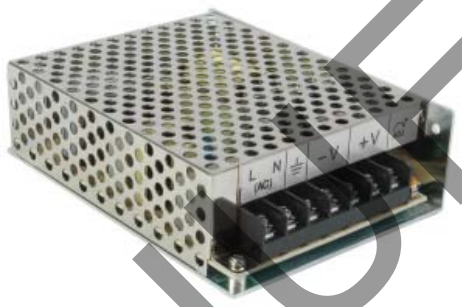
CUI INC®



# **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

## 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

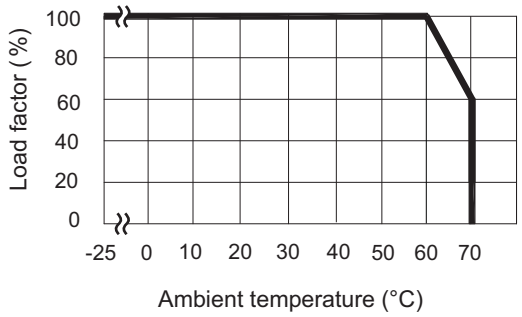
| parameter | conditions/description | min | nom | max | units |
|---|---|---|---|---|---|
| operating temperature | see derating curve | -20 | | 70 | °C |
| storage temperature | see derating curve | -40 | | 85 | °C |
| relative humidity | non-condensing operating | 20 | | 90 | % |
| temperature coefficient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

## PROTECTIONS

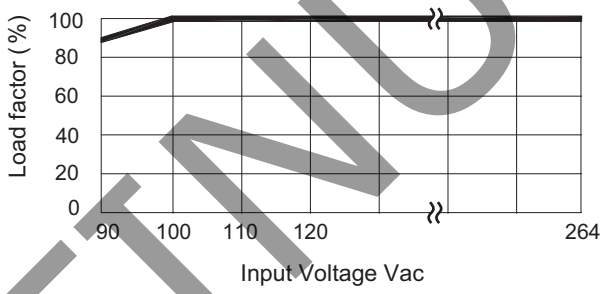
| parameter | conditions/description | min | nom | max | units |
|---|---|---|---|---|---|
| over load | Hiccup mode, auto recovery | | | 110 | % |
| over voltage | latch off mode | 115 | | 150 | % |
| short circuit | continuous | | | | |

## DERATING CURVES

Load vs. Temp



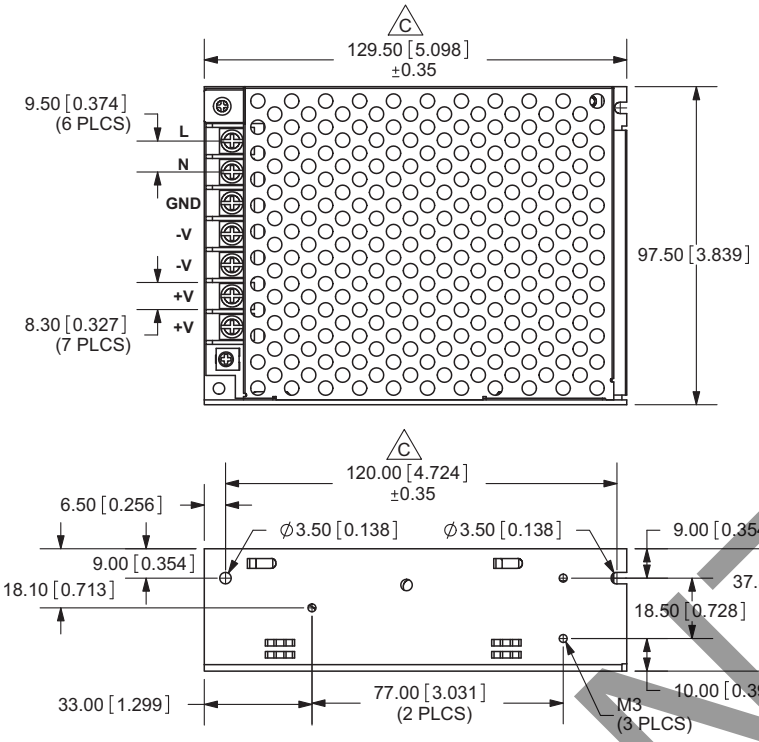

Load vs. Input Voltage

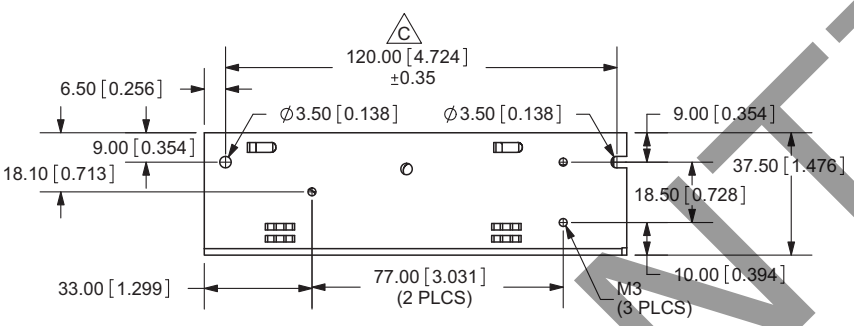


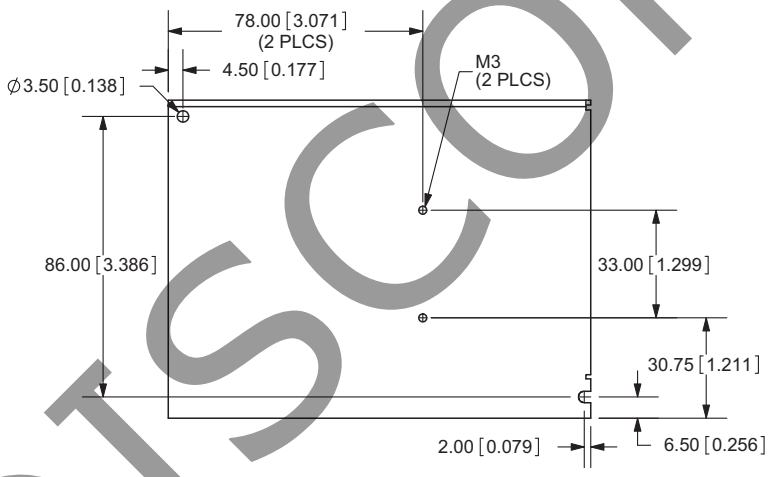
## MECHANICAL DRAWING

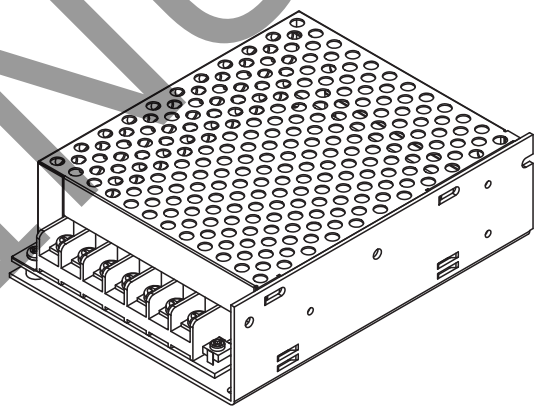
Note:
terminal block screws #6-32 (7 PLCS)

Tolerance: ±0.3mm unless otherwise specified



## REVISION HISTORY

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

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



CUI INC®

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

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