CUI INC®

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 (Vdc)	output current max (A)	output power max (W)	ripple and noise max (mVp-p)	efficiency (%)
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

VGS-50 - XX

Base Number — Output Voltage

INPUT

parameter	conditions/description	min	nom	max	units
voltage range		88 125		264 373	Vac Vdc
frequency range		50		60	Hz
current	at 115 Vac, cold start at 230 Vac, cold start			1.3 0.65	A 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 5 V models all other models		±3 ±2 ±1		% % %
line regulation	low line to high line		±0.5		%
load regulation	3.3 V models 5 V models all other models		±2.0 ±1.0 ±0.5		% % %
start-up time	at 115 Vac, cold start at 230 Vac, cold start		1.0 0.8		s s
rise time	at 115 Vac, cold start at 230 Vac, cold start		65 50		ms ms
hold-up time	at 115 Vac, cold start at 230 Vac, cold start	10 32			ms ms

SAFETY & COMPLIANCE

parameter	conditions/description	min	nom	max	units
isolation voltage	input to output: input to case: output to case:	4,242 2,121 707			Vdc Vdc 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

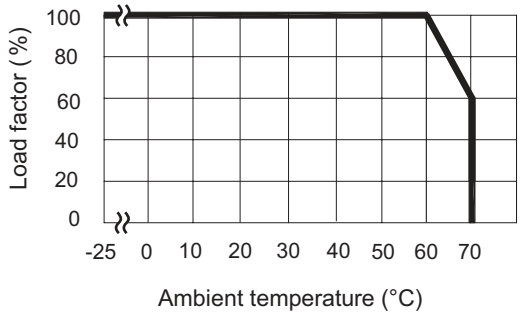
parameter	conditions/description	min	nom	max	units
operating temperature	see derating curve	-25		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	20		90	%
storage humidity	non-condensing	10		95	%
temperature coefficient	(0 ~ 50°C)		0.3		%/°C
vibration	(10 ~ 500 Hz, 1 hour per axis,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

PROTECTIONS

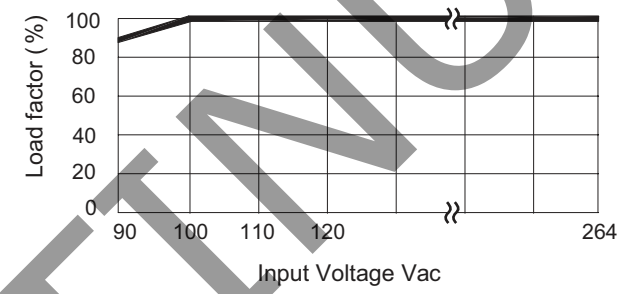
parameter	conditions/description	min	nom	max	units
over load	hiccup mode, auto recovery			110	%
over voltage	latch off mode	115		150	%
short circuit	continuous				

DERATING CURVES

Load vs. Temp



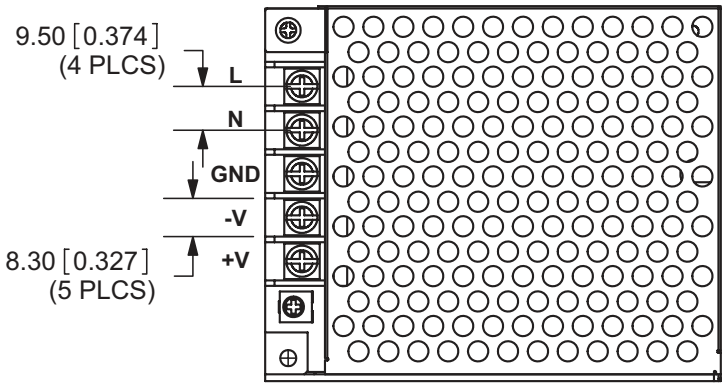
Load vs. Input Voltage

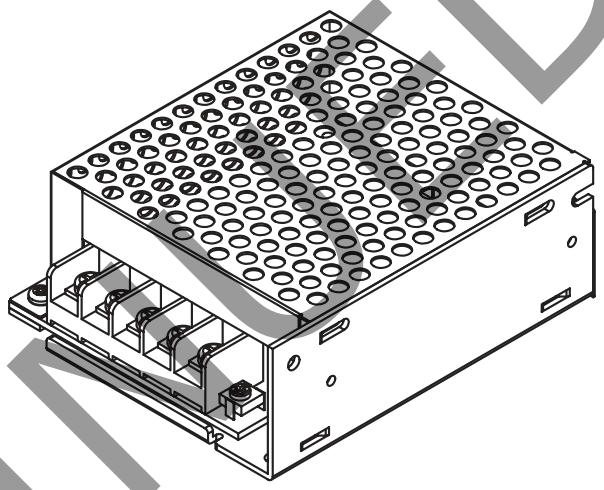


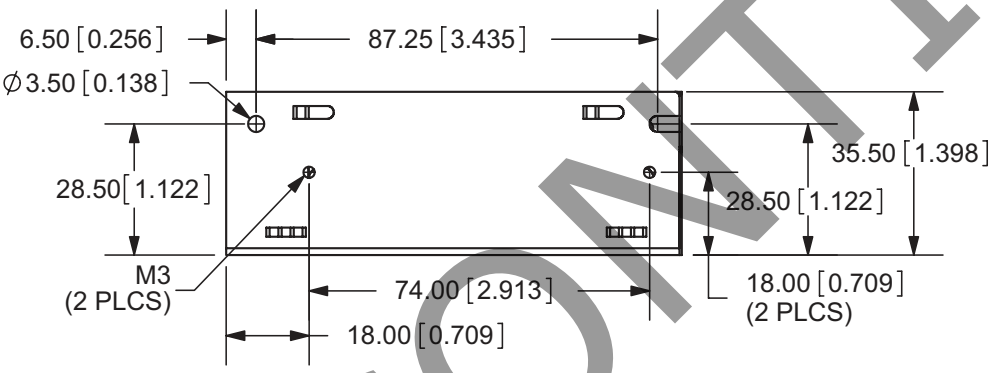
MECHANICAL DRAWING

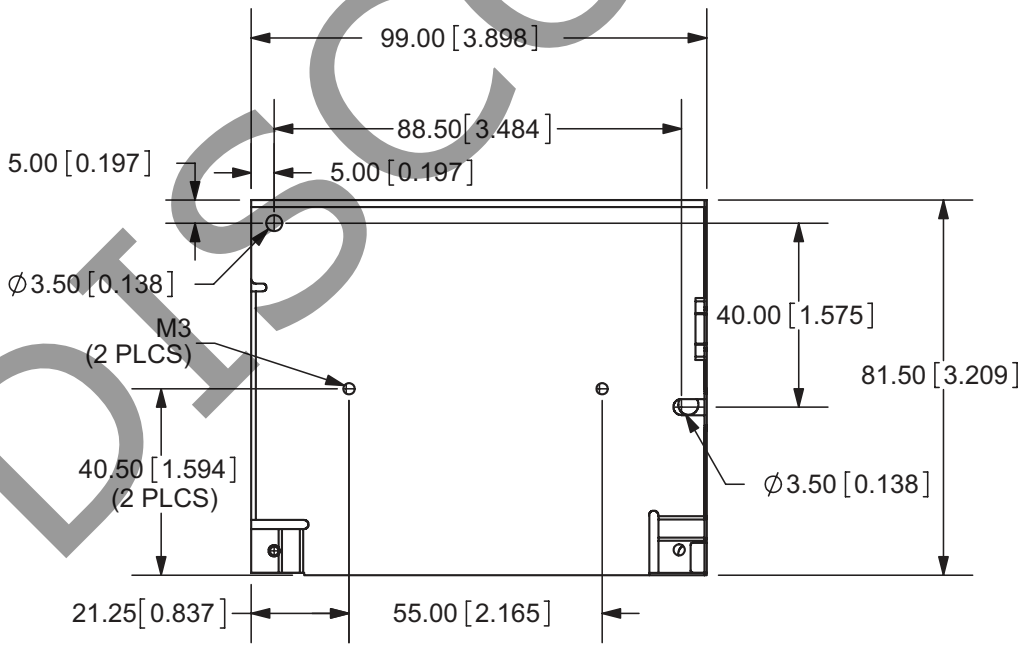
Note:
terminal block screws #6-32 (5 PLCS)

Tolerance: ±0.3mm 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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