

100 WATT AC-DC CONVERTER ERD-SA SERIES

Specifications <AC/DC>	Model				
ERD**SA 100WATTS/SINGLE	ERD05SA	ERD12SA	ERD15SA	ERD24SA	ERD48SA
Input Characteristic					
Input Voltage	AC 100V(DC 130V)				
Input Range	AC 85-132V(DC 110-175V)				
Input Frequency	50/60Hz				
Input Frequency Range	47-440Hz				
Phase	Single				
Inrush Current *1	20A(maximum)at AC 100V				
Efficiency [%] (typical) *2	82	85	86	88	90
Output Characteristic					
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
Regulation					
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				
Functions					
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				
Environmental					
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 AC 1,500V for 1minute Primary-Frame Ground AC 1,500V for 1minute Secondary-Frame Ground AC 500V for 1minute				
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ (minimum) by DC 500V 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	not specified				
? Safety					
? Weight (typical)	540g/enclosed type:580g				
? MTBF [H]	710,000				
? Switching Frequency[kHz](typical) *7	140				

Conditions:

*1 at cold start

*2 at DC 130V input and rated output

*3 measured by a bayonet probe at output connector at 0 to 100MHz bandwidth

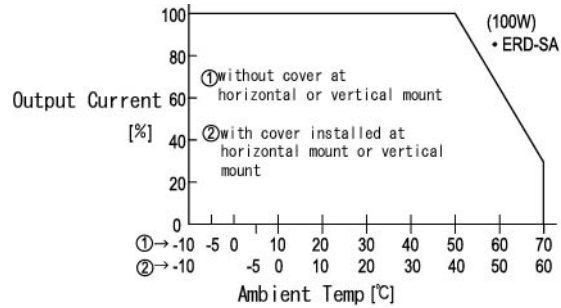
*4 at -10 to +50°C /enclosed type: at -10 to 40°C

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

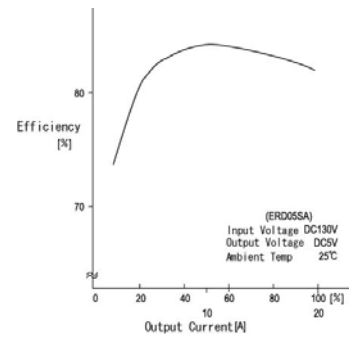
*6 when output current changed from 25% to 75% of rated output current rapidly at AC 100V input

*7 variable on input voltage and load conditions

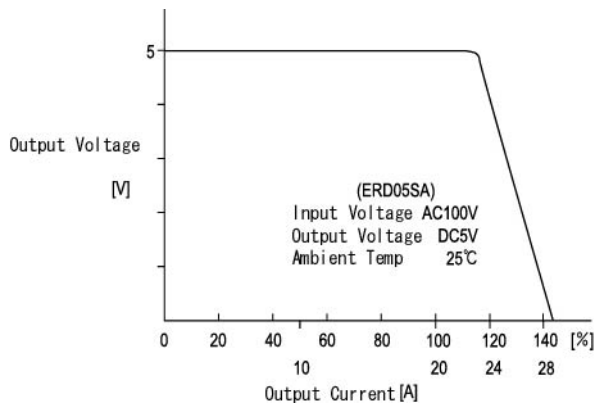
Derating Curve



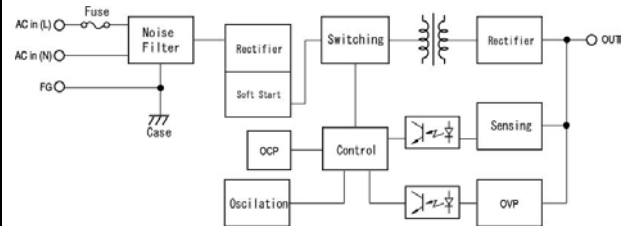
Efficiency Curve



OCP Curve



Block Diagram



Dimension Diagram(mm)

