ELV90

TDK-Lambda

V006-01-01D

SPECIFICATIONS

	ITEMS / MODEL			ELV90-12-7R5	ELV90-24-3R8
1	Nominal Output Voltage		V	12	24
2	Minimum Output Current		A	0.2	0.2
3	Maximum Output Current		A	7.5	3.8
4	Maximum Output Power		W	90	91.2
5	Efficiency (Typ.) (*1)	100VAC	%	81	85
		200VAC	%	84	88
6	Input Voltage Range (*2)		-	90 - 305VAC (47Hz - 63Hz)	
7	Input Current (Typ.) (*1)		-	1.13A at 100VAC, 0.56A at 200VAC	
8	Inrush Current (Typ.) (*3)		-	25A at 100VAC, 50A at 200VAC, Ta = 25°C, Cold Start	
9	Harmonic Current		-	Designed to meet IEC61000-3-2 Class C (Load: 100VAC/230VAC:50% - 100%)	
10	Power Factor (Typ.) (*1)		-	0.99 at 100VAC, 0.95 at 200VAC	
11	Output Voltage Accuracy (*4,5)		-	±3%	
12	Total Regulation (*5)		-	±3%	
13	Output Ripple & Noise (*4,5)		mV	360	240
14	Over Current Protection (*6)		-	>105% Rated Output Power	
15	Over Voltage Protection (*7)		-	>110%	
16	Turn On Time (Typ.)		-	400 ms at 25°C	
17	Operating Temperature (*8)		-	-25 - +50°C	
18	IP Class (*9)		-	IP66	
19	Operating Humidity		-	15 - 90%RH (No Condensing)	
20	Storage Temperature		-	-30 - +85°C	
21	Storage Humidity		-	15 - 90%RH (No Condensing)	
22	Cooling		-	Convection Cooling	
23	Withstand Voltage		-	Input - FG : 3kVAC (10mA), Input - Output : 4kVAC (10mA) Output - FG : 2kVAC (10mA) for 1min	
24	Isolation Resistance		-	>100MΩ at 25°C and 70%RH. Output - FG : 500VDC	
25	Leakage Current (*10)		-	Less than 0.25mA. 0.05mA(Typ) at 100VAC / 0.1mA(Typ) at 200VAC	
26	Vibration		-	At no operating, 10 - 55Hz (Sweep for 1min) 19.6m/s^2 Constant, X,Y,Z 1hour each.	
27	Shock (In Package)		-	Less than 196.1m/s^2	
28	EMI (Conducted & Radiated Emission)		-	Designed to meet EN55015 ; EN55022-B ; VCCI-B ; CISPR 22-B ; FCC-B	
29	Immunity		-	Designed to meet IEC61000-6-2 IEC61000-4-2, -3, -4, -5, -6, -8, -11	
30	Safety Standard		-	Approved by Den-an (Appendix 8, Appendix 10) UL8750, CSA C22.2 No.250.13,EN61347-1, EN61347-2-13	
31	Weight (Typ.)		g	830	
32	Size (L x W x H)		mm	L:228 (253 including mounting bracket) W:45.5 H:40.2	

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

=NOTES=

*1 : At maximum output power , Ta = 25°C after warm up.

*2 : For cases where conformance to various safety specs (UL, CSA, EN, Den-an) are required, to be described as 100-240VAC (100-277V for USA), 50/60Hz on name plate.

*3 : Not applicable for the in-rush current to noise filter for less than 0.2ms.

*4 : At Vin=100/200VAC & maximum output power, Ta = 25°C.

*5 : Refer to Fig. A for measurement determination.

*6 : Current limiting with automatic recovery or shutdown. Avoid over load and short circuit.

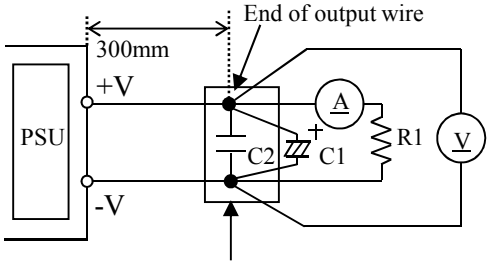
*7 : OVP circuit will shutdown output, manual reset (Re-power on).

*8 : For cases where conformance to safety specs, operating case or ambient temperature will be specified. Please refer instruction manual.

*9 : Conditions : Please refer instruction manual.

*10 : Measured by measuring method of Den-an (at 60Hz), Ta=25°C.

Figure A measurement setup



Measurement point for output voltage, regulation and ripple & noise voltage.
Measure with JEITA probe.
Bandwidth of oscilloscope : 20MHz
R1 = Electronic load
C1 = Elect. Cap. 100uF
C2 = Film Cap. 0.1uF

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ELV90

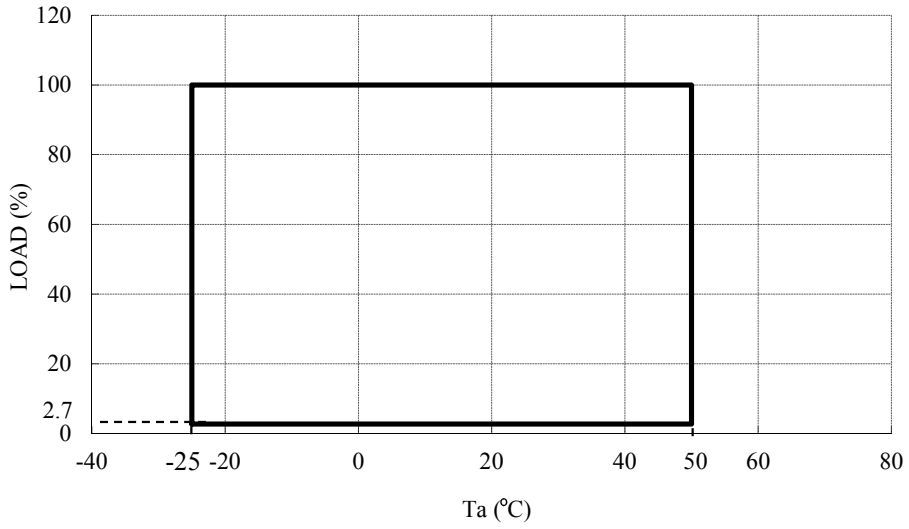
V006-01-02

OUTPUT DERATING

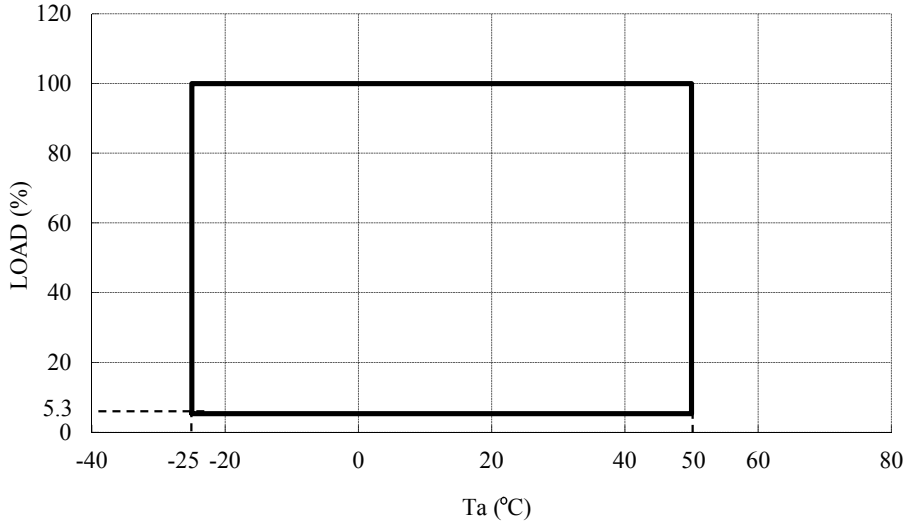
*COOLING : CONVECTION COOLING

Derating Table	Ta (°C)	LOAD (%)
ELV90-12-7R5	-25 - +50	2.7 - 100
ELV90-24-3R8	-25 - +50	5.3 - 100

ELV90-12-7R5 OUTPUT DERATING CURVE



ELV90-24-3R8 OUTPUT DERATING CURVE



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