CUI INC
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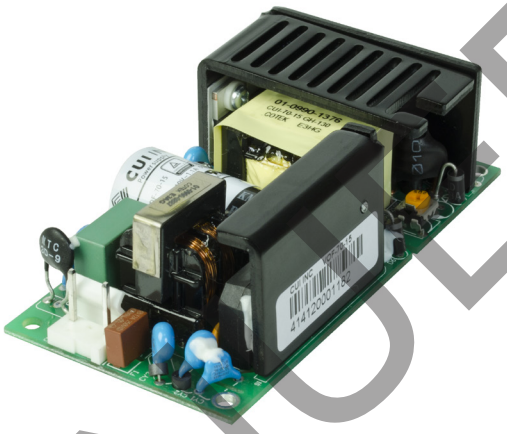
SERIES: VOF-70 | DESCRIPTION: AC-DC POWER SUPPLY

FEATURES

- up to 70 W continuous power
- compact size
- universal input (90~277 Vac)
- single output from 5~48 Vdc
- user trimmable output voltage option
- no load power consumption <0.24W
- 3000 Vac isolation
- over current, over voltage, and short circuit protections
- certified to 60950: UL/cUL
- efficiency up to 90%



MODEL

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency typ (%)
VOF-70-5	5	8.61	43	120	81
VOF-70-12*	12	5.9	70	120	87
VOF-70-15*	15	4.7	70	150	87
VOF-70-24*	24	3	70	240	88
VOF-70-28	28	2.5	70	280	88
VOF-70-48	48	1.5	70	480	90

Notes:
1. Ripple & noise are measured at 20 MHz BW with 0.1 µF ceramic cap and a 10 µF electrolytic capacitors on the output and the two earth ground pads are connected to input earth ground.
2. * Discontinued model.

PART NUMBER KEY

VOF-70 - XX

Base Number — Output Voltage

INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		277	Vac
frequency		47		63	Hz
input current	at 115 Vac, full load at 230 Vac, full load		1.5 0.7		A A
inrush current	at 230 Vac, cold start		50		A
leakage current	at 277 Vac			3.5	mA
no load power consumption	at 110 Vac at 230 Vac			0.24 0.30	W W
input fuse	2 A/250V time delay fuse (included)				

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	low line to high line		±0.5		%
load regulation	full load to 10% load		±1		%
initial set point accuracy			±3		%
transient response	1 kHz, 10~100% load VOF-70-5 VOF-70-12 VOF-70-15 VOF-70-24 VOF-70-28 VOF-70-48		 500 1200 1500 2400 2800 4800		 mVp-p mVp-p mVp-p mVp-p mVp-p mVp-p
hold-up time	at 115 Vac, full load	8			ms
start-up time	at 115 Vac, full load		50		ms
start-up delay	at 115 Vac, full load		1000		ms
adjustability	built in trim pot		±5		%
switching frequency		61	65	69	kHz
temperature coefficient			±0.03		%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
short circuit protection	hiccup, auto recovery	110			%
over current protection	hiccup, auto recovery	110			%
over voltage protection	clamped by TVS				

SAFETY & COMPLIANCE

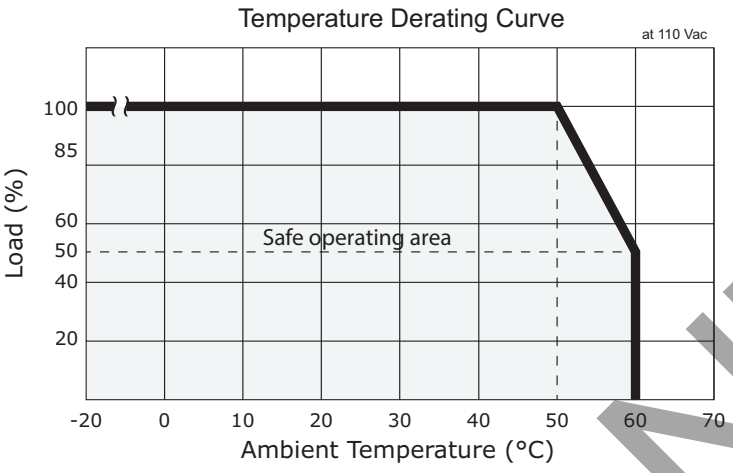
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output input to ground output to ground	3,000 1,500 1,500			Vac Vac Vac
safety approvals	certified to 60950: UL/cUL				
EMI/EMC[1]	EN 55022: 2010 Class B, EN 61204-3:2000, EN 61000-6-3: 2007 +A1: 2011, EN 61000-3-2: 2006 +A2: 2009, EN 61000-3-3: 2008, EN 55024: 2010, EN 61000-6-1: 2007, ENV 50204: 1995, CE, FCC				
class	class II				
MTBF	as per MIL-HDBK-217F at 25 °C, full load	250,000			hours
RoHS	2011/65/EU				

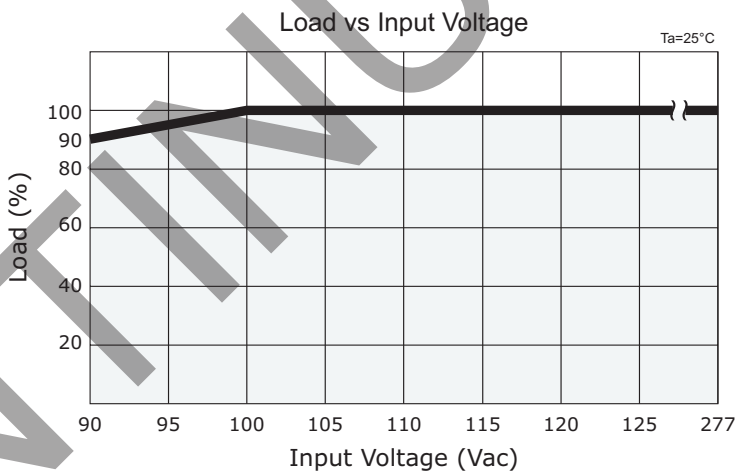
Notes: 1. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curves	-20		60	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	20		90	%
storage humidity	non-condensing	20		90	%
operating altitude			2000		m
vibration & shock	10~3000Hz, 10 minutes per cycle, for 1 hour along each of the X, Y, and Z axes		2		G

DERATING CURVES





MECHANICAL

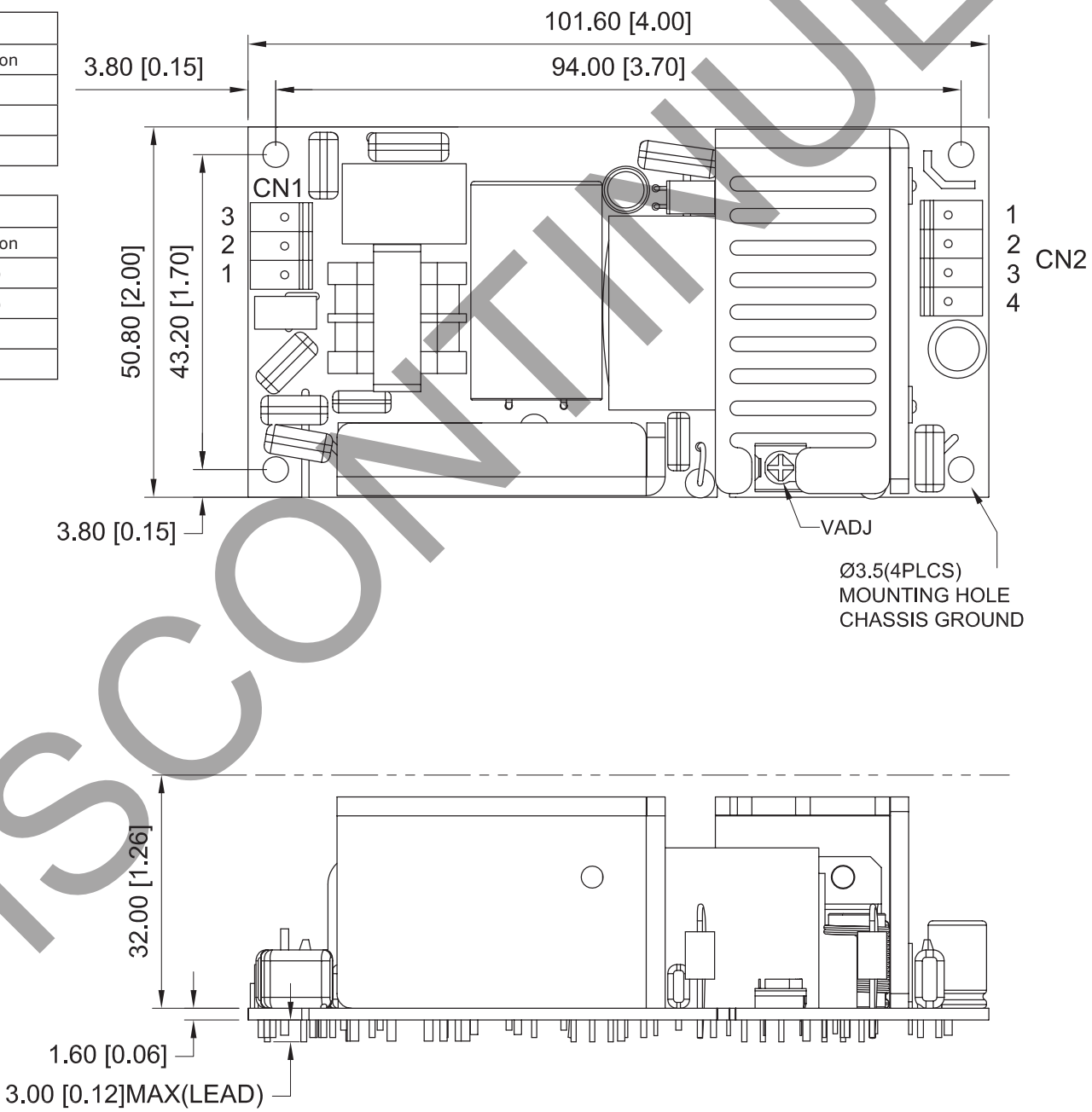
parameter	conditions/description	min	typ	max	units
dimensions	101.6 x 50.8 x 33.6 (4.00 x 2.00 x 1.32 inch)				mm
weight			160		g
cooling method	open frame (convection)				

MECHANICAL DRAWING

units: mm[inch]
tolerance: ±0.30

CN1	
PIN	Function
1	L
2	NP
3	N

CN2	
PIN	Function
1	+Vo
2	+Vo
3	-Vo
4	-Vo



Notes:
1. CN1 mates with Molex housing 09-50-3031 with Molex 2478 series crimp contact or equivalent.
2. CN2 mates with Molex housing 09-50-3041 with Molex 2478 series crimp contact or equivalent.
3. All specifications are measured at Ta=25°C, 230 Vac input voltage, and rated output load unless otherwise specified.

REVISION HISTORY

rev.	description	date
1.0	initial release	04/08/2014
1.01	updated datasheet	05/09/2014
1.02	updated datasheet	07/22/2014
1.03	safety information updated	11/19/2020
1.04	discontinued model VOF-70-12, VOF-70-15 & VOF-70-24	02/06/2023

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

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