

AFC Series

0.5kVA to 2000kVA

CE



Manual AC Power Source

INTEPRO
SYSTEMS

THE POWER TEST EXPERTS

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Preen[®]

AC Power Source and Frequency Converter

Preen's AFC Series is an adjustable AC Power Source that utilizes double conversion to accept a variety of inputs to provide a fully adjustable (across operating range) clean sinusoidal output that shields your DUT from grid harmonics. Preen engineers have designed reliable and cost-effective power products for over 35 years – making the AFC Series an ideal solution to your end-of-line, burn-in, chamber or laboratory power needs.

The IGBT based AFC Series is available in a Single Phase (0.5-120kVA) or Three Phase (5-2000kVA) Output Model. The adjustable output voltage range is 5 - 300VL-N (8 – 520VL-L for 3 Phase Output). The AFC also allows for custom higher voltage ranges (ex: 600VL-L) or lower voltage ranges with increased current. The AFC gives customers the ability to define their frequency range. Users can choose a specific band to work with and save cost.

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

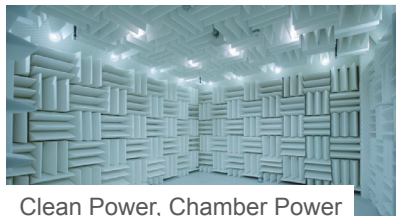
Applications :



Burn-In, Aging Test



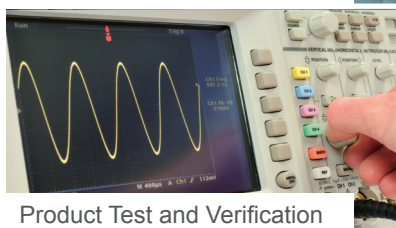
Quality Assurance Test



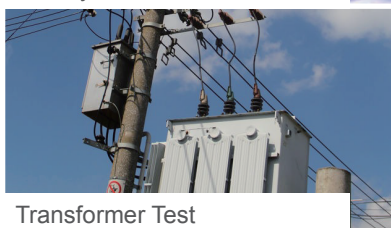
Clean Power, Chamber Power



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																							
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	47 ~ 63 Hz 50 Hz 60 Hz 2F (2 times frequency) 4F (4 times frequency) Optional: 400 Hz	4.2	2.1	0.50%	≤0.5%	≤0.01%	≥90%	110/ 220 V ± 15% (1Ø2W +G)	50 or 60 ±3 Hz	≥0.9	430x520x200/ 17x20.5x7.9	①	44/97							
AFC-11003	3 KVA				25	12.5	≤2% * (opt. ≤1%)	± 1% *						120V or 220 V ± 15% (1Ø2W +G)	430x520x720 / 17x20.5x28.4	②	73/161						
AFC-11005	5KVA				41.7	20.8									600x850x945/ 23.7x33.5x37.3	③	89/196.3						
AFC-11010	10KVA				83.3	41.7									600x850x1340 / 23.7x33.5x52.8	④	210/461						
AFC-11015	15KVA				125.0	62.5									600x850x1340 / 23.7x33.5x52.8	④	280/617						
AFC-11030	30KVA				250.0	125.0									600x850x1340 / 23.7x33.5x52.8	④	330/727.6						
AFC-31010	10KVA				83.3	41.7									120/208V or 277/480V or 220/380 V ± 15% (3Ø4W +G)	50 or 60 ±3 Hz	≥0.9	600x850x945/ 23.7x33.5x37.3	③	240/529			
AFC-31015	15KVA				125.0	62.5												600x850x1340 / 23.7x33.5x52.8	④	290/639			
AFC-31030	30KVA				250.0	125.0												800x860x1545/ 31.5x33.9x60.9	⑤	360/793			
AFC-31045	45KVA				375.0	187.5												800x860x1545/ 31.5x33.9x60.9	⑤	580/1278			
AFC-31060	60KVA				500.0	250.0												1050x970x1800/ 41.4x38.2x70.9	⑥	670/1477			
AFC-31080	80KVA				666.7	333.4												1050x970x1800/ 41.4x38.2x70.9	⑥	830/1829			
AFC-31100	100 KVA				833.3	416.7												≥0.85	1150x1240x1900 / 45.3x48.9x74.9	⑦	935/2061		
AFC-31120	120 KVA				1000.0	500.0															≤3%*	≥85%	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																
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)	47 ~ 63 Hz 50 Hz 60 Hz 2F (2 times frequency) 4F (4 times frequency) Optional: 400 Hz	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	≥0.9	600x850x945 /23.7x33.5x37.3	③	200/441
AFC-33010	10KVA				27.8	13.9								600x850x1340 /23.7x33.5x52.8	④	300/661
AFC-33015	15KVA				41.7	20.8								600x850x1340 /23.7x33.5x52.8	④	310/683
AFC-33030	30KVA				83.3	41.7								410/903		
AFC-33045	45KVA				125.0	62.5								800x860x1545 /31.5x33.9x60.9	⑤	580/1278
AFC-33060	60KVA				166.7	83.3								800x860x1545 /31.5x33.9x60.9	⑤	670/1477
AFC-33080	80KVA				222.2	111.1								1050x970x1800 /41.4x38.2x70.9	⑥	890/1962
AFC-33100	100KVA				277.8	138.9								1050x970x1800 /41.4x38.2x70.9	⑥	960/2116
AFC-33120	120KVA				333.3	166.7								1170/2579		
AFC-33160	160KVA				444.4	222.2								1150x1240x1900 /45.3x48.9x74.9	⑦	1400/3086
AFC-33200	200KVA				555.6	277.8								1150x1240x1900 /45.3x48.9x74.9	⑦	1840/4056
AFC-33240	240KVA				666.7	333.3								2220/4894		
AFC-33300	300KVA				833.3	416.7								2240x1240x2000 /88.2x48.9x78.8	⑧	2465/5434
AFC-33400	400KVA				1111.1	555.6								2240x1240x2000 /88.2x48.9x78.8	⑧	3335/7352
AFC-33500	500KVA				1388.9	694.4								3450x1240x2000 /135.8x48.9x78.8	⑨	3600/7936
AFC-33640	640KVA				1777.8	888.9								3450x1240x2000 /135.8x48.9x78.8	⑨	3960/8730

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