

# EV512G-063

DATA SHEET



## EV Traction Gel Industrial Battery Block

Discover® EV Traction GEL Batteries provide superior integrity and reliability. The maintenance-free, thick plate construction, designed to deliver excellent cycle life and very good run times at high operating voltages in tough industrial use with regular discharges, makes the EV Gel Series an excellent choice for robust industrial applications.

### 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
- ETTS Germany
- Euro Bat classification for Environmental Stewardship Standards

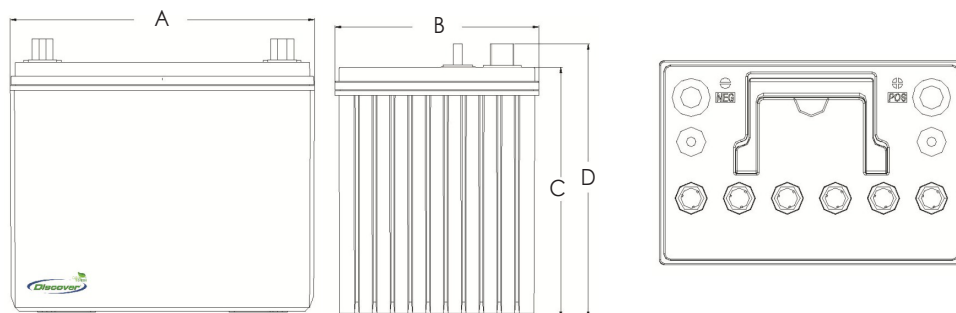


### Contact Us

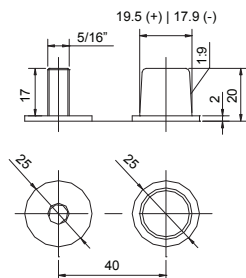


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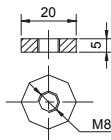
### Mechanical Drawings



Terminal (AM)



Optional Terminal (M8)



### Mechanical Specifications

Industry Reference	24	
Length (A)	10.2 in	258 mm
Width (B)	6.8 in	172 mm
Height (C)	8.1 in	206 mm
Total Height (D)	8.9 in	226 mm
Weight	50.6 lbs	23 kgs
Terminal (Opt'l)*	AM (M8)	
Cells	6 cell	
Electrolyte	Gel	

### Electrical Specifications

Volts	12 V
80% DOD Voltage Cutoff	11.8V
RINT	-
Short Circuit (-68°F   20°C)	-
Self Discharge	3% per month (77°F / 25°C)
Charging	-20°C (-4°F)   60°C (140°F)
Discharge	-10°C (14°F)   60°C (140°F)
Storage	-20°C (-4°F)   60°C (140°F)

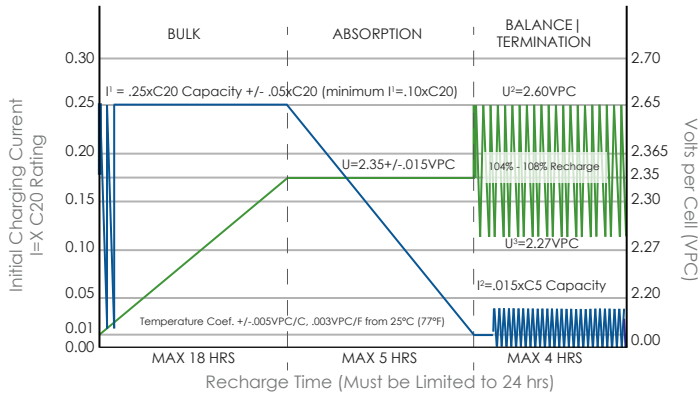
\*TERMINAL TORQUE: Please refer to our document, located in the Resources webpage ([www.discover-energy.com/resources/](http://www.discover-energy.com/resources/)).

### 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
83	73	67	63	53	42	110	37	21	18	15

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

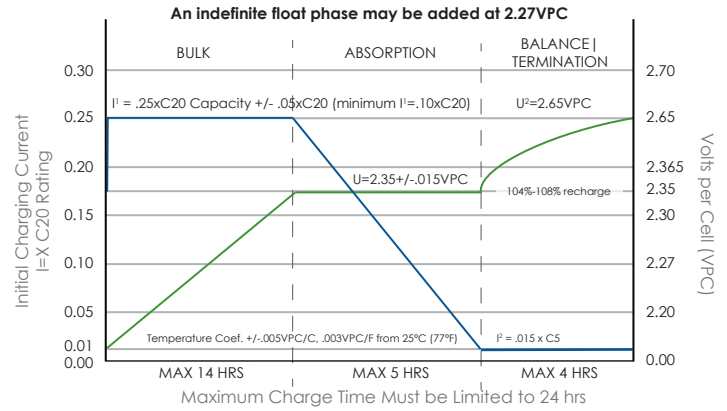
### Constant Current IUI Pulse Termination



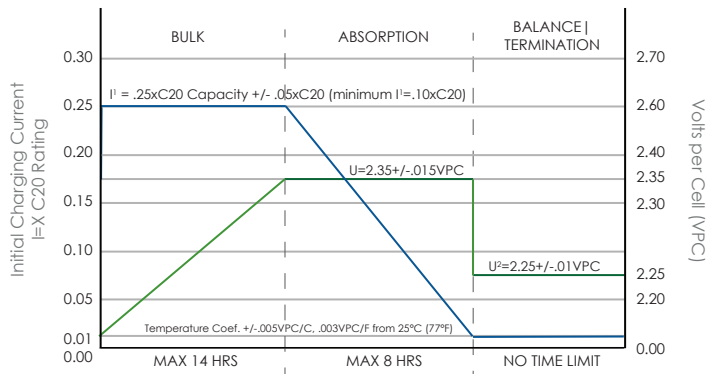
**NOTE 1:** This algorithm uses a pulse termination criterion. As a safety precaution during the Finish phase, if the average cell voltage, or volts per cell (vpc), exceeds  $U^2$  and the charger output has been on for more than 30 seconds, the output is shut off until the vpc falls to  $U^3$ . The finish phase then resumes and this "pulsing" continues until the target overcharge (104% - 108%) is reached.

**NOTE 2:** Due to self-discharge characteristics of lead acid battery technologies, all batteries must be charged within 6 months of storage to prevent a possible permanent loss of capacity as a result of sulfation.

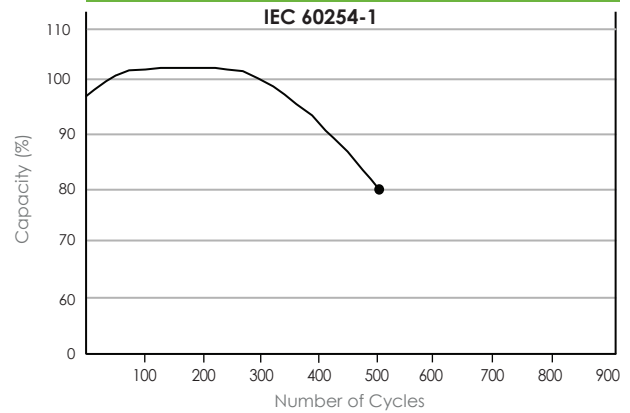
### Constant Current IUI



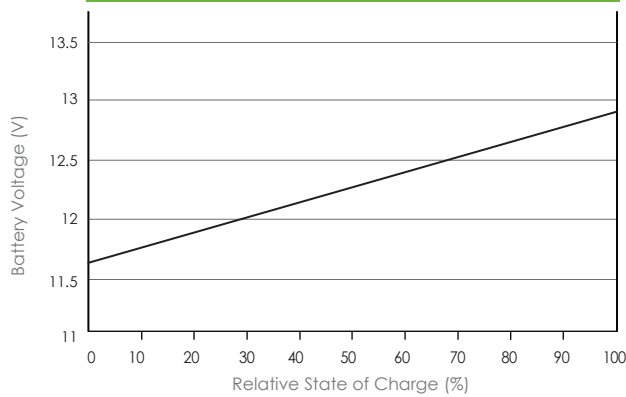
### Voltage Regulated IUI



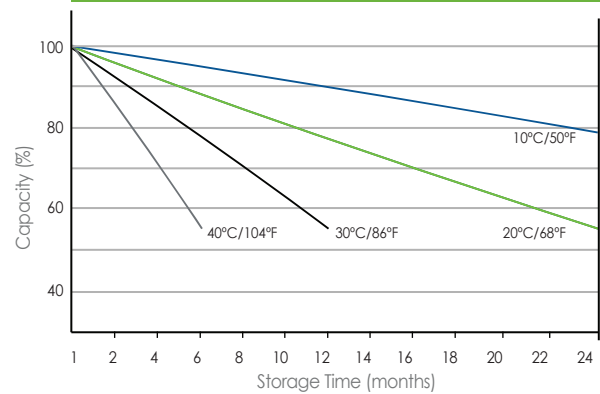
### Cycle Service Life in Relation to Depth Discharge



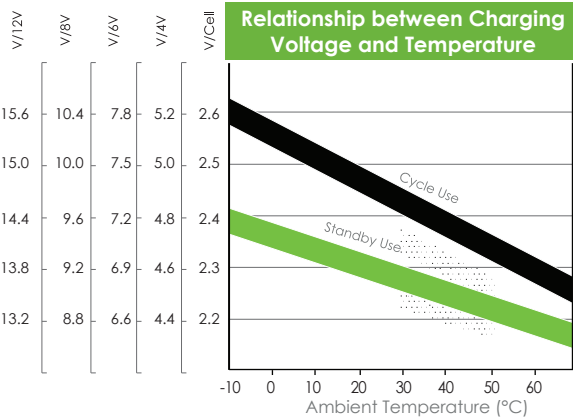
### Relationship of OCV and SOC (20°C)



### Storage Time in Relation to Self-Discharge



### Relationship between Charging Voltage and Temperature



### Temperature Effects on Capacity

