

NPSM85 Series

85W DIN Rail Switching Power Supply



■ Main Features

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

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TECHNICAL DATA

Model type	NPSM85-S	NPSM85-24	NPSM85-24P
OUTPUT DATA			
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 ¹	≤ 130mVpp	≤ 50mVpp	
Hold up time Vin = 120Vac Vin = 240Vac		≥ 15ms ≥ 50ms	
Protections	<ul style="list-style-type: none"> Overload, short circuit: Hiccup mode Thermal protection Output overvoltage 		
Output overvoltage protection	≥ 6.8Vdc	≥ 33Vdc	
Status Signals	<ul style="list-style-type: none"> DC OK - green LED DC OK - dry contact (NO, 24Vdc / 1A) 		
Parallel connection	<ul style="list-style-type: none"> Possible for redundancy (with external ORing module) P (models) - include internal ORing circuit 		
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	1.0A 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.		
GENERAL DATA			
Efficiency	> 75%	> 88%	> 87%
Dissipated power	< 14.5W	< 11.5W	< 12.5W
Operating temperature ²	- 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		
Overvoltage category	EN50178	III	
Pollution degree	IEC60664-1	2	
Protection Class	CLASS	I	
Input / output isolation	4.2kVdc		
Input / ground isolation	2.2kVdc		
Output / ground isolation	0.75kVdc		
Safety Standards	<ul style="list-style-type: none"> UL508 (certified E356563) EN60950 (reference) EN50178 (reference) 		
EMC Emission	<ul style="list-style-type: none"> EN55011 (CISPR11) Class A EN55022 (CISPR22) Class A 		
EMC Immunity	<ul style="list-style-type: none"> 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 sinusoidal	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 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.

Notes:

- Technical parameters are typical, measured in laboratory environment at 25°C and 240Vac / 50Hz, at nominal values, after minimum 5 minutes of operation.

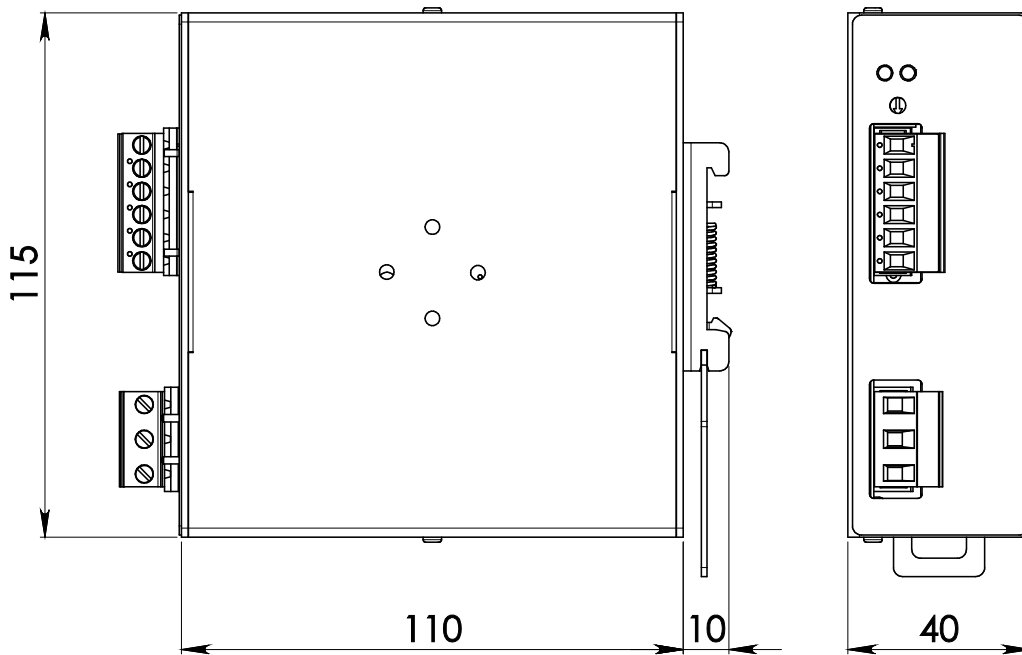
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.

- Data may change without prior notice in order to improve the product.

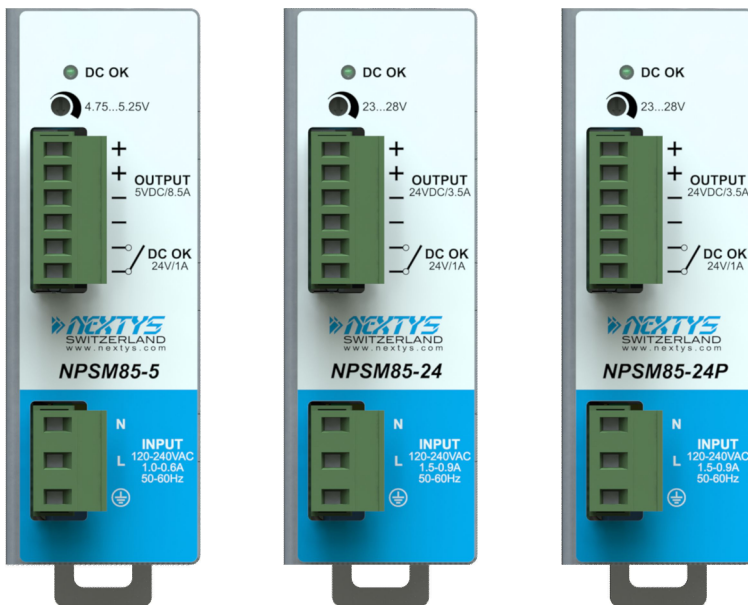
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DIMENSIONS



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