

HWS600L/BAT

SPECIFICATIONS

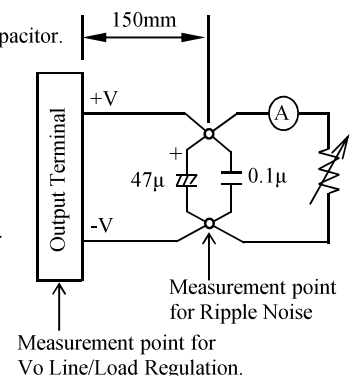
CA771-01-01/BAT-D

ITEMS		MODEL	HWS600L-36 /BAT	HWS600L-60/BAT
1	Nominal Output Voltage	V	36	60
2	Maximum Output Current (*1)	A	18	10
3	Maximum Output Power (*1)	W	648	600
4	Efficiency (Typ)(115/230VAC) (*2)	%	82 / 84	82 / 84
5	Input Voltage Range (*3)	-	85 - 265VAC (47-63Hz) or 120 - 350VDC	
6	Input Current (Typ)(115/230VAC) (*2)	A	7.1 / 3.6	
7	Inrush Current (Typ) (*4)	-	20A/40A at 115VAC, 40A/40A at 230VAC, Ta=25°C (first inrush/second inrush)	
8	PFHC	-	Designed to meet IEC61000-3-2	
9	Power Factor (Typ)(115/230VAC) (*2)	-	0.98/0.95	
10	Output Voltage Range	V	28.0-36.0	48.0-60.0
11	Ripple and Noise (115/230VAC) (*5)	0<Ta<74°C	mV	200
		-20<Ta<0°C	mV	240
12	Line Regulation (*5,6)	mV	144	240
13	Load Regulation (*5,7)	mV	216	360
14	Temperature Coefficient	-	Less than 0.02%/°C	
15	Output Constant Current Limit Range (Preset CC Value at shipping) (*8)	A	9.9 - 17.1 (15.3 - 17.1)	5.5 - 9.5 ( 8.5 - 9.5 )
16	Constant Current Setting accuracy (*8)	-	±10%	
17	Over Voltage Protection (*9)	V	45.0-52.2	69.0-81.0
18	Hold-Up Time (Typ)(115/230VAC) (*2)	-	20ms	
19	Leakage current (*10)	-	Less than 0.75mA . 0.3mA (Typ) at 115VAC / 0.5mA (Typ) at 230VAC .	
20	Remote Sensing	-	Possible	
21	Remote ON/OFF control	-	Possible	
22	Monitoring Signal	-	ALM (Open Collector Output)	
23	Parallel Operation	-	Possible	
24	Series Operation	-	Possible	
25	Operating Temperature (*11)	-	- 20 to + 74 °C (-20°C to +50°C: 100%, +74°C: 50%) 100% load start up at -40°C	
26	Operating Humidity	-	20 to 90 %RH (No dewdrop)	
27	Storage Temperature	-	- 40 to +85°C	
28	Storage Humidity	-	10 to 95%RH (No dewdrop)	
29	Cooling	-	Forced air by build-in fan	
30	Withstand Voltage	-	Input - Output : 3.0kVAC (20mA), Input - FG : 2.0kVAC (20mA) Output - FG : 500VAC (100mA) (60V model: 651VAC, 130mA) Output - CNT/ALM/AUX : 100VAC (100mA) for 1min.	
31	Isolation Resistance	-	Input - FG, Input - Output and Output - FG: More than 50MΩ (500VDC) Output - CNT/ALM/AUX: More than 50MΩ (100VDC) at Ta=25°C and 70%RH	
32	Vibration (*12)	-	Designed to meet MIL-STD-810F 514.5 Category 4, 10	
33	Shock (In package)	-	Designed to meet MIL-STD-810F 516.5 Procedure I,VI	
34	Safety (*13)	-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN50178, EN61010-1 Designed to meet DENAN	
35	Line Dip	-	Designed to meet SEMI-F47 (200VAC line only)	
36	EMI	-	Designed to meet VCCI-B, FCC-B, EN55011/EN55032-B	
37	Immunity	-	Designed to meet EN61000-4-2 (Level 2,3), -3 (Level 3), -4 (Level 3), -5 (Level 3,4), -6 (Level 3), -8 (Level 4), -11	
38	Weight (Typ)	-	1.6kg	
39	Dimension (W x H x D)	mm	120 x 61 x 190 (Refer to Outline Drawing)	

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

= NOTES=

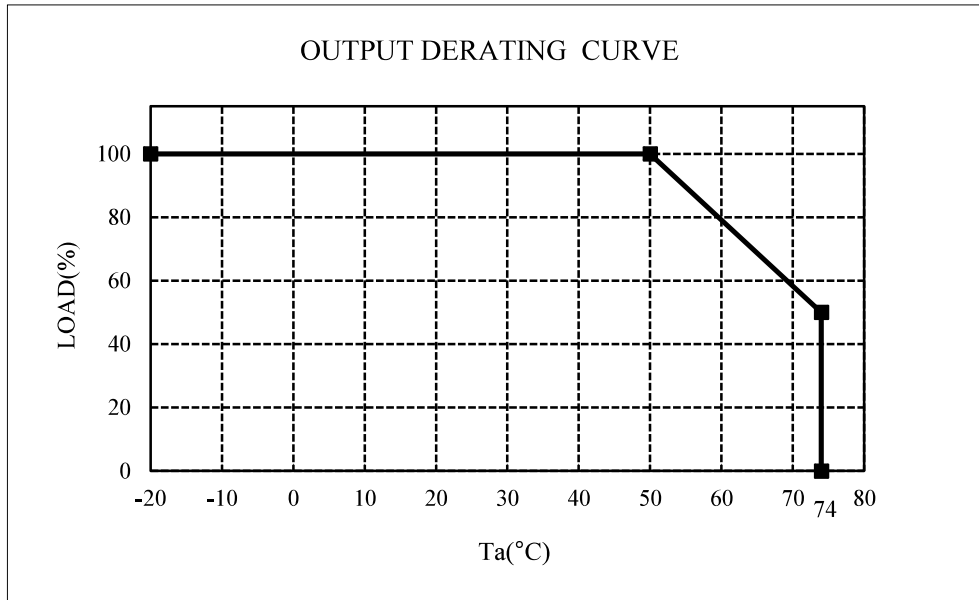
- \*1. Maximum Output Power and Maximum Output Current have tolerance +0%/-5%. (36V; 615.6W - 648W/17.1A - 18A , 60V; 570W - 600W/9.5A - 10A)
- \*2. At Maximum Output Power, nominal input voltage, Ta = 25°C.
- \*3. For cases where conformance to various safety specs ( UL, CSA, EN ) are required, to be described as 100 - 240VAC, 50 / 60Hz on name plate.
- \*4. First/second inrush current, not applicable for the in-rush current to Noise Filter for less than 0.2ms.
- \*5. Please refer to Fig A for measurement of line & load regulation, ripple and noise voltage.  
Ripple & noise are measured at 20MHz by using a twisted pair of load wires terminated with a 0.1uF and 47uF capacitor.
- \*6. 85 - 265VAC, constant load, NL -90% Load of Maximum power (at Preset CC Value of shipping)
- \*7. No load - 90% Load of Maximum power (at preset CC Value of shipping), constant input voltage.
- \*8. Constant current limit with automatic recovery. Min. Voltage is 18V (Vo:36V) or 30V (Vo:60V).  
Avoid to operate at Constant Current condition that output voltage is less than 18V (Vo:36V) or 30V (Vo:60V)
- \*9. OVP circuit will shutdown output, manual reset (Remote ON/OFF control reset or Re-power on).
- \*10. Measured by each measuring method of UL, CSA, EN and DENAN (at 60Hz), Ta=25°C.
- \*11. Refer to Output Derating Curve (CA771-01-02/BAT- ) for details of output derating versus ambient temperature.  
- Load (%) is percent of Maximum Output Power and Maximum Output Current ( Item 2 and 3).  
Do not exceed derating of Maximum Output Power and Maximum Output Current.  
- 100% load start up at -40°C is possible. However, it may not fulfil all the specifications.
- \*12. Category 4 exposure levels: Trunk transportation over U.S. highways, Composite two-wheeled trailer.
- \*13. As for DENAN, designed to meet at 100VAC.



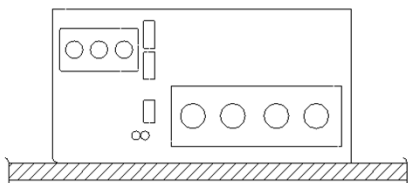
OUTPUT DERATING

CA771-01-02/BAT

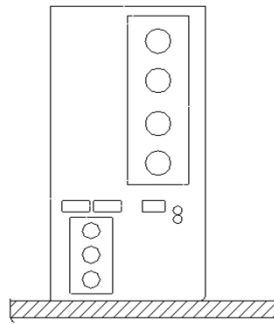
Ta (°C)	LOAD(%)
	Mounting A,B,C
-20 to 50	100%
74	50%



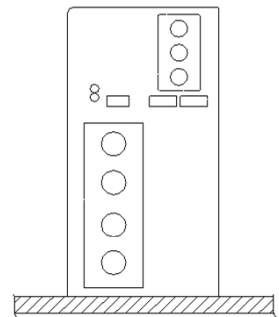
**Mounting A**



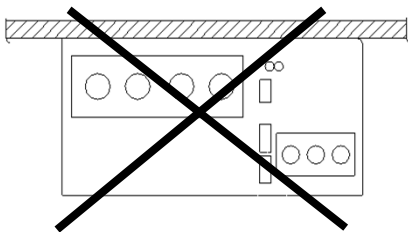
**Mounting B**



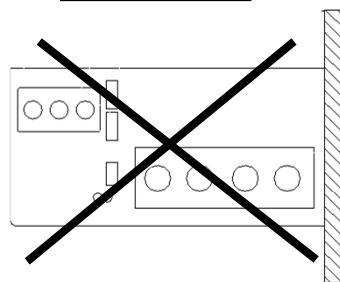
**Mounting C**



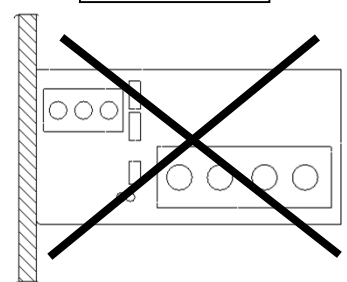
**Don't Use**



**Don't Use**



**Don't Use**



**HWS600L/BAT**

CA771-01-03/BAT-B

Output Constant Current Limit Range Curve

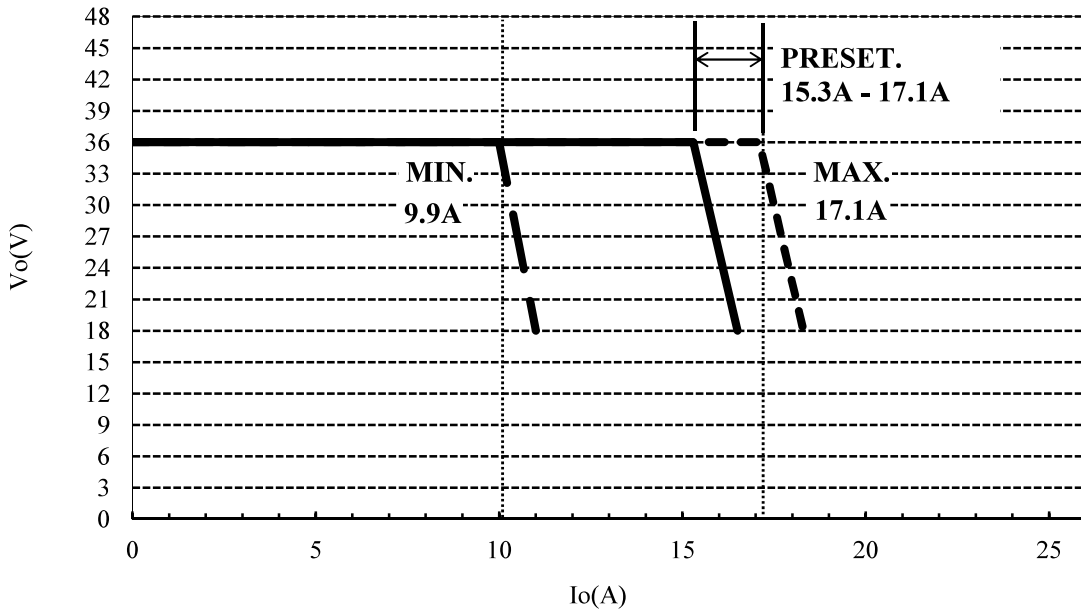
PRESET : Std Setting of Current Limit at shipping

MIN. : Available Setting of Minimum Current Limit

MAX. : Available Setting of Maximum Current Limit

\*These Current limit Curve are the Images. Refer to the evaluation data of Current Limit Curve.

HWS600L-36/BAT



HWS600L-60/BAT

