MEAN WELL

12W Single Output LED Power Supply

PLM-12 series

User's Manual

Click Me



SELV IP30 BS EN/EN61347-1,-2-13 optional

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

- 350: Output current
- 12: Output wattage
- PLM: Series name

SPECIFICATION

MODEL		PLM-12-350	PLM-12-500	PLM-12-700	PLM-12-1050
OUTPUT	CONSTANT CURRENT REGION Note.5	22 ~ 36V	15 ~ 24V	11 ~ 18V	7 ~ 12V
	RATED CURRENT	0.35A	0.5A	0.7A	1.05A
	NO LOAD OUTPUT VOLTAGE(max.)	42V	30V	22V	16V
	RATED POWER	12.6W	12W	12.6W	12.6W
	RIPPLE & NOISE (max.) Note.2	3.6Vp-p	2.4Vp-p	2.4Vp-p	1.8Vp-p
	CURRENT ACCURACY Note.3	±5.0%			
	SETUP TIME	500ms / 115VAC, 230VAC at full load;			
INPUT	VOLTAGE RANGE Note.4	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(twidth=50μs measured at 50% Ipeak) 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℃			
	WORKING HUMIDITY	20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	±0.06%/℃ (0 ~ 50℃)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	UI8750, 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℃/ 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℃)			
	DIMENSION	145*38*22mm (L*W*H)			
	PACKING	0.126Kg;60pcs/8.6 Kg/0.48CUFT			

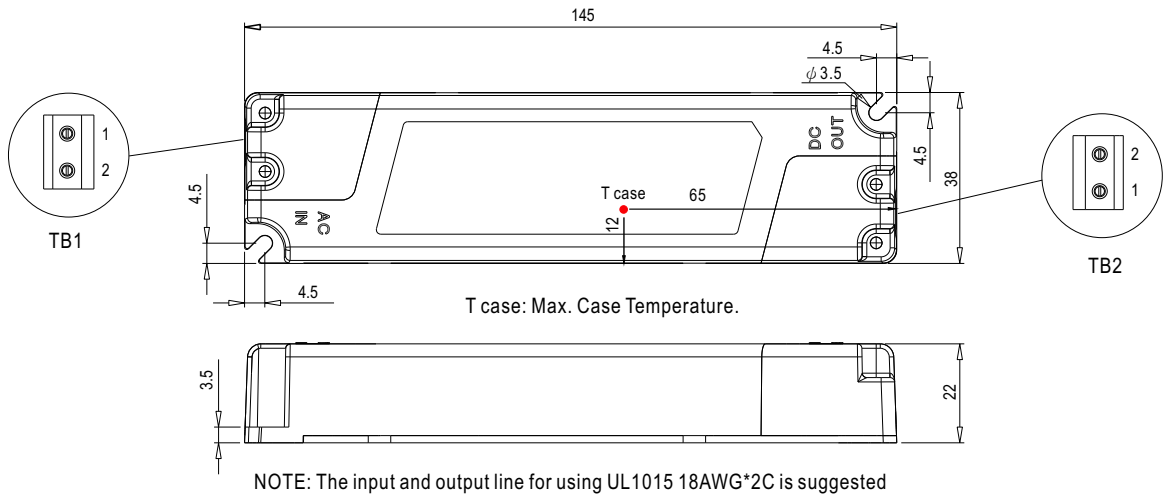
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Please see "AC input voltage drop vs. output current characteristics" table.
4. Derating may be needed under low input voltage, please check the static characteristic for more details.
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.
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 https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.
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.

※ Product Liability Disclaimer：For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Mechanical Specification

Case No.PLM-25 Unit:mm Tolerance:±1



T case: Max. Case Temperature.

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

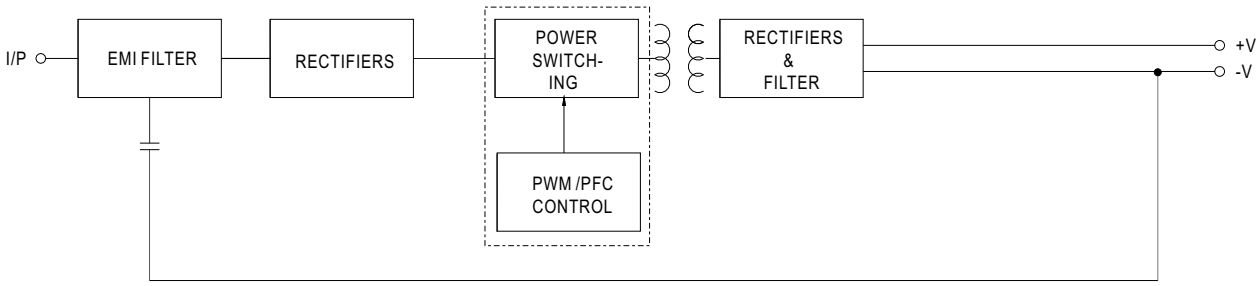
Terminal Pin No. Assignment (TB1) :
SWITCHLAB MWX201-75002EB(GRAY)

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

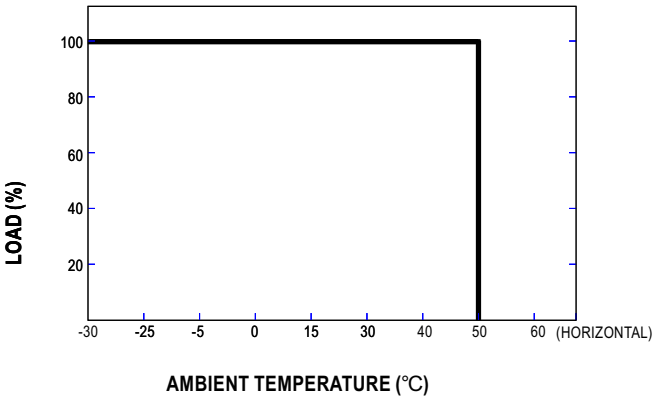
Terminal Pin No. Assignment (TB2) :
SWITCHLAB MWX201-75002B(BLUE)

Pin No.	Assignment
1	+V
2	-V

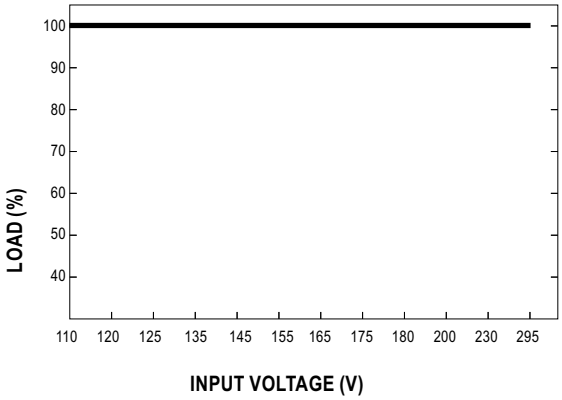
■ Block Diagram



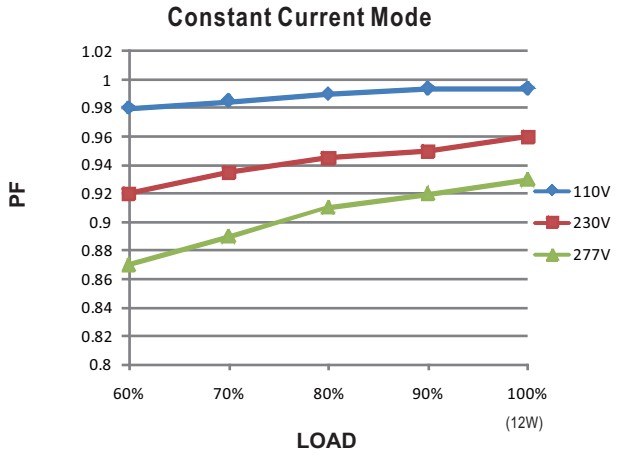
■ Derating Curve



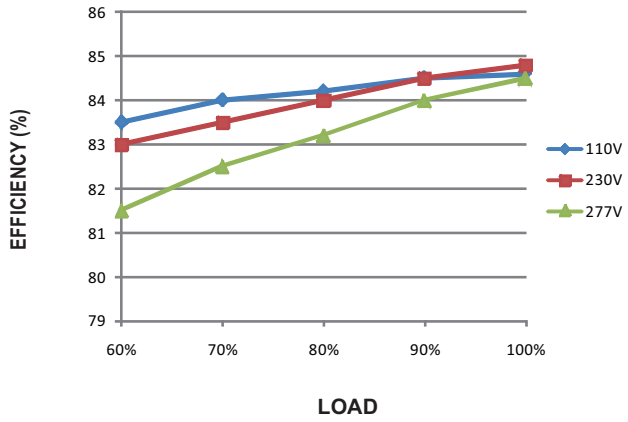
■ Static Characteristics



■ 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