



Features:

- 10W Small Compact Size 47.6 x 26.8 x 23.5mm
- Wide AC & DC Input 85V to 305VAC
- Temperature Range -40°C to +85°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, IEC60601-1 (2xMOPP)
- 3 Year Warranty



Description

VTX-214-010-5## is a compact AC-DC power 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 CISPR32/EN55032 and meets IEC/EN/UL62368, EN60335, EN61558, IEC60601-1/ANSI/AAMI ES60601-1 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-214-010-503	10	3.3	3000	55°C (85°C @ 50%)	>82%	85 - 305VAC (100 - 430VDC)
VTX-214-010-505	10	5	2000			
VTX-214-010-509	10	9	1100			
VTX-214-010-512	10	12	830			
VTX-214-010-515	10	15	660			
VTX-214-010-518	10	18	555			
VTX-214-010-524	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. The information contained in this document is subject to change without notice.

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	-	-	0.45	A
	230VAC	-	-	0.3	
Inrush Current		-	-	-	
	230VAC	-	60	-	
Leakage Current	277VAC / 50Hz	0.1mA 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)	-	70	120	mV
Stand by Power	3.3V/5V/9V/12V/15V/18V 230VAC	-	-	0.1	W
	24V	-	-	0.12	
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	-	10	-	mS
	230VAC Input	-	55	-	

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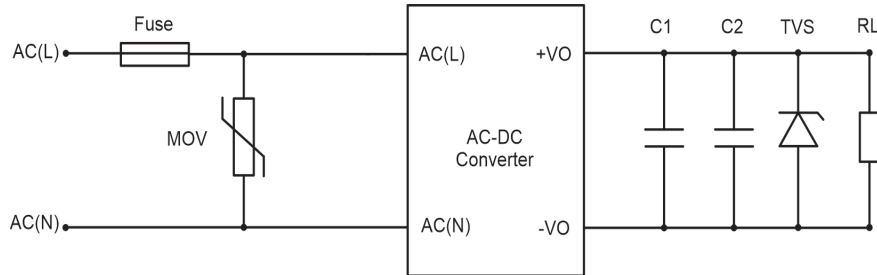
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4000	-	-	VAC
Insulation Resistance	Input to Output (500VDC)	100			M.Ohm
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+85	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
Switching Frequency		-	65	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS II			
MTBF		>3,200KHrs @ 25°C (MIL-HDBK-217F)			
Designed Life	25°C, 230VAC 100% Load	>130x10 ³ h			
	55°C, 230VAC 100% Load	>27x10 ³ h			
Safety Approvals		IEC/EN/UL62368, EN61558, EN60335			
Dimensions		47.60 x 26.80 x 23.50mm			
Weight		48g			

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

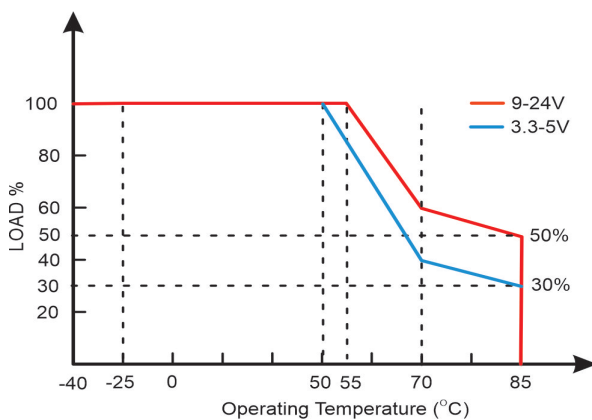


Part Number	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-010-503	1uF/50V	220uF/16V	SMBJ7.0A	2Amp/300V Slow Blow	S14K350	6600 uF
VTX-214-010-505		220uF/16V	SMBJ7.0A			5000 uF
VTX-214-010-509		100uF/25V	SMBJ12A			3000 uF
VTX-214-010-512		100uF/25V	SMBJ20A			2000 uF
VTX-214-010-515		100uF/25V	SMBJ20A			1500 uF
VTX-214-010-518		100uF/35V	SMBJ20A			1000 uF
VTX-214-010-524		100uF/35V	SMBJ30A			680 uF

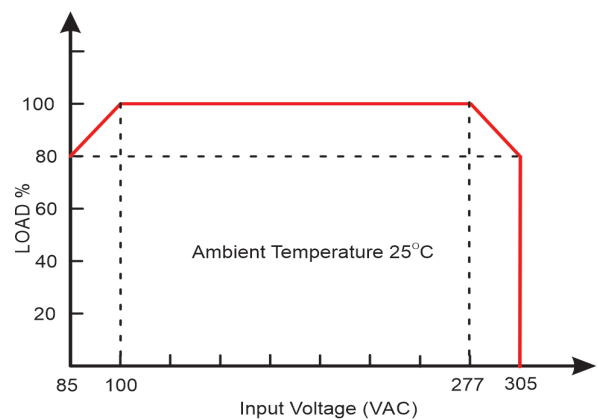
Note: For additional filtering requirements, contact technical support

Derating Graphs

Temperature Derating Graph



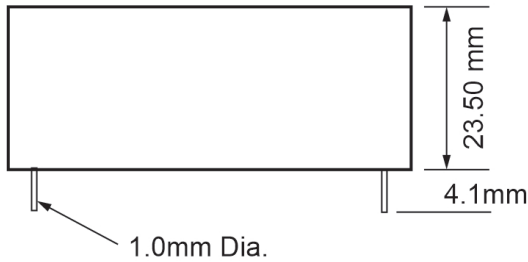
Input Voltage Derating Graph



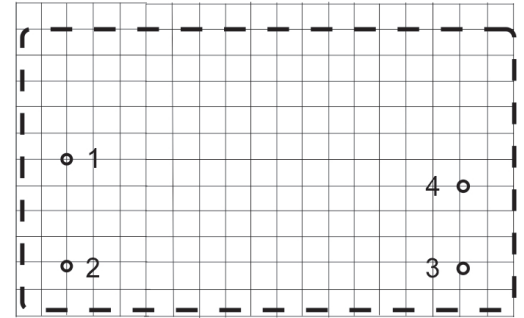
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Dimensions

Side View

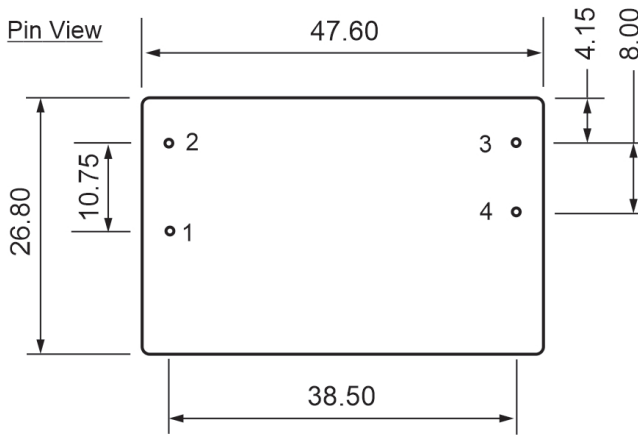


Top View



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

Pin View



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

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

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