

FZA 120-12

12V 120AH

General



FZA 120-12 / VRLA GEL



Physical Specification

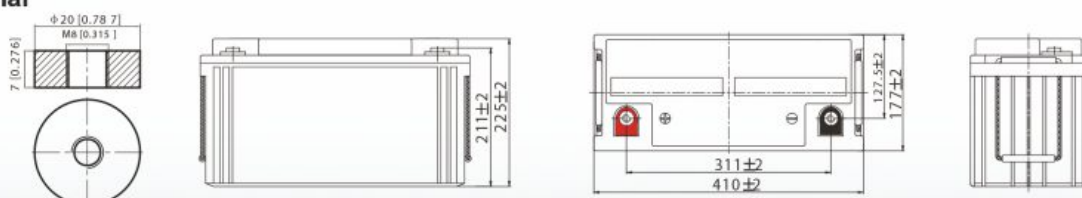
| | |
|-------------------------------|---------------------------|
| Part Number: | FZA 120-12 |
| Length: | 410 ± 2 mm (16.14 inches) |
| Width: | 177 ± 2 mm (6.97 inches) |
| Container Height: | 225 ± 2 mm (8.86 inches) |
| Total Height (with terminal): | 225 ± 2 mm (8.86 inches) |

Specifications

| | | |
|------------------------------|----------------------------------|---|
| Terminal Type | Nominal Voltage | 12V |
| | Nominal Capacity (10HR) | 120AH |
| | Standard Terminal | F11 |
| Container Material | Optional Terminal | - |
| | Standard Option | ABS |
| Rated Capacity | Flame Retardant Option (FR) | ABS (UL94:VO) |
| | 124.8 AH/6.24A | (20hr, 1.80V/cell, 25°C / 77°F) |
| | 120.0 AH/12.0A | (10hr, 1.80V/cell, 25°C / 77°F) |
| | 104.5 AH/20.9A | (5hr, 1.75V/cell, 25°C / 77°F) |
| Max Discharge Current | 92.1 AH/30.7A | (3hr, 1.75V/cell, 25°C / 77°F) |
| | 1300A (5s) | |
| Internal Resistance | Approx 4.0mΩ | |
| Discharge Characteristics | Operating Temp. Range | Discharge: -15 ~ 50°C (5 ~ 122°F) |
| | | Charge: 0 ~ 40°C (5 ~ 104°F) |
| | | Storage: -15 ~ 40°C (5 ~ 104°F) |
| | Nominal Operating Temp. Range | 25 ± 3°C (77 ± 5°F) |
| | Cycle Use | Initial Charging Current less than 36.0A. Voltage 14.4V ~ 15.0V at 25°C (77°F) Temp. Coefficient -30mV/°C |
| | Standby Use | No limit on Initial Charging Current Voltage 13.5V ~ 13.8V at 25°C (77°F) Temp. Coefficient -20mV/°C |
| | Capacity affected by Temperature | 40°C (104°F) |
| 25°C (77°F) | | 100% |
| 0°C (32°F) | | 86% |
| Design Floating Life at 20°C | 10 Years | |

Dimensions

F11 Terminal



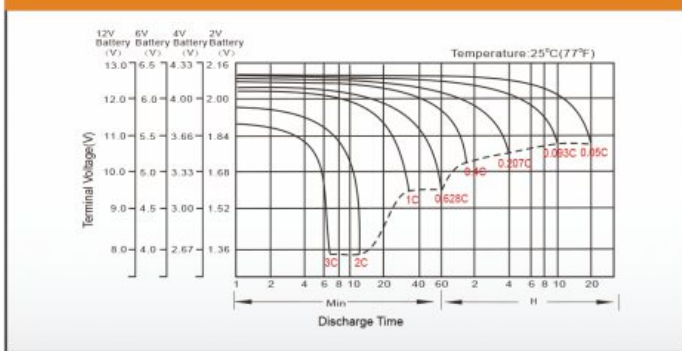
Constant Current Discharge (Amperes) at 25 °C (77°F)

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 250.6 | 193.7 | 163.7 | 140.4 | 104.2 | 75.8 | 60.1 | 36.5 | 28.0 | 23.0 | 19.5 | 17.0 | 13.7 | 11.5 | 6.15 |
| 1.80V/cell | 295.2 | 216.0 | 181.0 | 151.9 | 111.1 | 81.0 | 64.4 | 39.3 | 30.0 | 24.3 | 20.5 | 17.8 | 14.3 | 12.0 | 6.24 |
| 1.75V/cell | 334.1 | 236.9 | 194.4 | 161.6 | 117.6 | 85.3 | 68.0 | 40.8 | 30.7 | 24.8 | 20.9 | 18.1 | 14.5 | 12.1 | 6.35 |
| 1.70V/cell | 381.6 | 257.8 | 209.3 | 172.1 | 123.6 | 89.6 | 71.5 | 42.4 | 31.7 | 25.4 | 21.3 | 18.4 | 14.7 | 12.2 | 6.41 |
| 1.65V/cell | 427.7 | 278.6 | 222.7 | 181.8 | 130.1 | 93.9 | 74.9 | 43.6 | 32.5 | 26.1 | 21.7 | 18.8 | 14.9 | 12.4 | 6.47 |
| 1.60V/cell | 486.7 | 305.3 | 236.6 | 191.9 | 137.3 | 98.2 | 78.1 | 45.2 | 33.3 | 26.6 | 22.2 | 19.1 | 15.1 | 12.5 | 6.54 |

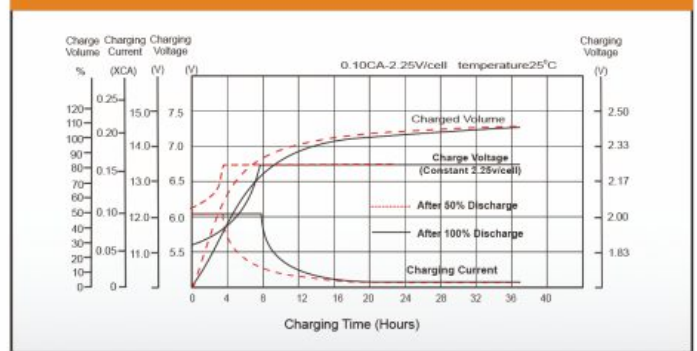
Constant Power Discharge (Watts) at 25 °C (77°F)

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 2h | 3h | 4h | 5h | 6h | 8h | 10h | 20h |
|------------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.85V/cell | 458.1 | 357.8 | 305.4 | 264.7 | 198.5 | 145.8 | 116.0 | 71.0 | 54.7 | 45.1 | 38.3 | 33.4 | 27.0 | 22.8 | 12.2 |
| 1.80V/cell | 534.0 | 394.3 | 333.1 | 282.2 | 208.6 | 154.4 | 123.6 | 75.9 | 58.2 | 47.3 | 39.9 | 34.9 | 28.1 | 23.7 | 12.3 |
| 1.75V/cell | 591.5 | 425.5 | 353.5 | 297.3 | 218.9 | 161.1 | 129.9 | 78.4 | 59.2 | 48.1 | 40.7 | 35.4 | 28.4 | 23.9 | 12.5 |
| 1.70V/cell | 656.8 | 452.5 | 375.2 | 314.2 | 228.8 | 168.6 | 136.2 | 81.3 | 61.1 | 49.2 | 41.4 | 35.9 | 28.8 | 24.1 | 12.7 |
| 1.65V/cell | 725.7 | 484.7 | 396.3 | 329.4 | 238.8 | 175.2 | 141.5 | 83.1 | 62.4 | 50.2 | 42.1 | 36.5 | 29.2 | 24.4 | 12.8 |
| 1.60V/cell | 806.8 | 518.9 | 414.1 | 343.9 | 250.3 | 182.2 | 146.9 | 85.8 | 63.6 | 51.2 | 42.7 | 37.0 | 29.5 | 24.6 | 12.9 |

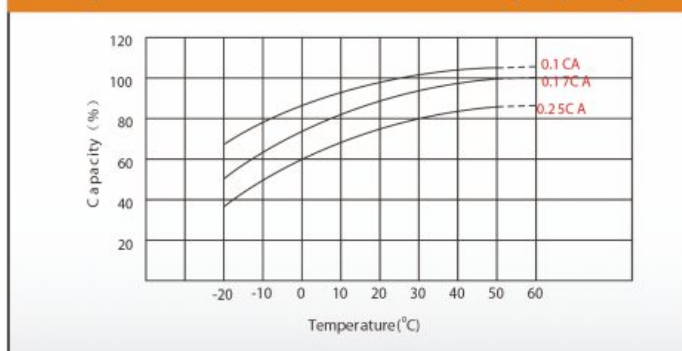
Discharge Characteristics



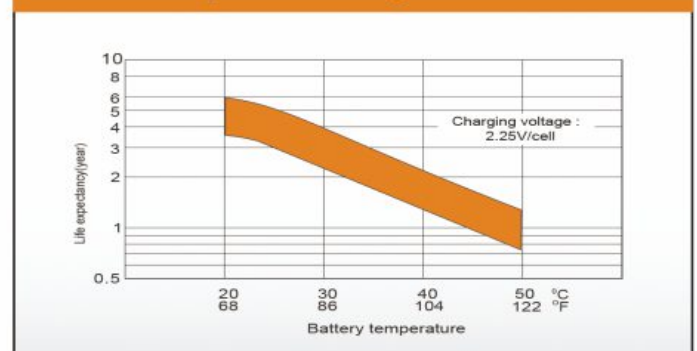
Float Charging Characteristics



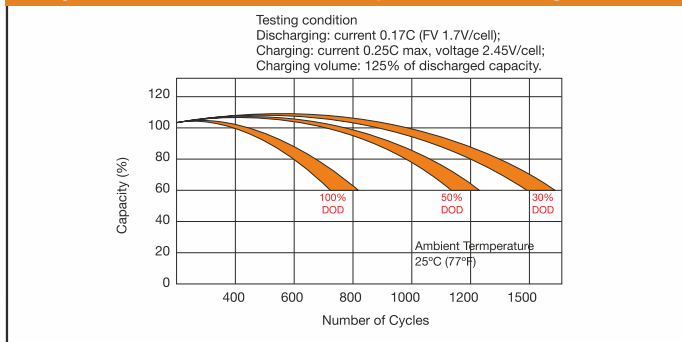
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life



Cycle Life in Relation to Depth of Discharge



Self Discharge Characteristics

