

AFV Series

Programmable AC Power Sources

10~2000kVA

Preen®

Leading Test & Measurement Power Supply Provider





7-inch Touch Screen



AFV Series Product Features

1. Touch Screen is available

Touch screen: easy to operate, rich colors, able to simulate change curve, suitable for non-harsh environment such as laboratory and R&D center

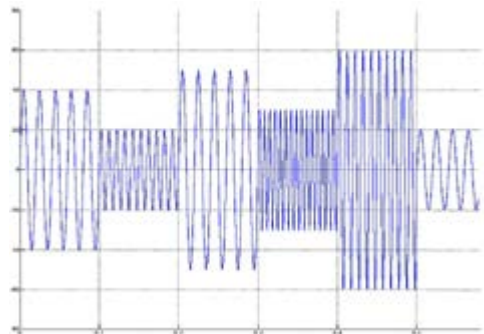
2. Programmable output voltage and frequency functionality: generic mode, step change mode, gradual change mode and curve change simulation

- ① Generic mode (standard): one set of output voltage and output frequency
- ② Step Change Mode (standard): up to 24 sets (255 cycles) of output voltage and frequency are available for configuration. Each voltage, frequency and running time can be set separately.
- ③ Gradual Change Mode (standard): up to 12 sets (255 cycles) of output voltage and frequency are available for configuration. Each set includes starting voltage, starting frequency and ending voltage, ending frequency and running time.
- ④ Curve change simulation (optional): voltage and frequency variation simulation can be made according to customer's requirement and relevant standard.

Step Change Mode



Voltage and Frequency Setting Interface at Step Change Mode

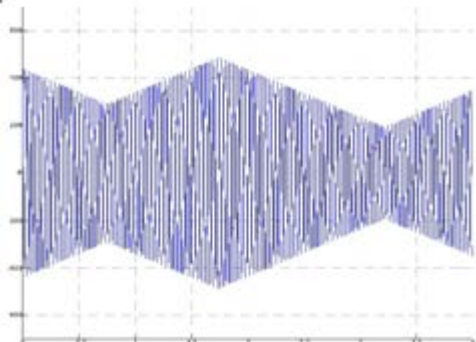


Voltage and Frequency Change Schematic Diagram

Gradual Change Mode



Voltage and Frequency Setting Interface at Gradual Change Mode



Voltage and Frequency Change Schematic Diagram

Application areas of AFV series products



Electric Motor



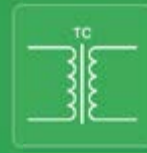
Home Applications



Switched-mode Power Supply



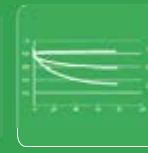
Air Conditioning Compressor



Transformer Test



EMC Test



Product Life Cycle Test



Product Test and R&D

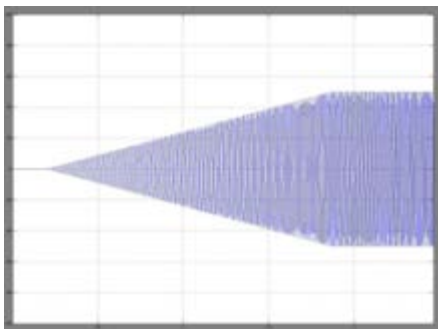
AFV Series Product Features

3. Multiple communication ports to choose

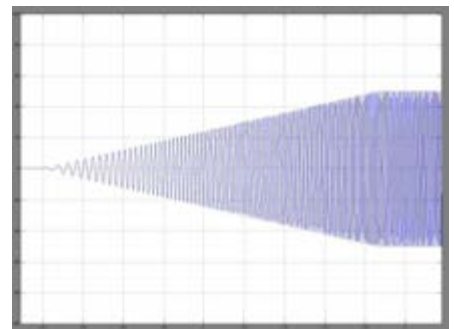
- ① RS232 or RS485 are available; option to support MODBUS
- ② GPIB and USB are optional; option to support SCPI or LabVIEW.

4. Soft start function (optional): VVCF or VVVF soft start is specially designed for electric motor testing

Inrush current is reduced; therefore lower power capacity and purchase cost are needed



Method 1: VVCF soft start Schematic Diagram



Method 2: VVVF soft start Schematic Diagram

5. Enhanced troubleshooting function

- ① Fault code is shown in the screen in the event of fault; to enable quick troubleshooting and reduce downtime and therefore enhance uptime
- ② Fault code and message in the AFV unit can be replicated into USB memory stick for further survey

6. Back-feed protection

When back-feeding occurs, over voltage is detected and then output is switched off immediately to protect load equipment and maintain safety

7. Independently adjustable three-phase output

- ① Three-phase output voltage (and frequency) is independently adjustable
- ② Work as one unit of three-phase power source or as three units of Single-phase power source

8. Eco-friendly and high-efficiency design

- Power module technology: used to make size smaller and power density higher
- SMD technology: used to enhance the reliability of the AFV unit
- High-efficiency IGBT: low EMI and high inverter efficiency
- Lightning protection module(optional): prevent a lightning storm from damaging the input/output circuitry and the AFV unit and load equipment.
- Variable-speed fans(optional): low noise, low maintenance and high energy efficiency

AFV -
AFV Series
Frequency Converter

3
Input Phase
3

1
Output Phase
1

060
Capacity
60kVA

T
Input Voltage
220/380Vac

[Please contact us for other voltage specification]

AFV series Three Phase–Single Phase(10~120kVA)

Model	AFV-31010	AFV-31015	AFV-31030	AFV-31045	AFV-31060	AFV-33080	AFV-31100	AFV-31120	
Capacity(kVA)	10	15	30	45	60	80	100	120	
Circuit Type	IGBT/PWM Type								
Input	Phase	Three Phase							
	Voltage	115V/200V,120V/208V, 220V/380V,230V/400V,240V/415V or 277V/480V ^①							
	Voltage range	Rated Voltage±15%							
	Frequency range	47~63Hz							
	Power Factor	0.9				0.85			
Max.current(A) (Rated Input) ^②	18.7	28.1	56.1	84.2	112.2	167.8	209.7	251.7	
Output	Phase	Single Phase							
	Wave	SINE Wave							
	Voltage	Low(V)	0V ~ 150.0V (L-N) ^③						
		High(V)	0V ~ 300.0V (L-N)						
	Frequency range	45 ~ 65Hz. Optional 45 ~ 500Hz							
	Frequency regulation	≤0.01%							
Max. Current(A)	High(A)	41.7	62.5	125.0	187.5	250.0	333.3	416.7	500.0
	Low(A)	83.3	125.0	250.0	375.0	500.0	666.7	833.3	1000.0
System	Line regulation	<1%							
	Load regulation	±1% (linear load)							
	THD	≤2%(linear load)							
	Efficiency	≥90%				≥85%			
	Response time	≤2ms							
	Crest Factor	3 : 1							
Protection	Input no-fuse breaker,electronic circuit instant trip for over/low voltage,over current,over load,over temperature and short circuit protection and alarm system								
Readings	Display	Touch screen							
	Voltage	Res.: 0.1V, Accuracy: 0.5%FS+4Counts.							
	Current	Res.: 0.1A, Accuracy: 0.5%FS+4Counts.							
	Frequency	Res.: 0.1Hz, Accuracy:0.5%FS+4Counts.							
Control mode	RS-232	Option							
	RS-485	Standard							
	GPIB	Option							
Environment	Cooling system	Fan Cooling							
	Temperature[Operating]	0°C ~ 45°C							
	Humidity[Operating]	0~90% (Non-condensing)							
	Altitude[Operating]	<1500m							
Dimensions (W*D*H) mm	600×850×945	600×850×1340		800×860×1545		1050×970×1800	1150×1240×1900		
Weight(kg)	240	290	360	580	670	830	935	1092	

P.S.: ^① Please contact us for other voltage specification;

^② The rated input here is 220V/380V;

^③ When the voltage is lower than 150V, please switch to the low voltage.

AFV -

AFV Series
Frequency Converter

3
Input Phase
3

3
Output Phase
3

060
Capacity
60kVA

T
Input Voltage
220/380Vac

[Please contact us for other voltage specification]

AFV series Three Phase–Three Phase(10~100kVA)

Model	AFV-33010	AFV-33015	AFV-33030	AFV-33045	AFV-33060	AFV-33080	AFV-33100	
Capacity(kVA)	10	15	30	45	60	80	100	
Circuit Type	IGBT/PWM Type							
Input	Phase	Three Phase						
	Voltage	115V/200V,120V/208V, 220V/380V,230V/400V,240V/415V or 277V/480V ^①						
	Voltage range	Rated Voltage±15%						
	Frequency range	47~63Hz						
	Power Factor	0.9					0.85	
Max.current(A) (Rated Input) ^②	18.7	28.1	56.1	84.2	112.2	167.8	198.1	
Output	Phase	Three Phase						
	Wave	SINE Wave						
	Voltage	Low(V)	0V ~ 150.0V (L-N) ^③					
		High(V)	0V ~ 300.0V (L-N)					
	Frequency range	45 ~ 65Hz. Optional 45 ~ 500Hz						
	Frequency regulation	≤0.01%						
	Max. Current(A)	High(A)	13.9	20.8	41.7	62.5	83.3	111.1
Low(A)		27.8	41.7	83.3	125.0	166.7	222.2	277.8
System	Line regulation	<1%						
	Load regulation	±1% (linear load)						
	THD	≤2%(linear load)						
	Efficiency	≥90%				≥85%		
	Response time	≤2ms						
	Crest Factor	3 : 1						
Protection	Input no-fuse breaker,electronic circuit instant trip for over/low voltage,over current,over load,over temperature and short circuit protection and alarm system							
Readings	Display	Touch screen						
	Voltage	Res.: 0.1V, Accuracy: 0.5%FS+4Counts.						
	Current	Res.: 0.1A, Accuracy: 0.5%FS+4Counts.						
	Frequency	Res.: 0.1Hz, Accuracy:0.5%FS+4Counts.						
Control mode	RS-232	Option						
	RS-485	Standard						
	GPIB	Option						
Environment	Cooling system	Fan Cooling						
	Temperature[Operating]	0°C ~ 45°C						
	Humidity[Operating]	0~90% (Non-condensing)						
	Altitude[Operating]	<1500m						
Dimensions (W*D*H) mm	600×850×1340		800×860×1545			1050×970×1800		
Weight(kg)	300	310	410	580	670	890	960	

P.S.: ^① Please contact us for other voltage specification;

^② The rated input here is 220V/380V;

^③ When the voltage is lower than 150V, please switch to the low voltage.



AFV series Three Phase–Three Phase(120~1600kVA)

Model	AFV-33120	AFV-33160	AFV-33240	AFV-33300	AFV-33400	AFV-33500	AFV-33640	AFV-33800	AFV-331000	AFV-331200	AFV-331600		
Capacity(kVA)	120	160	240	300	400	500	640	800	1000	1200	1600		
Circuit Type	IGBT/PWM Type												
Input	Phase	Three Phase											
	Voltage	115V/200V,120V/208V, 220V/380V,230V/400V,240V/415V or 277V/480V ①											
	Voltage range	Rated Voltage±15%											
	Frequency range	47~63Hz											
	Power Factor	0.85											
Max.current(A) (Rated Input) ②	251.7	335.5	503.3	629.1	838.8	1048.5	1342.1	1677.7	2097.1	2516.5	3355.4		
Output	Phase	Three Phase											
	Wave	SINE Wave											
	Voltage	Low(V)	0V ~ 150.0V (L-N) ③										
		High(V)	0V ~ 300.0V (L-N)										
	Frequency range	45 ~ 65Hz. Optional 45 ~ 500Hz											
	Frequency regulation	≤0.01%											
Max. Current(A)	High(A)	166.7	222.2	333.3	416.7	555.6	694.4	888.9	1111.1	1388.9	1666.7	2222.2	
	Low(A)	333.3	444.4	666.7	833.3	1111.1	1388.9	1777.8	2222.2	2777.8	3333.3	4444.4	
System	Line regulation	<1%											
	Load regulation	±1% (linear load)											
	THD	≤2%(linear load)											
	Efficiency	≥85%											
	Response time	≤2ms											
	Crest Factor	3 : 1											
Protection	Input no-fuse breaker,electronic circuit instant trip for over/low voltage,over current,over load,over temperature and short circuit protection and alarm system												
Readings	Display	Touch screen											
	Voltage	Res.: 0.1V, Accuracy: 0.5%FS+4Counts.											
	Current	Res.: 0.1A, Accuracy: 0.5%FS+4Counts.											
	Frequency	Res.: 0.1Hz, Accuracy:0.5%FS+4Counts.											
Control mode	RS-232	Option											
	RS-485	Standard											
	GPIB	Option											
Environment	Cooling system	Fan Cooling											
	Temperature[Operating]	0°C ~ 45°C											
	Humidity[Operating]	0~90% (Non-condensing)											
	Altitude[Operating]	<1500m											
Dimensions (W*D*H) mm	1150×1240×1900			2240×1240×2000		3450×1240×2000		---	---	---	---		
Weight(kg)	1170	1400	2220	2465	3335	3600	3960	---	---	---	---		

- P.S.: ① Please contact us for other voltage specification;
 ② The rated input here is 220V/380V;
 ③ When the voltage is lower than 150V, please switch to the low voltage
 ④ Consult factory for power levels exceeding 1600kVA

AC POWER CORP.

Specialized in power electronics, Preen (AC Power Corp.) has been developing products based on its core technology of Power Conversion. Product Line includes AC Power Sources, DC Power Supplies, Power Supplies for Defense Industry, Renewable Energy Simulators, Line Conditioners and UPS. Boasting one of the broadest product line in the industries, Preen specializes in High Power Source and has developed AC power source up to 2MVA with high power density.

Product Lines



- Up to 1000Hz
- 500VA ~ 2,000kVA
- Regenerative Function



- Up to 2,000V
- 2kW ~ 300kW
- Fast Response & Low Ripple



- Solid State & Inductive types
- Up to 1500kVA

Applications



Renewable Energy



Laboratory



Aircraft Manufacturing



Transport System



EMC Chamber



Medical Equipment



Control Center/Data Center



Electronics



ATE System



Airport Apron / Hangar



Home Appliance



Motor / Engine



Communication Equipment



Military Aircraft / Helicopter



Navy System



Defense Equipment



ISO 9001:2008

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