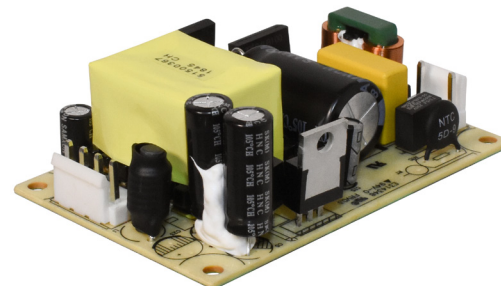


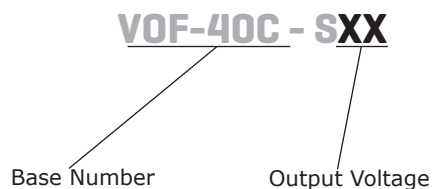
SERIES: VOF-40C | **DESCRIPTION:** AC-DC POWER SUPPLY**FEATURES**

- universal input voltage range (85~264 VAC)
- 3 × 2 × 1.2 in (76.2 × 50.8 × 30 mm)
- class B EMI performance, meets CISPR32 / EN55032
- output short circuit, overcurrent & overvoltage protection
- safety certified: IEC/EN/UL 62368



| MODEL | output voltage (Vdc) | output current | | output power max (W) | ripple and noise ¹ max (mVp-p) | efficiency ² typ (%) |
|-------------|-------------------------|----------------|-------------|----------------------------|---|---------------------------------------|
| | | min (mA) | max (mA) | | | |
| VOF-40C-S3 | 3.3 | 0 | 8000 | 26.4 | 100 | 76 |
| VOF-40C-S5 | 5 | 0 | 8000 | 40 | 100 | 82 |
| VOF-40C-S9 | 9 | 0 | 4444 | 40 | 100 | 84 |
| VOF-40C-S12 | 12 | 0 | 3333 | 40 | 100 | 84 |
| VOF-40C-S15 | 15 | 0 | 2667 | 40 | 100 | 86 |
| VOF-40C-S24 | 24 | 0 | 1667 | 40 | 100 | 86 |
| VOF-40C-S48 | 48 | 0 | 833 | 40 | 100 | 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 input.
 3. All specifications are measured at Ta=25°C, humidity <75%, nominal input voltage, and rated output load unless otherwise specified.

PART NUMBER KEY

INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|------------------------|-----|-----|------|-------|
| voltage | | 85 | | 264 | Vac |
| | | 100 | | 370 | Vdc |
| frequency | | 47 | | 63 | Hz |
| current | at 115 Vac | | | 1200 | mA |
| | at 230 Vac | | | 700 | mA |
| inrush current | at 115 Vac | | 35 | | A |
| | at 230 Vac | | 50 | | A |
| no load power consumption | | | | 0.5 | W |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|----------------------------|------------------------|-----|-------|--------|-------|
| capacitive load | 3.3 Vdc output models | | | 30,000 | |
| | 5 Vdc output models | | | 20,000 | |
| | 9 Vdc output models | | | 6,000 | |
| | 12 Vdc output models | | | 4,000 | μF |
| | 15 Vdc output models | | | 3,500 | |
| | 24 Vdc output models | | | 1,000 | |
| | 48 Vdc output models | | | 600 | |
| initial set point accuracy | 3.3 Vdc output models | | ±3 | | % |
| | all other models | | ±2 | | % |
| line regulation | at full load | | ±0.5 | | % |
| load regulation | from 0~100% load | | ±1 | | % |
| hold-up time | at 230 Vac, full load | | 50 | | ms |
| switching frequency | | | 65 | | kHz |
| temperature coefficient | | | ±0.02 | | %/°C |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|-------------------------------------|-----|-----|-----|-------|
| over voltage protection | output voltage clamp, auto recovery | | | | |
| | 3.3 Vdc output models | | | 7.5 | |
| | 5 Vdc output models | | | 9 | |
| | 9 Vdc output models | | | 16 | |
| | 12 Vdc output models | | | 20 | Vdc |
| | 15 Vdc output models | | | 24 | |
| | 24 Vdc output models | | | 35 | |
| 48 Vdc output models | | | 60 | | |
| over current protection | hiccup, auto-recovery | 150 | | 300 | % |
| short circuit protection | hiccup, continuous, auto-recovery | | | | |

SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|---------------------|--|-------|-----|-----|-------|
| isolation voltage | input to output electric strength test for 1 minute, leakage current <5 mA | 3,000 | | | Vac |
| safety approvals | IEC/UL/EN 62368-1 certified | | | | |
| safety class | Class II | | | | |
| conducted emissions | CISPR32/EN55032, Class B | | | | |
| radiated emissions | CISPR32/EN55032, Class B | | | | |
| ESD | IEC/EN61000-4-2, Contact ±6KV, Perf. Criteria B | | | | |
| radiated immunity | IEC/EN61000-4-3 10V/m perf. Criteria A | | | | |

SAFETY & COMPLIANCE (CONTINUED)

| parameter | conditions/description | min | typ | max | units |
|------------------------------|--|---------|-----|-----|-------|
| EFT/burst | IEC/EN61000-4-4, ±2 kV, perf. Criteria B | | | | |
| surge | IEC/EN61000-4-5, line to line ±1KV, perf. Criteria B | | | | |
| conducted immunity | IEC/EN61000-4-6, 10 Vrms, Perf. Criteria A | | | | |
| voltage dips & interruptions | IEC/EN61000-4-11 , 0%,70%, perf. Criteria B | | | | |
| MTBF | as per MIL-HDBK-217F at 25°C | 300,000 | | | hours |
| RoHS | yes | | | | |

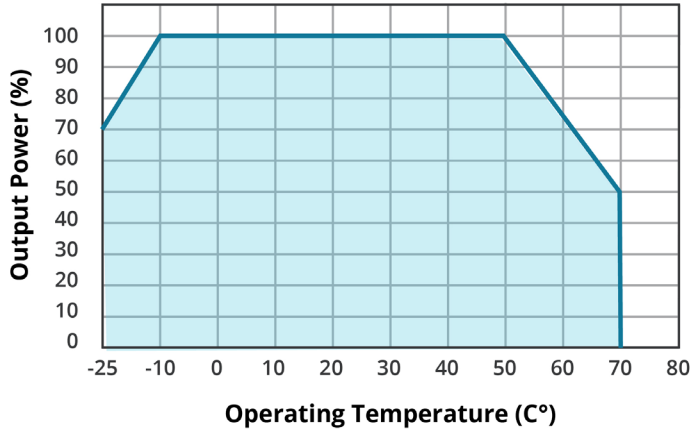
Notes: 4. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

ENVIRONMENTAL

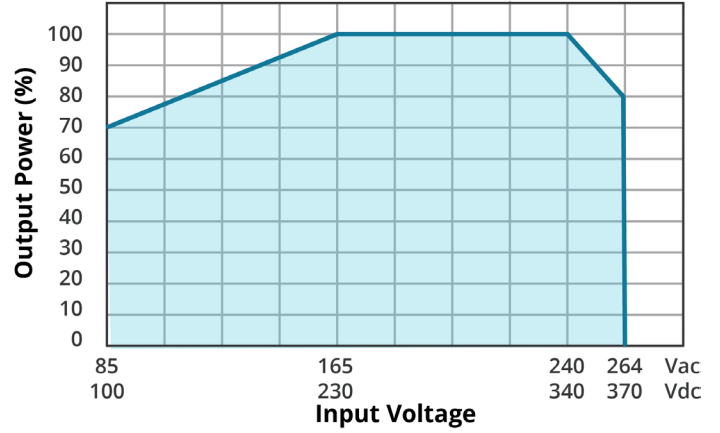
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | see derating curves | -25 | | 70 | °C |
| storage temperature | | -25 | | 85 | °C |
| storage humidity | non-condensing | | | 90 | % |

DERATING CURVES

TEMPERATURE DERATING CURVE
(at 85~264 Vac / 100~370 Vdc)

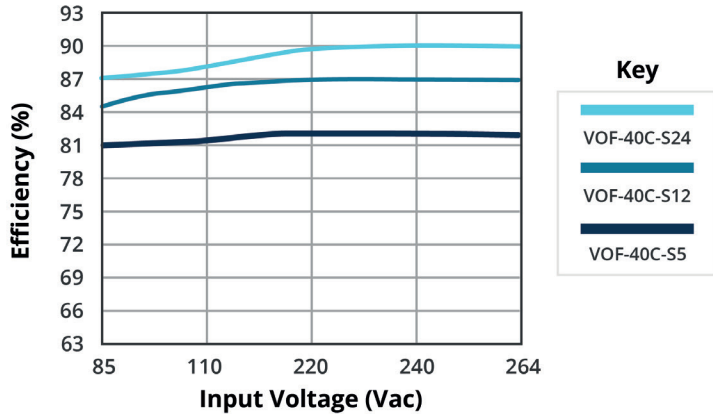


INPUT VOLTAGE DERATING CURVE
(at 25°C)

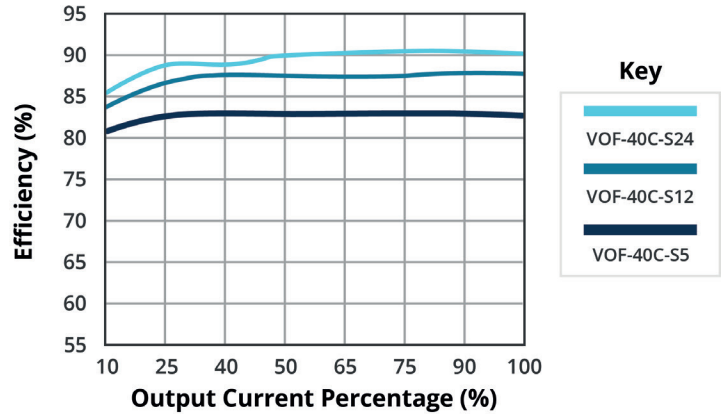


EFFICIENCY CURVES

EFFICIENCY VS INPUT LOAD
(full load)



EFFICIENCY VS OUTPUT LOAD
(at 230 Vac)



MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 76.20 x 50.80 x 30.00 | | | | mm |
| weight | | | 90 | | g |

MECHANICAL DRAWING

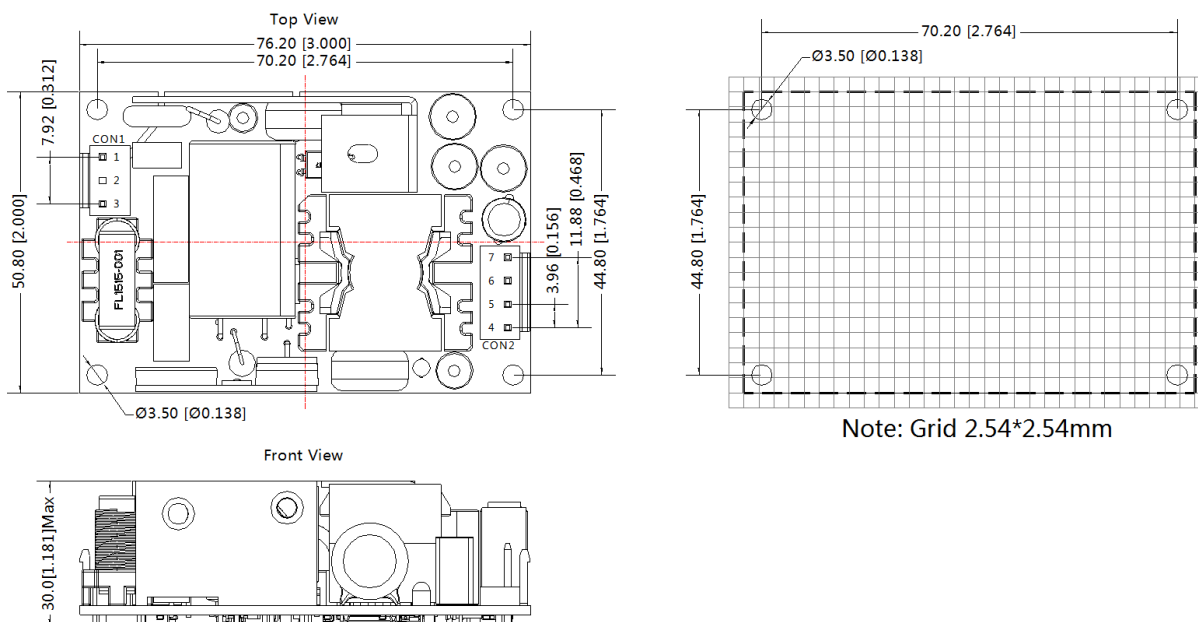
units: mm[inch]

tolerance: $\pm 0.50[\pm 0.020]$

In CON1 model: VH-3A, Recommended terminal: VH-3Y

Out CON2 model: VH-4A, recommended terminal: VH-4Y

Mounting hole screwing torque: Max 0.4 N·m



| PIN-Out | | | |
|---------|----------|--|---|
| PIN | Function | Connector | Terminal |
| 1 | AC(L) | VH-3A or B2P3-VH or the same Spec. | VH-3Y or VHR-3N or the same Spec. |
| 2 | NoPin | | |
| 3 | AC(N) | | |
| 4 | -Vo | VH-4A or B4P-VH or the same Spec. | VH-4Y or VHR-4N or the same Spec. |
| 5 | -Vo | | |
| 6 | +Vo | | |
| 7 | +Vo | | |

REVISION HISTORY

| rev. | description | date |
|------|--|------------|
| 1.0 | initial release | 10/25/2019 |
| 1.01 | company logo updated | 11/30/2020 |
| 1.02 | derating and efficiency curves updated | 05/13/2021 |
| 1.03 | output current of 12V model updated | 05/19/2022 |

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.