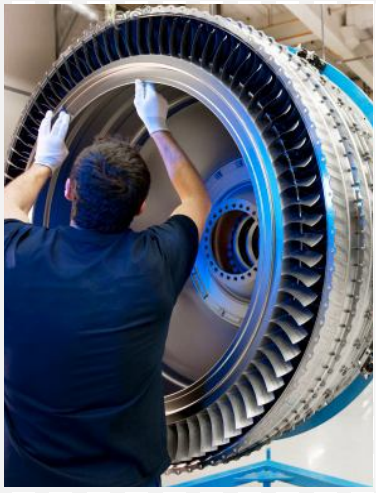
Preen®

AFV Series

Programmable AC Power Sources

15~2000kVA

Leading Test & Measurement Power Supply Provider



ISO 9001:2008

AC POWER CORP.

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Figure 1: VFD screen

Figure 2: 7-inch Touch Screen

AFV Series Product Features

1. VFD Screen or Touch Screen is available

① VFD screen: high definition display and environment robustness, able to work properly under extreme temperature (-20℃~ +85℃), suitable for harsh environment such as shop floor and manufacturing factory

② 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. High Efficiency

Power Efficiency ⩾ 90%,energy saving and eco-friendly

3. 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

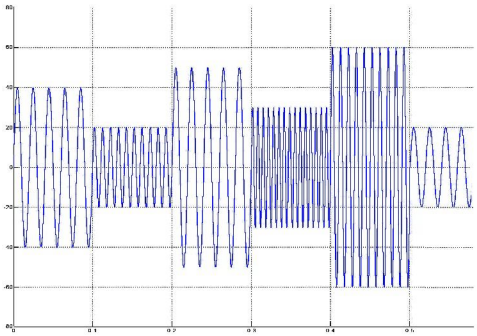
② Step Change Mode (optional): up to 24 sets of output voltage and frequency are available for configuration. Each voltage, frequency and running time can be set separately.

③ Gradual Change Mode (optional): 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.

④ Curve change simulation (optional): voltage and frequency variation simulation can be made according to customer's requirement and relevant standard.

Step Change Mode

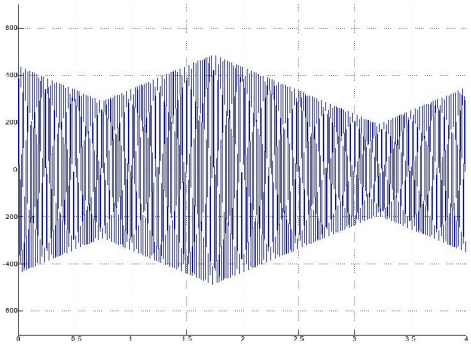
Voltage and Frequency Setting Interface at Step Change Mode



Voltage and Frequency Change Schematic Diagram

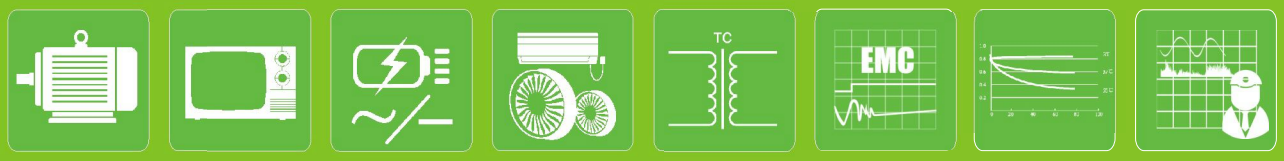
Gradual Change Mode

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

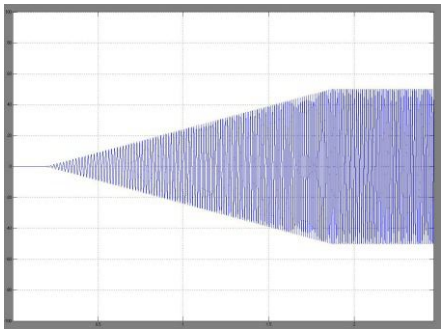
4. Multiple communication ports to choose

① RS232 or RS485 are available; option to support MODBUS

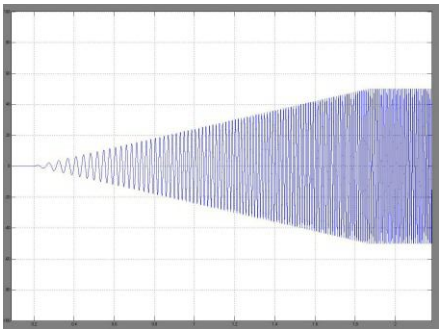
② GPIB and USB are optional; option to support SCPI or LabVIEW.

5. 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

6. 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

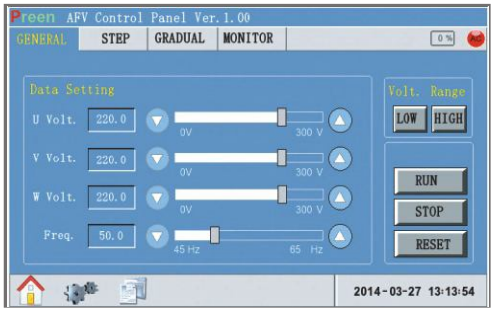
7. Back-feed protection

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

8. Adjustable power limit

Within maximum power, output power is adjustable.

It is both flexible and safe.



9. Independently adjustable three-phase output (Optional)

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

10. Option for two-unit operation in parallel

11. 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: 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

AFV -

AFV Series
Frequency Converter

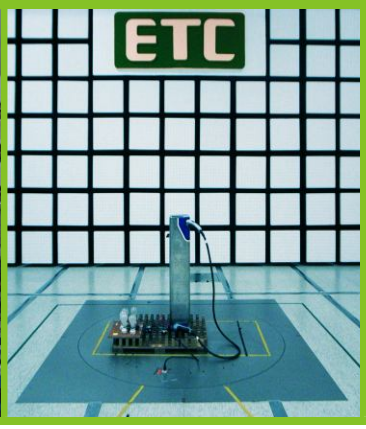
3	3	060	T
Input Phase 3	Output Phase 1	Capacity 60kVA	Input Voltage 220/380Vac

[Please contact us for other voltage specification]

AFV series Three Phase–Three Phase(15~400kVA)

Model			AFV-33015	AFV-33020	AFV-33030	AFV-33045	AFV-33060	AFV-33075	AFV-33100	AFV-33120	AFV-33150	AFV-33200	AFV-33300	AFV-33400
Capacity(kVA)			15	20	30	45	60	75	100	120	150	200	300	400
Circuit Type			IGBT/PWM Type											
Input	Phase		Three Phase											
	Voltage		120V/208V, 220V/380V, or 277V/480V ①											
	Voltage range		220V/380V±15%											
	Frequency range		47~63Hz											
	Power Factor		0.9											
	Max.current(A) (With full load)		28.1	37.4	56.1	84.2	112.2	140.3	187.1	224.5	280.6	374.1	561.2	748.2
Output	Phase		Three Phase											
	Wave		SINE Wave											
	Voltage	Low(V)	0V ~ 150.0V (L-N)											
		High(V)	150.1V ~ 300.0V (L-N)											
	Frequency range		45 ~ 65Hz. Optional 45 ~ 500Hz											
	Frequency regulation		≤0.01%											
	Max. Current(A)	High(A)	20.8	27.8	41.7	62.5	83.3	104.2	138.9	166.7	208.3	277.8	416.7	555.6
		Low(A)	41.7	55.6	83.3	125.0	166.7	208.3	277.8	333.3	416.7	555.6	833.3	1111.1
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											
Readings	Display		VFD(Touch screen Option)											
	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		Standard											
	RS-485		Standard											
	GPIB		Option											
Safety	Insulation resistance		10M ohm(Tested with DC 500V)											
	Insulation withstand voltage		Tested with AC 1,800V 10mA for 1min											
Environment	Cooling system		Fan Cooling											
	Temperature[Operating]		0℃ ~ 45℃											
	Humidity[Operating]		0~90% (Non-condensing)											
	Altitude[Operating]		<1500m											
Dimensions (W*D*H) mm			650×920×1248		700×800×1620				940×820×1700		1100×940×1850		1400×1040×2000	
Weight(kg)			400	415	425	435	490	525	716	777	1300	1400	2200	2500

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


AFV series Three Phase–Three Phase(500~2000kVA)

Model			AFV-33500	AFV-33600	AFV-33800	AFV-331000	AFV-331200	AFV-331500	AFV-332000
Capacity(kVA)			500	600	800	1000	1200	1500	2000
Circuit Type			IGBT/PWM Type						
Input	Phase		Three Phase						
	Voltage		120V/208V, 220V/380V, or 277V/480V ①						
	Voltage range		220V/380V±15%						
	Frequency range		47~63Hz						
	Power Factor		0.85						
	Max.current(A) (With full load)		990.3	1188.4	1584.5	1980.6	2376.7	2970.9	3961.2
Output	Phase		Three Phase						
	Wave		SINE Wave						
	Voltage	Low(V)	0V ~ 150.0V （L-N）						
		High(V)	150.1V ~ 300.0V（L-N）						
	Frequency range		45 ~ 65Hz. Optional 45 ~ 500Hz						
	Frequency regulation		≤0.01%						
	Max. Current(A)	High(A)	694.4	833.3	1111.1	1388.9	1666.7	2083.3	2777.8
		Low(A)	1388.9	1666.7	2222.2	2777.8	3333.3	4166.7	5555.6
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						
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						
Safety	Insulation resistance		10M ohm(Tested with DC 500V)						
	Insulation withstand voltage		Tested with AC 1,800V 10mA for 1min						
Environment	Cooling system		Fan Cooling						
	Temperature[Operating]		0℃ ~ 45℃						
	Humidity[Operating]		0~90% (Non-condensing)						
	Altitude[Operating]		＜1500m						
Dimensions（W*D*H）mm			4900×1400×2050		6300×1500×2050			——	
Weight(kg)			4500	5200	7000	8500	9200	——	——

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

AC Power Corp. offers products widely applied in multi-professional fields and provides the best power solutions to customers. Our mission is to satisfy customers' demand by considering the whole conditions including power environment, loading allocation, module solution alternative, thoughtful design, lean and efficient manufacturing, timely and comprehensive maintenance.

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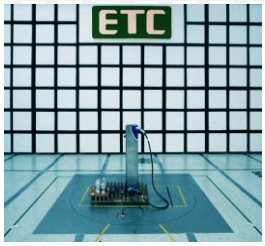







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