Section D

SPECIFICATIONS

Input:	120V, 60 Hz, 25 VA max. (Cat. Nos. 230305, and 230405). 240V, 50/60 Hz, 40 VA max. (Cat. Nos. 230305-1, and 230405-1).
Output:	
Voltage	Calibrated 0 - 3000V (4000V) ac, adjustable, low side grounded, essentially sinusoidal.
Open-Circuit Voltage (maximum)	3300 V (Cat. Nos. 230305, 230305-1). 4300 V (Cat. Nos. 230405, 230405-1).
Short-Circuit Current	5 mA Maximum (approx. 6.2 mA on 50 Hz).
Capacitive Load	Maximum: 7500 pF at 3000V 10,000 pF at 1500V Resonance with internal inductance: at C = 3100 pF.
Test Voltage Control	Manual, by adjustable autotransformer with zero-start interlock.
Voltmeter	4-1/2" taut band, 0-3000V rms. Accuracy: 2% Full Scale, field adjustable.
Failure Detection	Two modes selectable by screwdriver-operated switch: Breakdown only: Failure signal produced by arcing. Leakage or Breakdown: Failure signal produced by arcing or by leakage current. Leakage trip level adjustable between approximately 0.3 mA and 4.2 mA.
Failure Interlock	Failure detection trips high voltage off and keeps it off until manually reset by turning voltage control to zero position. Models with "Reset" pushbutton may be reset without moving voltage control.

Section D (Continued)

SPECIFICATIONS

Indicators	
POWER Lamp	Indicates supply voltage is "ON".
CAUTION-HIGH VOLTAGE Lamp.	Indicates that high-voltage output is energized.
FAILURE Lamp	Indicates that a failure has occurred.
Audible Alarm	Audible signal sounds when FAILURE lamp is lit.
Power Switch	Two-pole, in 120-volt line.
Line Fuses	One 2.0 A AGC (Cat. Nos. 230305, 230405). Three 2.0 A AGC (Cat. Nos. 230305-1, 230405-1).
Input Power Cord	Attached, 8 ft. (2.4 meters), 3-wire, with molded plug, UL listed Type SJ.
Output Lead	Attached, 3 ft. (1 meter), red, field replaceable. Hand probe termination accepts bulldog clip (supplied) when desired. Assembly proof-tested to 15kV dc.
Ground Lead	Attached, 3 ft. (1 meter), black with insulated bulldog clip, field replaceable. Assembly proof-tested to 15 kV dc.
Construction	Molded flame-retardant case with carrying handle and removable hinged cover. Interior chassis grounded and exterior surfaces all insulation, tested to 15 kV.
Dimensions	9 x 7-1/2 x 7-1/2 inches high (23 x 19 x 19 cm).
Weight	10 lbs. (4.2 kg)

Section E

DESCRIPTION

GENERAL

The portable high-pot tester includes a variable high-voltage source, an adjustable leakage current level detector, a breakdown or flashover detector, and visual and audible failure indicators. The circuitry is simple and utilizes highly reliable passive components for long, trouble-free service.

The lid of the tester case is fitted with a covered compartment which holds the power cord, test leads, and instruction manual. Abbreviated operating instructions are given on the compartment cover.

To protect the operator from shock hazard, a unique triple protection is provided between the operator and the internal voltages of the test set. In addition to the normal insulation between conducting parts and metal frame, a second barrier of insulation surrounds all metal parts. The metal frame itself is grounded by the third wire of the supply cord, so that a shock hazard exists only if the ground fails and two layers of insulation break down. (The triple protection does not extend to the test leads).

The high-voltage transformer is of the high-reactance current limiting type. As the load current approaches the limiting value, the output voltage drops rapidly, until at short circuit (zero output voltage) a current of 4.2 mA is reached. This feature allows the output to be short-circuited without causing damage to the transformer or the equipment being tested. More important, it protects the user from shock hazard.

240V 50/60 Hz operation is enabled by adding an autotransformer to the basic set as shown in Figure 8.

CONTROLS AND CONNECTORS

The location of controls and connectors are illustrated in Figure 2. All knobs and other exposed hardware are fully insulated. The functions of the controls are described below.