

## Model PCS-2B Current Calibrator

- 10 Amp AC/DC
- 5 Ranges
- Input Voltage: 0V to  $\pm 11$ Vdc or 0V to 11Vac (rms)
- AC Bandwidth: 40Hz to 1kHz
- Accuracy: DC,  $\pm(0.01\%$  of setting + 0.01% of range + 10 $\mu$ A)
- Stability: DC, 0.001% of range; AC, 0.005% of range
- GPIB Remote Controlled



### GENERAL DESCRIPTION

The Model PCS-2/B is a current-to-voltage calibrator or transconductance amplifier. The current output is directly proportional to the input voltages from a high accuracy AC or DC voltage standard. The input voltage to the unit can be AC or DC up to 1kHz. The ratios of 10 volts to output is: 1:1, 1:0.1, 1:0.01, 1:0.001 and 1:0.0001. The PCS-2/B is laboratory calibrated with instruments and load resistors traceable to N.I.S.T. (National Institute of Standards & Technology). The unit is also equipped for rack mounting in a standard 19" rack.

Recommended for DC – Models 511 and 521

Recommended for AC – Models 4601, 4503 or 4032

For watt hour systems see System 4700

The PCS-2B may also be used with AC and DC voltage sources (calibrators) of other manufacturers.

### APPLICATIONS

Applications for the Model PCS-2B include: Direct Calibration of Watt Meters, Meter Shunts, AC and DC Current Meters, I to E Transducers, DVMS, DMMs, Relay Coil Current Testing.

### SPECIFICATIONS

#### INPUT

**Input Voltage:** 0V to  $\pm 11$ Vdc or 0V to 11Vac (rms).

**Input Impedance:** 10k ohms (all ranges).

**AC Bandwidth:** 40Hz to 1kHz.

### OUTPUT

Ranges	Resolution	Compliance Voltage	Load Reg. (%)	Distortion *(50Hz to 1kHz)
10A	10 $\mu$ A	1.5Vdc or peak ac	$\pm 0.015$	<0.5%
1A	1 $\mu$ A	5Vdc or peak ac	$\pm 0.015$	<0.1%
100mA	100nA	5Vdc or peak ac	$\pm 0.01$	<0.1%
10mA	10nA	5Vdc or peak ac	$\pm 0.01$	<0.1%
1mA	1nA	5Vdc or peak ac	$\pm 0.01$	<0.1%

\* Distortion: Added to the distortion of the AC voltage calibrator.

**Accuracy:** DC,  $\pm(0.01\%$  of setting + 0.01% of range + 10 $\mu$ A); AC,  $\pm(0.05\%$  of setting + 0.01% of range + 20 $\mu$ A).

**Line Regulation:**  $\pm 0.0005\%$  for  $\pm 10\%$  line change.

**Stability:** DC, 0.001% of range; AC, 0.005% of range.

**Isolation:** Floating output; limited only by the isolation of the driving voltage source. Ripple and Noise, rms, non-additive, in a band-pass 0.1Hz to 100kHz: 1mA range, 1.5 $\mu$ A; 10mA range, 3.0 $\mu$ A; 100mA range, 40 $\mu$ A; 1A range, 80 $\mu$ A; 10A range, 375 $\mu$ A.

**PROGRAMMING (IEEE-488.1)**

The 5 ranges are GPIB programmable as well as controlled locally with front panel controls. A dip-switch, located on the rear panel, is used to set the instruments bus address.

**GENERAL**

**Power Requirements:** 117Vac, 60Hz, 150 watts or 220Vac, 50Hz.

**Temperature Coefficient:** 10A and 1A ranges, 50ppm/°C; 100mA, 10mA and 1mA ranges, 10ppm/°C.

**Operating Temperature:** -10°C to 40°C.

**Dimensions:** 5.22" (12.25cm) high, 17" (43.18cm) wide, 15" (38.1cm) deep.

**Weight:** 30 lbs. (13.6kg) net; 34 lbs. (15.4kg) shipping.

**Protection:** A front panel lamp indicates when the compliance voltage has exceeded or when a malfunction has occurred.

**Certification:** Certificate of Compliance traceable to U.S. N.I.S.T.

**Warranty:** One full year, includes accuracy and stability.

**Extended 1 Year Warranty:** Part No. EWPCS2B.

**OPTIONAL ACCESSORIES**

**CAB-005:** Cable, Two Conductor Shielded Balance Line

**CAB-018:** Cable, Multi-stacking Double Banana plug

**CAB-023:** Cable Set, Low Thermal EMF Retractable Banana

**CAB-024:** Cable Set, Low Thermal EMF Spade Lug

For a watt-hour meter calibration system see the Model 4700.

Specifications are subject to change without notice.