

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 $^\circ\!{\rm C}$ 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 |
|-----------------|---|---|---------------------|-----------------|--------------|----------------------------|--------------|--------------|--------------|
| | DC VOLTAGE | 3.3V | 5V | 7.5V | 12V | 15V | 24V | 36V | 48V |
| OUTPUT | 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 | 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 |
| | | | | ±2.5% | ±1.5% | ±1.5% | ±1.5% | ±1.5% | ±1.5% |
| | VOLTAGE TOLERANCE Note.3 | | +2.5,-3.5% ±0.5% | | | $\pm 0.3\%$ | | | |
| | LINE REGULATION | ±0.5% ±2.0% | | 土0.5% 土1.5% | ±0.3% | $\pm 0.3\%$ $\pm 0.8\%$ | ±0.2% | ±0.2% | ±0.2% |
| | LOAD REGULATION | | ±2.0% | | ±0.8% | LT0.8% | ±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 | | 85~264VAC 120~370VDC | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230V | | 8/115VAC at ful | | | | | |
| | 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 | | | | | | | |
| | LEAKAGE CURRENT Note.6 | Earth leakage current < 300µA/264VAC , Touch leakage current < 100µA/264VAC | | | | | | | |
| PROTECTION | VERLOAD | | | | | | | | |
| | OVERLOAD | Protection type : Constant current limiting for Vo=50 ~ 100% of rated voltage, recovers automatically after fault condition is remove | | | | | | | |
| | | 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 | 57.6~67.2 |
| | OVER VOLTAGE | Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | |
| | 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 $^{\circ}$ 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 STANDARDS | ANSI/AAMI ES60601-1, IEC60601-1 approved | | | | | | | |
| | ISOLATION LEVEL | Primary-Secondary: 2×MOOP, Primary-Earth: 1×MOOP, Secondary-Earth: 1×MOOP | | | | | | | |
| SAFETY & | WITHSTAND VOLTAGE | I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC | | | | | | | |
| EMC (Note 4) | 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 | | | | | | | |
| | MTBF | 295.7K hrs min. MIL-HDBK-217F (25°C) | | | | | | | |
| OTHERS | DIMENSION | 159*97*38mm (L*W*H) | | | | | | | |
| | PACKING | | 10.1Kg/0.76CUF | T | | | | | |
| NOTE | Ripple & noise are measure Tolerance : includes set up The power supply is consid EMC directives. For guidan (as available on http://www. Derating may be needed up Touch current was measure When the input voltage is left | Ily mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. ed at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. lered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets ice on how to perform these EMC tests, please refer to "EMI testing of component power supplies." | | | | | | | |



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