C&D TECHNOLOGIES
Power Solutions

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Power You Can Depend On

C&D TECHNOLOGIES
Power Solutions

Battery monitor solutions

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It cost a lot of energy and labor on VRLA battery maintenance and failure prevention. It has been proved verification discharge, or monitoring the battery voltage of single cell for failure prediction cost a lot work, and bring impact to the overall system reliability. It is not an ideal method.

Battery health management system uses battery ac signal test technology to improve the battery safety, reduce the overall operation and maintenance costs (TCO), can replace most of the battery capacity discharge test.

Data center UPS battery management solution

Data center UPS power supply system is key equipment of the supply system. During the UPS operation, some batteries lost their element compression, thermal runaway or dry-out. Battery performance degradation brings huge risks to the UPS power system stability.

The CDM is designed for real-time monitoring of the batteries.

1, Ensure that all the single battery charge voltage, current and temperature operating parameters is reasonable.

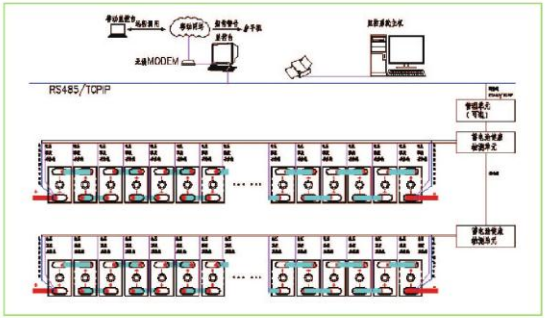
2, Select the deterioration batteries by testing the battery impedance.

3, Record the single cell battery and the alarm state.

Data center UPS battery health management system typical configuration

Site conditions	Model	Quantity	Remarks
2 group batteries for each UPS, each battery group including 34 blocks 12V batteries.	CDM-V1240	20	34 battery internal resistance detection modules
	CDM-CTS temperature sensor	680	1-wire digital temperature sensor
	BCS current sensor	20	Hall current sensor
	CMU site management unit	2	Industrial PC
	Battery sampling cables	2	10m flame retardant cable

System network diagram:

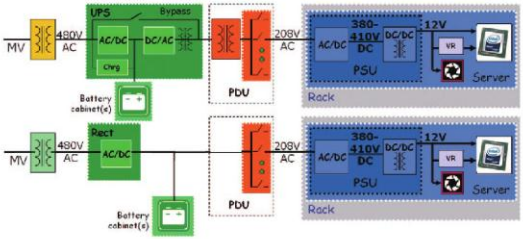


Data center HVDC battery management solution

Some innovative data center is gradually using HVDC power supply system to replace the UPS system. The HVDC system is simple, low cost, and the reliability is guaranteed.

However, HVDC reliability is directly from the highly reliable battery system. If the battery management properly, that will significantly reduce the HVDC system reliability indices.

Therefore, in the HVDC system, the battery system monitoring, health management, reliability, security is the most critical aspects. Monitoring the safety of every single battery status, health status, is the essential function of HVDC system.



The battery health management system can real-time monitor the running status and the health status of the batteries. The core valve are:

1) Real-time online monitoring of every single cell voltage, internal resistance of the cell , cell temperature, battery voltage / current, temperature and other parameters to ensure system reliability work, early detection of weak batteries.

2) Reduce the risk of fire, so as to effectively improve the security of IT equipment.

3) To meet international standards (TIA942-2005).

4) Reducing battery replacement costs in advance.

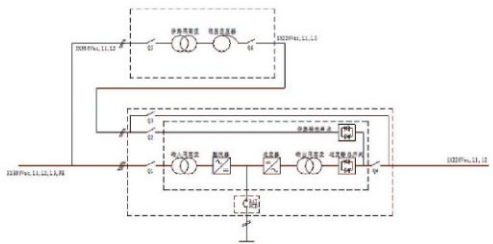
5) Reducing the waste of lead and damage to the environment.

Data center HVDC battery health management system typical configuration

Site conditions	Model	Quantity	Remarks
2 group batteries for HVDC, each battery group including 20 blocks 12V batteries.	CDM-V1240	2	20 battery internal resistance detection modules
	CDM-CTS temperature sensor	40	1-wire digital temperature sensor
	BCS current sensor	2	Hall current sensor
	Battery Cables	2	10m flame retardant cable

The industrial UPS battery health management solution

In the industrial control field, such as steel, petrochemical and chemical industry of automated production lines, extensive use industrial UPS to protect the power supply of the DCS, DDC, PLC. Battery is the key thing for the reliability of the Industrial UPS system.



The CDM battery health management system can real-time monitor the batteries and effective battery maintenance purposes. The main role is to:

1, Ensure that all the single battery charge voltage, current and temperature operating parameters is reasonable.

2, On-line detection of single cell resistance, accurately determine the deterioration of the battery in the battery.

3, Determine and record the single cell battery alarm state.

4, Access to the industrial site monitoring system, it can remote monitoring and control parameters for the batteries.

5, Improve the reliability of industrial UPS power supply, remove the battery hidden faults.

6, Reduce the waste of lead and damage to the environment.

Industrial UPS battery management system typical configuration

Site conditions	Model	Quantity	Remarks
Each industry UPS battery group including 109 blocks 2V batteries.	CDM-02V126	2	20 battery internal resistance detection modules
	CDM-CTS temperature sensor	218	1-wire digital temperature sensor
	BCS current sensor	1	Hall current sensor
	Battery Cables	3	10m flame retardant cable

Telecommunication power battery management solution

In the communication system, the communication power supply system always uses batteries to provide a stable, continuous DC power.

With the continuous expansion of the network size, for effective control of the whole network of battery operating conditions, the urgent need for more a simple, objective, practical means of maintaining and testing, battery maintenance mode, the traditional innovation

Use battery health management system, to achieve:

1, Real-time online monitoring of every single cell voltage, internal resistance of the cell , cell temperature, battery voltage / current, temperature and other parameters to ensure system reliability work, early detection of weak batteries.

2, On-line detection of single cell resistance, accurately determine the deterioration of the battery in the battery.

3, Determine and record the alarm state of the single cell battery.

4, Accessing communication system power and environmental monitoring, it can remote monitor battery parameters.

5, Improve the communication system power supply reliability, eliminate battery failure problems.

6, Reduce the waste of lead and damage to the environment.

Communications power battery management system typical configuration

Site conditions	Model	Quantity	Remarks
2 group batteries for each UPS, each battery group including 24 blocks 12V batteries.	CDM-V1248	2	48 battery internal resistance detection modules
	CDM-CTS temperature sensor	48	1-wire digital temperature sensor
	BCS current sensor	2	Hall current sensor
	Battery Cables	1	10m flame retardant cable

Power supply system battery health management solution

Electrically operated power system is widely used in power plants, hydroelectric plants and a variety of substation, to provide protection and 110V or 220V DC power supply. Common specifications are 220VDC, 110VDC.

Use battery health management system to ensure reliability of power supply operation, to achieve:

1, Ensure the power supply operated power system reliability and eliminate battery failure problems.

2, On-line detection of single cell resistance, accurately determine the deterioration of the battery in the battery.

3, Determine and record the alarm state of the single cell battery.

4, Accessing communication system power and environmental monitoring, it can remote monitor battery parameters.

5, Improve the electrically operated power system reliability, eliminate battery failure problems.

6, Reduce the waste of lead and damage to the environment.

Industrial UPS battery management system typical configuration

Site conditions	Model	Quantity	Remarks
Each power supply battery group including 109 blocks 2V batteries.	CDM-02V126	2	20 battery internal resistance detection modules
	CDM-CTS temperature sensor	218	1-wire digital temperature sensor
	BCS current sensor	1	Hall current sensor
	Battery Cables	3	10m flame retardant cable

C&D battery management products

Parameters	Model				
	CDM-12V24	CDM-12V40	CDM-12V48	CDM-02V48	CDM_02V126
Battery cell volt	12V/6V	12V/6V	12V/6V	2V	2V
Battery number	24	40	48	48	126
String number	1 string		1 or 2 string		1 or many strings
Accumulator capacity	7-300Ahour			200-3000Ahour	
Battery cell volt scope	0~16V			0~4V	
Battery impedance scope	0~50mΩ			0~10mΩ	
Temperature scope	-30~85℃				
Battery cell volt precision	+-0.5%				
Battery impedance precision	+-2%				
Temperature precision	+-1℃				
Battery current scope	0~3000AHour				
Rated operational voltage	AC220V,50/60Hz			DC-48V/AC220V	
Working humistor	0~40℃ , 5~95%RH				
Communication interface	RS485				
Outline and Weight	482mmW×44.4mmH×266mmD、3Kg				

CMU site management unit

5.6-inch TFT LCD (222*159*47mm)

Up to 8 sets of CDM can be monitored with RS485

You can browse through the WEB

C&D battery management module

CDM indicator definition			
Name	Function	Color	Display mode
Power	Power status	Green	Light up after power on
Status	Work status	Green	Flashing during impedance test
Alarm	Alarm status	Red	Light up when system alarms