS provides comprehensive protection and optimization of the battery's performance, ensuring up to 4000 full depth discharge cycles.

Compatibility and Versatility

Medical Cart UPS Compatibility: Fully compatible with Triplite & Power VAR Medical Cart UPS systems, offering a reliable power solution for critical healthcare equipment.

External Charge Capability: Equipped with a dedicated charger port, this battery pack can be easily charged outside of UPS-capable operations, adding flexibility to its use.

Ideal for Light Applications: Perfectly suited for light trolling motors and other applications up to 20A, providing reliable power without the risk of damage from full discharge.

Charger Recommendations:

For optimal performance and longevity, use a general-purpose lead acid charger 14.4V with a maximum output of 21A. We recommend a setting of 14.4V 15A for most applications.

Compliance and Safety

Our battery packs are manufactured using UL IECC 26650 cells with ceramic coated separators, enhancing reliability and safety. This product meets the highest industry standards for shipping and handling, classified as UN 3480 CLASS 9 for lithium batteries.





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FEATURE SHEET - REV1.3

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Quiescent Current	MIN	TYP	MAX
At 3.3V cell voltage	-	-	10mA
Sleep Mode	-	-	400µA

Under Temperature	MIN	TYP	MAX
Charge Under Temperature Trip	-6 °C	-5°C	-4 °C
Charge Under Temperature Release/Warning	4 °C	5 °C	6 °C
Discharge Under Temperature Trip	-26 °C	-25 °C	-24 °C
Discharge Under Temp Release/Warning	-16 °C	-15 °C	-14 °C

Over Temperature	MIN	TYP	MAX
Charge Over Temperature Trip	58 °C	65°C	66 °C
Charge Over Temperature Release/Warning	49 °C	50 °C	51°C
Discharge Over Temperature Trip	74 °C	75°C	76 °C
Discharge Over Temp Release/Warning	64 °C	65 °C	66°C

Mechanical Specifications	
Dimensions (L x W x H)	195 x 130 x 185 mm (12.9" x 6.8" x 9.1")
Weight	11.9 lbs (5.4 kg)
Terminal Type	M6 x 1.25 x 12mm
Terminal Torque	80 - 100 in-lbs (9 - 11 N-m)
Case Material	ABS
Enclosure Protection	IP67

Interface	
Digital	SMBus Rev1.1 via an RJ45 Connector RJ45 Connector Pinouts: 7 - SDL 6 - SCL 8 - ENBL 1 - P-
State of Charge (SOC)	5 LED Display with push button

Charger Settings at room temperature of 23±2°C:
Can use general purpose lead acid charger:
Maximum 14.4V 21A.
Recommended 14.4V 15A.

Compliance Specifications	
Certifications	UN38.3 (battery) CE (battery) UL1642 & IEC62133 (cells)
Shipping Classification	UN 3480, CLASS 9

UNDER VOLTAGE	MIN	TYP	MAX
Under Voltage	9.9 V	10 V	10.1V
Under Voltage Delay Time	-	10 Sec.	-
Under Voltage Release (>30 Sec.)	13.0	13.2V	13.4V

Over VOLTAGE	MIN	TYP	MAX
Over Voltage	14.9 V	15 V	15.1 V
Over Voltage Delay Time	-	10 Sec.	-
Over Voltage Release	14.2 V	14.4 V	14.6 V

Over Current	MIN	TYP	MAX
Discharge Overcurrent Trip ^a	43.5A	44.0A	44.5A
Discharge Overcurrent Trip Delay Time ^a	4 Sec.	5 Sec.	6 Sec.
Discharge Overcurrent Release – Remove Load	7 Sec.	8 Sec.	9 Sec.

Short Circuit Current	MIN	TYP	MAX
Short Circuit Current Trip	150A	160A	170A
Short Circuit Current Trip Delay Time ^a	0.6ms	0.9ms	1.2ms
Short Circuit Current Release -Remove Load	4 Sec.	5 Sec.	6 Sec.

Charge Current	MIN	TYP	MAX
Charge Overcurrent Trip ^a	21.5A	22.0A	22.5A
Charge Overcurrent Trip Delay Time ^a	4 Sec.	5 Sec.	6 Sec.





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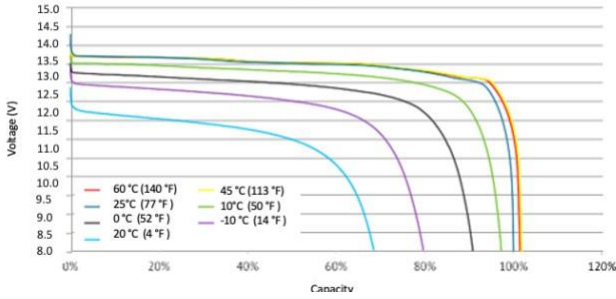
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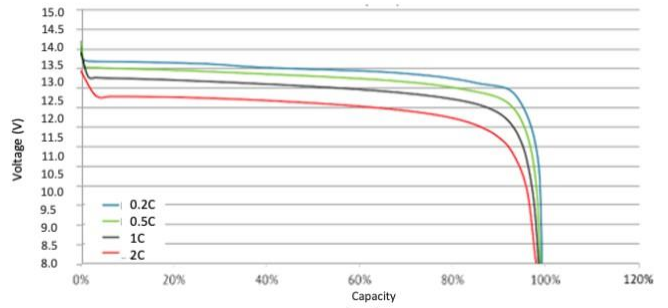
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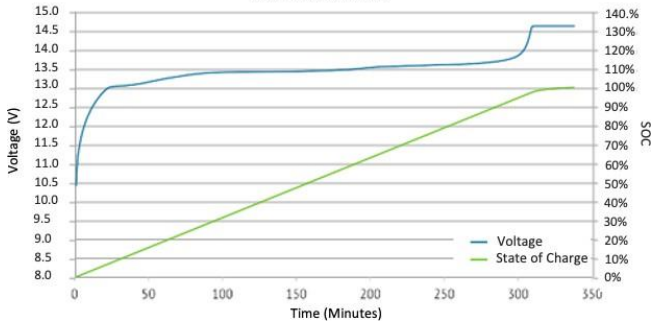
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS TEMPERATURES
DISCHARGE 1C



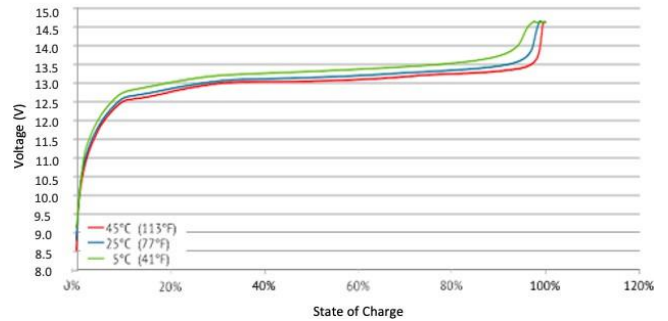
DISCHARGE VOLTAGE CHARACTERISTICS AT VARIOUS RATES
25 °C (77 °F)



CHARGE VOLTAGE AND STATE OF CHARGE (SOC)
CHARGE 0.2C AT 25°C



CHARGE VOLTAGE CHARACTERISTICS AT DIFFERENT TEMPERATURES
CHARGE 0.2C



CYCLE LIFE vs. DEPTH OF DISCHARGE (DOD)
DISCHARGE 0.5C/CHARGE 0.5C @ 25°C (77°F)

