■ *Main Features*

- High efficiency and compact size
- Only 54mm width aluminum enclosure
- 1, 2 or 3 phases input AC 187…550Vac
- Wide DC input range 250…725Vdc
- Overload 150%
- Excellent field reliability record
- Usable for broad range of industrial, telecom and renewable energy applications

TECHNICAL DATA

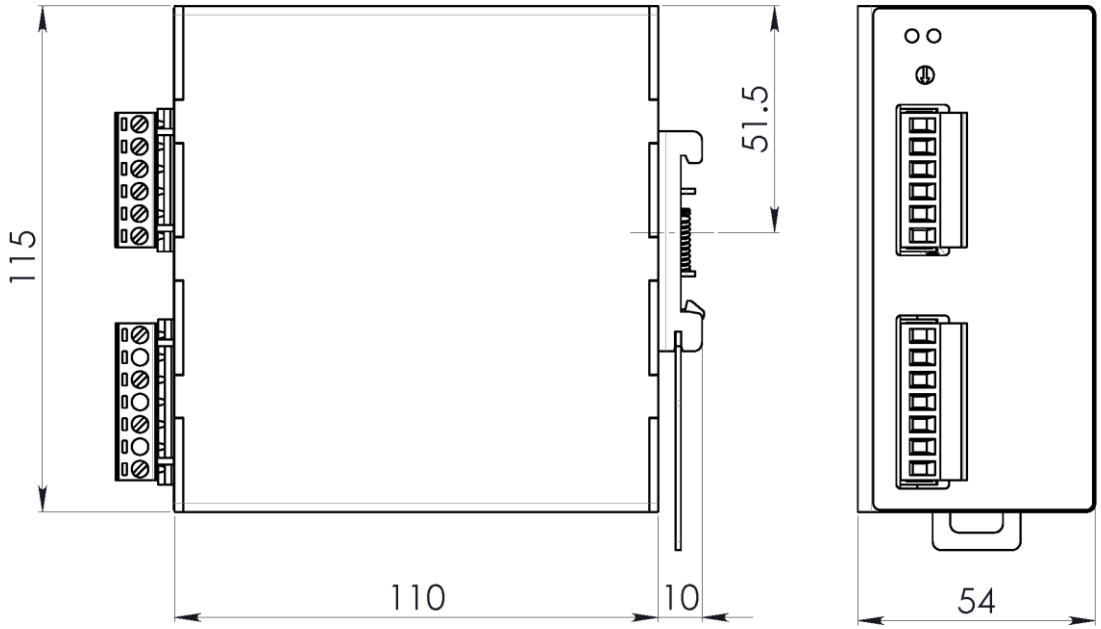
Model type	NPSW240-12	NPSW240-24	NPSW240-48P	NPSW240-72P
OUTPUT DATA				
Rated voltage	12…15Vdc	24Vdc	48Vdc	72Vdc
Adj. output voltage range	12…15Vdc	23…28Vdc	45…55Vdc	72…85Vdc
Continuous current	15…12A	10A	5.0A	3.5A
Overload limit (max. 6s)	20A	15A	7.5A	5.0A
Short circuit peak current	34A	38A	18A	13A
Load regulation	≤ 1%		≤ 1.5%	
Ripple & Noise[1]	≤ 100mVpp			
Hold up time Vin = 240Vac Vin = 500Vac	≥ 15ms ≥ 100ms			
Protections	▪ Overload, short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage			
Output overvoltage protection	≥ 18Vdc	≥ 33Vdc	≥ 68Vdc	≥ 100Vdc
Status Signals	▪ **DC OK** - green LED ▪ **OVERLOAD** - red LED ▪ **DC OK** - dry contact (NO, 24Vdc / 1A) -> Not present in model NPSW240-72P			
Parallel connection	▪ Possible for redundancy (with external ORing module) ▪ **P** (models) - include internal ORing circuit			
INPUT DATA				
Input AC rated voltage Frequency	Nominal: 1/2/3 phases, 200…500Vac (UL certified) Range: 187…550Vac 47...63Hz			
Input DC rated voltage	250...725Vdc (300…500Vdc UL508 certified, 250…600Vdc UL62368-1 certified)			
Input AC rated current Vin = 200Vac 1/2 Ph Vin = 500Vac 1/2 Ph Vin = 200Vac 3Ph Vin = 500Vac 3Ph	2.8A (UL508/UL61010) / 2.2A (UL62368-1) 1.6A (UL508/UL61010) / 1.6A (UL62368-1) 1.5A (UL508/UL61010) / 1.5A (UL62368-1) 0.8A (UL508/UL61010) / 0.8A (UL62368-1)			
Input DC rated current Vin = 250Vdc Vin = 725Vdc	1.4A 0.5A			
Inrush peak current[2] / I^2t	≤ 45A / 1.31A^2s			
Touch (leakage) current	≤ 1.3mA			
Internal protection fuse	None, external fuse must be provided			
Recommended external protection	Fuse 6.3AT or 6AT or MCB 6A C or MCB 4A D curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.			
GENERAL DATA				
Efficiency	> 89%	> 93%	> 91%	> 92%
Dissipated power	< 22.5W	< 18W	< 23.5W	< 22W
Operating temperature[3]	- 40°C...+ 70°C UL certified up to 50°C			
Derating	- 4.2W/°C over 50°C			
Storage temperature	- 40°C...+ 80°C			
Humidity	5…95% r.H. non condensing			
Life time expectation	81'648h (9.3 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	I		
Input / output isolation	4.2kVdc			
Input / ground isolation	2.2kVdc			
Output / ground isolation	0.75kVdc			
Safety Standards	▪ UL508 ▪ UL61010-1 ▪ UL61010-2-201 ▪ UL62368-1 ▪ IEC/EN61010-1 ▪ IEC/EN61010-2-201	(certified E356563) (certified E356563) (certified E356563) (certified E511889, only NPSW240-24)		
EMC Emission	▪ EN55011 (CISPR11)	Class A		
EMC Immunity	▪ EN61000-4-2 ▪ EN61000-4-3 ▪ EN61000-4-4 ▪ EN61000-4-5 ▪ EN61000-4-6 ▪ EN61000-4-8 ▪ EN61000-4-11	Level 3 (Air), Level 2 (Contact) Level 3 (80-1000MHz), Level 2 (1.4-6GHz) Level 3 Level 3 Level 3 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 pluggable (24...12AWG)
Case material	Aluminum
Weight	0.65kg
Size (W x H x D)	54.0 x 115.0 x 110.0mm

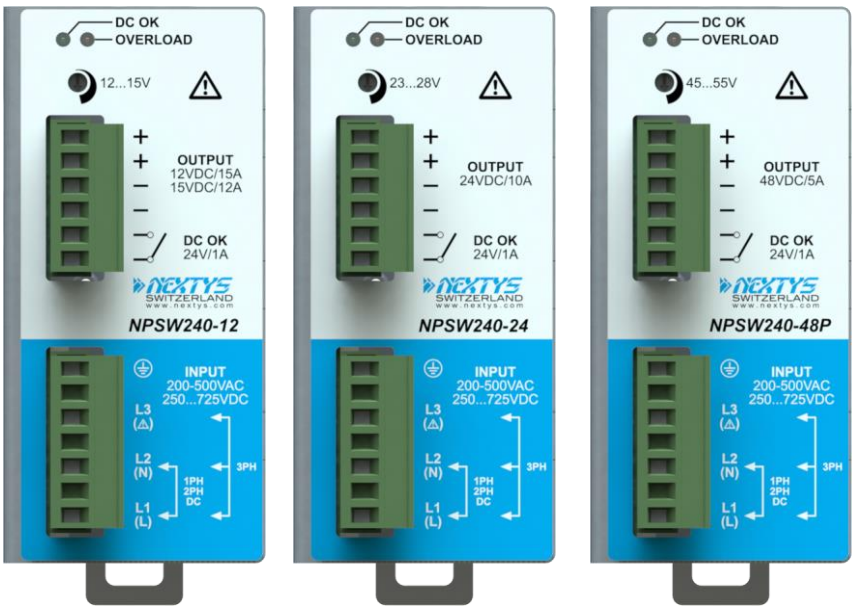
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Peak current measured after 0.2ms from main connection; 400Vac/50Hz; Ambient temperature at 25°C; Cold Start.
3) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

Notes:
- Technical parameters are typical, measured in laboratory environment at 25°C and 400Vac / 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

2 phases:
- L1 = phase 1
- L2 = phase 2
- ⏚ = Earth ground

3 phases:
- L1 = phase 1
- L2 = phase 2
- L3 = phase 3
- ⏚ = Earth ground

DC:
- L1(L) = + Positive DC
- L2(N) = - Negative DC
- L3 = do not connect
- ⏚ = Earth ground

Output Connection:

- + = Positive DC
- - = Negative DC

Signalling:
DC OK: dry contact
- NO
- COM