

Features

- Open-frame design, compact and thin size: 4*2*0.7inches
- Wide input voltage range: 85-264VAC/120-370VDC
- Natural cooling: 120W
- Fan assisted cooling(10CFM): 180W
- Operating temperature: -25°C~+70°C
- Isolation voltage: 4000VAC
- Active PFC function
- LED indicator light
- Output voltage adjustment
- High reliability, long lifespan, 3-year warranty
- Protection: Input undervoltage, output short circuit, overcurrent, overvoltage, overtemperature

Product Description

The TPS-GSH180Sxx series is a 180W output, AC or DC input switch-mode power supply. It supports an input voltage range of 85-264VAC or 120-370VDC, and provides output voltages of 12V, 19V, 24V, 36V, and 48V. With an efficiency of up to 94%, it can operate stably in environments ranging from -25°C to +70°C. This series has comprehensive protection features. It complies with international safety regulations and is suitable for industrial automation machinery, industrial control systems, communication equipment, LED lighting, smart home systems, electronic instruments, and medical equipment.

Specifications

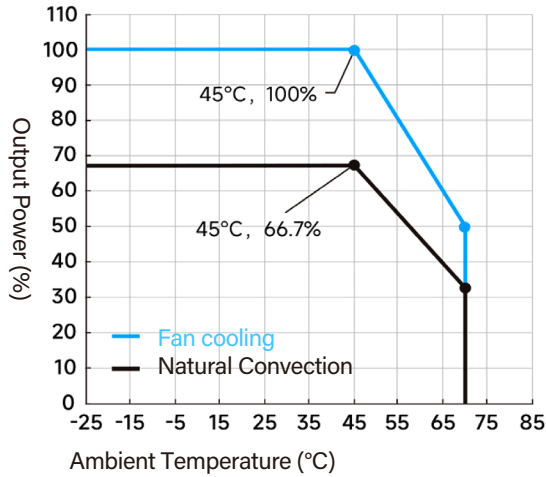
Model	Cooling Method	Output Power*	Rated Output Voltage Current (Vo/Io)	Adjustable Voltage Range ADJ(V)	Input Voltage Range	Input Current	Efficiency (Typ.)*	Max Capacitive Load at Room Temperature
TPS-GSH180S-12V	Natural Cooling	100W	12V/8.34A	11.4~12.8	85~176VAC	<2A	92%	10000uF
	10CFM	150W	12V/12.5A				91%	
	Air Cooling	120W	12V/10A		176~264VAC	<1A	94%	
	10CFM	180W	12V/15A				93%	
TPS-GSH180S-19V	Natural Cooling	100W	19V/5.27A	18~20.9	85~176VAC	<2A	92%	5000uF
	10CFM	150W	19V/7.9A				91%	
	Air Cooling	120W	19V/6.32A		176~264VAC	<1A	94%	
	10CFM	180W	19V/9.48A				93%	
TPS-GSH180S-24V	Natural Cooling	100W	24V/4.17A	22.8~27	85~176VAC	<2A	92%	4000uF
	10CFM	150W	24V/6.25A				91%	
	Air Cooling	120W	24V/5A		176~264VAC	<1A	94%	
	10CFM	180W	24V/7.5A				93%	
TPS-GSH180S-36V	Natural Cooling	100W	36V/2.78A	33-39	85~176VAC	<2A	92%	3000uF
	10CFM	150W	36V/4.17A				91%	
	Air Cooling	120W	36V/3.34A		176~264VAC	<1A	94%	
	10CFM	180W	36V/5A				93%	
TPS-GSH180S-48V	Natural Cooling	100W	48V/2.08A	45.6~54	85~176VAC	<2A	92%	2000uF
	10CFM	150W	48V/3.13A				91%	
	Air Cooling	120W	48V/2.5A		176~264VAC	<1A	94%	
	10CFM	180W	48V/3.75A				93%	

Note: *1*In any steady-state condition, the total output power should not exceed the rated power. When the output voltage is adjusted upwards, the total output power must not exceed the rated output power. If the output voltage is adjusted upwards beyond 5% of the rated voltage, the output power should be reduced to 80% of the rated power. When the output voltage is adjusted downwards, the output current must not exceed the rated current.

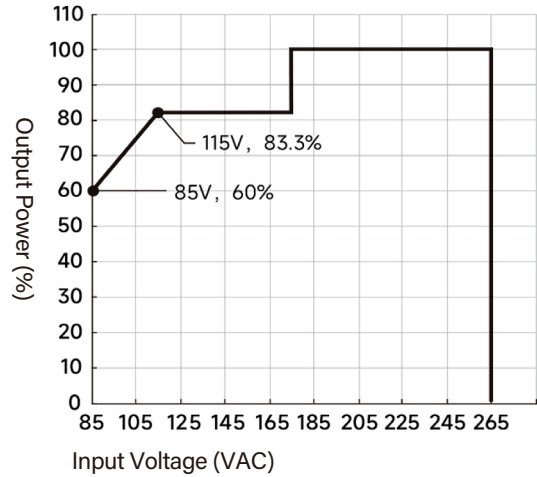
Electrical Specifications							
Model		TPS-GSH180S-12V	TPS-GSH180S-19V	TPS-GSH180S-24V	TPS-GSH180S-36V	TPS-GSH180S-48V	
Output	Rated voltage	12V	19V	24V	36V	48V	
	Current range(Natural cooling)	0-10A	0-6.32A	0-5A	0-3.34A	0-2.5A	
	Current range(10CFM Fan cooling)	0-15A	0-9.48A	0-7.5A	0-5A	0-3.75A	
	Output power(Natural cooling)	120W	120w	120w	120W	120W	
	Output power(Fan cooling)	180W	180W	180W	180W	180W	
	Voltage adjustment range (Adjustable Resistor)	11.4~12.8V	18~20.9V	22.8~27V	33~39V	45.6~54V	
	Voltage ripple	<60mVp-p	<100mVp-p	<100mVp-p	<100mVp-p	<100mVp-p	
	Efficiency		90%/92%(115VAC/230VAC,Min)				
			92%/94%(115VAC/230VAC,Typ)				
	Voltage accuracy		± 1%				
	Voltage overshoot		<5%				
	Line regulation		± 0.5%				
	Load regulation		± 1%				
	Start-up time		0.5S(Typ)				
	Rise time		10ms(Typ)				
Hold time		10ms(Typ)115/230VAC, full load					
Input	Rated voltage	100-240VAC					
	Voltage range	85-264VAC,120-370VDC(Refer to the input voltage derating curve)					
	Input frequency	Rated frequency50/60Hz,operating range 47-63Hz					
	Power factor	>0.98(115VAC full load);>0.95(230VAC full load)					
	Input current(Max)	2A/115VAC,1A/230VAC					
	No-load power consumption(Max)	≤0.5W					
	Inrush current(Max)	cold start: 40A/120VAC,75A/240VAC					
	Leakage current(Max)	0.1mA/240VAC					
Protection	Input undervoltage protection	60-82VAC ± 10%					
	Output overcurrent protection	110%-180% of rated output current, hiccup mode, automatic recovery					
	Output overvoltage protection	110%-125% of rated output voltage, output shuts off, restart to recover					
	Output short-circuit protection	Hiccup mode, automatic recovery after short-circuit removal					
	Overtemperature protection	Output shuts off, automatic recovery after temperature decreases					
Environment	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	I/P-O/P:4000VAC,I/P-FG:1500VAC,O/P-FG:1500VAC					
	Insulation resistance	I/P-O/P,I/P-FG,O/P-FG:>100M Ohm/500VDC					
Physical properties	Standard dimensions	LxWxH: 101.6X50.8X17.8mm					
	With Aluminum plate dimensions	LxWxH: 101.6X50.8X20.3mm					
	Standard weight	135 ± 10g					
	With Aluminum plate weight	165 ± 10g					
	Cooling method	Natural cooling / 10CFM,refer to product characteristic curve for cooling and power derating					
<p>Note: 1. *Unless otherwise specified, all typical values are measured at 230VAC and 25°C.</p> <p>2. *Ripple and noise testing method: connect a 0.1μF ceramic capacitor and a 47μF electrolytic capacitor in parallel at the output, using an oscillo scope with a 20MHz bandwidth.</p>							

Product Characteristic Curves

• Temperature-Load Derating Curve

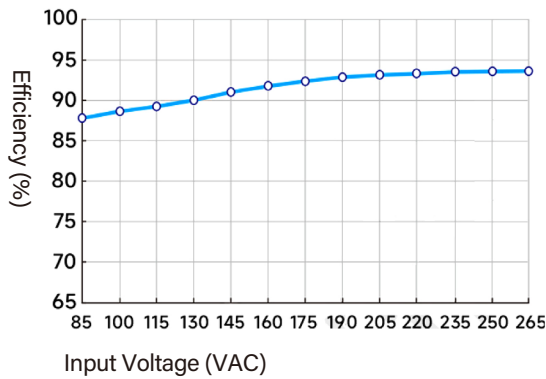


• Input Voltage-Output Power Curve

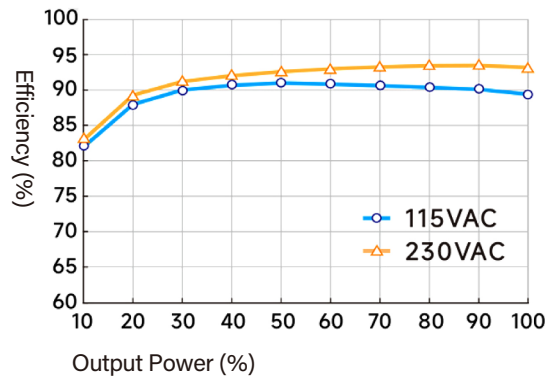


Note: For input voltage 85-115VAC, the input voltage should be derated based on temperature derating.

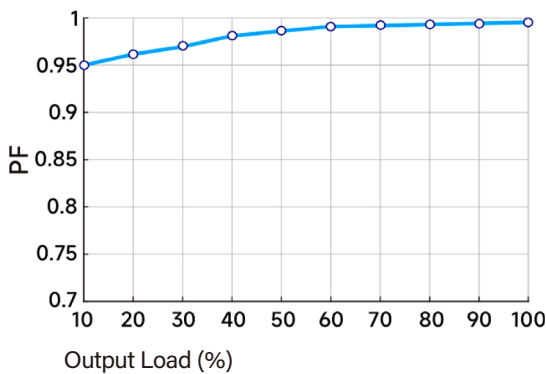
• Efficiency-Input Voltage



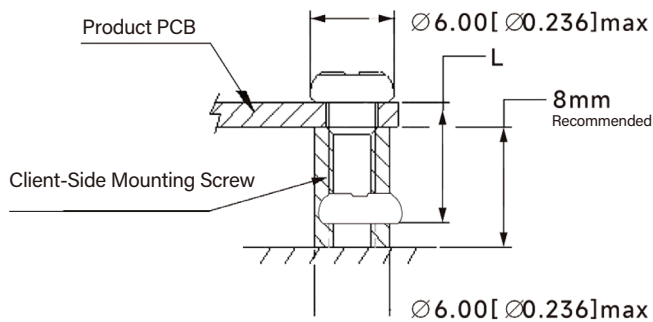
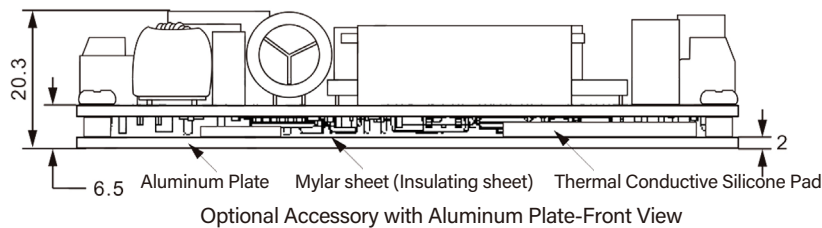
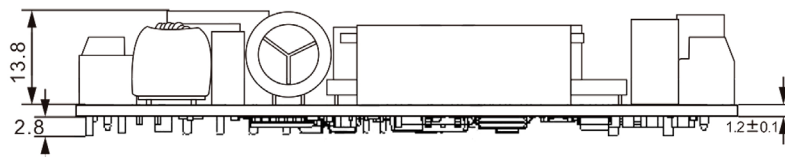
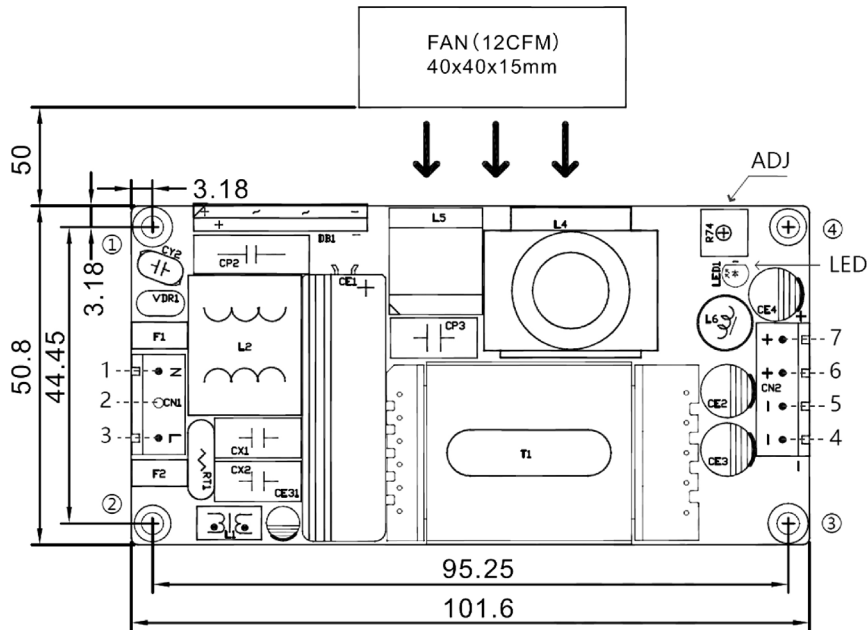
• Efficiency-Output Load



• PF- Output Load(115VAC)



Mechanical Dimensions




Pin Position		
Pin	Function	Product Connector
1	AC(N)/DC-	DA126-5.0-3P or equivalent
2	NC	
3	AC(L)/DC+	DA126-5.0-4P or equivalent
4、5	-Vo	
6、7	fVo	

Mounting Position	①-④
Screw Specification	M3
L(Recommended)	6mm
Torque(max)	0.4N-m

If the H dimension is too small, thermal silicone pads can be added at the bottom of the product to improve temperature rise

- Units: mm [inch] ADJ: Output Adjustable Resistance
- Dimension Tolerance: $\pm 0.5\text{mm}$
- Please do not use the fan power supply to power other devices.
- The layout and reference numbers for power supply are for reference only, based on the actual physical product.

 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 can be obtained from your city or communal administration. If the old electrical or electronic device contains personal data, you are responsible for deleting it before you return it. Further information: www.elektrogesetz.de