Chloride BMS
Battery Monitoring System

Chloride BMS is a battery monitoring tool to effectively manage stand-by battery banks, thereby ensuring the reliability of back-up power systems. It helps minimizing the risk of failure to critical systems.

BMS enables maintenance teams to easily monitor battery health status and resolve potential issues before they become costly problems.

Benefits

- **Reduced maintenance costs** through preventive maintenance instead of emergency replacement
- **Maximized battery life** through smart diagnostics, regular data analysis and on-time remedial action
- **Increased safety on site** as back-up power remains available when most needed and less human presence is required in battery room

Key Features

- **24/7 alarm notification**
- **Event Log** of all activities affecting the battery bank
- **Remote access** – via TCP/IP or Modbus
- **Automatic capture of data** and report generation
- Individual battery **impedance** measure
- Individual and ambient battery **temperature** measures
- Individual and battery string **voltage and current** measures
- Compatible with Ni-Cd and Lead batteries, open or gas-recombination types
- Optical isolation to increase safety
- Wide choice of configurations to meet the most complex architectures

Applications

Chloride BMS suits all applications where safety and reliance on a battery bank is highly critical:

- Oil and Gas, Petrochemical and Chemical industries
- Power generation plants
- Power Transmission and Distribution
- Continuous process industries

The power to predict battery health

Chloride BMS battery monitoring system is the ultimate detection tool to predict and detect stand-by battery bank issues.

Routine testing is essential to evaluate performance of any battery. The Chloride BMS continuous monitoring tool allows preventive detection of any potential anomaly: all the relevant parameters, such as voltages, current, impedance and temperature are constantly measured to allow a secure diagnostic of the battery health status.

A wide scope of communication features such as emailing, SMS and serial link allows the maintenance manager to get the right information early enough to prevent power failures.

By using the Link dedicated software, the user can access to real time battery status and measurements, view alarm and battery history and check alarm status of all connected cells. It is also possible to initiate and manage battery dedicated reports.
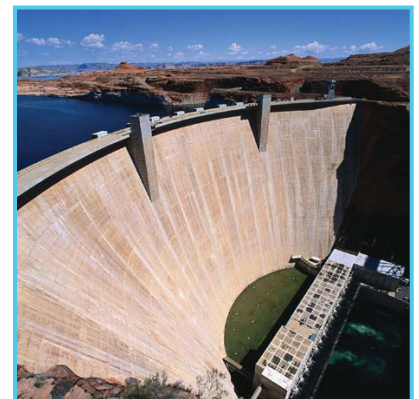
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Network Power™

Chloride BMS Box - technical data

Purpose
The Chloride BMS box is a wall-mounted box to interconnect the monitored battery with the monitoring software tool and which allows remote indication via serial link and volt-free contacts.

General Data

Power supply voltage range	48VDC - 400VDC (from battery)
Dimensions	Height: 560mm
	Width: 585mm
	Depth: 400mm
Ingress protection	IP42 according to IEC60529
Frame colour	Grey RAL 7032
Cable entry	Bottom
Operating temperature	0°C to 50°C
Storage temperature	0°C to 70°C

Communication

Relay outputs (volt-free contacts)	-Voltage fault
	-Temperature fault
	-Impedance fault
	-System fault
Com port 1	Ethernet
Com port 2	RS 485 interface: Modbus ASCII or RTU protocol

Chloride BMS box

Sentinel data acquisition module - technical data

Purpose
The Sentinel module allows to measure string values and makes data acquisition from the connected m-Senzors.

Battery string measured values

String voltage range	2V - 600V
String current:	
• Measurement Range	0A - 2000A
• Number of string current measures	up to 5 (scaleable to 16)
String ambient temperature:	
• Measurement range	0°C to 50°C
• Number of measures	up to 5. Only 1 sensor per battery room if several strings in the same battery room

Acquisition of battery monoblock measured values

Number of monoblocks[1]	up to 160 (scaleable to 1280)
Voltage (depending on battery type and m-Senzor type)	from 1V to 12V
Impedance[2] (depending on block voltage and m-Senzor)	from 0.15 to 40 mΩ - For Lead Acid batteries ONLY
Temperature[2]	from -10°C to +70°C

General Data

Power supply voltage range	48 VDC - 110 VDC
Dimensions	Height: 270mm (1U)
	Width: 430mm
	Depth: 45mm

Communication

LEDs	12 status LEDs on front of the module
Service port	RS232 for configuration / factory setting)
Digital inputs	4

[1] A monoblock represents one or more battery cells in a container.
[2] Available as option.

Sentinel module

m-Senzor module technical data

Purpose
m-Senzor is the measurement module which can measure individual monoblock voltage, impedance and temperature.

Application	Lead Acid or Nickel-Cadmium
	Vented or Recombination

Measurements

Input configuration	Single or Dual monoblocks sensors					
Nominal voltage	1 V	2 V	4 V	6 V	8V	12 V
Voltage measure	0.8V - 1.9V	1.6V - 2.6V	3.2V - 5.2V	4.8V - 7.8V	6.4V - 10.4V	9.6V - 15.6V
Impedance measure	0.15 - 5 mΩ	0.15 - 5 mΩ	0.15 - 5 mΩ	0.5 - 20 mΩ	0.5 - 20 mΩ	1 - 40 mΩ
Temperature measure		-10°C to +70°C (measure taken on negative post of battery)				

General Data

Power supply	powered by the monoblocks being monitored
Interface to Sentinel	BBUS (150m max cable length per BBUS port)

m-Senzor module

Link Battery Management Software

Purpose
Link is the battery management software which allows easy interfacing and understanding of battery status and alarms

Recommended PC system requirements [3]

Processor	Intel E5400 DUAL CORE or better
Operating system	Windows XP Professional or greater
RAM	2 GB

[3] PC is not part of our scope of supply.

Link software screenshot