

Power Systems & Controls

Series DFR -- Dynamic Frequency Regulator



The Series DFR has been designed for poor or "constant" frequency deviations which do not

allow today's "High Tech" equipment to operate properly. The Series DFR will provide the same uncompromising reliability as all Power Systems & Controls's systems, from 25 to 500kVA utilizing the latest in technology. Power Systems & Controls has developed an industrial grade product that will clean the frequency and voltage simultaneously. This, coupled with the long life design, gives the Series DFR a distinct advantage over all other

voltage regulators available today.

The standard system is complete and includes:

- Frequency Regulation to .1%
- Voltage regulation to .5%
- 100% on-line operation
- Digital metering and controls
- 100% load isolation
- Low starting inrush
- PLC control and internal fault monitors
- Input voltage tolerance of +10%, -15% selectable auto restart
- Electrically operated input and output circuit breakers
- Input frequency tolerance from 45 Hz to 65 Hz
- Remote monitoring ready
- Maintenance free coupling

Standard Equipment Features

- AC induction motor
- Brushless synchronous generator
- +10% output voltage adjustment
- Over/under output voltage protection
- Sound and vibration isolated enclosure
- Vertical motor-generator configuration for minimum footprint (some models)
- Superior motor starting capability
- Auto Restart
- Air conditioning not required
- Overload protection
- Touch screen interface
- Manual wrap around bypass

Optional Features

- Remote monitor (Status & Control)
- Remote touch screen (Standard & Fiber optic)
- Modem, serial port & profibus
- Single phase output
- Remote Communications
- "Turn Key" Installation
- Input THD filter -- meets IEEE 519
- Containerized
- Automatic lubrications



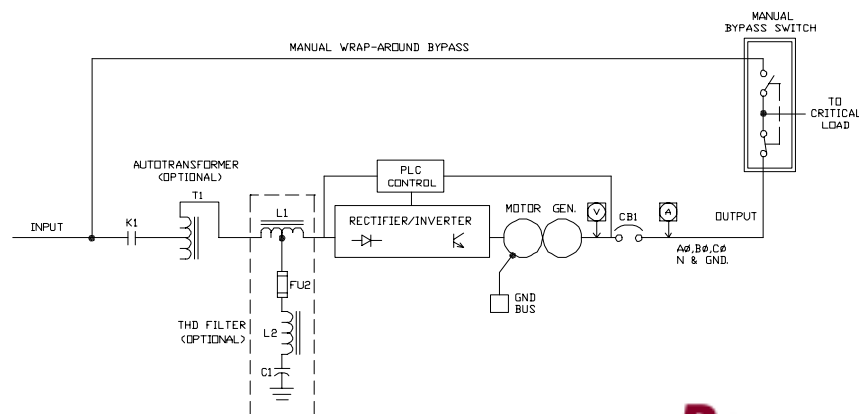
System Specifications

*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	55 to 65 or 45 to 55	➤ Frequency Regulation	+/- .1Hz
➤ Magnitude Tolerance		➤ Voltage Adjustment	+ 10%
➤ Continuous	+10%, -15%	➤ Voltage Regulation	
➤ Transient	1500v for 10 ms	➤ Transients	50% Block Load +/-8%
Power Factor		➤ Recovery Time	0.5 within 0.5 seconds
➤ Power Factor	0.95 lagging @ full load	➤ Steady State	+/-0.5% Δ 90° F

SERIES DFR RATINGS, DIMENSIONS & WEIGHTS					
60HZ	KVA /KW	L (CM)	W (CM)	H (CM)	W (KGS)
UNDER 30		CONSULT FACTORY			
30 / 24		36 (91.5)	34.5 (87.6)	76 (193)	1950 (884)
50 / 40		51 (130)	34.5 (87.6)	76 (193)	3000 (1361)
75 / 60		51 (130)	34.5 (87.6)	76 (193)	3950 (1791)
100 / 80		114 (289.6)	34.5 (87.6)	76 (193)	4800 (2177)
125 / 100		114 (289.6)	34.5 (87.6)	76 (193)	5200 (2359)
150 / 120		114 (289.6)	34.5 (87.6)	76 (193)	5500 (2495)
200 / 160		114 (289.6)	34.5 (87.6)	76 (193)	6100 (2767)
250 / 200		114 (289.6)	34.5 (87.6)	76 (193)	6410 (2907)
300 / 240		120 (304.8)	34.5 (87.6)	79.5 (201.9)	7073 (3215)
50HZ	KVA /KW	W (CM)	L (CM)	H (CM)	W (KGS)
25 / 20		39 (91.5)	34.5 (87.6)	76 (193)	1950 (884)
41.5 / 33		51 (130)	34.5 (87.6)	76 (193)	3000 (1361)
62.5 / 50		51 (130)	34.5 (87.6)	76 (193)	3950 (1791)
83 / 66.5		114 (289.6)	34.5 (87.6)	76 (193)	4800 (2177)
104 / 83		114 (289.6)	34.5 (87.6)	76 (193)	5200 (2359)
125 / 100		114 (289.6)	34.5 (87.6)	76 (193)	5500 (2495)
166.5 / 133		114 (289.6)	34.5 (87.6)	76 (193)	6100 (2767)
208 / 166.5		114 (289.6)	34.5 (87.6)	76 (193)	6410 (2907)
250 / 200		120 (304.8)	34.5 (87.6)	79.5 (201.9)	7073 (3215)

THD (Total Harmonic Distortion)	
➤ Single	2% Max
➤ Total	3% Max
Phase Separation	
➤ Balanced Load	120° +/- 1°
➤ 25% Unbalanced	120° +/- 3°
Overload Capacity	
➤ 100% Rating	Continuous
➤ 110%	2 Hours
➤ 125%	10 Minutes
➤ 150%	1 Minutes
➤ Power Factor	0.8
ENVIRONMENT	
➤ Temperature	0° -104° F (0° -40° C)
➤ MG	0° -120° F
➤ Console	32° -104° F
➤ Altitude	3,300 ft
➤ Humidity	0 to 95% non-condensing
➤ Noise Level	65 dBa at 1.5 meters (5 ft)



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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& CONTROLS
THE POWER IS ON!