

**ZWS240RC**

SPECIFICATIONS

B138-01-01A

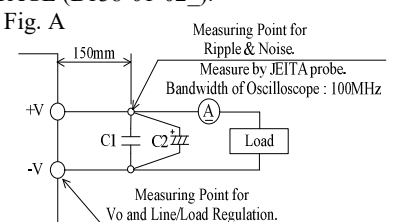
ITEMS		MODEL	ZWS240RC-24
1	Nominal Output Voltage	V	24
2	Maximum Output Current	A	10
3	Maximum Output Power	W	240
4	Efficiency (Typ)	100VAC %	87
		(*1) 200VAC %	90
5	Input Voltage Range	(*2)(*3) -	85 - 265VAC (47 - 63Hz)
6	Input Current (Typ)	(*1) A	2.8/1.5
7	Inrush Current (Typ)	(*1)(*4) -	15A at 100VAC, 30A at 200VAC, Ta=25°C, Cold Start
8	PFHC	-	Designed to meet IEC61000-3-2
9	Power Factor (Typ)	(*1) -	0.93/0.90
10	Output Voltage Accuracy	(*1) V	±2%
11	Output Voltage Range	V	21.6 - 26.4
12	Maximum Ripple & Noise	0≤Ta≤70°C mV	200
		(*5) -10≤Ta<0°C mV	250
13	Maximum Line Regulation	(*5)(*6) mV	96
14	Maximum Load Regulation	(*5)(*7) mV	150
15	Temperature Coefficient	(*5) -	Less than 0.02% / °C
16	Over Current Protection	(*8) A	10.5 -
17	Over Voltage Protection	(*9) V	27.6 - 32.4
18	Hold-up Time (Typ)	(*1) -	31ms
19	Leakage Current	(*10) -	Less than 0.5mA. 0.2mA (Typ) at 100VAC / 0.4mA (Typ) at 230VAC
20	Remote Control	-	Option
21	Parallel Operation	-	-
22	Series Operation	-	Possible
23	Operating Temperature	(*11) -	Convection : -10 - +70°C (-10 - +50°C:100%, +60°C:65%, +70°C:30%)
24	Operating Humidity	-	30 - 90%RH (No Condensing)
25	Storage Temperature	-	-30 - +75°C
26	Storage Humidity	-	10 - 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 <sup>2</sup> Constant, X,Y,Z 1hour each.
31	Shock	-	Less than 196.1m/s <sup>2</sup>
32	Safety	-	Approved by UL62368-1, CSA62368-1, EN62368-1, UL60950-1, CSA60950-1, EN60950-1 (Expire date of 60950-1 : 20/12/2020), EN62477-1 (OVCI-III)
33	Conducted Emission	(*12) -	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B
34	Radiated Emission	(*12) -	Designed to meet EN55011/EN55032-A, FCC-A, VCCI-A
35	Immunity	(*12) -	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

\*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 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. Refer to LOAD vs. INPUT VOLTAGE (B138-01-02\_).
- \*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 (at 60Hz), Ta=25°C.
- \*11. Output Derating
  - Derating at standard mounting.
  - Refer to LOAD vs. AMBIENT TEMPERATURE (B138-01-02\_, B138-01-03\_).
  - Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.
- \*12. 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 directives.

Fig. A



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

**ZWS240RC**

OUTPUT DERATING

B138-01-02

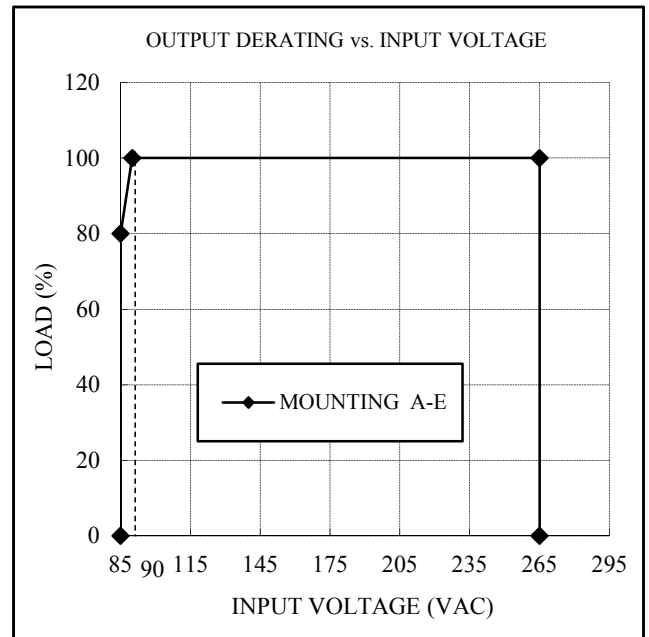
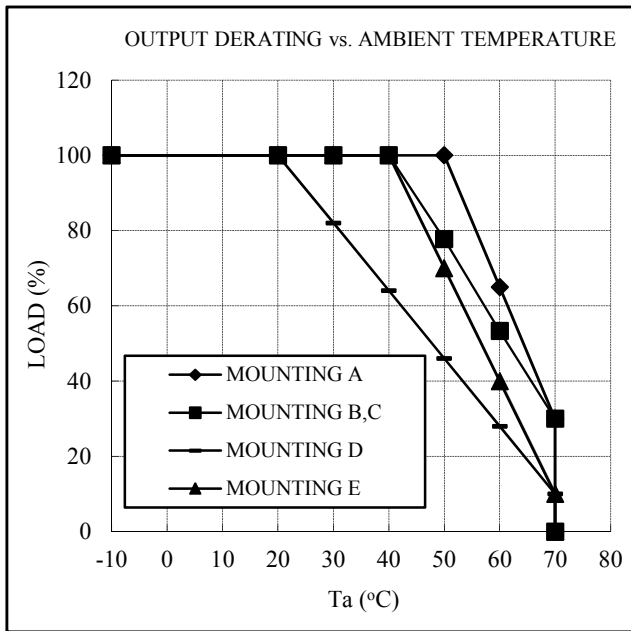
\*COOLING : CONVECTION COOLING

Ta (°C)	LOAD (%)	
	MOUNTING A	MOUNTING B,C
-10 - +20	100	100
30	100	100
40	100	100
50	100	77
60	65	53
70	30	30

Ta (°C)	LOAD (%)	
	MOUNTING D	MOUNTING E
-10 - +20	100	100
30	82	100
40	64	100
50	46	70
60	28	40
70	10	10

\*COOLING : CONVECTION

INPUT VOLTAGE (VAC)	LOAD (%)
	MOUNTING A-E
85	80
90 - 265	100



When used at 170VAC - 265VAC and MOUNTING D or MOUNTING E, refer to "B138-01-03\_" of the output derating.

MOUNTING A

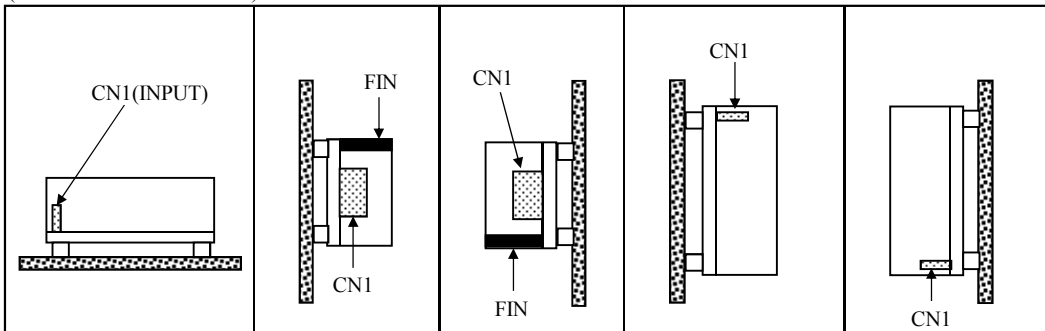
MOUNTING B

MOUNTING C

MOUNTING D

MOUNTING E

(STANDARD MOUNTING)



**ZWS240RC**

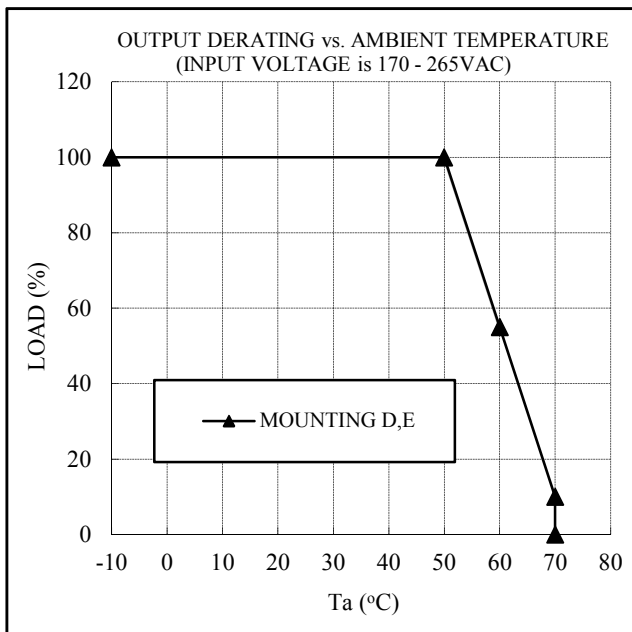
OUTPUT DERATING

B138-01-03

Special output derating when used at 170VAC - 265VAC and MOUNTING D or MOUNTING E.

\*COOLING : CONVECTION COOLING  
(INPUT VOLTAGE is 170 - 265VAC)

Ta (°C)	LOAD (%)
	MOUNTING D,E
-10 - +50	100
60	55
70	10



MOUNTING D

MOUNTING E

