

# Innovative products and solutions for electric power

Test, Measurement and Safety | Controls and System Monitoring





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# Helping you deliver electric power to your customers efficiently and safely

Thank you for your interest in HDE and our products. For over eighty years, HDE has provided products serving the needs of the electrical power and related industries worldwide. Our continuous improvement and innovation in the areas of controlling, testing and measuring of electric power has resulted in the development of leading edge products designed to help you provide electric power to your customers safely and efficiently.

Please take a moment to review this Short Form Product Catalog with an invitation to learn more about the products by visiting us at [HDElectricCompany.com](http://HDElectricCompany.com). HDE also publishes an expanded catalog in binder format that is available upon request. In addition, our fleet of mobile demonstrators continuously travel the country and HDE is present in virtually all major industry tradeshows and conferences. You are always able to get local support by contacting the sales representative in your area. Just check the **Rep Locator** on our website.

However you choose to contact us, know that it is our intention to provide you with best-in-class service, support and products.

Thank you again for your interest.





# Helping you deliver electric power to

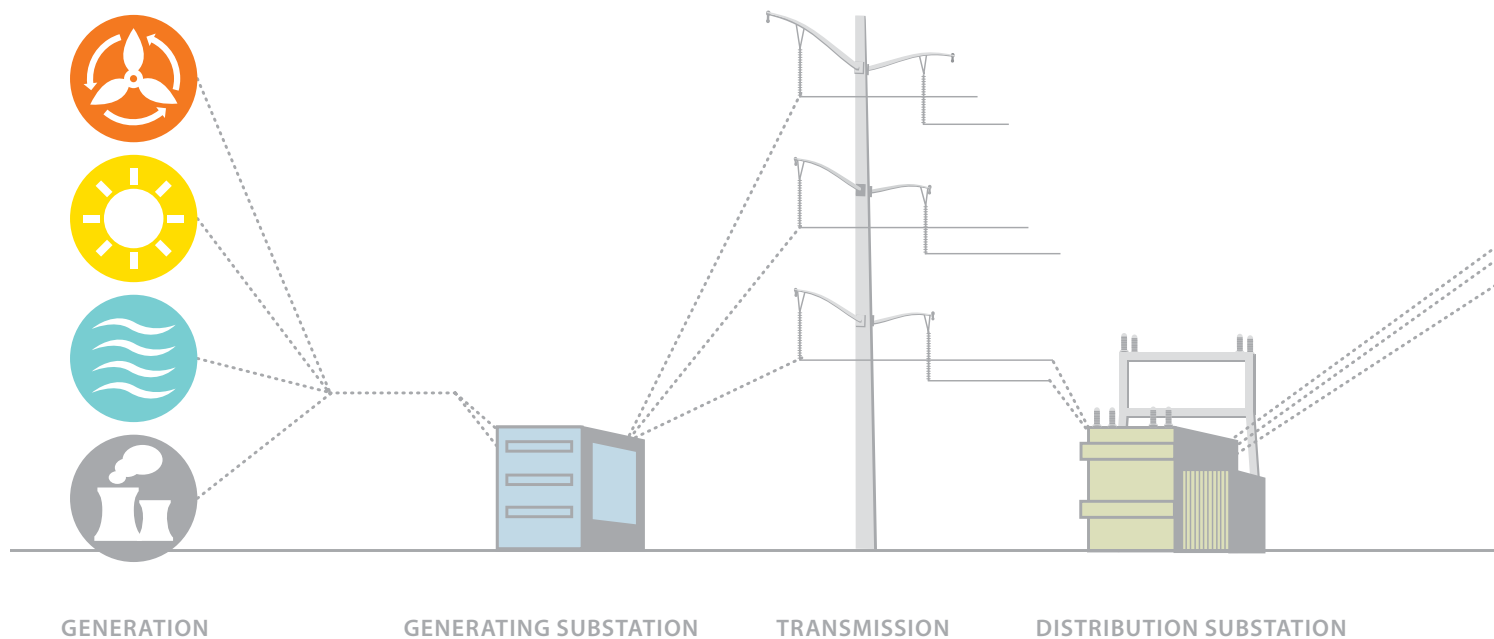
## Test, Measurement and Safety Products

HDE's state-of-the-art test, measurement and safety products provide safe, accurate and critical information about the electric power system and its associated equipment. All HDE products are built to "utility grade" standards and are designed to improve system reliability; expedite power restoration; and facilitate maintenance procedures safely in the field. HDE's products give you the confidence you need to ensure that electricity is flowing to your customers in a safe and efficient manner.

- Voltmeters and Phasing Sets
- Voltage Detectors
- Personal Voltage Detectors
- Insulator and Arrester/Leakage Testers
- Capacitor Testers
- Phase Identifiers
- Transformer and Capacitor Testers
- High Voltage Ammeters
- Additional Test Instruments
- Arc Analysis Software
- Custom Machining and Fabrication
- Utility Lighting Products
- Spot and Flood Lights
- Hard Hat Safety Lights



## Serving the Entire Electrical Power System

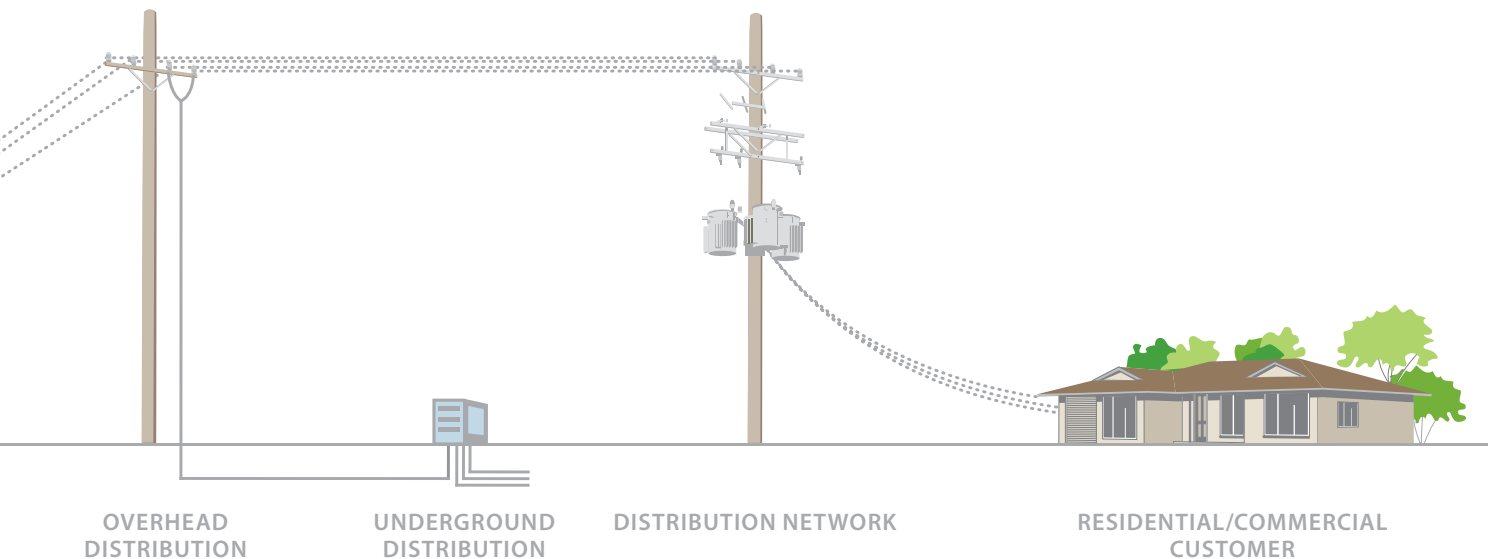


your customers efficiently and safely.

## Controls and System Monitoring Products

HDE's comprehensive and innovative products for controlling and monitoring electricity help you manage system efficiencies and obtain maximum performance from the assets you operate. Whether communicating with smart grid applications and providing valuable load information, or managing capacitor banks based on site parameters, our capacitor control products provide you with the leading-edge products you need.

- Communicating Capacitor Controls
- Local Capacitor Controls



## Mobile demonstrations brought right to your door...



The HD Electric Company mobile demonstrators are designed to bring products directly to the customer and perform live demonstrations. The size and versatility of these vehicles allows a wide range of products to be shown to any size audience and includes live multi-phase high voltage and current sources. Also included are many samples of electrical apparatus that HDE's products test. The HDE mobile demonstrators allow live testing and demonstrations to groups and take only minutes to setup. All of our mobile demonstrators are ideal venues for product training sessions, tool shows and rodeos.

- Display and demonstrate all the latest HD Electric products
- Help train field crews
- Equipped with live high voltage to demonstrate both overhead and underground applications
- Includes high voltage test equipment, controls and lighting products conveniently displayed for viewing
- Travel across the country, from state-to-state and division-to-division

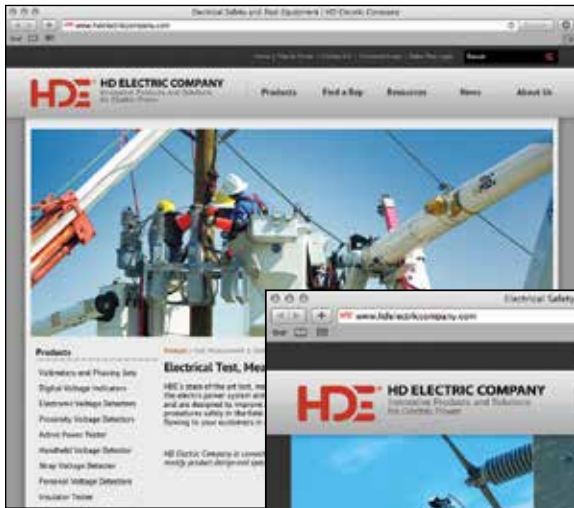
Mobile exhibits are equipped to perform live high voltage demonstrations. Great for product training, tool fairs and rodeos.

**Schedule a visit by an HDE Mobile Demonstrator**  
Visit the Rep Locator on our website to contact your local sales representative



**Your link to in-depth product detail, video product demonstrations, industry news and more on our website:**

- Product updates
- Download literature and manuals
- Contact local sales representatives
- View tradeshows where HDE exhibits
- Read about our sustainability efforts





## Test, Measurement and Safety Products

HDE's state-of-the-art test, measurement and safety products provide safe, accurate and critical information about the electric power system and its associated equipment. All HDE products are built to "utility grade" standards and are designed to improve system reliability; expedite power restoration; and facilitate maintenance procedures safely in the field. HDE's products give you the confidence you need to ensure that electricity is flowing to your customers in a safe and efficient manner.





## Digital Voltmeters

DigiVolt® digital voltmeters and phasing sets are designed to take voltage measurements and perform phasing applications on system voltages up to 80kV. There are ten different models. See page 13 for optional accessories.

The **DVM-80UVM** is a compact, high accuracy dual stick voltmeter and phasing set with capacitive test point mode, peak hold and connecting cord. The DVM-80UVM measures voltage from 5V up 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-80 units incorporate 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 **DVM-80** and **DVM-80T** are compact, high accuracy dual stick voltmeter and phasing sets. They measure voltages from 50V up 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-80T includes an elbow test point mode.

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 up to 25kV and can be used in both overhead and underground applications.

The **DVM-5000V** is a digital voltmeter/phasing set for low voltage applications from 10V up to 5,000V. The DVM-5000V can be used in both overhead and underground applications when used with the required applicable length hotsticks. The digital meter displays 4-digits, showing the true RMS voltage on the conductor. No decimal points show on the display, only the voltage reading. Fixed contact probes on the end of each stick allow for direct contact voltage measurements.

The **DVM-I** and **DVM-III** are single-stick units with a ground lead designed for taking line-to-ground measurements from 150V up to 20kV. The **DVM-II** and **DVM-IV** are two-stick units for taking line-to-ground and line-to-line measurements from 150V up to 50kV. The DVM-III and IV also include Capacitive Test Point mode. This allows for taking voltage measurements and performing phasing directly from the capacitive test points on the backside of load-break elbow connectors. The less expensive and smaller **DVM-V**, a two-stick unit for measuring and phasing voltages from 150V to 20kV, does not include Peak Hold mode or Capacitive Test Point mode.



DVM-80UVM



DVM-80



DVM-V

(continued)

## Digital Voltmeters – *continued*

### features

- True RMS voltage measurements up to 80kVAC/DC
- Auto-ranging LCD
- Back lit display for low light conditions
- Coiled connecting cord (optional reel cord may be available)
- Peak hold (DVM-80UVM and DVM-I through DVM-IV)
- Auto shut-off and low battery indicator
- Capacitive test point mode (some models)
- Universal splines for standard hot stick attachment
- Powered by 9V alkaline batteries
- Measures DC through 1000Hz AC RMS
- Optional accessories are available, see page 13 for details

## DigiVolt Series Digital Voltmeters

PART #	DESCRIPTION
DVM-80UVM	Dual Stick Phasing Voltmeter w/Peak Hold and Capacitive Test Point Mode, 5V-40kV*
DVM-80	Dual Stick Phasing Voltmeter, 50V-40kV*
DVM-80T	Dual Stick Phasing Voltmeter w/Capacitive Test Point Mode, 50V-40kV*
DVM-5000V	Low Voltage Phasing Voltmeter, 10V-5,000V
DVM-25T	Single Stick Voltmeter w/Capacitive Test Point Mode, 50V-25kV
DVM-I	Single Stick Voltmeter w/Peak Hold, 150V-20kV
DVM-II	Dual Stick Phasing Voltmeter w/Peak Hold, 150V-50kV
DVM-III	Single Stick Voltmeter w/Peak Hold and Capacitive Test Point Mode, 150V-20kV
DVM-IV	Dual Stick Phasing Voltmeter w/Peak Hold and Capacitive Test Point Mode, 150V-50kV
DVM-V	Dual Stick Phasing Voltmeter, 150V-20kV

*\*Optional Cord Reel available on DVM-II, DVM-IV, DVM-V – NO EXTRA CHARGE (contact HDE for part number)*

*\*DVM-80 Series has a maximum range of 80kV when used with optional R-80 resistors – sold separately, see page 13*

## DigiVolt Series Digital Voltmeter Kits

PART #	DESCRIPTION
DVM-80UVK	Universal Voltmeter Kit Includes DVM-80UVM, (2) 025-OLPS-5, (2) R-80, (2) ASP-15/25, (1) CFT-35, (1) PT-5000B, (2) HSA-2500 and B-12 Carrying Bag
DVM-80/K02	Kit Includes DVM-80 with (2) 025-OLPS-5, (2) R-80, (1) PT-5000B and CS-DVM Case
DVM-80/K03	Kit Includes DVM-80 with (2) 025-OLPS-5, (2) R-80 and CS-DVM Case
DVM-80T/K02	Kit Includes DVM-80T with (2) 025-OLPS-5, (2) R-80, (1) PT-5000B and CS-DVM Case
DVM-80T/K03	Kit Includes DVM-80T with (2) 025-OLPS-5, (2) R-80 and CS-DVM Case

*\*Other DVM-80 Kits are available, contact HDE*

[Search](#) ▶ Digital Voltmeters @ HDElectricCompany.com



DVM-5000V



DVM-25T

## Universal Voltmeter Kit

The DVM-80UVK Universal Voltmeter Kit is an exciting addition to our phasing voltmeter product line. As the largest supplier of innovative voltage testing and measuring devices in the market today, we have expanded the features of our popular industry-proven DVM-80 series voltmeter and packaged it with an assembly of accessories, offering it as a complete, ready-to-use universal voltmeter kit.

Significant additions include:

- Peak Hold Mode – holds the reading for your convenience
- Triple Auto Range Display – reads in kilovolts from 5V to 80kV

### features

- Digital Meter – reads in kilovolts, 3.5 digits with decimal point
- Voltage Range – 5V-40kV, 5V-80kV with add-on resistors
- Use on Secondary Voltages – starting at 5V
- Auto-Ranging – no range selector switch
- Accuracy – highly accurate, within 1% of reading
- Backlit Display – for easy reading in bright or dark conditions
- Peak Hold Mode – conveniently keeps the peak voltage reading on the display
- Measures AC and DC voltages
- Measures Voltage on Elbow Test Points – meter displays system voltage
- DC Leakage Tester – test arresters and other devices for leakage current
- Underground Cable Testing – test underground cables for faults
- Auto-Shutoff – prevents battery drain
- Coiled Connecting Cord – 3.5' retracted, 12' extended
- Phase Accurate Technology – makes all voltage readings, whether line-to-line or line-to-ground, accurate and repeatable to within 1%
- Battery – powered by a standard 9V alkaline battery in an easy to change battery case (no tools required)
- Measure DC through 1000Hz AC RMS



DVM-80UVK

PART #	DESCRIPTION
DVM-80UVK	Kit Includes DVM-80UVM, (2) 025-OLPS-5, (2) R-80, (2) ASP-15/25, (1) CFT-35, (1) PT-5000B, (2) HSA-2500 and (B-12) Soft-sided, Multi-functional Carrying Bag

[Search](#) ▶ DVM-80UVK @ HDElectricCompany.com





MARK-V



MARK-V KIT



EM-1

## Analog Voltmeters

MARK® analog voltmeters/phasers are designed to take voltage measurements and perform phasing applications on system voltages up to 75kV. There are fourteen versions with single and multiple ranges for use on multiple system voltages. These include one-stick models with a ground lead and two-stick models with a connecting cord. See page 13 for optional accessories.

### features

- Numerous models with different ranges
- Large 3" meter face for easy reading
- Coiled connecting cord is standard (optional reel cord available)
- Strain relief fittings at end of cords reduce cable damage
- Measures DC through 1000Hz AC RMS

PART #	DESCRIPTION
MARK-I-S	Dual Stick Voltmeter, Single Range, 0-15kV
MARK-II-S	Dual Stick Voltmeter, Dual Range, 0-15/0-45kV
MARK-III-S	Dual Stick Voltmeter, Dual Range, 0-15/0-75kV (with included R-75 Resistors)
MARK-IV	Dual Stick Voltmeter, Single Range, 0-5kV
MARK-V	Dual Stick Voltmeter, Dual Range, 0-5/0-15kV
MARK-VI	Dual Stick Voltmeter, Triple Range, 0-5/0-15/0-45kV (with included R-45 Resistors)
MARK-VII	Dual Stick Voltmeter, Dual Range, 0-1/0-15kV
MARK-VIII	Single/Dual Stick Voltmeter, Single Range, 0-15kV, Convertible to 1 Stick/2 Stick
MARK-IX	Dual Stick Voltmeter, Single Range, 0-25kV
MARK-XI	Dual Stick Voltmeter, Dual Range, 0-5/0-25kV
MARK-XII	Dual Stick Voltmeter, Single Range, 0-40kV
EM-1	Single Stick Voltmeter, Single Range, 0-16kV
EM-2	Single Stick Voltmeter, Single Range, 0-25kV
EM-3	Single Stick Voltmeter, Dual Range, 0-1/0-15kV

• All MARK's manufactured after 2002 include Metal Carrying Case (CM-100/V) and (2) Overhead Probes (025-OLPS-5). Optional Aluminum Cases available at an additional cost – see Cases & Bags

• Optional Cord Reel available on all MARK Series – NO EXTRA CHARGE (contact HDE for part number)

• All EM's include (1) Overhead Probe (025-OLPS-5)

## Analog Voltmeter Kits

PART #	DESCRIPTION
MARK-I-S/KIT	Includes MARK-I-S with (2) 025-OLPS-5, CM-100/V, (2) S-4H, B-6
MARK-II/KIT	Includes MARK-II-S with (2) 025-OLPS-5, CM-100/V, (2) ASP-15/25, PT-5000B, (2) S-6H, B-6
MARK-II-S/KIT	Includes MARK-II-S with (2) 025-OLPS-5, CM-100/V, (2) S-6H, B-6
MARK-III-S/KIT	Includes MARK-III-S with (2) 025-OLPS-5, CM-100/V, (2) S-6H, B-6
MARK-V/KIT	Includes MARK-V with (2) 025-OLPS-5, CM-100/V, (2) ASP-15/25, PT-5000B, (2) S-4H, B-6

[Search](#) ▶ Analog Voltmeters @ HDElectricCompany.com

## Voltmeter Accessories

### Hotsticks & Hotstick Adapter

PART #	DESCRIPTION
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick
HV-208	Telescopic Hotstick; Retracted - 26"; Extended - 8'
HV-212	Telescopic Hotstick; Retracted - 58"; Extended - 12'
HV-216	Telescopic Hotstick; Retracted - 60"; Extended - 16' 9"
HV-220	Telescopic Hotstick; Retracted - 62"; Extended - 21'
HV-225	Telescopic Hotstick; Retracted - 64"; Extended - 25' 6"
HV-230	Telescopic Hotstick; Retracted - 66"; Extended - 30'
HV-235	Telescopic Hotstick; Retracted - 68"; Extended - 35'
HSA-2500	Universal Hotstick Adapter (Shotgun)

### Cases & Bags

PART #	DESCRIPTION
C-2	Aluminum Case for EM-2
C-5	Aluminum Case for MARK I - XII*, EM-1, EM-3 and DVM I - V
B-6	Vinyl Bag for 4' and 6' Hotsticks
B-7	Nylon Bag for MARK I - XII*, EM-1, EM-3 and DVM I - V
B-12	Soft-sided Carrying Bag with Hanging Hooks for DVM-80UVK
CM-100/V	Metal Case for MARK I - XII*, EM-1, EM-3 and DVM I - V
CS-DVM	Plastic Carrying Case for DVM-25T and DVM-80 Series
CS-DVM5000V	Plastic Carrying Case for DVM-5000V
C-208	Carrying Bag for HV-208 Telescopic Hotstick
C-30	Carrying Bag for HV-212, HV-216 & HV-220
C-40	Carrying Bag for HV-225, HV-230 & HV-235

Available for all MARK models manufactured after 2002. Contact HDE for older models

### Probes & Add-on Resistor Sticks

PART #	DESCRIPTION
ASP-15/25	Adapter Bushing, 15 and 25kV Class
ASP-35U	Adapter Bushing, 34.5kV (Universal) Class
CFT-35	Cable Fault Tester, 15, 25 and 35kV Class
EA-15/25	Loadbreak Elbow Adapter, 15 and 25kV Class
GCP-1	General Purpose Insulated Probe
R-45	Add-On Resistor for MARK-VI (Pair Required)
R-75	Add-On Resistor for MARK-III-S (Pair Required)
R-80	Add-On Resistor for DVM-80 Series (Pair Required)
025-OLPS-5	PVC/Brass Overhead Hook Probe
025-OLPS-6	PVC/Brass Overhead Pigtail Probe

### Proof-Tester® Voltmeter Testers

PART #	DESCRIPTION
PT-500	Voltmeter Tester with 500V Output for DVM-5000V
PT-5000B	Voltmeter Tester with 5,000V Output for other Voltmeters





TAG-5000



IEP-EA/C



IEP-UD/C

## Wireless Phasing

TAG-5000 Phase-Free® Wireless Phasers provide a unique method of phasing across a single-phase or three-phase system to make certain that correct polarity has been established prior to “closing-in” a switch. The TAG-5000 consists of two units, a transmitter and receiver, which communicate via a radio frequency signal, thus eliminating the need for a connecting cord found on traditional phasing sets. Since the units communicate via radio signals, the range of operation is extended to more than 33 feet through the air, over 1,000 feet along overhead conductors and can operate through walls or partitions.

### features

- No connecting cord between transmitter and receiver
- Perform phasing operations through walls and metal enclosures
- Phase conductors on system voltages up to 230kV (phase-to-phase)
- Audible and visual in-phase/out-of-phase indications
- Rugged and lightweight
- All-Check® self-test feature for verifying proper operation prior to use
- Built-in universal splines for hotstick attachment
- Both transmitter and receiver powered by 9V alkaline battery
- Can be used on 60Hz systems

PART #	DESCRIPTION
TAG-5000	Wireless Phaser Set 4-230kV; Includes Transmitter and Receiver, (1) TAG-AC60, (1) TAG-42029 and CM-5000 Case
TAG-5000/KIT1	Kit Includes Transmitter and Receiver, (1) TAG-AC60, (1) TAG-42029, (2) IEP-UD/C and CM-5000 Case
TAG-AC60	Overhead Suspension Hook Probe
TAG-42029	Overhead “Y” Probe
CM-5000	Metal Carrying Case
IEP-UD/C	Underground Bushing Probe, 15, 25 and 35kV Class
IEP-EA/C	Underground Elbow Probe, 15, 25 and Elastimold® 35kV Class
IEP-TAG-EXT	Extension Probe, Allows Direct Contact with Bare Conductor
IEP-UDP	Probe Adapter, Allows ASP-15/25 to be Installed and Used for Testing Bushings
ASP-15/25	Adapter Bushing, 15 and 25kV Class
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4’ Fixed Length Fiberglass Hotstick
S-6H	6’ Fixed Length Fiberglass Hotstick

Elastimold® is a registered trademark of Thomas & Betts Corporation, Memphis, TN  
 • Telescopic Hotsticks are listed on page 13

[Search](#) ▶ Wireless Phasing @ HDElectricCompany.com



## Digital Voltage Indicators

DVI Digital Voltage Indicators are single point instruments designed to read the voltage on a conductor up to 500kV line-to-ground. The large LED readout is easy to read on the end of a long hotstick and can be used on overhead lines or in underground applications with an underground bushing probe.

The DVI displays the voltage and emits an audible alarm when voltage above 100VAC is detected with no range selector switches or settings to be made – just contact the conductor and read the display. This allows the user to determine if the voltage being read is nominal or a lower induced voltage.

There are four DVI models. The DVI-500 indicates voltage from 0.1kV to 500kV on overhead and underground systems – displaying the voltage on a large 3-digit LED display. The DVI-500T with Test Point Mode has the added feature of indicating voltage on elbow test points. The DVI-100 indicates voltage from 0.1kV to 99kV on overhead and underground systems – displaying the voltage on a large 2-digit LED display. The DVI-100T with Test Point Mode has the added feature of indicating voltage on elbow test points.

### features

- For use on system voltages up to 800kV
- Large LED display indicates the line-to-ground voltage level
- Display is easy to read from a distance and in bright or dark conditions
- Voltage readout allows the user to distinguish between nominal and induced voltages
- Audible indication when voltage is detected
- Built-in universal spline for standard hotstick attachment
- Auto shutoff with low battery function
- Tester available as a power source to test before and after use
- Operating frequency 60Hz (50Hz available)



DVI-500T



DVI-100



DVI-500 Kit (DVI-500T/K02)

PART #	DESCRIPTION
DVI-500	Indicates Voltage up to 500kV, Includes (1) HP-DVI-2, (1) HP-DVI-6 and CS-DVI-5 Case
DVI-500T/K01	Indicates Voltage up to 500kV with Capacitive Test Point Mode, Kit Includes DVI-500T, (1) HP-DVI-2, (1) HP-DVI-6, (1) IEP-DVI-5 and CS-DVI-5 Case
DVI-500T/K02	Indicates Voltage up to 500kV with Capacitive Test Point Mode, Kit Includes DVI-500T, (1) HP-DVI-2, (1) HP-DVI-6, (1) IEP-DVI-5, (1) PT-DVI and CS-DVI-5 Case
DVI-500/K01	Kit Includes DVI-500, (1) HP-DVI-2, (1) HP-DVI-6, (1) IEP-DVI-5 and CS-DVI-5 Case
DVI-500/K02	Kit Includes DVI-500, (1) HP-DVI-2, (1) HP-DVI-6, (1) IEP-DVI-5, (1) PT-DVI and CS-DVI-5 Case

[Search](#) ▶ DVI @ HDElectricCompany.com

(continued)



PT-DVI



B-30

## Digital Voltage Indicators – continued

PART #	DESCRIPTION
DVI-100	Indicates Voltage up to 99kV, Includes (1) HP-DVI-2 and CS-DVI Case
DVI-100T/K01	Indicates Voltage up to 99kV with Capacitive Test Point Mode, Kit Includes DVI-100T, (1) HP-DVI-2, (1) IEP-DVI-5 and CS-DVI Case
DVI-100T/K02	Kit Includes DVI-100T, (1) HP-DVI-2, (1) IEP-DVI-5, (1) PT-DVI and CS-DVI Case
DVI-100/K01	Kit Includes DVI-100, (1) HP-DVI-2, (1) IEP-DVI-5 and CS-DVI Case
DVI-100/K02	Kit Includes DVI-100, (1) HP-DVI-2, (1) IEP-DVI-5, (1) PT-DVI and CS-DVI Case

• Other DVI-500 Kits and DVI-100 Kits are available, contact HDE

## Accessories

PART #	DESCRIPTION
PT-DVI	Proof Tester for Digital Voltage Indicators
HP-DVI-2	Overhead Hook Probe for DVI Models*, 2" Diameter Opening
HP-DVI-6	Overhead Hook Probe for DVI-500, 6" Diameter Opening
IEP-DVI-5	Underground Bushing Probe for DVI Models*, 15, 25 and 35kV Class
IEP-DVI-EXT-5	Extension Probe for DVI Models*, Allows Direct Contact with Bare Conductor
IEP-200TC-5	Probe Adapter for DVI Models*, Allows ASP-15/25 to be Installed and Used for Testing Bushings
ASP-15/25	Adapter Bushing, 15 and 25kV Class
CS-DVI-5	Rugged Plastic Case for DVI-500
CS-DVI	Rugged Plastic Case for DVI-100
B-30	Carrying Bag with Fluorescent/Reflective Safety Stripes and Carrying Strap
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

\* Contact HDE for accessories on DVI-100 models older than 2010

• Telescopic Hotsticks are listed on page 13

[Search](#) ▶ [DVI @ HDElectricCompany.com](mailto:DVI@HDElectricCompany.com)

## TAG® Voltage Detectors

The single range **TAG-200** and multi-range **TAG-200MR** are voltage detectors designed for detecting distribution voltages. The **TAG-330** is a single range voltage detector designed for detecting transmission voltages. These direct contact type detectors emit both audible and visual indications when placed in contact with an energized conductor. TAG Voltage Detectors are designed for both overhead and underground applications with optional underground bushing probes.

### features

- TAG-200 Series for system voltages up to 69kV (phase-to-phase)
- TAG-330 Series for system voltages from 69kV up to 765kV (phase-to-phase)
- Designed to physically contact conductor under test
- Rugged polycarbonate housing for heavy field use
- Water resistant/gasketed housing
- All-Check® self testing system
- Both audible and visual alarms
- No on/off or range selector switches
- 9V alkaline battery operated
- Compact, lightweight and easy to use
- Operating frequency 60Hz

PART #	DESCRIPTION
T200-0412	TAG-200, Range: 4-12kV, (1) TAG-42029, (1) TAG-41811/B and C-200 Case
T200-1235	TAG-200, Range: 12-35kV, (1) TAG-42029, (1) TAG-41811/B and C-200 Case
T200/KIT-0412	Kit Includes T200-0412, (1) IEP-UD/C, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200/KIT-1235	Kit Includes T200-1235, (1) IEP-UD/C, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200MR-0412	TAG-200/MR, Dual Range: 4kV & 12kV, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200MR-0435	TAG-200/MR, Dual Range: 4kV & 35kV, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200MR-1235	TAG-200/MR, Dual Range: 12kV & 35kV, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200MR/KIT-0412	Kit Includes T200MR-0412, (1) IEP-UD/C, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200MR/KIT-0435	Kit Includes T200MR-0435, (1) IEP-UD/C, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T200MR/KIT-1235	Kit Includes T200MR-1235, (1) IEP-UD/C, (1) TAG-42029, (1) TAG-41811/B & C-200 Case
T330-069230	TAG-330, Range: 69-230kV, (1) TAG-AD100, (1) TAG-AC60, (1) TAG-AC120 and CM-330 Case
T330-138500	TAG-330, Range: 138-500kV, (1) TAG-AD100, (1) TAG-AC60, (1) TAG-AC120 and CM-330 Case

• Custom ranges and labeling are available, contact HDE

• Other operating ranges are available, contact HDE



TAG-200



TAG-200MR

(continued)





TAG-330



TAG-330 in Case

## Accessories

PART #	DESCRIPTION
IEP-UD/C	Underground Bushing Probe, 15, 25 and 35kV Class for TAG-200 Series
IEP-EA/C	Underground Elbow Probe, 15, 25 and Elastimold® 35kV Class for TAG-200 Series
IEP-TAG-EXT	Extension Probe, Allows Direct Contact with Bare Conductor for TAG-200 Series
IEP-UDP	Probe Adapter, Allows ASP-15/25 to be Installed and Used for Testing Bushings for TAG-200 Series
ASP-15/25	Adapter Bushing, 15 and 25kV Class for TAG-200 Series
PT-DET	Tester for Voltage Detectors up to 69kV
TAG-42029	Overhead "Y" Probe for TAG-200 Series
TAG-41811/B	Overhead Straight Probe for TAG-200 Series
C-200	Plastic Carrying Case for TAG-200 Series
B-2	Padded, Zippered Carrying Bag with Strap for TAG-200 Series
TAG-AD100	Overhead 4" Straight Probe for TAG-330 Series
TAG-AC60	Overhead Small Hook Probe for TAG-330 Series
TAG-AC120	Overhead Large Hook Probe for TAG-330 Series
CM-330	Metal Carrying Case for TAG-330 Series
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

• Telescopic Hotsticks are listed on page 13

[Search](#) ▶ TAG @ HDElectricCompany.com

## Proximity Voltage Detectors

PRX Proximity Voltage Detectors are non-contact detectors designed to detect a range of voltages up to 500kV. When voltage is detected an audible and visual indication is given with a typical detection distance of 10 inches. Proximity Voltage Detectors have the ability to detect voltage on most elbow test points at the 120V setting. An internal rechargeable battery can be charged quickly from 12VDC automotive outlets or from 115-240VAC. The battery is sealed inside the device, providing maximum protection.

There are 3 models of PRX available:

- **PRX-500**  
Transmission and distribution range proximity voltage detector with nine standard voltage ranges from 120V to 500kV.
- **PRX-69D**  
Distribution range proximity voltage detector with seven standard voltage ranges from 120V to 69kV.
- **PRX-4**  
Provides police, fire departments, paramedics, telecom, cable and tree trimmers with a safety tool that alerts them to potentially dangerous high voltage in their work area. The PRX-4 is a non-contact detector with two voltage ranges; 50V-4kV and above 4kV.

### features

- Rechargeable battery with quick recharge – if battery is low, a quick 15 minute charge provides over one full day of use
- Models available with standard voltage ranges up to 500kV
- Detects voltages 10" or greater from source
- Detects voltage on most elbow test points
- Dual hotstick connections – universal spline & shotgun stick
- Loud beeper and LED lights indicate voltage
- Weighs less than 1 pound
- A full charge takes only 3 hours and gives 1 week of continuous use
- Easy to use electronic touch pad with large buttons
- Custom voltage ranges available upon request
- Can be used on 50Hz and 60Hz systems



PRX-500

### PRX-500

PART #	DESCRIPTION
PRX-500/K01	Indicates Voltages 120VAC – 500kV; Includes PRX-CORD
PRX-500/K02	Indicates Voltages 120VAC – 500kV; Includes PRX-CORD and PRX-XF
PRX-500/K03	Indicates Voltages 120VAC – 500kV; Includes PRX-CORD, PRX-XF and B-2
PRX-500H	Indicates Voltages 120VAC – 500kV; Includes PRX-HS, PRX-CORD and PRX-XF

(continued)



PRX-69D



PRX-4



PRX-500 Kit

PART #	DESCRIPTION
PRX-500B	Indicates Voltages 120VAC – 500kV; Includes PRX-HS, PRX-CORD, PRX-XF and B-2
PRX-500	Indicates Voltages 120VAC – 500kV; Includes PRX-HS, PRX-CORD, PRX-XF and PRX-CS

## PRX-69

PART #	DESCRIPTION
PRX-69D/K01	Indicates Voltages 120VAC – 69kV; Includes PRX-CORD
PRX-69D/K02	Indicates Voltages 120VAC – 69kV; Includes PRX-CORD and PRX-XF
PRX-69D/K03	Indicates Voltages 120VAC – 69kV; Includes PRX-CORD, PRX-XF and B-2
PRX-69DH	Indicates Voltages 120VAC – 69kV; Includes PRX-HS, PRX-CORD and PRX-XF
PRX-69DB	Indicates Voltages 120VAC – 69kV; Includes PRX-HS, PRX-CORD, PRX-XF and B-2
PRX-69D	Indicates Voltages 120VAC – 69kV; Includes PRX-HS, PRX-CORD, PRX-XF and PRX-CS

## PRX-4

PART #	DESCRIPTION
PRX-4/K01	Indicates Voltages 50V-4kV & above 4kV; Includes PRX-CORD
PRX-4/K02	Indicates Voltages 50V-4kV & above 4kV; Includes PRX-CORD and PRX-XF Charge Cords
PRX-4/K03	Indicates Voltages 50V-4kV & above 4kV; Includes PRX-CORD, PRX-XF Charge Cords and B-2 Carrying Bag
PRX-4H	Indicates Voltages 50V-4kV & above 4kV; Includes PRX-HS Holster, PRX-CORD and PRX-XF Charge Cords
PRX-4B	Indicates Voltages 50V-4kV & above 4kV; Includes PRX-HS Holster, PRX-CORD, PRX-XF Charge Cords and B-2 Carrying Bag
PRX-4	Indicates Voltages 50V-4kV & above 4kV; Includes PRX-HS Holster, PRX-CORD, PRX-XF Charge Cords & PRX-CS Carrying Case

## Accessories

PART #	DESCRIPTION
PRX-CORD	Charge Cord with 12VDC Automotive Jack
PRX-XF	115-240VAC Transformer to Plug PRX-CORD into 115-240VAC Wall Outlet
PRX-HS	Carrying Holster with Belt Clip and Restraining Strap
PRX-CS	Carrying Case; Holds PRX, PRX-HS and Charge Cords
B-2	Padded, Zippered Carrying Bag with Strap; Holds PRX, PRX-HS and Charge Cords
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

• Telescopic Hotsticks are listed on page 13

• Other PRX Kits are available, contact HDE

• A version of the PRX with 220VAC Charging Adapter Kit is available, contact HDE

Search ▶ PRX @ HDElectricCompany.com

## Active Power Tester

The APT-1 Active Power Tester is designed to give an indication when the absence of full line voltage is detected on overhead conductors, giving an audible and visual alert. The APT-1 is for use on uninsulated overhead conductors with voltages from 7.6 to 13.2kV line-to-ground.

### features

- Lets the worker know whether the overhead voltage has been disconnected prior to working on the line
- Audible indication and flashing light when the absence of voltage is detected on the line
- Clampstick installed
- Powered by a field replaceable 9V alkaline battery

PART #	DESCRIPTION
APT-1	Indicates Absence of Full Line Voltage on Conductors from 7.6 to 13.2kV Line-to-Ground

• Telescopic Hotsticks are listed on page 13

[Search](#) ▶ APT @ HDElectricCompany.com



APT-1

## Voltage Probe

The VP-1 Voltage Probe is designed to be used as a hand held direct contact secondary voltage detector from 50VAC to 600VAC. It can also be used as a direct contact voltage detector on primary voltages from 600V up to 21kVAC and also as a proximity voltage detector for voltages exceeding 21kVAC when using appropriately rated electrical insulating gloves.

### features

- Tests exposed metallic surfaces and conductors for the presence of secondary voltage
- Tests unshielded primary voltage cable insulation
- Tests primary voltage joint and termination test points for the presence of voltage
- Simple indication of voltage – flashing red light and beeper
- Compact, lightweight and easy-to-use
- Super bright LED indicator
- Powered by field replaceable 2AA alkaline batteries
- Can be used on 50Hz and 60Hz systems

PART #	DESCRIPTION
VP-1/K01	Direct Contact Voltage Detector; Kit Includes VP-1, PT-VP and B-35 Bag
VP-1	Direct Contact Voltage Detector from 50VAC to 21kV, Proximity Voltage Detector above 21kV
PT-VP	Proof Tester for Voltage Probe
B-35	Padded, Zippered Carrying Bag with Strap

[Search](#) ▶ VP-1 @ HDElectricCompany.com



VP-1



Voltage Probe Kit (VP-1/K01)





LV-5



LV-5 Being Tested While Worn

## Stray Voltage Detector

The Stray Voltage Detector, model LV-5, is used to detect stray voltage as low as 5 volts which may be present on electrically conductive surfaces. The detector operates by holding it with a bare or gloved hand and directly contacting the metal tip of the detector to the potentially energized source. A kit is available containing a belt clip holster, allowing the user to carry the LV-5 in the holster on their belt. The holster also includes an integrated tester that supplies a low voltage AC signal for testing the LV-5 before and after use.

Two optional accessories are available for the LV-5. The Extension Handle extends the reach of the LV-5, allowing the detector to test equipment on the ground or hard to reach locations. The Ground Shield is used in areas where high voltage lines or other energized conductors are present.

### features

- Low threshold voltage sensing design picks up voltages from 5VAC to 600VAC with direct contact and above 600VAC at a distance
- Ultra bright, long-lasting red LED indicates when voltage is present
- Detector is always on, ready to use and operates on two AA alkaline batteries
- Rugged, utility-grade design is waterproof
- Optional tester integrated into the holster provides a visual indication of the test. Supplies a low voltage AC signal for testing before and after use
- Optional Extension Handle extends the LV-5 reach
- Optional Ground Shield used in areas where energized conductors are present and interfere with normal voltage tests
- Operating Frequency 60Hz

PART #	DESCRIPTION
LV-5/K01	Detects Stray Voltage from 5-600VAC. Kit Includes LV-5, LV-PT and LV-HS
LV-5	Stray Voltage Detector, Detects Voltage from 5-600VAC
LV-HS	Holster for LV-5 and LV-PT Tester
LV-PT	Proof Tester for LV-5
LV-GS	Ground Shield with Ground Lead and Alligator Clip
LV-EH	Extension Handle, 33.5" Long

[Search](#) ▶ Stray Voltage Detector @ HDElectricCompany.com

## Personal Voltage Detectors

Worn on the outside of your clothing at mid-torso, V-Watch® Personal Voltage Detectors provide that extra level of safety by detecting and alerting you to the presence of electrical fields or energized electrical equipment. In emergencies, you and your crews can move safely to quickly restore power. V-Watch Personal Voltage Detectors are available in both a standard model and a model with a mute feature. Each comes in a tough nylon carrying case lanyard that is worn around the neck during use. There are two versions of the C-10 Carrying Case Lanyard available. The C-10 Carrying Case Lanyard is made with a black shielded material. The C-10FR Carrying Case Lanyard is made with a high-visibility safety green material that is shielded with the added benefit of an outer layer of flame resistant material.

### features

- Alerts user to the dangerous presence of high voltage
- Audible and visual alarms increase in frequency the closer the user gets to the high voltage source
- Typical initial warning distance is about 7 feet (2.13 m) from a 4kVAC (2.4kV line-to-ground) conductor. Warning distance increases with higher voltages.
- Provides another level of awareness and safety protection for line crews, storm restoration workers and first responders
- Built-in self test
- Low battery indicator
- Field replaceable 9V battery
- Carrying case lanyard
  - Can be used with any V-Watch models, old or new
    - o High-visibility safety green with FR material or black
  - Electrically shielded
  - Storage case when the V-Watch is not in use
  - Lanyard allows user to adjust to optimum mid-torso position
- Can be used on 50Hz and 60Hz systems

PART #	DESCRIPTION
VW-20HFR	V-Watch Personal Voltage Detector with C-10FR Flame Resistant Carrying Case Lanyard
VW-20HFR-K	Kit Includes VW-20HFR and VW-K-BAG
VWP-20HFR	V-Watch Pro Personal Voltage Detector with Mute Button and C-10FR Flame Resistant Carrying Case Lanyard
VWP-20HFR-K	Kit Includes VWP-20HFR and VW-K-BAG
VW-20H	V-Watch Personal Voltage Detector with C-10 Carrying Case Lanyard
VW-20H-K	Kit Includes VW-20H and VW-K-BAG
VWP-20H	V-Watch Pro Personal Voltage Detector with Mute Button and C-10 Carrying Case Lanyard
VWP-20H-K	Kit Includes VWP-20H and VW-K-BAG

• Other V-Watch Models with Different Sensitivities, Kits and Accessories are available, contact HDE

[Search](#) ▶ V-Watch @ HDElectricCompany.com



V-WATCH

V-WATCH PRO



C-10 FR

C-10



IT-4

## Insulator Tester

Hi-Test® Insulator Testers detect non-visible insulator failures before they cause operations difficulties or safety threats to line crews. The Insulator Tester can be used as a routine maintenance tool to test insulators quickly, safely and reliably. It can be applied to any in-service transmission or distribution insulator and at any voltage, provided there are two or more insulators between conductor and ground. It can also be used to test de-energized insulators prior to installation.

### features

- Universal spline for attachment to a hotstick
- Built-in gigohmmeter applies a current limited 10kVDC potential across an insulator
- Buzzer provides audible warning of bad insulators
- LED scale displays the condition of the insulator being tested
- Powered by an 8VDC rechargeable battery
- Rugged carrying case included
- Lightweight – weighs approximately 3 lbs. (1.35 kg)

PART #	DESCRIPTION
IT-4	Insulator Tester; Includes Battery, (1) Standard Side Bent Probe, (1) Standard Straight Probe, 120VAC Charging Adapter and CS-IT4 Case
IT-4/12V	Insulator Tester; Includes Battery, (1) Standard Side Bent Probe, (1) Standard Straight Probe, 120VAC Charging Adapter, 12VDC Charging Cord and CS-IT4 Case

•A version of the IT-4 with 220VAC Charging Adapter is available, contact HDE

## Accessories

PART #	DESCRIPTION
075-IT3-8VX4	Replacement Battery
025-02035-SUB	Standard Side Bent Test Probe
025-02040-SUB	Standard Side Straight Test Probe
025-02045-SUB	Optional Pigtail End Test Probe (MUST BE USED WITH OPTIONAL STRAIGHT END PROBE)
025-02050-SUB	Optional Straight End Test Probe (MUST BE USED WITH OPTIONAL PIGTAIL END PROBE)
025-02070-120V	120VAC Charging Adapter
050-02000-12V	12VDC Charging Cord
050-02025-220V	220VAC Charging Adapter
CS-IT4	Carrying Case
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

•Also see Telescopic Hotsticks in Voltmeter Accessories Section page 13

[Search](#) ▶ Insulator Tester @ HDElectricCompany.com

## MOV Arrester/Leakage Testers

Hi-Test® HiSat MOV Surge Arrester and Leakage Testers allow for the non-destructive testing of de-energized surge arresters for non-visible internal breakdown. These self-contained units are lightweight and portable for both shop and field use. The HiSat applies voltage across the arrester and indicates the breakover/conduction point of the arrester. It will determine if an arrester is conducting at lower voltages than specified or not conducting at all. Because of new arrester technology, the testers will not properly test gap or hybrid MOV/GAP type arresters such as Hubbell® Optima or Cooper VariGAP®.

### features

- Tests up to 25kV class MOV arresters (up to 18kV rated)
- Self-contained with rechargeable battery
- Easy to read LED's
- Auto shut-off
- Pivoting handle and belt clip
- Lightweight and completely portable



HISAT-15

PART #	DESCRIPTION
HISAT-15	Surge Arrester/Leakage Tester for up to 15kV Class Arresters; Includes Battery, (1) High-Voltage Test Lead, (1) Ground Return Lead, (1) Static Ground Lead and 120VAC Charging Adapter
HISAT-25	Surge Arrester/Leakage Tester for up to 25kV Class Arresters; Includes Battery, (1) High-Voltage Test Lead, (1) Ground Return Lead, (1) Static Ground Lead and 120VAC Charging Adapter

• A version of the HiSat with 220VAC Charging Adapter is available, contact HDE

## Accessories

PART #	DESCRIPTION
075-02000-12V	Replacement Battery
025-02015-SUB	Red High-Voltage Test Lead
025-02190-SUB	Black Ground Return Lead
025-02195-SUB	Black Static Ground Lead
050-02030-SET	Complete Test Lead Set - (1) High Voltage, (1) Ground Return, (1) Static Ground
575-02012-SAT	Wall Mount Rack
025-02070-120V	120VAC Charging Adapter
050-02000-12V	12VDC Charging Cord
050-02025-220V	220VAC Charging Adapter
B-5	Zippered Carrying Bag

Hubbell is a registered trademark of Hubbell Power Systems, Inc.

VariGAP is a registered trademark of Cooper Industries, Inc.

[Search](#) ▶ Arrester @ HDElectricCompany.com





AT-100

## Arrester Tester

The AT-100 is a two-stick live line tester designed to test disconnected lightning arresters on a power distribution system. The tester is designed to warn the user that an arrester is damaged or deteriorating and should not be energized.

### features

- For use on systems from 4kV to 25kV phase-to-phase and up to 69kV with optional R-69 add-on resistor stick pair
- Built-in universal splines for attachment to hotsticks
- Easy to read meter face
- Optional bushing probes allows testing of elbow arresters
- Can be used on 50Hz and 60Hz systems

PART #	DESCRIPTION
AT-100	Lightning Arrester/Leakage Tester 4-25kV, up to 69kV with Optional R-69 Resistors; Includes (2) 025-OLPS-5 Overhead Hook Probes and CM-100/V Case
AT-100/K1	Kit Includes AT-100 and (2) R-69 Resistor Sticks
R-69	Add-On Resistor Stick (Pair Required)

• See page 13 for optional accessories

[Search](#) ▶ AT-100 @ HDElectricCompany.com



PT-5000W

## DC Leakage Tester

The PT-5000W is a portable, general purpose dual voltage leakage tester designed to test primary distribution voltage or secondary voltage equipment for faults or high leakage currents. Use only on cables or equipment that have been verified to be both de-energized and discharged. The test voltage can be set by the user to either 500VDC or 5,000VDC. The PT-5000W can be used to check for leakage on cables, transformers, capacitors, joints, terminations, insulators, etc.

### features

- Portable unit tests de-energized and discharged capacitors, transformers, terminations and insulators
- Use in overhead or underground systems
- User selectable – test 500VDC or 5,000VDC
- Compact, lightweight and easy-to-use
- Super bright LED indicators
- Low battery indicator
- Powered by field replaceable 9V alkaline battery

PART #	DESCRIPTION
PT-5000W	High Voltage DC Leakage Tester

[Search](#) ▶ PT-5000W @ HDElectricCompany.com

## Capacitor Testers

Cap Check® Capacitor Testers are designed to identify internal problems with a capacitor or capacitor bank. The instruments are proven to be a valuable asset in maintaining both pole-mounted and substation capacitors. The testers will identify bad or failing capacitors that may rupture upon energizing. Cap Check I and III are designed for pole mounted and individual capacitors and can enable a two-man crew to check a bank of 12 in about 20 minutes. Cap Check II is based on the same principles and specifically designed for checking capacitor units in substation banks.

### features

- Quick and easy-to-use
- Allows user to eliminate unnecessary replacement through proper testing
- Tests individual or banks of capacitors
- Prevents costly clean-ups
- Operating frequency 60Hz (50Hz available)



CC-III (Optional Accessories Shown)

PART #	DESCRIPTION
CC-I	Overhead Bank Capacitor Checker, Requires 12VDC Power, Includes 4" CT
CC-II/100	Substation Capacitor Checker – Carrying Case Version, Includes 2" CT
CC-II/102	Substation Capacitor Checker – Console Version, Includes 2" CT
CC-III/K01	Distribution/Substation Capacitor Checker – Portable Version, Includes 2" CT (CT002/III)
CC-III	Distribution/Substation Capacitor Checker – Portable Version, CT Sold Separately



CC-I

## Accessories

PART #	DESCRIPTION
CT002	2" Current Transformer with Plug, Cord and Hotstick Adapter for Cap Check II
CT002/III	2" Current Transformer with Plug and Cord for Cap Check III
CT004	4" Current Transformer with Plug, Cord and Hotstick Adapter for Cap Check II
CT004/III	4" Current Transformer with Plug and Cord for Cap Check III

[Search](#) ▶ CC-III @ HDElectricCompany.com



CC-II/100



CT-300

## Transformer Tester

The New ClearTest Transformer Tester provides quick and easy tests of deenergized power distribution system transformers. It is a handheld device with a single pushbutton that provides a clear indication of open circuits, short circuits, including shorted turns or shorted windings and confirmation that the test results are OK. The ClearTest can test new or reworked, single or three phase transformers and all the connections made to them, up to and including the revenue meter.

The ClearTest is a completely new design that briefly energizes the transformer and takes a snapshot of the transformer condition by measuring the voltage, current and power factor of the test signal. Testing is fully automatic and pressing and holding the TEST button starts an automatic self test of the internal circuits of the ClearTest followed by an application of the 10V test signal to the transformer under test. The ClearTest combines measurements of both test current magnitude and waveform combined with power factor to find transformer defects that include:

- Open coils or blown internal fuses or breakers
- Partial shorts including shorted turns, shorted turn layers, coil to core shorts and primary to secondary shorts
- Bad transformer ratios resulting from shorted turns

### features

- Tests for internal transformer defects before energizing
- Tests all types of transformers – overhead, pad-mount and other distribution types
- Test the primary and secondary sides of de-energized transformers without disconnecting
- Improve SAIDI statistics by quickly testing and getting the transformer back in service
- Prevents line workers from installing a fuse on a shorted transformer
- Quickly verifies the secondary connections are not shorted
- Compact, lightweight and easy-to-use
- Powered by two 9V field replaceable alkaline batteries
- Audible alarm confirms successful test
- Built-in self test

PART #	DESCRIPTION
CT-300	ClearTest Transformer Tester

[Search](#) ▶ ClearTest @ HDElectricCompany.com

## Transformer & Capacitor Testers

TILT II Transformer Testers and Quick-Check® Transformer and Capacitor Testers provide quick and easy checks for opens or shorts on power distribution systems. They operate with a single push-button and provide clear indications of open circuits, short circuits and confirmation that the test results are OK. The TILT II transformer tester is a versatile tool for quick and easy checks of transformers and the connections made to them. In the field, it is used to test the primary and secondary sides of new or reworked, single or three-phase transformer installations for short circuits prior to energizing. In the shop, it is used for the quick screening of incoming and outgoing transformers for both primary and secondary shorts or opens, including internal fuses and breakers. Quick-Check Transformer and Capacitor Testers perform all the same transformer tests as the transformer tester, and also test capacitors and capacitor banks. A magnet is available to hold the tester in place while testing.

### features

- Tests transformers or capacitors for major defects before energizing
- Tests the primary and secondary sides of de-energized transformers without disconnecting
- Built-in self-test feature (manual or auto self-test models available)
- Single button automatic testing
- Audible alarm confirms successful test
- Super bright LED indicators

PART #	DESCRIPTION
TL-MAN-N	TILT II Transformer Tester with Manual Self-Test
TL-MAN-M	TILT II Transformer Tester with Manual Self-Test and Magnet
TL-AST-N	TILT II Transformer Tester with Automatic Self-Test
TL-AST-M	TILT II Transformer Tester with Automatic Self-Test and Magnet
QC-MAN-N	Quick-Check Transformer & Capacitor Tester with Manual Self-Test
QC-MAN-M	Quick-Check Transformer & Capacitor Tester with Manual Self-Test and Magnet
QC-AST-N	Quick-Check Transformer & Capacitor Tester with Automatic Self-Test
QC-AST-M	Quick-Check Transformer & Capacitor Tester with Automatic Self-Test and Magnet
B-8	Padded Carrying Bag

• All TILT and Quick-Check include B-8 Carrying Bag

[Search](#) ▶ Quick-Check @ HDElectricCompany.com



TL-AST-N



QC-MAN-N



## High Voltage Ammeters

The HVA High Voltage Digital Ammeter is the newest addition to our ammeter product family. The HVA-2000 is a high voltage digital ammeter designed for taking AC current measurements up to 2000 amps. The HVA can be used on system voltages up to 500kV. The large, bright LED display allows real time monitoring of current from the longest of telescoping hotsticks. The HVA-2000 will store the last 4 readings – no need to bring the unit up to the conductor and then back down for each reading! The High Voltage Ammeter is capable of taking spot-load studies at transformers or any mid-span location, as well as phase balance studies on primary or secondary lines.

### features

- Quickly take current readings on conductors up to 500kV (phase-to-phase)
- Measures AC Current, 25-500Hz
- Use in overhead and underground applications
- Take spot-load checks with ease
- Verify phases are balanced
- Read the measurement in real time from the large digit display
- Stores the last four current readings
- Display is easy to read from a distance and in bright or dark conditions
- Auto shutoff with low battery function
- Small and lightweight, easy to manage on an extension hotstick - 1.8 lbs (0.82 kg)
- Dual hotstick connections – universal spline and clampstick
- Use on conductors up to 2.75" (7.0 cm)
- Accuracy 1% of reading (+/- 3 counts)



HVA-2000

PART #	DESCRIPTION
HVA-2000	High Voltage Digital Ammeter, 0-2000 AMPS AC, includes B-5
B-5	Zippered Carrying Bag
CS-HVA	Rugged Plastic Carrying Case
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

• Also see *Telescopic Hotsticks in Voltmeter Accessories Section, page 13*

[Search](#) ▶ HVA @ HDElectricCompany.com

## High Voltage Ammeters

HALO® High Voltage Digital Ammeters are for use on power distribution systems designed to take True RMS AC current measurements. The open-core design allows the user to quickly hook it over a conductor from the end of a hotstick and obtain a current reading in amperes. HALO ammeters can be used to take spot load measurements on a single phase, as well as take readings on all three phases to determine load balance.

There are two models, HALO I and HALO II. HALO I has a peak-hold mode so the reading is stored on the display until reset. HALO II includes peak-hold mode and also a tracking mode that allows the user to view continuous changes on the display. The unit can be used on any voltage up to 69kV system voltages. It is available with either a hook-style or fork-style sensing head. HALO ammeters can be used over insulated cable. However, they cannot be used over shielded cable, such as the concentric neutral.

### features

- For use on voltages up to 69kV class (40kV line-to-ground)
- True RMS reading instrument
- 0-2000 amp auto-ranging LCD display
- Track and peak-hold modes available
- Hook or fork style sensing heads
- Universal spline for standard hot stick attachment
- Powered by a field replaceable 9V alkaline battery
- Auto shut-off
- Measures current 25 to 1000Hz

PART #	DESCRIPTION
8280	HALO I Ammeter, Peak Hold, Hook Head and B-7 Bag
8281	HALO I Ammeter, Peak Hold, Fork Head and B-7 Bag
9390	HALO II Ammeter, Peak Hold and Tracking, Hook Head and B-7 Bag
9391	HALO II Ammeter, Peak Hold and Tracking, Fork Head and B-7 Bag

•To order HALO with metal case, add "/HC-5" to end of part number

### Accessories

PART #	DESCRIPTION
HC-5	Aluminum Case
B-7	Nylon Carrying Bag
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

•Also see Telescopic Hotsticks in Voltmeter Accessories Section, page 13

 Search ▶ HALO @ HDElectricCompany.com



8280



9391



FACT-1

## Feeder Ammeter Clear Test

The FACT is used to indicate the presence of grounds or short circuits on the three-phase conductors of a primary feeder or on transformer secondaries. Grounding of feeder cables is a common safety practice and may occur when maintenance is being performed prior to service being restored. If grounds are not removed from the feeder prior to restoring power, damage can occur.

### features

- Alerts user to grounds left in place before the circuit is energized
- Prevents fault currents, transformer damage and blown fuses
- Fully automated test procedure with built-in self test
- Internal diagnostics confirm proper operation
- Automatically detects incorrect polarity
- Portable, one person design, easy to use
- Operating frequency 60Hz

PART #	DESCRIPTION
FACT-1	Feeder Ammeter Clear Test

[Search](#) ▶ [FACT-1 @ HDElectricCompany.com](#)



LB-5

## Load Box

The LB-5 Load Box helps to prevent the damaging effects of ferroresonance found on lightly or unloaded 3-phase power systems. This situation typically occurs on medium voltage distribution transformers and power cables during single phase switching. As the electric power industry moves towards more efficient transformer design, this condition is becoming more common. If such conditions exist, overvoltage can lead to the breakdown of insulation resulting in damage to the transformer, lightning arresters and other equipment. When using the LB-5 to connect and apply a resistive load on the transformer secondaries, damage to distribution equipment due to ferroresonance can be prevented.

### features

- Helps prevent ferroresonance during single phase switching
- Portable, one person design
- Powered by transformer secondaries 120/277VAC
- 5,000 watt per phase loading
- Resistive load up to 3 phases
- 40A fused disconnect switch
- Blown fuse indicator lamp
- Operating frequency 50/60Hz

PART #	DESCRIPTION
LB-5	Dual Voltage Load Box, 240/120V and 480/277V

[Search](#) ▶ [LB-5 @ HDElectricCompany.com](#)

## Cable Distance Meters

The Cable Distance Meter is a handheld device for measurement of cable sag, cable height distance and overhead clearance of conductors. It is a modern alternative to telescopic measuring poles. The Cable Distance Meter utilizes ultrasonic signals to determine the height of overhead cables up to 75 feet.

### features

- Quick measurements save time and money
- No physical connection to cables or wires
- Simple, three-button operation ensures fast, effective measurements
- Compact, lightweight and portable
- Low battery indicator

PART #	DESCRIPTION
CDM-50	Cable Distance Meter Measures up to 6 Wires, 50' Range with B-20 Bag
CDM-75	Cable Distance Meter Measures up to 6 Wires, 75' Range with B-20 Bag
CDM3-50HT	Cable Distance Meter Works with Horizontal Target, Measures up to 3 Wires, 50' Range with B-20 Bag
HT-150	Horizontal Target for Use with CDM3-50HT to Determine Horizontal Distances up to 150'
B-20	Padded, Zippered Carrying Bag

[Search](#) ▶ CDM @ HDElectricCompany.com



CDM-75

## Rope Tester

The Hi-Test® Rope Tester is designed to test hot line ropes, slings and straps for dielectric integrity at the time and location they are being used. Ropes with diameters ranging from 3/8" diameter (9.5 mm) to 1-1/2" diameter (38 mm) can be tested along with slings and straps of various sizes.

### features

- Continuously test any length of rope or straps
- Dielectric condition is displayed by green (good) or red (bad) LED's
- Powered by an 8VDC rechargeable battery
- Audible buzzer sounds if defective section of rope is found
- Small, portable and easy-to-use

PART #	DESCRIPTION
RT-200	Rope Tester; Includes Battery and 120VAC Charging Adapter
075-IT3-8VX4	Replacement Battery
025-02070-120V	120VAC Charging Adapter
050-02000-12V	12VDC Charging Cord
050-02025-220V	220VAC Charging Adapter

\* A version of the RT-200 with 220VAC Charging Adapter is available, contact HDE

[Search](#) ▶ RT-200 @ HDElectricCompany.com



RT-200



## Phase Rotation Meter

The Phase Rotation Meter is used to determine which is the leading phase of any two phases of a three-phase conductor system. It is a dual range, 0–5kV and 0–15kV, unit that can be used as high as 45kV when resistor sticks are added and consists of two sticks with a connecting cord and ground lead.

### features

- Determine phase rotation up to 45kV
- Large 3" meter face for easy reading
- Adaptable for underground applications with bushing probes
- Operating frequency 50/60Hz

PART #	DESCRIPTION
PRM-100	Phase Rotation Meter, 0-5/0-15kV, up to 45kV with Optional R-45 Resistor Sticks; Includes (2) 025-OLPS-5 and CM-100/V
R-45	Add-On Resistor Stick (Pair Required)
025-OLPS-5	PVC/Brass Overhead Hook Probe
CM-100/V	Metal Carrying Case

• Hotsticks and other accessories are listed on page 13

[Search](#) ▶ PRM-100 @ HDElectricCompany.com

## 3 Phase Cable Identifier

The 3ID Three Phase Cable Identifier identifies the correct phases on long lengths of de-energized and discharged overhead and underground cables. It includes a sender and receiver that are designed to be hand held with or without gloves. Because of its higher test voltage, the 3ID can test long lengths of cable. LED's on both units indicate that the 3ID units are connected to the same phases on each end of a cable.

### features

- Identify all three cable phases simultaneously and any shorted phases
- Higher test voltage of 36VDC allows for longer cable lengths to be tested – has been tested up to 7 miles apart
- Use in overhead or underground systems
- Compact, lightweight and easy-to-use
- Super bright LED indicators
- Large copper alligator clips with heavy duty boots
- Low battery indicator

PART #	DESCRIPTION
3ID-100	Three Phase Cable Identifier, Includes Sender, Receiver and B-5 Carrying Bag
B-5	Zippered Carrying Bag

[Search](#) ▶ 3ID @ HDElectricCompany.com



PRM-100



3ID-100

## Cable Identifier

The PF-50 identifies the correct phases on long lengths of de-energized and discharged overhead and underground cables. It consists of a Transmitter and Receiver that are designed to be handheld with or without gloves or with optional accessory hotsticks. Red LED's on both units indicate that the PF-50 units are connected to the same cable.

### features

- Higher test voltage allows for longer cable lengths to be tested
- Small, lightweight and easy-to-use
- Bright LED display indicates phase reference
- 9V alkaline field replaceable batteries
- Rugged plastic enclosures

PART #	DESCRIPTION
PF-50	Phase Flasher Cable Identifier, Includes Transmitter, Receiver and B-5 Bag
B-5	Zippered Carrying Bag Holds Both Transmitter and Receiver
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

• Telescopic Hotsticks are listed on page 13

[Search](#) ▶ PF-50 @ HDElectricCompany.com



PF-50

## Phase Sequence Indicator

The K-7-1 Phase Sequence Indicator indicates the order of succession in time of the different voltage peaks of a multi-phase supply. The K-7-1 is used in connection with the making of three-phase circuit installations or alterations, and replacement installations of motors and generators. It can be used for making continuity tests of circuits of poly-phase systems. It is also valuable in making connections of power-factor meters, voltampere meters, watt and watthour meters and relays.

### features

- Indicates the phase sequence by the direction of the rotor disc
- Voltage Range from 60 - 600V
- Only 21 ounces, the K-7-1 is lightweight and easy to carry

PART #	DESCRIPTION
K-7-1	Phase Sequence Indicator

[Search](#) ▶ K-7-1 @ HDElectricCompany.com



K-7-1



FT-1

## Fuse Tool

The FT-1 Fuse Tool is designed to assist in the installation and removal of most cutout type overhead fuse links. The Fuse Tool provides greater control of the fuse link during installation and removal. By using the Fuse Tool, line crews are able to quickly and safely remove and install most cutout type overhead fuse links found in overhead distribution systems.

### features

- Eliminate the danger of falling fuses
- Increased safety during fuse link replacement
- Quickly and easily remove and install fuse links
- Heavy duty fuse receiver
- Corrosion resistant switch hook
- Universal spline for standard hotstick attachment

PART #	DESCRIPTION
FT-1	Fuse Tool
HSA-2500	Universal Hotstick Adapter (Shotgun)
S-4H	4' Fixed Length Fiberglass Hotstick
S-6H	6' Fixed Length Fiberglass Hotstick

• Telescopic Hotsticks are listed on page 13

[Search](#) ▶ FT-1 @ HDElectricCompany.com

## Switch Blocking Pins

The Switch Blocking Pin is a non-conductive pin that is placed into the switch blocking location of an air break/load break switch when the switch is opened for work on the line or equipment. The blocking pin assures the worker that the switch stays open until the pin is removed.

### features

- The pins can be placed into the switch blocking location of Omni-Rupter® and Scada-Mate® switches
- Can be installed by one worker from the ground using an extension hotstick, keeping the worker away from energized conductors and equipment
- Switch cannot be closed until the pin is removed



SBP-200

SBP-100

PART #	DESCRIPTION
SBP-100	Omni-Rupter® Switch Blocking Pin with Magnet – 4.75" High
SBP-200	Scada-Mate® Switch Blocking Pin with Magnet – 5.5" High

Omni-Rupter® and Scada-Mate® are registered trademarks of S&C Electric Company, Chicago, IL

• Kits and accessories are available, contact HDE

[Search](#) ▶ SBP-100 @ HDElectricCompany.com

## Extension Clip Cord

The Clip Cord is an extension cord with a built-in GFCI circuit that provides power to any 120V power tools, such as handheld drills, without having to carry a power supply. The Clip Cord attaches to the terminals of a meter socket or a transformer with alligator clips and has a grounded 120V plug at the other end.

### features

- Convenient source of power eliminates need for separate power supply
- Built-in GFCI allows testing before each use
- Neon light in GFCI verifies proper operation



XC-GFCI

PART #	DESCRIPTION
XC-GFCI	Clip Cord with GFCI Circuit, 6'-7" Length

[Search](#) ▶ [GFCI @ HDElectricCompany.com](#)

## Arc Analysis Software

ARCPRO 2.01 is a software program developed to calculate the thermal parameters of electrical arcs. The program is designed to aid in the selection of protective clothing by defining the potential arc hazard for workers who may be accidentally exposed to electrical arcs. The user can then specify clothing that will withstand the level of predicted arc hazards.

### features

- Easy to use Windows®-based format
- Clothing database
- Second degree burn criteria



ARCPRO 2.01

PART #	DESCRIPTION
ARCPRO2.01	Arc Analysis Software, Keyless Version, Includes Manual
ARCPRO-UPGRADE1	Upgrade of ArcPro Software from Version 1.0 to Version 2.01
ARCPRO-UPGRADE	Upgrade of ArcPro Software from Version 2.0 to Version 2.01

*Windows is a registered trademark of Microsoft Corporation*

[Search](#) ▶ [ARCPRO @ HDElectricCompany.com](#)





MODEL C/CC

MODEL M/CC



78790

## 12 Volt Lighting

Versa-Lite® Spot and Flood Lights offer a variety of portable emergency lights, ranging from a 50,000 candlepower floodlight to a 100,000 candlepower spotlight.

### features

- Magnetic base supplied on all units
- Straight cord or coil cord (depending on model)
- 12V power cord

PART #	DESCRIPTION
Model-C	50,000 CP Flood/100,000 CP Spot
Model-C/CC	50,000 CP Flood/100,000 CP Spot, CC
Model-CR	50,000 CP Flood/100,000 CP Spot, CC, R
Model-M	50,000 CP Flood/100,000 CP Spot, with Handle
Model-M/CC	50,000 CP Flood/100,000 CP Spot, with Handle, CC
Model-MR	50,000 CP Flood/100,000 CP Spot, with Handle, CC, R
100-00003-128	Bulb – Models C, M, CR, MR

Legend: CP - Candlepower, CC - Coil Cord, R - Ruggedized Rubber Housing with Booted Switch

[Search](#) ▶ Versa-Lite @ HDElectricCompany.com

## Disposable Hard Hat & Safety Lights

Rite-Lite® Hard Hat Lights conveniently attach to the hard hat with mounting strips or can be used as a hand held utility flashlight. The mounting strip allows for quick installation and removal. When the battery is exhausted, simply remove the light and replace with a new one. Rite-Lite Safety Lights have a multitude of uses within the power industry.

### features

- Compact and self-contained
- Contoured design fits hard hats and bump caps
- Provides a natural fit in your hand
- Ultrasonically sealed assembly won't leak
- Easy-to-use
- Long-life alkaline battery provides over 15 hours of burn time
- "Fly-Eye" reflector provides a bright, even flood of light
- Polycarbonate lens assists in focusing the light and protects the bulb from damage

PART #	DESCRIPTION
78790	Rite-Lite II, Alkaline – Includes Mounting Strips
VE-2X3	2" x 3" Pair Self-Adhesive Mounting Strips

• Rite-Lites are sold in multiples of 24 or 48 to a box

[Search](#) ▶ Rite-Lite @ HDElectricCompany.com

## Battery Powered Headlamps

Cyclops Headlamps mount on the hard hat and allow you to move quickly and efficiently with both hands free. The front mounted design and sealed battery compartment eliminate cumbersome external wiring and allows for the even distribution of weight across the forehead.

### features

- LED, halogen or long burn bulbs
- Secured to hard hat by rugged rubber strap
- Spot or wide angle reflectors
- Hinged base allows positioning at any angle
- 60 hours of burn time with LED bulb
- 8 hours of burn time with long burn bulb
- 5 hours of burn time with halogen bulb

### Cyclops LED (3-AAA) with LED & Rubber Strap

PART #	DESCRIPTION
CY3-LED	4 Setting LED Bulb (High/Med/Low/Flash), Batteries



CY3-LED

### Cyclops I (4-AA) with Rubber Strap

PART #	DESCRIPTION
CY1-HWB	Halogen Bulb, Wide Beam Reflector, Batteries
CY1-HSB	Halogen Bulb, Spot Beam Reflector, Batteries
CY1-HWN	Halogen Bulb, Wide Beam Reflector, No Batteries
CY1-HSN	Halogen Bulb, Spot Beam Reflector, No Batteries
CY1-LWB	Long Burn Bulb, Wide Beam Reflector, Batteries
CY1-LSB	Long Burn Bulb, Spot Beam Reflector, Batteries
CY1-LWN	Long Burn Bulb, Wide Beam Reflector, No Batteries
CY1-LSN	Long Burn Bulb, Spot Beam Reflector, No Batteries



CY1-HWB

### Cyclops II (2-AA) with Rubber Strap

PART #	DESCRIPTION
CY2-HWB	Halogen Bulb, Wide Beam Reflector, Batteries
CY2-HSB	Halogen Bulb, Spot Beam Reflector, Batteries
CY2-HWN	Halogen Bulb, Wide Beam Reflector, No Batteries
CY2-HSN	Halogen Bulb, Spot Beam Reflector, No Batteries
CY2-LWB	Long Burn Bulb, Wide Beam Reflector, Batteries
CY2-LSB	Long Burn Bulb, Spot Beam Reflector, Batteries
CY2-LWN	Long Burn Bulb, Wide Beam Reflector, No Batteries
CY2-LSN	Long Burn Bulb, Spot Beam Reflector, No Batteries



CY2-LSB

• All Cyclops come with rubber strap. Elastic strap available, contact HDE  
 • Parts are available for the Cyclops hard hat safety lights, contact HDE

[Search](#) ▶ Cyclops @ HDElectricCompany.com

# Controls and System Monitoring Products

HDE's comprehensive, innovative products for controlling and monitoring electricity help you manage system efficiencies and obtain maximum performance from the assets you operate. Whether controlling smart grid applications, managing current loading or collecting customer information, our capacitor controls provide you with the leading-edge products you need.



## VarCom® 3600 Series Capacitor Controls

VarCom 3600 Series Capacitor Controls switch Smart Grid capacitor banks using commands from Volt/VAR management systems with backup control based on local parameters of time of day, ambient temperature, kVAR, current and system voltage.

3600 Series controls monitor three phase voltages and currents and provide the ability to switch banks on a single phase basis for applications requiring this capability. The controls can be programmed from the front panel or by computer. Data can be collected and stored for up to 3 months which can be downloaded to analyze further. With field-ready upgradeable firmware capabilities, VarCom Capacitor Controls feature ComFlex® Flexible Communications Technology, allowing the user the option of deploying the control initially as a local control and later upgrading it with communications.

### features

- Monitors three phase voltages and currents
- CapCheck HV in situ capacitor unit testing, optional
- Single phase switching, optional
- Cap switch status inputs, optional
- Based on existing, field-proven design
- Best-in-class VarWare® control software user interface
- Multi-schedule local functionality – Time / Voltage / Temperature / kVAR / Current
- Local control default mode switches capacitor bank even when communications or Volt/VAR applications are off-line
- Easy to use, field friendly control panel
- Faceplate test points for line voltages and phase currents, optional
- DNP3.0/IEEE 1815 protocol
- ComFlex design – select the communications of your choice or field upgradeable at a later date with communications
  - Cellular Modem/Router
  - Mesh Radio
  - AMI Networks
  - Wide Area Networks
  - Fiber Optics
  - WiMAX
- Control provides 12VDC power to communications hardware
- Built-in 5 minute reclosing delay
- USB and RS-232 serial communication ports are standard
- Ethernet (multi-session capable), optional
- R-Comm® Bluetooth® short range wireless communications, optional
- Mounting – pole mount with Amphenol™ connectors
- Neutral current sensor option available to detect switch failures, blown fuses and other malfunctions (Supports HD Electric, Fisher Pierce® and Lindsey™ sensors)



VarCom 3600

PART #	DESCRIPTION
VCC-3600	Communicating Capacitor Control with kVAR, Time, Temperature, Current, Voltage Override, Multiple Schedules, Logging and ComFlex® Communications Ready, 3 Phase Capability (Line Current Sensor Required)

• See Accessories listed on page 45

• Amphenol™, Fisher Pierce® and Lindsey™ are trademarks of their respective owners

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## VarCom® 2600 Series Capacitor Controls

VarCom 2600 Series Capacitor Controls monitor and control capacitor banks using time of day, ambient temperature, system voltage, line current and line kVAR with overrides.

They can be programmed from the front panel or by computer, where a quantity of controls can be programmed quickly and identically. Data can be collected and stored for up to 3 months, which can be downloaded to analyze further. With field-ready upgradeable firmware capabilities, VarCom Capacitor Controls feature ComFlex® Flexible Communications Technology, allowing the user the options of purchasing the controls with communications hardware factory installed and ready to use or deploying the control initially as a local control and later upgrading it with communications.

### features

- Easy to use, field friendly control panel
- Based on existing, field-proven design
- Best-in-class user interface
- Multi-schedule local functionality – Time / Voltage / Temperature / Current / kVAR
- Neutral current sensing
- Local control default mode switches capacitor bank – even when communications or Volt/VAR applications are off-line
- Field upgradeable firmware
- Secure mode prevents front panel changes
- ComFlex design – select the communications of your choice
- Field upgradeable at a later date with communications – radio, modem, router, etc.
- Cellular, licensed and unlicensed radio networks through DNP 3.0 interface
- Control provides 12VDC power to communications hardware
- Built-in 5 minute reclosing delay
- USB and RS-232 equipped
- PC software allows data logs/profiles to be downloaded
- Data logging
- Mounting options available – pole, socket, etc.
- Ethernet, multi-session capable, optional
- Wireless communications capable
- Bluetooth® short range wireless communications from PC to control for programming, monitoring and downloading, optional



VarCom 2600 with Two-Way Communications

PART #	DESCRIPTION
VCC-2600	Communicating Capacitor Control with kVAR, Time, Temperature, Current, Voltage Override, Multiple Schedules, Logging and ComFlex® Communications Ready (Line Current Sensor Required)

• See Accessories listed on page 45

[Search](#) ▶ [VarCom @ HDElectricCompany.com](http://VarCom@HDElectricCompany.com)

## VarCom® 1600 Series Capacitor Controls

VarCom 1600 Series Capacitor Controls monitor and control capacitor banks using time of day, ambient temperature, system voltage.

They can be programmed from the front panel or by computer, where a quantity of controls can be programmed quickly and identically. Data can be collected and stored for up to 3 months, which can be downloaded to analyze further. With field-ready upgradeable firmware capabilities, VarCom Capacitor Controls feature ComFlex® Communications Technology, allowing the user the option of deploying the control initially as a local control and later upgrading it with communications.

### features

- Easy to use, field friendly control panel
- Based on existing, field-proven design
- Best-in-class user interface
- Multi-schedule local functionality – Time / Voltage / Temperature
- Neutral current sensing
- Local control default mode switches capacitor bank – even when communications or Volt/VAR applications are off-line
- Field upgradeable firmware
- Secure mode prevents front panel changes
- ComFlex design – select the communications of your choice
- Field upgradeable at a later date with communications – radio, modem, router, etc.
- Cellular, licensed and unlicensed radio networks through DNP 3.0 interface
- Control provides 12VDC power to communications hardware
- Built-in 5 minute reclosing delay
- USB and RS-232 equipped
- PC software allows profiles to be uploaded
- Data logging
- Mounting options available – pole, socket, etc.
- Ethernet, multi-session capable, optional
- Wireless communications capable
- Bluetooth® short range wireless communications from PC to control for programming, monitoring and downloading, optional



VarCom 1600 with Two-Way Communications

PART #	DESCRIPTION
VCC-1600	Communicating Capacitor Control with Time, Temperature, Voltage Override, Multiple Schedules, Logging and ComFlex Communications Ready

• See Accessories listed on page 45

[Search](#) ▶ [VarCom @ HDElectricCompany.com](#)

## VarCom® 950P Series Capacitor Controls

VarCom 950P Series Capacitor Controls are an economical way to control capacitor banks using paging, time and/or voltage.

They are fully programmable from the front panel eliminating the need for a computer. The smaller, compact design allows for easy installation in any configuration. These compact controls are available with FLEX Paging receivers.

### features

- Based on existing, field-proven design
- Best-in-class user interface
- Local control default mode never switches capacitor bank – even when communications or Volt/VAR applications are off-line
- Easy to use, field friendly control panel
- VHF/UHF paging for basic one-way communications
- Control provides power to communications hardware
- Built-in 5 minute reclosing delay
- Mounting options available – pole, socket, etc.



VarCom 950P with One-Way Pager Communications

PART #	DESCRIPTION
VCC-950P	Communicating Capacitor Control with Time, Voltage Override and Pager

• See Accessories listed on page 45

[Search](#) ▶ VarCom @ HDElectricCompany.com

## Accessories for All Capacitor Controls

PART #	DESCRIPTION
LCS-15	15kV Line Current Sensor
LCS-25	25kV Line Current Sensor
LCS-9610/20	20' Cable with Connector for Line Current Sensors
050-812025	USB/USB Communications Cable
050-USB	RS-232/USB Communications Cable
850-810025	RS-232/DB9 Communications Cable

### Simple One Way or Two Way Control

Communications technologies available include paging, cellular, licensed and unlicensed radio options. The communications function is modular for retrofits or changes in communications technologies.

- Cost effective
- Add or remove local VARs to meet overall system demands
- Available on all VarCom local controls
- Full local control functions and capabilities

### Control and Monitoring

Options include Sensus-Telemetric™ Radio, Silver Spring® eBridge Radio, Landis+Gyr Integrated Wangate Radio, Wide Area Network, Advanced Metering Infrastructure (AMI) networks or any DNP 3.0 communications interface. Two-way communications provides near real time control and monitoring of capacitor banks and the distribution systems they are connected to.

- Add or remove local VARs to meet overall system demands
- Can be used as a capacitor bank control and distribution system monitor
- Control status reporting including trouble indicated by high neutral current
- Full local control and override functions and capabilities
- Monitoring and control of other system parameters including voltage and power factor



Lindsey™ LCS Multicore Sensor



Piedmont Sensor



## NoMax® 2000 Series Capacitor Controls

NoMax 2000 Series Capacitor Controls set a standard for sophisticated automatic VAR and/or voltage control of distribution capacitor banks.

The 2000 Series Capacitor Controls can be fully programmed from the front panel or by computer. A quantity of controls can be programmed quickly and identically. VAR controls can monitor their own operation and record voltage, current and power factor for up to 6 months, which can then be downloaded to analyze further. The NoMax 2000 VAR Control works with current sensors from Lindsey™, Fisher-Pierce™ and Piedmont which can be setup and adjusted by computer.

NoMax Version 5 software with an RS-232 interface is included on the control to speed programming, download stored data and remotely monitor and control. For VAR controls, the software allows the user to choose the appropriate current sensor and enter the necessary sensor parameters including phase shift, conductor size and more.

### features

- Based on existing, field-proven design
- Operations counter and adjustable daily limit on operations
- Field adjustable time delay for all operations
- Automatic control or manual close and open
- Front panel accessible fuse and battery
- Software selected secure mode prevents unwanted field adjustments
- Easy field adjustment for vacuum or oil capacitor bank switches
- Surge protection on all inputs
- RS-232 Interface for programming, data logging and communications
- NoMax Version 5 software



NMC-2000

PART #	DESCRIPTION
NMC-2000	Capacitor Control with KVAR, Voltage Override, Logging (Line Current Sensor Required)

• See Accessories listed on page 45

[Search](#) ▶ NoMax @ HDElectricCompany.com

## NoMax® 1600 Series Capacitor Controls

NoMax 1600 Series Capacitor Controls monitor and control capacitor banks based on time of day, ambient temperature and/or system voltage.

The time control features a 365 day time clock with daily and/or seasonal schedules. Temperature override allows high or low temperatures to override the time control settings. Voltage override allows high or low voltages to override the time and temperature settings. The temperature and voltage settings can be programmed to be time independent or to allow different temperature and voltage set-points at different times of the day or year. This control provides maximum versatility for a variety of applications.

NoMax Version 5 software with an RS-232 interface is included on the control to speed programming, download stored data and remotely monitor and control. Data can be collected and stored for up to 6 months, which can then be downloaded to analyze further.

### features

- Based on existing, field-proven design
- Operations counter and adjustable daily limit on operations
- Field adjustable time delay for all operations
- Automatic control or manual close and open
- Front panel accessible fuse and battery
- Software selected secure mode prevents unwanted field adjustments
- Easy field adjustment for vacuum or oil capacitor bank switches
- Surge protection on all inputs
- RS-232 Interface for programming, data logging and communications
- NoMax Version 5 software



NMC-1600

PART #	DESCRIPTION
NMC-1600	Capacitor Control with Time, Temperature, Voltage Override, Multiple Schedules, Logging

• See Accessories listed on page 45

[Search](#) ▶ NoMax @ HDElectricCompany.com

## NoMax® 1300 Series Capacitor Controls

NoMax 1300 Series Capacitor Controls monitor and control capacitor banks based on time of day and/or system voltage.

The 1300 Series Capacitor Controls are fully programmable with four independent time schedules for seasonal changes or to block out portions of a day or year. Voltage override allows for high or low voltages to override the time schedules for applications where voltage regulation is important. Voltage sensing is RMS and is averaged over time so brief sags or spikes are ignored.

NoMax Version 5 software with an RS-232 interface is included on the control to speed programming, download stored data and remotely monitor and control. Data can be collected and stored for up to 6 months, which can then be downloaded to analyze further.

### features

- Based on existing, field-proven design
- Operations counter and adjustable daily limit on operations
- Field adjustable time delay for all operations
- Automatic control or manual close and open
- Front panel accessible fuse and battery
- Software selected secure mode prevents unwanted field adjustments
- Easy field adjustment for vacuum or oil capacitor bank switches
- Surge protection on all inputs
- RS-232 Interface for programming, data logging and communications
- NoMax Version 5 software



NMC-1300

PART #	DESCRIPTION
NMC-1300	Capacitor Control with Time, Voltage Override, Multiple Schedules, Logging

• See Accessories listed on page 45

[Search](#) ▶ NoMax @ HDElectricCompany.com

## NoMax® 950 Series Capacitor Controls

NoMax 950 Series Capacitor Controls are an economical way to control capacitor banks using time of day or voltage. The smaller, compact size allows for easy installation in any configuration. An intuitive design eases the task of field programming. The time control features a 365 day time clock with daily and/or seasonal schedules. Voltage override allows high or low voltages to override the time settings. The voltage settings can be programmed to be time independent or to allow different voltage set-points at different times of the day or year. This control provides maximum versatility for a variety of applications.

PART #	DESCRIPTION
NMC-950	Capacitor Control with Time and Voltage Override



NMC-950

## NoMax® 900 Series Capacitor Controls

NoMax 900 Series Capacitor Controls are an economical way to control capacitor banks using time of day, temperature or system voltage. The smaller, compact size allows for easy installation in any configuration. An intuitive design eases the task of field programming. The time control features a 365 day time clock with daily and/or seasonal schedules. Voltage override allows high or low voltages to override the time settings. The voltage settings can be programmed to be time independent or to allow different voltage set-points at different times of the day or year. This control provides maximum versatility for a variety of applications.

PART #	DESCRIPTION
NMC-900	Capacitor Control with Time, Temperature and Voltage Override



NMC-900

## NoMax® 900T Series Capacitor Controls

NoMax 900T Series Capacitor Controls are an economical way to control capacitor banks using time of day. An intuitive design enables the 900T Series to be fully field programmed from the front panel. The smaller, compact size allows for easy installation in any configuration. The time control features a 365 day time clock with daily and/or seasonal schedules.

PART #	DESCRIPTION
NMC-900T	Capacitor Control with Time Only



NMC-900T

• See Accessories listed on page 45



## Order Placement

Orders may be placed directly with HDE or an authorized HDE representative or distributor. HDE has a dedicated email address for orders – [orders@HDElectricCompany.com](mailto:orders@HDElectricCompany.com). Orders can also be sent by fax to (847) 473-4981. An acknowledgement will be sent upon receipt. If additional information is required, a response will be sent within 24 hours.

## Order Cancellations & Product Modifications

Order cancellation for a standard product will be accepted prior to shipment, subject to HD Electric Company approval. Order cancellation for a non-standard product will not be accepted after receipt and acceptance of the order. Modifications to an order or product specification may be subject to terms of cancellation.

## Minimum Order

\$100.00 minimum order (for orders less than \$100.00, an additional \$10.00 service charge is applicable).

## Sales & Other Tax

Customer is responsible for determining whether the products they are purchasing from HDE are subject to any federal, state or local sales, use, gross receipts, transaction privilege or other excise tax. If the purchase transaction is exempt from such taxes, Customer shall provide any applicable exemption documentation to HDE at the time Customer submits its purchase order to HDE. If the purchase transaction is taxable, Customer shall pay any and all taxes due on the transaction directly to the applicable taxing agencies. Upon written request, Customer shall reimburse HDE for any tax, penalties and interest that HDE is assessed as a result of the Customer not having timely paid tax due on the purchase transaction.

## Payment Terms

1% 10/Net 30 days, unless otherwise specified. 1% discount applies to open account cash payments only.

## Credit Cards Accepted

Visa/MasterCard/American Express (1% cash discount not applicable to credit card purchases).

## Freight Terms

Prices of all products listed herein are F.O.B. origin, prepaid and add, unless specified otherwise. Freight includes

shipping, handling and insurance. Orders will be shipped via Federal Express Ground, UPS Ground, collect motor freight or most economical means. Should a shipment become damaged in transit, immediately contact the carrier for inspection and have them issue an inspection report. The claim should then be filed with the carrier. On damaged shipments, keep the carton. Shortages must be reported within 7 business days of receipt of shipment.

## Price Policy

All prices and terms are subject to change without notice. Orders are accepted on the basis that they will be invoiced in U.S. dollars at the price and terms in effect on the date order is received.

## Volume Discounts

Volume discounts are available – contact HDE for details.

## Specifications

HDE reserves the right to change specifications without notice in regard to price, design, material, etc., and to improve performance and/or economy.

## Parts & Repairs

No discounts or commissions will be paid on repairs, replacements for units that are not repairable, or the sale of parts. Customer is responsible for shipping charges to HDE and back to their location for non-warranty repair items. For warranty merchandise, customer will be responsible for shipping charges if it has been established that merchandise has been damaged due to negligence, abuse, misuse, alteration, faulty installation or application by the Purchaser or Purchaser's agents or employees. Customers are subjected to a minimum evaluation charge in the event the merchandise is not repairable or the customer chooses not to repair.

## Return Policy

Authorization for return of equipment must be obtained from HDE. An inspection and electrical testing will be made before credit is granted. A minimum of 20% re-stocking charge will apply to all standard products returned for credit. A Return Authorization may be granted if requested within 30 days of the date of receipt and conditions specified are met. All shipping charges will be the sole responsibility of buyer. Discontinued items and specially manufactured equipment are not subject to return, as are orders so specified.

## Limitation of Warranty & Liability

This warranty applies to all products sold by HD Electric Company (the "Products"); provided, however, that the term Products does not include any third party products purchased through HD Electric Company, for which no warranties are made (the "Third Party Products"). Third Party Products may be subject to a separate manufacturer's warranty; [should you have any question regarding whether a separate warranty applies, please contact HD Electric Company].

**NOTICE:** READ THIS LIMITATION OF WARRANTY AND LIABILITY BEFORE BUYING OR USING THE PRODUCTS CONTAINED HEREIN.

It is impossible to eliminate all risks associated with the use of the Products. Risks of serious injury or death, including risks associated with electrocution, arcing and thermal burns, are inherent in work in and around energized electrical systems. Such risks arise from the wide variety of electrical systems and equipment to which Products may be applied, the manner of use or application, weather and environmental conditions or other unknown factors, all of which are beyond the control of HD Electric Company.

HD Electric Company does not agree to be an insurer of these risks.

WHEN YOU BUY OR USE THESE PRODUCTS, YOU AGREE TO ACCEPT THESE RISKS.

HD Electric Company warrants to the original purchaser that the Products (excluding any third party products purchased through HD Electric Company, for which no warranties are made) will be free from defects in material and workmanship, under normal use and regular service, and preventative maintenance for a period of one (1) year from the date of shipment (the "Warranty Period"). Should any failure to conform with this warranty be found during the Warranty Period, you must notify HD Electric Company of your claim within thirty (30) days of discovery, and within the Warranty Period. Your failure to give notice of claims of breach of warranty within the Warranty Period shall be deemed an absolute and unconditional waiver of claims for such defects. HD Electric Company will have no responsibility to honor claims received after the date the applicable Warranty Period expires.

Upon notice of your claim, HD Electric Company will provide a return authorization number, and further instructions on how to return the product for service. You must follow HD Electric Company's instruction. You are responsible for all Product removal, handling, re-installation, and shipping (both to and from HD Electric Company). Products returned for repair, as well as repaired or replacement Products shall be sent postage / freight prepaid. After receipt of a product which HD Electric Company determines is defective, HD Electric will, at its option, either (1) repair (or authorize the repair of) the Product or (2) replace the Product, subject to the following: The Products are made using parts sourced from a variety of manufacturers. Due to the rapidly changing technology environment, parts may become obsolete / unavailable over time (end of life). In the event that a Product cannot be repaired or replaced due to unavailability of parts, HD Electric Company will use commercially reasonable efforts to obtain substitute parts or conduct work around design, but cannot guarantee its ability to do so.

Items not found defective will be returned at your expense, or failing receipt of instruction from you on return of such items within five (5) business days of our notice to you that the product is not defective, HD Electric may dispose of the product at its discretion and with no liability to you. HD Electric Company's determination of defects is final. Products repaired or replaced during the Warranty Period shall be covered by the foregoing warranties for the remainder of the original Warranty Period or ninety (90) days from the date of delivery of the repaired or replaced Products, whichever is longer.

### Limitations:

This warranty is void in the event of misuse, alteration, faulty installation, or misapplication of the product.

This warranty does not cover failure of product or components due to any ACT OF NATURE; lightning, floods, hurricanes, tornadoes or any other such catastrophic events.

HD Electric Company does not warrant any third party products or associated hardware or their performance or suitability for use and application. Such items are provided "as-is".

All repairs must be authorized by HD Electric Company. Unauthorized repairs will not be reimbursed under any circumstances.

HD Electric Company is not required to make replacement or loaner equipment available while Products are being repaired or replaced, or to compensate you for any in/out labor charges or expenses associated with removal, handling or re-installation of the Products.

To the maximum extent permitted by law, this warranty and the remedies set forth above are exclusive and in lieu of all other warranties, remedies and conditions, whether oral or written, express or implied. HD ELECTRIC EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY AND NON-INFRINGEMENT.

IN NO EVENT SHALL HD ELECTRIC COMPANY BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THESE PRODUCTS. THIS SHALL INCLUDE BUT, NOT LIMITED TO, LOST PROFITS OR REVENUE, LOSS OF USE OF THE PRODUCTS, COST OF SUBSTITUTE PRODUCTS, FACILITIES OR SERVICES, OR DOWNTIME.

IN NO EVENT SHALL HD ELECTRIC COMPANY HAVE ANY LIABILITY FOR ANY THIRD PARTY PRODUCTS OR ASSOCIATED HARDWARE, OR CUSTOMER-OWNED SYSTEMS, EQUIPMENT OR SOFTWARE.

HD Electric Company must have prompt notice of any claim so that an immediate product inspection and investigation can be made. Buyer and all users shall promptly notify HD Electric Company of any claims, whether based on contract, negligence, strict liability, or other tort or otherwise be barred from any remedy.









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## HD ELECTRIC COMPANY

For over eighty years, HD Electric Company has provided products serving the diverse needs of the electric power industry and its related industries worldwide. Our continuous improvement and innovation in the areas of controlling, testing and measuring of electric power has resulted in the development of leading edge products designed to help you provide electric power to your customers safely and efficiently.

Acquired by Textron in 2013, HDE is headquartered in the Chicago metropolitan area and supports over 60 sales representatives worldwide; manages a field demonstration fleet; and maintains global support for its vast array of industry-proven products.



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