

VOLTMETERS/PHASING SETS

For Phase-To-Phase & Phase-To-Ground Measurements



DVM-80UVM



DVM-25T



MARK-V

DESCRIPTION

Our extensive line of voltmeters and phasing sets are designed to measure AC and DC voltages on conductors from phase-to-ground and phase-to-phase. These instruments also allow the user to determine if two conductors are in-phase or out-of-phase with one another. There are numerous models available with different ranges to assure the best possible range for easy readings. All models are designed for use on overhead lines and are adaptable for use on underground systems by using accessory probes.

Our analog line of voltmeters and phasing sets include the MARK® and EM series. Our digital line of voltmeters and phasing sets include the DigiVolt® series. All of the voltmeters and phasing sets feature universal splines for mounting onto hotsticks and easy-to-read displays.

BENEFITS

- Measure voltages from phase-to-ground and phase-to-phase up to 80kV
- Determine if two conductors are in-phase or out-of-phase
- Measure voltages and phase conductors on both overhead and underground systems
- Verify a conductor is de-energized prior to grounding
- Measure voltages in Metal Enclosed Switch Gear
- Determine whether a section of underground cable is faulted with the Cable Fault Tester (optional accessory)
- Discharge underground cables and other equipment that hold capacitive charges



HDE HD ELECTRIC COMPANY

1475 Lakeside Drive • Waukegan, Illinois 60085 U.S.A. • 847.473.4980
 fax 847.473.4981 • website: www.HDElectricCompany.com

analog

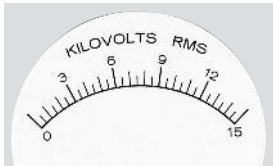
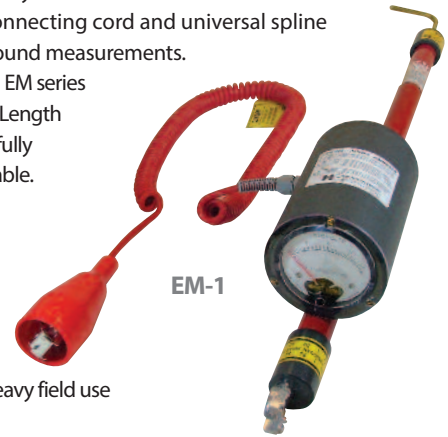
Voltmeters and Phasing Sets For Phase-To-Phase and Phase-To-Ground Measurements



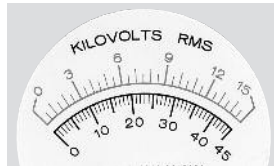
MARK® & EM ANALOG VOLTMETER FEATURES

There are three models of the EM series voltmeters and eleven models of the MARK series voltmeters and phasing sets. The EM series voltmeters are all single stick voltmeters with one resistive probe with universal spline and ground lead, for phase-to-ground measurements only. The MARK series voltmeters are all dual stick phasing voltmeters with connecting cord and universal spline for phase-to-phase and phase-to-ground measurements.

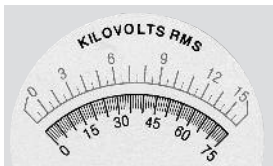
- Coil cord is standard on all MARK and EM series voltmeters. Coil cord is rated at 10kV. Length is 3.5' (1.7m) retracted and 12' (3.6m) fully extended. Optional lengths are available. Optional reel with straight cord available at no additional cost in lengths up to 22' (6.7m). Straight cord is rated at 15kV.
- Accuracy 3% of full scale
- Universal splines
- Rugged construction designed for heavy field use
- Overhead brass hook contact probes
- Large 3" (7.6 cm) meter face with a Lexan protective cover is specially designed for easy reading and increased accuracy. Multiple scales assist the user in avoiding misreads.
- Strain relief fittings at ends of cords reduce cable damage at point of highest stress
- High voltage resistors are encapsulated in epoxy in all resistor sticks, thereby limiting maximum current to approximately 1 milliamp at full rated voltage.
- Virtually maintenance free - no batteries required
- Measures DC through 1000Hz AC RMS



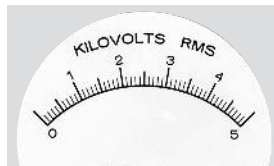
MARK-I-S



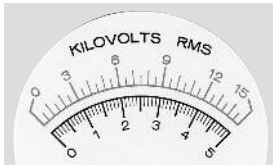
MARK-II-S



MARK-III-S



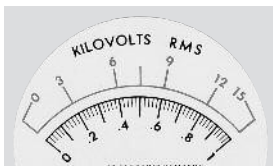
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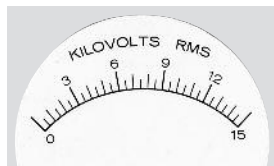
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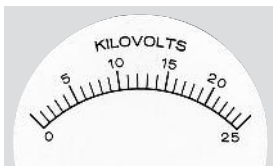
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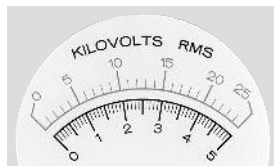
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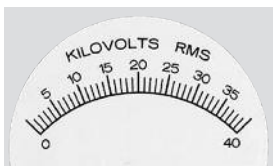
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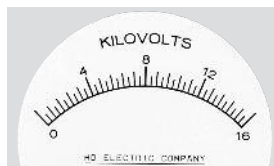
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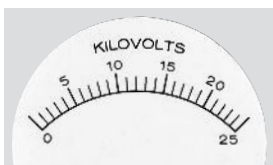
MARK-XI



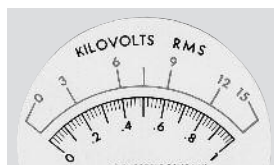
MARK-XII



EM-1



EM-2



EM-3

Model	Type of Unit	Range (kV)	Length w/Hook Probes	Unit Weight w/Hook Probes	Case (Included)
MARK-I-S	Dual Stick	0-15	23" (58 cm)	4.9 lbs. (2.2 kg)	CM-100/V
MARK-II-S	Dual Stick	0-15 / 0-45	32" (81 cm)	5.7 lbs. (2.6 kg)	CM-100/V
MARK-III-S	Dual Stick	0-15 / 0-75	23" (58 cm)	4.9 lbs. (2.2 kg)	CM-100/V
MARK-IV	Dual Stick	0-5	23" (58 cm)	4.9 lbs. (2.2 kg)	CM-100/V
MARK-V	Dual Stick	0-5 / 0-15	23" (58 cm)	4.9 lbs. (2.2 kg)	CM-100/V
MARK-VI	Dual Stick	0-5 / 0-15 / 0-45	23" (58 cm)	4.9 lbs. (2.2 kg)	CM-100/V
MARK-VII	Dual Stick	0-1 / 0-15	23" (58 cm)	4.9 lbs. (2.2 kg)	CM-100/V
MARK-VIII	Dual/Single Stick	0-15	26.5" (67 cm)	6.2 lbs. (2.8 kg)	CM-100/V
Convertible from Voltmeter (one stick w/ground cord) to Phaser (two stick) by simple plug and receptacle					
MARK-IX	Dual Stick	0-25	27" (69 cm)	5.2 lbs. (2.4 kg)	CM-100/V
MARK-XI	Dual Stick	0-5 / 0-25	27" (69 cm)	5.2 lbs. (2.4 kg)	CM-100/V
MARK-XII	Dual Stick	0-40	31" (79 cm)	5.7 lbs. (2.6 kg)	CM-100/V

• All MARK Voltmeter Models include (2) overhead hook probes and carrying case (CM-100/V). Hotsticks required for all voltmeter/phasing sets.

Model	Type of Unit	Range (kV)	Length w/Hook Probe	Unit Weight w/Hook Probe	Case (Optional)
EM-1	Single Stick	0-16	28" (71 cm)	3.7 lbs. (1.7 kg)	CM-100/V
EM-2	Single Stick	0-25	34" (86 cm)	4.0 lbs. (1.8 kg)	C-2
EM-3	Single Stick	0-1 / 0-15	30" (76 cm)	3.9 lbs. (1.8 kg)	CM-100/V

• All EM Voltmeter Models include (1) overhead hook probe. Carrying cases are optional. Hotstick required for all voltmeters.

digital

Voltmeters and Phasing Sets For Phase-To-Phase and Phase-To-Ground Measurements

DIGIVOLT® DIGITAL VOLTMETER FEATURES

There are four models of the DigiVolt series voltmeters and phasing sets. The DVM-25T is a compact, high accuracy single stick voltmeter with capacitive test point mode and ground lead. The DVM-25T measures voltages from 50V to 25kV and can be used in both overhead and underground applications.

The DVM-80 series are compact, high accuracy digital voltmeter and phasing instruments designed to measure voltages up to 40kV and up to 80kV when used with a pair of add-on resistors. The two-stick design can be used in both overhead and underground applications. The digital meter displays the true RMS voltage on the conductor.

The DVM-80/DVM-80T series voltmeter/phasers are compact, high accuracy dual stick voltmeter and phasing sets that measure voltages from 50V to 40kV and up to 80kV with a pair of optional add-on resistors. The DVM-80/DVM-80T series incorporates Phase Accurate Technology, which makes all voltage readings, whether made from line-to-line or line-to-ground, accurate and repeatable to within 1%. The two-stick design can be used in both overhead and underground applications. The DVM-80T also includes a capacitive test point mode feature.

The DVM-80UVM is a compact, high accuracy dual stick voltmeter and phasing set with capacitive test point mode and peak hold. The DVM-80UVM measures voltage from 5V to 40kV and up to 80kV with a pair of optional add-on resistors. The two-stick design can be used in both overhead and underground applications.

The DVM-80UVM is available in a Universal Voltmeter Kit. We have expanded the features of our DVM-80 voltmeter and packaged it with an assembly of accessories, offering it as a complete, ready-to-use DVM-80UVK Universal Voltmeter Kit that includes:

- pair of add-on resistors sticks
- pair of shotgun hotstick adapters
- pair of underground bushing probes
- soft-sided, multi-function carrying bag with built-in bucket hooks
- cable fault tester
- voltmeter proof tester



DVM-80



DVM-25T

SPECIFICATIONS

- Coil cord is standard on all digital voltmeters. Coil cord is rated at 10kV. Length is 3.5' (1.7 m) retracted and 12' (3.6 m) fully extended. Optional lengths are available.
- Optional reel with straight cord is available on some models, contact factory for details. Straight cord rated at 15kV.
- Accuracy – within 1% of reading +/- 3 counts
- Display – 0.4" (1.0cm) LCD display with decimal point and backlight
- Auto shut-off
- Overhead brass hook contact probes
- Universal splines
- Operating temperature range –13°F to +131°F (-25°C to +55°C)
- Strain relief fittings on cords reduce cable damage at point of highest stress
- High voltage resistors are encapsulated in epoxy in all resistor sticks, thereby limiting maximum current to approximately 1 milliamp at full rated voltage
- Low battery indicator
- Battery – one (1) field replaceable 9V lithium or alkaline battery
- Measures DC through 1000Hz AC RMS



DVM-80UVM

Model	Type of Unit	Range	Length w/Hook Probe(s)	Unit Weight w/Hook Probe(s)	Case (Included)	Peak Hold Mode	Capacitive Test Point Mode	RMS
DVM - 25T	Single Stick	50V-25kV	18" (46 cm)	2.0 lbs. (0.9 kg)	CS-DVM		X	X
DVM - 80UVM	Dual Stick	5V-80kV (w/add-on resistors)	18" (46cm)	2.7 lbs. (1.2 kg)	CS-DVM	X	X	X
DVM - 80	Dual Stick	50V-80kV (w/add-on resistors)	18" (46 cm)	2.7 lbs. (1.2 kg)	CS-DVM			X
DVM - 80T	Dual Stick	50V-80kV (w/add-on resistors)	18" (46 cm)	2.7 lbs. (1.2 kg)	CS-DVM		X	X

• All DVM Models include overhead hook probe(s) and carrying case. Hotsticks required for all voltmeters.

ACCESSORIES



DVM-80UVK

Optional Reel with Straight Cord

PT-5000B



Kits are available - Contact factory for details



GCP-1

OLPS-6

OLPS-5

ASP-15/25

ASP-35U

EA-15/25

CFT-35



CS-DVM

Extension Hotstick

CM-100/V Carrying Case

B-6 Carrying Bag

Optional Reel with Straight Cord

Available for analog voltmeters in lengths up to 22 feet, contact factory for details. Straight cord rated at 15kV.

Overhead Probes

- OLPS-5** Overhead Hook Brass Probe
Dimensions: 4.5" (11.4 cm) • Weight: 0.2 lbs. (0.09 kg)
- OLPS-6** Overhead Pigtail Brass Probe
Dimensions: 5.5" (14 cm) • Weight: 0.3 lbs. (0.14 kg)

Proof Tester[®] Voltmeter Tester

- PT-5000B** Test voltmeters/phasers prior to use.
9V battery operated. 5000V output
Dimensions: 5.75" x 3.5" x 1.5" (14.6 cm x 8.9 cm x 3.9 cm)
Weight: 0.9 lbs. (0.41 kg)

Insulated Underground Probe

- GCP-1** General Contact Underground Distribution Probe
Dimensions: 3" (7.6 cm) • Weight: 0.3 lbs. (0.14 kg)

Insulated Underground Bushing Probes

- ASP-15/25** 15kV & 25kV Class
Insulated UD Probe for Loadbreak Bushings
Dimensions: 9" (23 cm) • Weight: 0.9 lbs. (0.41 kg)
- ASP-35U** 35kV Insulated UD Probe for Loadbreak Bushings
Dimensions: 9.5" (24 cm) • Weight: 1.5 lbs. (0.68 kg)

Underground Loadbreak Elbow Probe

- EA-15/25** 15kV & 25kV Class UD Loadbreak Elbow Probe
Dimensions: 10" (25 cm) • Weight: 1.1 lbs. (0.50 kg)

Cable Fault Tester

- CFT-35** For use up to 35kV system voltages (20kV phase-to-ground)
Dimensions: 14" (36 cm) • Weight: 0.8 lbs. (0.36 kg)

Add-On Resistor Sticks

- R-45** Resistor stick for MARK-VI, pair required
Length: 16" (41 cm) Weight: 1 lb (0.45 kg)
- R-75** Resistor stick for MARK-III, pair required
Length: 27" (69 cm) Weight: 1.52 lbs (0.69 kg)
- R-80** Resistor stick for DVM-80 models, pair required
Length: 10.5" (27 cm) Weight: 0.74 lbs (0.34 kg)

Extension Hotsticks

- S-4H/** Extension hotsticks with universal spline, foam filled,
- S-6H** 1-1/4" diameter fiberglass. Lengths: 4' (1.2 m) / 6' (1.8m)
Weights: 2 lbs. (0.91 kg) / 3 lbs. (1.36kg)

Carrying Bags

- B-6** Vinyl carrying bag for 4' and 6' extension hotsticks
Dimensions: 77" x 15" (196 cm x 38 cm)
Weight: 2.4 lbs. (1.09 kg)
- B-7** Vinyl carrying bag Dimensions: 29" x 6" (75 cm x 15 cm)
Weight: 1.7 lbs. (0.77 kg)
- B-12** Soft-sided, multi-functional carrying bag with built-in bucket hooks
Dimensions: 23" x 13" x 5" (58 cm x 33 cm x 13 cm)
Weight: 3.2 lbs. (1.45 kg)

Telescopic hotstick carrying bags available – contact factory for details

Carrying Cases

- CM-100/V** Metal Case for all MARK analog voltmeters, EM-1 & EM-3
Dimensions: 30" x 8" x 9" (76 cm x 20 cm x 23 cm)
Weight: 12 lbs. (5.44 kg)
- CS-DVM** Plastic Case for DVM-25T and DVM-80 models
Dimensions: 20" x 10" x 10.5" (50 cm x 25 cm x 27 cm)
Weight: 7 lbs. (3.17 kg)
- C-2** Aluminum Case for EM-2
Dimensions: 42" x 8" x 5" (107 cm x 20 cm x 13 cm)
Weight: 7.1 lbs. (3.22 kg)
- C-5** Aluminum Case for all MARK analog voltmeters, EM-1 & EM-3
Dimensions: 29" x 8" x 5" (74 cm x 20 cm x 13 cm)
Weight: 5.3 lbs. (2.40 kg)

All sales are subject to the terms and conditions of the Limited Warranty and Limitation of Liability set forth in the product Instruction Manual and at www.HDElectricCompany.com.

Users must read and agree to the Limitation terms, as stated, before using the product.

HD Electric Company is committed to ongoing review and improvement of its product lines, and thus reserves the right to modify product design and specifications without notice.

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