

VS100E

SPECIFICATIONS

A241-01-01D

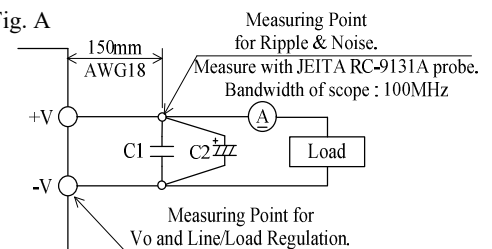
ITEMS		MODEL	VS100E-3	VS100E-5	VS100E-12	VS100E-15	VS100E-24	VS100E-48	
1	Nominal Output Voltage	V	3.3	5	12	15	24	48	
2	Maximum Output Current	A	20	20	8.5	7.0	4.3	2.2	
3	Maximum Output Power	W	66.0	100.0	102.0	105.0	103.2	105.6	
4	Efficiency (Typ)	(*1) %	80	85	85	85	86	87	
5	Input Voltage Range	(*2) -	85 - 132VAC (47 - 63Hz) or 110 - 175VDC						
6	Input Current (Typ)	(*1) A	1.5	2.1					
7	Inrush Current (Typ)	(*1) -	30A at Cold Start						
8	Output Voltage Range	V	2.97 - 3.63	4.5 - 5.5	10.8 - 13.2	13.5 - 16.5	21.6 - 26.4	43.2 - 52.8	
9	Maximum Ripple & Noise (*3)(*4)	0≤Ta≤70°C	mV	120	120	150	150	150	200
		-10≤Ta<0°C	mV	160	160	180	180	180	240
10	Maximum Line Regulation	(*3)(*5) mV	20	20	48	60	96	192	
11	Maximum Load Regulation	(*3)(*6) mV	40	40	96	120	150	240	
12	Temperature Coefficient	(*3) -	Less than 0.02% / °C						
13	Over Current Protection	(*7) A	21.0 <	21.0 <	8.92 <	7.35 <	4.51 <	2.31 <	
14	Over Voltage Protection	(*8) V	3.80 - 4.46	5.75 - 6.75	13.8 - 16.2	17.3 - 20.3	27.6 - 32.4	55.2 - 64.8	
15	Hold-up Time (Typ)	(*1) -	20ms						
16	Leakage Current	(*9) -	Less than 0.5mA						
17	Parallel Operation	-	-						
18	Series Operation	-	Possible						
19	Operating Temperature	(*10) -	Convection : -10 to +70°C (-10 to +50°C:100%, +60°C:70%, +70°C:20%)						
20	Operating Humidity	-	30 to 90%RH (No Condensing)						
21	Storage Temperature	-	-30 to +85°C						
22	Storage Humidity	-	10 to 95%RH (No Condensing)						
23	Cooling	-	Convection Cooling						
24	Withstand Voltage	-	Input - FG : 2kVAC (10mA), Input - Output : 2kVAC (10mA) Output - FG : 500VAC (20mA) for 1min						
25	Isolation Resistance	-	More than 100MΩ at 25°C and 70%RH Output - FG : 500VDC						
26	Vibration	-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s ² Constant, X,Y,Z 1hour each.						
27	Shock	-	Less than 196.1m/s ²						
28	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 Den-an Appendix12 (J60950-1)						
29	Conducted Emission	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B						
30	Radiated Emission	-	Designed to meet EN55011/EN55032-B, FCC-B, VCCI-B						
31	Immunity	-	Designed to meet IEC61000-4-2(Level 2,3), -3(Level 3), -4(Level 3), -5(Level 2,3), -6(Level 3), -8(Level 4), -11						
32	Weight (Typ)	g	290						
33	Size (W x H x D)	(*11) mm	62 x 29 x 155 (Refer to Outline Drawing)						

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

=NOTES=

- *1. At 100VAC, 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 - 120VAC(50/60Hz).
- *3. Please refer to Fig. A for measurement of line & load regulation and ripple voltage.
- *4. For start up at low ambient temperature and low input voltage, output ripple noise might not meet specification. However, there is no overshoot at start up and output ripple noise specification can be met after one second.
- *5. 85 - 132VAC, constant load.
- *6. No load-Full load, constant input voltage.
- *7. 3.3, 5V model : Constant current limit and hiccup with automatic recovery.
12 - 48V model : Constant current limit with automatic recovery.
Avoid to operate at over load or short circuit condition for more than 30seconds.
- *8. OVP circuit will shut the output down, manual reset (Re power on).
- *9. Measured by the each measuring method of UL, CSA, EN and DENAN(at 60Hz), Ta=25°C.
- *10. Ratings
 - Derating at standard mounting. Refer to output derating curve(A241-01-02_).
 - When forced air cooling, refer to derating curve(A241-01-03_).
 - Load (%) is percent of maximum output power or maximum output current, whichever is greater.
- *11. Not include lead length on solder side.

Fig. A



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

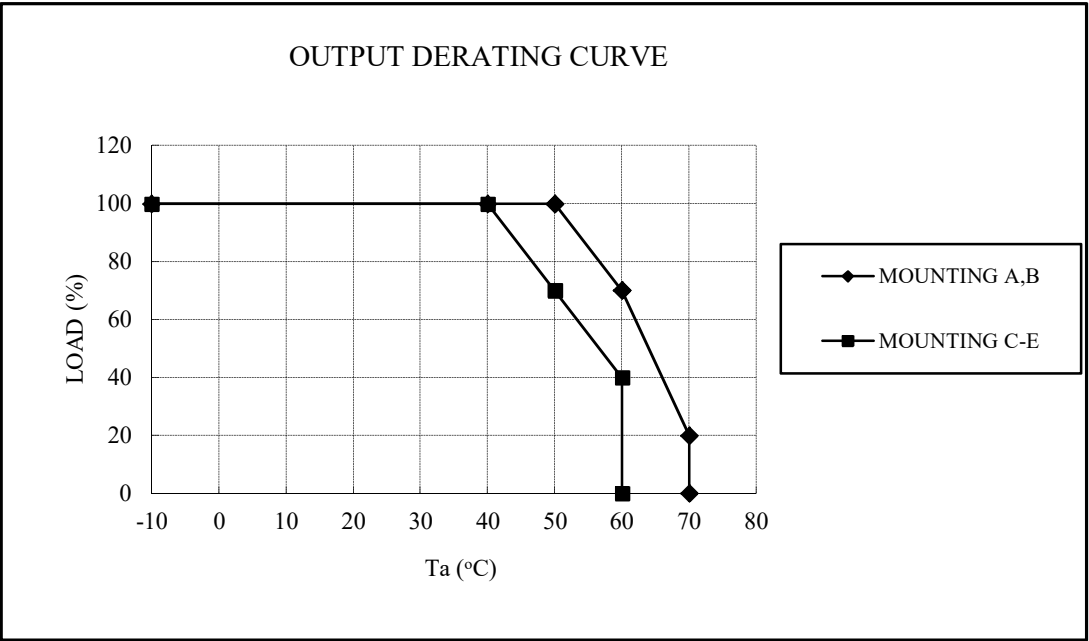
VS100E

OUTPUT DERATING

A241-01-02

*COOLING : CONVECTION COOLING

Ta (°C)	LOAD (%)	LOAD (%)
	MOUNTING A,B	MOUNTING C-E
-10 to +40	100	100
50	100	70
60	70	40
70	20	-



MOUNTING A

MOUNTING B

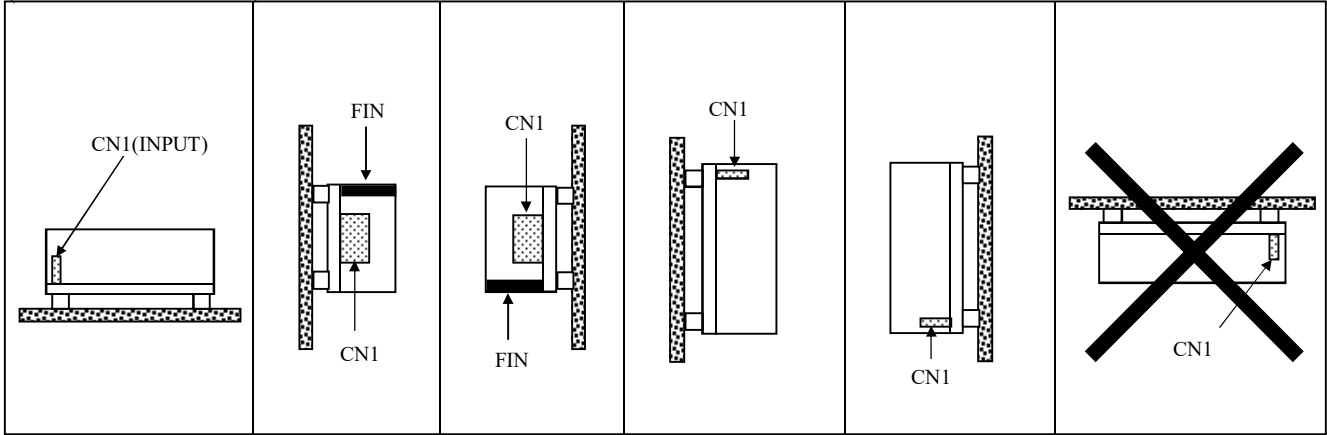
MOUNTING C

MOUNTING D

MOUNTING E

DON'T USE

(STANDARD MOUNTING)



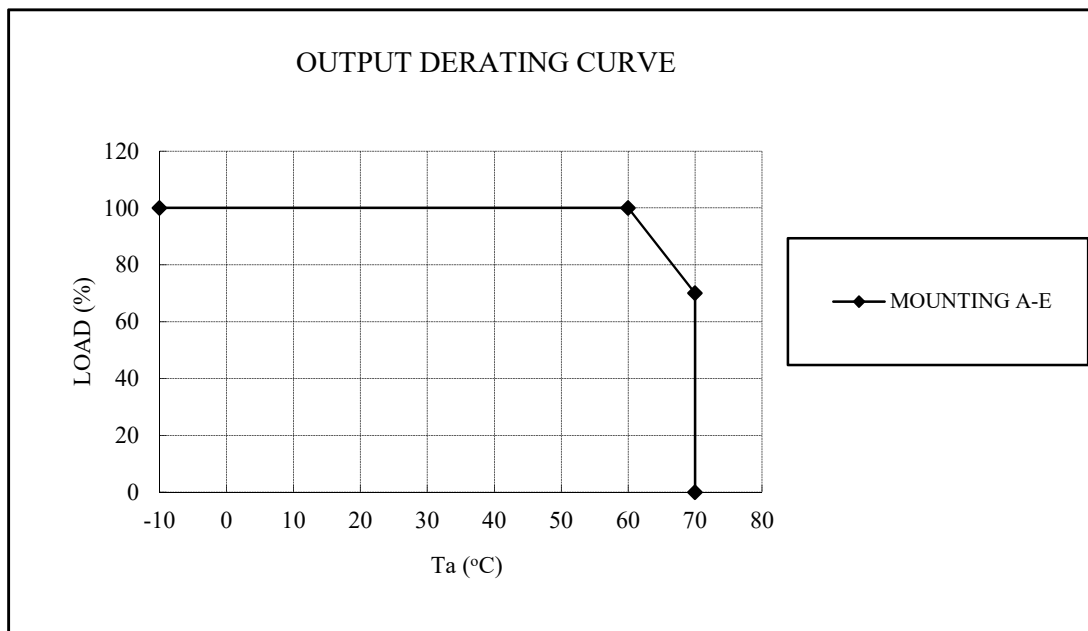
OUTPUT DERATING

A241-01-03

*COOLING : FORCED AIR COOLING

Ta (°C)	LOAD (%)
	MOUNTING A-E
-10 to +60	100
70	70

Air flow $\geq 0.5\text{m}^3/\text{min}$: Air must flow through component side.



MOUNTING A

MOUNTING B

MOUNTING C

MOUNTING D

MOUNTING E

DON'T USE

(STANDARD MOUNTING)

