



180W Level VI Desktop Type Power Supply

**ENP-180** series



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User's Manual



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## ■ Features

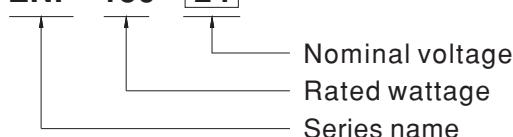
- Universal AC input / Full range
- Built-in active PFC function
- Energy efficiency Level VI
- No load power consumption <0.15W
- Comply with EISA 2007/DoE, NRCan and EU ErP
- 125% peak load capability
- Fanless design, cooling by free air convection
- Protection: Short circuit / Overload / Over voltage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

## ■ 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°C ~+70°C under free air convection.

## ■ Model Encoding

ENP - 180 - **24**



## ■ Applications

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

## SPECIFICATION

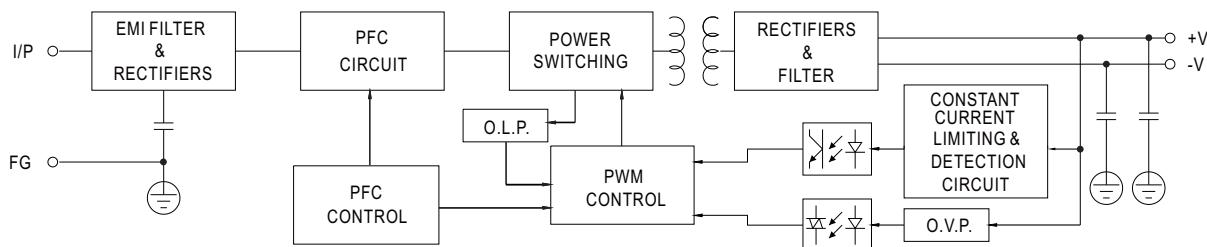
MODEL	ENP-180-12		ENP-180-24	ENP-180-48		
OUTPUT	DC VOLTAGE	13.8V	27.6V	55.2V		
	RATED CURRENT	13A	6.5A	3.3A		
	CURRENT	0 ~ 13A	0 ~ 6.5A	0 ~ 3.3A		
	PEAK Note.2	16.3A	8.1A	4.1A		
	WATTAGE	179W	179W	182W		
	PEAK Note.2	225W	224W	226W		
	RIPLLE & NOISE (max.) Note.3	150mVp-p	150mVp-p	350mVp-p		
	VOLTAGE 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%		
INPUT	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				
	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%		
PROTECTION	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				
	SHORT CIRCUIT	Protection type : Constant current limiting, recovers automatically after fault condition is removed				
ENVIRONMENT	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				
	OVER VOLTAGE	Constant current limiting, if >125% rated power, with auto-recovery after the overload condition is removed				
	15.5 ~ 18.2V	31 ~ 36.5V	62.1 ~ 72.9V			
	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover				
SAFETY & EMC (Note 9)	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 95% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing				
	TEMP. COEFFICIENT	±0.05%/°C (0 ~ 50°C)				
	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°C / 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	-----		
	EMC IMMUNITY	Voltage Flicker	BS EN/EN61000-3-3	-----		
		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		
OTHERS	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			
	MTBF	170.6K hrs min. MIL-HDBK-217F (25°C)				
OTHERS	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°C 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 0.1uf & 47uf 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a> ) 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). ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>					



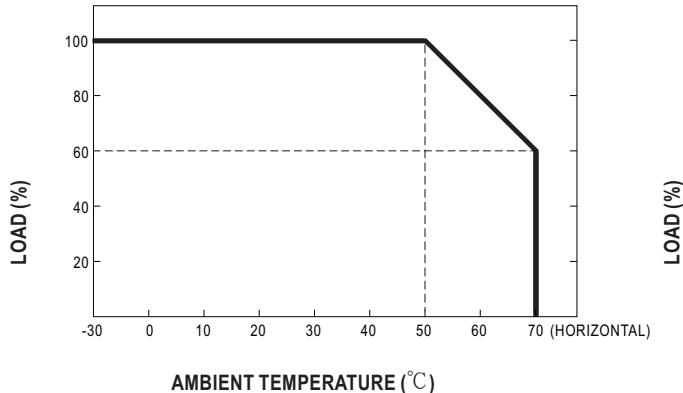
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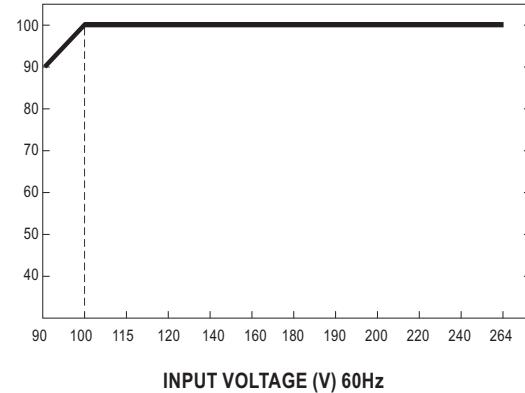
■ Block Diagram



■ Derating Curve

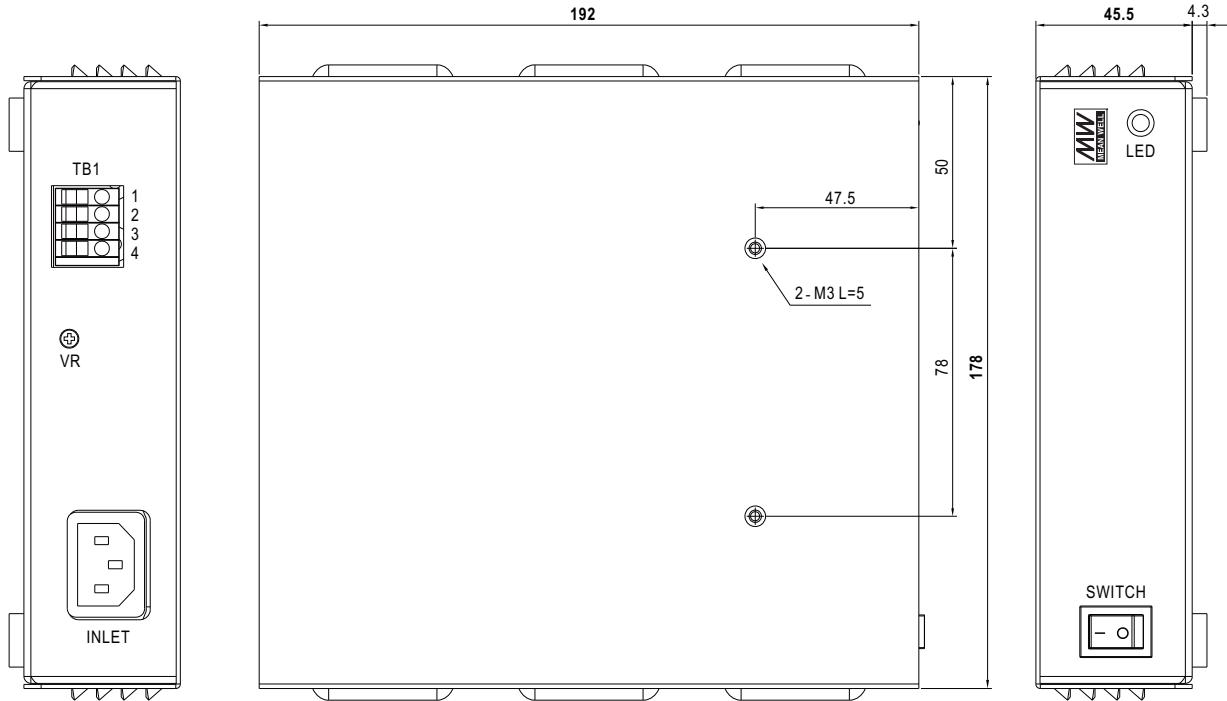


■ Static Characteristics



**■ Mechanical Specification**

Case No. 252 Unit:mm



## 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<sup>2</sup> (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>