



Product Description

The Power Node Control Center (PNCC) offers groundbreaking technology for electrical power distribution systems by providing the functionality of transfer switches, frequency converters, motor controllers, transformers, circuit breakers, rectifiers and inverters - simultaneously within a single enclosure. Programmable power electronic building blocks are what enables this technology for mixed application usage. The PNCC provides the highest reliability, survivability, power density and load power quality all with affordability in mind.

PERFORMANCE BENEFITS:

- Load Survivability
 - Dual input capability with “seamless” transfer
 - Flexible I & V protection
 - Mil qualified environmental requirements
 - Faults do NOT affect adjacent circuits
 - Eliminates high-fault currents
- Affordability
 - Lower installation costs through factory integration
 - Lower start-up costs by factory grooming
 - Reduced training and maintenance
 - Fewer spare parts required
 - Potential for manning reduction
 - Open architecture to facilitate efficient technology upgrades
 - Many building block modules have the flexibility to perform as inputs or outputs
- Improved Power Density
 - Reduced equipment and cable weights
 - Eliminates multiple distribution systems by enabling multiple output types from a single node, e.g. 450V, 208V, 115V
 - Flexible building block design
 - Input power factor correction to near unity
 - Provides more deck and bulkhead space
- Improved Power Quality
 - Tailors power to the needs of each load



KEY FEATURES:

- “Seamless” power transfer when performing as a transfer switch
- Power Conversion
 - Programmable frequency (25-400Hz)
 - AC to DC, DC to AC
 - AC to AC, DC to DC
- Motor Controller
 - All modules programmable for variable speed control
 - All motors can be soft started
- Remote and local control

POWER NODE CONTROL CENTER (PNCC)®



Product Description Line

STANDARD FEATURES OF PNCC:

- Source voltage
 - 440 VAC, 60Hz, 3 phase
 - 800VDC
- Common Multi-Function Power Modules (MFPM)
- Ratings 5kW to 300kW
- Modules can be paralleled for higher capacities
- Load current limiting
- Field adjustable output frequency range 25Hz to 400Hz
- Local monitoring and control panel
- Air cooled
- Near unity line power factor
- Line current balancing
- Seamless source transfer
- Programmable fault protection
- Remote control capability compatible with/RS485, ethernet or serial interface
- Field upgradable firmware

APPLICATIONS:

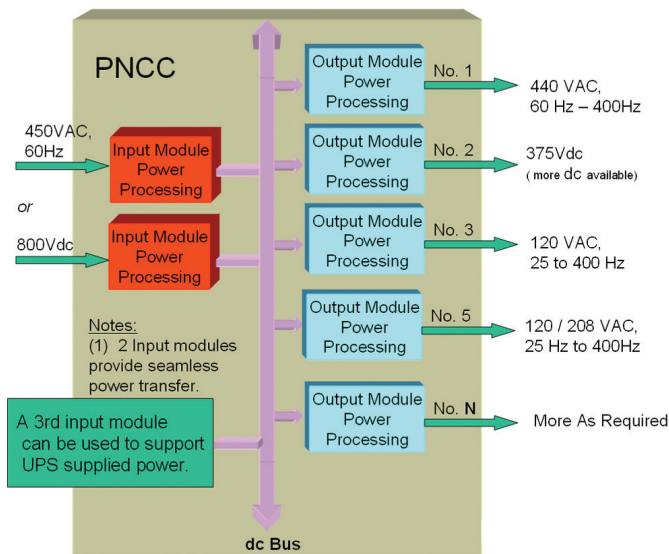
- Naval ships and submarines
- Commercial marine and offshore vessels
- Land-based critical power facilities

ELECTRICAL CHARACTERISTICS:

- Node frequency DC to 400Hz
- Efficiency PNCC – 92% - 94% (input to output)

OPERATIONAL CHARACTERISTICS:

- Temperature range 0°C to 50°C
- Shock Mil-S-901D Grade A
- Vibration Mil-Std-167-1
- EMI Mil-Std-461
- Performance Specification MIL-PRF-32272 (Integrated Power Node Center – IPNC)



Motor Applications

AESS

MCE

VLS

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