

Features:



- 45W Small Compact Size 87.0 x 52.0 x 29.5mm
- Wide AC & DC Input 85V to 264VAC
- Temperature Range -40°C to +70°C
- Output Range: 5V - 48VDC
- Low Standby Power <0.5W
- Fully Isolated Pri - Sec >4000Vrms
- Insulation: Class II
- Materials: UL94-V0
- IEC/EN/UL62368-1, EN61558-1 safety approval



Description

VTX-214-045-1## is a compact AC-DC power converter. It features a wide AC input 85V to 264VAC and a DC input voltage 100 to 370VDC. 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, 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 show 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-214-045-105	40	5	8000	50°C (70°C @ 50%)	>81%	85 - 264VAC (100 - 370VDC)
VTX-214-045-109	45	9	5000			
VTX-214-045-112	45	12	3800			
VTX-214-045-115	45	15	3000			
VTX-214-045-124	45	24	1900			
VTX-214-045-148	45	48	940			

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	85	-	264	VAC
	DC Input	100	-	370	VDC
Input Frequency		47	-	63	Hz
Input Current	115VAC	-	-	1.5	A
	230VAC	-	-	0.75	
Inrush Curent	115VAC	-	30	-	
	230VAC	-	60	-	
Leakage Current	277VAC / 50Hz	0.1mA RMS Max			
Internal Fuse		3.15Amp Slow Blow Fuse			

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
Output Voltage	Output	-	+/-2	-	%
Line Regulation	Full Load	-	+/-0.5	-	
Load Regulation	0% - 100% Load	-	+/-1	-	
Ripple / Noise	20MHz Bandwidth (Peak to Peak Value)	-	60	120	mV
Stand by Power	230VAC	-	-	0.5	W
Temp. Coefficient		-	+/-0.02	-	%/°C
Short Circuit Protection		Hiccup, Continuous, Self-recovery			
Over Current Protection		>110% Load Self-recovery			
Over Voltage Protection		Hiccup, Continuous, Self-recovery			
Minimum Load		0	-	-	%
Hold-up Time	115VAC Input	-	8	-	mS
	230VAC Input	-	50	-	

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General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4000	-	-	VAC
Insulation Resistance	Input to Output (500VDC)	100			M.Ohm
Operating Temperature		-40	-	+70	°C
Storage Temperature		-40	-	+85	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
Switching Frequency		-	65	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS II			
MTBF		>300KHrs @ 25°C (MIL-HDBK-217F)			
Safety Approvals		IEC/UL62368-1, EN61558-1, EN60335-1			
Dimensions		87.0 x 52.0 x 29.5mm			
Weight		205g			
Body Colour		Orange or Black			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS B EN55014-1
Immunity	ESD	IEC/EN 61000-4-2 CONTACT +/-8KV EN55014-2
	RS	IEC/EN 61000-4-3 10V/m EN55014-2
	EFT	IEC/EN 61000-4-4
	SURGE	IEC/EN 61000-4-5, EN55014-2
	CS	IEC/EN 61000-4-6 10V/r.m.s. EN55014-2
	Voltage Variation	IEC/EN 61000-4-11, EN55014-2

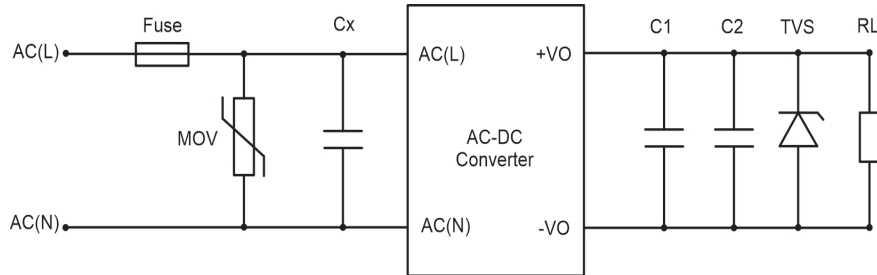
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Application Schematic for EMC

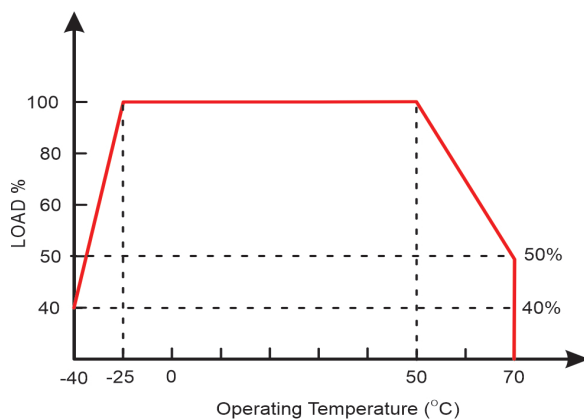
Typical Application EMC



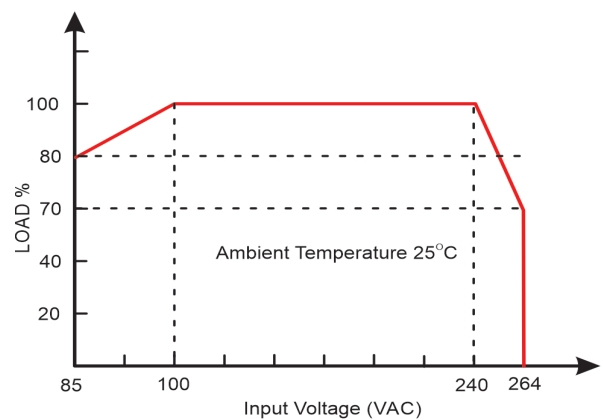
Part Number	Cx	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-045-105	0.22uF /275V	1uF /100V	680uF/25V	SMBJ7.0A	3.15A/270V Slow Blow	S14K350	30000 uF
VTX-214-045-109			680uF/25V	SMBJ20A			6400 uF
VTX-214-045-112			220uF/25V	SMBJ20A			6400 uF
VTX-214-045-115			220uF/25V	SMBJ20A			5600 uF
VTX-214-045-124			120uF/50V	SMBJ30A			2000 uF
VTX-214-045-148			100uF/63V	SMBJ64A			600 uF
Note: For additional filtering requirements, contact technical support							

Derating Graphs

Temperature Derating Graph



Input Voltage Derating Graph



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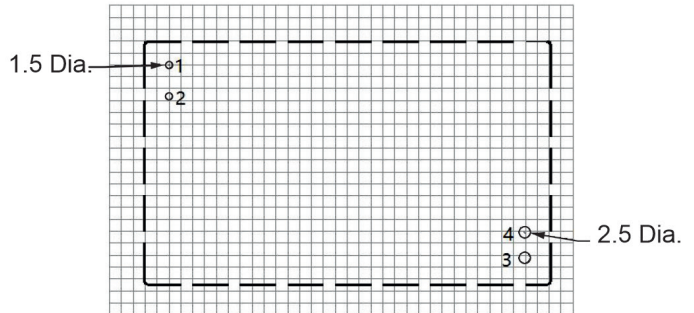
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Dimensions

Side View



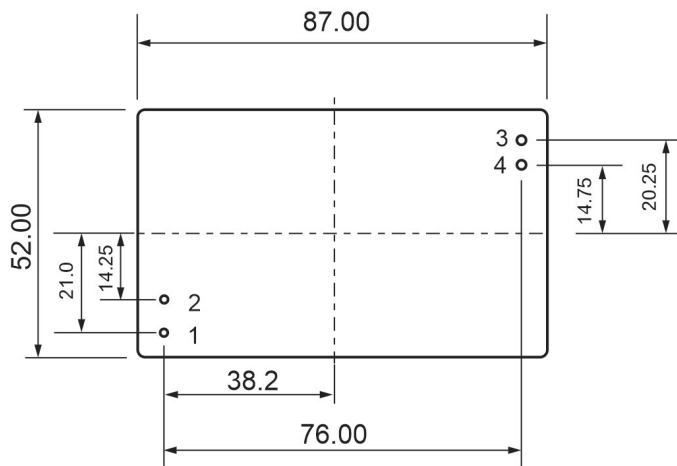
Top View



Grid Pitch 2.54 x 2.54mm (0.1 x 0.1 Inch)

Recommended PCB Pad hole 1.5/2.5mm Dia.

Pin View



(Tolerances: x.xx = ± 0.05 , x.x = ± 0.5)

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

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