



### Features:

- 10W Small Compact Size 37.0 x 27.5 x 20.0mm
- Wide AC & DC Input 90V to 305VAC, 120V to 430VDC
- Temperature Range -40°C to +70°C
- EMC Compliant without external components
- Over-voltage Category OVC III
- Output Range: 3.3V - 24VDC
- Low Standby Power <0.1W
- Fully Isolated Pri - Sec >4200Vrms
- Insulation: Class II
- Materials: UL94-V0
- IEC/EN/UL62368, EN61558, EN60335
- 3 Year Warranty



### Description

VTX-214-010-3## is a compact AC-DC power converter. It features a wide AC input 85V to 305Vac and a DC input voltage 120 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 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
<b>VTX-214-010-303</b>	10	3.3	3000	50°C (70°C @ 50%)	>81%	85 - 305VAC (100 - 430VDC)
<b>VTX-214-010-305</b>	10	5	2000			
<b>VTX-214-010-309</b>	10	9	1100			
<b>VTX-214-010-312</b>	10	12	833			
<b>VTX-214-010-315</b>	10	15	667			
<b>VTX-214-010-318</b>	10	18	555			
<b>VTX-214-010-324</b>	10	24	410			

**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	90	-	305	VAC
	DC Input	120	-	430	VDC
Input Frequency		47	-	440	Hz
Input Current	115VAC	-	-	0.23	A
	230VAC	-	-	0.14	
Inrush Current	115VAC	-	25	-	
	230VAC	-	40	-	
Leakage Current	277VAC / 50Hz	0.25mA RMS Max			
External Input Fuse		2Amp 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	-	0.1	-	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	-	30	-	

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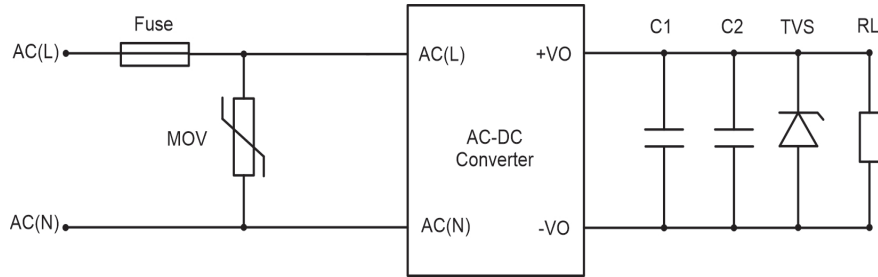
General Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Dielectric Strength</b>	Input to Output (1Min, 5mA)	4000	-	-	VAC
<b>Insulation Resistance</b>	Input to Output (500VDC)	100			M.Ohm
<b>Operating Temperature</b>		-40	-	+85	°C
<b>Storage Temperature</b>		-40	-	+105	
<b>Storage Humidity</b>		-	-	+95	%RH
<b>Soldering Temperature</b>	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
<b>Switching Frequency</b>		-	65	-	KHz
<b>Altitude</b>		-	-	2000	m
<b>Safety Class</b>		CLASS II			
<b>MTBF</b>		>450KHrs @ 25°C (MIL-HDBK-217F)			
<b>Designed Life</b>	25°C, 230VAC 100% Load	>130x10 <sup>3</sup> h			
	55°C, 230VAC 100% Load	>20x10 <sup>3</sup> h			
<b>Safety Approvals</b>		IEC/EN/UL62368, EN61558, EN60335			
<b>Weight</b>		35g			

EMC Specification		
<b>Emissions</b>	CE /RE	CISPR32 / EN55032 CLASS B EN55014-1
<b>Immunity</b>	ESD	IEC/EN 61000-4-2 CONTACT +/-6KV 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

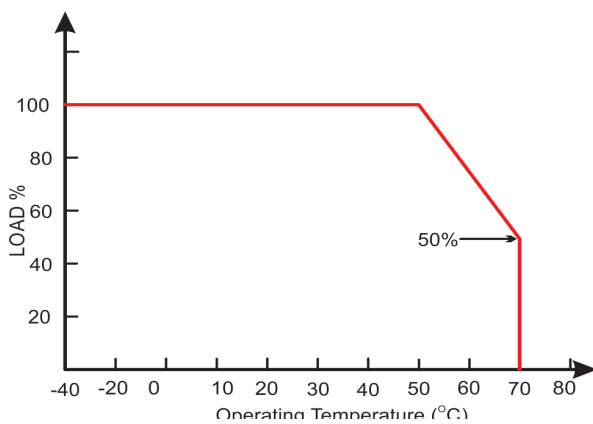


Part Number	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-010-303	1uF/50V	220uF/16V	SMBJ7.0A	2Amp/300V Slow Blow	S14K350	3500 uF
VTX-214-010-305		220uF/16V	SMBJ7.0A			3500 uF
VTX-214-010-309		100uF/25V	SMBJ12A			1100 uF
VTX-214-010-312		100uF/25V	SMBJ20A			700 uF
VTX-214-010-315		100uF/25V	SMBJ20A			390 uF
VTX-214-010-318		100uF/35V	SMBJ20A			180 uF
VTX-214-010-324		100uF/35V	SMBJ30A			180 uF

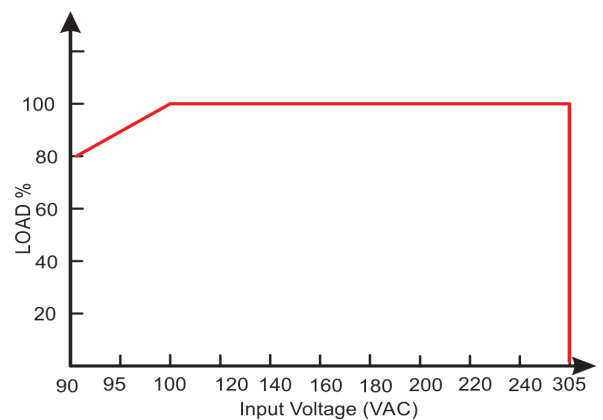
Note: For additional filtering requirements, contact technical support

## Derating Graphs

### Temperature Derating Graph



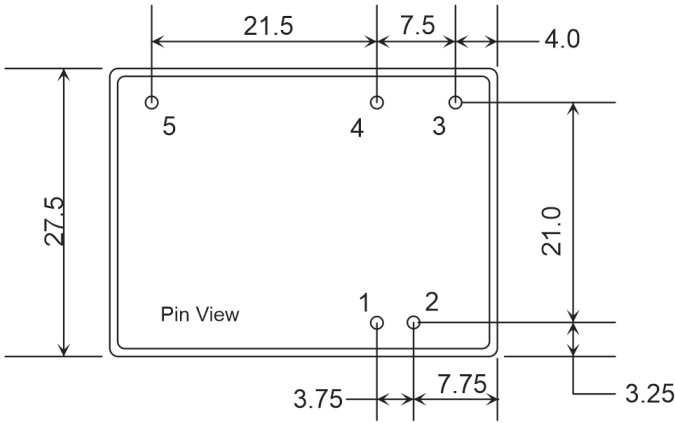
### Input Voltage Derating Graph



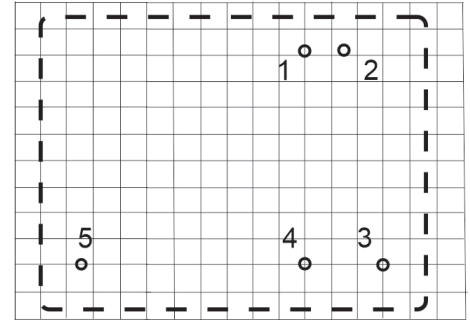
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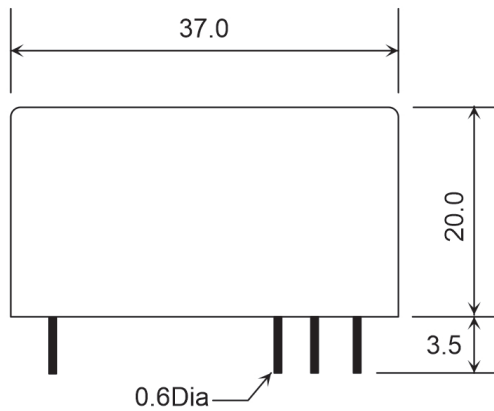
## Dimensions



Top View



Grid Pitch 2.50 x 2.50mm



PIN Number	Function
1	+Vo
2	-Vo
3	AC(L)
4	AC(N)
5	Not Fitted

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