



Features:

- 5W Compact Size 50.8 x 25.4 x 18.3mm
- Wide AC & DC **Input 90V to 528VAC**
- Temperature Range -40°C to +85°C
- Output Range: 5V - 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###W is a compact size AC-DC converter. It features a wide AC input 90V to 528Vac and a DC input voltage 110 to 746VDC. 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-214-005-605W	5	5	1000	55°C (85°C @ 70%)	>76%	90 - 528VAC (110 - 746VDC)
VTX-214-005-609W	5	9	550			
VTX-214-005-612W	5	12	420			
VTX-214-005-615W	5	15	330			
VTX-214-005-618W	5	18	277			
VTX-214-005-624W	5	24	210			
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	90	-	528	VAC	
	DC Input	110	-	746	VDC	
Input Frequency		47	-	63	Hz	
Input Current	115VAC	-	0.11	-	A	
	230VAC	-	0.07	-		
Inrush Curent	115VAC	-	15	-		
	230VAC	-	25	-		
Leakage Current	277VAC / 50Hz	0.2mA RMS Typ.				
External Input Fuse		1Amp Slow Blow Fuse				

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
Output Voltage	Output Load 10% - 100%	-	±2	-	%
Line Regulation	Full Load	-	±0.5	-	
Load Regulation	0% - 100% Load	-	+/-1	-	
Ripple / Noise	20MHz Bandwidth (Peak to Peak Value)	-	100	300	mV
Stand by Power	230VAC	-	0.1	0.25	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	320VAC Input	-	40	-	mS

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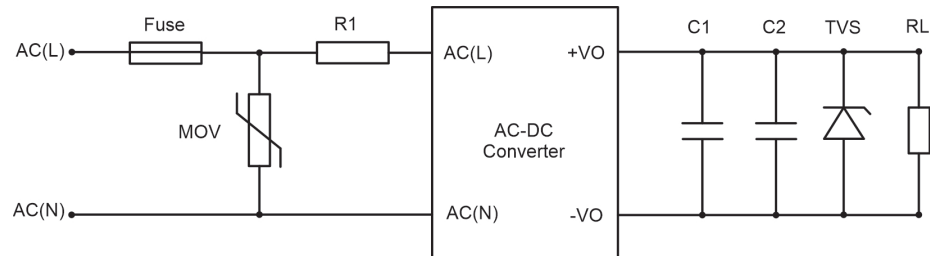
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 5mA)	4000	-	-	VAC
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+105	
Storage Humidity		-	-	+95	%RH
Soldering Temperature	Wave Soldering	260 +/-5°C			
	Manual Soldering	360 +/-5°C			
Switching Frequency		-	65	-	KHz
Altitude		-	2000	-	m
Safety Class		CLASS II			
MTBF		>2600,000Hrs @ 25°C (MIL-HDBK-217F)			
Safety Approvals		IEC/EN/UL62368, EN61558			
Cooling Method		Free Air Convection			
Dimensions		50.8 x 25.4 x 18.3mm			
Weight		41g			
Body Colour		Black			

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

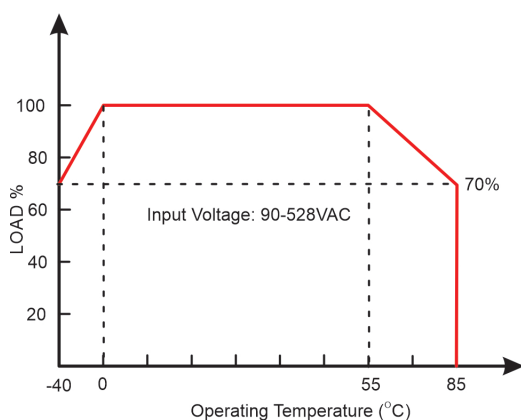


Optional: R1 to reduce any Surge currents, wire wound resistor or NTC

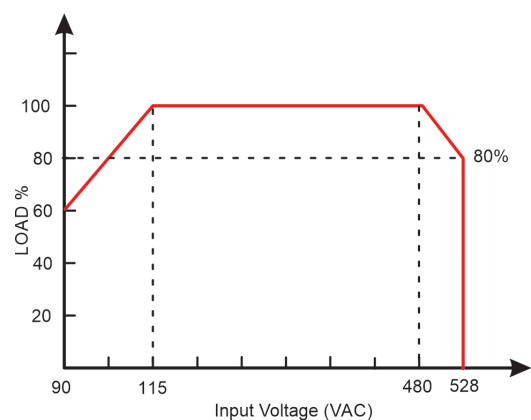
Part Number	C1 (uF)	C2 (uF)	TVS	Fuse	MOV	Capacitance Load Max
VTX-214-005-605W	0.1	150	SMBJ7.0A	1Amp/500V Slow Blow	14D561K	4000 uF
VTX-214-005-609W		120	SMBJ12A			1000 uF
VTX-214-005-612W		120	SMBJ20A			820 uF
VTX-214-005-615W		100	SMBJ20A			680 uF
VTX-214-005-618W		100	SMBJ20A			330 uF
VTX-214-005-624W		100	SMBJ30A			330 uF
Note: For additional filtering requirements, contact technical support						

Derating Graphs

Temperature Derating Graph



Input Voltage Derating Graph



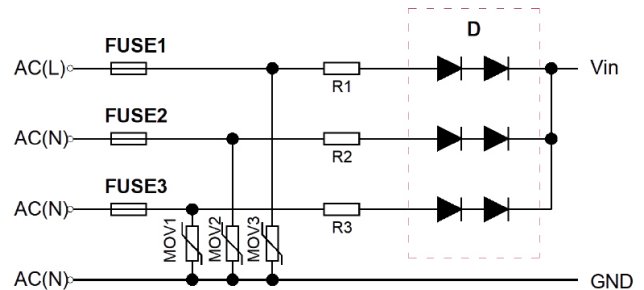
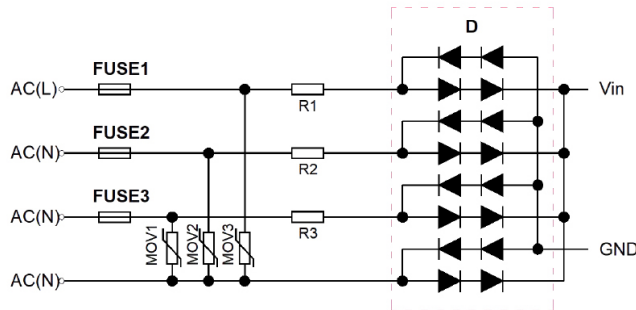
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Recommended circuit diagram for 4KV differential mode surge -
mode surge -full bridge rectification

Recommended circuit diagram for 4KV differential mode surge -
half bridge rectification



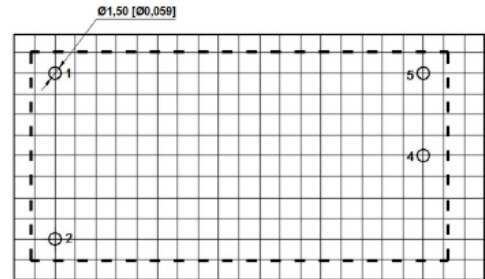
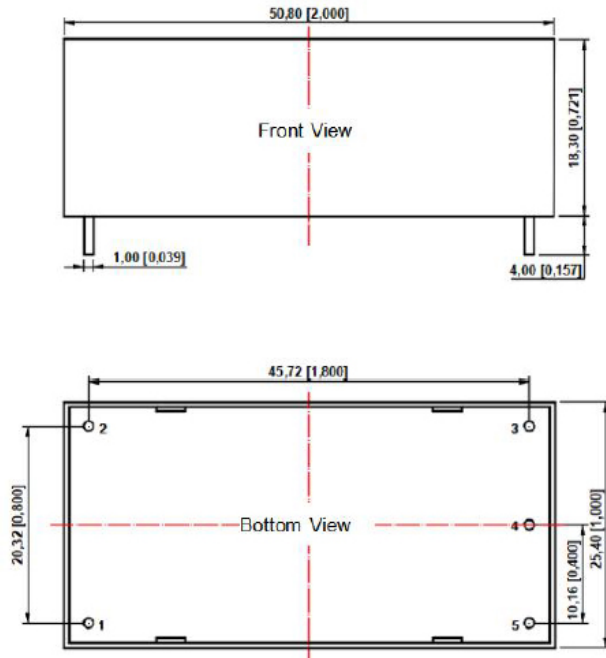
Item	Recommended Value
FUSE1, FUSE2, FUSE3	2A/500VAC, slow-blow, required part
MOV1, MOV2, MOV3	14D561K
R1, R2, R3	6.8Ω/3W
D	2A/1000V
Note: For additional filtering requirements, contact technical support	

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Dimensions



Grid size: 2.54*2.54mm

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

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