

FMJ Series

6FMJ-120 12V120Ah

FMJ series gel batteries utilize advanced battery technology. FMJ has good cyclic performance and high reliability. It is the economical choice for solar photovoltaic street lights, garden and lawn lamps, traffic lights, warning lights and other energy storage systems.

Benefits

- Long life according to EUROBAT Classification
- High discharge performance
- High gas recombination efficiency
- Maximum charge efficiency
- GEL state electrolyte prevents leakage and layering
- Low resistance PVC or PF micro-porous separator ensure low self-discharge rate
- Easy installation and handling

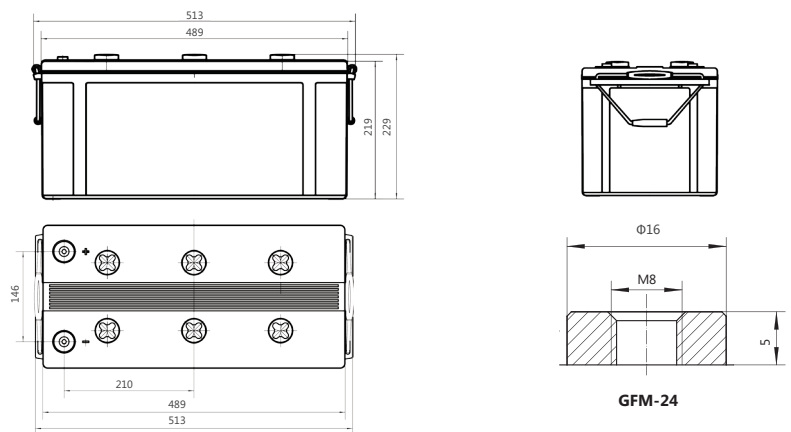
Applications

- Telecommunications
- Emergency power
- Energy storage systems
- UPS units
- Electrical Power plants and substation

Standards

- IEC 60896-21/22
- IEC 61427
- DIN 43539-T5
- EUROBAT guide

Drawing



Specifications

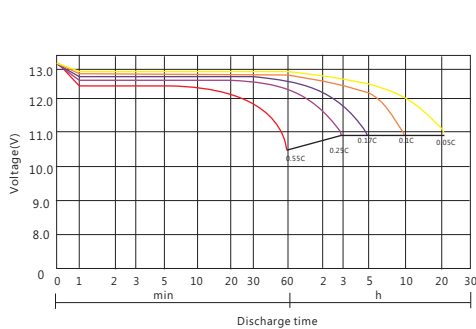
| | | | | |
|--------------------------------------|---|--------------------|-----------------------|-------------------|
| Battery Model | 6FMJ-120 | | | |
| Design Life (years, 25°C) | 15 | | | |
| Capacity (Ah, 25°C) | 10HR (12A, 1.80V) | 5HR (20.4A, 1.80V) | 3HR (30A, 1.80V) | 1HR(64.6A, 1.80V) |
| | 120 | 102 | 90 | 64.6 |
| Dimensions (mm) | Length | Width | Height | Total Height |
| | 513 | 232 | 219 | 229 |
| Approx. Weight (kg) | 47.0 | | | |
| Reference Internal Resistance (mΩ) | 3.66±15% (full charged @ 25 °C ,testing device:HIOKI BT3562) | | | |
| Maximum Discharge Current (A/3 Sec.) | 1196 | | | |
| Self-Discharge (25°C) | < 3 % per month | | | |
| Charge Voltage (V/cell, 25°C) | Cycle use | | Float use | |
| | 2.33 (-3.5mV/°C/cell), max charge current: 24A | | 2.23 (-3.5mV/°C/cell) | |
| Short Circuit Current (A) | 2780 | | | |

Discharge Data

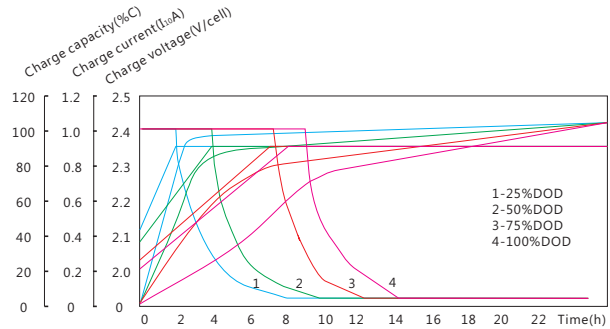
| Constant Current Discharge Data (25°C, A) | | | | | | | | | | | | | | | | | | |
|---|-----|-----|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|
| End Voltage (V/cell) | min | | | h | | | | | | | | | | | | | | |
| | 15 | 30 | 45 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 20 | 24 | 48 | 100 | 120 | 240 |
| 1.60 | 187 | 120 | 83.7 | 70.8 | 53.9 | 42.1 | 32.8 | 26.3 | 22.3 | 20.4 | 15.8 | 13.1 | 6.77 | 5.71 | 2.84 | 1.37 | 1.31 | 0.68 |
| 1.65 | 182 | 118 | 82.0 | 69.3 | 52.8 | 41.2 | 32.2 | 25.8 | 21.9 | 20.0 | 15.5 | 12.9 | 6.62 | 5.60 | 2.78 | 1.36 | 1.30 | 0.67 |
| 1.70 | 176 | 115 | 80.4 | 68.0 | 51.8 | 40.4 | 31.5 | 25.2 | 21.5 | 19.6 | 15.1 | 12.6 | 6.49 | 5.50 | 2.75 | 1.34 | 1.28 | 0.66 |
| 1.75 | 171 | 113 | 78.7 | 66.6 | 50.7 | 39.6 | 30.9 | 24.7 | 21.0 | 19.2 | 14.8 | 12.4 | 6.372 | 5.39 | 2.70 | 1.33 | 1.27 | 0.65 |
| 1.80 | 162 | 110 | 76.4 | 64.6 | 49.2 | 38.4 | 30.0 | 24.0 | 20.4 | 18.6 | 14.4 | 12.0 | 6.24 | 5.28 | 2.66 | 1.32 | 1.26 | 0.64 |

| Constant Power Discharge Data (25°C, W/cell) | | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| End Voltage (V/cell) | min | | | h | | | | | | | | | | | | | | |
| | 15 | 30 | 45 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 20 | 24 | 48 | 100 | 120 | 240 |
| 1.60 | 326 | 210 | 146 | 125 | 94.8 | 74.0 | 58.8 | 47.8 | 40.9 | 37.0 | 29.0 | 24.4 | 13.0 | 11.1 | 5.57 | 2.72 | 2.62 | 1.38 |
| 1.65 | 320 | 208 | 145 | 123 | 94.5 | 73.8 | 58.6 | 47.4 | 40.5 | 36.9 | 28.7 | 24.3 | 12.9 | 11.0 | 5.51 | 2.71 | 2.60 | 1.36 |
| 1.70 | 313 | 206 | 144 | 122 | 93.7 | 73.6 | 58.0 | 46.7 | 40.1 | 36.8 | 28.6 | 24.2 | 12.7 | 10.9 | 5.47 | 2.70 | 2.59 | 1.35 |
| 1.75 | 309 | 205 | 143 | 121 | 93.3 | 73.3 | 57.4 | 46.3 | 39.7 | 36.6 | 28.5 | 24.1 | 12.6 | 10.8 | 5.40 | 2.69 | 2.58 | 1.33 |
| 1.80 | 302 | 203 | 141 | 120 | 92.5 | 73.0 | 57.0 | 45.8 | 39.4 | 36.3 | 28.2 | 23.8 | 12.5 | 10.6 | 5.35 | 2.68 | 2.57 | 1.31 |

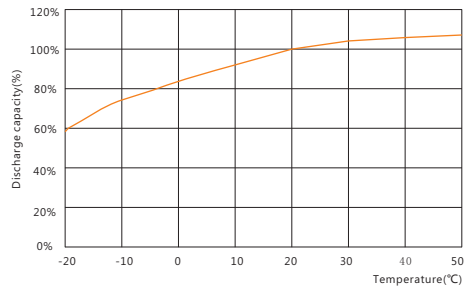
Performance Curve



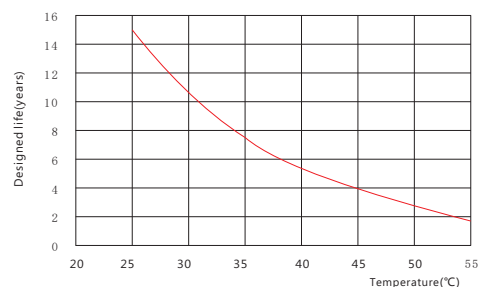
Discharge voltage vs. discharge time



Charge vs. discharge depth



Capacity vs. temperature



Design life vs. temperature

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