



### ■ Main Features

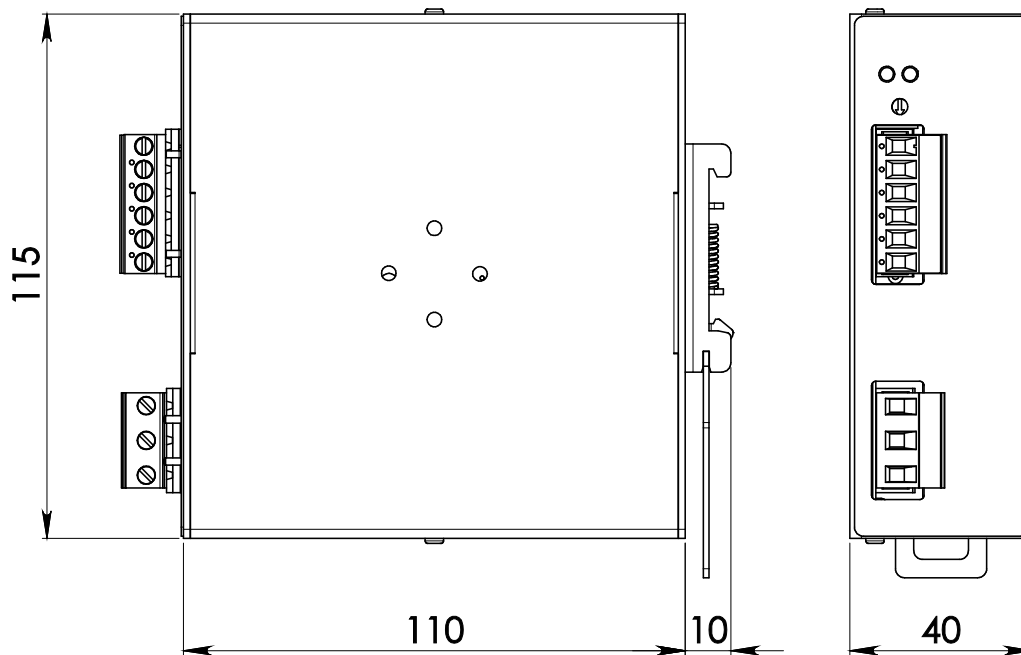
- ⌋ High efficiency and compact size
- ⌋ Only 40mm width aluminum enclosure
- ⌋ Overload 150%
- ⌋ Up to 70°C operating temperature with no derating

**TECHNICAL DATA**

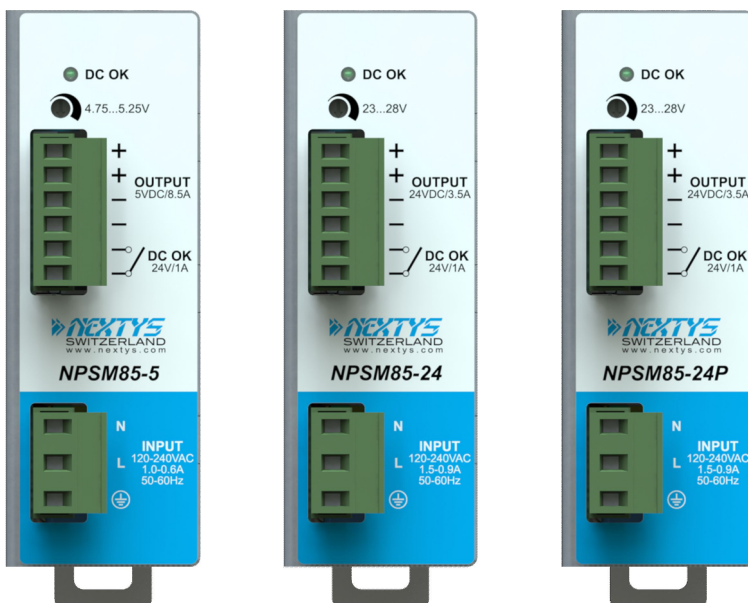
Model type	NPSM85-S	NPSM85-24	NPSM85-24P
<b>OUTPUT DATA</b>			
Rated voltage	5Vdc	24Vdc	
Adj. output voltage range	4.75...5.25Vdc	23...28Vdc	
Continuous current	8.5A	3.5A	
Overload limit	11A	5A	
Short circuit peak current	20A	30A	20A
Load regulation	≤ 3.5%	≤ 1%	≤ 2.5%
Ripple & Noise <sup>1</sup>	≤ 130mVpp	≤ 50mVpp	
Hold up time Vin = 120Vac Vin = 240Vac		≥ 15ms ≥ 50ms	
Protections	<ul style="list-style-type: none"> <li>▪ Overload, short circuit: Hiccup mode</li> <li>▪ Thermal protection</li> <li>▪ Output overvoltage</li> </ul>		
Output overvoltage protection	≥ 6.8Vdc	≥ 33Vdc	
Status Signals	<ul style="list-style-type: none"> <li>▪ <b>DC OK</b> - green LED</li> <li>▪ <b>DC OK</b> - dry contact (NO, 24Vdc / 1A)</li> </ul>		
Parallel connection	<ul style="list-style-type: none"> <li>▪ Possible for redundancy (with external ORing module)</li> <li>▪ <b>P</b> (models) - include internal ORing circuit</li> </ul>		
<b>INPUT DATA</b>			
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	1.0A 0.6A	1.5A 0.9A	
Input DC rated current Vin = 110Vdc Vin = 345Vdc	0.7A 0.3A	1.0A 0.4A	
Inrush peak current	≤ 40A		
Touch (leakage) current	≤ 0.45mA		
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	> 75%	> 88%	> 87%
Dissipated power	< 14.5W	< 11.5W	< 12.5W
Operating temperature <sup>2</sup>	- 40°C...+ 70°C UL certified up to 60°C		
Derating	No derating up to 70°C		
Storage temperature	- 40°C...+ 80°C		
Humidity	5...95% r.H. non condensing		
Life time expectation	138'640h (15.8 years) at 25°C ambient full load		
MTBF	<ul style="list-style-type: none"> <li>▪ MIL-HDBK-217F</li> </ul>	> 600'000h at 25°C ambient full load	
Overvoltage category	<ul style="list-style-type: none"> <li>▪ EN50178</li> </ul>	III	
Pollution degree	<ul style="list-style-type: none"> <li>▪ IEC60664-1</li> </ul>	2	
Protection Class	<ul style="list-style-type: none"> <li>▪ CLASS</li> </ul>	I	
Input / output isolation	4.2kVdc		
Input / ground isolation	2.2kVdc		
Output / ground isolation	0.75kVdc		
Safety Standards	<ul style="list-style-type: none"> <li>▪ UL508 (certified E356563)</li> <li>▪ EN60950 (reference)</li> <li>▪ EN50178 (reference)</li> </ul>		
EMC Emission	<ul style="list-style-type: none"> <li>▪ EN55011 (CISPR11) Class A</li> <li>▪ EN55022 (CISPR22) Class A</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 3</li> <li>▪ EN61000-4-5 Level 3</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 pluggable (24...12AWG)
Case material	Aluminum
Weight	0.45kg
Size (W x H x D)	40.0 x 115.0 x 110.0mm
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.	
<b>Notes:</b> - 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
  - N = Neutral
  - | = Earth ground
- DC:
- L = + Positive DC
  - N = - Negative DC
  - | = Earth ground

**Output Connection:**

- + = Positive DC
  - - = Negative DC
- Signalling:
- DC OK:** dry contact
- NO
  - COM