

AMF Series

0.5kVA to 300kVA



400Hz Solid State Frequency Converter

INTEPRO
SYSTEMS

THE POWER TEST EXPERTS

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Preen[®]

AMF Series

0.5kVA to 300kVA



AMF-33180 pictured above.
See product specification tables for
other options and sizes.

Product Overview

The AMF Series is a complete line of single and three phase, 400Hz AC power sources. With Power levels ranging from 6kVA up to 300kVA, the series are ideal cost effective solutions for precise frequency conversion. Power is supplied by state-of-the-art IGBT pulse-width-modulated power amplifiers resulting in highly efficient power conversion, compact design and maximized performance.

Output is adjustable from nominal 115VL-N $\pm 10\%$ (218VL-L) and can be fixed at 400Hz and adjusted from 350 to 450Hz. Crystal controlled clock offers an outstanding 0.01% frequency stability. The AMF is capable of driving overload conditions of 120% for 1hr, 150% for 1min and 200% for 15sec.

Featured Benefits

- Precision frequency control and load regulation
- Robust design and ability to service reduces downtime
- Typically 50% the size of rotary converters, the design minimizes floor space requirements
- Low output distortion
- Integrated high accuracy measurements
- Single phase output up to 100kVA
- Overload drive capability of up to 200% for 15 seconds

Why choose AMF?

400Hz frequency conversion is traditionally accomplished using low cost rotor frequency converters and motor generators. While the initial cost for these types of conversion technology is lower, they require regular maintenance and upfront infrastructure investment. This traditional technology is also slow to regulate fluctuating load conditions and generates high harmonic distortion. Utilizing a Solid-state design the AMF offers a cost effective replacement to these traditional technologies and the benefits of modern switch mode power technology. The input and output are isolated and provides protection from counter-electromotive force (CEMF) which is common among motor applications.

Options

EMI Options

- *Output EMI Filter*

Remote Options

- *RS485 Remote Control for Output Voltage & Frequency (No Monitoring)*
- *External 0-5Vdc or 4~20mA Remote Control Voltage (V) / Frequency (F)*
- *Webcomm Ethernet Connection*

Best-in-Class

AMF solutions are easily serviced by Intepro Systems, LP, an ISO 9001 certified company. Intepro prides itself on best-in-class service support by minimizing the pains associated with system failure and maximizing uptime of our products. In the unfortunate and rare event of failure, the standard one year warranty includes ON-SITE repair for sources 15kVA and greater. Returning high power products back to the factory is expensive, impacts development schedules and furthers risk associated with lengthy transit times. Extended service level agreements and yearly calibrations are available for up to five years.

400Hz Solid State Frequency Converter Single Phase Input - Single Phase Output

Model		AMF-500W	AMF-11001	AMF-11003	AMF-11005	AMF-11010	AMF-31020
Power (kVA)		500VA	1kVA	3kVA	5kVA	10kVA	20kVA
Circuit Type		Transistor Amplifier			IGBT / PWMT		
Input	Phase	Single Phase					
	Voltage	110(B) or 220V(G) ± 15%			220V(G)± 15%		
	Frequency Range	50Hz±3Hz or 60Hz±3Hz					
Output	Phase	Single Phase					
	Voltage	115V (C) or 220V , 230V (H) Output Voltage ±10 Adjustable					
	Frequency	2-Step Output Frequency: 400Hz Fixed, 350Hz-450Hz adjustable					
	Current (A)	4.2	8.4	25	41.7	83.3	166.7
Frequency Regulation		≤0.01%					
Load Regulation		<±1%					
Total Harmonic Distortion (THD)		≤2%					
Meter/Res	4 Digit Freq. Meter	Res. 0.1Hz					
	4 Digit Voltmeter	Res. 0.1V					
	Digit Ammeter	0.001A	0.01A	4 Digit Ammeter / Res. 0.1A			
Overload Capacity		120%/ 1hr 150% /1min 200%/15sec, 25% duty cycle					
Protection Device		Electronic circuit trip for over/low voltage, over current, over load, over temperature, and short circuit protection and alarm system					
Insulation Equipment		≥DC500V 20MΩ					
Voltage Insulation		AC 1800V 5mA/1 Min					
Cooling System		Fan Cooling, Front to Rear					
Temperature		-20°C ~ 45°C					
Humidity		0 ~ 90% (Non-condensing)					
Case No.		1	2			3	4
Weight (lb/kg)		97/44	133/60	161/73	197/89	331/150	618/280
Consult factory for power levels above 300kVA							

400Hz Solid State Frequency Converter Three Phase Input - Single Phase Output

Model		AMF-31030	AMF-31045	AMF-31060	AMF-31100
Power (kVA)		30kVA	45kVA	60kVA	100kVA
Circuit Type		IGBT / PWM			
Input	Phase	Three Phase			
	Voltage	120V/208V, 220V/380V, or 277V/480V			
	Frequency Range	50Hz±3Hz or 60Hz±3Hz			
Output	Phase	Single Phase			
	Voltage	115V (C) or 220V , 230V (H) Output Voltage ±10 Adjustable			
	Frequency	2-Step Output Frequency: 400Hz Fixed, 350Hz-450Hz adjustable			
	Current (A)	250	375	500	833.3
Frequency Regulation		≤0.01%			
Load Regulation		<±1.5%			
Total Harmonic Distortion (THD)		≤3%			
Meter/Res	4 Digit Freq. Meter	Res. 0.1Hz			
	4 Digit Voltmeter	Res. 0.1V			
	Digit Ammeter	5 Digit Ammeter / Res. 0.1A			
Overload Capacity		120%/ 1hr 150% /1min 200%/15sec, 25% duty cycle			
Protection Device		Electronic circuit trip for over/low voltage, over current, over load, over temperature, and short circuit protection and alarm system			
Insulation Equipment		≥DC500V 20MΩ			
Voltage Insulation		AC 1800V 5mA/1 Min			
Cooling System		Fan Cooling, Front to Rear			
Temperature		-20°C ~ 45°C			
Humidity		0 ~ 90% (Non-condensing)			
Case No.		4	5		6
Weight (lb/kg)		735/333	923/418	1259/571	1980/898
Consult factory for power levels above 300kVA					

400Hz Solid State Frequency Converter Three Phase Input - Three Phase Output (6-75kVA)

Model		AMF-33006	AMF-33010	AMF-33015	AMF-33020	AMF-33030	AMF-33045	AMF-33060	AMF-33075	
Power (kVA)		6kVA	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA	75kVA	
Circuit Type		IGBT / PWM								
Input	Phase	Three Phase								
	Voltage	3W+G: 220V (G) or 3W+N+G:220/380 (T)±15%								
	Frequency Range	50Hz±3Hz or 60Hz±3Hz								
Output	Phase	Three Phase								
	Voltage	200V/115V Output Voltage ±10 Adjustable								
	Frequency	2-Step Output Frequency: 400Hz Fixed, 350Hz-450Hz adjustable								
	Current (A) Per Phase	16.7	27.8	41.7	55.6	83.3	125	166.7	208.3	
Frequency Regulation		≤0.01%								
Load Regulation		≤±1%						≤±1.5%		
Total Harmonic Distortion (THD)		≤2%						≤3%		
Meter/Res	4 Digit Freq. Meter	Res. 0.1Hz								
	4 Digit Voltmeter	Res. 0.1V								
	Digit Ammeter	4 Digit Ammeter / Res. 0.1A						5 Digit Ammeter / Res. 0.1A		
Phase Shift		Balanced Load / Empty Load: ≤ ±2°; 100% Unbalanced Load: ≤ ±4°								
Overload Capacity		120%/1hr; 150%/1min; 200%/15sec; 25% duty cycle								
Protection Device		Electronic circuit trip for over/low voltage, over current, over load, over temperature, and short circuit protection and alarm system								
Insulation Equipment		≥DC500V 20MΩ								
Voltage Insulation		AC 1800V 5mA/1 Min								
Cooling System		Fan Cooling, Front to Rear								
Temperature		-20°C ~ 45°C								
Humidity		0 ~ 90% (Non-condensing)								
Case No.		3			4			5		
Weight (lb/kg)		331/150	386/175	585/265	761/345	849/385	1164/528	1400/635	1544/700	
Consult factory for power levels above 300kVA										

400Hz Solid State Frequency Converter Three Phase Input - Three Phase Output (100-300kVA)

Model	AMF-33100	AMF-33120	AMF-33150	AMF-33180	AMF-33200	AMF-33250	AMF-33300
Power (kVA)	100kVA	120kVA	150kVA	180kVA	200kVA	250kVA	300kVA
Circuit Type	IGBT / PWM						
Input	Phase	Three Phase					
	Voltage	3W+G: 220V (G) or 3W+N+G:220/380 (T)±15%					
	Frequency Range	50Hz±3Hz or 60Hz±3Hz					
Output	Phase	Three Phase					
	Voltage	200V/115V Output Voltage ±10 Adjustable					
	Frequency	2-Step Output Frequency: 400Hz Fixed, 350Hz-450Hz adjustable					
	Current (A) Per Phase	277.8	333.3	416.7	500	555.6	694.4
Frequency Regulation	≤0.01%						
Load Regulation	<±1.5%						
Total Harmonic Distortion (THD)	≤3%						
Meter/Res	4 Digit Freq. Meter	Res. 0.1Hz					
	4 Digit Voltmeter	Res. 0.1V					
	Digit Ammeter	5 Digit Ammeter / Res. 0.1A					
Phase Shift	Balanced Load / Empty Load: ≤ ±2°; 100% Unbalanced Load: ≤ ±4°						
Overload Capacity	120%/ 1hr 150% /1min 200%/15sec, 25% duty cycle						
Protection Device	Electronic circuit trip for over/low voltage, over current, over load, over temperature, and short circuit protection and alarm system						
Insulation Equipment	≥DC500V 20MΩ						
Voltage Insulation	AC 1800V 5mA/1 Min						
Cooling System	Fan Cooling, Front to Rear						
Temperature	-20°C ~ 45°C						
Humidity	0 ~ 90% (Non-condensing)						
Case No.	6		7			8	
Weight (lb/kg)	2205/1000	2646/1200	2978/1350	3969/1800	4410/2000	5005/2270	6041/2740
Consult factory for power levels above 300kVA							

Case Dimensions

(width x depth x height)

- | | |
|---|---|
| <p>1 16.92 x 20.47 x 7.87 (in) / 430 x 520 x 200 (mm)</p> <p>2 16.92 x 20.47 x 28.35 (in) / 430 x 520 x 720 (mm)</p> <p>3 16.92 x 29.53 x 38.98 (in) / 430 x 750 x 990 (mm)</p> <p>4 23.62 x 38.19 x 48.82 (in) / 600 x 970 x 1240 (mm)</p> | <p>5 31.50 x 42.91 x 63.00 (in) / 800 x 1090 x 1600 (mm)</p> <p>6 41.34 x 38.19 x 70.87 (in) / 1050 x 970 x 1800 (mm)</p> <p>7 45.28 x 48.82 x 74.80 (in) / 1150 x 1240 x 1900 (mm)</p> <p>8 88.19 x 48.82 x 78.74 (in) / 2240 x 1240 x 2000 (mm)</p> |
|---|---|

Input Voltage Range			
100V	1Ø2W+G	110/190 V	3Ø4W+G or 3Ø4W+N+G (Y-Connection)
110V		115/200 V	
115V		120/208 V	
120V		127/220 V	
200V	1Ø2W+G or 3Ø3W+G (Δ-Connection)	220/380 V	
208V		230/400 V	
220V		240/415 V	
230V		254/440 V	
240V		100/200 V	
380V		110/220 V	
400V	3Ø3W+G (Δ-Connection)	115/230 V	1Ø3W+G
415V		Consult Intepro System for other Input Voltages	
440V			
480V			

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