ETA-USA
Your power supply experts

15 WATT AC-DC CONVERTER

2 CHANNEL **WRM-FWX SERIES**

General Description

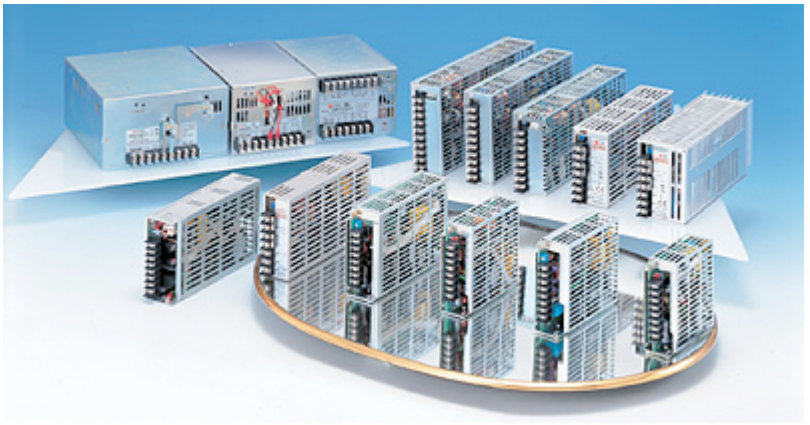
Universal or auto-ranging inputs for world wide use. Output power from 15 to 600 watts. Up to 4 outputs available. Approved to international safety standards.

Dimensions: 33.5Wx98.5Lx97H (400g)

RoHS

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

Specifications WRM**FWX-U 15WATTS/2 OUTPUTS	Model			
	WRM21FWX	WRM22FWX	WRM23FWX	WRM24FWX
Input Characteristic				
Input Voltage	AC115-230V			
Input Current	0.45A			
Input Range	AC85-264V(DC110-350V)			
Input Frequency	50/60Hz			
Input Frequency Range	47-440Hz			
Phase	Single			
Inrush Current *1	30A(maximum) at AC115/60A(maximum) at AC230V			
Efficiency [%] (typical) *2	66	70	71	66

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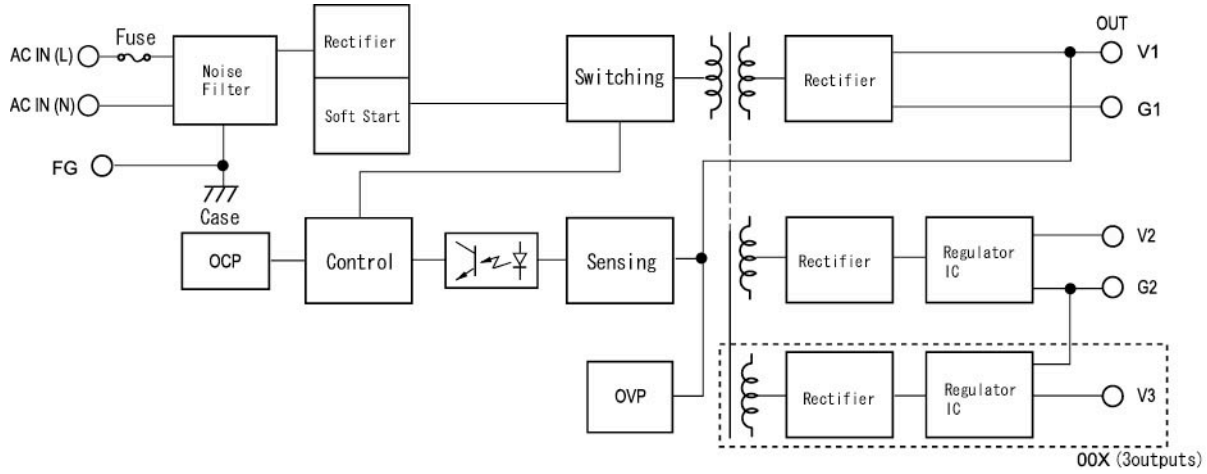
BLOCK DIAGRAM



Output	Model							
WRMFWX-U*(15WATTS/2 OUTPUTS)***	**WRM21FWX**		**WRM22FWX**		**WRM23FWX**		**WRM24FWX**	
Output Voltage [V]	5	24	12	12	15	15	5	12
Output Current [A]	0.2-1.2	0.4	0.2-0.8	0.5	0.2-0.5	0.5	0.2-1.8	0.5
Voltage Adjust Range	V1:+3%/-0% of Rated Output Voltage(at no load within the input range)							
	V2:fixed with tolerance of +/-4% (at no load within the input range)							
Ripple and Noise [mVp-p](maximum) *3	100	290	170	170	200	200	100	170
Regulation								
a.Statistic Line Regulation [mV](maximum)	25	120	60	60	75	75	25	60
b.Statistic Load Regulation [mV](maximum)	50	240	120	120	150	150	50	120
c.Temperature Coefficient *4	0.03%/°C							
d.Drift[mV](maximum) *5	40	135	75	75	90	90	40	75
e.Dynamic Load Regulation [mV](typical) *6	not specified							
f.Recovery Time *6	not specified							
Rise up time	200mS(maximum) at 25°C and rated input/output							
Hold up time	10mS(minimum) at 25°C and rated input/output							
Functions								
Overcurrent Protection ≥110% of	V1:Zenner diode clamping V2:by the regulator I.C's characteristics							
Rated Output Current[A]	1.32	-	0.88	-	0.55	-	1.98	-
Overvoltage Protection ≥110% of]	V1:Output shutdown(to reset,leave 1minute after shut-off)V2:not available							
Rated Output Voltage[V	5.75	-	13.8	-	17.3	-	5.75	-
Remote Sense	not available							
Remote On/Off	not available							
Power Fail Detection	not available							
Parallel/series Operation	not available							
Environmental								
Operating Temperature *7	-5 to +40°C [unit without cover:-5 to +50□]							
Operating Humidity	30 to 85%RH(non-condensing)							
Storage Temperature	-20 to +85°C							

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/s2 ,20minutes' period for 60minutes
Shock	294m/s^2
Cooling	Convection
Leakage Current	1mA(maximum) at 2°C rated input/output and rated input frequency
Line Conducted Noise	
Safety	N/A
□ Weight (typical)	310g/open frame type:270g
□ MTBF [H]	640,000
□ Switching Frequency[kHz](typical)	90

Conditions:

*1 at cold start

*2 at DC130V input,rated output and 25℃

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

*4 at -5 to +40℃/open frame type:-5 to +50℃

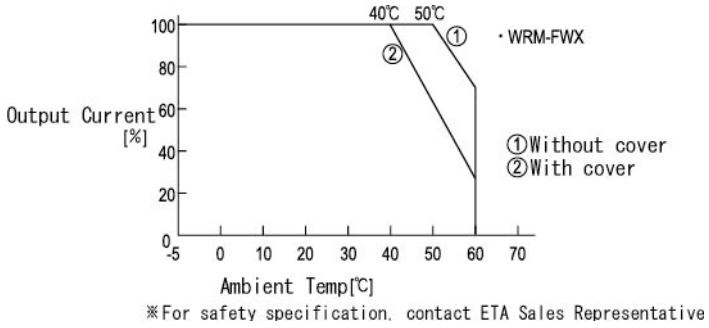
*5 for 7hour period after 1hour warm-up at 25℃ and rated input/output

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

*7 safety approved at 25℃

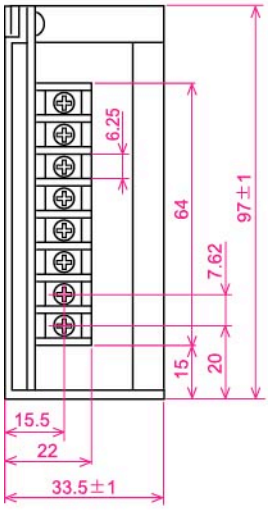
*8 variable on input voltage and load conditions

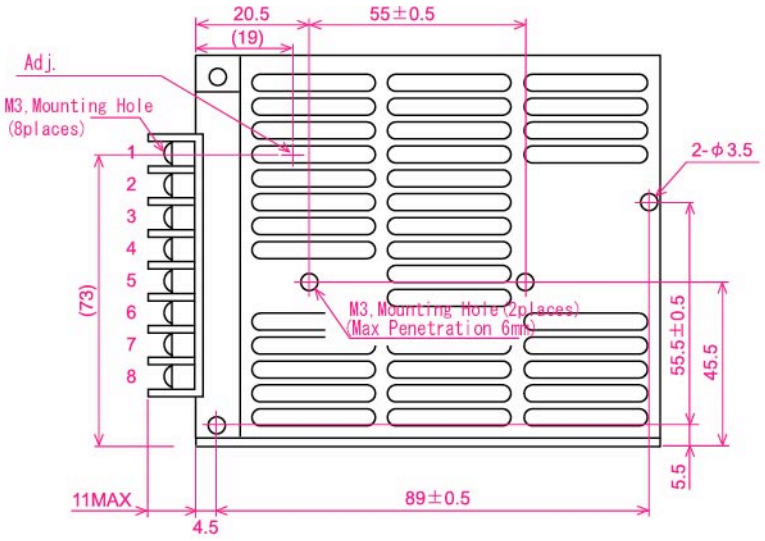
DERATING CURVE



※For safety specification, contact ETA Sales Representative

DIMENSION DIAGRAM





Pin Assignments

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