

SPECIFICATIONS

A231-01-01/ME-A

MODEL			HWS300	HWS300	HWS300	HWS300	
ITEMS			-12/ME	-15/ME	-24/ME	-48/ME	
1	Nominal Output Voltage	V	12	15	24	48	
2	Maximum Output Current (*1)	A	27	22	14(16.5)	7	
3	Maximum Output Power	W	324	330	336	336	
4	Efficiency (Typ) (*2)	100VAC	80	80	82	82	
		200VAC	83	83	85	85	
5	Input Voltage Range (*3)	-	85 - 265VAC (47 - 63Hz) or 120 - 330VDC				
6	Input Current (100/200VAC)(Typ) (*2)	A	4.1/2.1				
7	Inrush Current(Typ) (*4)	-	20A at 100VAC, 40A at 200VAC				
8	PFHC	-	Designed to meet IEC61000-3-2				
9	Voltage Fluctuations / Flicker Emissions	-	Designed to meet IEC61000-3-3				
10	Power Factor (100/200VAC)(Typ) (*2)	-	0.99/0.95				
11	Output Voltage Range	V	9.6 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8	
12	Maximum Ripple & Noise (*5)	0≤Ta≤70°C	mV	150	150	150	350
		-10≤Ta<0°C	mV	200	200	200	400
13	Maximum Line Regulation (*6)	mV	48	60	96	192	
14	Maximum Load Regulation (*7)	mV	72	90	144	288	
15	Temperature Coefficient	-	Less than 0.02% / °C				
16	Over Current Protection (*8)	A	28.4 -	23.1 -	16.7 -	7.4 -	
17	Over Voltage Protection (*9)	V	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	55.2 - 64.8	
18	Hold-up Time (Typ) (*10)	-	20ms				
19	Leakage Current (*11)	-	Less than 0.5mA. 0.15mA(Typ) at 100VAC / 0.39mA(Typ) at 230VAC				
20	Remote Sensing	-	Possible				
21	Remote ON/OFF control	-	Possible				
22	Monitoring Signal	-	PF(Open Collector Output)				
23	Parallel Operation	-	Possible				
24	Series Operation	-	Possible				
25	Operating Temperature (*12)	-	-10 to +70°C (-10 to +50°C:100%,+70°C:50%)				
26	Operating Humidity	-	10 to 90%RH (No dewdrop)				
27	Storage Temperature	-	-30 to +85°C				
28	Storage Humidity	-	10 to 95%RH (No dewdrop)				
29	Cooling	-	Forced Air By Blower Fan				
30	Withstand Voltage	-	Input - FG : 2.5kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG: 500VAC (100mA), Output-CNT: 100VAC(100mA) for 1min				
31	Isolation Resistance	-	More than 100MΩ Output - FG : 500VDC More than 10MΩ Output -CNT : 100VDC at 25°C and 70%RH				
32	Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s ² Constant, X,Y,Z 1hour each.				
33	Shock (In package)	-	Less than 196.1m/s ²				
34	Safety (*13)	-	Approved by UL60601-1, EN60601-1, CSA-C22.2 No601.1-M90				
35	Line DIP	-	Designed to meet SEMI-F47 (200VAC Line only)				
36	Conducted Emission	-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
37	Radiated Emission	-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
38	Immunity	-	Designed to meet IEC61000-4-2(Level 3), -3(Level 3), -4(Level 3), -5(Level 3,4), -6(Level 3), -8(Level 4), -11				
39	Weight(Typ.)	-	1.0kg				
40	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. () :Peak output current at 200VAC. Operating time at peak output is less than 10sec,duty is less than 35%.
- *2. At 100/200VAC, Ta=25°C and maximum output power.
- *3. For cases where conformance to various safety specs (UL, EN, CSA) are required, to be described as 100 - 240VAC(50/60Hz).
- *4. Not applicable for the inrush current to Noise Filter for less than 0.2ms.
- *5. Measure with JEITA RC-9131A probe, Bandwidth of scope :100MHz.
- *6. 85 - 265VAC , constant load.
- *7. No load-Full load, constant input voltage.
- *8. Constant current limit with automatic recovery.
Avoid to operate at over load or short circuit condition for more than 30seconds.
- *9. OVP circuit will shut the output down, manual reset (CNT reset or Re power on).
- *10. At 100/200VAC , nominal output voltage and maximum output current.
- *11. Measured by the each measuring method of UL, EN, and CSA(at 60Hz), Ta=25°C.
When using it as a patient care equipment, all outer surfaces of the equipment shall be constructed of nonconductive material. See clause 19.5DV.2 of UL60601-1.
- *12. 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.
- *13. As for UL60601-1, EN60601-1 and CSA-C22.2No601.1-M90, basic insulation.