CUI INC®

SERIES: VFM40 | DESCRIPTION: AC-DC POWER SUPPLY

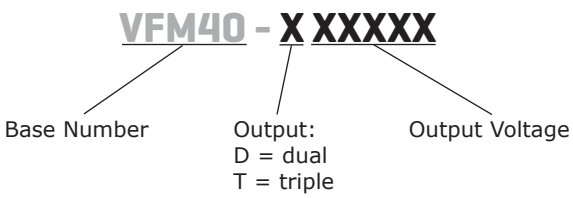
FEATURES

- up to 40 W continuous power
- industry standard footprint (2x4")
- universal input (90~264 Vac)
- 4,242 V isolation
- over current, over temperature, over voltage, and short circuit protections
- efficiency up to 81%

MODEL	output voltage	output current		output power	ripple and noise[1]	efficiency
		min	typ	max	max	typ
	(Vdc)	(A)	(A)	(A)	(W)	(mVp-p)	(%)
VFM40-D512	5 (V1) 12 (V2)	0.4 0.2	3.2 2.0	5.0 2.5	40.0	50 120	80
VFM40-D524	5 (V1) 24 (V2)	0.4 0.2	3.2 1.0	5.0 1.5	40.0	50 240	81
VFM40-T5125	5 (V1) 12 (V2) -5 (V3)	0.4 0.2 0	3.0 2.0 0.3	5.0 2.5 0.5	40.5	50 120 50	78
VFM40-T512	5 (V1) 12 (V2) -12 (V3)	0.4 0.2 0	3.0 2.0 0.3	5.0 2.5 0.5	42.6	50 120 120	78
VFM40-T515	5 (V1) 15 (V2) -15 (V3)	0.4 0.2 0	3.0 1.5 0.3	5.0 2.3 0.5	42.0	50 150 150	78
VFM40-T52412	5 (V1) 24 (V2) -12 (V3)	0.4 0.2 0	3.0 1.0 0.3	5.0 1.5 0.5	42.6	50 240 120	78
VFM40-T5245	5 (V1) 24 (V2) -5 (V3)	0.4 0.2 0	3.0 1.0 0.3	5.0 1.5 0.5	40.5	50 240 50	78
VFM40-T52412-1	5 (V1) 24 (V2) 12 (V3)	0.4 0.2 0	3.0 1.0 0.3	5.0 1.5 0.5	42.6	50 240 120	78
VFM40-3512	3.3 (V1) 5 (V2) 12 (V3)	0.4 0.2 0	5.0 2.0 0.3	7.0 3.5 0.5	30.0	100 100 120	71

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

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage		90 120		264 370	Vac Vdc
frequency		47		440	Hz
input current	115 Vac			1	A
inrush current	230 Vac			60	mA

OUTPUT

parameter	conditions/description		min	typ	max	units
line regulation	dual output models	V1 V2			±1 ±2	% %
	triple output models	V1 V2 V3			±1 ±2 ±1	% % %
load regulation	dual output models	V1 V2			±3 ±5	% %
	triple output models	V1 V2 V3			±3 ±5 ±1	% % %
voltage accuracy	dual output models	V1 V2			±3 ±4	% %
	triple output models	V1 V2 V3			±3 ±4 ±3	% % %
hold-up time	115 Vac at full load			20		ms
adjustment range				10		%

PROTECTIONS

parameter	conditions/description		min	typ	max	units
over voltage protection	V1	3.3 V 5 V	3.6 5.7	4.6 6.7		Vdc Vdc
	V2	12, 15, and 24 V	120		140	%
over current protection	auto recovery				180	%Io
short circuit protection	auto recovery upon removal of short					

SAFETY & COMPLIANCE

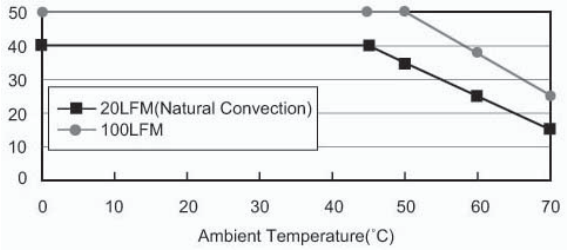
parameter	conditions/description	min	typ	max	units
isolation voltage	primary to secondary	4,242			Vac
safety standards	UL, TUV, CE				
EMI/EMC	EN 61204-3 Class B, CISPR, FCC Class B				
leakage current				3.5	mA
RoHS compliant	yes				

ENVIRONMENTAL

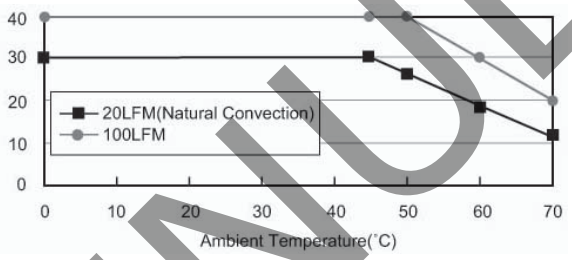
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	0		45	°C
storage temperature		-20		85	°C

DERATING CURVES

All other models



VFM40-3512

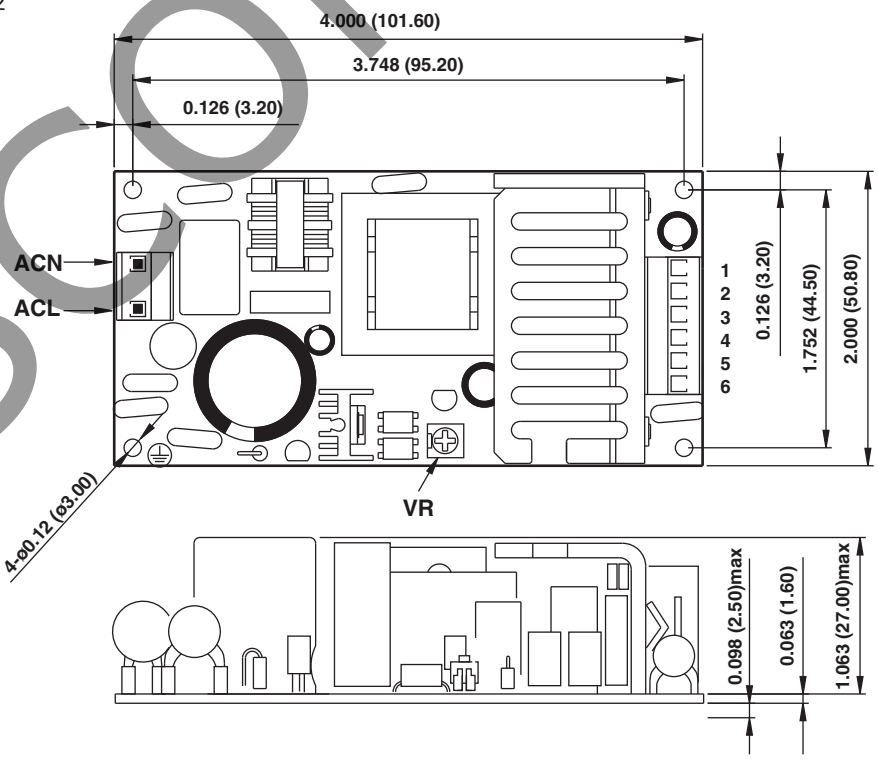


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	4 x 2 x 1.2 (101.6 x 50.8 x 30.48 mm)				inch
weight			180		g

MECHANICAL DRAWING

units: inches (mm)
tolerance: inches: x.xx = ±0.02
mm: x.xx = ±0.5



MATING CONNECTORS	
CONNECTOR	MOLEX
AC input (CN1)	housing: 09-50-3031 crimp contact: 2878
DC output (CN2)	housing: 09-50-3061 crimp contact: 2878

PIN CONNECTIONS	
PIN	FUNCTION
1	V2
2	V1
3	V1
4	COM
5	COM
6	V3

Note: All specifications measured at 25°C, 115/230Vac input voltage, and 75% load unless otherwise noted.

REVISION HISTORY

rev.	description	date
1.0	initial release	01/30/2007
1.01	updated spec template and derating curves	08/28/2007
1.03	new template applied, V-Infinity branding removed, safety marks/standards and mechanical drawing updated	08/17/2012
1.04	updated spec	07/22/2013

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

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