## **SPECIFICATIONS**

# A160-<u>01-01/A-B</u>

MODEL			JWS150	JWS150	JWS150	JWS150	JWS150	JWS150	
	ITEMS		-3/A	-5/A	-12/A	-15A	-24/A	-48/A	
1	Nominal Output Voltage	V	3.3	5	12	15	24	48	
2	Maximum Output Current	Α	30	30	13	10	6.5	3.3	
3		W	99	150	156	150	156	158.4	
4	Efficiency (Typ) (*1)	%	67	75	77	78	80	80	
5		-		85 - 265	VAC (47-63)	Hz) or 120 - :	330VDC		
6	6 Input Current (100/200VAC)(Typ) (*1)		1.5/0.75 2.0/1.0A						
	7 Inrush Current(Typ)		25A at 100VAC, 50A at 200VAC, Ta=25°C, Cold Start						
	8 PFHC		Designed to meet EN61000-3-2						
9	1111 ( 1111 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.99/0.95						
10		V	2.85-3.63	4.5-5.5	10.8-13.2	13.5-16.5	21.6-26.4	43.2-52.8	
11	Maximum Ripple & Noise 0 - +50°C		120	120	150	150	150	200	
	(*2) -10 - 0°C		160	160	180	180	180	240	
12	E \		20	20	48	60	96	192	
13		mV	40	40	96	120	150	240	
	Temperature Coefficient	-				0.02%/°C			
	Over Current Protection (*5)	Α	31.5-	31.5-	13.65-	10.5-	6.82-	3.46-	
16		V	3.79-4.95	5.75-6.75	13.8-16.2	17.3-20.3	27.6-32.4	55.2-64.8	
17	Hold-up Time (Typ) (*7)	-	20ms						
18	Leakage Current (*8)	-	0.75mA	MAX, 0.2m	A(Typ) at 10	0VAC / 0.44	mA(Typ) at 2	230VAC	
19	Remote Sensing	-			Pos	sible			
20		-				-			
21	Series Operation	-				sible			
22	Operating Temperature (*9)	-				°C:100%, +5			
23		-		3		(No dewdrop	)		
24		-				+85°C			
	Storage Humidity -		10 - 95%RH (No dewdrop)						
26		-				on Cooling			
27	Withstand Voltage	ltage -		Input - FG: 2kVAC (20mA), Input - Output: 3kVAC (20mA)					
						AC (100mA)			
28		-	Wildle than 1001/122 at 23 C and 70/01d1 Catput 1 G500 VBC		OVDC .				
29	Vibration	-				5Hz (Sweep 1			
						ıt, X,Y,Z 1h e	each.		
	Shock (In package)	-			Less than 19				
31	Safety (*11)		Approved by UL60950-1, CSA C22.2 No.60950-1 & EN60950-1.						
			Designed to meet DENAN.						
32		-					C-ClassB, VO		
	Radiated Emission		Design	ed to meet E			C-ClassB, VO	CCI-B.	
	Weight(Typ)	-				00g			
35	Size (W.H.D)	mm		65 x 92	x 198 ( Refer	to Outline D	Orawing)		

<sup>\*</sup>Read instruction manual carefully, before using the power supply unit.

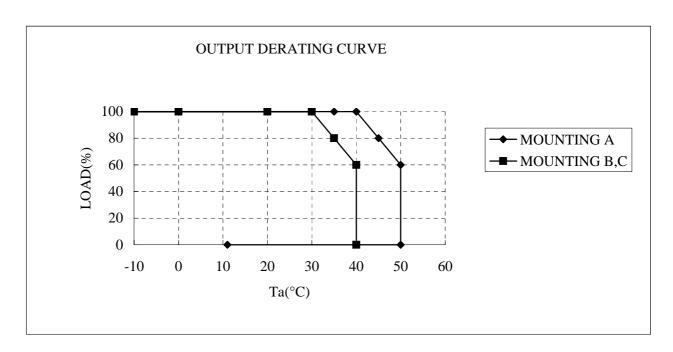
=NOTES=

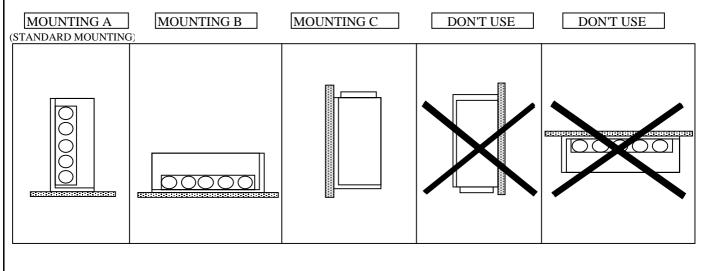
- \*1. At 100/200VAC, Ta=25°C and maximum output power.
- \*2. For cases where conformance to various safety specs (UL, CSA, EN) are repuired, input voltage range will be 100-240VAC (50/60Hz)
- \*3. Measure with JEITA RC-9131 probe, Bandwise of scope :100MHz.
- \*4. 85 265VAC, constant load.
- \*5. No load-Full load, constant input voltage.
- \*6. Constant current limit with automatic recovery.
- \*7. OVP circuit will shut down output, manual reset (Line recycle).
- \*8. At 100/200VAC nominal output voltage and maximum output current.
- \*9. Measured by the each measuring method of UL, CSA, EN and DENAN (at 60Hz).
- \*10. Ratings Derating at standard mounting.
  - Load (%) is percent of maximum output power or maximum output current, whichever is greater.
  - As for other mountings, refer to derating curve (A160-01-02/A- ).
- \*11. As for DENAN, designed to meet at 100VAC.

# **OUTPUT DERATING**

## A160-01-02/A

	LOAD(%)					
Ta(°C)	MOUNTING A	MOUNTING B	MOUNTING C			
-10 ~+30	100	100	100			
35	100	80	80			
40	100	60	60			
45	80	-	-			
50	60	-	-			





#### **SPECIFICATIONS**

#### A160-01-03/A-A

MODEL		JWS150		
ITEMS		-28/A		
1 Nominal Output Voltage	-	28V		
2 Maximum Output Current	-	5.5A		
3 Maximum Output Power		154W		
4 Efficiency (Typ.)	(*1) -	80%		
	(*2) -	85 - 265VAC (47 - 63Hz) or 120 - 330VDC		
6 Input Current (100/200VAC)(Typ.) (*1)		2.0/1.0A		
7 Inrush Current (Typ.)	-	25A at 100VAC, 50A at 200VAC, Ta=25°C, Cold Start		
8 PFHC	-	Designed to meet EN61000-3-2		
9 Power Factor (100/200VAC)(Typ.)	(*1) -	0.99/0.95		
10 Output Voltage Range	-	25.2 - 30.8V		
11 Maximum Ripple & Noise 0 - +5	50°С -	150mV		
(*3)	0°C -	180mV		
12 Maximum Line Regulation	(*4) -	112mV		
13 Maximum Load Regulation	(*5) -	160mV		
14 Temperature Coefficient	-	Less than 0.02%/°C		
	(*6) -	5.77A-		
16 Over Voltage Protection	(*7) -	32.2 - 37.8V		
17 Hold-up Time (Typ.)	(*8) -	20ms		
18 Leakage Current	(*9) -	0.75mA MAX, 0.2mA(Typ.) at 100VAC / 0.44mA(Typ.) at 230VAC		
19 Remote Sensing	-	Possible		
20 Parallel Operation	-	-		
21 Series Operation	-	Possible		
22 Operating Temperature (*	*10) -	-10 - +50°C ( -10 - +40°C:100%, +50°C:60%)		
23 Operating Humidity	-	30 - 90%RH (No dewdrop)		
24 Storage Temperature	-	-30 - +85°C		
25 Storage Humidity	-	10 - 95%RH (No dewdrop)		
26 Cooling	-	Convection Cooling		
27 Withstand Voltage	-	Input - FG: 2kVAC (20mA), Input - Output: 3kVAC (20mA)		
		Output - FG: 500VAC (100mA) for 1min		
28 Isolation Resistance	-	More than 100MΩ at 25°C and 70%RH Output - FG 500VDC		
29 Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min)		
		19.6m/s <sup>2</sup> Constant, X,Y,Z 1h each.		
30 Shock (In package)		Less than $196.1 \text{m/s}^2$		
	*11) -	Approved by UL60950-1, CSA C22.2 No.60950-1 & EN60950-1.		
		Designed to meet DENAN.		
32 Conducted Emission	-	Designed to meet EN55011/EN55022-B, FCC-ClassB, VCCI-B.		
33 Radiated Emission	-	Designed to meet EN55011/EN55022-B, FCC-ClassB, VCCI-B.		
34 Weight (Typ.)		900g		
35 Size (W x H x D) mm		65 x 92 x 198 (Refer to Outline Drawing)		

<sup>\*</sup>Read instruction manual carefully, before using the power supply unit.

=NOTES=

- \*1. At 100/200VAC, Ta=25°C and maximum output power.
- \*2. For cases where conformance to various safety specs (UL, CSA, EN) are required, input voltage range will be 100 240VAC (50/60Hz).
- \*3. Measure with JEITA RC-9131 probe, Bandwise of scope :100MHz.
- \*4. 85 265VAC, constant load.
- \*5. No load-Full load, constant input voltage.
- \*6. Constant current limit with automatic recovery.
- \*7. OVP circuit will shut down output, manual reset (Line recycle).
- \*8. At 100/200VAC nominal output voltage and maximum output current.
- \*9. Measured by the each measuring method of UL, CSA, EN and DENAN (at 60Hz).
- \*10 Ratings Derating at standard mounting.
  - Load (%) is percent of maximum output power or maximum output current, whichever is greater.
  - As for other mountings, refer to derating curve (A160-01-02/A-\_).
- \*11 As for DENAN, designed to meet at 100VAC.