APS- Advanced Real-time Battery Monitor

ABOUT PRODUCT

The APS – Advanced Real-time Battery Monitor is an innovative solution to measuring battery conditions using Power Line Carrier (PLC) communication. With multi-frequency measurement, users can analyse all aspects of batteries, including internal resistance, voltage, current, capacitance and temperature. With APP or Web page access based on a Cloud server, you can easily manage your batteries through a smart phone remotely. Periodically detailed diagnostic reports will be sent, providing comprehensive data about your batteries with targeted suggestions and solutions.

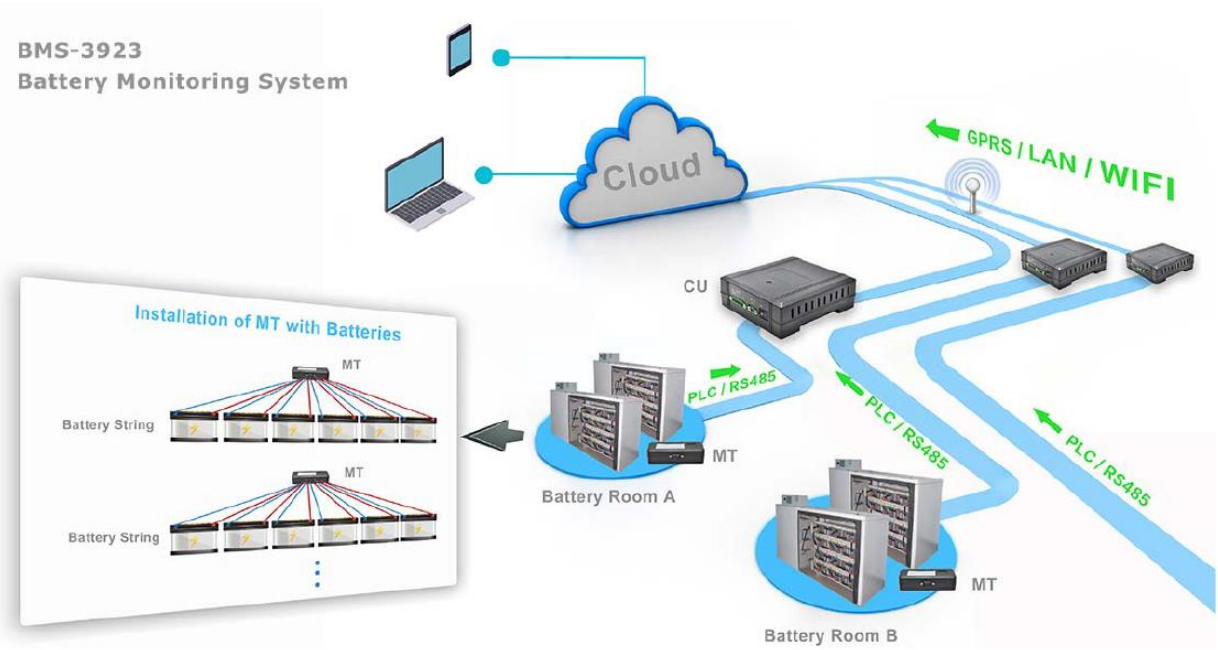
PRODUCT PERFORMANCE

APS – Advanced Real-time Battery Monitor provides real time knowledge about battery conditions. This is vert significant to ensure the performance of the critical power systems in place. Existing methods of manual measurement or online battery monitoring systems will require vert complicated wire connections, labour intensive installation and commissioning, professional technicians at very high costs. The investment is large. The APS-Advanced Real Time Batter Monitoring system is an innovative solution to solve these problems. We apply new methods to measure battery condition and communication by PLC methodology. With multi-frequency measurement, users can analyse batteries in all aspects including internal resistance, voltage, current, capacitance, temperature etc..... Based on APS's years of experience in battery management a mature mathematical model that will precisely predict batter capacity is ensured.

MAIN FEATURES

- Simple wire connection- easy installation and onsite commission
- Advanced mathematical model, consistent and precise measurement
- Cloud server and mobile communication
- Smart and convenient methods for battery management
- Unique technology for system resting
- Data solutions: Detailed monthly analytical reports. Real solutions for smart applications.

SYSTEM ARCHITECTURE



POWER SOLUTIONS antipodes

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ADDITIONAL PARTS

Current Clamp (CT)
Function: Customised DC current clamp for measuring battery string discharge and charge current. Customised as 100A, 200A, 300A or the alike.
Power Supply: No External Supply- Powered by CU BUS

1- Channel Measurement Cable
Connection: Each cable is connected with one cell.
Feature: Built-in temperature sensors on the clip. Cable length and clip size can be customised for different battery posts

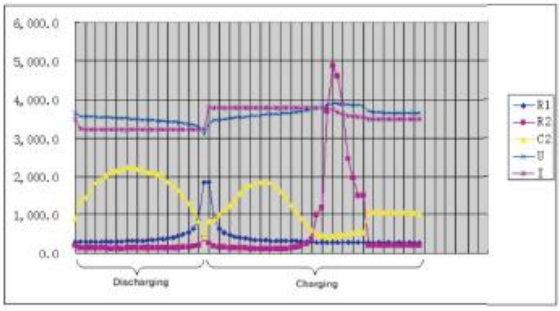
4- Channel Measurement Cable
Connection: Each cable is connected with 4 cells.
Feature: Built-in temperature sensors on the clips. Cable length and clip size can be customised for different battery posts

6- Channel Measurement Cable
Connection: Each cable is connected with 6 cells.
Feature: Built-in temperature sensors on the clips. Cable length and clip size can be customised for different battery posts

Onsite installation of measurement cables
Our patented clip provides for fast and convenient connection with battery posts. Simply loosen the screws on the battery posts and fix the clips on each post. Built-in temperature provide temperature readings for each cell.

Applications

- Power substations
- Telecommunications Machine Rooms
- Data Centres
- Railway Systems
- Offshore Platforms



The change of R1, R2, C2, U & I during battery charging and discharging

Onsite installation of battery monitoring system

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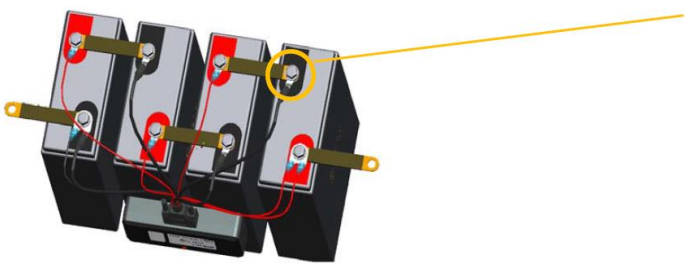
Control Unit (CU)
Communication with server: WIFI or GPRS
Communication with MT: PLC (Optional RS485)
Function: Test string voltage and current, collect measurement data from MT via Power Line Carrier (PLC) Data can be sent to cloud server via built-in WIFI/ GPRS module

Monitoring Terminal (MT)
Communication with CU: PLC (Optional RS485)
Cells connected per MT: One MT can be connected with 1, 4 or 6 cells, depending on requirements and battery wiring structure.
Function: Test battery voltage, internal resistance, capacitance and temperature. Data can be sent to CU via Power Line Carrier (PLC)

Ring Connector:



Data Interface

With the APS cloud servers, users can easily access the data system simply with a smart phone or web page. All aspects of monitoring can be be viewed clearly in hand. Lagged out batteries will be listed and timely warnings sent to the battery administrator.

The data interface also provides detailed reporting that analyses all battery conditions in different aspects. In the instance of a battery failure, solutions will be provided within the report.

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