

SPECIFICATIONS

A232-01-01/ME-A

ITEMS		MODEL	HWS600 -5/ME	HWS600 -12/ME	HWS600 -15/ME	HWS600 -24/ME	HWS600 -48/ME	
1	Nominal Output Voltage	V	5	12	15	24	48	
2	Maximum Output Current (*1)	A	120	53	43	27 (31)	13	
3	Maximum Output Power	W	600	636	645	648	624	
4	Efficiency (Typ) (*2)	100VAC	80	80	81	82	83	
		200VAC	83	83	84	85	86	
5	Input Voltage Range (*3)	-	85 - 265VAC (47 - 63Hz) or 120 - 330VDC					
6	Input Current (100/200VAC)(Typ) (*2)	A	7.5/3.6	8.1/3.9				
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	4.0 - 6.0	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	120	150	150	150	350
		-10≤Ta<0°C	mV	180	200	200	200	400
13	Maximum Line Regulation (*6)	mV	20	48	60	96	192	
14	Maximum Load Regulation (*7)	mV	30	72	90	144	288	
15	Temperature Coefficient	-	Less than 0.02% / °C					
16	Over Current Protection (*8)	A	126 ≤	55.7 ≤	45.2 ≤	31.4 ≤	13.7 ≤	
17	Over Voltage Protection (*9)	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) (*10)	-	20ms					
19	Leakage Current (*11)	-	Less than 0.5mA. 0.12mA(Typ) at 100VAC / 0.34mA(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-A, FCC-A, VCCI-A					
37	Radiated Emission	-	Designed to meet EN55011/EN55022-A, FCC-A, VCCI-A					
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)	-	1.6kg					
40	Size (W x H x D)	mm	100 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, CSA, EN) 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.
Inrush Current is 30A (Typ) when PFHC start-up.
- *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. (A232-01-02_)
- Load (%) is percent of maximum output power or maximum output current, whichever is greater.
- *13. As for UL60601-1, EN60601-1 and CSA-C22.2 No601.1-M90, basic insulation.