

IP65



■ Main Features

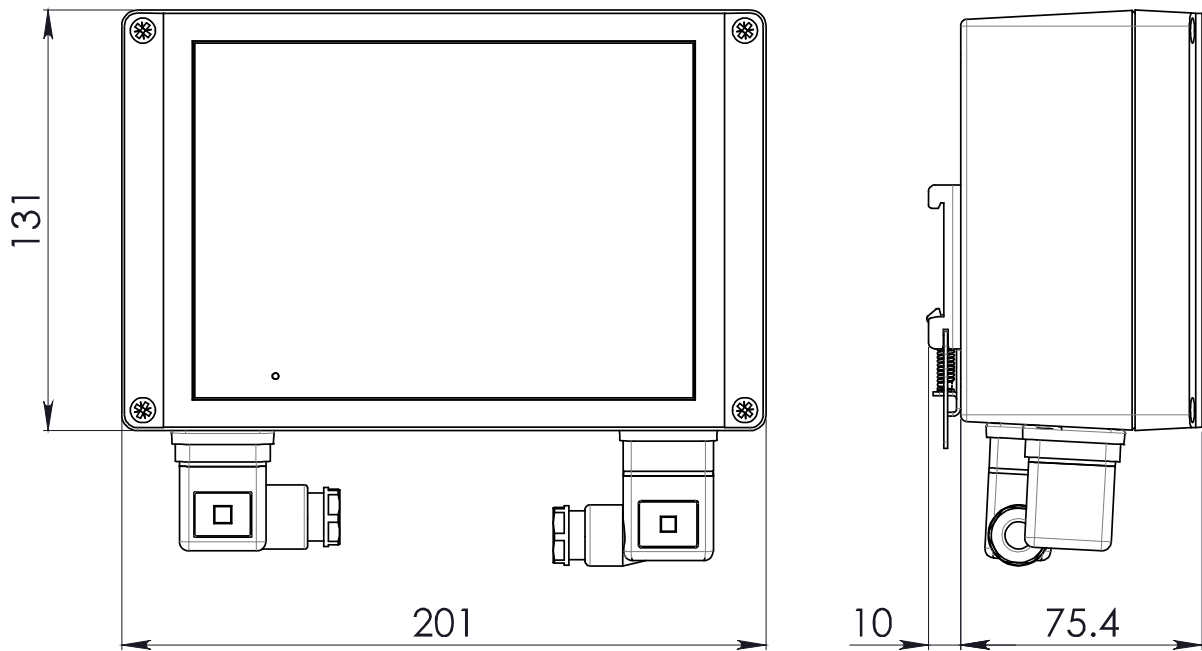
-] IP65 design
-] Suitable for harsh environments
-] High efficiency and compact size
-] Active PFC
-] Overload 150%
-] High operating temperature with no derating

TECHNICAL DATA

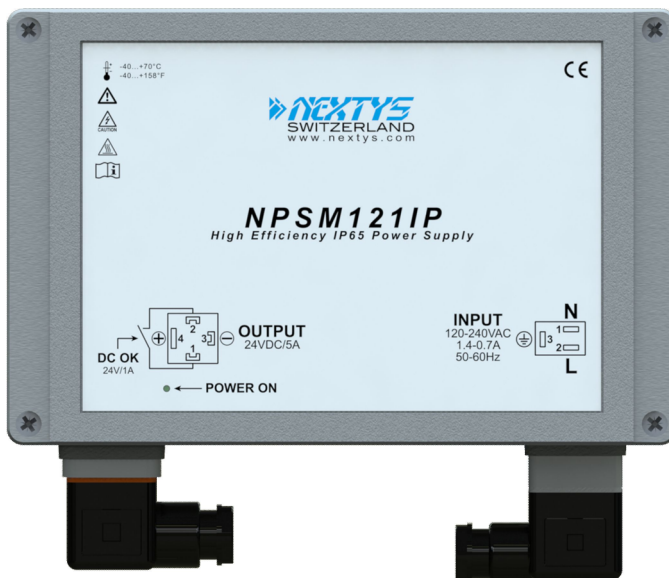
Model type	NPSM121IP	NPSM241IP
OUTPUT DATA		
Rated voltage	24Vdc	
Adj. output voltage range	24Vdc fixed	
Continuous current	5A	10A
Overload limit (max. 5s)	7.5A	15A
Load regulation	≤ 1.5%	≤ 2%
Ripple & Noise ¹	≤ 60mVpp	≤ 260mVpp
Hold up time	≥ 20ms	
Protections	<ul style="list-style-type: none"> ▪ Overload/short circuit: Hiccup mode³ ▪ Thermal protection ▪ Input undervoltage lockout ▪ Output overvoltage 	
Output overvoltage protection	≥ 33Vdc	
Status Signals	<ul style="list-style-type: none"> ▪ Power ON - green LED ▪ DC OK - dry contact (NO, 24Vdc / 1A) 	
Parallel connection	<ul style="list-style-type: none"> ▪ Possible for redundancy (with external ORing module) 	<ul style="list-style-type: none"> ▪ Possible for redundancy ▪ Include internal ORing circuit
INPUT DATA		
Input AC rated voltage	Nominal: 120...240Vac	
Frequency	Range: 90...264Vac 47...63Hz	
Input DC rated voltage	110...345Vdc	
Input AC rated current		
Vin = 120Vac	1.4A	2.4A
Vin = 240Vac	0.7A	1.2A
Input DC rated current		
Vin = 110Vdc	1.4A	2.6A
Vin = 345Vdc	0.5A	0.9A
Power factor correction	Active / > 0.9	
Inrush peak current	≤ 45A	≤ 50A
Touch (leakage) current	≤ 0.5mA	≤ 0.6mA
Internal protection fuse	Fuse 3.15AT (not user replaceable)	Fuse 6.3AT (not user replaceable)
Recommended external protection	Fuse 4AT or MCB 4A C curve	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%	> 92.5%
Dissipated power	< 13.5W	< 19.5W
Operating temperature ²	- 35°C...+ 70°C	- 40°C...+ 70°C
Derating	No derating	- 2.4W/°C over 50°C at 120Vac - 2.4W/°C over 60°C at 240Vac
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Life time expectation	74'640h (8.5 years) at 25°C ambient full load	221'288h (25.2 years) at 25°C ambient full load
MTBF MIL-HDBK-217F	> 500'000h at 25°C ambient full load	> 600'000h at 25°C ambient full load
Overvoltage category	▪ EN50178 III	
Pollution degree	▪ IEC60664-1 3	
Protection Class	▪ 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 (reference) ▪ EN60950 (reference) ▪ EN50178 (reference) 	
EMC Emission	<ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class B ▪ EN55022 (CISPR22) 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	▪ EN60529 IP65	
Vibration sinusoidal	▪ 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	1.5mm ² , screw type pluggable (22...16AWG)	
Case material	Aluminum	
Weight	1.45kg	1.75kg
Size (W x H x D)	201.0 x 131.0 x 75.4mm	
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. 3) For Constant Current mode contact the factory.		
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 (2)
 - N = Neutral (1)
 - | = Earth ground (3)

DC:

- L = + Positive DC (2)
- N = - Negative DC (1)
- | = Earth ground (3)

Output Connection:

- + = Positive DC (4)
- - = Negative DC (3)

Signalling:

- DC OK:** dry contact
- NO (2)
 - COM (1)