



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- High efficiency up to 89%
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- 1U low profile 38mm
- Medical safety approved (MOOP level)
- Built-in remote ON-OFF control
- Standby 5V@0.3A
- Built-in remote sense function
- No load power consumption<0.5W (Note.6)
- 5 years warranty

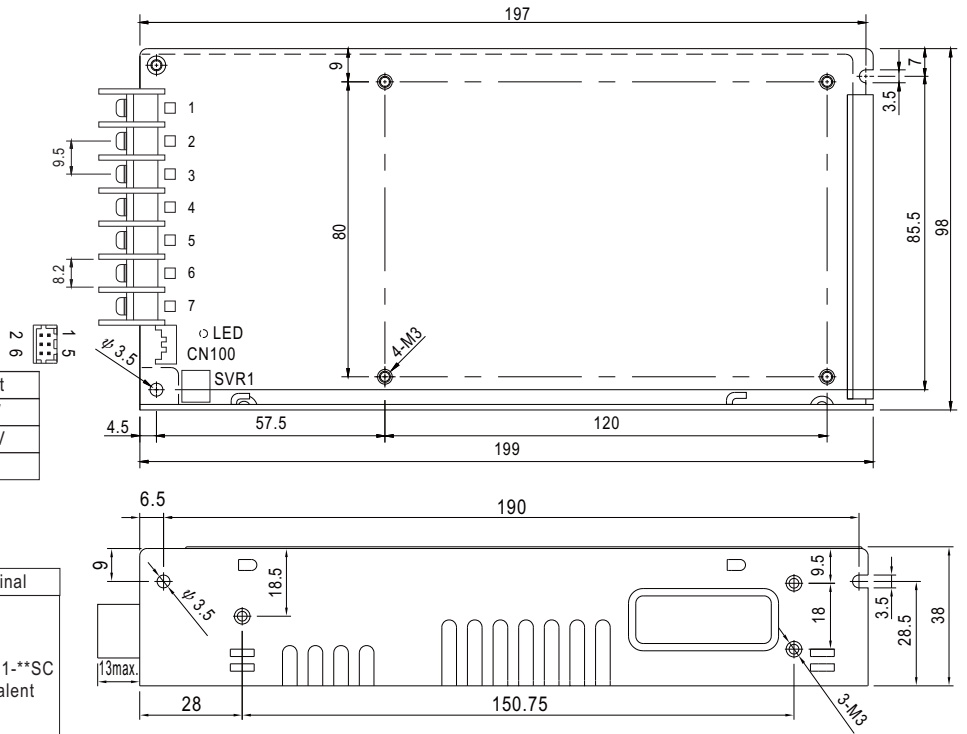


**SPECIFICATION**

MODEL	MSP-200-3.3	MSP-200-5	MSP-200-7.5	MSP-200-12	MSP-200-15	MSP-200-24	MSP-200-36	MSP-200-48		
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	36V	48V	
	RATED CURRENT	40A	35A	26.7A	16.7A	13.4A	8.4A	5.7A	4.3A	
	CURRENT RANGE	0 ~ 40A	0 ~ 35A	0 ~ 26.7A	0 ~ 16.7A	0 ~ 13.4A	0 ~ 8.4A	0 ~ 5.7A	0 ~ 4.3A	
	RATED POWER	132W	175W	200.3W	200.4W	201W	201.6W	205.2W	206.4W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	90mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	250mVp-p	250mVp-p	
	VOLTAGE ADJ. RANGE	2.8 ~ 3.8V	4.3 ~ 5.8V	6.8 ~ 9V	10.2 ~ 13.8V	13.5 ~ 18V	21.6 ~ 28.8V	28.8 ~ 39.6V	40.8 ~ 55.2V	
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	
	LOAD REGULATION	±1.5%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME	1000ms, 50ms/230VAC      250ms, 50ms/115VAC at full load								
HOLD UP TIME (Typ.)	16ms/230VAC      16ms/115VAC at full load									
INPUT	VOLTAGE RANGE Note.5	85 ~ 264VAC      120 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.95/230VAC      PF>0.99/115VAC at full load								
	EFFICIENCY (Typ.)	80%	84%	86%	88%	88%	88%	89%	89%	
	AC CURRENT (Typ.)	2.2A/115VAC      1.1A/230VAC								
	INRUSH CURRENT (Typ.)	35A/115VAC      70A/230VAC								
LEAKAGE CURRENT Note.7	Earth leakage current < 300µA/264VAC , Touch leakage current < 100µA/264VAC									
PROTECTION	OVERLOAD	105 ~ 135% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE	3.96 ~ 4.62V	6 ~ 7V	9.4 ~ 10.9V	14.4 ~ 16.8V	18.8 ~ 21.8V	30 ~ 34.8V	41.4 ~ 48.6V	57.6 ~ 67.2V	
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down								
FUNCTION	5V STANDBY	5VSB : 5V@0.3A ; tolerance ±5%, ripple : 50mVp-p(max.)								
	REMOTE CONTROL	RC+/RC- : 4 ~ 10V or open = power on ; 0 ~ 0.8V or short = power off								
ENVIRONMENT	WORKING TEMP.	-40 ~ +70°C (Refer to "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)								
SAFETY & EMC (Note 4)	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes								
	SAFETY STANDARDS	ANSI/AAMI ES60601-1, IEC60601-1, EAC TP TC 004 approved								
	ISOLATION LEVEL	Primary-Secondary: 2xMOOP, Primary-Earth: 1xMOOP								
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH								
	EMC EMISSION	Compliance to EN55011 (CISPR11) Class B, EN61000-3-2,-3, EAC TP TC 020								
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN60601-1-2, EAC TP TC 020								
	MTBF	209.4K hrs min.    MIL-HDBK-217F (25°C)								
	DIMENSION	199*98*38mm (L*W*H)								
NOTE	PACKING	0.77Kg; 18pcs/14.9Kg/0.9CUFT								
		<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. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."</p> <p>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>6. No load power consumption&lt;0.5W when RC+ &amp; RC- (CN100 pin1,2) 0 ~ 8V or short.</p> <p>7. Touch current was measured from primary input to DC output.</p> <p>8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p>								

**Mechanical Specification**

Case No.902E Unit:mm



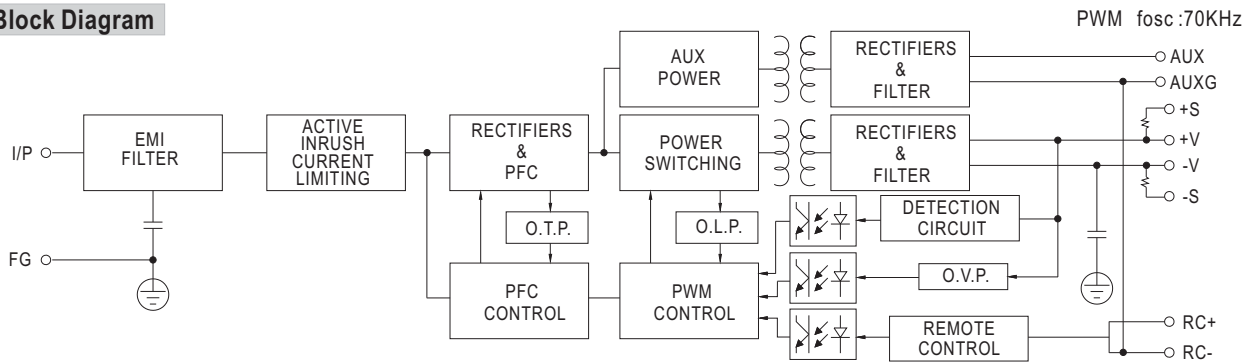
**Terminal Pin No. Assignment**

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG $\perp$		

**Connector Pin No. Assignment (CN100) :**  
HRS DF11-6DP-2DS or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	RC+	HRS DF11-6DS or equivalent	HRS DF11-**SC or equivalent
2	RC-		
3	AUX		
4	AUXG		
5	+S		
6	-S		

**Block Diagram**



**Derating Curve**

**Output Derating VS Input Voltage**

