HVP300 SERIES

300 Watt 12VDC Output Models

- 9.45 x 2.15 x 1.57" Hot-Swap Package

Features:

- Universal AC Input Range (90-264 VAC)
- Active Power Factor Correction (0.98 PF Typical)
- Hot-Swap / N+1 Redundant Operation
- Analog / I²C / PMBus Interface for Status & Control
- Front Panel LED Indicators
- Class B Emissions
- 2 Year Warranty

INPUT:

Input Voltage	90~264 VAC (Universal AC Input)
Input Frequency	47-63Hz
Inrush Current	13Arms @ 230 VAC Cold Start
Input Current	2.9 / 1.4A @ 115 / 230 VAC
Input Protection	Single Fuse
Hold-Up Time	8ms Minimum @ 115 VAC Minimum
Leakage Current	<800 µA @ 230 VAC Maximum
Power Factor	EN61000-3-2 (0.99 PF Typical)
No Load power	8 Watt Typical

GENERAL:

Efficiency	93% @ 230 VAC / Full Load
Operating Temperature	-10-70°C, derate linearly to 60% load at 50-70°C
Storage Temperature	-40°C to +85°C
Over-Temp Protection	Auto-Recovery
Cooling	Internal Ball Bearuing Fans
Operating Humidity	5-90% RH, Non-Condensing
Vibration	5 ~ 50 Hz, acceleration 7.35 m/s*s on X,Y and Z Axis
MTBF	>100k Hrs (according to MIL-HBK-217F) at 30°C

OUTPUT:

Adjustment Range	Via I²C / RxTx Interface
Minimum Load	none required
Line Regulation	±1%
Load Regulation	±1% (5VSB = ±5%)
Ripple & Noise	±1% pk-pk @ 20MHz
Overload Protection	120-135% of max power (Foldback)
Over Voltage	Latching before 130% of nominal
Short Circuit Protection	Trip without damage & auto-recovery
Transient Response	recovers <2ms following a 25% load change
Switching Frequency	55KHz

EMC:

Electrostatic Discharge	EN61000-4-2, ±4KV Contact / ±8KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, ±2KV
Surges	EN61000-4-5, ±2KV Line-Earth, ±1KV Line-Line
Conducted Immunity	EN61000-4-6, 0.15-800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-100, 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% reduction, 5s
Fluctuations & Flicker	EN61000-3-3

STATUS / CONTROL:

5VSB	500mA (Always present and on)
DC Okay	Active Low
Fan Fail	Active Low
Enable	Active Low to Enable
P/S Present	Pull to Low
Current Share	V1 Only
AC Fail	Active Low

APPROVALS:

Emissions	EN55022 "B", FCC Part 15 Subject J Class B
Safety Approvals	IEC 60950-1 Class I

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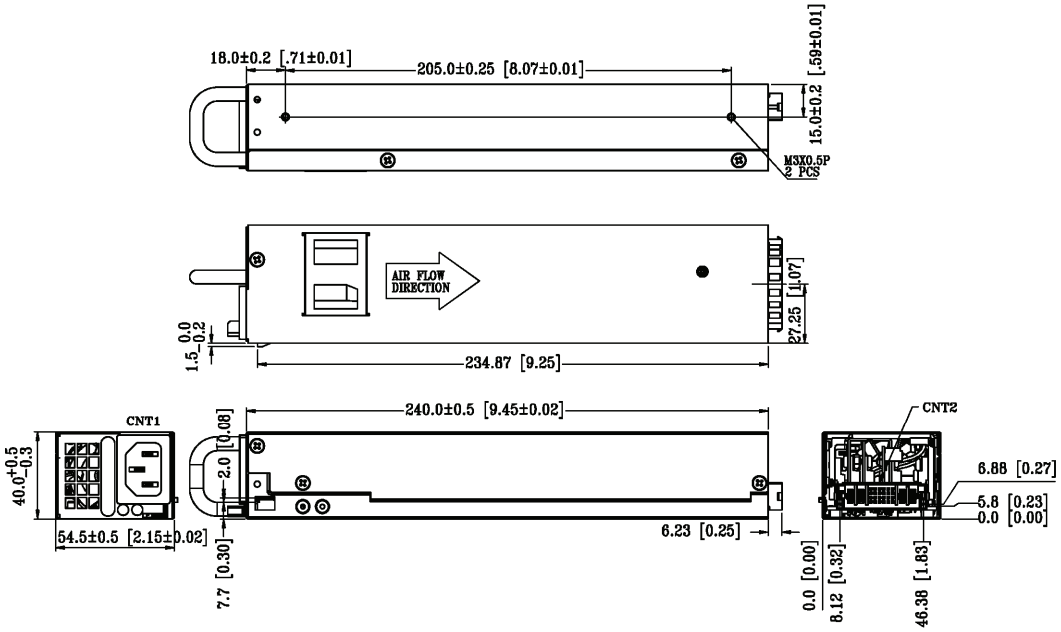
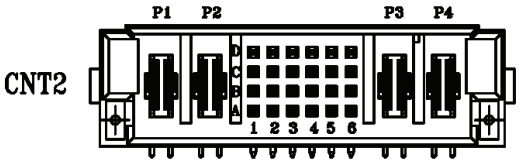
Ouput Specifications:

Model:	V1	Iout	V2	Iout
HVP300-D120E	+12V	25A	+5VSB	0.5A

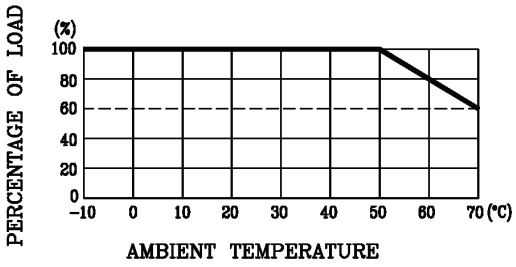
* Maximum Output Power ≤300 Watts

Mechanical Dimensions:





DERATING CHART



INPUT & OUTPUT CONNECTORS PIN ASSIGNMENT

CNT1			CNT2									
L	N	G	P1	P2	D1	D2	D3	D4	D5	D6	P3	P4
LINE	NEUTRAL	GND	VO1	COM	Albet	A2	DGND	5VSb	N/A	N/A	N/A	N/A
					C1	C2	C3	C4	C5	C6		
					PS_PRNT	A1	PS_EN_IN	DCOK_12V_L	N/A	N/A		
					B1	B2	B3	B4	B5	B6		
					12V_CS	A0	PS_EN_OUT	N/A	N/A	N/A		
					A1	A2	A3	A4	A5	A6		
					SCL	SDA	AC_FAIL	FAN_FAL	N/A	N/A		

HVP300 SERIES

80 PLUS Verification and Testing Report

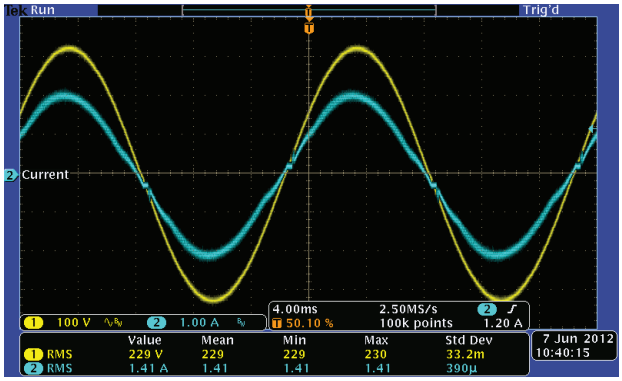
TYPICAL EFFICIENCY (50% Load):	91.11%
AVERAGE EFFICIENCY:	89.51%
80 PLUS COMPLIANT:	YES

Input Current and Voltage Waveforms

Manufacturer	Advanced Power Solutions
Moder Number	HVP300-D120E
Serial Number	N/A
Year	2012
Type	1U
Test Date	7-Jun-12

Rated Specifications	Value	Units
Input Voltage	100~240	Volts
Input Current	1.5	Amps
Input Frequency	50~60	Hz
Rated Output Power	302.5	Watts

Note: All measurements were taken with input voltage at 230V nominal and 50 Hz



Input AC current Waveform (I_{THD} = % , 100% Load)

I RMS A	PF	I THD %	Load %	Fraction of Load	Input Watts	Interbal Fan Power (W)	DC Terminal Voltage(V) / DC Load Current (A)					Output Watts	Efficiency %
							12V	5Vsb	N/A	N/A	N/A		
0.2718	0.6312	22.48	*10%	Low	39.43	0.8	12V / 2.5	5V / 0.05				30.36	79.03%
0.3901	0.7965	18.45	20%	Light	71.54	0.8	12V / 5	5V / 0.1				60.9	86.25%
0.7551	0.9663	10.78	50%	Typical	167.81	1.3	12V / 12.5	5V / 0.25				151.6	91.11%
1.4637	0.9898	3.89	100%	Full	333.33	2.2	12V / 25	5V / 0.5				301.72	91.18%

* 10% load results are for informative purposes only and not included in certification requirements.

** Fan power should be recorded if Fan exists, but is not included in the efficiency calculations.