

# PC Board Mountable Power Supplies

## DESCRIPTION

CALEX produces the highest quality, most dependable power supplies in the industry. These rugged units are reliable, cost effective power sources for use with a wide variety of operational amplifiers, function modules, and data conversion circuits. All units employ industry standard pin configurations for system upgrading by replacement of or substitution for supplies from other manufacturers.

All CALEX power supplies feature a 5 Year Warranty and are characterized by tight regulation, low noise, and outstanding stability. The short circuit protection features "foldback" current limiting, so all units can be shorted indefinitely without damage.

## COMMON SPECIFICATIONS

### Input Voltage

100  $\pm$ 10 VAC (add "-100" to model number)  
 115  $\pm$ 10 VAC (add "-115" to model number)  
 220  $\pm$ 20 VAC (add "-220" to model number)  
 230  $\pm$ 20 VAC (add "-230" to model number)  
 240  $\pm$ 20 VAC (add "-240" to model number)

## SELECTION CHART

| Output Voltage VDC   | Output Current mA | Voltage Accuracy | Line & Load Regulation Maximum | Noise & Ripple mV RMS | Case Size | Unit Weight (oz.) | Model Number |
|----------------------|-------------------|------------------|--------------------------------|-----------------------|-----------|-------------------|--------------|
| <b>Single Output</b> |                   |                  |                                |                       |           |                   |              |
| 5                    | 500               | $\pm$ 1.0%       | $\pm$ 0.10%                    | 1                     | B1        | 11.2              | 1.5.500      |
| 5                    | 1000              | $\pm$ 1.0%       | $\pm$ 0.10%                    | 1                     | B2        | 17.5              | 1.5.1000     |
| 5*                   | 1000              | $\pm$ 1.0%       | $\pm$ 0.10%                    | 1                     | B2        | 17.5              | 1.5.1000-DV  |
| 5**                  | 1000              | $\pm$ 1.0%       | $\pm$ 0.10%                    | 1                     | B2        | 17.5              | 7009         |
| 5                    | 2000              | $\pm$ 1.0%       | $\pm$ 0.20%                    | 2                     | B3        | 22.2              | 1.5.2000     |
| 5                    | 2000              | $\pm$ 1.0%       | $\pm$ 0.20%                    | 2                     | B3        | 22.2              | 1.5.2000-DV  |
| 9                    | 1000              | $\pm$ 0.5%       | $\pm$ 0.10%                    | 2                     | B3        | 22.2              | 1.9.1000     |
| 10                   | 750               | $\pm$ 1.0%       | $\pm$ 0.10%                    | 1                     | B3        | 22.2              | 1.10.750     |
| 12                   | 480               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B2        | 17.5              | 1.12.480     |
| 12                   | 480               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B2        | 17.5              | 1.12.480-DV  |
| 12                   | 750               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B3        | 22.2              | 1.12.750     |
| 15                   | 400               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B2        | 17.5              | 1.15.400     |
| 15                   | 600               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B3        | 22.2              | 1.15.600     |
| 18                   | 500               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B3        | 22.2              | 1.18.500     |
| 24                   | 375               | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B3        | 22.2              | 1.24.375     |
| <b>Dual Output</b>   |                   |                  |                                |                       |           |                   |              |
| $\pm$ 5              | $\pm$ 750         | $\pm$ 1.0%       | $\pm$ 0.10%                    | 1                     | B3        | 22.2              | 2.5.750      |
| $\pm$ 12             | $\pm$ 120         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B1        | 11.2              | 2.12.120     |
| $\pm$ 12             | $\pm$ 240         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B2        | 17.5              | 2.12.240     |
| $\pm$ 12*            | $\pm$ 240         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B2        | 17.5              | 2.12.240-DV  |
| $\pm$ 12             | $\pm$ 360         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B3        | 22.2              | 2.12.360     |
| $\pm$ 15             | $\pm$ 100         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B1        | 11.2              | 2.15.100     |
| $\pm$ 15             | $\pm$ 200         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B2        | 17.5              | 2.15.200     |
| $\pm$ 15*            | $\pm$ 200         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B2        | 17.5              | 2.15.200-DV  |
| $\pm$ 15 **          | $\pm$ 200         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 1                     | B2        | 17.5              | 7010         |
| $\pm$ 15             | $\pm$ 350         | $\pm$ 0.5%       | $\pm$ 0.04%                    | 2                     | B3        | 22.2              | 2.15.350     |
| <b>Triple Output</b> |                   |                  |                                |                       |           |                   |              |
| $\pm$ 12 & 5         | $\pm$ 100<br>600  | $\pm$ 1.0%       | $\pm$ 0.10%***                 | 2                     | B2        | 17.5              | 3.12.5       |
| $\pm$ 15 & 5         | $\pm$ 100<br>500  | $\pm$ 1.0%       | $\pm$ 0.10%                    | 2                     | B2        | 17.5              | 3.15.5       |
| $\pm$ 12 & 5         | $\pm$ 125<br>1000 | $\pm$ 1.0%       | $\pm$ 0.20%                    | 2                     | B3        | 22.2              | 3.12.1000    |
| $\pm$ 15 & 5         | $\pm$ 100<br>1000 | $\pm$ 1.0%       | $\pm$ 0.20%                    | 2                     | B3        | 22.2              | 3.15.1000    |

\*Dual AC Input 115/230 VAC

\*\*Recognized to UL 544 (Available in 115 VAC only).

\*\*\*The +5V output load regulation in the 3.12.5-100 and 3.12.5-115 models is 0.20%

STCO #970624-1, STCO #990908-1

D-204

# PC Board Mountable Power Supplies

## Specifications

All parameters measured at 25 C, nominal input voltage and full rated load unless otherwise noted.

| All Models                    |                         |                           | Unit   |
|-------------------------------|-------------------------|---------------------------|--------|
| Input Frequency Range         | TYP                     | 50 to 60                  | Hz     |
| Short Circuit Protection      | TYP                     | Foldback Current Limiting |        |
| <b>Isolation</b>              |                         |                           |        |
| Isolation Resistance          | MIN                     | 50                        | megohm |
| Isolation Voltage *           | MIN                     | 1200 - 1500               | VRMS   |
| Input to Output Capacitance * | TYP                     | 50 - 250                  | pF     |
| <b>Environmental</b>          |                         |                           |        |
| Case Operating Range          | MIN                     | -25                       | °C     |
| No Derating                   | MAX                     | +50                       |        |
| Storage Range                 | MIN                     | -25                       | °C     |
|                               | MAX                     | +85                       |        |
| Temperature Coefficient       | TYP                     | ±0.01                     | %/°C   |
| Case                          | B1, B2, & B3            |                           |        |
| Mounting Kits                 | MK215-022 & MK215-08BDV |                           |        |

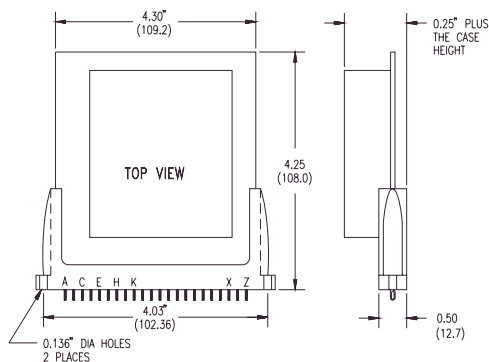
\* Contact CALEX for information on exact model, call  
(800) 542-3355 or (925) 687-4411

Single 5 Volt output models have output overvoltage protection which operates between 5.8V and 6.85 Volts. Power must be removed to reset the clamp.

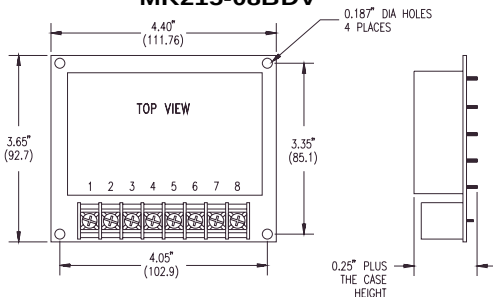
## Power Supply Mounting Kit Options

Two types of mounting kits are available for convenient installation of CALEX power supplies. The MK215-022 consists of a PC card with a 22-pin connector for use in racks. The alternative, our MK215-08BDV, employs a barrier strip type connector for chassis mount applications. Two screws hold the power supply firmly in place on the PC card without need of soldering.

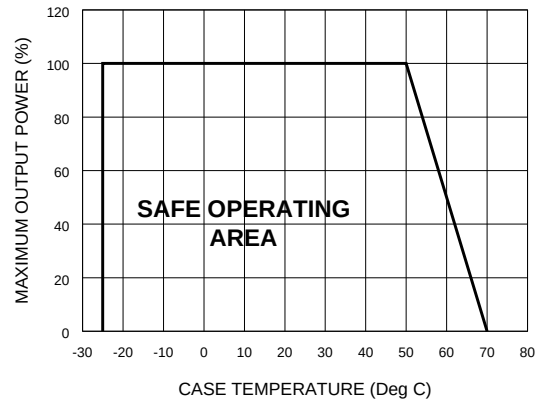
**MK215-022**



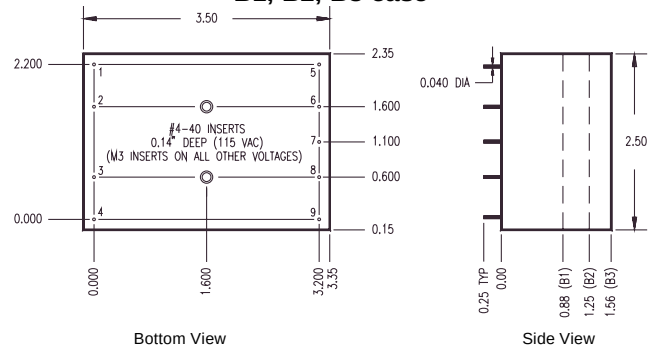
**MK215-08BDV**



**AC/DC POWER SUPPLY DERATING**



**B1, B2, B3 case**



"A" models have 2" spacing between AC pins. (e.g. 2.15.200A)

**Pin Assignments**

| Pin                       | Function                                                      |
|---------------------------|---------------------------------------------------------------|
| 9                         | +Output Voltage                                               |
| 5                         | -Output Voltage                                               |
| 7                         | Common                                                        |
| 5                         | On Single Output<br>Common is also connected to Pin 5         |
| 8                         | On Triple Units 5 V Output                                    |
| 6                         | On Triple Units 5 V Common<br>(Isolated from ± Common)        |
| 1 or 1A<br>4 or 4A        | AC Input 100, 115, 220, 230, 240 VAC<br>AC Input and DC Units |
| Jumper 2 & 3              | DV Units - 230 V                                              |
| Jumper 1 to 3<br>& 2 to 4 | DV Units - 115 V                                              |

Mechanical tolerances unless otherwise noted:

X.XX dimensions: 0.020 inches

X.XXX dimensions: 0.005 inches

**Case to Mounting Kit Connections**

| Case Pin | MK215-022 | MK215-08BDV |
|----------|-----------|-------------|
| 1, 1A    | X         | 2           |
| 2        | -         | -           |
| 3        | -         | -           |
| 4, 4A    | Z         | 1           |
| 5        | K         | 6           |
| 6        | H         | 5           |
| 7        | E         | 7           |
| 8        | C         | 4           |
| 9        | A         | 8           |

Pins not referenced are not inserted in the case.