

D12120 (STANDBY/FLOAT)

DATASHEET

Valve Regulated Lead Acid Battery

Discover[®] AGM Series VRLA Industrial Batteries provide superior high integrity and reliability for commercial, industrial, and private applications. The maintenance-free Valve Regulated Lead Acid (VRLA) construction make Discover[®] Standard AGM Series Batteries the definitive choice for mobility and Home Medical Equipment (HME), solar and renewable energy, electronics and security, marine and RV, and utility applications.

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Voltane

20 HR

10 HR

5 HR

1 HR

15 MIN

Charge Temperature

Discharge Temperature

Maximum Discharge*

Internal Resistance

Short Circuit 20°C (68°F)

Terminal (F2)

7.8

6.35

6.35

4.8

ELECTRICAL SPECIFICATIONS

0.8

OptionalTerminal (F1)

0.8

12 V

20 mΩ

12 Ah

11.4 Ah

10.2 Ah

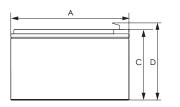
7.5 Ah

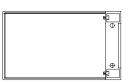
-10°C (14°F) to 50°C (122°F)

-20°C (-4°F) to 50°C (122°F)

-40°C (-40°F) to 60°C (140°F)

MECHANICAL DRAWINGS





MECHANICAL SPECIFICATIONS

| Length (A) | 5.94 in | 151 mm | | | |
|------------------|---------|---------|--|--|--|
| Width (B) | 3.86 in | 98 mm | | | |
| Height (C) | 3.74 in | 95 mm | | | |
| Total Height (D) | 3.98 in | 101 mm | | | |
| Weight | 7.7 lbs | 3.5 kgs | | | |
| Terminal (Opt'I) | F2 (F1) | | | | |
| Cells | 6 | | | | |
| Electrolyte | AGM | | | | |

NOTE: There is a tolerance of +/-2%.

TERMINAL TORQUE: Please refer to our document, located in the Resources webpage (discoverbattery.com/resources).

CAUTTION*: Extra considerations must be given to depths of discharge, operating voltages and currents when designing systems for use at maximum temperatures.

DISCHARGE CONSTANT CURRENT (AMPERES AT 25°C/77°F)

| 1 | Final Voltage (VPC) | 5 MIN | 10 MIN | 15 MIN | 30 MIN | 1 HR | 3 HR | 5 HR | 10 HR | 20 HR |
|---|---------------------|-------|--------|--------|--------|------|------|------|-------|-------|
| | 1.60V | 45.6 | 31.0 | 24.3 | 13.3 | 7.50 | 3.15 | 2.11 | 1.20 | 0.62 |
| | 1.65V | 44.2 | 30.1 | 23.8 | 12.9 | 7.43 | 3.12 | 2.09 | 1.19 | 0.62 |
| | 1.70V | 42.7 | 29.2 | 23.2 | 12.6 | 7.37 | 3.09 | 2.06 | 1.18 | 0.62 |
| | 1.75V | 41.3 | 28.3 | 22.7 | 12.3 | 7.30 | 3.06 | 2.04 | 1.16 | 0.61 |
| | 1.80V | 39.8 | 27.5 | 22.1 | 12.0 | 7.23 | 3.03 | 2.01 | 1.14 | 0.60 |

DISCHARGE CONSTANT POWER (WATTS AT 25°C/77°F)

| Final Voltage (VPC) | 5 MIN | 10 MIN | 15 MIN | 30 MIN | 45 MIN | 1 HR | 2 HR | 3 HR | 5 HR |
|---------------------|-------|--------|--------|--------|--------|------|------|------|------|
| 1.60V | 88.0 | 59.2 | 47.7 | 28.2 | 21.0 | 15.6 | 9.78 | 6.52 | 4.24 |
| 1.65V | 82.5 | 55.7 | 45.1 | 26.8 | 20.0 | 14.9 | 9.49 | 6.36 | 4.17 |
| 1.70V | 77.1 | 52.3 | 42.5 | 25.3 | 19.0 | 14.2 | 9.17 | 6.19 | 4.09 |
| 1.75V | 71.7 | 48.8 | 39.8 | 23.9 | 18.0 | 13.5 | 8.81 | 6.00 | 4.00 |
| 1.80V | 66.4 | 45.4 | 37.2 | 22.4 | 17.0 | 12.8 | 8.43 | 5.80 | 3.90 |

BENEFITS & FEATURES

Optimized lead calcium plate technology deliver high power denisty and consistent performance.

Special grid alloy and paste formula to reduce gassing and self-discharge.

Sealed valve regulated non-spillable maintenance-free technology.

99% gas recombination for extended life in float or cyclic applications.

Multiple battery terminal options and carrying handles.

UL924 recognized flame arresting low pressure safety vents.

Flame retardant ABS case and cover with UL94 V0 rating available.

Up to 12 year design life in float service models.

98% recyclable.

Classified as a non-spillable battery and is not restricted for transportation by: • Air (IATA/ICAO provision 67)

- Ground (STB, DOT-CFR-HMR49)
- Water (per IMDG amendment 27)

CERTIFIED QUALITY

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

- ISO, UL, CE, and QS standards
 ETTS Germany
- Euro Bat classification for Environmental Stewardship Standards

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

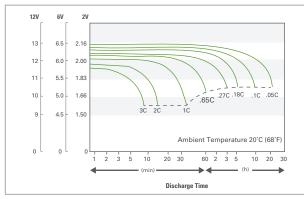


Updated: July 1st, 2017

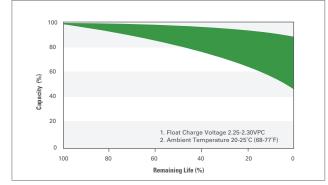
CHARGE AND DISCHARGE

| Max Charge / Discharge Currents | Peak (5 seconds) | Peak (10 seconds) | Max Continuous | |
|------------------------------------|---------------------|----------------------|-------------------|--|
| Charge | 1c20 | 0.75c20 | 0.25c20 | |
| Discharge | 15c20 | 10c20 | 0.5c20 | |

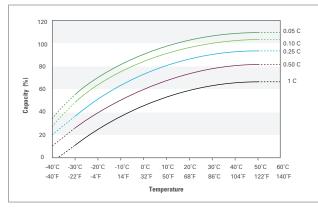
DISCHARGE CHARACTERISTICS



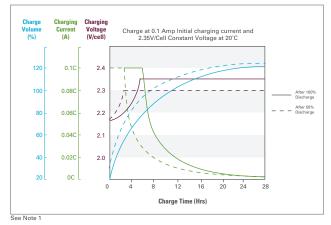
LIFE CHARACTERISTICS IN STAND-BY USE



TEMPERATURE EFFECTS ON CAPACITY



STANDBY/FLOAT APPLICATIONS

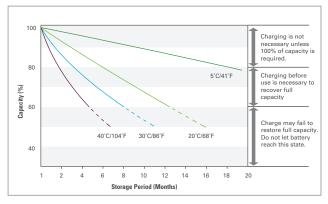


Note 1 - Float (Stand-By) Use: Hold a constant voltage of 2.25vpc to 2.30vpc continuously. When held at this voltage, the battery will seeks its own current level and maintain itself in a fully charged condition.

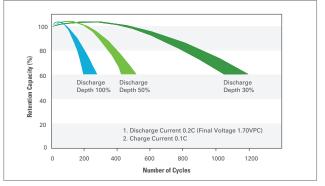
Note 2 - Cyclic Use: Limit initial currents to 0.25C20 amps. Charge until battery voltage reaches 2.40 to 2.45vpc. Hold at 2.40 to 2.45vpc until current drops to under 0.01C20 amps. Battery is fully charged under these conditions, and charger should be disconnected or switched to "float" voltage.

Note 3 - Temperature Coefficient: For temperatures below 25°C, adjust +0.005VPC/°C (or 0.003VPC per "F). For temperatures above 25°C, adjust -0.005VPC/°C (or 0.003VPC per "F).

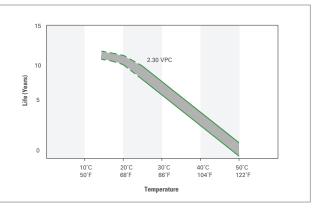
SELF-DISCHARGE CHARACTERISTICS



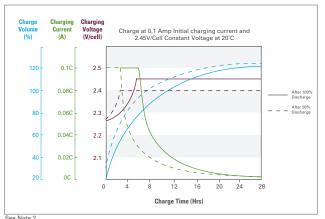
LIFE CHARACTERISTICS IN CYCLIC USE (CYCLIC MODELS ONLY)



TEMPERATURE EFFECTS ON FLOAT LIFE



CYCLIC APPLICATIONS



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