

NPSM20 Series

AC/DC Power Supply 20W



■ Main Features

- High efficiency and compact size
- Plastic enclosure, circuit breaker shape
- Simplified wiring (no PE connection)
- Overload 170%
- High operating temperature with no derating

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TECHNICAL DATA

Model type	NPSM20-12	NPSM20-24
OUTPUT DATA		
Rated voltage	12Vdc	24Vdc
Adj. output voltage range	12Vdc Fixed	24Vdc Fixed
Continuous current	1.65A	0.85A
Overload limit		
Vin = 120Vac	2.60A	1.30A
Vin = 240Vac	3.25A	1.70A
Short circuit peak current	8.0A	4.0A
Load regulation	≤ 1%	
Ripple & Noise ¹	≤ 100mVpp	
Hold up time	≥ 5ms	
Protections	<ul style="list-style-type: none"> ▪ Overload/short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage 	
Status Signals	<ul style="list-style-type: none"> ▪ DC OK - green LED 	
Parallel connection	Possible for redundancy (with external ORing module)	
INPUT DATA		
Input AC rated voltage	Nominal: 120...240Vac (UL certified)	
Frequency	Range: 90...264Vac 47...63Hz	
Input DC rated voltage	110...345Vdc	
Input AC rated current		
Vin = 120Vac	0.40A	
Vin = 240Vac	0.30A	
Input DC rated current		
Vin = 110Vdc	0.30A	
Vin = 345Vdc	< 0.10A	
Inrush peak current	≤ 50A	
Touch (leakage) current	≤ 0.2mA	
Internal protection fuse	Fuse 1AT (not user replaceable)	
Recommended external protection	MCB 6A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	
GENERAL DATA		
Efficiency	> 80%	
Dissipated power	< 6W	
Operating temperature ²	- 40°C...+ 70°C UL certified up to 50°C	
Derating	- 0.5W/°C over 50°C	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Life time expectation	58'629h (6.6 years) at 25°C ambient full load	
Overvoltage category	<ul style="list-style-type: none"> ▪ EN50178 III 	
Pollution degree	<ul style="list-style-type: none"> ▪ IEC60664-1 2 	
Protection Class	<ul style="list-style-type: none"> ▪ CLASS II 	
Input / output isolation	4.2kVdc	
Safety Standards	<ul style="list-style-type: none"> ▪ UL508 (certified E356563) ▪ EN60950 (reference) ▪ EN50178 (reference) 	
EMC Emission	<ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A 	
EMC Immunity	<ul style="list-style-type: none"> ▪ EN61000-4-2 Level 3 ▪ EN61000-4-3 Level 3 ▪ EN61000-4-4 Level 3 ▪ EN61000-4-5 Level 3 ▪ EN61000-4-11 Level 2 	
Protection degree	<ul style="list-style-type: none"> ▪ EN60529 IP20 	
Vibration sinusoidal	<ul style="list-style-type: none"> ▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z) 	
Shock	<ul style="list-style-type: none"> ▪ IEC 60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total) 	
Connection terminals	2.5mm ² , screw type header (24...12AWG)	
Case material	ABS, Flame retardant UL94 V-0	
Weight	0.1kg	
Size (W x H x D)	35.0 x 90.0 x 61.5mm	

1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

Notes:

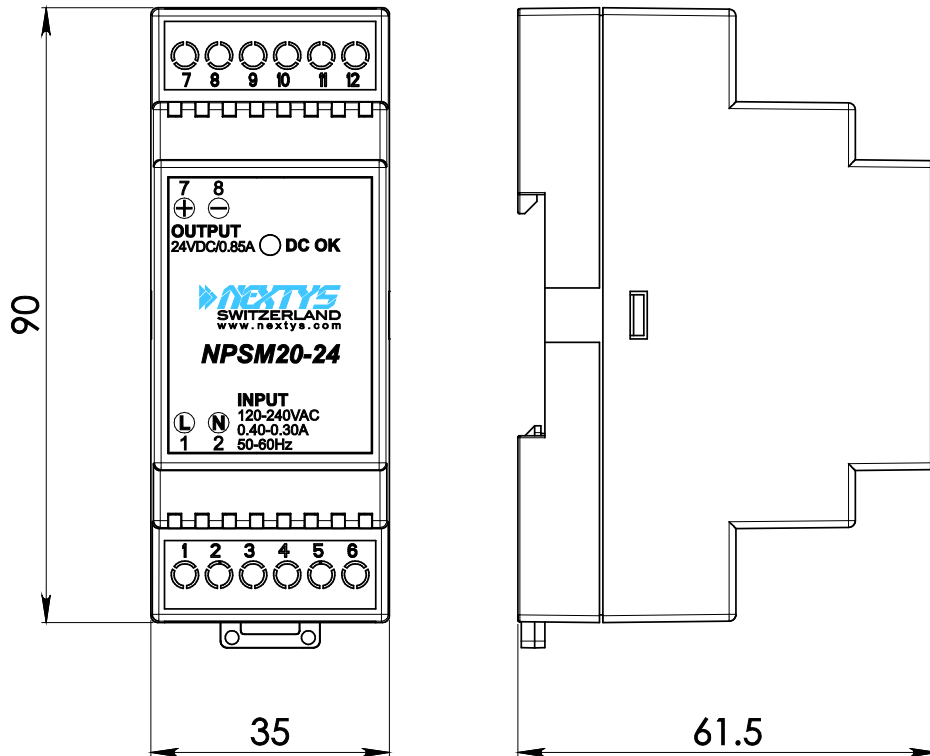
- Technical parameters are typical, measured in laboratory environment at 25°C and 240Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.
- Data may change without prior notice in order to improve the product.

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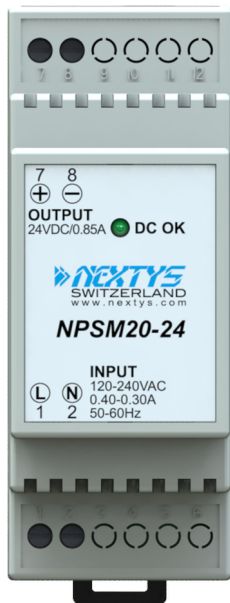
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DIMENSIONS



CONNECTION



Input Connection:

- Single phase:
- L = Line (1)
 - N = Neutral (2)
- DC:
- L = + Positive DC (1)
 - N = - Negative DC (2)

Output Connection:

- + = Positive DC (7)
- - = Negative DC (8)