CUI INC®

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

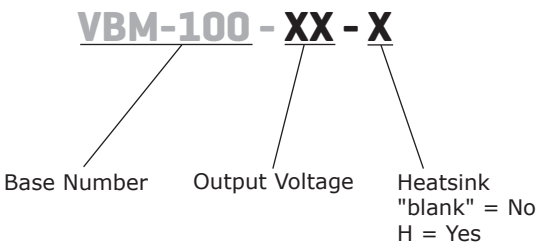
FEATURES

- 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%

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				

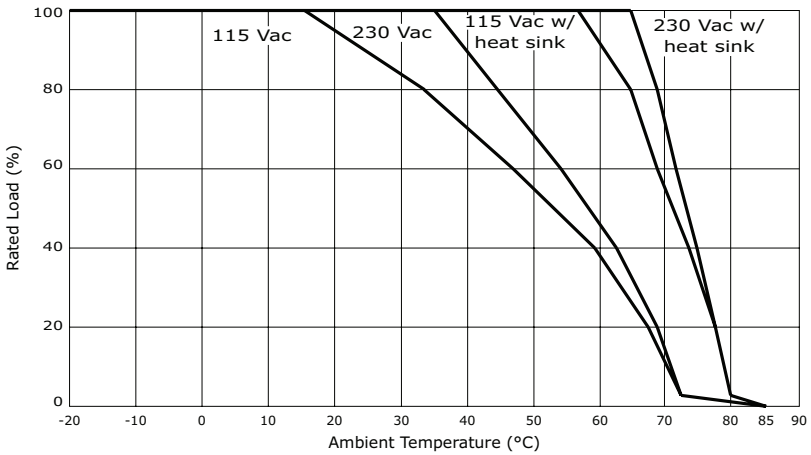
SAFETY AND COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output	4,242			Vdc
safety approvals	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	see derating curves	-20		85	°C
storage temperature		-40		100	°C
humidity	non-condensing			93	%

DERATING CURVES



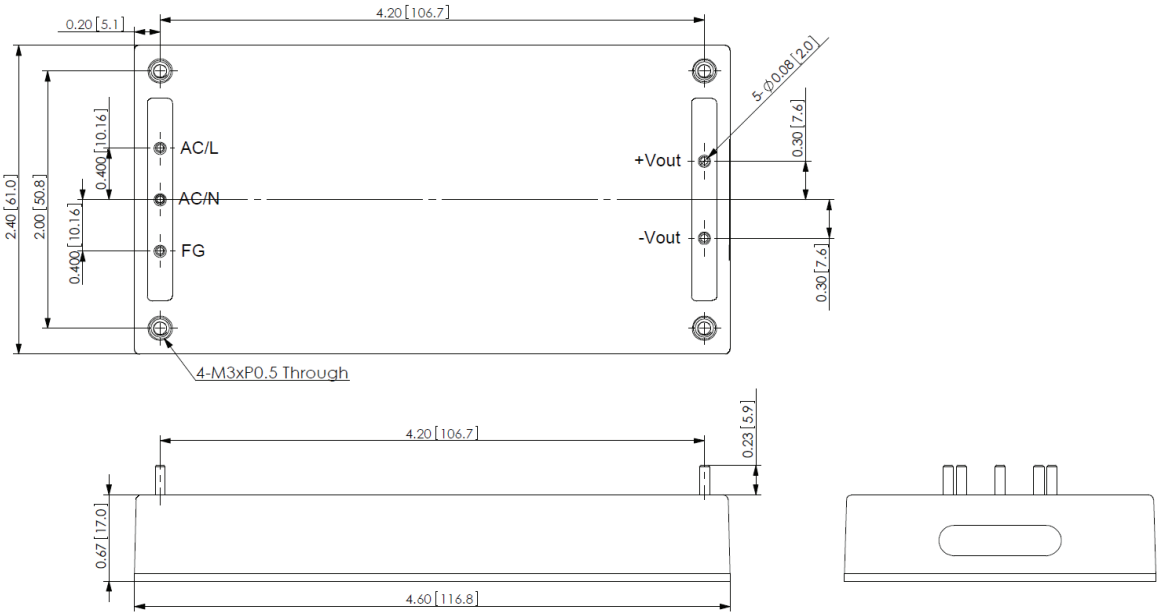
MECHANICAL

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

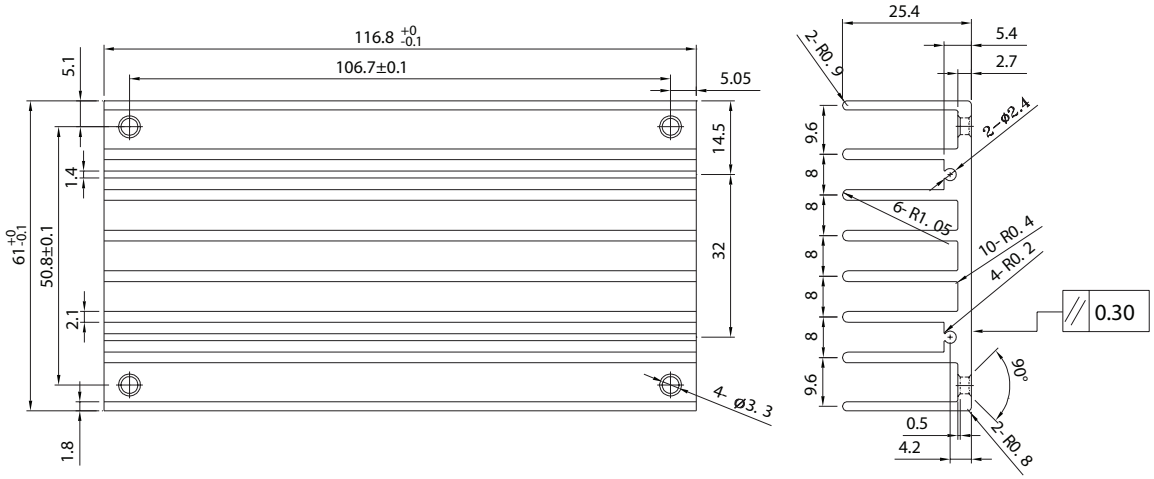
units: inch[mm]
tolerance: inches: x.xx = ±0.02, x.xxx = ±0.010
mm: x.x = ±0.5, x.xx = ±0.25

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

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

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