

# AFV series

Preen®

Programmable AC Power Source  
10~2000kVA



▼ Output Power

10-2000kVA

▼ Multiple Programmable Features

▼ Fast Response Time

▼

7 inches  
Touch Screen

▼ Three Phase Independent Control

▼ Soft Start Feature

▼

Efficiency

> 85%-90%

▼ Complete Interface Options:  
RS232 / RS485 / GPIB

▼ Complete Protection

**AC POWER CORP**

<http://www.PreenPower.com>

**AC + DC**  
Power Solutions

## Programmable AC Power Source

Preen's AFV series is a programmable AC power supply, provides complete output voltage and output frequency to achieve various types of industrial requirements. Additionally, the AFV series provides programmable features, such as STEP feature and GRADUAL feature, which are ideal for R&D and compliance test.

With the advanced SPWM and DDS waveform technology, the AFV series provides high quality and stable output with output level up to 2000kVA. The AFV series adopts the touch screen to support user operation, which provides impressive users experience while operating the product. Users are allowed to remotely control the product via the standard interface: RS485 or the optional interface: RS232/GPIB. Additionally, the AFV series provides complete product protection, such as OVP, UVP, OCP, OPP, OTP and short circuit protection, and the product will immediately alarm users and stop the product output while the product protection is enabled.

|   |   |  |
|---|---|--|
| <p>High Output Power</p> <p><b>10-2000kVA</b></p>           | <p>High Efficiency</p> <p><b>&gt;85%-90%</b></p>                | <p>Multiple Programmable Features</p> <p><b>STEP/GRADUAL</b></p> |
| <p>7" Touch Screen</p> <p><b>Touch Screen Operation</b></p> | <p>Ideal for Motor Testing</p> <p><b>Soft Start Feature</b></p> | <p>Complete Protection</p> <p><b>OVP/UVP/OCP/OPP/OTP</b></p>     |

## High Power AC Source

### Applications



Electric Motor Test



Home Appliance



EMC Chamber



Switching Power Supply



Product Test and R&D



Transformer Test



# Key Features of AFV Series

## Intuitive Touch Screen



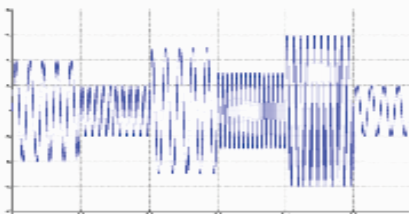
Users are allowed to operate the product via the touch screen on the front panel, which provides an easy operation for users to quickly set the product output.

## Three Phase Independent Control (opt.)



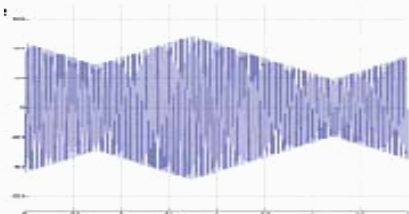
Users are allowed to control three-phase output voltage and output frequency independently. The product can be used as one unit of three-phase power supply or as three units of single-phase power supply.

## STEP Feature



Preen AFV series provides up to 24 sequences in the STEP feature. Through the STEP feature, users are allowed to set the product output, such as output voltage, output frequency and dwell time of performing the STEP feature in each of the adjustable sets, and then the product output will change step by step accordingly. Additionally, the product can automatically repeat the STEP feature according to the setting product output up to 255 times, which is suitable for electric motor and home application test.

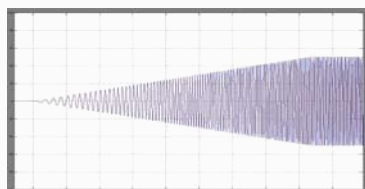
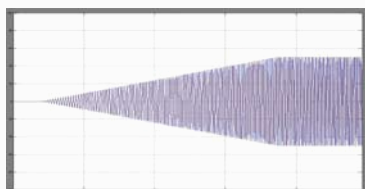
## GRADUAL Feature



Preen AFV series provides up to 12 sequences in the the GRADUAL feature. Through the GRADUAL feature, users are allowed to set the product output, such as start/end output voltage, start/end output frequency and dwell time of performing the GRADUAL feature in each of the adjustable sets, and then the product output will change according to the setting slew rate. Additionally, the product can automatically repeat the GRADUAL feature according to the setting product output up to 255 times.

## Soft Start Feature (optional)

### Variable Voltage Constant Frequency (VVCF) / Variable Voltage Variable Frequency (VVVF)



Variable Voltage Constant Frequency (VVCF)

Variable Voltage Variable Frequency (VVVF)

With the soft start feature, the product effectively reduces inrush current generated while turning on inductive loads, such as motor and air conditioning compressor and etc. Accordingly, the product is suitable for electric motor industries to run reliability test.

## AFV Series: Three-Phase Input / Single-Phase Output (10-120KVA)

| Model                   |  | AFV-31010  | AFV-31015       | AFV-31030 | AFV-31045 | AFV-31060 | AFV-31080 | AFV-31100 | AFV-31120 |        |
|-------------------------|--|--|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|--------|
| Power (kVA)             |  | 10   | 15              | 30        | 45        | 60        | 80        | 100       | 120       |        |
| Input                   | Phase  | 3Ø4W + G   |                 |           |           |           |           |           |           |        |
|                         | Voltage ①  | 115V/200V, 120V/208V, 220V/380V, 230V/400V, 240V/415V or 277V/480V ; Rated Input Voltage ± 15% |                 |           |           |           |           |           |           |        |
|                         | Frequency Range                                      | 47~63Hz  |                 |           |           |           |           |           |           |        |
|                         | Power Factor   | 0.9  |                 |           |           | 0.85      |           |           |           |        |
|                         | Max. Current ②                                       | 18.7   | 28.1            | 56.1      | 84.2      | 112.2     | 167.8     | 209.7     | 251.7     |        |
| Output                  | Phase  | 1Ø2W + G   |                 |           |           |           |           |           |           |        |
|                         | Voltage  | Low(V)   | 0V~150.0V (L-N) |           |           |           |           |           |           |        |
|                         |  | High(V)  | 0V~300.0V (L-N) |           |           |           |           |           |           |        |
|                         | Frequency Range                                      | 45~65Hz (opt. 45~500Hz)  |                 |           |           |           |           |           |           |        |
|                         | Frequency Regulation                                 | ≤0.01%   |                 |           |           |           |           |           |           |        |
|                         | Maximum Current                                      | 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% (Resistive Load)  |                 |           |           |           |           |           |           |        |
|                         | THD  | ≤2% (Resistive Load)   |                 |           |           |           |           |           |           |        |
|                         | Efficiency   | ≥90%   |                 |           |           | ≥85%      |           |           |           |        |
|                         | Response Time  | ≤2ms   |                 |           |           |           |           |           |           |        |
|                         | Crest Factor   | 3 : 1  |                 |           |           |           |           |           |           |        |
| Protection              | OVP, UVP, OCP, OPP, OTP and Short Circuit Protection |  |                 |           |           |           |           |           |           |        |
| Measurement             | Voltage  | Voltage: Resolution: 0.1V; Accuracy: 0.5% F.S. + 4 Counts                                      |                 |           |           |           |           |           |           |        |
|                         | Current  | Resolution: 0.1A; Accuracy: 0.5% F.S. + 4 Counts   |                 |           |           |           |           |           |           |        |
|                         | Frequency  | Resolution: 0.1Hz; Accuracy: 0.5% F.S. + 4 Counts  |                 |           |           |           |           |           |           |        |
| Remote Interface        | RS-485: Standard RS-232/GPIB: Optional               |  |                 |           |           |           |           |           |           |        |
| General                 | Operational Temp.                                    | 0°C~45°C   |                 |           |           |           |           |           |           |        |
|                         | Humidity   | 0~90% (Non-condensing)   |                 |           |           |           |           |           |           |        |
|                         | Altitude   | <1500m   |                 |           |           |           |           |           |           |        |
| Dimensions (W*D*H) mm ③ |  | ①  | ②               | ③         | ④         | ⑤         |           |           |           |        |
| Weight(kg) ③            |  | 240  | 290             | 360       | 580       | 670       | 830       | 935       | 1092      |        |

## AFV Series: Three-Phase Input / Three-Phase Output (10~100kVA)

| Model                   |  | AFV-33010  | AFV-33015       | AFV-33030 | AFV-33045 | AFV-33060 | AFV-33080 | AFV-33100 |       |
|-------------------------|--|--|-----------------|-----------|-----------|-----------|-----------|-----------|-------|
| Power (kVA)             |  | 10   | 15              | 30        | 45        | 60        | 80        | 100       |       |
| Input                   | Phase  | 3Ø4W + G   |                 |           |           |           |           |           |       |
|                         | Voltage ①  | 115V/200V, 120V/208V, 220V/380V, 230V/400V, 240V/415V or 277V/480V ; Rated Input Voltage ± 15% |                 |           |           |           |           |           |       |
|                         | Frequency Range                                      | 47~63Hz  |                 |           |           |           |           |           |       |
|                         | Power Factor   | 0.9  |                 |           |           | 0.85      |           |           |       |
|                         | Maximum Current ②                                    | 18.7   | 28.1            | 56.1      | 84.2      | 112.2     | 167.8     | 198.1     |       |
| Output                  | Phase  | 3Ø4W + G   |                 |           |           |           |           |           |       |
|                         | Voltage  | Low(V)   | 0V~150.0V (L-N) |           |           |           |           |           |       |
|                         |  | High(V)  | 0V~300.0V (L-N) |           |           |           |           |           |       |
|                         | Frequency Range                                      | 45~65Hz (opt. 45~500Hz)  |                 |           |           |           |           |           |       |
|                         | Frequency Regulation                                 | ≤0.01%   |                 |           |           |           |           |           |       |
|                         | Maximum Current                                      | High(A)  | 13.9            | 20.8      | 41.7      | 62.5      | 83.3      | 111.1     | 138.9 |
|                         |  | Low(A)   | 27.8            | 41.7      | 83.3      | 125.0     | 166.7     | 222.2     | 277.8 |
| System                  | Line Regulation                                      | <1%  |                 |           |           |           |           |           |       |
|                         | Load Regulation                                      | ± 1% (Resistive Load)  |                 |           |           |           |           |           |       |
|                         | THD  | ≤2% (Resistive Load)   |                 |           |           |           |           |           |       |
|                         | Efficiency   | ≥90%   |                 |           |           | ≥85%      |           |           |       |
|                         | Response Time  | ≤2ms   |                 |           |           |           |           |           |       |
|                         | Crest Factor   | 3 : 1  |                 |           |           |           |           |           |       |
| Protection              | OVP, UVP, OCP, OPP, OTP and Short Circuit Protection |  |                 |           |           |           |           |           |       |
| Measurement             | Voltage  | Resolution: 0.1V; Accuracy: 0.5% F.S. + 4 Counts   |                 |           |           |           |           |           |       |
|                         | Current  | Resolution: 0.1A; Accuracy: 0.5% F.S. + 4 Counts   |                 |           |           |           |           |           |       |
|                         | Frequency  | Resolution: 0.1Hz; Accuracy: 0.5% F.S. + 4 Counts  |                 |           |           |           |           |           |       |
| Remote Interface        | RS-485: Standard RS-232/GPIB: Optional               |  |                 |           |           |           |           |           |       |
| General                 | Operational Temperature                              | 0°C~45°C   |                 |           |           |           |           |           |       |
|                         | Humidity   | 0~90% (Non-condensing)   |                 |           |           |           |           |           |       |
|                         | Altitude   | <1500m   |                 |           |           |           |           |           |       |
| Dimensions (W*D*H) mm ③ |  | ②  |                 |           | ③         |           |           | ④         |       |
| Weight(kg) ③            |  | 300  | 310             | 410       | 580       | 670       | 890       | 960       |       |

## AFV Series: Three-Phase Input / Three-Phase Output (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 |        |
|-----------------------|--|--|-----------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------|--------|
| Power (kVA)           |  | 120  | 160             | 240       | 300       | 400       | 500       | 640       | 800       | 1000       | 1200       | 1600       |        |
| Input                 | Phase                                  | 3Ø4W + G   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Voltage ①                              | 115V/200V, 120V/208V, 220V/380V, 230V/400V, 240V/415V or 277V/480V ; Rated Input Voltage ± 15% |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Frequency Range                        | 47~63Hz  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Power Factor                           | 0.85   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Maximum Current 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                                  | 3Ø4W + G   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Voltage                                | Low(V)   | 0V~150.0V (L-N) |           |           |           |           |           |           |            |            |            |        |
|                       |  | High(V)  | 0V~300.0V (L-N) |           |           |           |           |           |           |            |            |            |        |
|                       | Frequency Range                        | 45~65Hz (opt. 45~500Hz)  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Frequency Regulation                   | ≤ 0.01%  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Maximum Current                        | 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% (Resistive Load)  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | THD                                    | ≤ 2% (Resistive Load)  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Efficiency                             | ≥ 85%  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Response Time                          | ≤ 2ms  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Crest Factor                           | 3 : 1  |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Protection                             | OVP, UVP, OCP, OPP, OTP and Short Circuit Protection   |                 |           |           |           |           |           |           |            |            |            |        |
| Measurement           | Voltage                                | Resolution: 0.1V; Accuracy: 0.5% F.S. + 4 Counts   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Current                                | Resolution: 0.1A; Accuracy: 0.5% F.S. + 4 Counts   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Frequency                              | Resolution: 0.1Hz; Accuracy: 0.5% F.S. + 4 Counts  |                 |           |           |           |           |           |           |            |            |            |        |
| Remote Interface      | RS-485: Standard RS-232/GPIB: Optional |  |                 |           |           |           |           |           |           |            |            |            |        |
| General               | Operational Temperature                | 0°C~45°C   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Humidity                               | 0~90% (Non-condensing)   |                 |           |           |           |           |           |           |            |            |            |        |
|                       | Altitude                               | 1500m  |                 |           |           |           |           |           |           |            |            |            |        |
| Dimensions(W*D*H)mm ③ |  | ⑤  |                 | ⑥         |           | ⑦         |           | ⑧         |           | ⑨          |            |            |        |
| Weight(kg) ③          |  | 1170   | 1400            | 2220      | 2465      | 3335      | ---       | ---       | ---       | ---        | ---        | ---        |        |

## AFV Series Case Dimension Overview



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

② The rated input voltage is 220V/380V.

③ For AFV series over 400kVA, please contact us for details.

\*All specifications are subject to change without notice

# 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.

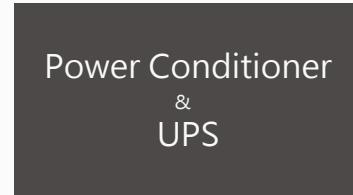
## Product Lines



- 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 Room/ Data Center



Electronics



ATE System



Airport Apron / Hangar



Home Appliance



Motor / Engine



Communication Equipment



Military Aircraft / Helicopter



Navy System



Defense Equipment

Leading Test & Measurement Power Supply Provider



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