

HWS300P

SPECIFICATIONS(1/2)

A237-01-01B

ITEMS		MODEL		HWS300P	HWS300P	HWS300P
				-24	-36	-48
1	Nominal Output Voltage		V	24	36	48
2	Average Output Current		A	12.5	8.4	6.3
3	Peak Output Current (*1)	100VAC	A	21	14	10.5
		200VAC	A	42	28	21
4	Average Output Power		W	300	302.4	302.4
5	Peak Output Power (*1)	100VAC	W	504		
		200VAC	W	1008		
6	Efficiency (Typ.) (*2)	100VAC	%	84	84	84
		200VAC	%	87	87	87
7	Input Voltage Range (*3)		-	85 - 265VAC (47 - 63Hz) or 120 - 330VDC		
8	Input Current (100/200VAC)(Typ) (*2)		A	3.6/1.9		
9	Inrush Current(Typ) (*4)		-	20A at 100VAC, 40A at 200VAC		
10	PFHC		-	Designed to meet IEC61000-3-2		
11	Power Factor (100/200VAC)(Typ) (*2)		-	0.99/0.93		
12	Output Voltage Range		V	19.2 - 26.4	28.8 - 39.6	38.4 - 52.8
13	Maximum Ripple & Noise (*5)	0≤Ta≤70°C	mV	150	200	350
		-10≤Ta<0°C	mV	200	250	400
14	Maximum Line Regulation (*6)		mV	96	144	192
15	Maximum Load Regulation (*7)		mV	144	216	288
16	Temperature Coefficient		-	Less than 0.02% / °C		
17	Over Current Protection (*8)	100VAC	A	21.4-	14.3-	10.7-
		200VAC	A	42.8-	28.6-	21.4-
18	Over Voltage Protection (*9)		V	27.6 - 32.4	41.4 - 48.6	55.2 - 64.8
19	Hold-up Time(Typ) (*10)		-	20ms		
20	Leakage Current (*11)		-	Less than 0.75mA. 0.2mA(Typ) at 100VAC / 0.44mA(Typ) at 230VAC		
21	Remote Sensing		-	-		
22	Remote ON/OFF control		-	Possible		
23	Monitoring Signal		-	PF(Open Collector Output)		
24	Parallel Operation		-	-		
25	Series Operation		-	Possible		
26	Operating Temperature (*12)		-	-10 - +70°C (-10 - +50°C:100%,+70°C:50%)		
27	Operating Humidity		-	10 - 90%RH (No dewdrop)		
28	Storage Temperature		-	-30 - +85°C		
29	Storage Humidity		-	10 - 95%RH (No dewdrop)		
30	Cooling		-	Forced Air By Blower Fan 60xl, Exhaust		
31	Withstand Voltage		-	Input - FG : 2.5kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG: 500VAC (100mA), Output-CNT: 100VAC(100mA) for 1min		
32	Isolation Resistance		-	More than 100MΩ Output - FG : 500VDC More than 10MΩ Output -CNT : 100VDC at 25°C and 70%RH		
33	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s ² Constant, X,Y,Z 1hour each		
34	Shock (In package)		-	Less than 196.1m/s ²		
35	Safety (*13)		-	Approved by UL60950-1, CSA60950-1, EN60950-1, EN50178 Designed to meet DENAN		
36	Line DIP		-	Designed to meet SEMI-F47 (200VAC Line only)		
37	Conducted Emission (*14)		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B		
38	Radiated Emission (*14)		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B		
39	Immunity		-	Designed to meet IEC61000-4-2(Level 2,3), -3(Level 3), -4(Level 3), -5(Level 3,4), -6(Level 3), -8(Level 4), -11		
40	Weight(Typ.)		-	1.0kg		
41	Size (W x H x D)		mm	61 x 82 x 165 (Refer to Outline Drawing)		

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SPECIFICATIONS(2/2)

A237-01-02

ITEMS	MODEL	HWS300P -24	HWS300P -36	HWS300P -48
*Read instruction manual carefully, before using the power supply unit.				
=NOTES=				
<p>*1. Operating time at peak output is less than 5sec, duty is less than 35%. For details, refer to peak output condition.(A237-01-04_) When the peak output more than 5 sec is continued, the output is shut down, manual reset (CNT reset or Re power on).</p> <p>*2. At 100/200VAC, Ta=25°C and average output power.</p> <p>*3. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC(50/60Hz).</p> <p>*4. First inrush current. Not applicable for the inrush current to Noise Filter for less than 0.2ms.</p> <p>*5. Measure with JEITA RC-9131A probe, Bandwidth of scope :100MHz. At average output power.</p> <p>*6. 85 - 265VAC , constant load.</p> <p>*7. No load-Average load, constant input voltage.</p> <p>*8. OCP circuit will shut the output down, manual reset (CNT reset or Re power on).</p> <p>*9. OVP circuit will shut the output down, manual reset (CNT reset or Re power on).</p> <p>*10. At 100/200VAC , nominal output voltage and average output current.</p> <p>*11. Measured by the each measuring method of UL,CSA,EN and DENAN(at 60Hz), Ta=25°C.</p> <p>*12. Ratings - Derating at standard mounting. Refer to output derating curve.(A237-01-03_) - Load (%) is percent of average output power or average output current, whichever is greater.</p> <p>*13. As for DENAN, designed to meet at 100VAC.</p> <p>*14. At Ta=25°C and average output power.</p>				

HWS300P

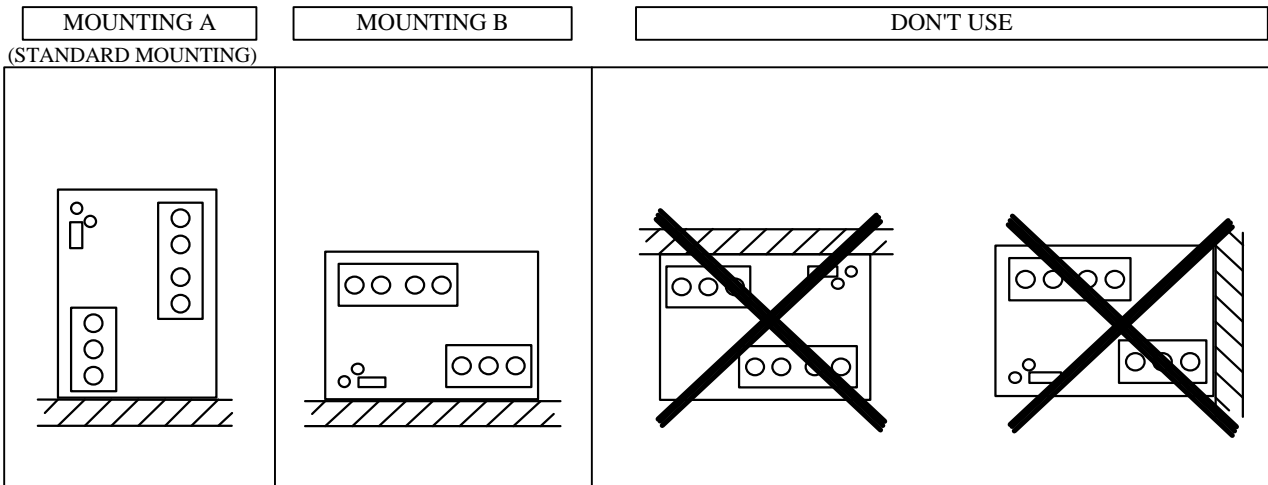
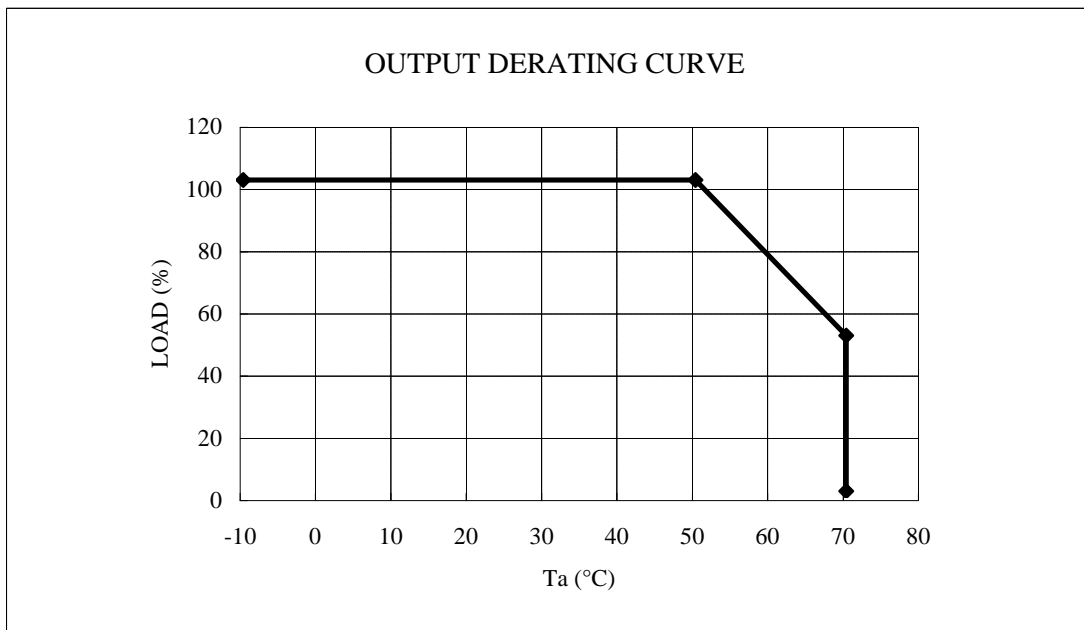
OUTPUT DERATING

A237-01-03

Ta(°C)	LOAD(%)	
	MOUNTING A	MOUNTING B
-10 ~+50	100	
70	50	

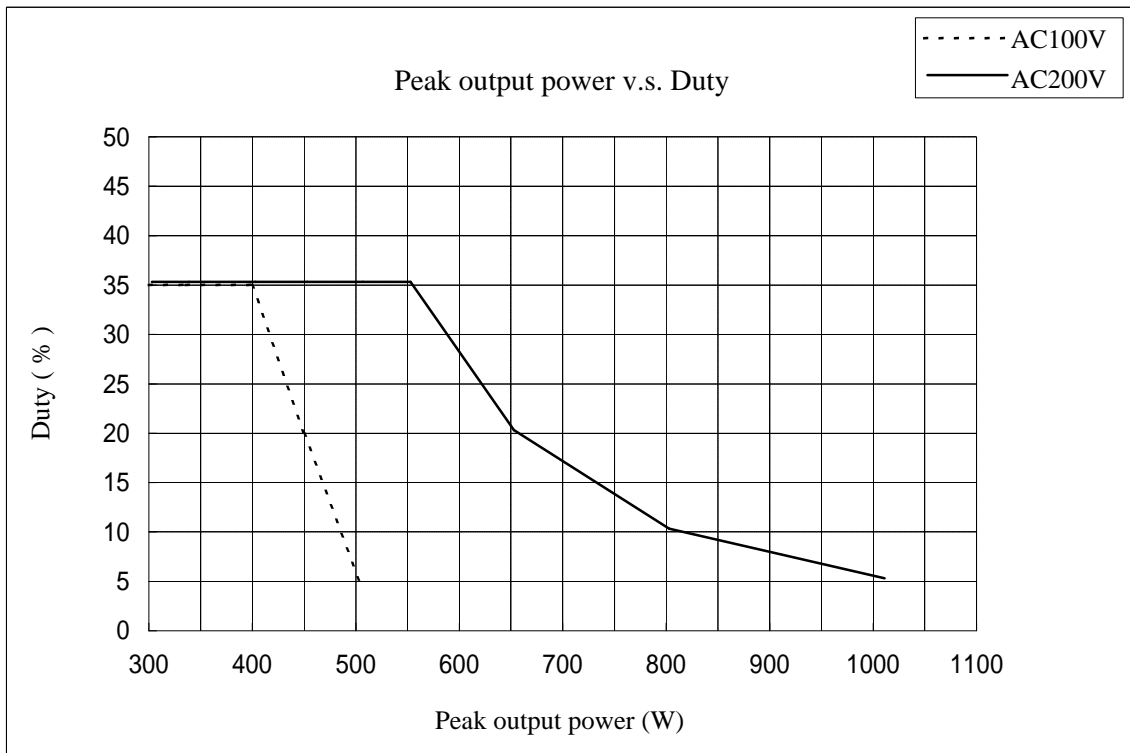
(*) Load(%) is percent of average output power or average output current.
 For example, load 100% refers to following condition when output is 24V model.
 24[V], 12.5[A]

(*) Peak output current does not need derating.



PEAK OUTPUT CONDITION

A237-01-04



Peak output power

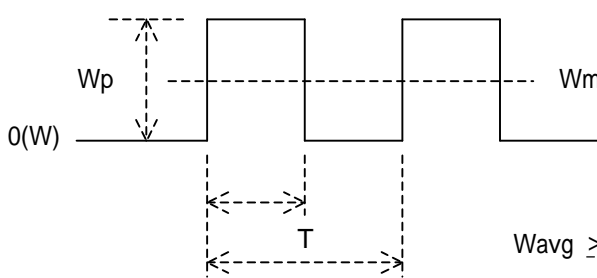
Use this product so that relationship among Duty, average output power (W_m) and peak output power (W_p) satisfy conditions defined by expression below.

This product must be used less than average output power of specification (W_{avg}).

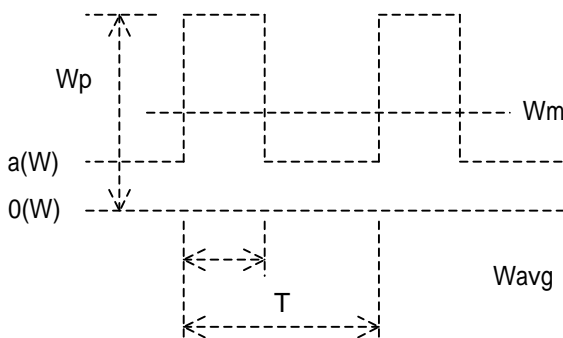
Also operating duration at peak output power should be less than 5 sec.

$$\text{Duty} = \frac{\text{Pulse width}}{T} \times 100 (\%) \leq 5 (\text{sec})$$

- W_p : Peak output power (W)
- W_{avg} : Average output power of Specification (W)
- W_m : Average output power (W)
- t : Pulse width of peak output power (sec)
(Operating time at peak output)
- T : Period (sec)
- Duty : The duty is pulse width of peak output power of one period (%)



$$W_{avg} \geq W_m = \frac{W_p \times t}{T}$$



$$W_{avg} \geq W_m = \frac{(W_p - a) \times t}{T} + a$$