

BE SMART URB12450

ULTRALIFE's URB12450-U1-SMB Lithium Iron Phosphate (LiFePO4) smart battery offers incredible performance in a wide range of transportable and stationary equipment, including medical carts, delivery robots and UPS systems. The inclusion of Ultralife's SMART CIRCUIT™ battery management electronics provides the user with accurate runtime information in addition to a balancing and protection system which maximizes both safety and performance.

The URB12450-U1-SMB is specifically designed to replace and outperform lead acid batteries in mission critical applications. The tough UL 94V-0 flame retardant polycarbonate case ensures internal cells and electronics are protected at all times and, unlike a lead acid battery, the URB12450-U1-SMB can be mounted in any direction and does not require charging in a vented area. When used in a cyclic application, more than 2,000 cycles are possible, making it a truly 'fit & forget' proposition for many applications.

The inclusion of Ultralife's SMART CIRCUIT™ battery management electronics and RJ45 communication port allows host devices to communicate with the battery via SMBus. Important battery information such as Runtime to Empty (minutes), Relative State of Charge (%) and Cycle Count (#) is available; making the battery an active part of any host device's power management system.

The URB12450-U1-SMB is qualified for use with medical cart inverters from Tripp Lite and Ametek Powervar, replacing lead acid batteries or LiFePO4 batteries from Valence Technology, Inventus Power or Power-Sonic.

As safety is paramount, the URB12450-U1-SMB is internally protected against over-charge, over-discharge, over-current and over-temperature while a cell balancing system ensures the internal battery cells operate in unison, promoting a higher degree of safety, longer runtime per cycle and more cycles over life.



The URB12450-U1-SMB can be continuously discharged at currents of up to 20A and pulsed at currents up to 100A, which is ideal for high power motor driven applications. Regulatory compliance is assured as URB12450-U1-SMB meets the requirements of ST/SG/AC.10.11 section 38.3 (transportation) and is certified to IEC 62133-2:2017 (safety). This allows for easy integration into medical equipment certified to IEC 60601-1.

OEMs can rest assured that the URB12450-U1-SMB meets the most stringent quality standards as its manufactured in the USA at Ultralife's NY plant. The facility holds both ISO 9001 and ISO 13485 registration.

KEY FEATURES

- Compatible with medical cart inverters from Tripp Lite and Ametek Powervar
- Uniform voltage during discharge
- No need for trickle charging to retain charge
- Significantly lighter than SLA batteries with the same energy
- Does not become gaseous during use
- Stable voltage over a wide temperature range
- Can be properly charged using a 2 phase SLA charger
- IEC 62133-2:2017 compliant
- SMBus communication interface

COMMON APPLICATIONS

- Medical carts
- Scooters / wheelchairs
- UPS battery replacement
- Solar power battery
- Robotics & motor bots

ASSEMBLED IN THE USA



TECHNICAL SPECIFICATION

URB12450-U1-SMB



LITHIUM IRON PHOSPHATE (LIFEPO4) BATTERY

Voltage (nominal)		12.8V
Capacity (nominal)		45.6Ah
Energy (nominal)		583.7Wh
Energy Density		107Wh/Kg 110Wh/l
Discharge current (maximum)		20.0A
Discharge power (maximum)		200.0W
Internal resistance		<35mΩ
Self Discharge		<5% per month
Cycle Life		>2000
Housing		Hard plastic (polycarbonate)
Dimensions	Length	208.5 ± 2mm (8.21in)
	Width	136.4 ± 2mm (5.37in)
	Height	182.1 ± 2mm (7.17in)
Weight		5.44 ± 0.2kg (12.0 ± 0.4lbs)
Operating temperature	Charge	0°C to +45°C
	Discharge	-20°C to +60°C
Storage temperature		-40°C to +60°C
Communications		SMBus
Active Protection System		Internal Battery Management System (BMS) protects against over-charge, over-discharge, over-current and over-temperature
Cell balancing function		✓
UN 38.3 (transportation) certified		✓
IEC 62133-2:2017 (safety) certified		✓

Medical cart inverter compatibility ¹	Tripp Lite	HC150SL, HCINT150SL, HC150ATD
	Ametek Powervar	ABCE150-11M2, ABCE150-22M2
Battery compatibility ²	Valence Technology	U1-12RT, U1-12RJ
	Inventus Power	U1-40
	Power-Sonic	PSL-12450

1. Some legacy medical inverter systems may require a firmware update to fully utilize battery fuel gauging.
2. When used in other, non-medical inverter systems please contact Ultralife for compatibility advice.



Assembled in the USA & meets stringent quality standards



ULTRALiFE®

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- Specification details are correct at the time of printing.
- For the latest data please refer to published specifications which are available on our website at www.ultralifecorp.com
- Operator & regional variations may apply to the transport of Lithium Ion batteries. Check with your operator.