



E-Star Power Development Co., Ltd. (E-STAR)

1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City 22069, Taiwan (R.O.C.)

Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

150W Open Frame type Single output power supply < ULP-150



■ Features :

- Universal AC input / Full range(up to 300VAC)
- Built in active PFC circuit compliance to EN61000-3-2 class C
- High efficiency up to 90%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- U-bracket low profile:33mm
- ZVS technology to reduce power dissipation
- 3 years warranty(100% load 12hr/day=5years)



SPECIFICATION

MODEL		ULP-150-12	ULP-150-15	ULP-150-24	ULP-150-36	ULP-150-48
OUTPUT	DC VOLTAGE	12V	15V	24V	36V	48V
	RATED CURRENT	12.5A	10A	6.3A	4.2A	3.2A
	CURRENT RANGE (convection)	0 ~ 12.5A	0 ~ 10A	0 ~ 6.3A	0 ~ 4.2A	0 ~ 3.2A
	PEAK POWER (3sec) Note.6	200W	200W	200W	200W	200W
	RATED POWER (convection)	150W	150W	151.2W	151.2W	153.6W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	150mVp-p	200mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	10.8~13.2V	13.5~16.5V	21.6~26.4V	32.4~39.6V	43.2~52.8V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±2.0%	±2.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
INPUT	SETUP, RISE TIME	2000ms, 100ms/230VAC 3000ms, 100ms/115VAC at full load				
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load				
	VOLTAGE RANGE Note.5	90 ~ 300VAC 127 ~ 424VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	0.95/230VAC 0.98/115VAC at full load				
	EFFICIENCY (Typ.)	89%	88%	90%	90%	90%
	AC CURRENT (Typ.)	2A/115VAC 1A/230VAC				
PROTECTION	INRUSH CURRENT (Typ.)	Cold start 65A/230VAC				
	LEAKAGE CURRENT	<2mA / 240VAC				
	OVERLOAD	Normally works within 105~130% rated output power for 3sec and then shut down o/p voltage with auto-recovery 130~150% rated power or short circuit, constant current limiting within 3sec and shut down o/p voltage with auto-recovery				
	OVER VOLTAGE	13.5 ~ 16.3V	17 ~ 21V	26.7 ~ 32.4V	41.4 ~ 48.6V	53 ~ 64.8V
ENVIRONMENT		Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER TEMPERATURE	95°C±5°C(TSW1) Protection type : Shut down o/p voltage,recovers automatically after fault condition is removed				
	WORKING TEMP.	-30 ~ +70°C (Refer to output load derating curve)				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH				
SAFETY & EMC (Note 4)	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)				
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes				
	SAFETY STANDARDS	EN61347-2-13, UI1012, UL60950-1,EN60950-1 approved				
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/70%RH				
	EMI CONDUCTION & RADIATION	Compliance to EN55015,EN55022 (CISPR22) Class B,				
OTHERS	HARMONIC CURRENT	Compliance to EN61000-3-2,CLASS C(≡60% load),EN61000-3-3				
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61547, EN55024, heavy industry level (surge 4KV), criteria A				
	MTBF	K hrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	219*68*33mm (L*W*H)				
NOTE	PACKING					
		1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. 5. Derating may be needed under low input voltages. Please check the derating curve for more details. 6. 3seconds or 20% duty cycle max. and the average output power should not exceed the rated power.				



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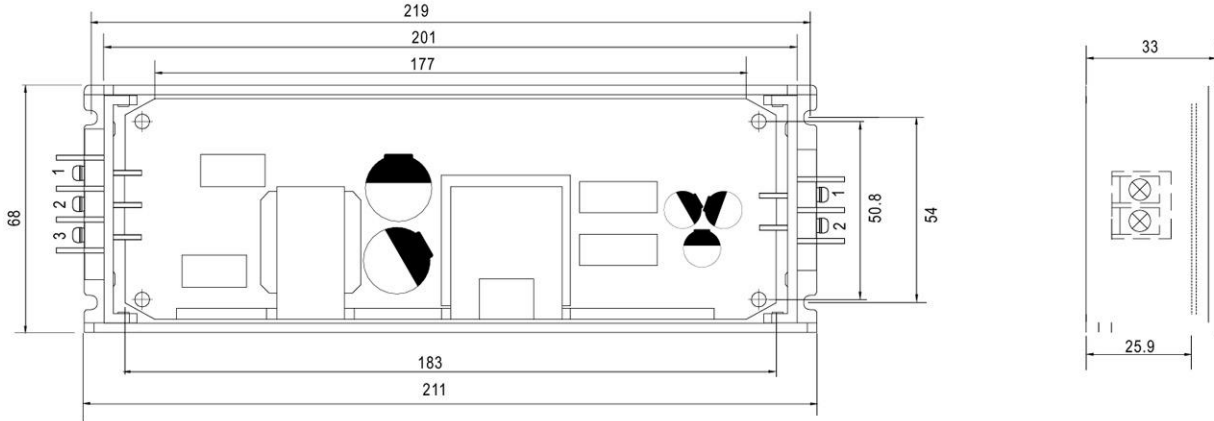
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Mechanical Specification

Case No. 988A-D Unit:mm



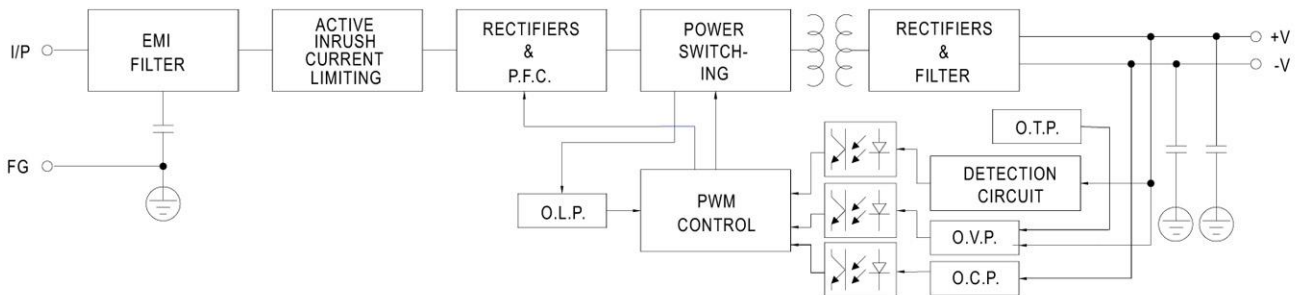
AC Terminal pin NO Assignment

Pin No.	Assignment
1	FG
2	AC/N
3	AC/L

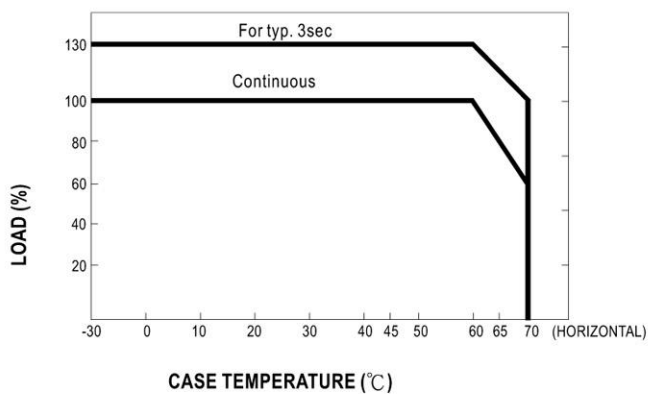
DC Terminal pin NO Assignment

Pin No.	Assignment
1	V-
2	V+

Block Diagram



Derating Curve



Static Characteristics

