



AC SPARKER MODEL AVS-300-10VE

FOR TESTING JACKET THICKNESS OF ELECTRICAL CABLES DURING PRODUCTION

INPUT	120 V 60 Hz
OUTPUT	Adjustable 0-30 kV ac @ 10 mA
TRIP CURRENT	Adjustable 0.2-10 mA
METERING	One voltmeter 0-30 kV ac
SAFETY	Line-fault circuitry to ensure that sparker is grounded, one remote safety terminal (outlet & plug) and one 120 V terminal to light up a remote light to warn that high-voltage is on.
PLC CONNECTION	One remote terminal outlet to short 2 contacts at fault
SETTING CONTROLS	One switch for manual and automatic test, one timer adjustable 0.1-2 seconds to adjust automatic resetting after a fault occurs, one marked dial to adjust trip current from 0.2 to 10 mA and one dial to adjust output voltage from zero to 30 kV ac.
INDIDATORS	One fault light, one bell to go on for 2 seconds when fault occurs and one counter to indicate the number of faults that occurred.
OPERATING CONTROLS	One reset button, one high-voltage on button, one high-voltage off button, one fuse and one circuit-breaker.
LEADS	One high-voltage lead and one ground lead, both are 3 meters (9 ft.) long.
SIZE	53W x 34D x 32H cm (21W x 13.5D x 12.5H inches).
WEIGHT	20 kg (44 lb)

This High-Voltage Test Set is ideal for testing control panels, small transformers, small electrical motors, Switchgear, Cables and similar products.



HIGH-VOLTAGE TEST SET

MODEL AV/DV-150VA-100/5V

INPUT	120 V 60 Hz
OUTPUT	Adjustable 0-15 kV ac & dc @ <u>100 mA</u> ac & 5 mA dc
TRANSFORMER	Rated 1kVA @ ac output.
VOLTMETER	One Voltmeter 0-5/15 kV ac and one Voltmeter 0-5/15 kV dc Accuracy: $\pm 2\%$ of full scale
AMMETER	One Ammeter 0-100 mA ac and one Ammeter 0-5 mA dc Accuracy: $\pm 2\%$ of full scale
TRIP CURRENT	Adjustable from 10 to 100 mA ac and 3 to 5 mA dc.
INDICATORS	3 Lights (Power-on, high-voltage-on and fault)
CONTROL	One on/off switch, one fuse, two ac/dc meters-switches, one reset push-button, one high-voltage on push-button, one high-voltage off push-button, one high-voltage adjust knob, one safety interlock outlet c/w a plug to be connected to a limit switch if desired, one outlet c/w a plug to produce 120V for remote lamp to warn that high-voltage is on and a form C relay contacts to be used to turn warning lights or turn a machine on when high-voltage is on.
LEADS	One input line-cord, one ground lead and one high-voltage lead C/W clips. Each is 2 meters (6 ft) long. NOTE: There are two high-voltage outlets, one for testing with ac and one for testing with dc. Therefore, the high-voltage cable can be plugged to either ac output or dc output but not both outlets.
SIZE	51W x 46D x 41H cm (20W x 18D x 16H inches)
WEIGHT	55 kg (120 lb)

ELECTROMETER



ELECTROMETER MODEL E-45244 is a portable battery-operated high-voltage voltmeter with very high input impedance for measuring high-voltage with very low current (Electrostatics)

MODEL E-45244	SPECIFICATIONS
VOLTAGE RANGE	2 Ranges: Low Range $\pm 0-600$ V dc and High Range $\pm 0-3000$ V dc
INPUT IMPEDANCE	≥ 10 G Ω
OUTPUT DISPLAY	4-digit DPM (LCD)
ACCURACY	$\pm 0.3\%$ of full scale
BATTERY TEST	Push-Button a lamp lights if batteries are OK
TEST LEADS	Two test leads each is 2 meters long (6ft) c/w a clip
BATTERY LIFE	Approximately 300 hours
SIZE	22W x 23D x 9.5H cm (8.5W x 9D x 3.75H inches)
WEIGHT	1.4 kg (3lb)



CIRCUIT-BREAKER TEST SET

MODEL CBTS-5-2000-V3	SPECIFICATIONS
INPUT	240 V 60 Hz single-phase
OUTPUT	0-2000A @ 5V ac Compliance
DUTY CYCLE	0-1500A 30 minutes ON & 30 minutes OFF, 1500-2000A 1 minute ON & 2 minutes OFF, 2000-2500A 5 seconds ON & 5 minutes OFF.
VOLTMETER	0.5V ac Accuracy: $\pm 2\%$ of full scale
AMMETER	0-2500A ac Accuracy: $\pm 2\%$ of full scale
CHRONOMETER	One digital timer to measure elapsed time of test from 0.02-9999.99 seconds.
CONTROLS	One main input circuit-breaker, one overload circuit-breaker, test on push-button, test off push-button, timer reset push-button and output current adjust knob.
INDICATORS	Main power-on light, control power-on light and test-on light.
COOLING	One small cooling fan.
CONNECTION	One input line-cord c/w a plug 3 meters (10 ft) long and two large output copper bars.
SIZE	66W x 71D x 144H cm (26W x 28D x 57H inches) Mounted on casters for easy mobility.
WEIGHT	205 kg (450 lb)



AUTOMATIC SEQUENCING HEATER TEST SET MODEL HTS-5

INPUT VOLTAGE	120 V 60 Hz @ 3 A
TEST No. 1	Dielectric Strength Test Adjustable 0-3000 V ac.
TEST DURATION	One second
TRIP CURRENT	Adjustable 3 – 95 mA
TEST No. 2	Insulation Resistance Measurement 0 – 99 MΩ @ 500 V dc
RESISTANCE LIMIT	Resistance limit is set by a Thumbwheel switch 1 – 99 MΩ
TEST No. 3	Element resistance test set by a Thumbwheel switch 1 – 999.9Ω with Accuracy of ± 1% and Percent deviation setting of ± 15%
SEQUENCING	Test No. 1, Test No.2 and Test No. 3 are done automatically
SEQUENCE TIME	Total Time of a Sequence is approx. 3.5 seconds
INDICATORS	Ready light shows when Test Sequence can be started
INDICATORS	Lights indicate which Test is being done and fault on each test
INDICATORS	Accept and reject lights for complete test
METERS	H. V. Meter, Insulation resistance Meter and Element resistance Meter
CONTROL	Push-Button to start test, 3 switches (one for each test), power-on switch, fuse and High-Voltage adjust knob.
COUNTER	One counter, counts total number of tests
PROVISIONS	Remote start, remote reset and testing two elements alternately
SIZE	50 W x 46 D x 38 H cm (20 W x 18 D x 15 H inches)
WEIGHT	29 kg (64 lb)

INSULATION-SHEET TESTER MODEL AV-200V-40-03



Model AV-200V-40-03 is a high-voltage test set designed especially for measuring dielectric strength on insulation sheets according to ASTM standard # D 149. The test set includes a test cage and all necessary equipment to run the test. The test cage is equipped with a Plexiglas door so that the operation of the test may be observed.

SPECIFICATIONS

INPUT	120 V 60 Hz
OUTPUT	0-20 kV ac @ 40 mA Peak
RATE OF RISE	Adjustable by a front-panel control: 100, 200, 500, & 1000 Volts per second
TRIP CURRENT	2 ranges: 3.3 mA for output 0-2 kV and 10 mA for output 2-20 kV
METER	Digital voltmeter (memory type), reads to 19.9 kV ac. Accuracy: $\pm 2\%$ of full scale ± 2 digits
SAFETY	Safety interlock switch on the cage's door
SIZE	53W x 44D x 76H cm (21W x 17,5D x 30H in)
WEIGHT	50 kg (110 lb)

This HIGH VOLTAGE TEST SET is designed as a cable fault locator for underground cables. It is c/w a receiver which locates the faulty area of the cable.



RECEIVER



HIGH VOLTAGE TEST SET
MODEL DV-50-OHEPC
CABLE FAULT LOCATOR

INPUT	120 V 60 Hz
OUTPUT	Adjustable: 0-5000 V dc @ 115 mA with shorted output leads. In continuous mode.
PULSED MODE	Approx. one second on and one second off
VOLTMETER	0-5000 V dc Accuracy: $\pm 5\%$ of full scale
AMMETER	0-120 mA dc Accuracy: $\pm 5\%$ of full scale
INDICATORS LAMPS	Power-on, Continuous output, Pulsed output and a buzzer c/w a lamp to go on when ground rod is not dug in the ground to make ground contact
CONTROL	One input fuse, one input circuit-breaker, one voltage adjust knob and one switch for continuous or pulsed output
LEADS	One input line-cord, one ground lead and one high-voltage lead c/w clips
SIZE	58W x 48D x 33H cm (23W x 19D x 13H inches)
WEIGHT	25 kg (50 lb)



**VOLTMETER & AMMETER
MODEL MASTER**

VOLTAGE: Single-Range 0-3 kV ac
CURRENT: Dual-Range 0-10/100 mA ac
Accuracy: $\pm 1\%$ of full scale

RELAY TEST SET



Relay Test Set Model RT-2.4-A-B is used for testing relays and small circuit-breakers.

MODEL RT-2.4-A-B	SPECIFICATIONS
INPUT	240V 60 Hz
OUTPUT No. 1	Adjustable 0-10V ac @ 200A and 0-22V ac @ 100A (one output at a time) c/w one ammeter dual-range 0-20/200A
OUTPUT No. 2	0-120V ac @ 10A and 0-240V ac @ 5A (one output at a time) c/w one voltmeter and one ammeter
OUTPUT No. 3	0-150V dc @ 0.5A and 0-300V dc @ 0.25A (one output at a time) c/w one voltmeter and one ammeter
TIMER	One digital timer to measure elapsed time of test from 0.02 seconds to 9999.99 seconds
LEADS	Input and output leads 2 meters long are included
SIZE	Approximately 48D x 55W x 45H cm
WEIGHT	90 kg

CAPACITANCE BRIDGE



Model TCB-108 Capacitance Bridge is a general-purpose bridge for measurement of capacitors, capacitance of transformers and dielectric material. It comprises a transformer-type bridge operating from an internal 108 Hz generator (for accurate measurement at 60 Hz) with digital readout of capacitance from 1 pF to 99.999 μ F over four ranges, and digital readout of D (dissipation factor) in percentage from 0-50%. A shield terminal is provided to which a guard can be connected. A metered null detector is used consisting of solid-state amplifier, with a semi-logarithmic response for ease of setting and a readout on a panel meter. Two & three terminal measurements can be made, guard circuit provided.

SPECIFICATIONS

INPUT	120 V 60 Hz
TEST FREQUENCY	108 Hz
CAPACITANCE RANGE	1 pF to 99.999 μ F (in four ranges)
ACCURACY	≤ 100 pF ± 1 digit, 100-500 pF $\pm 1\%$, 500 pF to 1 μ F $\pm 0.5\%$ and ≥ 1 μ F $\pm 1\%$.
DISSIPATION FACTOR (D)	0-50% (at 108 Hz) (in 6 ranges)
NULL DETECTOR	Tuned; semi-logarithmic response
INTERNAL STANDARD	2 μ F
VOLTAGE APPLIED TO UNKNOWN	35 V to range X1, 3.5 V to range X10, 350 mV to range X100 and 35 mV to range X1000
PORTABILITY	C/W a carrying handle and a slip-hinge cover
SIZE	43W x 30D x 18H cm (17W x 12D x 7H in)
WEIGHT	10.5 kg (23 lb)

TRANSFORMER RATIOMETER MODEL TR-1C-01



Model TR-1C-01 Transformer Ratiometer is a precision test set with an easy-to-read in-line digital readout from 0.00001 to 1.00000, Suitable for testing all types of single and three-phase power distribution, potential and current transformers. Accuracy is $\pm 0.005\%$ and reproducibility is $\pm 0.002\%$, or better. Ideal for testing large oil filled transformers on monthly basis to determine whether there are any short winding-turns or some changes in the insulation due to deterioration in the oil inside the transformer. Also useful for transformer manufacturers because it can find an error of one turn in 10,000.

SPECIFICATIONS

INPUT	120 V 60 Hz
URNS RATIO FORMULA	$\% \text{ ratio} = (\text{low voltage} / \text{high voltage}) \times 100$
RATIO MEASURING RANGE	00.001% to 100.000%
TEST POTENTIALS	Ratio test-voltage is adjustable from zero to 120V ac up to 2A. Current Transformer ratio test is adjustable 0-36V ac up to 8A. for checking ratio and core-saturation.
ACCURACY OF RATIO	Ratio-measurement is $\pm 0.005\%$ of full scale
RESOLUTION	0.001%
REPRODUCIBILITY	$\pm 0.002\%$
TRANSFORMER POLARITY INDICATION	Forward or reversed – direct reading
PHASE-ANGLE REFERENCE Number (PARN) RANGE	2.5 lead to 2.5 lag
RESOLUTION OF PARN	0.05
METERS	One analog voltmeter 0-120 V ac, one analog ammeter 0-2/10 A ac Accuracy: $\pm 2\%$ of full scale and Null – bipolar DPM
SIZE	44W x 31D x 24H cm (17W x 12D x 9.5 in)
WEIGHT	18 kg (40 lb)