

# SERIES: VOF-30 | DESCRIPTION: AC-DC POWER SUPPLY

#### FEATURES

- up to 30 W continuous power
- compact size
- universal input (90~277 Vac)
- single output from 5~24 Vdc
- user trimmable output voltage option
- no load power consumption <0.18W
- 3000 Vac isolation
- over current, over voltage, and short circuit protections
- UL/cUL and TUV 60950-1 safety approvals
- efficiency up to 86%





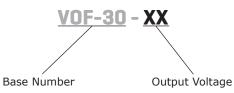
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MODEL	output voltage	output current	output power	ripple and noise <sup>1</sup>	efficiency
	(Vdc)	max (A)	max (W)	<b>max</b> (mVp-p)	<b>typ</b> (%)
VOF-30-5	5	5.28	26.4	120	78
VOF-30-12	12	2.5	30	120	84
VOF-30-15	15	2.0	30	150	85
VOF-30-18	18	1.7	30	180	85
VOF-30-24	24	1.3	30	240	86

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.

#### **PART NUMBER KEY**

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#### 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		0.75 0.35		A A
inrush current	at 230 Vac, cold start		40		А
leakage current	at 277 Vac			3.5	mA
no load power consumption	at 110 Vac at 230 Vac			0.18 0.30	W W
input fuse	1 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-30-5 VOF-30-12 VOF-30-15 VOF-30-18 VOF-30-24		500 1200 1500 1800 2400		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**

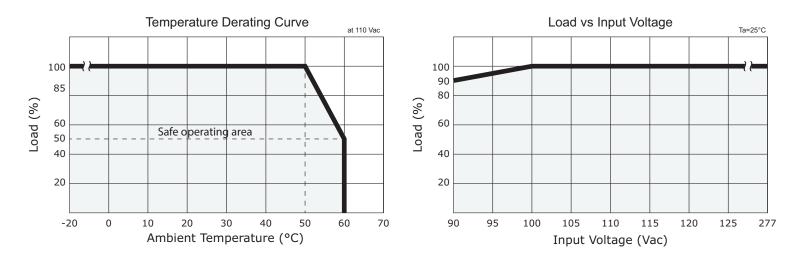
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output input to ground	3,000 1,500			Vac Vac
	output to ground	1,500			Vac
safety approvals	UL60950-1, EN60950-1				
EMI/EMC <sup>1</sup>	EN 55022: 2010 Class B, EN 61204-3:2000, EN 61000-6-3: 2007 +A1: 2011, EN 61000-3-2: 2006 +A2: 2009, EN 61000-3-3: 2008, EN 5502 2010, EN 61000-6-1: 2007, ENV 50204: 1995, 0 FCC	24:			
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 mus	t be tested to m	neet the necessary	/ EMC directive

# **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	$10 \sim 3000$ Hz, $10$ minutes per cycle, for 1 hour along each of the X, Y, and Z axes		2		G

# **DERATING CURVES**

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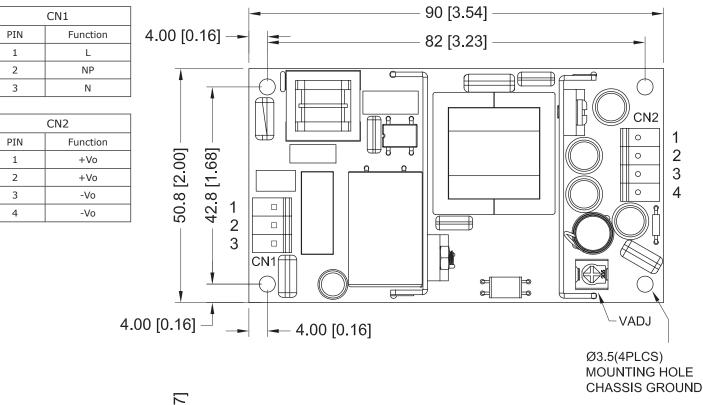


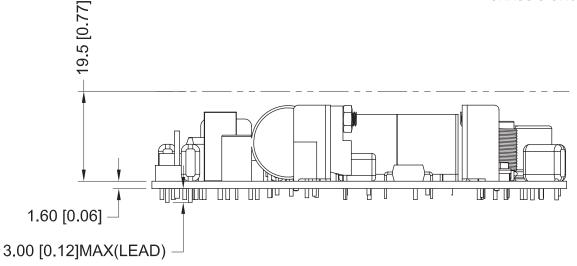
#### **MECHANICAL**

parameter	conditions/description	min	typ	max	units
dimensions	90 x 50.8 x 21.1 (3.54 x 2.00 x 0.83 inch)				mm
weight			86		g
cooling method	open frame (convection)				

#### **MECHANICAL DRAWING**

units: mm[inch] tolerance: ±0.30





1. CN1 mates with Molex housing 09-50-3031 with Molex 2478 series crimp contact or equivalent. Notes:

 CN2 mates with Molex housing 09-50-3041 with Molex 2478 series crimp contact or equivalent.
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	corrected CN2 pinouts	07/22/2014

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.

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