

Infinity ICS4220
(J85590A1)
-48V Output, Maximum 300A

Features

- High power density
- High efficiency
- Modular plug-and-play components
- Remote monitoring capability
- Modular front and top/bottom access architecture
- Hot-insertable components
- Universal AC input
- Different rectifier options using NP family rectifiers
- Low Voltage Battery Disconnect
- Accepts up to either two or four strings of batteries
- Non-seismic cabinet
- Six office alarms
- AC Distribution incorporates either six 20A DIN style single-pole circuit breakers to power two NP shelves or three 20A DIN style single-pole circuit breakers to power one NP shelf
- DC Distribution accommodates up to 12 DIN style circuit breakers ranging from 6A to 63A
- Two or four battery shelves with integral battery disconnect switches are provided. Each shelf can accommodate different battery styles and up to two strings (battery style dependant)



The Infinity ICS (Indoor Cabinet System) is an extremely flexible power system designed for indoor applications where space conservation is critical. The Infinity plant provides power ranging from 15A to 300A in a single cabinet and it utilizes a broad range of NP rectifiers rated at 800W, 1200W, 1500W and 2500W which all fit within the same rectifier shelf and it powers up to 12,500W (N+1). The Infinity battery plant was designed to

provide continuous highly regulated and reliable 48V DC with all the necessary components contained in a single cabinet. The Infinity ICS also introduces the new Spring controller, an advanced controller designed to fit the needs of Telecom and Wireless power systems.

The Infinity ICS4220 is available in a footprint of 600x600mm and sizes of 1.5M and 2.2M.

Benefits

Maximum Design Efficiency

The Infinity ICS plant has exceptional power density. Incremental, cost-effective system growth is made possible through convenient front-access design and lightweight modular components. In addition, using a single set of components over a wide range of applications reduces training, parts inventory, and management. Moreover, many of the same components are used in the reliable Galaxy Power Systems.

Simplified Engineering

The Infinity battery plant eliminates the need for pre-system engineering and testing associated with piece-part assembly and minimizes need for costly power cables and connectors. The Infinity plant is designed to provide you with easy installation and minimal maintenance. Every building block within the Infinity range is designed to the highest quality and reliability standards.

By adding remote monitoring and configuration management to your system, Infinity will provide you with fault indication and general performance data; valuable input to assist in reducing service intervals and when planning for future expansion.

Automated System Setup

For automated installation and set up, the controller and rectifiers communicate via a digital interface. A newly added rectifier automatically identifies itself to the controller by transmitting its type and serial number, and the controller then sets the output voltage to a 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.

Continuous Operation

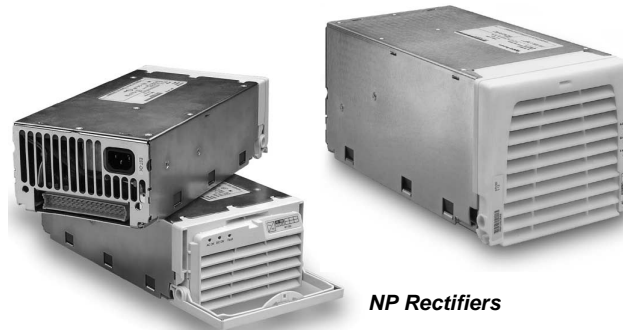
The Infinity ICS is designed for continuous operation and in-service upgrades, allowing system components including rectifiers, distribution, and controller options to be added in the field without interrupting service.

Simplified Plant Management

Depending on the chosen configuration that better fits your power requirements, the Infinity system can operate either with the Galaxy Vector controller or the Spring controller. The controller serves as the single interface point for rectifier control, alarm and status reporting, battery management and plant diagnostic.



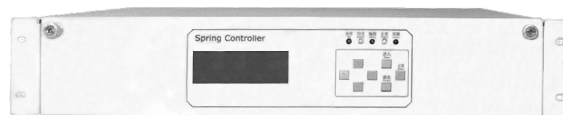
Infinity ICS4220 System
with two NP2500 rectifier shelves
and four battery shelves



NP Rectifiers

Spring Controller

The Spring Controller is an advanced controller designed to meet the needs of telecom and wireless power systems. Some of its features are:



- Monitoring and control of two main input switches
- AC input voltage, frequency and current monitoring
- AC Alarm monitoring
- Basic Alarm History
- Available as rack mounted or door mounted
- Four LVDs can be configured as LVBD or LVLD
- Control for up to 24 rectifiers
- Configuration stored in non-volatile memory
- Multiple rectifier fail alarm
- Battery discharge testing/reserve time prediction
- Battery current monitoring
- Reserve engine transfer and sequencing
- Audible alarm cut-off

Specifications

Electrical

	NP0800	NP1200	NP1500	NP2500
Nominal Input Voltage (single phase)	100, 120, 200, 208, 220, 240 Vac	100, 120, 200, 208, 220, 240 Vac	100, 120, 200, 208, 220, 240 Vac	100, 120, 200, 208, 220, 240 Vac
Steady State Voltage Limit	85 - 264 Vac	85 - 264 Vac	85 - 264 Vac	85 - 264 Vac
Frequency	47 - 63 Hz	47 - 63 Hz	47 - 63 Hz	47 - 63 Hz
Maximum Input Current	10A at 100 Vac 9A at 120 Vac 5A at 220 Vac	15A at 100 Vac 12A at 120 Vac 8A at 220 Vac	15A at 100 Vac 12A at 120 Vac 8A at 220 Vac	13A at 100 Vac 14A at 120 Vac
Nominal Voltage	-48 Vdc	-48 Vdc	-48 Vdc	-48 Vdc
Vo Setpoint (factory)	52.0 Vdc ± 1%	52.0 Vdc ± 1%	52.0 Vdc ± 1%	52.0 Vdc ± 1%
Vo Range	48 to 58 Vdc	48 to 58 Vdc	48 to 58 Vdc	48 to 58 Vdc
Maximum Output Current (per rectifier)	15.6A	23A	29A at > 150 Vac 23A at < 150 Vac	50A at > 170 Vac 42A at < 170 Vac
Maximum Output Current (system)	300A	300A	300A	300A
Regulation (with Galaxy Controller)	±2%	±2%	±2%	±2%
Ripple	250 mVp-p 0-20 MHz	250 mVp-p 0-20 MHz	250 mVp-p 0-20 MHz	250 mVp-p 0-20 MHz

Mechanical

Height	1.5M (59.0 in.) 2.2M (87.0 in.)
Width	600mm (23.6 in.)
Depth	600mm (23.6 in.)
Weight (approximate, without rectifiers)	242 lbs (1.5M cabinet) 286 lbs (2.2M cabinet)

Specifications (continued)

Environmental

Operating Temperature Range	0°C to 50°C with NP rectifiers
Operating Relative Humidity Range	10% to 85% non-condensing
Storage Temperature Range	-40°C to 75°C
Storage Relative Humidity Range	5% to 95% non-condensing

Safety / Standards Compliance

Electromagnetic Compliance:	
Emission	AC Power conducted emissions, EN550022 class A limits DC Power conducted emissions, EN550022 class A limits
Immunity	Radiated Immunity EN 61000-4-3
CE Marking	CE Marked per European Council directives: electromagnetic compatibility (73/23/EEC) and low-voltage (89/336/EEC). (ETSI 300-386 DC Output port conducted emissions under review.)



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