

100W Single Output Medical Type

**MSP-100** series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90%
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Protections: Over temperature (optional)
- Cooling by free air convection
- 1U low profile 38mm
- Medical safety approved (MOOP level)
- Built-in remote ON-OFF control
- No load power consumption<0.5W
- All using 105°C long life electrolytic capacitors
- 5 years warranty



**SPECIFICATION**

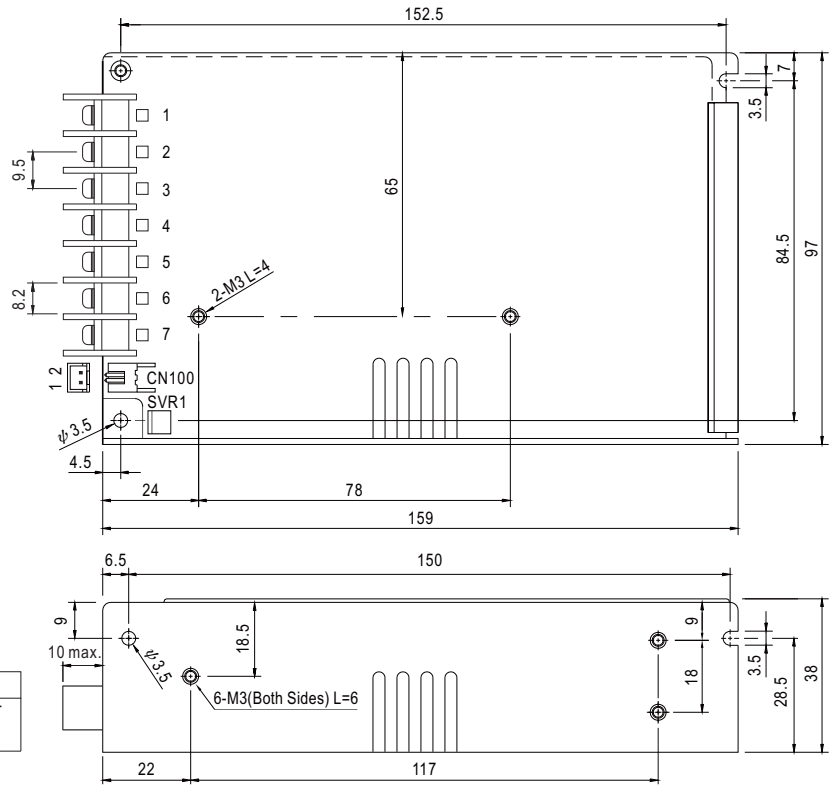
MODEL		MSP-100-3.3	MSP-100-5	MSP-100-7.5	MSP-100-12	MSP-100-15	MSP-100-24	MSP-100-36	MSP-100-48	
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	36V	48V	
	RATED CURRENT	20A	17A	13.5A	8.5A	7A	4.5A	2.9A	2.2A	
	CURRENT RANGE	0 ~ 20A	0 ~ 17A	0 ~ 13.5A	0 ~ 8.5A	0 ~ 7A	0 ~ 4.5A	0 ~ 2.9A	0 ~ 2.2A	
	RATED POWER	66W	85W	101.3W	102W	105W	108W	104.4W	105.6W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p	
	VOLTAGE ADJ. RANGE	3.1 ~ 3.8V	4.75 ~ 5.8V	7.1 ~ 9V	11.4 ~ 13.8V	14.25 ~ 18V	22.8 ~ 28.8V	34.2 ~ 39.6V	45.6 ~ 55.2V	
	VOLTAGE TOLERANCE Note.3	+2.5,-3.5%	+2.5,-3.5%	±2.5%	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%	
	LOAD REGULATION	±2.0%	±2.0%	±1.5%	±0.8%	±0.8%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME	2500ms, 100ms/230VAC      2500ms, 100ms/115VAC at full load								
HOLD UP TIME (Typ.)	50ms/230VAC      20ms/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>0.98/115VAC at full load								
	EFFICIENCY (Typ.)	78%	83%	84%	87.5%	88%	88.5%	89%	90%	
	AC CURRENT (Typ.)	1.2A/115VAC      0.6A/230VAC								
	INRUSH CURRENT (Typ.)	35A/115VAC      65A/230VAC								
PROTECTION	LEAKAGE CURRENT Note.6	Earth leakage current < 300 $\mu$ A/264VAC , Touch leakage current < 100 $\mu$ A/264VAC								
	OVERLOAD	105 ~ 135% rated output power Protection type : Constant current limiting for Vo=50 ~ 100% of rated voltage, 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	REMOTE CONTROL	RC+/RC- : 0 ~ 0.8V= power on ; 4 ~ 10V = power off								
ENVIRONMENT	WORKING TEMP.	-40 ~ +60°C (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.04%/°C (0 ~ 50°C)								
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes								
SAFETY & EMC (Note 4)	SAFETY STANDARDS	ANSI/AAMI ES60601-1, IEC60601-1 approved								
	ISOLATION LEVEL	Primary-Secondary: 2xMOOP, Primary-Earth: 1xMOOP, Secondary-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								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN60601-1-2								
OTHERS	MTBF	295.7K hrs min.    MIL-HDBK-217F (25°C)								
	DIMENSION	159*97*38mm (L*W*H)								
	PACKING	0.38Kg; 24pcs/10.1Kg/0.76CUFT								
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>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.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>5. Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>6. Touch current was measured from primary input to DC output.</li> <li>7. When the input voltage is less than 40VAC, the SPS may exhibit degradation of performance. The final product manufacturers must re-confirm this deviation that does not affect basic safety or essential performance.</li> </ol>									

File Name:MSP-100-SPEC 2015-07-14

Note: all features are subject to change without notice.

**Mechanical Specification**

Case No.901I Unit:mm



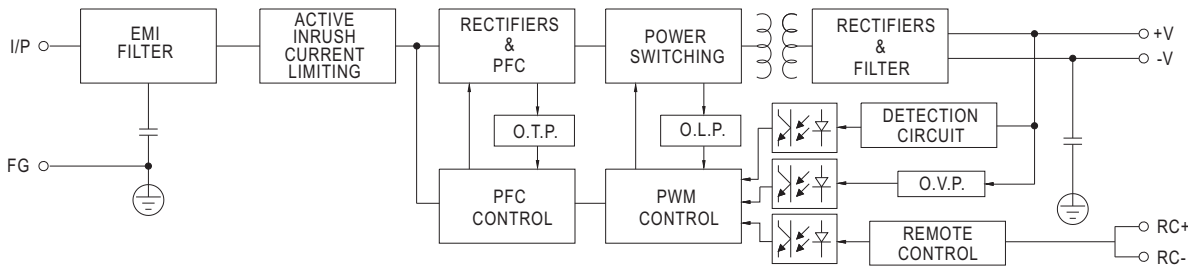
**Terminal Pin No. Assignment**

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

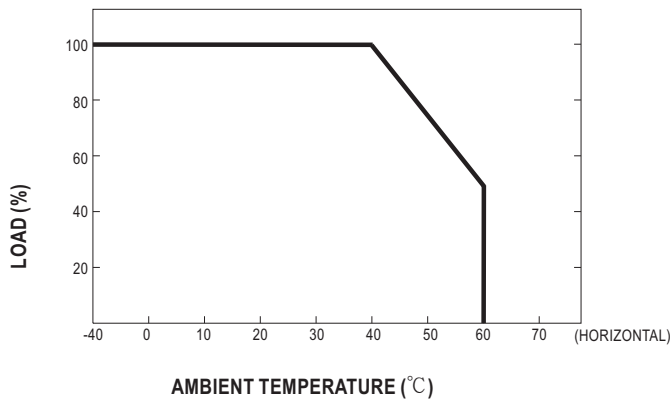
**Remote ON/OFF (CN100) : JST B-XH or equivalent**

Pin No.	Assignment	Mating Housing	Terminal
1	RC-	JST XHP or equivalent	JST SXH-001T or equivalent
2	RC+		

**Block Diagram**



**Derating Curve**



**Output Derating VS Input Voltage**

