180W Level VI Desktop Type Power Supply

ENP-180 series



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User's Manual

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UL62368-1 TPTC004 IEC62368-1

ECO Telecom Security

Features

- Universal AC input / Full range
- Built-in active PFC function
- Energy efficiency Level VI
- No load power consumption <0.15W
- Comply with EISA 2007/DoE, NRCan and EU ErP
- 125% peak load capability
- Fanless design, cooling by free air convection
- Protection: Short circuit / Overload / Over voltage / Over temperature
- 3 years warranty

Applications

- Land mobile radio system
- Surveillance system
- TV antenna facility

GTIN CODE

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

Description

ENP-180 series is a 180W desktop type power supply working perfectly for communication related applications. Observing the standard 7" width size in the land mobile radio field, it provides the most frequently used voltage in the communication field. With the rugged mechanical design along with the high efficiency circuitry, it operates for the ambient temperature range -30℃~+70℃ under free air convection.

Model Encoding

ENP - 180 - 24

- 24 — Nominal voltage
- 180 — Rated wattage
- ENP — Series name

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SPECIFICATION

MODEL			ENP-180-12	ENP-180-24	ENP-180-48
OUTPUT	DC VOLTAGE		13.8V	27.6V	55.2V
	RATED CURRENT		13A	6.5A	3.3A
	CURRENT	RATED	0 ~ 13A	0 ~ 6.5A	0 ~ 3.3A
		PEAK Note.2	16.3A	8.1A	4.1A
	WATTAGE	RATED	179W	179W	182W
		PEAK Note.2	225W	224W	226W
	RIPPLE & NOISE (max.) Note.3		150mVp-p	150mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE		11.5 ~ 15V	23.5 ~ 30V	47.5 ~ 58.8V
	VOLTAGE TOLERANCE Note.4		±1.0%	±1.0%	±1.0%
	LINE REGULATION Note.5		±0.5%	±0.5%	±0.5%
	LOAD REGULATION Note.6		±2.0%	±1.0%	±0.5%
	SETUP, RISE TIME Note.7		1000ms, 100ms at full load		
	HOLD UP TIME (Typ.)		20ms at full load		
INPUT	VOLTAGE RANGE Note.8		90 ~ 264VAC 127 ~ 370VDC		
	FREQUENCY RANGE		47 ~ 63Hz		
	POWER FACTOR (Typ.)		PF>0.98/115VAC, PF>0.95/230VAC at full load		
	EFFICIENCY (Typ.)		91%	93.5%	94%
	AC CURRENT (Typ.)		1.9A/115VAC 0.95A/230VAC		
	INRUSH CURRENT (Typ.)		COLD START 70A at 230VAC		
	LEAKAGE CURRENT		<3.5mA / 240VAC		
	NO LOAD POWER CONSUMPTION		<0.15W		
PROTECTION	SHORT CIRCUIT		Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVERLOAD		Normally works within 110 ~ 125% rated output power for more than 3 seconds and switches to constant current limiting, with auto-recovery after the peak load condition is removed		
			Constant current limiting, if >125% rated power, with auto-recovery after the overload condition is removed		
	OVER VOLTAGE		15.5 ~ 18.2V	31 ~ 36.5V	62.1 ~ 72.9V
			Protection type : Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE		Shut down O/P voltage, recovers automatically after temperature goes down		
ENVIRONMENT	WORKING TEMP.		-30 ~ +70℃ (Refer to "Derating Curve")		
	WORKING HUMIDITY		20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY		-40 ~ +85℃, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT		±0.05%/℃ (0 ~ 50℃)		
	VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 9)	SAFETY STANDARDS		IEC62368-1, UL62368-1, EAC TP TC 004 approved; Meet BS EN/EN62368-1		
	WITHSTAND VOLTAGE		I/P-O/P:3KVAC 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℃/ 70% RH		
	EMC EMISSION		**Parameter**	**Standard**	**Test Level / Note**
			Conducted	BS EN/EN55032 (CISPR32) / FCC PART15 (CISPR22)	Class B
			Radiated	BS EN/EN55032 (CISPR32) / FCC PART15 (CISPR22)	Class B
			Harmonic Current	BS EN/EN61000-3-2	-----
			Voltage Flicker	BS EN/EN61000-3-3	-----
	EMC IMMUNITY		BS EN/EN55024		
			Parameter	**Standard**	**Test Level / Note**
			ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact
			Radiated	BS EN/EN61000-4-3	Level 2, 3V/m
			EFT / Burst	BS EN/EN61000-4-4	Level 2, 1KV
			Surge	BS EN/EN61000-4-5	Level 2, 1KV/Line-Line,Level 3, 2KV/Line-Earth
			Conducted	BS EN/EN61000-4-6	Level 2, 3Vrms
			Magnetic Field	BS EN/EN61000-4-8	Level 1, 1A/m
			Voltage Dips and Interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods
OTHERS	MTBF		1600.7K hrs min. Telcordia SR-332 (Bellcore) ; 170.6K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION		192*178*45.5mm (L*W*H)		
	PACKING		1.15Kg; 10pcs/12.5Kg /1.34CUFT		

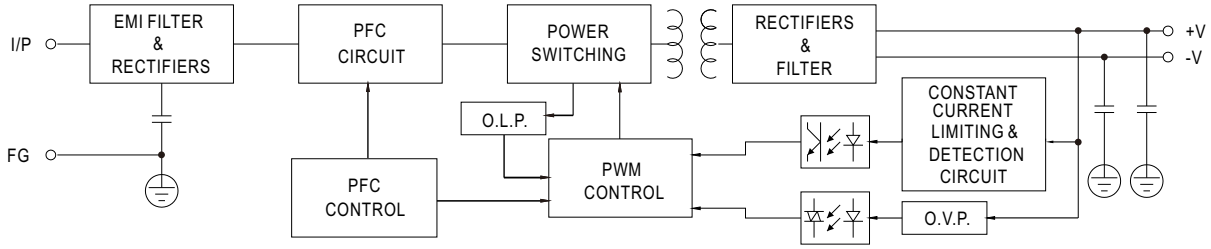
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Peak current or peak power up to 3 seconds is provided.
3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μF & 47 μF parallel capacitor.
4. Tolerance : includes set up tolerance, line regulation and load regulation.
5. Line regulation is measured from low line to high line at rated load.
6. Load regulation is measured from 0% to 100% rated load.
7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
8. Derating may be needed under low input voltages. Please check the derating curve for more details.
9. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf)
10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

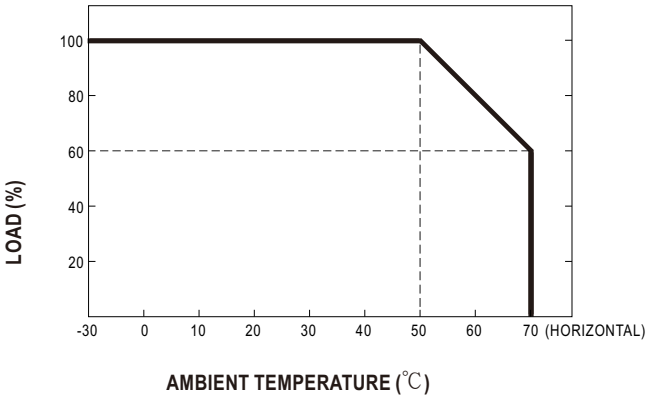
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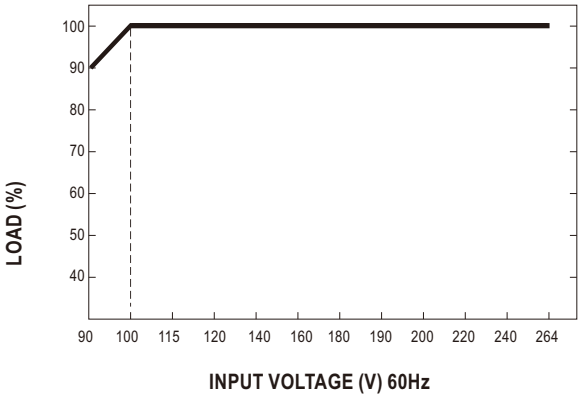
■ Block Diagram



■ Derating Curve



■ Static Characteristics

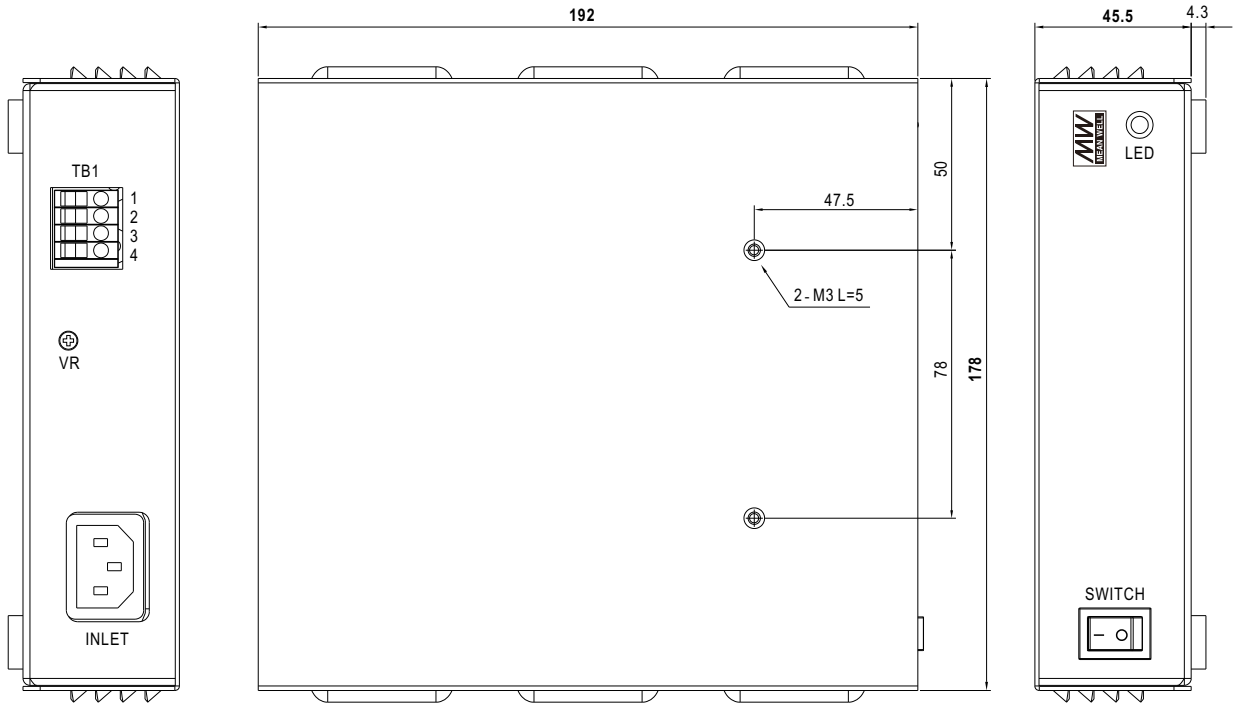


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■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

Case No. 252



Terminal Pin No. Assignment (TB1):

Pin No.	Assignment
1,2	+V
3,4	-V

Note: Please use wires with a cross section of 0.5 - 4.0 mm^2 (12~20AWG) for connection.
Recommended wires strip length is 9 mm and screw torque is 4.0 lb-inch (0.4~0.5Nm).

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html

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