



Features:

- 450W Compact Size 215.0 x 115.0 x 30.0mm
- Wide AC & DC Input 176V to 264VAC
- Temperature Range -30°C to +70°C
- LED Power Indicator
- Output Range: 12V - 48VDC
- Low Standby Power <0.5W
- Fully Isolated Pri - Sec: 4000Vrms
- Insulation: Class II
- Materials: UL94-V0
- UL/EN62368-1, EN61558, EN60335
- 3 Year Warranty



Description

VTX-212-450-0### AC-DC enclosed caged SMPS. It features a wide AC input 176V to 264VAC and a DC input voltage 240 to 370VDC. 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, LED lighting 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 Voltage Adj. Range	Output Current (mA)	Ambient Temp. (°C)	Efficiency Typical	Input Range
VTX-212-450-012	450	12	10.2~13.8	37500	50°C (70°C @ 60%)	>85%	176 - 264VAC (240 - 370VDC)
VTX-212-450-015	450	15	13.5~18	30000			
VTX-212-450-024	450	24	21.6~28.8	18800			
VTX-212-450-027	450	27	24.3~29.7	16700			
VTX-212-450-036	450	36	32.4~39.6	12500			
VTX-212-450-048	450	48	43.2~52.8	9400			

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	176	-	264	VAC
	DC Input	240	-	370	VDC
Input Frequency		47	-	63	Hz
Input Current		-	-		A
	230VAC	-	5	6	
Inrush Current		-	-	-	A
	230VAC	-	60	80	
Leakage Current	230VAC / 50Hz	-	-	2	mA

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
Output Voltage	12V	-	+/-1.5	-	%
	Full Load Range 15V/24V/27V/36V/48V	-	+/-1.0	-	
Line Regulation	Rated Load	-	+/-0.5	-	%
Load Regulation	0% - 100% Load	-	+/-0.5	+/-1	
Ripple / Noise	12V/15V/24V/27V	-		200	mV
	20MHz Bandwidth 36V/48V	-		200	
Stand by Power	230VAC	-	-	0.75	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		-	-	-	mS
	230VAC Input	-	16	-	
Fan Operation	Fan ON, Temperature	50	-	-	°C
	Fan OFF, Temperature	-	-	40	

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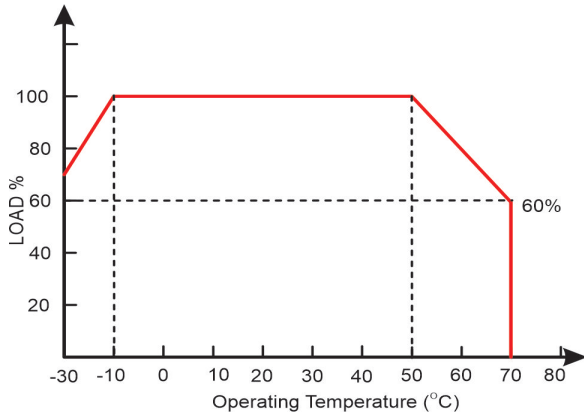
General Specification					
Item	Conditions	Min	Typical	Max	Unit
Dielectric Strength	Input to Output (1Min, 10mA)	4000	-	-	VAC
	Input to Earth (1Min, 10mA)	2000	-	-	
Insulation Resistance	Input to Output (500VDC)	50			M.Ohm
Operating Temperature		-30	-	+70	°C
Storage Temperature		-40	-	+85	
Operating Humidity		20	-	90	%RH
Storage Humidity		10	-	95	
Switching Frequency		-	85	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS I			
MTBF		>300KHrs @ 25°C (MIL-HDBK-217F)			
Safety Approvals		IEC/EN/UL62368, EN61558, EN60335			
Case Material		Metal (AL1100)			
Dimensions		215.00 x 115.00 x 30.00mm			
Cooling Method		Free air convection			
Weight		750g			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS A EN55014-1
Immunity	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

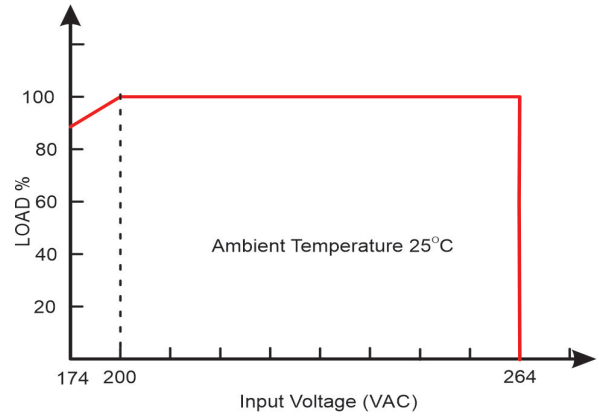
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Derating Graphs

Temperature Derating Graph



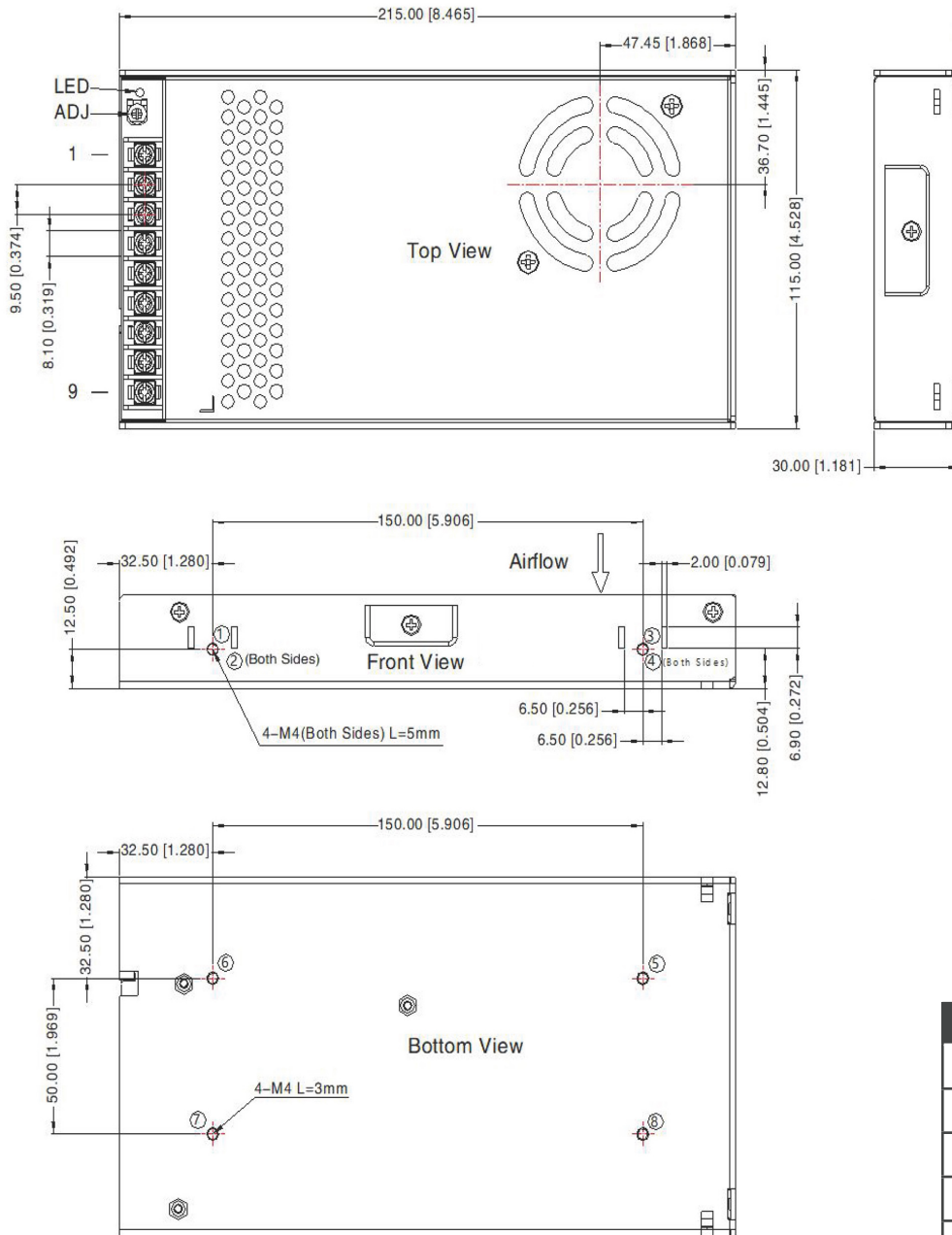
Input Voltage Derating Graph



Efficiency Guide			
Part Number	Output Voltage (VDC)	Efficiency Typical (%)	Capacitance Load Max
VTX-212-450-012	12	85	4000 uF
VTX-212-450-015	15	86	3300 uF
VTX-212-450-024	24	87	1500 uF
VTX-212-450-027	27	87	1500 uF
VTX-212-450-036	36	88	1000 uF
VTX-212-450-048	48	88	470 uF
Note: Other output voltages are available upon request.			

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Dimensions



PIN Number	Function
1	+Vo
2	+Vo
3	+Vo
4	-Vo
5	-Vo
6	-Vo
7	Earth
8	AC(N)
9	AC(L)

Position	Screw Size	Max Length	Max Torque
1 - 4	M4	5mm	0.9Nm
5 - 8	M4	3mm	0.9Nm

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