



KBC12550 Deep Cycle Use 12V 55Ah(20hr)



The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

Battery Construction

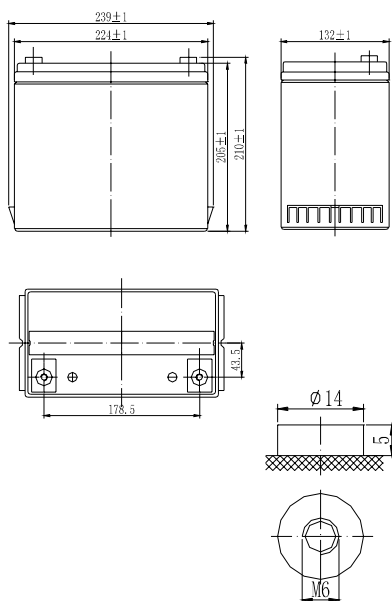
| | | | | | | | | |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| Component | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator | Electrolyte |
| Raw material | Lead dioxide | Lead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

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

Dimensions and Weight

| | |
|--------------------------|-------------|
| Length(mm / inch) | 239 / 9.41 |
| Width(mm / inch) | 138 / 5.43 |
| Height(mm / inch) | 205 / 8.07 |
| Total Height(mm / inch) | 210 / 8.27 |
| Approx. Weight(Kg / lbs) | 17.3 / 38.1 |



Performance Characteristics

| | |
|--|--------------|
| Nominal Voltage | 12V |
| Number of cell | 6 |
| Design Life | 10 years |
| Nominal Capacity 77°F(25°C) | |
| 20 hour rate (2.75A, 10.8V) | 55Ah |
| 10 hour rate (5.17A, 10.8V) | 51.7Ah |
| 5 hour rate (9.18A, 10.5V) | 45.9Ah |
| 1 hour rate (34.6A, 9.6V) | 34.6Ah |
| Internal Resistance | |
| Fully Charged battery 77°F(25°C) | 5.8mOhms |
| Self-Discharge | |
| 3% of capacity declined per month at 20°C(average) | |
| Operating Temperature Range | |
| Discharge | -20~60°C |
| Charge | -10~60°C |
| Storage | -20~60°C |
| Max. Discharge Current 77°F(25°C) | 550A(5s) |
| Short Circuit Current | 1400A |
| Charge Methods: Constant Voltage Charge 77°F(25°C) | |
| Cycle use | 2.30-2.35VPC |
| Maximum charging current | 16.5A |
| Temperature compensation | -30mV/°C |
| Standby use | 2.23-2.27VPC |
| Temperature compensation | -20mV/°C |

Discharge Constant Current (Amperes at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h | 3h | 5h | 10h | 20h |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|------|
| 1.60V | 167 | 124 | 96.5 | 57.8 | 42.3 | 34.6 | 14.5 | 9.77 | 5.35 | 2.81 |
| 1.65V | 157 | 119 | 92.6 | 56.0 | 41.1 | 33.7 | 14.1 | 9.52 | 5.32 | 2.81 |
| 1.70V | 148 | 111 | 88.0 | 54.2 | 39.9 | 32.8 | 13.8 | 9.35 | 5.28 | 2.78 |
| 1.75V | 138 | 102 | 83.3 | 52.5 | 38.8 | 32.0 | 13.5 | 9.18 | 5.24 | 2.74 |
| 1.80V | 128 | 96.0 | 77.2 | 50.6 | 37.6 | 31.2 | 13.2 | 9.01 | 5.17 | 2.75 |

Discharge Constant Power (Watts at 77°F25°C)

| End Point Volts/Cell | 5min | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h |
|----------------------|------|-------|-------|-------|-------|------|------|------|------|
| 1.60V | 303 | 220 | 177 | 108 | 83.6 | 67.9 | 38.6 | 28.8 | 18.7 |
| 1.65V | 286 | 216 | 172 | 106 | 82.4 | 66.3 | 37.7 | 28.2 | 18.5 |
| 1.70V | 268 | 205 | 164 | 104 | 80.7 | 64.8 | 36.9 | 27.6 | 18.1 |
| 1.75V | 249 | 192 | 157 | 102 | 78.9 | 63.3 | 36.1 | 27.0 | 17.9 |
| 1.80V | 236 | 179 | 150 | 101 | 76.9 | 63.1 | 35.5 | 26.4 | 17.8 |

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

