

Features:



- 5W Small Compact Size 25.4 x 25.4 x 17.6mm
- Wide AC & DC Input 85V to 305VAC
- Temperature Range -40°C to +85°C
- Output Range: 3.3V - 24VDC
- Low Standby Power <0.1W
- Fully Isolated Pri - Sec >4200Vrms
- Insulation: Class II
- OVC III
- Materials: UL94-V0
- IEC/EN/UL62368, EN61558, EN60335
- 3 Year Warranty



Description

VTX-214-005-6## is a compact size AC-DC converter. It features a wide AC input 85V to 305Vac and a DC input voltage 100 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 CIS-PR32/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
VTX-214-005-603	5	3.3	1515	55°C (85°C @ 50%)	>72%	85 - 305VAC (100 - 430VDC)
VTX-214-005-605	5	5	1000			
VTX-214-005-609	5	9	555			
VTX-214-005-612	5	12	416			
VTX-214-005-615	5	15	333			
VTX-214-005-618	5	18	277			
VTX-214-005-624	5	24	208			

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.

Vigortronix, 16 De Havilland Way, Witney, Oxfordshire, OX29 0YG, UK
Tel. +44 (0)1993 777570 Web. www.vigortronix.com, E-mail: sales@vigortronix.com
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Input Specification					
Item	Conditions	Min	Typical	Max	Unit
Input Voltage	AC Input	85	-	305	VAC
	DC Input	100	-	430	VDC
Input Frequency		47	-	63	Hz
Input Current	115VAC	-	-	0.13	A
	230VAC	-	-	0.07	
Inrush Curent	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	-	+/-3	-	%
	Other Outputs	-	+/-2-	-	
Line Regulation	Full Load	-	+/-0.5	-	
Load Regulation	0% - 100% Load	-	+/-1	-	
Ripple / Noise	20MHz Bandwidth (Peak to Peak Value)	-	50	120	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	-	5	-	mS
	230VAC Input	-	50	-	

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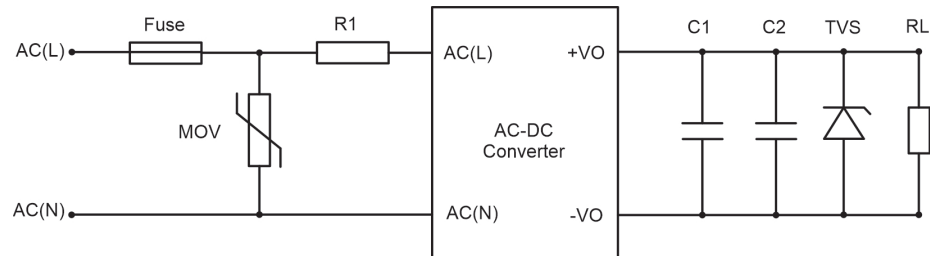
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4000	-	-	VAC
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+105	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
Switching Frequency		-	65	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS II			
MTBF		>2600,000Hrs @ 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		IEC/EN/UL62368, EN61558, EN60335			
Cooling Method		Free Air Convection			
Weight		18g			
Body Colour		Orange or Black			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS B EN55014-1
Immunity	ESD	IEC/EN 61000-4-2 CONTACT +/-6KV CONTACT +/-8KV
	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

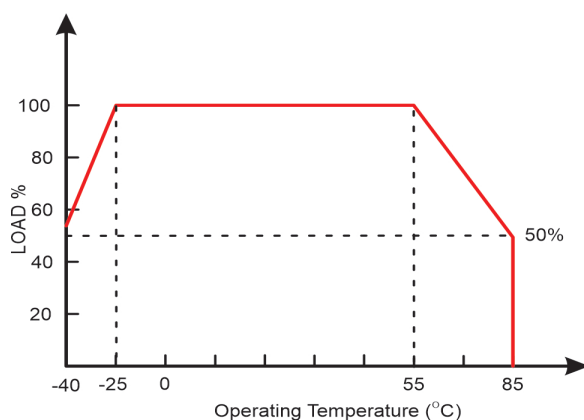


Optional: R1 to reduce any Surge currents, 12Ω/3W wire wound resistor

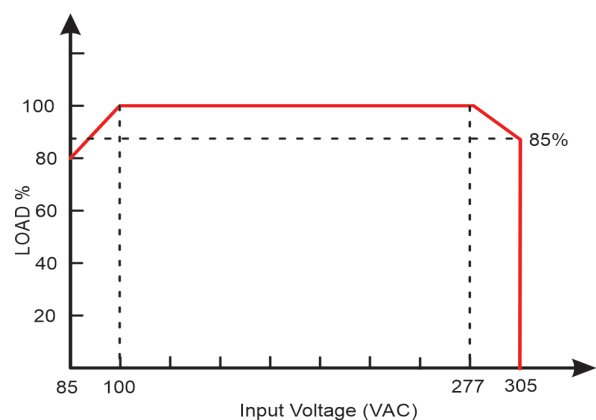
Part Number	C1 (uF)	C2 (uF)	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-005-603	1.0	150	SMBJ7.0A	2Amp/300V Slow Blow	S14K350	4000 uF
VTX-214-005-605		150	SMBJ7.0A			3000 uF
VTX-214-005-609		120	SMBJ12A			1200 uF
VTX-214-005-612		120	SMBJ20A			1200 uF
VTX-214-005-615		120	SMBJ20A			680 uF
VTX-214-005-618		120	SMBJ20A			680 uF
VTX-214-005-624		68	SMBJ30A			220 uF
Note: For additional filtering requirements, contact technical support						

Derating Graphs

Temperature Derating Graph



Input Voltage Derating Graph



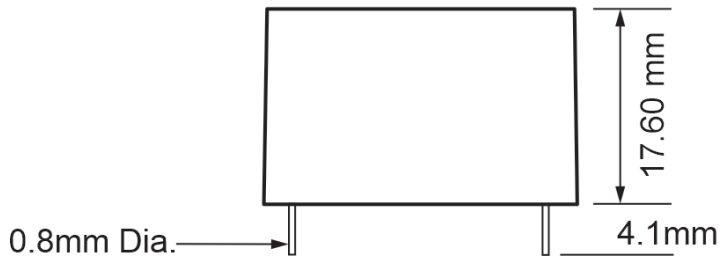
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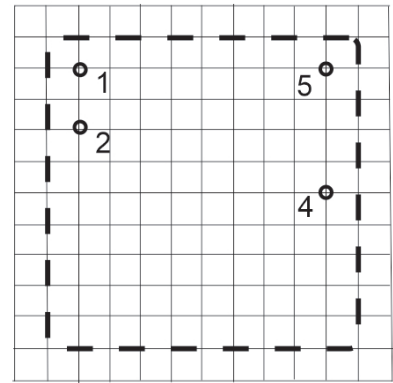
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Dimensions

Side View



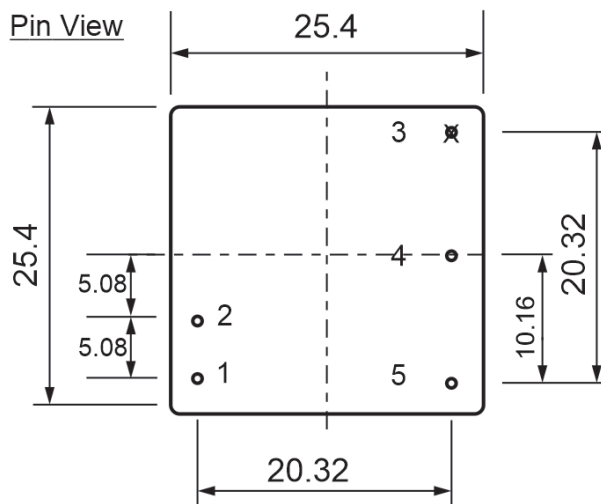
Top View



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

Recommended PCB Pad hole 1.2mm Dia.

Pin View



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

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