

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

FEATURES

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

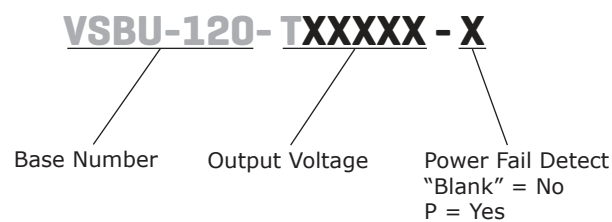


| MODEL | | output voltage | output current | output power | ripple and noise | efficiency |
|----------------|-----|----------------|----------------|--------------|------------------|------------|
| | | (Vdc) | max (A) | max (W) | max (mVp-p) | typ (%) |
| VSBU-120-T312A | Vo1 | 3.3 | 15 | 120 | 66 | 80 |
| | Vo2 | 12 | 6 | 120 | 120 | 80 |
| | Vo3 | 12 | 0.8 | 120 | 120 | 80 |
| VSBU-120-T312A | Vo1 | 3.3 | 15 | 120 | 66 | 80 |
| | Vo2 | 12 | 6 | 120 | 120 | 80 |
| | Vo3 | 12 | 0.8 | 120 | 120 | 80 |
| VSBU-120-T125A | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 12 | 6 | 120 | 120 | 80 |
| | Vo3 | -5 | 0.8 | 120 | -50 | 80 |
| VSBU-120-T125B | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 12 | 6 | 120 | 150 | 80 |
| | Vo3 | 5 | 0.8 | 120 | 50 | 80 |
| VSBU-120-T512A | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 12 | 6 | 120 | 120 | 80 |
| | Vo3 | -12 | 0.8 | 120 | -120 | 80 |
| VSBU-120-T512B | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 12 | 6 | 120 | 120 | 80 |
| | Vo3 | 12 | 0.8 | 120 | 120 | 80 |
| VSBU-120-T515A | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 15 | 6 | 120 | 150 | 80 |
| | Vo3 | -15 | 0.8 | 120 | -150 | 80 |
| VSBU-120-T515B | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 15 | 6 | 120 | 150 | 80 |
| | Vo3 | 15 | 0.8 | 120 | 150 | 80 |
| VSBU-120-T524A | Vo1 | 5 | 15 | 120 | 50 | 80 |
| | Vo2 | 24 | 3.5 | 120 | 240 | 80 |
| | Vo3 | -24 | 0.8 | 120 | -240 | 80 |
| VSBU-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 voltage | output current | output power | ripple and noise | efficiency |
|-----------------|-----|----------------|----------------|--------------|------------------|------------|
| | | (Vdc) | max (A) | max (W) | max (mVp-p) | typ (%) |
| 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 | | 260 | Vac |
| frequency | | 47 | | 63 | Hz |
| current | at 115 Vac, full load | | | 1.7 | A |
| | at 230 Vac, full load | | | 1.0 | A |
| inrush current | at 115 Vac, 25°C, full load, cold start | | 30 | 37 | A |
| | at 230 Vac, 25°C, full load, cold start | | 65 | 75 | A |
| power factor correction | 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 | | 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 |

PROTECTIONS

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

SAFETY & COMPLIANCE

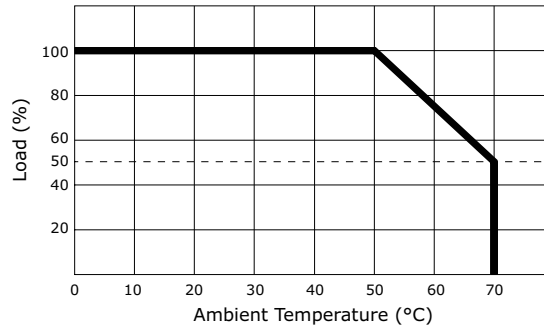
| parameter | conditions/description | min | typ | max | units |
|----------------------|--|---------|-----|------|-------|
| isolation voltage | primary to secondary | 4,242 | | | Vdc |
| | primary to earth ground | 2,121 | | | Vdc |
| isolation resistance | test voltage of 500 Vdc | 50 | | | MΩ |
| safety approvals | UL 60950-1 2nd edition, EN 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 | | | | |
| MTBF | MIL-HDSK-217F, 25°C ambient | 100,000 | | | hrs |

ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 70 | °C |
| storage temperature | | -40 | | 85 | °C |
| operating humidity | non-condensing | 5 | | 95 | % |
| storage humidity | | 0 | | 75 | % |

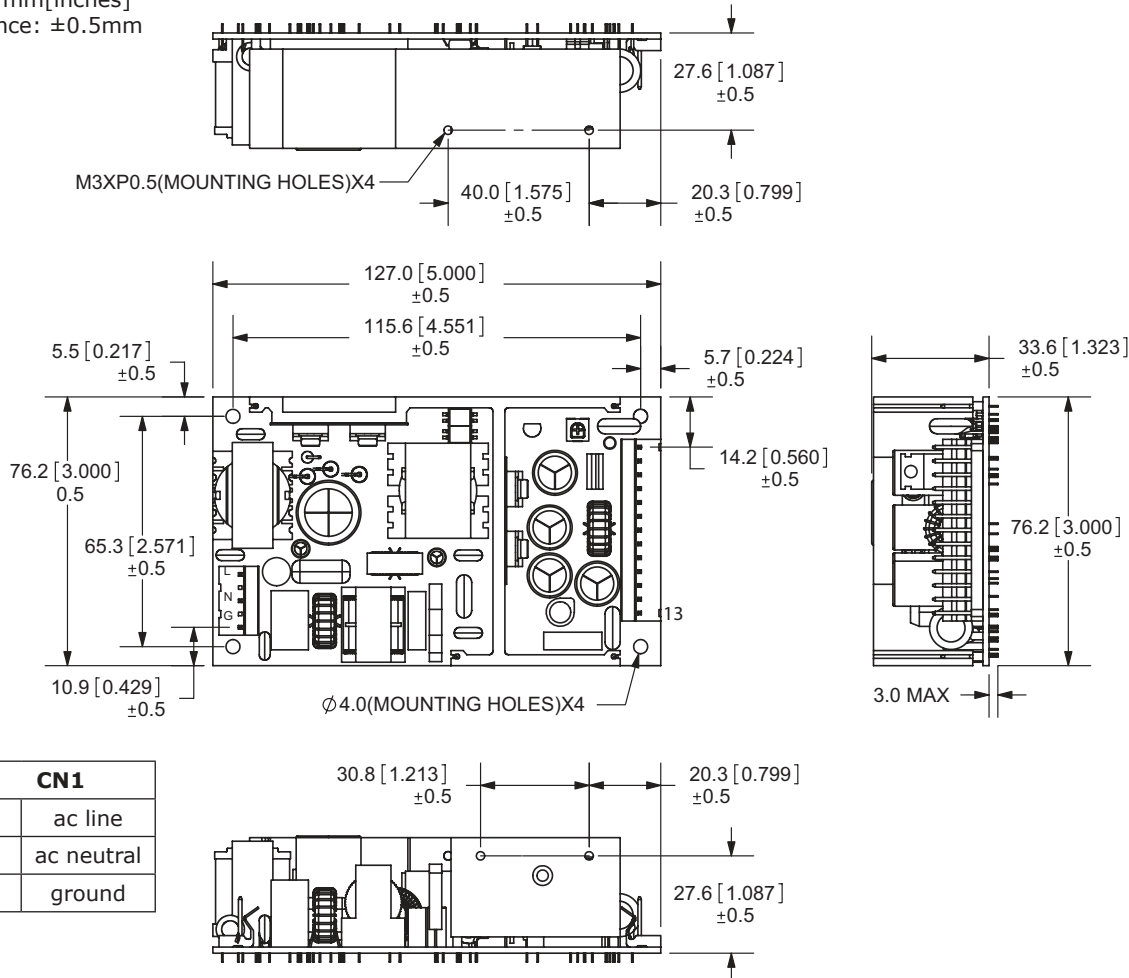
DERATING CURVES

output power vs. ambient temperature



MECHANICAL DRAWING

units: mm[inches]
tolerance: ±0.5mm



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

| CN2 | |
|-----|-----|
| 1 | V2 |
| 2 | V2 |
| 3 | V1 |
| 4 | V1 |
| 5 | V1 |
| 6 | V1 |
| 7 | com |
| 8 | com |
| 9 | com |
| 10 | V3 |
| 11 | com |
| 12 | com |
| 13 | n/c |

note:

1. Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
2. Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal.

*pin 13 for optional power fail detect

REVISION HISTORY

| rev. | description | date |
|------|--------------------------------------|------------|
| 1.0 | initial release | 11/19/2010 |
| 1.01 | applied new spec template | 02/29/2012 |
| 1.02 | V-Infinity branding removed | 08/14/2012 |
| 1.03 | updated derating curve | 02/07/2013 |
| 1.04 | updated output connector part number | 09/24/2020 |
| 1.05 | updated safety marks and features | 04/27/2021 |

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



CUI INC

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Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

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