

SERIES RFC

2 BEARING ROTARY CONVERTER

The **Series RFC** is a rotary frequency converter, which incorporates the proven technology of motor generator sets. The rotary converter provides the equipment with reliable power while simultaneously converting the input voltage and frequency. The 2 bearing is a single shaft motor generator design, which allows for a greater handling of power and lower maintenance costs. The required voltage and frequency are maintained within specifications by internal control logic with a voltage regulator maintaining output voltage at +/- .5%. The frequency of the generator is controlled by the RPM of the motor, which allows the output frequency to be variable. The Series RFC acts as a rotating filter protecting the critical load from transients and brownouts. In general, it is 100% effect for outages less than 100m sec. The Series RFC is available with either a synchronous or induction motor, and is offered in horizontal or vertical configurations. Also the absence of brushes and slip rings allows for virtually maintenance free operation. PS&C also offers full field service & engineering support.



Standard Equipment Features

- Configuration: Horizontal or Vertical
- Synchronous Generator
- Forced Air Cool
- Precision Solid-State Voltage Regulator
- Anti-Friction Bearings
- Input & Output Circuit Breakers
- Control & Internal Fault Monitors
- Analog Metering & Controls
- NEMA Rated Connection Boxes
- Push Button Start
- 100% Electrically Isolated

Optional Features

- NEMA 3, 3R, 4, 4X, 12, Etc.
- Pony Motor Start
- High Efficiency Motors
- Oversized Generators (Inrush)
- Containerized Enclosure
- Remote Monitor & Communications
- PLC Touch Screen
- Sound Attenuation
- Increased Operating Temperatures
- Dual Outputs
- 50 & 60Hz Output Capable
- E&F Circuits
- Increased Voltage Adjustment (15%)
- Seismic Vibration Kits
- Tactical & Portable Models
- Input & Output Filters
- Engineering Support
- Remote Control Panel
- Parallel Capability
- Remote EPO
- Extended Warranty
- "Turn Key" Installation

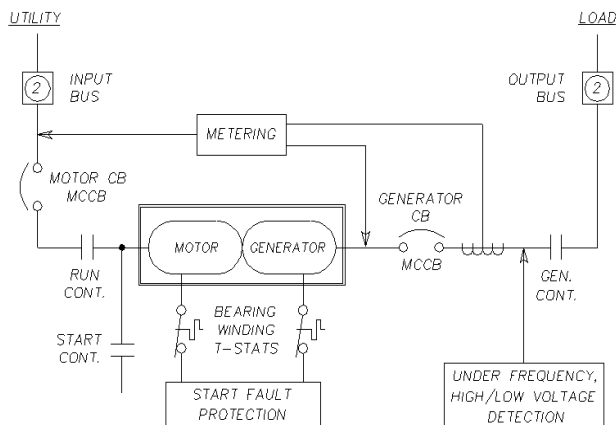


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System Specifications

*Note: System performance shown is typical and is dependent upon M-G sizing, options desired, and loading of the system.

INPUT		OUTPUT	
Nominal Voltage Available		Nominal Voltage Available	
➤ @ 60 Hz	208, 240, 480, 600	➤ @ 60 Hz	208, 240, 480, 600
➤ @ 50 Hz	380, 415	➤ @ 50 Hz	380, 415
➤ Phase	3 Phase + Ground	➤ @ 400 Hz	208, 480
➤ Frequency Tolerance	Selectable	➤ Phase	3 Phase 4 Wire + Ground
➤ Magnitude Tolerance		➤ Frequency Regulation	Input Dependent
➤ Continuous	+10%, -20%	➤ Adjustment	± 10%
➤ Transient	1500v for 10 ms	➤ Regulation	
Power Factor		➤ Transients	50% Block Load +/-8%
➤ Induction	.8	➤ Recovery Time	0.5 within 0.5 Seconds
➤ Synchronous	.8 leading to 1.0	➤ Steady State	+/-0.5% Δ 90° F
➤ Starting Inrush	3 x input kVa	THD (Total Harmonic Distortion)	
		➤ Single	2% Max
		➤ Total	3% Max
		Phase Separation	
		➤ Balanced Load	120° +/- 1°
		➤ 25% Unbalance	120° +/- 3°
		Overload Capacity	
		➤ 110%	2 Hours
		➤ 125%	10 Minutes
		➤ 150%	2 Minutes
		➤ Power Factor	0.8
ENVIRONMENT			
		➤ Temperature	0° -104° F (0° -40° C)
		➤ MG	0° -120° F
		➤ Console	32° -104° F
		➤ Altitude	0 to 3000 meters (0 to 5000 ft)
		➤ Humidity	0 to 95% non-condensing
		➤ Noise Level	
		➤ Enclosed	65 dBa at 1.5 meters (5 ft)



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