



# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

AC/DC SWITCHING POWER SUPPLY  
AC INPUT 85~264V or DC120-350  
SINGLE CHANNEL OUTPUT  
60 WATTS

# NSB SERIES



### General Description

Dimensions:  
87W × 145L × 40H



### Application

Industrial

### Input

|                               |  |
|-------------------------------|--|
| <b>Input Voltage:</b>         | AC100-240V                                     |
| <b>Input Voltage Range:</b>   | AC85-264V, DC120~350                           |
| <b>Input Current:</b>         | 0.73-0.3 A                                     |
| <b>Frequency:</b>             | 50/60Hz  |
| <b>Input Frequency Range:</b> | 47-63Hz  |
| <b>Range:</b>                 | Single   |
| <b>Phase:</b>                 | 10A(typ.) at AC100V                            |
| <b>Inrush Current: *1</b>     | 24A(typ.) at AC240V                            |
| <br>                          |  |
| <b>Leakage Current:</b>       | 0.1/0.26[mA] (maximum) at AC100/240V at 50[Hz] |

### Features

1. Low ripple and noise
2. High efficiency 24V output
3. Remote control and power fail output
4. Overcurrent, overvoltage and overheating protection

### Options



ETA USA  
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037  
Phone: 1-800-ETA-POWER, (408) 778-2793 Fax: (408) 779-2753

Visit us at: [www.eta-usa.com](http://www.eta-usa.com)  
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)



# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

| Output Characteristic                | Unit | Models  |              |
|--------------------------------------|------|---|--------------|
|                                      |      | NSB05SX                                       | NSB24SX      |
| Output Voltage                       | Vdc  | 5   | 24           |
| Output Current                       | A    | 12  | 2.5          |
| Voltage Adjust Range                 | V    | ±10% of Rated Output Voltage (.9~1.1)         |              |
| Ripple & Noise(max)                  | mVpp | 50  | 80           |
| Rise time                            | mS   | 500mS(maximum) at 25°C and rated input/output |              |
| Hold up time                         | mS   | 30mS(minimum) at 25°C and AC100Vin            |              |
| <b>Regulation</b>                    |      |   |              |
| a. Line Regulation                   | mV   | 40  | 190          |
| b. Load Regulation                   | mV   | 45  | 216          |
| c. Temperature Coefficient           | °C   | 0.03% / (-10~71)°C                            |              |
| d. Drift(maximum)                    | mV   | 40  | 135          |
| e. Dynamic Load Regulation (typ.) *2 | mV   | +/-200  | +/-720       |
| f. Recovery Time *2                  | mS   | 20 mS(typ.)                                   |              |
| <b>Efficiency *1</b>                 | %    | <b>83/85</b>                                  | <b>84/86</b> |
| <b>Power Factor *1</b>               |      | <b>0.99/0.94</b>                              |              |



ETA USA

16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037  
Phone: 1-800-ETA-POWER, (408) 778-2793 Fax: (408) 779-2753

Visit us at: [www.eta-usa.com](http://www.eta-usa.com)  
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)



# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

| Environmental Specification |  |
|-----------------------------|--|
| Operating Temperature       | -10 to +71 °C  |
| Derating                    | -3.5% /°C (50°C up to 71°C)  |
| Operating Humidity          | 20~90 [%RH]  |
| Storage Temperature         | -20 to +85 °C  |
| Storage Humidity            | 20 to 90%/RH(non-condensing)   |
| Withstanding Voltage        | Primary-Secondary AC 3000V for 1minute<br>Primary-Frame Ground AC 2500V for 1minute<br>Secondary-Frame Ground AC 1000V for 1minute<br>Sensory current 10mA |
| Isolation Resistance        | Primary-Secondary-Frame Ground 100MΩ(minimum) by DC500V insulation tester  |
| Vibration                   | 5-10Hz:10mm double amplitude,10-55Hz:19.6[m/s <sup>2</sup> ]30 minute cycle along X,Y,Z axis(non-operating)  |
| Shock                       | 196m/s <sup>2</sup>  |
| Cooling                     | Convection   |
| Leakage Current             | 0.1/0.26[mA] (maximum) at AC100/240V at 50[Hz]   |
| Environmental Agencies      |  |
| Line Conducted Noise/EMI    | Built to meet the following standards:<br>FCC Part 15 Class B<br>EN55022 Class B (CISPR22-B)<br>VCCI Class B   |
| Line Harmonic Distortion    | Built to meet IEC61000-3-2   |
| Safety                      | Applying for UL: UL60950-1<br>C-UL: CSA60950-1 and EN60950-1   |
| Switching Frequency[kHz]    | 100 (typical)  |
| Function/Protection         |  |
| Over current Protection     | Built in   |
| Over voltage Protection     | Built in (latch type)  |
| Remote Sense                | Not available  |
| Remote Control              | Available  |
| Thermal Protection          | Built in   |
| Power Fail Detection        | Available  |
| Input Fuse                  | Built in (AC250[V] T3.15[A]H)  |
| Mechanical                  |  |
| Dimension [mm]              | 87W×145L×40H (output terminal not included)  |
| Weight [g] (typical)        | 430 (output terminal not included)   |

Conditions:

\*1 at Rated Input and Rated Output (AC100/240V)

\*2 at Output current quick change 25% to 75%



ETA USA

16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037

Phone: 1-800-ETA-POWER, (408) 778-2793 Fax: (408) 779-2753

Visit us at: [www.eta-usa.com](http://www.eta-usa.com)

email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)

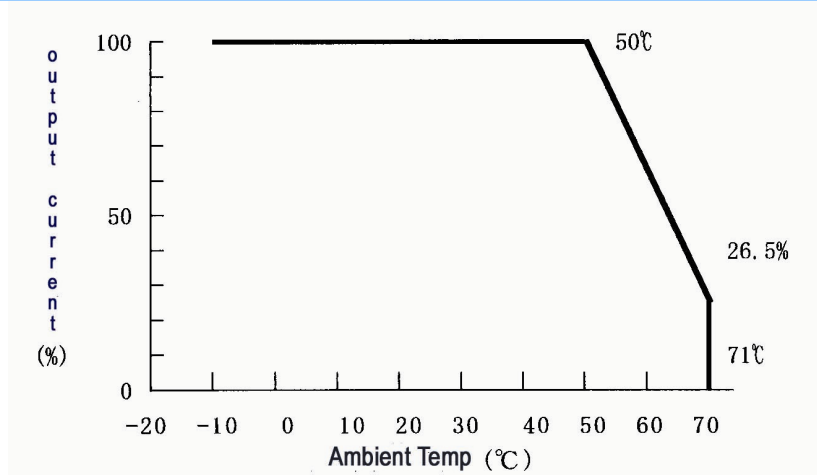




# ETA-USA

HIGH QUALITY SWITCHING POWER SUPPLIES

## DERATING CURVE



ETA USA

16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037  
Phone: 1-800-ETA-POWER, (408) 778-2793 Fax: (408) 779-2753

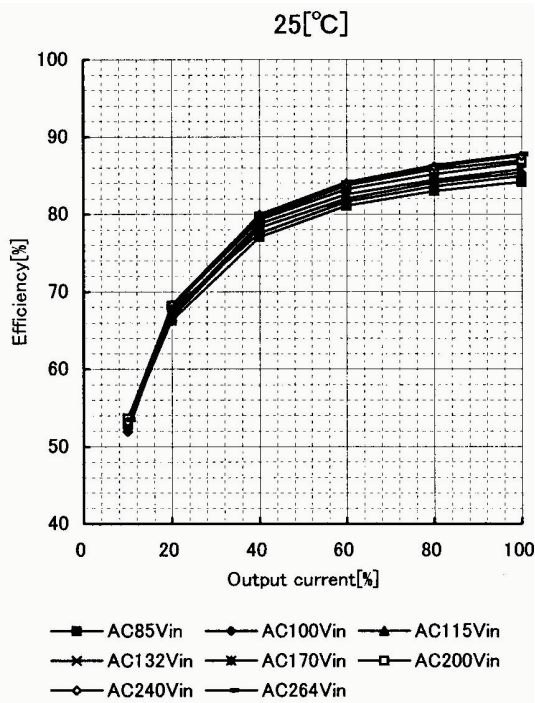
Visit us at: [www.eta-usa.com](http://www.eta-usa.com)  
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)



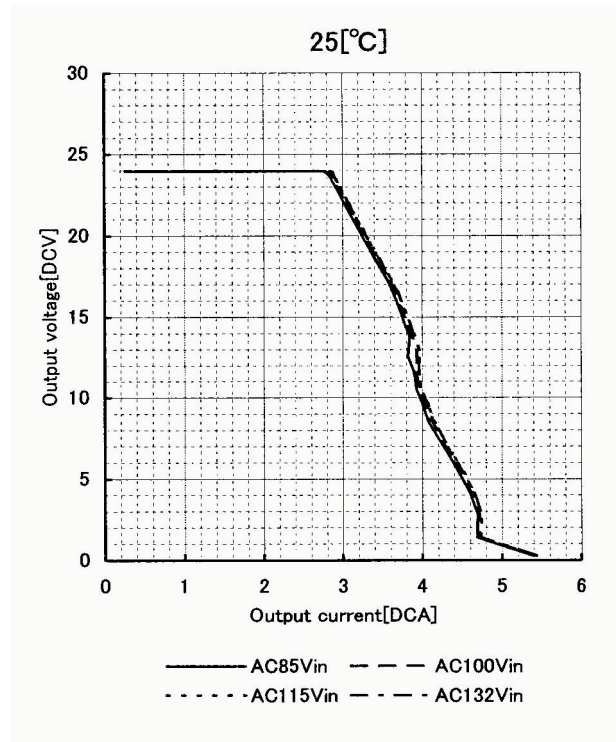
# ETA-USA

## HIGH QUALITY SWITCHING POWER SUPPLIES

### EFFICIENCY CURVE



### OCP CURVE



NSB24SX-U



ETA USA  
16170 Vineyard Blvd. Suite 180, Morgan Hill, CA 95037  
Phone: 1-800-ETA-POWER, (408) 778-2793 Fax: (408) 779-2753

Visit us at: [www.eta-usa.com](http://www.eta-usa.com)  
email at: [sales@eta-usa.com](mailto:sales@eta-usa.com)