

# 100 WATT AC-DC CONVERTER ERD-SB SERIES

Specifications <AC/DC>	Model				
ERD**SB 100WATTS/SINGLE	ERD05SB	ERD12SB	ERD15SB	ERD24SB	ERD48SB
<b>Input Characteristic</b>					
Input Voltage	AC200V(DC260V)				
Input Range	AC170-264V(DC220-350V)				
Input Frequency	50/60Hz				
Input Frequency Range	47-440Hz				
Phase	Single				
Inrush Current *1	20A(maximum)at AC200V				
Efficiency [%] (typical) *2	82	85	86	90	90
<b>Output Characteristic</b>					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	20.0	8.5	7.0	4.5	2.2
Voltage Adjust Range	+/- 10% of Rated Output Voltage(at no load within the input range)				
Ripple and Noise [mVp-p](maximum) *3	150	220	250	340	580
<b>Regulation</b>					
a.Statistic Line Regulation [mV](maximum)	40	96	120	192	384
b.Statistic Load Regulation [mV](maximum)	45	108	135	216	432
c.Temperature Coefficient *4	0.03%/°C				
d.Drift[mV](maximum) *5	40	75	90	135	255
e.Dynamic Load Regulation [mV](typical) *6	150	360	450	720	1440
f.Recovery Time *6	0.3mS(typical)				
Rise up time	200mS(maximum) at 25°C and rated input/output				
Hold up time	20mS(minimum) at 25°C and rated input/output				
<b>Functions</b>					
Overcurrent Protection	Current Limiting with automatic recovery				
Current[A]	21.0	8.93	7.35	4.73	2.31
Overvoltage Protection	output shutdown(to reset,leave 30seconds after shut-off)				
Voltage[V]	5.75	13.8	17.25	27.6	55.2
Remote Sense	available				
Remote On/Off	not available				
<b>Environmental</b>					
Operating Temperature	to +50°C [enclosed type:-10 to 50°C at vertical mount/-10 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 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 <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s <sup>2</sup>				
Cooling	Convection				
? Leakage Current	1mA(maximum) at 25°C ,rated input/output and rated input frequency				
? Line Conducted Noise	not specified				
? Safety					
? Weight (typical)	540g/enclosed type:580g				
? MTBF [H]	720,000				
? Switching Frequency[kHz](typical) *7	85				

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

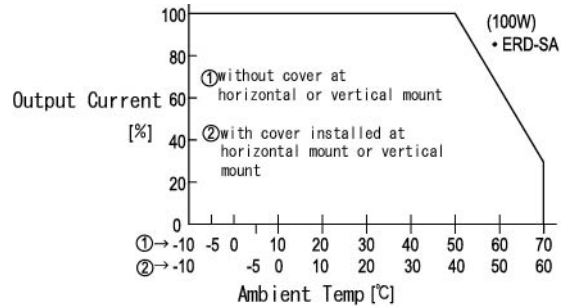
\*4 at -10 to +50°C/enclosed type: at -10 to 40°C

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

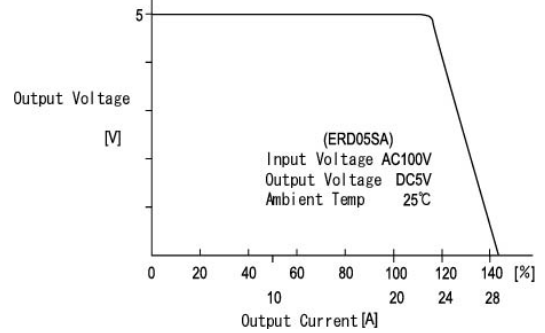
\*6 when output current changed from 25% to 75% of rated output current rapidly at AC200V input

\*7 variable on input voltage and load conditions

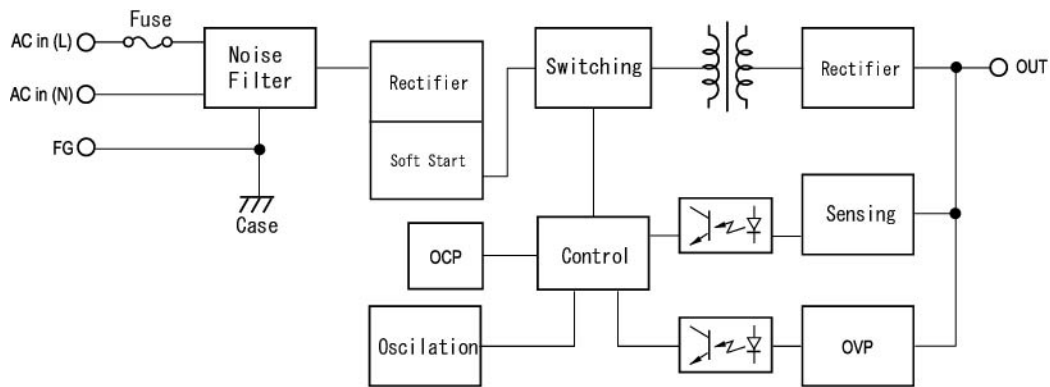
### Derating Curve



### OCP Curve



### Block Diagram



### Dimension Diagram(mm)

