Section D

SPECIFICATIONS

PHYSICAL CHARACTERISTICS

Dimensions: 8-3/8" D x 9" W x 8-1/8" H
(213 x 229 x 206mm)

Weight: 13.5 lbs. (6.1 kg)

ENVIRONMENTAL RECOMMENDATIONS

Operating Temperature: 25°F to 104°F (-4°C to 40°C)

Storage Temperature: -22°F to 131°F (-30°C to 55°C)

Humidity: Operation and storage limits 5 to 95% RH.

Climate: Operation prohibited in direct rain or snow.

INPUT

120 volts ±10%, 1A, 50/60 Hz single phase with ground (Cat. No. 230425). Connection to the Tester is made via a removable 7-1/2 ft. power cord, with a molded PVC grounding plug PH-290B (NEMA configuration 5-15P) on one end and a molded PVC grounding connector SPH-386 on the other.

240 volts ±10%, 0.5A, 50/60 Hz single phase with ground (Cat. No. 230425-1). Connection to the Tester is made via a removable 6-1/2 ft. power cord, with a molded PVC grounding plug PH-44 (NEMA configuration 6-15P) on one end and a molded PVC grounding connector SPH-386 on the other.

INPUT PROTECTION

2-pole, 1 Amp, 250V, rocker handle circuit breaker.

Section D

SPECIFICATIONS (Cont'd.)

OUTPUT

AC Mode:

0-4000 VAC, continuously adjustable.

Maximum short-circuit current: 12.6 mA (electronic limitation).

Maximum load at maximum voltage: 0.008 μF (60 Hz)
0.010 μF (50 Hz)

Maximum capacitive loads are proportionally higher at reduced output voltages. (See Figure 3 in Section G, Application Notes).

DC Mode:

0-5000 VDC, continuously adjustable.

Maximum current: 12.6 mA (electronic limitation).

Maximum ripple: 0.4% RMS per mA at full voltage (no capacitive load).

NOTE: Ripple will be greatly reduced with a capacitive load.

For complete loading capability, see Figure 4 in Section G, Application Notes.

METERING

Average reading, average calibrated.

Style: 3-1/2", zero left analog meter with high-torque, ruggedized movement.

Range: 0-5000V (NOTE: AC readings stop at 4 kV.)

Accuracy: ±2% Full Scale

Section D

SPECIFICATIONS (Cont'd.)

CONTROLS

Voltage Control

Voltage is controlled manually be means of an adjustable autotransformer with zero-start interlock.

Mode Selection

Four pushbuttons provide the following selections.

One-Second Test: Momentary actuation of the ONE SEC pushbutton turns on high voltage for a period of from 1 second (minimum) to 1.3 seconds (maximum) unless a failure occurs. This test is recommended for AC testing only, since DC testing usually involves a high initial charging current which may cause a failure signal. To begin initial testing, or after a failure, the RESET pushbutton must be actuated or the VOLTAGE CONTROL returned to the ZERO START (RESET) position. Once the Tester is reset, the One-Second Test can be repeated as many times as desired.

Continuous Test: Momentary actuation of the CONT pushbutton turns on high voltage until the HV OFF pushbutton is actuated or a failure occurs. Each time high voltage is turned off, or after a failure, the RESET pushbutton must be actuated or the VOLTAGE CONTROL returned to the ZERO START (RESET) position.

HV Off: Momentary actuation of the HV OFF pushbutton turns off high voltage.

Reset: Momentary actuation of the RESET pushbutton stops failure signals and allows further testing.

NOTE: The RESET pushbutton is also a zero-start override. When the output voltage has been preset and the HV OFF pushbutton has been depressed, high voltage can be turned on to the preset value by depressing the RESET button then the CONT or ONE SEC test pushbutton.

Section D

SPECIFICATIONS (Cont'd.)

Failure Detection and Automatic Shutdown

The failure detection circuit indicates a failure, by audible and visual alarms, and switches off high voltage within 50 ms whenever arcing occurs or the total leakage current exceeds a preset value. The leakage current trip level is adjustable between 0.3 mA ±5% to 12 mA ±5% by means of the LEAKAGE SENSITIVITY control knob.

INDICATORS

Tester Grounded:	Lights when the Tester is connected to a properly wired supply.
HV On:	Lights when the high-voltage output is energized.
Power:	Integral to power switch. Lights when power is available to the Tester.
Failure:	Lights when a breakdown occurs or an excessive leakage current is drawn by the item under test.
Audible Alarm:	Sounds when the failure lamp is lit.

ACCESSORIES

Catalog No. 230425-2:	Removable high-voltage test probe assembly, 4 feet long, with retractile test tips.

TEST CONNECTIONS

The item to be tested is connected by means of the alligator clips on the 4-ft. long removable high-voltage test probe assembly.

Section D

SPECIFICATIONS (Cont'd.)

TESTS PERFORMED

Tester Grounded

A low current (less than 0.5 mA, 120 V operation) line monitoring circuit is connected between the "HOT" side and the ground side of the incoming power line. This circuit lights a white neon lamp as soon as the Tester is connected to a correctly wired power supply. The grounded circuit of the Tester is interlocked with the dielectric voltage-withstand test so that high voltage cannot be applied if either of the following common faults exist:

a. Ground wire open.
b. "HOT" and "NEUTRAL" wires interchanged (120V operation).

Dielectric Voltage-Withstand

A high-voltage transformer supplies test voltage to two panel jack assemblies. A slide selects the desired panel jack assembly (either AC or DC) and automatically connects the proper metering circuit. A high-voltage test probe assembly plugs into the open panel jack assembly for output. A voltmeter indicates the test voltage. Visual and audible alarms signal when the total leakage current exceeds an adjustable preset value or when arcing occurs.