



30W Single Output LED Power Supply

PLN-30 series



■ Features :

- Universal AC input / Full range
- Fully isolated plastic case with IP64 level
- Built-in constant current limiting circuit with adjustable OCP level
- Protections: Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function
- IP64 design for indoor or outdoor installations
- Cooling by free air convection
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- 2 years warranty



SPECIFICATION

| MODEL | PLN-30-9 | PLN-30-12 | PLN-30-15 | PLN-30-20 | PLN-30-24 | PLN-30-27 | PLN-30-36 | PLN-30-48 | |
|-----------------|---|--|-----------|--------------|-----------|------------|------------|------------|------------|
| OUTPUT | DC VOLTAGE | 9V | 12V | 15V | 20V | 24V | 27V | 36V | 48V |
| | CONSTANT CURRENT REGION Note.6 | 6.3 ~ 9V | 8.4 ~ 12V | 10.5 ~ 15V | 14 ~ 20V | 16.8 ~ 24V | 18.9 ~ 27V | 25.2 ~ 36V | 33.6 ~ 48V |
| | RATED CURRENT | 3.3A | 2.5A | 2A | 1.5A | 1.25A | 1.12A | 0.84A | 0.63A |
| | CURRENT RANGE | 0 ~ 3.3A | 0 ~ 2.5A | 0 ~ 2A | 0 ~ 1.5A | 0 ~ 1.25A | 0 ~ 1.12A | 0 ~ 0.84A | 0 ~ 0.63A |
| | RATED POWER | 29.7W | 30W | 30W | 30W | 30W | 30.24W | 30.24W | 30.24W |
| | RIPPLE & NOISE (max.) Note.2 | 2.6Vp-p | 2Vp-p | 2.6Vp-p | 2.6Vp-p | 2.6Vp-p | 2.3Vp-p | 4.5Vp-p | 3.7Vp-p |
| | VOLTAGE ADJ. RANGE Note.5 | -5% ~ 10%. Can be adjusted by internal potential meter SVR1 | | | | | | | |
| | CURRENT ADJ. RANGE Note.5 | 3% ~ -25%. Can be adjusted by internal potential meter SVR2 | | | | | | | |
| | VOLTAGE TOLERANCE Note.3 | ±10% | | | | | | | |
| | LINE REGULATION | ±3.0% | | | | | | | |
| LOAD REGULATION | ±5.0% | | | | | | | | |
| SETUP TIME | 1500ms / 230VAC 3000ms / 115VAC at full load | | | | | | | | |
| INPUT | VOLTAGE RANGE | 90 ~ 264VAC | | 127 ~ 370VDC | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | |
| | POWER FACTOR | PF ≥ 0.9 at 75 ~ 100% load, 115VAC / 230VAC | | | | | | | |
| | EFFICIENCY(Typ.) | 80% | 83% | 84% | 84% | 85% | 85% | 86% | 86% |
| | AC CURRENT | 0.4A/115VAC | | 0.2A/230VAC | | | | | |
| | INRUSH CURRENT(max.) | 40A/230VAC | | | | | | | |
| LEAKAGE CURRENT | <0.5mA / 240VAC | | | | | | | | |
| PROTECTION | OVER CURRENT Note.4 | 100 ~ 110% Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | | | | | |
| | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed. | | | | | | | |
| | OVER VOLTAGE | 10 ~ 14V | 14 ~ 16V | 17 ~ 22V | 23 ~ 26V | 27 ~ 34V | 31 ~ 35V | 40 ~ 50V | 53 ~ 63V |
| | OVER TEMPERATURE | 90°C ±10°C (TSW1) 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 ~ 95% RH non-condensing | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | | | | | | | |
| | TEMP. COEFFICIENT | ±0.06%/°C (0 ~ 50°C) | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes | | | | | | | |
| SAFETY & EMC | SAFETY STANDARDS | TUV EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V), IP64 approved | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 3.75KVAC | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH | | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55015 | | | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2 Class C (pin ≥ 25W), Class D (>70% load) ; EN61000-3-3 | | | | | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN61547, light industry level, criteria A | | | | | | | |
| OTHERS | MTBF | 621.4Khrs min. MIL-HDBK-217F (25°C) | | | | | | | |
| | DIMENSION | 145*47*30mm (L*W*H) | | | | | | | |
| | PACKING | 0.22Kg; 60pcs/14.2Kg/1.25CUFT | | | | | | | |
| NOTE | 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. Direct connecting to LEDs is not suggested for models with "RIPPLE & NOISE" >±10% and using additional drivers is highly recommended. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. Please refer to OLP characteristics. 5. Output voltage can be adjusted through the SVR1 on the PCB; limit of output constant current level can be adjusted through the SVR2 on the PCB. 6. Constant current operation region is within 70% ~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. | | | | | | | | |

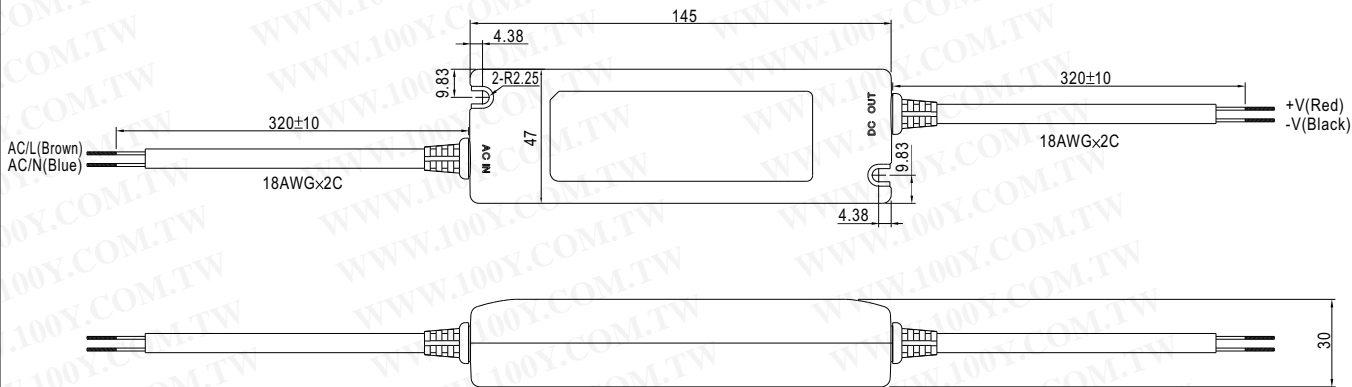


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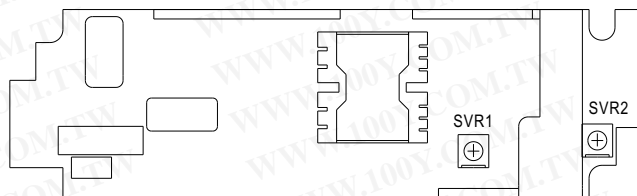
PLN-30 series

■ Mechanical Specification

Case No.964A Unit:mm

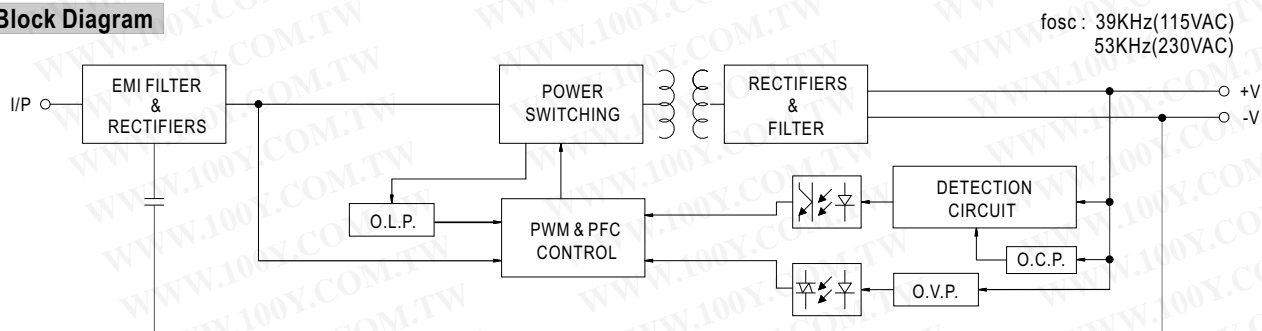


Output voltage and current adjustment : remove the upper case and adjust through SVR1 & SVR2 shown in the diagram.

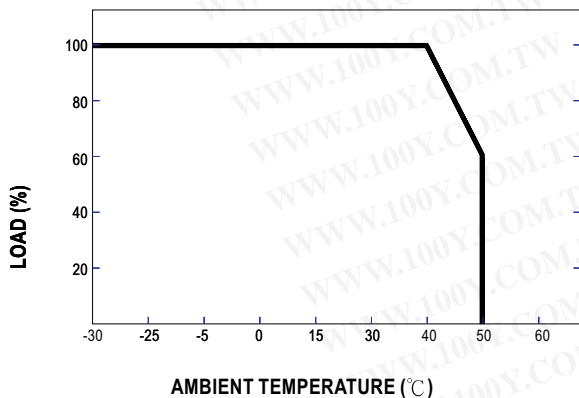


| | |
|------|---------------------------|
| SVR1 | Output voltage adjustment |
| SVR2 | Output current adjustment |

■ Block Diagram



■ Derating Curve



■ OLP Characteristics

