



12W Single Output LED Power Supply

PLM-12 series



## Features

- Full range (up to 295VAC) models
- Built-in active PFC function
- Constant current design
- Protections: Short circuit
- Cooling by free air convection
- Fully isolated plastic case
- Class II power unit, no FG
- Class 2 power unit
- No load power consumption <0.5W
- High reliability, low cost
- 2 years warranty

## Applications

- Indoor LED lighting
- LED office lighting
- LED commercial lighting
- LED decorative lighting

## GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

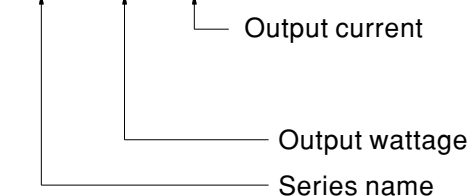
## Description

PLM-12 is a 12W economical AC/DC LED power supply series. Incorporating a built-in active PFC design, PLM-12 provides a high Power Factor value greater than 0.9. In addition, with the low no load power consumption below 0.5W, and the setup time less than 500ms, PLM-12 is complied with the ErP regulation required by European Union for lighting fixtures.

PLM-12 is a class II (without FG pin) power unit housed with the UL 94V-0 rated flame retardant plastic case. The I/O terminals are designed with screw-less clamp style terminal block that greatly simplifies the wiring installation. PLM-12 series, which operates from 110~295VAC. The series is constant current output design, supplying models with the current of 350mA, 500mA, 700mA and 1050mA, respectively.

## Model Encoding

PLM - 12 - 350





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## SPECIFICATION

MODEL		PLM-12-350	PLM-12-500	PLM-12-700	PLM-12-1050
OUTPUT	CONSTANT CURRENT REGION <small>Note.5</small>	22 ~ 36V	15 ~ 24V	11 ~ 18V	7 ~ 12V
	RATED CURRENT	0.35A	0.5A	0.7A	1.05A
	NO LOAD OUTPUT VOLTAGE <sub>(max.)</sub>	42V	30V	22V	16V
	RATED POWER	12.6W	12W	12.6W	12.6W
	RIPPLE & NOISE <small>(max.) Note.2</small>	3.6Vp-p	2.4Vp-p	2.4Vp-p	1.8Vp-p
	CURRENT ACCURACY <sub>Note.3</sub>	±5.0%			
	SETUP TIME	500ms / 115VAC, 230VAC at full load;			
INPUT	VOLTAGE RANGE <small>Note.4</small>	110 ~ 295VAC    156 ~ 417VDC;			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR	PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF > 0.9/277VAC (at full load) (Please refer to "Power Factor Characteristic" curve)			
	TOTAL HARMONIC DISTORTION	THD < 20% when output loading ≥ 60% at 115VAC/230VAC input and output loading ≥ 75% at 277VAC input			
	EFFICIENCY (Typ.)	85%	84%	83%	81%
	AC CURRENT	0.15A/115VAC    0.08A/230VAC    0.07A/277VAC;			
	INRUSH CURRENT(Typ.)	COLD START 15A (t <sub>width</sub> =50μs measured at 50% I <sub>peak</sub> ) at 230VAC			
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	160 units (circuit breaker of type B) / 160 units (circuit breaker of type C) at 230VAC			
LEAKAGE CURRENT	0.25mA / 240VAC				
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.			
ENVIRONMENT	WORKING TEMP.	-30 ~ +50°C			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.06%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	UL18750, CSA C22.2 No. 250.13-12; ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384, EAC TP TC 004, IP30 approved			
	WITHSTAND VOLTAGE	I/P-O/P: 3.75KVAC			
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms/500VDC / 25°C / 70%RH			
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (≥60% load); BS EN/EN61000-3-3, EAC TP TC 020			
EMC IMMUNITY	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11; BS EN/EN61547, light industry level, criteria B (surge 2KV), EAC TP TC 020				
OTHERS	MTBF	7872.3K hrs min. Telcordia SR-332 (Bellcore); 598.9Khrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	145*38*22mm (L*W*H)			
	PACKING	0.126Kg; 60pcs/8.6 Kg/0.48CUFT			
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μf &amp; 47μf parallel capacitor.</p> <p>3. Please see "AC input voltage drop vs. output current characteristics" table.</p> <p>4. Derating may be needed under low input voltage, please check the static characteristic for more details.</p> <p>5. Constant current operation region is within 60% ~ 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.</p> <p>6. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. (as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</p> <p>7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.</p> <p>8. The models certified by CCC (GB/T19510.1, GB/T19510.213, GB/T 17743 and GB17625.1) are optional models. Please contact your MEAN WELL sales for more information.</p> <p>⊗ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>				

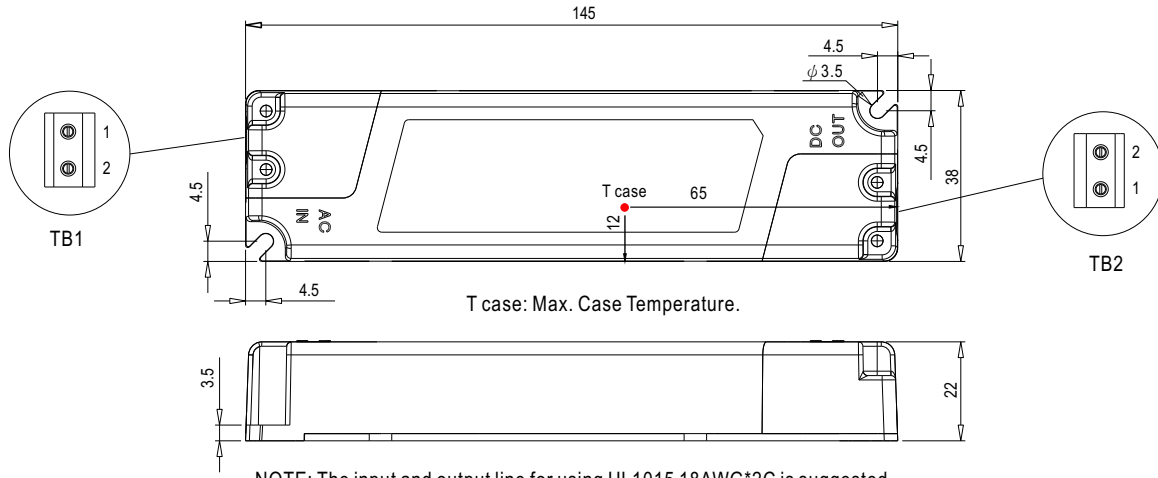


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# PLM-12 series

## Mechanical Specification

Case No. PLM-25    Unit:mm    Tolerance:±1



NOTE: The input and output line for using UL1015 18AWG\*2C is suggested

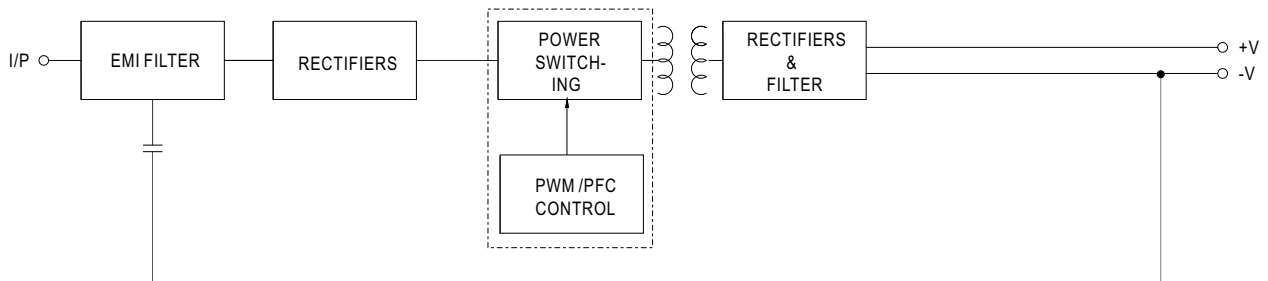
Terminal Pin No. Assignment (TB1):  
SWITCHLAB MWX201-75002EB (GRAY)

Pin No.	Assignment
1	AC/L
2	AC/N

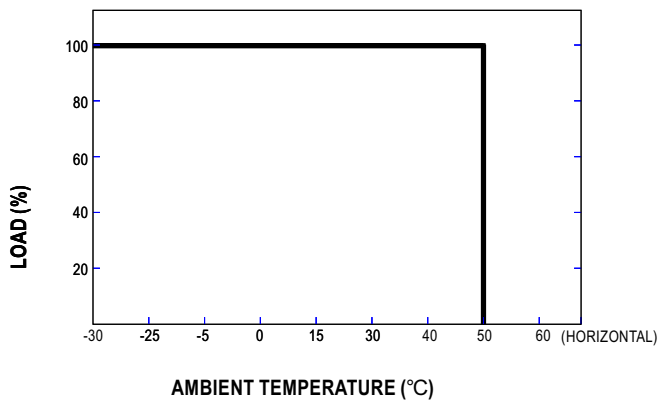
Terminal Pin No. Assignment (TB2):  
SWITCHLAB MWX201-75002B (BLUE)

Pin No.	Assignment
1	+V
2	-V

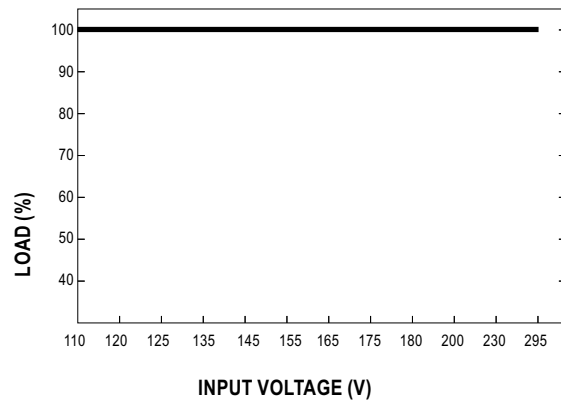
## Block Diagram



## Derating Curve

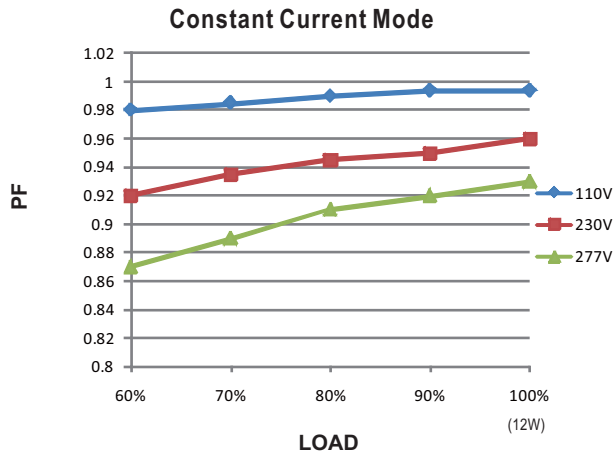


## Static Characteristics

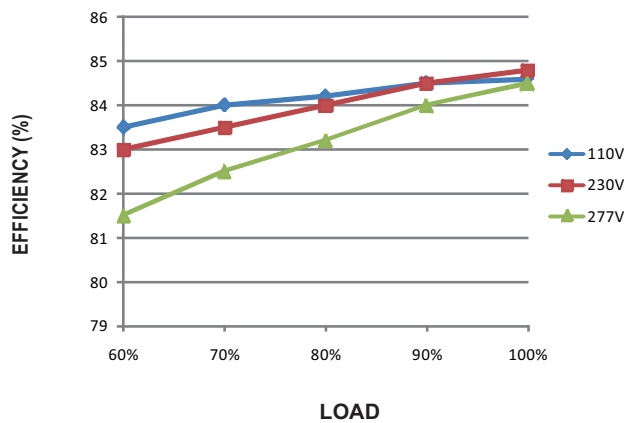




■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (500mA Model)



■ AC input voltage drop vs. output current characteristics

AC input drop	10%	8%	5%	3%
Io drop	<15%	<11%	<7%	<6%

NOTE: Output current will return to the rated value within 50ms