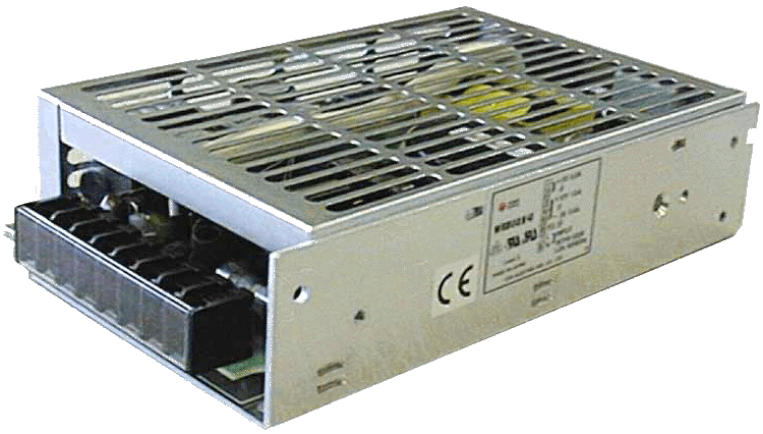
ETA-USA
Your power supply experts

50 WATT AC-DC CONVERTER

2 CHANNELS WRB-FWX SERIES



General Description

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

Dimensions: 39.5Wx159Lx97H(mm) (460g)

RoHS

Options

N/A

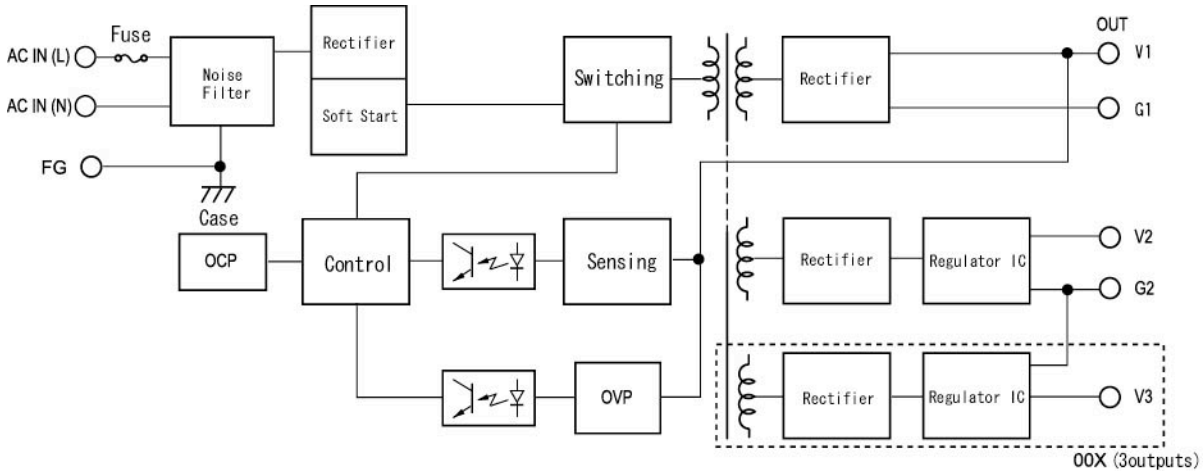
Features

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

Specifications WRB**FWX-U 50WATTS/2 OUTPUTS	Model				
	WRB21FWX-B	WRB22FWX	WRB23FWX	WRB24FWX	WRB24FWX-B
Input Characteristic					
Input Voltage	AC115-230V				
Input Current	1.2A				
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	76	77	77	72	75

ETA-USA Tel: 408-778-2793 Fax: 408-779-2753 e-mail: sales@eta-usa.com

BLOCK DIAGRAM

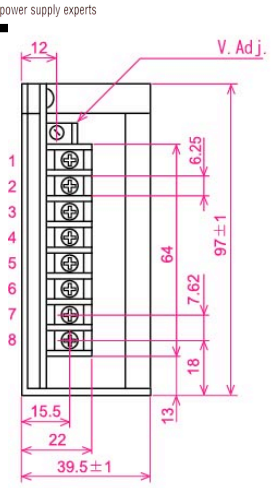


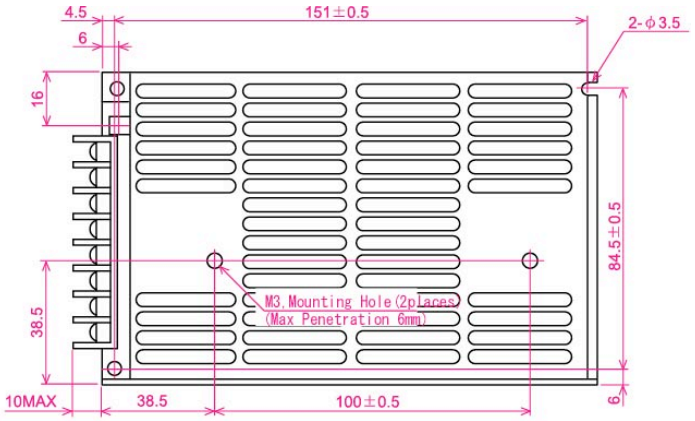
Output	Model									
WRBFWX-U(50WATTS/2 OUTPUTS)**	**WRB21FWX-B**		**WRB22FWX**		**WRB23FWX**		**WRB24FWX**		**WRB24FWX-B**	
Output Voltage [V]	24	5	12	12	15	15	5	12	12	5
Output Current [A]	0.5-1.7	1.8	0.5-3.0	1.2	0.5-1.8	1.5	0.5-5.0	1.8	0.5-3.4	1.8
Voltage Adjust Range	V1:+3%/-0% of Rated Output Voltage(at no load within the input range) V2:fixed (at no load within the input range)									
Ripple and Noise[mVp-p](maximum) *3	290	100	170	170	200	200	100	170	170	100
Regulation										
a.Statistic Line Regulation [mV](maximum)	120	25	60	60	75	75	25	60	60	25
b. Statistic Load Regulation [mV](maximum)	240	50	120	120	150	150	50	120	120	50
c. Temperature Coefficient *4	0.03%/°C									
d. Drift[mV](maximum) *5	135	40	75	75	90	90	40	75	75	40
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										
Over current Protection ≥110%	V1:Current Limiting with automatic recovery V2:by the regulator I.C's characteristics									
of Rated Output Current[A]	1.87	-	3.3	-	1.98	-	5.5	-	3.74	-
Over voltage Protection ≥110%	V1:Output shutdown(to reset, leave 1minute after shut-off) V2:not available									
of Rated Output Voltage[V]	26.4	-	13.2	-	16.5	-	5.5	-	13.2	-

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 /open frame type:-5 to +50°C
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/s^2,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)
Shock	294m/s^2
Cooling	Convection
Leakage Current	1mA(maximum) at 25°C, rated input/output and rated input frequency
Line Conducted Noise	
Safety	N/A
□ Weight (typical)	460g/open frame type:440g
□ MTBF [H]	470,000
□ 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℃

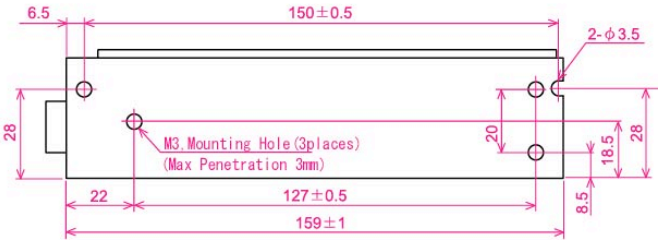
DIAGRAM DIMENSION





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)



OCP CURVE

