

# ACU+ CONTROLLER

M820B, M821B, M820D, M821D, M820N



## KEY FEATURES

- Flexible and scalable to satisfy your present and future needs with configurable IB (interface boards)
- Easily configurable file upload/download minimizes installation time
- Long battery life-span – sophisticated boost charge management
- Unattended battery test – advanced scheduled test/constant test/fast test
- High quality failure information – programmable logic controller provides intelligent alarm setup
- Lower operating cost – energy-saving standby function for rectifier

Designed for global use, the ACU+ Controller with stands high telecom standards, providing outstanding reliability and availability.

## Description

The ACU+ is an advanced control unit designed for DC power applications. It can provide remote monitoring of the telecom site's AC mains supply, DC power plant, battery backup, diesel generator and site environment etc.

Featuring advanced battery management such as sophisticated boost charge control, remaining time and capacity prediction, constant current test, scheduled test and short test, and Battery Low Voltage Disconnection (BLVD), the ACU+ realizes easy and predictive battery maintenance. Furthermore, with basic energy saving and power split function, the ACU+ is a highly cost-efficient product.

The information and alarms from a specific site can be monitored or checked with a simple web browser or special monitoring software. When using a web browser, no additional software is needed, and the web browser login is password protected.



M820B  
M821B



M820D  
M821D



M820N

## Technical Specifications

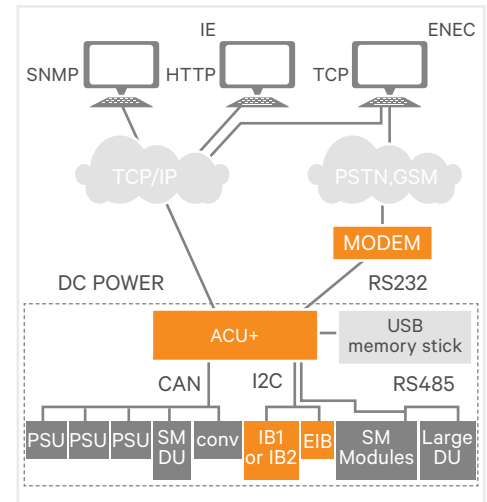
| GENERAL                     |   |
|-----------------------------|---|
| Power Supply                | 19 VDC to 60 VDC                              |
| Power Consumption           | 5 W   |
| Operating Temperature Range | -40°C to +75°C / -40°F to +167°F              |
| Relative Humidity           | 0 to 90%                                      |
| EMC                         | EN 300 386, 2001 class B, FCC part 15 class B |
| Safety                      | IEC 60950-1, EN 60950-1, UL 60950-1           |
| Approvals                   | CE, UL and NEBS level 3                       |

| MECHANICAL DATA               |   |   |
|-------------------------------|---|---|
| Dimensions (H x W x D)        | M820B and M821B:                                      | 42 x 86.6 x 211.5 (mm) /<br>1.65 x 3.41 x 8.33 (inches)   |
|                               | M820D, M821D and M820N:                               | 86.6 x 86.8 x 211.5 (mm) /<br>3.41 x 3.42 x 8.33 (inches) |
| Standard Installation Methods | Hot pluggable in stand-alone or embedded power plants |   |
| Weight                        | < 1 kg / 2.2 lbs                                      |   |

| INPUTS/OUTPUTS |                                  |  |   |                            |   |  |
|----------------|----------------------------------|--|---|----------------------------|---|--|
| Model          | M820B                            | M821B  | M820D   | M821D                      | M820N   |  |
| Display        | LCD with 8 x 16 characters       |  |   | LCD with 4 x 16 characters |   |  |
| Communication  | RS232, RS485, Ethernet, USB      |  |   |                            | RS232, 10/100M Ethernet, TCP/IP, SNMP, web server |  |
| Protocol       | HTTP, SNMP, EEM, SocTpe, Rsoc    |  |   |                            |   |  |
| Inputs         | Analog                           | 2 battery currents, 1 load current, 1 bus voltage, 2 battery voltages, 3 temperatures, 3 AC voltages     | 2 battery currents, 1 load current, 1 bus voltage, 2 battery voltages, 2 temperatures | Refer to M820B             | Refer to M821B                                    | 3 DC system voltages, 3 DC system currents, 3 temperatures, 3 AC voltages    |
|                | Digital                          | 1 input for status of SPD auxiliary contacts, 10 load fuses, 4 battery fuses, bi-stable contactor status | 1 input for status of SPD auxiliary contacts  | Refer to M820B             | Refer to M821B                                    | 1 input for status of SPD auxiliary contacts, 10 load fuses, 4 battery fuses |
| Outputs        | 2 LVD mono & bistable contactors | None   | Refer to M820B  | Refer to M821B             | 2 LVD mono & bistable contactors                  |  |

| EXAMPLES OF ALARMS    |  |
|-----------------------|--|
| DC Power Plant Alarms | AC mains failure, rectifier failure, DC/DC converter failure, high voltage shutdown, fan failure, thermal derating (of rectifier output due to high temperature) |

## Diagram



Network Operation Center (NOC)

| NOC ABBREVIATIONS |  |
|-------------------|--|
| PSTN              | Public Switched Telephone Network, an ordinary telephone line  |
| IE                | Internet Explorer  |
| ENEC              | EnergyMaster™ Vertiv Energy Center, multi-platform, multi-user, distributed multi-language web environment for monitoring of Vertiv DC, HPAC and UPS equipment |
| PSU               | Power Supply Unit (AC/DC converter/rectifier)  |
| SM DU             | Supervision Module for additional alarms in extension cabinets   |
| EIB               | Extension Interface Board IB   |
| IB                | Interface Board  |

## Ordering Information

| MODEL | PRODUCT CODE / DESCRIPTION                                  |
|-------|---|
| M820B | 1M820BAXX / ACU+ controller                                 |
| M821B | 1M821BAXX / ACU+ controller                                 |
| M820D | 1M820DAXX / ACU+ controller                                 |
| M821D | 1M821DAXX / ACU+ controller                                 |
| M820N | 1M820NXX / ACU+ controller                                  |
| MODEL | OPTIONAL INTERFACE BOARD                                    |
| IB1   | 4 relay outputs, 4 digital inputs                           |
| IB2   | 8 relay outputs, 8 digital inputs, 2 temperatures           |
| EIB   | 5 relay outputs, 8DC voltages, 3DC currents, 2 temperatures |