



■ Main Features

- High efficiency and extremely compact size
- 1 or 2 phases AC (90...550Vac) or DC (150...725Vdc)
- Plastic enclosure, circuit breaker shape
- Class II insulation (simplified wiring)
- Overload 130%
- Up to 70°C operating temperature with derating
- Ideal for applications with harsh main conditions
- Compliant to renewable energy system and high voltage DC BUS

TECHNICAL DATA

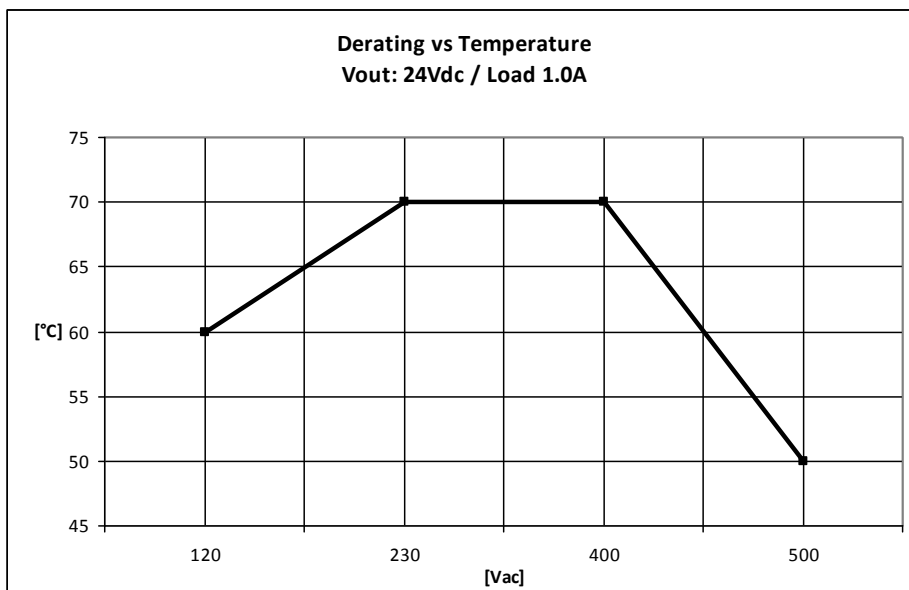
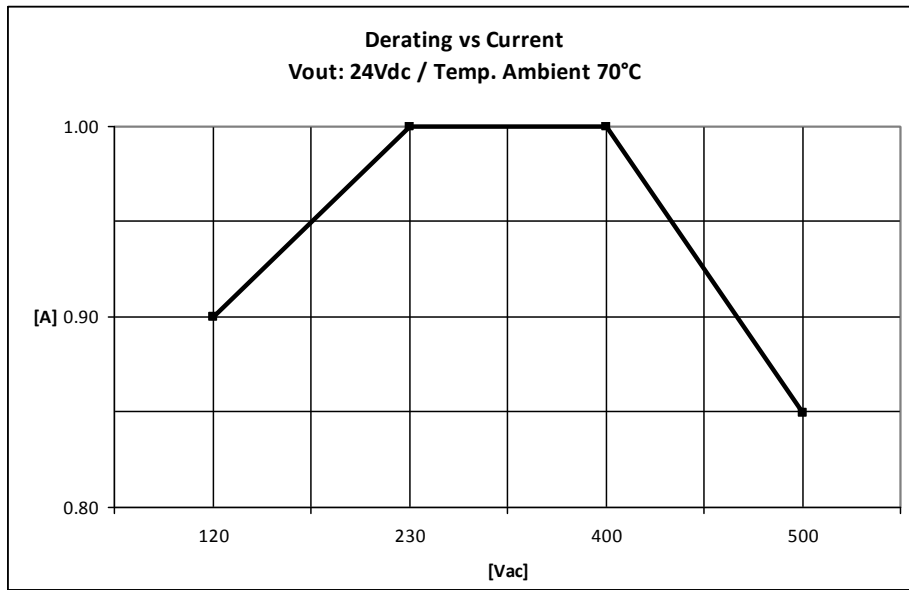
Model type	NPSW25-24	
OUTPUT DATA		
Rated voltage	24Vdc	
Adj. output voltage range	23...28Vdc	
Continuous current		
Vin = 120Vac 1Ph	1.35A	
Vin = 240Vac 1Ph	1.50A	
Vin = 400Vac 2Ph	1.35A	
Vin = 500Vac 2Ph	1.30A	
Overload limit	4.5A	
Short circuit peak current	30A	
Load regulation	≤ 0.5%	
Ripple & Noise ¹	≤ 50mVpp	
Hold up time		
Vin = 240Vac 1Ph	≥ 35ms	
Vin = 500Vac 2Ph	≥ 180ms	
Protections	<ul style="list-style-type: none"> ▪ Overload/short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage 	
Output overvoltage protection	≥ 33Vdc	
Status Signals	<ul style="list-style-type: none"> ▪ DC OK - green LED 	
Parallel connection	Possible for redundancy (with external ORing module)	
INPUT DATA		
Input AC rated voltage	Nominal: 1/2 phases, 120...500Vac (UL certified)	
Frequency	Range: 90...500Vac 47...63Hz	
Input DC rated voltage	150...725Vdc	
Input AC rated current		
Vin = 120Vac 1Ph	0.50A	
Vin = 500Vac 2Ph	0.15A	
Input DC rated current		
Vin = 150Vdc	0.30A	
Vin = 725Vdc	< 0.10A	
Inrush peak current	≤ 20A	
Touch (leakage) current	≤ 0.2mA	
Internal protection fuse	None, external fuse must be provided	
Recommended external protection	MCB 2A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	
GENERAL DATA		
Efficiency	> 83%	
Dissipated power	< 4.9W	
Operating temperature ²	- 40°C...+ 70°C	
Derating	See charts on Fig.1	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Life time expectation	179'477h (20.4 years) at 25°C ambient full load	
Overvoltage category	<ul style="list-style-type: none"> ▪ EN50178 III 	
Pollution degree	<ul style="list-style-type: none"> ▪ IEC60664-1 2 	
Protection Class	<ul style="list-style-type: none"> ▪ Class II 	
Input / output isolation	4.2kVdc	
Safety Standards	<ul style="list-style-type: none"> ▪ UL508 (reference) ▪ EN60950 (reference) ▪ EN50178 (reference) 	
EMC Emission	<ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class B ▪ EN55022 (CISPR22) Class B 	
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 4 ▪ EN61000-4-11 Level 2 	
Protection degree	<ul style="list-style-type: none"> ▪ EN60529 IP20 	
Vibration sinusoidal	<ul style="list-style-type: none"> ▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z) 	
Shock	<ul style="list-style-type: none"> ▪ 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	ABS, Flame retardant UL94 V-0	
Weight	0.17kg	
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) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

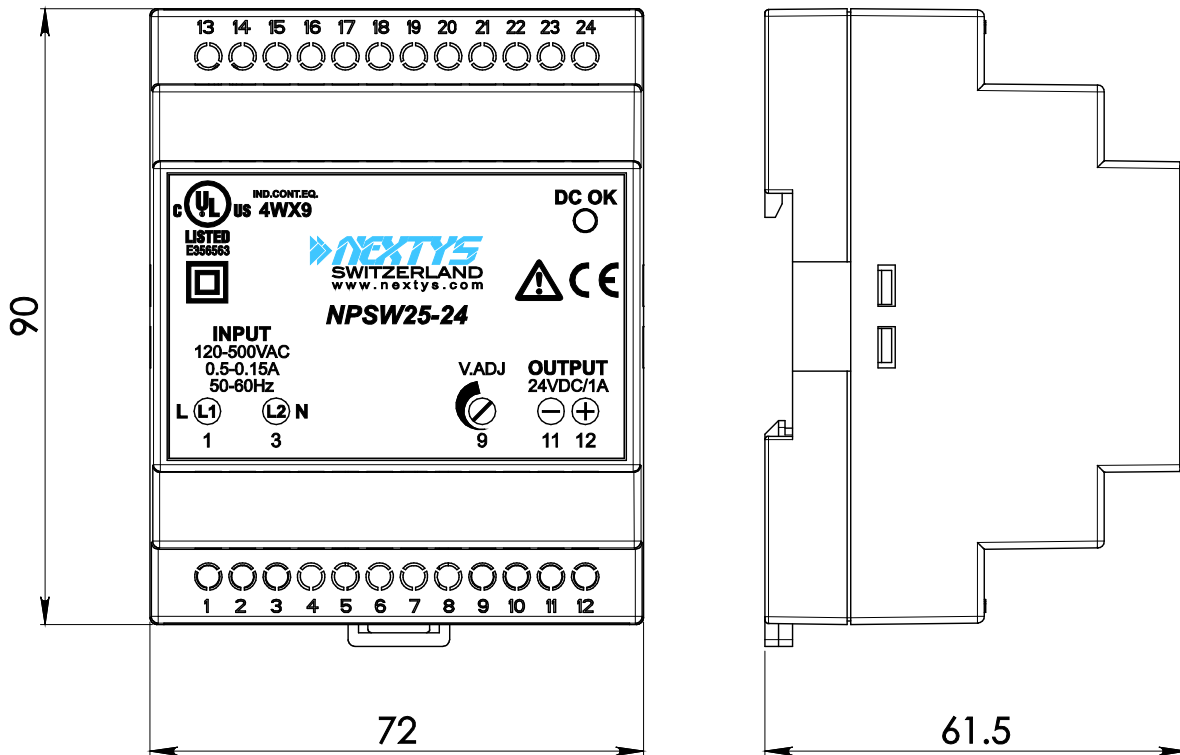
Notes:

- 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.

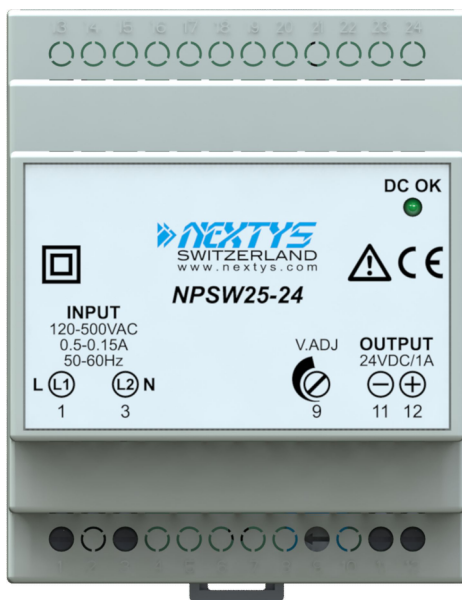
Fig.1



DIMENSIONS



CONNECTION



Input Connection:

Single phase:

- L = Line (1)
- N = Neutral (3)

2 phases:

- L1 = phase 1 (1)
- L2 = phase 2 (3)

DC:

- L (L1) = + Positive DC (1)
- N (L2) = - Negative DC (3)

Output Connection:

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