

DB12-100

12V 100Ah(10hr)

The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

Battery Construction

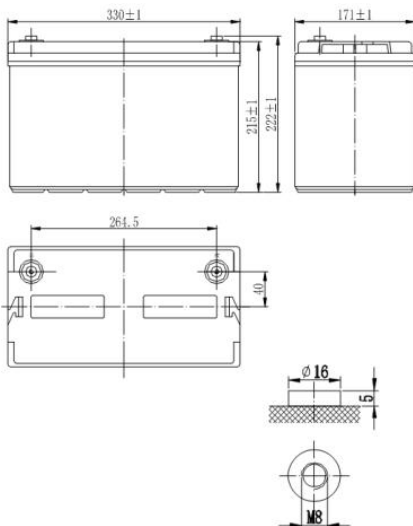
| Component | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator | Electrolyte |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Raw material | Lead dioxide | Lead | ABS | ABS | Rubber | Copper | Fiberglass | Sulfuric acid |

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Dimensions and Weight

| | |
|--------------------------|--------------|
| Length(mm / inch) | 330 / 12.99 |
| Width(mm / inch) | 171 / 6.73 |
| Height(mm / inch) | 215 / 8.46 |
| Total Height(mm / inch) | 222 / 8.74 |
| Approx. Weight(Kg / lbs) | 30.0 / 66.14 |



Performance Characteristics

| | |
|--|--------------|
| Nominal Voltage | 12V |
| Number of cell | 6 |
| Design Life | 10 years |
| Nominal Capacity 77°F(25°C) | |
| 10 hour rate (10.00A, 10.8V) | 100Ah |
| 5 hour rate (16.83A, 10.8V) | 84.15Ah |
| 1 hour rate (56.93A, 10.5V) | 63.50Ah |
| Internal Resistance | |
| Fully Charged battery 77°F(25°C) | ≤5.0mOhms |
| Self-Discharge | |
| 3% of capacity declined per month at 25°C(average) | |
| Operating Temperature Range | |
| Discharge | -20~60°C |
| Charge | -10~55°C |
| Storage | -10~50°C |
| Max. Discharge Current 77°F(25°C) | 1000A(5s) |
| Short Circuit Current | 2100A |
| Charge Methods: Constant Voltage Charge 77°F(25°C) | |
| Cycle use | 2.40-2.45VPC |
| Maximum charging current | 30.0A |
| Temperature compensation | -30mV/°C |
| Standby use | 2.20-2.30VPC |
| Temperature compensation | -20mV/°C |

Discharge Constant Current (Amperes at 77 °F25 °C)

| End Point Volts/Cell | 10min | 15min | 30min | 1h | 3h | 5h | 8h | 10h | 20h |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| 1.60V | 232.5 | 179.2 | 103.9 | 61.78 | 27.52 | 18.42 | 12.57 | 10.70 | 5.44 |
| 1.65V | 224.8 | 173.9 | 101.8 | 60.59 | 27.13 | 18.12 | 12.38 | 10.60 | 5.39 |
| 1.70V | 214.7 | 166.9 | 98.8 | 59.11 | 26.63 | 17.82 | 12.18 | 10.50 | 5.32 |
| 1.75V | 201.2 | 157.4 | 94.9 | 56.93 | 25.84 | 17.43 | 11.98 | 10.30 | 5.23 |
| 1.80V | 183.1 | 144.6 | 89.5 | 54.06 | 24.75 | 16.83 | 11.58 | 10.00 | 5.10 |

Discharge Constant Power (Watts at 77 °F25 °C)

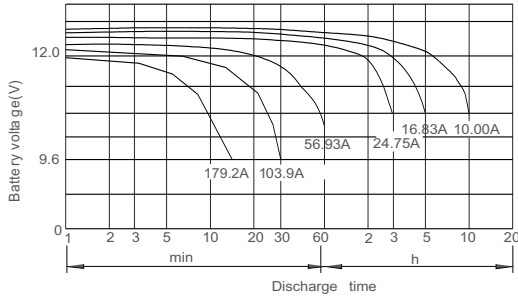
| End Point Volts/Cell | 10min | 15min | 30min | 1h | 2h | 3h | 5h | 8h | 10h |
|----------------------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V | 395 | 314 | 189 | 115.8 | 70.1 | 52.7 | 35.4 | 24.5 | 21.1 |
| 1.65V | 392 | 311 | 187 | 114.9 | 69.4 | 52.2 | 35.1 | 24.3 | 20.9 |
| 1.70V | 378 | 300 | 183 | 111.9 | 68.0 | 51.2 | 34.7 | 24.0 | 20.7 |
| 1.75V | 362 | 287 | 177 | 108.9 | 66.1 | 50.0 | 34.0 | 23.5 | 20.3 |
| 1.80V | 334 | 268 | 170 | 104.0 | 63.5 | 48.1 | 33.0 | 22.9 | 19.8 |

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

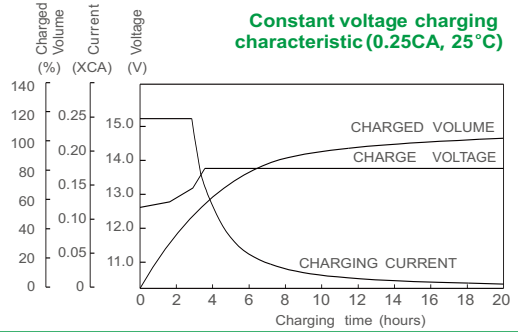
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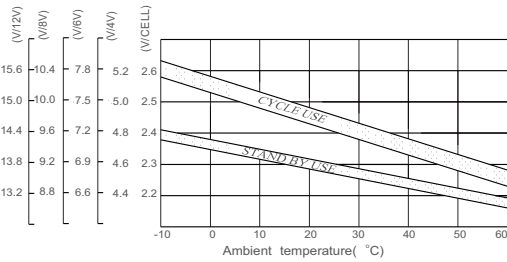
Discharge characteristic (25°C)



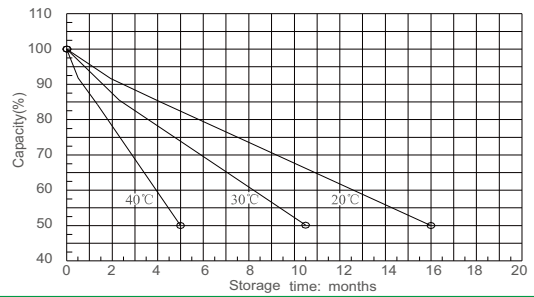
Constant voltage charging characteristic (0.25CA, 25°C)



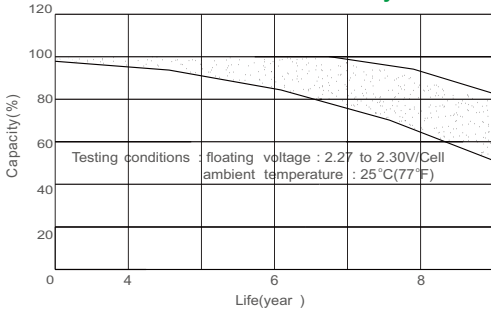
Relationship between charging voltage and temperature



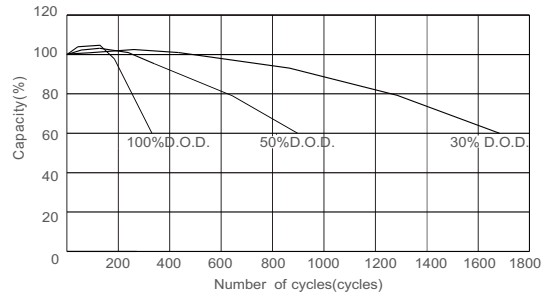
Self-discharge characteristic



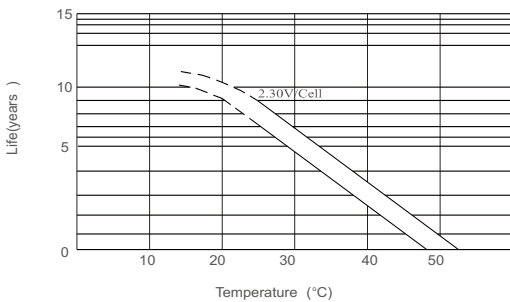
Life characteristics of Standby use



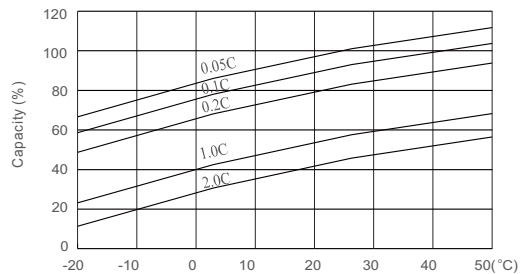
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



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