

6FM60D-X 12V 60Ah(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

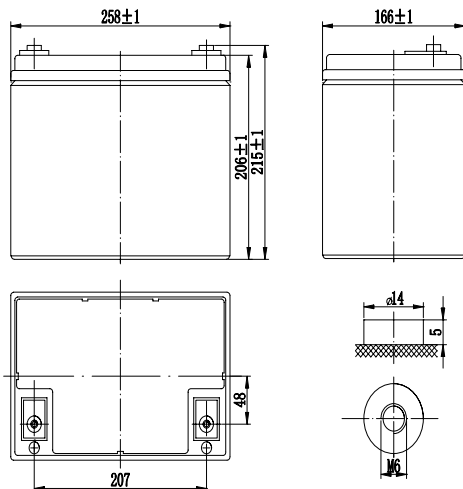
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|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Component | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator | Electrolyte |
| Raw material | Lead dioxide | Lead | ABS | ABS | Rubber | Pb | 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) | 258 / 10.16 |
| Width(mm / inch) | 166 / 6.54 |
| Height(mm / inch) | 206 / 8.11 |
| Total Height(mm / inch) | 215 / 8.46 |
| Approx. Weight(Kg / lbs) | 24 / 52.9 |



Performance Characteristics

| | |
|--|------------|
| Nominal Voltage | 12V |
| Number of cell | 6 |
| Design Life | 10 years |
| Nominal Capacity 77°F(25°C) | |
| 10 hour rate (6.0A, 10.8V) | 60.0Ah |
| 5 hour rate (10.5A, 10.5V) | 52.5Ah |
| 1 hour rate (40.7A, 9.6V) | 40.7Ah |
| Internal Resistance | |
| Fully Charged battery 77°F(25°C) | 5.5mOhms |
| Self-Discharge | |
| 3% of capacity declined per month at 20°C(average) | |
| Operating Temperature Range | |
| Discharge | -20~60°C |
| Charge | -10~60°C |
| Storage | -20~60°C |
| Max. Discharge Current 77°F(25°C) | 600A(5s) |
| Short Circuit Current | 1450A |
| Charge Methods: Constant Voltage Charge 77°F(25°C) | |
| Cycle use | 14.4-14.7V |
| Maximum charging current | 18A |
| Temperature compensation | -30mV/°C |
| Standby use | 13.6-13.8V |
| Temperature compensation | -20mV/°C |

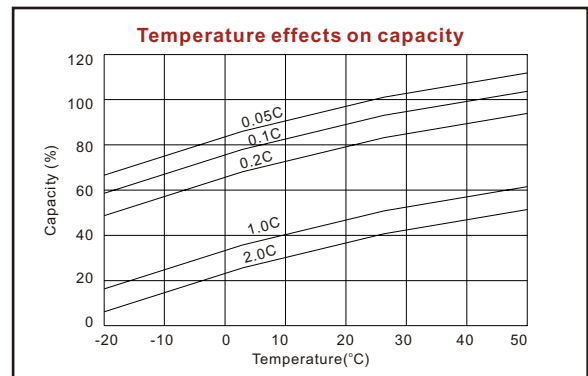
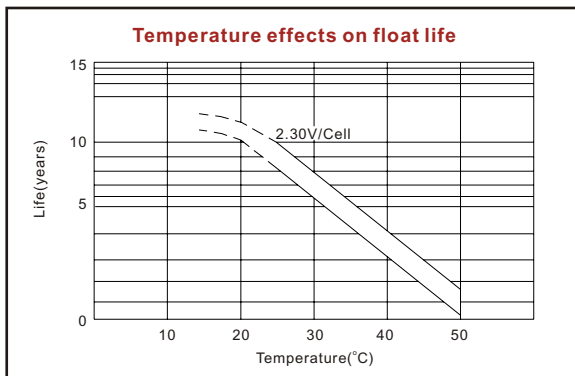
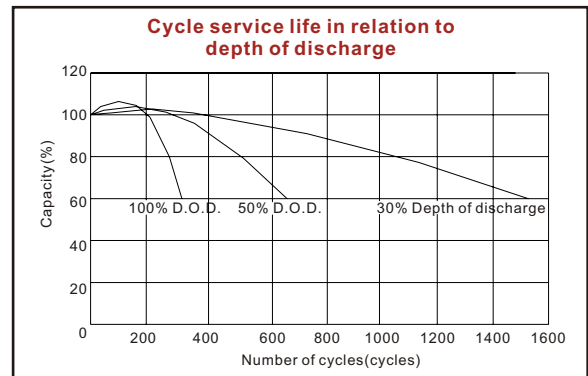
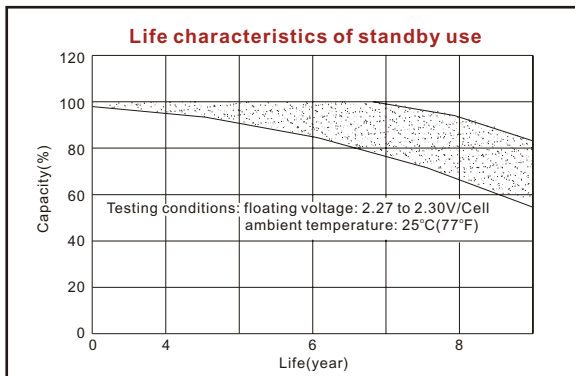
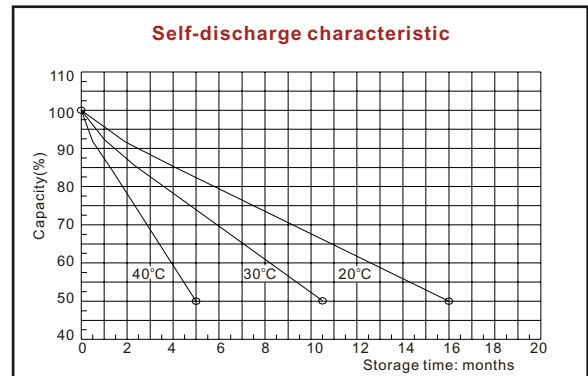
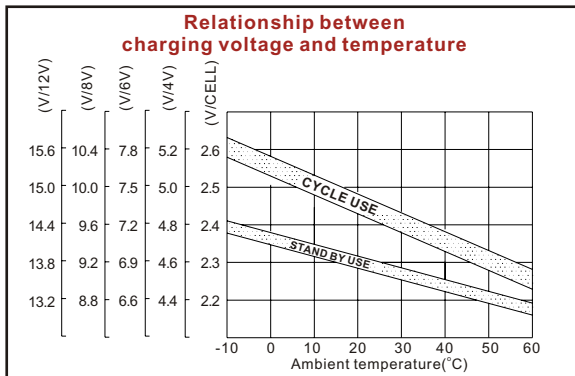
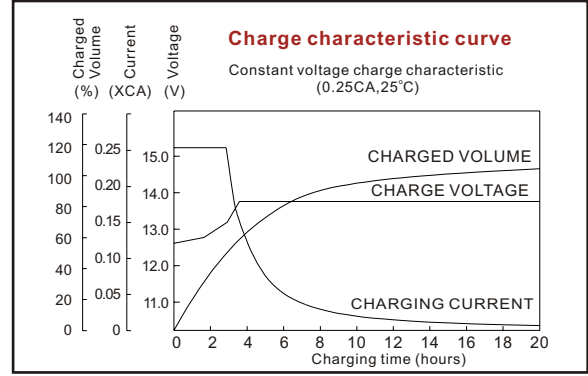
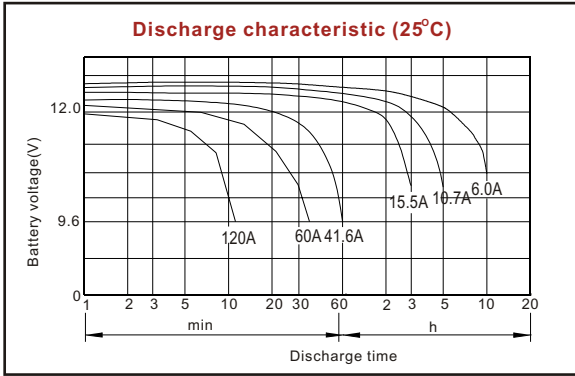
Discharge Constant Current (Amperes at 77°F25°C)

| End Point Volts/cell | 5min | 10min | 15min | 30min | 1h | 3h | 5h | 10h | 20h | 100h |
|----------------------|------|-------|-------|-------|------|------|------|------|------|------|
| 1.60V | 200 | 148 | 114 | 66.4 | 41.6 | 16.8 | 11.4 | 6.52 | 3.37 | 0.75 |
| 1.65V | 189 | 142 | 109 | 64.5 | 40.6 | 16.4 | 11.1 | 6.41 | 3.27 | 0.73 |
| 1.70V | 179 | 132 | 104 | 62.5 | 39.6 | 15.9 | 10.9 | 6.26 | 3.17 | 0.71 |
| 1.75V | 166 | 122 | 98.5 | 60.4 | 38.5 | 15.5 | 10.7 | 6.10 | 3.07 | 0.68 |
| 1.80V | 153 | 111 | 91.2 | 58.2 | 37.7 | 15.2 | 10.5 | 6.00 | 3.07 | 0.66 |

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

| End Point Volts/cell | 5min | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h | 100h |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V | 348 | 251 | 192 | 116 | 93.3 | 77.0 | 46.6 | 33.5 | 22.4 | 1.49 |
| 1.65V | 334 | 246 | 188 | 116 | 91.8 | 75.1 | 45.7 | 32.8 | 22.2 | 1.46 |
| 1.70V | 314 | 232 | 185 | 113 | 89.9 | 73.5 | 44.7 | 32.2 | 21.8 | 1.43 |
| 1.75V | 293 | 218 | 182 | 111 | 87.9 | 71.8 | 43.6 | 31.5 | 21.6 | 1.40 |
| 1.80V | 282 | 203 | 173 | 109 | 85.7 | 71.9 | 42.4 | 30.8 | 21.4 | 1.37 |

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



ISO9001:2000

MH25860

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