

BMS : Battery Monitoring System

Battery Bank : UPS & Data Center



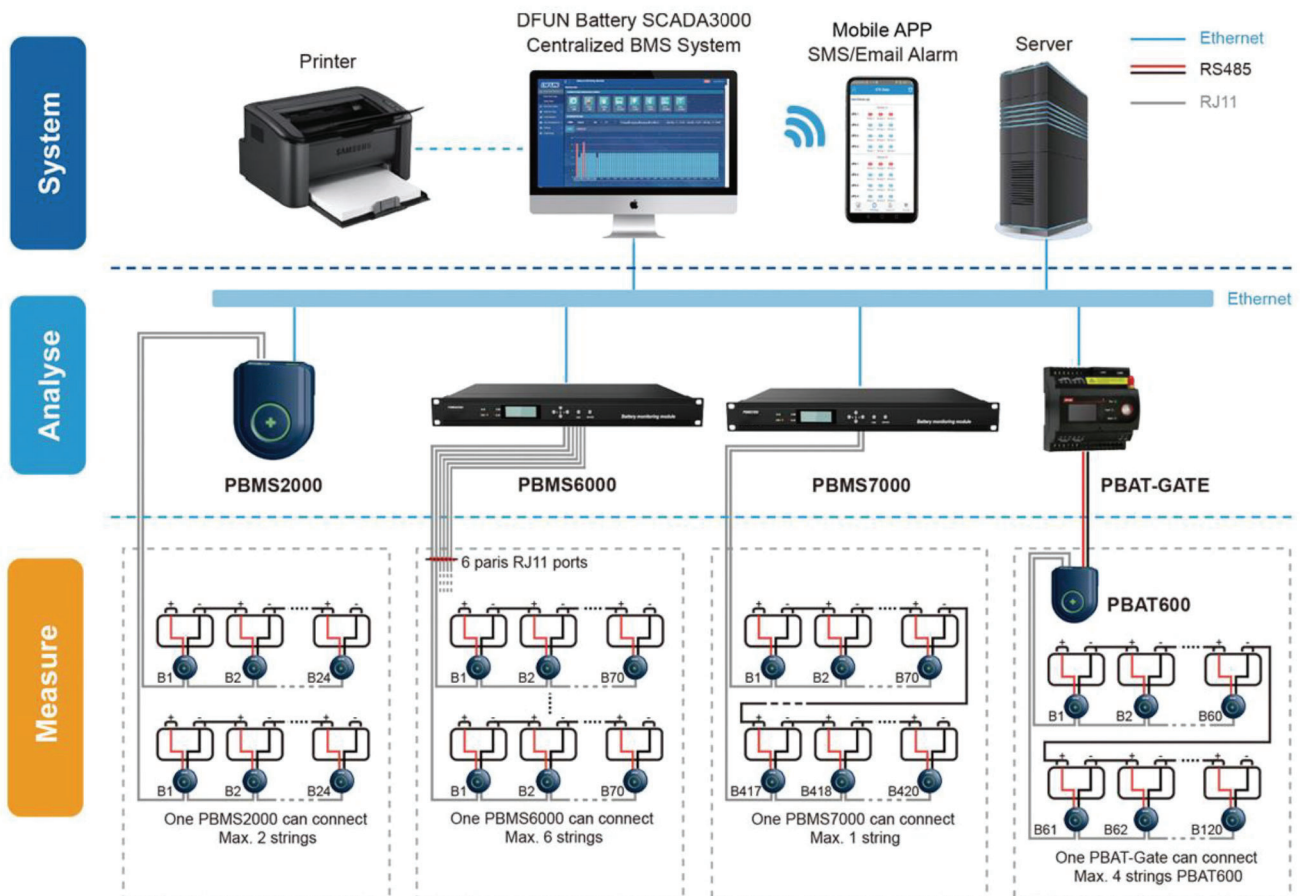
Feature:

- Online Battery Monitoring & Alarm System 24/7 Hr.
- Lead Acid Battery type 2V OPzS/OPzV & 12V AGM/VRLA
- Suitable Battery Bank of UPS & Data Center Application
- Isolated Individual Design support to Battery Bank
- Online Battery in Voltage, Impedance, Internal Neg. Temp.
- Auto-Balancing Battery Bank or Equalization Battery Cell
- String Battery in Voltage, Charge/Discharge Current, Alarm
- String Battery Current use Isolated Hall Sensor
- Easy & Safety Installation Battery Bank
- Automatic ID Address Battery Setting
- Apply in Small Scale, Middle Scale, Large Scale
- Provide HMI for Local Operation
- Built-in Web Server with Visual Monitoring
- Support Multi-Communication : MODBUS-TCP, SNMP
- Standard Apply in CE , IEEE 1182-2005
- ISO9001 / ISO14001:2015 MFG Certification





Battery Monitoring System BMS Structure



IoT SYSTEM : BMS Cloud Server # Cloud Server Monitoring BMS System #
 : BMS SCADA3000 # Battery Bank Centralized BMS System #
 : BMS Mobile App # Mobile App Monitoring BMS System
 : BMS HMI 7" # Local Monitoring BMS System #

PBMS7000 : String BMS for UPS with Mono String Battery Bank

PBMS2000 : Low Scale BMS for UPS with 2 String Battery Bank

PBMS-Gate : Middle Scale BMS for DATA CENTER UPS with 4 String Battery Bank

PBMS6000 : Large Scale BMS for Energy Storage System with 6 string Battery Bank

Measure : PBAT600 Battery String Sensor & PBAT-02V/12V Battery Cell Sensor in Modbus Network

BMS Powerful Application



Substation



Data Center



Railway Transport



Energy Storage



BTS Site



Bank



Battery String Sensor & Batter Cell Sensor

PBAT600 Battery String Sensor

- Battery String Voltage , Charge & Discharge Current
- Calculate Battery State of Charge (SOC)
- Battery Auto Balancing / Equalization Battery cell
- Automatic ID Address Battery Bank Setting in ModBus
- Data Acquisition String in Voltage, Charge/Discharge Current



Running Status



Alarming Status



Hall Sensor



Battery String Sensor & Batter Cell Sensor

PBAT-02V/12V Battery Cell Sensor

- PBAT-02V : 2V Cell-OPzS/OPzV , PBAT-12V : 12V Cell-AGM
- Data Acquisition Cell in Voltage, Impedance, Int. Temp.
- Battery Auto Balancing / Equalization Battery cell
- Easy Installation and Individual battery & Accessory

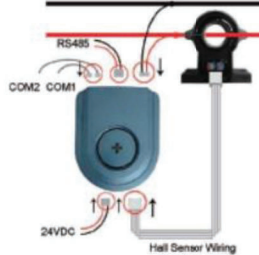
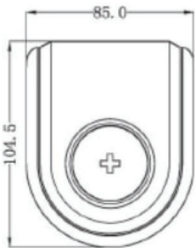


Running Status

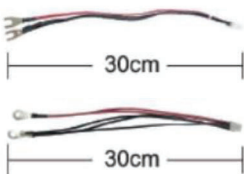


Alarming Status

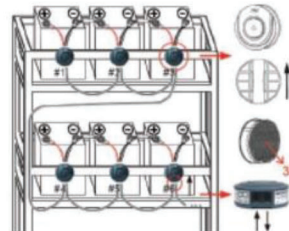
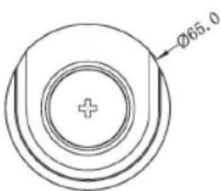
Dimension and Installation



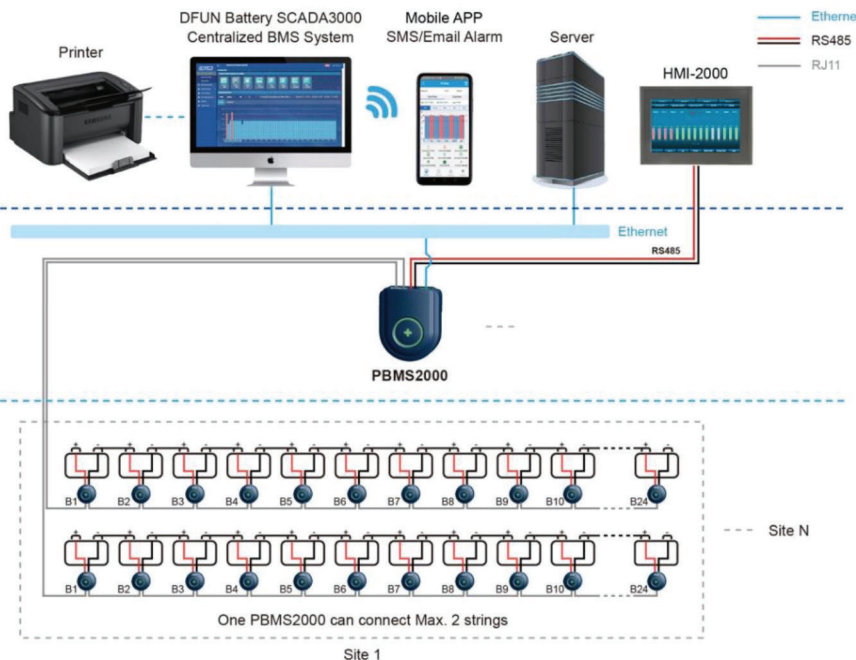
Dimension and Installation



Battery Measuring Cable	Item	Description
	Length	30cm
	Terminal and size	U Type, Hole Diameter: 8mm
		O Type, Hole Diameter: 8mm



System

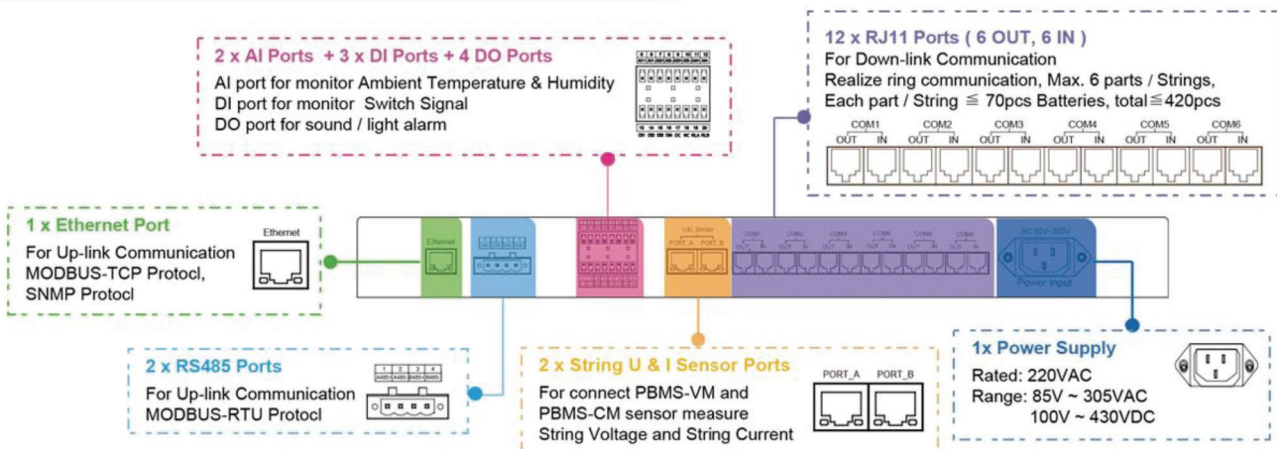
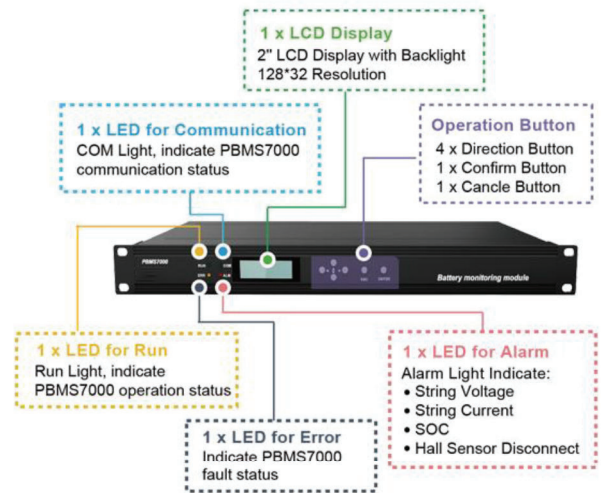




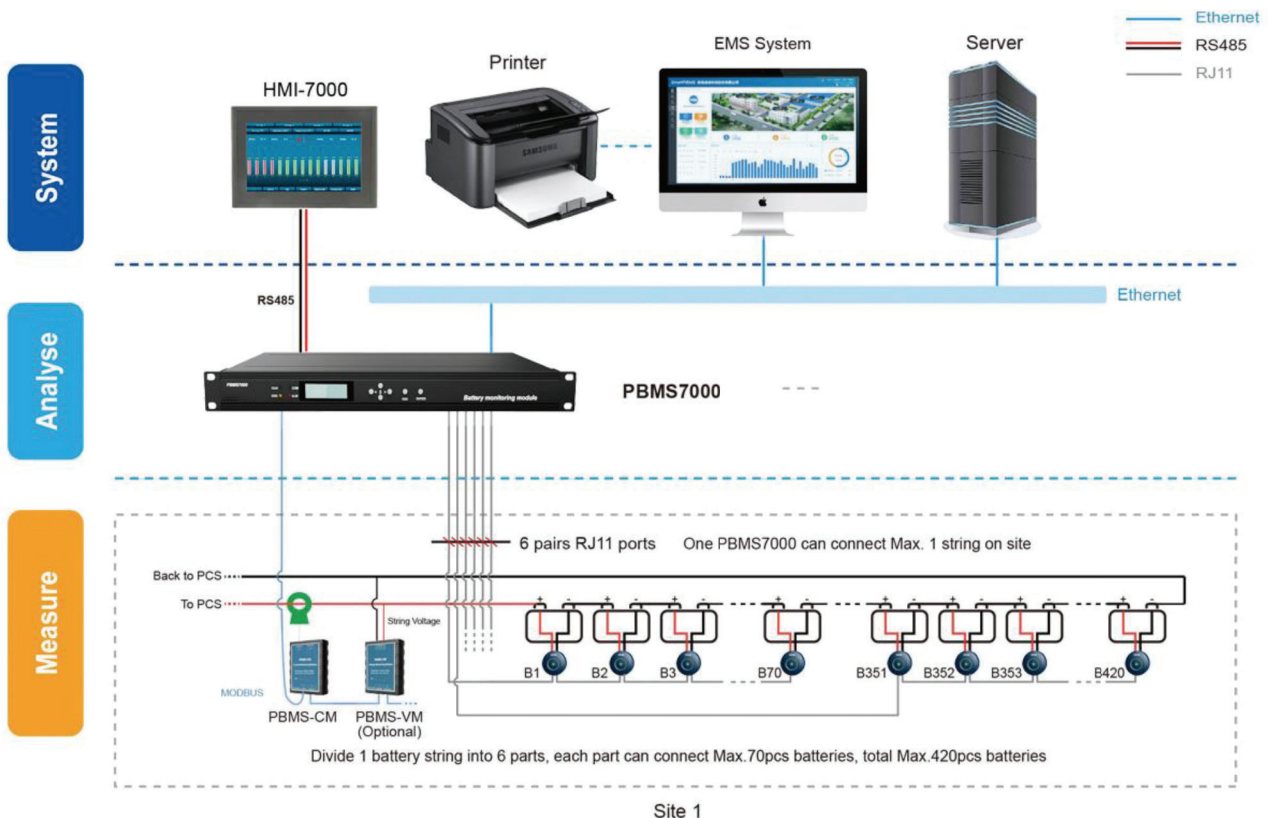
PBMS7000 : String BMS for UPS with Mono String Battery Bank

PBMS7000 Battery Monitoring Module

- Standard 1 U Design for Energy Storage Distribution Cabinet
- String voltage up to 1000V, Battery Capacity Up to 3000AH
- Measure Battery String Status, String Voltage, String Current
- Measure Ripple Voltage, Ripple Current
- Measure individual Battery Voltage, Impedance, Temperature
- Calculate Battery String SOC, Individual SOC / SOH
- Support Data Acquisition and Data Upload
- Setpoint Alarm (Upper Limit / Lower Limit)
- Support 3rd party system (EMS)
- Auto-Balancing
- Local Display via HMI



PBMS7000 Structure





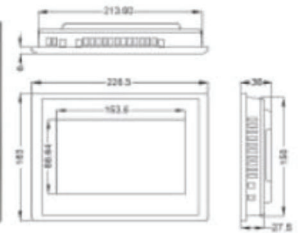
BMS HMI : Local Monitoring BMS System

Local Display & Operation Layer (Optional)

PBAT-HMI

- 7" inch Touch-Screen HMI for Data Display and Operation
- One HMI Connect with One PBAT-Gate, Max. 480pcs batteries
- **Real-time Data Inquiry**
 - 1) Individual Battery Voltage, Impedance, Internal Temperature, SOC, SOH
 - 2) String Voltage, Charge and discharge Current, SOC, Balance degree
- **Alarm Data Inquiry**
 - 1) Real-time alarm state and related alarm information (Problem battery ID, Date/ Time, Alarm Reason, communication state etc..)
 - 2) 1000 Alarm Records for each string battery

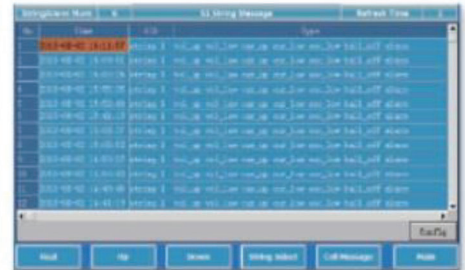
Unit: mm



Dashboard



Real-time Data Inquiry



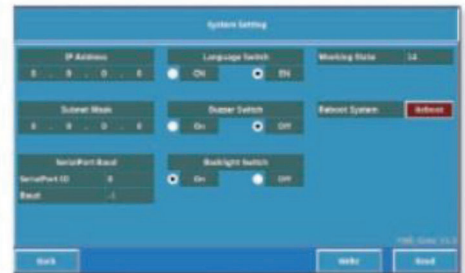
Alarm Data Inquiry



String Status

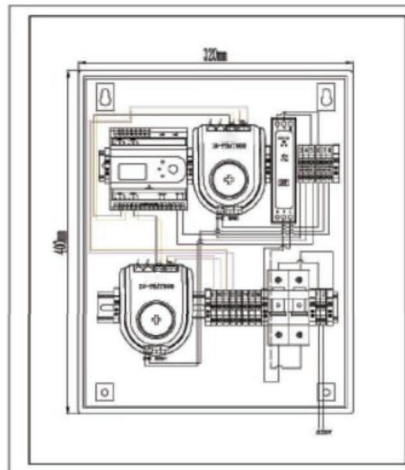


Alarm Release

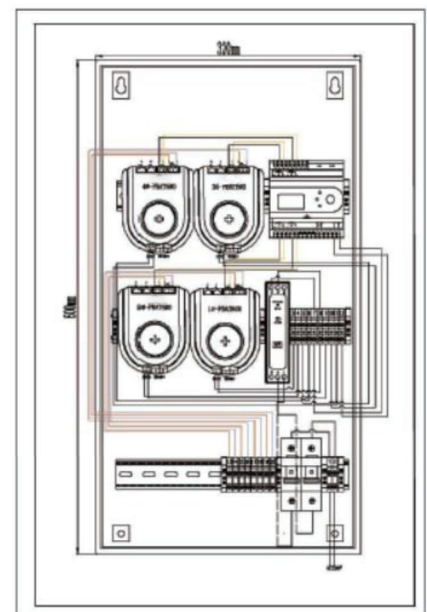


Network Setting

Dimension and Installation

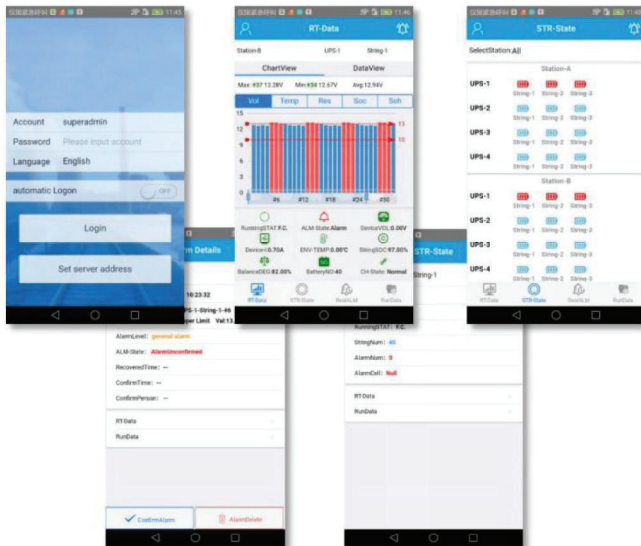


Cabinet for 1~2 Battery String



Cabinet for 3~4 Battery String

BMS-Mobile : Mobile APP Monitoring BMS System



- Mobile APP to Realize Remote Monitoring
- POP-UP Alarm for problem battery (Alarm date, Time, Reason)
- Show Individual Battery Voltage, internal temperature, impedance, SOC, SOH
- Show Battery String Voltage, Current, SOC
- Show Environment Temperature
- Judge String Status
- Support to Inquiry Historical Data
- Support Multiple Station Monitoring

