

EV31A-A

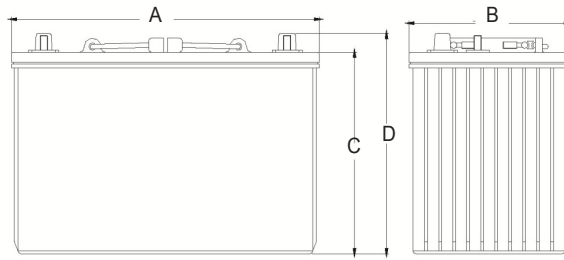
DATA SHEET



EV Traction Dry Cell Industrial Battery Block

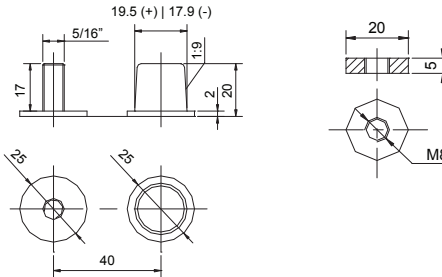
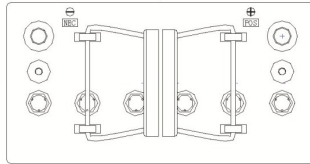
Discover® EV Series Industrial Batteries provide superior high integrity and reliability for commercial, industrial and private applications. The maintenance-free, thick plate construction, designed for tough applications and repeated deep discharging makes the EV Series the definitive choice for robust Traction applications including Home Medical Equipment (HME), Electric Vehicle, Automated Guided Vehicles (AGV), Aerial Lifts, Floor Cleaning Equipment, Robotics, Materials Handling, Renewable Energy and Marine / RV applications.

Mechanical Drawings



Terminal (AM)

Optional Terminal (M8)



Mechanical Specifications

Industry Reference	31	
Length (A)	13.0 in	330 mm
Width (B)	6.8 in	172 mm
Height (C)	8.5 in	216 mm
Total Height (D)	9.3 in	236 mm
Weight	72 lbs	33 kgs
Terminal (Opt'l)*	AM (M8)	
Cells	6	
Electrolyte	1.2875 S.G.	AGM

*TERMINAL TORQUE: Please refer to our document, located in the Resources webpage (www.discover-energy.com/resources/).

Electrical Specifications

Volts	12 V	
80% DOD Voltage Cutoff	11.4 V	
RINT	3.40 mΩ	
Short Circuit (-68°F 20°C)	3270 A	
Self Discharge	<3% of capacity month @ 20°C (68°F)	
Cranking Amps**	940 @ 0°C (32°F)	785 @ -18°C (0°F)
Charging	-10°C (-4°F) 50°C (122°F)	
Discharge	-20°C (-4°F) 50°C (122°F)	
Storage	40°C (-40°F) 60°C (140°F)	

**CRANKING AMPS: Cranking Amps data is provided as a reference only. Specific application sizing and life factors must be considered when using deep cycle product in a starting application.

Electrical Specifications

Amp Hours (AH)						Minutes of Discharge				
100 HR	20 HR	10 HR	5 HR	3 HR	1 HR	@25A	@56A	@75A	@85A	@100A
132	115	110	96	88	72	235	89	63	52	42

Max Charge Discharge Currents	Peak (5 seconds)	Peak (10 seconds)	Max Continuous	Recommended Max Continuous
Charge	1C10Hr	0.75C10Hr	0.5C10Hr	0.3C10Hr
Discharge	2C10Hr	1.5C10Hr	1C10Hr	0.5C10Hr

Benefits & Features

Maintenance-Free Clean & Green® choice of Original Equipment Manufacturers.

Traction heavy duty grid design (PbCaSn) gives consistent active material adhesion and corrosion resistance.

High impact reinforced copolymer and polypropylene cases with flat top designs.

A recognized gas recombination efficiency of greater than 99.9%.

Multiple terminal, configuration options and carrying handles available with most models.

Classified as a non-spillable battery and is not restricted for transportation by:

- Air (IATA/ICAO provision 67)
- Surface (DOT-CFR-HMR49)
- Water (per IMDG amendment 27)

Compatible with sensitive electronic equipment.

Comprehensive design to conserve resources, improve safety and reduce waste. 98% recyclable.

Certified Quality

Designed in accordance with and published in compliance with applicable BCI, IEC and BS EN standards, including:

- IEC60896-21/22
- BS EN 60254-1:2005
- AS/NZS 4029.2:2000 BS EN 60254-1:2005 (MOD)

Discover® and its facilities and products are certified to multiple standards:

- ISO, UL, QS, and TUV standards
- ETIS Germany
- Euro Bat classification for Environmental Stewardship Standards

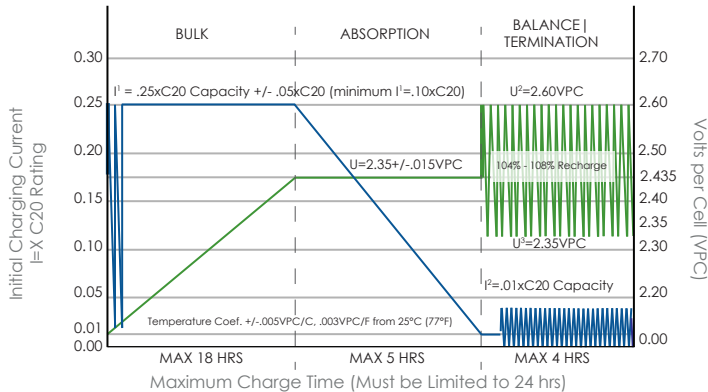


Contact Us



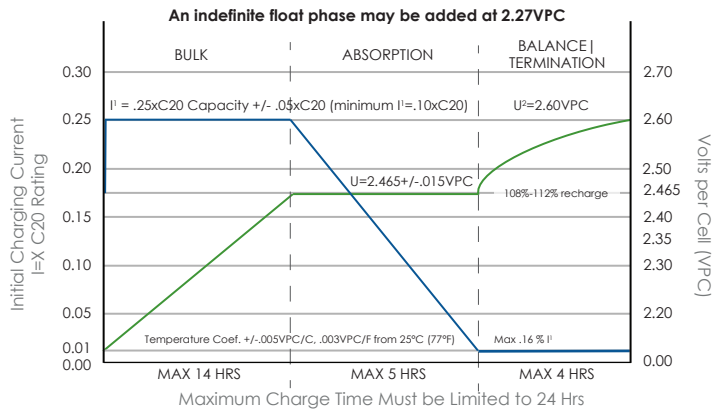
Unit 5-13511 Crestwood Place,
Richmond, BC, V6V 2E9, Canada
Email: info@discover-energy.com
www.discover-energy.com

Constant Current IUI Pulse Termination

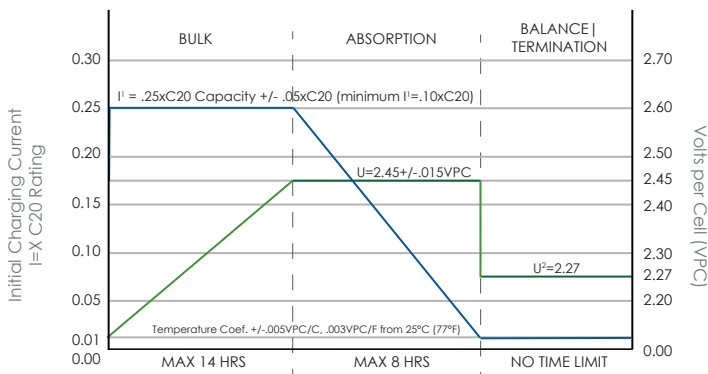


NOTE: This algorithm uses a pulse termination criterion. As a safety precaution during the Finish phase, if the average cell voltage, or volts per cell (vpc), exceeds V2 and the charger output has been on for more than 30 seconds, the output is shut off until the vpc falls to V3. The finish phase then resumes and this "pulsing" continues until the target overcharge (108% - 112%) is reached.

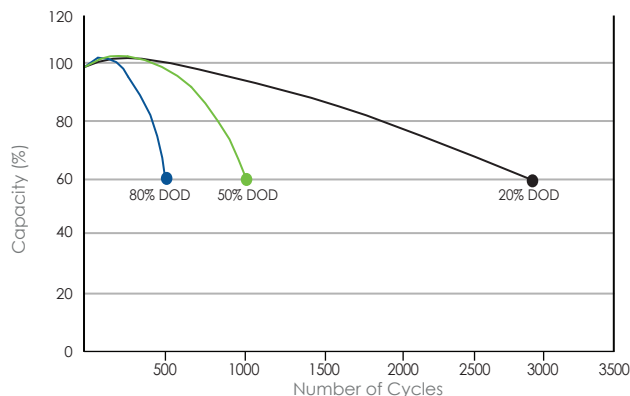
Constant Current IUI



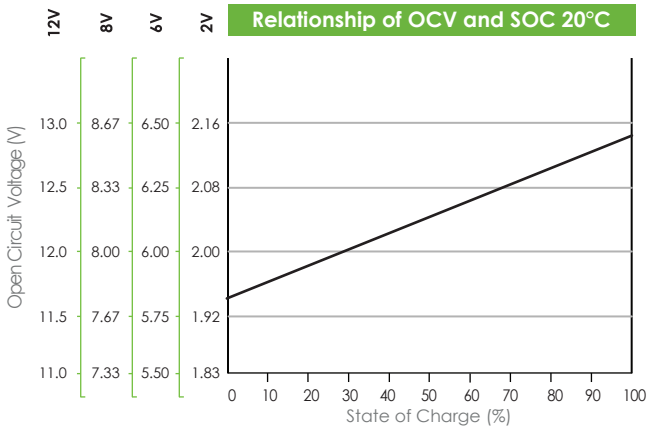
Voltage Regulated IUI



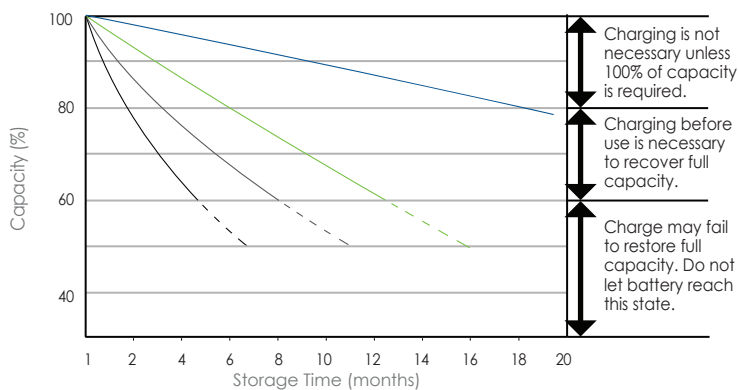
Cycle Service Life in Relation to Depth Discharge



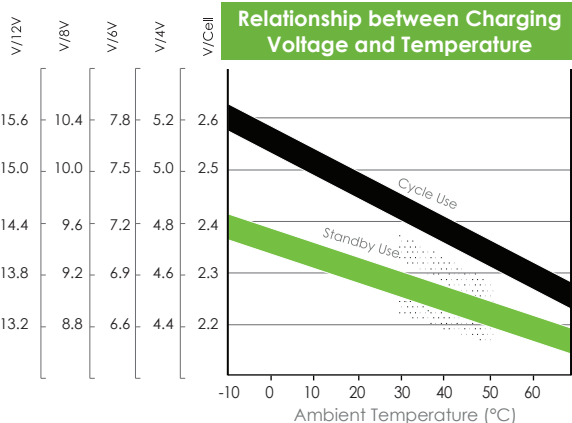
Relationship of OCV and SOC 20°C



Self-Discharge Characteristics



Relationship between Charging Voltage and Temperature



Temperature Effects on Capacity

