

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%

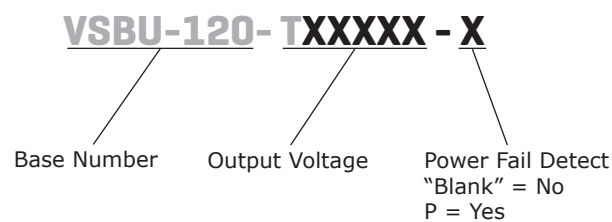


| MODEL | | output voltage | output current | output power | ripple and noise | efficiency |
|----------------|-----|----------------|----------------|--------------|------------------|------------|
| | | (Vdc) | max (A) | max (W) | max (mVp-p) | typ (%) |
| VSBU-120-T312A | Vo1 | 3.3 | 15 | 120 | 66 | 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 | % |

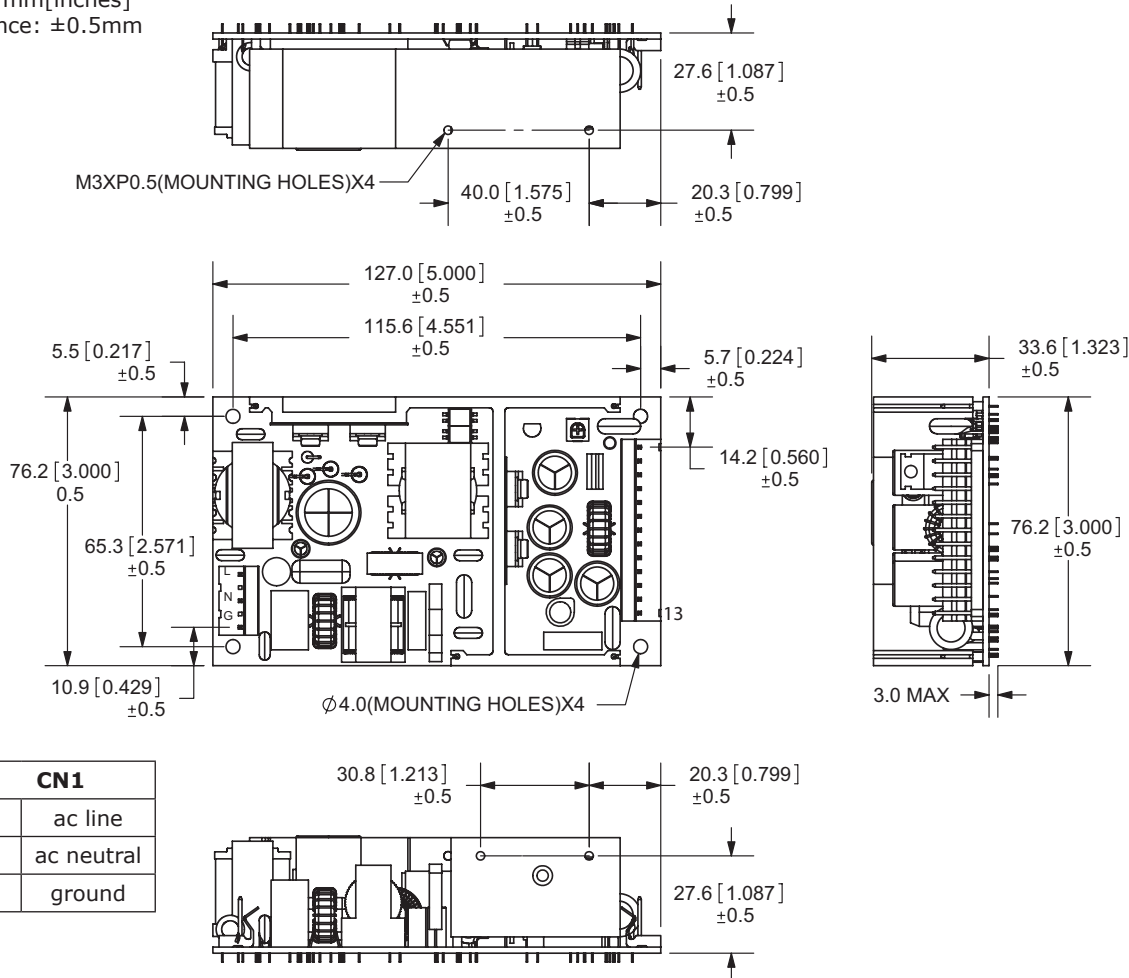
DERATING CURVES

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

a bel group

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

Fax 503.612.2383
cui.com
techsupport@cui.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

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.