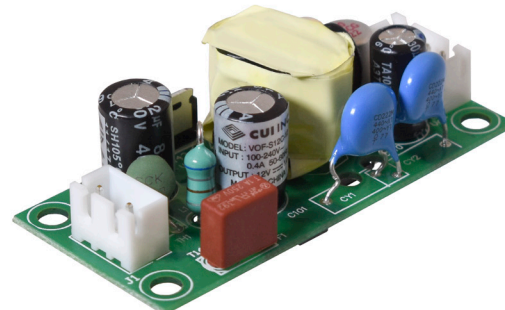


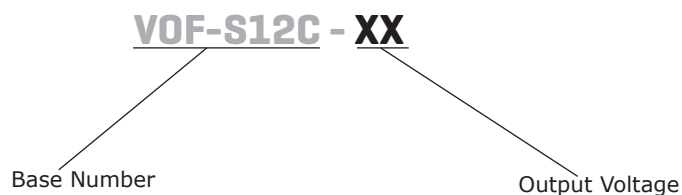
SERIES: VOF-S12C | DESCRIPTION: AC-DC POWER SUPPLY
FEATURES

- universal input range (90 ~ 264 Vac)
- Class B emissions (EN55032/CISPR/FCC)
- certified to IEC/EN/UL 62368-1
- designed to meet IEC/EN 60335
- short circuit protection
- over voltage protection
- < 75 mW no-load power consumption
- Class II



| MODEL | output voltage (Vdc) | output current | | output power max (W) | ripple and noise ¹ max (mVp-p) | efficiency ² typ (%) |
|-------------|-------------------------|----------------|------------|----------------------------|---|---------------------------------------|
| | | min (A) | max (A) | | | |
| VOF-S12C-5 | 5 | 0 | 2.0 | 10 | 100 | 80 |
| VOF-S12C-9 | 9 | 0 | 1.34 | 12 | 100 | 85 |
| VOF-S12C-12 | 12 | 0 | 1.0 | 12 | 120 | 85 |
| VOF-S12C-15 | 15 | 0 | 0.8 | 12 | 150 | 85 |
| VOF-S12C-24 | 24 | 0 | 0.5 | 12 | 240 | 87 |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, with 1 μ F ceramic and 10 μ F electrolytic capacitors on the output.
 2. At 230 Vac, full load, 25°C.
 3. All specifications are measured at Ta=25°C, nominal input voltage, and 75% rated output load unless otherwise specified.

PART NUMBER KEY


INPUT

| parameter | conditions/description | min | typ | max | units |
|-----------------|------------------------------|-----|-----|------|-------|
| voltage | | 90 | | 264 | Vac |
| | | 120 | | 370 | Vdc |
| frequency | | 47 | | 63 | Hz |
| current | | | | 400 | mA |
| inrush current | at 240 Vac, cold start, 25°C | | | 50 | A |
| leakage current | at 264 Vac | | | 0.25 | mA |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|----------------------------|--|-----|-------|-------|-------|
| capacitive load | 5 Vdc output models | | | 2,000 | μF |
| | 9 Vdc output models | | | 1,340 | μF |
| | 12 Vdc output models | | | 1,000 | μF |
| | 15 Vdc output models | | | 800 | μF |
| | 24 Vdc output models | | | 500 | μF |
| initial set point accuracy | at 100% load | | | ±2 | % |
| line regulation | measured at high line to low line at full load | | | ±1 | % |
| load regulation | measured at 10%~100% load | | | ±1 | % |
| start-up time | | | | 3 | s |
| hold-up time | at 115 Vac | | 10 | | ms |
| switching frequency | | | 65 | | kHz |
| temperature coefficient | | | ±0.05 | | %/°C |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|------------------------|-----|------|------|-------|
| over voltage protection | hiccup, auto recovery | | | | |
| | 5 Vdc output models | | | 6.3 | Vdc |
| | 9 Vdc output models | | | 12.6 | Vdc |
| | 12 Vdc output models | | | 15.8 | Vdc |
| | 15 Vdc output models | | | 18.9 | Vdc |
| 24 Vdc output models | | | 31.5 | Vdc | |
| short circuit protection | hiccup, auto recovery | | | | |

SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|--------------------------------|--|-------|-----|-----|-------|
| isolation voltage | input to output for 1 minute | 3,000 | | | Vac |
| isolation resistance | | 100 | | | MΩ |
| safety approvals | certified to IEC/EN/UL 62368-1 designed to meet IEC/EN 60335 | | | | |
| safety class | Class II | | | | |
| conducted emissions | EN55032 2015, EN61000-6-3 2007+A1: 2011+AC: 2012, Class B, 47 CFR FCC Part 15 Subpart B (Class B) | | | | |
| radiated emissions | EN55032 2015, EN61000-6-3 2007+A1: 2011+AC: 2012, Class B, 47 CFR FCC Part 15 Subpart B (Class B) | | | | |
| harmonic current emissions | EN61000-3-2:2014 | | | | |
| voltage fluctuations & flicker | EN61000-3-3:2013 | | | | |
| ESD | IEC61000-4-2:2008 | | | | |
| radiated immunity | IEC61000-4-3:2010 | | | | |
| EFT/burst | IEC61000-4-4:2012 | | | | |
| surge | IEC61000-4-5:2014 | | | | |

SAFETY & COMPLIANCE (CONTINUED)

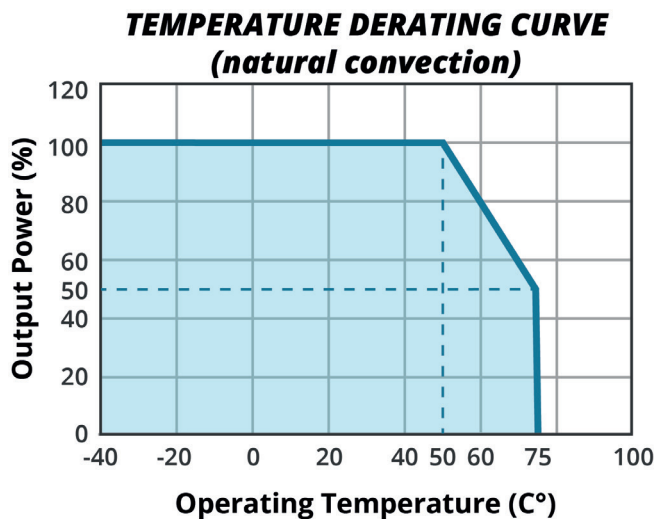
| parameter | conditions/description | min | typ | max | units |
|--------------------------------|--|-----|---------|-----|-------|
| conducted immunity | IEC61000-4-6:2013 | | | | |
| power frequency magnetic field | IEC61000-4-8:2009 | | | | |
| voltage dips & interruptions | IEC61000-4-11:2004 | | | | |
| MTBF | as per MIL-HDBK-217F, at 115 Vac, 25°C, GB | | | | |
| | 5 Vdc output model | | 580,000 | | hours |
| | 9 Vdc output model | | 870,000 | | hours |
| | 12 Vdc output model | | 660,000 | | hours |
| | 15 Vdc output model | | 740,000 | | hours |
| | 24 Vdc output model | | 620,000 | | hours |
| RoHS | yes | | | | |

Notes: 4. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|---|-----|-----|-------|-------|
| operating temperature | see derating curves | -40 | | 75 | °C |
| storage temperature | | -40 | | 85 | °C |
| operating humidity | non-condensing | | | 93 | % |
| altitude | | | | 5,000 | m |
| vibration | as per MIL-STD-810F Table 514.5C-VIII; 15~2000 Hz for 1 hour on each axis for 3 hours | | 4 | | G |
| shock | as per MIL-STD-810F Table 516.5, Table 516.5-1; for 10 ms on each axis 3 times | | 75 | | G |

DERATING CURVES



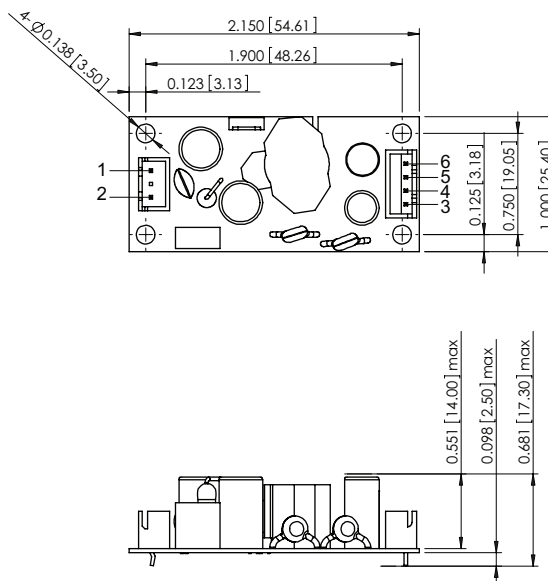
MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|---|-----|-----|-----|--------|
| dimensions | 2.15 x 1.00 x 0.68 (54.61 x 25.40 x 17.30 mm) | | | | inches |
| weight | | | 40 | | g |

MECHANICAL DRAWING

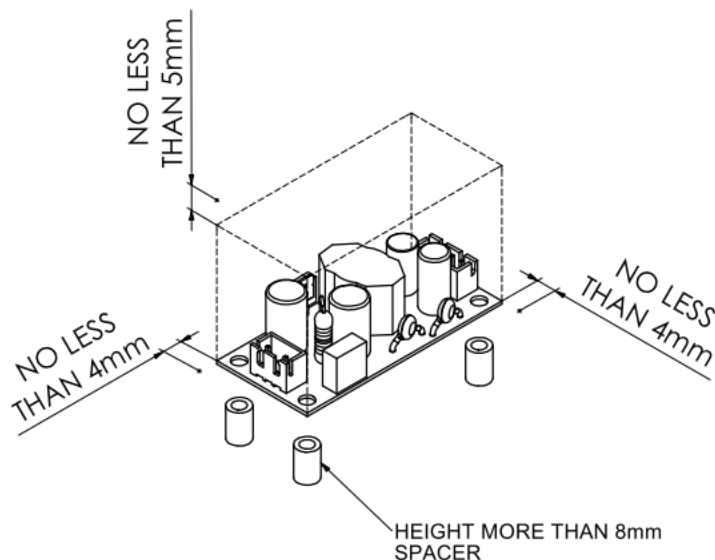
units: inch [mm]
tolerance: ±0.020[±0.50]

| PIN CONNECTIONS | | CONNECTORS |
|-----------------|----------|---|
| PIN | Function | |
| 1 | AC (N) | Input connector: JST B3B-XH Mates with JST housing XH Series or equivalent |
| 2 | AC (L) | |
| 3 | -Vo | Output Connector: JST B4B-XH Mates with JST housing XH Series or equivalent |
| 4 | -Vo | |
| 5 | +Vo | |
| 6 | +Vo | |



INSTALLATION INSTRUCTIONS

The VOF-S12C has four 3.5 mm diameter mounting holes; one in each corner. Use 8 mm tall spacers (6 mm outside diameter max) to mount the unit, which will maintain the isolation and vibration specifications. A minimum of 4 mm clearance is required for all four sides of the unit and a minimum of 5 mm clearance is required above the top surface of the unit.



REVISION HISTORY

| rev. | description | date |
|------|----------------------------|------------|
| 1.0 | initial release | 02/14/2020 |
| 1.01 | mechanical section updates | 05/07/2020 |
| 1.02 | derating curve updated | 02/14/2022 |

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



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.

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