

# Detex® Voltage Detectors and Phasing Testers

## Voltage Detectors and Phasing Testers



### Voltage detectors

- Seven models
- Continuous monitoring
- IEC conformance

### Phasing Testers

- Grounded or ungrounded ac system check
- Five models

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## VOLTAGE DETECTORS

### DESCRIPTION

For use on any grounded electrical system, DETEX Voltage Detectors are available in seven models that cover a range from distribution class to transmission line voltages up to 550 kV. Megger offers six electronic “beeper” models and one model with white LED indication for greater visibility when testing indoors.

The beeper-style electronic detectors provide audible and visual indication of the presence of phase-to-ground ac voltages, in accordance with ANSI C84.1-1982 standards.

The 6.9-kV model is equipped with a telescopic pole. All other models are fitted for universal spline mounting on a hot line pole rated for the voltage of the system being tested.

Electronic voltage detectors for use on distribution line voltages (Cat. No. 514360 series) provide a single red LED.

Detectors rated for transmission line voltages (Cat. No. 514242 series) provide four LEDs for improved visibility at greater distances.

The white LED-indicating voltage detector is designed for indoor testing of grounded ac systems. A row of bright LED indicators provide easy visibility in poor lighting conditions. During testing, the presence of voltages within the detector’s operating range will illuminate the bright LED bulbs.

A built-in piezoelectric voltage source provides a test feature to ensure that the detector is operative before use. A pushbutton activates the self-test.

The detector is equipped with a 48-in. (1219-mm) telescopic pole calibrated and marked for voltages within the ratings of the detector. These demarcations assist the user in adjusting the pole to the length required for safe operation. The pole retracts to 34 in. (864 mm) for convenient storage in a vinyl carrying case when not in use.

### APPLICATIONS

All DETEX models provide continuous monitoring with no on/off switch. They respond to minimum phase-to-ground voltages as outlined by ANSI C84.1 standards, with conformance to IEC guidelines for capacitive high-voltage test instruments.

Prior to testing, a self-test may be activated on the electronic detectors at the push of a button. The test simulates application of external voltage to the probe electrode, which verifies the operation of the buzzer and lights a red LED.

When the TEST button is released, a green LED indicates the detector is operative and ready for use. If voltages within the detector’s operating range are present during testing, the green LED extinguishes, the red LED flashes and the audio tone sounds until the detector is removed from the voltage source.

#### FEATURES AND BENEFITS

- Available in seven models covering a range from distribution class to transmission line voltages up to 550 kV
- Six electronic, beeper-style models and one model with white LED indicators

#### PHASING TESTERS

##### DESCRIPTION

DETEX Phasing Testers are available in five models for applications up to 69-kV class systems. The models include four analog phasing testers and one model with LED indication.

The analog testers are ideally suited for outdoor testing of grounded and ungrounded systems, especially in areas where an LED lamp is not easily visible. The large, 3.5-in. (89-mm) analog scale is calibrated to indicate the presence of nominal system voltages; the tester cannot be used to determine an exact voltage measurement.

The testers are equipped with two fixed-length poles connected by a flexible, insulated cable. Hand guards are standard on lower voltage models, while units for use on higher voltages are fitted with a universal spline mount for attachment to a standard hot stick. Spline-mounted testers provide a 10-ft (3-m) nominal spacing between two energized phases.

The Phasing Tester (cat. no. 510836-1) provides bright LED indication for easy visibility indoors or where lighting conditions are poor. Approximate voltage ranges to be checked can be preset for additional assurance. The instrument consists of a pair of fixed-length, 43-in. (1092-mm) poles with hand guards. A flexible, insulated connecting cable is capable of covering a 7-ft (2.1-m) span between two energized phases under test.

#### APPLICATIONS

These two-pole phasing testers may be used on grounded and ungrounded ac systems to check high-voltage fuses, test for correct phase connections and test for the absence of high voltage on de-energized lines or apparatus.

#### FEATURES AND BENEFITS

- Used on grounded or ungrounded ac systems to check high-voltage fuses, test for correct phase connections and test for the absence of high voltage on de-energized lines or apparatus
- Five models available for up to 69-kV class systems

#### OPTIONAL ACCESSORIES

##### Piezo Verifier

This essential safety tool is used to confirm the correct operation of voltage detectors and phasing testers that do not have a self-testing capability. When the verifier handle

is depressed at the rate of 3 strokes per second, a piezo crystal generates approximately 1800 volts. This voltage, when applied to the tip of the detector, tests for integrity of the current path and proper operation of the indicators.

A high-voltage model provides selectable outputs of 10, 20, and 30 kV.

A three-step procedure of testing the detector with the piezo verifier, using the detector to test for the absence of high voltage and then testing the detector again should be strictly observed in accordance with accepted operating procedures. Verifier can be used with single- and two-pole models.

##### Supplied with case and lead

**Length:** 7 in. (178 mm)

**Weight:** 0.75 lb (0.34 kg)

##### Pneumatic Glove Tester

This rugged, molded air pump conveniently tests all types of rubber gloves with a cuff diameter of 5 in. (127 mm) or less. A built-in check valve retains pressure within the glove as long as desired. Tester is provided with two fabric-covered elastic sealing rings.

**Length:** 5.5 in. (140 mm)

**Diameter:** 5 in. (127 mm)

**Weight:** 1.5 lb (0.7 kg)



Distribution line voltage detector



Transmission line voltage detector



Piezo verifier, Cat. No. 510005 shown



Pneumatic glove tester

**SPECIFICATIONS**  
**Voltage Detectors**

CAT. NO.	Model	Operating Voltage Range (phase to phase)	Mechanical Style	Min Voltage (phase to ground)	Nominal System Voltage Range, 50/60 Hz (phase to phase)	Weight
514360-1	Electronic, with red LED and audible indication	2.3 to 7.2 kV	51-in. (1295-mm) telescopic pole	1.2 kV	2.4 to 6.9 kV	2.2 lb (1 kg)
514360-2		4 to 14.5 kV	Spline fitted for attachment to a universal hot line pole	2.3 kV	4.16 to 13.8 kV	1.1 lb (0.5 kg)
514360-3		11.7 to 36.2 kV		6.8 kV	12 to 34.5 kV	
514360-4		24.3 to 72.5 kV		14 kV	24.94 to 69 kV	
514242-1		67 to 235 kV		38 kV	69 to 230 kV	1.5 lb (0.67 kg)
514242-2		200 to 550 kV		115 kV	230 to 500 kV	
514440-2	white LED	3.6 to 36.5 kV	48-in. (1219-mm) telescopic pole	2.1 kV	4.16 to 34.5 kV	2.1 lb (0.95 kg)

**Phasing Testers**

CAT. NO.	Model	Nominal System Voltage Range, 50/60 Hz (phase to phase)	Kilovolt Indicator Markings (kV)**	Mechanical Style	Pole Length	Cable Length Between Poles	Weight	
							Instrument Only	With Metal Case
514500-1	Analog*	2.4 to 6.9 kV	0, 1.4, 2.4, 4.2, 6.9	Two fixed-length poles with hand guards	39 in. (991 mm)	59 in. (1499 mm)	4 lb (1.8 kg)	16.6 lb (7.5 kg)
514500-2		6.9 to 34.5 kV	0, 4.2, 7.2, 13, 25, 35		56 in. (1422 mm)	59 in. (1499 mm)	4.7 lb (2.1 kg)	18.6 lb (8.5 kg)
514500-3		35.5 to 69 kV	0, 13, 35, 69	Spline fitted for attachment to a universal hot line pole	52 in. (1321 mm)	59 in. (1499 mm)	4.3 lb (1.9 kg)	27 lb (12.3 kg)***
514500-4		6.9 to 34.5 kV	0, 4.2, 7.2, 13, 25, 35		33 in. (838 mm) plus hook	9 ft (2743 mm)		27 lb (12.3 kg)
510836-1	LED	4.16 to 34.5 kV		Two fixed-length poles with hand guards	43 in. (1092 mm)	54 in. (1372 mm)	3 lb (1.4 kg)	13.4 lb (6.1 kg)

\* Analog scale provides only an indication that voltage is present; the tester cannot be used to determine the exact voltage.  
 \*\* The kilovolt indication obtained from these testers should not be interpreted as an exact measurement of the voltage.  
 \*\*\* With optional steel case

**ORDERING INFORMATION**

Item (Qty)	Cat. No.	Item (Qty)	Cat. No.
For DETEX Voltage Detector and Phasing Tester ordering information, refer to Specifications table above.		<b>Optional Accessories</b>	
<b>Included Accessories</b>		Piezo verifier (generates 1800 V)	510005
<b>DETEX Voltage Detectors:</b>		Piezo verifier (generates 10, 20 and 30 kV)	510006
Carrying case, vinyl	514440-C	Pneumatic glove tester	512117
Instruction manual	AVTM51Jd		
<b>DETEX Phasing Testers:</b>			
Carrying case, steel, for all models	514500-C		
Instruction manual	AVTM51Jd		