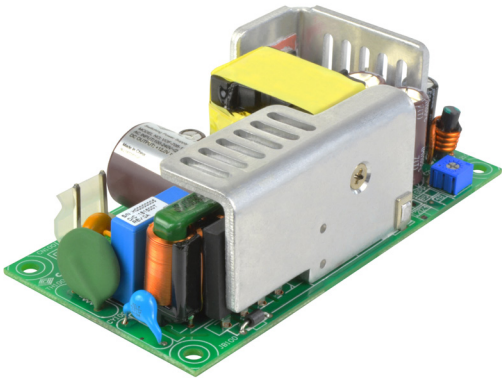




**SERIES:** VOF-70B | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

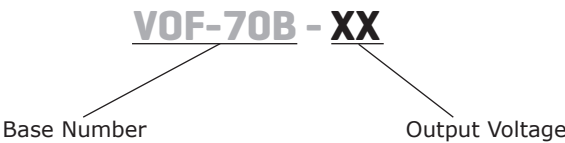
- safety Class II design
- industry standard 2" x 4" footprint
- no-load power consumption < 0.3 W
- EN 55032 Class B radiated emissions
- 5k meters high altitude operation



| MODEL      | output<br>voltage | output<br>current<br>max | output<br>power<br>max | ripple<br>and noise <sup>1</sup><br>max | efficiency <sup>2</sup> |
|------------|-------------------|--------------------------|------------------------|-----------------------------------------|-------------------------|
|            | (Vdc)             | (A)                      | (W)                    | (mVp-p)                                 | typ<br>(%)              |
| VOF-70B-12 | 12                | 5.84                     | 70                     | 120                                     | 87                      |
| VOF-70B-24 | 24                | 2.92                     | 70                     | 240                                     | 89                      |
| VOF-70B-48 | 48                | 1.46                     | 70                     | 300                                     | 89                      |

Notes: 1. Measured at output within 20 MHz BW, at rated line voltage and output load, with a 10  $\mu$ F tantalum and a 0.1  $\mu$ F ceramic capacitor across the output.  
2. At 230 Vac.

**PART NUMBER KEY**



## INPUT

| parameter                 | conditions/description        | min | typ        | max        | units  |
|---------------------------|-------------------------------|-----|------------|------------|--------|
| voltage                   |                               | 90  |            | 264        | Vac    |
| frequency                 |                               | 47  |            | 63         | Hz     |
| current                   | at 115 Vac<br>at 230 Vac      |     | 1.8<br>0.9 |            | A<br>A |
| inrush current            | at 230 Vac, cold start, 25 °C |     | 90         |            | A      |
| leakage current           | at 264 Vac, 63 Hz             |     |            | 0.25       | mA     |
| no load power consumption | at 110 Vac<br>at 230 Vac      |     |            | 0.2<br>0.3 | W<br>W |

## OUTPUT

| parameter                  | conditions/description | min | typ | max   | units |
|----------------------------|------------------------|-----|-----|-------|-------|
| initial set point accuracy |                        |     | ±3  |       | %     |
| line regulation            | at full load           |     |     | ±0.5  | %     |
| load regulation            | at 10% to full load    |     | ±1  |       | %     |
| adjustability              | built in trim pot      |     | ±5  |       | %     |
| start-up time              | at 100 Vac, full load  |     |     | 1     | s     |
| rise time                  | at 100 Vac, full load  |     | 50  |       | ms    |
| hold-up time               | at 115 Vac, full load  | 10  |     |       | ms    |
| switching frequency        | at full load           | 60  |     | 85    | kHz   |
| temperature coefficient    |                        |     |     | ±0.04 | %/°C  |

## PROTECTIONS

| parameter                   | conditions/description | min | typ | max | units |
|-----------------------------|------------------------|-----|-----|-----|-------|
| over voltage protection     | latch off              | 110 |     | 130 | %     |
| over current protection     | auto recovery          |     |     |     |       |
| short circuit protection    | auto recovery          |     |     |     |       |
| over temperature protection | latch off              |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter                          | conditions/description                           | min | typ   | max | units |
|------------------------------------|--------------------------------------------------|-----|-------|-----|-------|
| isolation voltage                  | input to output                                  |     | 3,000 |     | Vac   |
| safety approvals                   | UL 62368-1, EN 62368-1, IEC 62368-1              |     |       |     |       |
| safety class                       | Class II                                         |     |       |     |       |
| conducted emissions                | EN 55032 Class B, FCC Class B                    |     |       |     |       |
| radiated emissions                 | EN 55032 Class B, FCC Class B                    |     |       |     |       |
| input current harmonics            | EN 61000-3-2 Class A                             |     |       |     |       |
| voltage fluctuation and flicker    | EN 61000-3-3                                     |     |       |     |       |
| ESD immunity                       | EN 61000-4-2, air: ±8 kV; contact: ±4 kV contact |     |       |     |       |
| radiated field immunity            | EN 61000-4-3, 3 V/m                              |     |       |     |       |
| electrical fast transient immunity | EN 61000-4-4, ±2 kV                              |     |       |     |       |

Notes: 3. 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.

## SAFETY & COMPLIANCE (CONTINUED)

| parameter                   | conditions/description                                                                                                                                                 | min     | typ | max | units |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|-----|-------|
| surge immunity              | EN 61000-4-5, $\pm 2$ kV diff, $\pm 4$ kV com                                                                                                                          |         |     |     |       |
| conducted immunity          | EN 61000-4-6, 3 Vrms                                                                                                                                                   |         |     |     |       |
| magnetic field immunity     | EN 61000-4-8, 50 Hz, 1 A/m (rms), Class A                                                                                                                              |         |     |     |       |
| voltage dips, interruptions | EN 61000-4-11:<br>voltage dips 30% reduction for 500 ms, Class A<br>voltage dips >95% reduction for 10 ms, Class A<br>voltage dips >95% reduction for 5000 ms, Class B |         |     |     |       |
| MTBF                        | as per MIL-HDBK-217F, 25°C, full load                                                                                                                                  | 350,000 |     |     | hours |
| RoHS                        | yes                                                                                                                                                                    |         |     |     |       |

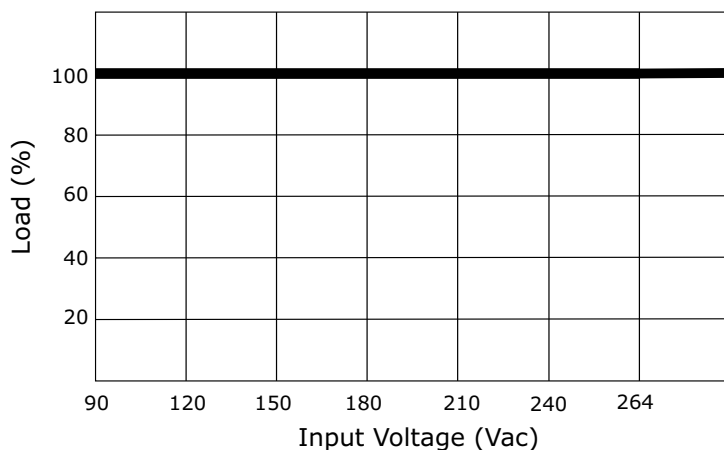
Notes: 4. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

## ENVIRONMENTAL

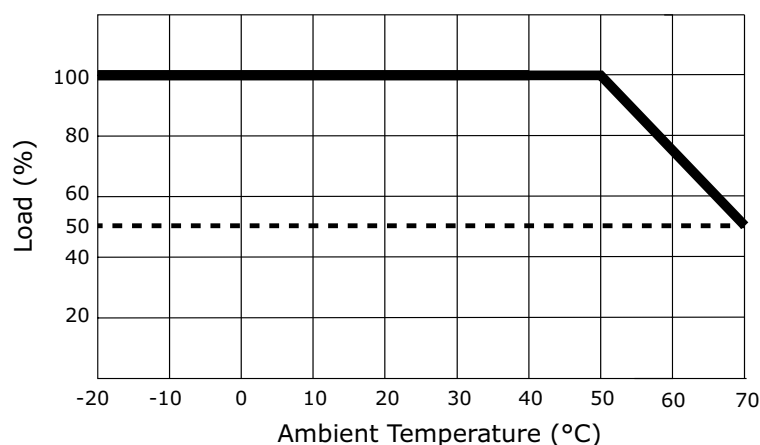
| parameter             | conditions/description | min | typ | max   | units |
|-----------------------|------------------------|-----|-----|-------|-------|
| operating temperature | see derating curves    | -20 |     | 70    | °C    |
| storage temperature   |                        | -40 |     | 85    | °C    |
| operating humidity    | non-condensing         | 5   |     | 95    | %     |
| altitude              |                        |     |     | 5,000 | m     |

## DERATING CURVES

Output Load vs. Input Voltage

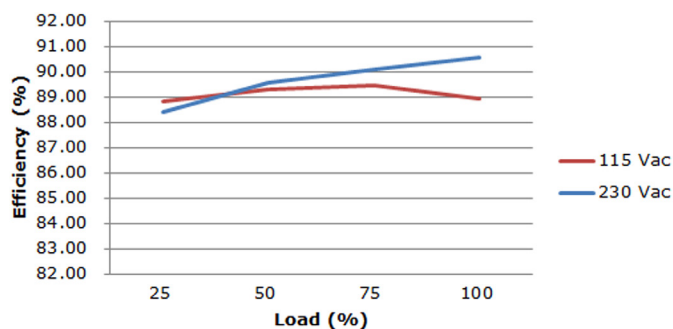


Output Load vs. Ambient Temperature

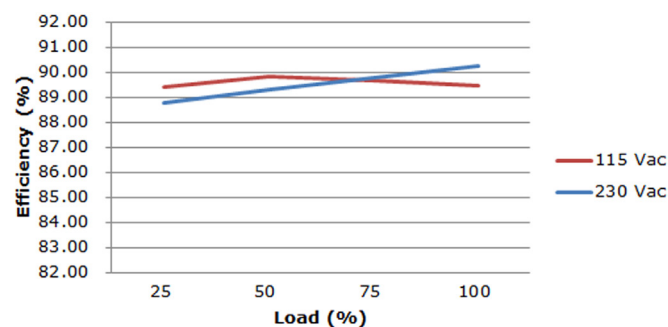


## EFFICIENCY CURVES

VOF-70B-12 Efficiency vs. Output Load (Natural Convection)

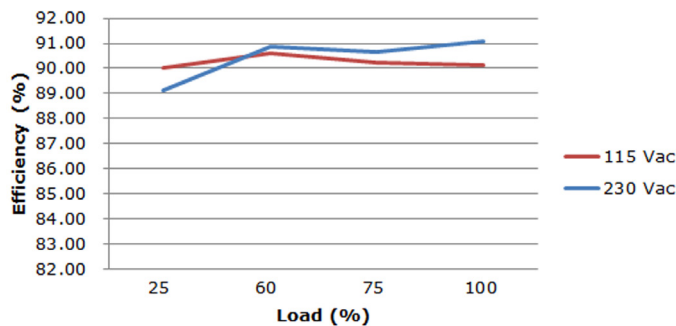


VOF-70B-24 Efficiency vs. Output Load (Natural Convection)



## EFFICIENCY CURVES (CONTINUED)

VOF-70B-48 Efficiency vs. Output Load  
(Natural Convection)



## MECHANICAL

| parameter              | conditions/description                                                                                | min | typ | max | units |
|------------------------|-------------------------------------------------------------------------------------------------------|-----|-----|-----|-------|
| dimensions             | 101.6 x 50.8 x 31.6 (4.0 x 2.0 x 1.24 inch)                                                           |     |     |     | mm    |
| weight                 |                                                                                                       |     | 152 |     | g     |
| cooling                | natural convection                                                                                    |     |     |     |       |
| CN100 input connector  | CN100 mates with Jowle A3961H02-3P, crimp pin A3961T2P-2C, or Molex 09-50-3031, crimp pin 2478 series |     |     |     |       |
| CN200 output connector | CN200 mates with Jowle A3961H02-4P, crimp pin A3961T2P-2C, or Molex 09-50-3041, crimp pin 2478 series |     |     |     |       |

## MECHANICAL DRAWING

units: mm

tolerance:

$X \leq 30$ :  $\pm 0.25$  mm

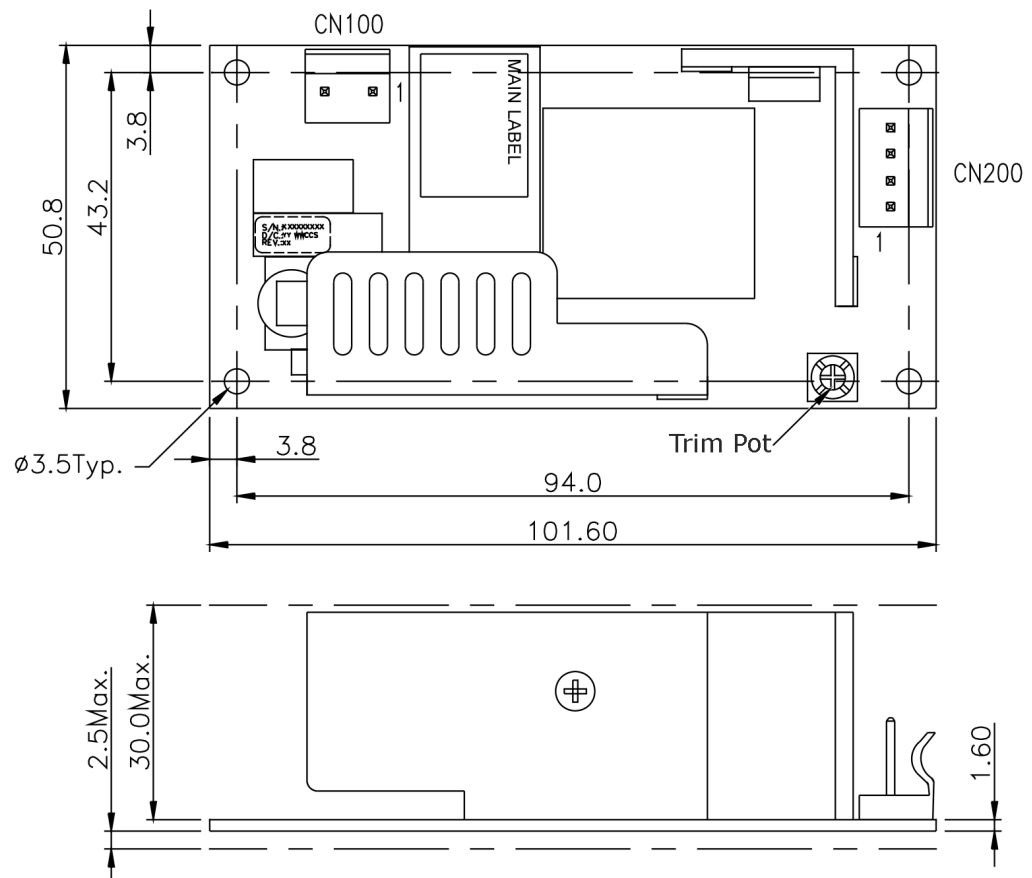
$30 < X \leq 100$ :  $\pm 0.35$  mm

$100 < X \leq 300$ :  $\pm 0.50$  mm

holes:  $\pm 0.20$  mm

| CN100 Connector |          |
|-----------------|----------|
| PIN             | Function |
| 1               | AC(L)    |
| 2               | NP       |
| 3               | AC(N)    |

| CN200 Connector |          |
|-----------------|----------|
| PIN             | Function |
| 1               | +V       |
| 2               | +V       |
| 3               | RTN      |
| 4               | RTN      |



## REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 10/16/2018 |

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

**CUI INC<sup>®</sup>**

**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.

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9