



**FCX**  
**SYSTEMS**

*Engineered for Endurance*  
MADE IN THE USA SINCE 1987



## Step Wave Converters



### LEADERS IN 400 HZ TECHNOLOGY

Since 1987, FCX Systems, Inc. has designed & manufactured solid-state frequency converters including, but not limited to, 50Hz, 60Hz, and 400Hz systems. Applications include aircraft hangars, laboratory power supplies, radar systems, and maintenance hangers. Each solid-state converter is configured in a vertical, stand alone NEMA 12 equivalent cabinet, with optional designs available, such as NEMA 3R or 4 enclosure.

The most advanced solid-state technology enables these high performance power units to convert any conventional electrical power to 400Hz aircraft grade power or clean 50 or 60Hz power for industrial applications. High performance and increased reliability are achieved by using laminated bus integrated inverter modules. The performance characteristics are enhanced by micro-processor controllers. This advanced design has long made the FCX converter the top converter in the world.

### FEATURES

- RS232/485 communications interface
- True RMS Design for precision voltage control of non-linear loads
- Integrated IGBT driver/power modules providing the most compact and reliable inverter design
- Laminated bus design reduces internal transients



FCX Systems has been serving the military, commercial, and industrial markets since 1987. Our knowledgeable, experienced sales staff is waiting to review your requirements and specifications. Please call us at **(304)983-0400** or submit your inquiry via email to **[sales@fcxinc.com](mailto:sales@fcxinc.com)**. We are eager to provide your solution.

**Specifications below based on Legacy Series Converter FCX 50, 60, and 400Hz frequencies. Other ratings and types are available. Please contact us for more information.**

Electrical Characteristics		
I N P U T	Input Voltage	480VRMS +/- 10%, 60Hz, 3 phase 380VRMS +/- 10%, 50Hz, 3 phase 208 VRMS +/- 10%, 60Hz, 3 phase Other voltages available
	Input Frequency	45 to 65 Hz, 400 Hz
	Input Phase Rotation	Any (automatic phase lock)
	Inrush Current	None (soft start to rated power)
	Protection	Overload, short circuit, over voltage, under voltage, phase loss, over temperature, access door interlock
O U T P U T	Output Power	5 to 3000 KVA
	Output Voltage	3 phase, 3 or 4 wire, ratings available from 115V to 575V; single phase also available
	Output Frequency	50Hz, 60Hz or 400Hz, +/- 0.01%
	Voltage Recovery	Meets or exceeds limits of MIL-STD-704F, typically less than 50 milliseconds with a 100% load change
	Voltage Regulation	+/- 1% maximum
	Voltage Balance	+/- 1% for balanced loads, +/- 2% for 25% unbalanced loads
	Overload Capacity	125% for one hour, 150% for 5 minutes, 200% for 20 seconds, 300% for 6 seconds
	NBPT	Fully capable of No Break Power Transfer for all aircraft
	Protection	Overload, short circuit, over and under voltage per MIL-STD-704F, over temperature, aircraft 28VDC interlock—immediate shutdown, access door interlock
	Efficiency	>/ 88% @ 50% >/ 91% @ 100% 12 and 24 pulse will vary
	MTTR	Mean time to repair less than 30 minutes
Environmental		
Enclosure		Meets NEMA 12; NEMA 3R equivalent also available
Audible Noise Level		Less than 72 dbA typical
Ambient Temp. Range		Operating -40°C to +55°C (-40°F to +131°F)
Humidity		Less than 72 dbA typical
Altitude		0 to 3,000 meters (9,842 ft.) without derating
Wind		Up to 145 km/hr (90 mph)
Operational Life		20 to 25 years
Finish		Standard color: RAL 9006 "White Aluminum" (gray), other colors available
Monitoring and Controls		
Digital Monitor		4 x 20 Character backlit display which shows voltage, amperage, frequency operating parameters, & diagnostics, 16 key matrix keypad for easy menu selection
Meters		Elapsed time

#### Options and Accessories

Dual or multiple outputs
12-pulse input rectification system to reduce input harmonics to less than 10%
24-pulse input rectification system to reduce input harmonics to less than 5%
Remote boxes
Aircraft cables
18" or 36" Floor Stand
Cable Racks
Caster Base
Towable Cart

*Model	KW rating	KVA rating	Size (in) H x W x D
PFC006	6	7.5	48X44X24
PFC012	12	15	48X44X24
PFC024	24	30	64X40X22
PFC032	32	40	64X40X22
PFC040	40	50	64X40X22
PFC048	48	60	76X48X30
PFC060	60	75	76X48X30
PFC072	72	90	76X48X30
PFC096	96	120	84X62X36
PFC120	120	150	84X62X36
PFC150	150	187.5	84X62X36
PFC200	200	250	84X88X36
PFC250	250	312	84X126X36

\*\*Other KVA ratings available per request

\*\*Enclosure size may increase with low frequency outputs (50 or 60Hz)

\*\*Indoor/ outdoor may vary

**At FCX Systems, we take pride in our highly trained support staff, dedicated to providing the best operational and technical support in the industry. Factory technicians are available for on-site training, maintenance and repair services, either in conjunction with our available maintenance plans, or as standalone services. Operational and maintenance training are also available at our factory. With FCX you can rest assured that you will have the support you need, when you need it, from a friendly, professional and experienced staff, 24/7/365. Contact us at (304)983-0403 or [service@fcxinc.com](mailto:service@fcxinc.com).**