



# 150W Single Output Switching Power Supply

# NES-150 series

Authorized Distributor: Total Power International, Inc. Toll Free: 877-646-0900(US) PH# (978)453-7272 www.total-power.com



### ■ Features :

- AC input range selectable by switch
- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- High efficiency, long life and high reliability
- 2 years warranty

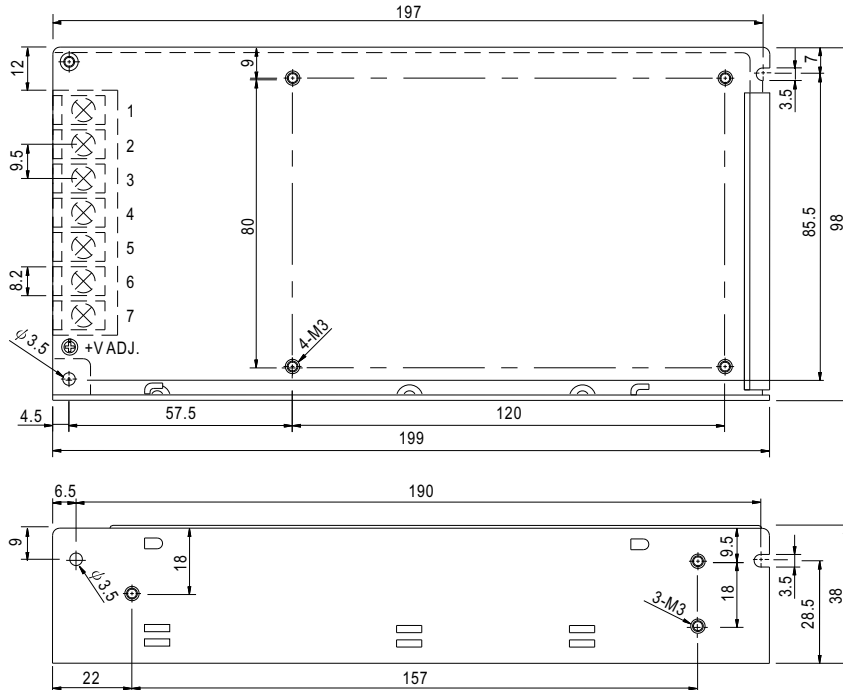


### SPECIFICATION

MODEL	NES-150-3.3	NES-150-5	NES-150-7.5	NES-150-9	NES-150-12	NES-150-15	NES-150-24	NES-150-48		
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	9V	12V	15V	24V	48V	
	RATED CURRENT	30A	26A	20A	16.7A	12.5A	10A	6.5A	3.3A	
	CURRENT RANGE	0 ~ 30A	0 ~ 26A	0 ~ 20A	0 ~ 16.7A	0 ~ 12.5A	0 ~ 10A	0 ~ 6.5A	0 ~ 3.3A	
	RATED POWER	99W	130W	150W	150W	150W	150W	156W	158.4W	
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	120mVp-p	200mVp-p	
	VOLTAGE ADJ. RANGE	3.2 ~ 3.5V	4.75 ~ 5.5V	7.13 ~ 8.3V	8.55 ~ 9.9V	11.4 ~ 13.5V	14.25 ~ 16.5V	22.8 ~ 27.6V	45.6 ~ 52.8V	
	VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION Note.4	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION Note.5	±2.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME Note.7	800ms, 20ms/230VAC 1200ms, 30ms/115VAC at full load								
HOLD UP TIME (Typ.)	24ms/230VAC 20ms/115VAC at full load									
INPUT	VOLTAGE RANGE	90 ~ 132VAC / 180 ~ 264VAC selected by switch 254 ~ 373VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	EFFICIENCY (Typ.)	73%	78%	80%	83%	83%	83%	86%	86%	
	AC CURRENT (Typ.)	3A/115VAC 2A/230VAC								
	INRUSH CURRENT (Typ.)	COLD START 45A/230VAC								
	LEAKAGE CURRENT	<2mA / 240VAC								
PROTECTION	OVERLOAD	110 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	3.8 ~ 4.65V	5.75 ~ 6.75V	8.6 ~ 10.1V	10.4 ~ 12.2V	13.8 ~ 16.2V	17.25 ~ 20.25V	27.6 ~ 32.4V	55.2 ~ 62.4V	Protection type : Hiccup mode, recovers automatically after fault condition is removed
ENVIRONMENT	WORKING TEMP.	-20 ~ +60°C (Refer to output load derating curve)								
	WORKING HUMIDITY	20 ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC (Note 6)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved								
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC 70% RH								
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B								
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3								
EMS IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-1, heavy industry level, criteria A									
OTHERS	MTBF	433.3Khrs min. MIL-HDBK-217F (25°C)								
	DIMENSION	199*98*38mm (L*W*H)								
	PACKING	0.7Kg; 30pcs/22Kg/1.24CUFT								
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Line regulation is measured from low line to high line at rated load.</li> <li>5. Load regulation is measured from 0% to 100% rated load.</li> <li>6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>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.</li> </ol>									

**Mechanical Specification**

Case No. 902 Unit:mm

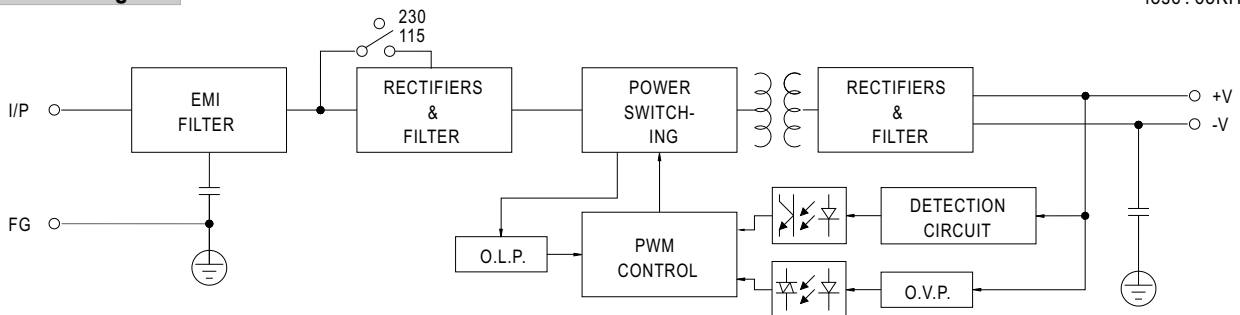


Terminal Pin No. Assignment

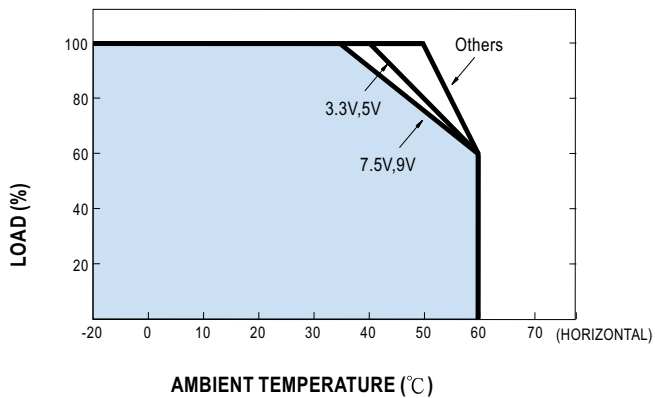
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG $\perp$		

**Block Diagram**

fosc : 65KHz



**Derating Curve**



**Static Characteristics**

