

HWS300

SPECIFICATIONS

A231-01-01D

MODEL			HWS300	HWS300	HWS300	HWS300	HWS300	HWS300	
ITEMS			-3	-5	-12	-15	-24	-48	
1	Nominal Output Voltage	V	3.3	5	12	15	24	48	
2	Maximum Output Current (*13)	A	60	60	27	22	14(16.5)	7	
3	Maximum Output Power	W	198	300	324	330	336	336	
4	Efficiency (Typ) (*1)	100VAC	%	74	79	80	80	82	
		200VAC	%	77	82	83	83	85	
5	Input Voltage Range (*2)	-	85 - 265VAC (47 - 63Hz) or 120 - 330VDC						
6	Input Current (100/200VAC)(Typ) (*1)	A	2.7/1.4	3.8/1.9	4.1/2.1				
7	Inrush Current(Typ) (*3)	-	20A at 100VAC, 40A at 200VAC						
8	PFHC	-	Designed to meet IEC61000-3-2						
9	Power Factor (100/200VAC)(Typ) (*1)	-	0.99/0.95						
10	Output Voltage Range	V	2.64 - 3.96	4.0 - 6.0	9.6 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8	
11	Maximum Ripple & Noise (*4)	0≤Ta<70°C	mV	120	120	150	150	150	350
		-10≤Ta<0°C	mV	180	180	200	200	200	400
12	Maximum Line Regulation (*5)	mV	20	20	48	60	96	192	
13	Maximum Load Regulation (*6)	mV	30	30	72	90	144	288	
14	Temperature Coefficient	-	Less than 0.02% / °C						
15	Over Current Protection (*7)	A	63 -	63 -	28.4 -	23.1 -	16.7 -	7.4 -	
16	Over Voltage Protection (*8)	V	4.13 - 4.95	6.25 - 7.25	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	55.2 - 64.8	
17	Hold-up Time (Typ) (*9)	-	20ms						
18	Leakage Current (*10)	-	Less than 0.75mA. 0.2mA(Typ) at 100VAC / 0.44mA(Typ) at 230VAC						
19	Remote Sensing	-	Possible						
20	Remote ON/OFF control	-	Possible						
21	Monitoring Signal	-	PF(Open Collector Output)						
22	Parallel Operation	-	Possible						
23	Series Operation	-	Possible						
24	Operating Temperature (*11)	-	-10 - +70°C (-10 - +50°C:100%,+70°C:50%)						
25	Operating Humidity	-	10 - 90%RH (No dewdrop)						
26	Storage Temperature	-	-30 - +85°C						
27	Storage Humidity	-	10 - 95%RH (No dewdrop)						
28	Cooling	-	Forced Air By Blower Fan						
29	Withstand Voltage	-	Input - FG : 2.5kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG: 500VAC (100mA), Output-CNT: 100VAC(100mA) for 1min						
30	Isolation Resistance	-	More than 100MΩ Output - FG : 500VDC More than 10MΩ Output -CNT : 100VDC at 25°C and 70%RH						
31	Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s ² Constant, X,Y,Z 1hour each.						
32	Shock (In package)	-	Less than 196.1m/s ²						
33	Safety (*12)	-	Approved by UL60950-1, CSA60950-1, EN60950-1, EN50178, UL508(24V model only). Designed to meet DENAN						
34	Line DIP	-	Designed to meet SEMI-F47 (200VAC Line only)						
35	Conducted Emission	-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B						
36	Radiated Emission	-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B						
37	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						
38	Weight(Typ.)	-	1.0kg						
39	Size (W x H x D)	mm	61 x 82 x 165 (Refer to Outline Drawing)						

*Read instruction manual carefully, before using the power supply unit.

=NOTES=

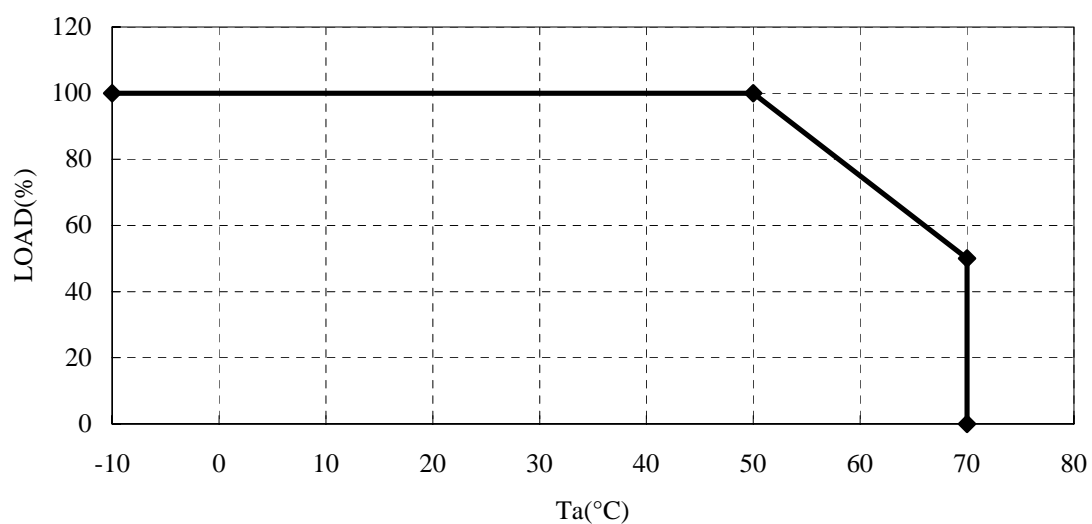
- *1. At 100/200VAC, Ta=25°C and maximum output power.
- *2. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC(50/60Hz).
- *3. Not applicable for the inrush current to Noise Filter for less than 0.2ms.
- *4. Measure with JEITA RC-9131A probe, Bandwidth of scope :100MHz.
- *5. 85 - 265VAC , constant load.
- *6. No load-Full load, constant input voltage.
- *7. 3.3, 5V model: Constant current limit and hiccup with automatic recovery.
12 - 48V model: Constant current limit with automatic recovery.
Avoid to operate at over load or short circuit condition for more than 30seconds.
- *8. OVP circuit will shut the output down, manual reset (CNT reset or Re power on).
- *9. At 100/200VAC , nominal output voltage and maximum output current.
- *10. Measured by the each measuring method of UL,CSA,EN and DENAN(at 60Hz), Ta=25°C.
- *11. Ratings - Derating at standard mounting. Refer to output derating curve.(A231-01-02_)
- Load (%) is percent of maximum output power or maximum output current, whichever is greater.
- *12. As for DENAN, designed to meet at 100VAC.
- *13.():Peak output current at 200VAC.Operaing time at peak output is less than 10sec,duty is less than 35%.

OUTPUT DERATING

A231-01-02

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

OUTPUT DERATING CURVE

**MOUNTING A**

(STANDARD MOUNTING)

MOUNTING B**DON'T USE**