

Galaxy Pulsar Plus

Digital Battery Plant Controller

Features

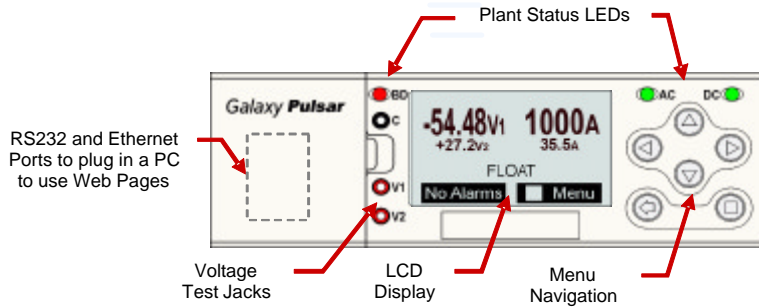
- Supports up to 60 Power Modules – rectifiers and converters
- Supports dual voltage plants, with rectifiers and converters
- Auto-sensing dual voltage - displays Plant Voltage and Current for both voltages when present
- 10 alarm relays – 7 of which are user assignable
- Configurable alarm severity
- Advanced Battery monitoring and control functions
 - Slope thermal compensation mode voltage control
 - Recharge current limit control
 - Multiple contactor control
 - Mid string voltage monitoring
 - Thermal monitoring
 - Battery discharge testing and reserve time prediction
- Remote monitoring capability – via Ethernet LAN access
- Local monitoring capability – via Ethernet Craft Port
- Secure access – 3 access security levels
- Local or remote viewing and configuration of system parameters, alarm thresholds, and user-definable alarm inputs and relays
- Emergency Power Off (EPO) feature for emergency battery disconnect
- dc Distribution monitoring
- Extensive Voltage, Current, Temperature, and Binary Input monitoring
- Alarm Test Feature
- System Statistics – Time / Date stamped
- System History – Time / Date stamped
- SNMP support
- Digital communications to all system devices
- Web page server
- DHCP server option
- Seismic zone 4



Package Options

- Infinity NE power module package – fully compatible with NE Power Shelves
- CP Rectifier package – fully compatible with CP Power Shelves
- EPS2400 Power shelf Module.
- Door mount package for system mounting

- Local Control panel
- Web based Control panel for local (Craft Port) and remote (LAN) access.
- Ethernet interface – TCP/IP, FTP, Telnet, HTTP, SMTP support
- 10 alarm Relays
- User configurable relays and alarm severity
- DC/DC converter support
- Extensive Monitoring and control features
 - Voltage, current and status
 - All plant configuration
- Advanced Battery management
- Battery testing
- Contactor (load and battery) management
- Voltage Test Jacks (both voltages)
- History, Statistics and Trend logs



The screenshot displays the web-based control panel in a Mozilla Firefox browser window. The interface includes a navigation menu with options like Home, Reports, Maintenance, Settings, Installation, Software, and Logout. The main content area is divided into several sections:

- Site Information:** Shows site name (NIB43), description, and primary/secondary bus voltages and currents.
- Batteries:** Displays installed and on-line capacity, total current, on-discharge status, model, number of strings, highest temperature, boost state, and string midpoint.
- Plant:** A grid showing current levels for various components (G11-G14, G21-G24, G31-G34, G41, C52-C54).
- Status Legend:** Defines symbols for on, off, standby, missing, and fail.
- Rectifier and Converter:** Shows installed, on-line, and total capacities and drain for both.
- Alarms:** A table listing alarm severity, event, date, and time. A 'Silence Alarm' button is present.
- Distribution:** A table showing the state and current for LVBD1, LVD1, LVD2, and LVD3.

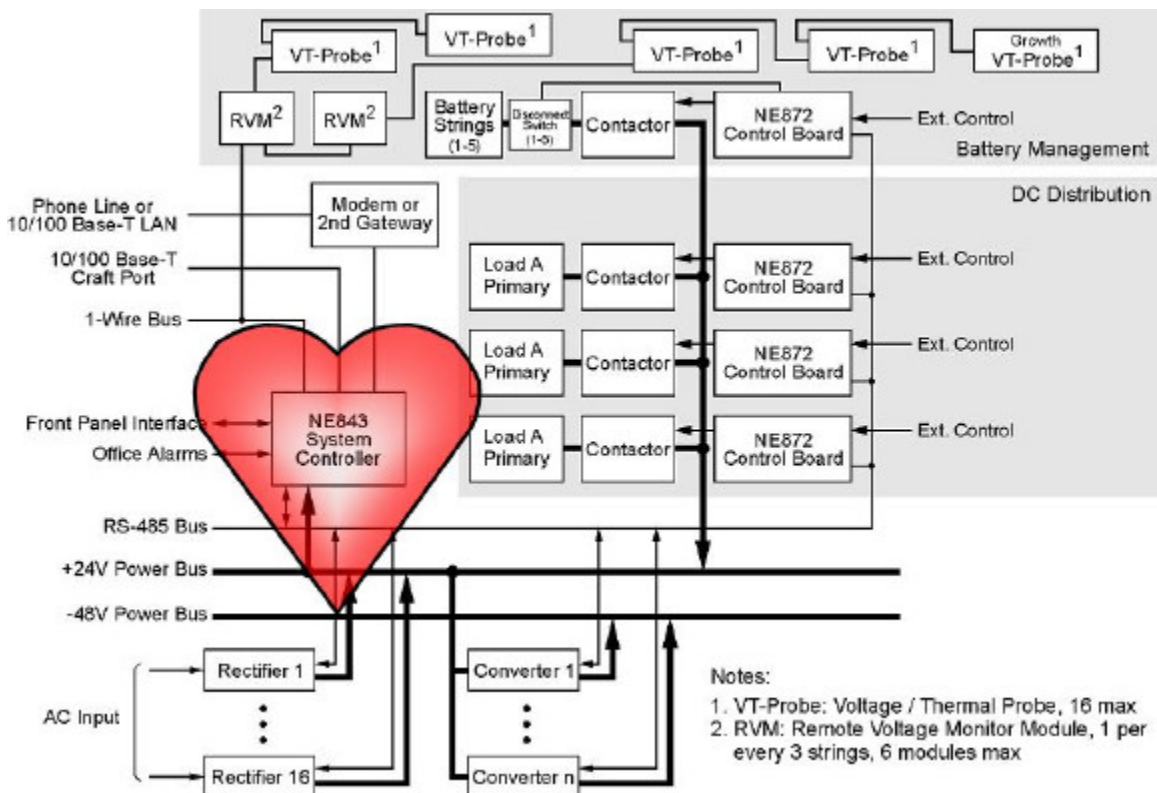
At the bottom of the browser window, the status bar shows 'Done'.

Web Based Control Panel

Overview

The Galaxy Pulsar Plus NE843 family of controllers provides system monitoring and control features for NE, CP, and other power systems. These controllers monitor and control system components including rectifiers, converters, and distribution modules via a multi-drop RS485 digital communications bus. System status, parameters, settings, and alarm thresholds can be viewed and configured from the controller's front panel display. Assignment and configuration of alarm inputs and output relays can be performed from a laptop computer connected to a local RS-232 or Ethernet port, or by remote access is through a network connection to the World Wide Web (internet) or your enterprise network (intranet). An optional modem is also available.

The Heart of a Sophisticated Power System



Automated System Setup

For automated installation and set up, the controller, rectifiers and converters communicate via a digital interface. A newly added power module automatically identifies itself to the controller by transmitting its type and serial number, and the controller then sets the output voltage to the pre-established value. The digital interface automates the installation and setup process and eliminates the need to use potentiometers to separately set the output voltage or balance current sharing.

On initial power up the controller senses the primary voltage (Rectifier) and automatically selects the appropriate set of configuration values for that voltage.

Tyco Electronics Power Systems has determined a set of default configuration parameters, but customized default values can be factory programmed per individual customer requirements.

Mounting Options

The Pulsar Plus controller is offered in several convenient mounting options. The simplest is the power module box, which is compatible with the power shelf for the associated power modules (rectifier and converters). Power module boxes are available to match the Infinity NE power modules and the CP power modules. A stand – alone board version is also available for door or panel mounting along with the separate front panel display / control interface.

Specifications

General

Input Voltage Ranges (power)	+/-24 volts: from +/-18 volts to +/-30 volts; -48 volts: from -36.5 volts to -60 volts
Input Power	6.0 watts maximum
Input Power Connections	NE843A/NE843B, No external connection required (Powered from backplane) NE843C, (J9) 12-pin connector
Front Panel LCD user interface	8-line by 40-character LCD; Severity sensitive backlit LCD; Three status LEDs; Voltage test jacks
System Configuration Methods	Front panel LCD display and menu keys; (J5) and (J8) 10/100 Base-T port/s; (J7) DB9 for RS232 asynchronous port – T1.317 or EasyView; (J6) RJ11 for phone line connection –MODEM option
Maximum Number Of Power Units	60 NE Power Units 32 CP Power Units
Low-Voltage Disconnects	Manage up to eight LVD contactors using up to 3 independent configurable Load disconnect thresholds (LVLs) and 1 configurable Battery disconnect threshold
Temperature Monitoring	Up to 16 One-Wire Battery Temperatures; One on-board ambient

System Input/Output

Alarm and Control Inputs	(J3) 10-pin connector 2 control and 5 alarm inputs and returns; (J1) 6-pin connector for 4 basic plant inputs
Alarm Contact Outputs	10 User configurable Form-C Outputs; (J4) 20-pin connector for 10 individual alarm output contacts; Wire size: 28-16 AWG stranded or solid
Alarm Contact Ratings	60 VDC, 0.5A
Voltage Measurement Accuracy	±40 mV
Resolution	0.01V
Plant Current Measurement Accuracy	±0.5% of full scale
Resolution	1A
Temperature Measurement Accuracy	±1°C
Resolution	0.1°C

Environmental

Operating Temperature Range	-40 to 75°C (-40 to 167°F)
Storage Temperature Range	-40 to 85°C (-40 to 185°F)
Altitude	-200 to 13,000 feet (-61 to 3962 meters) See Note 1
Humidity	10% to 95% non-condensing
Audible Noise	< 60 dBA
Earthquake Rating	Zone 4, upper floors

Safety / Standards Compliance

Safety Agency Approvals	Underwriters Laboratories (UL) Listed per Subject Letter 1801: Power Distribution Center for Communications Equipment, and cUL Certified (CSA 22.2 950): Safety of Information Technology Equipment
European Economic Community (EEC) Directives	EMC Directive 89/336/EEC, Low Voltage Directive 73/23/EEC as amended by Marking Directive 93/68/EEC
Radiated and Conducted Emissions	FCC Part 15, Class B EN55022 (CISPR22), Class A
Electromagnetic Immunity	Meets Telcordia GR-1089-CORE
Electrostatic Discharge	EN61000-4-2 Level 3
RF Immunity	IEC61000-4-3 Level 3, 10 V/m
Conducted Immunity	IEC 61000-4-6 Level 3, 10V
Voltage Dips, Interruptions, and Variations	IEC 61000-4-11, EN55024 (CISPR24)

Note 1: For altitudes above 5000 feet (1524 meters), de-rate the temperature by 3.6 °F per 1000 feet (0.656 °C per 100 meters).

Ordering Information

Configuration Number	Description	Comcode
NE843A	Standard NE Slot controller	CC109128402
NE843A_M3	Standard NE Slot controller with BSM3 internal modem as option	CC109140522
NE843A_M5	Standard NE slot controller with BSM5 internal modem as option	CC109140530
NE843A_G2 ^[1]	Standard NE slot controller with EBW3 network card (dual Ethernet) as option	CC109140547
NE843B	Standard CP Slot controller	CC109129895
NE843C	Standard controller (door mount) with no options	CC109134152
NE843D	2U high, Custom controller for EPS package, no options	CC109133427
NE843E	Compact, Door mount modular controller package	CC109142056
NE843G	1U high, 19" rack mount packaged controller with no options	CC109139358

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