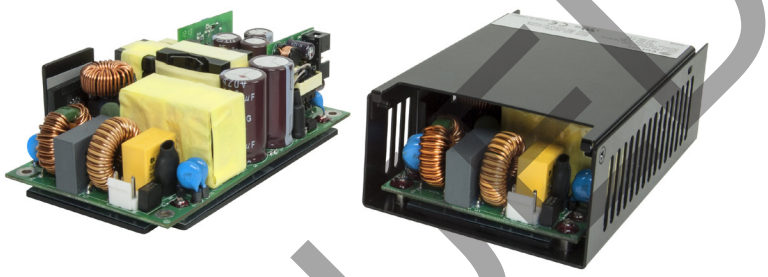
CUI INC
a bel group

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 (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency 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

VBM-360 - XX - XXX

- VBM-360: Base Number
- XX: Output Voltage
- XXX: Chasis
  "blank" = open frame
  CNF = enclosed

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				

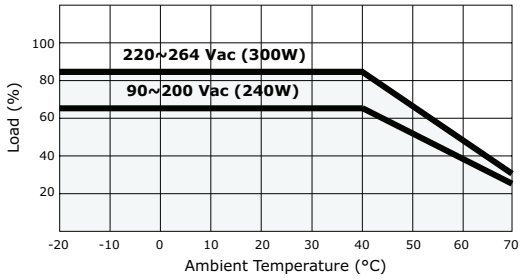
ENVIRONMENTAL

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	%

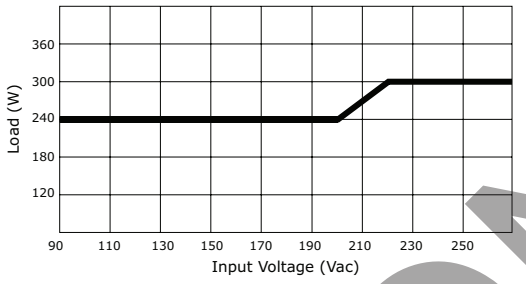
DERATING CURVES

VBM-360 (open frame)

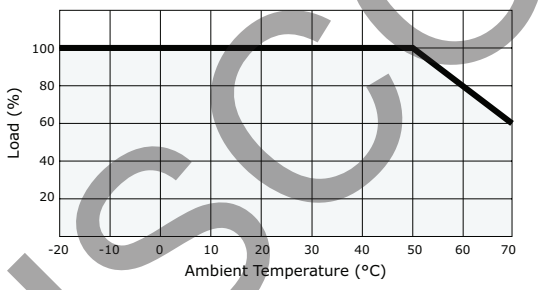
Natural Convection
(Ambient Temp vs. Load)



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

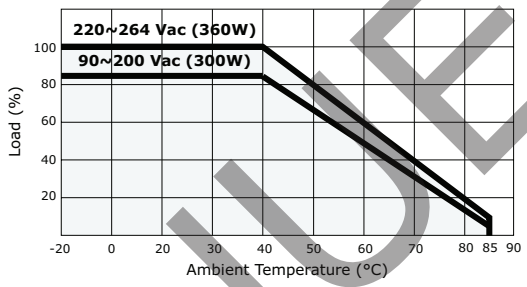


10 CFM Airflow
(Ambient Temp vs. Load)
90~264 Vac

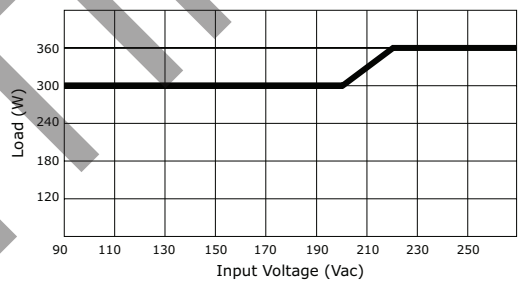


VBM-360-CNF (enclosed)

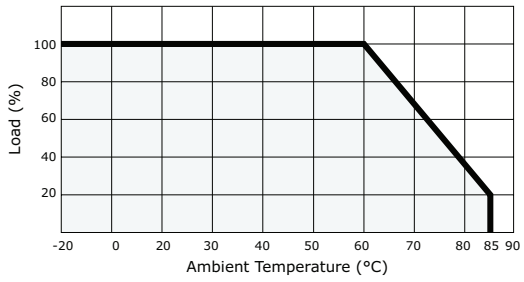
Natural Convection
(Ambient Temp vs. Load)



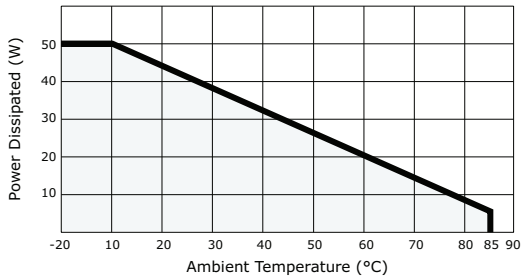
Natural Convection
(Input Voltage vs. Load)
40 °C



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



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



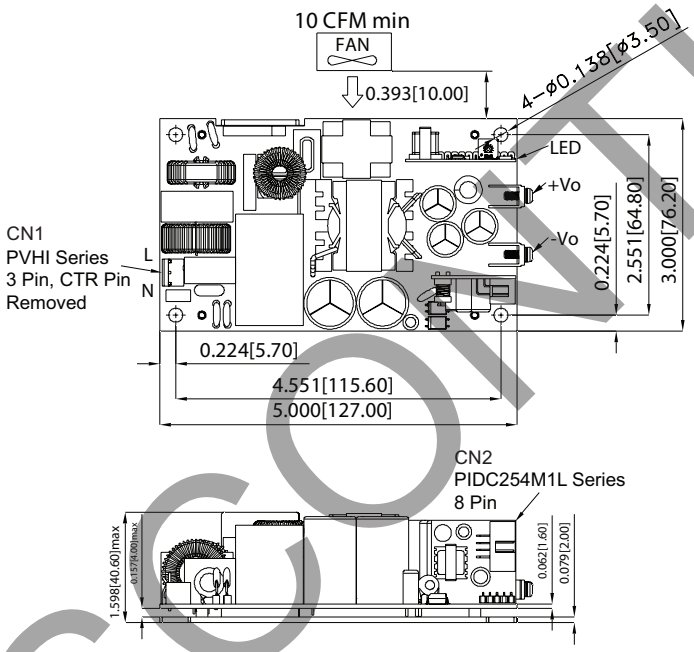
MECHANICAL

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

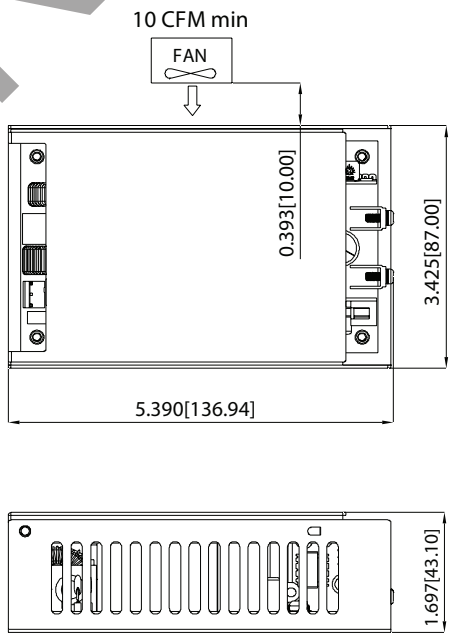
units: inch[mm]
tolerance: ±0.02[±0.5]

Open Frame

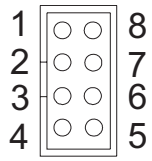


CN1	
1	AC Line
2	No pin
3	AC Neutral

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
1.04	company logo updated	12/22/2020

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

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