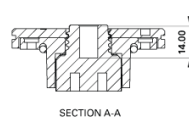
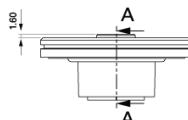
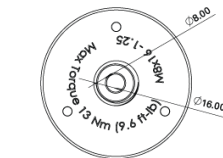
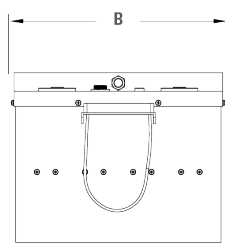
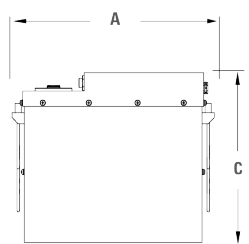




## AES LiFePO<sub>4</sub> Industrial Mobile Battery

Discover® Advanced Energy System (AES) LiFePO<sub>4</sub> Lithium batteries enable the highest level of productivity for battery-powered machines and vehicles, but unlike lead-acid battery-power deliver a dramatic reduction in the total cost of ownership and a predictable return on investment. AES LiFePO<sub>4</sub> batteries are manufactured with the highest-grade LiFePO<sub>4</sub> cells and feature a proprietary high peak power transient voltage hardened BMS that delivers superior peak power performance, lightning-fast charge and discharge rates. BMS performance exceeds the automotive standard for ESD resilience while supporting the inrush current demands of electric motors. AES LiFePO<sub>4</sub> batteries pair with an LYNK II or LYNK LITE Gateway to enable closed-loop integration with mobile inverter-chargers, industrial chargers, motor controllers and displays.

### Download Firmware



SECTION A-A

## MECHANICAL SPECIFICATIONS

Length A (in/mm)	13.0	330
Width B (in/mm)	13.7	348
Height C (in/mm)	10.8	274
Weight (lbs/kgs)	88.0	40.0
Terminal *	M8	
Cell(s)	8S/22P	
Case Material	Steel	
Electrolyte	LiFePO <sub>4</sub>	

\*TERMINAL TORQUE: 9 Nm +/- 3 / 6.64ft-lb

## ELECTRICAL SPECIFICATIONS

Open Circuit Voltage (V)	25.6
Nominal Energy (kWh)	3.1
Usable DoD	91%
Rated Ah Capacity (1C)	110
Charge Voltage (Vdc)	27.2
Max Voltage (Vdc)	29.2
Min Voltage (Vdc)	22.4
Max Continuous Charge Current (Adc)	110
Max Continuous Discharge Current (Adc)	110
Max Peak Current (Adc)	300
Short Circuit	
Self-Discharge (25°C / 77°F)	< 3% per month (Battery Off)
Charge Temperature	Min: 0°C (32°F)   Max: 45°C (113°F)
Discharge Temperature	Min: -20°C (-4°F)   Max: 50°C (122°F)
Storage Temperature	Min: -20°C (-4°F)   Max: 45°C (113°F)

Electrical Specifications at 25°C.

\* Do not exceed maximum voltage at the battery terminals.

CAUTION: Extra considerations must be given to depths of discharge, operating voltages and currents when designing systems for use at maximum operating temperatures.

## FEATURES

### LYNK PORT

- Connects Battery String to LYNK Gateway
- Multi-Battery BMS Communication

### HIGH-CURRENT BMS

- Field Serviceable BMS and Fuse Protection
- High Peak Surge, Continuous Current
- Sets Charge Voltage, broadcasts SoC and Temperature, Balances Cells

### LYNK ACCESS Software for Windows

- Monitor and Troubleshoot
- Configure Communication with Charger
- Export Battery Data Logs
- Update Battery Firmware

## ACCESSORIES

### LYNK II GATEWAY

- Integrated Closed-loop Communication with the World's Best Industrial Chargers
- Plug and Play Charger Configuration

## BENEFITS

### RUNS LONGER

- 2x Runtime of Lead-Acid Battery
- Up to 90% Usable Capacity
- Up to 90% Depth of Discharge

### LASTS LONGER

- 10x the Life of Lead-Acid (BCI-06)
- Unlimited Partial State-of-Charge Cycles
- 4-Year Warranty and Energy Performance Guarantee

### CHARGERS FASTER

- 5x Faster than New Lead-Acid Batteries
- Up to 10x Faster than Aged Lead-Acid Batteries
- 2x Faster than C/2 Rated Lithium Batteries
- 1C Continuous Charge Rate, Regardless of SoC

### SURGE POWER

- Peak Power for Traction Motors
- Up to 3C Peak Power
- Up to 1C Continuous Discharge

### HIGH-EFFICIENCY

- Up to 50% More Energy Efficient Than Lead-Acid Battery
- Up to 98% Round Trip Efficiency

### DYNAMIC PERFORMANCE

- Real-time Optimization of the Charge Rate
- Up to 25% Faster Charging 0% to 100% SoC than lead-acid battery

### PARALLEL POWER

- Easy to Parallel More Capacity
- Linear Scaling of Charge, Discharge and Peak Capacity

### QUICK INSTALL

- Fast Installation. No Special Tools

### RELIABLE AND SAFE

- LiFePO<sub>4</sub> is Thermally Safe
- Maintenance-Free
- Steel Case and Cover
- IP 55 Rated

### CERTIFIED QUALITY

**Discover® manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards.**

### CERTIFICATION STANDARDS

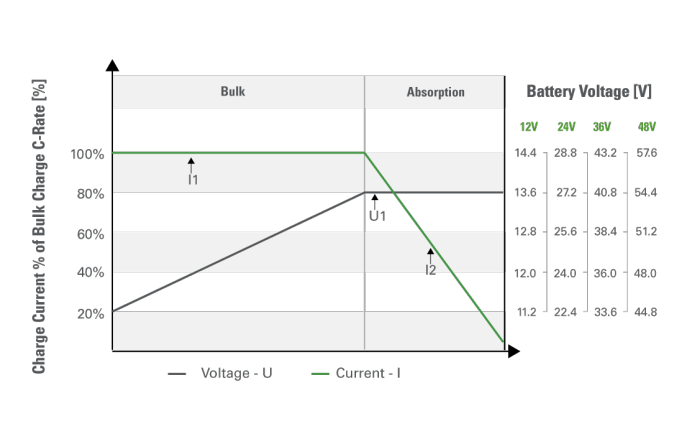
- IEC 62133
- UL 1973
- UL 2271
- CE
- UN 38.3

## SHIPPING CLASSIFICATION

- UN 3480, Class 9 (Lithium batteries)

Minutes of Discharge	
@25A	@100A
264	66

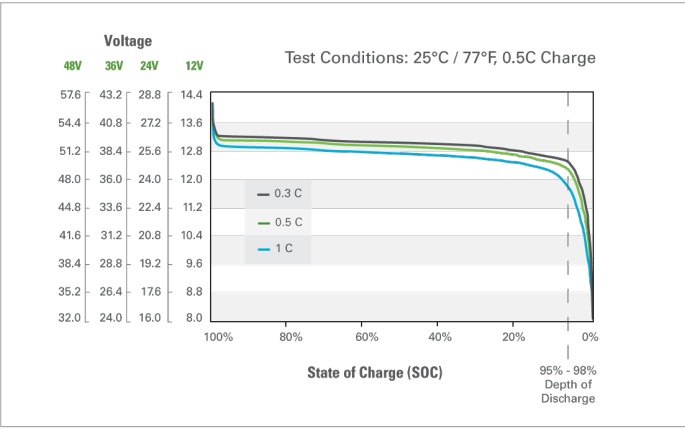
Voltage Regulated IU Curve



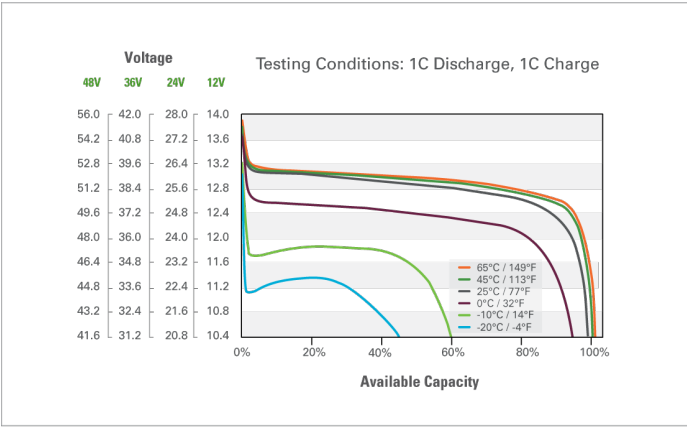
Voltage Regulated IU Charging Curve Parameters

Nominal Voltage	24 V
Bulk Current (I1)	55 Adc recommended 110 Adc maximum
Absorption Voltage (U1)	27.2 V
Termination Charge Current	$I2 \leq 2.5\% \text{ C1 Capacity}$

Voltage in Relation to Rate of Discharge



Discharge Voltage and Capacity vs. Temperature



NOTES

**CAUTION:** Direct connection to DC motors without proper safety protection, motor controllers, and external motor voltage clamping systems (such as high power anti-parallel diodes or braking resistor systems) may result in damage to the internal pack protection system which may result in unsafe situations. Please consult Discover technical support before directly connecting any motorloads.

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