

AP12-100 12V100Ah



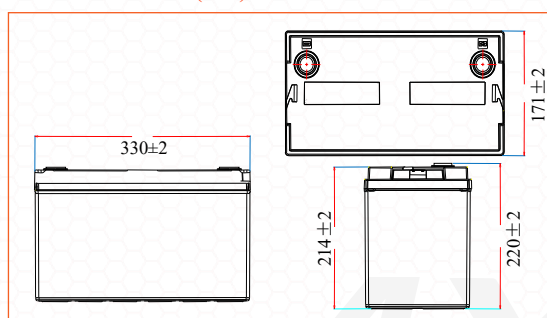
Sealed Maintenance Free / VRLA Battery

Specifications

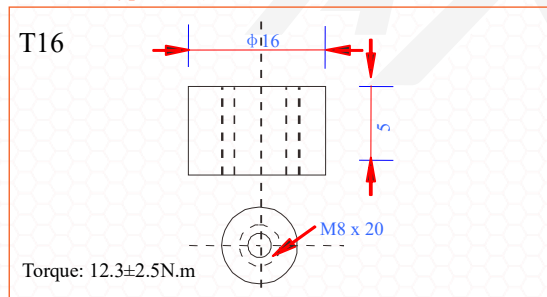
| | | |
|-----------------------|------------------------|---------------------|
| Nominal voltage | 12V (6 cells per unit) | |
| Rated capacity (10HR) | 100Ah/10.8V | |
| Dimensions | Length | 330±2mm (12.99inch) |
| | Width | 171±2mm (6.73inch) |
| | Height | 214±2mm (8.43inch) |
| | Total height | 220±2mm (8.66inch) |
| Approx. weight | 29.50kg (65.04lbs)±3% | |



Outer dimensions (mm)



Terminal type (mm)



Characteristics

| | | |
|---|---|--|
| Capacity (25°C) | 10HR (10.8V) | 100Ah |
| | 3HR (10.8V) | 75Ah |
| | 1HR (10.5V) | 55Ah |
| Terminal type | | T16 |
| Internal resistance (Fully charged, 25°C) | | Approx. 4.5mΩ |
| Capacity affected by temperature (10HR) | 40°C | 102% |
| | 25°C | 100% |
| | 0°C | 85% |
| | -15°C | 65% |
| Self-discharge (25°C) | 3 months | Remaining capacity: 91% |
| | 6 months | Remaining capacity: 82% |
| | 12 months | Remaining capacity: 65% |
| Nominal operating temperature | | 25°C± 3°C (77°F± 5°F) |
| Operating temperature range | Discharge | - 15°C~ 50°C (5°F ~ 122°F) |
| | Charge | - 10°C~ 50°C (14°F ~ 122°F) |
| | Storage | - 20°C~ 50°C (-4°F ~ 122°F) |
| Float charging voltage (25°C) | | 13.50 to 13.80V Temperature compensation: -18mV/°C/Block |
| Cyclic charging voltage (25°C) | | 14.50 to 15.00V Temperature compensation: -30mV/°C/Block |
| Maximum charging current | | 30A |
| Maximum discharge current | | 800A (5 sec.) |
| Design life | 10 years for floating (25°C) | |
| | Eurobat (20°C): 10-12 years, long life. | |

Construction

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

Constant current discharge characteristics unit: Ampere/Block (at 25°C, 77°F)

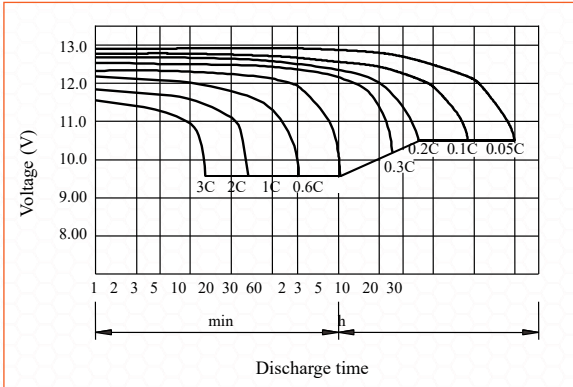
| F.V/Time | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|------|------|------|------|------|------|------|
| 9.60V | 218 | 168 | 101 | 61.8 | 36.5 | 26.3 | 21.0 | 18.0 | 12.3 | 10.2 | 5.40 |
| 9.90V | 211 | 164 | 98.5 | 60.9 | 36.3 | 26.2 | 20.9 | 17.8 | 12.3 | 10.2 | 5.38 |
| 10.2V | 203 | 158 | 95.5 | 59.3 | 36.0 | 26.0 | 20.7 | 17.7 | 12.2 | 10.1 | 5.37 |
| 10.5V | 194 | 153 | 93.2 | 57.5 | 35.5 | 25.8 | 20.6 | 17.6 | 12.1 | 10.1 | 5.34 |
| 10.8V | 183 | 144 | 89.7 | 55.6 | 34.6 | 25.0 | 20.0 | 17.1 | 11.7 | 10.0 | 5.30 |

Constant power discharge characteristics unit: Watt/Block (at 25°C, 77°F)

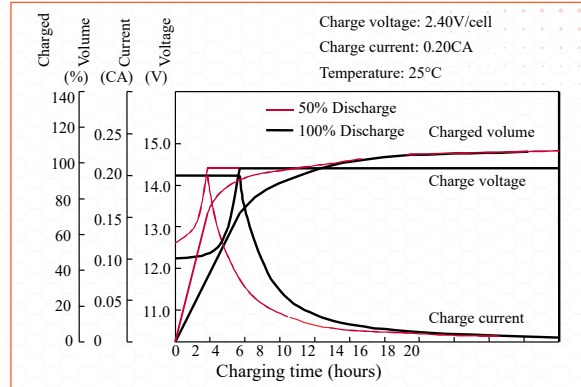
| F.V/Time | 10min | 15min | 30min | 60min | 2h | 3h | 4h | 5h | 8h | 10h | 20h |
|----------|-------|-------|-------|-------|-----|-----|-----|-----|-----|-----|------|
| 9.60V | 2354 | 1845 | 1128 | 705 | 423 | 309 | 247 | 212 | 147 | 122 | 64.7 |
| 9.90V | 2284 | 1800 | 1105 | 694 | 421 | 308 | 246 | 211 | 146 | 121 | 64.6 |
| 10.2V | 2190 | 1734 | 1071 | 676 | 417 | 306 | 244 | 209 | 145 | 121 | 64.4 |
| 10.5V | 2095 | 1675 | 1045 | 655 | 411 | 303 | 242 | 208 | 144 | 120 | 64.0 |
| 10.8V | 1978 | 1586 | 1007 | 634 | 400 | 294 | 235 | 202 | 139 | 119 | 63.6 |

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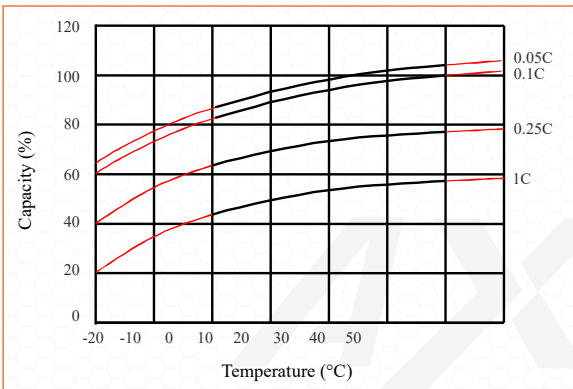
Discharge characteristics (25°C)



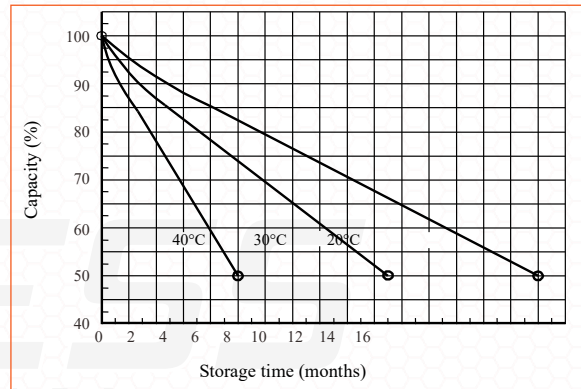
Charging characteristics (25°C)



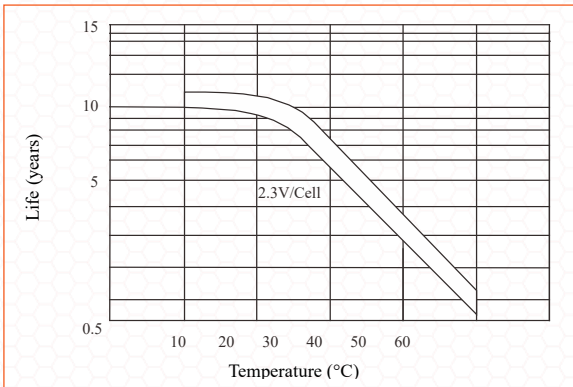
Temperature effects on capacity



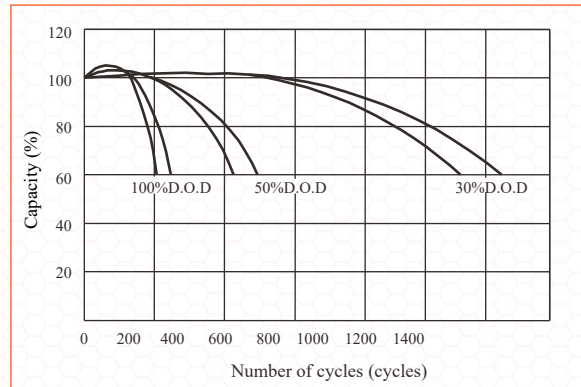
Self-discharge characteristics



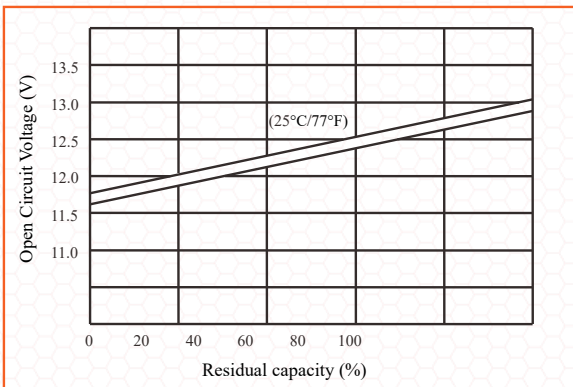
Floating life on temperature



Cycle life on D.O.D (25°C)



Relationship for OCV and capacity (25°C)



Relationship for charging voltage and temperature

