

BMS

Battery Monitoring Systems

Why do you need to monitor batteries ?

Batteries are the power storage medium for many critical protection systems. Modern Rectifiers and UPS control systems generally supply the user with only a summary of the condition of the associated power systems.

However, Battery Monitoring Systems specifically measure, record and analyse the individual cell and battery module parameters in detail. Continuous monitoring and analysis of these parameters can be used to identify battery or cell deterioration, hence prompting action to avoid unplanned power interruption.

Does Battery Monitoring Prolong Battery life ?

Yes, generally the battery consists of a number of a cells. If a single cell becomes bad this will effect all other cells, and hence the total battery. If each cell is monitored individually then any cell damage can be monitored to take necessary preventive action, safe guarding the other cells from damage. Thus the total battery life is prolonged.

DEVELEC CELL AND BATTERY MONITORING SYSTEM (DCBMS)

Modular based Panel mountable, light weight Battery Monitoring System with individual cell monitoring facility. Each measurement module allowing upto 36 cell connections and the current range of 0-1000 Amps.

It consists of the following components

A Control Module (ABM NET)Which includes :

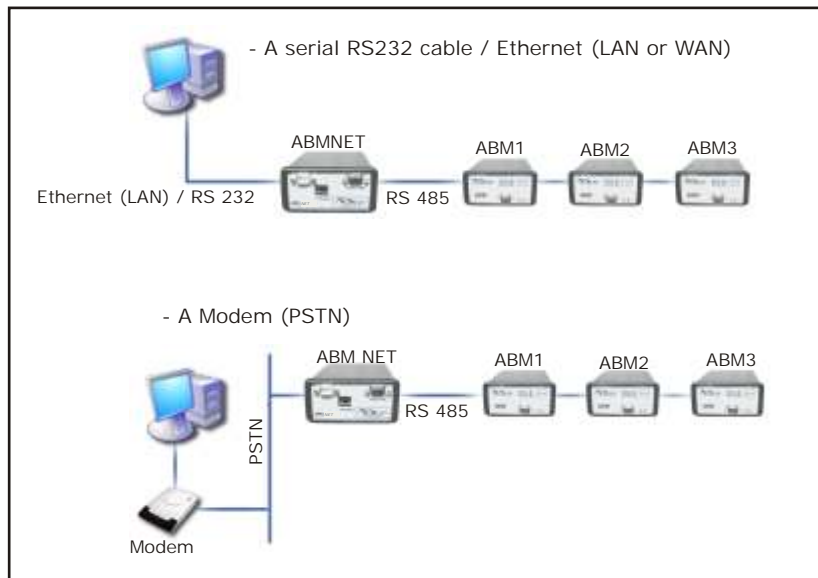
1 Ethernet RJ45 connector or optional modem port

RS 485 connection

1 alarm contact

Power supply for all ABM modules.

A Measurement Module (ABM) which allows measurement of cell voltages.



FEATURES:

- Modular , light weight, Panel mountable construction
- Unlimited Data Storage to retrieve the history of Battery performance
- Monitoring of almost unlimited number of Batteries, cells
- User settable test schedules and alarms
- Remote Monitoring of Battery health through Ethernet, Telephone modem
- Windows based software to control and monitor cell parameters.
- 24/7 alarm notification, programmable alarm thresholds
- Automatic capture of data, standard reports and graphs
- Monitors Battery voltage and current with time and date stamping

SPECIFICATIONS:

- ➔ Number of Cell inputs per Measurement Module : 36 x 2
- ➔ Max.no.of cells that can be Monitored at a time : 36 x 32 x 8 = 9216 cells (256 MMs,8Comports , 8 CMs)
- ➔ Voltage Measurement Range : 0-15 Volts/cell
- ➔ Current Measurement Range : 4 V (through Hall probe)
- ➔ Voltage Measurement Resolution : 10 mV
- ➔ Voltage Measurement accuracy : 1.0% with HBL probe
- ➔ Current Measurement Resolution : 0.1 Amps
- ➔ Current Measurement Accuracy : 1%
- ➔ Input Power Requirement : 230v, Ac/Dc, < 5W
- ➔ Operating temperature range : 0-50 Deg.c
- ➔ Measurement of Room Temperature : 0-100 Deg.c
- ➔ Mounting : Panel mounting
- ➔ IP Protection : IP 25
- ➔ Unit Dimensions(H x W x D) in mm : 110 x 50 x 270 ABM/ABMNET
- ➔ Weight/unit : < 2 Kgs

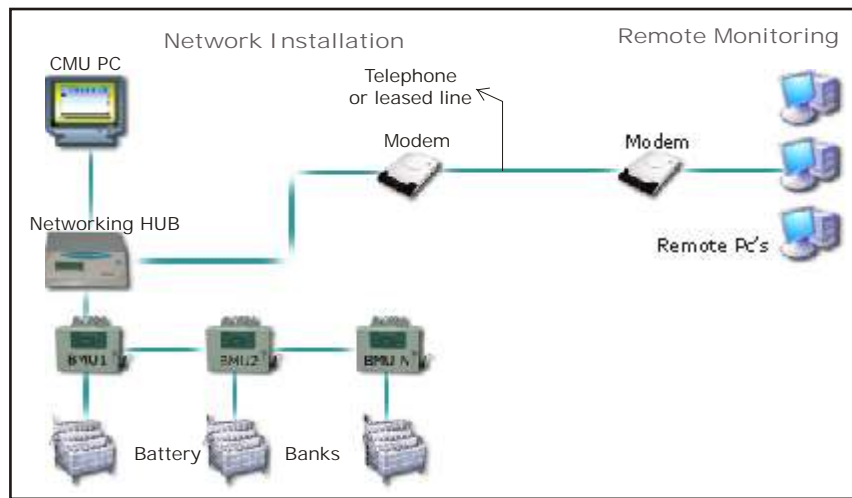
FORMATION BATTERY MONITORING SYSTEM (FBMS)

This designed specifically for factories that manufacture or maintain large number of batteries. The system comprises of a Battery Monitoring Unit (BMU) and a Central Monitoring Unit (CMU). A networking HUB is also provided to network a number of battery monitoring systems to monitor several battery banks at a time.

Battery Monitoring Unit: This compact universal type Battery Monitoring System can monitor all types of batteries including individual cells and monoblocks (up to 12 V).

Central Monitoring Unit: This is a standard computer (PC) loaded with specially developed easy to use software tools. CMU interfaces with the BMU through standard connectors. Data acquired from the BMU is stored analysed and used to generate standard reports and graphs. One CMU can be used with upto 100 Battery Monitoring Units.

Networking Hub: This equipment is used to control the communication between the CMS & BMUs. Up to 32 BMU s can be Networked into one Networking hub which inturn connected to the CMU.



FEATURES:

- Continuous monitoring , to pinpoint suspected deterioration of individual cells prior to failure
- User settable test schedules and alarms
- Windows based software to control and monitor cell parameters
- 24/7 alarm notification, programmable alarm thresholds
- Automatic capture of data, standard reports and graphs
- Monitors Battery voltage and current with time and date stamping
- Memory : Programmed information is retained even when the monitor is unpowered

SPECIFICATIONS:

- Number of Cell inputs per BMU : 20 for 12v battery/cell & 24 for 6v battery/cell
- Total number of cell that can be Monitored at a time : 24 x 32 = 768 cells (using 32 BMUs & 1 Networking Hub)
- Voltage Measurement Range : 0-18 Volts/cell
- Current Measurement Range : (0-4)V (through Hall probe)
- Voltage Measurement Resolution : 10 mV
- Voltage Measurement accuracy : 0.1 % for (6-12)V Range
1.0% for 2 V Range
- Current Measurement Resolution : 0.1 Amps
- Current measurement accuracy : 1%
- Memory : Storage of 1500 test records
- Input Power Requirement : 230 V AC, 15 W per BMU
- Operating temperature range : 0 50 Deg.c
- Communication Interface : RS-485 / RS-232
- Enclosure type : CRCA Box powder coated
- Mounting : Wall mounting
- IP Protection : IP 25
- Unit Dimensions(H x W x D) in mm : 220 x 300 x 90 in mm
- Weight/unit : < 5 Kgs

SMART BATTERY MONITOR (SBM)

Versatile and intelligent battery monitoring tool for all types of lead acid, Nicad battery systems including UPS, Power stations, and Telecom applications. Reliability accuracy and simplicity are the key design features of Smart Battery Monitor.

- A simple low cost monitor for an individual battery bank
- Suitable for all types of lead acid , Nicad batteries.
- Indicates discharge time duration the battery can discharge safely.
- Measurement of battery Ah charged and discharged
- Facility to read the Battery Ah capacity available in absolute terms and in percentage
- Monitors Battery voltage and current
- Days since full : Days since the battery bank was fully charged encourages proper battery management by warning of system problems

- Out of limit alarms for :
 - Battery low voltage
 - Battery deep discharge
 - Maximum number of days between full charging

- User selectable efficiency factor i.e Discharge current for the net Ah can be measured at a selectable efficiency adjustable in the increments of 1 %
- Easy to install : Simply mount your meter, connect the shunt to battery cables
- Memory: Programmed information is retained when the monitor is un-powered.



SPECIFICATIONS:

➔ Battery voltage	:	Standard: 12 V to 48 V (Optional: 110V, 220V,)
➔ Battery current	:	75 mv - 100 mv shunt
➔ Ampere Hour	:	0.1 to 9,999 Ah
➔ Measurement Resolution	:	100 mv
➔ Measurement accuracy	:	+/-1 %
➔ Input Power Requirement	:	Battery to which it is connected, 50 mA(max)
➔ Operating temperature range	:	0 50 Deg.c
➔ Enclosure type	:	CRCA Box powder coated
➔ Mounting	:	Table Top (Optional : Wall, panel mounted)
➔ IP Protection	:	IP 25
➔ Unit Dimensions(H x W x D) in mm	:	200 x 125 x 65
➔ Weight/unit	:	< 2 Kgs



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