MEAN WELL PLM-12-350 12W Single Output LED Power Supply Owner's Manual

Contents

1 MEAN WELL PLM-12-350 12W Single Output LED Power Supply
2 Product Information
3 Product Usage Instructions
4 Features
5 Applications
6 GTIN CODE
7 Description
8 Model Encoding
9 SPECIFICATION
10 Mechanical Specification
11 Block Diagram
12 Derating Curve
13 Power Factor Characteristic
14 EFFICIENCY vs LOAD
15 AC input voltage drop vs. output current characteristics
16 Documents / Resources
16.1 References
17 Related Posts

MEAN WELL PLM-12-350 12W Single Output LED Power Supply

Product Information

Specifications:

- **Model:** PLM-12 -350, PLM-12 -500, PLM-12 -700, PLM-12 -1050
- **Constant Current Region:** 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
- **Ripple & Noise:** Blank type 3.6Vp-p (max.), E type 5.5Vp-p
- **Setup Time:** Blank type: 500ms / 115VAC, 230VAC at full load; E type: 500ms / 230VAC at full load
- **Voltage Range:** Blank type: 110 ~ 295VAC 156 ~ 417VDC; E type: 180 ~ 295VAC 254~ 417VDC
- **Frequency Range:** 47 ~ 63Hz
- **Power Factor:** Blank type PF0.97/115VAC, PF0.95/230VAC, PF>0.9/277VAC; E type PF0.95/230VAC, PF0.9/277VAC
- **Input Efficiency:** Blank type: 85% (Typ.), E type: 84% (Typ.)
- **Working Temperature:** -30°C to +50°C
- **Working Humidity:** 20% to 90% RH non-condensing
- **Safety Standards:** UL8750, CSA C22.2 No. 250.13-12, ENEC BS EN/EN61347-1, EAC TP TC 004, IP30 approved

Product Usage Instructions

Installation:

1. Ensure proper ventilation around the power supply unit.
2. Connect the input power according to the specified voltage range.
3. Connect the output leads to the LED lights or devices as per the rated current and voltage requirements.

Operation:

1. Switch on the input power and verify the LED lights are functioning correctly.
2. Monitor the temperature of the power supply during operation to ensure it stays within the specified working temperature range.

Maintenance:

1. Regularly check for any loose connections or signs of damage.
2. Clean the power supply unit periodically to prevent dust buildup that can affect performance.

FAQ:

- **Q: What should I do if the power supply unit overheats during operation?**
  A: If the power supply unit overheats, immediately switch it off and allow it to cool down before resuming operation. Check for any obstructions to ventilation and ensure proper airflow around the unit.
- **Q: Can I connect multiple LED lights to one power supply unit?**
  A: The maximum number of LED lights that can be connected to one power supply unit depends on the total power consumption of the lights and the maximum load capacity of the power supply unit. Refer to the product specifications for guidance on this.

User's Manual

Features

- 230VAC only or Full range (up to 295 VAC) models available
- 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 (Blank type only)
- 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

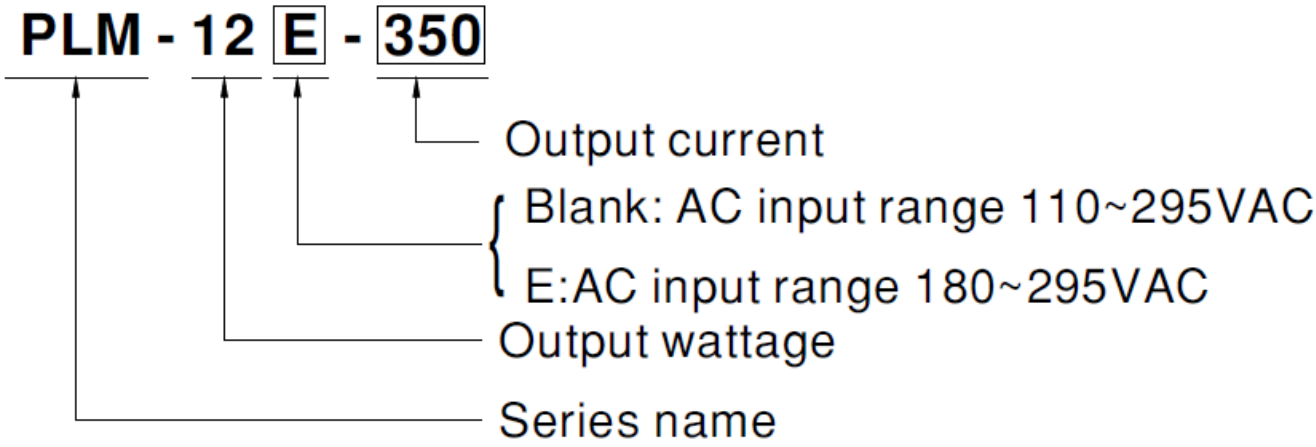
GTIN CODE

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 of less than 500ms, PLM-12 has complied with the ErP regulation required by the 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 a screw-less clamp-style terminal block that greatly simplifies the wiring installation. Two types of models with different input voltage ranges are offered: the PLM-12 series, which operates from 110~295 VAC, and the PLM-12E series, which operates from 180~295VAC. These two series are both constant current output designs, supplying models with currents of 350mA, 500mA, 700mA, and 1050mA, respectively.

Model Encoding



SPECIFICATION

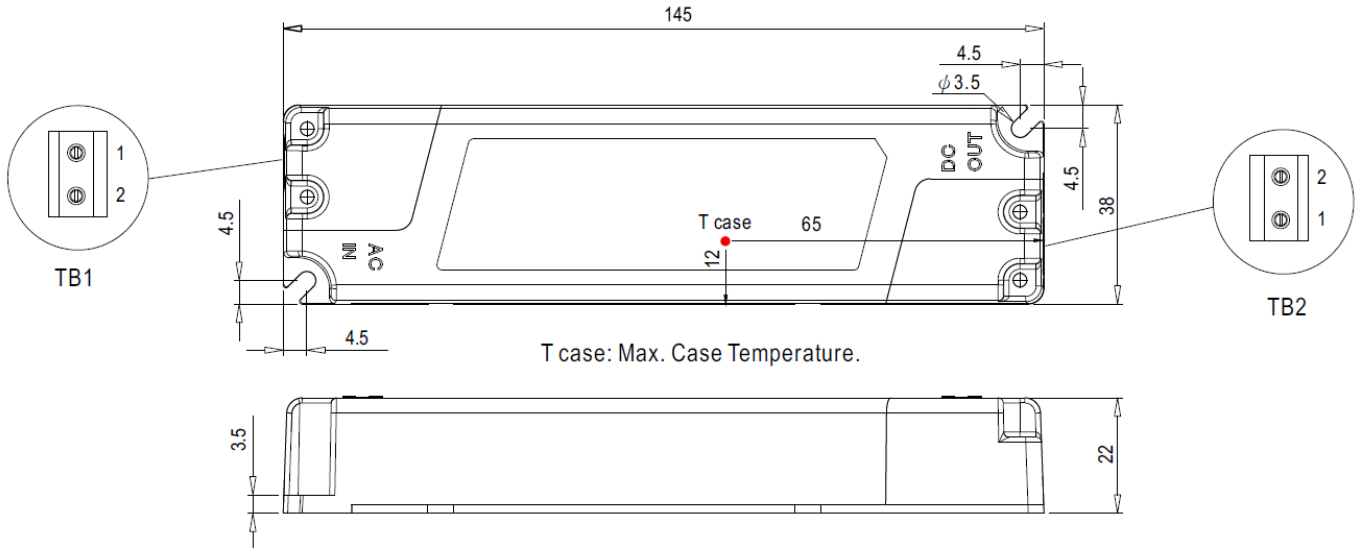
MODEL		PLM-12 -350	PLM-12 -500	PLM-12 -700	PLM-12 -1050
	CONSTANT CURRENT REGION Note.5	22 ~ 36V	15 ~ 24V	11 ~ 18V	7 ~ 12V
	RATED CURRENT	0.35A	0.5A	0.7A	1.05A

OUTPUT	**NO LOAD OUTPUT VOLTAGE(max.)**		42V	30V	22V	16V
	RATED POWER		12.6W	12W	12.6W	12.6W
	RIPPLE & NOISE (max.) Note.2	**Blank type**	3.6Vp-p	2.4Vp-p	2.4Vp-p	1.8Vp-p
		E type	5.5Vp-p	3.6Vp-p	3.6Vp-p	2.7Vp-p
	CURRENT ACCURACY Note.3		±5.0%			
	SETUP TIME		Blank Type: 500ms / 115VAC, 230VAC at full load; E type: 500ms / 230VAC at full load			
INPUT	**VOLTAGE RANGE Note.4**		Blank type: 110 ~ 295VAC 156 ~ 417VDC; E type: 180 ~ 295VAC 254 ~ 417VDC			
	FREQUENCY RANGE		47 ~ 63Hz			
	POWER FACTOR	**Blank type**	PF≥0.97/115VAC,PF≥0.95/230VAC,PF>0.9/277VAC(at full load)(Please refer to “Power Factor Characteristic” curve)			
		E type	PF≥0.95/230VAC,PF≥0.9/277VAC (at full load)(Please refer to “Power Factor Characteristic” curve)			
	TOTAL HARMONIC DISTORTION	**Blank type**	THD< 20% when output loading≧60% at 115VAC/230VAC input and output loading≧75% at 277VAC input			
		E type	THD< 20% when output loading≧60% at 230VAC input and output loading≧75% at 277VAC input			
	EFFICIENCY (Typ.)	**Blank type**	85%	84%	83%	81%
		E type	84%	83%	82%	78%
	AC CURRENT		Blank Type: 0.15A/115VAC 0.08A/230VAC 0.07A/277VAC; E type: 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 the fault condition is removed.			
	WORKING TEMP.		-30 ~ +50℃			

ENVIRONMENT	**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**	UL8750, CSA C22.2 No. 250.13-12(for Blank type only); ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384,GB19510.14,GB19510.1(for E type only),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, GB/T 17743,GB17625.1(for E type only),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	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. Please see the “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 the EMC Directive on the complete installation. (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. ※ Product Liability Disclaimer: For detailed information, please refer to **https://www.meanwell.com/serviceDisclaimer.aspx**.	

Mechanical Specification

Case No.PLM-25 Unit:mm



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

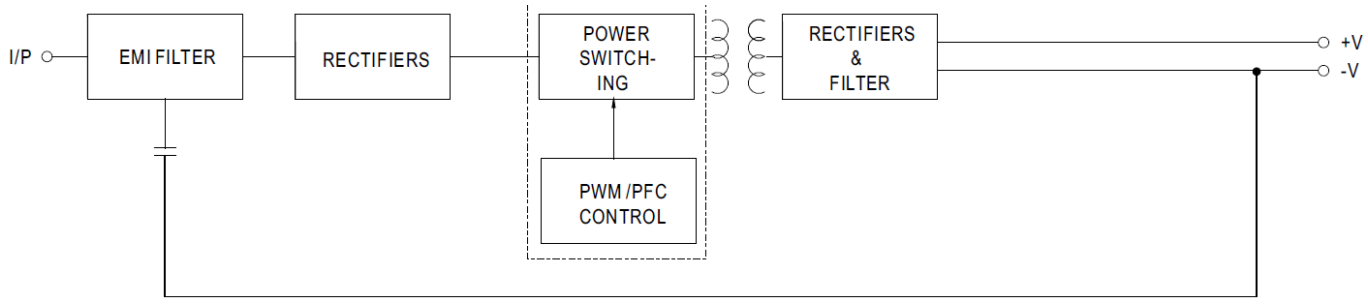
Terminal Pin No. Assignment (TB1):
SWITCHLAB MWX201-75002EB(GRAY)

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

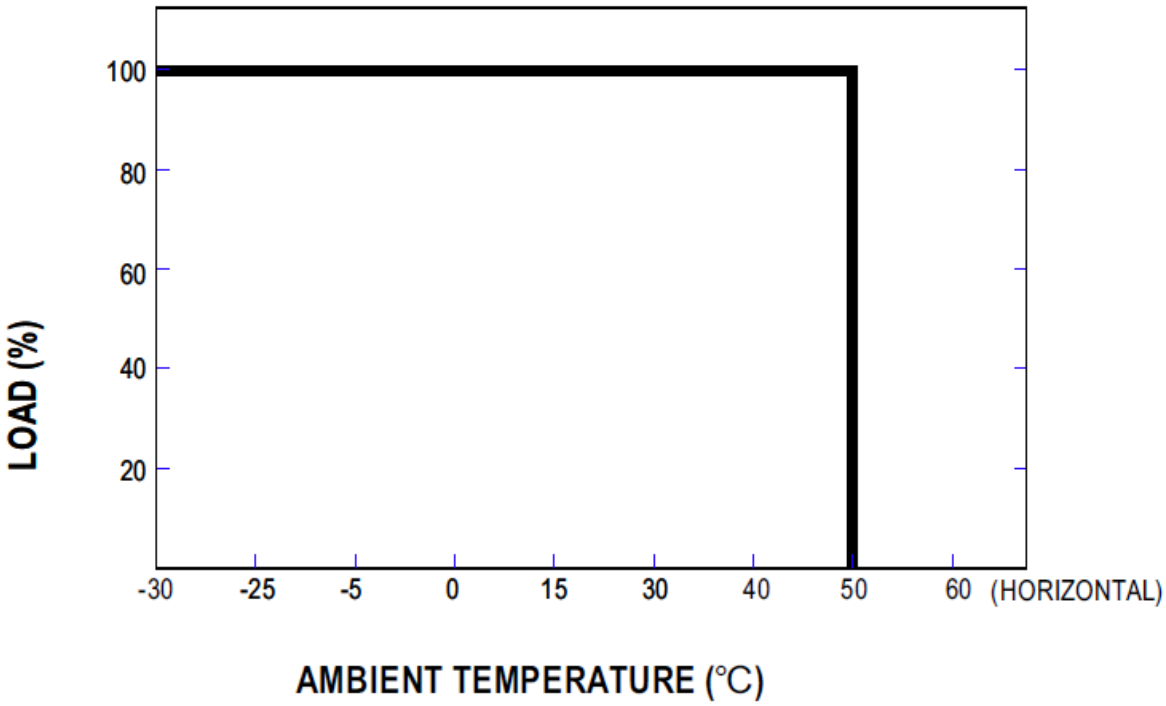
Terminal Pin No. Assignment (TB2):
SWITCHLAB MWX201-75002B(BLUE)

Pin No.	Assignment
1	+V
2	-V

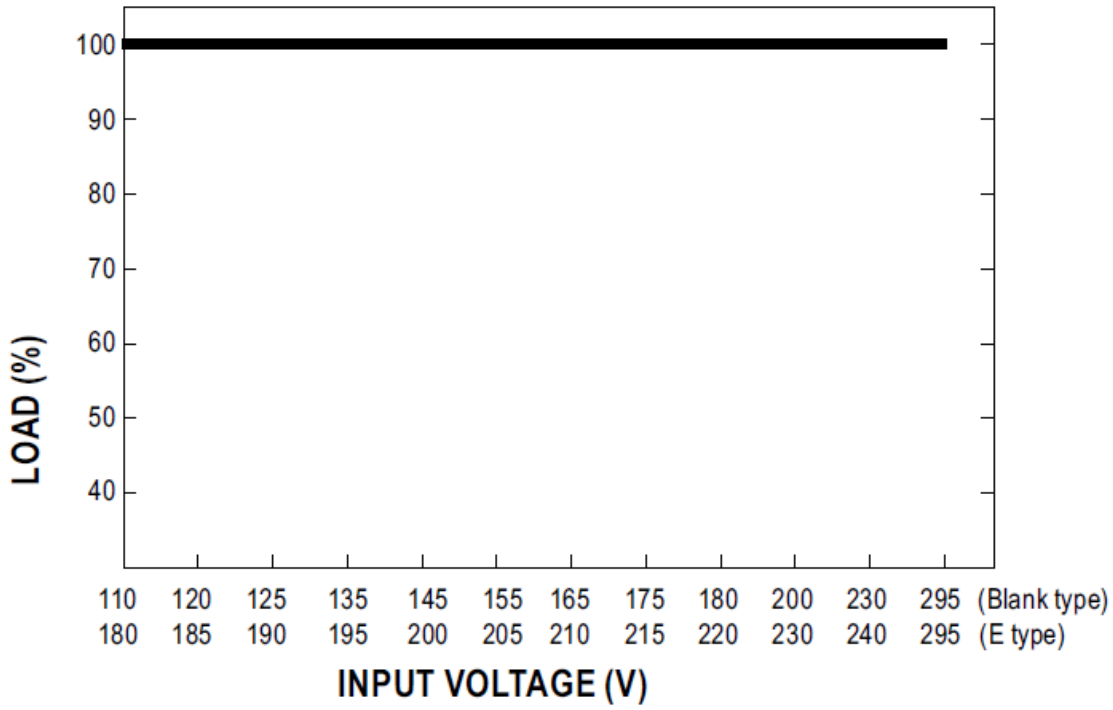
Block Diagram



Derating Curve

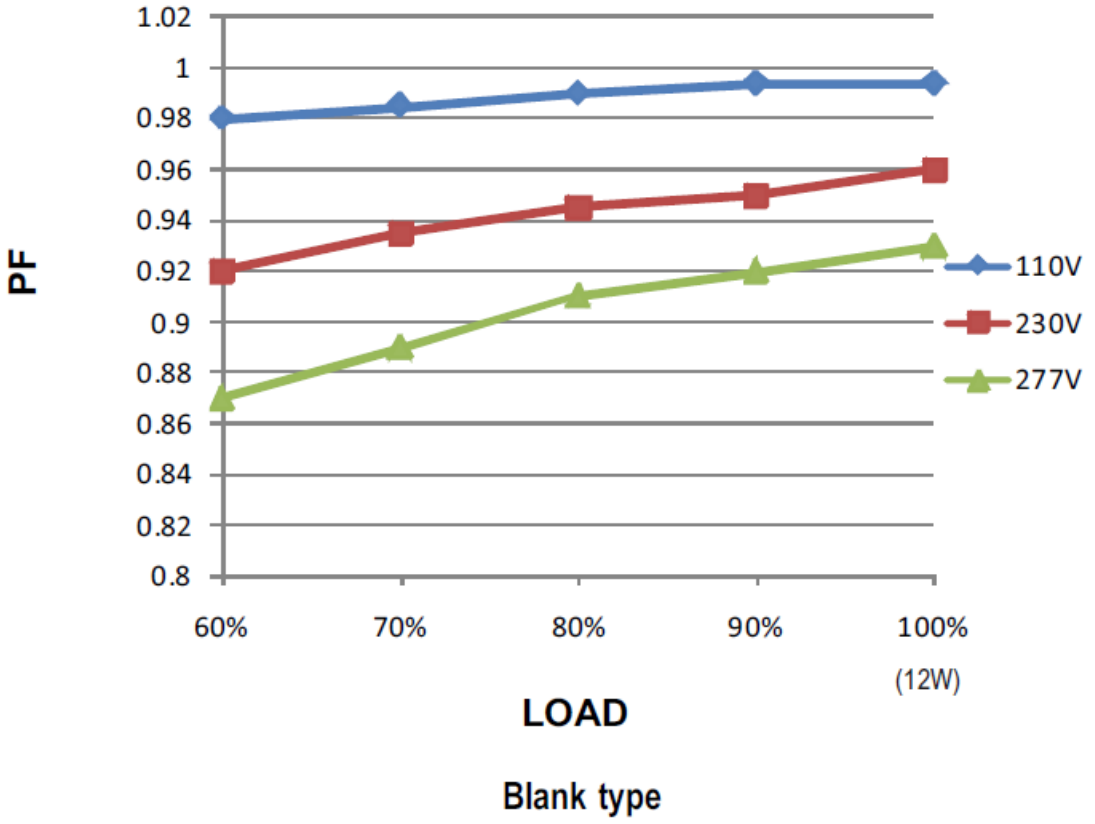


Static Characteristics



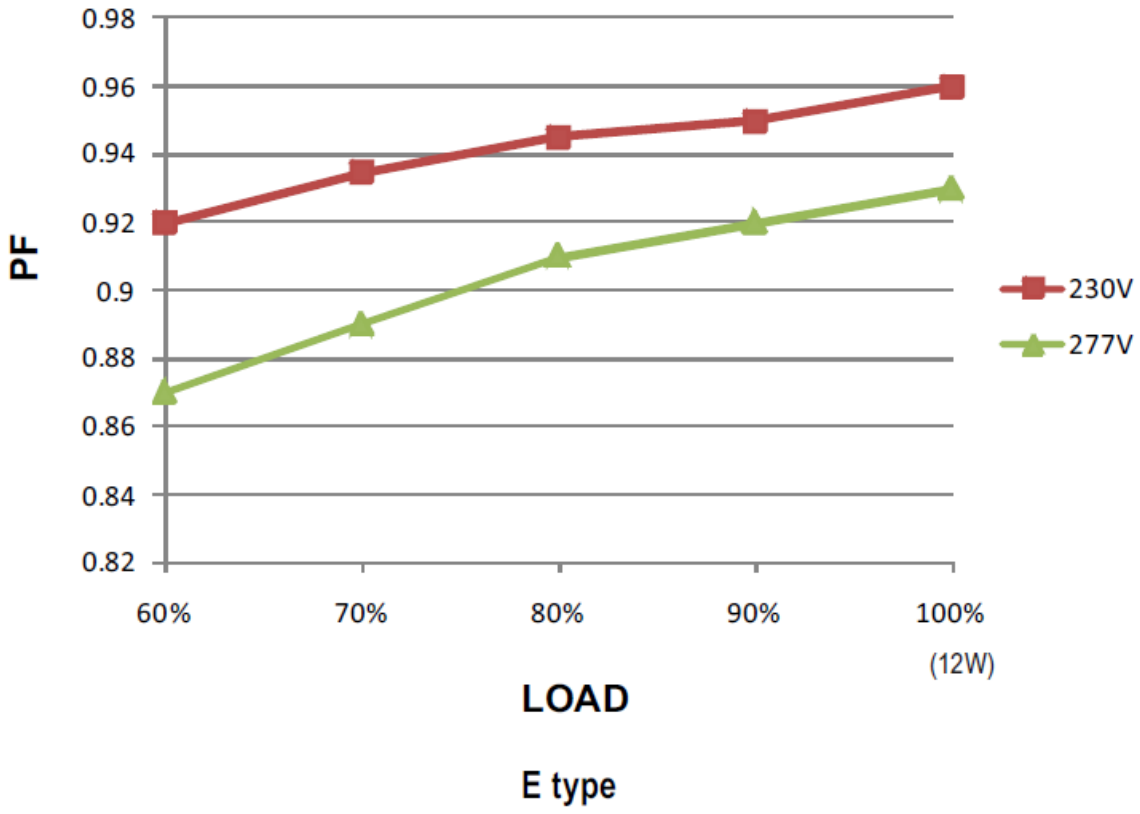
Power Factor Characteristic

Constant Current Mode



Blank type

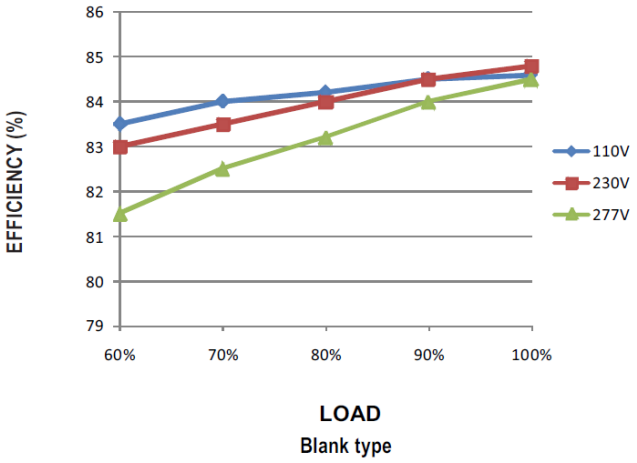
Constant Current Mode



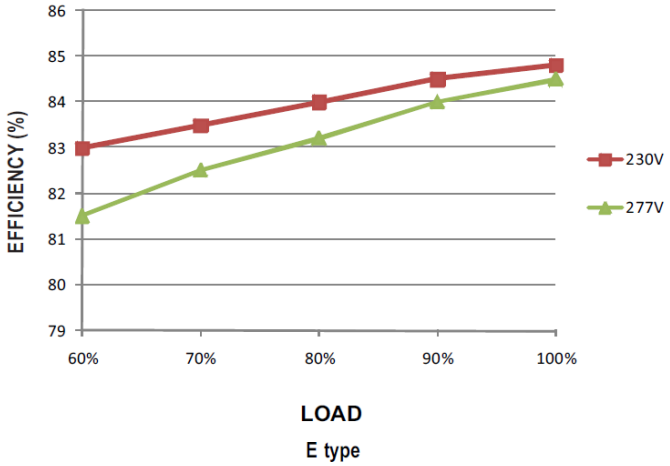
E type

EFFICIENCY vs LOAD

EFFICIENCY vs LOAD (500mA Model)



Blank type



E type

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.

Documents / Resources

	MEAN WELL PLM-12-350 12W Single Output LED Power Supply [pdf] Owner's Manual PLM-12-350, PLM-12-500, PLM-12-700, PLM-12-1050, PLM-12-350 12W Single Output LED Power Supply, PLM-12-350, 12W Single Output LED Power Supply, Single Output LED Power Supply, Output LED Power Supply, Power Supply, Supply

References

- User Manual

Manuals+, Privacy Policy

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