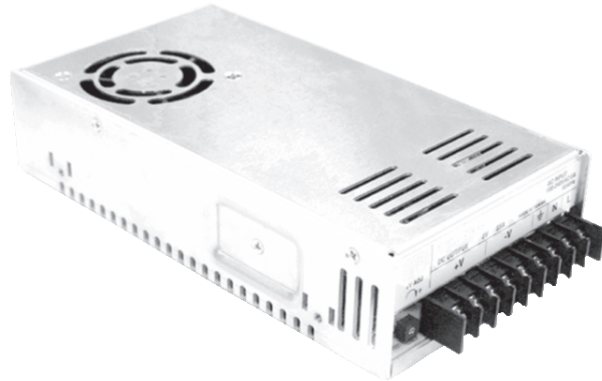


PART NUMBER: VSP-320

DESCRIPTION: switching power supply

features

- universal ac input / full range
- built-in active PFC function, PF>0.95
- short circuit, overload, over-voltage, over-temperature
- forced air cooling by built-in dc fan
- built-in fan speed control
- fixed switching frequency at 100 kHz
- 3 year warranty



MODEL	preset	output	output current		line	load	ripple &	efficiency
	voltage	tolerance ³	rated	range	regulation	regulation	noise ²	
VSP-320-3.3	3.3 V	±1%	55 A	0~60 A	± 0.5%	± 1.5%	150 mVpp	74%
VSP-320-5	5 V	±2%	55 A	0~55 A	± 0.5%	± 1%	150 mVpp	79%
VSP-320-7.5	7.5 V	±2%	40 A	0~40 A	± 0.5%	± 1%	150 mVpp	83%
VSP-320-12	12 V	±1%	25 A	0~25 A	± 0.3%	± 0.5%	150 mVpp	86%
VSP-320-13.5	13.5 V	±1%	22 A	0~22 A	± 0.3%	± 0.5%	150 mVpp	86%
VSP-320-15	15 V	±1%	20 A	0~20 A	± 0.3%	± 0.5%	150 mVpp	86%
VSP-320-24	24 V	±1%	13 A	0~13 A	± 0.2%	± 0.5%	150 mVpp	87%
VSP-320-27	27 V	±1%	11.7 A	0~11.7 A	± 0.2%	± 0.5%	200 mVpp	88%
VSP-320-36	36 V	±1%	8.8 A	0~8.8 A	± 0.2%	± 0.5%	220 mVpp	87%
VSP-320-48	48 V	±1%	6.7 A	0~6.7 A	± 0.2%	± 0.5%	240 mVpp	89%

- notes:
1. All parameters not specified are measured at 230VAC input, rated load, 25°C 70% ambient
 2. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1µF & 47 µF capacitor
 3. Tolerance includes set up tolerance, line regulation, load regulation
 4. The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets the EMC directives.

V-Infinity reserves the right to make changes to its products or to discontinue any product or service without notice, and to advise customers to verify the most up-to-date product information before placing orders. V-Infinity assumes no liability or responsibility for customer's applications using V-Infinity products other than repair or replacing (at V-I's option) V-Infinity products not meeting V-I's published specifications. Nothing will be covered outside of standard product warranty.



PART NUMBER: VSP-320

DESCRIPTION: switching power supply

INPUT

parameter	conditions/description	min	nom	max	units
input frequency		47		63	Hz
input voltage ⁴		88		264	V ac
		124		370	V dc
input current	At 115 V ac (3.3 V output)		2.5		A
	At 115 V ac (all other output voltages)		5		A
	At 230 V ac (3.3 V output)		1.5		A
	At 230 V ac (all other output voltages)		2.5		A
inrush current	peak measured at 115 V ac at full load, cold start		20		A
	peak measured at 230 V ac at full load, cold start		40		A
power factor	At 115 V ac	0.98			
	At 230 V ac	0.95			

OUTPUT

parameter	conditions/description	min	nom	max	units
turn on delay	115 V ac full load			2500	ms
	230 V ac full load			800	ms
rise	115 / 230 V ac full load			50	ms
hold up time	115 / 230 V ac full load		16		ms
voltage adjust	3.3 V output	3.14		3.63	V dc
	5 V output	4.5		5.5	V dc
	7.5 V output	6		9	V dc
	12 V output	10		13.2	V dc
	13.5 V output	12		15	V dc
	15 V output	13.5		18	V dc
	24 V output	20		26.4	V dc
	27 V output	26		31.5	V dc
	36 V output	32.4		39.6	V dc
	48 V output	41		56	V dc

PROTECTION CIRCUIT

parameter	conditions/description	min	nom	max	units
overload	105~135% rated output power protection type: hiccup mode, recovers automatically after fault condition is removed				
output over-voltage	3.3 V output	3.8		4.5	V dc
	5 V output	5.75		6.75	V dc
	7.5 V output	9.4		10.9	V dc
	12 V output	13.8		16.2	V dc
	13.5 V output	15.5		18.2	V dc
	15 V output	18		21	V dc
	24 V output	27.6		32.4	V dc
	27 V output	33.7		39.2	V dc
	36 V output	45		52.5	V dc
	48 V output	57.6		67.2	V dc
	protection type: shut down o/p voltage, auto recovery				

notes: 4. Derating may be needed under low input voltages. Please check the derating curve for more details.



PART NUMBER: VSP-320

DESCRIPTION: switching power supply

GENERAL AND SAFETY

parameter	conditions/description	min	nom	max	units
operating temp.	refer to output derating curve	-20		65	°C
storage temp.		-40		85	°C
operating humid.	Non-condensing	20%		90%	RH
storage humid.	Non-condensing	10%		95%	RH
EMC ⁵	CISPR 22/EN55022 class B, EN61000-3-2,-3, EN6100-4-2,3,4,5,6,8,11, ENV50204, EN55024, Light industry level, criteria A				
safety ⁵	UL60950-1, TUV EN60950-1 approved				
leakage current	@ 240VAC			1	mA
vibration	2G 10 min. /1 cycle for 60 min on X, Y and Z Axis	10		500	Hz
isolation voltage ⁵	primary to secondary:	500 / 100M Ohms			V dc
	primary to earth ground:	500 / 100M Ohms			V dc
	secondary to earth ground:	500 / 100M Ohms			V dc
withstand voltage ⁵	Primary to secondary:	3000			V ac
	Primary to earth ground:	1500			V ac
	secondary to earth ground:	500			V ac
temp. coefficient	0~50°C		0.3		%/°C

MECHANICAL

parameter	conditions/description	min	nom	max	units
packaging	1.1 Kg; 12 pcs / 14 kg; 0.92 ft ³				
enclosure	215 x 115 x 50 mm (LxWxH)				inches
MTBF	MIL-HDBK-217F (25°C)	207,000			hours

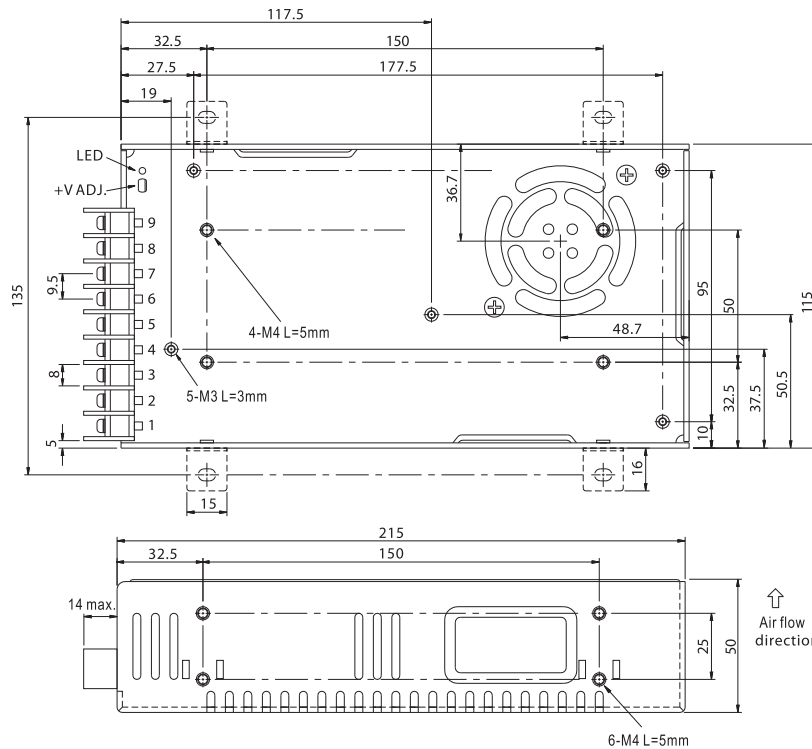
notes: 5. The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets the EMC directives.



PART NUMBER: VSP-320

DESCRIPTION: switching power supply

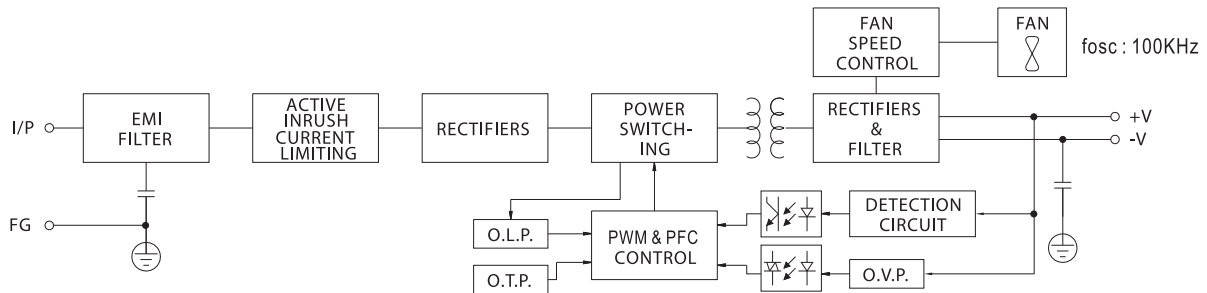
DIMENSIONS (mm)



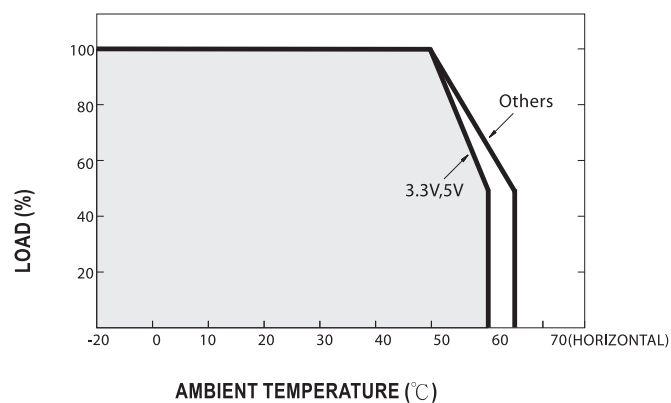
Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4~6	DC OUTPUT -V
2	AC/N	7~9	DC OUTPUT +V
3	FG $\perp$		

BLOCK DIAGRAM



OUTPUT DERATING



STATIC CHARACTERISTICS

