

**HWS100A/ME**

SPECIFICATIONS

A258-01-01/ME

ITEMS		MODEL	HWS100A -5/ME	HWS100A -12/ME	HWS100A -15/ME	HWS100A -24/ME	HWS100A -48/ME
1	Nominal Output Voltage	V	5	12	15	24	48
2	Maximum Output Current	A	20	8.5	7	4.5	2.1
3	Maximum Output Power	W	100.0	102.0	105.0	108.0	100.8
4	Efficiency (Typ.) (*1)	100VAC	% 84	% 86	% 86	% 87	% 88
		200VAC	% 86	% 88	% 88	% 89	% 90
5	Input Voltage Range (*2)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC				
6	Input Current (Typ.) (*1)	A	1.3/0.65				
7	Inrush Current (Typ.) (*1)(*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 (Typ.) (*1)	-	0.98/0.93				
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	mV 150	mV 150	mV 150	mV 200
		-10≤Ta<0°C	mV 160	mV 180	mV 180	mV 180	mV 240
13	Maximum Line Regulation (*5)	mV	20	48	60	96	192
14	Maximum Load Regulation (*6)	mV	40	96	120	150	240
15	Temperature Coefficient	-	Less than 0.02% / °C				
16	Over Current Protection (*7)	A	21.0 ≤	8.92 ≤	7.35 ≤	4.72 ≤	2.20 ≤
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.) (*1)	-	20ms				
19	Leakage Current (*9)	-	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 (*10)	-	-10 to +70°C (-10 to +50°C:100%, +60°C:65%, +70°C:30%)				
24	Operating Humidity	-	30 to 90%RH (No Condensing)				
25	Storage Temperature	-	-30 to +85°C				
26	Storage Humidity	-	10 to 95%RH (No Condensing)				
27	Cooling	-	Convection Cooling				
28	Withstand Voltage	-	Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (20mA) 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 <sup>2</sup> Constant, X,Y,Z 1hour each.				
31	Shock	-	Less than 196.1m/s <sup>2</sup>				
32	Safety (*11)	-	Approved by ES60601-1, EN60601-1, CSA-C22.2 No.60601-1				
33	Line DIP	-	Designed to meet SEMI-F47 (200VAC Line only)				
34	Conducted Emission (*12)	-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
35	Radiated Emission (*12)	-	Designed to meet EN55011/EN55022-B, FCC-B, VCCI-B				
36	Immunity (*12)	-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11				
37	Weight (Typ)	-	420g				
38	Size (W x H x D)	mm	28 x 82 x 160 ( Refer to Outline Drawing )				

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

=NOTES=

- \*1. At 100VAC/200VAC, Ta=25°C, nominal output voltage and maximum output power.
- \*2. For cases where conformance to various safety specs (ES, 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-9131B 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. Avoid to operate at over load or short circuit condition.
- \*8. OVP circuit will shut down output, manual reset (Re power on).
- \*9. Measured by the each measuring method of ES, CSA and EN (at 60Hz).
- \*10. Output Derating
  - Derating at standard mounting. Refer to OUTPUT DERATING CURVE (A258-01-02\_).
  - Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.
- \*11. As for ES60601-1, EN60601-1 and CSA-C22.2 No.60601-1, 3rd Edition and MOOP level.
- \*12. The power supply is considered a component which will be installed into a final equipment.  
The final equipment should be re-evaluated that it meets EMC directives.