

**HWS50A/EVA**

SPECIFICATIONS (1/2)

A286-01-01/EVA

ITEMS		MODEL	HWS50A-12/EVA	HWS50A-15/EVA	HWS50A-24/EVA	HWS50A-48/EVA	
<b>INPUT</b>							
Input Voltage Range	(*2)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC				
Efficiency(Typ.)	(*1)	100/200VAC	%	83 / 85	83 / 86	84 / 87	84 / 86
Input Current(Typ.)	(*1)	100/200VAC	A	0.65 / 0.35			
Inrush Current (Typ.)	(*1)(*3)	100/200VAC	A	14 / 28 (Cold Start)			
Power Factor (Typ.)	(*1)	100/200VAC	-	0.97 / 0.91			
<b>OUTPUT</b>							
Nominal Output Voltage		V	12	15	24	48	
Output Voltage Initial set Accuracy	(*12)	-	±1%				
Maximum Output Current		A	4.3	3.5	2.2	1.1	
Maximum Output Power		W	51.6	52.5	52.8	52.8	
Maximum Line Regulation	(*5)	mV	48	60	96	192	
Maximum Load Regulation	(*6)	mV	96	120	150	240	
Temperature Coefficient		-	Less than 0.02% / °C				
Maximum Ripple & Noise	0<Ta<70°C	mV	150	150	150	200	
	(*4) -10<Ta<0°C	mV	180	180	180	240	
Output Voltage Range		V	9.6 - 14.4	12.0 - 18.0	19.2 - 28.8	38.4 - 52.8	
Hold-up Time (Typ.)	(*1)	ms	20				
Leakage Current	(*9)	-	Less than 0.5mA. 0.2mA (Typ) at 100VAC / 0.4mA (Typ) at 230VAC				
Over Current Protection	(*7)	A	4.51 ≤	3.67 ≤	2.31 ≤	1.15 ≤	
Over Voltage Protection	(*8)	V	15.0 - 17.4	18.8 - 21.8	30.0 - 34.8	55.2 - 64.8	
<b>FUNCTION</b>							
Remote ON/OFF Control		-	-				
Remote Sensing		-	-				
Parallel Operation		-	-				
Series Operation		-	Possible				
<b>ENVIRONMENT</b>							
Operating Temperature	(*10)	-	-10 to +70°C (-10 to +50°C:100%, +60°C:60%, +70°C:20%)				
Storage Temperature		-	-30 to +85°C				
Operating Humidity		-	30 to 90%RH (No Condensing)				
Storage Humidity		-	10 to 95%RH (No Condensing)				
Vibration	(*11)	-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.				
Shock	(*11)	-	Less than 196.1m/s <sup>2</sup>				
Cooling		-	Convection Cooling				
<b>ISOLATION</b>							
Withstand Voltage		-	Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA) Output - FG : 500VAC (20mA) for 1min				
Isolation Resistance		-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC				
<b>STANDARD AND COMPLIANCE</b>							
Safety		-	Approved by IEC/UL/CSA/EN62368-1 (Altitude ≤ 4,000m) Approved by IEC/EN62477-1 (OVCI) (Altitude ≤ 2,000m) Approved by UL508, CSA C22.2 No.107.1-01. Designed to meet Den-an Appendix 8 at 100VAC (creepage distance and clearance only)				
Conducted Emission	(*11)	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B				
Radiated Emission	(*11)	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B				
Harmonic Current		-	Designed to meet IEC61000-3-2				
Immunity	(*11)	-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11				
Line DIP		-	Designed to meet SEMI-F47 (200VAC Line only)				
<b>MECHANICAL</b>							
Weight (Typ.)		g	300				
Size (W x H x D)		mm	31.5 x 82 x 132.5				

## SPECIFICATIONS (2/2)

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\*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 is required to meet various safety specs (UL, CSA, EN), Input voltage range shall be from 100 - 240VAC (50-60Hz).
- \*3. Not applicable for the inrush current to Noise Filter for less than 0.2ms.
- \*4. Refer to instruction manual (A286-04-01\_ ) for measurement of ripple voltage.
- \*5. 85 - 265VAC, constant load.
- \*6. No load-Full load, constant input voltage.
- \*7. 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. Output Derating
  - Derating at standard mounting. Refer to OUTPUT DERATING CURVE (A286-01-02/EHA-\_ ).
  - Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.
- \*11. The result is evaluated by TDK-Lambda standard measurement condition.  
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, Vibration and Shock directives.
- \*12. Output voltage setting at the time of shipment. At 100VAC, nominal output voltage and maximum output current.