



### Features:

- 45W High Power Density 76.2 x 50.8 x 27.0mm
- Wide AC & DC Input 85V to 264VAC
- Temperature Range -25°C to +70°C
- Protection: OVP, OCP and Output Short Circuit
- Output Range: 3.3V - 48VDC
- Low Standby Power <0.5W
- Fully Isolated Pri - Sec >3000Vrms
- Insulation: Class II
- Materials: UL94-V0
- IEC/EN/UL62368
- 2 Year Warranty



### Description

VTX-210-045-0## is a compact Open style AC-DC power converter. It features universal AC input and at the same time accepts DC input voltage, low power consumption, high efficiency, high reliability, reinforced isolation. It offers good EMC performance compliant to IEC/EN61000-4 and CISPR32/EN55032 and meets UL/EN/IEC62368, EN/UL60335 standards. The converters are widely used in industrial, office and civil applications. Please 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-210-045-003	26.4	3.3	8000	50°C (70°C @ 50%)	>76%	85 - 264VAC (100 - 370VDC)
VTX-210-045-005	40	5	8000			
VTX-210-045-009	45	9	4444			
VTX-210-045-012	45	12	3750			
VTX-210-045-015	45	15	3000			
VTX-210-045-024	45	24	1875			
VTX-210-045-048	45	48	940			

**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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Vigortronix, 16 De Havilland Way, Witney, Oxfordshire, OX29 0YG, UK  
Tel. +44 (0)1993 777570 Web. [www.vigortronix.com](http://www.vigortronix.com), E-mail: [sales@vigortronix.com](mailto:sales@vigortronix.com)  
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Input Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Input Voltage</b>	AC Input	85	-	264	VAC
	DC Input	100	-	370	VDC
<b>Input Frequency</b>		47	-	63	Hz
<b>Input Current</b>	115VAC	-	-	1.2	A
	230VAC	-	-	0.70	
<b>Inrush Current</b>	115VAC	-	35	-	
	230VAC	-	50	-	
<b>Leakage Current</b>	264VAC / 50Hz	0.25mA RMS Max			

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Output Voltage</b>	Output 3.3V	-	+/-3	-	%
	5V/9V/12V/15V/24V/48V	-	+/-2	-	
<b>Line Regulation</b>	Full Load 3.3V	-	+/-0.5	-	
	5V/9V/12V/15V/24V/48V	-	+/-0.5	-	
<b>Load Regulation</b>	0% - 100% Load 3.3V	-	+/-1	-	
	5V/9V/12V/15V/24V/48V	-	+/-1	-	
<b>Ripple / Noise</b>	20MHz Bandwidth (Peak to Peak Value)	-	50	100	mV
<b>Stand by Power</b>	230VAC	-	-	0.5	W
<b>Temp. Coefficient</b>		-	+/-0.02	-	%/°C
<b>Short Circuit Protection</b>		Hiccup, Continuous, Self-recovery			
<b>Over Current Protection</b>		>150% Load, Self-recovery			
<b>Over Voltage Protection</b>		Hiccup, Continuous, Self-recovery			
<b>Minimum Load</b>		0	-	-	%
<b>Hold-up Time</b>	115VAC Input	-	20	-	mS
	230VAC Input	-	50	-	

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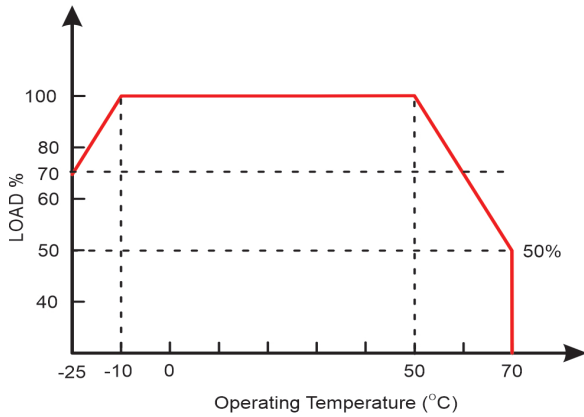
General Specification					
Item	Conditions	Min	Typical	Max	Unit
<b>Dielectric Strength</b>	Input to Output (1Min, 10mA)	3000	-	-	VAC
<b>Insulation Resistance</b>	Input to Output (500VDC)	100			M.Ohm
<b>Operating Temperature</b>		-25	-	+70	°C
<b>Storage Temperature</b>		-25	-	+85	
<b>Operating Humidity</b>		20	-	90	%RH
<b>Storage Humidity</b>		-	-	95	
<b>Soldering Temperature</b>	Wave Soldering	260 +/-5°C 5-10s			
	Manual Soldering	360 +/-5°C 3-5s			
<b>Switching Frequency</b>		-	65	-	KHz
<b>Altitude</b>		-	-	2000	m
<b>Safety Class</b>		CLASS II			
<b>MTBF</b>		>300KHrs @ 25°C (MIL-HDBK-217F)			
<b>Safety Approvals</b>		IEC/EN/UL62368			
<b>Dimensions</b>		76.2 x 50.8 x 27.0mm (3 x 2 Inch)			
<b>Cooling Method</b>		Free air convection			
<b>Weight</b>		90g			

EMC Specification		
<b>Emissions</b>	CE /RE	CISPR32 / EN55032 CLASS B EN55014-1
<b>Immunity</b>	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 +/-2KV
	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

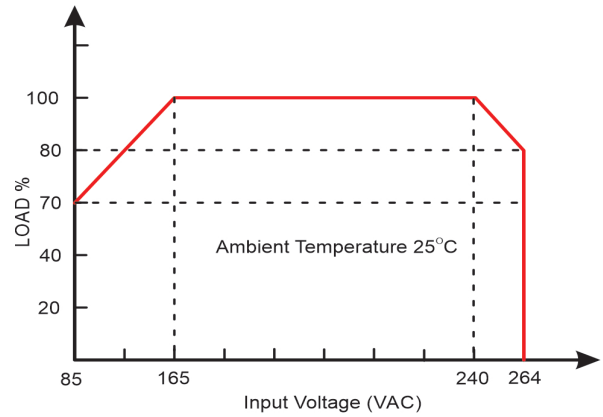
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## Derating Graphs

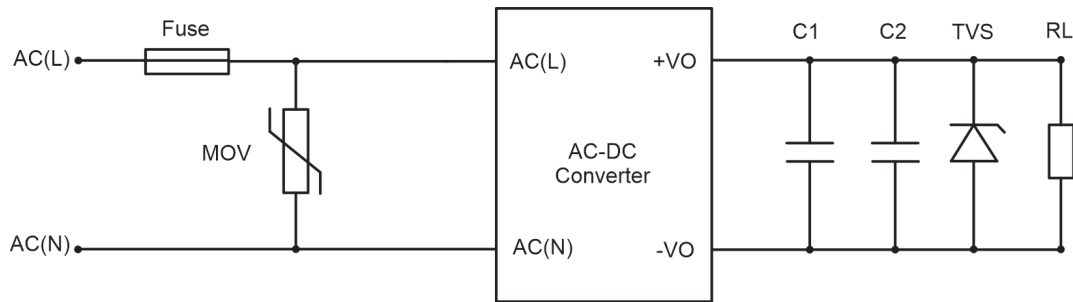
### Temperature Derating Graph



### Input Voltage Derating Graph



## Application Circuit



C1 (uF)	C2 (uF)	TVS	Fuse	MOV
1.0	47	SMBJxxA	3.15A/300V Slow Blow	S14K350

## Efficiency Guide

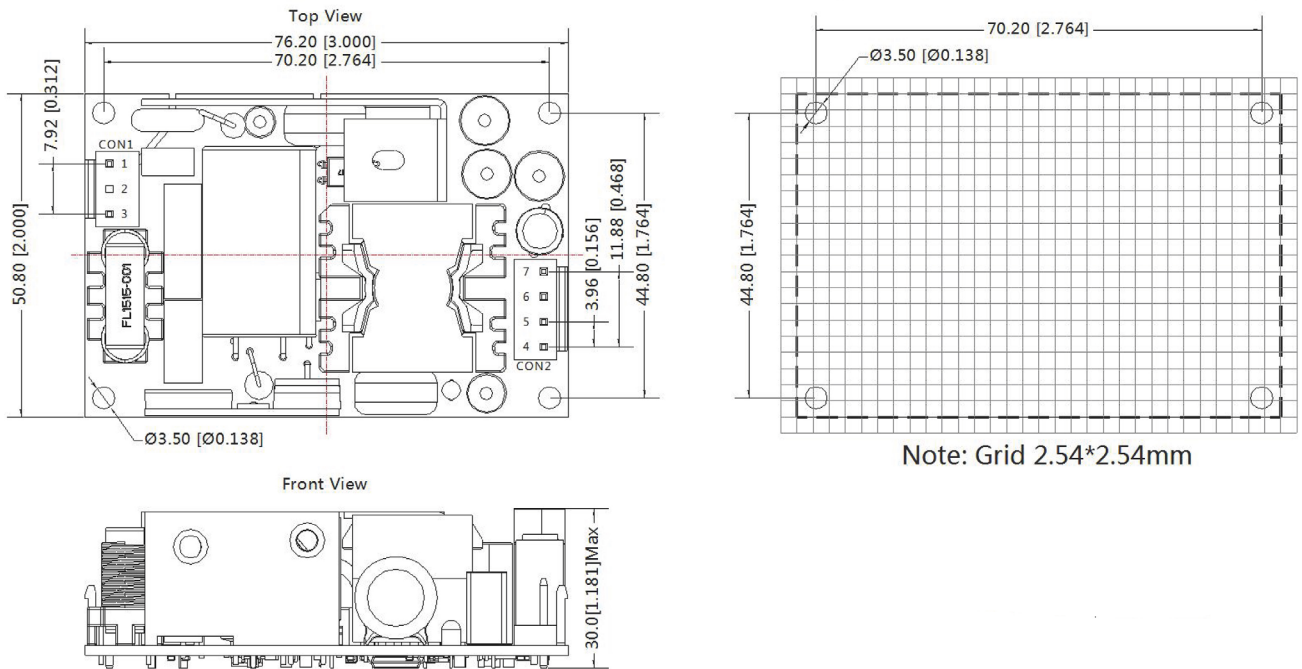
Part Number	Output Voltage (VDC)	Efficiency Typical (%)	Capacitance Load Max
VTX-210-045-003	3.3	76	30000 uF
VTX-210-045-005	5	82	20000 uF
VTX-210-045-009	9	84	6000 uF
VTX-210-045-012	12	84	4000 uF
VTX-210-045-015	15	86	3500 uF
VTX-210-045-024	24	86	1000 uF
VTX-210-045-048	48	87	600 uF

**Note: Other output voltages are available upon request.**

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## Dimensions



PIN Number	Function	Connector	Terminal
1	AC(L)	VH-3A or B2P3-VH or Equivalent	VH-3Y or VHR-3N or Equivalent
2	No Pin		
3	AC(N)		
4	-Vo	VH-2A or B2P-VH or Equivalent	VH-2Y or VHR-2N or Equivalent
5	+Vo		

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