

# FREQUENCY CONVERTER

50, 60, 400Hz Vertical Systems



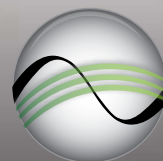
## FEATURES:

- 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
- Software options & upgrades

## 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 hangars. Each solid-state converter is configured in a vertical, stand alone NEMA 12 equivalent cabinet, with optional designs available.

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.



**FCX**  
SYSTEMS

# SPECIFICATIONS

## INPUT

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 65Hz
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

## OUTPUT

Output Power	7.5 to 1,000KVA
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
Harmonic Content	2% max., 1.5% typical (line to line, or line to neutral)
Overload Capacity	125% for one hour, 150% for 5 minutes, 200% for 20 seconds, 250% for 10 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	94% load above 50% of rating (6 pulse) 12 and 24 pulse will vary
MTRR	Mean time to repair less than 30 minutes

## MONITORING & CONTROLS

Digital Monitor	4 x 20 Character backlit LCD display which shows voltage, amperage, frequency operating parameters, & diagnostics, 16 key matrix keypad for easy menu selection
Meters	Elapsed time

## ENVIRONMENTAL

Enclosure	Meets NEMA 12; NEMA 3R equivalent also available
Audible Noise Level	Less than 68dba typical
Ambient Temp. Range	Operating -40°C to +55°C (-40°F to +131°F)
Humidity	0% to 100%
Altitude	0 to 3,000 meters (9,842 ft.) without derating
Wind	Up to 145 km/hr (90 mph)
Operational Life	30 to 35 years
Finish	Standard color: Ultra Sonic Chrome. Other colors available.

## 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

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 12-pulse option  
or 24 pulse option and low frequency outputs (50 or 60Hz)

expect focus. expect the best.



www.fcxinc.com

304-983-0400