


**CUI INC**

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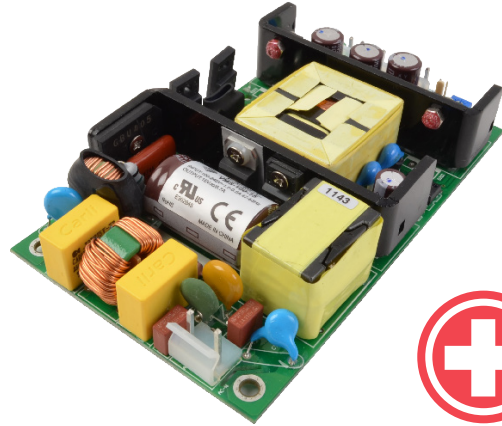
date 01/11/2024

page 1 of 4

## SERIES: VMS-100 | DESCRIPTION: AC-DC POWER SUPPLY

### FEATURES

- up to 100 W continuous power
- industry standard 3" x 5" footprint
- universal input (90~264 Vac)
- single output from 5 to 48V
- no load power consumption < 0.5W
- over voltage and short circuit protections
- full medical approvals
- built-in active PFC function
- built-in remote sense function
- no minimum load required
- efficiency up to 91%

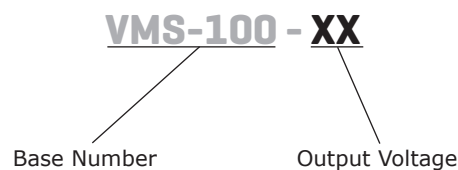


| MODEL       | output<br>voltage<br>(Vdc) | output<br>current<br>max<br>(A) | output<br>power<br>max<br>(W) | ripple and<br>noise <sup>1,2</sup><br>max<br>(mVp-p) | efficiency<br>typ<br>(%) |
|-------------|----------------------------|---------------------------------|-------------------------------|------------------------------------------------------|--------------------------|
| VMS-100-5*  | 5                          | 20                              | 100                           | 100                                                  | 85                       |
| VMS-100-9*  | 9                          | 11.2                            | 100                           | 90                                                   | 88                       |
| VMS-100-12* | 12                         | 8.4                             | 100                           | 120                                                  | 89                       |
| VMS-100-15* | 15                         | 6.7                             | 100                           | 150                                                  | 89                       |
| VMS-100-18* | 18                         | 5.6                             | 100                           | 180                                                  | 90                       |
| VMS-100-24  | 24                         | 4.2                             | 100                           | 240                                                  | 91                       |
| VMS-100-28* | 28                         | 3.6                             | 100                           | 280                                                  | 91                       |
| VMS-100-36* | 36                         | 2.8                             | 100                           | 360                                                  | 91                       |
| VMS-100-48* | 48                         | 2.1                             | 100                           | 480                                                  | 91                       |

Notes:

1. VMS-100-5: Measured at 20MHz, with 0.1μF ceramic and 220μF electrolytic capacitors
2. All other models: Measured at 20MHz, with 0.1μF ceramic and 10μF electrolytic capacitors
3. \* Discontinued model.

### PART NUMBER KEY



INPUT

| parameter      | conditions/description | min | typ | max | units |
|----------------|------------------------|-----|-----|-----|-------|
| voltage        |                        | 90  |     | 264 | Vac   |
| frequency      |                        | 47  |     | 63  | Hz    |
| inrush current | at 240 Vac             |     |     | 80  | A     |

OUTPUT

| parameter               | conditions/description           | min | typ   | max | units |
|-------------------------|----------------------------------|-----|-------|-----|-------|
| line regulation         | low line to high line, full load |     | ±0.5  |     | %     |
| load regulation         | 10% to 100% full load            |     | ±1    |     | %     |
| temperature coefficient |                                  |     | ±0.05 |     | %/°C  |
| hold-up time            |                                  |     | 16    |     | ms    |
| adjustability           |                                  |     |       | ±5  | %     |
| switching frequency     |                                  | 80  |       | 100 | kHz   |

PROTECTIONS

| parameter                | conditions/description              | min | typ | max | units |
|--------------------------|-------------------------------------|-----|-----|-----|-------|
| over voltage protection  | recycle ac input to restart         |     |     |     |       |
| short circuit protection | hiccup mode, recovers automatically |     |     |     |       |

SAFETY & COMPLIANCE

| parameter         | conditions/description                                                                                                                                   | min     | typ | max | units |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|-----|-------|
| isolation voltage | input to output                                                                                                                                          | 5,656   |     |     | Vdc   |
| safety approvals  | IEC 60601-1, EN 60601-1, UL 60601-1                                                                                                                      |         |     |     |       |
| EMI/EMC           | EN 55024, EN 61000-6-1, EN 61204-3, EN 60601-1-2, EN 61000-3-2 Class (A, B, C, D), EN 61000-3-3, EN 55011 Class B, EN 55022 Class B, FCC Part 15 Class B |         |     |     |       |
| leakage current   |                                                                                                                                                          |         |     | 0.3 | mA    |
| RoHS compliant    | yes                                                                                                                                                      |         |     |     |       |
| MTBF              | MIL-HDBK-217F, GB, at 25°C, 115 Vac                                                                                                                      | 200,000 |     |     | hrs   |

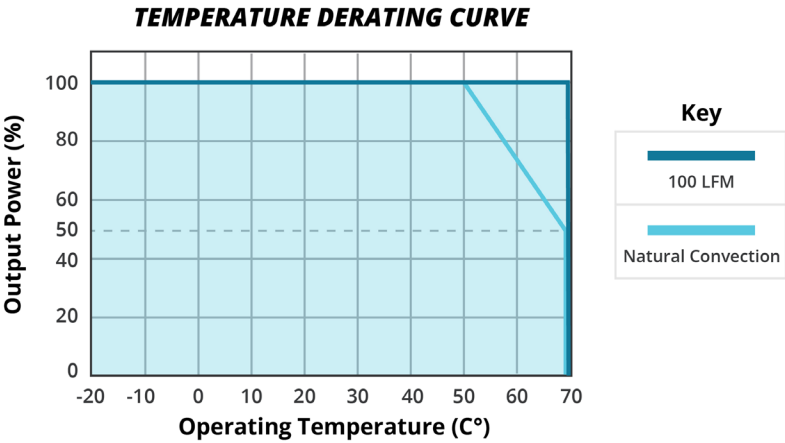
ENVIRONMENTAL

| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | see derating curve     | -20 |     | 70  | °C    |
| storage temperature   |                        | -20 |     | 85  | °C    |
| operating humidity    | non-condensing         |     |     | 93  | %     |

MECHANICAL

| parameter      | conditions/description                           | min | typ | max | units |
|----------------|--------------------------------------------------|-----|-----|-----|-------|
| dimensions     | 127.00 x 76.20 x 26.67 (5.00 x 3.00 x 1.05 inch) |     |     |     | mm    |
| weight         |                                                  |     |     | 270 | g     |
| cooling method | free air convection (see derating curves below)  |     |     |     |       |

DERATING CURVES



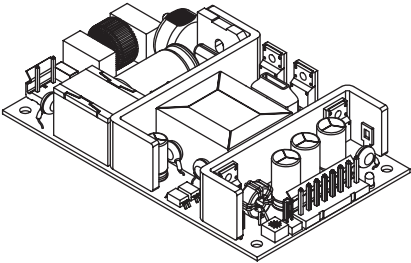
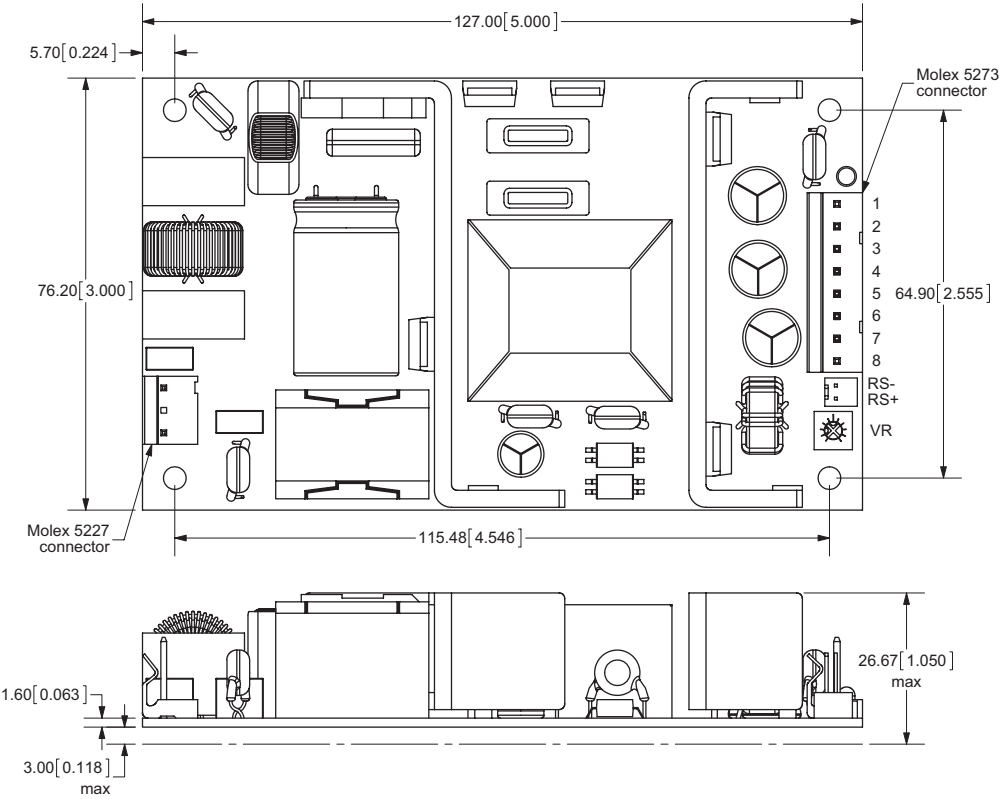
MECHANICAL DRAWING

units: mm [inch]  
tolerance: mm:  $\pm 0.5$   
inch:  $\pm 0.02$

| CN1 |            |
|-----|------------|
| 1   | AC Line    |
| 2   | No pin     |
| 3   | AC Neutral |

| CN2 |     |
|-----|-----|
| 1   | -Vo |
| 2   | -Vo |
| 3   | -Vo |
| 4   | -Vo |
| 5   | +Vo |
| 6   | +Vo |
| 7   | +Vo |
| 8   | +Vo |

| CN3 |                        |
|-----|------------------------|
| RS- | Remote Voltage Sense - |
| RS+ | Remote Voltage Sense + |



Note: 1. All specifications measured at 25°C, 115/230Vac input voltage, and 75% load unless otherwise noted.

## REVISION HISTORY

| rev. | description                                                                                                       | date       |
|------|-------------------------------------------------------------------------------------------------------------------|------------|
| 1.0  | initial release                                                                                                   | 11/03/2011 |
| 1.01 | V-Infinity branding removed                                                                                       | 08/22/2012 |
| 1.02 | updated spec                                                                                                      | 07/22/2013 |
| 1.03 | company logo updated                                                                                              | 12/21/2020 |
| 1.04 | derating curve updated                                                                                            | 05/06/2021 |
| 1.05 | discontinued models VMS-100-5, VMS-100-9, VMS-100-12, VMS-100-15, VMS-100-18, VMS-100-28, VMS-100-36 & VMS-100-48 | 01/11/2024 |

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



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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.