## ZWS300BAF/CO2

## **SPECIFICATIONS**

## A254-01-01/CO2-C

MODEL			ZWS300BAF	ZWS300BAF	ZWS300BAF	ZWS300BAF	ZWS300BAF	
	ITEMS		-12/CO2	-15/CO2	-24/CO2	-36/CO2	-48/CO2	
1	Nominal Output Voltage	V	12	15	24	36	48	
2	Maximum Output Current	A	25.0	20.0	12.5	8.4	6.3	
3	Maximum Output Power	W	300.0	300.0	300.0	302.4	302.4	
4	Efficiency (Typ) 100VA			6	300.0	88	302.1	
	(*1) 200VA		89		91			
5	Input Voltage Range (*2)(*3			85 - 265VAC (47 - 63Hz) or 120 - 370VDC				
6	Input Current (Typ) (*1	-	3.7	3.7/1.9			3.6/1.8	
7	Inrush Current (Typ) (*1)(*2	/	15A at 100VAC, 30A at 200VAC, Ta=25°C, Cold Start					
8	PFHC	-	Designed to meet IEC61000-3-2					
9	Power Factor (Typ) (*1	) -	0.97/0.93					
10	Output Voltage Range	V	9.6 - 13.2	13.5 - 16.5	21.6 - 27.5	32.4 - 39.6	39.5 - 52.8	
11	Maximum Ripple & Noise 0\(\text{Ta} \le 70\)	c mV	150	150	150	250	250	
	(*5) -10 <u>&lt;</u> Ta<0°	c mV	180	180	180	300	300	
12	Maximum Line Regulation (*5)(*6	) mV	48	60	96	144	192	
13	Maximum Load Regulation (*5)(*7	) mV	100	120	150	240	240	
14	Temperature Coefficient (*5	) -	Less than 0.02% / °C					
15		) A	26.25 -	23.1-	14.7 -	9.87 -	7.35 -	
16	8	) V	13.8 - 16.2	17.3 - 20.3	28.8 - 33.6	41.4 - 48.6	55.2 - 64.8	
17	1 (31)	) -	18ms(typ) at 100VAC & Rated O/P Power, 20ms(typ) at 100VAC & 80% Load					
18	( )	) -	Less than 0.5mA. 0.2mA (Typ) at 100VAC / 0.4mA (Typ) at 230VAC					
19		-	-					
20	Series Operation	-	Possible					
21	Operating Temperature	10 to +70°C				-10 to +70°C		
			(-10 to +40°C:100%, +50°C:80%, (-10 to +45°C:100%, +50°C:88%,					
	(*11	)	+60°C:60%, 70°C:40%) +60°C:64%, 70°C:40%)					
22		-	30 to 90%RH (No Condensing)					
23	8	-	-30 to +75°C					
24	2 ,	-	10 to 90%RH (No Condensing)					
25	Cooling	-	Convection Cooling					
26	Withstand Voltage	-	Input - FG: 2kVAC (10mA), Input - Output: 3kVAC (10mA)					
~-	T 1 1 2 D 1 1	-	Output - FG : 500VAC (20mA) for 1min					
27	Isolation Resistance	-	More than 100MΩ at 25°C and 70%RH Output - FG: 500VDC					
28	Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min)					
20	ci i	-	19.6m/s <sup>2</sup> Constant, X,Y,Z 1hour each.					
29	Shock	-	Less than 196.1m/s <sup>2</sup>					
30	Safety	-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1,					
			EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN50178 (OV II)					
31	Conducted Emission	-	Designed to meet DENAN at 100VAC only.  Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B					
32		<del>  -</del>	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B  Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B					
33		-	Designed to meet EN33011/EN33032-B, FCC-B, VCC1-B  Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11					
34	<u> </u>	<u> </u>	540					
	Size (W x H x D) mm 84 x 42 x 180 (Refer to Outline Drawing)							
	*Read instruction manual carefully, before using the power supply unit							

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=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. Output derating needed when input voltage less than 90VAC.
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  Refer to LOAD vs. INPUT VOLTAGE (24V/36V/48V: A254-01-02\_, 12V/15V: A254-01-06\_).
- \*4. Not applicable for the in-rush current to Noise Filter for less than 0.2ms.
- \*5. Please refer to Fig. A for measurement of Vo, line & load regulation and ripple voltage.
- \*6. 90 265VAC, constant load.
- \*7. No load-Full load, constant input voltage.
- \*8. Constant current limit with automatic recovery. Avoid to operate at over load or short circuit condition.
- \*9. OVP circuit will shut down output, manual reset (Re power on).
- \*10. Measured by the each measuring method of UL, CSA, EN and DENAN (at 60Hz), Ta=25°C.

\*11. Output Derating

C1 : Film Cap. 0.1  $\mu$ F C2 : Elect. Cap. 100  $\mu$ F

Measuring Point for

Vo and Line/Load Regulation.

150mm

C1

Measuring Point for

Ripple & Noise.

<u>(A)</u>

C2‡

Measure by JEITA probe.

Bandwidth of Oscilloscope: 100MHz

Load

- Derating at standard mounting. C. Refer to LOAD vs. AMBIENT TEMPERATURE (24V/36V/48V: A254-01-02, 12V/15V: A254-01-06).

- When forced air cooling, refer to forced air cooling specifications (24V/36V/48V: A254-01-03, A254-01-04, 12V/15V: A254-01-07, A254-01-08).
- Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.