

■ Features :

- Universal AC input / Full range
- Built in active PFC circuit compliance to EN61000-3-2
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Free air convection for 150W and forced air convection for 225W
- High power density 4.7w/in<sup>3</sup>
- Active AC surge current limiting
- U-bracket low profile: 38mm
- 3 years warranty

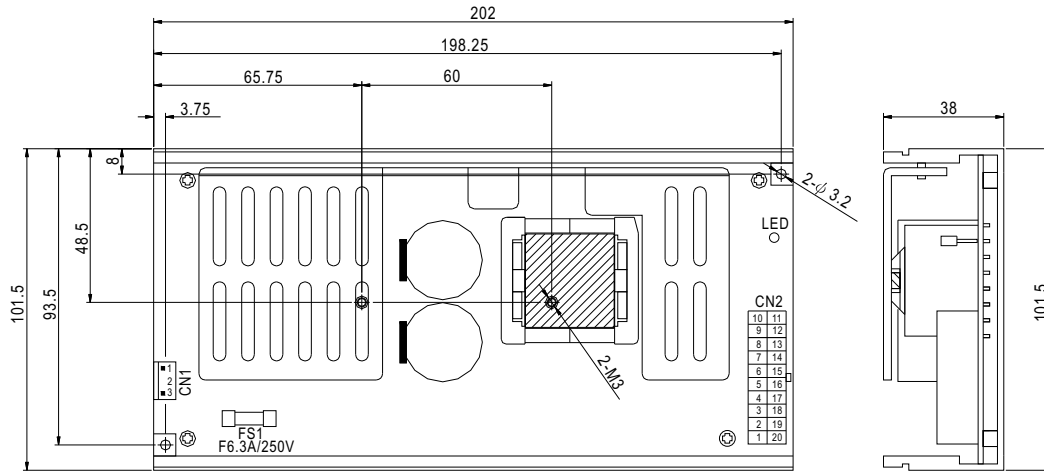


**SPECIFICATION**

MODEL	USP-225-3.3		USP-225-5		USP-225-12		USP-225-15		USP-225-24		USP-225-48			
OUTPUT	DC VOLTAGE	3.3V		5V		12V		15V		24V		48V		
	RATED CURRENT	40A		40A		18.7A		15A		9.4A		4.7A		
	CURRENT RANGE	0 ~ 40A		0 ~ 40A		0 ~ 18.7A		0 ~ 15A		0 ~ 9.4A		0 ~ 4.7A		
	RATED POWER	132W		200W		224.4W		225W		225.6W		225.6W		
	RIPPLE & NOISE (max.) Note.2	100mVp-p		100mVp-p		100mVp-p		100mVp-p		150mVp-p		250mVp-p		
	VOLTAGE ADJ. RANGE	2.97 ~ 3.6V		4.5 ~ 5.5V		10.8 ~ 13.2V		13.5 ~ 16.5V		21.6 ~ 26.4V		43.2 ~ 52.8V		
	VOLTAGE TOLERANCE Note.3	±2.0%		±2.0%		±2.0%		±2.0%		±2.0%		±2.0%		
	LINE REGULATION	±0.5%		±0.5%		±0.5%		±0.5%		±0.5%		±0.5%		
	LOAD REGULATION	±1.0%		±1.0%		±1.0%		±1.0%		±1.0%		±1.0%		
	SETUP, RISE TIME	500ms, 30ms/230VAC		1200ms, 30ms/115VAC at full load										
HOLD TIME (Typ.)	22ms/230VAC		22ms/115VAC at full load											
INPUT	VOLTAGE RANGE	90 ~ 264VAC		127 ~ 370VDC										
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR (Typ.)	PF>0.93/230VAC		PF>0.97/115VAC at full load										
	EFFICIENCY (Typ.)	72%		77%		85%		84%		86%		86%		
	AC CURRENT (Typ.)	115VAC	2.2A		3.3A									
		230VAC	1.1A		1.6A									
	INRUSH CURRENT (Typ.)	15A/115VAC		30A/230VAC										
LEAKAGE CURRENT	<3.5mA / 240VAC													
PROTECTION	OVER LOAD	105 ~ 150% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed												
	OVER VOLTAGE	3.6 ~ 4.4V		5.5 ~ 7.4V		13.2 ~ 16.3V		16.5 ~ 20.2V		26.4 ~ 32.4V		52.8 ~ 64.8V		
	OVER TEMPERATURE	95°C ±5°C (RTH2 : Detect on heatsink of power transistor) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down												
ENVIRONMENT	WORKING TEMP.	-20 ~ +65°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 ~ 50°C)												
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes												
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved												
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC		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												
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B												
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3												
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, Light industry level, criteria A												
OTHERS	MTBF	220K hrs min. MIL-HDBK-217F (25°C)												
	DIMENSION	202*101.5*38mm (L*W*H)												
	PACKING	0.85Kg; 16pcs/14.6Kg/0.76CUFT												
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>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.</p>													

### Mechanical Specification

Case No. 928 Unit:mm



AC Input Connector (CN1) : JST B3P-VH or equivalent

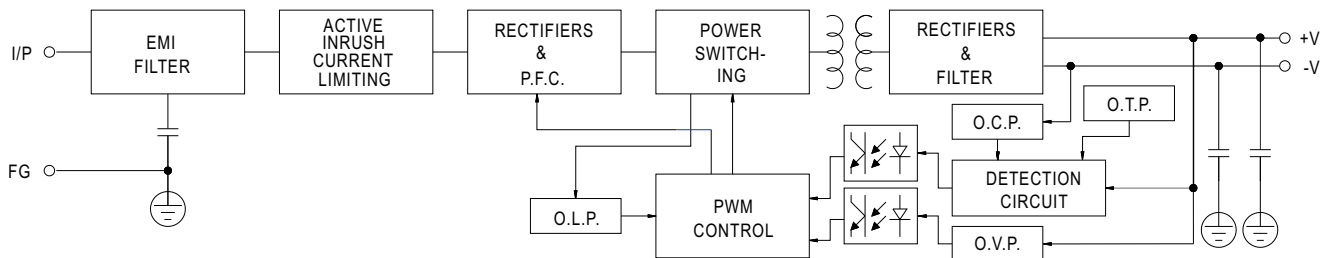
Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/L		

DC Output Connector (CN2) : MOLEX 39-29-9206 or equivalent

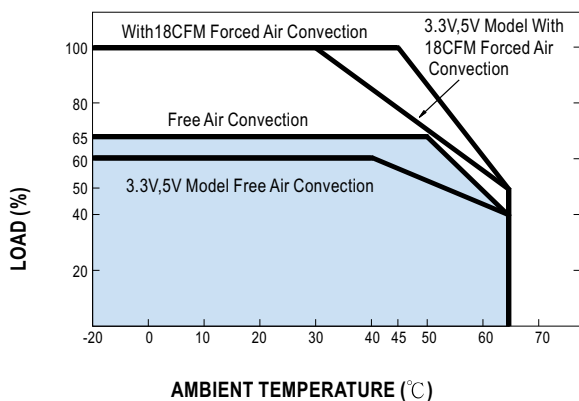
Pin No.	Assignment	Mating Housing	Terminal
1~5	+V	MOLEX 5557 or equivalent	MOLEX 5556 or equivalent
6~15	-V		
16~20	+V		

### Block Diagram

fosc : 100KHz



### Derating Curve



### Static Characteristics (5V)

