

## **HDP-600 Series** 600 Watt Embedded Power Supply

## Features

- Universal AC input range
- Built-in Active PFC function, PF > 0.96 •
- Using ZVS technology to reduce power dissipation.
- · Built in fan speed control and over temp. protection
- Built in AC inrush current limiting circuit (<20A)
- Built in constant current limiting circuit
- Built in Remote Sense Function

- · Built in DC OK signal
- · Wide operating ambient temperature (-30°C ~ 70°C)
- 1U low profile, 41mm
- 3 year warranty



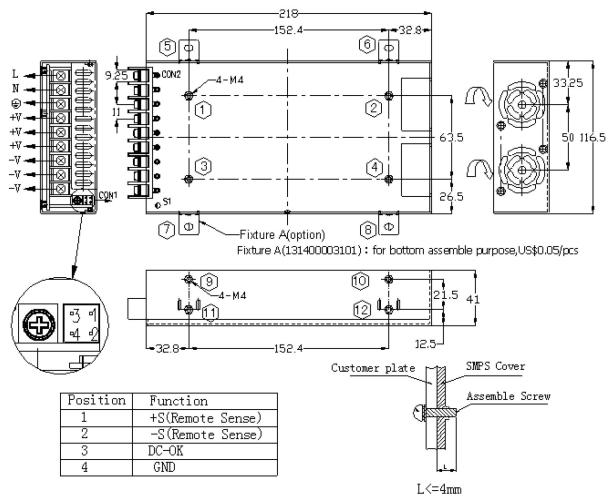
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Dutput d Current (100 ~ 12 d Current (128~ 264 e and Noise TE 2) ge ADJ. Range ge Accuracy Regulation Regulation p Time up Time up Time verature Coefficient shoot and Undersho ge Range uency Range ency (Typical) current (Max.)	Vac) 0 ~ 70°C -30°C	12V 34A 42A 120mV 180mV -5% ~ +10% of rate ±2.0% ±0.5% ±1.0% < 1.5S (230Vac inp > 16mS (230Vac in ±0.05%/°C < 5.0% 90Vac ~ 264Vac 47Hz - 63Hz	ed output vol	±2.0% ±0.5% ±1.0% ) < 3S (115Vac input	36V 14A 17.5A 150mV 150mV ±2.0% ±0.5% ±1.0% t, Full Ioad)	48V 11A 13.6A 200mV 200mV ±2.0% ±0.2% ±1.0%		
d Current (128~ 264 e and Noise E 2) ge ADJ. Range ge Accuracy Regulation p Time up Time up Time perature Coefficient shoot and Undersho ge Range uency Range ency (Typical)	Vac) 0 ~ 70°C -30°C	42A 120mV 180mV -5% ~ +10% of rate ±2.0% ±0.5% ±1.0% < 1.5S (230Vac inp > 16mS (230Vac in ±0.05%/°C < 5.0% 90Vac ~ 264Vac	ed output vol	26.5A 150mV 150mV ttage ±2.0% ±0.5% ±1.0% ) < 3S (115Vac input	17.5A 150mV 150mV ±2.0% ±0.5% ±1.0%	13.6A 200mV 200mV ±2.0% ±0.2%		
e and Noise E 2) ge ADJ. Range ge Accuracy Regulation p Time up Time up Time perature Coefficient shoot and Undersho ge Range uency Range ency (Typical)	0~70°C -30°C	120mV 180mV -5% ~ +10% of rate ±2.0% ±0.5% ±1.0% < 1.5S (230Vac inp > 16mS (230Vac in ±0.05%/°C < 5.0% 90Vac ~ 264Vac	ed output vol out, Full load	150mV 150mV Itage ±2.0% ±0.5% ±1.0% ) < 3S (115Vac input	150mV 150mV ±2.0% ±0.5% ±1.0%	200mV 200mV ±2.0% ±0.2%		
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Regulation p Time up Time berature Coefficient shoot and Undersho ge Range Jency Range ency (Typical)	pot	±1.0% < 1.5S (230Vac inp > 16mS (230Vac in ±0.05%/°C < 5.0% 90Vac ~ 264Vac	out, Full load)	±1.0% ) < 3S (115Vac input	±1.0%			
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ge Range Jency Range ency (Typical)	pot	90Vac ~ 264Vac						
uency Range ency (Typical)								
ency (Typical)		47Hz – 63Hz		90Vac ~ 264Vac				
		47Hz – 63Hz						
urrent (Max.)		88%		89%	90%	90%		
anone (max.)		< 7A						
sh Current (Typical)		< 20A@120Vac Cold Start						
eakage Current		Input – output: ≤ 0.1mA Input – PG: ≤ 0.75mA						
Load		110% ~ 135% of rated output current, constant current						
Temperature		105°C + 5°C (detect on Mosfet temperature); shut down, auto recovery at 75°C						
Voltage		110% ~ 150% of rated voltage, constant voltage						
t Circuit		Long-term mode, constant current, auto recovery						
ating Ambient Temp	o. & Hum.	-30°C ~ 70°C; 20% ~ 90%RH No Condensing (refer to the derating curve)						
Storage Temp. & Hum.		-40°C ~ 85°C; 10% ~ 95%RH No Condensing						
FETY & EMC Safety Standards OTE 3) Withstand Voltage		UL60950-1 2nd Ed; IEC 60950-1:2005 2nd Ed; EN60950-1: 2006						
Withstand Voltage		Primary – Secondary: 3.0KVac; ≤10mA Primary – PG: 1.5KVac; ≤10mA Secondary – PG: 0.5KVac; ≤10mA						
solation Resistance		≥100M ohms						
Conduction & Radia	tion	Compliance to EN55022, Class B						
onic Current		Compliance to EN61000-3-2, Class D						
Immunity		Compliance to EN61000-4-2,3,4,5,6,8,11; heavy industry level						
MTBF (MIL-HDBK-217F)		More than 200,000Hrs (25°C, Full load)						
nsion (L*W*H)		218 x 116.5 x 41 mm						
ing		6PCS/CTN, 8.7KGS, 0.04CBM						
ng Method		Forced air cooling (	(Built-in fan)					
a L T V ( ( a a a a a a a a a a a a a	ge Current oad Temperature /oltage Circuit ting Ambient Temp je Temp. & Hum. Standards and Voltage on Resistance onduction & Radia onic Current mmunity (MIL-HDBK-217F) ision (L*W*H) 19 g Method parameters NOT spasured at 20MHz o	ge Current oad Temperature /oltage Circuit ting Ambient Temp. & Hum. je Temp. & Hum. Standards and Voltage on Resistance onduction & Radiation onic Current mmunity (MIL-HDBK-217F) ision (L*W*H) 19 g Method parameters NOT specially mentione asured at 20MHz of bandwidth by us	ge CurrentInput – output: $\leq 0$ oad $110\% \sim 135\%$ of raTemperature $105^\circ$ C + $5^\circ$ C (detect/oltage $110\% \sim 150\%$ of raCircuitLong-term mode, ofting Ambient Temp. & Hum. $-30^\circ$ C $\sim 70^\circ$ C;StandardsUL60950-1 2nd Edand VoltagePrimary – Secondaton Resistance $\geq 100M$ ohmsonduction & RadiationCompliance to ENSonduction & RadiationCompliance to ENS(MIL-HDBK-217F)More than 200,000ision (L*W*H)218 x 116.5 x 41 mng6PCS/CTN, 8.7KGg MethodForced air coolingasured at 20MHz of bandwidth by using a 12" twisted parameters NOT specially mentioned are measured at ra	ge CurrentInput – output: $\leq 0.1 \text{mA}$ Input.oad110% ~ 135% of rated output cTemperature105°C + 5°C (detect on Mosfet/oltage110% ~ 150% of rated voltage,CircuitLong-term mode, constant curting Ambient Temp. & Hum30°C ~ 70°C; 20% ~ 90% fye Temp. & Hum40°C ~ 85°C; 10% ~ 95% fStandardsUL60950-1 2nd Ed; IEC 60950and VoltagePrimary – Secondary: 3.0KVaconduction & RadiationCompliance to EN55022, Classonduction & RadiationCompliance to EN61000-3-2, CmmunityCompliance to EN61000-4-2,3,(MIL-HDBK-217F)More than 200,000Hrs (25°C, Fision (L*W*H)218 x 116.5 x 41 mmog6PCS/CTN, 8.7KGS, 0.04CBMg MethodForced air cooling (Built-in fan)parameters NOT specially mentioned are measured at rated input, rasured at 20MHz of bandwidth by using a 12" twisted pair-wire term	ge CurrentInput – output: $\leq 0.1mA$ Input – PG: $\leq 0.75mA$ .oad110% ~ 135% of rated output current, constant currentTemperature105°C + 5°C (detect on Mosfet temperature); shut/oltage110% ~ 150% of rated voltage, constant voltageCircuitLong-term mode, constant current, auto recoveryting Ambient Temp. & Hum30°C ~ 70°C; 20% ~ 90%RHNo Condensge Temp. & Hum40°C ~ 85°C; 10% ~ 95%RHNo CondensStandardsUL60950-1 2nd Ed; IEC 60950-1:2005 2nd Ed; ENand VoltagePrimary – Secondary: 3.0KVac; ≤10mA Primary – Fon Resistance≥100M ohmsonduction & RadiationCompliance to EN55022, Class Bonduction & RadiationCompliance to EN61000-3-2, Class DmmunityCompliance to EN61000-4-2,3,4,5,6,8,11; heavy in(MIL-HDBK-217F)More than 200,000Hrs (25°C, Full load)ision (L*W*H)218 x 116.5 x 41 mmrg6PCS/CTN, 8.7KGS, 0.04CBMg MethodForced air cooling (Built-in fan)oarameters NOT specially mentioned are measured at rated input, rated load and 25°Casured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF	ge CurrentInput – output: $\leq 0.1mA$ Input – PG: $\leq 0.75mA$ .oad $110\% \sim 135\%$ of rated output current, constant currentTemperature $105^{\circ}C + 5^{\circ}C$ (detect on Mosfet temperature); shut down, auto recovery at 75%/oltage $110\% \sim 150\%$ of rated voltage, constant voltageCircuitLong-term mode, constant current, auto recoveryting Ambient Temp. & Hum. $-30^{\circ}C \sim 70^{\circ}C$ ; $20\% \sim 90\%$ RHNo Condensing (refer to the derating current), & Hum. $-40^{\circ}C \sim 85^{\circ}C$ ; $10\% \sim 95\%$ RHNo CondensingVL60950-1 2nd Ed; IEC 60950-1:2005 2nd Ed; EN60950-1: 2006and VoltagePrimary – Secondary: $3.0KVac$ ; $\leq 10mA$ Primary – PG: $1.5KVac$ ; $\leq 10mA$ Secondor Resistance $\geq 100M$ ohmsCompliance to EN55022, Class Bonduction & RadiationCompliance to EN61000-3-2, Class DmmunityCompliance to EN61000-3-2, Class D(MIL-HDBK-217F)More than 200,000Hrs ( $25^{\circ}C$ , Full load)sion (L*W*H) $218 \times 116.5 \times 41$ mmng $6PCS/CTN, 8.7KGS, 0.04CBM$		

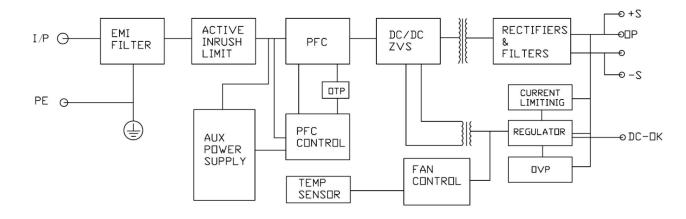


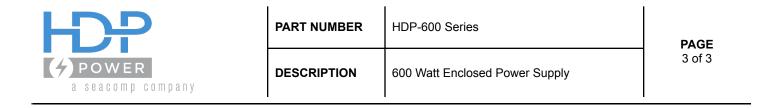
Mechanical Specification

Unit: mm (Tolerance is ±1mm)



Block Diagram





## **Derating Curve**

