



## SERIES: VMS-60 | DESCRIPTION: AC-DC POWER SUPPLY

### FEATURES

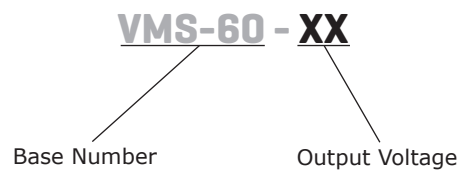
- up to 60 W continuous power
- industry standard 2" x 4" footprint
- universal input (90 ~ 264 Vac)
- single output from 5 to 48 V
- no load power < 0.5W
- over voltage and short circuit protections
- full medical safety approvals
- efficiency up to 90%



| MODEL     | output<br>voltage<br>(Vdc) | output<br>current<br>max<br>(A) | output<br>power<br>max<br>(W) | ripple<br>and noise <sup>1</sup><br>max<br>(mVp-p) | efficiency <sup>2</sup><br>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

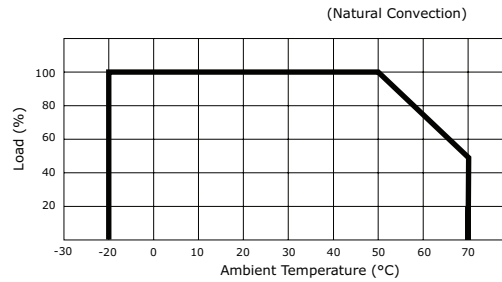
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | see derating curve     | -20 |     | 70  | °C    |
| storage temperature   |                        | -20 |     | 85  | °C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

output power vs. ambient temperature

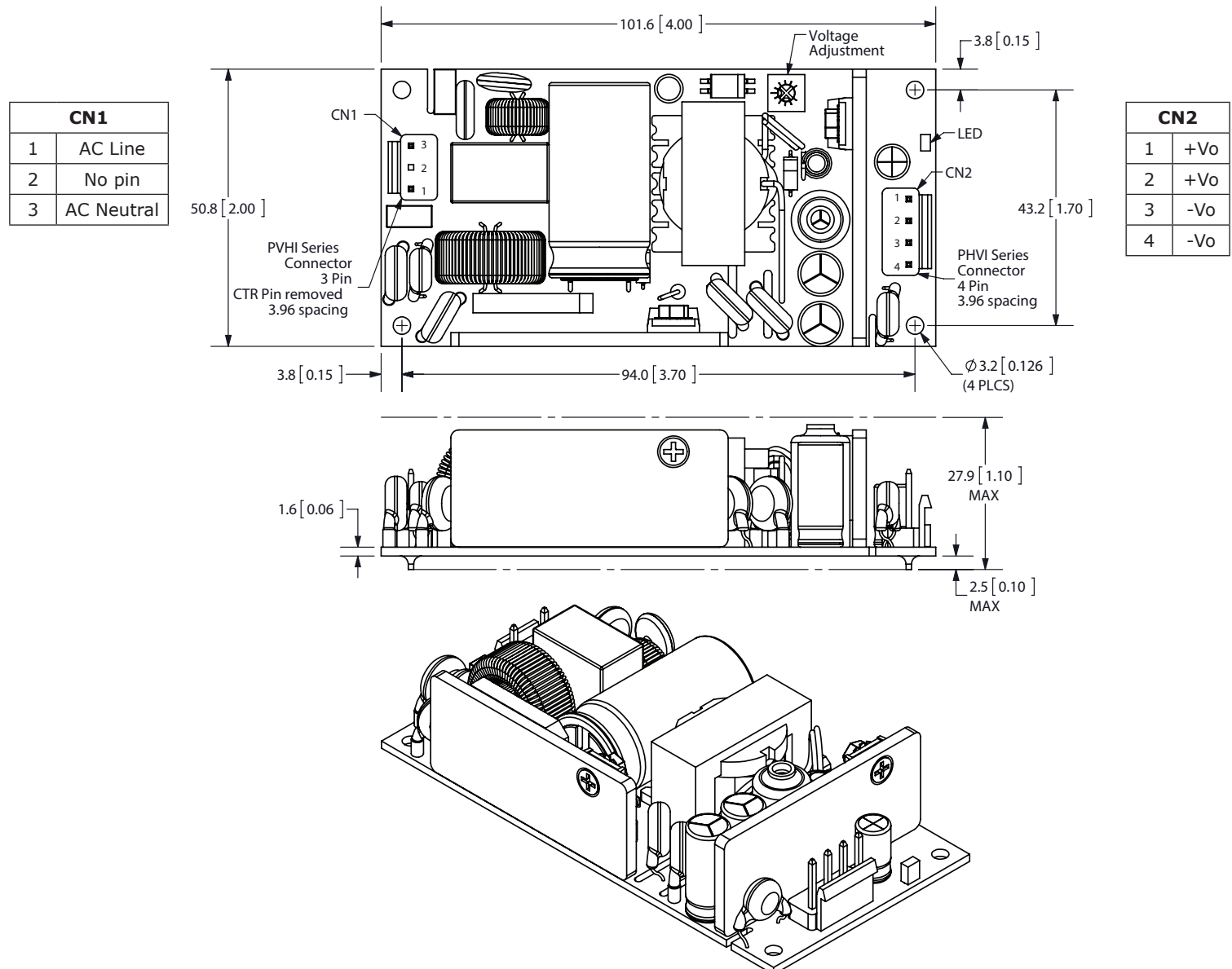


## MECHANICAL DRAWING

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 |

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



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