

ZPS-150
ZPS-200
ZPS-300
ZPS-400



Featuring:

- Models rated at 150 W, 200 W, 300 W and 400 W continuous power (180 W, 240 W, 360 W and 480 W peak power respectively)
- An auto-ranging input (ZPS-150 A, 200 A) or jumper selectable input (ZPS-300 A, 400 A) or power factor corrected, wide range input (ZPS-300 AP, 400 AP) for 115 V or 230 V, 47-65Hz, single phase AC
- Typical power factor of 0.99 (ZPS-300 AP, 400 AP)
- Four independently isolated and regulated outputs
- Wide range of adjustability on auxiliary outputs (up to 3.3:1)
- Up to 50% greater peak currents on auxiliary outputs
- Low ripple and noise on all outputs
- Typical 70%-75% efficiency
- Meets international safety requirements
- Meets international Class B EMI requirements (except for ZPS-300 AP which meets Class A)
- DC Power good signal
- Remote start (Enable) and remote sense features
- Optional cover available
- Medically approved version available

STANDARD ZPS SERIES

MODEL	PWR	PFC	OUTPUT #1	OUTPUT #2	OUTPUT #3	OUTPUT #4
ZPS-150A	150	NO	4.75V To 5.25V @ 2A To 20A	11.5V To 25.2V @ 0.3A To 3A/4.5A pk	9.5V To 15.8V @ 0.3A To 4A/5A pk	4.75V To 12.6V @ 0.2A To 2A
ZPS-200A	200	NO	4.75V To 5.25V @ 3A To 30A	11.5V To 25.2V @ 0.4A To 4A/6A pk	9.5V To 15.8V @ 0.4A To 5A/6A pk	4.75V To 12.6V @ 0.2A To 2A
ZPS-300A	300	NO	4.75V To 5.25V @ 4.5A To 45A	11.5V To 25.2V @ 0.6A To 6A/9A pk	4.75V To 15.8V @ 0.8A To 8A/12A pk	4.75V To 15.8V @ 0.4A To 4A/6A pk
ZPS-300AP		YES	4.75V To 5.25V @ 5.5A To 55A	11.5V To 25.2V @ 0.7A To 7A/10.5A pk	4.75V To 15.8V @ 1A To 10 A/15A pk	4.75V To 15.8V @ 0.6A To 6A/9A pk

Flexibility is the key word for these models. Since all four outputs are independently isolated and regulated, they can be connected as required to meet the needs of the system. Outputs can be connected in either polarity or stacked to obtain greater voltages.

An outstanding feature of these models is the wide range adjustability of the auxiliary outputs (up to 3.3:1). The user can adjust the auxiliary outputs to meet almost any combination of voltage requirements from 4.75 V to 25.2 V. Most of the models provide a wide input range

for operation anywhere in the world.

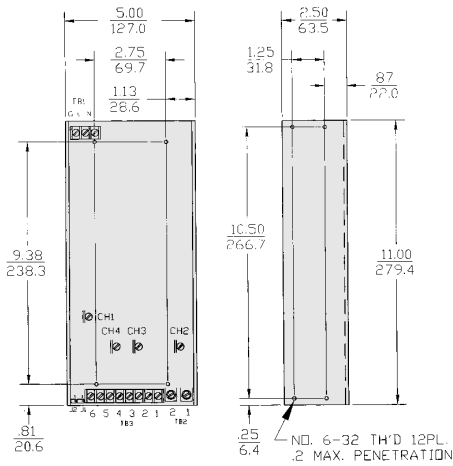
Two of the models feature power factor corrected inputs to meet the international standards for input current harmonics. All models are fully approved to international safety and EMI standards (including the CE low voltage directive), simplifying approvals at the system level.

All models feature highly reliable designs to ensure years of trouble free operation.

150, 200 WATTS
11" x 5" x 2.5"
ZPS-150A, 200A, 250A, 300A

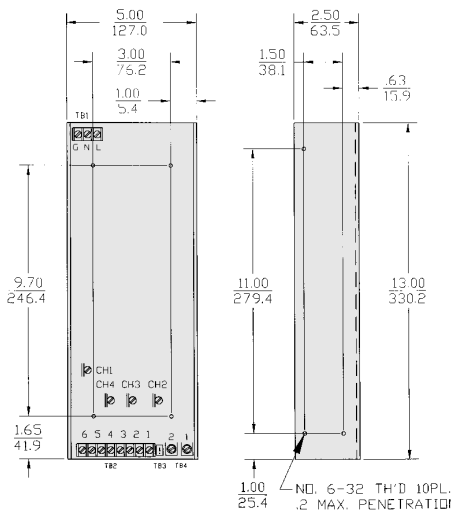
300, 400 WATTS (PFC AVAILABLE)
13" x 6" x 2.5"
ZPS-400A

ZPS-150A, 200A
4.0 lbs - 1.8 kgs

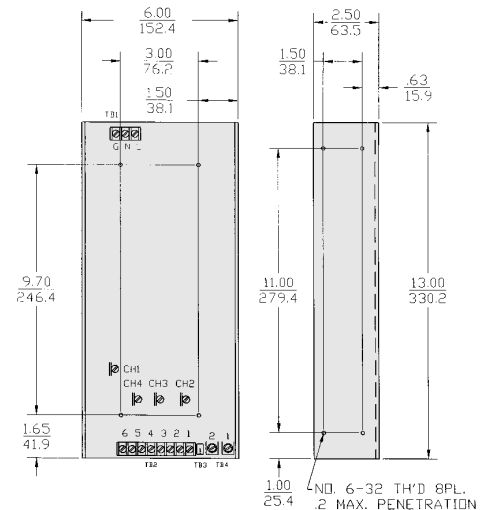


Dimensions: Inches
Millimeters

ZPS-250A, 250AP, 300A, 300AP
5.0 lbs - 2.3 kgs



ZPS-400A, 400AP
7.0 lbs - 3.2 kgs



SPECIFICATIONS: ALL MODELS

INPUT

AC Input: Auto-ranging (ZPS-150A & 200A) or Jumper selectable (ZPS-300 A & 400 A) or power factor corrected wide range (ZPS-300AP & 400AP)- input for 115 V or 230 Vac, 47-65Hz internally fused with appropriate fuses (6A-10A)

Power Factor: Typical 0.99 for ZPS-300AP & 400AP. Meets EN 61000-3-2.

Inrush: Cold start AC current is less than 70 A peak for one half cycle of applied power at 230 Vac, limited by a thermistor.

Brownout Protection: Holds regulation to 85 Vac.

Hold-up Time: 20 ms @ after removal of power at nominal line and full load.

Efficiency: 70%-75% typical

OUTPUT

Adjustability: Output #1 is adjustable $\pm 5\%$. Wide range on auxiliary outputs up to 3.3:1 (see table).

Line Load Cross Regulation: $\pm 0.6\%$ on all outputs, over AC input range and loads within the ranges specified in the table.

Ripple & Noise: Less than 1% p-p on all outputs.

Remote Sense Compensates for 250 mV total line drop. Open sense lead protection.

Temperature Coefficient: 0.03% per degree C.

Stability: 0.1% over 8 hours after 30 minutes warm up.

Transient Response: Output voltage returns to within 1% in less than 500 μ Sec for a 25% load change. Peak transient does not exceed 3%.

Overload Protection: All outputs protected against short circuit. Input cycling off/on is required to reset latched-off protection mode.

Overvoltage Protection (Output #1): Protects against power supply induced overvoltage. Trip point is factory set so that the output does not exceed 6.4 V.

Peak output Current: Peak current should be limited to a maximum of 15 seconds.

Enable: TTL level "0" or contact closure to the ve-sense line inhibits DC outputs.

DC Power Good: Provides a TTL level "1" when output #1 is above 4.6 V nominal.

ENVIRONMENTAL

Thermal Protection: Automatic shutdown if power supply temperature exceeds 90° C.

Temperature Range: 0° C to 40° C at full ratings. Output power linearly derated by 1.7% per deg. C over 50° C to 70° C.

Safety Agencies: UL 1950, CSA C 22.2 234 level 5, VDE 0805 /EN 60950, CE marking to low voltage directive.

Conducted EMI: All models except ZPS-300AP, meet FCC Part 15 Subpart J, Class B, VDE 0871/B, EN 55022/B. ZPS-300AP meets Class A.

Output Isolation: Isolated from ground at 50 Vdc.

Cooling: 5 CFM ZPS-150, 15 CFM ZPS-200, 25 CFM ZPS-300 & 300AP, 30 CFM ZPS-400, 35 CFM ZPS-400AP. Forced air required to achieve full ratings.

OPTIONS:

Option "C": Available with an enclosed cover

Option "M": Intended for MEDICAL APPLICATIONS Approved to UL 544, IEC 601/VDE 0750 safety and MDS-201-0004 EMI. Leakage Current is less than 500 μ A.

Option "AP": For 300 watt and 400 watt power supplies, Power Factor corrected.

Consult factory for other available options.

AC INPUT (90-264 VAC Continuous Range Except ZPS-300A, 400A which require input jumpers to be set for 115V or 230V)

FUNCTION	ZPS-150A & ZPS-200A		ZPS-300A, 300AP ZPS-400A, 400AP		CONNECTOR
	115V	230V	115V	230V	
TB1-(1)	Neutral	Line 2	Line	Line 1	Barrier strip #6-32 screws 0.375" centers
TB1-(2)	Line	Line 1	Neutral	Line 2	
TB1-(3)	Safety Ground		Safety Ground		

DC OUTPUT

FUNCTION	MODEL	LOCATION	NOTES	CONNECTOR
Output #1	ZPS-150A & ZPS-200A	TB2-1	4.75V-5.25V	Bus bars #8-32 screws
		TB-22	Rtn (Isolated)	
	ZPS-300A/AP & 400A/AP	TB4-1	4.75V-5.25V	
		TB4-2	Rtn (Isolated)	
Output #2	ZPS-150A & ZPS-200A	TB3-1	11.5V-25.2V	Barrier Strip #6-32 Screws .375" centers
		TB3-2	Rtn (Isolated)	
	ZPS-300A/AP & 400A/AP	TB2-3	11.5V-25.2V	
		TB2-4	Rtn (Isolated)	
Output #3	ZPS-150A & ZPS-200A	TB3-3	9.5V-15.8V	
		TB3-4	Rtn (Isolated)	
	ZPS-300A/AP & 400A/AP	TB2-5	4.75V-15.8V	
		TB2-6	Rtn (Isolated)	
Output #4	ZPS-150A & ZPS-200A	TB3-5	4.75V-12.6V	
		TB3-6	Rtn (Isolated))	
	ZPS-300A /AP & 400A/AP	TB2-7	4.75V-15.8V	
		TB2-8	Rtn (Isolated)	

STATUS AND CONTROL

FUNCTION	MODEL	LOCATION	NOTES	CONNECTOR
Enable	ZPS-150A & ZPS-200A	J1-1	Enable	Molex Part # 22-23-2041 Mates with Molex Part # 22-01-3047
		J1-2	Output #1 Rtn	
	ZPS-300A/AP & ZPS-400A/AP	J3-1	Enable	
DC Power Good	ZPS-150A & ZPS-200A	J3-2	Output #1 Rtn	
		J1-4	DC Power Good	
	ZPS-300A/AP & ZPS-400A/AP	J1-3	Output #1 Rtn	
		J3-4	DC Power Good	
Remote Sense	ZPS-150A & ZPS200A	J2-2	Output #1 Sense+	
		J2-1	Output #1 Sense-	
	ZPS-300A/AP & ZPS-400A/AP	TB2-1	Output #1 Sense+	
		TB2-2	Output #1 Sense-	