

# ETBM3000

## Battery On-line Monitoring Module

ETBM3000 is an individual online battery monitoring module specially designed for UPS/EPS, telecom and Electric Operation Power Supply System. It is with high performance-price ratio and could monitoring cell parameters like voltage and inner resistance of every single battery, ETBM3000 could Accurate and quickly monitoring the parameters of the battery.

Flexible and convenient on-site installation, high reliability intelligent adaptive algorithm, the high anti-jamming capability, and stability for a variety of complex applications.



### MONITORING ITEMS

- Cell Voltage
- Cell Internal Resistance (IR)
- Cell Temperature
- String Voltage
- String Charge & Discharge Current
- String Ambient Temperature
- Thermal Runaway Detection

### APPLICATIONS

- Data Center
- Railway Transport
- Electricity Power Plat
- Radio and TV Station
- Telecom Base Station
- Data Center
- Medical
- Aviation

### FEATURES

- Modular design, adapt to different battery applications field.
- High reliability and stability, with precision algorithm.
- Compact size, on-site installation flexibility and easily.
- Patent algorithm, to ensure the accuracy of measurement.

### SYSTEM ALARM ITEMS

- String Charge Voltage High/Low
- Discharge Current High
- Charge Current High
- String Over Voltage Discharge
- Cell Charge Voltage High/Low
- Cell Internal Resistance Over Limit
- Cell Over Discharge
- Cell Short Circuit
- Cell Open Circuit



# TECHNICAL DATA

## Control Collection Unit (CCU)

Operating specifications		Protection	
Operating temperature	0-50°C (32-122°F)	Sensing inputs	Short circuit proof
Storage temperature	-10-80°C (15-175°F)	Insulation resistance	600VDC
Power supply	110-240VAC	Thermal Run away Protection	
Power supply frequency	50-60 Hz	Sensing inputs	
Power supply rating	Max.20 Watts	Temperature sensor	Solid state probe
Communications		Resolution	0.5°C (32.9°F)
RS-485 interface	With optional jumper for termination	Accuracy	±2°C
Max. range	<2000 ft (619m) total bus length	Range	2-70°C (35-158°F)
RS232	< 32 ft (10m @ 9600bps)	Physical characteristics	
BMU and CMU	254 MAX	Dimensions (H x W x D)	7.69 x 6.09 x 1.97 in (195.5 x 155 x 50 mm)
Alarm outputs		Enclosure material	Steel with powder coating
Control Unit	Single contact, volts free	Color	Silver
Thermal Runaway Controller	Single contact, volts free		
Contact rating	30 VDC @5A max.		
Electrical isolation	1500 VAC		

## Battery Monitoring Unit (BMU) (R BMU)

Voltage measuring characteristics		Temperatures	
Voltage measuring range	1-18 VDC	Operating temperature	0-60°C (32-140°F)
Cell Voltage Range	2V/3.7V, 6V/12V VDC	Storage temperature	0-80°C (32-176°F)
Resolution	2 mV	Power supply	
Accuracy	0.1 % ±5 mV	Power supply nominal	2V, 6V, 12V
Protection		Power supply voltage, temperature, ripple	Min.4 VDC, max. 80 VDC
Transient suppression	Up to 600W	Operating current	
Short circuit	3A max. with internal fuse	Running current	25 mA
Reverse polarity protection	Any combination in any connection order, for any period of time within the rated voltage	During ohmic test	0.0011A/hr
		Sleep mode current	<2 mA
Ohmic value measuring characteristics		Physical characteristics	
Ohmic value measuring range	0-65m ohms	Dimensions (H x W x D)	2.36 x 2.32 x 1.1 in (60 x 59 x 28 mm)
Resolution	1 µOhms	Mounting pads	2 in (50.8 mm) 3M dual lock
Max.BMUs per CCU	254 MAX (include number of CMU)	Enclosure material	Flame retardant ABS
RJ 11		Color	Black
RJ 11 Range	< 98 ft (30m)		
Input cable lengths	Max. 6 ft (1.828m)		
Max. variation between cables on one unit	36 in (0.9144m)		

## Current Monitoring Unit (CMU) (I Current)

Current measuring characteristics		Power supply	
Current measuring range (DCA)	100A/200A/300A/400A/1000A	Power supply nominal	24/48 VDC
Resolution	0.5 A	Operating current	
Accuracy	± 1 % Full Scale	Running current	< 66 mA
Current sensor	Solid state, ferrite core clamp	Sleep mode current	< 1 mA
Max.CMUs per CCU	6 MAX	Physical characteristics	
RJ 11		Dimensions (H x W x D)	2.36 x 2.32 x 1.1 in (60 x 59 x 28 mm)
RJ 11 Range	< 98 ft (30m)	Mounting pads	2 in (50.8 mm) 3M dual lock
Input cable lengths	Max. 6 ft (1.828m)	Enclosure material	Flame retardant ABS
Max. variation between cables on one unit	36 in (0.9144m)	Color	Black
Temperatures			
Operating temperature	0-50°C (32-122°F)		
Storage temperature	0-80°C (32-176°F)		

# SYSTEM CONFIGURATION

