

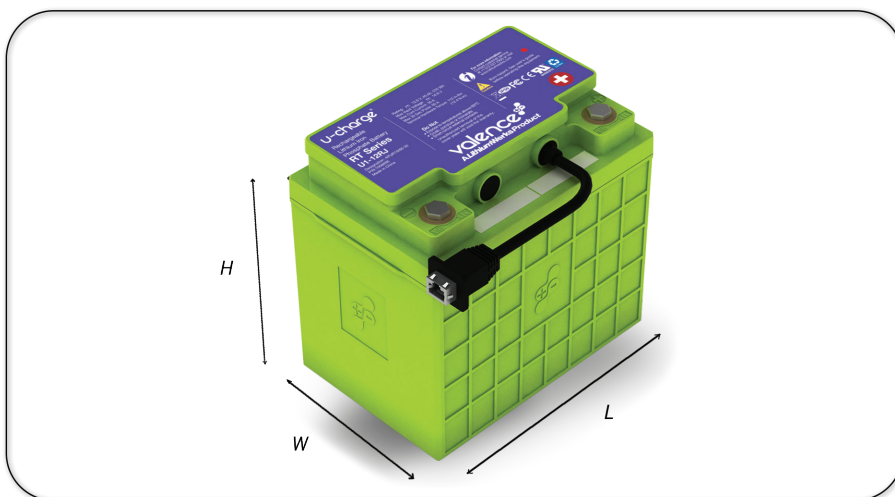
U1-12RJ

Part Number 1008896

U-Charge Group U1 Lithium Iron Phosphate Battery

Built on Lithium Werks' decade-long experience of producing 12 V batteries for the medical market, the U1-12RJ is a 12-volt, 45 Ah battery that is the size of a Group U1R battery, but with a longer run time than a larger 55 Ah lead acid battery. The battery was specifically designed to communicate with advanced li-ion inverter/chargers such as those made by Tripp Lite® and AMETEK®/POWERVER®®, requiring only a simple RJ45 patch cable to provide communications.

The U1-12RJ is a perfect solution for medical carts, carts on wheels (COWs), or any type of mobile medical device that needs autonomous power.



Electrical Specifications

Voltage (nominal)	12.8 V
Capacity @ C/5, 25 °C (typical)	45 Ah
Energy	576 Wh
Discharge Cont. / Peak (30 sec)	30 A / 80 A
Discharge Cutoff Voltage	10 V
Recommended Charge Voltage	14.6 V
Charge Float Voltage Range	13.8 - 14.6 V
Recommended Charge CCCV	≤ 20 A to 14.6 V

Discharge Temperature	-10 °C to 50 °C
Charge Temperature	0 °C to 45 °C
Specific Energy	90 Wh/kg
Energy Density	122 Wh/l

Mechanical Specifications

Height	183 mm	7.20"
Width	131 mm	5.16"
Length	197 mm	7.76"
Weight	6.4 kg	14.1 lbs
Cell Configuration	4IFpR19/66-30	

Terminal Hardware	M6 x 1.0	
Terminal Torque	12.4 Nm	110 in-lbs
Plastic Case	Flame Retardant	
IP Rating	IP56	
BCI Group	U1R	

Features

- Intrinsic safety profile of lithium iron phosphate battery chemistry
- UL 2054 Recognized and complies IEC 62133 CB Scheme
- Built-in protection from over-charge, over-discharge, and short circuit conditions
- Communicates battery status and accurate state of charge to inverter-charger or BDI via RJ45 connector
- Maintenance-free design
- Recharges completely in as little as 2 hours
- 24 hour run time when charged during shift changes/breaks
- >4000 cycles at 80% DOD
- Series connection up to four (4) batteries (48 V)

Benefits of Lithium (LiFePO₄)

Robust Safety

Multiple levels of protection prevent operation outside of current, voltage, and temperature limits.

- No thermal runaway
- No corrosive acid leaks
- No explosive gassing

Longer Life

Provides > 10 times the life of lead acid batteries.

Efficient & Fast Charging

High charge efficiency of >90%. Increases productivity, reduces energy costs and eliminates the need for investments in battery change out systems.

Space and Weight Efficiency

Systems provide >3 times the energy per weight of lead acid.

High, Uniform Discharge Voltage

Delivers stable voltage during discharge. Increases equipment performance and reduces motor heat.

Environmentally Safe

Does not contain toxic metals such as cobalt, lead, cadmium, nor any corrosive acids or alkalis.

Contact Us

www.lithiumwerks.com/contact

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Accessories



The U-Charge® Battery Discharge Indicator (U-BDI) displays a 10-segment state of charge, as well as fault conditions. The U-BDI must be used when U1-12RJ battery modules are connected in series or parallel for system balancing.

U-BDI part number: 1004467



The Diagnostic Kit allows connection of a PC or laptop to the battery to monitor individual cell voltages and temperatures. It also enables a sleep function for long-term storage. It includes an RS485 to USB converter for data transfer.

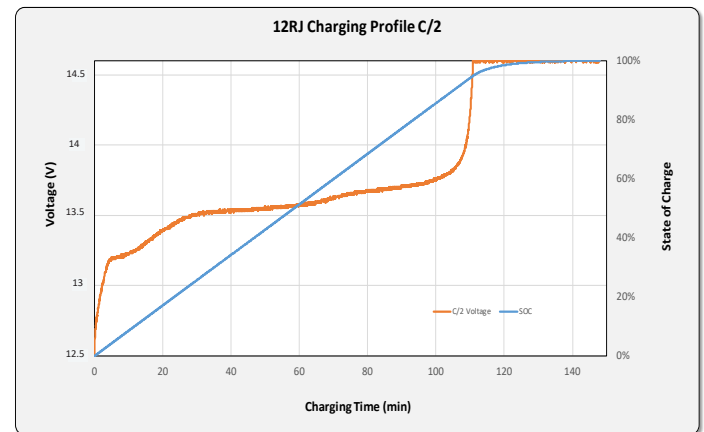
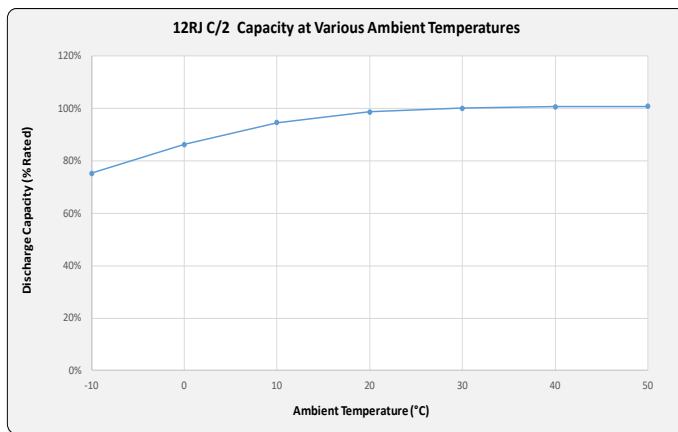
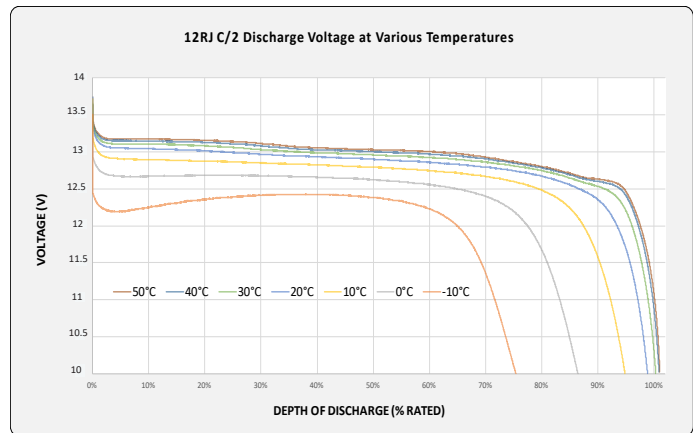
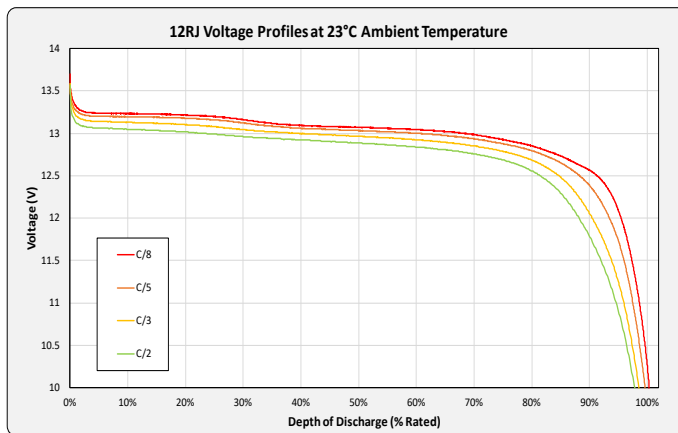
Diagnostic Kit part number: 1006216



The X cable is needed for either the U-BDI or the Diagnostic Kit. It must be used as a communication cable between U1-12RJ modules and U-BDI.

X Cable part number: 1007050

Performance



Certifications

- UL 2054
- UL 1642 (cells)
- IEC 62133
- FCC Class B, CE
- UN 38.3

Shipping Classifications
UN 3480
Class 9



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