



■ Features :

- Universal AC input / Full range
- High efficiency up to 88.5%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- Built-in active PFC function
- Class 2 power unit
- Pass LPS
- 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



SELV LPS



BS EN/EN1347-1-2-13

SPECIFICATION

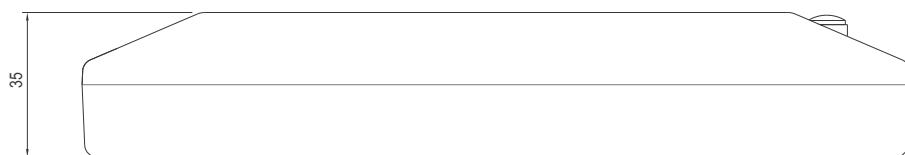
MODEL	PLC-100-12	PLC-100-15	PLC-100-20	PLC-100-24	PLC-100-27	PLC-100-36	PLC-100-48
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	27V	36V
	CONSTANT CURRENT REGION Note.4	9 ~ 12V	11.25 ~ 15V	15 ~ 20V	18 ~ 24V	20.25 ~ 27V	27 ~ 36V
	RATED CURRENT Note.6	5A	5A	4.8A	4A	3.55A	2.65A
	CURRENT RANGE Note.6	0 ~ 5A	0 ~ 5A	0 ~ 4.8A	0 ~ 4A	0 ~ 3.55A	0 ~ 2.65A
	RATED POWER Note.6	60W	75W	96W	96W	95.85W	95.4W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE(Vo ADJ)	10.2 ~ 12V	12.8 ~ 15V	17 ~ 20V	20.4 ~ 24V	23 ~ 27V	30.6 ~ 36V
	CURRENT ADJ. RANGE(Io ADJ)	3.75 ~ 5A	3.75 ~ 5A	3.6 ~ 4.8A	3 ~ 4A	2.6 ~ 3.55A	2 ~ 2.65A
	VOLTAGE TOLERANCE Note.3	±3.0%	±3.0%	±3.0%	±3.0%	±3.0%	±2.0%
	LINE REGULATION	±1.0%					
INPUT	LOAD REGULATION	±2.0%					
	SETUP, RISE TIME	500ms, 80ms/230VAC	1200ms, 80ms/115VAC at full load				
	HOLD UP TIME (Typ.)	60ms/230VAC	16ms/115VAC at full load				
	VOLTAGE RANGE Note.5	90 ~ 264VAC	127 ~ 370VDC				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.95/115VAC, PF>0.95/230VAC at full load (Please refer to "Power Factor Characteristic" curve)					
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading≥75% at 115VAC/230VAC input					
	EFFICIENCY (Typ.)	83%	87%	88.5%	88.5%	88%	88%
	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(twidth=950μs measured at 50% Ipeak) at 230VAC					
PROTECTION	MAX. No. of PSUs on 16A CIRCUIT BREAKER	3 units (circuit breaker of type B) / 5 units (circuit breaker of type C) at 230VAC					
	LEAKAGE CURRENT	<0.75mA / 240VAC					
	OVER CURRENT (Typ.) Note.4	95 ~ 102%					
	Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	OVER VOLTAGE	13 ~ 16V	16.5 ~ 20V	22 ~ 27V	27 ~ 34V	30 ~ 36V	39 ~ 48V
	OVER TEMPERATURE	Protection type : Shut down and latch off o/p voltage, re-power on to recover					
ENVIRONMENT	WORKING TEMP.	-30 ~ +50°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)					
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes					
	SAFETY STANDARDS Note.7	UL1310, TUV BS EN/EN60950-1, BS EN/EN1347-1, BS EN/EN1347-2-13, GB19510.14, GB19510.1, CAN/CSA C22.2 No. 223-M91(except for 48V),J61347-1, J61347-2-13,EAC TP TC 004 approved					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Compliance to BS EN/EN55015, GB17743, GB17625.1, BS EN/EN61000-3-2,-3, Class C (≥70% load) ; BS EN/EN61000-3-3, EAC TP TC 020					
OTHERS	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, BS EN/EN55024, light industry level, (surge 4KV), criteria A,EAC TP TC 020					
	MTBF	297.9Khrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	200.5*69.5*35mm (L*W*H)					
NOTE	PACKING	0.52Kg; 25pcs/14Kg/0.65CUFT					
	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 "DRIVING METHODS OF LED MODULE". 5. Derating may be needed under low input voltage. Please check the static characteristics 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. Safety and EMC design refer to BS EN/EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18. 8. 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. 9. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains. 10. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). 11. PLC-100-12 is used for any light source that exempt from the ErP-Directive (EU) 2019/2020 requirement, for example this model could be use for signalling products (including, but not limited to road-, railway-, marine/air traffic-signalling , traffic control or airfield lamps).						
* Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx							

■ Mechanical Specification

Case No.981A Unit:mm



※ T case: Max. Case Temperature.

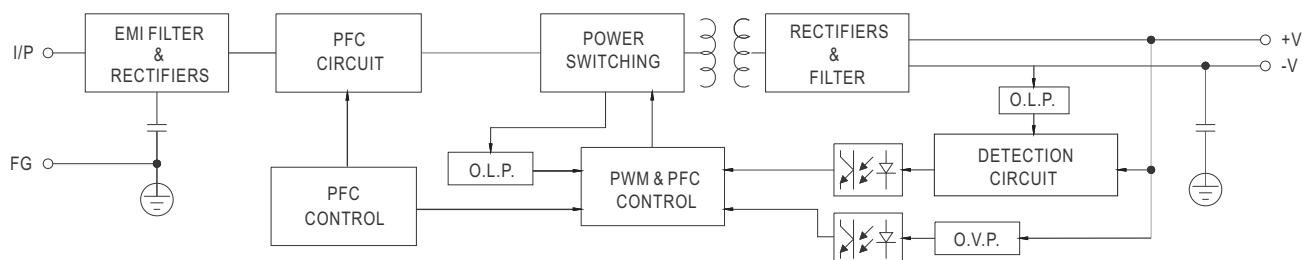

 Terminal Pin No. Assignment (TB1):
SWITCHLAB MB310-75003

Pin No.	Assignment
1	FG (GND)
2	AC/N
3	AC/L

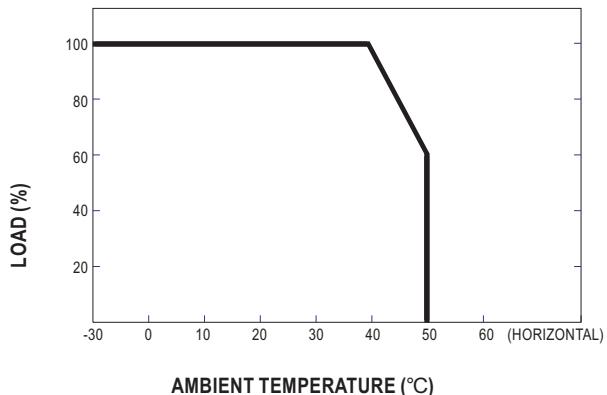
 Terminal Pin No. Assignment (TB2):
SWITCHLAB MB310-75002

Pin No.	Assignment
1	+V
2	-V

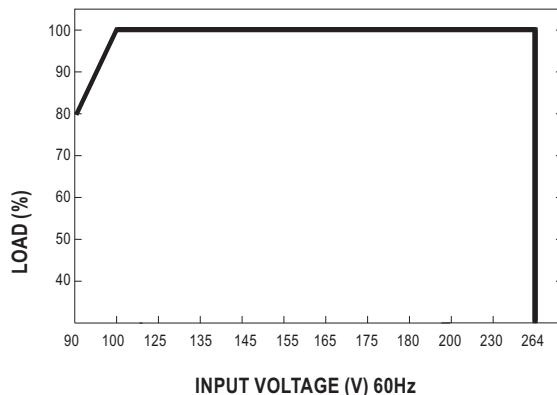
Fosc : 100KHz



■ Derating Curve



■ Static Characteristics

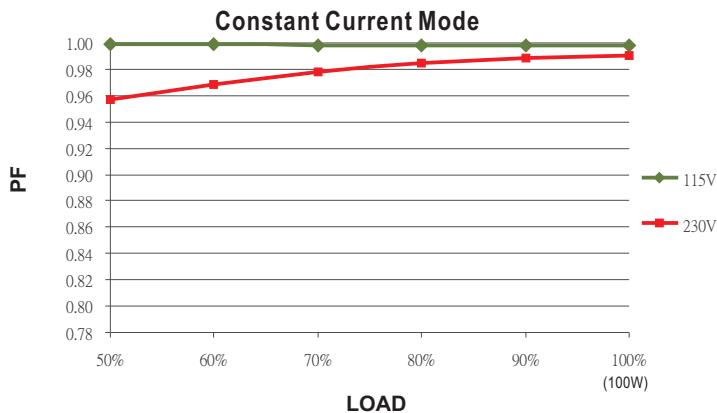




100W Single Output Switching Power Supply

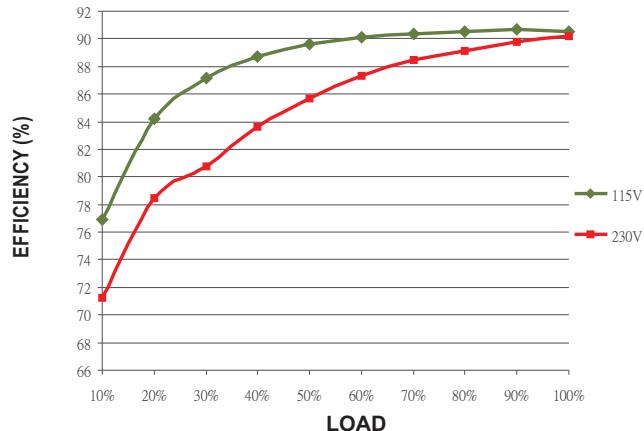
PLC-100 series

■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

PLC-100 series possess superior working efficiency that up to 88.5% can be reached in field applications.

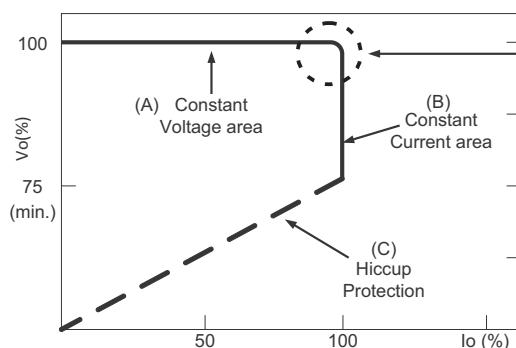


■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode [with LED driver, at area (A)] and CC mode [direct drive, at area (B)].



In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.

Typical LED power supply I-V curve