BATTERY MONITORING SYSTEM

PBAT-802/PBAT-812

PBAT-800

PBAT- GATE

Measure Range and Accuracy

Item	Voltage	Temperature	Internal Resistance
PBAT-802	1.6V to 2.6V (±0.2%)	0℃ to 100℃ (±1.0℃)	0.1 mΩ - 100 mΩ Repeatability Error: 1.5% ±25uΩ Conformity Error: 1.0% ±25uΩ
PBAT-812	4.8V to 15.6V (±0.2%)		
PBAT-800	0V to 600V (±0.5%)	String Current: -1000 to +1000 A (By Hall sensor)	

Monitoring, Record and Function

- Voltage, Internal Resistance, Negative Pole Temperature per block
- Voltage, Current per String
- Alarm of Battery's State of Charge and State of Health
- Real-Time and history data records and curve analysis
- Sleep mode to achieve ultra-low standby power consumption
- Built-in anti-reverse input circuit aims to protect the sensor and battery away from damage even if the power supply is connected conversely
- Built-in fuse with high reliability and safety
- Wiring easily with distributed installation
- Intelligent Voltage Balancing function

PBAT-GATE

PBAT-GATE Feature

PBAT-Gate is a industrial leading intelligent control gateway with OS, database and multi-communication. It collects, stores, and analyzes data from each block and string monitoring unit and then transmit to cloud server and remote system.
PBAT-Gate build in web server and database. It can manage 260 blocks battery's SOC and SOH without any system as the most cost-effective BMS.

PBAT-GATE Function

- Connect Max 260 monitoring units
- 8GB TF card for 60 months monitor data storage
- Build-in web server, display data by web view pages
- Analysis monitor cuve and judge battery SOC & SOH
- Battery switch status, humidity & temperature monitor
- Transmit data & alarm to cloud server by Ethernet
- E-mail and GSM message as optional function

Analysis & Report

- SOH of Block Battery
- SOC of String Battery
- Trend Curve Analysis
- Bar Chart Report
- Threshold Alarm

Measurement

Block Battery's:
- Voltage
- Temperature
- Internal Resistance

String Battery's:
- String Voltage
- Charge / Discharge Current

Battery Switch Panel:
- Switch Status
- Temperature & Humidity

Data Logging:
- Internal Resistance: Once per day
- Voltage, Current, Temperature: every 10mins ~ 60mins

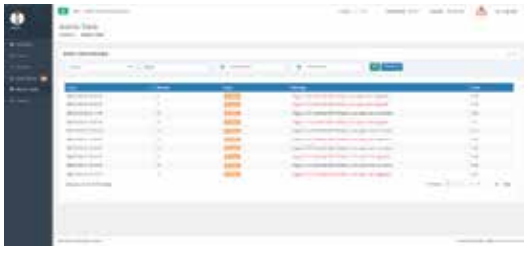
Environmental Measurement:
- Room Temperature
- Room Humidity

Summary

Data Trend

Bar Chart Report

Alarm Record



Battery Monitoring System Configuration

Specification	PBAT-802		PBAT-812
Function	Measures individual monoblock Voltage, Internal Resistance and Negative Pole Temperature		
Application	VRLA Battery		
Voltage Range	1.6V to 2.6V		4.8V to 15.6V
Accuracy	±0.2%		
Resolution	1 mV		
Temperature Range	0°C to 100°C	Accuracy	±0.1°C
		Resolution	1°C
Internal Resistance Range	0.1mΩ to 100mΩ	Accuracy	1% ±25uΩ
		Resolution	0.001mΩ
Isolated Measurement Point	Voltage 1000 VDC / Resistance >10MΩ		
Power Supply	A little consumption from monoblock being monitored		
Communication	BM-BUS Communication		
Specification	**PBAT-800**		
String Voltage	0VDC to 600VDC	Accuracy	±0.5%
		Resolution	0.01V
String Current	-1000A to +1000A (By Hall Sensor)	Accuracy	±1%
		Resolution	0.01A
Specification	**PBAT-GATE**		
Data Collection	Controlling every battery monitoring unit of one string to discharge AC current orderly to measure the internal ohmic.		
Battery Input	Up to 260 Batteries		
Sensor Monitoring	Humidity and Temperature Sensor		
Status Monitoring	Up to 4 battery switch status		
Communication	Max. 4x RS485 serial port, 2x Ethernet Port (10/100M), 1x GPRS (2G)		
Relay Output	2x Relay Output. Capacity is 30VDC/5A and 250VAC/5A,		
Analog Input	2x Analog Input (4~20mA)	Digital Input	4x Digital Input
Data Logging	100,000 points (Can be upgraded depend on Flash Memory Card)		
Event Logging	1,000 points (Can be upgraded depend on Flash Memory Card)		
Memory	512MB RAM, 1GB Flash and 8GB TF Memory Card		
Power Supply	18VDC to 36VDC	Display	OLED Display
Weight	650g	Operating Temperature	-10°C to +55°C
Dimension	94mmx90mmx68mm	Operating Humidity	≤ 95%
Power Consumption	<5W	Safety Standard	CE EMC/LVD/FCC

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