

Datasheet

RS 150W, 1 Output, Embedded Switch Mode Power Supply (SMPS), 15V dc, 10A

RS Stock number 721-2020



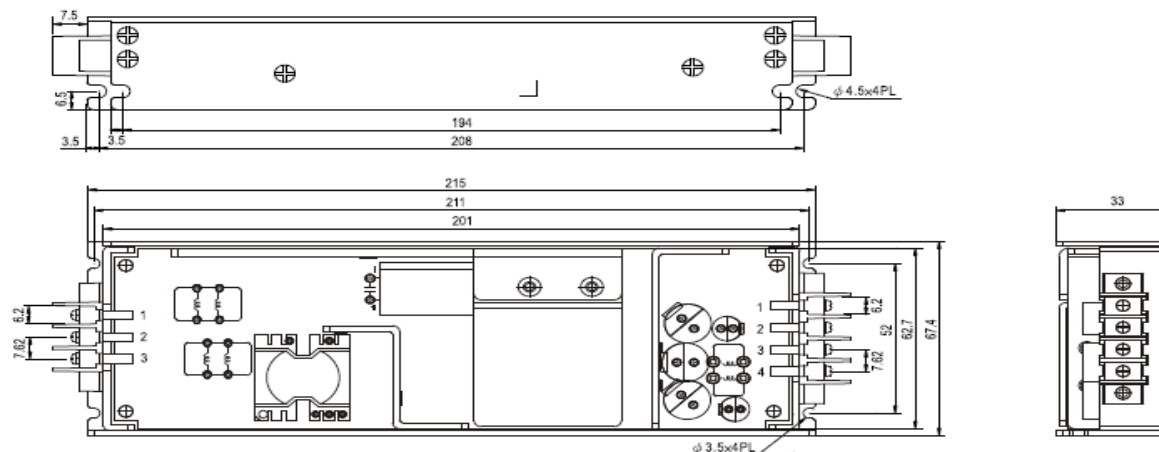
■ Features :

- Universal AC input / Full range(up to 295VAC)
- Built in active PFC compliance to EN61000-3-2 class C
- Constant Voltage design
- High efficiency up to 93%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Half encapsulated
- U-bracket low profile:33mm
- ZVS technology to reduce power dissipation
- Suitable for built-in type LED applications

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	0 ~ 12.5A	0 ~ 10A	0 ~ 6.3A	0 ~ 4.2A	0 ~ 3.2A
	RATED POWER	150W	150W	151.2W	151.2W	153.6W
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	150mVp-p	250mVp-p	250mVp-p
	VOLTAGE ADJ. RANGE	11.0~13.2V	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%
	SETUP, RISE TIME	2000ms, 100ms/230VAC 3000ms, 100ms/115VAC at full load				
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load				
INPUT	VOLTAGE RANGE Note.4	90 ~ 295VAC 127 ~ 417VDC				
	FREQUENCY RANGE	47 ~ 63Hz				
	POWER FACTOR (Typ.)	PF ≥ 0.96/230VAC PF ≥ 0.98/115VAC PF ≥ 0.94/277VAC at full load; PF ≥ 0.9/230VAC at 50%~100% load				
	EFFICIENCY (Typ.)	91.5%	91.5%	93%	93%	93%
	AC CURRENT (Typ.)	2A/115VAC 1A/230VAC				
	INRUSH CURRENT (Typ.)	Cold start 65A/230VAC				
	LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	OVERLOAD	145~185% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	SHORT CIRCUIT	Protection type : Hiccup mode, recovers automatically after fault condition is removed				
	OVER VOLTAGE	13.6 ~ 16.3V	17 ~ 21V	26.7 ~ 32.4V	41.4 ~ 48.6V	53 ~ 64.8V
		Protection type : Shut down o/p voltage with auto-recovery or re-power on to recovery				
	OVER TEMPERATURE	95°C ±5°C (RTH2) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down				
ENVIRONMENT	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				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)				
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC (Note 5)	SAFETY STANDARDS	Design refer to EN61347-1, EN61347-2-13, IEC61347-1, IEC61347-2-13, UL8750				
	WITHSTAND VOLTAGE	I/P-O/P: 3.75KVAC I/P-FG: 1.88KVAC O/P-FG: 0.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC/25°C/70%RH				
	EMI CONDUCTION & RADIATION	Compliance to EN55015 Class B				
	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, light industry level (surge 4KV), criteria A				
OTHERS	MTBF	216.3K hrs min. MIL-HDBK-217F (25°C)				
	DIMENSION	215*67.4*33mm (L*W*H)				
	PACKING	0.67kg; 24PCS/17.5kg/0.65CUFT				

Mechanical Specification

Case No. 988 Unit:mm



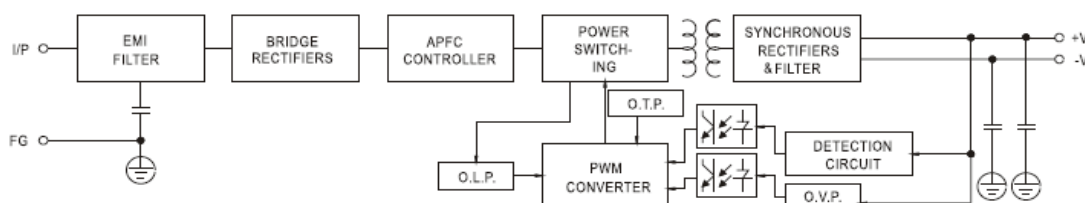
AC Terminal pin NO. Assignment

Pin No.	Assignment	Terminal
1	FG	DECA T31-C032033702
2	AC/L	
3	AC/N	

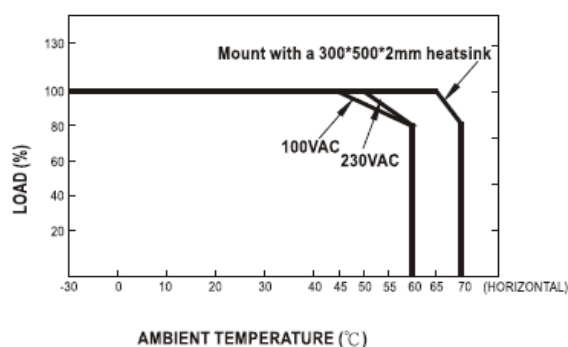
DC Terminal pin NO. Assignment

Pin No.	Assignment	Terminal
1	V-	DECA T31-C032043702
2	V-	
3	V+	
4	V+	

Block Diagram



Derating Curve



Static Characteristics

