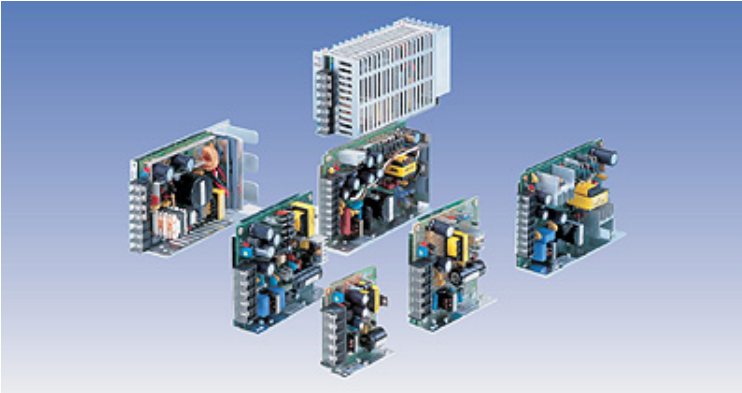


50 WATT AC-DC CONVERTER ERB-00B SERIES



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.

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

Specifications<AC/DC>	Model								
	ERB**B 50WATTS/3OUTPUTS			ERB01B	ERB03B	ERB04B			
Input Voltage	AC200V(DC260V)								
Input Range	AC 170-264V(DC220-350V)								
Input Frequency	50/60Hz								
Input Frequency Range	47-440Hz								
Phase	Single								
Inrush Current *1	30A(maximum)at AC200V								
Efficiency [%] (typical) *2	73			73	76				
Output Characteristic									
Output Voltage [V]	5	+12	-12	5	+12	-5	5	+15	-15
Output Current [A]	1-5	1.5(P2)	0.5	1-5	1.5(P2)	0.5	1-5	1.2	0.5
Voltage Adjust Range	V1:+3%/-0% of Rated Output Voltage(at no load within the input range) V2:fixed with tolerance of +/-3.5% (at no load within the input range)								
Ripple and Noise [mVp-p](maximum) *3	100	170	170	100	170	100	100	200	200
Regulation									
a.Statistic Line Regulation [mV](maximum)	25	60	60	25	60	25	25	75	75
b.Statistic Load Regulation [mV](maximum)	50	120	120	50	120	50	50	150	150
c.Temperature Coefficient *4	0.03%/°C								
d.Drift[mV](maximum) *5	40	75	75	40	75	40	40	90	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	≥ 120% of Rated Output Current[A]	urrent Limiting with automatic recovery V2,V3:by the regulator I.C's character							
Overvoltage Protection	≥ 115% of Rated Output Voltage[V]	V1:output shutdown(to reset,leave 30seconds after shut-off) V2:not available							
Remote Sense	Remote On/Off	not available							
Environmental									
Operating Temperature	b +50°C [enclosed type:-5 to 50°C at vertical mount/-5 to 40°C at horizontal mo								
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)	400g/enclosed type:450g								
? MTBF [H]	440,000								
? Switching Frequency[kHz](typical) *7	50								

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

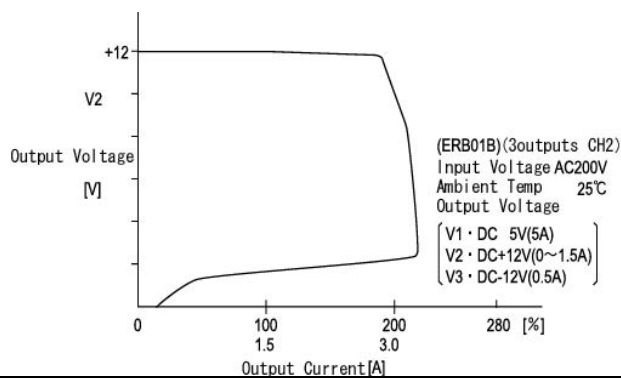
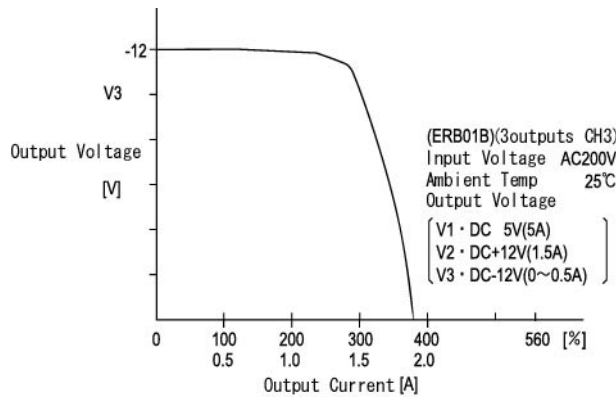
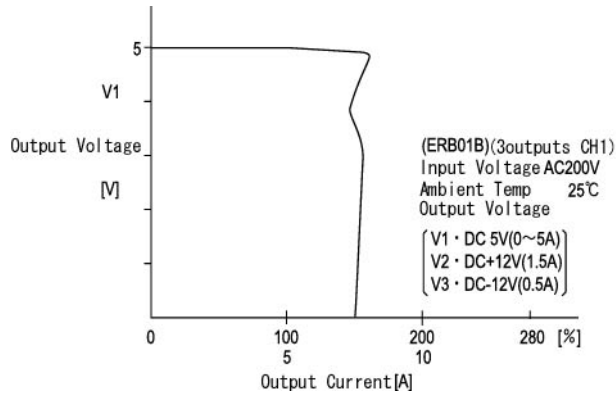
*4 at -5 to +50°C/enclosed type: at -5 to +40°C

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

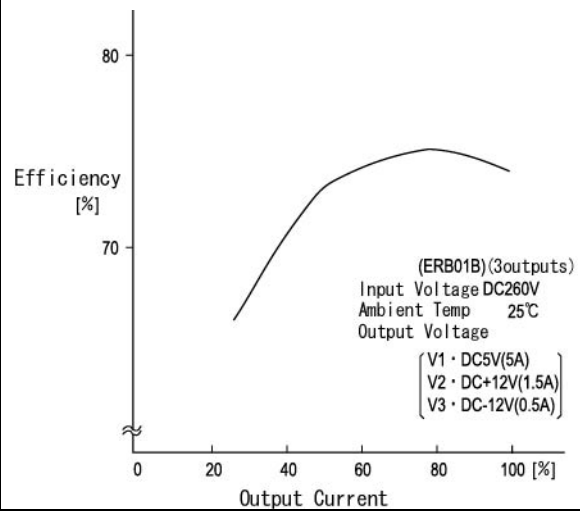
*6 when output current changed from 25% to 75% of rated output current rapidly at AC100V input

*7 variable on input voltage and load conditions

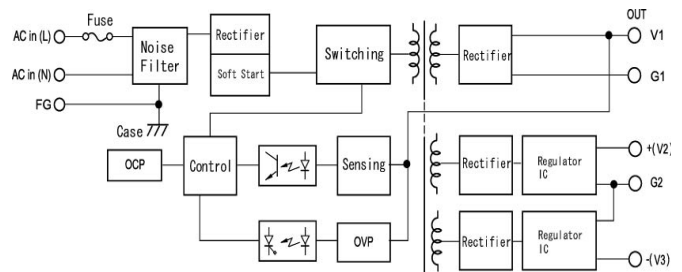
OCP Curve



Efficiency Curve



Block Diagram



Dimension Diagram

