





FCX Systems Inc., a worldwide leader in solid-state 400Hz technology since 1987, continues to provide customers with stateof-the-art technology to meet the changing needs of the marketplace.

FCX Engineers have designed an economical, compact 312KVA solid-state frequency converter intended for direct genset replacement or which might be utilized in compact settings. This high performance unit is indoor rated, constructed to operate under the most extreme situations. The unit requires minimal space while offering easy front and rear access to the unit for simple servicing. FCX has achieved high performance and increased reliability by using laminated bus integrated inverter modules. The performance characteristics are enhanced by micro-processor controllers with field programmable logic. This advanced design has long made the FCX converter the top converter in the world.

- Higher efficiency than rotating converters
- True RMS Design for precise voltage control of non-linear loads.

- Integrated IGBT driver/power modules providing the most compact and reliable inverter design
- Easy access for servicing
- Built-in Line Drop Compensation
- User-friendly controls
- Standard RS485 Modbus communication and integration capability with available RJ45 Ethernet connection capability
- 300% overload capacity (optional)
- Clean, reliable power

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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. We are eager to provide your solution.

Central System (400Hz)

Specifications below based on 312KVA (400Hz). Other ratings and types are available. Please contact us for more information.

Eleo	trical Characteristics			
	Input Voltage	208V, 3ph, 60Hz / 380-415V, 3ph, 50Hz / 480V, 3ph, 60Hz ± 10% (Other voltages available upon request)		
I P U T	Input Power Factor	0.8 to Unity (1.0)		
	Surge Protection	Integral Surge Supression compliant with UL 1449 and IEEE C62.41.1 and IEEE C62.41.1 (Location Category B) requirements		
	Inrush Current	None, Soft Charge to rated voltage		
	Input Current Distortion	\leq 12% at full rated load (Average \leq 8% at full load)		
	Output Voltage	200/115V, 3ph, 400Hz, 208/120V, 3ph, 400Hz, or 575/332V, 3ph, 400Hz (Other votlages available upon request)		
	Power output	200 thru 500KVA		
	Efficiency	≥ 87% @ 50% Load ≥91% @ 100% Load (Note: Systems requiring an input transformer, apply 2% reduction to efficiency numbers)		
	No Load input Losses	≤7% of converter output kW rating (Typically ≤5%)		
O U T P U T	Overload	110% (60 minutes), 125% (5 minutes), 150% (2 minutes), 200% (20 seconds) Standard. 300% (4 seconds) Optional		
	Short Circuit	System designed and tested to withstand short circuit current (bolted line to ground fault and bolted three phase fault) without damage until the integral protective controls and devices interrupt the fault		
	Output Voltage THD	≤3% L-L / L-N for Linear Loads, ≤5% L-L / L-N for Non- Linear Loads, ≤4% for Unbalanced (15%) Linear Loads		
	Output Voltage Amplitude Modulation	≤0.5% of nominal votlage rating, no load to full load		
	Frequency Stability	±0.01% under all operating conditions		
	Phase Angle Regulation	120° between adjacent phases ±2° (Balanced Load), 120° between adjacent phases ±4° (15% Unbalanced Load)		
	Transient Output Voltage Recovery	Meets or exceeds MIL-STD-704F		
Env	ironmental Rating			
Ambient Temperature Range		-40°C to +55°C / (-40°F to +131°F)		
Relative Humidity Range		10 to 95% w/out condensation		
Ambient Pressure from Sea Level		Ambient Pressure: Sea Level to 9843ft (3000m)		
Monitoring and Control Panel				
Con	trols	Start, Stop/Reset, Output On/Off, Emergency Stop		
Indicators		LED indicators: Power On, Converter On, Module Fault, Input Voltage Fault, Output Voltage Fault, Overload, 28VDC E/F Interlock, 28VDC E/F Bypass Mode, Output 1 On, Output 2 On		
Instrumentation		4 Line by 20 Character Backlit Display		
Data Logging		Total of 200 events (100 Events per unit when dual outputs are incorporated)		
Diagnostics		System designed with built-in test circuit that monitors both primary and protective circuits of the unit. Performs system check of each circuit board and communication port to internal component interfaces.		
Alarm Functions		Audible Alarm rated 80dB(A) @ 2ft w/ Alarm silence function & indicator activates when system fault condition is detected		
Input and Output Connections				
Circuit Breaker		Circuit breaker conforming to UL489		
Input Circuit Breaker		UL listed thermal magnetic trip circuit breaker		

Engineered for Endurance

Output Contactor	Three pole, mag overload, and sh internlocked wit the event of fault applications)	netic coil contactor rated for full load, ort circuit conditions. Contactor h all protective controls to open in condition. (Typical for aircraft cable		
Output Circuit Breaker	UL listed molded application. (Typ	l case switch derated for 400Hz ocial for distribution applications)		
Protection				
Input Under/Over Voltage, Phase Loss, Input Power Loss, Access Door(s) Interlock, Output Under/ Over Voltage per Mil-STD-704F, Output Overload, and Over Temperature				
Automatic Line Drop Compensation				
Adjustable automatic line drop compensation, configurable from 0 - 10%				
Acoustical Noise Maximum continuous acoustical noise level ≤72dBA				
				Assembly Construction
Enclosure is suitable for indoor environments and provides protection equivalent to NEMA 250, Type 12 (Optional outdoor environmental rating avaiable and provides protection equivalent to NEMA 250, Type 3R). Integral forced air cooling intake and exhaust openings are covered as required. All components except for the user interface are totally enclosed within the enclsoure. Design employs modular construction for ease of maintenance and repair. All wiring uniquely indentified with indentification throughly documented in as built schematics provided with Operation & Maintenance manual. Finish is durable, scratch resistant, rust inhibiting, electrostatically applied powder coat finish. Standard color: White Aluminum (RAL 9006). Other colors available upon request				
Codes and Standards				
Meets or Exceeds	UFGS 26 35 43 NFPA 70 UL 1012 MIL-STD-704F	SAE ARP-5015 BS2G-219 DFS-400		
Options and Accessories				
Remote Control Station Distribution Panels Line Drop Compensators	Gate Boxes Paralleling Capabilities			

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.

 ISO 9001:2015
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