

Electrostatic Field Meter Set PFK-100

Data Sheet

Measure fields and voltage generation and balance ionizers

The PFK-100 set includes Prostat's unique PFM-711A dual range field meter, CPM-720A charged plate monitor assembly and PCS-730 charging source. With this instrument set you can measure electrostatic fields, analyze ionizer performance and assess the voltage generation of materials, equipment and personnel.

The battery operated PFM-711A Field Meter is a compact "electronic chopper" design with accuracy of ±2% at ambient conditions (23 °C and 30% Rh). It features automatic polarity, measurement "hold" button, low battery indicator, high and low ranges, distance ranging lights for accurate and repeatable measurements, manual zero control and a ground snap. With the supplied analog output cable, it can be used in conjunction with an X-Y plotter or any analog data-recording device.



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Specifications for the PFM-711A Electrostatic Field Meter

Overall Range	High Range 0 V to ±19.99 kV (at 1" distance): Least significant digit indicates volts at one inch (kV/in) in 10 Volt increments
	Low Range 0 V to ±1,999 V (at 1" distance): Least significant digit indicates volts at one inch (V/in) in 1 Volt invrements.
	Measures higher voltages at greater distances, e.g., at 2" double indicated voltage, at 4" multiply indicated voltage by four.
Instrument Tolerance	±5% from 0 V to 10 kV Tolerance at > 10 kV depends on conditions and handling Accuracy unaffected by the presence of air ionization. Note: Performance when mounted in laboratory fixture positionned 1 inch from a 6"x6" reference plate
Range Lights	Red "Bulls Eye" at 1" distance
Meter Display	3½ digit Liquid Crystal Display with 0.4" digit height. Automatic polarity, HOLD and LOW BATTERY indicators
Response	Digital display updates three (3) times per second. Analog Output Time Constant: Either Range 0.1 sec. Display Time Constants: High Range 0.2 sec. Low Range 2.0 sec.
Output	Analog signal output and 30" two conductor cable provided. ±10.0 kV meter reading equals ±1.0 Volt output
Controls	Three position slide switch: KV/INCH - OFF - V/INCH Sample/HOLD push button, and ZERO adjust knob
Grounding	Meter circuit grounded through the conductive case and 10 mm snap fastener mounted on back of case
Power	9 Volts alkaline battery. Battery life minimum 40 hours
Dimension (LxWxH)	2.4" x 4.2" x 0.9" (6.1 cm x 10.7 cm x 2.3cm) 1.3" deep with zero knob and snap fastener (3.3 cm)
Weight	5 oz with battery installed (142g)

Specifications for the CPM-720A Charge Plate Assembly		
Tolerance	Matches the PFM-711A Field Meter within 2% when calibrated together	
Capacitance	Plate Capacitance 10 picofarads (pF) ±1 pF Note: Plate capacitance is 15.8 pF when mounted to PFM-711A Filed Meter	
Range	0 to ±5.5 kV ±2% at 23 °C, 30% Rh.	
Grounding	Through conductive case and snap fastener of PFM-711A Field Meter.	
Dimension (LxWxH)	3.25" x 3.25" x 0.9" (8.25 cm x 8.25 cm x 2.3cm)	
Weight	8 oz (227g)	



Data Sheet (continued)

Specifications for the PCS-730 Charging Source 9 Volts Alkaline Battery. Input Power Battery life in excess of 40 hours continuous operation ±1,400 ±5% volts DC