■ *Main Features*

- High efficiency and extremely compact size
- Ultra-slim Plastic enclosure only 22.5mm
- Simplified wiring (no PE connection)
- Overload 130%
- High operating temperature with no derating

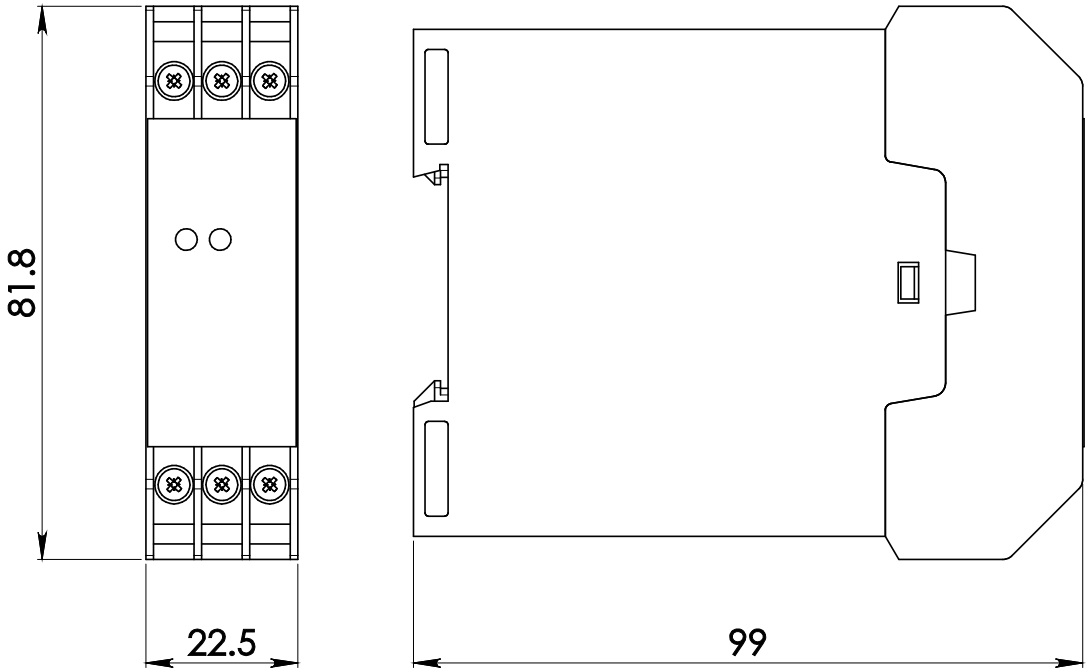
TECHNICAL DATA

Model type	NPSM30S-12	NPSM30S-12D	NPSM30S-24
OUTPUT DATA			
Rated voltage	12Vdc	2x 12…15Vdc	24Vdc
Adj. output voltage range	10…15Vdc	2x 12…15Vdc	22…28Vdc
Continuous current	1.5A @ 10Vdc 1.0A @ 15Vdc	1.0A	1.2A
Overload limit	2.0A @ 10Vdc 1.3A @ 15Vdc	1.5A @ 12Vdc 1.2A @ 15Vdc	1.5A
Short circuit peak current	7.0A	5.5A	7.5A
Load regulation	≤ 0.5%		
Ripple & Noise[1]	≤ 100mVpp		
Hold up time Vin = 120Vac Vin = 240Vac	 ≥ 5ms ≥ 25ms		
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 Range: 90…264Vac 47…63Hz		
Input DC rated voltage	110…345Vdc		
Input AC rated current Vin = 120Vac Vin = 240Vac	 0.60A 0.40A		
Input DC rated current Vin = 110Vdc Vin = 345Vdc	 0.40A 0.15A		
Inrush peak current	≤ 55A		
Touch (leakage) current	≤ 0.3mA		
Internal protection fuse	Fuse 2AT (not user replaceable)		
Recommended external protection	Fuse 6AT or MCB 6A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.		
GENERAL DATA			
Efficiency[3]	> 82.5%	> 83%	> 87%
Dissipated power	< 3.1W	< 5.0W	< 4.5W
Operating temperature[2]	- 40°C…+ 70°C		
Derating[3]	No Derating		
Storage temperature	- 40°C…+ 80°C		
Humidity	5…95% r.H. non condensing		
Life time expectation	121'731h (13.9 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	(reference) (reference) (reference)	
EMC Emission	▪ EN55011 (CISPR11) ▪ EN55022 (CISPR22)	Class B Class B	
EMC Immunity	▪ EN61000-4-2 ▪ EN61000-4-3 ▪ EN61000-4-4 ▪ EN61000-4-5 ▪ EN61000-4-11	Level 3 Level 3 Level 4 Level 4 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	0.14kg		
Size (W x H x D)	22.5 x 99.0 x 81.8mm		

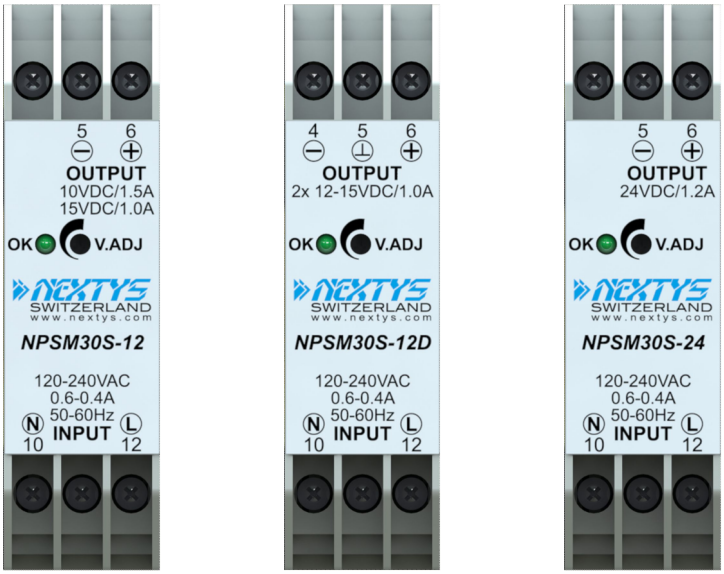
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Start-up type tested: - 40°C, possible at nominal voltage with load deration.
3) On NPSM30S-12 measures are performed with output set to 12Vdc, and NPSM30-12D measures are performed with output set to 24Vdc

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 (12)
- N = Neutral (10)

DC:
- L = + Positive DC (12)
- N = - Negative DC (10)

Output Connection:

- + = Positive DC (6)
- - = Negative DC (5)

Exception NPSM30S-12D:
- + = Positive DC (6)
- ⊥ = Common DC (5)
- - = Negative DC (4)