

Model MK614SBR Modified Keithley 614 Electrometer

The Keithley Model 614 is a J-FET based electrometer capable of performing four functions: current, charge, resistance and voltage measurements. In its original form it is intended to satisfy a wide range of applications in component and circuit testing in research laboratories.

The engineering staff at CNMC Company, who are thoroughly familiar with the needs of practicing medical physics professionals, modify this electrometer to make it expressly suited for medical dosimetry applications.

The Model MK614SBR incorporates several features that the Keithley 35614 therapy dosimeter does not have. The significant features are the use of a static bias supply, the capability of reading the bias voltage directly from the display, modification of the display to read 4^{1/2} digits, and the addition of a second independent coulomb range (10 - 11 C).

Features:

- ▶ 150/300 volt electronic static bias supply with reversible polarity
- ▶ Bias voltage can be read on display
- ▶ Two independent coulomb scales - .19999 nC to 199.99 nC
- ▶ 20/240 VAC line operation with rechargeable battery
- ▶ Clearly marked controls for ease of use
- ▶ Complete QA checkout and calibration at CNMC

Range	Current		Charge	
	pA	nA	10 - 8	10 - 11
0.2	-----	-----	1.9999 nC	-----
2	-----	-----	19.999 nC	-----
20	19.999 pA	19.999 nA	199.99 nC	.19999 nC
200	199.99 pA	199.99 nA	-----	1.9999 nC
2K	1999.9 pA	1999.9 nA	-----	19.999 nC



Specifications

- Display: 4^{1/2} digit LED
 Range:
 Current: 0.001 pA to 1999.9 nA
 Charge, 10 - 11 scale: 0.01 pC to 19.999 nC
 Charge, 10 - 8 scale: 0.1 pC to 199.99 nC
 Leakage: <6 x 10⁻¹⁴ A
 Input: triaxial BNC, with dust cap & chain
 Bias: internal electronic static bias supply;
 -150 V, -300 V, OFF, +300 V, +150 V,
 selectable on back panel, voltage may be
 read directly on the display
 External bias: 5-way binding posts
 Output: analog, 2 V corresponds to full scale,
 5-way binding posts
 Power: line or battery operated, 105 - 125 VAC or
 210 - 250 VAC, switch selected, 50/60 Hz,
 or internal rechargeable battery,
 (10 hours between charges)
 Dimensions: 21.6 cm W x 12.7 cm H x 36 cm D
 (8.5 in x 5 in x 14 in)
 Weight: 3.5 kg (7.7 lbs)

