# ZJB-101

## 110V/220V Battery Online Monitor

## Description

ZJB-101 online monitoring system consists with battery cell acquisition module and monitoring host device. It provide real-time string voltage, charge / discharge status detect, export current, cell current & voltage, internal resistance etc. It also provide automatic balance function of battery cell, to keep the voltage at a reasonable float charging range, prolong the service life of the battery.

Comm port allow build remote monitor system, provide reliable and effective management method for the battery bank management, reduce risk of power interruption caused by power failure.

## Main Features

- Independent sampling channel, fuse to protect battery safety.
- Cell monitoring module equipped external temperature sensor.
- Automatically switch three working modes: Equalization operations , Internal resistance test, Voltage and temperature monitoring.
- Automatic determine battery opened loop or offline status.
- Detect and display charge and discharge capacity of the battery bank.
- Alarm record with time stamp for battery unexpect status, minimun 1min record interval for all battery cell.
- 4.0 inch TFT screen.
- USB interface for export record data.
- Provide Visual & sound alarm notice, with DO passive node for connect other device.
- Ethernet interface, RS232 and RS485 interfaces for build SCADA.

## Technical characteristics

| | |
|---|---|
| **Battery bank monitoring** | |
| Voltage | 0~999.99V |
| Accuracy | 0.10% |
| Current | 0~999.99A |
| Accuracy | ±0.5% for Shunt, ±1% for Hall CT |
| **Battery cell monitoring** | |
| Cell voltage | 0~20.000V |
| Accuracy | 0.1% @ ±30% rated voltage |
| Cell internal resistance | 0~65535uOhm |
| Accuracy | 5% |
| Cell temperature | 0-99.9°C |
| Accuracy | ±0.5°C |
| Call capacity display | 9999.9AH @ 1Sec detect interval |
| **Others** | |
| Float charging equalization | 10mV |
| Battery cell qtys | ≤240cells |
| Cell rated voltage | 2V, 4V, 6V, 12V |
| System info record | 1000lists |
| Alarm info display | 240lists |
| Alarm info record | 1000lists |
| Working voltage | AC220V & DC110/220V |
| Communication interface | RS485 / RS232 / Ethernet opional |



DC System Monitor & Tester
BLUE JAY®
Technology of Electrical Automatic

# ZJB-DT

## Battery Bank Discharge Tester

## Description

ZJB-DT is highly intelligent battery charge and discharge tester. It can be used as the discharge load in the battery off-line state, and realize the constant discharge of the set value by continuously regulating the discharge current. the tester records all valuable and continuous real-time data during the process.

Friendly HMI provide a variety of configuration and data review, user can download record data to USB. PC host operation software can generate the curves and reports needed.

## Main Features

- Intelligent SCM ARM control, 7-inch 1024*600 LCD display.
- Discharge load use PTC ceramic resistor, avoid red heat for a safer discharge process.
- Remote battery data collector use wireless, multiple band design for 4 device working in one site.
- Each device support max 25 cell collection boxes, each box connect 12 batteries, total 300 battery cell detecting.
- User free to configuration charge/discharge termination threshold.
- Provide software export record & curve report for further analysis.
- Various alarm function, provide automatic protection in over-temperature /voltage/current status.
- With RS485 port for remote control.

## Technical characteristics

| | |
|---|---|
| Battery Bank Voltage | DC110V or DC220V |
| Charge/discharge voltage | DC88V-264V |
| Charge/discharge current | Charge 60A; Discharge 60A |
| Power Supply | AC220V (-20%-+30%) |
| Battery cell voltage | 2V/4V/6V/12V optional<br>Max 300 batteries |
| Control precision | Discharge current ≤±1%;<br>Group terminal voltage ≤±0.1%;<br>Cell voltage ≤±0.05% |
| communication | RS485+ USB interface |
| Data storage capacity | 8G SD card and 16G USB flash drive |
| Temperature & Humidity | -5-50°C, 0-90% (40±2°C) |
| Elevation | Rated elevation of 4000m |
| Working mode | Standalone mode;<br>Parallel master mode;<br>Parallel slave mode;<br>Remote controlled mode |
| Protection performance | Over voltage protection;<br>Under voltage stop;<br>Over current protection;<br>Over temperature protection;<br>Wiring reversed protection |

# KP series

## Nickel-cadmium Battery

## Description

KP series nickel-cadmium pocket type can be divided into low rate (KPL), medium rate (KPM) and high rate (KPH) based on their discharge current. It tailored for superior performance at high temperature, high discharge, fast charge, long-term float or trickle charge.

They have advantage of high power and energy density, high efficiency of charge/discharge,a low cycle life, usually used for Railway DC power supply, Wind-energy/Solar systems, Telecom station, Lighting, UPS, Transport Vehicles etc.

## Main Features

- Large range of working temperature,-25°C to 45°C.
- Long service life: more than 20 years.
- Excellent charging efficiency and low rate of self discharge.
- Low maintenance cost and replacement cost.
- High resistance to mechanical and electrical abuse.

## Technical characteristics

| Model | KPL Series | KPM Series | KPH Series |
|---|---|---|---|
| Battery Type | Low Discharge Rate | Medium Discharge Rate | High Discharge Rate |
| Rated Capacity (Ah) | 10-1200Ah | 10~1100Ah | 10~400Ah |
| Discharge Rate | 0.5C 5A | 3.5C 5A | 7.5C 5A |
| Nominal Voltage (V) | 1.2V | | |
| Discharge Performance | 8h @ 0.2C 5A, 20°C | | |
| Float Charging Voltage | 1.4 ~ 1.44V | | |
| Charge Method | Constant Current | | |
| Cycle Life | 500 to 5000 cycles | | |
| Internal Resistance | Approx. 30mΩ | | |
| Operating Temp. | 25±10°C | | |
| Normal Temp. | -25°C to 45°C | | |
| Container Material | ABS/PP optional | | |
| Terminal | M8/M10/M16/M10*1.5/M20*1.5 optional | | |
| Design life | More than 20 years | | |
| Weight(Kg) | 1-62KG | 1.2-68.3KG | 2.15-27KG |





# DC/DG series

## AMG/GEL Lead-acid Battery

## Description

DC (AGM Deep Cycle) series is specially designed for frequent cyclic discharge. By using strong grids and specially designed active material, the DC series battery offers 30% more cyclic life than the standby series. It is suitable for UPS, solar & wind energy, telecom system, electric power system, electric vehicles, golf cars, etc.

DG (GEL Deep Cycle)series is pure GEL battery with 15~20 years floating design life, it is ideal for standby or frequent cyclic discharge applications under extreme environments. By using strong grids, high purity lead and patented Gel electrolyte, the DG series offers excellent recovery after deep discharge under frequent cyclic discharge use, and can deliver 400 cycles at 100% DOD. Suitable for solar, CCTV, marine, RV and deep discharge UPS, communication , and telecommunication , etc.

## Main Features

- Sealed (VRLA) AGM/GEL type Batteries.
- Good electrical conductivity and high capacity.
- High current charge-discharge performance.
- Small internal resistance, low self-discharge rate.
- Easy to install design.
- High reliability and safety.
- Deep cycle design, 800cycles~2500cycles.

## Technical characteristics

| Model | DC Series | DG Series |
|---|---|---|
| Battery Type | AGM Deep Cycle | GEL Deep Cycle |
| Nominal Voltage (V) | 2v/6V/12V | 6V/12V |
| Rated Capacity (Ah) | 2V@ 200-3000Ah<br>6V@180-225Ah<br>12V@26-260Ah | 6V@100-335Ah<br>12V@26-260Ah |
| Float Charging Voltage | 13.6 V~13.8 V @ 25°C<br>Temperature Compensation: -3mV/°C/Cel | |
| Cycle Use Voltage | 14.6 V~14.8 V @ 25°C<br>Temperature Compensation: -4mV/°C /Cell | |
| Internal Resistance | Approx. 5 mΩ | |
| Operating Temperature | Discharge: -20°C ~60°C<br>Charge: 0°C ~50°C<br>Storage: -20°C ~60°C | |
| Terminal | M5/M6/M8 optional | |
| Container Material | A.B.S. UL94-HB, UL94-V0 Optional | |
| Design life | 12 years | 15 years |
| Weight(Kg) | 4.92-13.46Kg | |