2 Watt AC-DC Converters
Zero Crossing Series

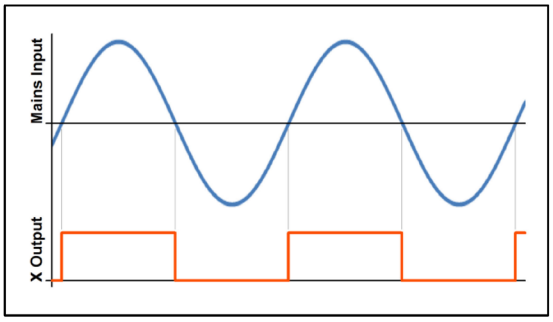
Features:

- Zero Crossing Feature - NEW
- 2W Low Profile <15.5mm Height
- MTBF: 1,000,000 Hours
- Wide Input Range: 90 - 305VAC
- Low Standby Power <0.15W
- High Temperature 85°C Full Load
- EMC Compliant - No External Components
- TUV, UL Approved

Part Number	Power Rating Watts	Output Voltage (VDC)	Output Current (mA)	Ambient Temp. (°C)	Efficiency Typical	Voltage Range
VTX-214-002-303X	**2**	3.3	600	85	>72%	90 - 305VAC
VTX-214-002-305X	**2**	5	400			
VTX-214-002-306X	**2**	6	333			
VTX-214-002-307X	**2**	7.5	266			
VTX-214-002-308X	**2**	8	250			
VTX-214-002-309X	**2**	9	222			
VTX-214-002-310X	**2**	10	200			
VTX-214-002-312X	**2**	12	166			
VTX-214-002-315X	**2**	15	133			
VTX-214-002-318X	**2**	18	111			
VTX-214-002-324X	**2**	24	83			
VTX-214-002-348X	**2**	48	42			
Note: Other output voltages are available upon request.						

Zero Cross Detection Output

In many applications it is advantageous to synchronize various events to the mains frequency and phase. For example, the efficiency of power Thyristor circuits is increased and component service life is extended, e.g. for relays, if switching occurs at zero-crossing. In addition, sensing applications like those frequently found in the 'Smart Home' market, need to eliminate 50/60 Hz noise, which can be easily accomplished by synchronizing built-in A/D converters with the mains frequency.



Please contact Vigortronix for any enquiries. Products can be altered to suit custom requirements.

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Model: 2 Watt		Specification
INPUT **Pin 1: L** **Pin 2: N**	Voltage Range	90 ~ 305VAC / 47 ~ 63Hz
	Current	200mA Max (100VAC) / 100mA Max (240VAC)
	Inrush Current	15A Max (100VAC) / 25A Max (277VAC)
	No Load power	0.3W Max
	Leakage Current	0.3 mA Max
OUTPUT **Pin 5: 0V** **Pin 4: +DCV** **Pin 3: Zero Crossing**	Voltage Accuracy	5% (<6VDC 7%)
	Ripple	3% Vout (Vp~p) (<6VDC 5%)
	Noise	3% Vout (Vp~p) (<6VDC 5%)
	Efficiency @ 230VAC	>72%
	Minimum Load	0
Protection	Over Power	Hiccup mode
	Over Voltage	Hiccup mode
	Short Circuit Protection	Hiccup mode
Dielectric Isolation	Input to Output	3600Vrms
Enviroment	Operating Temperature	-25^{O}C ~ +85^{O}C (+70^{O}C, 100%, See Derating Curve)
	Storage Temperature	-40^{O}C ~ +105^{O}C
	MTBF	>1,000,000Hrs @ 25^{O}C (MIL-HDBK-217F)
	Weight	29g
Safety	Agency Standards	Compliance with IEC60950-1, EN60950-1, IEC61558-1 EN61558-1, EN61558-2-6, EN61558-2-17
EMC	EMI	Compliance with EN55022 Class B, EN61000-3-2, 3
	EMS	Compliance with EN55024, EN55014-1, EN55014-2, EN61000-4-2,3,4,5,6,8,11 Class A, (Surge L-N: 1KV),

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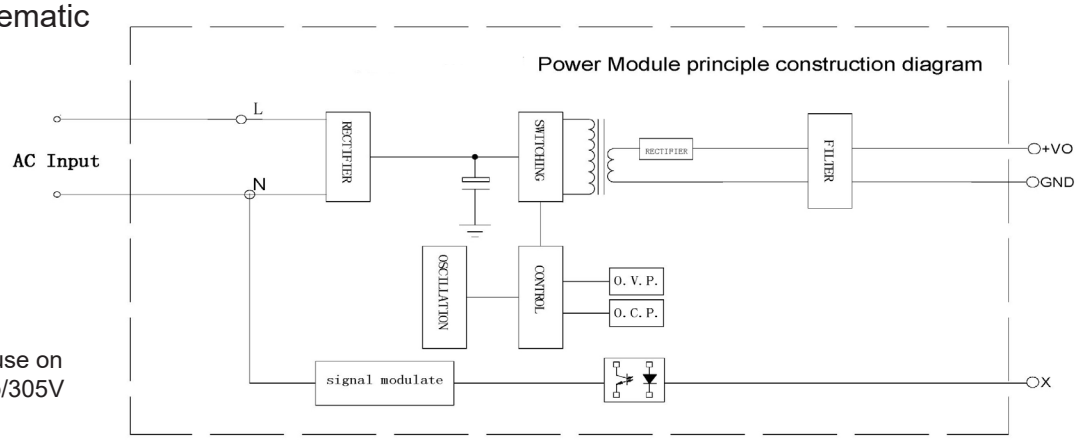
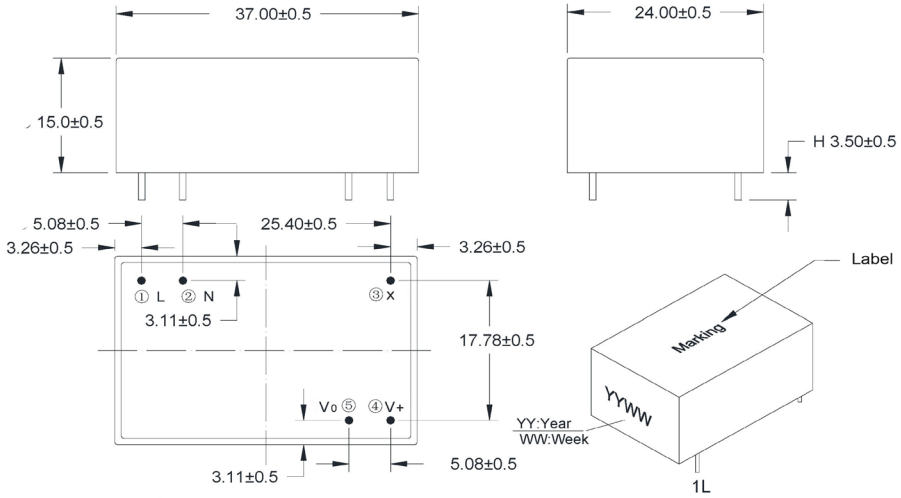
Converter Schematic



Recommend a Fuse on the input of 1Amp/305V

Dimensions:



NO.	Pin connect	Function
1	AC_L	AC Input L
2	AC_N	AC Input N
3	X	Zero Crossover
4	DC+	Output Positive
5	DC-	Output Negative

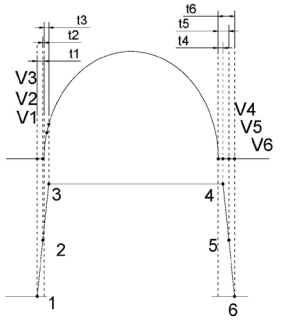
Pin3 will change state from 0V to 3.3V output based on AC Input.

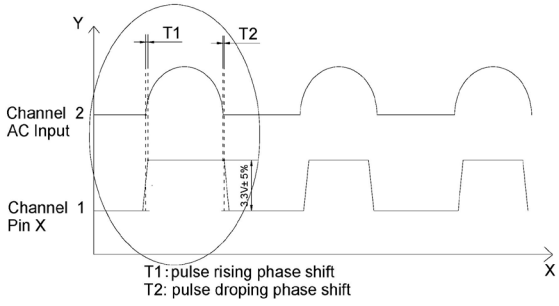
Unit weight: 29g

Phase Shift

AC Input	RISE SHIFT(typ.)	DROP Shift(typ.)
90Vac	32us	244us
110Vac	60us	226us
220Vac	176us	128us
264Vac	184us	118us
277Vac	196us	114us
300Vac	216us	104us

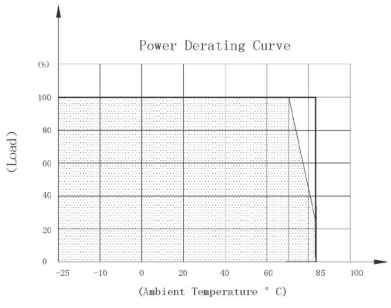
NO.	Vac Value(typ.)	Phase Shift(typ.)
1	V1:0V	t1:-54us
2	V2:0V	t2:-18us
3	V3:16.6V	t3:160us
4	V4:0V	t4:126us
5	V5:0V	t5:131us
6	V6:0V	t6:233us

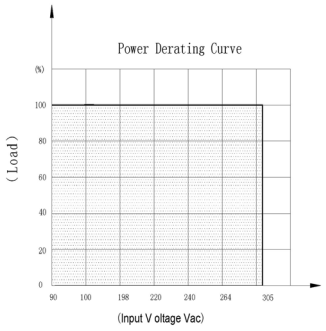




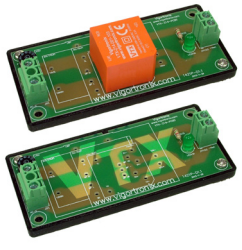
Phase shift: When input AC signal crossing with X axis ,the output zero crossing detection signal pulse reversal ,the delta-T between the two signal. Where:a.Pulse rising edge shift @ VAC=0 :AC Signal from 0 voltage to max value.Here is T1.b.Pulse droping edge shift @VAc=0 Singe from max value to 0 Voltage Here is T2

Derating Graph:





Optional Universal PCB mounting kit.
Part Number:
VTX-214-PCB2



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