

MAC12420 (12V45Ah/C10-42AH/C9)



MAC General Series Battery

MAC General Series VRLA batteries are designed with AGM (Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for common power backup system. MAC series Batteries are the general purpose batteries with 10 years floating design life at 25°C. Meet with IEC, BS, JIS and Eurobat standard

General Features

Safety Sealing
 Non-spillable construction
 High Reliability and Stability
 Sealed and Maintenance-free
 Safety and Quality certification
 Long Life and low self-discharge design

Application

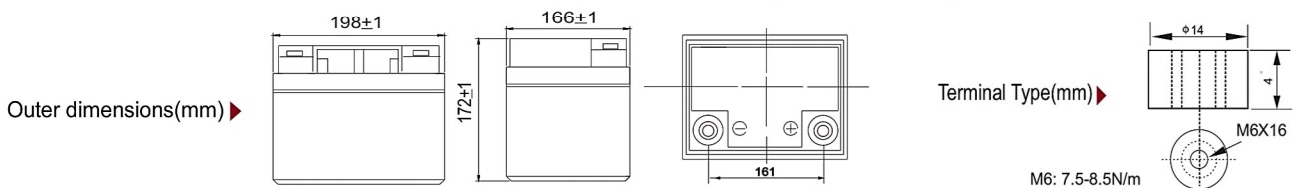
- Emergency Power System
- Communication equipment
- Telecommunication systems
- Uninterruptible power supplies
- Electric bicycle and wheelchairs, etc.
- Power tools
- Alarm system
- Marine equipment
- Fire and Security System

Construction

- PositiveLead dioxide
- ElectrolyteSulfuric acid
- SeparatorFiber glass
- ContainerABS(UL94-HB), Flammability Resistance of UL94-V2 can be available upon request
- NegativeLead
- Safety ValveEPDR
- TerminalCopper

Specification

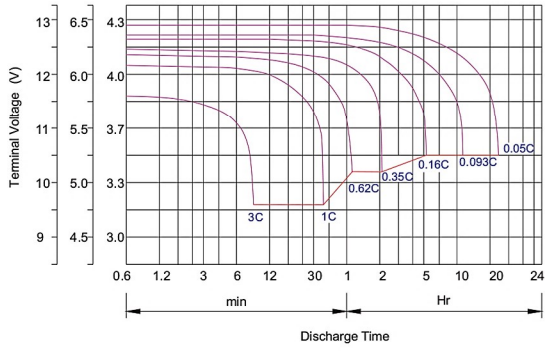
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|------------------------------------|---|----------------------|------------------------|-------------------------|
| Battery Model | Nominal Voltage | | 12V | |
| | Rated capacity(10 Hour rate) | | 45Ah(C10)-42Ah(C9) | |
| Dimensions | Length | Width | Height | Total Height |
| | 197mm (7.76 inches) | 166mm(6.54 inches) | 171mm(6.73 inches) | 171mm (6.73 inches) |
| Approx Weight | 13.5 kg (29.76 lbs) ±3% | | | |
| Capacity 25°C (77°F) | 10 hour (4.5A,10.8V) | 5 Hour (7.0A,10.5V) | 3 Hour (11.0A,10.2V) | 1 Hour (26.4A,9.6V) |
| | 45Ah | 35Ah | 33Ah | 26.4Ah |
| Max.discharge current | 450A(5Sec.) | | | |
| Internal Resistance | Full charged at 25 °C : Approx 7.8mΩ | | | |
| Capacity affected by Temp. (10 HR) | 40°C (104 °F) | 25°C (77°F) | 0°C (32°F) | -15°C (5°F) |
| | 102% | 100% | 85% | 65% |
| Self Discharge at 25°C (77°F) | After 3 months storage | | After 6 months storage | After 12 months storage |
| | 91% | | 82% | 64% |
| Charge method 25°C (77°F) | Cycle Use | | Float Use | |
| | 14.10-14.40V (Initial charging current less than 17.6A) | | 13.50-13.80V | |



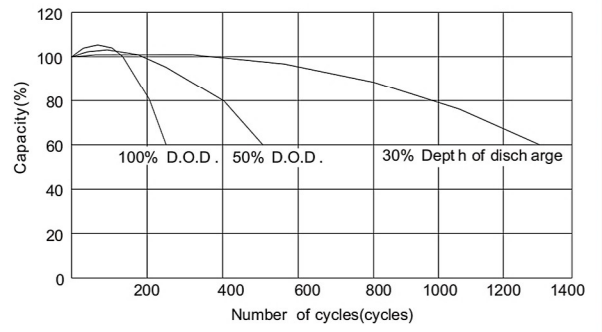
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

| Time | | 5min | 10min | 15min | 30min | 1hr | 2hr | 3hr | 4hr | 5hr | 8hr | 10hr | 20hr |
|--------|---|--------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|
| 9.60V | A | 140.9 | 92.8 | 74.8 | 50.2 | 26.4 | 15.4 | 11.3 | 8.8 | 7.3 | 5.1 | 4.6 | 2.5 |
| | W | 1454.4 | 991.5 | 802.5 | 539.3 | 285.1 | 169.1 | 125.9 | 99.0 | 82.5 | 59.0 | 53.4 | 29.0 |
| 10.20V | A | 136.5 | 83.8 | 70.5 | 48.0 | 24.8 | 14.7 | 11.0 | 8.6 | 7.1 | 5.0 | 4.5 | 2.4 |
| | W | 1457.7 | 935.4 | 788.8 | 538.4 | 280.7 | 169.4 | 127.4 | 99.8 | 83.1 | 58.7 | 53.2 | 28.4 |
| 10.50V | A | 132.0 | 74.9 | 61.6 | 44.9 | 24.0 | 14.3 | 10.7 | 8.4 | 7.0 | 5.0 | 4.4 | 2.4 |
| | W | 1441.9 | 852.4 | 703.5 | 516.5 | 278.2 | 166.4 | 125.1 | 98.8 | 82.5 | 58.5 | 52.6 | 28.6 |
| 10.80V | A | 127.2 | 70.6 | 57.3 | 41.4 | 23.2 | 14.0 | 10.5 | 8.3 | 6.9 | 4.8 | 4.4 | 2.4 |
| | W | 1427.7 | 814.4 | 660.0 | 479.2 | 270.4 | 163.9 | 123.5 | 98.2 | 81.1 | 57.4 | 52.3 | 28.3 |
| 11.10V | A | 123.0 | 66.2 | 52.9 | 37.0 | 22.4 | 13.6 | 10.1 | 8.1 | 6.7 | 4.7 | 4.2 | 2.2 |
| | W | 1394.6 | 766.3 | 615.6 | 432.4 | 263.9 | 161.2 | 120.2 | 96.4 | 79.8 | 56.4 | 50.5 | 27.2 |

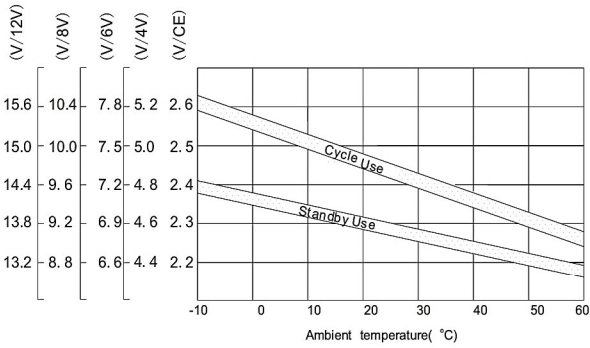
Discharge characteristic Curve



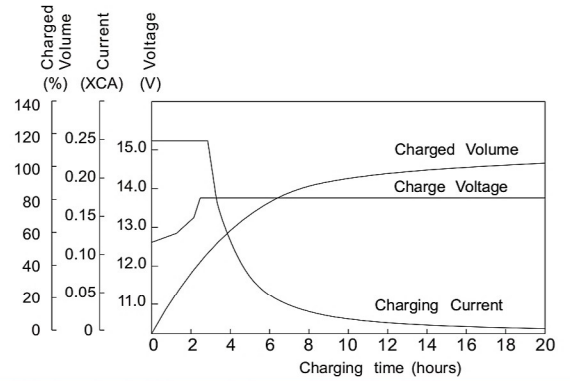
Cycle service life in relation to depth of discharge



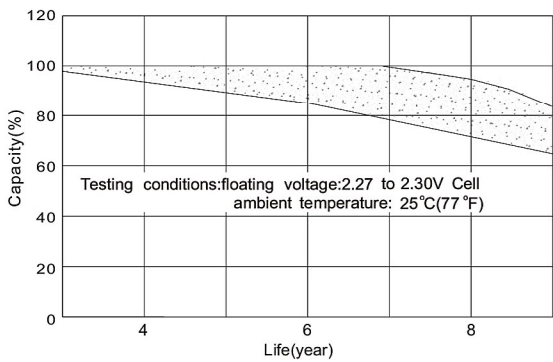
Relationship between charging voltage and temperature



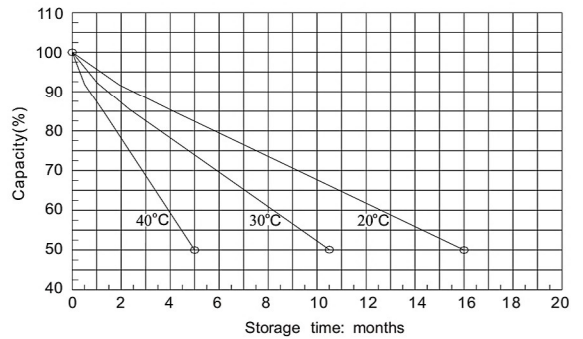
Constant voltage charging characteristic (0.25CA, at 25°C)



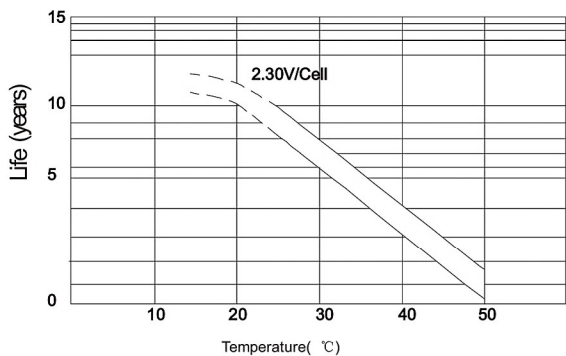
Life characteristics of standby use



Self-discharge characteristic



Temperature effects on float life



Charge characteristic Curve for standby use

