Main Features

- High efficiency and extremely compact size
- Only 40mm width aluminum enclosure
- Active PFC
- Overload 150%
- Constant current or hiccup mode limitation, user settable
- Wide range of output voltage
- Easy parallelable for power increase
- Up to 70°C operating temperature with no derating
- All models available as version **(PH)**
- Codes ended with **(H)**: include enhanced transient overvoltage protection (> 6kV)

TECHNICAL DATA

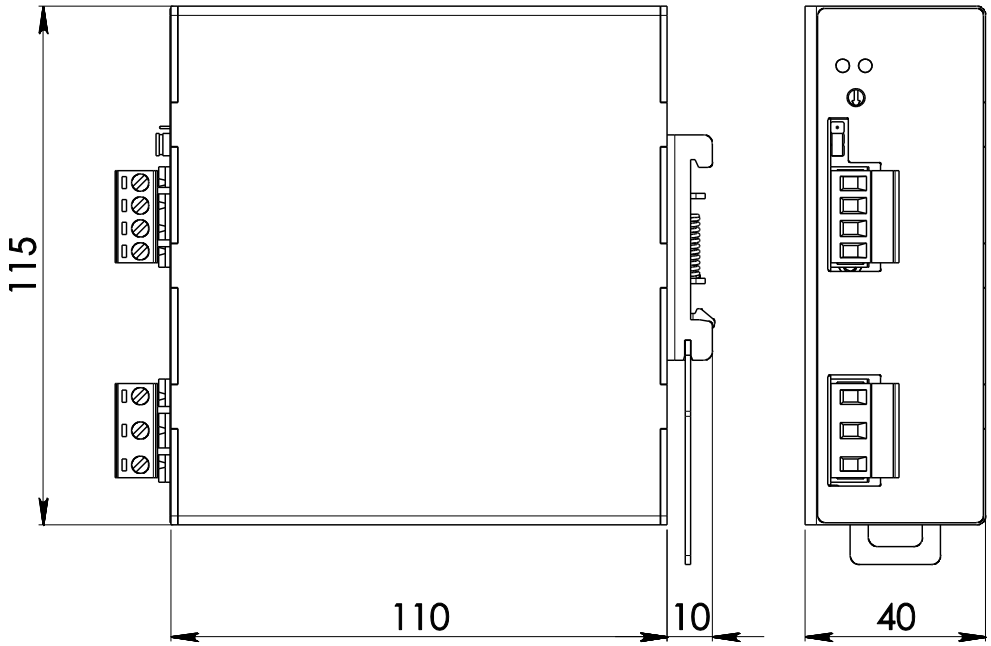
Model type[1]	NPSM241-12 (P,H)	NPSM241-24 (P,H)	NPSM241-36 (P,H)	NPSM241-48P (H)	NPSM241-72P (H)
OUTPUT DATA					
Rated voltage	12Vdc	24Vdc	36Vdc	48Vdc	72Vdc
Adj. output voltage range	12…15Vdc	22…29Vdc	32…40Vdc	45…55Vdc	70…85Vdc
Continuous current	15A	10A	7.0A	5.0A	3.3A
Overload limit in constant current mode	17A	11A	7.5A	7.0A	4.0A
Overload limit in hiccup mode (max. 5s)	20A	15A	10A	8.5A	5.5A
Load regulation	≤ 2%	≤ 1%			
Ripple & Noise[2]	≤ 160mVpp	≤ 260mVpp	≤ 300mVpp	≤ 400mVpp	≤ 550mVpp
Hold up time	≥ 25ms	≥ 20ms	≥ 15ms	≥ 20ms	≥ 15ms
Protections	▪ Overload, short circuit: Constant current or Hiccup mode (user settable) ▪ Thermal protection ▪ Input undervoltage lockout ▪ Output overvoltage				
Output overvoltage protection	≥ 18Vdc	≥ 33Vdc	≥ 51Vdc	≥ 68Vdc	≥ 100Vdc
Status Signals	▪ **DC OK** - green LED ▪ **OVERLOAD** - red LED ▪ **DC OK** - dry contact (NO, 24Vdc / 1A)				
Parallel connection[3]	▪ Possible for power or 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	2.4A 1.2A		3.0A 1.5A	2.4A 1.2A	
Input DC rated current Vin = 110Vdc Vin = 345Vdc	2.5A 1.2A	2.6A 0.9A	2.5A 1.2A	2.6A 0.9A	
Power factor correction	Active / > 0.9				
Inrush peak current	≤ 50A				
Touch (leakage) current	≤ 0.6mA				
Internal protection fuse	Fuse 6.3AT (not user replaceable)				
Recommended external protection	Fuse 10AT or MCB 10A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.				
GENERAL DATA					
Efficiency	> 90%	> 93%	> 93%	> 93.5%	
Dissipated power	< 25W	< 19W	< 19W	< 17W	
Operating temperature[4]	- 40°C…+ 70°C UL certified up to 70°C				
Derating	No derating				
Storage temperature	- 40°C…+ 80°C				
Humidity	5…95% r.H. non condensing				
Life time expectation	221'288h (25.2 years) at 25°C ambient full load				
MTBF	▪ MIL-HDBK-217F > 600'000h at 25°C ambient full load				
Overvoltage category Pollution degree	▪ EN50178 III ▪ IEC60664-1 2				
Protection Class	▪ CLASS I				
Input / output isolation	4.2kVdc				
Input / ground isolation	2.2kVdc				
Output / ground isolation	0.75kVdc				
Safety Standards[5]	▪ UL508 (certified E356563) ▪ EN60950 (reference) ▪ EN50178 (reference)				
EMC Emission	▪ EN55011 (CISPR11) Class B ▪ EN55022 (CISPR22) Class B ▪ EN61000-3-2 Class A				
EMC Immunity	▪ EN61000-4-2 Level 3 ▪ EN61000-4-3 Level 3 ▪ EN61000-4-4 Level 4 ▪ EN61000-4-5 Level 4 ▪ EN61000-4-11 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	0.60kg
Size (W x H x D)	40.0 x 115.0 x 110.0mm

1) Codes ended with **(H)**: include enhanced transient overvoltage protection (> 6kV)
2) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor.
3) Pay attention, set the current limitation mode jumper on C.C. mode when connecting more units in parallel.
4) Start-up type tested: - 40°C, possible at nominal voltage with load deration.
5) Codes ended with **(H)** and NPSM241-36 (P) are not UL508 certified.

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