

Power Systems & Controls

Series SMG - Mission Critical Power Conditioners



The Series SMG provides total electrical isolation from spikes, brownouts, voltage fluctuations and electrical disturbances on the commercial utility network. This is accomplished via a coupling between the motor and generator. The ride-through of the Series

SMG provides power outage protection for short

outages such as utility re-closure operations.

The standard system includes:

- Brushless synchronous motor
- Brushless synchronous generator
- PLC control and internal fault monitors
- Precision solid-state voltage regulator
- Cycle on/off with no load interruption
- Electrically operated input and output circuit breakers

Standard Equipment Features

- NEMA-1 control cabinet, steel construction
- Output under voltage detector
- Output under frequency detector
- Auto bypass
- Motor over temperature detector
- Reduced current starting
- Rigid steel base, welded construction
- Bearing over temperature protection
- 100% Electrical isolation across MG set
- Output overvoltage detector
- Anti-friction bearings throughout
- A touch screen interface simplifies all operator controls
- PLC technology will control and monitor all SMG functions
- Power factor correction

Optional Features

- Remote monitor (status & alarm)
- Remote touch screen
- Simple relay logic controls
- 4 bearing system utilizing 2 bearing motor and 2 bearing generator
- Special voltages
- NEMA-3R enclosure
- "Turn Key" installation services
- Vibration isolation

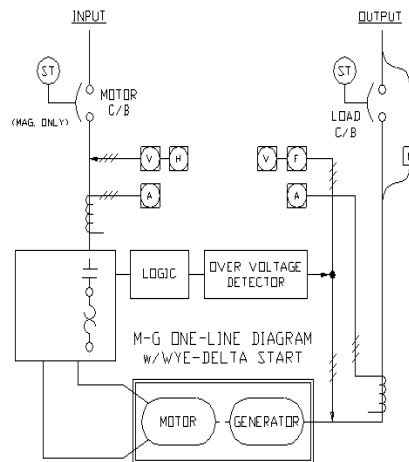
Benefits of Rotary Power Line Conditioning

- Single feeder or dual feeder applications
- Little disruption to the existing electrical service
- Blocks all line disturbances
- Desired system flexibility
- Motor sized for real power
- Low cost of installation
- Can match size of customer electrical service
- Blocks customer generated problems from reflecting back on the utility
- Customers desired residual value of the equipment
- Durability of the equipment
- Long or short term power conditioning
- Rides-through "most" common utility power disturbances
- Effectively isolates harmonics and disturbances from supply side loads
- Started via a "start motor winding", thus limiting the inrush or starting current to no more than the MG's full load current
- Three sound attenuation levels available

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 4 Wire + Ground	➤ Phase	3 Phase 4 Wire + Ground
➤ Frequency Tolerance					47 to 63	➤ Frequency Regulation	Input Dependent
➤ Magnitude Tolerance						➤ Voltage Adjustment	± 10%
➤ Continuous					+10%, -20%	➤ Voltage Regulation	
➤ Transient					1500v for 10 ms 0 for 100 ms	➤ Transients	50% Block Load +/-8% 100% Block Load +/-12%
Power Factor						➤ Recovery Time	0.5 within 0.5 Seconds
➤ Starting inrush					<1.5 x FLA	➤ Steady State	+ 0.5% Δ 90° F
SERIES SMG RATINGS, DIMENSIONS & WEIGHT					THD (Total Harmonic Distortion)		
KVA/KW	DIMENSIONS IN INCHES			W (KGS)	➤ Single	3% Max	
	LENGTH	WIDTH	HEIGHT		➤ Total	5% Max	
UNDER 125	CONSULT FACTORY				Phase Separation		
125/100	113	32	68	4900	➤ Balanced Load	120° + 1°	
156/125	113	32	68	4900	➤ 25% Unbalance	120° + 3°	
188/150	113	32	68	4900	Overload Capacity		
250/200	119	32	68	5800	➤ 100% Rating	Continuous	
313/250	126	32	68	6500	➤ 110%	2 Hours	
375/300	126	32	68	6800	➤ 125%	10 Minutes	
438/350	135	32	76	8300	➤ 150%	1 Minute	
500/400	135	36	76	8300	➤ Power Factor	0.8	
625/500	148	36	76	9700	ENVIRONMENT		
750/600	148	36	76	10300	➤ Temperature	32° -104° F (0° - 40° C)	
875/700	158	36	96	13000	➤ Altitude	0 – 3000 meters (0 – 5000 ft)	
1000/800	180	44	96	16000	➤ Humidity	0 – 95% non-condensing	
1250/1000	186	44	96	19400	➤ Noise Level	@ 1.5 meters (5 ft)	
1500/1200	186	44	96	19400	➤ Open	90 dBA	
1800/1440	186	44	96	21500	➤ Enclosed	75 dBA	
2000/1600	199	44	96	23400	➤ Silenced	65 dBA	



Power Systems & Controls reserves the right to improve, enhance and modify the features and specifications of its products and services without prior notification.

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