50 Watt AC-DC Enclosed Power Supply

Features:

- 50W Compact Size 99.0 x 82.0 x 30.0mm
- Wide AC & DC Input 85V to 305VAC
- Temperature Range -30°C to +70°C
- Over-voltage Category OVC III
- Output Range: 3.3V - 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-212-050-0## AC-DC enclosed caged PSU. 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, 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-212-050-005	50	5	2.8~3.6	10000	50°C (70°C @ 60%)	>83%	85 - 305VAC (100 - 430VDC)
VTX-212-050-012	50	12	10.2~13.8	4200			
VTX-212-050-015	50	15	13.5~18	3400			
VTX-212-050-024	50	24	21.6~28.8	2200			
VTX-212-050-036	50	36	32.4~39.6	1450			
VTX-212-050-048	50	48	43.2~52.8	1100			

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.

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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	-	-	1.2	A
	230VAC	-	-	0.8	
Inrush Curent	115VAC	-	30	-	
	230VAC	-	60	-	
Leakage Current	277VAC / 50Hz	0.75mA RMS Max			

Output Specification					
Item	Conditions	Min	Typical	Max	Unit
Output Voltage	Output 5V	-	+/-2	-	%
	Output 12V/15/24V	-	+/-1	-	
Line Regulation	Full Load 5V	-	+/-0.5	-	
	Full Load 12V/15/24V	-	+/-0.5	-	
Load Regulation	0% - 100% Load 5V	-	+/-1	-	
	0% - 100% Load 12V/15/24V	-	+/-0.5	-	
Ripple / Noise	20MHz Bandwidth (Peak to Peak Value)	-	120	150	mV
Stand by Power	230VAC	-	0.2	0.3	W
Temp. Coefficient		-	+/-0.03	-	%/^{O}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	-	30	-	

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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)	100			M.Ohm
Operating Temperture		-30	-	+70	°C
Storage Temperture		-40	-	+85	
Operating Humidity		20	-	90	%RH
Storage Humidity		-	-	95	
Switching Frequency		-	65	-	KHz
Altitude		-	-	5000	m
Safety Class		CLASS I			
MTBF		>300KHrs @ 25°C (MIL-HDBK-217F)			
Safety Approvals		IEC/UL62368-1, EN61558-1, EN60335-1			
Case Material		Metal (AL5052)			
Dimensions		99.00 x 82.00 x 30.00mm			
Cooling Method		Free air convection			
Weight		190g			

EMC Specification		
Emissions	CE /RE	CISPR32 / EN55032 CLASS B 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 +/-2.2KV
	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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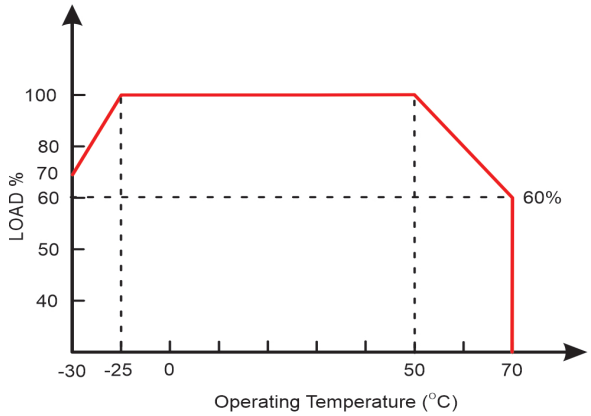
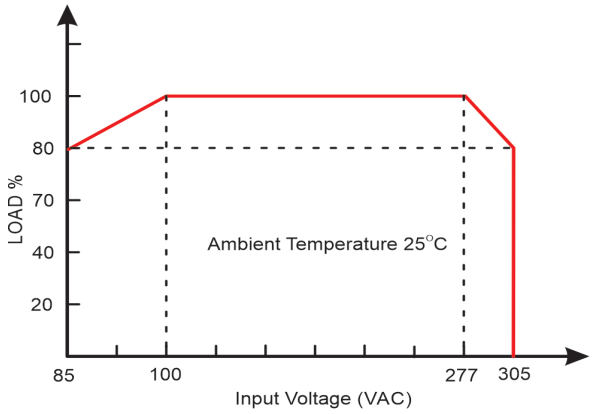
Derating Graphs

Temperature Derating Graph



Input Voltage Derating Graph



Efficiency Guide

Part Number	Output Voltage (VDC)	Efficiency Typical (%)	Capacitance Load Max
VTX-212-050-005	5	83	8500 uF
VTX-212-050-012	12	86	2000 uF
VTX-212-050-015	15	87	1500 uF
VTX-212-050-024	24	88	1000 uF
VTX-212-050-036	36	89	470 uF
VTX-212-050-048	48	90	220 uF
Note: Other output voltages are available upon request.			

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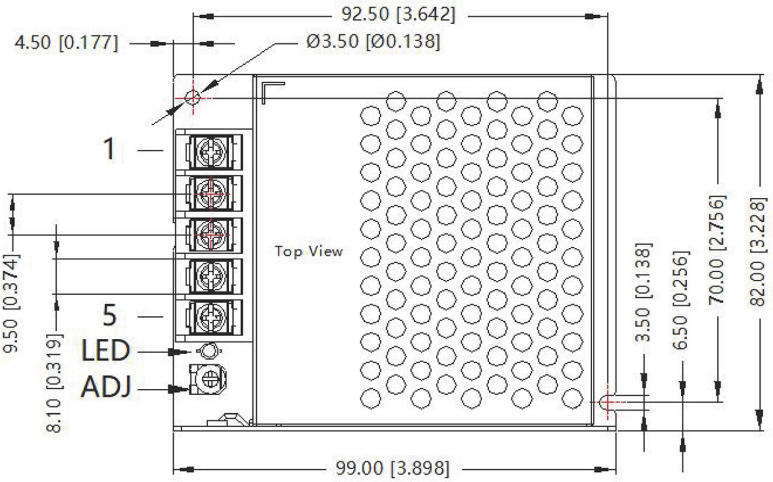
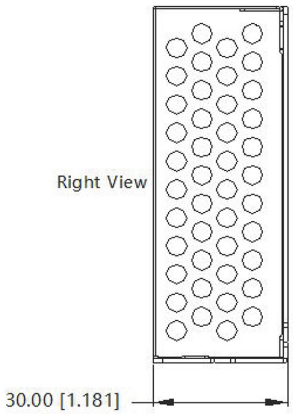
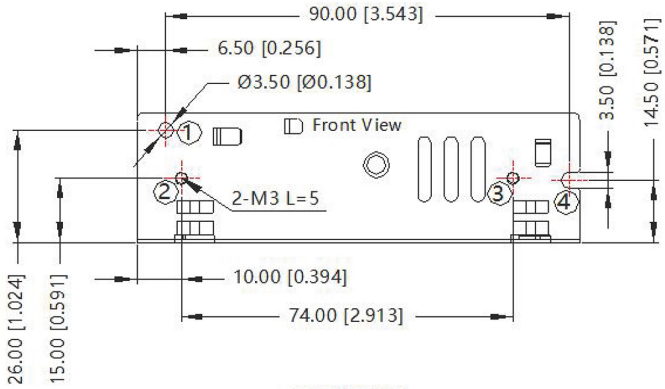
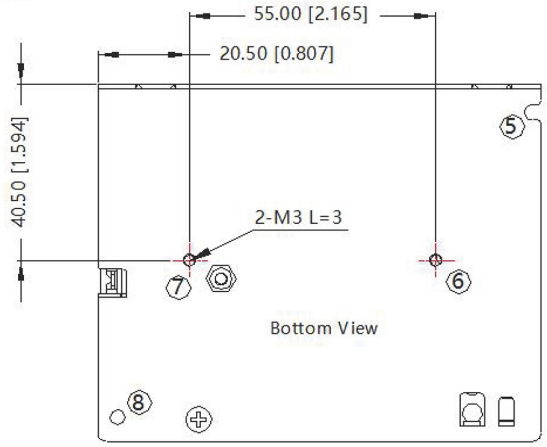
Dimensions









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

Position	Screw Size	Max Length	Max Torque
1 - 2	M3	4mm	0.4Nm
3 - 4	M3	3mm	0.4Nm

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