Discover®
Innovative Battery Solutions

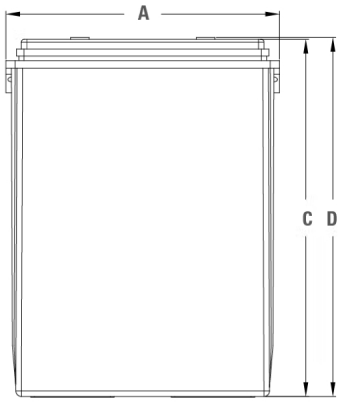
# 6VRE-2700FD

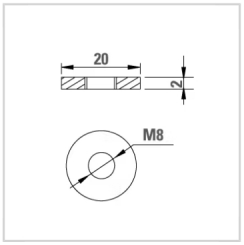
Printed: 10/13/2022

**DRY CELL Solar/Energy Storage Battery**

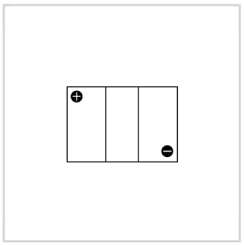
Discover® DRY CELL Solar Energy Storage batteries outperform traditional Flooded, AGM and Gel deep-cycle batteries and promotes resilience in on-grid and off-grid applications, particularly in regions with poor infrastructure and unreliable power. The batteries incorporate features to withstand Partial State of Charge (PSOC) operation and tolerate wide ambient temperatures.

DRY CELL Solar Energy Storage batteries are maintenance-free, safe, easy to use and are the economical choice for reducing energy cost and grid dependence.

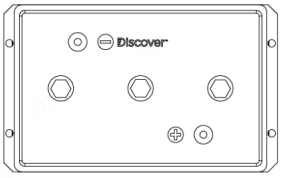



TERMINAL



LAYOUT




## MECHANICAL SPECIFICATIONS

| | | |
|---|---|---|
| Industry Reference | BCI: 903-L16 | |
| Length A (in/mm) | 11.6 | 295 |
| Width B (in/mm) | 7.1 | 180 |
| Height C (in/mm) | 15.1 | 383 |
| Total Height D (in/mm) | 15.2 | 385 |
| Weight (lbs/kgs) | 116.6 | 53 |
| Terminal * | F10M8 | |
| Technology | DRY CELL AGM, VRLA | |

**NOTE 1:** Dimensions have a ±2 mm (0.08 in) tolerance. Weights may vary.
**NOTE 2:** Refer to terminal guide on website for torque values.

## ELECTRICAL SPECIFICATIONS

| | |
|---|---|
| Voltage (V) | 6 |
| Voltage Cutoff (20% DOD) | 6.30 |
| Voltage Cutoff (50% DOD) | 6.15 |
| Internal Resistance (mΩ) | 1 |
| Short Circuit (A) (20°C / 68°F) | 4900 |
| Self-Discharge (20°C / 68°F) | 2-3% per month |
| Charge Temperature | Min: -30°C ( -22°F) \| Max: 50°C (122°F) |
| Storage Temperature | -40°C (-40°F) to 70°C (158°F) |

## PERFORMANCE SPECIFICATIONS

| Amp Hours (AH) | | |
|---|---|---|
| 10 HR | 20 HR | 120 HR |
| 378 | 408 | 449 |

Capacities: 1.75VPC at 30°C/86°F

## FEATURES

**HYDRO POLYMER**
- Organic capillary separators with hydro polymer electrolytes resist dry-out and prevent thermal runaway
- Maintains performance characteristics over operational life

**ENHANCED ALLOYS**
- Thick plates with graphite enhanced alloys deliver maximum runtime over operational life

**CARBON BOOST**
- Carbon additives to increase duty cycle performance, charge acceptance, and partial state of charge operation

**AUTOMATED THROUGH-THE-PARTITION WELD**
- Improved intercell weld consistency, and less lead waste than manual welding process (key industry models)
- Supports higher current loads and lowers internal resistance

**POLYPROPYLENE CASE**
- High heat resistance and durability (key industry models)
- High precision pressure relief valves reduce water loss and extend life
- Integrated flame arrestors to prevent fire and explosion

## BENEFITS

**ENHANCED RUNTIME**
- High amp hour capacity
- High operational voltage over lifetime
- 50% DoD above 2.05 VPC

**EXTENDED SERVICE LIFE**
- Long life superior to deep-cycle FLA / AGM / Gel batteries
- 700+ cycles 60% DoD (IEC 896-2 Stationary Lead-Acid)
- 1,400+ cycles 50% DoD (BCIS-06 Deep-Cycle Lead-Acid)

**RESILIENCE**
- Partial stage of charge operation superior to AGM
- Intense duty cycling superior to AGM / Gel
- Overcharge and over-discharge resilience superior to AGM

**EXTREME TEMPERATURES**
- High temperature life superior to AGM
- Low temperature operation superior to FLA / AGM / Gel batteries

**RELIABLE AND SAFE**
- Valve Regulated Lead-Acid, Dry Cell AGM
- Maintenance-free
- Nonspillable, no-gassing

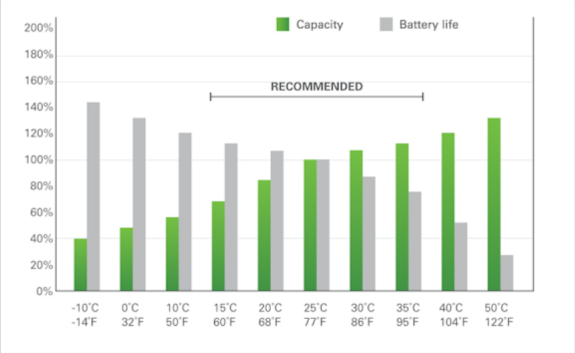
**CERTIFIED QUALITY**

Discover® manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards.
Designed in accordance with and published in compliance with applicable standards, including:
- IEC 60896-21/22. Lead-Acid Stationary
- BCIS-06. Deep-Cycle
- UL, CE Health Safety Certified

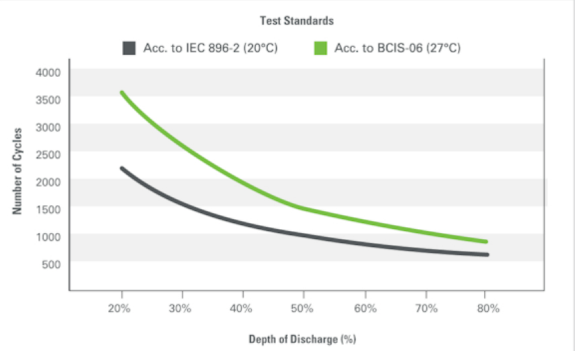
## SHIPPING CLASSIFICATION

- Classified as a nonspillable battery
- Without restriction for transport by Sea (IMDG amendment 27)
- Without restriction for transport by Air (IATA/ICAO provision 67)
- Without restriction for transport by Ground (STB, DOT-CFR-HMR49)

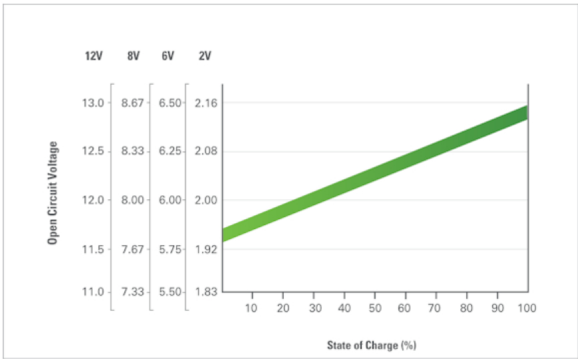
## Temperature Effects on Capacity



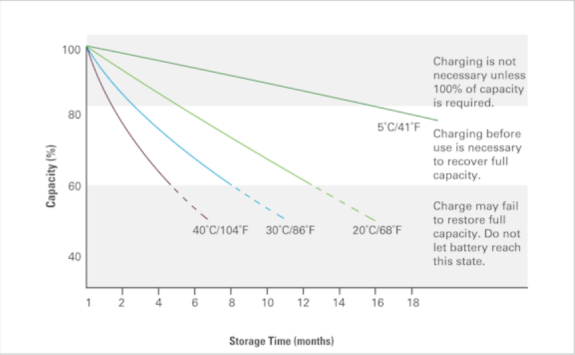

## Test Standards and Cycle Life



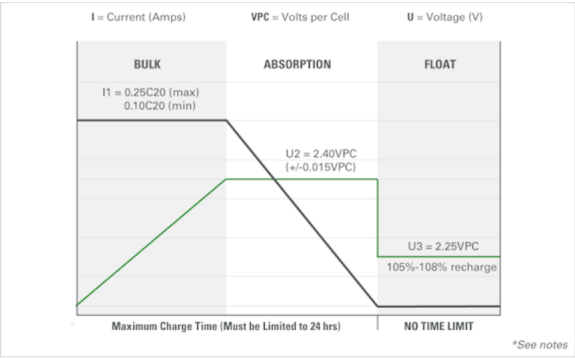

## Open Circuit Voltage in Relation to SOC (20°C)



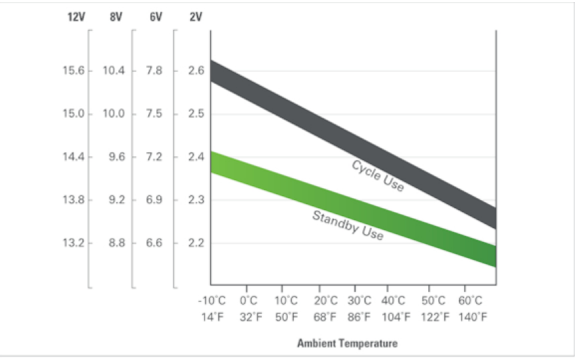

## Self-Discharge Characteristics




## Voltage Regulated (IUU) Charge Profile




## Relation between Charge, Voltage and Temperature




## NOTES

1 Due to self-discharge characteristics of lead-acid battery technologies, batteries should be charged within 6 months of storage to ensure optimum performance, prevent sulphation and permanent capacity loss

2 Charge profile recommendations correspond to battery voltages at 25°C (77°F). For temperatures below, adjust +5mVPC/°C (+3mVPC/°F). Temperatures above, adjust -5mVPC/°C (-3mVPC/°F). Temperature compensated charging helps ensure optimum battery runtime and life performance.