ZWS240BP/CO2

SPECIFICATIONS

A253-01-01/CO2-B

	ITEMS / MODEL			ZWS240BP -24/CO2	ZWS240BP -36/CO2	ZWS240BP -48/CO2
1	Nominal Output Voltage		V	24	36	48
2	Average Output Current		A	10	6.7	5.0
3	Peak Output Current	(*1)	A	20.0	13.4	10.0
4	Average Output Power		W	240.0	241.2	240.0
5	Peak Output Power	(*1)	W	480.0	482.4	480.0
6	Efficiency (Typ)	100VAC	%	88		
	(*2)	200VAC	%	91		
7	Input Voltage Range	(*3)(*13)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC		
8	Input Current (Typ)	(*2)	A	2.8/1.5		
9	Inrush Current (Typ)	(*2)(*4)	-	15A at 100VAC, 30A at 200VAC, Ta=25°C, Cold Start		
10	PFHC		-	Designed to meet IEC61000-3-2		
11	Power Factor (Typ)	(*2)	-	0.98/0.93		
12	Output Voltage Range		V	21.6 - 27.5	32.4 - 39.6	39.6 - 52.8
13	Maximum Ripple & Noise	0≤Ta≤70°C	mV	240	360	480
	(*5)	-10≤Ta<0°C	mV	360	540	720
14	Maximum Line Regulation	(*5)(*6)	mV	96	144	192
15	Maximum Load Regulation	(*5)(*7)	mV	192	288	384
16	Temperature Coefficient	(*5)	-	Less than 0.02% / °C		
17	Over Current Protection	(*8)	A	20.10 -	13.47 -	10.05 -
18	Over Voltage Protection	(*9)	V	28.8 - 33.6	41.4 - 48.6	55.2 - 64.8
19	Hold-up Time (Typ)	(*2)	-	20ms		
20	Leakage Current	(*10)	-	Less than 0.5mA. 0.2mA(Typ) at 100VAC / 0.4mA(Typ) at 230VAC		
21	Parallel Operation		-	-		
22	Series Operation		-	Possible		
23	Operating Temperature	(*11)	-	Convection : -10 to +70°C (-10 to +50°C:100%, +60°C:65%, +70°C:30%)		
24	Operating Humidity		-	30 to 90%RH (No Condensing)		
25	Storage Temperature		-	-30 to +75°C		
26	Storage Humidity		-	10 to 90%RH (No Condensing)		
27	Cooling		-	Convection Cooling		
28	Withstand Voltage		-	Input - FG : 2kVAC (10mA), Input - Output : 3kVAC (10mA) 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), EN50178(OV II) Designed to meet DENAN at 100VAC Only.		
33	Conducted Emission	(*12)	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B		
34	Radiated Emission	(*12)	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B		
35	Immunity		-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11		
36	Weight (Typ)		g	520		
37	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.

=NOTES=

*1. Operating time at peak output is less than 5sec, duty is less than 40%. For details, refer to peak output condition (A253-01-03_). When the peak output more than 5 sec is continued, the output is shut down, manual reset.

*2. At 100VAC/200VAC, Ta=25°C, nominal output voltage and average output power.

*3. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC (50-60Hz).

*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-Average 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).

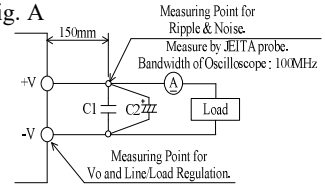
*10. Measured by the each measuring method of UL, CSA, EN and DENAN (at 60Hz), Ta=25°C.

*11. Output Derating - Derating at standard mounting. Refer to output derating curve (A253-01-02_).
- When forced air cooling, refer to forced air cooling specifications (A253-01-04_, A253-01-05/CO2-_, A253-01-06_).
- Load (%) is percent of average output power or average output current, do not exceed its derating of average load.

*12. At Ta=25°C and average output power.

*13. Output derating needed when input voltage less than 90VAC. Refer to output derating vs. input voltage (A253-01-02_).

Fig. A



C1 : Film Cap. 0.1μF
C2 : Elect. Cap. 100μF

ZWS240BP/CO2

SPECIFICATIONS (FORCED AIR COOLING)

A253-01-05/CO2-A

	ITEMS / MODEL			ZWS240BP -24/CO2	ZWS240BP -36/CO2	ZWS240BP -48/CO2
1	Nominal Output Voltage		V	24	36	48
2	Average Output Current		A	12.5	8.4	6.3
3	Peak Output Current	(*1)	A	20.0	13.4	10.0
4	Average Output Power		W	300.0	302.4	302.4
5	Peak Output Power	(*1)	W	480.0	482.4	480.0
6	Efficiency (Typ)	100VAC	%	88		
	(*2)	200VAC	%	91		
7	Input Voltage Range	(*3)(*4)	-	85 - 265VAC (47 - 63Hz) or 120 - 370VDC		
8	Input Current (Typ)	(*5)	A	3.6/1.8		
9	Hold-up Time (Typ)	(*5)	-	16ms(typ) at 100VAC & Rated O/P Power, 20ms(typ) at 100VAC & 75% Load		
10	Operating Temperature	(*6)	-	-10 to +60°C (-10 to +50°C:100%, +60°C:70%)		
11	Cooling	(*7)	-	Forced Air Cooling		
12	Conducted Emission	(*8)	-	Designed to meet EN55011/EN55032-A, FCC-A, VCCI-A		
13	Radiated Emission	(*8)	-	Designed to meet EN55011/EN55032-A, FCC-A, VCCI-A		

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

*For other specification items, refer to specifications (A253-01-01/CO2_).

=NOTES=

*1. Operating time at peak output is less than 5sec, duty is less than 40%. For details, refer to peak output condition (A253-01-03_). When the peak output more than 5 sec is continued, the output is shut down, manual reset.

*2. At 100VAC/200VAC, Ta=25°C, nominal output voltage and average output power.

*3. For cases where conformance to various safety specs (UL, CSA, EN) are required, to be described as 100 - 240VAC (50-60Hz).

*4. Output derating needed when input voltage less than 90VAC. Refer to output derating vs. input voltage (A253-01-02_).

*5. At 100VAC/200VAC, Ta=25°C, nominal output voltage and average output power.

*6. Output Derating - Derating at standard mounting. Refer to output derating curve (A253-01-06_).
- Load (%) is percent of average output power or average output current, do not exceed its derating of average load.

*7. Forced air cooling with air velocity more than 1.5m/s (measured at component side of PCB, air must flow through component side)

*8. At Ta=25°C and average output power.