



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

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.

Specifications<AC/DC>	Model									
	ERT**HWB 40WATTS/2OUTPUTS									
	ERT21HWB		ERT22HWB		ERT23HWB		ERT24HWB		ERT25HWB	
Input Voltage	AC200V(DC260V)									
Input Range	AC170-264V(DC220-350V)									
Input Frequency	50/60Hz									
Input Frequency Range	47-440Hz									
Phase	Single									
Inrush Current *1	30A(maximum)at AC200V									
Efficiency [%](typical) *2	80		80		82		78		81	
Output Characteristic										
Output Voltage [V]	24		5		12		12		15	
Output Current [A]	1.1(Peak1.4)		3.0		2.0(Peak2.6)		1.3		1.7	
Output Current [A]	3.0		2.0(Peak2.6)		1.3		1.7		1.0	
Output Current [A]	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	
Regulation										
a.Statistic Line Regulation [mV](maximum)	120		25		60		60		75	
b.Statistic Load Regulation [mV](maximum)	240		50		120		120		150	
c.Temperature Coefficient *4	0.03%/°C									
d.Drift[mV](maximum) *5	135		40		75		75		90	
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	20mS(minimum) at 25°C and rated input/output									
Functions										
Overcurrent Protection	≥ 110% of Rated Output									
Current[A]	Current Limiting with automatic recovery									
Current[A]	≥ Peak 3.3		≥ Peak 1.43		1.79		1.1		≥ Peak 3.3	
Overvoltage Protection	≥ 115% of Rated Output									
Voltage[V]	Zener diode clamping									
Voltage[V]	27.6		5.75		13.8		13.8		17.3	
Remote Sense	not available									
Remote On/Off	not available									
Environmental										
Operating Temperature	-5 to +50°C [enclosed type:-5 to 50°C at vertical mount/-5 to 40°C at horizontal mount]									
Operating Humidity	85% RH(non-condensing)									
Storage Temperature	-20 to +85°C									
Storage Humidity	85% RH(non-condensing)									
Withstanding Voltage	Primary-Secondary AC2,500V for 1minute									
Withstanding Voltage	Primary-Frame Ground AC2,500V for 1minute									
Withstanding Voltage	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	Built to meet FCC Part15-B Class B									
? Safety										
? Weight (typical)	390g/enclosed type:440g									
? MTBF [H]	420,000									
? Switching Frequency[kHz](typical) *7	35		25		40		30		40	
? Switching Frequency[kHz](typical) *7	40		30		40		30		40	
? Switching Frequency[kHz](typical) *7	40		25		30		40		30	

Conditions:

- *1 at cold start
- *2 at DC260V input and rated output
- *3 measured by a bayonet probe at output connector at 0 to 100MHz bandwidth
- *4 at -5 to +50°C/enclosed type: at -5 to +40°C
- *5 for 7hour period after 1hour warm-up at 25°C and rated input/output
- *6 when output current changed from 25% to 75% of rated output current rapidly at AC200V input
- *7 variable on input voltage and load conditions


ETA-USA

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