



SERIES: VBM-360 | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

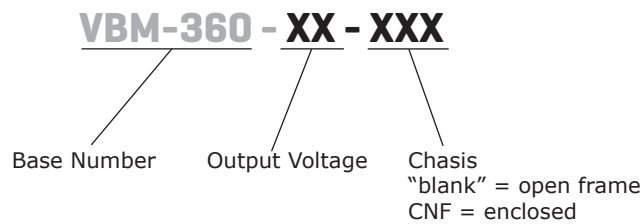
- up to 360 W continuous power
- baseplate cooling
- industry standard 3" x 5" footprint
- universal input (90~264 Vac)
- single output from 12 to 48V
- over voltage, short circuit, and over temperature protections
- built-in active PFC function
- built-in remote sense function
- remote on/off control function
- efficiency up to 93.5%



| MODEL | output voltage | output current | output power | ripple and noise ¹ | efficiency |
|------------|----------------|----------------|--------------|-------------------------------|------------|
| | (Vdc) | max (A) | max (W) | max (mVp-p) | typ (%) |
| VBM-360-12 | 12 | 29.6 | 355 | 120 | 92.5 |
| VBM-360-24 | 24 | 14.8 | 355 | 150 | 93.5 |
| VBM-360-48 | 48 | 7.4 | 355 | 150 | 93.5 |

Notes: 1. at 20 MHz bandwidth oscilloscope, each output terminated with a 47 µF electrolytic and 0.1 µF ceramic capacitors.

PART NUMBER KEY



INPUT

| parameter | conditions/description | min | typ | max | units |
|-----------------|------------------------|-----|-----|-----|-------|
| voltage | | 90 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| inrush current | at 240 Vac | | | 50 | A |
| leakage current | at 264 Vac | | | 3.5 | mA |

OUTPUT

| parameter | conditions/description | min | typ | max | units |
|-------------------------|----------------------------------|-----|-------|-----|-------|
| line regulation | high line to low line, full load | | ±0.5 | | % |
| load regulation | 60% ±40% rated load | | ±1 | | % |
| voltage accuracy | set at 60% rated load and 25°C | | ±1 | | % |
| hold-up time | | | 12 | | ms |
| adjustability | built in trim pot | | | ±5 | % |
| switching frequency | | 55 | | 60 | kHz |
| temperature coefficient | | | ±0.05 | | %/°C |
| standby output | 5 Vdc / 0.5A | | | | |
| fan drive output | 12 Vdc / 0.3A for external fan | | | | |

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|-----------------------------|-------------------------------------|-----|-----|-----|-------|
| over voltage protection | recycle ac input to restart | | | | |
| short circuit protection | hiccup mode, recovers automatically | | | | |
| over temperature protection | auto recovery | | | | |
| over current protection | continuous | 120 | | 150 | % |

SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|-------------------|---|-------|-----|-----|-------|
| isolation voltage | input to output | 3,000 | | | Vac |
| safety approvals | IEC 60950-1, EN 60950-1, UL 60950-1 | | | | |
| EMI/EMC | EN 55022 Class B, FCC Part 15 Class B, EN 61000-6-(1,3), EN 61000-3-(2,3), EN 55024, EN 61204-3 | | | | |
| RoHS compliant | yes | | | | |

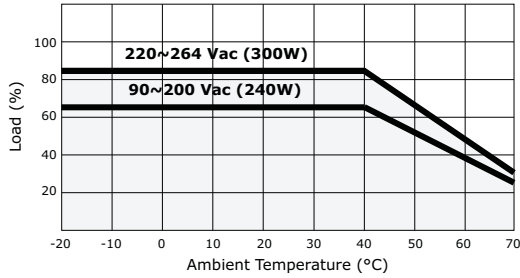
ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|---|-----|-----|-----|-------|
| operating temperature | refer to derating curves for more details | -20 | | 85 | °C |
| storage temperature | | -40 | | 85 | °C |
| operating humidity | non-condensing | | | 93 | % |

DERATING CURVES

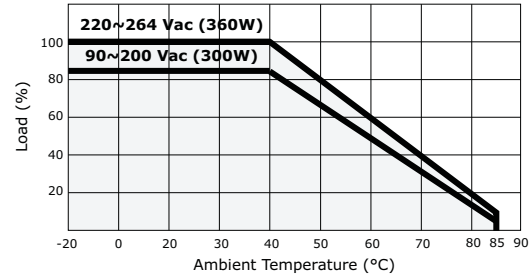
VBM-360 (open frame)

Natural Convection
(Ambient Temp vs. Load)

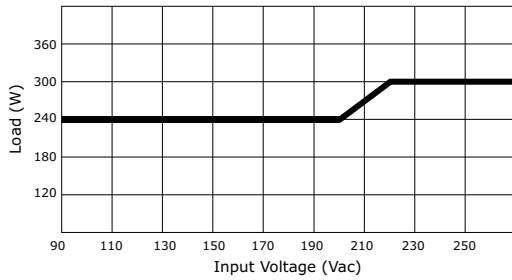


VBM-360-CNF (enclosed)

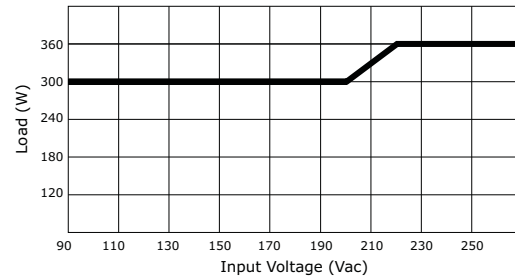
Natural Convection
(Ambient Temp vs. Load)



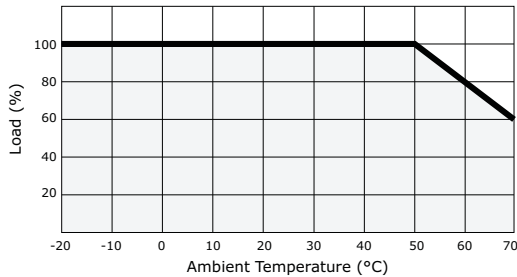
Natural Convection
(Input Voltage vs. Load)
40 °C



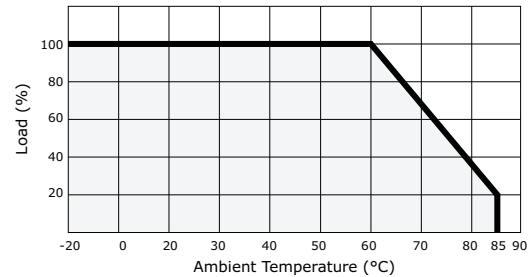
Natural Convection
(Input Voltage vs. Load)
40 °C



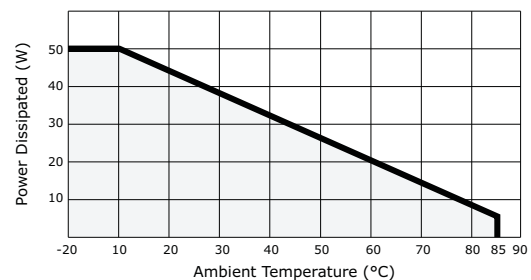
10 CFM Airflow
(Ambient Temp vs. Load)
90~264 Vac



10 CFM Airflow
(Ambient Temp vs. Load)
90~264 Vac



Baseplate Cooling
(Ambient Temp vs. PD)
90~264 Vac



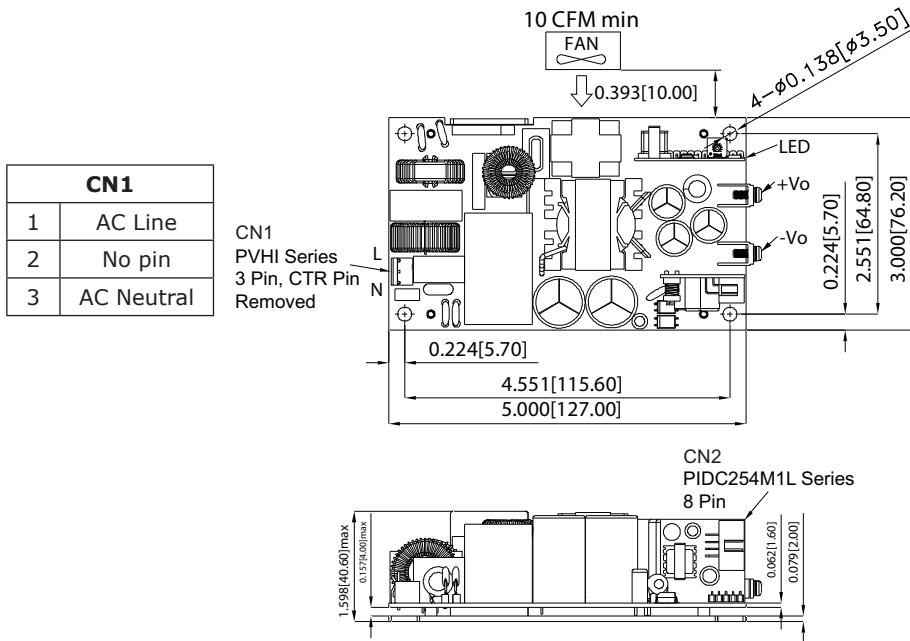
MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|------------|------------------------|--|-------------|-----|----------|
| dimensions | open frame | 5.000 x 3.000 x 1.598 (127.00 x 76.20 x 40.60 mm) | | | inch |
| | enclosed | 5.391 x 3.425 x 1.697 (136.94 x 87.00 x 43.10 mm) | | | inch |
| weight | open frame | | 470 1.04 | | g lbs |
| | enclosed | | 550 1.21 | | g lbs |

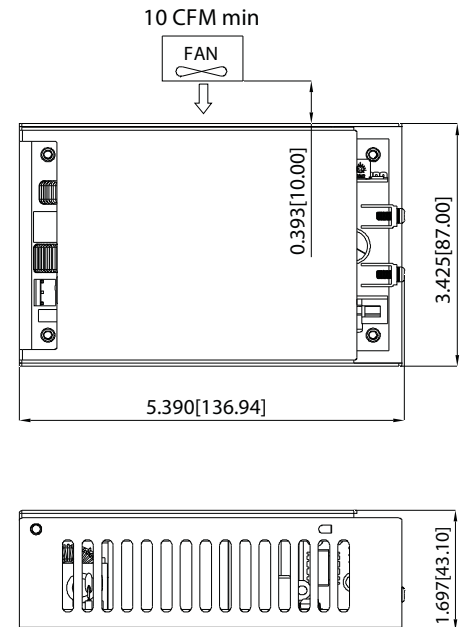
MECHANICAL DRAWING

units: inch[mm]
tolerance: ±0.02[±0.5]

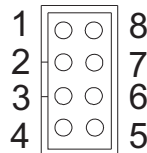
Open Frame



Enclosed (CNF)



| CN2 | | | |
|-----|-------------|----------------|-------------|
| 1 | +S | 8 | -S |
| 2 | GND | 7 ¹ | enable |
| 3 | GND | 6 | +5 VBS |
| 4 | FAN output- | 5 | FAN output+ |



Note: 1. For operation, it is required to pull down enable to activate the power supply (pin 7 tied to pin 2). It is recommended to use a 2.54mm mini shunt jumper. Jumper will need to be removed if using the 8 pin mating plug and tied together internally.

Note: All specifications measured at 25°C, 230Vac input voltage, and 60% load unless otherwise noted.

REVISION HISTORY

| rev. | description | date |
|------|--|------------|
| 1.0 | initial release | 01/09/2013 |
| 1.01 | added baseplate cooling to features, updated derating curves | 02/04/2013 |
| 1.02 | corrected mounting hole sizes | 05/30/2013 |
| 1.03 | updated connector note | 07/15/2013 |

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.

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.