EAC/AFV SERIES

PROGRAMMABLE AC POWER SOURCES
15 kVA ~ 2000 kVA

ETSYSTEM

AFV Series Product Features

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- **Touch Screen**
  Easy to operate, rich colors, able to simulate change curve, suitable for non-harsh environment such as labaratory and R&D center.

- **High Efficiency**
  Power Efficiency > 90 %, energy saving and eco-friendly

- **Programmable output voltage and frequency functionality**
  General mode, step mode, gradual change mode

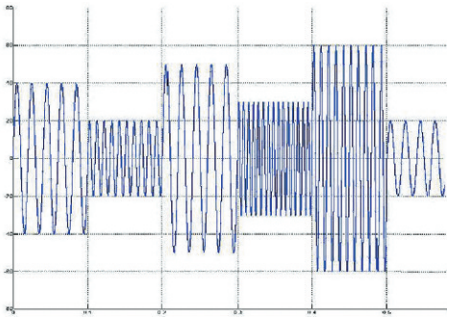
- **General mode:**
  Ten set of output voltage and output frequency

- **Step Mode:**
  up to 24 sets of output voltage and frequency are available for configuration. Each voltage, frequency and running time can be set separately.

- **Gradual Change Mode:**
  up to 12 sets of output voltage and frequency are available for configuration. Each set includes starting voltage, starting frequency and ending voltage, ending frequency and running time.

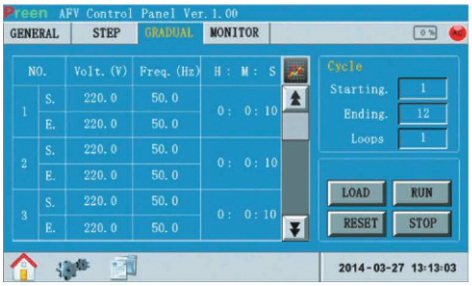
Step Mode

Voltage & Frequency Setting Interface at Step Change Mode

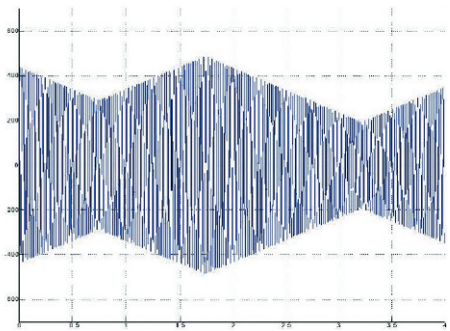


Voltage & Frequency Change Schematic Diagram

Gradual Change Mode



Voltage & Frequency Setting Interface at Gradual Change Mode



Voltage & Frequency Change Schematic Diagram

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AFV Series Product Features

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Multiple communication ports to choose

Standard RS485
Optional RS232 or GPIB
Support SCPI or LabView and optional MODBUS

Enhanced troubleshooting function

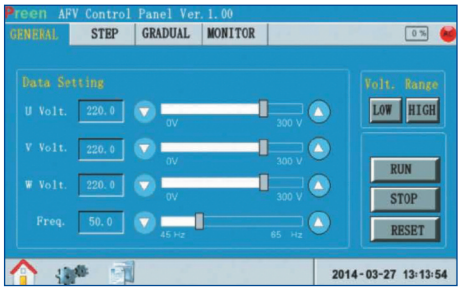
Faultcode is shown in the screen in the event of fault; to enable quick troubleshooting and reduce downtime and therefore enhance uptime.
Faultcode and message in the AFV unit can be replicated into USB memorystick available on models with touch screen for further survey.

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.

Adjustable power limit (optional)

Within maximum power, output power is adjustable.
It is both flexible and safe.



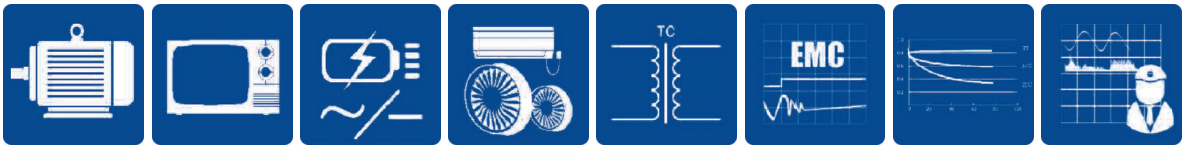
Independently adjustable three-phase output (optional)

Three-phase output voltage is independently adjustable.
Work as one unit of three-phase power source or as three units of single-phase power source.

Eco-friendly and high-efficiency design

- **Powermodule 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:** prevent a lightning storm from damaging the input / output circuitry and the AFV unit and load equipment
- **Variable-speed fans:** low noise, low maintenance and high energy efficiency

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 an R&D

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AFV Series Product Features

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EAC/AFV

AFV Series
Frequency Converter

3	3	060	T
Input Phase 3	Output Phase 1	Capacity 60 kVA	Input Voltage 220 / 380 Vac

Model				AFV-31020	AFV-31030	AFV-33015	AFV-33020	AFV-33030	AFV-33045	AFV-33060	AFV-33075	AFV-33100	AFV-33120	AFV-33150	AFV-33200
Capacity (kVA)				20	30	15	20	30	45	60	75	100	120	150	200
Circuit Type				IGBT/PWM Type											
Input	Phase			Three Phase											
	Voltage			220V/380V											
	Frequency range			47-63Hz											
	Voltage range			220V/380V±15%											
	Power factor			0.9											
	Max. current (A) (With full load)			37.4	56.1	28.1	37.4	56.1	84.2	112.2	140.3	187.1	224.5	280.6	374.1
Output	Phase			Single Phase		Three Phase									
	Wave			SINE Wave											
	Frequency regulation			≦0.01%											
	GENERAL mode	Frequency		45-65Hz. Optional 45-500Hz. Res.: 0.1Hz Accuracy: 0.01%.											
		Voltage	Low (V)	0V-150.0V (L-N)											
			High (V)	150.1V-300.0V (L-N)											
		Max. current (A)	High (A)	83.3	125.0	20.8	27.8	41.7	62.5	83.3	104.2	138.9	166.7	208.3	277.8
			Low (A)	166.7	250.0	41.7	55.6	83.3	125.0	166.7	208.3	277.8	333.3	416.7	555.6
		Time Interval		Res.: standard 1 sec. and 0.02 sec. optional. Up to 99 Hr.											
		Number of settings		For selected voltage and frequency values up to 10 sets											
		Cycles		Up to 255.											
	STEP + GRADUAL CHANGE modes	Frequency		45-65Hz. Optional 45-500Hz. Res.: 0.1Hz. Accuracy: 0.01%.											
		Voltage		10 to 300V. Res.: 0.1V. Accuracy: 1%											
		Max. current (A)		Please refer to the above rows of Max. current (A)											
		Time Interval		Res.: standard 1 sec. and 0.02 sec. optional. Up to 99 Hr.											
		Number of settings		For selected voltage, frequency, and time values: Up to 24 sets under STEPPING mode, or 12 sets under GRADUAL CHANGE mode.											
		Cycles		Up to 255 cycles for each mode.											
	3-Phase independent voltage control (Optional)			Not applicable	Each phase voltage could be set (to different values) independently.										
System	Line regulation			<1%											
	Load regulation			±1% (linear load)											
	THD			≦2% (linear load)											
	Efficiency			≧90%											
	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											
Display/ Control	Front panel interface			Touch screen											
	Frequency			Res.: 0.1Hz. Accuracy: 0.5%FS+4Counts.											
	Voltage			Res.: 0.1V. Accuracy: 0.5%FS+4Counts.											
	Current			Res.: 0.1A. Accuracy: 0.5%FS+4Counts.											
	Remote	Ports		RS-485(D-Sub 9-pin female). Optional RS-232 or GPIB (Only one of the three exits)											
		LabView driver		Support windows XP and versions afterward											
	USB Port			For downloading log.											
Safety	Insulation resistance			10M ohm (Tested with DC 500V)											
	Insulation withstand voltage			Tested with AC 1,800V 10mA for 1min											
Environ-ment	Cooling system			Fan Cooling											
	Temperature (Operating)			0℃ - 45℃											
	Humidity (Operating)			0-90% (Non-condensing)											
	Altitude (Operating)			<1500m											
Dimensions (W*D*H)mm				600*800*1200		650*920*1248		700*800*1620				940*820*1700	1150*1200*1900	1100*940*1850	
Weight (kg)				300	350	400	420	425	435	490	525	716	1200	1300	1400

All specifications are subject to cahnge without prior notice

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Frequency Converter

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Input Phase 3	Output Phase 1	Capacity 60 kVA	Input Voltage 220 / 380 Vac

Model			AFV-33300	AFV-33400	AFV-33500	AFV-33600	AFV-33800	AFV-331000	AFV-331200	AFV-331500	AFV-332000
Capacity (kVA)			300	400	500	600	800	1000	1200	1500	2000
Circuit Type			IGBT/PWM Type								
Input	Phase		Three Phase								
	Voltage		220V/380V								
	Frequency range		47-63Hz								
	Voltage range		220V/380V±15%								
	Power factor		0.9		0.85						
	Max. current (A) (With full load)		561.2	748.2	990.3	1188.4	1584.5	1980.6	2376.7	2970.9	3961.2
Output	Phase		Three Phase								
	Wave		SINE Wave								
	Frequency regulation		≦0.01%								
	GENERAL mode	Frequency	45-65Hz. Optional 45-500Hz. Res.: 0.1Hz Accuracy: 0.01%.								
		Voltage Low (V)	0V-150.0V (L-N)								
		Voltage High(V)	150.1V-300.0V (L-N)								
		Max. current (A) High(A)	416.7	555.6	694.4	833.3	1111.1	1388.9	1666.7	2083.3	2777.8
		Max. current (A) Low (A)	833.3	1111.1	1388.9	1666.7	2222.2	2777.8	3333.3	4166.7	5555.6
		Time Interval	Res.: standard 1 sec. and 0.02 sec. optional. Up to 99 Hr.								
		Number of settings	For selected voltage and frequency values up to 10 sets								
		Cycles	Up to 255.								
	STEP + GRADUAL CHANGE modes	Frequency	45-65Hz. Optional 45-500Hz. Res.: 0.1Hz. Accuracy: 0.01%.								
		Voltage	10 to 300V. Res.: 0.1V. Accuracy: 1%								
		Max. current (A)	Please refer to the above rows of Max. current (A)								
		Time Interval	Res.: standard 1 sec. and 0.02 sec. optional. Up to 99 Hr.								
		Number of settings	For selected voltage, frequency, and time values: Up to 24 sets under STEPPING mode, or 12 sets under GRADUAL CHANGE mode.								
		Cycles	Up to 255 cycles for each mode.								
	3-Phase independent voltage control (Optional)		Each phase voltage could be set (to different values) independently.								
System	Line regulation		<1%								
	Load regulation		±1% (linear load)								
	THD		≦2% (linear load)								
	Efficiency		≧90%								
	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								
Display/ Control	Front panel interface		Touch screen								
	Frequency		Res.: 0.1Hz. Accuracy: 0.5%FS+4Counts.								
	Voltage		Res.: 0.1V. Accuracy: 0.5%FS+4Counts.								
	Current		Res.: 0.1A. Accuracy: 0.5%FS+4Counts.								
	Remote	Ports	RS-485(D-Sub 9-pin female). Optional RS-232 or GPIB (Only one of the three exits)								
		LabView driver	Support windows XP and versions afterward								
	USB Port		For downloading log.								
Safety	Insulation resistance		10M ohm (Tested with DC 500V)								
	Insulation withstand voltage		Tested with AC 1,800V 10mA for 1min								
Environ-ment	Cooling system		Fan Cooling								
	Temperature (Operating)		0℃ - 45℃								
	Humidity (Operating)		0-90% (Non-condensing)								
	Altitude (Operating)		<1500m								
Dimensions (W*D*H)mm			1400*1040*2000		4900*1400*2050		6300*1500*2050			/	/
Weight (kg)			2200	2500	4500	5200	7000	8500	9200	/	/

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