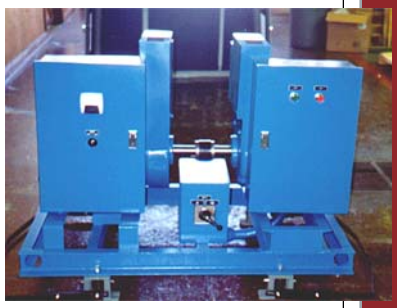
Power Systems & Controls

Series GRF -- Government Rotary Filter

The Series GRF provides reliable clean power to the most critical mission needs within the USG. The Series GRF is offered in many different models to support the diverse applications requested by the secure community. Output voltage and frequency are maintained within specifications by internal control logic. Under normal operation, the Series GRF isolates the critical load from any and all utility transients, brownouts, spikes and anomilies generated upstream of the system. In general it is 100% effective for outages less than approximately 100 msec. The standard Series GRF is supplied with a high-efficiency induction motor, an isolation coupling, a synchronous generator with a precision voltage regulator to maintain the output voltage +/-.5%. The absence of brushes and slip rings in both motor and generator allows for virtually maintenance free operation.



Standard Equipment Features

- Brushless two bearing induction motor
- Synchronous, brushless generator
- Flexible isolation couping
- Push-button start-up
- Precision solid-state voltage regulator
- Analog metering and controls
- Input and output circuit breakers
- Synchronous, brushless, generator
- Motor input molded case circuit (CB) breaker with shunt trip
- Generator output molded case circuit (CB) breaker with shunt trip
- Reduced current motor start
- Vibration mounts
- Rigid steel base, welded construction
- Anti-friction bearings throughout
- Control and internal fault monitors
- EMP protection
- Bearing temperature detectors
- Continuous, full load operation

Optional Module Types

- Horzontal or Vertical
- Induction Motor or Synchronous Motor
- Siesmic 4 isolation model
- Open Frame or Full Enclosure
- Single piece or Split Horizontal Cabinet
- Auto Bypass or Auto Restart
- Custom Assembly for space limitations
- “Turn Key” Installation

System Specifications

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

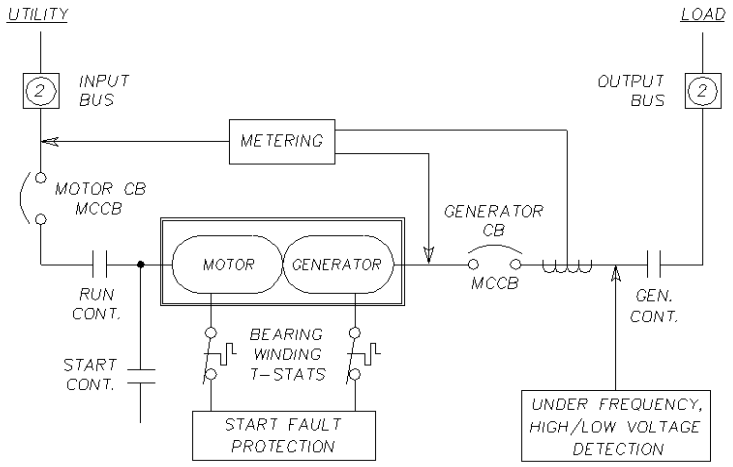
INPUT	
Nominal Voltage Available	
➢ @ 50 Hz	380, 208
➢ Phase	3 Phase + Ground
➢ Frequency Tolerance	
➢ Magnitude Tolerance	
➢ Continuous	+10%, -20%
➢ Transient	1500v for 1 ms
Power Factor	
➢ Induction	.8
➢ Synchronous	.8 leading to 1.0
➢ Starting Inrush	< 1.5 x FLA

OUTPUT	
Nominal Voltage Available	
➢ @ 60 Hz	380, 220, 208
➢ Phase	3 Phase 4 Wire + Ground
➢ Frequency Regulation	± 1%
➢ Adjustment	± 10%
➢ Regulation	
➢ Transients	50% Block Load +/-8%
➢ Recovery Time	0.5 within 0.5 Seconds
➢ Steady State	± 0.5% Δ 90° F
THD (Total Harmonic Distortion	
➢ Single	3% Max
➢ Total	5% Max
Phase Separation	
➢ Balanced Load	120° +/- 1°
➢ 25% Unbalance	120° +/- 3°
Overload Capacity	
➢ 100% Rating	Continuous
➢ 110%	2 Hours
➢ 125%	10 Minutes
➢ 150%	2 Minutes
➢ Power Factor	0.8
ENVIRONMENT	
➢ Temperature	32° -104° F (0° - 40° C)
➢ MG	32° -120° F (0° - 50° C)
➢ Console	32° -104° F (0° - 40° C)
➢ Altitude	0 to 1000 meters (0 to 3300 ft)
➢ Humidity	0 to 95% non-condensing
➢ Noise Level	
➢ Enclosed	65 dBa at 1.5 meters (5 ft)

SERIES GRF RATINGS, DIMENSIONS & WEIGHTS

Horizontal				
MODEL	L (IN)	W (IN)	H (IN)	W (LBS)
5/50/60	69	44	43	1094
10/50/60	69	44	43	1094
15/12.5	75	44	43	2000
24/20	86	30	68	3400
48/40	86	30	68	3800
75/60	110	35	69	4400
125/100	110	40	74	6120
150/125	130	40	77	7250
Vertical				
MODEL	L (IN)	W (IN)	H (IN)	W (LBS)
5/50/60	34.5	34.5	60	1400
10/50/60	34.5	34.5	60	1600
15/12.5	34.5	38.5	76	2500
24/20	34.5	38.5	76	3000
48/40	34.5	42	76	3400
75/60	-	-	-	-
150/125	-	-	-	-

* Larger Sizes Available, Consult Factory



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