UNIPOWER
Powering Technology

ACC Extended
INTELLIGENT CONTROLLER MODULE

DESCRIPTION

ACC Extended (ACX) is a pluggable microprocessor controller that provides monitoring and control for a broad range of UNIPOWER DC Power Systems. The ACC Extended monitors all system parameters including: DC voltage, rectifier current, rectifier temperature, system capacity, battery parameters, and circuit breaker status.

Alarm and warning notifications are indicated by front panel LEDs, and through potential free alarm contacts that allow remote signaling. External monitoring of alarms and the system is accomplished through a USB or RS232 port using PC-based PowCom™ software. The ACC Extended has an Ethernet port allowing control over a TCP/IP network and web based support. Alarms can be mapped via SNMP traps to customer OSS (Operation Support System) platforms such as Castle Rock Computing SNMPc Network Manager™.

To meet individual site requirements, the ACC Extended contains a Programmable Logic Units that can be used to monitor and control specified requirements. This allows individual alarm routing and logic operations to be set as actions, alarms to be triggered and outputs to be activated, based on internal or external signal monitoring, comparing and processing.

FEATURES

- User-selectable alarm parameters
- Password controlled environment
- USB or RS232* Interface
- Form "C" dry alarm contacts
- Programmable alarm routing, logic unit and analog inputs
- 100 Mbps Ethernet interface + web server support + SNMPv1,v2,v3
- 1000-event alarm log
- Audible Alarm
- Remote configuration upgrade
- Micro SD card data logging

INTELLIGENT SITE MANAGEMENT

- Supports up to 64 rectifiers as standard or 256 with 4 x 64 multiplexer board (see page 3).
- Battery tests and log
- Battery voltage and symmetry monitoring
- Remaining battery capacity measurement
- Low Voltage Disconnect
- Temperature compensation with programmable compensation factor
- Monthly data logging
- Site log tools

WEB INTERFACE

SAFETY CERTIFICATIONS

UL60950-1 2nd Edition
CSA22.2, No. 60950-1 2nd Edition
EN60950-1 2nd Edition

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THREE-YEAR WARRANTY

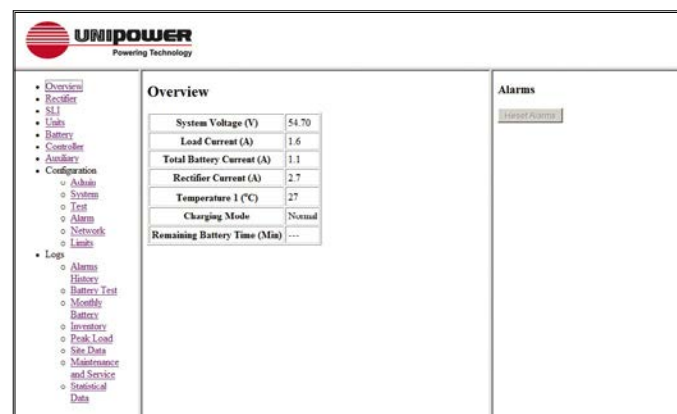**NORTH AMERICA CALL: +1-954-346-2442 • EUROPE CALL: +44 (0)1903 768200**

Input

Voltage	18 - 60VDC
Current	< 200mA

Interface

Display	3 x 16 character LCD
Internal Communication	RS485 Data Bus (64 modules max.) microSD card (up to 4GB)
External Communication	USB or RS232* interface for remote control via modem or directly from a PC with PowCom™ software. Ethernet port allowing monitoring and control over a TCP/IP network. Web browser support + SNMPv1,v2,v3.
Indications	Green LED - Power ON Yellow LED - System warning Red LED - System alarm
Signal Input	Battery current reading (via shunt) Output voltage reading Analog inputs for battery symmetry reading or general use Battery temperature sensor Load fuse failure Battery fuse failure 2 x Digital inputs
Signal Outputs	LVD / PLD disconnect (max 4*) LVD / PLD reconnect 2 x Digital outputs
Software	Site upgradeable by Flash memory

Alarms

Alarm Contacts	4 (optional 10*) potential free change-over alarm contacts
Alarms	Low/High Voltage Batteries on Discharge Overvoltage Shutdown High Load (Rectifier Capacity) Battery Test Failure Battery Symmetry Mains Failure Module Urgent Module Battery Fuse Failure Load Breaker Failure Battery/Load Disconnect High/Low Battery Temperature Temperature Probe Failure High/Low AC Voltage** 16 x Additional User Definable

Other Technical Data

Dimensions, In (mm)	3.4 W x 1.6 H x 8.9 D (85 W x 40 H x 225 D)	
Weight	0.44lb (0.2kg)	
Operating Temp.	-40 to +70°C	
Storage Temp.	-40 to +85°C	
Safety	IEC 60950-1, UL60950-1, & CSA-C22.2 No. 60950-1-03	
EMC	EN 61000-6-2, EN 61000-6-3, EN 300 386-2	
Environment	Storage: Transport: Operation:	ETS 300 019-2-1 ETS 300 019-2-2 ETS 300 019-2-3

Battery Management

Battery Disconnection	Allows voltage controlled disconnection of batteries.
Boost Charging	Manual time controlled or automatic boost charging with adjustable time and voltage levels.
Battery Tests	Automatic or manual testing of batteries up to six times per year with a 10 test memory. Variables include test duration and end voltage. Battery discontinuance test to ensure battery connection.
Enhanced Battery Monitoring	Monthly logging of essential battery parameters including temperature, temperature hours, current, charging voltage and symmetry voltage, Data logged for 5 years.
Site Logs	System tools developed to assist site management. Daily peak load and statistic logs available.
Symmetry Measurement	Optional tool that measures batteries for early detection of thermal runaway.
Temperature Compensation Charging	Allows continuous adjustment of output voltage according to battery temperature. Features include adjustable compensation factor and separate thresholds for high temperature alarms.
Load Shedding (PLD)	Optional feature that allows voltage or time controlled disconnection of non-essential load.

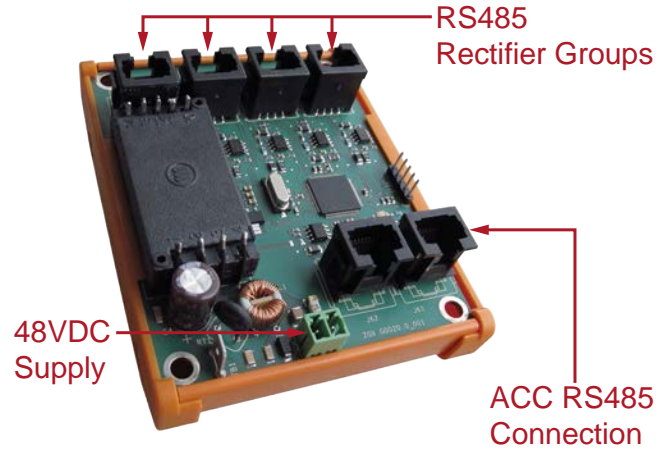* Depending on system configuration
** Depending on rectifier used

4x64 Multiplexer
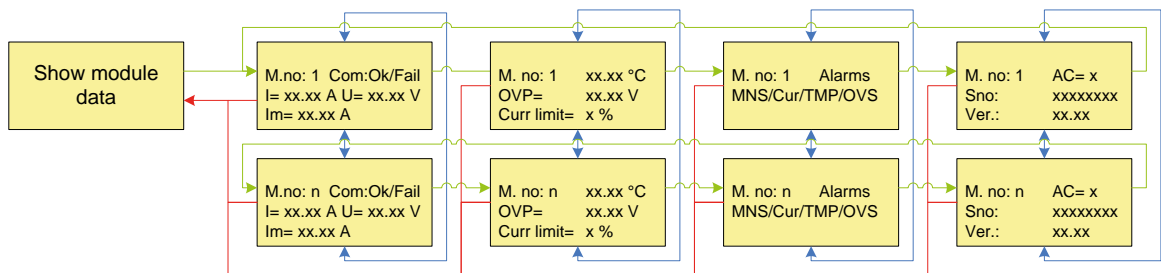*(see application note for ordering information)*

The rectifier 4x64 multiplexer board adds support for an additional 192 rectifiers by multiplexing four RS485 channels into the single channel provided by the ACC Extended controller.

When the rectifier multiplexer is installed with an ACC Extended controller the internal menu structure is automatically modified so that it displays the 4 channels one of which can be selected to view data about the associated rectifiers.
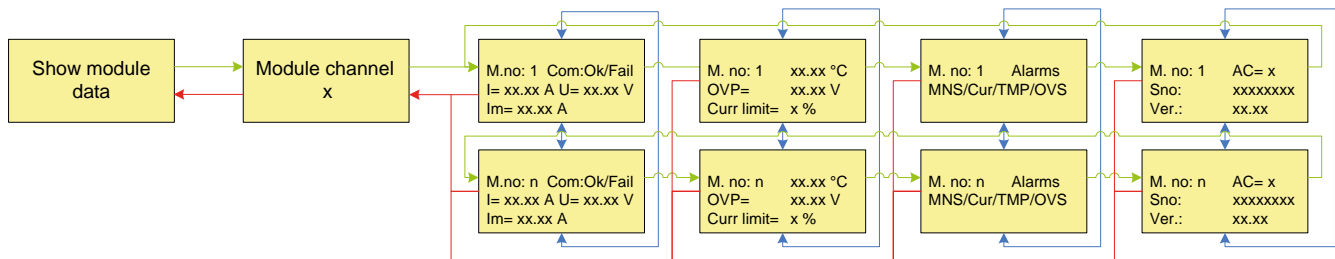
Similarly, when the controller is interrogated using the PowCom™ remote access software channel selection is automatically enabled in the software.
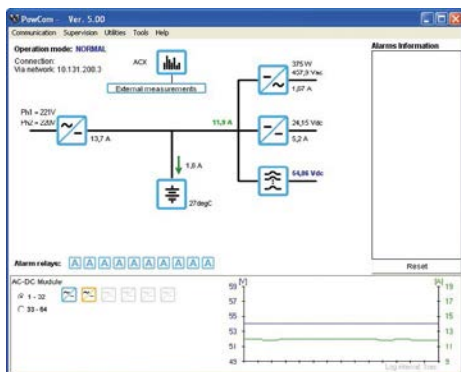

RS485 Rectifier Groups

48VDC Supply

ACC RS485 Connection

Rectifier Menu Tree (without multiplexer installed)
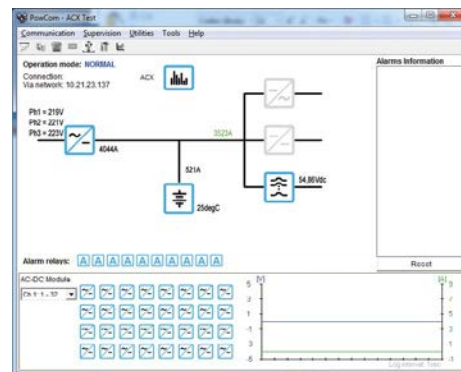

Rectifier Menu Tree (with 4x64 multiplexer installed)

PowCom - Module Main Window

without multiplexer installed

with multiplexer installed

acc-ds-revC-0915.indd