

SERIES: VGS-50 | **DESCRIPTION:** AC-DC POWER SUPPLY

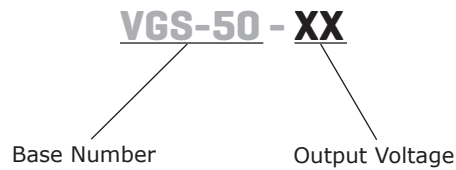
FEATURES

- up to 53 W continuous power
- compact footprint
- universal input (88~264 Vac / 125~373 Vdc)
- single output from 3.3 to 48 V
- over voltage, over load, and short circuit protections
- UL/cUL and TUV safety approvals
- long life electrolytic capacitors
- no load power consumption < 0.5 W
- efficiency 90%



MODEL	output voltage	output current	output power	ripple and noise	efficiency
	(Vdc)	max (A)	max (W)	max (mVp-p)	(%)
VGS-50-3.3	3.3	10	33	100	78
VGS-50-5	5	10	50	100	83
VGS-50-12	12	4.2	50.4	120	88
VGS-50-15	15	3.4	51	120	89
VGS-50-24	24	2.2	52.8	120	90
VGS-50-48	48	1.1	52.8	120	90

PART NUMBER KEY



INPUT

parameter	conditions/description	min	nom	max	units
voltage range		88		264	Vac
		125		373	Vdc
frequency range		50		60	Hz
current	at 115 Vac, cold start			1.3	A
	at 230 Vac, cold start			0.65	A
inrush current	at 230 Vac, full load, cold start			40	A

OUTPUT

parameter	conditions/description	min	nom	max	units
voltage adjust			±10		
voltage tolerance	3.3 V models		±3		%
	5 V models		±2		%
	all other models		±1		%
line regulation	low line to high line		±0.5		%
load regulation	3.3 V models		±2.0		%
	5 V models		±1.0		%
	all other models		±0.5		%
start-up time	at 115 Vac, cold start		1.0		s
	at 230 Vac, cold start		0.8		s
rise time	at 115 Vac, cold start		65		ms
	at 230 Vac, cold start		50		ms
hold-up time	at 115 Vac, cold start	10			ms
	at 230 Vac, cold start	32			ms

SAFETY & COMPLIANCE

parameter	conditions/description	min	nom	max	units
isolation voltage	input to output:	4,242			Vdc
	input to case:	2,121			Vdc
	output to case:	707			Vdc
safety approvals	UL 60950-1 / TUV EN 60950-1				
EMI/EMC	EN55022 : 1998+A1 : 2000+A2 : 2003 Class B, EN61000-3-2 : 2000+A2 : 2005 Class A, EN61000-3-3 : 1995+A1 : 2001, EN61204-3 : 2000 EN50204 1998+A1 : 2001+A2 : 2003 light industry level, criteria A				
leakage current	measured per IEC 60950-1, paragraph 5.1, test voltage of 240 Vac/60 Hz			2	mA
RoHS compliant	yes				
MTBF	at 230 Vac, MIL-HDBK-217F 25 °C ambient	620,300			hrs

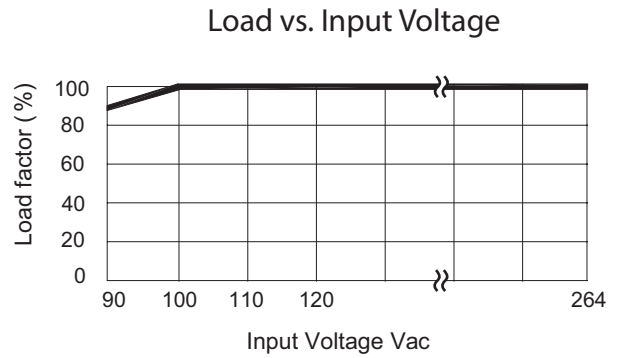
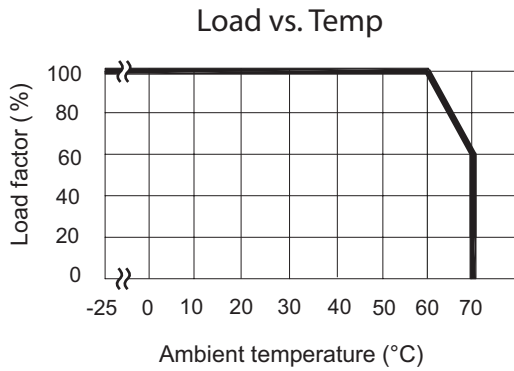
ENVIRONMENTAL

parameter	conditions/description	min	nom	max	units
operating temperature	see derating curve	-25		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	20		90	%
storage humidity	non-condensing	10		95	%
temperature coefficient	(0 ~ 50°C)		0.3		%/°C
vibration	(10 ~ 500 Hz, 1 hour per axis, 3 hours total)		5		Grms

PROTECTIONS

parameter	conditions/description	min	nom	max	units
over load	hiccup mode, auto recovery			110	%
over voltage	latch off mode	115		150	%
short circuit	continuous				

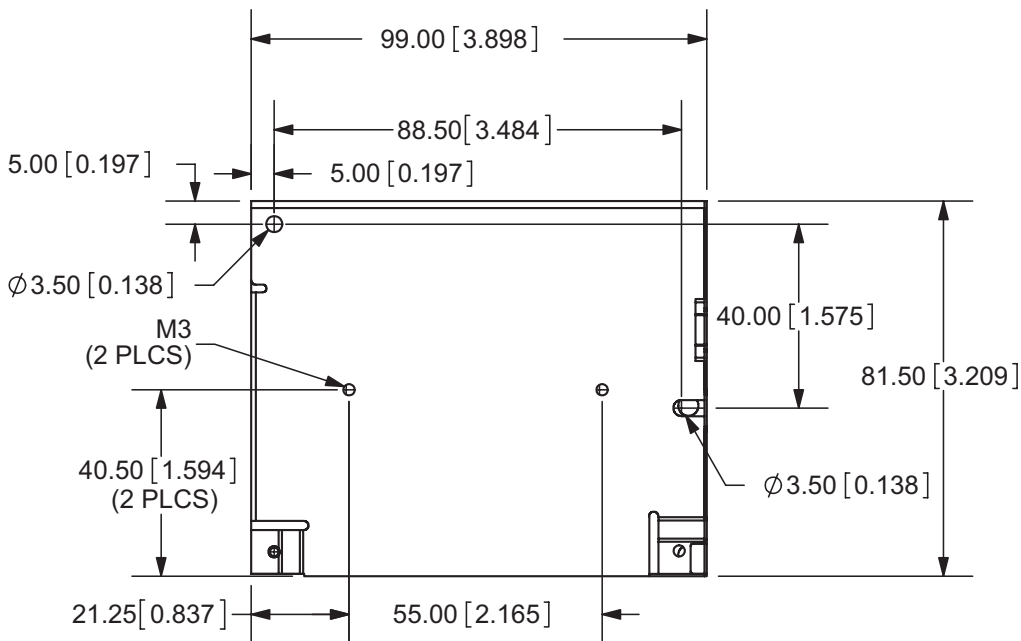
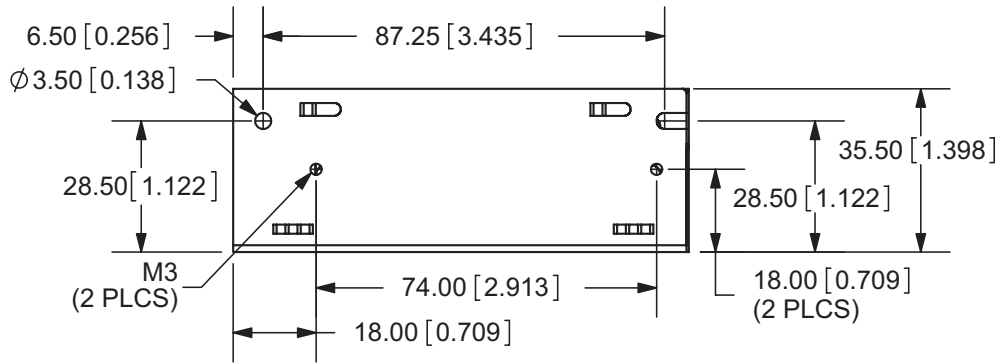
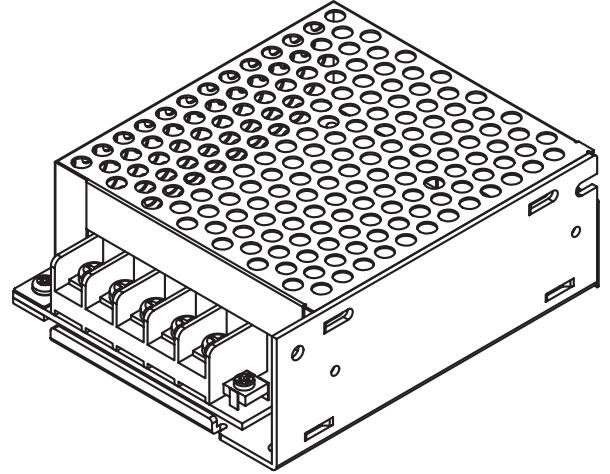
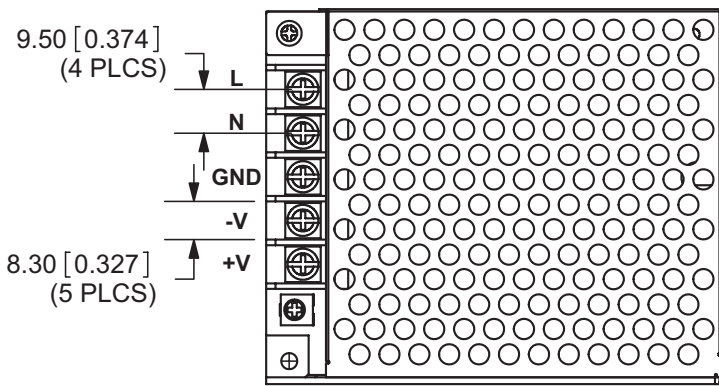
DERATING CURVES



MECHANICAL DRAWING

Note:
terminal block screws #6-32 (5 PLCS)

Tolerance: $\pm 0.3\text{mm}$ unless otherwise specified



REVISION HISTORY

rev.	description	date
1.0	initial release	08/12/2011
1.01	V-Infinity branding removed	08/21/2012
1.02	updated datasheet	11/08/2017

The revision history provided is for informational purposes only and is believed to be accurate.



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