Main Features

- High efficiency and compact size
- Plastic enclosure, circuit breaker shape
- Simplified wiring (no PE connection)
- Overload 150%
- High operating temperature with no derating

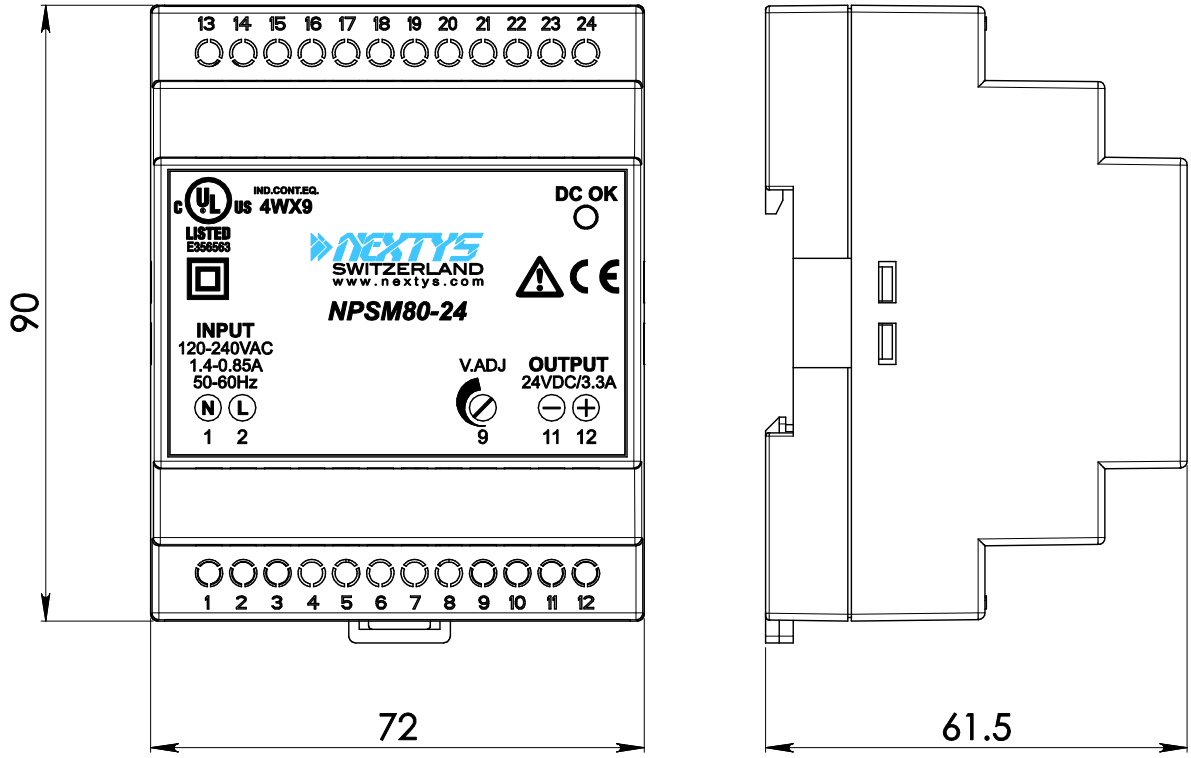
TECHNICAL DATA

Model type	NPSM80-12	NPSM80-24
OUTPUT DATA		
Rated voltage	12…15Vdc	24Vdc
Adj. output voltage range	12…15Vdc	23…28Vdc
Continuous current	6.0…5.0A	3.3A
Overload limit	7.5A @ 12Vdc 6.5A @ 15Vdc	4.0A
Short circuit peak current	20A	25A
Load regulation	≤ 0.5%	≤ 1%
Ripple & Noise[1]	≤ 100mVpp	≤ 50mVpp
Hold up time Vin = 120Vac Vin = 240Vac	≥ 10ms ≥ 30ms	
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	1.50A 0.85A	1.40A 0.85A
Input DC rated current Vin = 110Vdc Vin = 345Vdc	1.0A 0.40A	
Inrush peak current[2] / I^2t	≤ 54A / 1.28A^2s	
Touch (leakage) current	≤ 0.25mA	
Internal protection fuse	Fuse 2AT (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[3]	> 86%	> 87%
Dissipated power	< 12.5W	< 12W
Operating temperature[4]	- 40°C...+ 70°C UL certified up to 50°C for NPSM80-12 and up to 55°C for NPSM80-24	
Derating	- 1.2W/°C over 50°C	- 0.9W/°C over 55°C
Storage temperature	- 40°C...+ 80°C	
Humidity	5…95% r.H. non condensing	
Life time expectation	51'136h (5.8 years) at 25°C ambient full load	
MTBF	▪ MIL-HDBK-217F > 500'000h at 25°C ambient full load	
Overvoltage category Pollution degree	▪ EN50178 III ▪ IEC60664-1 2	
Protection Class	▪ CLASS II	
Input / output isolation	4.2kVdc	
Safety Standards	▪ UL508 (certified E356563) ▪ IEC/EN61010-1 ▪ IEC/EN61010-2-201 ▪ IEC/EN60950	
EMC Emission	▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A	
EMC Immunity	▪ 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	▪ 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	2.5mm^2, screw type header (24...12AWG)	
Case material	Plastic, Flame retardant UL94 V-0	
Weight	0.23kg	
Size (W x H x D)	72.0 x 90.0 x 61.5mm	

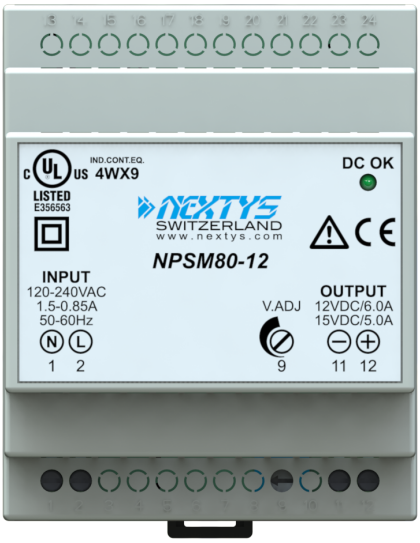
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Peak current measured after 0.2ms from main connection; 240Vac/50Hz; Ambient temperature at 25°C; Cold Start.
3) For NPSM80-12 measures are performed with output set to 15Vdc.
4) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

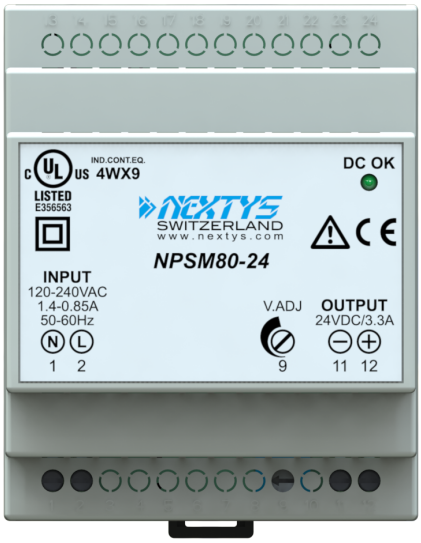
Notes:
- Technical parameters are typical, measured in laboratory environment at 25°C and 240Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory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

DIMENSIONS



CONNECTION





Input Connection:

Single phase:
- L = Line (2)
- N = Neutral (1)

DC:
- L = + Positive DC (2)
- N = - Negative DC (1)

Output Connection:

- + = Positive DC (12)
- - = Negative DC (11)