

SERIES: VFK400W | DESCRIPTION: DC-DC CONVERTER
FEATURES

- up to 400 W isolated output
- rugged metal enclosure with integrated heat sink
- 4:1 input range (10~36 V, 18~75 V)
- single output from 12~48 V
- 1,500 V isolation
- over current, over temperature, over voltage, and short circuit protection
- remote on/off
- efficiency up to 87%

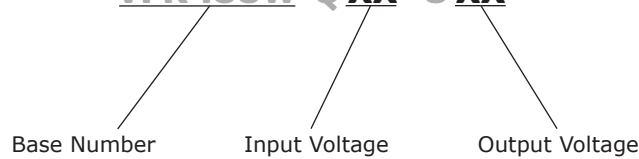


MODEL	input voltage range (Vdc)	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise¹ max (mVp-p)	efficiency max (%)
VFK400W-Q24-S12	10~36	12	33.3	400	200	87
VFK400W-Q24-S24	10~36	24	16.7	400	240	86
VFK400W-Q24-S48	10~36	48	8.3	400	480	86
VFK400W-Q48-S12	20~75	12	33.6	400	200	87
VFK400W-Q48-S24	18~75	24	16.7	400	240	86
VFK400W-Q48-S48	18~75	48	8.3	400	480	86.5

Notes: 1. ripple and noise are measured at 20 MHz BW with 10µF tantalum capacitor and 1µF ceramic capacitor across output

PART NUMBER KEY

VFK400W-Q XX -S XX



INPUT

parameter	conditions/description	min	typ	max	units
operating input voltage	24 V input	10	24	36	Vdc
	48 V input	12 V output 24, 48 V output	20 18	48 48	75 75
under voltage lockout	power up	24 V input 48 V input		9.5 17.8	Vdc Vdc
	power down	24 V input 48 V input		8.5 15.5	Vdc Vdc
remote on/off ¹					

Notes: 1. logic compatibility, open collector ref to -input
Module ON, 3.5~75 Vdc or open circuit
Module OFF, <1.2 Vdc

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	measured from high line to low line			±1	%
load regulation	measured from full load to zero load			±1	%
voltage accuracy				±1.5	%
transient response	25% step load change			500	µs
adjustability ²		90		105	%
switching frequency			250		kHz
temperature coefficient			±0.03		%/°C

Notes: 2. trim-up: connect a resistor between the trim pin and +Sense
trim-down: connect a resistor between the trim pin and -Sense

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	%Vo	115		140	%
over current protection	% nominal output current	110		150	%
short circuit protection	continuous				

SAFETY AND COMPLIANCE

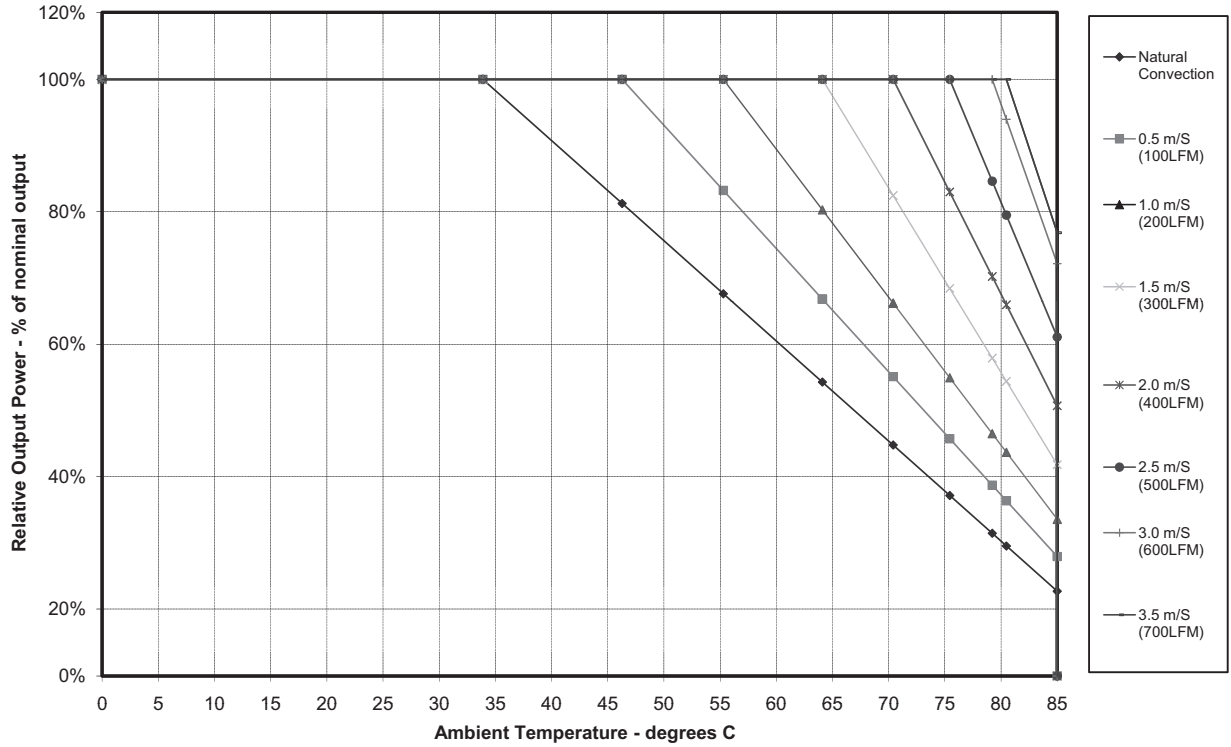
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output	1,500			Vdc
	input to case	1,500			Vdc
	output to case	1,500			Vdc
isolation resistance		10			MΩ
RoHS compliant	yes				

ENVIRONMENTAL

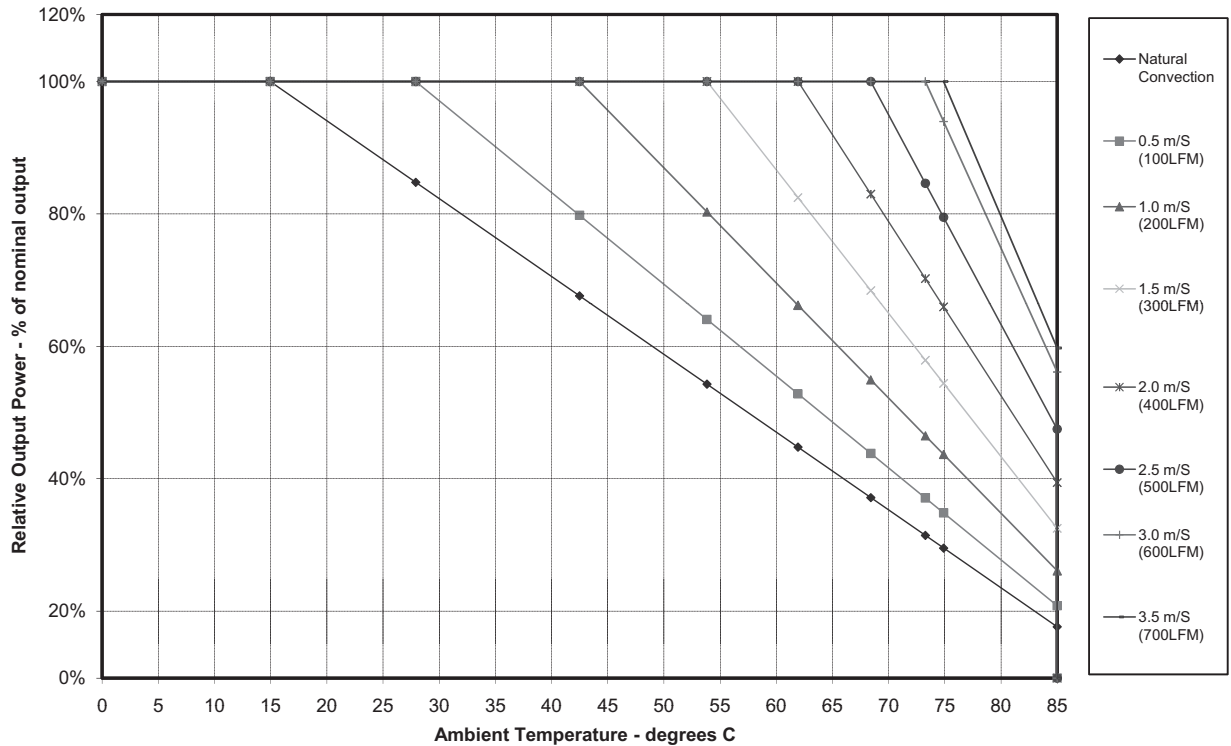
parameter	conditions/description	min	typ	max	units
case operating temperature	see derating curve	-40		100	°C
maximum case temperature			110		°C
storage temperature		-55		105	°C

DERATING CURVES

24 V input, 12 V output
48 V input, 12/24/48 V output



24 V input, 24/48 V output



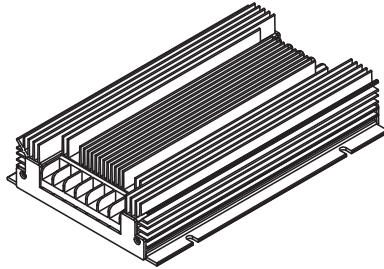
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	7.84 x 4.99 x 1.54 (199 x 126.8 x 39 mm)				inch
case material	steel and aluminum extrusion				
weight			14.2		g

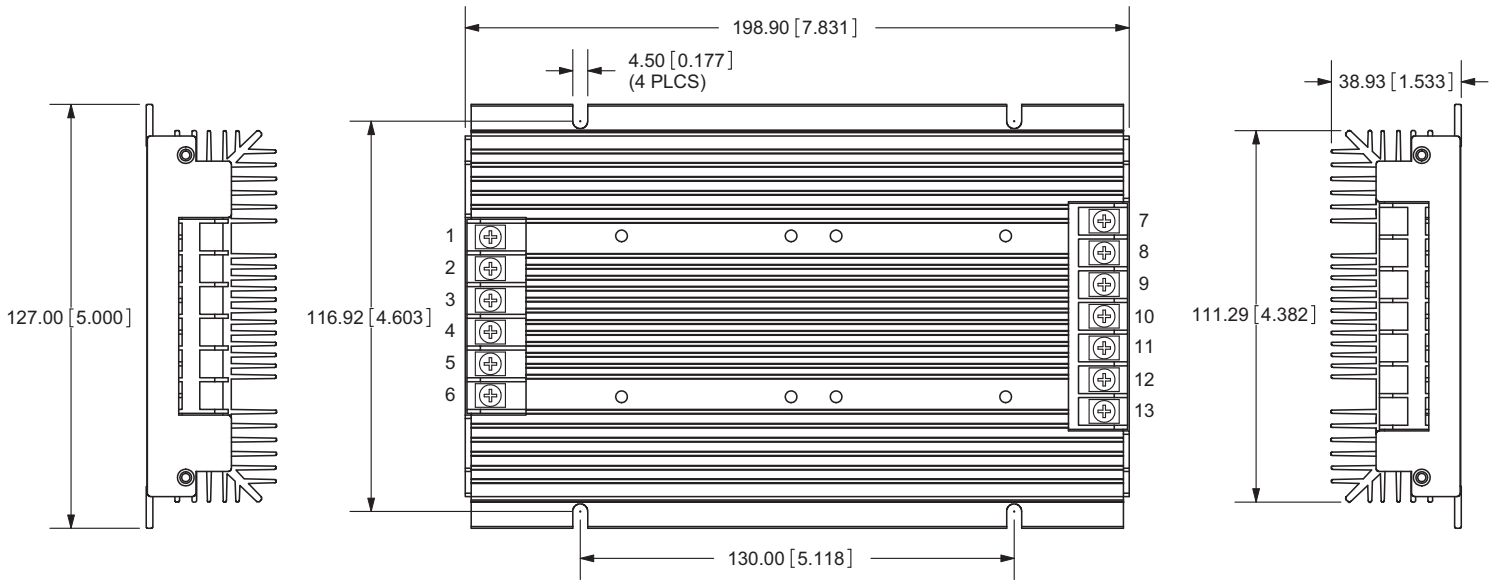
MECHANICAL DRAWING

units: mm[inch]

TOLERANCE:
 X.X = ±0.3mm
 X.XX = ±0.25mm



PIN CONNECTIONS	
PIN	FUNCTION
1,2	+Vin
3,4	-Vin
5	on/off
6	case
7,8	+Vo
9	+S
10	Trim
11	-S
12,13	-Vo



REVISION HISTORY

rev.	description	date
1.0	initial release	03/13/2012
1.01	updated adjustability range	09/20/2012

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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