



### ■ 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

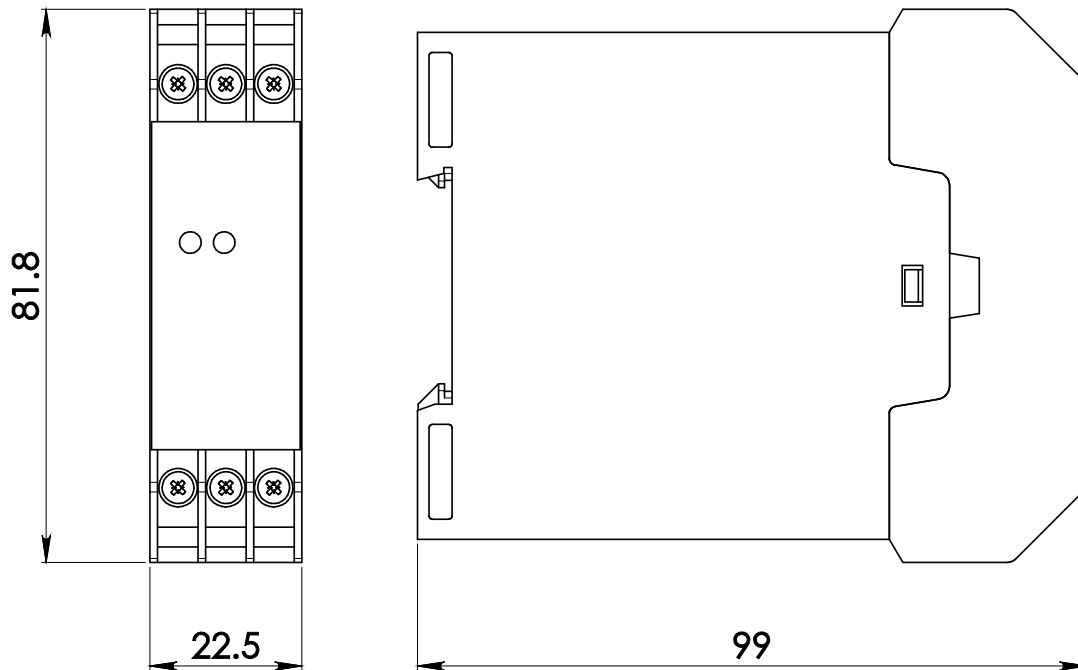
**TECHNICAL DATA**

Model type	NPSM30S-12	NPSM30S-12D	NPSM30S-24
<b>OUTPUT DATA</b>			
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 <sup>1</sup>		≤ 100mVpp	
Hold up time Vin = 120Vac Vin = 240Vac		≥ 5ms ≥ 25ms	
Protections	<ul style="list-style-type: none"> <li>▪ Overload/short circuit: Hiccup mode</li> <li>▪ Thermal protection</li> <li>▪ Output overvoltage</li> </ul>		
Status Signals	<ul style="list-style-type: none"> <li>▪ <b>DC OK</b> - green LED</li> </ul>		
Parallel connection	Possible for redundancy (with external ORing module)		
<b>INPUT DATA</b>			
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 <sup>2</sup> / I <sup>2</sup> t	≤ 15A / 0.19A <sup>2</sup> s		
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.		
<b>GENERAL DATA</b>			
Efficiency <sup>3</sup>	> 82.5%	> 83%	> 87%
Dissipated power	< 3.1W	< 5.0W	< 4.5W
Operating temperature <sup>4</sup>	- 40°C...+ 70°C		
Derating	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	<ul style="list-style-type: none"> <li>▪ MIL-HDBK-217F &gt; 500'000h at 25°C ambient full load</li> </ul>		
Overvoltage category	<ul style="list-style-type: none"> <li>▪ EN50178 III</li> </ul>		
Pollution degree	<ul style="list-style-type: none"> <li>▪ IEC60664-1 2</li> </ul>		
Protection Class	<ul style="list-style-type: none"> <li>▪ CLASS II</li> </ul>		
Input / output isolation	4.2kVdc		
Safety Standards	<ul style="list-style-type: none"> <li>▪ UL508 (reference)</li> <li>▪ EN60950 (reference)</li> <li>▪ EN50178 (reference)</li> </ul>		
EMC Emission	<ul style="list-style-type: none"> <li>▪ EN55011 (CISPR11) Class B</li> <li>▪ EN55022 (CISPR22) Class B</li> </ul>		
EMC Immunity	<ul style="list-style-type: none"> <li>▪ EN61000-4-2 Level 3</li> <li>▪ EN61000-4-3 Level 3</li> <li>▪ EN61000-4-4 Level 4</li> <li>▪ EN61000-4-5 Level 4</li> <li>▪ EN61000-4-11 Level 2</li> </ul>		
Protection degree	<ul style="list-style-type: none"> <li>▪ EN60529 IP20</li> </ul>		
Vibration sinusoidal	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)</li> </ul>		
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)</li> </ul>		
Connection terminals	2.5mm <sup>2</sup> , 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		

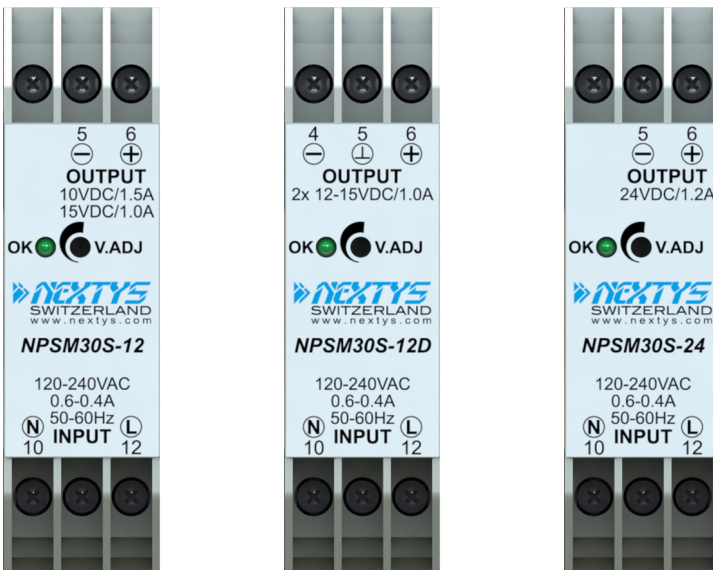
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.  
 2) Peak current measured after 0.2ms from main connection; 240Vac/50Hz; Ambient temperature at 25°C; Cold Start.  
 3) On NPSM30S-12 measures are performed with output set to 12Vdc, and NPSM30-12D measures are performed with output set to 24Vdc.  
 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 (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)