

12 W  
AC/DC  
USB  
ADAPTER

# 12 Watt Value Power

HNP12-USBL6 Steckernetzteil-Serie



HNP-POWER

## Besondere Merkmale Features

Steckerschaltnetzteil	Plug in switching adaptor
Doppelte Isolation	Double insulated
Kompakter Aufbau	Small low profile package
Überlast- und kurzschlußfest	Overload, short circuit protection
Minimalster Leerlaufverlust	Lowest standby power consumption
EU CoC V5 tier 2 / EnergyStar DOE VI	EU CoC V5 tier 2/ EnergyStar DOE VI

## Anwendung Application

Einplatinencomputer	Single board computers
Drahtlose Kommunikation	Wireless communications
Peripheriegeräte	Peripherals
Netzwerktechnik	Networking
Mobile Ausrüstungen	Portable equipment
Tablets / Smartphones	Tablets / Smartphones
Telekommunikation	Telecom

## Technische Daten Specification

(bei 25°C Umgebungstemperatur) at 25 °C ambient temperature

## Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	90...264 VAC
Eingangsfrequenz	Input frequency	47...63 Hz
Eingangsstrom	Input current	450mA(rms) @90VAC
Netzausfallüberbrückung	Hold-up time, nom.conditions	20ms @230VAC
Einschaltstromstoß	Inrush current	<30A/230VAC
Leerlaufverlust	No load power consumption	< 0.075 Watt

## Ausgangsdaten Output Specifications

Leistung	Power	12 Watt
Wirkungsgrad	Efficiency	DOE VI / CoC V5 tier 2
Ausregelzeit ±2%	Recovery time ±2%	max. 1 ms
Restwelligkeit	Ripple and noise	max. 100mV pp

## Allgemeine Daten General Specifications

Betriebstemperatur	Operating temperature	-10°C...+40°C
Lagertemperatur	Storage temperature	-20°C...+70°C
Luftfeuchte	Humidity	10...90% RH
Isolation	Dielectric Withstand (Hipot)	3000VAC 1min 5mA inp.<->outp.
Leckstrom	Leackage current	0.25mA max.@240 VAC
Überstromschutz	Overcurrent protection	continuous, auto restart
Überspannungsschutz	Overvoltage protection	typ. 120%
Zulassungsbestimmungen	Safety requirements	TÜV/GS EN60950-1:2006+A11(2009)+A1(2010)+A12(2011)+A2(2013)AfPS GS 2014:01; UL60065 EN55022:2010; EN55024:2010;EN55020:2007+A11 EN61000-3-2:2014;EN61000-3-3:2013;EN55013:2013 EN55014-1:2006+A1+A2;EN55014-2:1997+A1+A2 2011/65/EU
EMV	EMC	
RoHS	RoHS	

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### Bestell-Information / Order Information

Modell	Ausgang Output	Last/Load Min.	Max.
HNP12-USBL6	5 V	0.0 A	2.4 A

**MEMO:**

#### Vermerk

Andere Versionen ( Spannungen / Stecker / Farben ) mit Mindestbestellmengen auf Anfrage

#### Note

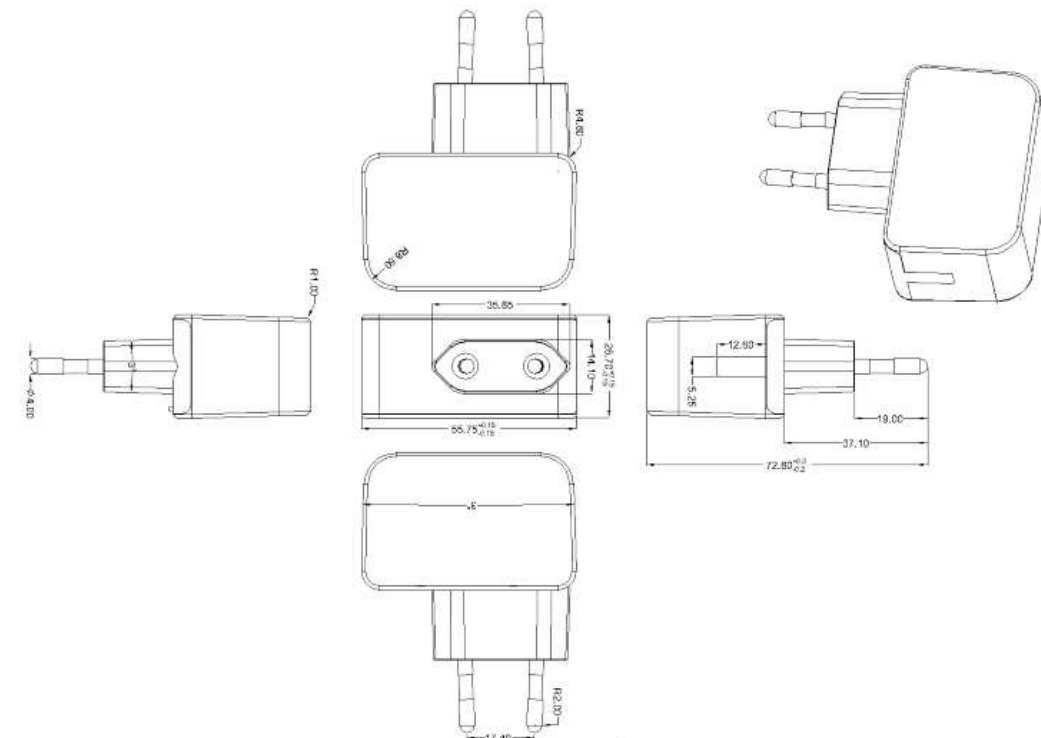
Other versions ( Voltages / Connectors / Colors ) with minimum order quantities on request

### Mechanik

### Mechanical

L×B×H	L×W×H	56 × 27 × 73 mm
Gewicht	Weight	51 g
Ausgang	Output	1x USB Socket A

### PIN-Belegung und Zeichnung / Pin Assignments & Drawing



## Energieeffizienz / Efficiency (EU) 2019/1782

Model	Input Voltage/Frequency	Output Voltage(V)	Output Current(A)	Power for label	Average efficiency	Efficiency at 10% load	No load power consumption (Watt)
HNP06-USBL6	230Vac / 50Hz	5,0	1,50	7,5W	77,46%	78,85%	0,07W
HNP06-050L6	230Vac / 50Hz	5,0	1,50	7,5W	77,46%	78,85%	0,07W
HNP06-060L6	230Vac / 50Hz	6,0	1,25	7,5W	78,13%	78,13%	0,05W
HNP06-090L6	230Vac / 50Hz	9,0	0,84	7,5W	81,61%	78,15%	0,07W
HNP06-120L6	230Vac / 50Hz	12,0	0,63	7,5W	78,81%	78,22%	0,07W
HNP06-MICROUSBL6	230Vac / 50Hz	5,0	1,50	7,5W	77,46%	78,85%	0,07W
HNP06-MINIUSBL6	230Vac / 50Hz	5,0	1,50	7,5W	77,46%	78,85%	0,07W
HNP06J-USBL6	230Vac / 50Hz	5,0	1,50	7,5W	77,13%	78,15%	0,08W
HNP06I-050L6	230Vac / 50Hz	5,0	1,50	7,5W	77,13%	78,15%	0,08W
HNP06I-050L6-DC17.4	230Vac / 50Hz	5,0	1,50	7,5W	77,13%	78,15%	0,07W
HNP06I-090L6	230Vac / 50Hz	9,0	0,84	7,5W	82,00%	77,11%	0,07W
HNP06I-120L6	230Vac / 50Hz	12,0	0,63	7,5W	81,65%	77,12%	0,08W
HNP06I-MicroUSBL6	230Vac / 50Hz	5,0	1,50	7,5W	77,13%	78,15%	0,08W
HNP06I-MiniUSBL6	230Vac / 50Hz	5,0	1,50	7,5W	77,13%	78,15%	0,08W
HNP11-USBV2-BLACK	230Vac / 50Hz	5,0	2,10	10,5W	80,12%	77,12%	0,09W
HNP11-USBV2-WHITE	230Vac / 50Hz	5,0	2,10	10,5W	79,32%	77,02%	0,01W
HNP12-USBL6	230Vac / 50Hz	5,0	2,40	12,0W	80,64%	78,92%	0,06W
HNP12-050L6	230Vac / 50Hz	5,0	2,40	12,0W	80,64%	78,92%	0,06W
HNP12-050L6-DC11	230Vac / 50Hz	5,0	2,40	12,0W	80,64%	78,92%	0,06W
HNP12-075L6-DC90-WH	230Vac / 50Hz	7,5	1,35	10,1W	82,29%	76,13%	0,08W
HNP12-090L6	230Vac / 50Hz	9,0	1,33	12,0W	85,12%	83,12%	0,09W
HNP12-120L6	230Vac / 50Hz	12,0	1,00	12,0W	85,56%	82,15%	0,07W
HNP12-150L6	230Vac / 50Hz	15,0	0,80	12,0W	83,12%	71,42%	0,09W
HNP12-150L6-RJ22-wh	230Vac / 50Hz	15,0	0,80	12,0W	83,12%	71,42%	0,09W
HNP12-240L6	230Vac / 50Hz	24,0	0,50	12,0W	86,71%	77,66%	0,07W
HNP12I-USBL6	230Vac / 50Hz	5,0	2,40	12,0W	80,41%	78,96%	0,06W
HNP12I-050L6	230Vac / 50Hz	5,0	2,40	12,0W	80,64%	78,92%	0,06W
HNP12I-090L6	230Vac / 50Hz	9,0	1,33	12,0W	85,26%	83,01%	0,07W
HNP12I-120L6	230Vac / 50Hz	12,0	1,00	12,0W	85,72%	82,15%	0,05W
HNP12I-150L6	230Vac / 50Hz	15,0	0,80	12,0W	83,12%	71,42%	0,09W
HNP12I-240L6	230Vac / 50Hz	24,0	0,50	12,0W	86,71%	77,15%	0,07W
HNP12I-MicroUSBL6-RS	230Vac / 50Hz	5,0	2,40	12,0W	80,40%	79,00%	0,06W
HNP15-050L6	230Vac / 50Hz	5,0	2,80	14,0W	81,91%	78,26%	0,06W
HNP15-051-MicroUSBL6	230Vac / 50Hz	5,2	2,50	13,0W	80,62%	79,12%	0,06W
HNP15-090L6	230Vac / 50Hz	9,0	1,67	15,0W	84,84%	79,26%	0,07W
HNP15I-090L6-DC25.55	230Vac / 50Hz	9,0	1,67	15,0W	84,84%	79,26%	0,07W
HNP15-120L6	230Vac / 50Hz	12,0	1,25	15,0W	84,62%	81,25%	0,07W
HNP15-MicroUSBL6	230Vac / 50Hz	5,0	2,50	12,5W	81,22%	79,56%	0,06W
HNP15I-050L6	230Vac / 50Hz	5,0	2,80	14,0W	81,91%	78,26%	0,06W
HNP15I-090L6	230Vac / 50Hz	9,0	1,67	15,0W	82,18%	78,91%	0,07W
HNP15I-120L6	230Vac / 50Hz	12,0	1,25	15,0W	84,62%	81,25%	0,07W
HNP15I-150L6	230Vac / 50Hz	9,0	1,67	15,0W	82,18%	78,91%	0,07W
HNP15I-MicroUSBL6	230Vac / 50Hz	5,0	2,50	15,0W	81,22%	79,56%	0,06W
HNP18-050L6	230Vac / 50Hz	5,0	3,00	15,0W	80,79%	78,12%	0,07W
HNP18-090L6	230Vac / 50Hz	9,0	2,00	18,0W	85,12%	83,23%	0,09W
HNP18-090L6-T	230Vac / 50Hz	9,0	2,00	18,0W	85,06%	83,56%	0,11W
HNP18-120L6	230Vac / 50Hz	12,0	1,50	18,0W	86,99%	83,56%	0,06W
HNP18-150L6	230Vac / 50Hz	15,0	1,20	18,0W	86,97%	83,75%	0,06W
HNP18-240L6	230Vac / 50Hz	24,0	0,75	18,0W	86,50%	83,12%	0,05W
HNP18I-050L6	230Vac / 50Hz	5,1	3,00	15,3W	80,79%	78,12%	0,07W
HNP18I-050-CL6	230Vac / 50Hz	5,1	3,00	15,3W	80,79%	78,12%	0,07W
HNP18I-051L6-C	230Vac / 50Hz	5,1	3,00	15,3W	80,79%	78,12%	0,07W
HNP18I-090L6	230Vac / 50Hz	9,0	2,00	18,0W	85,12%	83,23%	0,09W
HNP18I-120L6	230Vac / 50Hz	12,0	1,50	18,0W	86,99%	83,56%	0,06W
HNP18I-150L6	230Vac / 50Hz	15,0	1,20	18,0W	86,97%	83,75%	0,06W
HNP18I-150L6-EU90	230Vac / 50Hz	15,0	1,20	18,0W	86,97%	83,75%	0,06W
HNP18I-240L6	230Vac / 50Hz	24,0	0,75	18,0W	85,75%	83,12%	0,08W
HNP24-090L6	230Vac / 50Hz	9,0	2,50	22,5W	86,14%	84,15%	0,05W
HNP24-120L6	230Vac / 50Hz	12,0	2,00	24,0W	86,12%	83,58%	0,05W
HNP24-150L6	230Vac / 50Hz	15,0	1,60	24,0W	86,74%	82,89%	0,09W
HNP24-240L6	230Vac / 50Hz	24,0	1,00	24,0W	87,64%	84,06%	0,07W
HNP24I-090L6	230Vac / 50Hz	9,0	2,50	22,5W	86,14%	84,15%	0,05W
HNP24I-120L6	230Vac / 50Hz	12,0	2,00	24,0W	86,12%	83,58%	0,05W
HNP24I-150L6	230Vac / 50Hz	15,0	1,60	24,0W	85,98%	83,11%	0,11W
HNP24I-240L6	230Vac / 50Hz	24,0	1,00	24,0W	87,64%	84,06%	0,07W
HNP27-4USB	230Vac / 50Hz	5,0	5,40	27,0W	85,61%	83,98%	0,07W
HNP27I-C2USB	230Vac / 50Hz	5,0	5,40	27,0W	83,25%	79,02%	0,08W
HNP40-5USB	230Vac / 50Hz	5,0	8,00	40,0W	84,68%	82,61%	0,07W
HNP40-C4USB	230Vac / 50Hz	5,0	8,00	40,0W	86,08%	80,12%	0,07W
HNP42EU-090	230Vac / 50Hz	9,0	3,00	27,0W	85,90%	81,26%	0,11W
HNP42EU-120	230Vac / 50Hz	12,0	3,50	42,0W	88,05%	84,41%	0,11W
HNP42EU-150	230Vac / 50Hz	15,0	2,80	42,0W	88,47%	84,21%	0,11W
HNP42EU-240	230Vac / 50Hz	24,0	1,75	42,0W	89,20%	84,15%	0,11W
HNP42I-090	230Vac / 50Hz	9,0	3,00	27,0W	87,02%	84,03%	0,08W
HNP42I-120	230Vac / 50Hz	12,0	3,50	42,0W	87,99%	85,11%	0,07W
HNP42I-150	230Vac / 50Hz	15,0	2,80	42,0W	88,84%	86,01%	0,08W
HNP42I-240	230Vac / 50Hz	24,0	1,75	42,0W	89,65%	86,53%	0,08W
HNP45I-CPD	230Vac / 50Hz	5,0/9,0/15,0/20,0 V	3,0/2,25 A	15,0/27,0/45,0W	>83,9%	>79,8%	0,07W
HNP65F-120	230Vac / 50Hz	12,0	5,00	60W	88,15%	86,23%	0,09W
HNP65F-150	230Vac / 50Hz	15,0	4,30	60W	90,10%	85,33%	0,02W
HNP65F-240	230Vac / 50Hz	24,0	2,70	60W	90,78%	87,56%	0,01W
HNP-LED24EU-120L6	230Vac / 50Hz	12,0	2,00	24W	86,72%	83,12%	0,08W
HNP-LED24EU-240L6	230Vac / 50Hz	24,0	1,00	24W	87,28%	85,02%	0,08W