



### General Description

Universal or auto-ranging inputs for world wide use. Output power from 15 to 600 watts. Up to 4 outputs available. Approved to international safety standards.

**Dimensions: 33Wx116.5Lx97H (400g)**

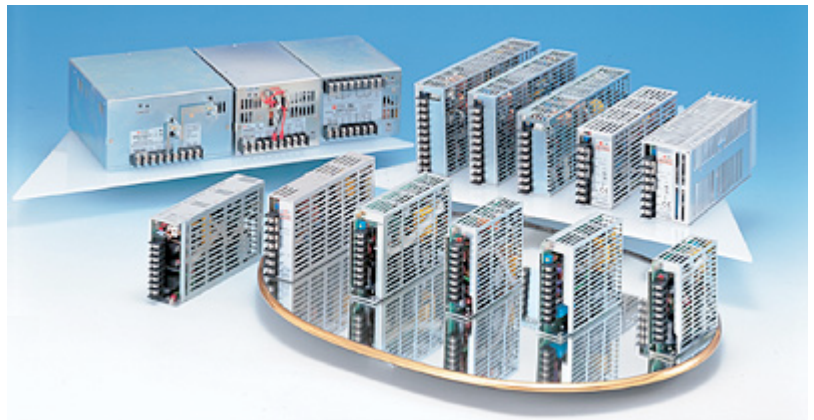
**RoHS**

**25 WATT  
AC-DC  
CONVERTER**

**WRA-00X Series  
3 CHANNEL**

### Features

1. Universal input 85-264VAC
2. EMI: meets EN 55022/B, FCC/B
3. Compact size
4. High efficiency and reliability
5. Output voltage adjustable
6. Over voltage protection



### Options

N/A





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Specifications <AC/DC>	Model		
<b>WRA**X-U</b>	WRA01X	WRA03X	WRA04X
<b>25WATTS/3 OUTPUTS</b>			
<b>Input Characteristic</b>			
Input Voltage	AC100-240V		
Input Current	0.77-0.36A	0.75-0.32A	0.75-0.35A
Input Range	AC85-264V(DC110-350V)		
Input Frequency	50/60Hz		
Input Frequency Range	47-440Hz		
Phase	Single		
Inrush Current *1	35A(maximum) at AC115/70A(maximum) at AC230V		
Efficiency [%] (typical) *2	66	66	67

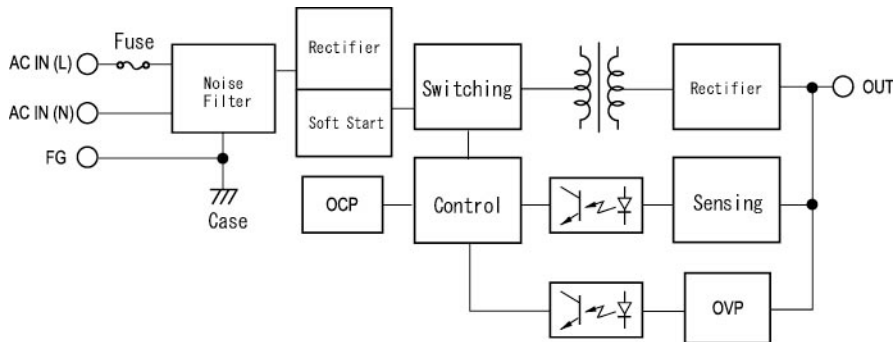


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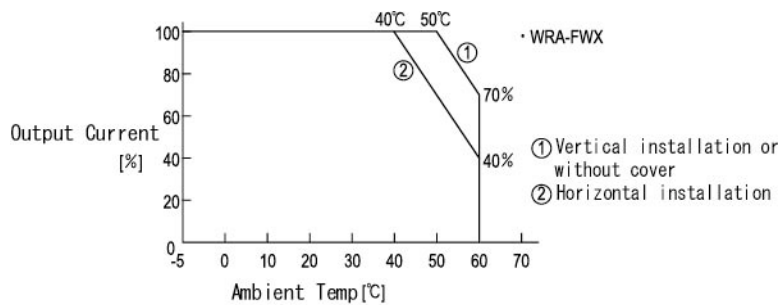
16170 Vineyard Blvd. Suite 180 Morgan Hill, CA 95037 <http://www.eta-usa.com>  
Toll-free (US only): 800-ETA-POWR (800-382-7697) Telephone: 408 778-2793 FAX: 408-779-2753



## BLOCK DIAGRAM



## DERATING CURVE

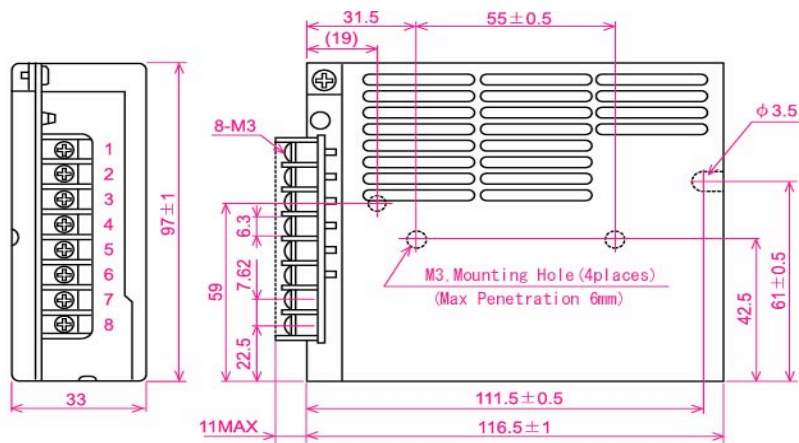


※For safety specification, contact ETA Sales Representative



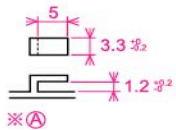
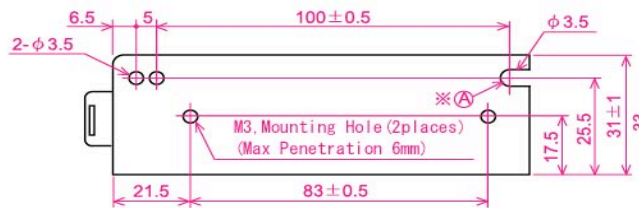


**DIMENSION DIAGRAM**



**Pin Assignments**

2 out	3 out
-FWX-U	-OOX-U
1 V1	V1
2 G1	G1
3 V2	V2
4 G2	G2
5 NC	V3
6 FG	FG
7 AC in (L)	AC in (L)
8 AC in (N)	AC in (N)

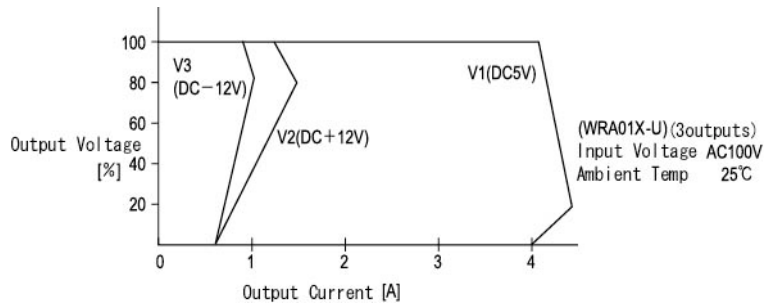


**OCP CURVE**





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Specifications<AC/DC>	Model								
WRA**X-U	WRA01X			WRA03X			WRA04X		
25WATTS/3 OUTPUTS									
<b>Output Characteristic</b>									
Output Voltage [V]	5	+12	-12	5	+12	-5	5	+15	-15
Output Current [A]	0.2-3.0	0.5	0.35	0.2-3.0	0.5	0.35	0.2-3.0	0.35	0.35
Voltage Adjust Range	V1:+3%/-0% of Rated Output Voltage(at no load within the input range) V2,V3:fixed with tolerance of +/-5%(at no load within the input range)								
Ripple and Noise [mVp-p](maximum) *3	100	170	170	100	170	100	100	200	200
<b>Regulation</b>									
a.Statistic Line Regulation [mV](maximum)	25	60	60	25	60	25	25	75	75
b.Statistic Load Regulation [mV](maximum)	50	120	120	50	120	100	50	150	150
c.Temperature Coefficient *4	0.03%/°								
d.Drift[mV](maximum) *5	40	75	75	40	75	40	40	90	90
e.Dynamic Load Regulation [mV](typical) *6	not specified								
f.Recovery Time *6	not specified								
Rise up time	200mS(maximum) at 25° and rated input/output								
Hold up time	10mS(minimum) at 25° and rated input/output								
<b>Functions</b>									
Overcurrent Protection ?105% of Rated Output	V1:Current Limiting with automatic recovery V2,V3:by the regulator I.C's characteristics								
	3.2	-	-	3.2	-	-	3.2	-	-
Overvoltage Protection ?115% of Rated Output	V1:Zener diode clamping V2,V3:not available								
	5.75	-	-	5.75	-	-	5.75	-	-
Remote Sense	not available								
Remote On/Off	not available								
Power Fail Detection	not available								
Parallel/series Operation	not available								
<b>Environmental</b>									
Operating Temperature *7	vertical mount:-5 to +50°/horizontal mount:-5 to +40°								
Operating Humidity	30 to 85%RH(non-condensing)								
Storage Temperature	-20 to +85°								
Storage Humidity	10 to 85%RH(non-condensing)								
Withstanding Voltage	Primary-Secondary AC3,000V for 1minute Primary-Frame Ground AC2,500V for 1minute Secondary-Frame Ground AC500V for 1minute								
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester								
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)								
Shock	294m/s <sup>2</sup>								
Cooling	Convection								
Leakage Current	1mA(maximum) at 25°,rated input/output and rated input frequency								
Line Conducted Noise									
Safety	N/A								
Weight (typical)	400g								
MTBF [H]	510,000								
Switching Frequency [kHz](typical) *8	25			25			25		

Conditions:

\*1 at cold start

\*2 at DC130V input and rated output

\*3 measured by a bayonet probe at output connector at a 0 to 100MHz bandwidth

\*4 at -5 to +50°

\*5 for 7hour period after 1hour warm-up at 25° and rated input/output

\*6 when output current changed from 25% to 75% of rated output current rapidly at AC115/230V input

\*7 safety approved at 25°

\*8 variable on input voltage and load conditions

