



■ Main Features

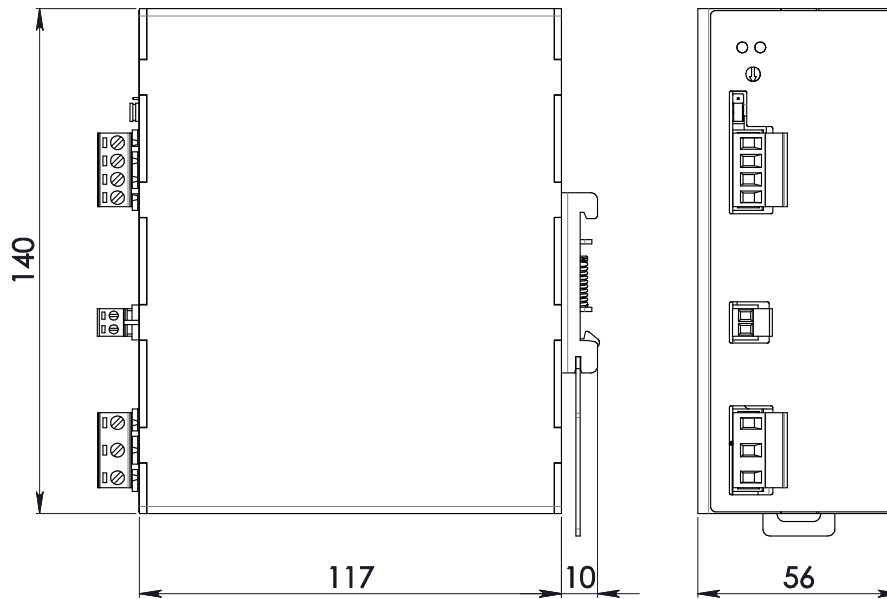
- High efficiency and extremely compact size
- Only 56mm width aluminum enclosure
- Active PFC
- Overload 150%
- Constant current or hiccup mode limitation, user settable
- Wide range of output voltage
- Easy parallelable for power increase
- Up to 60°C operating temperature with no derating

TECHNICAL DATA

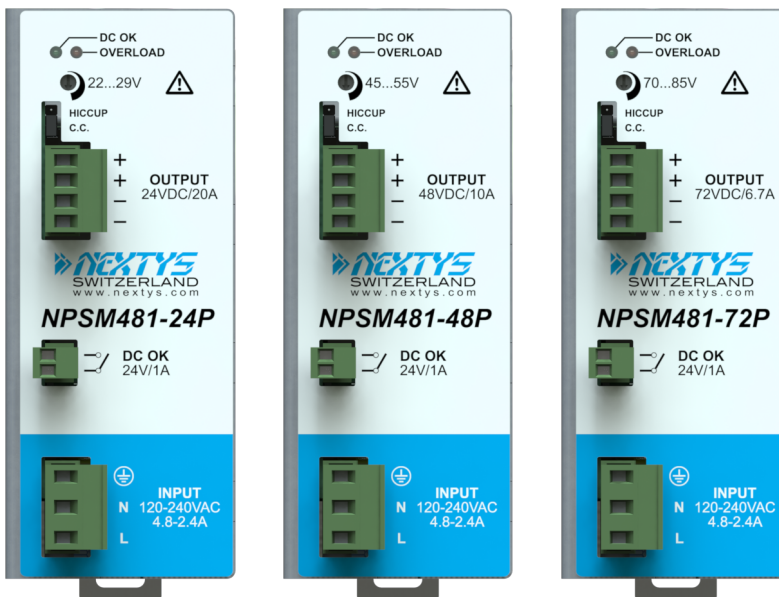
Model type	NPSM481-24 (P)	NPSM481-48 (P)	NPSM481-72 (P)
OUTPUT DATA			
Rated voltage	24Vdc	48Vdc	72Vdc
Adj. output voltage range	22...29Vdc	45...55Vdc	70...85Vdc
Continuous current	20A	10A	6.7A
Overload limit in constant current mode	21A	12A	7.0A
Overload limit in hiccup mode (max. 5s)	30A	17A	12A
Load regulation	≤ 1.5%	≤ 0.5%	
Ripple & Noise ¹	≤ 150mVpp	≤ 200mVpp	≤ 350mVpp
Hold up time	≥ 25ms		
Protections	<ul style="list-style-type: none"> ▪ Overload, short circuit: Constant current or Hiccup mode (user settable) ▪ Thermal protection ▪ Input undervoltage lockout ▪ Output overvoltage 		
Output overvoltage protection	≥ 33Vdc	≥ 68Vdc	≥ 100Vdc
Status Signals	<ul style="list-style-type: none"> ▪ DC OK - green LED ▪ OVERLOAD - red LED ▪ DC OK - dry contact (NO, 24Vdc / 1A) 		
Parallel connection ²	<ul style="list-style-type: none"> ▪ Possible for power or redundancy (with external ORing module) ▪ P (models) - include internal ORing circuit 		
INPUT DATA			
Input AC rated voltage	Nominal: 120...240Vac (UL certified)		
Frequency	Range: 90...264Vac 47...63Hz		
Input DC rated voltage	110...345Vdc		
Input AC rated current	4.8A		
V _{in} = 120Vac	2.4A		
V _{in} = 240Vac			
Input DC rated current	4.9A		
V _{in} = 110Vdc	1.7A		
V _{in} = 345Vdc			
Power factor correction	Active / > 0.9		
Inrush peak current ³ / I ² t	≤ 23A / 0.56A ² s		
Touch (leakage) current	≤ 0.9mA		
Internal protection fuse	Fuse 8AT (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	> 93%	> 94%	
Dissipated power	< 36.5W	< 31W	
Operating temperature ⁴	- 40°C...+ 70°C UL certified up to 50°C at 120Vac or up to 60°C at 240Vac		
Derating	- 7.6W/°C over 50°C at 120Vac - 7.2W/°C over 60°C at 240Vac		
Storage temperature	- 40°C...+ 80°C		
Humidity	5...95% r.H. non condensing		
Life time expectation	167*953h (19.1 years) at 25°C ambient full load		
MTBF	<ul style="list-style-type: none"> ▪ MIL-HDBK-217F > 600'000h 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 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) ▪ IEC/EN61010-1 ▪ IEC/EN61010-2-201 ▪ IEC/EN60950 		
EMC Emission	<ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class B ▪ EN61000-3-2 Class A 		
EMC Immunity	<ul style="list-style-type: none"> ▪ 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	<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 pluggable (24...12AWG)		

Case material	Aluminum
Weight	1.1kg
Size (W x H x D)	56.0 x 140.0 x 117.0mm
<p>1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor. 2) Pay attention, set the current limitation mode jumper on C.C. mode when connecting more units in parallel. 3) Peak current measured after 0.2ms from main connection; 240Vac/50Hz; Ambient temperature at 25°C; Cold Start. 4) Start-up type tested: - 40°C, possible at nominal voltage with load deration.</p> <p>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.</p>	

DIMENSIONS



CONNECTION



Input Connection:

- Single phase:
- L = Line
 - N = Neutral
 - PE = Earth ground
- DC:
- L = + Positive DC
 - N = - Negative DC
 - PE = Earth ground

Output Connection:

- + = Positive DC
 - - = Negative DC
- Signalling:
- DC OK:** dry contact
- NO
 - COM