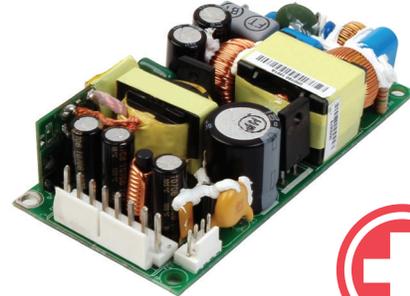




SERIES: VMS-160 | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

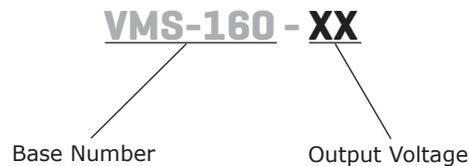
- up to 160 W continuous power
- industry standard 2" x 4" footprint
- 18 W/in³ power density
- universal input (85~264 Vac / 125~373 Vdc)
- single output from 5~48 V
- active power correction (98%)
- 12 V auxiliary fan output
- no minimum load required
- over load, over voltage, and short circuit protections
- full medical and ITE safety approvals
- efficiency up to 90%



| MODEL | output voltage | output current | output power | ripple and noise ⁴ | efficiency |
|------------|----------------|----------------|------------------|-------------------------------|------------|
| | (Vdc) | max (A) | max (W) | max (mVp-p) | typ (%) |
| VMS-160-5 | 5 | 20 | 100 ¹ | 50 | 90 |
| VMS-160-12 | 12 | 13.3 | 160 ³ | 120 | 90 |
| VMS-160-15 | 15 | 8 | 120 ² | 50 | 90 |
| VMS-160-24 | 24 | 6.66 | 160 ³ | 240 | 90 |
| VMS-160-48 | 48 | 3.33 | 160 ³ | 480 | 90 |

- Notes:
1. Total continuous output power will not exceed 100 W forced air (400 LFM), 70 W without fan
 2. Total continuous output power will not exceed 120 W forced air (400 LFM), 90 W without fan
 3. Total continuous output power will not exceed 160 W forced air (400 LFM), 100 W without fan
 4. Measured at 20 MHz, twisted pair with 0.47 μ F ceramic and 22 μ F tantalum parallel capacitors

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|-------------------------|--|-----------|------|-------------|------------|
| voltage | | 90 125 | | 264 373 | Vac Vdc |
| frequency | | 47 | | 63 | Hz |
| current | at 100 Vac, cold start at 200 Vac, cold start | | | 2.5 1.25 | A A |
| inrush current | at 230 Vac, full load, cold start | | | | |
| power factor correction | measured at full load and 115 Vac/60 Hz and 230 Vac/50 Hz input source input will be less than 0.25 Ω , compliant to EN61000-3-2 for harmonic currents | 0.85 | 0.98 | | |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|-------------------------|--|-----|---------------------|-----|------------------|
| line regulation | low line to high line | | ± 1 | | % |
| load regulation | all other outputs 12 V aux. output | | ± 1 ± 20 | | % % |
| temperature coefficient | | | 0.25 | | mV/ $^{\circ}$ C |
| transient response | 25% I_{max} to I_{max} , 0.1 A/ μ s slew rate, $\pm 5\%$ max. deviation, 1 ms recovery | | | | |
| start-up | | | 1 | | s |
| rise time | | 0.2 | | 20 | ms |
| hold-up | | 16 | | | ms |
| adjustability | | | ± 5 | | % |
| fan drive | 12 Vdc / 500 mA for external fan | | | | |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|--|-----|-----|-----|-------|
| over voltage protection | | | | 130 | % |
| over current protection | automatically recovers | | | 150 | % |
| short circuit protection | auto recovery with no damage from a short on any output | | | | |

SAFETY & COMPLIANCE

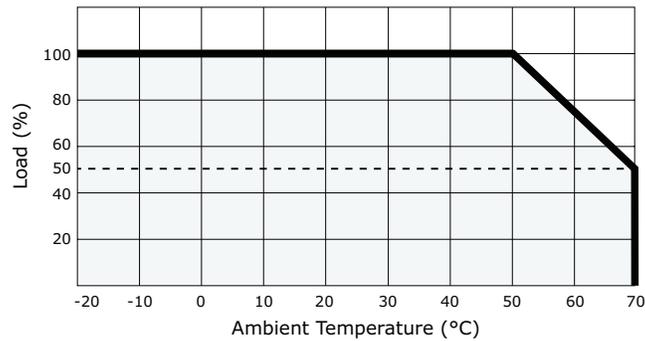
| parameter | conditions/description | min | typ | max | units |
|-------------------|---|----------------|-----|-----|------------|
| isolation voltage | primary to secondary (for 1 second): primary to earth ground (for 1 second): | 5,656 5,656 | | | Vdc Vdc |
| safety approvals | UL 60950-1/60601-1, NEMKO EN 60950-1/EN 60601-1, CE | | | | |
| EMI/EMC | EN 55022:1998 (Class B, conducted), EN 61000-3-2: 2000, EN 61000-3-3: A1:2001, EN 55024 (IEC 61000-4-2: 1995, IEC 61000-4-3: 1995, IEC 61000-4-4: 1995, IEC 61000-4-5: 1995, IEC 61000-4-6: 1996, IEC 61000-4-11: 1994) | | | | |
| leakage current | measured per IEC 60950-1, paragraph 5.1, test voltage of 120 Vac/60 Hz | | | 275 | μ A |
| MTBF | with 400 LFM forced air, MIL-HDBK-217E-1, 75% of rated full load, 25 $^{\circ}$ C ambient | 200,000 | | | hrs |
| RoHS | 2011/65/EU | | | | |

ENVIRONMENTAL

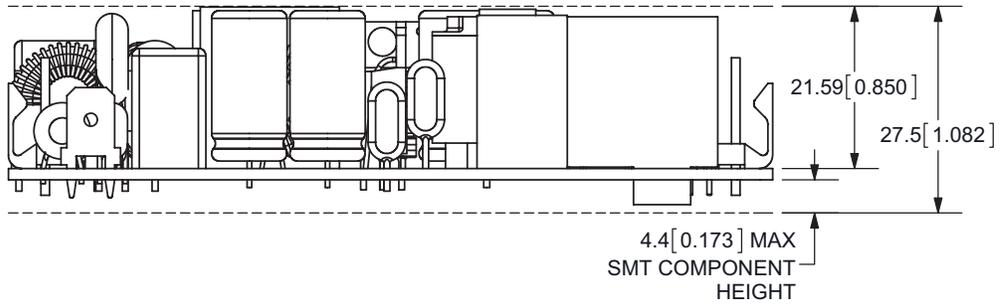
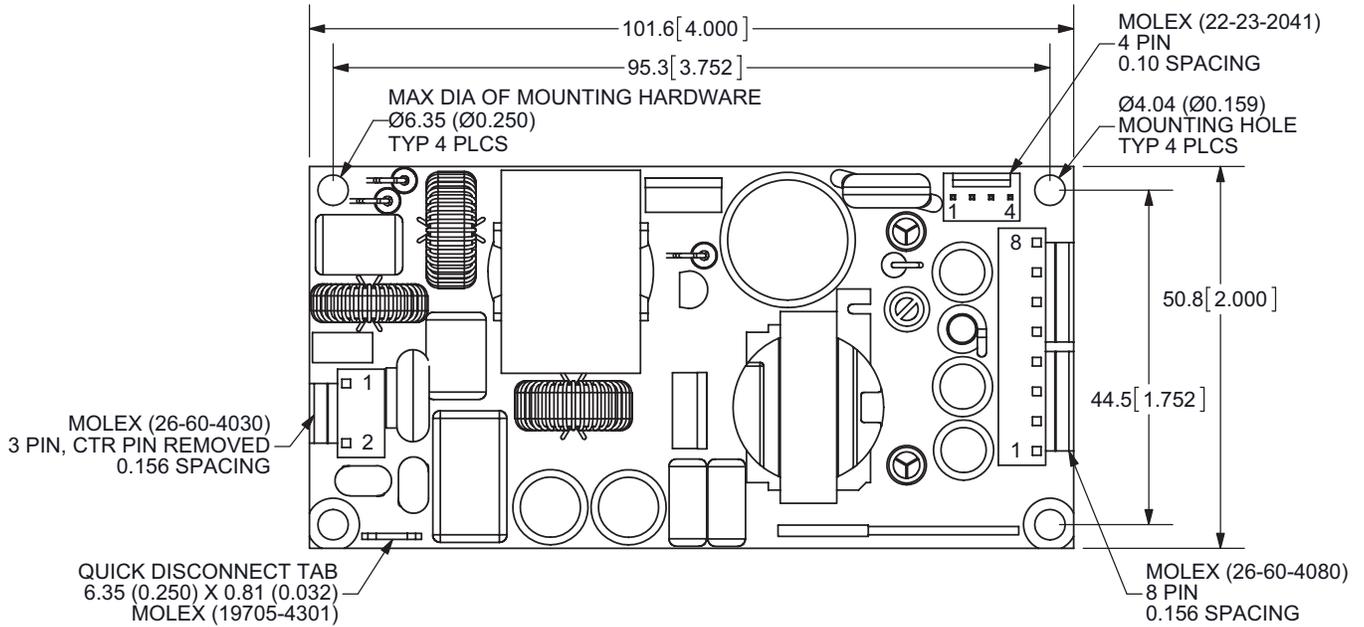
| parameter | conditions/description | min | typ | max | units |
|-----------------------|--|-----|-----|-----|-------|
| operating temperature | see derating curve | -20 | | 70 | °C |
| storage temperature | see derating curve | -40 | | 80 | °C |
| operating humidity | non-condensing | 8 | | 90 | % |
| storage humidity | non-condensing | | | 95 | % |
| shock | operating (11 ms, half sine, for a total of 6 shock inputs) | | 10 | | G |
| | non-operating (2 ms, half sine, for a total of 6 shock inputs) | | 140 | | G |
| vibration | operating (10 ~ 300 Hz, 1 hour per axis, 3 hours total) | | 1 | | Grms |
| | non-operating (10 ~ 500 Hz, 1 hour per axis, 3 hours total) | | 2 | | Grms |

DERATING CURVE

output power vs. ambient temperature



MECHANICAL DRAWING



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

| CN2 | |
|-----|-----------|
| 1 | dc return |
| 2 | dc return |
| 3 | dc return |
| 4 | dc return |
| 5 | V1 |
| 6 | V1 |
| 7 | V1 |
| 8 | V1 |

| CN3 | |
|-----|-----------|
| 1 | GND |
| 2 | GND |
| 3 | 12V (fan) |
| 4 | 12V (fan) |

REVISION HISTORY

| rev. | description | date |
|------|---|------------|
| 1.0 | initial release | 05/5/2009 |
| 1.01 | new template applied | 06/16/2011 |
| 1.02 | V-Infinity branding removed | 08/15/2012 |
| 1.03 | corrected power output data, updated derating curve | 11/02/2012 |
| 1.04 | corrected CN3 connector part number | 12/04/2012 |
| 1.05 | updated EMI/EMC section | 01/30/2014 |
| 1.06 | updated datasheet | 07/01/2016 |

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



CUI INC[®]

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.

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru