SERIES: VHK200W | **DESCRIPTION:** DC-DC CONVERTER

FEATURES

- up to 200 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 protections
- remote on/off
- efficiency up to 88%

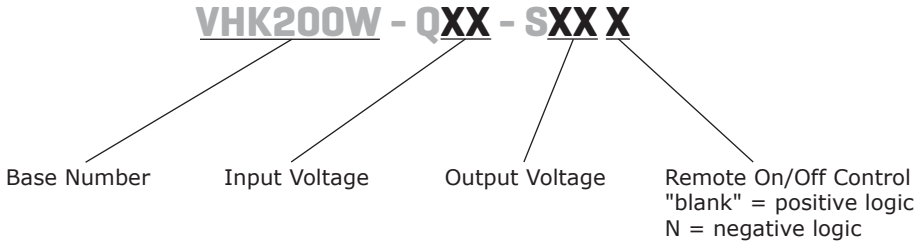
RoHS

MODEL

MODEL	input voltage range (Vdc)	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency typ (%)
VHK200W-Q24-S12	9 ~ 36	12	16.7	200	150	84
VHK200W-Q24-S15	9 ~ 36	15	13.3	200	150	84
VHK200W-Q24-S24	9 ~ 36	24	8.3	200	240	84
VHK200W-Q24-S28	9 ~ 36	28	7.14	200	280	87
VHK200W-Q24-S48	9 ~ 36	48	4.2	200	480	87
VHK200W-Q48-S12	18 ~ 75	12	16.7	200	150	86
VHK200W-Q48-S15	18 ~ 75	15	13.3	200	150	86
VHK200W-Q48-S24	18 ~ 75	24	8.3	200	240	86
VHK200W-Q48-S28	18 ~ 75	28	7.14	200	280	87
VHK200W-Q48-S48	18 ~ 75	48	4.2	200	480	88

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

PART NUMBER KEY



INPUT

parameter	conditions/description		min	typ	max	units
operating input voltage			10 18	24 48	36 75	Vdc Vdc
under voltage lockout	power up	24 V input		8.8		Vdc
		24 V input (48 V output)		9.5		Vdc
		48 V input		17		Vdc
	power down	24 V input		8		Vdc
		24 V input (48 V output)		8.5		Vdc
		48 V input		16		Vdc
remote on/off[1]						
filter	PI type					

Notes: 1. logic compatibility, open collector ref to -input
Module ON, >3.5 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				±0.2	%
load regulation	measured from full load to zero load				±1	%
voltage accuracy	12V, 15V & 24V 28V & 48V				±1 ±1.5	% %
transient response	25% step load change				500	µs
adjustability[2]				±10		%
switching frequency	100% load	12V, 15V & 24V 28V & 48V		300 250		kHz 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	12V, 15V & 24V 28V & 48V	115 90		140 110	% %
over current protection	% nominal output current		110		160	%
short circuit protection	continuous					

SAFETY AND COMPLIANCE

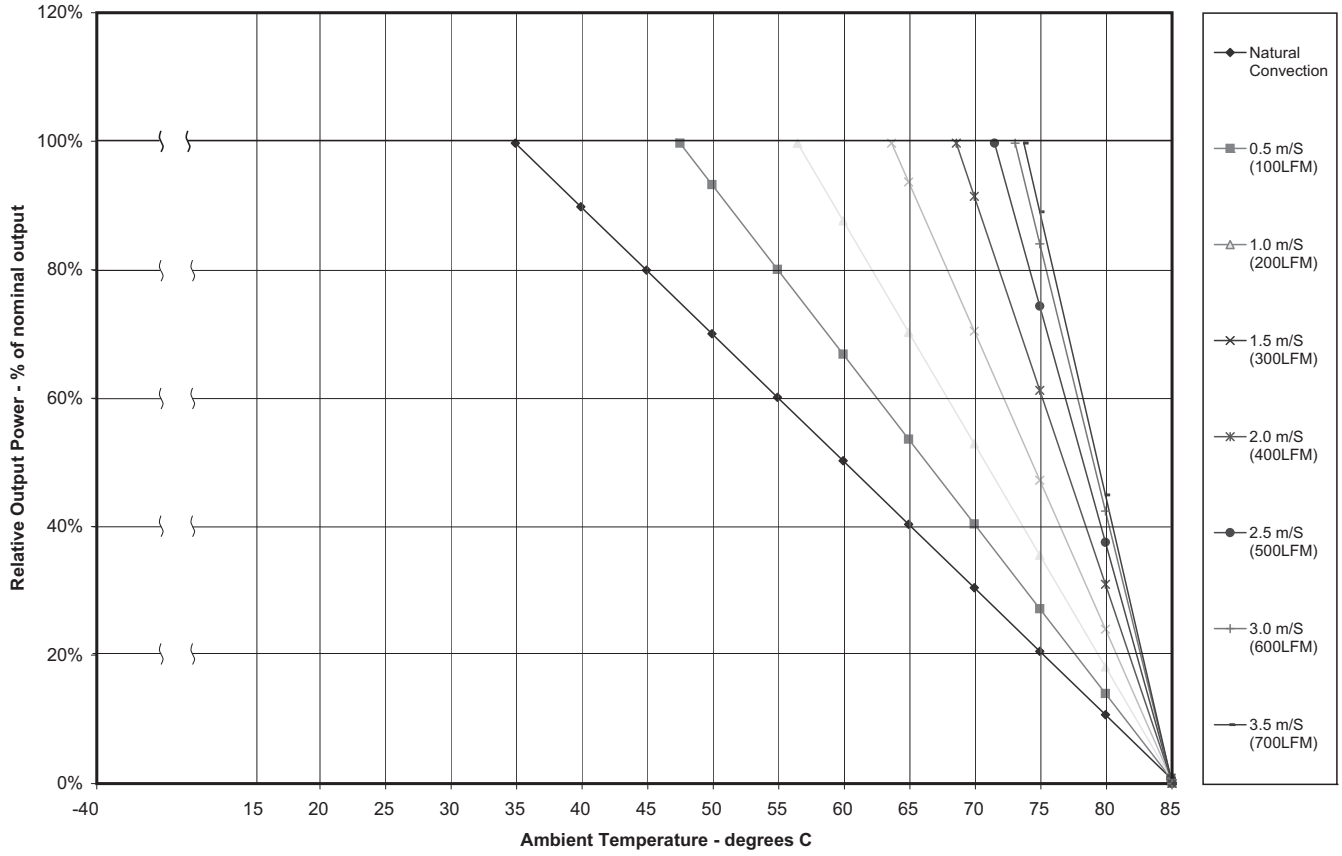
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output input to case output to case	1,500 1,500 1,500			Vdc Vdc Vdc
isolation resistance		100			MΩ
RoHS compliant	yes				

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

VHK200W POWER DERATING CURVES AT NOMINAL INPUT



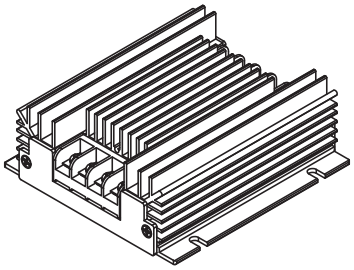
MECHANICAL

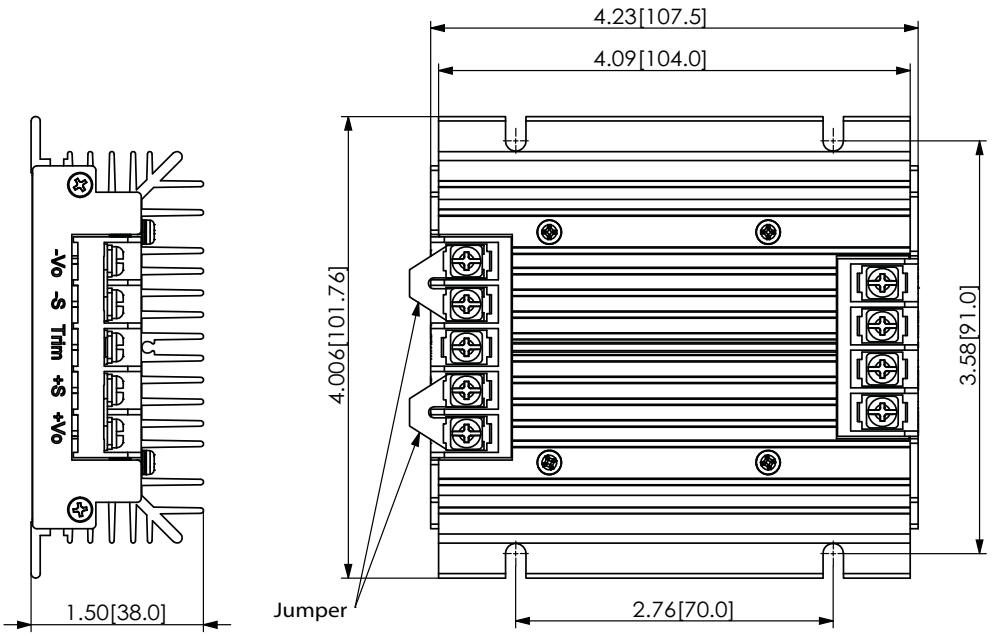
parameter	conditions/description	min	typ	max	units
dimensions	3.34 x 4.232 x 1.50 (101.76 x 107.5 x 38.0 mm)				inch
case material	steel and aluminum extrusion				
weight			522		g

MECHANICAL DRAWING

units: mm[inch]

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





*DIN rail mounting kit available (part# VHK-DIN)

PIN CONNECTIONS	
PIN	FUNCTION
1	-Vo
2	-S
3	trim
4	+S
5	+Vo
6	case
7	on/off
8	-Vin
9	+Vin

REVISION HISTORY

rev.	description	date
1.0	initial release	10/11/2006
1.01	new template applied	12/21/2011
1.02	misc. updates and corrections	03/13/2012
1.03	updated mechanical drawing	03/27/2012
1.04	V-Infinity branding removed	06/27/2012

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

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