■ *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

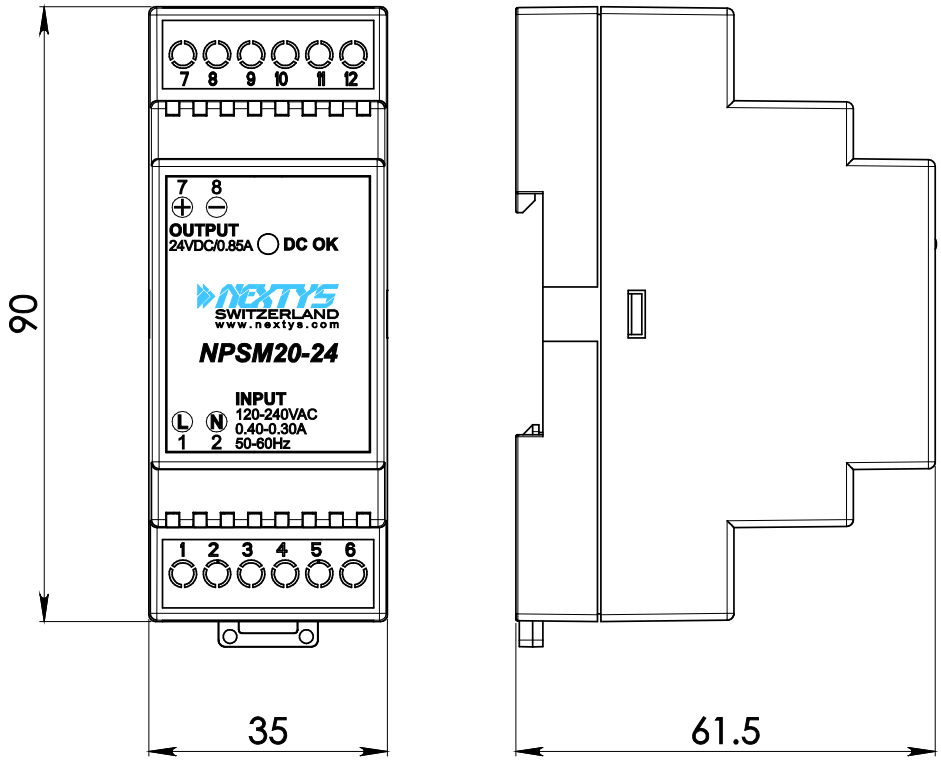
TECHNICAL DATA

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 Vin = 240Vac	 2.60A 3.25A	 1.30A 1.70A
Short circuit peak current	8.0A	4.0A
Load regulation	≤ 1%	
Ripple & Noise[1]	≤ 100mVpp	
Hold up time	≥ 5ms	
Protections	▪ Overload/short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage	
Status Signals	▪ **DC OK** - green LED	
Parallel connection	Possible for redundancy (with external ORing module)	
INPUT DATA		
Input AC rated voltage Frequency	Nominal: 120…240Vac (UL certified) Range: 90…264Vac 47...63Hz	
Input DC rated voltage	110...345Vdc	
Input AC rated current Vin = 120Vac Vin = 240Vac	 0.40A 0.30A	
Input DC rated current Vin = 110Vdc Vin = 345Vdc	 0.30A < 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	
MTBF	▪ MIL-HDBK-217F	> 500'000h at 25°C ambient full load
Overvoltage category Pollution degree	▪ EN50178 ▪ IEC60664-1	III 2
Protection Class	▪ CLASS	II
Input / output isolation	4.2kVdc	
Safety Standards	▪ UL508 ▪ EN60950 ▪ EN50178	(certified E356563) (reference) (reference)
EMC Emission	▪ EN55011 (CISPR11) ▪ EN55022 (CISPR22)	Class A Class A
EMC Immunity	▪ EN61000-4-2 ▪ EN61000-4-3 ▪ EN61000-4-4 ▪ EN61000-4-5 ▪ EN61000-4-11	Level 3 Level 3 Level 3 Level 3 Level 2
Protection degree	▪ EN60529	IP20
Vibration sinuosoidal	▪ IEC 60068-2-6	(5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)
Shock	▪ IEC 60068-2-27	(30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)
Connection terminals	2.5mm², screw type header (24...12AWG)	
Case material	Plastic, Flame retardant UL94 V-0	
Weight	0.1kg	
Size (W x H x D)	35.0 x 90.0 x 61.5mm	

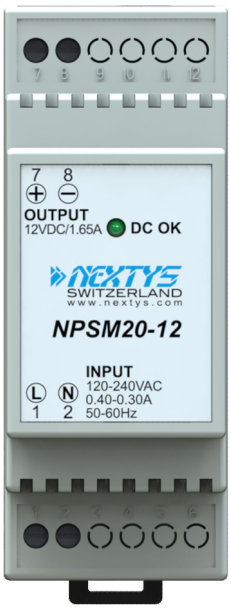
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

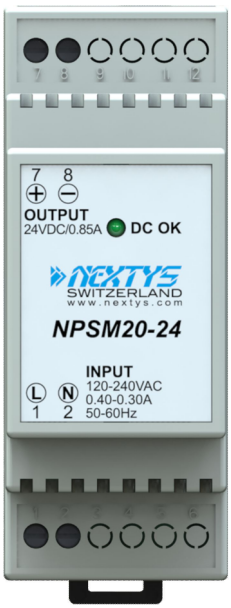
Notes:
- Technical parameters are typical, measured in laboratory environment at 25°C and 240Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory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

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)