



### Features:

- 3W Small Compact Size 37.0 x 24.5 x 18.0mm
- Wide AC & DC Input 85V to 264VAC
- Temperature Range -40°C to +70°C
- Output Range: 3.3V - 24VDC
- Output short circuit, Over-current protection
- Low Standby Power <0.2W
- Fully Isolated Pri - Sec >4000Vrms
- Insulation: Class II
- Materials: UL94-V0
- UL/EN/IEC62368, EN55032 Class B



### Description

VTX-214-003-5### 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-214-003-503	2.3	3.3	700	55°C (70°C @ 85%)	>70%	85 - 264VAC (100 - 370VDC)
VTX-214-003-505	3	5	600			
VTX-214-003-509	3	9	333			
VTX-214-003-512	3	12	250			
VTX-214-003-515	3	15	200			
VTX-214-003-518	3	18	166			
VTX-214-003-524	3	24	125			

**Note: Other output voltages are available upon request.**

Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements. The information contained in this document is subject to change without notice.

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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	-	-	0.08	A
	230VAC	-	-	0.045	
Inrush Current	115VAC	-	10	-	
	230VAC	-	20	-	
Leakage Current	230VAC / 50Hz	0.1mA RMS Max			
External Input Fuse		1Amp 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)	-	50	100	mV
Stand by Power	230VAC	-	0.2	-	W
Temp. Coefficient		-	+/-0.02	-	%/°C
Short Circuit Protection		Hiccup, Continuous, Self-recovery			
Over Current Protection		>150% Load Self-recovery			
Over Voltage Protection		Hiccup, Continuous, Self-recovery			
Minimum Load		0	-	-	%
Hold-up Time	115VAC Input	-	10	-	mS
	230VAC Input	-	60	-	

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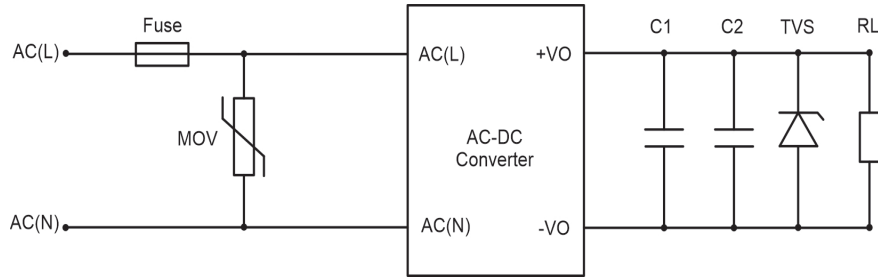
General Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Dielectric Strength</b>	Input to Output (1Min, 5mA)	4000	-	-	VAC
<b>Insulation Resistance</b>	Input to Output (500VDC)	100			M.Ohm
<b>Operating Temperature</b>		-40	-	+70	°C
<b>Storage Temperature</b>		-40	-	+105	
<b>Storage Humidity</b>		-	-	+95	%RH
<b>Soldering Temperature</b>	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
<b>Switching Frequency</b>		-	100	-	KHz
<b>Altitude</b>		-	-	5000	m
<b>Safety Class</b>		CLASS II			
<b>MTBF</b>		>300KHrs @ 25°C (MIL-HDBK-217F)			
<b>Power Derating</b>	-40°C to -25°C,	1.0%/°C			
	+55°C to +70°C,	1.0%/°C			
<b>Safety Approvals</b>		IEC62368, EN62368, UL62368			
<b>Weight</b>		25g			

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

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## Application Schematic for EMC

### Typical Application EMC

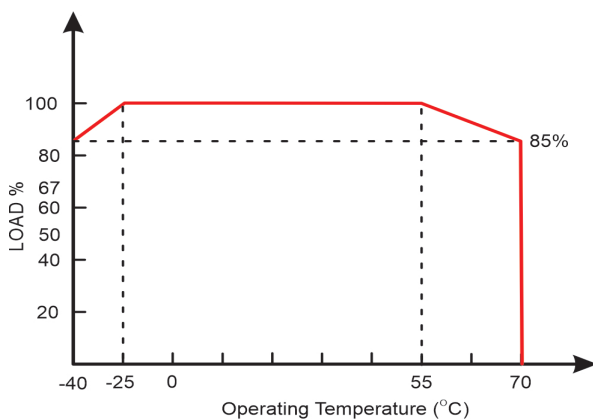


Part Number	Cx	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-003-503	0.1uF /275V	1uF /50V	150uF/16V	SMBJ70A	1Amp/270V Slow Blow	S14K350	4000 uF
VTX-214-003-505			150uF/16V	SMBJ70A			4000 uF
VTX-214-003-509			120uF/25V	SMBJ12A			2200 uF
VTX-214-003-512			120uF/25V	SMBJ20A			2200 uF
VTX-214-003-515			120uF/25V	SMBJ20A			1000 uF
VTX-214-003-518			120uF/35V	SMBJ20A			1000 uF
VTX-214-003-524			68uF/35V	SMBJ30A			680 uF

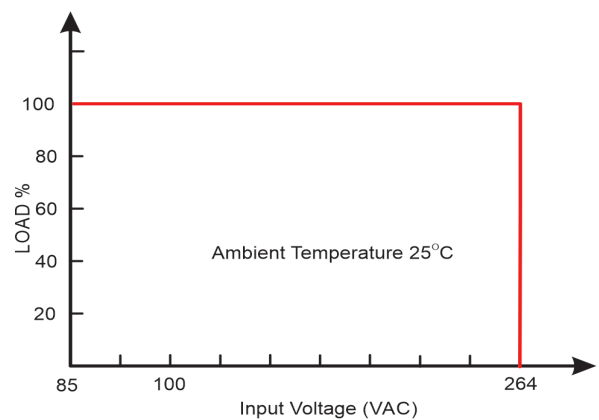
Note: For additional filtering requirements, contact technical support

## Derating Graphs

### Temperature Derating Graph



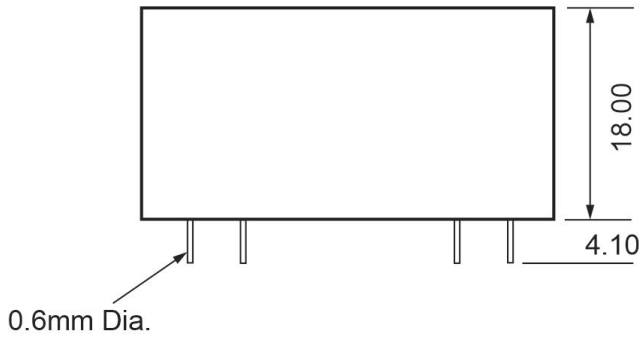
### Input Voltage Derating Graph



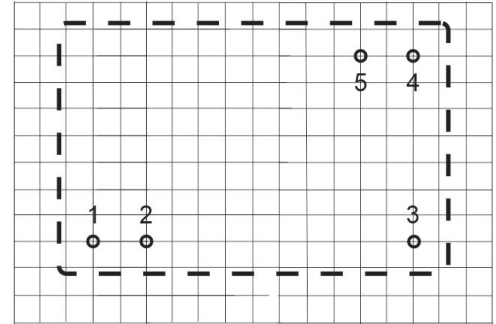
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## Dimensions

Side View

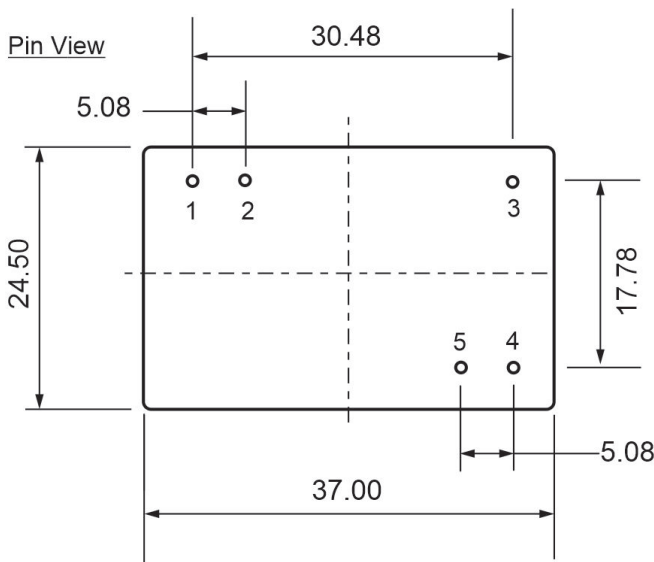


Top View



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

Pin View



(Tolerances: x.xx = ± 0.05, x.x = ± 0.1)

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

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