

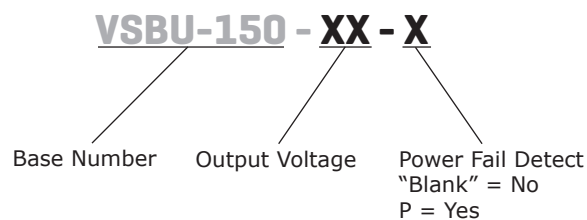

**SERIES:** VSBU-150 | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

- up to 150 W combined power
- open frame
- active power factor correction
- class I insulation
- output voltage available from 9 to 48 V dc
- over voltage protection, input surge current protection, over load protection
- 88% efficiency



| MODEL       | output<br>voltage | output<br>current | output<br>power | ripple and<br>noise | efficiency |
|-------------|-------------------|-------------------|-----------------|---------------------|------------|
|             | (Vdc)             | max<br>(A)        | max<br>(W)      | max<br>(mVp-p)      | typ<br>(%) |
| VSBU-150-9  | 9                 | 16                | 144             | 90                  | 88         |
| VSBU-150-12 | 12                | 12.5              | 150             | 120                 | 88         |
| VSBU-150-15 | 15                | 10                | 150             | 150                 | 88         |
| VSBU-150-18 | 18                | 8.33              | 150             | 180                 | 88         |
| VSBU-150-24 | 24                | 6.25              | 150             | 240                 | 88         |
| VSBU-150-30 | 30                | 5                 | 150             | 300                 | 88         |
| VSBU-150-36 | 36                | 4.17              | 150             | 360                 | 88         |
| VSBU-150-48 | 48                | 3.13              | 150             | 480                 | 88         |

**PART NUMBER KEY**


## INPUT

| parameter               | conditions/description                  | min  | typ | max | units |
|-------------------------|-----------------------------------------|------|-----|-----|-------|
| voltage                 |                                         | 90   |     | 264 | Vac   |
| frequency               |                                         | 47   |     | 63  | Hz    |
| current                 | at 115 Vac, full load                   |      |     | 2.0 | A     |
|                         | at 230 Vac, full load                   |      |     | 0.8 | A     |
| inrush current          | at 115 Vac, 25°C, full load, cold start |      |     | 40  | A     |
|                         | at 230 Vac, 25°C, full load, cold start |      |     | 100 | A     |
| power factor correction | at 240 Vac, full load                   | 0.95 |     | 1.0 |       |

## OUTPUT

| parameter               | conditions/description            | min   | typ | max  | units |
|-------------------------|-----------------------------------|-------|-----|------|-------|
| line regulation         | full load                         |       | 0.5 | 1    | %     |
| load regulation         | at 230 Vac                        |       |     | 5    | %     |
| temperature coefficient | all output                        | -0.04 |     | 0.04 | %/°C  |
| transient response      | full load to half load at 100 Vac |       |     | 4    | ms    |
| start-up                | full load at 100 Vac              |       |     | 3    | s     |
| hold-up                 | full load at 110 Vac              | 16    |     |      | ms    |

## PROTECTIONS

| parameter               | conditions/description | min | typ | max | units |
|-------------------------|------------------------|-----|-----|-----|-------|
| over voltage protection |                        | 112 |     | 132 | %     |
| over current protection |                        | 110 |     | 150 | %     |

## SAFETY & COMPLIANCE

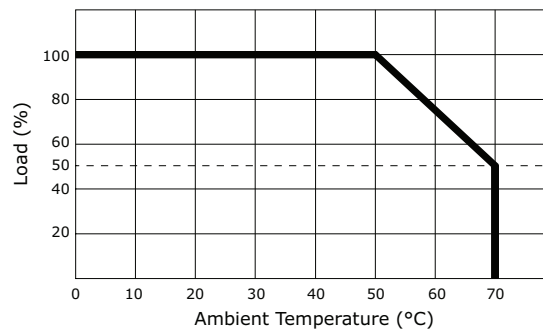
| parameter            | conditions/description                                             | min     | typ | max  | units |
|----------------------|--------------------------------------------------------------------|---------|-----|------|-------|
| isolation voltage    | primary to secondary                                               | 4,242   |     |      | Vdc   |
|                      | primary to earth ground                                            | 2,837   |     |      | Vdc   |
| isolation resistance | test voltage of 500 Vdc                                            | 50      |     |      | MΩ    |
| safety approvals     | UL/cUL, TUV-Baurart, CE, CISPR-22 class B, FCC part 15 class B, CB |         |     |      |       |
| EMI/EMC              | CISPR 22 class B, FCC part-15 class B                              |         |     |      |       |
| leakage current      | full load at 240 Vac                                               |         |     | 0.75 | mA    |
| MTBF                 | MIL-HDBK-217F, 25°C ambient                                        | 100,000 |     |      | hrs   |
| RoHS                 | 2011/65/EU                                                         |         |     |      |       |

## ENVIRONMENTAL

| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | see derating curve     | 0   |     | 70  | °C    |
| storage temperature   |                        | -40 |     | 85  | °C    |
| operating humidity    | non-condensing         | 5   |     | 95  | %     |
| storage humidity      |                        | 5   |     | 95  | %     |

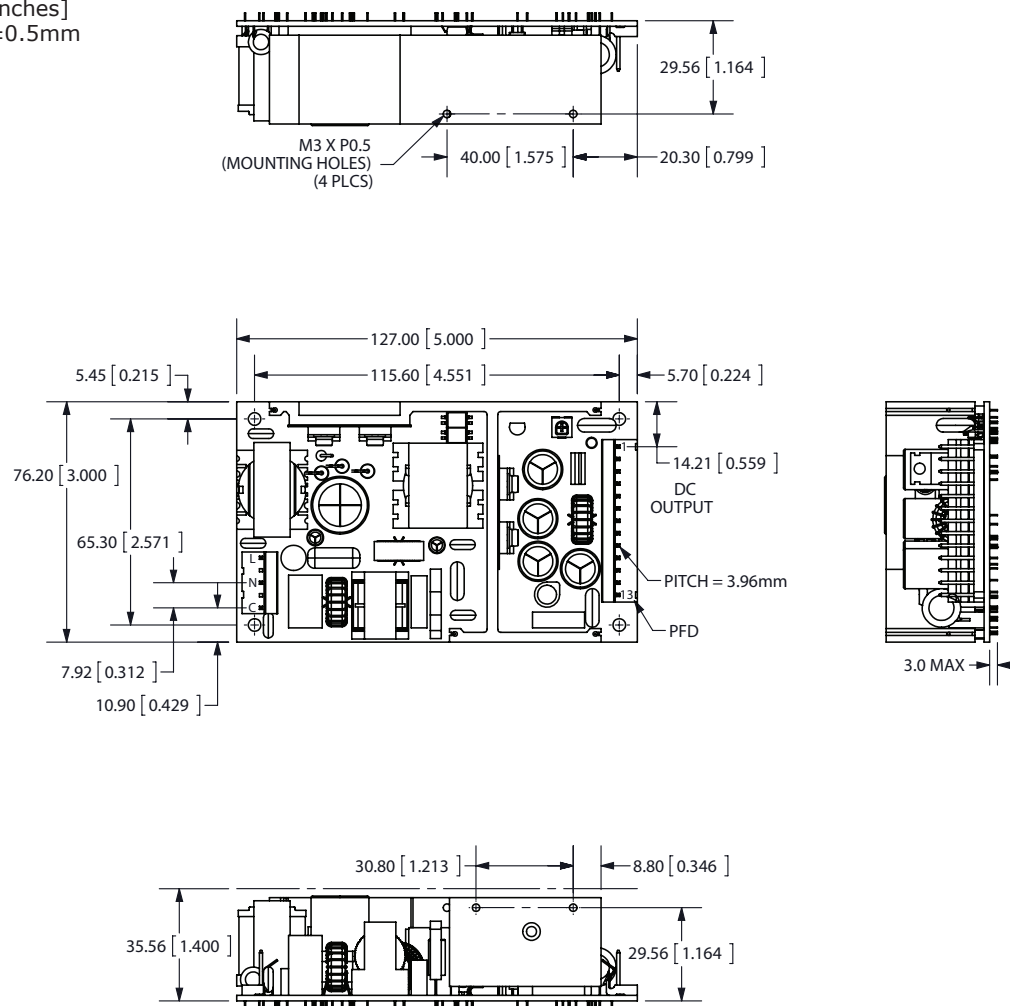
## DERATING CURVES

output power vs. ambient temperature



## MECHANICAL DRAWING

units: mm[inches]  
tolerance:  $\pm 0.5$ mm



| CN1 |            |
|-----|------------|
| 1   | ac line    |
| 2   | ac neutral |
| 3   | ground     |

note:

- Input connector mates with Molex housing 09-52-4054 and Molex 2478 series crimp terminal.
- Output connector mates with Molex housing 09-52-4134 and Molex 2478 series crimp terminal.

| CN2 |     |
|-----|-----|
| 1   | V1  |
| 2   | V1  |
| 3   | V1  |
| 4   | V1  |
| 5   | V1  |
| 6   | V1  |
| 7   | com |
| 8   | com |
| 9   | com |
| 10  | com |
| 11  | com |
| 12  | com |
| 13  | n/c |

\*pin 13 for optional power fail detect

## REVISION HISTORY

| rev. | description                                         | date       |
|------|-----------------------------------------------------|------------|
| 1.0  | initial release                                     | 11/19/2010 |
| 1.01 | new template applied                                | 08/12/2011 |
| 1.02 | V-Infinity branding removed                         | 08/16/2012 |
| 1.03 | updated drawing pinouts                             | 01/15/2013 |
| 1.04 | updated derating curve                              | 02/12/2013 |
| 1.05 | updated efficiencies                                | 07/01/2013 |
| 1.06 | updated recommended mating connectors, updated spec | 05/22/2014 |

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



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