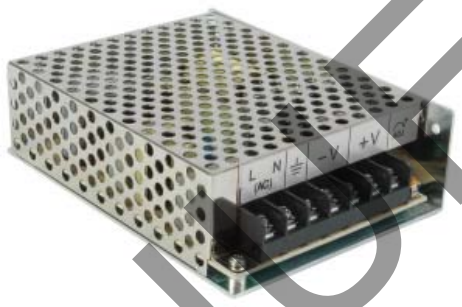
CUI INC®



# **SERIES:** VGS-100 | **DESCRIPTION:** AC-DC POWER SUPPLY

## FEATURES

- up to 110 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 89%



RoHS

| MODEL | output voltage (Vdc) | output current max (A) | output power max (W) | ripple and noise max (mVp-p) | efficiency (%) |
|---|---|---|---|---|---|
| VGS-100-3.3 | 3.3 | 20 | 66 | 100 | 70 |
| VGS-100-5 | 5 | 16 | 80 | 100 | 80 |
| VGS-100-12 | 12 | 8.5 | 102 | 120 | 86 |
| VGS-100-15 | 15 | 7 | 105 | 120 | 88 |
| VGS-100-24 | 24 | 4.5 | 108 | 120 | 88 |
| VGS-100-48 | 48 | 2.3 | 110 | 200 | 89 |

## PART NUMBER KEY

VGS-100 - **XX**

Base Number — Output Voltage

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## INPUT

| parameter | conditions/description | min | nom | max | units |
|---|---|---|---|---|---|
| voltage range | | 88<br>125 | | 264<br>373 | Vac<br>Vdc |
| frequency range | | 50 | | 60 | Hz |
| current | at 115 Vac, cold start<br>at 230 Vac, cold start | | | 2.5<br>1.4 | A<br>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<br>5 V models<br>all other models | | ±3<br>±2<br>±1 | | %<br>%<br>% |
| line regulation | low line to high line | | ±0.5 | | % |
| load regulation | 3.3 V models<br>5 V models<br>all other models | | ±2.0<br>±1.0<br>±0.5 | | %<br>%<br>% |
| start-up time | at 115 Vac, cold start<br>at 230 Vac, cold start | | 1.0<br>0.8 | | s<br>s |
| rise time | at 115 Vac, cold start<br>at 230 Vac, cold start | | 65<br>50 | | ms<br>ms |
| hold-up time | at 115 Vac, cold start<br>at 230 Vac, cold start | 10<br>32 | | | ms<br>ms |

## SAFETY & COMPLIANCE

| parameter | conditions/description | min | nom | max | units |
|---|---|---|---|---|---|
| isolation voltage | input to output:<br>input to case:<br>output to case: | 4,242<br>2,121<br>707 | | | Vdc<br>Vdc<br>Vdc |
| safety approvals | UL 60950-1 / TUV EN 60950-1 | | | | |
| EMI/EMC | EN 55022 : 1998+A1 : 2000+A2 : 2003 Class B, EN 61000-3-2 : 2000+A2 : 2005 Class A, EN 61000-3-3 : 1995+A1 : 2001, EN 61204-3 : 2000 EN 50204 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 | -20 | | 70 | °C |
| storage temperature | see derating curve | -40 | | 85 | °C |
| relative humidity | non-condensing operating | 20 | | 90 | % |
| temperature coefficient | (0 ~ 50°C) | | 0.3 | | %/°C |
| vibration | (10 ~ 500 Hz, 1 hour per axis, 3 hours total) | | 5 | | Grms |

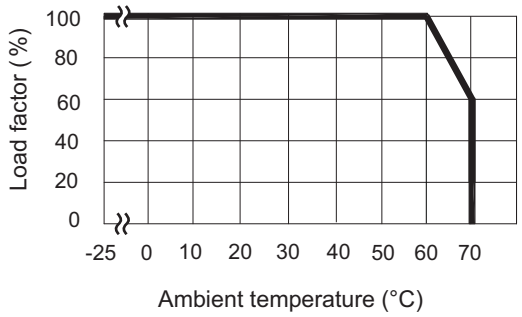
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## PROTECTIONS

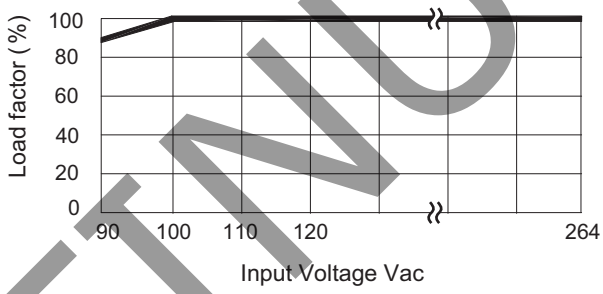
| parameter | conditions/description | min | nom | max | units |
|---|---|---|---|---|---|
| over load | Hiccup mode, auto recovery | | | 110 | % |
| over voltage | latch off mode | 115 | | 150 | % |
| short circuit | continuous | | | | |

## DERATING CURVES

Load vs. Temp




Load vs. Input Voltage

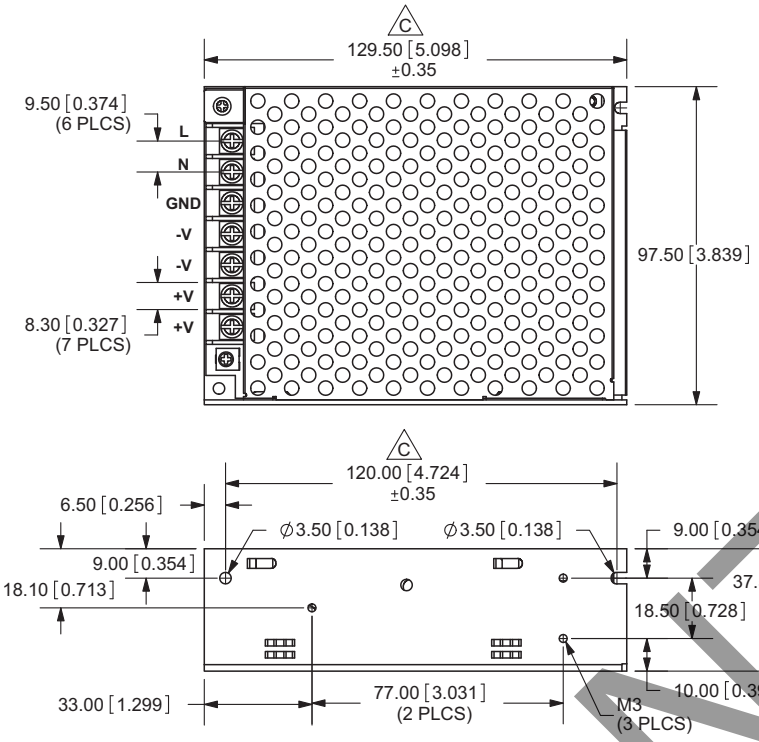



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## MECHANICAL DRAWING

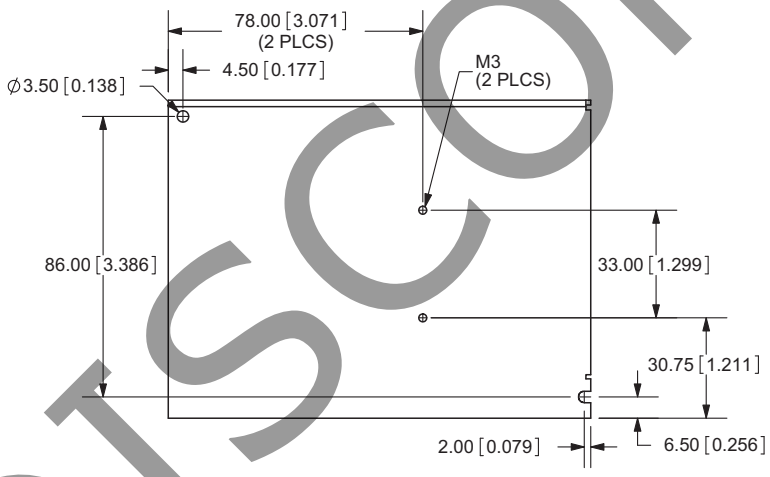
Note:
terminal block screws #6-32 (7 PLCS)

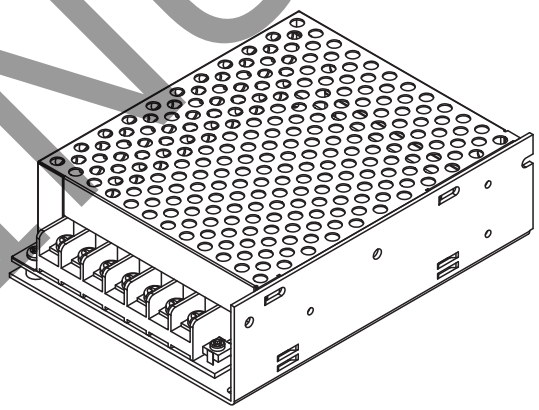
Tolerance: ±0.3mm unless otherwise specified









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## REVISION HISTORY

| rev. | description | date |
|---|---|---|
| 1.0 | initial release | 08/12/2011 |
| 1.01 | V-Infinity branding removed | 08/22/2012 |

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

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CUI INC®

**Headquarters**
20050 SW 112th Ave.
Tualatin, OR 97062
**800.275.4899**

Fax 503.612.2383
**cui**.com
techsupport@cui.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.