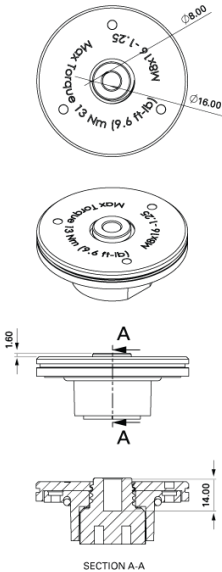
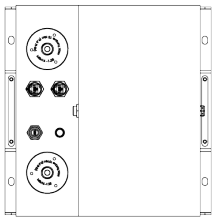
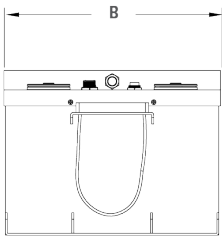
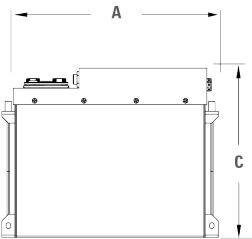




AES LiFePO₄ Industrial Mobile Battery

Discover® Advanced Energy System (AES) LiFePO₄ 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 LiFePO₄ batteries are manufactured with the highest-grade LiFePO₄ 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 LiFePO₄ 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



MECHANICAL SPECIFICATIONS

| | | |
|------------------|---------------------|------|
| Length A (in/mm) | 13.0 | 330 |
| Width B (in/mm) | 13.3 | 339 |
| Height C (in/mm) | 10.1 | 256 |
| Weight (lbs/kgs) | 88.0 | 40.0 |
| Terminal * | M8 | |
| Cell(s) | 16S15P | |
| Case Material | Steel | |
| Electrolyte | LiFePO ₄ | |

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

ELECTRICAL SPECIFICATIONS

| | |
|--|---------------------------------------|
| Open Circuit Voltage (V) | 51.2 |
| Nominal Energy (kWh) | 2.92 |
| Usable DoD | 100% |
| Rated Ah Capacity (1C) | 57 |
| Charge Voltage (Vdc) | 54.4 |
| Max Voltage (Vdc) | 58.4 |
| Min Voltage (Vdc) | 44.8 |
| Max Continuous Charge Current (Adc) | 57 |
| Max Continuous Discharge Current (Adc) | 57 |
| Max Peak Current (Adc) | 219 |
| 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: -10°C (14°F) Max: 30°C (86°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

- LiFePO₄ 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

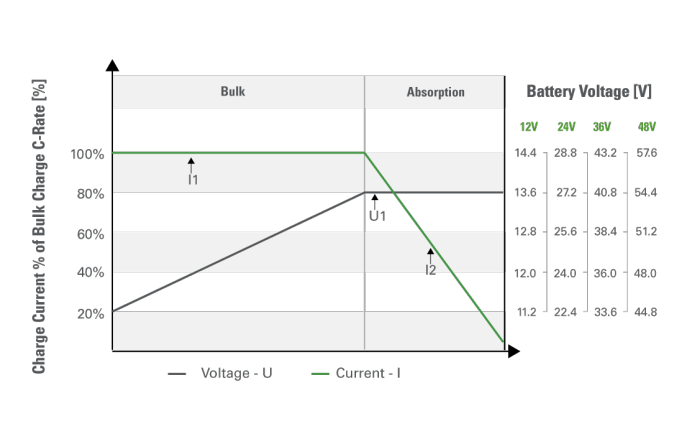
- IEC 62619
- UL 1973
- CE
- UN 38.3

SHIPPING CLASSIFICATION

- UN 3480, Class 9 (Lithium batteries)

| Minutes of Discharge | |
|----------------------|-------|
| @25A | @100A |
| 136 | 34 |

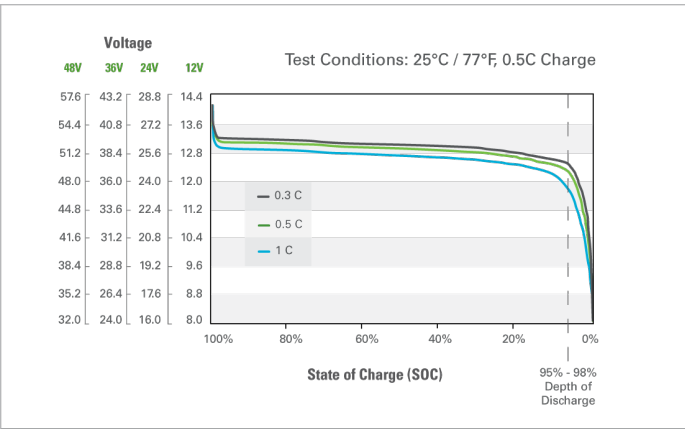
Voltage Regulated IU Curve



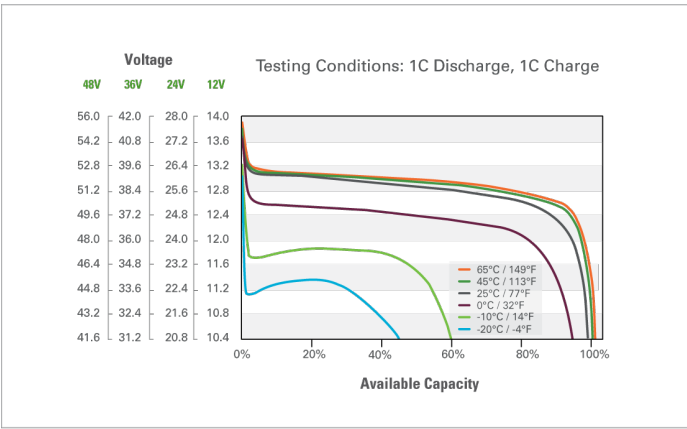
Voltage Regulated IU Charging Curve Parameters

| | |
|----------------------------|-----------------------------|
| Nominal Voltage | 48 V |
| Bulk Current (I1) | 57Adc maximum |
| Absorption Voltage (U1) | 54.4 V |
| Termination Charge Current | $I2 \leq 2.5\% C1$ 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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