

VPST961 Series

960W 3PH DIN Rail Switching Power Supply



■ Main Features

- High efficiency and compact size
- High efficiency 92%
- Overload 150%
- Up to 45°C operating temperature with no derating
- Constant current or Hiccup mode limitation, user settable
- Easy parallelable for power increase
- Low noise thermally regulated 60mm fan



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TECHNICAL DATA

Model type	VPST961 -24	VPST961 -48	VPST961 -72
OUTPUT DATA			
Rated voltage	24Vdc	48Vdc	72Vdc
Adj. output voltage range	23...28Vdc	45...55Vdc	72...85Vdc
Continuous current	40A	20A	13.3A
Overload limit	44A	22A	15A
Short circuit peak current	60A	30A	20A
Load regulation	1.0%	0.5%	0.5%
Ripple & Noise	100mVpp		
Hold up time	> 15ms		
User interface	<ul style="list-style-type: none"> ▪ DC OK green LED ▪ Overload red LED ▪ Current limitation mode jumper ▪ Dry contact (1A/30V) 		
Protections	<ul style="list-style-type: none"> ▪ Overload, short circuit, with constant current or hiccup mode (user settable) ▪ Thermal protection 		
Output overvoltage protection	> 33Vdc	> 68Vdc	> 100Vdc
Parallel connection	Up to 4 units for increased power		
Redundancy	With external ORing module		
INPUT DATA			
Input AC rated voltage Frequency	Nominal: 3 Phases, 400...500Vac (UL certified) Range: 340...550Vac 47...63Hz		
Input DC rated voltage	520...725Vdc		
Input AC current U _{in} = 400Vac U _{in} = 500Vac	2.4A 2.1A		
Input DC current U _{in} = 520Vdc U _{in} = 725Vdc	2.2A 1.7A		
Inrush peak current	< 50A		
Internal protection fuse	None, external fuse must be provided		
External protection on AC line	Fuse AT 10A or MCB 10A C curve It is strongly recommended to provide external surge arresters (SPD) according to local regulations		
GENERAL DATA			
Efficiency	> 90.5%	> 92.5%	> 93%
Dissipated power	< 101W	< 78W	< 73W
Operating temperature	- 40°C...+70°C / overtemperature protection UL certified up to 45°C Start-up type tested: - 40°C ¹		
Temperature derating	- 15.0W/°C over 45°C		
Storage temperature	- 40°C...+ 80°C		
Humidity	5...95% r.H. non condensing		
Life time expectation	63200h (7.2 years) at 25°C ambient 75% load		
Overvoltage category Pollution degree	III 2 (IEC 664-1)		
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) ▪ EN60950 (reference) 		
EMC Emission	<ul style="list-style-type: none"> ▪ EN55022:2010 (CISPR22) ▪ EN55011:2009 /A1:2010 	Class A Class A	
EMC Immunity	<ul style="list-style-type: none"> ▪ EN61000-4-2:2008 ▪ EN61000-4-3:2006 /A2:2010 ▪ EN61000-4-4:2012 ▪ EN61000-4-5:2014 ▪ EN61000-4-11:2004 /A1:2010 	Level 3 Level 3 Level 3 Level 4 Level 2	
Protection degree	<ul style="list-style-type: none"> ▪ EN60529:1989 /A:2013 	IP20	
Vibration sinusoidal	<ul style="list-style-type: none"> ▪ IEC 60068-2-6:2007 	(5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2Hours / axis (X,Y,Z)	
Shock	<ul style="list-style-type: none"> ▪ IEC 60068-2-27:2008 	(30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total)	
Connection terminals	1.5...6mm ² , screw type (16...10AWG) 6...16mm ² , screw type (10...6AWG) for output on 24V model		
Case material	Aluminum		
Approx. weight	1.300kg		
Size (W x H x D)	80.0 x 127.0 x 137.5mm		
Mounting Rail	IEC 60715/H15/TH35-7.5(-15)		

1) Possible at nominal voltage with load deration.

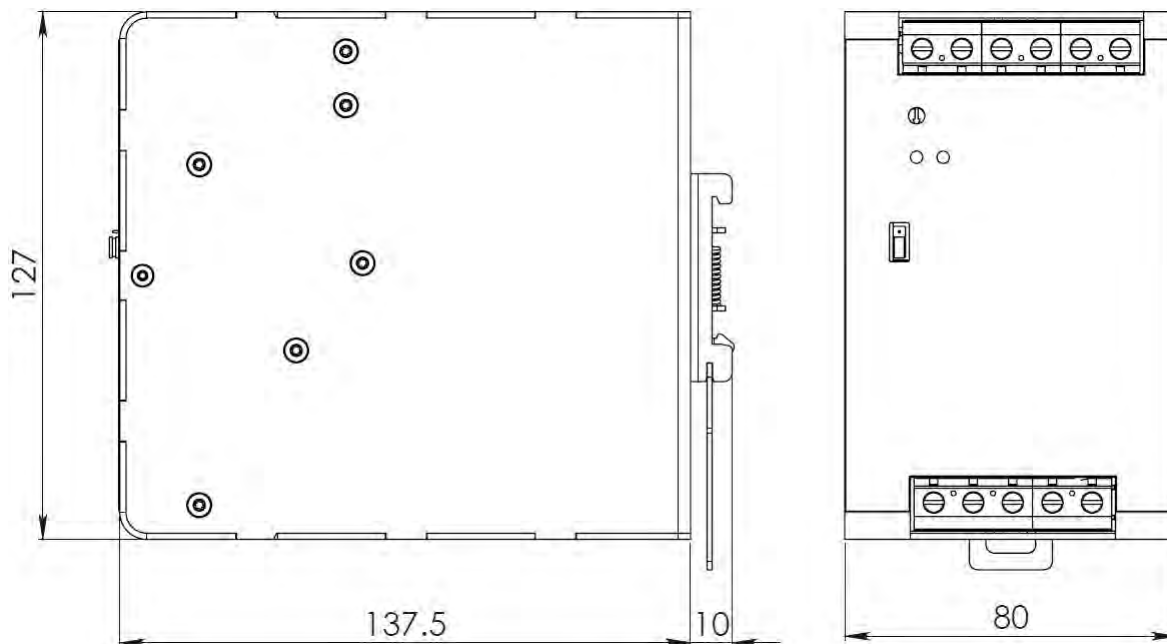
Notes:

- Technical parameters are typical, measured in laboratory environment at 25°C and 400Vac / 50Hz.
- 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.

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Dimensions



(model just for reference)

Input Connection:

- 3 phases:
- L1 = Phase 1
 - L2 = Phase 2
 - L3 = Phase 3
 - I = earth ground

DC:

- L1 = + Positive DC
- L2 = - Negative DC
- L3 = do not connect
- I = earth ground

Output Connection:

- + = Positive DC
- - = Negative DC
- Dry contact = NC