TPS-GSH750S Series

Single Output Open Frame Power Supply

Features

- Aluminum enclosure LxWxH：127×76.2×40mm
- Natural cooling：500W
- Forced convection：750W(25CFM)
- Wide input voltage range：85-305VAC/120-420VDC
- Constant current+constant voltage output
- Active PFC function
- LED indicator light
- Output voltage adjustment
- -25℃~+70℃ Operating temperature
- Isolation voltage：3750VAC
- High liability, long lifespan, 3-year warranty
- Input undervoltage protection, output short circuit protection, overcurrent, overvoltage protection, overtemperature protection

This series is a 750W output power AC-DC switching power supply with an input voltage range of 85-305VAC or 120-420-VDC. It offers both constant current and constant voltage output modes, available in 12V, 19V, 24V, 36V, and 48V output voltages. With efficiency up to 95%, it operates reliably in environments ranging from -25°C to +70°C. This series features comprehensive protection functions, complies with international safety regulations, and is suitable for applications in industrial automation machinery, industrial control systems, communication equipment, LED systems, smart home technology, electronic instruments, and medical equipment.

Specifications

Model	Cooling Method	Output Power*	Rated Output Voltage/ Current(Vo/Io)	Input Voltage Range	Efficiency (Typ.)*	Output Voltage Adjustable Range ADJ(V)	Output Voltage Adjustable Range ADJ(V)	Max Capacitive Load at Room Temperature
TPS-GSH750S-12V	Natural cooling	360W	12V30A	85~176VAC/ 120~250VDC	91%	11.4~12.8V	20~80A	10000μF
	25CFM	600W	12V50A		90%			
	Air cooling	500W	12V41.67A	176~305VAC/ 250~420VDC	94%			
	25CFM	750W	12V62.5A		93%			
TPS-GSH750S-19V	Natural cooling	360W	19V18.95A	85~176VAC/ 120~250VDC	92%	18~20.5V	10~48A	8000μF
	25CFM	600W	19V31.58A		91%			
	Air cooling	500w	19V26.32A	176-305VAC/ 250~420VDC	94.5%			
	25CFM	750W	19V39.48A		93.5%			
TPS-GSH750S-24V	Natural cooling	360W	24V15A	85~176VAC/ 120~250VDC	92%	22.8~27V	8~40A	6000μF
	25CFM	600W	24V25A		91%			
	Air cooling	500W	24V20.84A	176~305VAC/ 250~420VDC	95%			
	25CFM	750W	24V31.25A		94%			
TPS-GSH750S-27V	Natural cooling	360w	27V13.33A	85~176VAC/ 120~250VDC	92%	24~29V	8~40A	6000μF
	25CFM	600W	27V22.22A		91%			
	Air cooling	500W	27V18.52A	176~305VAC/ 250~420VDC	95%			
	25CFM	750W	27V27.78A		94%			
TPS-GSH750S-36V	Natural cooling	360W	36V10A	85~176VAC/ 120~250VDC	92%	34.2~39.6V	5~28A	5000μF
	25CFM	600W	36V16.67A		91%			
	Air cooling	500W	36V13.89A	176~305VAC/ 250~420VDC	95%			
	25CFM	750W	36V20.84A		94%			
TPS-GSH750S-48V	Natural cooling	360W	48V7.5A	85~176VAC/ 120~250VDC	92%	45.6~54V	4~20A	3000μF
	25CFM	600W	48V12.5A		91%			
	Air cooling	500W	48V10.42A	176~305VAC/ 250~420VDC	95%			
	25CFM	750W	48V15.63A		94%			

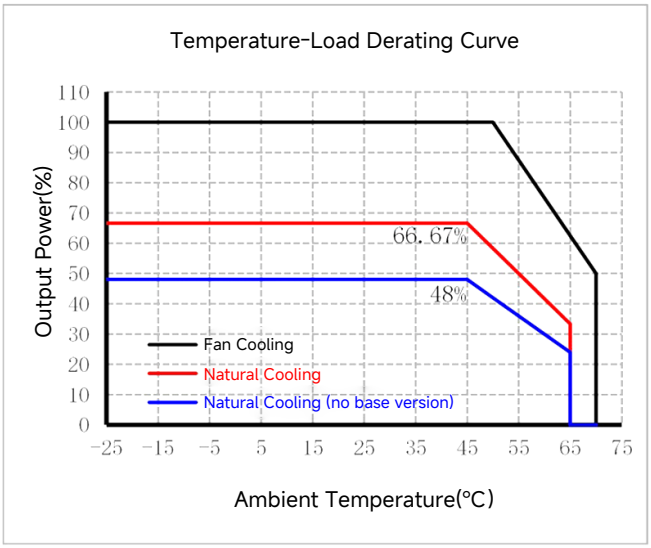
Notes

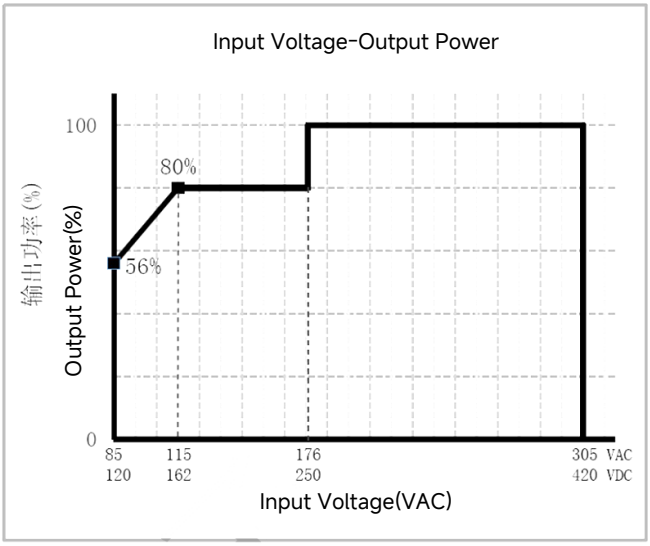
1. * Under any steady-state condition, the total output power must not exceed the rated total power. When output voltage is adjusted upward, total output power must not exceed the rated output power. If output voltage exceeds the rated voltage by more than 5%, output power must be reduced to 80% of the rated power. When output voltage is adjusted downward, output current must not exceed the rated output current.
2. *Efficiency testing conditions: 25°C ambient temperature, input at 230VAC; for full-load efficiency testing, the fan should be powered by an external source, so the fan's power consumption is not included in the input power measurement

Electrical Specifications

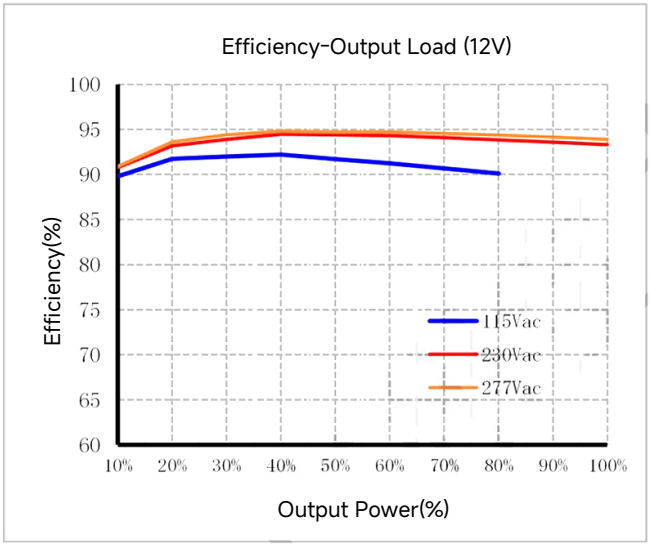
Item			TPS-GSH750S-12V	TPS-GSH750S-19V	TPS-GSH750S-24V	TPS-GSH750S-27V	TPS-GSH750S-36V	TPS-GSH750S-48V
Output	Rated voltage		12V	19V	24V	27V	36V	48V
	Current range(Natural cooling)		0-41.67A	0-26.32A	0-20.84A	0-18.52A	0-13.89A	0-10.42A
	Current range(25CFM Fan cooling)		0-62.5A	0-39.48A	0-31.25A	0-27.78A	0-20.84A	0-15.63A
	Output power(Natural cooling)		500W	500W	500W	500W	500W	500W
	Output power(25CFM Fan cooling)		750W	750W	750W	750W	750W	750W
	Efficiency(115VAC,typ)		90%	91%	91%	91%	91%	91%
	Efficiency(230VAC,typ)		93%	93.5%	94%	94%	94%	94%
	Ripple voltage		<100mVp-p	<100mVp-p	<150mVp-p	<150mVp-P	<200mVp-p	<200mVp-p
	Voltage adjustment range(adjustable resistor)		11.4-12.8y	18-20.5V	22.8-27V	24-29V	34.2~39.6V	45.6~54V
	Adjustable current range		20-80A	10-48A	8~40A	8~40A	5~28A	4~20A
	Voltage accuracy		±1%					
	Voltage overshoot		<10%					
	Line regulations		±0.5%					
	Load regulation		±1%					
	Start-up time		1S(typ.)					
	Rise time		12ms(typ.)					
	Hold time		>10ms,15ms(typ.)115/230VAC,full load					
Input	Rated voltage		100-277VAC					
	Voltage range		85-305VAC(Refer to the input voltage derating curve)					
	Input frequency		Rated frequency 50/60Hz,operating range47-63Hz					
	Power factor		>0.98(full load115/230Vac)					
	Input current(Max)		6.5A/115VAC,4A/230VAC					
	No-load power consumption(Max)		2W					
	Inrush current(Max)		Cold start： 20A/120VAC,40A/240VAC					
	Touch current(Max)		0.25mA/240vAc					
Protection	Input undervoltage protection		60-85VAC					
	Output overcurrent protection		110%-180% of the rated output current, hiccup mode, auto-recovery					
	Output overvoltage protection		110%-125% of rated output voltage, output shut down, auto-recovery after restart					
	Output short-circuit protection		Hiccup mode, auto-recovery after short is removed					
	Overtemperature protection	Primary	Output shuts off, automatic recovery after temperature decreases					
		Secondary	turn off output; when the temperature decreases, restart to restore operation					
Environmental Parameters	Operating temperature & Humidity		-25~+70°C,20%~90%RH non-condensing (refer to temperature derating curve for use)					
	Storage temperature & Humidity		-40~+85°C,10%-95%RH					
	Temperature coefficient		±0.03%/°C					
Safety EMC	Safety standards		MEET IEC62368,GB4943.1					
	EMC		CISPR32/EN55032 CLASS B,EN61000-4-2/3/4/6 CLASS B					
	Lightning surge protection		IEC/EN61000-4-5,line to line ±2KV,line to ground ±2KV					
	Withstand voltage		VP-O/P:3750VAC,IVP-FG:1500VAC,O/P-FG:500V					
	Insulation resistance		VP-O/P,VP-FG,O/P-FG:>100M Ohm/500VDC					
Other	Fan Auxiliary Power		Voltage 12V±15%,current 0.5A(voltage changes proportionally with output voltage adjustment)					
	Remote sense		When RS+ and RS- are connected to the client, they provide remote voltage compensation. If remote voltage compensation is not required, RS+ and RS- should be left floating and must not be shorted.					
	Dimensions		L×W×H： 127×76.2×40mm					
	Weight		550±20g					
Notes	1. *Unless otherwise specified, all typical values are measured at 230VAC and 25°C. 2. *Ripple and noise testing method: connect a 0.1μF ceramic capacitor and a 47μF electrolytic capacitor in parallel at the output, using an oscilloscope with a 20MHz bandwidth.							

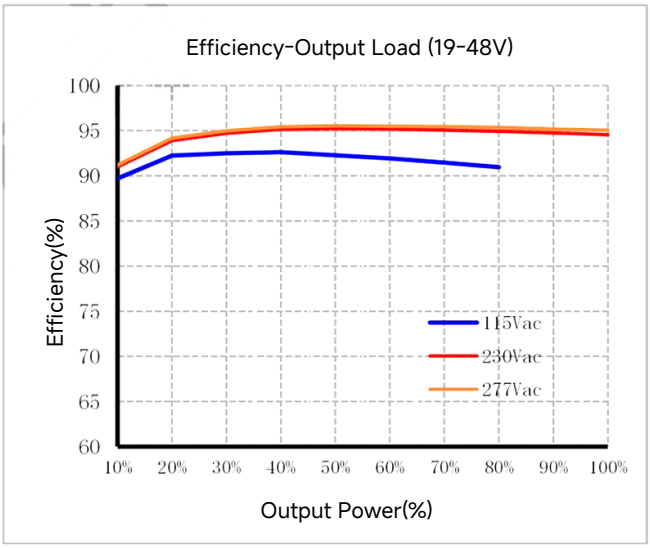
Product Characteristic Curve

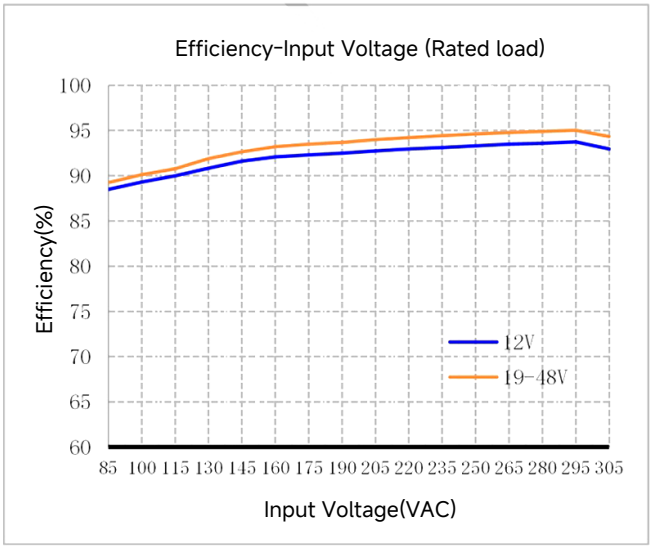


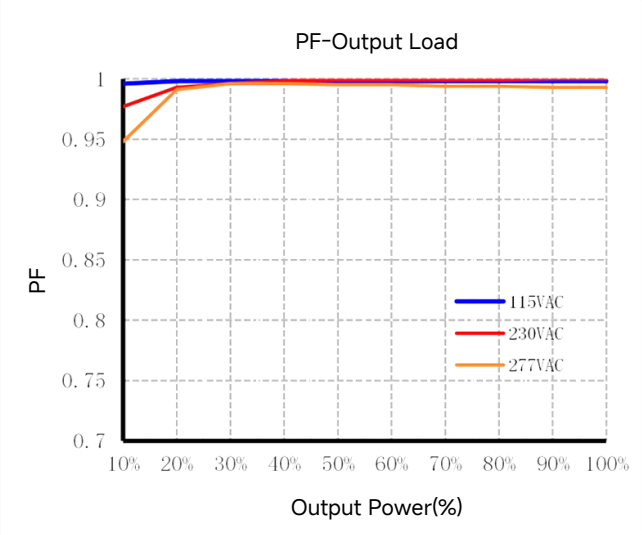


Note: For input voltages of 85~115VAC/120~162VDC, it is necessary to perform input voltage derating on the basis of temperature derating.

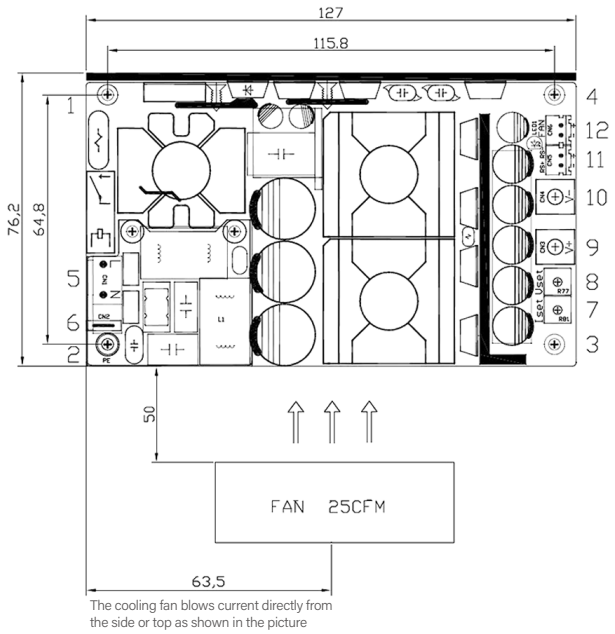




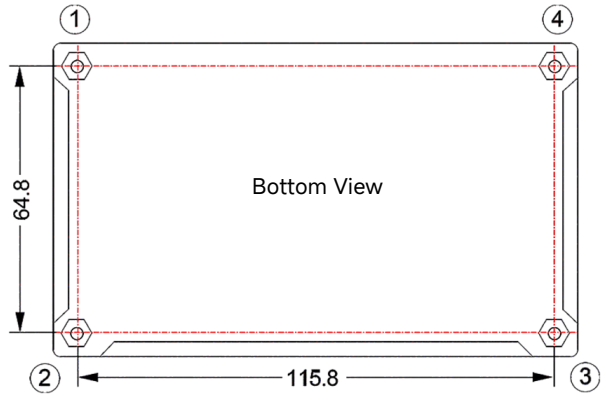


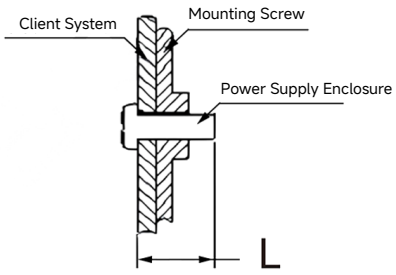


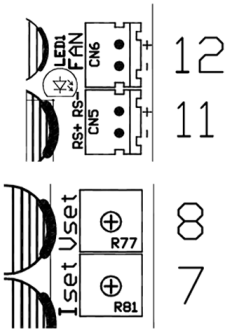
Mechanical Dimensions



The cooling fan blows current directly from the side or top as shown in the picture



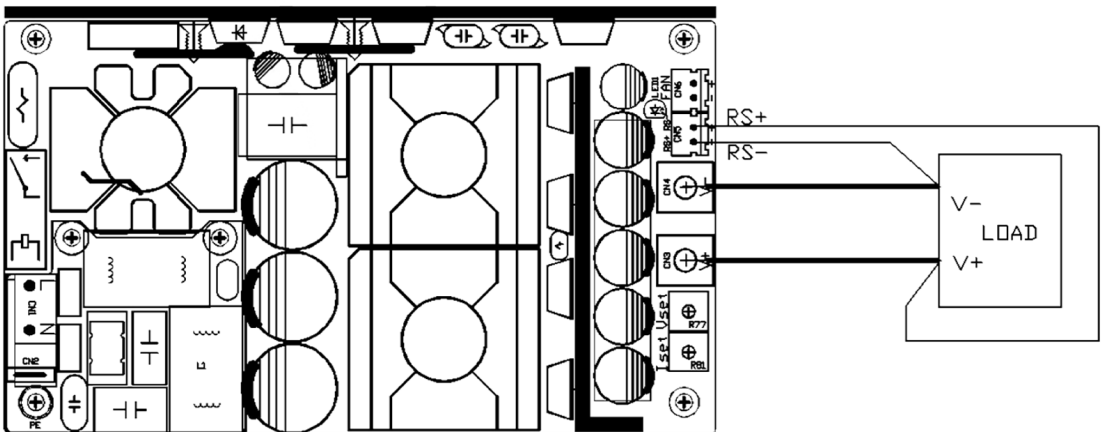




No.	Function	Client Connector
1,2,3,4	Mounting Hole Position	M3 screw, bottom mount
5	Input Terminal	JST SVH-21T-P1.1 or equivalent
6	Ground Terminal	JST SPS-21T-250 or equivalent
7	Adjustable Resistor	(Adjust the output voltage)
8	Adjustable Resistor	(Adjust the output voltage)
9	Output Positive	
10	Output Negative	
11	Remote Sensing Terminal	XH2.54-2P male connector or equivalent
12	Fan Terminal	XH2.54-2P male connector or equivalent

Mounting position	Screw specification	L (recommended)	Torque (Max)
①~④	M3	2MM	0.4N·m

Additional Aluminum Plate Installation Instructions:To comply with the derating curve, under natural cooling conditions, the power supply must be installed on an aluminum plate (or a chassis with an equivalent surface area). Aluminum Plate Specifications: 300 × 300 × 2 mm.
Heat Dissipation Optimization: The surface of the aluminum plate must be smooth or coated with thermal grease to enhance heat conduction.The power supply must be mounted tightly against the aluminum plate, positioned at the center of the plate.



Notes:

1. RS+ and RS- must not be shorted or connected in reverse, as this will damage the power supply.
2. When using remote sensing, ensure that the wire voltage drop includes the voltage drop of both positive and negative output terminals. This voltage drop should not exceed 1V. To reduce voltage drop, use thicker or shorter cables as necessary.
3. If remote sensing is not used, the signal terminals must be connected using dual wires to the load to maintain proper functionality.

This electronic device must not be disposed of in the household waste at the end of its service life. For your return, there are free collection points for electrical appliances and, if necessary, additional points of acceptance for the reuse of the devices in your area.The addresses an be obtained from your city or cummunal administration. If the old electrical or electronic device contains personal data, you are esponsible for deleting it before you return it. Further information: www.elektrogesetz.de