

**SERIES: VSUU-120-T | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- up to 120 W continuous power
- industry standard 3" x 5" footprint
- U-Frame
- universal input 90-260 Vac
- triple output
- active power correction
- internal EMI filter
- no minimum load required
- class I
- efficiency 80%
- input surge current, over voltage, over load, and over current protections

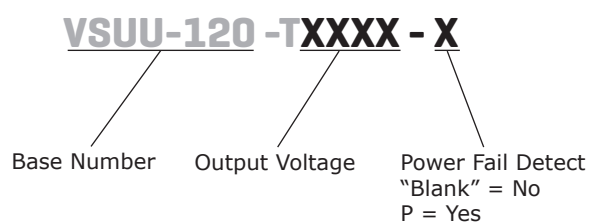


| MODEL          |     | output voltage | output current | output power | ripple and noise | efficiency |
|----------------|-----|----------------|----------------|--------------|------------------|------------|
|                |     | (Vdc)          | max (A)        | max (W)      | max (mVp-p)      | typ (%)    |
| VSUU-120-T312A | Vo1 | 3.3            | 15             | 120          | 66               | 80         |
|                | Vo2 | 12             | 6              | 120          | 120              | 80         |
|                | Vo3 | -12            | 0.8            | 120          | -120             | 80         |
| VSUU-120-T312A | Vo1 | 3.3            | 15             | 120          | 66               | 80         |
|                | Vo2 | 12             | 6              | 120          | 120              | 80         |
|                | Vo3 | 12             | 0.8            | 120          | 120              | 80         |
| VSUU-120-T125A | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 12             | 6              | 120          | 120              | 80         |
|                | Vo3 | -5             | 0.8            | 120          | -50              | 80         |
| VSUU-120-T125B | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 12             | 6              | 120          | 150              | 80         |
|                | Vo3 | 5              | 0.8            | 120          | 50               | 80         |
| VSUU-120-T512A | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 12             | 6              | 120          | 120              | 80         |
|                | Vo3 | -12            | 0.8            | 120          | -120             | 80         |
| VSUU-120-T512B | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 12             | 6              | 120          | 120              | 80         |
|                | Vo3 | 12             | 0.8            | 120          | 120              | 80         |
| VSUU-120-T515A | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 15             | 6              | 120          | 150              | 80         |
|                | Vo3 | -15            | 0.8            | 120          | -150             | 80         |
| VSUU-120-T515B | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 15             | 6              | 120          | 150              | 80         |
|                | Vo3 | 15             | 0.8            | 120          | 150              | 80         |
| VSUU-120-T524A | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 24             | 3.5            | 120          | 240              | 80         |
|                | Vo3 | -24            | 0.8            | 120          | -240             | 80         |
| VSUU-120-T524B | Vo1 | 5              | 15             | 120          | 50               | 80         |
|                | Vo2 | 24             | 3.5            | 120          | 240              | 80         |
|                | Vo3 | 24             | 0.8            | 120          | 240              | 80         |

continued on page 2

| 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-120-T305A  | Vo1 | 5                 | 15                | 120             | 50                  | 80         |
|                 | Vo2 | 24                | 3.5               | 120             | 240                 | 80         |
|                 | Vo3 | -12               | 0.8               | 120             | -120                | 80         |
| VSBU-120-T305B  | Vo1 | 5                 | 15                | 120             | 50                  | 80         |
|                 | Vo2 | 24                | 3.5               | 120             | 240                 | 80         |
|                 | Vo3 | 12                | 0.8               | 120             | 120                 | 80         |
| VSBU-120-T3125A | Vo1 | 3.3               | 15                | 120             | 66                  | 80         |
|                 | Vo2 | 12                | 6                 | 120             | 120                 | 80         |
|                 | Vo3 | -5                | 0.8               | 120             | -50                 | 80         |
| VSBU-120-T3125B | Vo1 | 3.3               | 15                | 120             | 66                  | 80         |
|                 | Vo2 | 12                | 6                 | 120             | 120                 | 80         |
|                 | Vo3 | 5                 | 0.8               | 120             | 50                  | 80         |
| VSBU-120-T510A  | Vo1 | 5                 | 15                | 120             | 50                  | 80         |
|                 | Vo2 | 10                | 6                 | 120             | 100                 | 80         |
|                 | Vo3 | -10               | 1                 | 120             | -100                | 80         |
| VSBU-120-T510B  | Vo1 | 5                 | 15                | 120             | 50                  | 80         |
|                 | Vo2 | 10                | 6                 | 120             | 100                 | 80         |
|                 | Vo3 | 10                | 1                 | 120             | 100                 | 80         |
| VSBU-120-T3512A | Vo1 | 3.3               | 15                | 91.5            | 66                  | 80         |
|                 | Vo2 | 5                 | 6                 | 91.5            | 50                  | 80         |
|                 | Vo3 | -12               | 1                 | 91.5            | -120                | 80         |
| VSBU-120-T3512B | Vo1 | 3.3               | 15                | 91.5            | 66                  | 80         |
|                 | Vo2 | 5                 | 6                 | 91.5            | 50                  | 80         |
|                 | Vo3 | 12                | 1                 | 91.5            | 120                 | 80         |

## PART NUMBER KEY



## INPUT

| parameter      | conditions/description                                                             | min       | typ      | max        | units      |
|----------------|------------------------------------------------------------------------------------|-----------|----------|------------|------------|
| voltage        |                                                                                    | 90<br>130 |          | 260<br>370 | Vac<br>Vdc |
| frequency      |                                                                                    | 47        |          | 63         | Hz         |
| current        | at 115 Vac, full load<br>at 230 Vac, full load                                     |           |          | 1.7<br>1.0 | A<br>A     |
| inrush current | at 115 Vac, 25°C, full load, cold start<br>at 230 Vac, 25°C, full load, cold start |           | 12<br>26 | 15<br>30   | A<br>A     |
| power factor   | full load at 90 ~ 260 Vac                                                          | 0.95      | 0.97     | 1.0        |            |

## OUTPUT

| parameter               | conditions/description            | min | typ    | max | units |
|-------------------------|-----------------------------------|-----|--------|-----|-------|
| line regulation         | full load                         |     | 0.5    | 1   | %     |
| load regulation         | at 230 Vac                        |     | 3      | 5   | %     |
| temperature coefficient | all output                        |     | ± 0.04 |     | %/°C  |
| transient response      | full load to half load at 100 Vac |     |        | 4   | ms    |
| start-up                | full load at 100 Vac              | 0.3 | 1      | 2   | s     |
| hold-up                 | full load at 110 Vac              | 16  |        |     | ms    |

## PROTECTION CIRCUITS

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

## SAFETY & COMPLIANCE

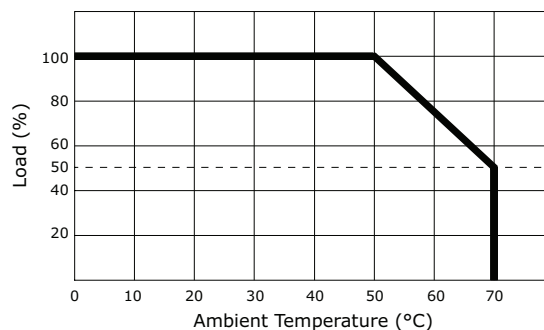
| parameter            | conditions/description                          | min            | typ | max  | units      |
|----------------------|-------------------------------------------------|----------------|-----|------|------------|
| isolation voltage    | primary to secondary<br>primary to earth ground | 4,242<br>2,121 |     |      | Vdc<br>Vdc |
| isolation resistance | test voltage of 500 Vdc                         | 50             |     |      | MΩ         |
| safety approvals     | UL 60950-1 2nd edition                          |                |     |      |            |
| EMI/EMC              | CISPR 22 class B, FCC part-15 class B           |                |     |      |            |
| leakage current      | full load at 240 Vac                            |                | 0.4 | 0.75 | mA         |
| RoHS compliant       | yes                                             |                |     |      |            |

## ENVIRONMENTAL

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

## DERATING CURVES

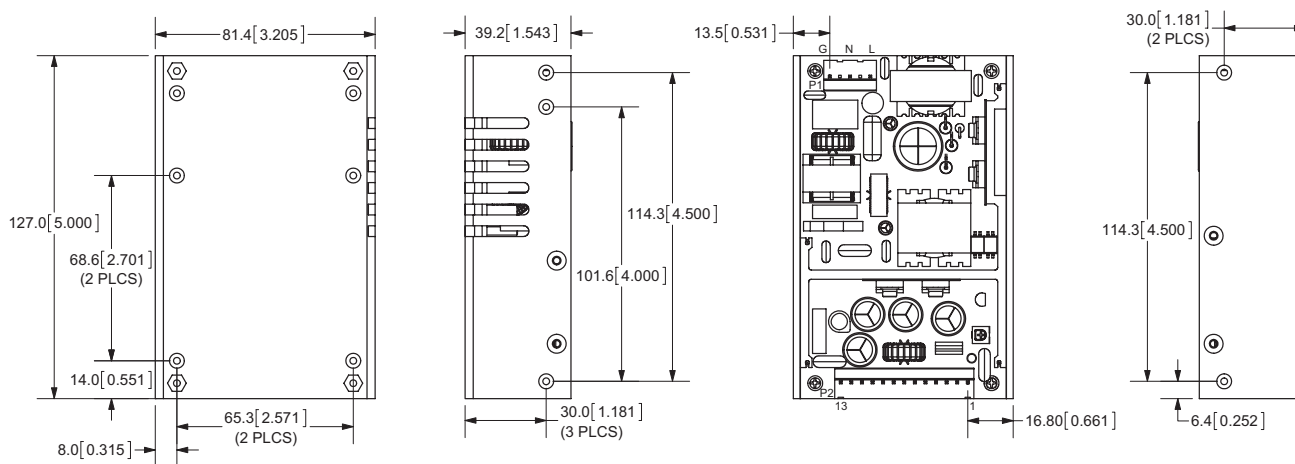
output power vs. ambient temperature



## MECHANICAL DRAWING

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

| CN2 |     |
|-----|-----|
| 1   | Vo2 |
| 2   | Vo2 |
| 3   | Vo1 |
| 4   | Vo1 |
| 5   | Vo1 |
| 6   | Vo1 |
| 7   | com |
| 8   | com |
| 9   | com |
| 10  | Vo3 |
| 11  | com |
| 12  | com |
| 13  | n/c |



\*pin 13 for optional  
power fail detect

note:

- Weight: 476~582 g (approx.)
- 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.

## REVISION HISTORY

| rev. | description                               | date       |
|------|-------------------------------------------|------------|
| 1.0  | initial release                           | 11/19/2010 |
| 1.01 | new template applied                      | 12/19/2011 |
| 1.02 | V-Infinity branding removed               | 08/16/2012 |
| 1.03 | updated derating curve                    | 02/12/2013 |
| 1.04 | updated spec                              | 12/02/2014 |
| 1.05 | company logo updated                      | 10/02/2020 |
| 1.06 | updated safety marks and safety approvals | 04/27/2021 |

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



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