

Albér BDS-256XL Full-Scale Battery Testing And Diagnostics For UPS Systems



The Albér BDS-256XL Battery Monitoring System Is Designed For Today's Large UPS Systems

Each Albér BDS-256XL Battery Monitoring System continuously diagnoses all critical battery parameters such as cell voltage, overall string voltage, current and temperature. Automatic periodic tests of the batteries internal resistance will verify the operating integrity of the battery. If resistance values exceed set thresholds, the user can take the proactive action of replacing the bad battery before it affects the others in the string, or before it causes complete string failure.

By tracking internal resistance, the system can predict and report failing conditions prior to complete failure. A time-to-go estimate algorithm, which uses discharge parameters and internal resistance readings, assists in predicting remaining battery life.

Interface to the Albér BDS-256XL is done with the Battery Monitor Data Manager software package. The Battery Monitor Report Generator software creates reports from collected data.

Albér BDS-256XL system features include:

- Monitor up to 256 cells/modules per string. 2 volt cells, NiCd cells, 4 volt, 6 volt, 8 volt, and 12 volt modules supported.
 - Modular design easily expands to monitor an unlimited number of strings.
 - Overall voltage, cell/module voltages, current, and temperature are continuously scanned every four seconds and compared with user-programmed alarm levels.
 - At user-selected intervals, automatic pro-active internal DC resistance tests are performed and compared to user-programmed alarm levels. All data is saved for automatic retrieval.
 - At user-selected intervals, overall voltage, cell/module voltages, current, and temperature readings are saved for automatic retrieval.
 - Discharges are automatically detected and data saved for retrieval. Discharges can be viewed in real time locally or remotely during the event or later replayed in real or accelerated time.
 - Alarm events trigger an indicator, dedicated contact closure, programmable contact closure and automatic dial-out notification. Can be user-set to page, fax, print, and/or sound audible alarm.
 - Industry standard MODBUS protocol interfaces to third party building management systems via RS-232/USB and Ethernet.
- Albér technology by Emerson Network Power**
Emerson Network Power offers the latest in UPS battery monitoring technology with products by Albér — a leader in the field since 1972. Albér technologies by Emerson Network Power are designed to prevent battery failure, optimize useful battery life, reduce maintenance cost and increase safety.
- Communicates with an external computer via R-S232/USB or remotely through internal modem.
 - Optional TCP/IP interface for network or Internet communication via MODBUS or SNMP.
 - When used in conjunction with the MPM-100, virtually all battery configurations can be managed on-site and/or remotely with one software package.
 - Windows-based software for real-time viewing, automatic data collection, data analysis, and report generating.
 - Digital input/output option permits monitoring up to 16 inputs and up to 8 user-programmed outputs.
 - Monitor Load Control option enables the monitor system to control an Albér Continuous Load Unit (CLU) for performing battery capacity testing.

Albér BDS-256XL System Specifications

Parameters/Features

Number of cell channels: Up to eight strings of 256 cells per string. Up to 6 DCM-480 units per string.

Input Range/Accuracy

Cell voltage: 0 to 16V, 0.1% of reading ± 1 mV

String voltage: 0 to 80.00V, 0.1% of reading ± 0.02 V

0 to 400.0V, 0.1% of reading ± 0.1 V

0 to 600.0V, 0.1% of reading ± 0.5 V

Discharge Current: 0 to 4000A, 0.1% of reading ± 1 A

Note: An optional current transducer is required.

Transducer accuracy affects overall current reading accuracy.

Float Current: 0 to 5000mA ± 5 mA

Note: An optional current transducer is required.

Operating Environment

Temperature range: 5°C to 40°C (41°F to 104°F)

Indoor use only.

Albér BDS-256XL Controller Specifications

Power

Less than 5 amps at 115 VAC $\pm 10\%$ 60Hz (for a configuration of 8 strings of 240 cells).

Inputs

Remote alarm reset: User-supplied 12V to 32V signal. (Current draw less than 50ma.) Momentarily applying voltage initiates the reset action.

Digital input (certain models): Sixteen 12V to 32V at less than 50mA.

Outputs

24 VAC power: Four for DCMs and External Load Modules.

Alarm contacts: Two Form C: 2A at 30VDC. (One for critical alarm; one for maintenance alarm.)

Digital output (certain models): Eight Form C: 2A at 30VDC. (Optional)

Communication

Modbus protocol, ASCII to PC, and Ethernet

Local port, USB connector (front panel).

Local port, RS-232 D8-9 connector (rear panel).

LAN port, RJ-45 (optional) (rear panel).

RJ-11 Telco line, internal 14.4Kbps modem (optional) (rear panel).

Fiber optic ports: 2 TX/RX

Data Storage

SRAM (8 MB) nonvolatile memory for all configuration settings and data. Hold's up to one year's worth of data.

Flash memory for firmware upgrades.

Packaging

19" rack-mount. 19"W x 8.15"D x 5.25"H

Optional brackets available for mounting in 23" rack.

Optional Liebert Foundation Wallmount Cabinet

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