

AFC series

Clean AC Power Source / Frequency Converter
0.5~2000kVA

Preen®



CE RoHS
Compliant

▼ Single Phase Output

0.5 ~ 120kVA

▼ Three Phase Output

5 ~ 2000kVA

▼ Adjustable Output Voltage and Frequency

▼ Galvanic isolation input to output

▼ Option for Custom Voltage Output Range

▼ Double Conversion Pure Sinewave Output

▼ Quiet and Clean Power Source

▼ Option for Output EMI filter

AC Power Source and Frequency Converter

Preen's AFC Series is an adjustable AC power source, provides double power conversion from a variety of inputs to pure clean sinusoidal output, isolate the harmonics from the grid system, fully adjustable across the output voltage and frequency ranges. Preen engineers have designed power products for over 35 years, the reliability and endurance of the AFC series products make the ideal solution for production, burn-in testing, chamber power, or laboratory stationary power source.

AFC series is designed with IGBT technology, consists of single phase output models from 0.5kVA to 120kVA and three phase output models from 5kVA to 2000kVA. The adjustable voltage output range of 5~300VL-N (8~520VL-L for three phase output system). AFC series also provides custom voltage range option that can simulate higher voltage range utility (ex: 600VL-L system) or lower voltage range with higher current test units. AFC series provides different output frequency band with different price range. Users can choose the frequency band according to their requirements and save the cost for their specific purpose. AFC series is a simple, clean, and cost effective solution for all of your AC power conversion needs!

Type	Output Frequency Range	Applications
A (Standard)	47~63Hz Adjustable, 50/60Hz Selectable	Industrial Product Testing, Production Line Power, Chamber Power, Burn-in Testing
B	45~500Hz Adjustable	Laboratory Testing, Electrical Safety Test
C	350~450Hz Adjustable, 400Hz	Military Stationary Power, Product Testing
D	47~63Hz Adjustable, 50/60/2F/4F/400Hz selectable	Transformer Testing
E	50/60Hz Selectable	Clean Power Source, Harmonics Isolation Variable Voltage Power, Frequency Conversion

Clean Adjustable Power Source

Applications :



Burn-In, Aging Test



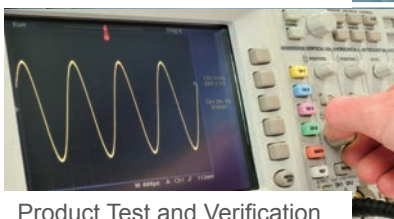
Quality Assurance Test



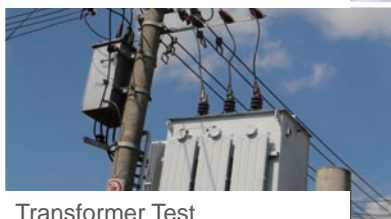
Clean Power, Chamber Power



Military Maintenance Power



Product Test and Verification



Transformer Test



Key Features of AFC Series

- Output Power: Single Phase Output (0.5kVA to 120kVA), Three Phase Output (5kVA to 2000kVA)
- Output Frequency: Type A to Type E frequency range according to the application
- Output Voltage: 5~150V/10~300VL-N (520VL-L), Optional for custom output voltage range available
- Double conversion, Galvanic isolation input to input, Clean Output, THD: < 2% (Optional for <1%)
- Analog knob for adjusting V and Hz, LED display for showing output V, A, kW, Hz
- One single stand alone unit up to 2000kVA (not parallel connected multiple units) with high MTBF
- All models equipped with input breaker and output magnetic switch with safety protection
- Optional output EMI filter for EMC chamber power applications
- Optional overload capacity for motor or inductive type load
- Optional for environmental proof or outdoor applications
- Optional RS232 or RS485 remote controlling the output V and Hz (no monitoring available)

Comparison with Motor Generator Set and Motor Driven Variable Transformer

	AFC Series	Motor Generator Set	Motor Driven Variable Transformer
Adjust Output Voltage	✓		✓
Select Output Frequency	✓	✓	
Adjust Wide Frequency Range	✓		
Static Type Without Moving Part	✓		
Low Noise suitable for indoor lab	✓		
Response Time for setting new V or Hz	Fast	-	Slow
Isolate Harmonics From Grid System	✓		
Regulate Output V or Hz when Load Change	✓		
Regulate Output V or Hz when Grid Change	✓		
Output Harmonic Distortion	<1 to 2%	<4 to 5%	Same as Input Grid
Full Load Efficiency	85~90%	70~80%	
Suitable for Outdoor or Sever Applications		✓	
Overload Capability	Option	✓	✓
Maintenance	Little or no preventive maintenance other than cleaning fans, exhausts	Preventive maintenance is required, e.g., bearing maintenance, belt replacement	Preventive maintenance is required, e.g., bearing maintenance, belt replacement

AFC Series Case Dimension Overview



AFC Series-Single Phase Unit

Single-phase output models																								
Model	Output										Input			Dimensions (WxDxH) mm / inch	Chassis No.	Weight KG / lbs								
	Power	Phase	Voltage (Vrms)	Frequency	Current / Phase (Arms)		THD	Regulation	Frequency Accuracy	Efficiency	Voltage	Frequency	Power factor											
AFC-500W	500W	1Ø2W +G	Low(V): 0-150VAC High(V): 0-300VAC Low(V): 5-150 VAC High(V): 10-300VAC (L-N)	A (Standard) 47~63Hz, 50/60Hz B 45~500Hz C 350~450Hz, 400Hz D 47~63Hz, 50/60/2F/4F/400Hz E 50/60Hz	4.2	2.1	0.50%	≤0.5%	≤0.01%	≥90%	110/ 220 V ± 15% (1Ø2W +G)	50 or 60 ±3 Hz	≥0.8	430x520x200/ 17x20.5x7.9	①	44/97								
AFC-11003	3 KVA				25	12.5	41.7	20.8			83.3			41.7	125.0	62.5	250.0	125.0	83.3	41.7	600x850x945/ 23.7x33.5x37.3	②	73/161	
AFC-11005	5KVA				41.7	20.8																	120V or 220 V ± 15% (1Ø2W +G)	89/196.3
AFC-11010	10KVA				83.3	41.7																	600x850x1340 / 23.7x33.5x52.8	210/461
AFC-11015	15KVA				125.0	62.5	≤2% * (opt. ≤1%)	± 1% *			120/208V or 277/480V or 220/380 V ± 15% (3Ø4W +G)			500x850x1340 / 23.7x33.5x52.8	③	280/617								
AFC-11030	30KVA				250.0	125.0										600x850x945/ 23.7x33.5x37.3	330/727.6							
AFC-31010	10KVA				83.3	41.7										600x850x1340 / 23.7x33.5x52.8	240/529							
AFC-31015	15KVA				125.0	62.5	≤3%*	≥85%			1150x1240x1900 / 45.3x48.9x74.9			④	290/639									
AFC-31030	30KVA				250.0	125.0									360/793									
AFC-31045	45KVA				375.0	187.5									800x860x1545/ 31.5x33.9x60.9	580/1278								
AFC-31060	60KVA				500.0	250.0	⑤	670/1477																
AFC-31080	80KVA				666.7	333.4		1050x970x1800/ 41.4x38.2x70.9			830/1829													
AFC-31100	100 KVA				833.3	416.7		⑥			935/2061													
AFC-31120	120 KVA				1000.0	500.0	⑦	1092/2407																

1. AFC series have input overvoltage, undervoltage, overcurrent, over power, output overvoltage, undervoltage, reverse current, over temperature and short circuit protection

* The test situation is under resistive load. ** All specifications are subject to change without notice.

***All dimensions and weights are for input voltage 220/380V. Please contact us for dimensions for other input voltage.

AFC Series-Three Phase Unit

Three-phase output models																											
Model	Output										Input			Dimensions (WxDxH) mm / inch	Chassis No.	Weight KG / lbs											
	Power	Phase	Voltage (Vrms)	Frequency	Current / Phase (Arms)		THD	Regulation	Frequency Accuracy	Efficiency	Voltage	Frequency	Power Factor														
AFC-33005	5KVA	3Ø4W +G	Low(V): 5-150 VAC High(V): 10-300VAC (L-N)	A (Standard) 47~63Hz, 50/60Hz B 45~500Hz C 350~450Hz, 400Hz D 47~63Hz, 50/60/2F/4F/400Hz E 50/60Hz	13.9	6.9	≤2% * (opt. ≤1%, up to 200kVA)	± 1% *	≤0.01%	≥90%	120/208V or 277/480V or 220/380V ± 15% (3Ø4W +G)	50 or 60 ±3 Hz	≥0.8	600x850x945/ 23.7x33.5x37.3	③	200/441											
AFC-33010	10KVA				27.8	13.9								41.7	20.8	83.3	41.7	125.0	62.5	166.7	83.3	222.2	111.1	600x850x1340 / 23.7x33.5x52.8	④	300/661	
AFC-33015	15KVA				41.7	20.8																				800x860x1545 / 31.5x33.9x60.9	310/683
AFC-33030	30KVA				83.3	41.7																				1050x970x1800 / 41.4x38.2x70.9	410/903
AFC-33045	45KVA				125.0	62.5								≤2% * (opt. ≤1%, up to 200kVA)	± 1% *	120/208V or 277/480V or 220/380V ± 15% (3Ø4W +G)	50 or 60 ±3 Hz	≥0.8	800x860x1545 / 31.5x33.9x60.9	1050x970x1800 / 41.4x38.2x70.9	1150x1240x1900 / 45.3x48.9x74.9	⑤	580/1278				
AFC-33060	60KVA				166.7	83.3																	670/1477				
AFC-33080	80KVA				222.2	111.1																	1050x970x1800 / 41.4x38.2x70.9	890/1962			
AFC-33100	100KVA				277.8	138.9								≥85%	1150x1240x1900 / 45.3x48.9x74.9	⑥	960/2116										
AFC-33120	120KVA				333.3	166.7											1170/2579										
AFC-33160	160KVA				444.4	222.2											1400/3086										
AFC-33200	200KVA				555.6	277.8								⑦	1840/4056												
AFC-33240	240KVA				666.7	333.3									2220/4894												
AFC-33300	300KVA				833.3	416.7									2240x1240x2000 / 88.2x48.9x78.8	2465/5434											
AFC-33400	400KVA				1111.1	555.6								⑧	3335/7352												
AFC-33500	500KVA				1388.9	694.4									3450x1240x2000 / 135.8x48.9x78.8	3600/7936											
AFC-33640	640KVA	1777.8	888.9	⑨	3960/8730																						

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About Preen

AC+DC Power Solution

Found in 1989, Preen (AC Power Corp.) is a leader in power supply and has been developing products based on the core technology of Power Conversion. We have one of the broadest product line of power supply, includes AC Power Source, DC Power Supplies, Power Supplies for Defense Industry, Renewable Energy Simulators, Line Conditioners and UPS.

- Programmable AC Power Source
- Regenerative Grid Simulator
- Programmable DC Power Supply
- Line Conditioner
- 400Hz/800Hz Power Supply for Aerospace



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