ELETRAS S.R.L. dal 1978



■ *Main Features*

- High efficiency and compact size
- Only 40mm width aluminum enclosure
- Overload 150%
- Excellent field reliability record
- Up to 60°C operating temperature with no derating

TECHNICAL DATA

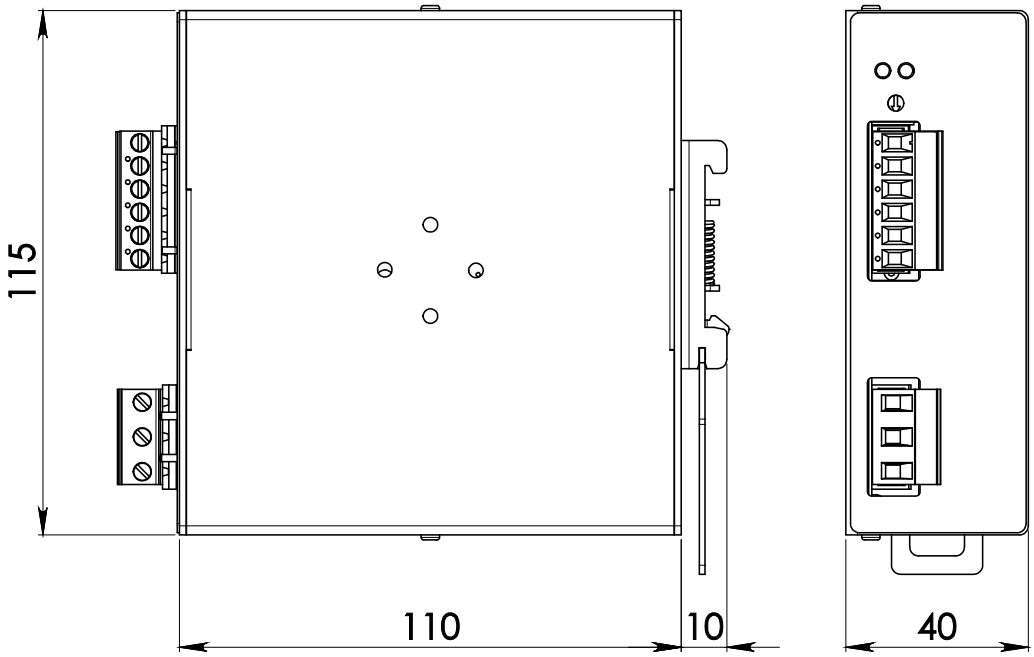
Model type	NPSM120-12	NPSM120-24	NPSM120-24P	NPSM120-48P
OUTPUT DATA				
Rated voltage	12Vdc	24Vdc		48Vdc
Adj. output voltage range	12…15Vdc	23…28Vdc		45…55Vdc
Continuous current	7.0A	5.0A		2.5A
Overload limit	11…9.5A	7.0A		3.7A
Short circuit peak current	30A			
Load regulation	≤ 2%	≤ 1%	≤ 2.5%	≤ 1.5%
Ripple & Noise[1]	≤ 120mVpp	≤ 60mVpp		
Hold up time Vin = 120Vac Vin = 240Vac	 ≥ 10ms ≥ 60ms	 ≥ 20ms ≥ 50ms	 ≥ 10ms ≥ 50ms	
Protections	▪ Overload, short circuit: Hiccup mode ▪ Thermal protection ▪ Output overvoltage			
Output overvoltage protection	≥ 18Vdc	≥ 33Vdc		≥ 68Vdc
Status Signals	▪ **DC OK** - green LED ▪ **DC OK** - dry contact (NO, 24Vdc / 1A)			
Parallel connection	▪ 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	 1.9A 1.1A	 2.1A 1.2A		
Input DC rated current Vin = 110Vdc Vin = 345Vdc	 1.3A 0.5A	 1.4A 0.6A		
Inrush peak current[2] / I^2t	≤ 30A / 0.72A^2s			
Touch (leakage) current	≤ 0.45mA			
Internal protection fuse	Fuse 3.15AT (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	> 84%	> 87%	> 85%	> 86%
Dissipated power	< 20W	< 18W	< 21W	< 19W
Operating temperature[3]	- 40°C…+ 70°C UL certified up to 60°C			
Derating	- 2.4W/°C over 60°C			
Storage temperature	- 40°C…+ 80°C			
Humidity	5…95% r.H. non condensing			
Life time expectation	106’880h (12.2 years) at 25°C ambient full load			
MTBF	▪ MIL-HDBK-217F	> 600'000h 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 ▪ EN60950 ▪ EN50178	(certified E356563) (reference) (reference)		
EMC Emission	▪ EN55011 (CISPR11) ▪ EN55022 (CISPR22)	Class A Class A		
EMC Immunity	▪ EN61000-4-2 ▪ EN61000-4-3 ▪ EN61000-4-4 ▪ EN61000-4-5 ▪ EN61000-4-11	Level 3 Level 3 Level 3 Level 3 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	0.45kg
Size (W x H x D)	40.0 x 115.0 x 110.0mm

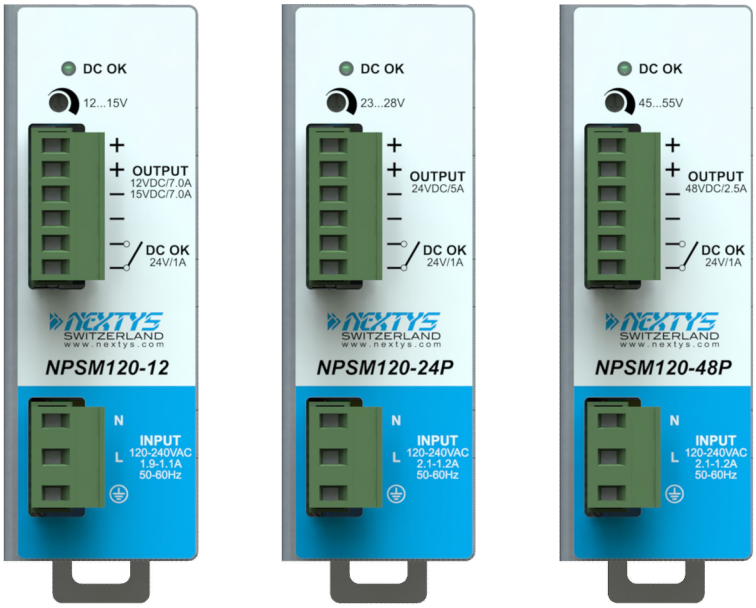
1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
2) Peak current measured after 0.2ms from main connection; 240Vac/50Hz; Ambient temperature at 25°C; Cold Start.
3) Start-up type tested: - 40°C, possible at nominal voltage with load deration.

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