

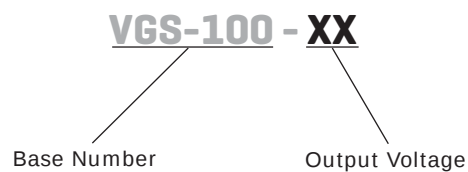
**SERIES:** VGS-100 | **DESCRIPTION:** AC-DC POWER SUPPLY

**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%



| MODEL       | output<br>voltage | output<br>current<br>max | output<br>power<br>max | ripple and<br>noise<br>max | efficiency |
|-------------|-------------------|--------------------------|------------------------|----------------------------|------------|
|             | (Vdc)             | (A)                      | (W)                    | (mVp-p)                    | (%)        |
| 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**


## 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           |     | ±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           | 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   |

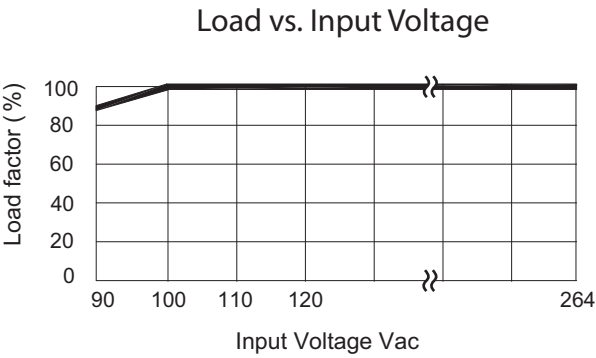
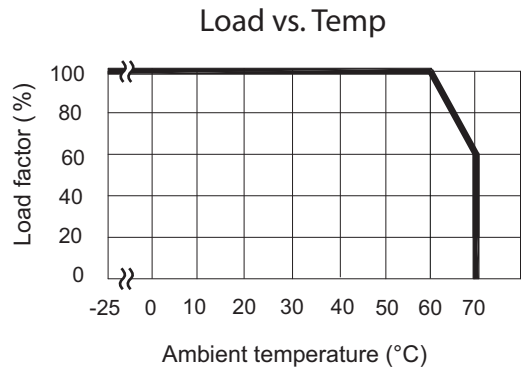
## ENVIRONMENTAL

| 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                 |     |     |     |       |

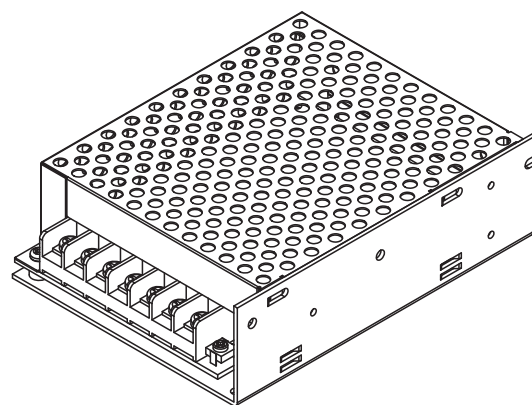
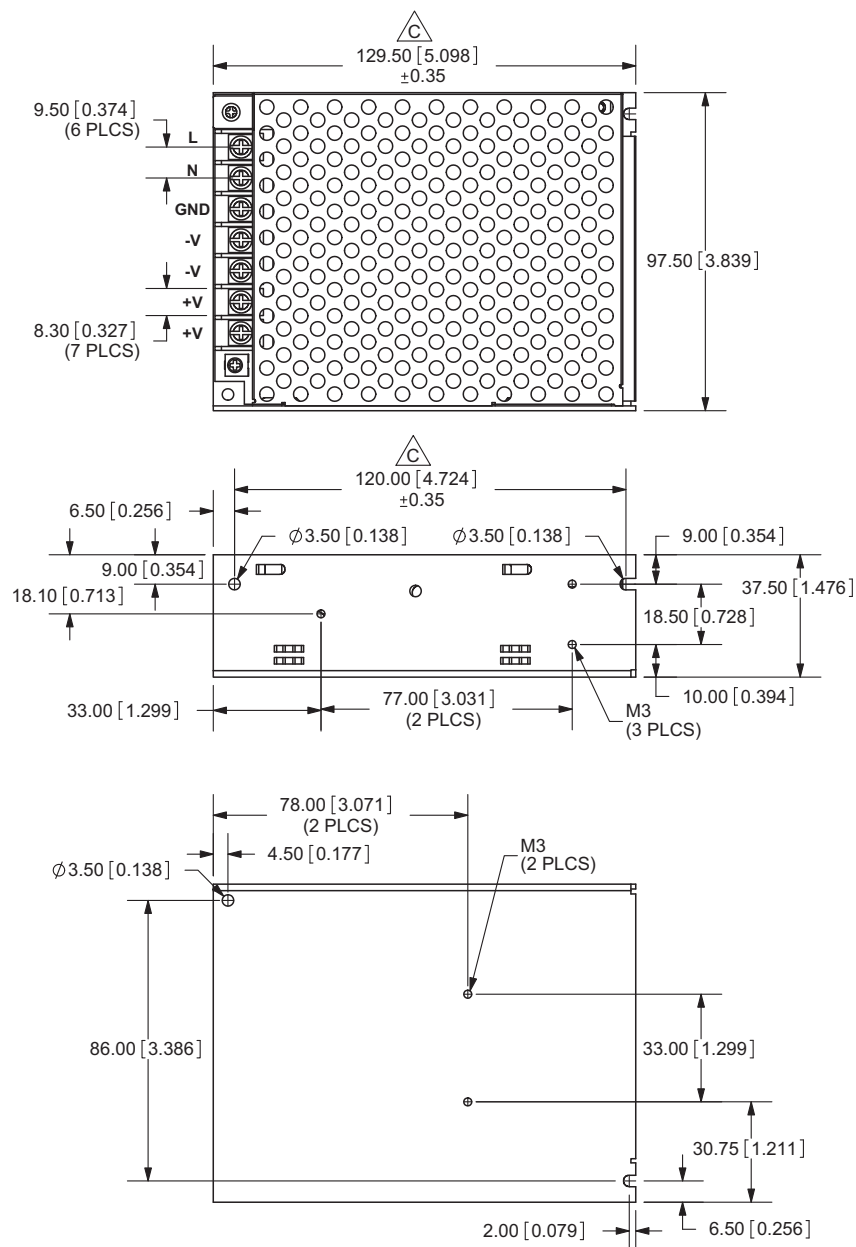
DERATING CURVES



## MECHANICAL DRAWING

Note:  
terminal block screws #6-32 (7 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 | 08/22/2012 |

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

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