



CATALOG 2450

Instruments and Meters

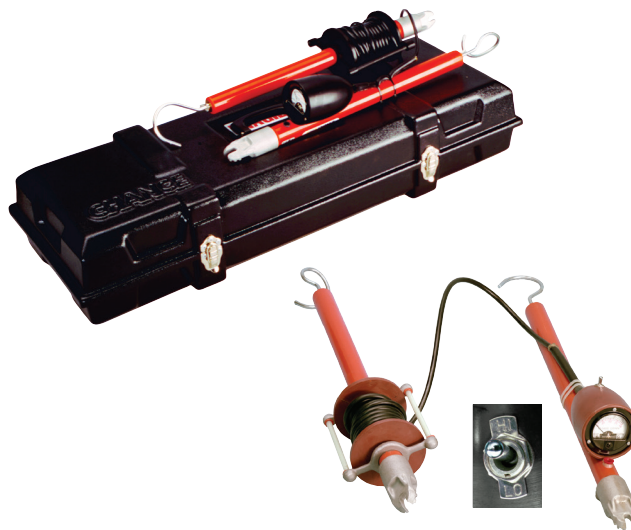


Analog Phasing Testers

For †Distribution Circuits

Features & Applications

- Determine phase relationships and approximate voltage, line-to-line or line-to-ground
- Feature two fiberglass poles with end fittings threaded for interchangeable probes
- Probe fittings couple with a high-impedance component encased in each pole
- To complete test circuit, a 22 ft. length of insulated flexible cable stores on reel affixed to one pole and connects to voltmeter on other pole
- Simple to operate, tester poles first attach to two 6 ft. Epoxiglas® insulating universal handles (included in each kit for proper working clearances)
- Probes can be brought into contact with conductors appropriate for the meter to read phase-to-phase or phase-to-ground voltage



Single-Range Units

- For convenience on different systems, toggle on dual-range units can switch calibration between two scales on meter face
- Can improve readability for low-end values on Hi scale
- Switched to Lo range, those values deflect needle more to give more finite readings for secondary and DC hi-potting
- To check instrument before and after each use, test-point jack in front of meter accepts plug from Phasing Meter Tester, next page

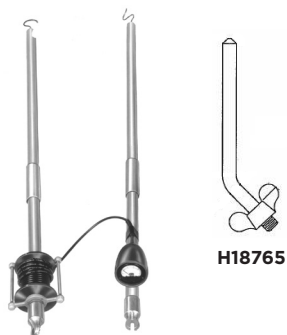


1 & 16 kV Unit



5 & 16 kV Unit

Dual-Range Meters



H18765

Extension Resistors, as installed



For URD testing, see Hi-Pot Adapters (page 2458) and Adapters for Elbows and Bushings (page 2472).

Distribution Phasing Testers

Single-Range Units

Catalog No.	Description	Weight
H1876	†16 kV Tester Kit*	27-1/2 lb./12.4 kg.
H18761	†16 kV Tester Hook Probes, Case and Manual	23 lb./10.4 kg.
T4032261	25 kV Tester Kit*	27-1/2 lb./12.4 kg.
H18767	40 kV Tester, Hook Probes, Case and Manual	23 lb./10.4 kg.

Dual-Range Units

T4030786	1 & †16 kV Tester Kit*	27-1/2 lb./12.4 kg.
T4032311	5 & †16 kV Tester Kit*	27-1/2 lb./12.4 kg.
T4032398	5 & †16 kV Tester Only	23 lb./10.4 kg.

Note: *Each kit includes two 6' x 1-1/4"-dia. Epoxiglas® universal handles with storage bag, tester, hook probes, case and instruction manual

†To extend any CHANCE 16 kV Phasing Tester for 48 or 80 kV applications, optional Extension Resistors simply thread on in the field

Extension Resistors

H18762	Pair of Extension Resistors for up to 80 kV (32" long)	6 lb./2.7 kg.
H18764	Pair of Extension Resistors for up to 48 kV (21" long)	4 lb./1.8 kg.
P6242	Bag for 48 kV Resistors	1 lb./0.5 kg.
P6244	Bag for 80 kV Resistors	1-1/4 lb./0.6 kg.

Accessories

H17601	Universal Pole 11/4" x 6' — Two Needed	1-3/4 lb./0.7 kg.
P6436	Bag for Two Poles	1 lb./0.5 kg.
H18763	Case only for Tester	2 lb./0.9 kg.
H18766P	Pigtail Hook Probe	1/4 lb./0.1 kg.
H18766S	Shepherd Hook Probe	1/4 lb./0.1 kg.
H18766	Straight Probe	1/8 lb./0.1 kg.
H18765	Angle Probe	1/8 lb./0.1 kg.

Distribution Analog Phasing Tester Kit

For Overhead and Underground Systems Dual Range: 5kV & 16kV Scales

Features & Applications

- Versatile for popular distribution voltages
- Facilitates testing both underground and overhead systems
- Basic functions include identifying phases and reading line-to-line or line-to-ground voltage
- URD accessories in the Kit also permit cable-fault detection via DC hi-potting
- Consists of high-impedance components encased in two fiberglass poles with threaded end fittings for overhead probes or URD adapters
- A 22 ft.-long cable connects to voltmeter pole and stores on reel pole



- To detect faults on URD cable, Hi-Pot Adapter converts AC source to DC pulse
- Effective field method quickly tests new, repaired or suspect spans



- To check instrument before and after use, Phasing Meter Tester lead plugs into test-point jack by meter
- Other lead clips onto each probe
- Switch on Meter Tester reverses polarity for thorough field-checking procedure
- Complete instructions included



- For convenience on different systems, toggle on meter housing can switch calibration between the two scales on meter face
- Improves readability for low-end values on the Hi (16 kV) scale
- Switched to Lo (5 kV) range, values deflect needle more to give more finite readings



Complete Kit includes:

Two 6' x 1-1/4"-dia. Epoxiglas® universal handles with storage bag, tester with instruction manual and two probes (shepherd hook and pigtail hook) in padded carrying case, plus four items below



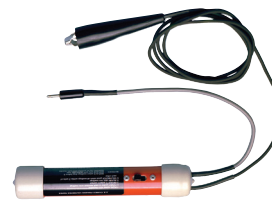
URD Accessories in Kit



One DC Hi-Pot Adapter & Instructions
C4031762



Two Bushing Adapters
T4030857



Phasing Meter Tester (with battery) in Kit
C4030838



H17601 Hotstick P6436 Bag

Ordering Information

Catalog No.	Description	Weight
T4032557	Phasing Tester Kit with 16kV Hi-Pot Adapter, 2 URD Bushing Adapters, Phasing Meter Tester	31-1/2 lb./ 14.2 kg.

Digital Phasing Testers

16kV and 40kV models, plus 80kV extensions

For Overhead & Underground

Display With Backlight, Hold and Sleep Modes

- Large direct-reading display
- Determine phase relationships and approximate voltage, line-to-line or line-to-ground
- Each tester consists of two fiberglass poles with end fittings threaded for interchangeable probes
- Probe fittings couple with high-impedance component encased in each pole
- To complete the test circuit, a 22 ft. length of insulated flexible cable stores on the reel affixed to one pole and connects to electronic display module on other pole
- Simple to operate, tester attaches to two 6 ft. Epoxiglas® insulating universal handles (included in each kit for proper working clearances)
- Probes can be brought into contact with conductors for tester to display phase-to-phase or phase-to-ground voltage
- Push button controls permit easy selection of options for display Backlight and Hold features
- When not in use, the unit's Sleep mode automatically conserves the battery



Large direct display with backlight and hold features



Basic Units:

Each Basic Unit Digital Phasing Tester includes the tester unit with meter and reel poles, a pigtail hook probe, a shepherd hook probe, instruction manual and hard shell padded case.

See next page for Tester Kits.

16kV Digital Phasing Tester Basic Unit
Cat. No. C4033369 (14 lb./6.4 kg.)

40kV Digital Phasing Tester Basic Unit
Cat. No. C4033370 (14-1/2 lb./6.6 kg.)

Hi-pot testing cannot be done with the 40kV unit.

Hi-Pot & Higher Voltage Test Accessories

- For underground cable hi-pot testing
- 16 kV Kit C4033402 includes a DC Hi-Pot Adapter on page 2455
- Hi-pot testing cannot be done with the 40 kV unit
- Both the 16 kV and 40 kV Kits include underground bushing and elbow adapters
- For overhead subtransmission systems, Extension Resistors are available as accessories specific to each Digital Phasing Tester



Extension Resistors as installed for testing up to 80kV



Available as accessories, Extension Resistors simply thread onto the Digital Phasing Tester in the field.

Digital Phasing Testers

For Overhead & Underground

Easy Verification Test

- To check instrument before and after use, Phasing Meter Tester lead plugs into test-point jack by meter
- Other lead clips onto each probe. Switch on Meter Tester
- Tester reverses polarity for thorough, easy field-checking procedure
- Complete instructions are included with each unit



16kV Digital Phasing Tester Kit Cat. No. C4033402 (22-1/2 lb./10.2 kg.)



C4033369
Digital
Phasing
Tester

C4031762
DC Hi-Pot
Adapter

T4030856
Elbow
Adapter

Two
T4030857
Bushing
Adapters

Two H17601
6-ft. x 1-1/4"-dia.
Epoxiglas® universal
poles in P6436 Bag

C4030838
Phasing Meter
Tester

40kV Digital Phasing Tester Kit Cat. No. C4033403 (21-1/2 lb./9.7 kg.)

Hi-pot testing cannot be done with the 40kV unit.



C4033370
Digital
Phasing
Tester

T4030856
Elbow
Adapter

Two
T4030857
Bushing
Adapters

Two H17601
6-ft. x 1-1/4"-dia.
Epoxiglas® universal
poles in P6436 Bag

C4030838
Phasing Meter
Tester

Extension Resistors for 16kV Digital Phasing Tester

H18762	Pair of Extension Resistors for up to 80 kV (32" long)	6 lb./2.7 kg.
H18764	Pair of Extension Resistors for up to 48 kV (21" long)	4 lb./1.8 kg.
P6242	Bag for 48 kV Resistors	1 lb./0.5 kg.
P6244	Bag for H18762 80 kV Resistors	1-1/4 lb./0.6 kg.

Accessories

H18766S	Shepherd Hook Probe	1/4 lb./0.1 kg.
H18766	Straight Probe	1/8 lb./0.1 kg.

Extension Resistors for 40kV Digital Phasing Tester

C4033371	Pair of Extension Resistors for up to 80 kV (21" long)	4 lb./1.8 kg.
P6242	Bag for C4033371 80 kV Resistors	1 lb./0.5 kg.

Note Use ONLY the Extension Resistors specified for each Digital Phasing Tester as listed on this page. Extension Resistors are NOT interchangeable between 16kV and 40kV Digital Phasing Testers.

Digital Phasing Testers for Transmission Circuits

Two models for up to 120 kV or 240 kV

Features & Applications

- Easily determine phase relationships
- Read approximate voltage (line-to-line or line-to-ground) on transmission circuits
- Feature two high-impedance components encapsulated in fiberglass poles, each with an end fitting threaded for interchangeable hook probes
- 22-ft.-long insulated flexible cable from voltmeter stores on reel on other pole
- Two complete kits offer a choice of voltage ranges for specific system applications
- Each kit includes a pair of 1-1/2"-dia. insulated handles for proper working clearances
- Individual items listed in each kit's bill of materials may be ordered separately by reference numbers given



Large direct display with backlight and hold features

Ordering Information

Catalog No.	Description	Weight
PSC4033465	10 - 120 kV Phasing Tester Kit:	40 lb./18.2 kg.
	(1) Instruction Manual	
	(1) PSE4033454 Phasing Tester (64" long)	22-1/2 lb.
	(2) C4030459 Handles (96")	10 lb.
	(1) P6218 Bag for Handles (108")	3-1/2 lb.
	(1) C4030460 Bag for Tester	3 lb.
PSC4033466	40 - 240 kV Phasing Tester Kit:	61 lb./27.7 kg.
	(1) Instruction Manual	
	(1) PSE4033455 Phasing Tester (102" long)	43-1/2 lb.
	(2) C4030459 Handles (96")	10 lb.
	(1) P6218 Bag for Handles (108")	3-1/2 lb.
	(1) C4030464 Bag for Tester	3 lb.
	(1) PSE40333473 Meter Tester	1 lb.



40 - 240 kV Digital Phasing Tester

Phasing Meter Tester

For Transmission Phasing Testers (pages 2456-2457)

PSE4033473
Phasing Meter Tester
for Transmission
Phasing Testers



Features & Applications

- Allows line personnel to determine, in the field, the operating condition of CHANCE instruments above
- Uses each instrument's own meter to display its operating condition
- Tester plugs into jack on instrument
- Meter readings are noted when tester's clip is contacted to each of instrument's two terminals and tester's polarity switch is in both of its positions
- Instrument is in proper working order if all four readings are within two units
- Pulling plug from jack automatically disconnects tester's battery
- 9-volt battery, furnished, usually lasts one year and is easily replaced
- Tester's durable and compact fiberglass housing will withstand abuse of field applications



10 - 120 kV Digital Phasing Tester

C4030459
96" Epoxiglas®
Handles

Catalog No.	Description	Weight
PSE4033473	Phasing Meter Tester with leads and battery	1 lb./ 0.5 kg.

Analog Phasing Testers

Three kits for Transmission Circuits

Features & Applications

- Determine phase relationships
- Read approximate voltage (line-to-line or line-to-ground) on transmission circuits
- Features high-impedance components encapsulated in fiberglass poles, each with an end fitting threaded for interchangeable hook probes
- 22' long insulated flexible cable from voltmeter stores on reel on other pole
- Three complete kits offer a choice of voltage ranges for specific system applications. Each kit includes a pair of 1-1/4"-dia. insulated handles for proper working clearances
- Individual items listed in each kit's bill of materials may be ordered separately by reference numbers given

Ordering Information

Catalog No.	Description	Weight
C4030457	69-120 kV Phasing Tester Kit:	39 lb./17.7 kg.
	(1) Instruction Manual	
	(1) E4030498 Tester (62" long)	22-1/2 lb.
	(2) C4030459 Handles (96")	10 lb.
	(1) P6218 Bag for Handles (108")	3-1/2 lb.
C4030458	69-161 kV Phasing Tester Kit:	44 lb./20 kg.
	(1) Instruction Manual	
	(1) E4030499 Tester (75" long)	27-1/2 lb.
	(2) C4030459 Handles (96")	10 lb.
	(1) P6218 Bag for Handles (108")	3-1/2 lb.
T4032781	69-240 kV Phasing Tester Kit:	60 lb./27.2 kg.
	(1) Instruction Manual	
	(1) E4032780 Tester (98" long)	43-1/2 lb.
	(2) C4030459 Handles (96")	10 lb.
	(1) P6218 Bag for Handles (108")	3-1/2 lb.
	(1) C4030464 Bag for Tester	3 lb.



C4030459
96" Epoxiglas®
Handles

Analog
Transmission
Phasing Tester



Phasing Meter Tester

For Transmission Phasing Testers (pages 2456-2457)

Features & Applications

- Allows line personnel to determine, in the field, the operating condition of CHANCE instruments above
- Uses each instrument's own meter to display its operating condition
- Tester plugs into jack on instrument
- Meter readings are noted when tester's clip is contacted to each of instrument's two terminals and tester's polarity switch is in both of its positions
- Instrument is in proper working order if all four readings are within two units
- Pulling plug from jack automatically disconnects tester's battery
- 9-volt battery, furnished, usually lasts one year and is easily replaced
- Tester's durable and compact fiberglass housing will withstand abuse of field applications

Catalog No.	Description	Weight
PSE4033473	Tool with leads and battery	1 lb./0.5 kg.



D.C. Hi-Pot URD Test Adapters

Features & Applications

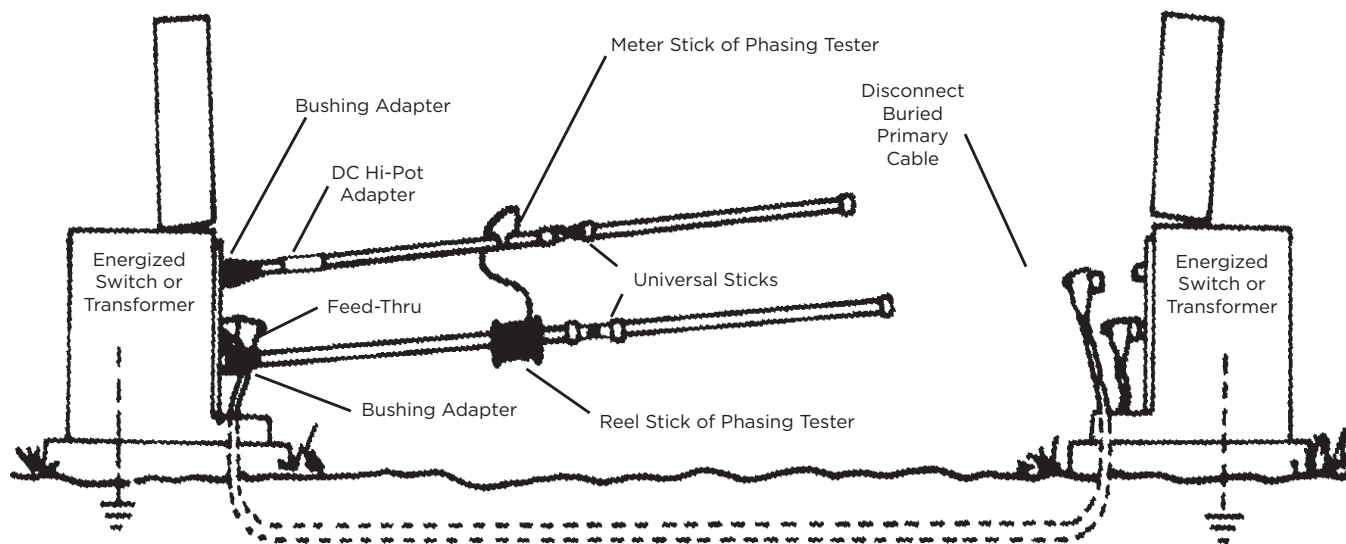
- Work with CHANCE Phasing Tool H1876 (page 2452) for metered readout
- For quick, reliable fault detection on underground cables
- Two units are available for phase-to-phase system voltages up to 16 kV or 35 kV
- By converting AC source voltage to a rectified half-wave, these adapters permit testing of cables with a potential level equal to peak source voltage
- Field-effective method proves especially beneficial for:
 - Testing new cable before initial energizing
 - Testing repaired cable before re-energizing
 - Testing suspect cable spans for faults
- Brass male fitting inside larger end threads onto the meter probe of phasing tool
- For testing and subsequent discharging, brass female fitting at smaller end accepts CHANCE Elbow Adapters or Bushing Adapters for 15 through 35 kV (page 2455)
- Illustrated instruction booklet is included
- Units contain high-voltage rectifiers encapsulated in CHANCE orange 1-1/4" and 1-1/2" dia. Epoxiglas® housings



Hi-Pot Adapters measure only 13" in length for 35 kV unit, and 10" for 16 kV unit, far right.

Catalog No.	Description	Weight, each
C4031762	*16 kV Hi-Pot Adapter	1 lb. / 0.5 kg.
C4031763	*35 kV Hi-Pot Adapter	1-1/4 lb. / 0.6 kg.

*Maximum phase-to-phase system voltage.



Phase Rotation Tester

Features & Applications

- To determine the correct phase-rotation relationship, this portable instrument features construction similar to Phasing Tester H18761, page 2452
- An additional grounding circuit on the Phase Rotation Tester sets it apart for phase rotation testing
- Tester consists of two fiberglass poles with end fittings threaded for interchangeable probes
- Probe fittings couple with a high-impedance component encased in each pole
- 22 ft. length of insulated cable stores on reel affixed to one pole and connects to voltmeter on other pole
- Grounding terminal below the meter permits connection to a known ground for proper operation
- To check instrument before and after each use, a test-point jack in front of meter accepts the plug from Phasing Meter Tester C4030838, shown on page 2457



Application Range

- Attaches to Epoxiglas® Universal Poles of proper length for voltage being worked
- Meter displays up to 16 kV alone
- Can also read circuits through 80 kV with the thread-on Extension Resistors



Catalog No.	Description	Weight, each
H1879	Phase Rotation Tester, 16 kV, with Case	23 lb. / 10.4 kg.
H18762	Pair of Extension Resistors for through 80 kV, Length: 43"	6 lb. / 2.7 kg.
H18764	Pair of Extension Resistors for through 48 kV, Length: 25"	4 lb. / 1.8 kg.
H17601	Universal Pole, 1-1/4" x 6', Two Needed	1-3/4 lb. / 0.7 kg.
P6436	Bag for Two Universal Poles	1 lb. / 0.5 kg.
P6242	Bag for 48 kV Extension Resistors	1 lb. / 0.5 kg.
P6244	Bag for 80 kV Extension Resistors	1-1/4 lb. / 0.6 kg.
H18763	Carrying Case Only for Tester	2 lb. / 0.9 kg.

Wireless Phasing Set (WPS)

Phasing Mode Range: 480V up to 765kV
 ARVI Mode Range: Cap. Test Point up to 765kV

Features & Applications

- Dual mode unit - Wireless Phasing Set (WPS) and full range Auto-Ranging Voltage Indicator (ARVI)
- WPS mode for determining phase relationship between two conductors with same nominal voltage
- ARVI mode to determine approximate voltage class of energized conductor
- Bright LEDs and audible alarm indicate in-phase or out-of-phase (WPS mode) and voltage class (ARVI mode)
- For use on 50/60Hz overhead and underground systems with proper adapters
- For use with hot sticks only



Design Features

- Wireless main and probe units have a range of approximately 300 ft
- Battery drawer does not require removal of front panel for replacement of batteries
- Requires two AA batteries for each unit
- Works with elbow and bushing adapters for URD applications



Operation

- To use in the ARVI mode, only turn on the main unit by depressing the power button. The main will go into ARVI mode when the yellow ARVI mode LED turns solid
- To use in the WPS mode, turn on both the main and probe units by depressing the power buttons on both units. The blue comm LEDs will turn solid when the units are linked

Optional Field Tester

- The WPS can be field tested in ARVI mode with the PSC4033582 Voltage Indicator Tester



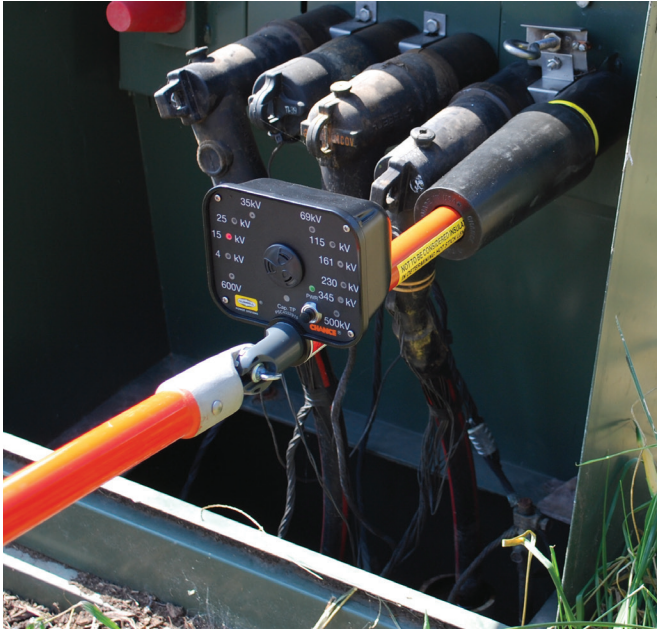
Orange Bag

Hard Case
(sold separately)

Catalog No.	Description	Weight, each
PSC4032916	Wireless Phasing Set with Orange Bag	10 lb./4.5 kg.
PSC4033926	Wireless Phasing Set with Hard Case	13 lb./5.9 kg.
PSC4033811	Hard Case Only	6 lb./2.7 kg.

Full Range (600V-500kV) Auto-Ranging Voltage Indicator (ARVI)

This model is capable of these three test methods



**URD Voltage Presence Test
with Bushing Adapter and your feed-thru device**



**URD Capacitance Test
with Straight Probe on Elbows with Test Points**



**Overhead Voltage Presence Test
with Shepherd Hook Probe**

Full Range (600V-500kV) Auto-Ranging Voltage Indicator (ARVI)

Complies with OSHA 1910.269 to Test for Absence of Nominal Voltage

- 600V to 500kV
- For Overhead and URD Systems

Bright display lights indicate voltage class

This smart new-generation instrument makes hot-line voltage testing easier than ever. Its state-of-the-art electronics eliminate the need for a selector switch. Its automatic-ranging function quickly displays the **approximate phase-to-phase voltage class**. It provides an easy, reliable means for the operator to determine if a line is:

- De-energized, or
- Carrying less than normal system voltage from any source or induced voltage from an adjacent live circuit, or
- Energized at full system voltage.

Simple to operate, the tester attaches to an Epoxiglas® insulating universal hot stick of appropriate length to maintain proper OSHA working clearances. A single push button activates the instrument, then a single light indicates either Power On (by glowing solid) or Low Battery (by blinking). With a good battery condition, the instrument performs a confirming self-test by illuminating each of the 12 indicator lights in series while emitting an **alternating audible signal**.

Then the probe can be brought into contact with the conductor. It automatically begins detecting at approximately 100V and holds the display of one of these phase-to-phase voltage classes: 600V, 4kV, 15kV, 25kV, 35kV, 69kV, 115kV, 161kV, 230kV, 345kV or 500kV. The audible signal begins as a slow beeping that becomes faster as the reading is increased.

When not in use, the unit's energy-saving Sleep mode automatically conserves the battery.



Large easy-to-read display activates each red light, one at a time, beginning at the low end and finally holds on the light for the phase-to-phase voltage class detected.



This model adapts to both overhead lines as well as URD circuits with 200 and 600 Amp elbows, including those with and without capacitance test-points. Interchangeable probes and adapters just thread into the ARVI end fitting and test point (T.P.) setting appropriate to each application. Furnished owner's manual illustrates operating details for all models.

... continued on next page ...



Distribution / Transmission ARVI (Auto-Ranging Voltage Indicator)
Cat. No. PSC4032915 (4-1/2 lb./2.0 kg.)

Includes the tester unit, a shepherd hook probe, a straight probe, instruction manual and hard shell padded case.



Voltage Indicator Tester PSC4033582

MUST BE ORDERED AS A SEPARATE ITEM

Plug-in jack on Full-Range ARVI housing permits line personnel to quickly verify its operable condition with Voltage Indicator Tester (Cat. No. PSC4033582) before and after each use.

Accessories

H18766S	Shepherd Hook Probe	0.3 lb./0.1 kg.
H18766	Straight Probe	0.1 lb./0.1 kg.
T4030428	15kV only Bushing Adapter	0.5 lb./0.2 kg.
T4030856	15 - 35kV Elbow Adapter	1 lb./0.4 kg.
T4030857	15 - 35kV Bushing Adapter	1.6 lb./0.7 kg.

Distribution Auto-Ranging Voltage Indicator (ARVI)

Complies with OSHA 1910.269 to Test for Absence of Nominal Voltage

- 600V to 69kV
- For Overhead & Underground

Bright Display Lights Indicate Voltage Class

- Makes hot-line voltage testing easier than ever
- State-of-the-art electronics eliminate need for selector switch
- Automatic-ranging function quickly displays approximate phase-to-phase voltage class
- Provides easy, yet reliable means for operator to determine if a line is:
 - De-energized, or
 - Carrying less than normal system voltage from any source or induced voltage from an adjacent live circuit, or
 - Energized at full system voltage
- Simple-to-operate tester attaches to an Epoxiglas® insulating universal handle of appropriate length to maintain proper OSHA working clearances
- Single push button activates the instrument, then a single light indicates either Power On (by glowing solid) or Low Battery (by blinking)
- With good battery condition, instrument performs a confirming self-test
- It does this by illuminating each of the six indicator lights in series while emitting an alternating audible signal
- Then the probe can be brought into contact with the conductor
- It automatically begins detecting at approximately 480 Volts and holds display of one of these voltage classes: 600 V, 4 kV, 15 kV, 25 kV, 35 kV or 69 kV phase-to-phase
- Audible signal begins as a slow beeping, becoming faster as final reading is displayed
- When not in use, unit's energy-saving Sleep mode automatically conserves battery

Overhead & Underground Capabilities

- For overhead testing, a Shepherd Hook probe is included with the Basic ARVI (Auto-Ranging Voltage Indicator)
- For underground testing, Elbow Adapter T4030856 and

Bushing Adapter T4030857 are included

- They simply thread onto the ARVI in the field to check for voltage at switch bushings or elbows on cables, using a feed-thru device

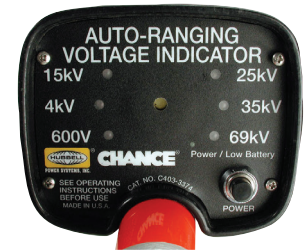


Basic ARVI for Overhead Applications
Catalog No. C4033374 (5-1/2 lb./2.5 kg.)

Includes the tester unit, a shepherd hook probe, instruction manual and hard shell padded case.



ARVI Auto-Ranging Voltage Indicator



Large easy-to-read display activates each red light, one at a time, beginning at the low end and finally holds on the light for the phase-to-phase voltage class detected.



ARVI Auto-Ranging Voltage Indicator



Bushing Adapter T4030857 for 15, 25, 35kV



Elbow Adapter T4030856 for 15, 25, 35kV



Voltage Indicator Tester C4033409



ARVI Kit for Overhead and Underground
Catalog No. T4033418 (16-1/4 lb./7.4 kg.)
Includes the tester unit, shepherd hook probe, elbow adapter, bushing adapter, voltage indicator tester, instruction manual and hard shell padded case.

Accessories

H18766S	Shepherd Hook Probe	1/4 lb. / 0.1 kg.
H18766	Straight Probe	1/8 lb. / 0.1 kg.

Transmission Auto-Ranging Voltage Indicator (ARVI)

Complies with OSHA 1910.269 to Test for Absence of Nominal Voltage

- 600V to 500kV
- For Overhead and URD Systems

Bright Display Lights Indicate Voltage Class

- Makes hot-line voltage testing easier than ever
- State-of-the-art electronics eliminate need for selector switch
- Automatic-ranging function quickly displays approximate phase-to-phase voltage class
- Provides easy, yet reliable means for operator to determine if a line is:
 - De-energized, or
 - Carrying less than normal system voltage from any source or induced voltage from an adjacent live circuit, or
 - Energized at full system voltage
- Simple-to-operate tester attaches to an Epoxiglas® insulating universal handle of appropriate length to maintain proper OSHA working clearances
- Single push button activates the instrument, then a single light indicates either Power On (by glowing solid) or Low Battery (by blinking)
- With good battery condition, instrument performs a confirming self-test
- It does this by illuminating each of the six indicator lights in series while emitting an alternating audible signal
- Then the probe can be brought into contact with the conductor
- It automatically begins detecting at approximately 69 kV and holds display of one of voltage classes: 69 kV, 115 kV, 161 kV, 230 kV, 345 kV or 500 kV phase-to-phase
- Audible signal begins as a slow beeping, becoming faster as final reading is displayed
- When not in use, unit's energy-saving Sleep mode automatically conserves battery



Large easy-to-read display activates each red light, one at a time, beginning at the low end and finally holds on the light for the phase-to-phase voltage class detected.



Voltage Indicator Tester C4033431

MUST BE ORDERED AS A SEPARATE ITEM



Plug-in jack on Tester meter housing permits line personnel to quickly verify its operating condition with a Voltage Indicator Tester (Cat. No. C4033431) before and after each use.



**Transmission ARVI
(Auto-Ranging Voltage Indicator)
Cat. No. C4033375 (5-1/2 lb./2.5 kg.)**

Includes the tester unit, a shepherd hook probe, instruction manual and hard shell padded case.



Accessories

H18766S	Shepherd Hook Probe	1/4 lb. / 0.1 kg.
H18766	Straight Probe	1/8 lb. / 0.1 kg.

2450 - INSTRUMENTS AND METERS
Multi-Range Voltage Detector

Lighted-dial model for systems through 40 kV

Easier-To-Read, illuminated Dial

- The lighted-dial option sets this unit apart from standard features on Multi-Range Voltage Detector (MRVD) C4030979, shown on next page
- A long-life bulb, powered by included internal battery, gives a glow to the meter face so scale is easy to read in most conditions
- To conserve the battery, a special switch locks the light off when not in use
- Spring-loaded toggle must be pulled up to move it over the stop between its on and off positions
- This helps keep switch from being flipped on accidentally while unit is not in use



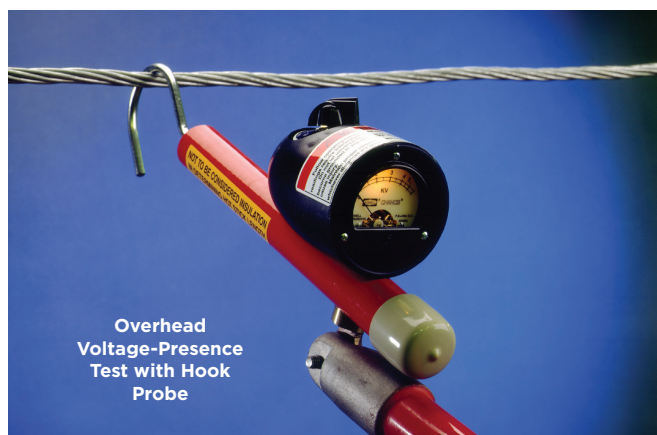
Light Switch



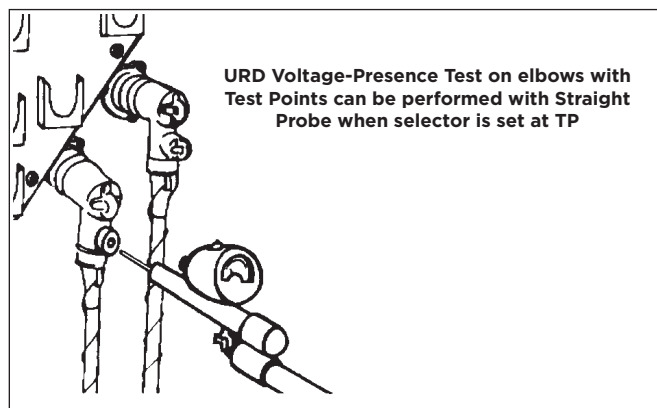
Self-test Button

Standard Features

- Confirms a line is de-energized prior to performing maintenance
- A field intensity meter, it is calibrated to read approximate phase-to-phase voltage when connected to any phase conductor
- Responds to magnitude of field gradient between its end probe and floating electrode (at the universal hotstick-attachment fitting)
- If the universal fitting is close to a ground, another phase or another voltage source, reading should be high
- If it's close to a jumper or equipment of the same phase, the reading should be low
- Gives metered readout capable of distinguishing actual line voltage from static or feedover from an adjacent line
- Numerical readings can be compared with numerical rather than subjective judgments associated with "fuzz sticking" or "glow-detecting"
- Since it is not a voltmeter, no specific accuracy is claimed by the manufacturer or can be assumed by the user



Overhead Voltage-Presence Test with Hook Probe



URD Voltage-Presence Test on elbows with Test Points can be performed with Straight Probe when selector is set at TP

Operation

- Must be mounted on proper length hotstick for the voltage class involved
- Complete instructions are furnished with easy, illustrated step-by-step procedures
- Internal circuit and push button permit check before and after each use to confirm operational condition of instrument and battery

Includes:

- Straight probe for URD elbows with test points
- Hook probe for overhead uses
- Instructions and storage case



Accessories

H18766S	Shepherd Hook Probe	1/4 lb. / 0.1 kg.
H18766	Straight Probe	1/8 lb. / 0.1 kg.

Catalog No.	Scale	Weight
T4033228	1 - 40 kV	5-1/2 lb. / 2.5 kg.

Multi-Range Voltage Detectors

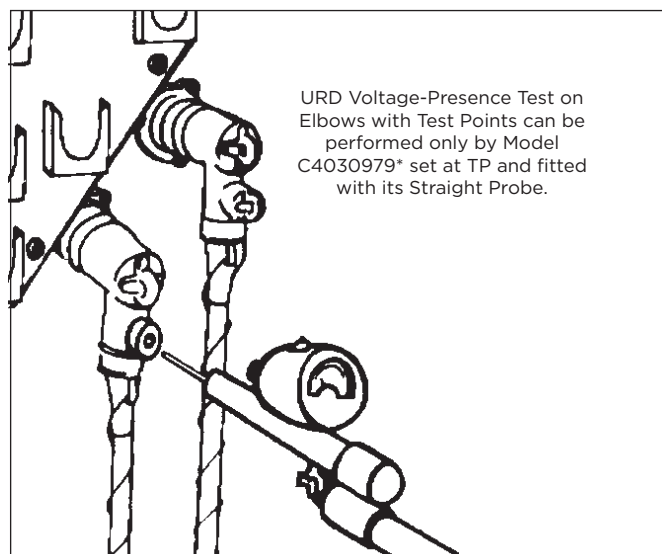
For Overhead Systems to 600 kV and URD Elbow Test Points*

Design Features

- Confirms a line is de-energized prior to performing maintenance
- A field intensity meter, it is calibrated to read approximate phase-to-phase voltage when connected to any phase conductor
- Responds to magnitude of field gradient between its end probe and floating electrode (at the universal hotstick-attachment fitting)
- If the universal fitting is close to a ground, another phase or another voltage source, reading should be high
- If it's close to a jumper or equipment of the same phase, the reading should be low
- Gives metered readout capable of distinguishing actual line voltage from static or feedover from an adjacent line
- Numerical readings can be compared with numerical rather than subjective judgments associated with "fuzz sticking" or "glow-detecting"
- Since it is not a voltmeter, no specific accuracy is claimed by the manufacturer or can be assumed by the user

Operation

- Must be mounted on proper length hotstick for the voltage class involved
- Complete instructions are furnished with easy, illustrated step-by-step procedures
- Internal circuit and push button permit check before and after each use to confirm operational condition of instrument and battery



Self-test Button

Overhead Voltage-Presence Test can be performed by all models. **Switch on C4030979* includes Test Point.**



C4030979*



C4031029 or C4031140

Ordering Information

Distribution and Transmission Multi-Range Voltage Detectors

Catalog No.	Scales	Weight
C4030979*	1 - 40 kV	5-1/2 lb./2.5 kg.
C4031029	16 - 161 kV	5-1/2 lb./2.5 kg.
C4031140	69 - 600 kV	5-1/2 lb./2.5 kg.

Note: *For testing URD elbows with test points, only model C4030979 on this page includes straight probe and "TP" setting on selector switch (as well as hook probe for overhead uses).

For other URD models and Accessories, see next page.

2450 - INSTRUMENTS AND METERS
Multi-Range Voltage Detectors

For Overhead & URD Systems to 40 kV

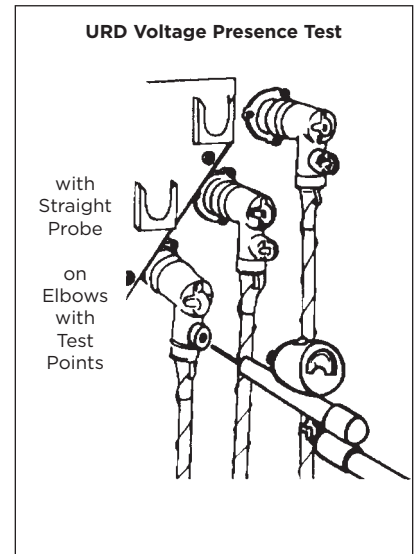
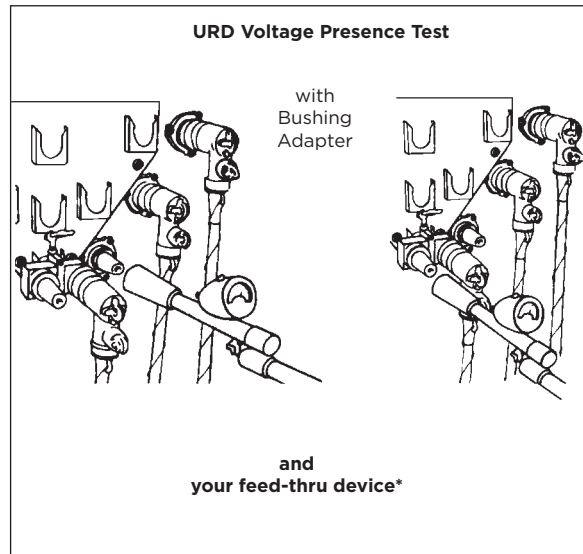
Features & Applications

- Test both overhead and underground distribution systems
- For systems in voltage classes from 5 through 40 kV
- Provide easy, yet reliable means for operator to determine if a line is:
 - De-energized, or
 - Carrying less than normal system voltage from any source or induced voltage from an adjacent live circuit, or
 - Energized at full system voltage
- Adapt to both overhead lines as well as URD circuits with 200 and 600 Amp loadbreak elbows including those with and without capacitive test points
- Interchangeable probes and adapters thread into the MRVD end fitting and the selector switch dials to the voltage range or test point (T.P.) setting appropriate to each application
- Furnished owner's manual illustrates operating details for all models



T4032271
 for Overhead and for URD Loadbreak Elbows

This model is capable of these three tests:



**Elbow Adapter also furnished to complete test when not using a feed-thru bushing device.*

Ordering Information

5-15-25-40 kV Multi-Range Voltage Detector with TP Setting for Test Point on URD Elbows

Catalog No.	Description	Weight
T4032271	MRVD, Hook & Straight Probes, Elbows & Bushing Adapters, Case	6 lb. / 2.7 kg.

Accessories

H18766S	Shepherd Hook Probe	1/4 lb. / 0.1 kg.
H18766	Straight Probe	1/8 lb. / 0.1 kg.



Self-test Button

Multi-Range Voltage Indicator (MRVI)

Capacitive Test Point up to 80kV phase-to-phase – Bluetooth connectivity for mobile device

CHANCE® Lineman Grade Tools™ introduces the Transmission Multi-Range Voltage Indicator (TMRVI), used to determine if power lines are at rated voltage, have induced voltage or are de-energized. Must be used with properly selected universal hot stick, even with rubber gloves.

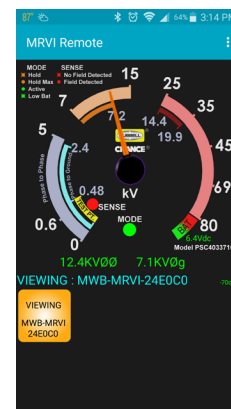
Features & Applications

- Visible and audible voltage indicator with range from Capacitive Test Point up to 80kV Phase-to-Phase
- Bluetooth Connectivity to view MRVI display live on a mobile device
- Mobile app displays the meter face and approximate phase-to-phase and phase-to-ground voltages
- Large, easy-to-read dial face and brightly illuminated pointer indicate the approximate phase-to-phase and phase-to-ground voltage
- Can be used on overhead and underground lines with proper adapters



Design Features

- New battery drawer does not require removal of front panel for replacement of batteries
- Requires four AA batteries
- Comes with storage bag designed with snaphook for suspending from belt or in storage
- Lightweight
- Works with elbow and bushing adapters for URD applications



Mobile Device Display

Operation

- To turn on the meter, press the power switch until the meter lights turn on and audible tone is heard
- The needle will fully deflect to show the condition of the batteries
- The needle will then go back to the zero and the sense light will blink indicating the MRVI is ready to take a reading
- Hold mode can also be selected by depressing the power button twice in quick succession
- Optional mobile app can be downloaded from the Google Play or Apple iTunes store



Snaphook on each bag

- For suspending from belt or in storage
- Leather reinforced tab is stitched to the back of each bag



Optional Field Tester

- The proximity voltage indicator can be field tested with the Voltage Indicator Tester PSC4033582

Catalog No.	Application	Weight
PSC4033710	Multi-Range Voltage Indicator and Bag	1.3 lb./0.6 kg.
PSC4033925	Multi-Range Voltage Indicator and Hard Case	1.3 lb./0.6 kg.

- Dual Range
- Audible & Visible Indicators

Features & Applications

- Lights blink and alarm sounds when placed in electrostatic field above trigger threshold
- Five flashing red lights alert the operator
- High-pitched tones also signal nearby personnel of present voltage that could be dangerous when applying temporary grounds or performing maintenance
- Can be used to check overhead lines, in substations and around switchgear
- Simply slips over the head of a standard 1-1/4"-diameter disconnect stick
- May be used on a CHANCE Grip-All clampstick, universal, telescoping or positive-grip hot line stick fitted with a special adapter (see table below)

Design Features

- Handy three-way switch permits selection of either the 1 - 100 kV or the 100 - 800 kV range for circuit being tested
- Turns off unit to save the battery when not in use
- 9-Volt alkaline battery readily installs by removing two knurl-head screws and sliding off the instrument cover
- Test button checks both the battery and the tester
- Depressing button activates signal circuits, sounding the tone and lighting the alarm lamps if the battery is good and unit operable
- Comes with instructions packed in lined, reinforced case with carrying handle

Phase-to-Phase versus Response Distance

kV	(1 - 100kV Range) Distance - inches	(100 - 800kV Range) Distance - inches
2.0.....	0	
13.8.....	4	
25.0.....	12	
34.5.....	19.....	1
69.....	39.....	3
115.....	.....	7
161.....	.....	10
230.....	.....	20
345.....	.....	26
525.....	.....	44

WARNING: Instrument damaged by touching 33kV or higher.

Note: Super Tester will not detect any voltage on cable with metallic sheath or semiconductive coating. Super Tester does not discriminate between induced and line voltage types. Device signals in the presence of either and the operator must determine which type before following utility safety working practices for engaging energized conductors.

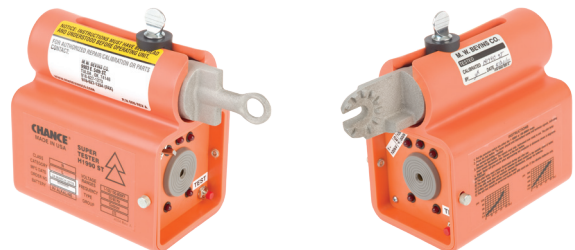


Operation

- Turn on tester with selector switch for voltage range required
- Check battery and unit by pushing "Test" button
- If tone volume is not clear or indicator lights are not bright, replace battery and recheck
- Mount tester on proper hot line tool
- For maximum-strength signals, place the tester within following minimum proximity to the circuit being tested

Ordering Information

Catalog No.	Description	Weight
H1990ST	Super Tester, battery, plastic case	4-3/4 lb. / 2.1 kg.
M445598 (Catalog Section 2100)	Super Tester Adapter for Grip-All, Universal, Telescoping or Positive-Grip hot line tools	5 oz. / 0.1 kg.



M445598 Adapter fits into Super Tester either way so you can use it on a Grip-All clampstick or on a splined fitting of Universal, Telescoping or Positive-Grip hot line sticks.

Proximity Voltage Indicator (PVI)

600V to 500kV - Audible & Visible Indicators

Features & Applications

- Bright display lights and audible alarm indicate voltage class without need to directly contact the conductor
- The class displayed is the approximate phase-to-phase voltage class
- Used to determine if power lines are at rated voltage, have induced voltage or are de-energized
- Designed as a non-contact Voltage Indicator
- Must be used with properly selected universal hot stick, even with rubber gloves
- Designed to be held 6 to 18 inches away from conductor being tested for presence of voltage
- Advanced feature allows user to temporarily disable range indications for voltages below the user selected range

Design Features

- New battery drawer does not require removal of front panel for replacement of batteries
- Requires two AA batteries
- Comes with storage bag designed with snaphook for suspending from belt or in storage
- Lightweight, 1.25lbs versus the 4.75lbs of the Super Tester

Operation

- To turn on the meter, press the power switch until the audible tone is heard
- Each LED will light up individually from the lowest to highest and then the alarm
- Bring the indicator within 6 to 18 inches of the line to be measured
- Below 480 volts, the indicator may need to be 6 inches or less away from the line
- Once an electrical field is detected, the range indications will increase as you approach the conductor
- As the voltage field intensity increases, the Proximity "SENSE" LED, Range LED and audible alarm will flash and beep faster



Optional Field Tester

- The proximity voltage indicator can be field tested with the Voltage Indicator Tester PSC4033582



Catalog No.	Application	Weight
PSC4033737	Proximity Voltage Indicator and Bag	1.3 lb. / 0.6 kg.



Snaphook on each bag

- For suspending from belt or in storage
- Leather reinforced tab is stitched to the back of each bag

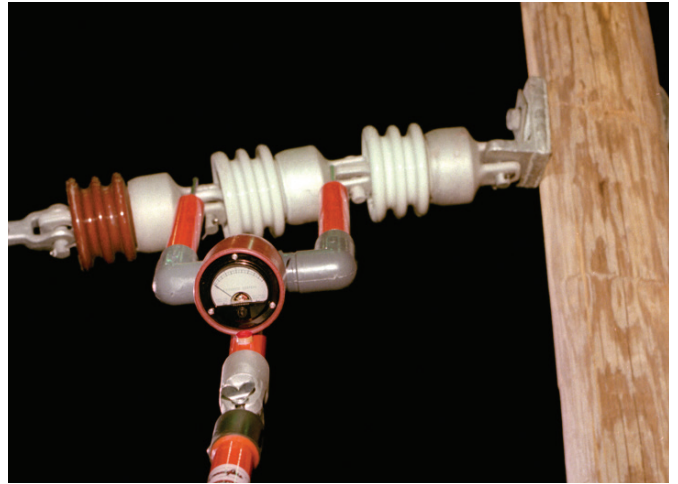
For Distribution and Transmission Systems

Operation

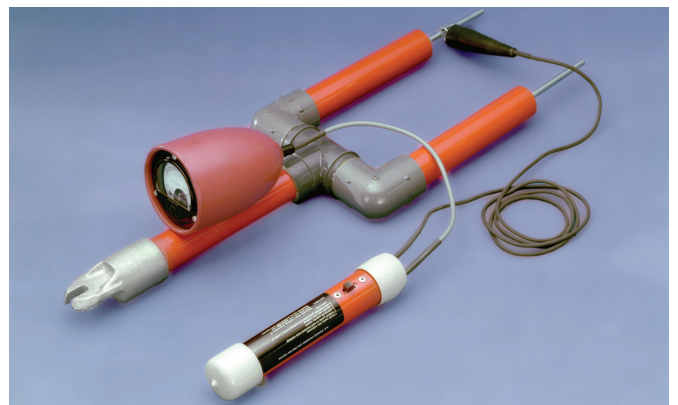
- Sensitive voltmeter measures difference in potential across each insulator in a suspect string
- Comparative readings from satisfactory strings in same operating situation quickly indicate the state of every insulator in the string being tested
- Meter places minimal load on the phase as it requires only a small leakage current to make a reading
- Two straight steel probes threaded into the tester forks simply contact the metal fittings on both ends of each insulator at the same time
- Mounted on a 1-1/4"-dia. Epoxiglas® pole with a universal fitting
- Before each use the tester should be attached to the proper length hot stick for the system voltage involved
- Distribution model's scale reads up to 11 kV
- Transmission model's scale reads a maximum of 16 kV

Applications

- Without interrupting service, one of these testers quickly can check the condition of each insulator in a string
- Greatly reduces maintenance costs
- Only insulators identified as damaged require replacements
- No need to change entire strings
- Available in two models
- Testers serve specific applications:
 - Deadend insulators on distribution systems through 35 kV
 - Suspension insulators on 44 kV through 500 kV transmission systems



**Transmission Tester
C4032299**



Plug-in jack on Insulator Tester meter housing permits line personnel to quickly verify its operable condition with a Phasing Voltmeter Tester (Cat. No. C4030838) before and after each use.

Energized Insulator Testers

(each includes instrument, two straight probes, operating instructions and metal carrying case)

Catalog No.	System Applications	Weight
C4032298	Distribution (thru 35 kV)	4 lb./1.8 kg.
C4032299	Transmission (44 thru 500 kV)	5 lb./2.3 kg.

*Carrying case weighs additional 10-1/4 lb. (4.6 kg.)



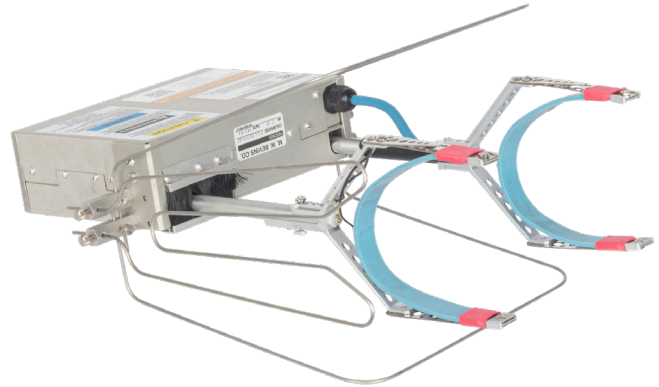
**Distribution Tester
C4032298**

Polymer Insulator Tester

For Transmission Post And Suspension Insulators

Operation

- Measures surface leakage current to assess electrical integrity of polymer insulator
- Compares data from known good insulator or from calibration samples provided
- Can be used on energized line or de-energized
- Powered by a Rechargeable battery
- Self contained power supply. Does not rely on E - field to operate
- Easy to interpret Go/No Go lights and audible tones
- Adjustable probe spacing to fit most suspension and post insulators
- Rugged carrying case



Applications

- Can be used to collect data on energized line without interrupting service
- Use to test insulators before installation for added security
- Used on transmission suspension and post insulators 69kV and above up to 4" in diameter
- Operates on energized lines with an appropriately rated Epoxiglas® hot stick with universal fitting

Kit includes:

Tester, Battery charger, Adapter cables, Calibration samples, Holder and Users Manual



Catalog No.	Application	Weight
PSC4033680	Transmission Insulator Tester 69kV thru 500kV	4.2 lb./1.9 kg.

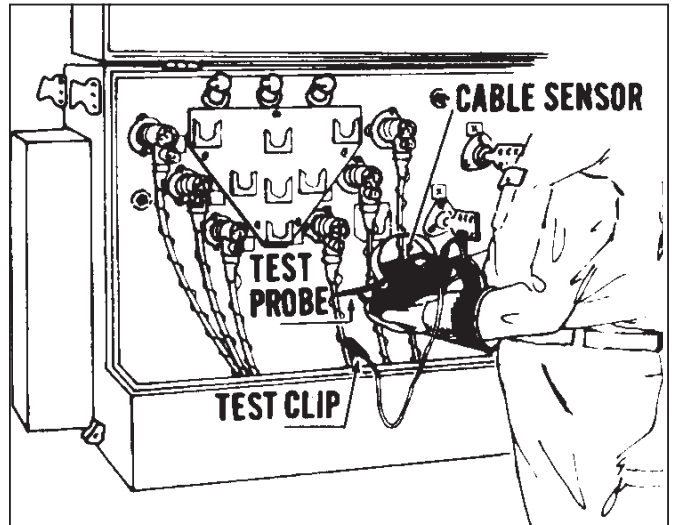
Energized Cable Sensor

Features & Applications

- Allows lineman to determine whether URD cable is energized or de-energized
- Amplifier is designed to give a meter reading
- This occurs when small AC voltage between the semi-conductive sheath and the concentric neutral of the energized URD cable is applied to test probe
- Amplifier is housed in a rugged thermoplastic case



- Self-test contact point is located on top of amplifier housing
- Check meter operation and battery condition by touching test probe to test point



- Sensor checks energized condition on concentric-neutral cable below an elbow without test points (as above)
- At cable mid-span (left), hose clamps bridge all strands of concentric neutral at the test location
- Sensor's neutral lead clips to one of the hose clamps
- Tip on probe lead contacts semi-conductive cable sheath to test voltage

Catalog No.	Description	Weight
C4030803	URD Cable Sensor, two leads, two hose clamps, two 9-volt batteries and instructions	5 lb. / 2.3 kg.

Protective-Grounding-Set Tester

- Meets ASTM Standard F 2249
- Offers easy, accurate diagnostics

Self-Contained, Portable Convenience

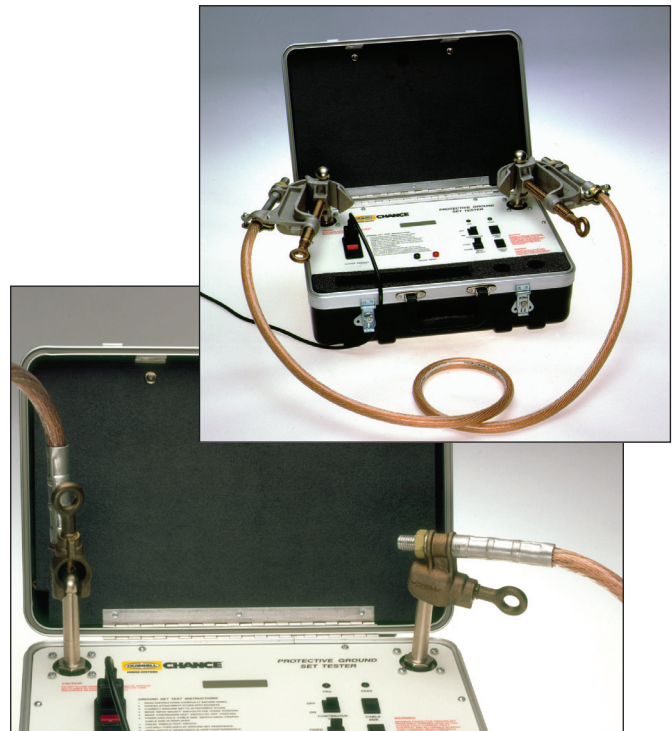
- Used to check resistance in protective grounding sets
- 120 VAC and 230 VAC models available
- Applies Direct Current across the test specimen
- Seven-minute video, included with each unit, shows how to use tester
- Instruction manual includes procedure details
- All components store in tester's integral carrying case

Simple, One-Button Testing

- Digital display shows the resistance measured in milliohm
- Compare measured resistance against the acceptable resistance levels specified in ASTM F2249
- Resistance displayed with $\pm 1\%$ accuracy, from 1 micro-ohm to 6.5 ohms

Troubleshooting Mode

- If a ground set does not pass initial test, Tester can help isolate problems
- High-resistance source can often be remedied by simple repairs to cable set
- Retesting then can quickly verify the effects of repairs
- For troubleshooting mode, test probes are furnished to plug into the Tester
- A switch activates them instead of ball-stud terminals
- Probes are used to test across each contact interface in ground set
- Results display in milliohms, just as in the first test mode



Optional Terminals For Special Ground Sets

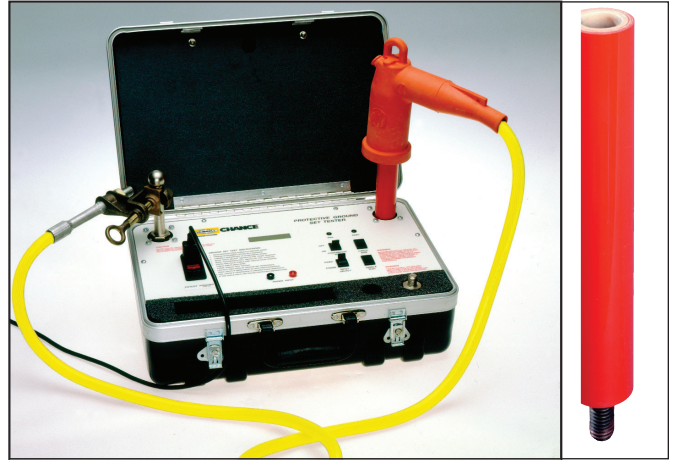
- Standard ball-stud terminals accept most types of ground clamps, including CHANCE ball-socket clamps
- To test special-application grounding sets for underground-distribution transformers or switchgear, two optional adapters shown on next page are available as separate items

Protective-Grounding-Set Tester (continued)

- For easy, accurate diagnostics
- Meets ASTM Standard F 2249



Optional Straight Stud Terminal T4033159 for testing grounded-parking-stand temporary grounding sets.



Optional Elbow Adapter C4033449 (15 & 25kV) for testing temporary grounding sets fitted with a grounding elbow. PSC4032947, 35kV, Elbow Adapter.

Included with each Protective-Grounding-Set Tester:

- Self-contained carry case
- 2 ball-stud terminals
- DVD demonstration video
- 2 troubleshooting probes
- Self-test cable

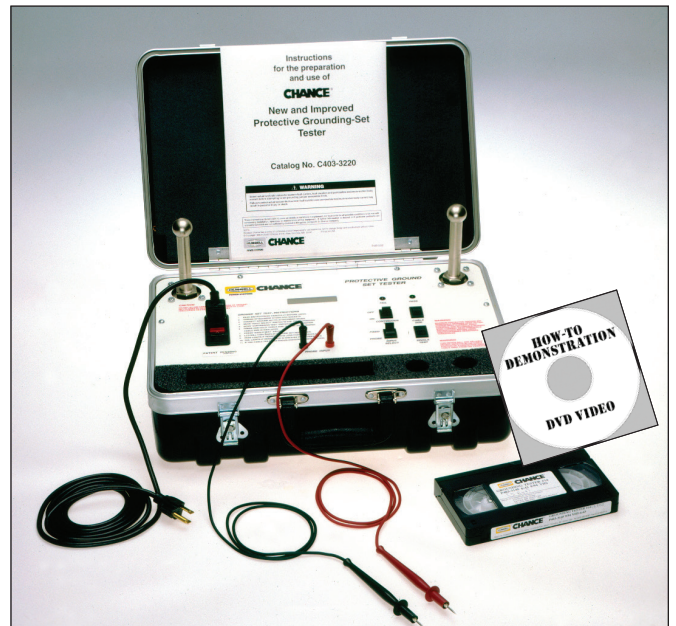
Catalog No.	Description	Weight
C4033220	115/120-Volt Protective Ground-Set Tester	17 lb. / 7.7 kg.
PSC4033220003	230-Volt Protective Ground-Set Tester	17 lb. / 7.7 kg.

Optional Adapters

T4033159	Straight Stud Terminal for 15 and 25 kV	3/4 lb. / 0.3 kg.
C4033449	15/25kV Elbow Adapter for .50" Probe	1 lb. / 0.5 kg.
PSC4032947	35kV Elbow Adapter for .50" Probe	1-1/4 lb. / 0.6 kg.
PSC4033796	35kV Elbow Adapter for .75" Probe	1-1/4 lb. / 0.6 kg.
PST6003541	Busbar Clamp Adapter	3 lb. / 1.4 kg.

Replacement Part

P4033120	Replacement Ball Studs	1/3 lb. / 0.2 kg.
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Complete Protective Ground-Set Tester
Catalog No. C4033220



Busbar Clamp Adapter
Catalog No. PST6003541



Replacement Ball Stud
Catalog No. P4033120

LoadLocker Ammeter

- Models for Distribution, Transmission and Substation uses
- Hold feature for easy hotstick use

User-Friendly Electronic-Loop Design

- Electronically closes loop
- No more manipulating a hinged or clamp-type inductive pick-up
- Unique U-shape jaw senses amperage present between tines
- Open-end design for checking component loads not accessible by other hot-line ammeters

Live-Line-Ready Hotstick Mount

- Standard fitting mounts on your insulated hotsticks
- Fits the same as any other universal tool
- Your hot-line crews can begin using it immediately

... continued on next page ...



Wide Jaw



Narrow Jaw

LoadLocker Ammeter

Simple Push button Operation, Direct-Reading Accuracy

- Push it once to turn on LoadLocker
- Push it a second time and LoadLocker will display the word HOLD
- Will continue to display the next reading it “sees” until you push the button to clear
- This lets you bring it down from the line to eye level to read it
- After five idle minutes, unit will turn itself off
- You can also manually turn it off by keeping the button depressed for five seconds
- Operator’s Manual and storage case are included

Rugged, Application-Specific Design

- Materials and construction are designed for field-condition rigors
- Typical applications include:
 - Identifying load imbalances
 - Verifying accuracy of current transformers
 - Determining load to select properly sized jumpers
 - Measuring load before opening switches

General Specifications

- LCD** : 3-1/2-digit display of Amps, Hold, Low Battery
- Battery** : 9 volt alkaline (included)
- Accuracy** : ±1% +2 Digits
- Frequency** : 50 or 60 Hertz
- Operating Temperature** : -30° to 60° C (-22° to 140° F)
- Display Range** : Automatic Ranging:
 0 - 99.9 Amperes, in 0.1-Amp increments.
 100 - 1999 Amperes, in 1.0-Amp increments.
 2000-5000 Amperes, in 0.1kA Amp increments.

Operators Manual and Case included



Narrow Jaw with Soft Case



Wide Jaw with Hard Case

Ordering Information

60 Hertz unit, Case and Operators Manual

Catalog No.	Max. Voltage (Ø-Ø)	Max. Current	Reading Type	Jaw Size	Weight
MEAMP11RW	Up to 69 kV	Up to 2,000 amps	True RMS	3.86"	3.1 lb. / 1.4 kg.
MEAMP21RW	Up to 400kV	Up to 2,000 amps	True RMS	3.86"	3.1 lb. / 1.4 kg.
MEAMP32RN	Up to 500kV	Up to 5,000 amps	True RMS	2.50"	3.1 lb. / 1.4 kg.

50 Hertz unit, Case and Operators Manual

MEAMP32RN2	Up to 500kV	Up to 5,000 amps	True RMS	2.50"	3.1 lb. / 1.4 kg.
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Replacement Case

Catalog No.	Description	Weight
C4002561	Hard Case for LoadLocker Ammeter	2.5 lb. / 1.1 kg.

Wet/Dry Hot Stick Tester

For Easy, Portable Compliance with Industry Standards

Controls & Meter for All Requirements

- Simple to operate, portable unit
- Makes easy work of testing insulated live-line tools
- Wet and dry modes selected by a toggle switch
- Follows procedures specified by ASTM, IEEE and OSHA
- Graduated meter gives precise readout of each tool's leakage current

Portable Operating Ease

- For testing any length fiberglass-reinforced plastic (FRP) hot stick up to 3" in dia.
- For spot checks at field jobsites or periodic diagnostics in workshop
- Full-scale test setups for both Wet (75 kV-per-foot) and Dry (100 kV-per-foot)
- Compact, self-contained unit easily carried and operated by one person
- In Setup procedure before each use, a zeroing knob is used to set meter to zero without a tool in the tester
- Furnished Check Bar serves as self-check to ensure tester is functional
- Included video demonstrates "how-to" basics for Setup, Dry and Wet tests
- Owners Manual must be read and understood before operating tester

Quantitative Test Results

- When placed on tool, displays any increase in leakage current due to hotstick
- Gives immediate indication of stick's true leakage condition, independent of stray currents (through the air, internal to testers, etc.) zeroed out in advance
- Detects leakage currents due to surface contamination, internal moisture and such internal conductive materials as carbon tracks

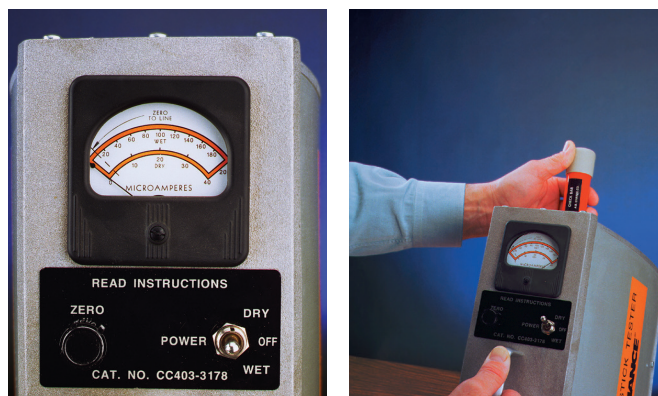
Ordering Information

Included with each Tester:

- Check bar
- Demonstration video
- Owners operating instruction manual
- Carrying case

Catalog No.	Wet/Dry Hot Stick Tester	Weight
C4033178	115-volt model	20 lb. / 9.0 kg.
C4033179	*230-volt model	20 lb. / 9.0 kg.

*Power-source cord does not include plug on 230-volt model



Ladder Monitor Kit

For EHV Microamp Measurement on Barehand Equipment

Features & Applications

- Used with EHV Barehand maintenance to detect microamp leakage on a ladder
- Meter is connected to ladder and takes readings when ladder is in contact with conductor
- Recommended that readings be taken periodically to ensure optimal working conditions which could be altered by change in atmosphere
- Kit includes:
 - 200 micro-amp scale microammeter
 - Three clamps to effect use on a three-rail ladder
 - Cable with clips and adapter to establish contact
 - Bracket to ground and hold meter on structure
 - Two dry cell batteries
 - Instruction drawings for field assembly
 - Operating instructions



Catalog No.	Description	Weight
C4020288	Ladder Monitor Kit	7.5 lb. / 3.4 kg.

CHANCE Sentinel Leakage-Current Monitor

- Alerts utility-line workers of overcurrent conditions
- For such aerial devices as insulated ladders and truck booms
- Sounds an alarm if leakage current reaches a pre-set level
- Leakage setting adjusts from 1 to 1,000 microamperes in resolution increments of 0.1 microamp
- Audible warning eliminates need to watch the actual current level, continuously displayed on digital LCD screen
- Alarm sounds immediately upon overcurrent and continues until the condition is corrected
- Instrument panel jack accepts a standard 1/4" two-conductor phone plug to also trigger a truck horn or other external alarm
- Panel test terminal permits a simple continuity check of the monitor leads prior to each operation
- Before use, instrument automatically performs a rapid electronic self-test
- Simple operating steps are printed on inside lid panel
- Detailed instruction sheet included
- Kit includes one coaxial cable and battery, two jumpers and three hose clamps for connections to two- or three-rail ladders
- Brackets on box secure to an earth-grounded structure up to 5/8" thick such as a transmission tower



Catalog No.	Description	Weight
C4070025	CHANCE Sentinel Kit	9 lb. / 4.1 kg.

Truck Boom Leakage-Current Monitor

- Mounts on truck body and hardwires into truck's 12-Volt system, which eliminates battery changeout
- Sounds an alarm if leakage current reaches a pre-set level
- Alerts utility-line workers of overcurrent conditions on truck booms
- Leakage setting adjusts from 1 to 1,000 microamperes in resolution increments of 0.1 microamp
- Audible warning eliminates need to watch the actual current level, continuously displayed on digital LCD screen
- Alarm sounds immediately upon overcurrent and continues until the condition is corrected
- Instrument panel jack accepts a standard 1/4" two-conductor phone plug to also trigger a truck horn or other external alarm
- Panel test terminal permits a simple continuity check of the monitor leads prior to each operation
- Before use, instrument automatically performs a rapid electronic self-test
- Simple operating steps are printed on the inside lid panel
- Detailed instruction sheet included



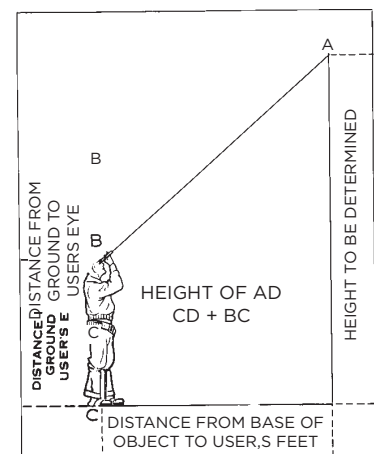
Mounting studs on steel box bond directly to truck body.

Catalog No.	Description	Weight
T4070327	Boom Monitor Kit (12 Volt)	14 lb. / 6.4 kg.

CHANCE Teleheight

Features & Applications

- Quickly and accurately figures pole, tree, or building heights or conductor clearance
- Easy to operate - only take a few minutes to learn
- Diagram shows how it works
- Sight point A and move backward or forward until the bubble centers on the hair line, which is point C
- Measure distance from C to D and add distance BC to find correct height
- Leather case (2-1/4" x 4-1/4") has belt loop



Catalog No.	Description	Weight
CW	Teleheight Complete w/Leather Case	1-1/4 lb. / 0.6 kg.



We are a world-renowned provider of hotline tools and temporary grounding equipment, dedicated to ensuring line worker safety.

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