

AFV-P-T620 Series

620V Voltage Transform Unit for AFV-P Series

User Manual

AC Power Corp. (Preen)

V 1.4.EN

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Preen's AFV-P-T620 series 620V voltage transform unit is warranted against defects in material and workmanship for a period of two year after date of shipment. Preen agrees to repair or replace any assembly or component found to be defective, under normal use during this period. Preen's obligation under this warranty is limited solely to repairing any such product which in sole Preen's opinion proves to be defective within the scope of the warranty when returned to the factory or to an authorized service center. Transportation to the factory or service center is to be prepaid by the purchaser. Shipment should not be made without prior authorization by Preen.

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SAFETY SUMMARY

The following general safety precautions must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or specific WARNINGS given elsewhere in this manual will violate safety standards of design, manufacture, and intended use of the product.

Preen assumes no liability for the customer's failure to comply with these requirements, causing malfunction or damage on the product, personal injury, death or any loss of, or damage to, property.

1) BEFORE APPLYING POWER

- Verify that the product is set to match with the power line input.
- Before relocating the product or reconnecting any cable, ensure the power line input is cut off and the product has been shut down for 20 minutes.

2) PROTECTIVE GROUNDING

Make sure to connect the product to the protective ground to prevent an electric shock before turning on the power.

3) NECESSITY OF PROTECTIVE GROUNDING

Never cut off the internal or external protective grounding wire, or disconnect the wiring of protective grounding terminal. Doing so will cause a potential shock hazard that may bring injury to a person.

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4) OPERATING ENVIRONMENT

- Do not operate the product in an area with poor ventilation.
- Do not operate the product in the presence of flammable gases or fumes.
- Do not block the cooling fan opening.
- Do not push objects of any kind through the opening, or spill liquid of any kind in the product.

5) DO NOT REMOVE THE COVER OF THE PRODUCT

Hazardous voltages may be present when covers are removed. Component replacement and internal adjustment can be done only by qualified service personnel.

WARNING

- ***LETHAL VOLTAGES.*** The product can supply 877V peak at its output. **DEATH** on contact may result if either the output terminals or the circuits connected to the output are touched when the power is applied.
- In the event that there is fire occurring in the vicinity, please use dry powder extinguishers. The use of liquid extinguishers may give rise to the danger of electric shock.

NOTICE

Non-qualified personnel are not allowed to open cover, warranty void if warranty sticker removed or damaged.

Introduction

AFV-P-T620 Series is a 620V voltage transform unit, used with AFV-P series programmable AC Power Source to increase the maximum output voltage range from 0~310VAC to 0~620VAC, providing the users more extensive application range.

Specification

AFV-P-T620 Model	AFV-P-T620A		AFV-P-T620B	AFV-P-T620C
AFV-P Model	AFV-P-600	AFV-P-1250	AFV-P-2500	AFV-P-5000
Power(VA)	600VA	1250VA	2500VA	5000VA
AC Output				
Phase	Single			
Voltage Range	0~620.0V			
Voltage Resolution	0.1V			
Frequency Range	AFV-P B model: 45~500Hz ; AFV-P A model: 45~1000Hz			
Frequency Resolution	0.1Hz at <100Hz ; 1Hz at ≥100Hz			
Frequency Stability	≤0.01%			
Max. Current (RMS)	1.25A	2.5A	5A	10A
Max. Current (Peak)	5A	10A	20A	40A
Power(W)	500W	1000W	2000W	4000W
Line Regulation	≤±0.5V			
Load Regulation	≤±0.5V (Resistive Load)			
Total Harmonic Distortion(THD)	≤0.3% at ≤100Hz ; 0.5% at 101~500Hz ; 1% at ≥501Hz (Resistive Load)			
Response Time	≤300us			
Form Factor	2.4 : 1 (at 50/60Hz)			
Measurement				
Frequency Range	45~1000Hz			
Frequency Resolution	0.1Hz			
Frequency Accuracy	±0.1Hz at ≤500Hz ; ±0.2Hz at >500Hz			
Voltage Range	0~620.0V			
Voltage Resolution	0.1V			
Voltage Accuracy	±(0.5% of reading + 5 Counts)			
Current Range	Hi : 0.50~6.00A Lo : 0.005~0.600A	Hi : 1.00~12.00A Lo : 0.005~1.200A	Hi : 0.05~24.00A	
Current Resolution	Hi : 0.01A Lo : 0.001A		Hi : 0.01A	

AFV-P-T620 Series 620V Voltage Transform Unit

Current Accuracy	$\pm(2\% \text{ of reading} + 5 \text{ Counts})$ at $\leq 500\text{Hz}$ $\pm(2\% \text{ of reading} + 10 \text{ Counts})$ at $>500\text{Hz}$		
Peak Current Range	0.0~22.5A	0.0~45.0A	0.0~90.0A
Peak Current Resolution	0.1A		
Peak Current Accuracy	$\pm(2\% \text{ of reading} + 5 \text{ Counts})$ at $\leq 500\text{Hz}$; $\pm(2\% \text{ of reading} + 10 \text{ Counts})$ at $>500\text{Hz}$		
Power Range	Hi : 100~1200W Lo : 0.0~120.0W	Hi : 200~2400W Lo : 0.0~240.0W	Hi : 0~4800W
Power Resolution	Hi : 1W Lo : 0.1W		Hi : 1W
Power Accuracy	$\pm(2\% \text{ of reading} + 10 \text{ Counts})$ at $\leq 500\text{Hz}$; $\pm(2\% \text{ of reading} + 15 \text{ Counts})$ at $>500\text{Hz}$		
Environment			
Operating Temperature	0°C~40°C		
Humidity	0~90% (Non-condensing)		
Dimension	88 * 442 * 495mm	88 * 442 * 650mm	
Weight	14kg	25kg	35kg

Installation

AFV-P-T620 can only be used with the AFV-P series. Turn the AFV-P series off before installation. The power cord used must be rated at least 85°C and has sufficiently gauge, so they will not overheat while carrying the output current. The input power line must have a current rating which is greater than or equal to the maximum rated current of the product.

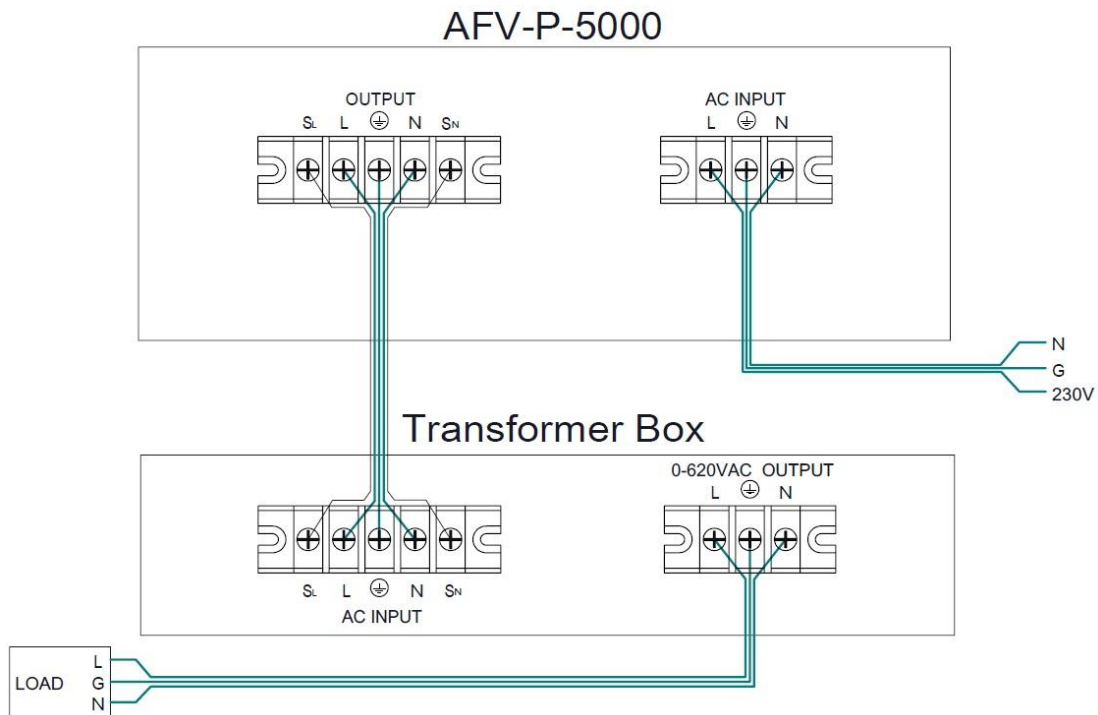


Figure 1

Referring to Figure 1, perform the following steps:

1. Remove the safety covers of the input and output terminal from the rear panel of AFV-P-T620.
2. Connect the input terminals of AFV-P-T620 to the output terminals of AFV-P. The terminals SL, L, \oplus N, SN must be connected correspondingly.
3. Fasten the power cords with strap.
4. Connect the load to the N and L of the output terminals of AFV-P-T620, and ensure to connect \oplus to the ground.
5. Screw the safety covers back to the input and output terminals.

Setup/Operation

After installation, ensure AFV-P's input is well connected. Turn on AFV-P and perform the following steps on its touch screen to setup.

1. After the power on procedure, press **MENU** at the main page (see Figure 2).

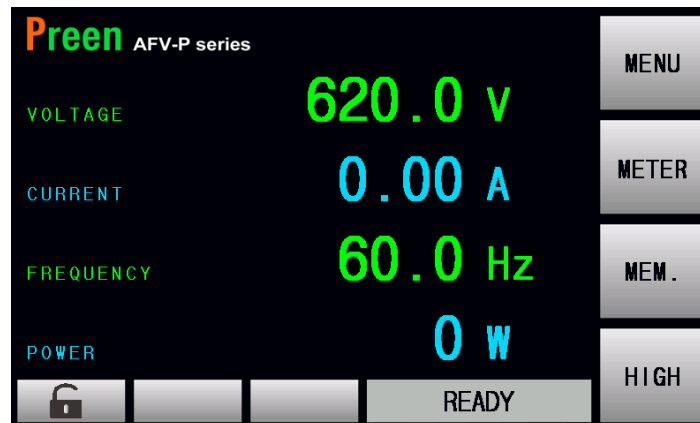


Figure 2

2. Press **SETTING** (see Figure 3).

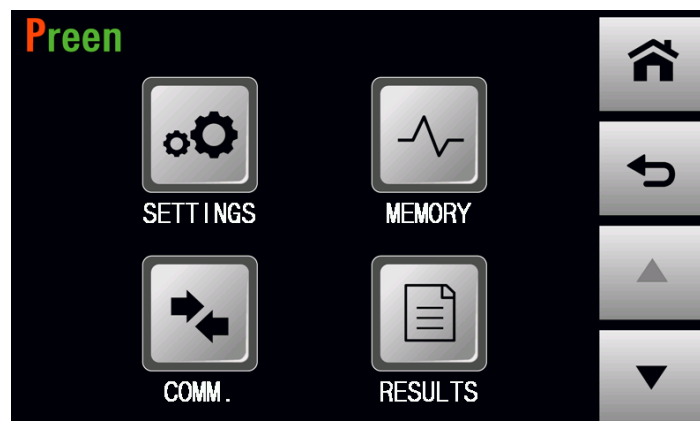


Figure 3


3. Press **SYSTEM**, and press the icon  to move to the last page of the **SYSTEM** subpage (see Figure 4).




Figure 4

4. Switch the icon status of **AC-620V** from **OFF** to **ON** (see Figure 5).



Figure 5

5. Press the icon  to return to the main page, the output voltage can now be set from 0 to 620 (see Figure 6).

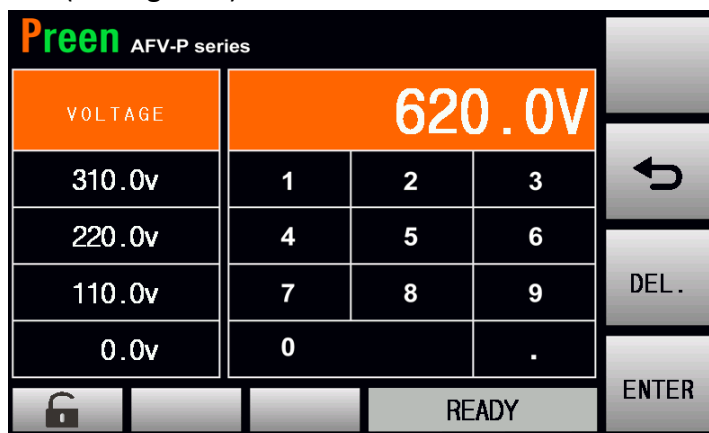


Figure 6

NOTICE

While **AC-620V** item is set ON, the **VOLTAGE SENSE** (go to **MENU** → **SETTING** → **TESTING**) will automatically change from INT to EXT.

However, when **AC-620V** item is switched from ON to OFF, the item of **VOLTAGE SENSE** will still remain EXT. So if the users would like to use AFV-P series alone without AFV-P-T620 and remote sense function, **VOLTAGE SENSE** has to be switched from EXT to INT; otherwise the protection warning will be triggered.