CUI INC
a bel group

SERIES: VBM-100 | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

- up to 100 W isolated output
- baseplate cooling
- active PFC meets EN61000-3-2 Class D
- 17mm ultra low profile encapsulated packaging
- universal input (90~264 Vac)
- no load power consumption < 0.5 W
- single output from 12~48 Vdc
- 4,242 Vdc isolation
- wide operating temperature range (-20°C~85°C)
- over temperature, over voltage, and short circuit protections
- high efficiency up to 92%



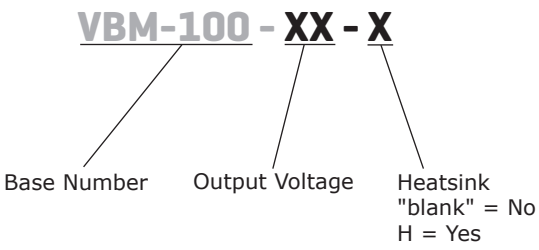
RoHS c UL us

MODEL

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency typ (%)
VBM-100-12	12	8.4	100	120	90
VBM-100-24	24	4.2	100	240	91
VBM-100-28	28	3.6	100	280	91
VBM-100-36	36	2.8	100	360	91
VBM-100-48	48	2.1	100	480	92

Notes: 1. ripple and noise are measured at 20 MHz BW with 10µF electrolytic capacitor and 0.1µF ceramic capacitor across output

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
inrush current	at 240 Vac			100	A
leakage current	at 264 Vac			3.5	mA
no load power consumption				0.5	W

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			16		ms
switching frequency			130		kHz
temperature coefficient			±0.05		%/°C

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				

SAFETY AND COMPLIANCE

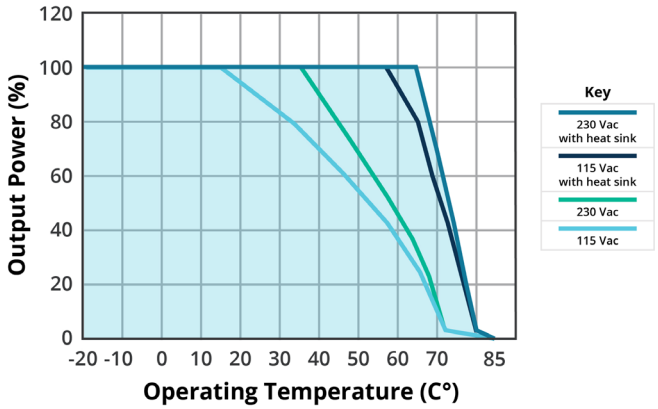
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output	4,242			Vdc
safety approvals	certified to 60950: IEC/UL				
EMI/EMC	EN 55022 Class B, FCC Part 15 Class B, EN 61000-6-(1,3), EN 61000-3-(2,3), EN 55024, EN 61204-3				
RoHS compliant	yes				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curves	-20		85	°C
storage temperature		-40		100	°C
humidity	non-condensing			93	%

DERATING CURVES

TEMPERATURE DERATING CURVE



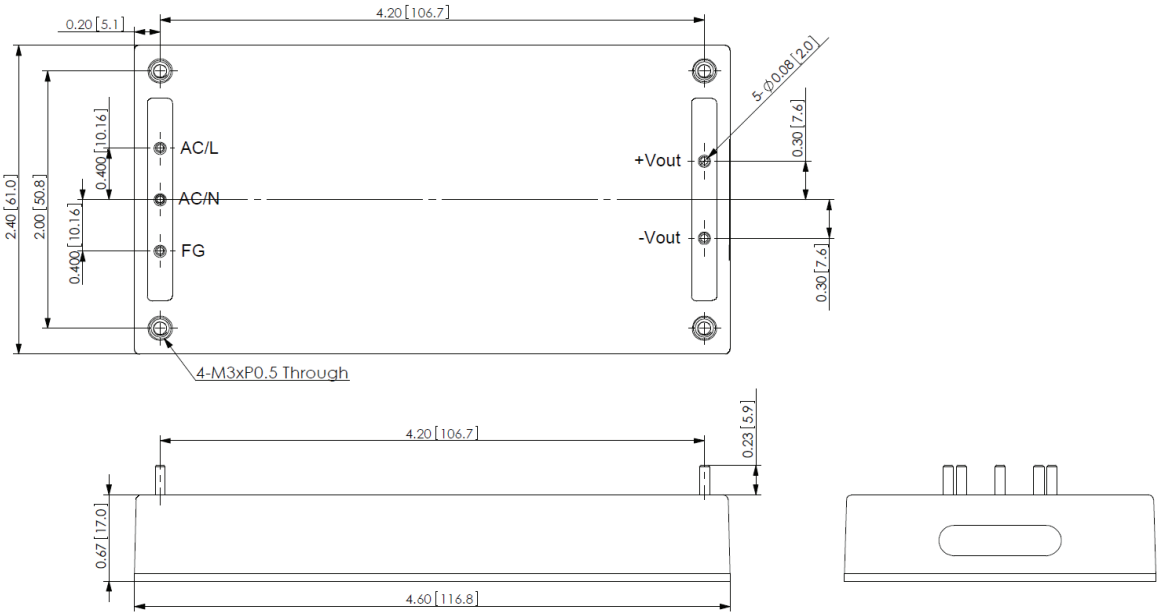
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	4.598 x 2.402 x 0.669 (116.80 x 61.00 x 17.00 mm)				inch
weight	without heatsink		220 0.5		g lbs

MECHANICAL DRAWING

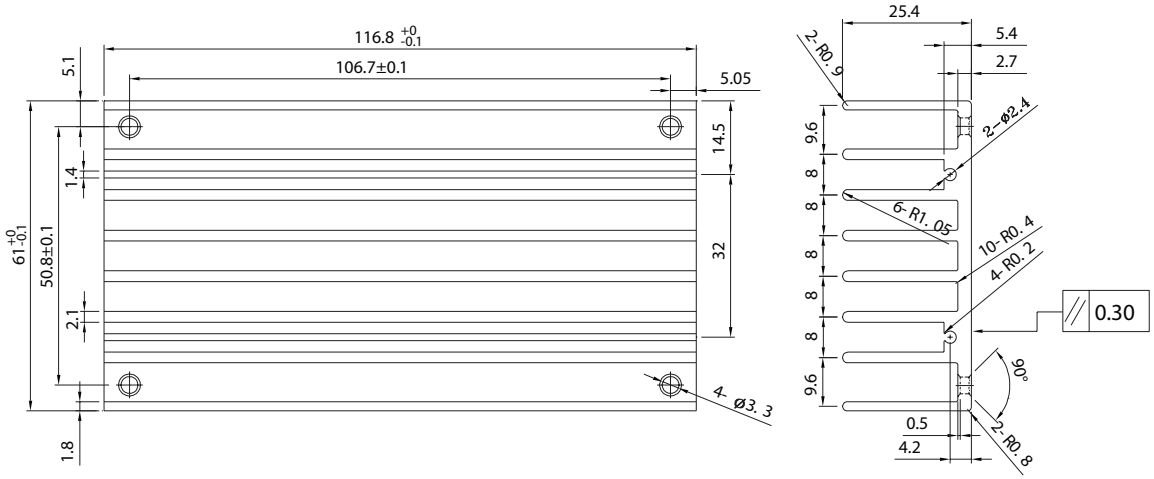
units: inch[mm]
tolerance: inches: x.xx = ±0.02, x.xxx = ±0.010
mm: x.x = ±0.5, x.xx = ±0.25

PIN CONNECTIONS	
PIN	FUNCTION
1	AC(L)
2	AC(N)
3	FG
4	+Vout
5	-Vout



HEATSINK

units: mm



All specifications measured at: Ta=25°C, 230 Vac input voltage and 60% rated output load, unless otherwise specified.

REVISION HISTORY

rev.	description	date
1.0	initial release	06/10/2013
1.01	updated derating curves	07/08/2013
1.02	added features	07/17/2013
1.03	company logo updated	12/22/2020
1.04	TUV mark removed, updated safeties	01/15/2021
1.05	safeties and derating curve updated	03/10/2022

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

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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.