

ERB-HWB SERIES

Features

1. Cost effective
2. High efficiency
3. No derating without cover and horizontal mounting
4. Over voltage protection



Options

- Case cover (add suffix "-P")
- "P" model dimension is same as "without cover" model

General Description

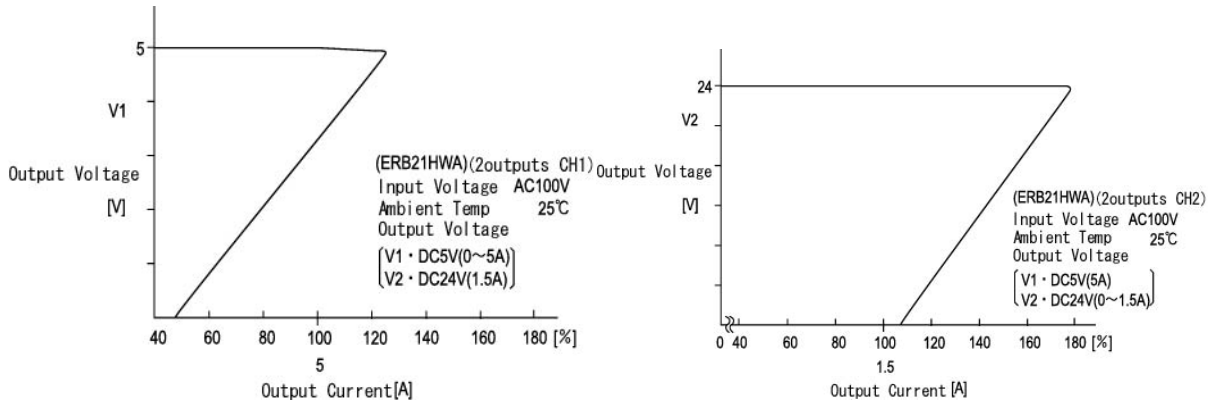
ER-series is an open frame, low cost switcher with high efficiency. 65 different models are available from low to medium power. Low power modules use a simple RCC circuit while higher power supplies employ a forward converter.

Specifications<AC/DC>	Model									
	ERB**HWB 60 WATTS/2OUTPUTS		ERB21HWB	ERB22HWB	ERB23HWB	ERB24HWB	ERB25HWB			
Input Voltage	AC200V(DC260V)									
Input Range	AC 170-264V(DC 220-350V)									
Input Frequency	50/60Hz									
Input Frequency Range	47-440Hz									
Phase	Single									
Inrush Current *1	30A(maximum)at AC200V									
Efficiency [%] (typical) *2	81		81		83		79		83	
Output Characteristic										
Output Voltage [V]	5	24	12	12	15	15	5	12	12	24
Output Current [A]	5.0	1.5(P2)	2.0	3.0(P4)	1.8	2.4	5.0	3.0(P4)	2.0	1.5(P2)
Voltage Adjust Range	+/-10% of Rated Output Voltage(at no load within the input range)									
Ripple and Noise [mVp-p](maximum) *3	100	290	170	170	200	200	100	170	170	290
Regulation										
a.Statistic Line Regulation [mV](maximum)	25	120	60	60	75	75	25	60	60	120
b.Statistic Load Regulation [mV](maximum)	50	240	120	120	150	150	50	120	120	240
c.Temperature Coefficient *4	0.03%/°C									
d.Drift[mV](maximum) *5	40	135	75	75	90	90	40	75	75	135
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	≥ 115% of Rated Output Current[A]		Current Limiting with automatic recovery							
Overvoltage Protection	≥ 115% of Rated Output Voltage[V]		Zener diode clamping							
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 1 minute Primary-Frame Ground AC2,500V for 1 minute Secondary-Frame Ground AC500V for 1 minute									
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)	370g/enclosed type:410g									
? MTBF [H]	410,000									
? Switching Frequency[kHz](typical) *7	40	60	45	55	45	60	40	60	40	55

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 on 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

OCP Curve



Dimension Diagram(mm)

