

ZWS10B/FV

SPECIFICATIONS

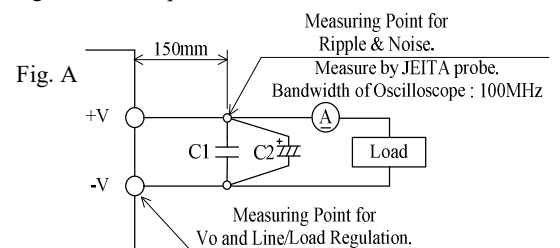
CA790-01-01/FV-A

ITEMS		MODEL	ZWS10B -3/FV	ZWS10B -5/FV	ZWS10B -12/FV	ZWS10B -15/FV	ZWS10B -24/FV
1	Nominal Output Voltage	V	3.3	5	12	15	24
2	Maximum Output Current	A	2.0	2.0	0.9	0.7	0.5
3	Maximum Output Power	W	6.6	10.0	10.8	10.5	12.0
4	Efficiency (Typ) (*1)	100VAC	% 70	77	82	83	84
		200VAC	% 70	78	83	84	85
5	Input Voltage Range (*2)(*12)	-	85- 265VAC (47-63Hz) or 120- 370VDC				
6	Input Current (Typ) (*1)	A	0.18 / 0.11		0.25 / 0.13		
7	Inrush Current (Typ) (*1)(*3)	-	15A at 100VAC,30A at 200VAC,Ta=25°C,Cold Start				
8	Output Voltage Range	-	Fixed				
9	Output Voltage Accuracy	V	3.1 - 3.5	4.8 - 5.2	11.5 - 12.5	14.4 - 15.6	23.0 - 25.0
10	Maximum	0≤Ta≤70°C, 35-100% Load	mV 120	120	150	150	150
	Ripple & Noise (*4)(*5)	-10≤Ta<0°C, 35-100% Load	mV 160	160	180	180	180
		-10<Ta<70°C, 0-35% Load	mV 200	200	240	240	240
11	Maximum Line Regulation (*4)(*6)	mV	20	20	48	60	96
12	Maximum Load Regulation (*4)(*7)	mV	40	40	96	120	150
13	No Load Power Consumption	-	Typical 0.2W at 100VAC/200VAC, 0.5W Max				
14	Temperature Coefficient (*4)	-	Less than 0.02% / °C				
15	Over Current Protection (*8)	A	2.1 -	2.1 -	0.95 -	0.74 -	0.53 -
16	Over Voltage Protection (*9)	V	4.00 - 5.25	5.75 - 7.00	13.8 - 16.2	17.3 - 20.3	27.6 - 32.4
17	Hold-up Time (Typ) (*1)	-	20ms				
18	Leakage Current (*10)	-	0.15/0.30mA Max. (100VAC / 230VAC 60Hz)				
19	Remote Control	-	-				
20	Parallel Operation	-	-				
21	Series Operation	-	Possible				
22	Operating Temperature (*11)	-	Convection : -10 to +70°C (-10 to +50°C:100%, +60°C:70%, +70°C:20%)				
23	Operating Humidity	-	30 to 90%RH (No Condensing)				
24	Storage Temperature	-	-30 to +75°C				
25	Storage Humidity	-	10 to 95%RH (No Condensing)				
26	Cooling	-	Convection Cooling				
27	Withstand Voltage	-	Input - FG : 2kVAC (10mA), Input - Output : 3kVAC (10mA) Output - FG : 500VAC (20mA) 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 ² Constant, X,Y,Z 1hour each.				
30	Shock	-	Less than 196.1m/s ²				
31	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.				
32	Conducted Emission	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B				
33	Radiated Emission	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B				
34	Immunity	-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11				
35	Weight (Typ)	g	45				
36	Size (W x H x D)	mm	50 x 22 x 73.5 (Refer to Outline Drawing)				

*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. Not applicable for the in-rush current to noise filter for less than 0.2ms.
- *4. Please refer to Fig. A for measurement of Vo, line & load regulation and ripple voltage.
- *5. For start up at low ambient temperature and low input voltage, output ripple noise might not meet specification. However, specification can be met after one second.
- *6. 85 - 265VAC, constant load.
- *7. No load-Full load, constant input voltage.
- *8. Current limiting (hiccup) with automatic recovery.
Avoid to operate at over load or short circuit condition for more than 30seconds.
- *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 Deratings
 - Derating at standard mounting. Refer to output derating curve (CA790-01-02).
 - When forced air cooling, refer to derating curve (CA790-01-02).
 - Load (%) is percent of maximum output power or maximum output current, do not exceed its derating of maximum load.
- *12. Output Derating needed when input voltage less than 90VAC. Refer to output derating vs. input voltage (CA790-01-03).



C1 : Film Cap. 0.1 μF

C2 : Elect. Cap. 100 μF