

Features:



- 10W Small Compact Size 40.0 x 25.4 x 21.0mm
- 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
- OVC III (Meet EN61558-1)
- Materials: UL94-V0
- IEC/EN/UL62368, EN61558, EN60335
- 3 Year Warranty



Description

VTX-214-010-6### 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 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-214-010-603	8.6	3.3	2600	55°C (85°C @ 40%)	>75%	85 - 305VAC (100 - 430VDC)
VTX-214-010-605	10	5	2000			
VTX-214-010-609	10	9	1100			
VTX-214-010-612	10	12	830			
VTX-214-010-615	10	15	660			
VTX-214-010-618	10	18	555			
VTX-214-010-624	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	85	-	305	VAC
	DC Input	100	-	430	VDC
Input Frequency		47	-	63	Hz
Input Current	115VAC	-	-	0.23	A
	230VAC	-	-	0.15	
Inrush Curent	115VAC	-	25	-	
	230VAC	-	40	-	
Leakage Current	230VAC / 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)	-	50	150	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	-	40	-	

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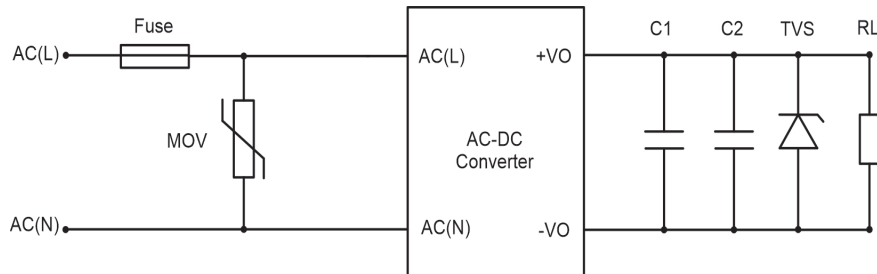
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4000	-	-	VAC
Insulation Resistance	Input to Output (500VDC)	100			M.Ohm
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+105	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
Switching Frequency		-	65	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS II			
MTBF		>3,200KHrs @ 25°C (MIL-HDBK-217F)			
Designed Life	25°C, 230VAC 100% Load	>130x10 ³ h			
	55°C, 230VAC 100% Load	>20x10 ³ h			
Safety Approvals		IEC/EN/UL62368, EN61558, EN60335			
Weight		34g			
Body Colour		Orange or Black			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS B EN55014-1
Immunity	ESD	IEC/EN 61000-4-2 CONTACT +/-8KV AIR +/-15KV
	RS	IEC/EN 61000-4-3 10V/rms EN55014-2
	EFT	IEC/EN 61000-4-4
	SURGE	IEC/EN 61000-4-5, line to line ±2KV/line to PE ±4KV
	CS	IEC/EN 61000-4-6 10Vr.m.s. EN55014-2
	Voltage Variation	IEC/EN 61000-4-11, EN55014-2

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Application Schematic for EMC

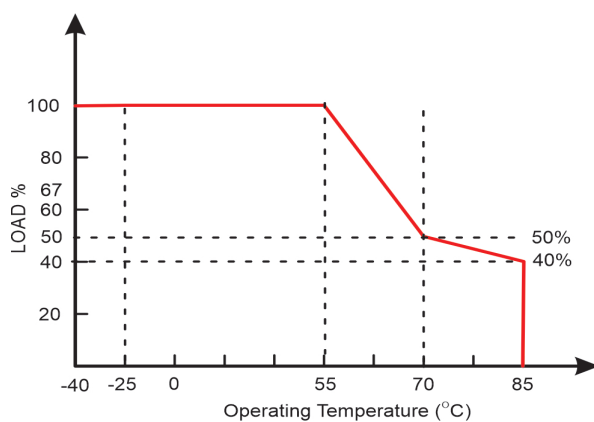
Typical Application



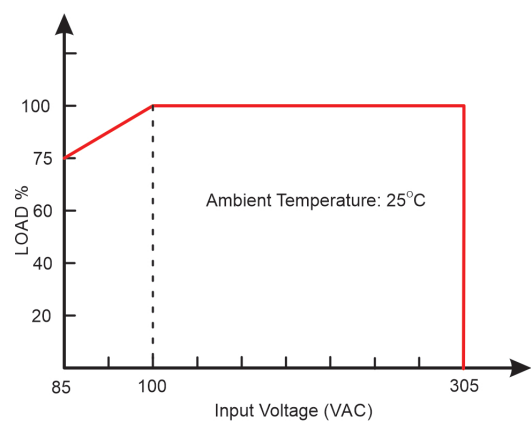
Part Number	C1	C2	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-010-603	1uF/50V	220uF/16V	SMBJ7.0A	2Amp/300V Slow Blow	14D561K	6000 uF
VTX-214-010-605		220uF/16V	SMBJ7.0A			5000 uF
VTX-214-010-609		150uF/25V	SMBJ12A			3600 uF
VTX-214-010-612		150uF/25V	SMBJ20A			2000 uF
VTX-214-010-615		150uF/25V	SMBJ20A			820 uF
VTX-214-010-618		100uF/35V	SMBJ20A			820 uF
VTX-214-010-624		100uF/35V	SMBJ30A			470 uF
Note: For additional filtering requirements, contact technical support						

Derating Graphs

Temperature Derating Graph



Input Voltage Derating Graph



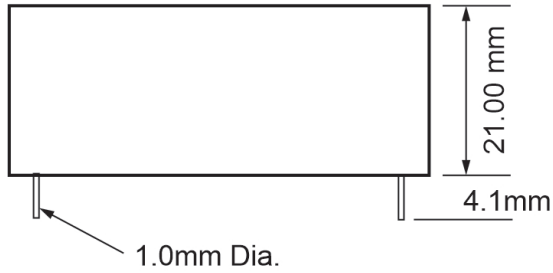
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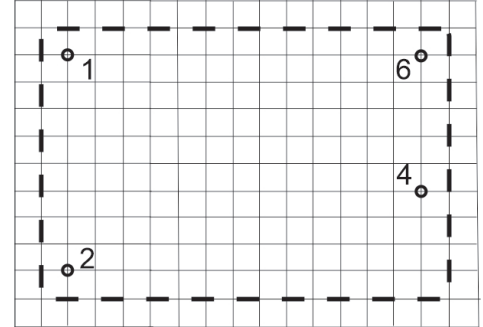
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Dimensions

Side View

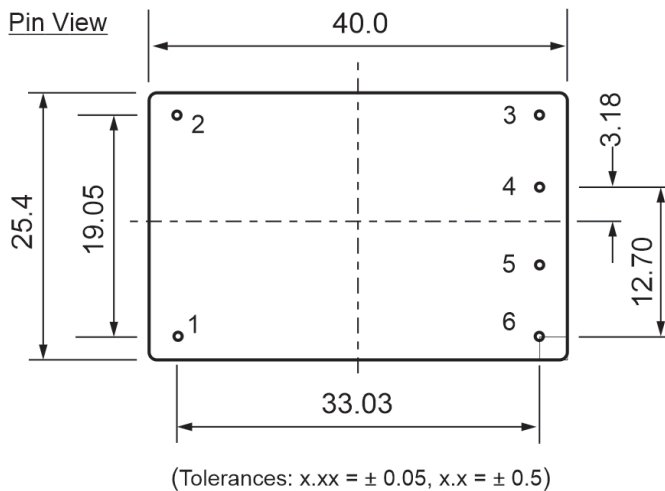


Top View



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

Pin View



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

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