AC Power Supply

Multi-Mode Output Freqency Conversion AC Power Supply
TFS-A Series

Product description:

TFS-A series programmable AC Power Supply can provide power grid electricity from all over the world and according to rated standard rules to simlulate the normal and abnormal conditon of power grid. Suitable for lab., university, reaseach institutes meet the product requirement of design, development and certification test. Products are widely used in new engery industry such as energy storage inverter, photovoltaic inverter, it also can be used in household appliance, motor test in lab., The product adopts advanced digital high-frequency inverter control technology and high speed digital controller, achieve the sinewave output of high accurate, fast dynamic response speed, high load adaptability, high stability, wide output range.

Features

- With a variety of output modes, powerful:
  - ► ***Three-phase standard mode***: Standard three-phase voltage output.
  - ► ***Three-phase unbalanced mode***: Three-phase voltage is set independently and three-phase phase Angle is adjustable from 0.0° to 359.9°
  - ► ***Three-phase Seperate mode***: Three-phase voltage, frequency independent setting, equivalent to three single-phase power supplies
  - ► ***Parallel single-phase mode***: Three phases are combined to form high-power single-phase output
- The product adopts three-phase decoupling control, which can adapt to 0 ~ 100% load imbalance.
- The use of accurate anti-impact technology, can withstand the load of large current impact, 3 times the rated current can mature 2s, especially suitable for motor and other impact equipment.
- 8-inch color touch screen, all operations can be achieved through the touch screen, exquisite appearance, convenient operation and equipped with digital keys, function keys, knobs, etc., diversified operation.
- With Auto-lock function, timed to automatically lock the keyboard to prevent miscontact.
- Voltage range design: 0.0 ~ 150.0V, 150.1 ~ 300.0V or 0.0 ~ 300.0V, high grade and low grade can be full power output; Frequency output range 45.00 ~ 65.00Hz, resolution 0.01Hz.
- The measurement function is complete, can measure voltage, current, current peak, frequency, active power, apparent power, power factor, voltage peak factor and other power parameters.
- With the "black box" function, real-time monitoring of internal voltage, current, temperature and other parameters, abnormal conditions immediately alarm and automatically record operating parameters, convenient for later viewing and maintenance.
- Communication interface standard RS232, optional RS485, GPIB, ETHERNET, analog control, etc.

Type Recommendation

◆ Overload capability makes it easier to start motors, compressors and other equipment

TFS-A series adopts precise current control technology, which can withstand the impact of 3 times the rated current for 2 s, and easily cope with 5-10 times the impact current at the start of the load such as motors and compressors.

90kVa AC Power Supply
TFS-090A

◆ Multiple output modes, "one machine multi-purpose"

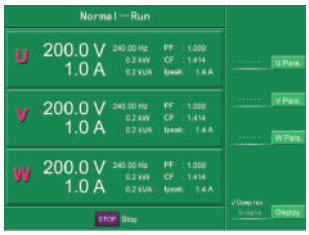
TFS-A series adopts three-phase decoupling control, combined with digital control algorithm, to achieve a variety of mode output: three-phase standard mode, three-phase unbalanced mode, discrete single-phase mode, parallel single-phase mode, one power supply is equivalent to a variety of traditional power supply functions, so that "one machine with multiple uses".

◆ Three-phase decoupling control, three-phase independent load

Three phase voltage of TFS-A series adopts independent channel decoupling control, independent regulation, and no influence on each other, which can adapt to 100% load imbalance.

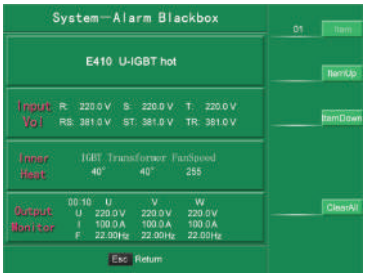
◆ **8 inch color touch screen, operation experience upgrade**

TFS-A series 8" color touch screen, all operations can be done by touch screen, intuitive, friendly and efficient.



◆ **Black box function, real-time monitoring, improved maintenance efficiency**

TFS-A series built-in "black box" function enables real-time monitoring of power operation data and timely recording of input and output parameters in case of abnormal operation, making maintenance easier.



Specifications

Model		TFS-015A	TFS-030A	TFS-045A	TFS-060A	TFS-090A	TFS-120A	TFS-150A	TFS-180A	TFS-240A
Output Capacity		15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	150kVA	180kVA	240kVA
Basic Function										
Output function		Simulate power grid voltage from all over the world								
Isolated function		Built-in Isolated transformer								
Wire Method		Input : Three-phase, 4 wires+PE / Output : Three-phase 4 wires + PE, Single-phase 2 wires+PE (Selectable)								
Output Parameter										
Output Mode		Standard Three-phase mode, Unbalance Three-phase mode, Separated Single-phase mode. Parallel single-phase mode								
Output Voltage	Automatic	Low range : 0.0 ~ 150.0V (L-N) / High range : 150.1 ~ 300.0V (L-N)								
	High-end Lock	0.0 ~ 300.0V (L-N)								
Voltage Setting Accurancy		≤0.5%FS, Resolution : 0.1V								
Standard Three-phase Mode, Unbalance Three-phase Mode, Separated Single-phase Mode										
Rate (L-N) Current	110V (Low grade)	45.5A	90.9A	136.3A	181.8A	272.6A	363.6A	454.5A	545.4A	727.2A
	220V (High grade)	22.7A	45.5A	68.1A	90.9A	136.3A	181.8A	227.2A	272.7A	363.6A
Parallel Single-phase Mode										
Rate (L-N) Current	110V (Low grade)	136.3A	272.7A	409.1A	545.5A	818.2A	1090.9A	1363.6A	1636.3A	2181.9A
	220V (High grade)	68.1A	136.3A	204.5A	272.7A	409.1A	545.4A	681.8A	818.2A	1090.9A
Output Frequency		45.00 ~ 240..00Hz								
Frequency Setting Accuracy		Accuracy : 0.02% Resolution : 0.01Hz								
Frequency Stability		≤ 0.02% or less								
Voltage Distortion (THD)		<1% (linear load)								
Response Time		≤ 2mS								
Voltage Sudden respone Time		≤ 20mS								
Three-phase Phase Angle		120° ± 2								
Crest Factor		1.14 ± 0.1								
Source Voltage Effect		≤1%								
Loading Effect		≤1%								
Efficiency		>85%								
Measurement Display										
Display Mode		8 inch color LCD Screen								
Voltage Meas. Accuracy		Accuracy : 0.2%F.S + 0.2% x Reading value, Resolution : 0.1V								
Frequency Meas. Accuracy		Accuracy : 0.02%, Resolution : 0.01Hz								
Current Meas. Accuracy		Accuracy : 0.3%F.S.±0.3% x Reading value, Resolution : 0.1A/1A								
Power Meas. Accuracy		Accuracy : 0.5%F.S.±0.5% x Reading value, Resolution : 0.1kW / 0.01kW / 0.001kW								
Operation Function										
Auto Stronge Function		Automatic memory of set parameters, automatic call at start-up								
Soft Start		With soft start function, soft-start time can be set from 0.0 ~ 99.9s								
Real-time adjustment		In the start state, the output voltage, freq. settings value can be adjusted by the numeric keys, ▲/▼ keys, knob & update imediately								
Line Volt-drop compensation		Impedance compensation : 0.000 ~ 0.500Ω								
Fast Call		Conventional mode 10 shortcut groups								
Protection Function										
Overload Capacity		105% < Output ≤ 110%, the output will be stopped within 15s								
		110% < Output ≤200%, the output will be stopped within 5s								
		200% < Output ≤ 300%, the output will be stopped within 2s								
		300% < Output the output will be stopped immediately								
Protection Function		Over-current, Overload, Short-circuit protection, Overheat protection, Output over-voltage, under-volatge								
Software Protection		Phase loss protection, artificial interlligence monitoring (AI-Monitor) function, Black-Box function, Auto-Lock key function								
Remote Interface										
Communication Interace		Standard : RS-232 / Optional : RS-485, GPIB, Ethernet								
Remote Interface		Analog control interface (Optional)								
Input Parameter										
Input Voltage Range		Three-phase 4 wires + PE, 380V±57V (L-L)								
Input Freqnecy Range		45 ~ 65Hz								
Working Environment										
Operation Temperature		0 ~ 40°C								
Operation Humidity		20 ~ 90%RH (non-condensation)								
Dimension (WxHxD) mm.		600x1150x1020		700x1350x1220			800x1750x1420			
Weight (kg.)		265	310	440	550	740	980	1250	1270	1400

Specifications

Model		TFS-350A	TFS-450A	TFS-550A	TFS-650A
Output Capacity		350kVA	450kVA	550kVA	650kVA
Basic Function					
Output function		Simulate power grid voltage from all over the world			
Isolated function		Built-in Isolated transformer			
Wire Method		Input : Three-phase, 4 wires+PE / Output : Three-phase 4 wires + PE, Single-phase 2 wires+PE (Selectable)			
Output Parameter					
Output Mode		Standard Three-phase mode, Unbalance Three-phase mode, Separated Single-phase mode. Parallel single-phase mode			
Output Voltage	Automatic	Low range : 0.0 ~ 150.0V (L-N) / High range : 150.1 ~ 300.0V (L-N)			
	High-end Lock	0.0 ~ 300.0V (L-N)			
Voltage Setting Accurancy		≤0.5%FS, Resolution : 0.1V			
Standard Three-phase Mode, Unbalance Three-phase Mode, Separated Single-phase Mode					
Rate (L-N) Current	110V (Low grade)	1060A	1363A	1666A	1970A
	220V (High grade)	530.3A	681.8A	833.3A	984.8A
Parallel Single-phase Mode					
Rate (L-N) Current	110V (Low grade)	3181.8A	4090.8A	4999.8A	5908.8A
	220V (High grade)	1590.9A	2045.4A	2499.9A	2954.4A
Output Frequency		45.00 ~ 240..00Hz			
Frequency Setting Accuracy		Accuracy : 0.02% Resolution : 0.01Hz			
Frequency Stability		≤ 0.02% or less			
Voltage Distortion (THD)		<1% (linear load)			
Response Time		≤ 2mS			
Voltage Sudden respone Time		≤ 20mS			
Three-phase Phase Angle		120° ± 2			
Crest Factor		1.14 ± 0.1			
Source Voltage Effect		≤1%			
Loading Effect		≤1%			
Efficiency		>85%			
Measurement Display					
Display Mode		8 inch color LCD Screen			
Voltage Meas. Accuracy		Accuracy : 0.2%F.S + 0.2% x Reading value, Resolution : 0.1V			
Frequency Meas. Accuracy		Accuracy : 0.02%, Resolution : 0.01Hz			
Current Meas. Accuracy		Accuracy : 0.3%F.S.±0.3% x Reading value, Resolution : 0.1A/1A			
Power Meas. Accuracy		Accuracy : 0.5%F.S.±0.5% x Reading value, Resolution : 0.1kW / 0.01kW / 0.001kW			
Operation Function					
Auto Stronge Function		Automatic memory of set parameters, automatic call at start-up			
Soft Start		With soft start function, soft-start time can be set from 0.0 ~ 99.9s			
Real-time adjustment		In the start state, the output voltage, freq. settings value can be adjusted by the numeric keys, ▲/▼ keys knob & update immediately			
Line Volt-drop compensation		Impedance compensation : 0.000 ~ 0.500Ω			
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Protection Function		Over-current, Overload, Short-circuit protection, Overheat protection, Output over-voltage, under-volatge			
Software Protection		Phase loss protection, artificial interlligence monitoring (AI-Monitor) function, Black-Box function, Auto-Lock key function			
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Communication Interace		Standard : RS-232 / Optional : RS-485, GPIB, Ethernet			
Remote Interface		Analog control interface (Optional)			
Input Parameter					
Input Voltage Range		Three-phase 4 wires + PE, 380V±57V (L-L)			
Input Freqnecy Range		45 ~ 65Hz			
Working Environment					
Operation Temperature		0 ~ 40°C			
Operation Humidity		20 ~ 90%RH (non-condensation)			
Dimension (WxHxD) mm.		1800×2000×1400	2400×2000×1400	4800×2000×1400	
Weight (kg.)		2100	2520	3650	4270