

# Calex BPS5000 Triple Output Bench Top Power Supply

## Interconnectable Fixed Floating Outputs

The BPS5000 provides three fully stabilised and smoothed variable DC power sources. Maximum versatility is achieved by making each output isolated from the other so that they may be interconnected to provide plus and minus rails or added together for higher voltages.

Outputs are current limited. An internal diode protects against reverse connection. Further protection is provided by an internal thermal overload mechanism which decreases the output voltage on continued overload.

Indicator lights give an indication of excessive output current being drawn. An indicator light also gives identification of the mains power being on.

Outputs are terminated on 4mm terminals which double either as binding posts for wires or sockets for 4mm plugs.

A double-section bobbin transformer and careful layout internally ensures that the maximum mains/output isolation is achieved for greater safety.

### SPECIFICATION

#### Mains Input

240VAC ( $\pm 7.5\%$ ) 50/60Hz

#### Mains Fuse

1A, 20 x 5mm (located on back panel).

#### Output Voltage

Output 1: 12V  $\pm 0.2V$

Output 2: 12V  $\pm 0.2V$

Output 3: 5V  $\pm 0.2V$

(All outputs are isolated from one another).

#### Output Current

All outputs 1A max (for up to 4 hours) 0.75A continuous

#### Load Regulation

(0 to 1A) 1%

#### Line Regulation

(222V to 258V) 1%

#### Noise and Ripple

10mV rms

#### Overload Indication

Occurs at approximately 25% overload

#### Power On Indication

LED on front panel

#### Termination

For use with 4mm wander plugs or as a binding post for wire connection.

#### Ambient Temperature Range

0°C to 35°C

#### Storage Temperature Range

-10°C to 80°C

#### Dimensions (h x w x d)

110 x 165 x 175mm

#### Weight

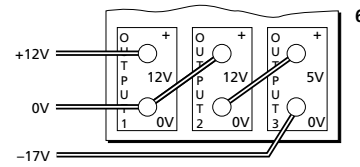
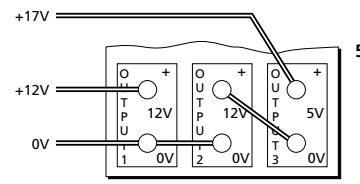
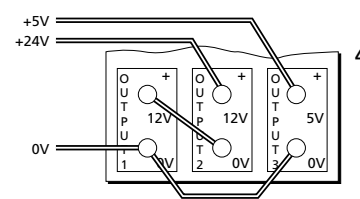
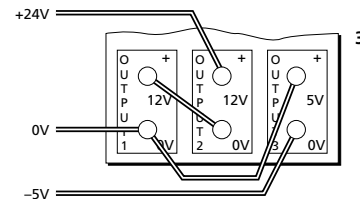
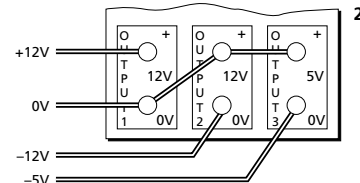
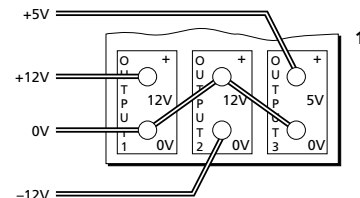
2.39kg

### MAINTENANCE

The BPS5000 does not contain any user-serviceable components.

In the event of difficulty, or apparent circuit malfunction, it is advisable to telephone the Quality Department or your local sales engineer or agent for advice before attempting repairs.

### EXAMPLES OF INTERCONNECTIONS FOR VARIOUS SUPPLY RAILS



# Bench Top AC/DC LINEAR POWER SUPPLIES



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# Calex BPS1000

## Multi-range/Multi-cell Ni-Cd Battery Charger

The BPS1000 constant current nickel cadmium battery charger is designed for quick charging, overnight charging or float (trickle) charging of a single cell or up to a maximum of 7 cells in series – as in a battery pack.

Selection of current is based around the standard range of commonly available cell sizes. The charger output is protected against short circuits and reverse connections and will not discharge cells if left connected with the power off.

### SPECIFICATION

#### Input Voltage Range

Nominal 240VAC @ 50 to 60Hz

#### Output Current Ranges

Off  
10mA  
60mA  
120mA  
240mA  
480mA

#### Output Current Tolerance

±10%

### CHARGING NICKEL CADMIUM CELLS

Cell Type	Nominal Capacity
PP3	110 mAh
N	150mAh
AAA	180mAh
1/2 AA	240mAh
AA	500mA
1/2 A	450mAh
PP9	1.2Ah
RR	1.4Ah
C (HP11)	2.0Ah
D (HP2)	4.0Ah
F	7.0Ah

Note: Capacities may vary slightly from manufacturer to manufacturer.

Charge and discharge rates of cells are expressed in multiples or sub-multiples of the 'C' rate where C is the rate at which a cell may be charged or discharged completely in one hour. Charging a fully discharged AA cell (500mAh) at the 'C' rate (in this case 500mA) should take one hour. Charging the same cell at the 2C rate (1A) should take 1/2-hour and charging at the 0.5C rate (250mA) should take 2-hours etc.

Care should be exercised when charging cells at rates higher than the C/4 rate as continuous over-charging at these rates tends to damage cells. The higher the charge rate the more likely a cell is to be damaged by overcharge.

At charge rates less than the C/4 rate many cells may be overcharged without damage. At the C/8 rate and lower, cells may be left charging indefinitely.

# Calex BPS1510 Bench Top Power Supply 0 to 15VDC, 1A

# Calex BPS3005 Bench Top Power Supply 0 to 30VDC, 0.5A

The BPS1510 and BPS3005 provide a fully stabilised and smooth variable DC power source. The voltage can be adjusted by rotating a graduated control on the front panel.

The output is short circuit and reverse connection protected. Additional protection is provided by current limiting and an internal thermal shut-down mechanism.

A 20mm x 5mm mains fuse accessible from the rear panel provides further protection

### SPECIFICATION

#### Mains Input

240VAC (±7.5%) 50Hz via 1 metre 3-core cable, on/off switch and 20mm x 5mm mains fuse rated 0.5A

#### Power-On Indication

LED on front panel

#### DC Output

0 to 15V (BPS1510) or 0 to 30V (BPS3005) adjustable by front panel control.

Maximum current 1A (0.5A for BPS3005)

Internal current limiting at approximately 1.5A

#### Load Regulation

Typically 0.5%

#### Ripple and Noise

Typically 5mV rms

#### Ambient Temp Range

0°C to 35°C

#### Storage Temp Range

-10°C to 80°C

#### Termination

For use with 4mm wander plugs or as a binding post for wire connection.

#### Dimensions (h x w x d)

76 x 160 x 138mm

#### Weight

1.5kg

# Calex BPS4000 Triple Output Bench Top Power Supply

## 4 to 6VDC, 12 to 15VDC and -12 to -15 VDC

The BPS4000 provides three fully stabilised and smoothed variable DC power sources.

The voltages can be adjusted by rotating graduated controls on the front panel. All three outputs are short circuit and reverse connection protected. Additional protection is provided by current limiting and an internal thermal shut-down mechanism.

A 20mm x 5mm mains fuse accessible from the rear panel provides further protection

### SPECIFICATION

#### Mains Input

240VAC (±7.5%) 50Hz via 1 metre 3-core cable, on/off switch and 20mm x 5mm mains fuse rated 0.5A

#### Power-on Indication

LED on front panel

#### DC Output 1

4 to 6V, adjustable by front panel control. Maximum current 0.5A. On this output the indicated area on the front panel is for T.T.L. applications and provides a reminder of the voltage range (4.75 to 5.25)

#### DC Outputs 2 & 3

+12 to 15V and -12 to 15V. The two outputs share a common 0V, are adjusted simultaneously by a single front panel control and are isolated from output. 1. Maximum current 0.5A.

### OPERATING INSTRUCTIONS

The AC input to the unit is via a three core mains lead to which a suitable plug must be attached. Fit a 3A mains fuse

Note these units must be earthed via the mains input, yellow/green lead. Do not obstruct the ventilation holes in the unit case.

### DC OUTPUT

The variable DC output voltage is available by connecting suitable leads to the red and black screw terminals situated on the front panel. The output voltage is adjustable over the range indicated by turning the control knob.

#### Protection

All 3 outputs have an internal current limit of approximately 1A for overload protection.

#### Load Regulation

Typically 0.5% (all outputs)

#### Ripple and Noise

Typically 5mV rms (all outputs)

#### Termination

For use with 4mm wander plugs or as a binding post for wire connection.

#### Dimensions (h x w x d)

76 x 160 x 138mm

#### Weight

1.5kg

### OPERATING INSTRUCTIONS

The AC input to the unit is via a three core mains lead to which a suitable plug must be attached. Fit a 3A mains fuse

Note these units must be earthed via the mains input yellow/green lead. Do not obstruct the ventilation holes in the unit case.

### DC OUTPUTS

The variable DC output voltages are available by connecting suitable leads to the red and black screw terminals situated on the front panel. The output voltages are adjustable over the range indicated by turning the control knobs.