

Features:



- 2W Low Profile 14.0mm Height
- Wide AC & DC Input Range: 90 - 277VAC
- Output Range: 3.3V - 48VDC
- Low Standby Power <0.15W
- Low Ripple & Noise
- Fully Isolated Pri - Sec >4200Vrms
- Insulation: Class II
- Materials: UL94-V0
- Compliance UL/EN62368-1, EN61558-2-6, CE, UKCA



Description

VTX-214-002-1## is a low profile size AC-DC 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/EN61000-3-2 and CISPR32/EN55032 and meets EN/UL62368-1, EN61558-2-6 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-214-002-103	2	3.3	600	80°C (85°C @ 50%)	>70%	85 - 305VAC (100 - 370VDC)
VTX-214-002-105	2	5	400			
VTX-214-002-106	2	6	333			
VTX-214-002-107	2	7	266			
VTX-214-002-108	2	8	250			
VTX-214-002-109	2	9	222			
VTX-214-002-112	2	12	166			
VTX-214-002-115	2	15	133			
VTX-214-002-118	2	18	111			
VTX-214-002-124	2	24	83			
VTX-214-002-148	2	48	42			

**Note: Other output voltages are available upon request.
Part VTX-214-002-112 has UL approval, UL file No. E472059**

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.

Input Specification					
Item	Conditions	Min	Typical	Max	Unit
Input Voltage	AC Input Range	85	-	305	VAC
	AC Rated Input	90		277	
	DC Input	100	-	370	VDC
Input Frequency		47	-	63	Hz
Input Current	115VAC	-	-	0.10	A
	230VAC	-	-	0.07	
Inrush Current	115VAC	-	15	-	
	230VAC	-	25	-	
Leakage Current	277VAC / 50Hz	0.3mA RMS Max			
External Input Fuse		2Amp Slow Blow Fuse			

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
Output Voltage	3.3VAV Output	-	+/-7	-	%
	Other Outputs	-	+/-5	-	
Line Regulation	Full Load	-	+/-0.5	-	
Load Regulation	0% - 100% Load	-	+/-3	-	
Ripple / Noise	20MHz Bandwidth (Peak to Peak Value)	-	50	300	mV
Stand by Power	230VAC	-	0.1	-	W
Temp. Coefficient		-	+/-0.05	-	%/°C
Short Circuit Protection		Hiccup, Continuous, Self-recovery			
Over Current Protection		>120% Load Self-recovery			
Over Voltage Protection		Hiccup, Continuous, Self-recovery			
Minimum Load		0	-	-	%
Hold-up Time	115VAC Input	-	59	-	mS
	230VAC Input	-	168	-	

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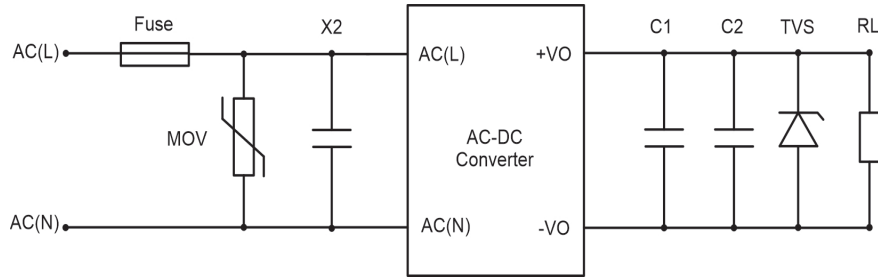
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4000	-	-	VAC
Operating Temperature		-25	-	+85	°C
Storage Temperature		-40	-	+105	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
Switching Frequency		-	65	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS II			
MTBF		>300,000Hrs @ 25°C (MIL-HDBK-217F)			
Designed Life	25°C, 230VAC 100% Load	>150x10 ³ h			
	70°C, 230VAC 100% Load	>27x10 ³ h			
Safety Approvals		EN/UL62368, EN61558-2-6			
Cooling Method		Free Air Convection			
Weight		18g			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS B EN55035
Immunity	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 EMC

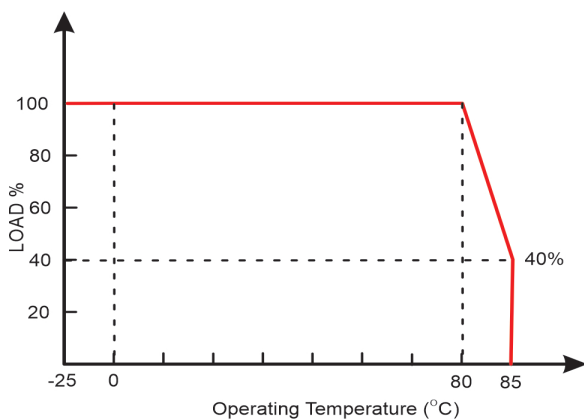


Part Number	X2 (uF)	C1 (uF)	C2 (uF)	TVS	Fuse	MOV
VTX-214-002-103	0.2	1.0	150	SMBJ7.0A	2Amp/300V Slow Blow	S14K350
VTX-214-002-105			150	SMBJ7.0A		
VTX-214-002-109			120	SMBJ12A		
VTX-214-002-112			120	SMBJ20A		
VTX-214-002-115			120	SMBJ20A		
VTX-214-002-118			120	SMBJ20A		
VTX-214-002-124			68	SMBJ30A		

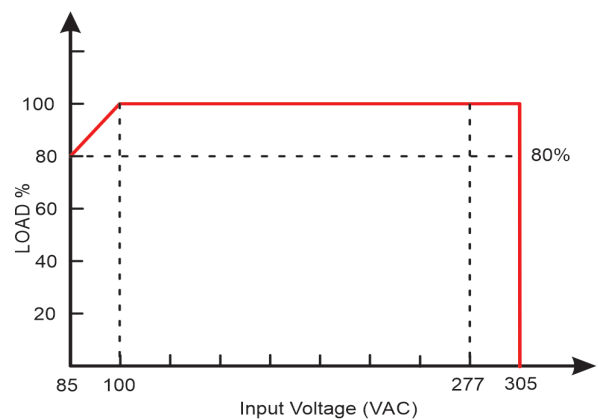
Note: For additional filtering requirements, contact technical support

Derating Graphs

Temperature Derating Graph

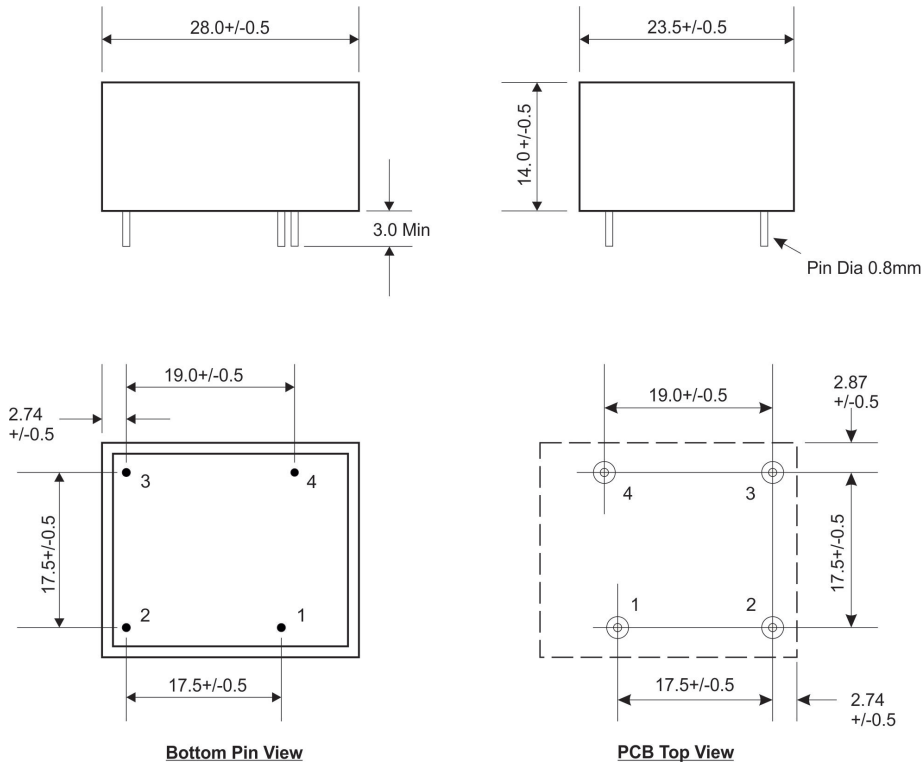


Input Voltage Derating Graph



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Dimensions



Pin Designation.

Pin 1: GND, Output Voltage Common
 Pin 2: +V, Output Voltage Positive
 Pin 3: N, AC Input Neutral
 Pin 4: L, AC Input Line

Notes:

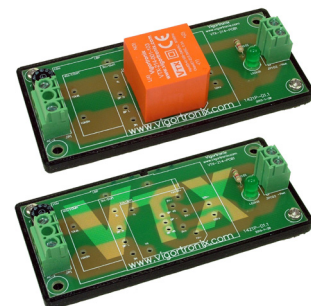
Recommended PCB
 Hole size: 1.5mm Dia.

Case Outline Maximum Size 29.0 x 24.2mm

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

Optional Universal PCB mounting kit.
 Part Number:
 VTX-214-PCB1

Farnell Part:
 246 4718
 Rapid Electronics Part:
 84-2157



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