



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

User's Manual



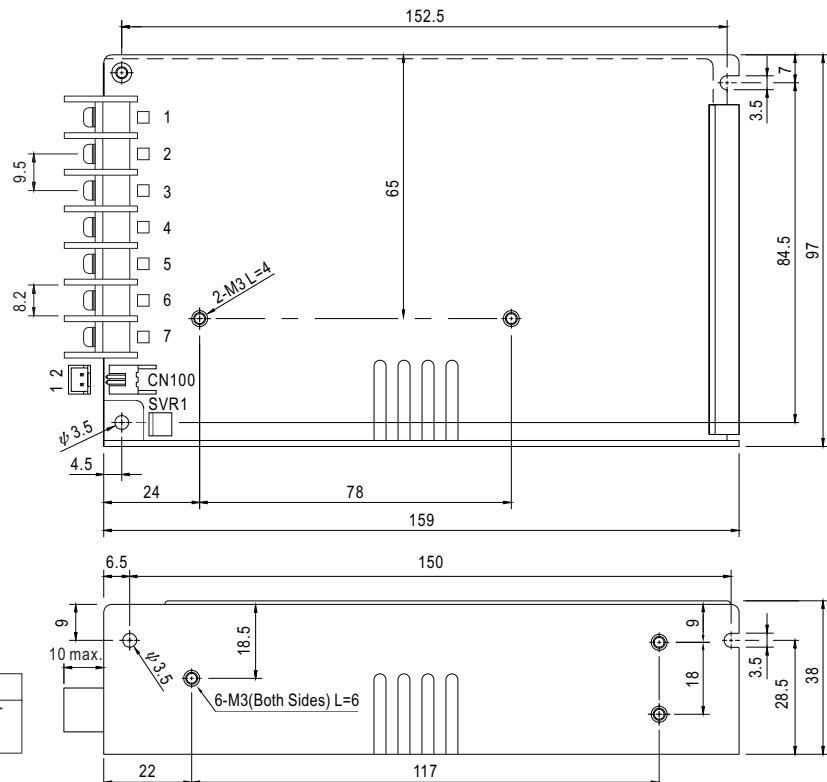
ANSI/AAMI ES60601-1 IEC60601-1 TPTC004

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
	RATED CURRENT	20A	17A	13.5A	8.5A	7A	4.5A	2.9A
	CURRENT RANGE	0 ~ 20A	0 ~ 17A	0 ~ 13.5A	0 ~ 8.5A	0 ~ 7A	0 ~ 4.5A	0 ~ 2.9A
	RATED POWER	66W	85W	101.3W	102W	105W	108W	104.4W
	RIPLINE & NOISE (max.) Note.2	80mVp-p	80mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-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
	VOLTAGE TOLERANCE Note.3	+2.5,-3.5%	+2.5,-3.5%	±2.5%	±1.5%	±1.5%	±1.5%	±1.5%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%
	LOAD REGULATION	±2.0%	±2.0%	±1.5%	±0.8%	±0.8%	±0.5%	±0.5%
	SETUP, RISE TIME	2500ms, 100ms/230VAC	2500ms, 100ms/115VAC at full load					
INPUT	HOLD UP TIME (Typ.)	50ms/230VAC	20ms/115VAC at full load					
	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%
	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 μ A/264VAC , Touch leakage current < 100 μ 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
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover						
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, EAC TP TC 004 approved, Design refer to BS EN/EN60601-1, BS EN/EN62368-1						
	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 BS EN/EN55011 (CISPR11) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020						
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN60601-1-2, EAC TP TC 020						
OTHERS	MTBF	295.7K hrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	159*97*38mm (L*W*H)						
	PACKING	0.38Kg; 24pcs/10.1Kg/0.9CUFT						
NOTE	<ol style="list-style-type: none"> 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. 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 http://www.meanwell.com) 5. Derating may be needed under low input voltages. Please check the derating curve for more details. 6. Touch current was measured from primary input to DC output. 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. 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>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p>							

■ Mechanical Specification

Case No.901I Unit:mm



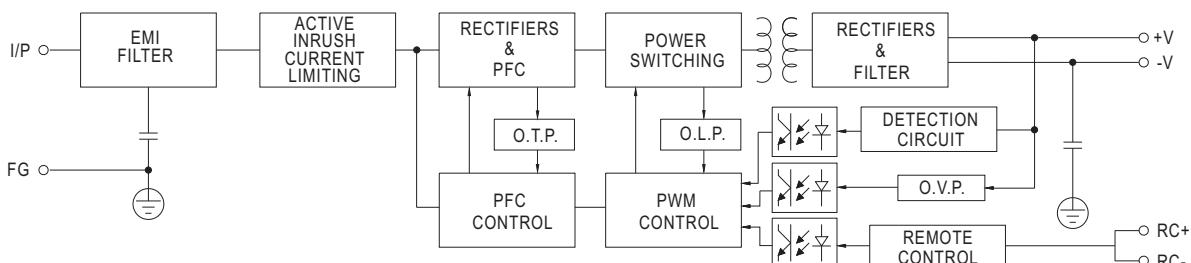
Terminal Pin No. Assignment

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

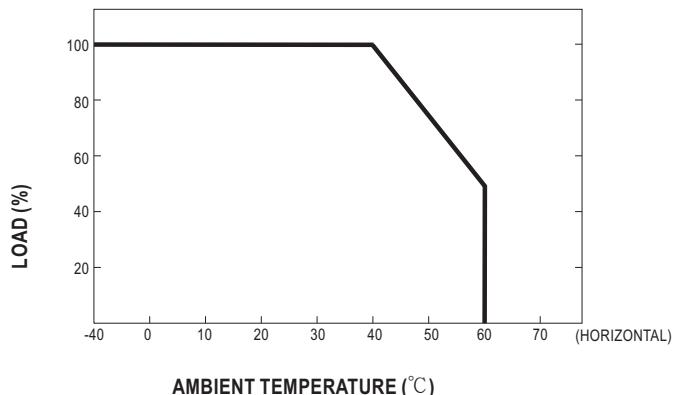
Remote ON/OFF (CN100) : JST B-XH or equivalent

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

