PCC
DIGITAL CONTROLLER MODULE

DESCRIPTION

The Prime Controller Card (PCC) is a pluggable microprocessor controller that provides monitoring and control for a broad range of DC Power Systems. The PCC 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 is accomplished through an RS232 port using PC-based PowCom™ software. The PCC has an Ethernet port allowing monitoring and control over a TCP/IP network. Alarms can mapped via SNMP traps to customer OSS platforms such as HP Openview™.

To meet individual site requirements, the PCC contains a Programmable Logic Unit 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 and external signal monitoring, comparing, and processing.

FEATURES

- User-selectable alarm parameters
- Password controlled environment
- RS232 Interface and Form “C” dry alarm contacts
- Programmable alarm routing, logic unit and analog inputs
- 10 Mbps Ethernet interface + web server support
- 40-event alarm log

INTELLIGENT SITE MANAGEMENT

- Temperature compensation with programmable compensation factor
- Automatic and manual load testing
- Battery voltage and symmetry monitoring
- Low voltage disconnection

SAFETY CERTIFICATIONS

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

TWO-YEAR WARRANTY

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Input

Voltage	18 - 60VDC
Current	< 200mA

Interface

Display	3 x 16 character LCD
Language Support	English, German, Spanish, Russian, Chinese
Internal Communication	RS485 Data Bus (20 modules max.)
External Communication	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 + SNMP traps.
Indications	Green LED - Power ON Yellow LED - System warning Red LED - System alarm
Signal Input	Battery current reading (via shunt) Output voltage reading 6 x Analog inputs for battery symmetry reading or general use 1 x Battery temperature sensor 1 x Load fuse failure 1 x Battery fuse failure 1 x LVD disconnect 1 x PLD disconnect 1 x LVD/PLD reconnect
Signal Outputs	3 x LED 1 x LCD
Software	Site upgradeable by EPROM/Flash

Alarms

Alarm Contacts	4 potential free change-over alarm contacts (Form C)
Alarms	Low Voltage, 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 Battery Temperature, Low Battery Temperature, Temperature Probe Failure, 16 x Additional User Definable Alarms

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. Variables include test duration and end voltage.
Enhanced Battery Monitoring	Monthly logging of essential battery parameters including temperature, temperature hours, current, charging voltage and symmetry voltage, Data logged for 5 years.
Symmetry Measurement	Optional tool that measures batteries for early detection of thermal runaway. Allows for separate measurements of up to 6 parallel battery branches using mid-point measurement.
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.

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