

### Features:



- 60W Small Compact Size 87.0 x 52.0 x 29.5mm
- Wide AC & DC Input 85V to 305VAC
- Temperature Range -40°C to +80°C
- Output Range: 5V - 48VDC
- Low Standby Power <0.15W
- Fully Isolated Pri - Sec >4200Vrms
- Insulation: Class II
- Materials: UL94-V0
- IEC/EN/UL62368-1, EN61558-1 safety approval



### Description

VTX-214-060-2### is a compact AC-DC power converter. It features a wide AC input 85V to 305VAC 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-214-060-205	50	5	10000	50°C (80°C @ 25%)	>84%	85 - 305VAC (100 - 420VDC)
VTX-214-060-209	60	9	6660			
VTX-214-060-212	60	12	5000			
VTX-214-060-215	60	15	4000			
VTX-214-060-224	60	24	2500			
VTX-214-060-248	60	48	1250			

**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
<b>Input Voltage</b>	AC Input	85	-	305	VAC
	DC Input	100	-	420	VDC
<b>Input Frequency</b>		47	-	63	Hz
<b>Input Current</b>	115VAC	-	-	1.8	A
	230VAC	-	-	1.0	
	277VAC	-	-	0.9	
<b>Inrush Current</b>	115VAC	-	30	-	
	230VAC	-	60	-	
<b>Leakage Current</b>	277VAC / 50Hz	0.25mA RMS Max			
<b>External Input Fuse</b>		3.15Amp Slow Blow Fuse			

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Output Voltage</b>	Output	-	+/-2	-	%
<b>Line Regulation</b>	Full Load	-	+/-0.5	-	
<b>Load Regulation</b>	0% - 100% Load	-	+/-1	-	
<b>Ripple / Noise</b>	20MHz Bandwidth (Peak to Peak Value)	-	60	150	mV
	Output 48VDC		-	240	
<b>Stand by Power</b>	230VAC	-	-	0.15	W
<b>Temp. Coefficient</b>		-	+/-0.02	-	%/°C
<b>Short Circuit Protection</b>		Hiccup, Continuous, Self-recovery			
<b>Over Current Protection</b>		>115% Load Self-recovery			
<b>Over Voltage Protection</b>		Hiccup, Continuous, Self-recovery			
<b>Minimum Load</b>		0	-	-	%
<b>Hold-up Time</b>	115VAC Input	-	12	-	mS
	230VAC Input	-	30	-	

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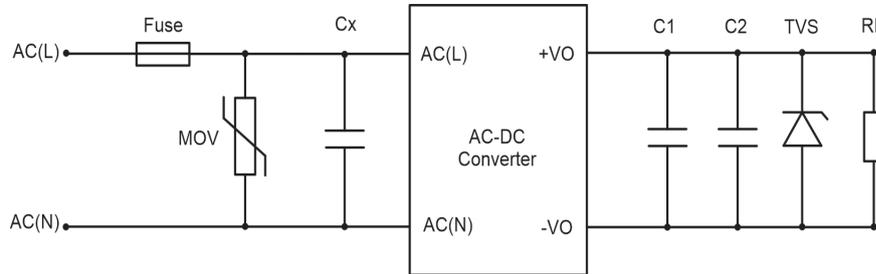
General Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Dielectric Strength</b>	Input to Output (1Min, 5mA)	4200	-	-	VAC
<b>Insulation Resistance</b>	Input to Output (500VDC)	100			M.Ohm
<b>Operating Temperature</b>		-40	-	+80	°C
<b>Storage Temperature</b>		-40	-	+95	
<b>Storage Humidity</b>		-	-	+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>		-	-	5000	m
<b>Safety Class</b>		CLASS II			
<b>MTBF</b>		>1226KHrs @ 25°C (MIL-HDBK-217F)			
<b>Safety Approvals</b>		IEC/UL62368-1, EN61558-1, EN60335-1			
<b>Dimensions</b>		87.0 x 52.0 x 29.5mm			
<b>Weight</b>		200g			
<b>Body Colour</b>		Orange or Black			

EMC Specification		
<b>Emissions</b>	CE /RE	CISPR32 / EN55032 CLASS B EN55014-1
<b>Immunity</b>	ESD	IEC/EN 61000-4-2 CONTACT +/-6KV, AIR +/-8KV, EN55014-2
	RS	IEC/EN 61000-4-3 10V/m EN55014-2
	EFT	IEC/EN 61000-4-4 ±2KV
	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

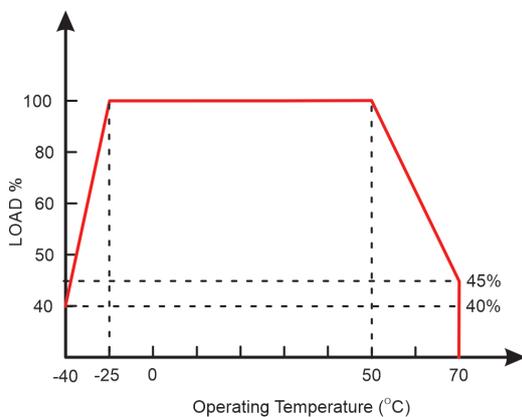
### Typical Application EMC



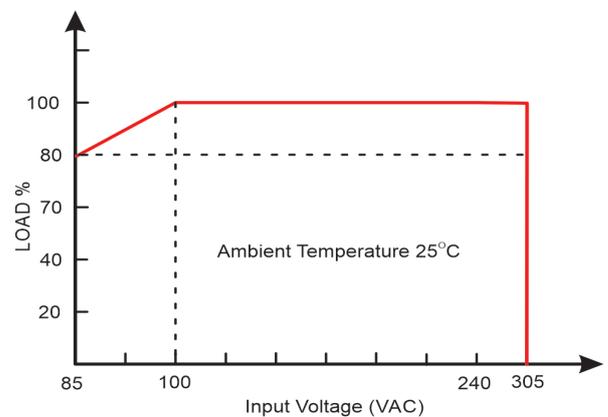
Part Number	Cx	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-060-205	0.22uF /275V	1uF /100V	680uF/25V	SMBJ7.0A	3.15A/270V Slow Blow	S10K300	20000 uF
VTX-214-060-209			680uF/25V	SMBJ20A			5000 uF
VTX-214-060-212			330uF/25V	SMBJ20A			4000 uF
VTX-214-060-215			330uF/25V	SMBJ20A			3000 uF
VTX-214-060-224			200uF/50V	SMBJ30A			1800 uF
VTX-214-060-248			100uF/63V	SMBJ64A			470 uF
Note: For additional filtering requirements, contact technical support							

## Derating Graphs

### Temperature Derating Graph



### Input Voltage Derating Graph



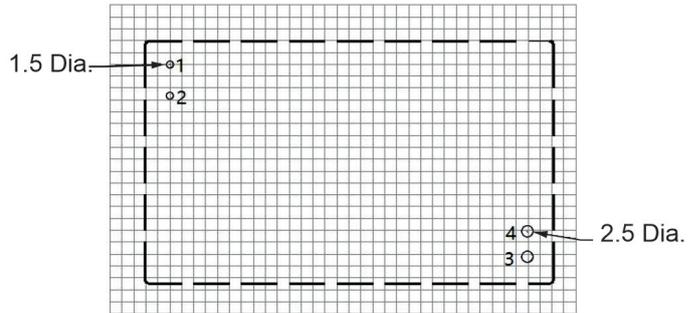
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## Dimensions

Side View



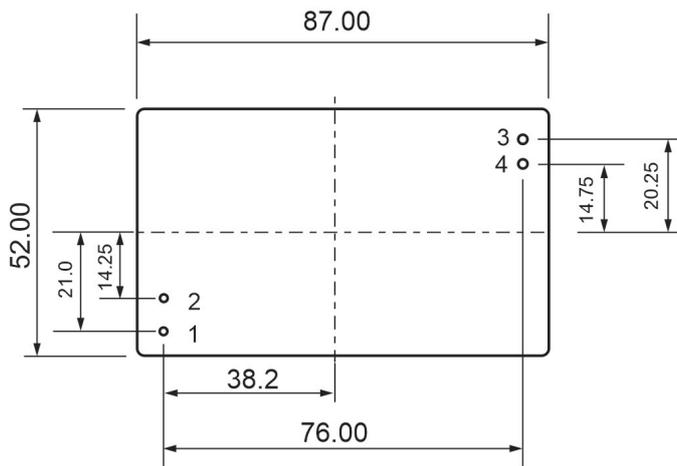
Top View



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

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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