

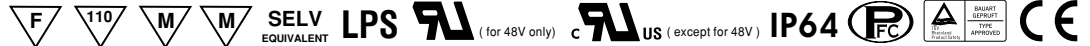


TOP100 Series 60-96 WATT AC/DC SWITCHING POWER SUPPLIES



■ Features :

- Universal AC input / Full range
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in active PFC function
- IP64 design for indoor or outdoor installations
- UL1310 Class 2 power unit
- Cooling by free air convection
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- 2 years warranty



SPECIFICATION

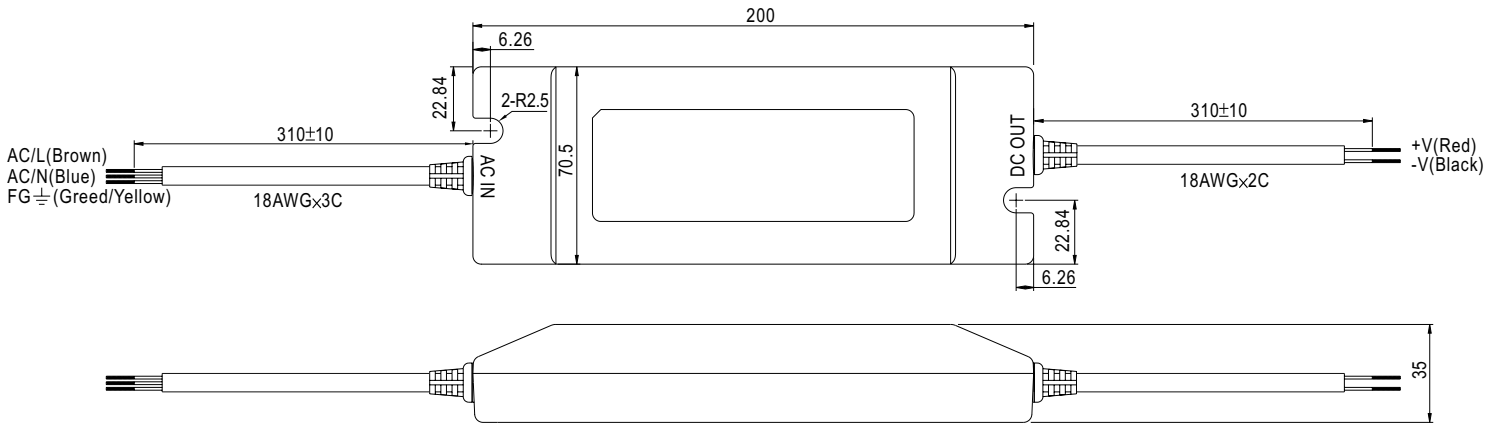
| P/N | TOP100-12 | TOP100-15 | TOP100-20 | TOP100-24 | TOP100-27 | TOP100-36 | TOP100-48 | |
|--------------|---|---|--------------|-----------------------------|--------------|-----------------------|--------------|----------|
| OUTPUT | DC VOLTAGE | 12V | 15V | 20V | 24V | 27V | 36V | 48V |
| | CONSTANT CURRENT REGION Note.7 | 6 ~ 12V | 7.5 ~ 15V | 10 ~ 20V | 12 ~ 24V | 13.5 ~ 27V | 18 ~ 36V | 24 ~ 48V |
| | RATED CURRENT Note.6 | 5A | 5A | 4.8A | 4A | 3.55A | 2.65A | 2A |
| | CURRENT RANGE Note.6 | 0 ~ 5A | 0 ~ 5A | 0 ~ 4.8A | 0 ~ 4A | 0 ~ 3.55A | 0 ~ 2.65A | 0 ~ 2A |
| | RATED POWER Note.6 | 60W | 75W | 96W | 96W | 95.85W | 95.4W | 96W |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | 0% ~ -15%. Can be adjusted by internal potential meter SVR1 | | | | | | |
| | CURRENT ADJ. RANGE | 3% ~ -25%. Can be adjusted by internal potential meter SVR2 | | | | | | |
| | VOLTAGE TOLERANCE Note.3 | ±3.0% | ±3.0% | ±3.0% | ±3.0% | ±3.0% | ±2.0% | ±2.0% |
| | LINE REGULATION | ±1.0% | | | | | | |
| | LOAD REGULATION | ±2.0% | | | | | | |
| | SETUP, RISE TIME | 1200ms, 80ms/230VAC 1200ms, 80ms/115VAC at full load | | | | | | |
| | HOLD UP TIME (Typ.) | 60ms/230VAC 30ms/115VAC at full load | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 90 ~ 264VAC | 127 ~ 370VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC | | PF>0.95/115VAC at full load | | | | |
| | EFFICIENCY (Typ.) | 83% | 85% | 87% | 87% | 87% | 87% | 87% |
| | AC CURRENT (Typ.) | 12V:0.8A/115VAC | 0.4A/230VAC | 15V:0.9A/115VAC | 0.45A/230VAC | 20V ~ 48V:1.1A/115VAC | 0.55A/230VAC | |
| | INRUSH CURRENT (Typ.) | COLD START 40A/230VAC | | | | | | |
| | LEAKAGE CURRENT | 0.5mA / 240VAC | | | | | | |
| PROTECTION | OVER CURRENT Note.4 | 95 ~ 100% Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | | | | |
| | OVER VOLTAGE | 13 ~ 16V | 16.5 ~ 20V | 22 ~ 27V | 27 ~ 34V | 29 ~ 36V | 39 ~ 48V | 52 ~ 64V |
| | OVER TEMPERATURE | 90°C ±10°C (RTH2) Protection type : Shut down o/p voltage, re-power on to recover | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +50°C (Refer to output load derating curve) | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°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 & EMC | SAFETY STANDARDS | UL1310 Class 2, UL879 (listed in UL Sign Components Manual (SAM)), TUV EN60950-1, EN61347-1, EN61347-2-13 CAN/CSA C22.2 No. 223-M91(except for 48V), IP64 approved | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4.25KVDC | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55015, EN55022 (CISPR22) Class B | | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2 Class C (>50% load) ; EN61000-3-3 | | | | | | |
| OTHERS | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61547, EN55024, light industry level, criteria A | | | | | | |
| | MTBF | 303.1Khrs min. MIL-HDBK-217F (25°C) | | | | | | |
| | DIMENSION | 200*70.5*35mm (L*W*H) | | | | | | |
| | PACKING | 0.52Kg; 20pcs/11.4Kg/0.76CUFT | | | | | | |
| 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. Please refer to OLP characteristics. 5. Derating may be needed under low input voltage. Please check the derating curve for more details. 6. This is the maximum possible output current and power. Over load protection may be activated slightly below this level to comply with the requirement of UL1310 class 2. 7. Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design. | | | | | | | |



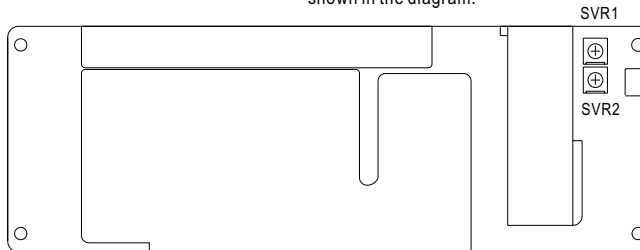
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Mechanical Specification

Case No.955A Unit:mm



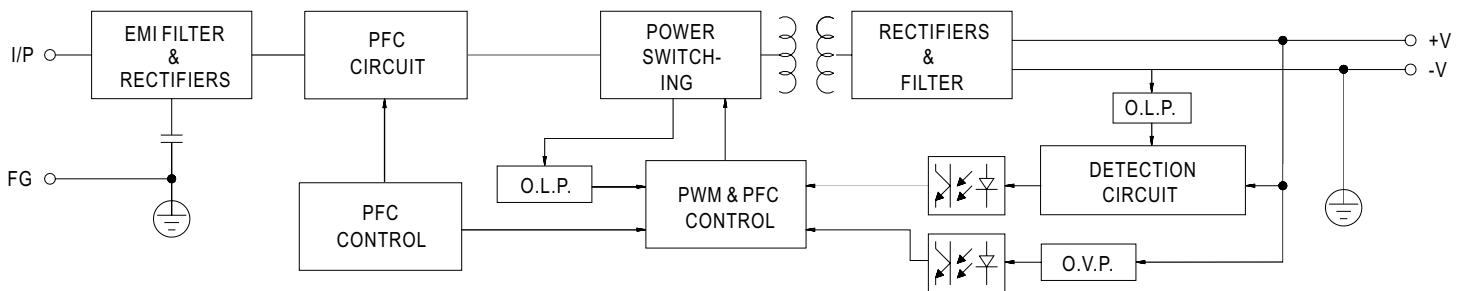
Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.



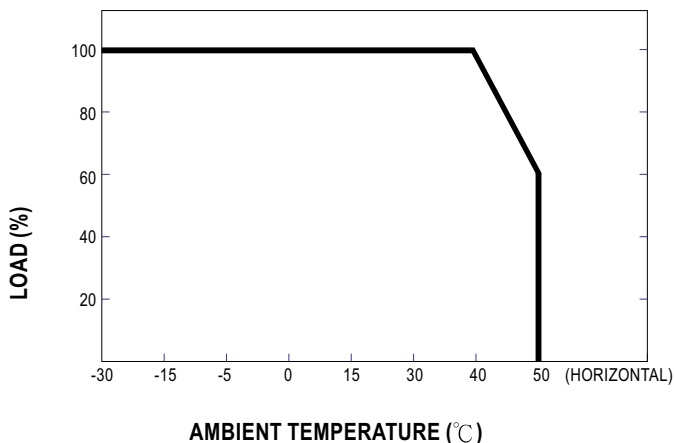
| | |
|------|---------------------------|
| SVR1 | Output voltage adjustment |
| SVR2 | Output current adjustment |

Block Diagram

Fosc : 100KHz



Derating Curve



Static Characteristics

