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

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 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.
### 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 (LVLDs) 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**  
Resolution 0.01V

**Plant Current Measurement Accuracy**  
Resolution ±0.5% of full scale  
1A

**Temperature Measurement Accuracy**  
Resolution ±1°C  
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**  

**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

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<thead>
<tr>
<th>Configuration Number</th>
<th>Description</th>
<th>Comcode</th>
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<tbody>
<tr>
<td>NE843A</td>
<td>Standard NE Slot controller</td>
<td>CC109128402</td>
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<tr>
<td>NE843A M3</td>
<td>Standard NE Slot controller with BSM3 internal modem as option</td>
<td>CC109140522</td>
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<tr>
<td>NE843A M5</td>
<td>Standard NE slot controller with BSM5 internal modem as option</td>
<td>CC109140530</td>
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<td>NE843A G2 [1]</td>
<td>Standard NE slot controller with EBW3 network card (dual Ethernet) as option</td>
<td>CC109140547</td>
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<td>NE843B</td>
<td>Standard CP Slot controller</td>
<td>CC109129895</td>
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<tr>
<td>NE843C</td>
<td>Standard controller (door mount) with no options</td>
<td>CC109134152</td>
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<td>NE843D</td>
<td>2U high, Custom controller for EPS package, no options</td>
<td>CC109133427</td>
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<td>NE843E</td>
<td>Compact, Door mount modular controller package</td>
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<td>NE843G</td>
<td>1U high, 19&quot; rack mount packaged controller with no options</td>
<td>CC109139358</td>
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