

PAS series

Preen®

Programmable Regenerative Grid Simulator
45~2000kVA

Built-in
Low Voltage Ride
Through Function
LVRT



▼ Load Regulation

$\leq 1\%$

▼ High Efficiency

$\geq 92\%$

▼ Complete Programmable Function

▼ Low Distortion

$THD \leq 2\%$

▼ Complete Interface Options
RS232/RS485/LAN/USB/GPIB

▼ Three Phase Independent Control

▼ Regenerative Function

$PF \geq 0.99$

▼ Built-in LVRT Mode

▼ Intuitive Touch Screen HMI

Programmable Regenerative Grid Simulator

PAS series is a programmable regenerative grid simulator, which convert fixed input voltage and input frequency into expected output voltage and output frequency. Its load regulation can be lower than 1%, which provide pure AC source for the equipment under test (EUT). PAS series not only can provides pure and stable sine wave AC source, but also has comprehensive protections for detecting over current, over load, over voltage and short circuit. When energy is reversed from EUT, PAS series can source and sink the energy back to the utility grid with low distortion and tight voltage regulation.

PAS series is designed for applications related to renewable energy. PAS series can be used to simulate standards and various grid conditions like voltage dips, variations and interruptions with built-in Low Voltage Ride Through (LVRT) mode for easy operation. PAS series is ideal for products related to renewable energy from design verification, quality assurance, ATE to mass production, such as PV inverter, wind-power converter, electric vehicle and smart-grid based test applications.

<p>High Output Power</p> <p>45-2000kVA</p>	<p>Excellent Stability & Low Distortion</p> <p>Load Regulation $\leq 1\%$ THD $\leq 2\%$</p>	<p>Voltage Drop Simulation</p> <p>Built-in LVRT Mode</p>
<p>High Efficiency</p> <p>Efficiency $\geq 92\%$</p>	<p>Three Phase Independent Control</p> <p>Independently Adjustable Three-phase Voltage</p>	<p>Regenerative Function</p> <p>PF ≥ 0.99 Sink 100% Reactive Power</p>

Applications of PAS Series

■ Applications



Intuitive Touch Panel

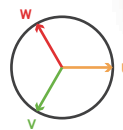
Touch Screen HMI



Users can quickly select parameters via 7" touch panel, which provides an easy operation and a clear measurement display.

Phase Angle Control (Optional)

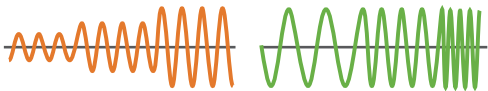
Angle between each phase can be set in Low Voltage Ride Through (LVRT) mode. Phase angle control is an optional feature.



- Phase Angle Control
- Angle between U and V
- Angle between U and W

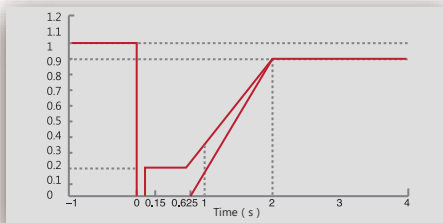
Complete Simulation Modes

Step Change Mode



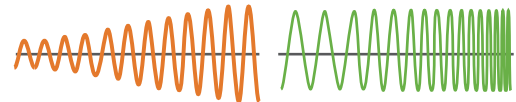
Step Change Mode: up to 24 sets are available for output voltage and output frequency configuration. Output voltage, output frequency and running time of each set can be set and stored separately.

Low Voltage Ride Through (LVRT) Mode

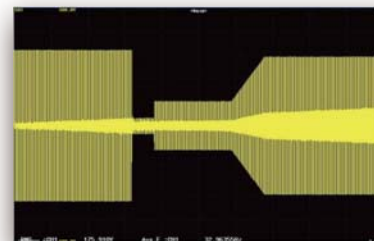


Built-in Low Voltage Ride Through (LVRT) mode can simulate the grid in abnormal conditions. The settings include voltage, frequency, drop voltage, recovery voltage, rise time and hold time to simulate various conditions.

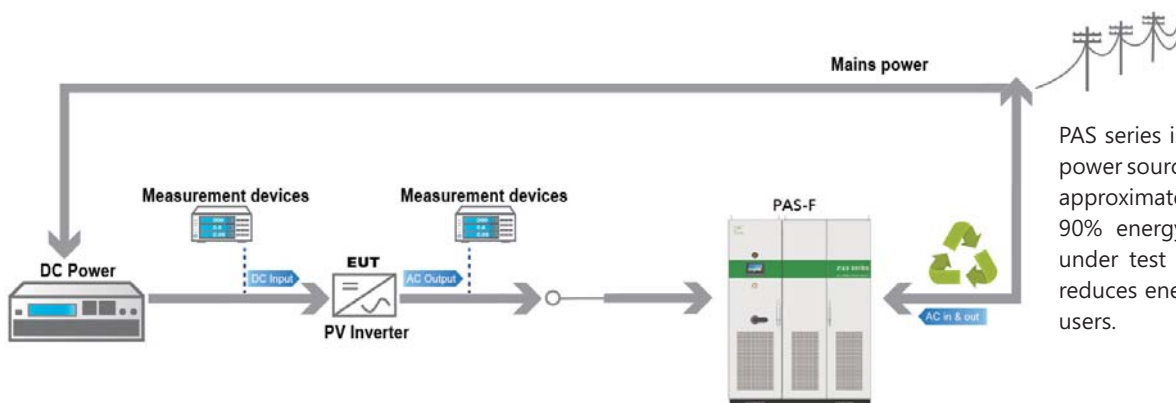
Gradual Change Mode



Gradual Change Mode: up to 12 sets are available for output voltage and output frequency configuration. Starting/ending voltage, starting/ending frequency and running time of each set can be set, and output will be automatically changed according to default slope.



Regenerative Function



PAS series is a four-quadrant AC power source, which is capable to approximately source and sink 90% energy to the equipment under test (EUT). It significantly reduces energy consumption for users.

Specifications

PAS series	PAS-F-33045	PAS-F-33060	PAS-F-33075	PAS-F-33100	PAS-F-33120	PAS-F-33150	PAS-F-33200
Capacity (kVA)	45	60	75	100	120	150	200
Circuit Type	IGBT Type						
AC Input							
Phase	Three Phase						
Voltage	220V/380V						
Voltage Range	±15%						
Frequency Range	47~63Hz						
Power Factor	0.99						
ITHD	≤5%(Typical Value)						
AC Output							
Phase	Three Phase						
Voltage Range	0V ~ 300.0V (L-N)						
Frequency Range	45~65Hz						
Frequency Stability	<0.01%						
Performance							
Line Regulation	<1% (Resistive Load)						
Load Regulation	<1% (Resistive Load)						
Output THD	<2% (Resistive Load)						
Efficiency	≥92%						
Response Time	<2ms						
Crest Factor	3:1						
Regenerative Function	Yes						
Display							
Type	7" Touch Panel						
Voltage	0.2V+0.1%FS; Resolution: 0.1V						
Current	0.2A+0.1%FS; Resolution: 0.1A						
Frequency	0.01Hz+0.01%FS; Resolution: 0.01Hz						
Real Power	0.2kW+0.1%FS; Resolution: 0.1kW						
Apparent Power	0.2kVA+0.1%FS; Resolution: 0.1kVA						
Power Factor	±0.01; Resolution: 0.01						
Communication Interface	RS485(or RS232); GPIB,LAN,USB(optional)						
Environment							
Isolation Resistance	>DC500V 10MΩ						
Isolation Voltage	AC 2000V 10mA/ 1min						
Cooling Method	Fan						
Working Temperature	0 °C to 45 °C						
Humidity	0~95%(Non-condense)						
Altitude	<1500m						
Dimension(W*D*H: mm)	1200 x 800 x 2100			1600 x 800 x 2100			

* All specifications are subject to change without notice.
 * Consult factory for power levels exceed 200kVA

About Preen

Leading Power Supply Provider

Found in 1989, Preen (AC Power Corp.) is a leader in power supply system and has been developing products based on the core technology of Power Conversion. We boast one of the broadest product line of power supply, includes AC Power Source, DC Power Supplies, Power Supplies for Defense Industry, Renewable Energy Simulators, Line Conditioners and UPS.

- Programmable AC Power Source
- Programmable Regenerative Grid Simulator
- Programmable DC Power Supply
- Automatic Voltage Regulator
- 400Hz/800Hz Aerospace & Military Power Supply
- UPS



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