BDS 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 ±1mV

- String voltage: 0 to 80.00V, 0.1% of reading ±0.02V
  0 to 400.0V, 0.1% of reading ±0.1V
  0 to 600.0V, 0.1% of reading ±0.5V

- Current: 0 to 4000A, 0.1% of reading ±1A
  Note: An optional current transducer is required.
  Transducer accuracy affects overall current reading accuracy.

Operating Environment

- Temperature range: 5°C to 40°C (41°F to 104°F)
- Humidity range: 0% to 80% RH (non condensing) at 5°C to 31°C
  0% to 50% RH (non condensing) at 32°C to 40°C
- Indoor use only.
- Installation category II
- Pollution degree 2.
- Altitude 0 to 2000 meters above sea level.

Notes

- Optional temperature transducer can be contact type or immersible.

WARNING: A BDS system, comprising a BDS Controller, DCM-480Rs, and External Load Modules may be mounted in a 19" or 23" wide rack enclosure. If using such rack enclosure, be certain that it is properly earth grounded and that adequate ventilation is provided to prevent equipment overheating. Refer to the respective installation manual for more information. The receptacle for the AC cord from the cabinet must have protective earth connection (three prong). You must not defeat the use of the earth connection prong.

BDS Cabinet Specifications

Cabinet Model
- 1100-262, in which the computer, monitor, UPS, Controller, DCM, and External Load Module may be mounted as required.

Power
- 115 VAC ±10% 60Hz, 12 amps maximum.

Maximum Dimensions
- 24" wide x 26" high x 37" deep with folding keyboard tray down.

Ventilation Requirements
- A minimum of 8" clearance must be maintained on all sides of the cabinet to allow for proper ventilation.

  NOTE: You must provide adequate ventilation to prevent equipment overheating. The cabinet has two ventilation fans that run when power is applied. The external load module has a fan that runs when required to cool internal circuitry. Do not block ventilation ports, and ensure that the equipment is operated only within the temperature and humidity ranges described in the specification sheets.

Installation Requirements
- Only equipment that is part of the BDS system should be installed in the BDS cabinet.
- The four corners of the cabinet must be securely bolted to the floor.

Operating Environment
- Temperature range: 5°C to 40°C (41°F to 104°F)
- Humidity range: 0% to 80% RH (non condensing) at 5°C to 31°C
                        0% to 50% RH (non condensing) at 32°C to 40°C
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BDS Controller Specifications

Power
- Less than 5 amps at 115 VAC ±10% 60Hz (for a configuration of 8 strings of 240 cells).

Fuses
- Two 250mA slow blow. On PC board. Not user replaceable.
- Fuse #1 and #2: 10 A slow blow, MDA or equivalent. Rear panel.
- One 5A fast blow, ABC or equivalent. AC power block. Rear panel.

Inputs
- Remote alarm reset: User-supplied 12 to 32V signal. (Current draw less than 50ma.) Momentarily applying voltage initiates the reset action.
- Digital input (certain models):   Sixteen 12V to 32 V 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.
- LEDs (one each): green DCM Tx transmit, green DCM Rx receive, green status, green com port, amber maintenance alarm, green resistance test, and red port select switch.

Communication
- Modbus protocol, ASCII to PC, Albércorp proprietary to DCMs.
- Local port, RS-232 DB-9 connector (front panel).
- Local port, RS-232 DB-9 connector (rear panel).
- LAN port, RS-232 DB-9 connector (rear panel).
- RJ-11 Telco line, internal 14.4Kbs modem (rear panel).
- Fiber optic ports: 20 rear panel Agilent HFBR series connectors: two for DCM communications; four for optional serial port multiplexer communications; 14 for active repeater.

Data Storage
- SRAM (8 MB) nonvolatile memory for all configuration settings and data.
- Flash memory for firmware upgrades.

Control Switches
- Power on/off: Main DCM power switch on rear panel of BDS controller module. Rocker switch.
- Alarm reset: Alarm Reset switch on front panel of BDS controller module. Momentary push button.
- Local port select: Rocker switch (front panel).
- Configuration settings: DIP switch (rear panel).

Operating Environment

- Temperature range: 5°C to 40°C (41°F to 104°F)
- Humidity range: 0% to 80% RH (non condensing) at 5°C to 31°C
                                  0% to 50% RH (non condensing) at 32°C to 40°C

- Indoor use only.
- Installation category II
- Pollution degree 2.
- Altitude 0 to 2000 meters above sea level.

Packaging

- 19" rack mount. 19" width, 5.25" height, 8.15" depth.
- Optional brackets available for mounting in a 23" rack.

DCM-480R Specifications

Power
- Less than 0.5 amps at 24 VAC ±10%.

Fuses
- Two 0.5 A slow blow. On PC board. Not user replaceable.

Combined Input / Output Connectors (rear panel)
- 24VAC
- 2 fiber optic ports

Inputs (rear panel)
- 48 cell voltage channels
- 10 intertier channels
- 2 temperature channels
- 1 discharge current channel
- 1 overall voltage channel (certain models)
- 48 intercell channels (certain models)

Outputs (rear panel)
- +15VDC, -15VDC power output (certain models only)
- External load module control cable output.
- LEDs (one each): green DCM Tx transmit, green DCM Rx receive, and green status.

Communications
- Fiber optic, Albércorp proprietary.

Data Storage
- E^2 nonvolatile memory for setup.
- Flash memory for firmware upgrade.

Control Switches
- DCM addressing: PC board mounted DIP switches inside DCM, accessible using cut-out in top panel.

Operating Environment
- Temperature range: 5°C to 40°C (41°F to 104°F)
- Humidity range: 0% to 80% RH (non condensing) at 5°C to 31°C
                         0% to 50% RH (non condensing) at 32°C to 40°C
- Indoor use only.
- Installation category I
- Pollution degree 2.
- Altitude 0 to 2000 meters above sea level.

Packaging
- 19" rack mount. 19" width, 1.75" height, 12.125" depth.
- Optional brackets available for mounting in a 23" rack.

External Load Module Specifications

Power
- Less than 1.0 amps at 24 VAC ±10%.

Fuses
- Two 0.5 A slow blow. On PC board. Not user replaceable.

Inputs / Outputs (rear panel)
- One 24VAC input
- 6 load control cable inputs
- 12 load connections

Outputs (front panel)
- LEDs (one each): red power.

Operating Environment
- Temperature range: 5°C to 40°C (41°F to 104°F)
- Humidity range: 0% to 80% RH (non condensing) at 5°C to 31°C
                        0% to 50% RH (non condensing) at 32°C to 40°C
- Indoor use only.
- Installation category I
- Pollution degree 2.
- Altitude 0 to 2000 meters above sea level.

Packaging
- 19" rack mount. 19" width, 5.25" height, 12.156" depth.
- Optional brackets available for mounting in a 23" rack.