

Features:



- 90W Compact Size 87.0 x 52.0 x 29.5mm
- Wide ACDC Input 80V to 305VAC
- Temperature Range -40°C to +85°C
- Over-voltage Category OVC III
- Output Range: 12V - 48VDC
- Low Standby Power <0.21W
- Fully Isolated Pri - Sec 4200Vrms
- Insulation: Class II
- Materials: UL94-V0
- UL/EN62368-1, EN61558-1, EN60335-1
- 3 Year Warranty



Description

VTX-214-090-1## AC-DC converters are a compact size power converter. It features a wide AC input 80V to 305VAC and a DC input voltage 110 to 430VDC. The converters have been designed with low power consumption, high efficiency, high reliability, reinforced isolation. It offers good EMC performance compliant to IEC/EN61000-4 and CISPR32/EN55032 and meets IEC/EN/UL62368, EN60335, EN61558 standards. The converters are widely used in industrial, power, home appliances, instrumentation, communication and civil applications. For extremely harsh EMC environment, we recommend using the application circuit shown in this Datasheet. or contact our Technical team for further support.

Selection Guide

Part Number	Power Rating Watts	Output Voltage (VDC)	Output Current (mA)	Ambient Temp. (°C)	Efficiency Typical	Input Range
VTX-214-090-112	80.4	12	6700	50°C (85°C @ 25%)	>92%	80 - 305VAC (110 - 430VDC)
VTX-214-090-115	85.05	15	5670			
VTX-214-090-124	90	24	3750			
VTX-214-090-148		48	1875			

Note: Other output voltages are available upon request.

Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements.
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Input Specification					
Item	Conditions	Min	Typical	Max	Unit
Input Voltage	AC Input	80	-	305	VAC
	DC Input	110	-	430	VDC
Input Frequency		47	-	63	Hz
Input Current	115VAC	-	-	2	A
	230VAC	-	-	1.1	
Inrush Curent	115VAC	-	35	-	
	230VAC	-	65	-	
Leakage Current	277VAC / 50Hz	0.25mA RMS Max			
External Input Fuse		3.15Amp Slow Blow Fuse			

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
Output Voltage Accuracy	Output	-	+/-2	-	%
Line Regulation	Full Load	-	+/-0.5	-	
Load Regulation	0% - 100% Load	-	+/-1	-	
Ripple / Noise	20MHz Bandwidth (Peak to Peak Value)	-	-	120	mV
		-	-	200	
		-	-	240	
Stand by Power	230VAC	-	-	0.21	W
Temp. Coefficient		-	+/-0.02	-	%/°C
Short Circuit Protection		Hiccup, Continuous, Self-recovery			
Over Current Protection		>110% Load Self-recovery			
Over Voltage Protection		Hiccup			
Minimum Load		0	-	-	%
Hold-up Time	115VAC Input	-	10	-	mS
	230VAC Input	-	30	-	

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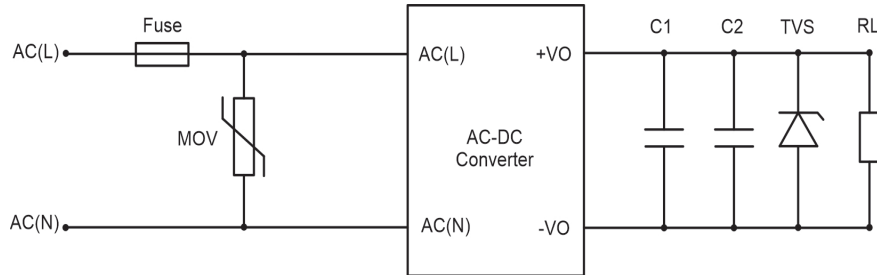
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4200	-	-	VAC
Insulation Resistance	Input to Output (500VDC)	100			M.Ohm
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+85	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-10°C			
Switching Frequency		-	75	-	KHz
Altitude		-	-	2000	m
Safety Class		CLASS II			
MTBF		>500KHrs @ 25°C (MIL-HDBK-217F)			
Safety Approvals		IEC/UL62368-1, EN61558-1, EN60335-1			
Weight		200g			
Body Colour		Orange or Black			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS B
	Harmonic Current	IEC/EN61000-3-2 CLASS A
Immunity	ESD	IEC/EN 61000-4-2 CONTACT +/-6KV
	RS	IEC/EN 61000-4-3 10V/m
	EFT	IEC/EN 61000-4-4 +/-2KV
	SURGE	IEC/EN 61000-4-5 line to line +/-2KV
	CS	IEC/EN 61000-4-6 10V/r.m.s. EN55014-2
	PFM	IEC/EN61000-4-8 30A/m
	Voltage Variation	IEC/EN 61000-4-11 0%, 70%

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Application Schematic for EMC

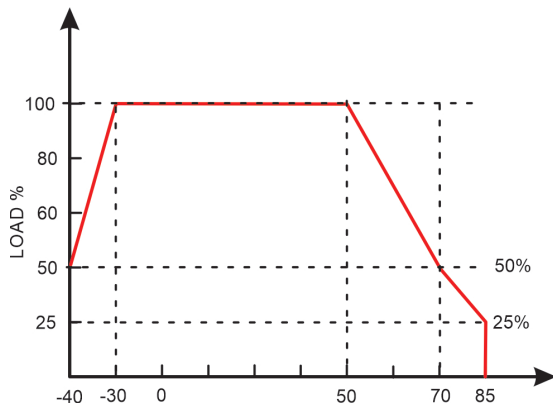
Typical Application



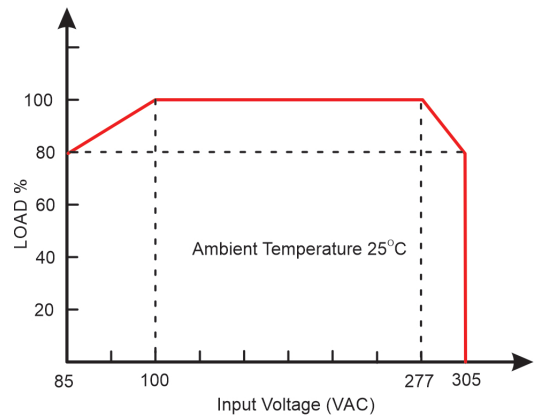
Part Number	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-090-112	1uF/100V	330uF/35V	SMBJ20A	6.3A/300V, slow-blow	S14K350	6800 uF
VTX-214-090-115		330uF/35V	SMBJ20A			4500 uF
VTX-214-090-124		200uF/35V	SMBJ30A			3000 uF
VTX-214-090-148		100uF/63V	SMBJ60A			470 uF
Note: For additional filtering requirements, contact technical support						

Derating Graphs

Temperature Derating Graph



Input Voltage Derating Graph



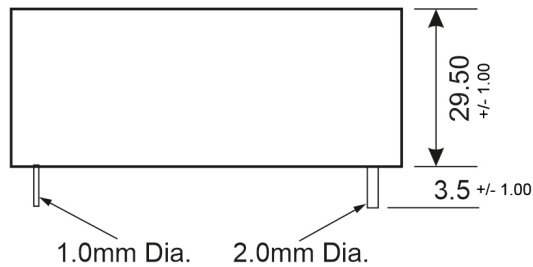
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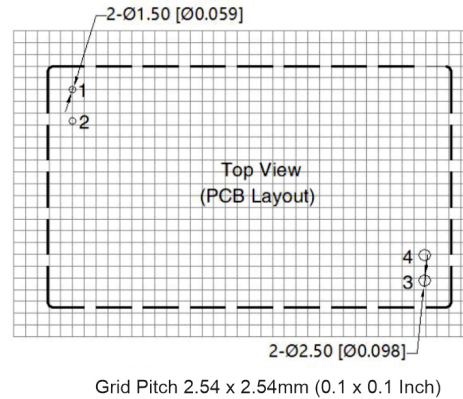
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Dimensions

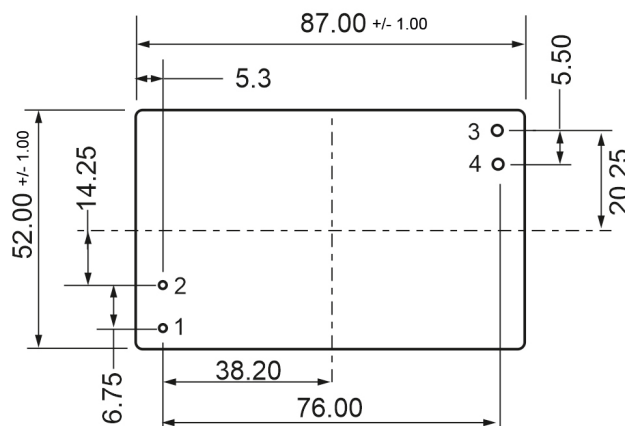
Side View



Top View



Pin View



Note:
Units: mm
Pin Dia tolerance: ± 0.1
General tolerance: ± 0.50

PIN Number	Function
1	AC(N)
2	AC(L)
3	+Vo
4	-Vo

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