

# AFC Series

## AC Power Source

The AFC Series AC Power Source is integrated with the IGBT/SPWM technology, simple operation but provides cleaner and reliable output voltage and frequency to achieve all kinds of industrial requirements.

This AFC Series AC Power Source offers high quality pure sine wave with output power rating from 500VA to 2000kVA, which THD less than 1% at resistive load. Additionally, this AC Source provides dual output voltage ranges of 0-150V or 0-300V (Opt.0-600V), output frequency of 50Hz and 60Hz selectable, 45-65Hz adjustable (opt. 45-400Hz). Users are allowed to remotely control this equipment via standard RS232 interface.

### Features

- Single phase output from 500VA-100kVA , three phase output from 10kVA-2000kVA.
- 4 LED display measurements of voltage, current, frequency and power/PF.
- Automatic high and low range voltage : 0-150V/150.1-300V automatic switch , or 1-300V high range locked.
- Comprehensive protection includes over voltage, over current, over load, input under voltage and over temperature with corresponding error codes.
- Strong shock resistance, able to start the loads of 1/3 rated power of the AC power supply directly.
- Three phase independent loading, and able to start each phase separately.
- Output voltage and frequency adjustable at output state.
- Simple operate with lock key, shortcut key and knob.
- Standard RS232 interface, optional RS485 and GPIB interface.
- With power-off memory function, remember the last output parameters automatically.

### Applications

- AC Motor and compressor testing.
- Household appliance industry.
- New energy applications.
- Industrial power supply.
- Testing Lab.
- Electronics manufacturing industry.
- EMC Chamber.



# Specification

Single phase input single phase output (500VA – 15kVA)

Model	AFC-105	AFC-110	AFC-120	AFC-130	AFC-150	AFC-1110	AFC-1115
<b>Input Specifications</b>							
Phase	1 $\phi$ 2W + PE						
Voltage	220V $\pm$ 10%(Please contact us for other input voltage)						
Frequency	50/60Hz $\pm$ 5%						
<b>Output Specifications</b>							
Capacity	500VA	1kVA	2kVA	3kVA	5kVA	10kVA	15kVA
Phase	1 $\phi$ 2W + PE						
Max Current	0-150V Range	4.2A	8.4A	16.8A	25A	42A	126A
	0-300V Range	2.1A	4.2A	8.4A	12.5A	21A	63A
Voltage	Low Range(L-N)	0-150V Variable (Opt. 0-300V.)					
	High Range(L-N)	0-300V Variable (Opt. 0-600V)					
Transient Response	30ms						
Frequency	50Hz, 60Hz, 45~65Hz Variable(Opt. 45~400Hz)						
Total Harmonic Distortion(THD)	$\leq$ 1% (Resistive Load, Full load 2% )						
Voltage Regulation	$\leq$ 1%						
Load Regulation	$\leq$ 1% (Resistive Load)						
Frequency Regulation	$\leq$ 0.01%						
Efficiency	$\geq$ 85% ( At full load)						
Protection	Over Current, Short Circuit, Over Temperature , Over Load ,Phase Deficient, Low-voltage Protection.						
Overload Capacity	100% <Output $\leq$ 110% 27min Cut-off output; 110%<Output $\leq$ 130% 10s Cut-off output; 130%<Output $\leq$ 150% 5s Cut-off output; 150%<Output Cut-off output immediately.						
Measurement	Current(RMS)	Resolution: 1mA/10mA or 10mA/100mA Accuracy: 0.3% F.S. $\pm$ 3 Counts $\pm$ 0.1%/100Hz					
	Voltage(RMS)	Resolution: 0.1V Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.1%/100Hz					
	Frequency	Resolution: 0.01Hz/0.1Hz Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.05%/100Hz					
<b>Working Environment</b>							
Operating Temperature	0° - 40° C/ 32° - 104° F						
Relative Humidity	10-90%, ( Non-condensing )						
<b>Functions</b>							
4 Digits LED Display	Voltage, Current, Frequency						
Interface	RS232 (Opt. RS485, GPIB)						
Memory Function	With power-off memory function, remember the last output parameters automatically.						
Sync Output Signal	Support						
<b>Mechanical Specifications</b>							
Dimensions(W x H x D)(mm)	430 x 192 x 510					432 x 475 x 595	
Weights(Kg)	22	25	30	35	40	100	120

### 3 phase input single phase output (10kVA – 100kVA)

Model	AFC-210	AFC-215	AFC-220	AFC-230	AFC-250	AFC-280	AFC-2100
<b>Input Specifications</b>							
Phase	3 $\phi$ 4W + PE						
Voltage	380V $\pm$ 10%(Please contact us for other input voltage)						
Frequency	50/60Hz $\pm$ 5%						
<b>Output Specifications</b>							
Capacity	10kVA	15kVA	20kVA	30kVA	50kVA	80kVA	100kVA
Phase	1 $\phi$ 2W + PE						
Max Current	0-150V Range	84A	126A	168A	250A	420A	840A
	0-300V Range	42A	63A	84A	125A	210A	420A
Voltage	Low Range(L-N)	0-150V Variable(Opt. 0-300V)					
	High Range(L-N)	0-300V Variable(Opt. 0-600V)					
Transient Response	30ms						
Frequency	50Hz, 60Hz, 45~65Hz Variable(Opt 45~400Hz)						
Total Harmonic Distortion(THD)	$\leq$ 1% (Resistive Load, At full load 下 2% )						
Voltage Regulation	$\leq$ 1%						
Load Regulation	$\leq$ 1% (Resistive Load)						
Frequency Regulation	$\leq$ 0.01%						
Efficiency	$\geq$ 85% ( At full load)						
Protection	Over Current, Short Circuit, Over Temperature , Over Load ,Phase Deficient, Low-voltage Protection						
Overload Capacity	100% <Output $\leq$ 110% 27min Cut-off output; 110%<Output $\leq$ 130% 10s Cut-off output; 130%<Output $\leq$ 150% 5s Cut-off output; 150%<Output Cut-off output immediately.						
Measurement	Current(RMS)	Resolution: 1mA/10mA or 10mA/100mA Accuracy: 0.3% F.S. $\pm$ 3 Counts $\pm$ 0.1%/100Hz					
	Voltage(RMS)	Resolution: 0.1V Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.1%/100Hz					
	Frequency	Resolution: 0.01Hz/0.1Hz Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.05%/100Hz					
<b>Working Environment</b>							
Operating Temperature	0° - 40° C/ 32° - 104° F						
Relative Humidity	10-90%, ( Non-condensing )						
<b>Functions</b>							
4 Digits LED Display	Voltage, Current, Frequency						
Interface	RS232 (Opt. RS485, GPIB)						
Memory Function	With power-off memory function, remember the last output parameters automatically.						
Sync Output Signal	Support						
<b>Mechanical Specifications</b>							
Dimensions(W x H x D)(mm)	432 x 570 x 695			565 x 1335 x 690		750 x 1605 x 900	
Weights(Kg)	100	115	130	200	300	400	500

### 3 phase input 3 phase output (10kVA – 75kVA)

Model	AFC-310	AFC-315	AFC-320	AFC-330	AFC-345	AFC-360	AFC-375
<b>Input Specifications</b>							
Phase	3 $\phi$ 4W + PE						
Voltage	380V $\pm$ 10%(Please contact us for other input voltage)						
Frequency	50/60Hz $\pm$ 5%						
<b>Output Specifications</b>							
Capacity	10kVA	15kVA	20kVA	30kVA	45kVA	60kVA	75kVA
Phase	3 $\phi$ 4W + PE						
Max Current	0-150V Range	27.6A	42A	54A	84A	126A	210A
	0-300V Range	13.8A	21A	27A	42A	63A	105A
Voltage	Line to Neutral	0-150V/ 0-300V Variable(Opt. 0-600V)					
	Line to Line	0-260V/ 0-520V Variable(Opt. 0-1040V)					
Transient Response	30ms						
Frequency	50Hz, 60Hz, 45~65Hz Variable(Opt. 45~400Hz)						
Phase Difference	120° $\pm$ 2°						
Total Harmonic Distortion(THD)	$\leq$ 1% (Resistive Load, At full load 2% )						
Voltage Regulation	$\leq$ 1%						
Load Regulation	$\leq$ 1% (Resistive Load)						
Frequency Regulation	$\leq$ 0.01%						
Efficiency	$\geq$ 85% ( At full load )						
Protection	Over Current, Short Circuit, Over Temperature ,Over Load ,Phase Deficient, Low-voltage Protection, Alarms						
Overload Capacity	100% <Output $\leq$ 110% 27min Cut-off output; 110%<Output $\leq$ 130% 10s Cut-off output; 130%<Output $\leq$ 150% 5s Cut-off output; 150%<Output Cut-off output immediately.						
Measurement	Current(RMS)	Resolution: 1mA/10mA or 10mA/100mA Accuracy: 0.3% F.S. $\pm$ 3 Counts $\pm$ 0.1%/100Hz					
	Voltage(RMS)	Resolution: 0.1V Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.1%/100Hz					
	Frequency	Resolution: 0.01Hz/0.1Hz Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.05%/100Hz					
<b>Working Environment</b>							
Operating Temperature	0° - 40° C/ 32° - 104° F						
Relative Humidity	10-90% ( Non-condensing )						
<b>Functions</b>							
4 Digits LED Display	Voltage, Current, Frequency						
Interface	Standard: RS232 (Opt. RS485, GPIB)						
Memory Function	With power-off memory function, remember the last output parameters automatically.						
Sync Output Signal	Support						
<b>Mechanical Specifications</b>							
Dimensions(W x H x D)(mm)	565 x 890 x 650			690 x 1510 x 590		750 x 1605 x 900	
Weights(Kg)	140	160	200	360	450	540	600

### 3 phase input 3 phase output (90kVA – 1000kVA)

Model	AFC-390	AFC-3120	AFC-3150	AFC-3240	AFC-3500	AFC-3750	AFC-31000
<b>Input Specifications</b>							
Phase	3 $\phi$ 4W + PE						
Voltage	380V $\pm$ 10%(Please contact us for other input voltage)						
Frequency	50/60Hz $\pm$ 5%						
<b>Output Specifications</b>							
Capacity	90kVA	120kVA	150kVA	240kVA	500kVA	750kVA	1000kVA
Phase	3 $\phi$ 4W + PE						
Max Current	0-150V Range	250A	333A	416A	666A	1388A	2776A
	0-300V Range	125A	166A	208A	333A	694A	1388A
Voltage	Line to Neutral	0-150V/ 0-300V Variable(Opt. 0-600V)					
	Line to Line	0-260V/ 0-520V Variable(Opt. 0-1040V)					
Transient Response	30ms						
Frequency	50Hz, 60Hz, 45~65Hz Variable(Opt. 45~400Hz)						
Phase Difference	120° $\pm$ 2°						
Total Harmonic Distortion(THD)	$\leq$ 1% (Resistive Load, At full load 2% )						
Voltage Regulation	$\leq$ 1%						
Load Regulation	$\leq$ 1% (Resistive Load)						
Frequency Regulation	$\leq$ 0.01%						
Efficiency	$\geq$ 85% ( At full load )						
Protection	Over Current, Short Circuit, Over Temperature ,Over Load ,Phase Deficient, Low-voltage Protection, Alarms						
Overload Capacity	100% <Output $\leq$ 110% 27min Cut-off output; 110%<Output $\leq$ 130% 10s Cut-off output; 130%<Output $\leq$ 150% 5s Cut-off output; 150%<Output Cut-off output immediately.						
Measurement	Current(RMS)	Resolution: 1mA/10mA or 10mA/100mA Accuracy: 0.3% F.S. $\pm$ 3 Counts $\pm$ 0.1%/100Hz					
	Voltage(RMS)	Resolution: 0.1V Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.1%/100Hz					
	Frequency	Resolution: 0.01Hz/0.1Hz Accuracy: 0.3% F.S. $\pm$ 2 Counts $\pm$ 0.05%/100Hz					
<b>Working Environment</b>							
Operating Temperature	0° - 40° C/ 32° - 104° F						
Relative Humidity	10-90% ( Non-condensing )						
<b>Functions</b>							
4 Digits LED Display	Voltage, Current, Frequency						
Interface	RS232 (Opt. RS485 , GPIB)						
Memory Function	With power-off memory function, remember the last output parameters automatically.						
Sync Output Signal	Support						
<b>Mechanical Specifications</b>							
Dimensions(W x H x D)(mm)	1130 x 1600 x 690			1120 x 1740 x 1235		3300 x 1740 x 1235	
Weights(Kg)	780	850	960	1200	2800	3500	4000

• Specifications are subject to change without notice.

## Models

Model	Description
AFC-105	AC Power Source ( 500VA/ Single phase output )
AFC-110	AC Power Source ( 1kVA/ Single phase output )
AFC-120	AC Power Source ( 2kVA/ Single phase output )
AFC-130	AC Power Source ( 3kVA/ Single phase output )
AFC-150	AC Power Source ( 5kVA/ Single phase output )
AFC-1110	AC Power Source ( 10kVA/ Single phase output )
AFC-1115	AC Power Source ( 15kVA/ Single phase output )
AFC-210	AC Power Source ( 10kVA/ Single phase output )
AFC-215	AC Power Source ( 15kVA/ Single phase output )
AFC-220	AC Power Source ( 20kVA/ Single phase output )
AFC-230	AC Power Source ( 30kVA/ Single phase output )
AFC-250	AC Power Source ( 50kVA/ Single phase output )
AFC-280	AC Power Source ( 80kVA/ Single phase output )
AFC-2100	AC Power Source ( 100kVA/ Single phase output )
AFC-310	AC Power Source ( 10kVA/ Three phase output )
AFC-315	AC Power Source ( 15kVA/ Three phase output )
AFC-320	AC Power Source ( 20kVA/ Three phase output )
AFC-330	AC Power Source ( 30kVA/ Three phase output )
AFC-345	AC Power Source ( 45kVA/ Three phase output )
AFC-360	AC Power Source ( 60kVA/ Three phase output )
AFC-375	AC Power Source ( 75kVA/ Three phase output )
AFC-390	AC Power Source ( 90kVA/ Three phase output )
AFC-3120	AC Power Source ( 120kVA/ Three phase output )
AFC-3150	AC Power Source ( 150kVA/ Three phase output )
AFC-3240	AC Power Source ( 240kVA/ Three phase output )
AFC-3500	AC Power Source ( 500kVA/ Three phase output )
AFC-3750	AC Power Source ( 750kVA/ Three phase output )
AFC-31000	AC Power Source ( 1000kVA/ Three phase output )

## Options

Model	Description
OPT.001	RS485 Interface
OPT.002	GPIB Interface
OPT.003	Output Voltage 0-600V
OPT.004	Output Frequency 45-400Hz
OPT.005	Output Frequency 40-500Hz