■ *Main Features*

- High efficiency and compact size
- Overload 150%
- Constant current or hiccup mode limitation, user settable
- Easy parallelable for power increase
- Natural convection cooling
- 72V output model as standard

TECHNICAL DATA

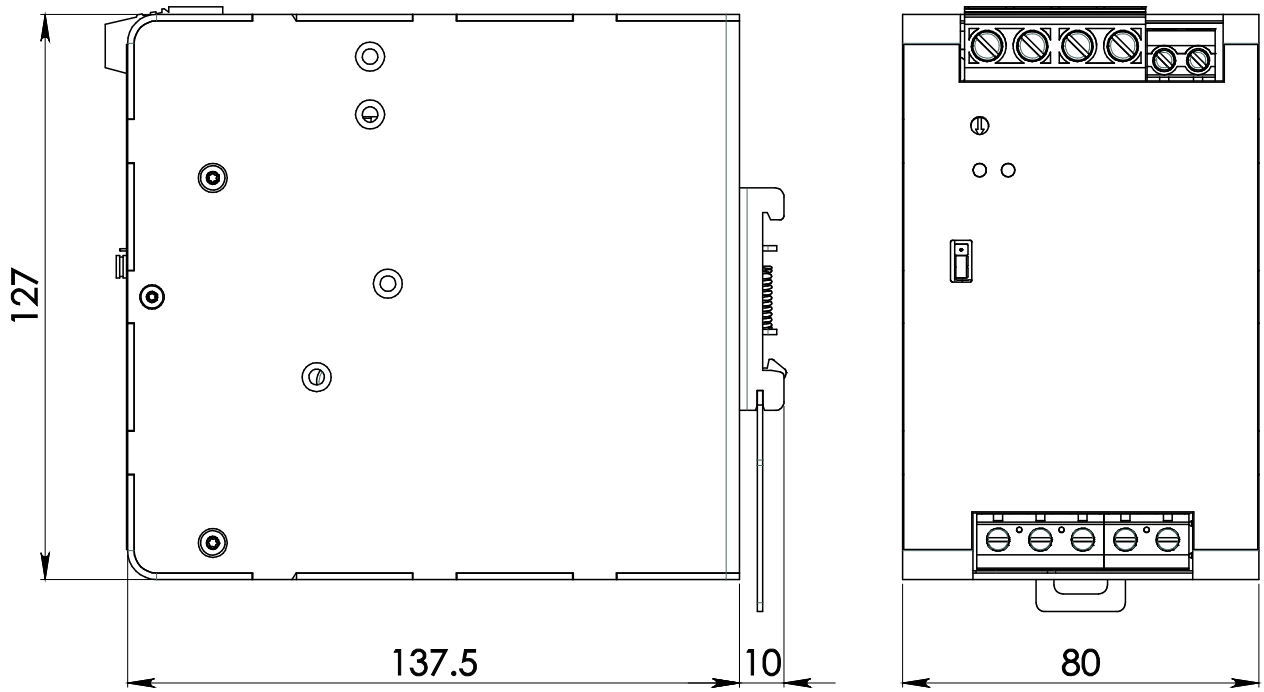
Model type	NPST501-12	NPST501-24	NPST501-48	NPST501-72
OUTPUT DATA				
Rated voltage	12Vdc	24Vdc	48Vdc	72Vdc
Adj. output voltage range	12…15Vdc	23…28Vdc	45…55Vdc	72…85Vdc
Continuous current	40A	20A	10A	6.7A
Overload limit in constant current mode	44A	22A	11A	7.5A
Overload limit in hiccup mode (max. 5s)	60A	30A	15A	10A
Load regulation	≤ 2.5%	≤ 1%	≤ 0.5%	
Ripple & Noise[1]	≤ 150mVpp	≤ 100mVpp		
Hold up time	≥ 20ms			
Protections	▪ Overload, short circuit: Constant current or Hiccup mode (user settable) ▪ Thermal protection ▪ Output overvoltage			
Output overvoltage protection	≥ 18Vdc	≥ 33Vdc	≥ 68Vdc	≥ 100Vdc
Status Signals	▪ **DC OK** - green LED ▪ **OVERLOAD** - red LED ▪ **DC OK** - dry contact (NO, 24Vdc / 1A)			
Parallel connection[2]	Possible for power or redundancy (with external ORing module)			
INPUT DATA				
Input AC rated voltage[3] Frequency	Nominal: 3 phases, 400…500Vac (UL certified) Range: 340…550Vac 47…63Hz			
Input DC rated voltage	520…725Vdc			
Input AC rated current Vin = 400Vac Vin = 500Vac	 1.3A 1.1A			
Input DC rated current Vin = 520Vdc Vin = 725Vdc	 1.2A 0.9A			
Inrush peak current	≤ 50A			
Touch (leakage) current	≤ 0.15mA			
Internal protection fuse	None, external fuse must be provided			
Recommended external protection	Fuse 3x 10AT or 3x MCB 10A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations.			
GENERAL DATA				
Efficiency	> 89%	> 93.5%		> 94%
Dissipated power	< 59W	< 34W		< 31W
Operating temperature[4]	- 40°C…+ 70°C UL certified up to 50°C			
Derating	- 4.5W/°C over 50°C			
Storage temperature	- 40°C…+ 80°C			
Humidity	5…95% r.H. non condensing			
Life time expectation	63'200h (7.2 years) at 25°C ambient full load			
MTBF	▪ MIL-HDBK-217F	> 500'000h 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	▪ UL508 (certified E356563) ▪ EN60950 (reference) ▪ EN50178 (reference)			
EMC Emission	▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A			
EMC Immunity	▪ EN61000-4-2 Level 3 ▪ EN61000-4-3 Level 3 ▪ EN61000-4-4 Level 3 ▪ 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	1.5…6mm², screw type header (16…10AWG) 6…16mm², screw type header (10…6AWG) for output on 12V model			

Case material	Aluminum
Weight	1.3kg
Size (W x H x D)	80.0 x 127.0 x 137.5mm

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) In case of 2 phases operation, reduce the output load to 50% of the nominal value.
4) 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 400Vac / 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:

3 phases:
- L1 = phase 1
- L2 = phase 2
- L3 = phase 3
- ⏚ = Earth ground

DC:
- L1 = + Positive DC
- L2 = - Negative DC
- L3 = do not connect
- ⏚ = Earth ground

Output Connection:

- + = Positive DC
- - = Negative DC

Signalling:
DC OK: dry contact
- NO
- COM