

12 W  
AC/DC  
USB  
ADAPTER

# 12 Watt Value Power

HNP12-USBL6 Steckernetzteil-Serie



HN-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	Leakage current	0.25mA max.@240 VAC
Überstromschutz	Overcurrent protection	continuous, auto restart
Überspannungsschutz	Overvoltage protection	typ. 120%
Zulassungsbestimmungen	Safety requirements	TÜV/GS EN62368-1:2014+A11:2017 ETL UL 62368-1:2014 Ed.2 EN55032:2015; EN55035:2017 EN61000-3-2:2019;EN61000-3-3:2013+A1:2019
EMV	EMC	
RoHS	RoHS	2015/863/EU

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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

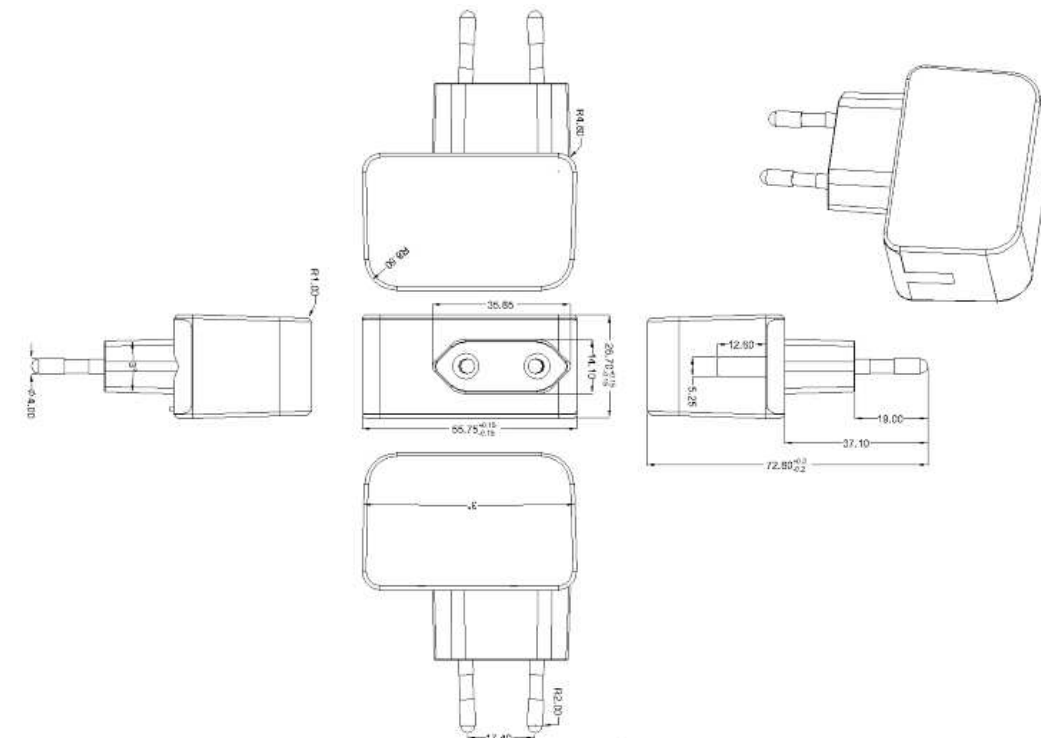
Other versions ( Voltages / Connectors / Colors ) with minimum order quantities on request

### 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
HNP06-051-MiniUSBL6	230Vac / 50Hz	5.1	1.47	7.5W	78,55%	74,27%	0.10W
HNP06-060L6	230Vac / 50Hz	6.0	1.25	7.5W	78,13%	78,13%	0.05W
HNP06-090L6	230Vac / 50Hz	9.0	0.83	7.5W	81,45%	77,22%	0.06W
HNP06-120L6	230Vac / 50Hz	12.0	0.62	7.5W	80,71%	77,66%	0.09W
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
HNP06I-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-090L6	230Vac / 50Hz	9.0	0.83	7.5W	80,18%	76,48%	0.07W
HNP06I-120L6	230Vac / 50Hz	12.0	0.62	7.5W	81,70%	76,52%	0.06W
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
HNP07-050V2	230Vac / 50Hz	5.0	1.50	7.5W	77,21%	72,50%	0.06W
HNP07-090V2	230Vac / 50Hz	9.0	0.84	7.5W	80,58%	74,04%	0.06W
HNP07-120V2	230Vac / 50Hz	12.0	1.00	7.5W	81,05%	70,94%	0.06W
HNP07-USBV2	230Vac / 50Hz	5.0	1.50	7.5W	77,15%	72,51%	0.06W
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
HNP12-090L6	230Vac / 50Hz	9.0	1.30	11.7W	83,19%	80,69%	0.07W
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
HNP12-240L6	230Vac / 50Hz	24.0	0.50	12.0W	86,71%	77,66%	0.07W
HNP12-MicroUSBL6	230Vac / 50Hz	5.0	2.40	12.0W	80,64%	78,92%	0.06W
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	1.30	11.7W	83,44%	81,01%	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	230Vac / 50Hz	5.0	2.40	12.0W	80,40%	79,00%	0.06W
HNP12-050V2	230Vac / 50Hz	5.0	2.40	12.0W	82,12%	75,04%	0.06W
HNP12-090V2	230Vac / 50Hz	9.0	1.33	12.0W	83,58%	74,58%	0.06W
HNP12-120V2	230Vac / 50Hz	12.0	1.00	12.0W	84,02%	74,66%	0.06W
HNP12-USBV2	230Vac / 50Hz	5.0	2.40	12.0W	83,54%	76,44%	0.06W
HNP18-USBV2	230Vac / 50Hz	5.0	3.00	18.0W	82,17%	78,62%	0.06W
HNP18-CV2	230Vac / 50Hz	5.0	3.00	18.0W	82,01%	78,58%	0.06W
HNP18-050V2	230Vac / 50Hz	5.0	3.00	18.0W	82,34%	78,75%	0.06W
HNP18-090V2	230Vac / 50Hz	9.0	2.00	18.0W	85,51%	82,24%	0.06W
HNP18-120V2	230Vac / 50Hz	12.0	1.50	18.0W	85,67%	82,62%	0.06W
HNP18-150V2	230Vac / 50Hz	15.0	1.20	18.0W	85,63%	82,74%	0.06W
HNP18-240V2	230Vac / 50Hz	24.0	0.75	18.0W	85,92%	83,07%	0.07W
HNP18I-USBV2	230Vac / 50Hz	5.0	3.00	18.0W	82,26%	78,81%	0.06W
HNP18I-CV2	230Vac / 50Hz	5.0	3.00	18.0W	82,15%	78,69%	0.06W
HNP18I-050V2	230Vac / 50Hz	5.0	3.00	18.0W	82,30%	78,83%	0.06W
HNP18I-090V2	230Vac / 50Hz	9.0	2.00	18.0W	85,43%	82,15%	0.06W
HNP18I-120V2	230Vac / 50Hz	12.0	1.50	18.0W	85,77%	82,59%	0.06W
HNP18I-150V2	230Vac / 50Hz	15.0	1.20	18.0W	85,74%	82,95%	0.06W
HNP18I-240V2	230Vac / 50Hz	24.0	0.75	18.0W	86,08%	83,17%	0.07W
HNP20EU-CPD	230Vac / 50Hz	5.0	3.00	15.0W	81,39%	78,44%	0.10W
	230Vac / 50Hz	9.0	2.22	19.98W	85,47%	82,15%	0.10W
	230Vac / 50Hz	12.0	1.67	20.04W	85,48%	82,16%	0.10W
HNP20EU-CPDV2	230Vac / 50Hz	5.0V	3.0A	15.0W	84,80%	79,16%	0.03W
	230Vac / 50Hz	9.0V	2.22A	19.98W	88,57%	81,70%	0.03W
	230Vac / 50Hz	12.0V	1.67A	20.04W	88,78%	78,82%	0.03W
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%	0.10W
HNP24I-240L6	230Vac / 50Hz	24.0	1.00	24.0W	87,64%	84,06%	0.07W
HNP30EU-CPD	230Vac / 50Hz	5.0V	3.0A	15.0W	85,16%	80,20%	0.07W
	230Vac / 50Hz	9.0V	3.0A	27.0W	88,15%	83,58%	0.07W
	230Vac / 50Hz	12.0V	2.5A	30.0W	89,03%	82,83%	0.07W
	230Vac / 50Hz	15.0V	2.0A	30.0W	89,16%	81,45%	0.07W
	230Vac / 50Hz	20.0V	1.5A	30.0W	88,68%	77,83%	0.07W
HNP36-4USB	230Vac / 50Hz	5.0	7.20	36.0W	86,70%	85,30%	0.07W
HNP36I-4USB	230Vac / 50Hz	5.0	7.20	36.0W	86,70%	85,30%	0.07W
HNP40F-2CPD	230Vac / 50Hz	5.0V	3.0A	15.0W	85,66%	80,00%	0.17W
	230Vac / 50Hz	9.0V	2.22A	19.98W	89,08%	82,04%	0.17W
	230Vac / 50Hz	12.0V	1.67A	20.04W	89,55%	80,72%	0.17W
HNP42EU-050	230Vac / 50Hz	5.0	5.00	25.0W	84,28%	80,90%	0.10W
HNP42EU-090	230Vac / 50Hz	9.0	3.00	27.0W	85,90%	81,26%	0.10W
HNP42EU-120	230Vac / 50Hz	12.0	3.50	42.0W	88,05%	84,41%	0.10W
HNP42EU-150	230Vac / 50Hz	15.0	2.80	42.0W	88,47%	84,21%	0.10W
HNP42EU-240	230Vac / 50Hz	24.0	1.75	42.0W	89,20%	84,15%	0.10W
HNP42I-050	230Vac / 50Hz	5.0	5.00	25.0W	84,28%	80,90%	0.10W
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
HNP65EU-CPDGaN	230Vac / 50Hz	5.0V	3.0A	15.0W	84,30%	69,23%	0.07W
	230Vac / 50Hz	9.0V	3.0A	27.0W	88,03%	76,96%	0.07W
	230Vac / 50Hz	12.0V	3.0A	36.0W	88,86%	79,13%	0.07W
	230Vac / 50Hz	15.0V	3.0A	45.0W	89,57%	82,09%	0.07W
	230Vac / 50Hz	20.0V	3.25A	65.0W	90,46%	83,75%	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
HNP65-120L6	230Vac / 50Hz	12.0	5.00	60.0W	89,00%	83,00%	0.16W
HNP65-150L6	230Vac / 50Hz	15.0	4.30	64.5W	89,50%	83,00%	0.16W
HNP65-240L6	230Vac / 50Hz	24.0	2.72	65.2W	90,00%	83,00%	0.16W
HNP90M-120	230Vac / 50Hz	12.0V	7.0A	84.0W	88,59%	89,98%	0.10W
HNP90M-190	230Vac / 50Hz	19.0V	4.7A	89.3W	88,62%	87,51%	0.12W
HNP90M-240	230Vac / 50Hz	24.0V	3.75A	90.0W	89,58%	86,49%	0.13W
HNP120M-120	230Vac / 50Hz	12.0V	8.0A	96.0W	88,56%	89,18%	0.14W
HNP120M-240	230Vac / 50Hz	24.0V	5.0A	120.0W	88,49%	72,54%	0.13W
HNP120M-480	230Vac / 50Hz	48.0V	2.7A	129.6W	89,64%	87,68%	0.11W
HNP180U-120	230Vac / 50Hz	12.0V	8.5A	102.0W	88,61%	80,16%	0.07W
HNP180U-240	230Vac / 50Hz	24.0V	7.5A	180.0W	91,35%	85,82%	0.03W
HNP180U-480	230Vac / 50Hz	48.0V	3.7A	177.6W	91,02%	82,22%	0.02W