

## AC/DC 180W ENCLOSED SMPS

NHP-ES-180-1-X-X

The ES-180 series is one of NHP's enclosed AC-DC switching power supply. It functions from a wide AC input range and at the same time accepts DC input voltage. Its main features are its cost-effective, low no load power consumption, high efficiency and high reliability. These power supply offer excellent EMC performance and meet international standards and are widely used in areas of industrial, LED, street light control, electricity, security, telecommunications, smart home, etc.

- Input 170V to 270V AC operating range
- Operating Temperature -20 to 85 Deg C
- Low Standby Power Consumption and High Efficiency
- Input over and under voltage protections
- LED indicator for power on
- Output short circuit, over-load, over-voltage protection
- Leading supplier for major OE manufactures for 25 years



Ordering Code:

NHP-ES-180-1-24-RM

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1 2 3 4 5 6

1	COMPANY'S NAME
2	ENCLOSED SMPS
3	RATED OUTPUT POWER
4	NUMBER OF OUTPUTS
5	RATED OUTPUT VOLTAGE
6	RM- RAIL MOUNTED WMV - WALL MOUNTED VERTICAL WMH- WALL MOUNTED HORIZONTAL

## SELECTION GUIDE:

Model Number	Output Power (Watt)	Output Voltage and Output Current (V/I)	Efficiency
NHP-ES-180-1-12-X	180W	12V/15A	>85%
NHP-ES-180-1-24-X	180W	24V/7.5A	
NHP-ES-180-1-36-X	180W	36V/5A	
NHP-ES-180-1-48-X	180W	48V/3.7A	

## INPUT SPECIFICATIONS:

Input Voltage	170 to 270V AC
Input Voltage Frequency	47Hz to 63Hz
Input Current	2.8A Typical at 230V AC
Input Inrush Current	Limited by NTC Thermistor to 35A
Leakage current	<3.5 mA at 230V AC

## OUTPUT SPECIFICATIONS:

Output voltage Accuracy	At full load range $\pm 1\%$
Line Regulation	<1%
Load Regulation	<1%
Ripple and noise	150 mv p-p
Temperature Coefficient	$\pm 0.03\%/^{\circ}\text{C}$
Hold-up Time 230V AC	20ms

## GENERAL SPECIFICATIONS:

Operating Temperature	-20 to 85 Deg C
Storage Temperature	-20 to 85 Deg C
Operating Humidity	20 to 95%RH
Storage Humidity	10 to 95%RH
Vibration	10-500 Hz 2G 10 min/cycle 60 mins each along XYZ axis
Indication	Mains On



## PROTECTIONS:

Input under voltage	Cutoff level 140V AC Turn on voltage 160V AC
Input over voltage	310V AC units shuts off if voltage goes above this value and automatic restart when input is less than 275V AC
Output short circuit and overload	Continuously Protected

## EMI/EMC:

Conducted EMI	Designed as per CISPR22A
Surge	Designed as per IEC 6100-4-2
ESD	Designed as per IEC 6100-4-2 AIR 8KV, CONTACT 4KV CRITERIA A
EFT	Designed as per IEC 61000-4-4 2KV ON INPUT CRITERIA A

## MECHANICAL SPECIFICATIONS:

Case Material	Sheet Metal Enclosure
Dimensions: L*B*H	150*60*95mm
Weight	700g
Mounting	Din Rail, Horizontal and Vertical Wall Mounting
Cooling Method	Naturally Air Cooled

## MOUNTING OPTIONS:



**RAIL MOUNTING**



**VERTICAL WALL MOUNTING**

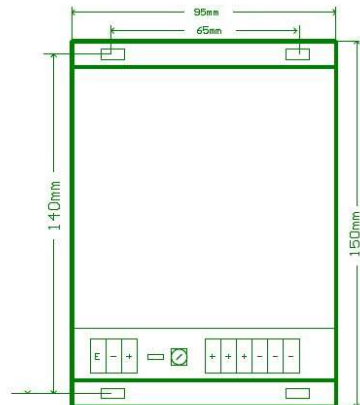
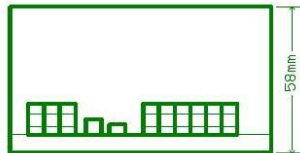


**HORIZONTAL WALL MOUNTING**



## MECHANICAL DRAWING:

### SIDE VIEW



### TOP VIEW

SMPS MODEL NHP-9513P

### SPECIFICATIONS

ENCLOSURE:

POWDER COATED METAL ENCLOSURE

COLOUR: STEEL GREY

BOTTOM : 1.5MM COVER : 0.8MM

### NOTE:

- 1) DRAWING NOT TO SCALE ALL DIMENSIONS IN mm
- 2) UNIT TO BE USED INSIDE CONTROL PANEL
- 3) NO SERVICABLE PARTS INSIDE

### NHP POWER SYSTEMS

PART NO : NHP-ES-180	PART DESCRIPTION: NHP-ES-180
DRG BY : ANUSHREE	VERSION-1
DRWG DATE 19-10-2021	DRWG NO 95136DC-080618



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