

## Battery Plant with Monitoring System

NBR4M

### Introduction

Telecommunications power conversion systems are necessary for providing reliable telecommunication without any interruptions. They supply continuously the required current in different situations.

Nevertheless also the back-up batteries as one of the major complimentary parts of power conversion systems play an important role in power supply chain.

Back-up batteries save the electricity power and deliver it in pre-defined situations when there is a power failure for any reasons.

Nian Electronic Battery Plant is equipped with an advanced monitoring system to control the batteries status and charging process. To ensure the best performance and the highest efficiency of the back-up batteries Nian Battery Khavaran Co., one of the most successful subsidiaries of our industrial group is manufacturing and providing the required industrial back-up batteries of our products including the Battery Plant with Monitoring System NBR4M.

### Features

- Capable to accommodate 12V batteries instead of 2V batteries to increase the free space and decrease the initial and maintenance costs
- Capable to monitor 8 integrated racks cell by cell
- Ability to accommodate 100, 150, 155 and 200Ah VRLA batteries
- Using an advance monitoring system capable to monitor the battery key parameters. Ability to control the process of float, recovery and equalize battery charging, sending the required alarms for battery maintenance and increasing the battery life cycle. Also it can report the battery failure for identifying the dead batteries and prevent the damage of the other batteries.



### Systems Specification

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Model	NBR4M
Battery Plant Arrangement	Battery Cabinet and DC-PDB Distribution Box
Color	RAL7035
Smart Battery Control and Monitoring	Graphical LCD / Touch Screen / Ethernet Access / GSM Supported
Max. Number of Battery Racks	Custom Design
Backup Battery Bas-Bar	Available
Cabling Mode	Top
Dimensions (HxWxD) mm / Each Cabinet	1800x600x600

### Battery monitoring system features

- User friendly
- touch screen control panel
- Short circuit protection
- Measuring and displaying each string current up to 200 A
- Measuring and displaying of each cell voltage with 0.1 accuracy
- Capable to monitor 8 integrated racks
- Capable to measure and display the capacity of each battery string
- Measuring and displaying the real discharge capacity at the time of battery discharge
- Detecting alarms in different charge modes
- Detecting and displaying the status of each battery (voltage, temperature, current, etc.)
- Ability to view the status of each supervisory contactors by the user
- Capability to save 3000 events in details in data-logger system for each battery cabinet
- Identifying and displaying the type of charge (float, recovery and equalize charge modes)
- Capability of displaying the connection status of MCBs strings for each battery
- Identifying the battery failure mode (float, recovery and equalize charge modes)
- Measuring and displaying temperature & humidity parameters and bus-bar voltage of each cabinet and reporting the related alarms
- Ability to display the alarms of each battery and each cabinet with the below details:
  - Battery voltage
  - Bus voltage
  - Average voltage for each row of the battery
  - Current of each row
  - Time and date of released alarms
  - Displaying charging cycle mode (bulk, absorption, float, equalization) up on the alarm release
- Ability to connect GSM to send the information and alarms through the SMS for 5 users
- Ability to connect network card with the below features:
  - Remote upgrade
  - LAN port
  - Monitoring web base
  - MODBUS protocol for monitor
  - Capable to monitoring through the SNMP protocol
  - Ability to receive the Microsoft Excel from each battery logger through the HTTP protocol without application of any additional software
- Modular monitoring design, easy installation and battery replacement