



### ■ Main Features

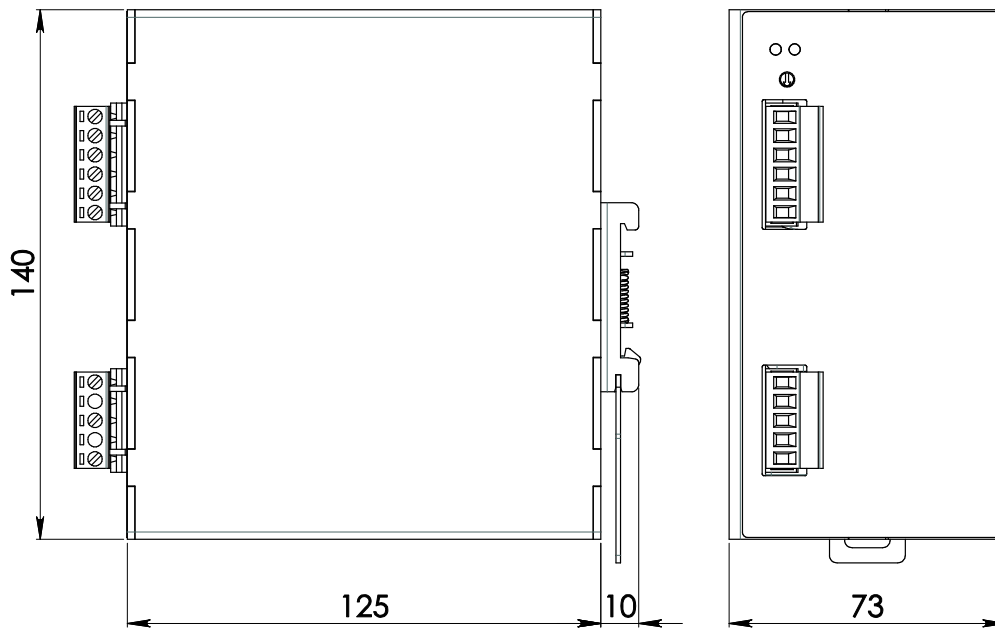
- High efficiency and compact size
- Active PFC
- Overload 140%
- Excellent long lasting overvoltage withstand (up to 550Vac)
- Usable for broad range of industrial, telecom and renewable energy applications

## TECHNICAL DATA

Model type	NPSM480-24	
<b>OUTPUT DATA</b>		
Rated voltage	24Vdc	
Adj. output voltage range	23...28Vdc	
Continuous current	20A	
Overload limit	28A	
Short circuit peak current	50A	
Load regulation	≤ 1%	
Ripple & Noise <sup>1</sup>	≤ 50mVpp	
Hold up time	≥ 50ms	
Protections	<ul style="list-style-type: none"> <li>▪ Overload, short circuit: Hiccup mode</li> <li>▪ Thermal protection</li> <li>▪ Output overvoltage</li> </ul>	
Output overvoltage protection	≥ 33Vdc	
Status Signals	<ul style="list-style-type: none"> <li>▪ <b>DC OK</b> - green LED</li> <li>▪ <b>OVERLOAD</b> - red LED</li> <li>▪ <b>DC OK</b> - dry contact (NO, 24Vdc / 1A)</li> </ul>	
Parallel connection	Possible for redundancy (with external ORing module)	
<b>INPUT DATA</b>		
Input AC rated voltage	Nominal: 200...240Vac (UL certified)	
Frequency	Range: 187...264Vac 47...63Hz; 400Hz	
Input DC rated voltage	250...375Vdc	
Input AC rated current	2.9A	
Vin = 200Vac	2.5A	
Vin = 240Vac		
Input DC rated current	2.2A	
Vin = 250Vdc	1.5A	
Vin = 375Vdc		
Power factor correction	Active / > 0.9	
Inrush peak current <sup>2</sup> / I <sup>2</sup> t	≤ 29A / 0.61A <sup>2</sup> s	
Touch (leakage) current	≤ 0.5mA	
Internal protection fuse	None, external fuse must be provided	
Recommended external protection	Fuse 6.3AT or MCB 6A C curve or 4A D curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.	
<b>GENERAL DATA</b>		
Efficiency	> 91%	
Dissipated power	< 48W	
Operating temperature <sup>3</sup>	- 40°C...+ 70°C UL certified up to 45°C	
Derating	-10W/°C over 45°C	
Storage temperature	- 40°C...+ 80°C	
Humidity	5...95% r.H. non condensing	
Life time expectation	65'496h (7.4 years) at 25°C ambient full load	
MTBF	<ul style="list-style-type: none"> <li>▪ MIL-HDBK-217F &gt; 500'000h at 25°C ambient full load</li> </ul>	
Overvoltage category	<ul style="list-style-type: none"> <li>▪ EN50178 III</li> </ul>	
Pollution degree	<ul style="list-style-type: none"> <li>▪ IEC60664-1 2</li> </ul>	
Protection Class	<ul style="list-style-type: none"> <li>▪ CLASS I</li> </ul>	
Input / output isolation	4.2kVdc	
Input / ground isolation	2.2kVdc	
Output / ground isolation	0.75kVdc	
Safety Standards	<ul style="list-style-type: none"> <li>▪ UL508 (certified E356563)</li> <li>▪ IEC/EN61010-1</li> <li>▪ IEC/EN61010-2-201</li> <li>▪ IEC/EN60950</li> </ul>	
EMC Emission	<ul style="list-style-type: none"> <li>▪ EN55011 (CISPR11) Class A</li> <li>▪ EN55022 (CISPR22) Class A</li> <li>▪ EN61000-3-2 Class A</li> </ul>	
EMC Immunity	<ul style="list-style-type: none"> <li>▪ EN61000-4-2 Level 3</li> <li>▪ EN61000-4-3 Level 3</li> <li>▪ EN61000-4-4 Level 4</li> <li>▪ EN61000-4-5 Level 3</li> <li>▪ EN61000-4-11 Level 2</li> </ul>	
Protection degree	<ul style="list-style-type: none"> <li>▪ EN60529 IP20</li> </ul>	
Vibration sinusoidal	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z)</li> </ul>	
Shock	<ul style="list-style-type: none"> <li>▪ IEC 60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)</li> </ul>	

Connection terminals	2.5mm <sup>2</sup> , screw type pluggable (24...12AWG)
Case material	Aluminum
Weight	1.0kg
Size (W x H x D)	73.0 x 140.0 x 125.0mm
<p>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.</p> <p><b>Notes:</b>                  - 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
  - ⊕ = Earth ground
- DC:
- L = + Positive DC
  - N = - Negative DC
  - ⊕ = Earth ground

**Output Connection:**

- + = Positive DC
- - = Negative DC

- Signalling:
- DC OK: dry contact
  - NO
  - COM