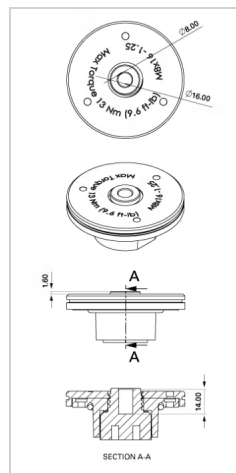
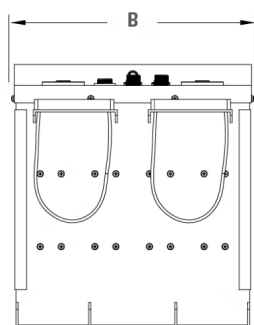
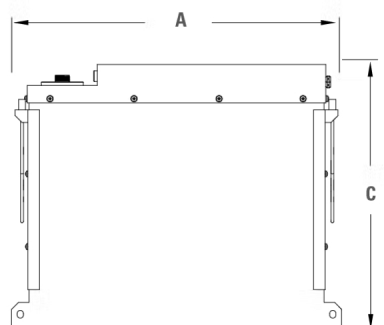


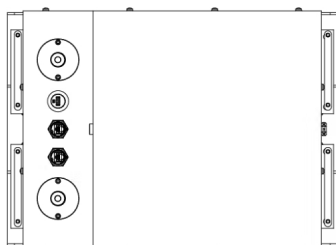


### AES LiFePO<sub>4</sub> Solar Stationary Battery

Discover<sup>®</sup> Advanced Energy System (AES) LiFePO<sub>4</sub> Lithium solar batteries offer bankable performance and the lowest cost of energy storage per kWh. AES LiFePO<sub>4</sub> Lithium batteries are manufactured with the highest-grade LiFePO<sub>4</sub> cells and feature a proprietary high peak surge and transient voltage hardened BMS that delivers superior peak power, lightning fast charge and discharge rates and LYNK Solar Gateway functionality for Plug-and-play closed loop integration with the worlds best known off-grid inverters and chargers turning a good system into a great one.



TERMINAL



### FEATURES

#### LYNK PORT

- Connects battery string to LYNK Gateway
- Multi-battery BMS communication

#### HIGH-CURRENT BMS

- Field serviceable BMS and fuse protection
- Plug and Play system wide BMS communication
- Sets Voltage, broadcasts SoC and temperature

#### AES DASHBOARD

- Battery diagnostic software for PC
- Data export kWh, fault logs to PC
- Update battery BMS firmware

### ACCESSORIES

#### LYNK SOLAR GATEWAY

- Integrated closed-loop communications with the world's best inverter chargers
- Plug and play charger configuration

### BENEFITS

#### ENHANCED RUNTIME

- Double the high-current runtime of lead-acid battery
- Up to 100% usable capacity
- Up to 100% depth of discharge

#### EXTENDED SERVICE LIFE

- 10x the life of lead-acid battery (BCI-06)
- Unlimited Partial State of Charge cycles
- 10-year energy throughput warranty

#### FAST CHARGING

- Up to 5x faster than new lead-acid batteries
- Up to 10x faster than aged lead-acid batteries
- 2X faster charging than C/2 Rated lithium batteries
- 1C continuous charge rate, regardless of SoC

#### SURGE POWER

- Power for off-grid inverter surge demands
- Up to 3C peak power discharge rate
- 1C continuous discharge rate

#### HIGH-EFFICIENCY

- Up to 50% more energy efficient than a lead-acid battery
- Up to 98% round-trip efficiency

#### DYNAMIC PERFORMANCE

- Real-time optimization of the charge rate
- Faster recharge from 0% to 100% SoC than lead-acid battery

#### PARALLEL POWER

- Easy to parallel more capacity
- Linear scaling of charge, discharge and peak capacity
- Parallel up to 20 batteries or 160 kWh per LYNK device

#### QUICK INSTALL

- Fast installation. No special tools
- Drop-in lead-acid replacement

#### RELIABLE AND SAFE

- LiFePO<sub>4</sub> is thermally safe
- Maintenance-free
- Steel case and cover
- IP 55 rated

#### CERTIFIED QUALITY

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

#### CERTIFICATION STANDARDS

- IEC 62133
- UL 1973
- UL 9540
- UL 2271
- CE
- UN 38.3

#### SHIPPING CLASSIFICATION

- UN 3480, Class 9 (Lithium batteries)

### MECHANICAL SPECIFICATIONS

Length A (in/mm)	18.5	470
Width B (in/mm)	13.7	348
Height C (in/mm)	14.7	373
Weight (lbs/kgs)	192.0	87.0
Terminal*	M8	
Cell(s)	16S/26P	
Case Material	Steel	
Electrolyte	LiFePO4	

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

### ELECTRICAL SPECIFICATIONS

Open Circuit Voltage (V)	51.2
Nominal Energy (kWh)	7.39
Useable DoD	90%
Rated Ah Capacity (1C)	129
Charge Voltage (Vdc)	54.4
Max Voltage (Vdc)	58.4
Min Voltage (Vdc)	44.8
Max Continuous Charge Current (Adc)	130
Max Continuous Discharge Current (Adc)	130
Max. Peak Current (Adc)	300
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)

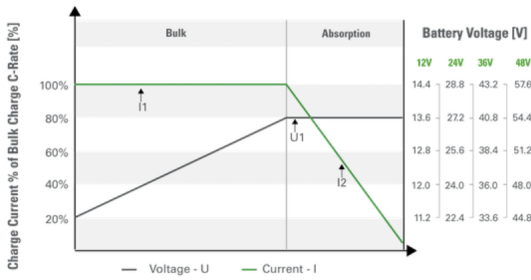
Electrical Specifications at 25°C.

\* 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.

Minutes of Discharge	
@25A	@100A
312	78

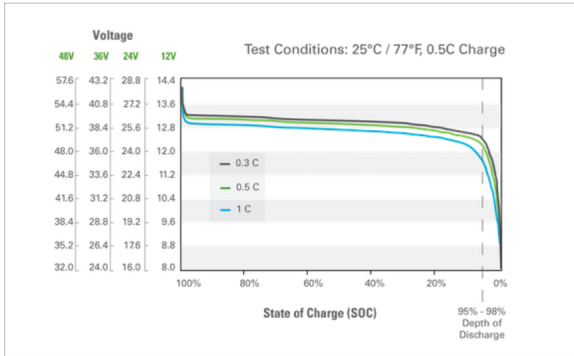
## Voltage Regulated IU Curve



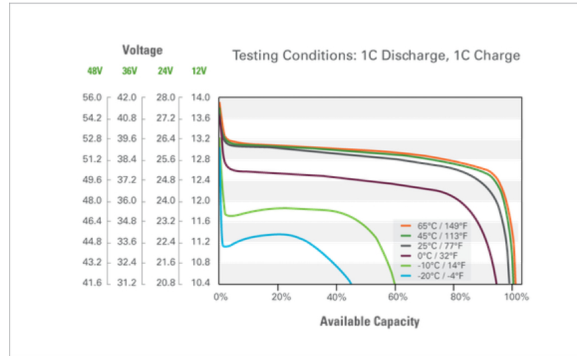
## Voltage Regulated IU Charging Curve Parameters

Nominal Voltage	48 V
Bulk Current (I1)	65 Adc recommended 130 Adc maximum
Absorption Voltage (U1)	54.4 V
Termination Charge Current	$I_2 \leq 2.5\% C_1$ 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.

Discover® reserves the right to make adjustments to this publication at any time, without notice or obligation. Data in this publication are for reference use only and models may vary from shown. It is the responsibility of the reader of this information to verify any and all information presented herein. For more information contact us at [info@discoverbattery.com](mailto:info@discoverbattery.com)

## VOLTAGE REGULATED IU CHARGING CURVE

### PARAMETERS

Nominal Voltage	
Bulk Current (I1)	65 A recommen
Absorption Voltage (U1)	
Termination Charge Current	I: