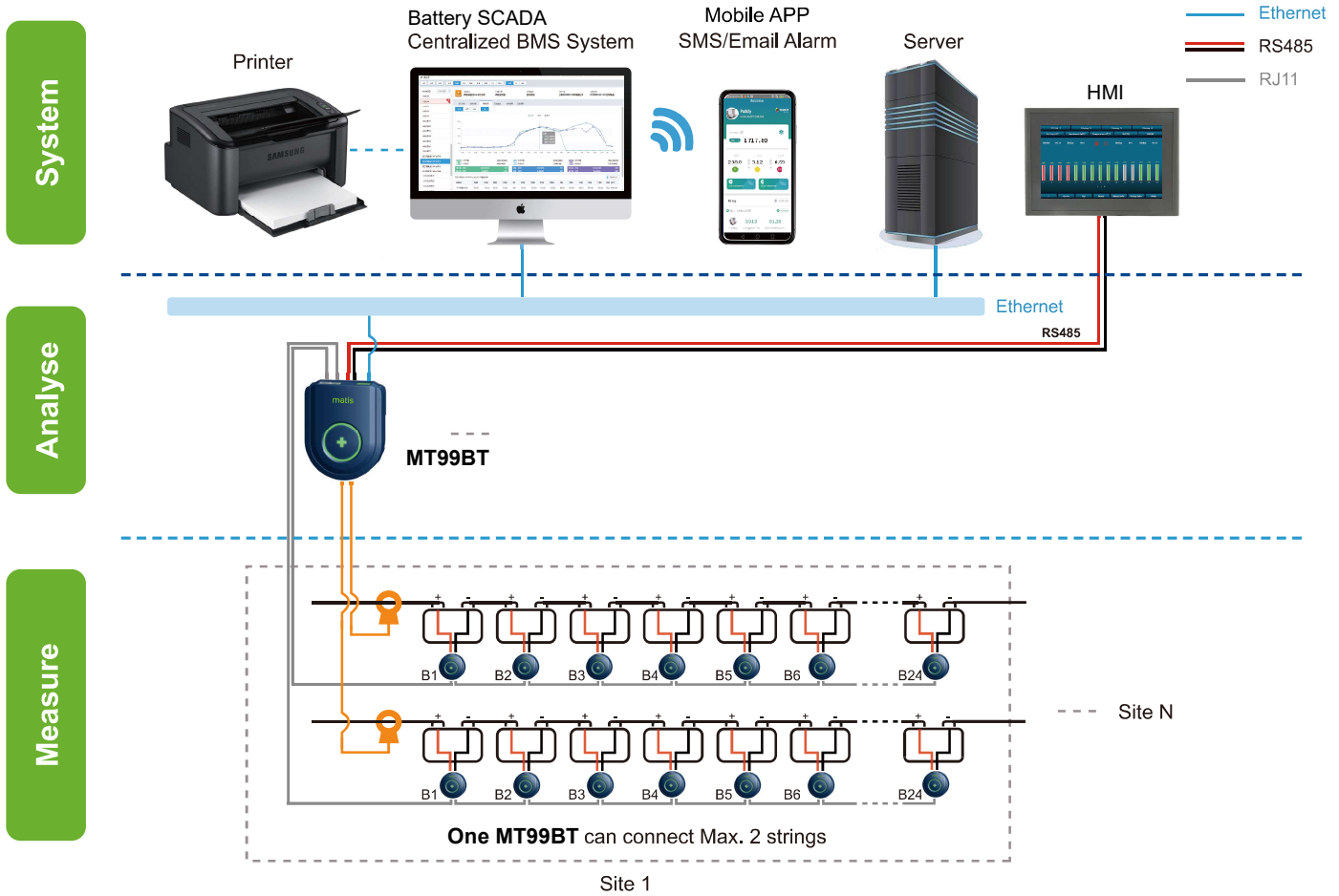




Solution Description

- Dedicated Design for Telecommunication 28V or 48V System
- 24/7/365 On-line Monitoring & Remote Alarms Notification
- Cost Competitive Solution, Support Max. 2 Battery Strings, Each String Support Max. 60pcs Batteries
- Multi Communication Protocol (Modbus-RTU, MODBUS-TCP, SNMP)
- Comply with IEEE 1188-2005

System Structure



Management Layer

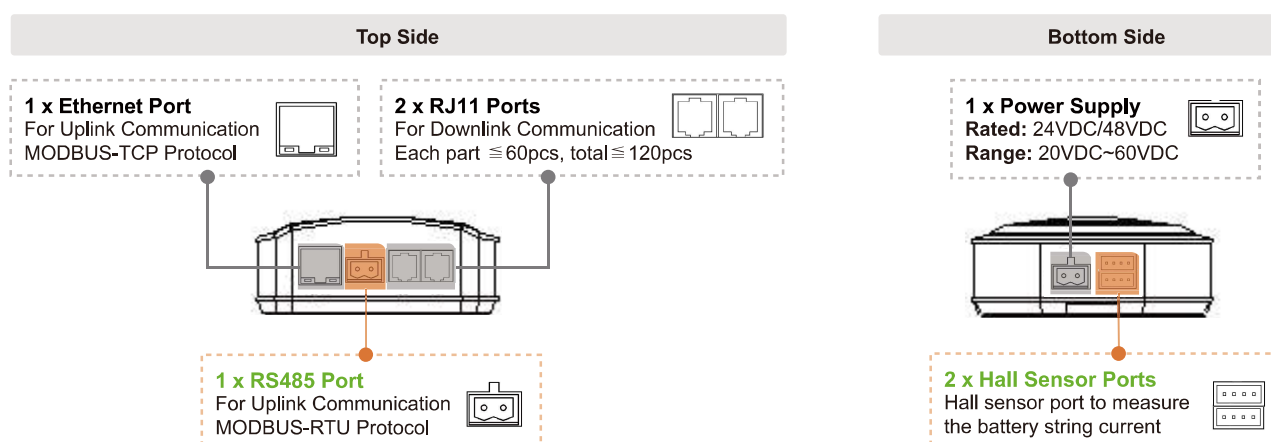
MT99BT Battery Monitoring Module

- Monitor Battery String Voltage, Charge and Discharge Current
- Calculate Battery String SOC
- Auto-Balancing
- Auto-sensing for the Battery Sensor's ID Address
- Setpoint Alarming (Upper Limit / Lower Limit)
- Data Collecting
- Data Uploading Function via Build-in RS485 (Modbus-RTU) & Ethernet (Modbus-TCP or SNMP)
- Check Battery String Status: Equalizing, Discharging, Floating Charge, Stand by and Abnormal Status



Application		DC Power System (Telecom)
Rated Input Voltage		24VDC or 48VDC Range: 20V ~ 60VDC
Measuring	Voltage	0V ~ 800V (Accuracy: $\pm 0.5\%$)
	Current	-1000A ~ +1000A (by Hall Sensor, Accuracy: $\pm 2.0\%$)
Power Consumption		< 2W
Up-link Communication		1 Ethernet port (10/100M), Modbus-TCP / SNMP protocol
		1 RS485 port, Modbus-RTU protocol, Baudrate: 9600bps, 19200bps, 38400bps
Down-link Communication		2 RJ11 ports, each port connect Max. 60pcs batteries, total Max. 120pcs batteries

Terminal Introduction



Battery Cell Sensor

MT99BT-S02/MT99BT-S12 Battery Cell Sensor

- MT99BT-S02 for 2V Battery, MT99BT-S12 for 12V Battery
- Monitor Individual Battery Voltage, Internal Temperature (Negative pole), Impedance(Ohmic Value)
- Auto-Balancing



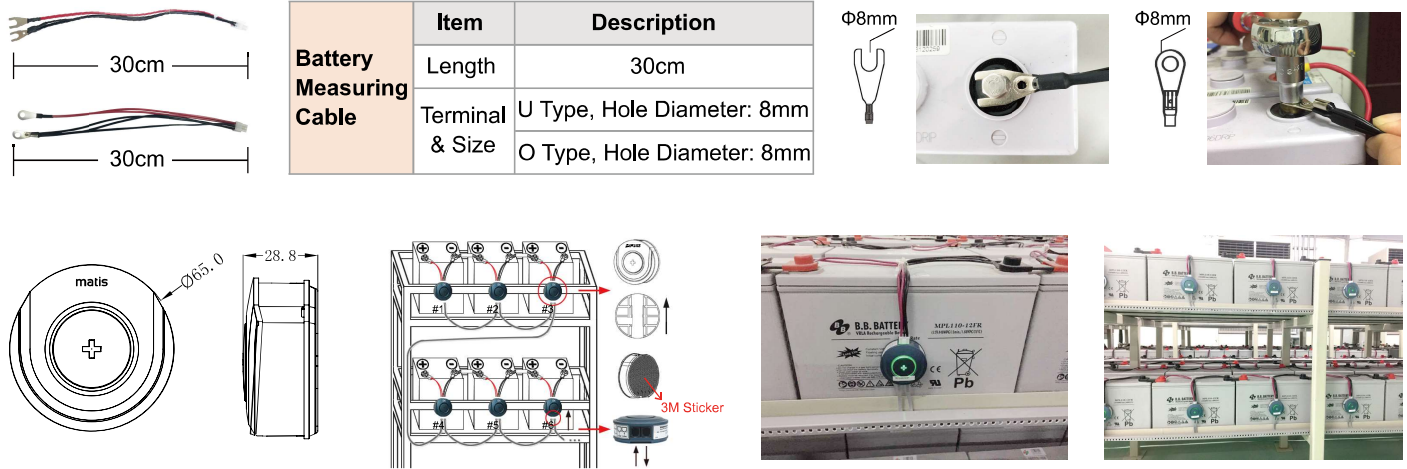
Running Status



Alarming Status

Item	Rated Input Voltage	Measuring Range			
		Voltage	Internal Temperature	Impedance	Power Consumption
MT99BT-S02	2V	1.6V~2.6V ($\pm 0.2\%$)	-20°C~85°C ($\pm 0.5\%$)	0.1mΩ~100mΩ	Running: <110mW Sleeping: <12mW
MT99BT-S12	12V	7.5V~15.6V ($\pm 0.2\%$)		Conformity Error: 1.5% $\pm 25\mu\Omega$	Running: <90mW Sleeping: <10mW

Dimension and Installation



Order Information

System Structure		Model	Description	Remark
Management Layer		MT99BT	Battery Monitoring Module	One MT99BT Can Monitor Max. 2 Strings, Each String Max. 60pcs Batteries Battery measuring cable: 30cm Communication Cable : 40cm & 70cm with RJ11 (optional)
Battery Cell Sensor		MT99BT-S02	2 Volt Battery Cell Sensor	
		MT99BT-S12	12 Volt Battery Cell Sensor	
Accessory	Cell Sensor Communication Cable	MT99BT-COM-40	Cable Terminal: RJ11 Port, Length: 40cm	
		MT99BT-COM-70	Cable Terminal: RJ11 Port, Length: 70cm (Standard)	
	Battery Measuring Cable	MT99BT-C1-U-M8	Cable Terminal: U Type  , Hole Diameter: 8mm, Length: 30cm (Standrad)	
		MT99BT-C1-O-M8	Cable Terminal: O Type  , Hole Diameter: 8mm, Length: 30cm	
	Hall Sensor for MT99BT	HS050EK1T5	Rated Input: 50A	Measure Range: 0~±100A, Φ20mm
		HS100EK2T5	Rated Input: 100A	Measure Range: 0~±200A, Φ40mm
		HS200EK2T5	Rated Input: 200A	Measure Range: 0~±400A, Φ40mm
		HS400EK2T5	Rated Input: 400A	Measure Range: 0~±800A, Φ40mm
		HS500EK2T5	Rated Input: 500A	Measure Range: 0~±1000A, Φ40mm
Optional Module	Local Display & Operation	HMI	7" inch Touch Screen HMI	One Per MT99BT Communication With SCADA via RS485