

DC12-100AC(12V100Ah)



Feature

DC-C series lead-carbon batteries use functional activated carbon and graphene as carbon materials, which are added to the negative plate of the battery to make lead carbon batteries have the advantages of both lead-acid batteries and super capacitors. It not only improves the ability of rapid charge and discharge, but also greatly prolongs the battery life, more than 2000 cycles at 80%DOD. It is more suitable for the application of PSOC.

Specification



| | |
|---|---|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Capacity | 100Ah@20hr-rate to 1.75V per cell @25°C |
| Weight | Approx. 29.0 Kg (Tolerance±2%) |
| Internal Resistance | Approx. 5.0 mΩ |
| Terminal | F5(M8)/F12(M8) |
| Max. Discharge Current | 1000A (5 sec) |
| Design Life | 15 years |
| Maximum Charging Current | 30.0 A |
| Cycle Use Voltage | 13.8 V~14.0 V @ 25°C Temperature Compensation: -4mV/°C/Cell |
| Operating Temperature Range | Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C |
| Normal Operating Temperature Range | 25°C±5°C |
| Self Discharge | The batteries can be stored for up to 6 months at 25°C and then recharging is recommended. Monthly Self-discharge ratio is less than 4% at 25°C. Please charged batteries before using. |
| Container Material | A.B.S. White/Red. UL94-HB/UL94-V0. |

Application

- ◆ Home energy storage system
- ◆ Smart power grid and micro-grid system
- ◆ Distributed energy storage system
- ◆ Solar and wind energy storage system
- ◆ Solar power generation grid or off-grid energy storage system
- ◆ Generation and battery hybrid energy storage system
- ◆



ISO 9001



ISO 14001



OHSAS 18001



Constant Current Discharge Characteristics :A(25°C)

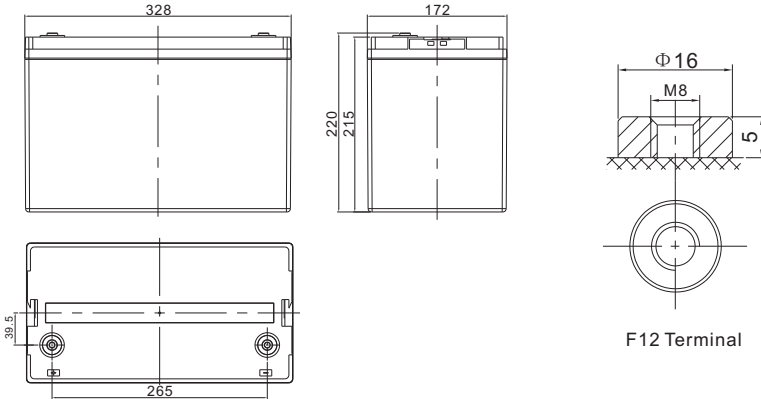
| F.V/Time | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR | 48HR | 72HR | 100HR | 120HR |
|----------|------|------|------|------|------|------|------|------|------|------|-------|-------|
| 1.60V | 55.5 | 32.5 | 24.2 | 19.1 | 16.1 | 11.0 | 9.66 | 5.22 | 2.23 | 1.53 | 1.13 | 0.96 |
| 1.65V | 54.4 | 31.9 | 23.8 | 18.9 | 15.9 | 10.9 | 9.56 | 5.17 | 2.21 | 1.51 | 1.11 | 0.95 |
| 1.70V | 53.0 | 31.2 | 23.3 | 18.5 | 15.7 | 10.7 | 9.43 | 5.10 | 2.18 | 1.49 | 1.10 | 0.94 |
| 1.75V | 51.1 | 30.2 | 22.6 | 18.0 | 15.3 | 10.5 | 9.25 | 5.00 | 2.14 | 1.47 | 1.08 | 0.92 |
| 1.80V | 48.5 | 28.8 | 21.7 | 17.4 | 14.8 | 10.2 | 9.00 | 4.86 | 2.08 | 1.43 | 1.05 | 0.89 |
| 1.85V | 44.8 | 26.8 | 20.4 | 16.4 | 14.0 | 9.72 | 8.64 | 4.67 | 2.00 | 1.37 | 1.01 | 0.86 |

Constant Power Discharge Characteristics : WPC(25°C)

| F.V/Time | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR | 48HR | 72HR | 100HR | 120HR |
|----------|-------|------|------|------|------|------|------|------|------|------|-------|-------|
| 1.60V | 103.7 | 61.6 | 46.2 | 36.8 | 31.1 | 21.5 | 19.0 | 10.3 | 4.39 | 3.01 | 2.21 | 1.88 |
| 1.65V | 102.8 | 61.0 | 45.8 | 36.4 | 30.9 | 21.3 | 18.8 | 10.2 | 4.36 | 2.98 | 2.19 | 1.87 |
| 1.70V | 100.5 | 59.7 | 44.9 | 35.8 | 30.4 | 21.0 | 18.6 | 10.0 | 4.30 | 2.94 | 2.17 | 1.84 |
| 1.75V | 97.4 | 58.1 | 43.8 | 35.0 | 29.8 | 20.6 | 18.3 | 9.87 | 4.22 | 2.89 | 2.13 | 1.81 |
| 1.80V | 92.9 | 55.7 | 42.2 | 33.9 | 28.9 | 20.1 | 17.8 | 9.61 | 4.11 | 2.82 | 2.07 | 1.76 |
| 1.85V | 86.4 | 52.1 | 39.7 | 32.1 | 27.6 | 19.2 | 17.1 | 9.23 | 3.95 | 2.71 | 1.99 | 1.69 |

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

Dimensions



Unit: mm

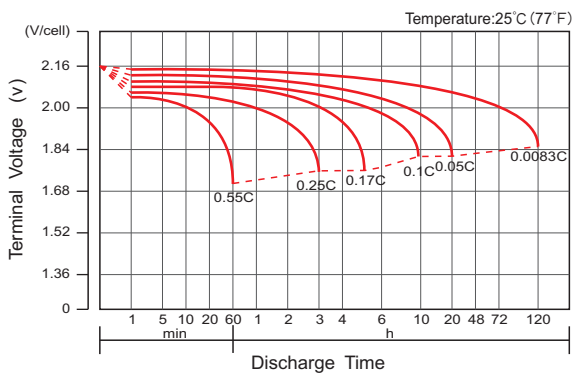
| | |
|--------------|-----------------------|
| Length | 328±2mm (12.9 inches) |
| Width | 172±2mm (6.77 inches) |
| Height | 215±2mm (8.46 inches) |
| Total Height | 220±2mm (8.66 inches) |
| Terminal | Value |
| M5 | 6~7 N*m |
| M6 | 8~10 N*m |
| M8 | 10~12 N*m |

Reference Capacity

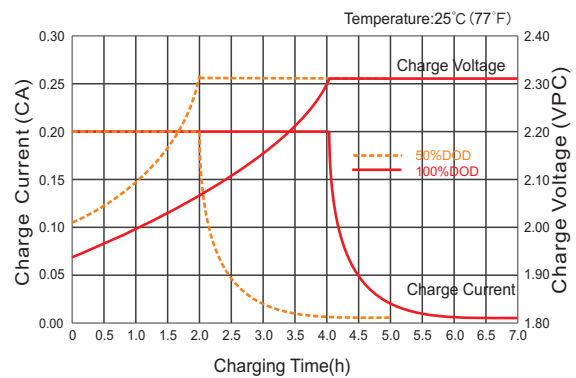
| Hour Rate | C20 (Ah) | C72 (Ah) | C100 (Ah) | C120 (Ah) |
|---------------|----------|----------|-----------|-----------|
| F.V (V/Cell) | 1.75 | 1.85 | 1.85 | 1.85 |
| Capacity (Ah) | 100.0 | 98.6 | 101.0 | 103.2 |

Characteristic Curve

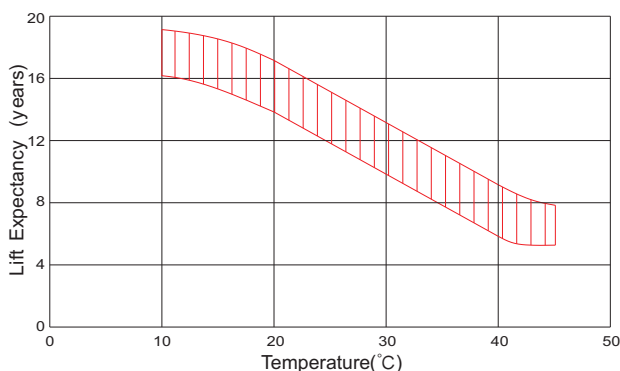
Discharge Characteristics Curve



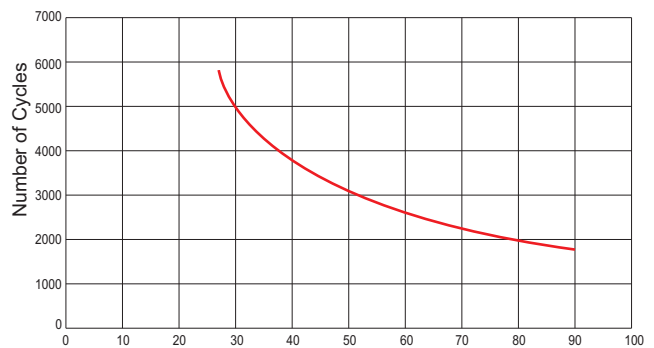
Charge Characteristic Curve for Cycle Use(IU)



Effect of Temperature on Long Term Life



Cycle Life in Relation to Depth of Discharge



(Note) All above information shall be changed without prior notice, Ritar reserves the right to explain and update the latest information.