

HWS80A/RA

SPECIFICATIONS

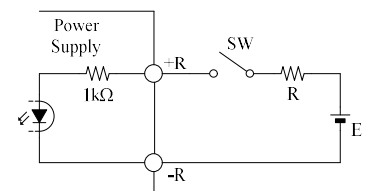
A264-01-01/RA-B

ITEMS		MODEL	HWS80A -3/RA	HWS80A -5/RA	HWS80A -12/RA	HWS80A -15/RA	HWS80A -24/RA	HWS80A -48/RA	
1	Nominal Output Voltage	V	3.3	5	12	15	24	48	
2	Maximum Output Current	A	16	16	6.7	5.4	3.4	1.7	
3	Maximum Output Power	W	52.8	80.0	80.4	81.0	81.6	81.6	
4	Efficiency (Typ.) (*1)	100VAC	%	81	83	85	85	86	87
		200VAC	%	83	85	87	87	88	89
5	Input Voltage Range (*2)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC						
6	Input Current (Typ.) (*1)	A	0.72/0.36 1.04/0.52						
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	Power Factor (Typ.) (*1)	-	0.96/0.87 0.98/0.91						
10	Output Voltage Range	V	2.97 - 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	200
		-10≤Ta≤0°C	mV	160	160	180	180	180	240
12	Maximum Line Regulation (*5)	mV	20	20	48	60	96	192	
13	Maximum Load Regulation (*6)	mV	40	40	96	120	150	240	
14	Temperature Coefficient	-	Less than 0.02% / °C						
15	Over Current Protection (*7)	A	16.8 ≤	16.8 ≤	7.04 ≤	5.67 ≤	3.57 ≤	1.79 ≤	
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.) (*1)	-	20ms						
18	Leakage Current (*9)	-	Less than 0.5mA. 0.2mA (Typ) at 100VAC / 0.4mA (Typ) at 230VAC						
19	Remote Sensing	-	Possible						
20	Remote ON/OFF Control (*10)	-	Possible						
21	Parallel Operation	-	-						
22	Series Operation	-	Possible						
23	Operating Temperature (*11)	-	-10 to +70°C (-10 to +50°C:100%, +60°C:80%, +70°C:60%)						
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 ² Constant, X,Y,Z 1hour each.						
31	Shock	-	Less than 196.1m/s ²						
32	Safety	-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020) UL508, CSA C22.2 No.107.1-01. Designed to meet Den-an Appendix 8 at 100VAC only.						
33	Line DIP	-	Designed to meet SEMI-F47 (200VAC Line only)						
34	Conducted Emission (*12)	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B						
35	Radiated Emission (*12)	-	Designed to meet EN55011/EN55032-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)	-	470g						
38	Size (W x H x D)	mm	33.5 x 83 x 160.5 (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 (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-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 UL, CSA, EN and Den-an (at 60Hz), Ta=25°C.
- *10. As for ON/OFF control mode, see the right figure.
- *11. Output Derating
 - Derating at standard mounting. Refer to OUTPUT DERATING CURVE (A264-01-02/A-).
 - Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.
- *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.



The control mode is shown below.

-R & -R terminal condition	Output condition
SW ON (Higher than 4.5V)	ON
SW OFF (Lower than 0.8V)	OFF

External voltage level : E	External resistance : R
4.5 ~ 12.5VDC	No required
12.5 ~ 24.5VDC	1.5kΩ