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## 60W Single Output Switching Power Supply

S-60 series



### Features:

- Universal AC input/Full range
- Protections:Short circuit/Over load/Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 50KHz
- 2 years warranty



### **SPECIFICATION**

| MODEL           |  | S-60-5  | (S-60-12)                         | S-60-15                 | S-60-24      |  |
|-----------------|--|---|-----------------------------------|-------------------------|--------------|--|
| ОИТРИТ          | DC VOLTAGE   | 5V  | 12V                               | 15V                     | 24V          |  |
|                 | RATED CURRENT  | 12A   | 5A                                | 4A                      | 2.5A         |  |
|                 | CURRENT RANGE  | 0 ~ 12A   | 0 ~ 5A                            | 0 ~ 4A                  | 0 ~ 2.5A     |  |
|                 | RATED POWER  | 60W   | 60W                               | 60W                     | 60W          |  |
|                 | RIPPLE & NOISE (max.) Note.2                               | 120mVp-p  | 120mVp-p                          | 150mVp-p                | 150mVp-p     |  |
|                 | VOLTAGE ADJ. RANGE   | 4.75 ~ 5.5V   | 10.8 ~ 13.2V                      | 13.5 ~ 16.5V            | 21.6 ~ 26.4V |  |
|                 | VOLTAGE TOLERANCE Note.3                                   | ±2.0%   | ±1.0%                             | ±1.0%                   | ±1.0%        |  |
|                 | LINE REGULATION  | ±0.5%   | ±0.5%                             | ±0.5%                   | ±0.5%        |  |
|                 | LOAD REGULATION  | ±1.0%   | ±0.5%                             | ±0.5%                   | ±0.5%        |  |
|                 | SETUP, RISE, HOLD TIME                                     | 300ms, 50ms, 80ms / 230VAC 800ms, 50ms, 10ms / 115VAC at full load  |                                   |                         |              |  |
| INPUT           | VOLTAGE RANGE  | 85 ~ 264VAC 120 ~ 370VDC  |                                   |                         |              |  |
|                 | FREQUENCY RANGE  | 47 ~ 63Hz   |                                   |                         |              |  |
|                 | EFFICIENCY(Typ.)   | 73%   | 76%                               | 77%                     | 79%          |  |
|                 | AC CURRENT   | 2A/115VAC 1A/230VAC   |                                   |                         |              |  |
|                 | INRUSH CURRENT(max.)                                       | COLD START 30A/115VAC 60A/230VAC  |                                   |                         |              |  |
|                 | LEAKAGE CURRENT  | <3.5mA / 240VAC   | <3.5mA/240VAC                     |                         |              |  |
| PROTECTION      | OVER LOAD  | 105 ~ 150% rated output power   |                                   |                         |              |  |
|                 |  | Protection type: Hiccup mode, recovers automatically after fault condition is removed.  |                                   |                         |              |  |
|                 | OVER VOLTAGE   | 5.75 ~ 6.75V  | 13.8 ~ 16.2V                      | 17.25 ~ 20.25           | 27.6 ~ 32.4V |  |
|                 |  | Protection type : Hiccup mode,  | recovers automatically after faul | t condition is removed. |              |  |
| ENVIRONMENT     | WORKING TEMP.  | -10 ~ +60 °C (Refer to output load derating curve)  |                                   |                         |              |  |
|                 | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |                                   |                         |              |  |
|                 | STORAGE TEMP., HUMIDITY                                    | -20 ~ +85°C, 10 ~ 95% RH  |                                   |                         |              |  |
|                 | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C)  |                                   |                         |              |  |
|                 | VIBRATION  | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes   |                                   |                         |              |  |
|                 | SAFETY STANDARDS   | UL1012, UL1950, TUV EN60950 Approved  |                                   |                         |              |  |
|                 | WITHSTAND VOLTAGE  | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC   |                                   |                         |              |  |
| SAFETY &        | ISOLATION RESISTANCE                                       | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  |                                   |                         |              |  |
| EMC<br>(Note 4) | <b>EMI CONDUCTION &amp; RADIATION</b>                      | 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, EN55024, Light industry level, criteria A   |                                   |                         |              |  |
| OTHERS          | MTBF   | 316.2K hrs min. MIL-HDBK-217F (25°ℂ)  |                                   |                         |              |  |
|                 | DIMENSION  | 159*97*38mm (L*W*H)   |                                   |                         |              |  |
|                 | PACKING  | 0.51Kg; 24pcs/13.1Kg/0.7CUFT  |                                   |                         |              |  |
| NOTE            | Ripple & noise are measure     Tolerance : includes set up | parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.  ple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  perance: includes set up tolerance, line regulation and load regulation.  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 C directives. |                                   |                         |              |  |



# Mechanical Specification Case No. 901 Unit:mm

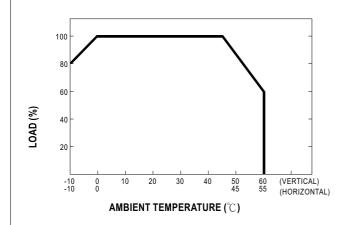
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Terminal Pin. No Assignment

| Pin No. | Assignment | Pin No. | Assignment   |
|---------|------------|---------|--------------|
| 1       | AC/L       | 4       | DC OUTPUT -V |
| 2       | AC/N       | 5       | DC OUTPUT +V |
| 3       | FG ±       |         |              |

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### **■** Output Derating



### ■ Static Characteristics (24V)

