HWS150/ME

SPECIFICATIONS

A228-01-01/ME

	ITEMS \ MODEL			HWS150 -5/ME	HWS150 -12/ME	HWS150 -15/ME	HWS150 -24/ME	HWS150 -48/ME
1	Nominal Output Voltage		V	5	12	15	24	48
2	Maximum Output Current		A	30	13	10	6.5	3.3
3	Maximum Output Power		W	150	156	150	156	158.4
4	Efficiency (Typ) (*1)	100VAC	%	83	83	83	85	85
		200VAC	%	86	86	86	88	88
5	Input Voltage Range (*2)		-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC				
6	Input Current (100/200VAC)(Typ) (*1)		A	1.9/0.95				
7	Inrush Current(Typ) (*3)		-	14A at 100VAC, 28A at 200VAC, Ta=25°C, Cold Start				
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) (*1)		-	0.99/0.95				
11	Output Voltage Range		V	4.0 - 6.0	9.6 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8
12	Maximum Ripple & Noise (*4)	0≤Ta≤70°C	mV	120	150	150	150	200
		-10≤Ta<0°C	mV	160	180	180	180	240
13	Maximum Line Regulation (*5)		mV	20	48	60	96	192
14	Maximum Load Regulation (*6)		mV	40	96	120	192	384
15	Temperature Coefficient		-	Less than 0.02% / °C				
16	Over Current Protection (*7)		A	31.5 ≤	13.6 ≤	10.5 ≤	6.82 ≤	3.46 ≤
17	Over Voltage Protection (*8)		V	6.25 - 7.25	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	55.2 - 64.8
18	Hold-up Time (Typ) (*9)		-	20ms				
19	Leakage Current (*10)		-	Less than 0.5mA. 0.2mA(Typ) at 100VAC / 0.4mA(Typ) at 230VAC				
20	Remote Sensing		-	Possible				
21	Parallel Operation		-	-				
22	Series Operation		-	Possible				
23	Operating Temperature (*11)		-	-10 to +70°C (-10 to +50°C:100%,+60°C:60%,+70°C:20%)				
24	Operating Humidity		-	30 to 90%RH (No dewdrop)				
25	Storage Temperature		-	-30 to +85°C				
26	Storage Humidity		-	10 to 95%RH (No dewdrop)				
27	Cooling		-	Convection cooling				
28	Withstand Voltage		-	Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (100mA) for 1min				
29	Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC				
30	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s^2 Constant, X,Y,Z 1hour each.				
31	Shock (In package)		-	Less than 196.1m/s^2				
32	Safety (*12)		-	Approved by UL60601-1, EN60601-1, CSA-C22.2 No.601.1-M90				
33	Line DIP		-	Designed to meet SEMI-F47 (200VAC Line only)				
34	Conducted Emission		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
35	Radiated Emission		-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
36	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				
37	Weight(Typ.)		-	500g				
38	Size (W x H x D)		mm	37 x 82 x 160 (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, EN, CSA) are required, to be described as 100 - 230VAC(50/60Hz).

*3. Not applicable for the in-rush 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. Constant current limit and Hiccup with automatic recovery.
Not operate at over load or dead short condition for more than 30seconds.

*8. OVP circuit will shutdown output, manual reset (Re power on).

*9. At 100/200VAC , nominal output voltage and maximum output current.

*10. Measured by the each measuring method of UL,EN and CSA(at 60Hz).
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.

*11. Ratings - Derating at standard mounting.
- Load (%) is percent of maximum output power or maximum output current, whichever is greater.
- As for other mountings, refer to derating curve (A228-01-02_).

*12. As for UL60601-1, EN60601-1 and CSA-C22.2 No.601.1-M90, basic insulation.