


**CUI INC**

a bel group

date 05/10/2021

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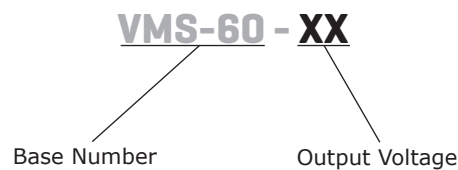
**SERIES: VMS-60 | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- up to 60 W continuous power
- industry standard 2" x 4" footprint
- universal input (90 ~ 264 Vac)
- single output from 5 to 48 V
- no load power < 0.5W
- over voltage and short circuit protections
- full medical safety approvals
- efficiency up to 90%



| MODEL     | output<br>voltage | output<br>current<br>max | output<br>power<br>max | ripple<br>and noise <sup>1</sup><br>max | efficiency <sup>2</sup> |
|-----------|-------------------|--------------------------|------------------------|-----------------------------------------|-------------------------|
|           | (Vdc)             | (A)                      | (W)                    | (mVp-p)                                 | typ<br>(%)              |
| VMS-60-5  | 5                 | 8                        | 40                     | 50                                      | 82                      |
| VMS-60-12 | 12                | 5                        | 60                     | 120                                     | 87                      |
| VMS-60-15 | 15                | 4                        | 60                     | 150                                     | 88                      |
| VMS-60-24 | 24                | 2.5                      | 60                     | 240                                     | 89                      |
| VMS-60-48 | 48                | 1.25                     | 60                     | 480                                     | 90                      |

Notes: 1. Measured at 20MHz, with 0.1uF ceramic and 10uF electrolytic capacitors.  
2. Measured at full load, 230 Vac, and 25°C

**PART NUMBER KEY**


## INPUT

| parameter      | conditions/description   | min | typ | max        | units  |
|----------------|--------------------------|-----|-----|------------|--------|
| voltage        |                          | 90  |     | 264        | Vac    |
| frequency      |                          | 47  |     | 63         | Hz     |
| input current  | at 100 Vac<br>at 240 Vac |     |     | 1.6<br>0.8 | A<br>A |
| inrush current | at 240 Vac               |     |     | 75         | 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   |     | %     |
| hold-up time        | 115 Vac                          |     | 16   |     | ms    |
| adjustability       |                                  |     |      | ±5  | %     |
| switching frequency |                                  |     | 65   |     | KHz   |

## PROTECTIONS

| parameter                | conditions/description              | min | typ | max | units |
|--------------------------|-------------------------------------|-----|-----|-----|-------|
| over voltage protection  | TVS component to clamp              |     |     |     |       |
| 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 55011 Class B, FCC CFR 47 Part 18 EN 60601-1-2, EN 61000-3-2, EN 61000-3-3 |       |     |     |       |
| leakage current   |                                                                               |       |     | 0.1 | mA    |
| RoHS compliant    | yes                                                                           |       |     |     |       |

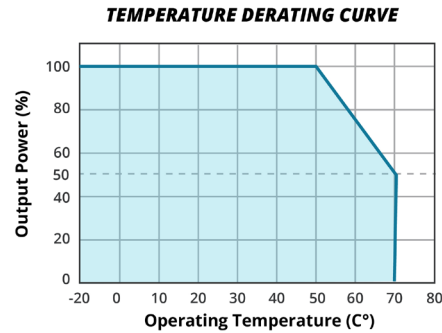
## ENVIRONMENTAL

| 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

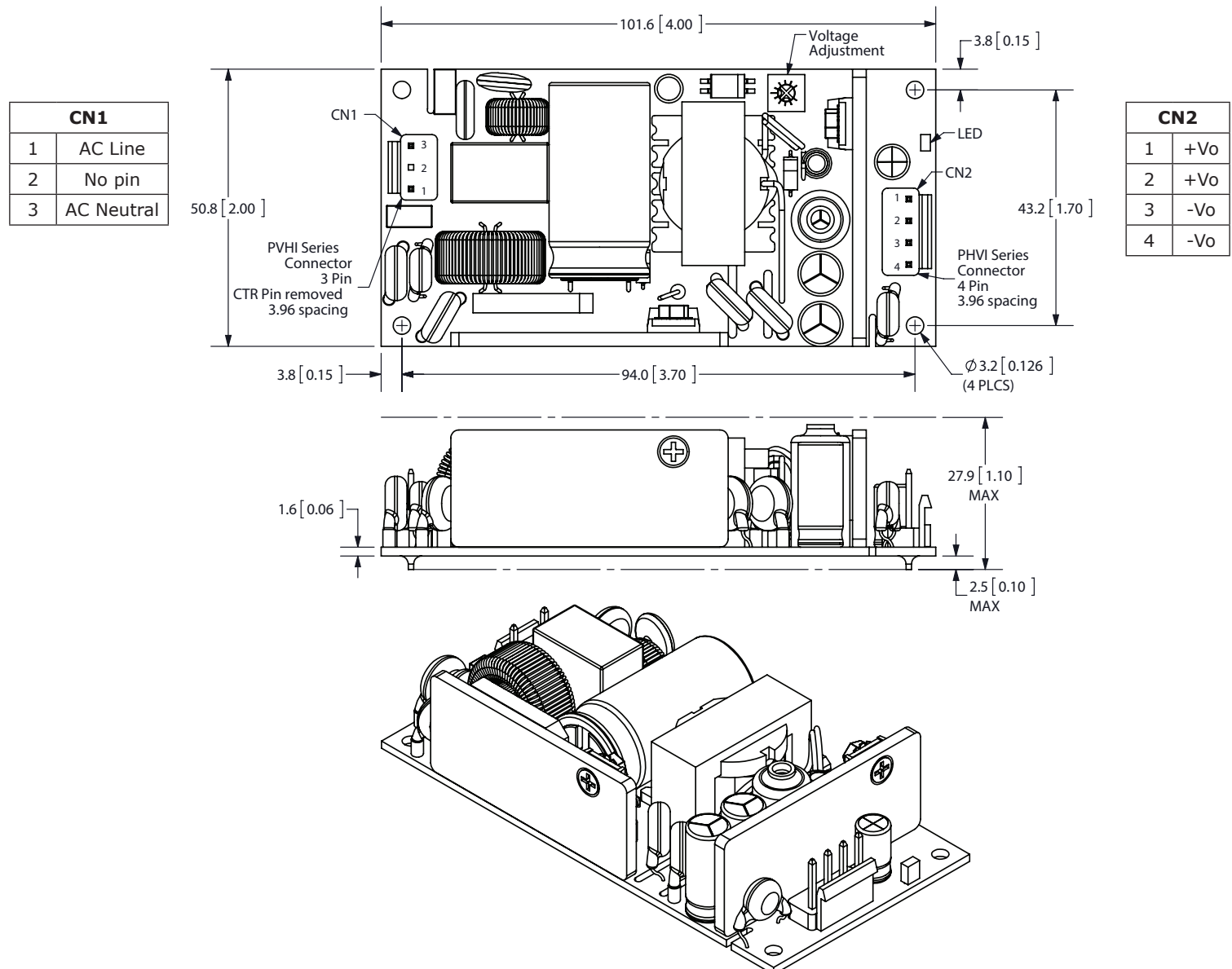
| parameter      | conditions/description                             | min | typ | max | units |
|----------------|----------------------------------------------------|-----|-----|-----|-------|
| dimensions     | 4.0 x 2.0 x 1.1 (101.6 x 50.8 x 27.94 mm)          |     |     |     | inch  |
| weight         |                                                    |     |     | 125 | g     |
| cooling method | free air convection<br>(see derating curves below) |     |     |     |       |

## DERATING CURVES



## MECHANICAL DRAWING

units: mm[in]

tolerance: mm: X.X =  $\pm 0.5$  ; X.XX =  $\pm 0.25$ inch: X.XX  $\pm 0.02$  ; X.XXX =  $\pm 0.010$ 

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             | 10/26/2011 |
| 1.01 | V-Infinity branding removed | 08/27/2012 |
| 1.02 | updated spec                | 07/22/2013 |
| 1.03 | company logo updated        | 12/21/2020 |
| 1.04 | derating curve updated      | 05/10/2021 |

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.

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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.