

# 50 WATT AC-DC CONVERTER ERB-SB SERIES

| Specifications <AC/DC>                     | Model  |         |         |         |         |
|--|--|---------|---------|---------|---------|
|  | ERB05SB  | ERB12SB | ERB15SB | ERB24SB | ERB48SB |
| <b>ERB**SB<br/>50WATTS/SINGLE</b>          |  |         |         |         |         |
| <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                          | 30A(maximum)at AC200V  |         |         |         |         |
| Efficiency [%] (typical) *2                | 77   | 82      | 83      | 85      | 87      |
| <b>Output Characteristic</b>               |  |         |         |         |         |
| Output Voltage [V]                         | 5  | 12      | 15      | 24      | 48      |
| Output Current [A]                         | 10.0   | 4.2     | 3.4     | 2.1     | 1.0     |
| Voltage Adjust Range                       | - 10% of Rated Output Voltage(at no load within the input range)   |         |         |         |         |
| Ripple and Noise [mVp-p](maximum) *3       | 100  | 170     | 200     | 290     | 530     |
| <b>Regulation</b>                          |  |         |         |         |         |
| a.Statistic Line Regulation [mV](maximum)  | 25   | 60      | 75      | 120     | 240     |
| b.Statistic Load Regulation [mV](maximum)  | 50   | 120     | 150     | 240     | 480     |
| c.Temperature Coefficient *4               | 0.03%/°C   |         |         |         |         |
| d.Drift[mV](maximum) *5                    | 40   | 75      | 90      | 135     | 255     |
| 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   |         |         |         |         |
| <b>Functions</b>                           |  |         |         |         |         |
| Overcurrent Protection                     | ≥ 110% of Current Limiting with automatic recovery   |         |         |         |         |
| Rated Output Current[A]                    | 11.0   | 4.62    | 3.74    | 2.31    | 1.10    |
| Overvoltage Protection                     | ≥ 115% of output shutdown(to reset,leave 30seconds after shut-off)   |         |         |         |         |
| Rated Output Voltage[V]                    | 5.75   | 13.8    | 17.3    | 27.6    | 55.2    |
| Remote Sense                               | not available  |         |         |         |         |
| Remote On/Off                              | not available  |         |         |         |         |
| <b>Environmental</b>                       |  |         |         |         |         |
| Operating Temperature                      | enclosed type:-5 to 50°C at vertical mount/-5 to 40°C at horizontal  |         |         |         |         |
| 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<br>Primary-Frame Ground AC2,500V for 1minute<br>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:10.6m/s <sup>2</sup> 20minutes/period for 60minutes each along                              |         |         |         |         |
| 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                     | Built to meet FCC Part15-B Class B   |         |         |         |         |
| ? Safety                                   |  |         |         |         |         |
| ? Weight (typical)                         | 370g/enclosed type:410g  |         |         |         |         |
| ? MTBF [H]                                 | 570,000  |         |         |         |         |
| ? Switching Frequency[kHz](typical) *7     | 35   | 30      | 30      | 35      | 40      |

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

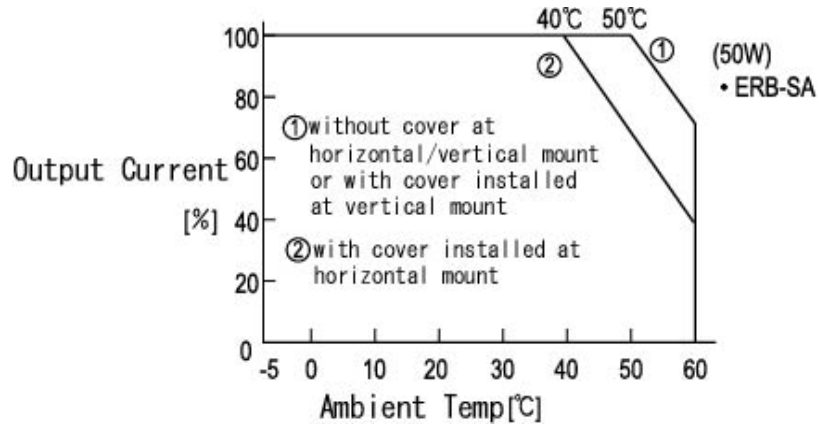
\*4 at -5 to +50°C/enclosed type: at -5 to 40°C

\*5 for 7hour 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



### Dimension Diagram(mm)

