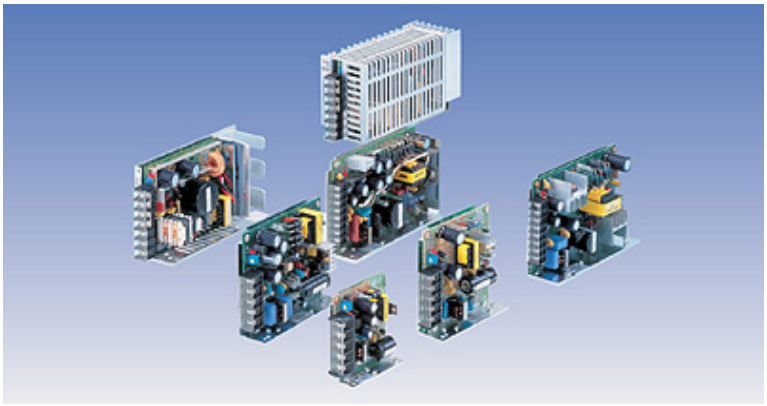
ETA-USA
Your power supply experts

40 WATT AC-DC CONVERTER

ERT-HWA SERIES



General Description

"ER"-Series AC/DC Switching power supplies are open frame, low cost with high efficiency. 65 different models are available from low to medium power. A low power modules use a simple RCC circuit while high power supplies employ a forward converter.

Features

1. Open Frame
2. Cost Effective
3. High Efficiency
4. No derating without cover and horizontal mounting
5. Input 170-264Vac
6. EMI : complies with FCC/A, FCC/B for ERD & ERE
7. Over voltage protection

Cover(add suffix "-P")

**"-P" model dimension is same as "without cover" model

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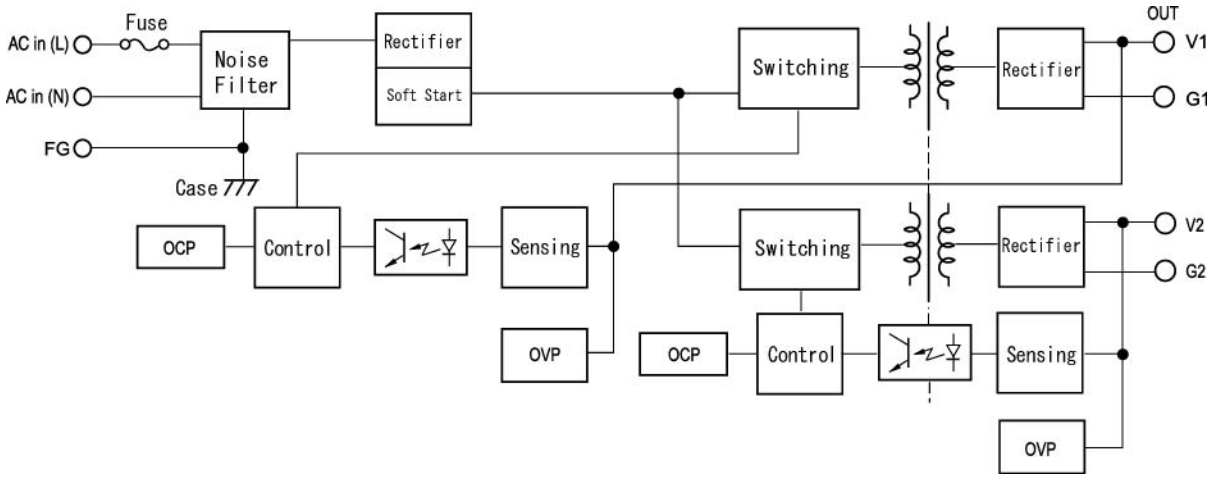
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Specifications<AC/DC>	Model									
ERT**HWA 40WATTS/2OUTPUTS	ERT21HWA		ERT22HWA		ERT23HWA		ERT24HWA		ERT25HWA	
Input Voltage	AC100V(DC130V)									
Input Range	AC85-132V(DC110-175V)									
Input Frequency	50/60Hz									
Input Frequency Range	47-440Hz									
Phase	Single									
Inrush Current *1	30A(maximum)at AC100V									
Efficiency [%] (typical) *2	80		79		80		78		81	
Output Characteristic										
Output Voltage [V]	24	5	12	12	15	15	12	5	24	12
Output Current [A]	1.1(Peak1.4)	3.0	2.0(Peak2.6)	1.3	1.7	1.0	2.0(Peak2.6)	3.0	1.1(Peak1.4)	1.3
Voltage Adjust Range	+/-5% of Rated Output Voltage(at no load within the input range)									
Ripple and Noise [mVp-p](maximum) *3	290	100	170	170	200	200	170	100	290	170
Regulation										
a.Statistic Line Regulation [mV](maximum)	120	25	60	60	75	75	60	25	120	60
b.Statistic Load Regulation [mV](maximum)	240	50	120	120	150	150	120	50	240	120
c.Temperature Coefficient *4	0.03%/℃									
d.Drift[mV](maximum) *5	135	40	75	75	90	90	75	40	135	75
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	20mS(minimum) at 25℃ and rated input/output									
Functions										
Overcurrent Protection ≧110% of Rated Output Current[A]	Current Limiting with automatic recovery									
	≧Peak	3.3	≧Peak	1.43	1.87	1.1	≧Peak	3.3	≧Peak	1.43
Overvoltage Protection ≧115% of Rated Output Voltage[V]	Zener diode clamping									
	27.6	5.75	13.8	13.8	17.3	17.3	13.8	5.75	27.6	13.8
Remote Sense	not available									
Remote On/Off	not available									
Environmental										
Operating Temperature	-5 to +50℃ [enclosed type:-5 to 50℃ at vertical mount/-5 to 40℃ at horizontal mount]									
Operating Humidity	85%RH(non-condensing)									
Storage Temperature	-20 to +85℃									
Storage Humidity	85%RH(non-condensing)									
Withstanding Voltage	Primary-Secondary AC1,500V for 1minute									
	Primary-Frame Ground AC1,500V 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℃,rated input/output and rated input frequency									
? Line conducted noise	Built to meet FCC Part15-B Class B									
? Safety										
? Weight (typical)	390g/enclosed type:440g									
? MTBF [H]	410,000									
? Switching Frequency[kHz](typical) *7	35	30	35	30	35	25	35	30	35	30

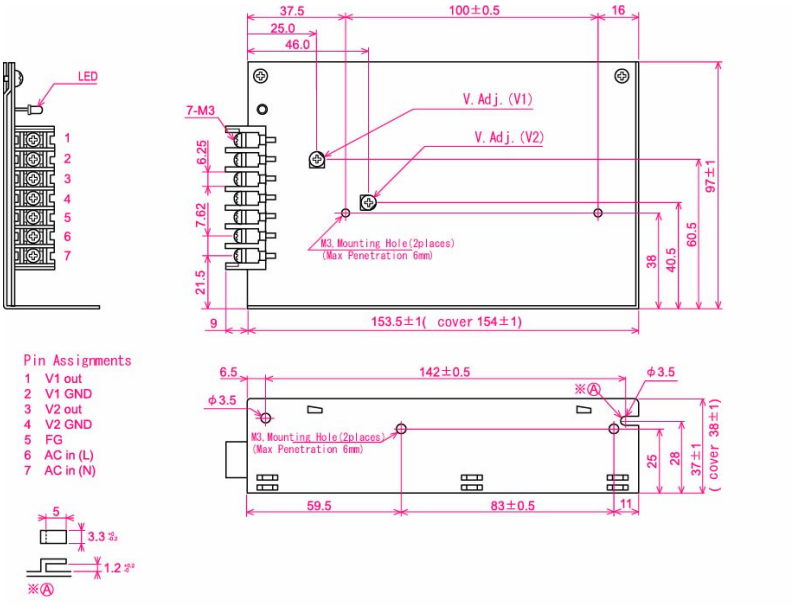
Conditions:
*1 at cold start
*2 at DC130V input and rated output
*3 measured by a bayonet probe at output connector at 0 to 100MHz bandwidth
*4 at -5 to +50℃/enclosed type: at -5 to +40℃
*5 for 7hour period after 1hour warm-up at 25℃ and rated input/output
*6 when output current changed from 25% to 75% of rated output current rapidly at AC100V input
*7 variable on input voltage and load conditions

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Block Diagram



Dimension Diagram



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