

Chloride® Monitoring

Unique architecture designed for industrial applications

Compatible with Lead Acid and NiCd technologies



Benefits

Increased personnel safety by eliminating manual testing of high voltage equipment

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

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** measurement

Individual and ambient battery **temperature** measurement

Individual and battery **string voltage and current** measurement

Compatible with Ni-Cd and Lead batteries, vented or gas-recombination types

Optical isolation to increase safety

Wide choice of configurations to meet the most complex architectures

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 to minimize the risk of failure for critical systems.

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

Range Overview

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

Routine testing is essential to evaluate the performance of any battery. The Chloride® BMS continuous monitoring tool allows preventive detection of any potential deviation: all vital parameters, including voltage, current, impedance and temperature are constantly measured to provide an accurate diagnostic of the battery health status.

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

By using the link battery management software, operator can easily access 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.

Applications

- Power generation plants
- Oil and gas, petrochemical and chemical industries
- Power generation plants
- Power transmission and distribution
- Continuous process industries



Controller Module monitoring sensors data

Technical Data Chloride[®] BMS box

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	48 Vdc - 400 Vdc (from battery)
Dimensions	Height: 460 mm Width: 585 mm Depth: 400 mm
Ingress protection	IP42 according to IEC60529
Frame colour	Black RAL 9005
Cable entry	Bottom
Operating temperature	0°C to 50°C
Storage temperature	0°C to 70°C
Communication	
Relay outputs (volt free contacts)	1 for MX (General fault) 4 for LX (Voltage fault - Temperature fault - Impedance fault System fault)
Com port 1	Ethernet - RS485
Com port 2 (MX only)	USB

Technical Data mSensor module

Purpose	
mSensor 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	1V 2V 4V 6V 8V 12V
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 - 40mΩ
Temperature measure	-10°C to +70°C (measured on negative post of battery)
General Data	
Power supply	Powered by the monoblocks being monitored
Interface to Controller	BBUS (75m max cable length per BBUS port)

⁽¹⁾A monoblock represents one or more battery cells in a container
⁽²⁾PC is not part of our scope of supply

⁽³⁾Available as option

Controller data acquisition module

Purpose	
The Controller module allows to measure string values and makes data acquisition from the connected mSensors.	
Battery string measured values	
String voltage range	2 V - 600 V
String current	• measurement range 0 A - 2000 A • number of string 4 for MX / 8 for LX (current measures)
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 200 (MX version) 512 (LX version)
Voltage (depending on battery type and mSensor type)	from 1 V to 12 V
Impedance ⁽²⁾ (depending on block voltage and mSensor)	from 0.15 to 40 mΩ for Lead Acid batteries ONLY
Temperature ⁽²⁾	from -10 °C to +70 °C
General data	
LCD display	Controller LX only
Power supply voltage range	48 Vdc - 110 Vdc
Dimensions LX	Height: 45 mm (1U) Width: 430 mm Depth: 265 mm
Dimensions MX	Height: 36 mm Width: 250 mm Depth: 155 mm
Communication	
LEDs	4 status LEDs on the panel of the module (controller MX) 8 status LEDs on the panel of the module (controller LX)
Service port (factory settings)	Ethernet for LX / USB for MX
Digital inputs LX	2

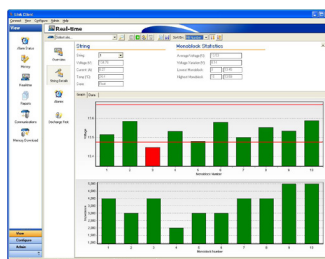
Link battery management software

Purpose	
Link battery management software provides simple interface for 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

Chloride[®] BMS Box with Controller modules installed



Link software screenshot



mSensor module

