

## Insulator Tester

# HI-TEST<sup>®</sup> INSULATOR TESTER



## DESCRIPTION

The Hi-Test Insulator Tester tests energized or de-energized insulators for non-visible internal failures at any AC line voltage. These non-visible failures are known causes of Radio Frequency/ Television Interference (RF/TVI), blinking lights, recloser operations and blown fuses. They are also a threat to line crew safety when performing energized maintenance. 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. When testing insulators in service, it can be applied to any porcelain, glass or cap and pin transmission or distribution insulators at any voltage. However, there must be two or more insulators between the conductor and ground. It can also be used to test installed, de-energized insulators prior to energizing and single insulators prior to installation.

The Insulator Tester is a portable instrument that applies a current limited, 10kVDC potential across an insulator through two probes and displays the condition of the insulator on an LED scale and warning buzzer on its front panel. The unit is easy-to-use as each insulator is tested separately and its condition displayed immediately on an easily viewed LED scale. The tester instantly identifies defective insulators with an audible warning and LED scale indication.

## BENEFITS

- Instantly identifies insulators which are defective due to non-visible internal cracks
- Use as a routine maintenance tool to improve system reliability and enhance line crew safety when energized maintenance work is performed
- Use as a troubleshooting tool in tracing the sources of ground fault trips and RF/TVI interference, which can be caused by faulty insulators
- Stretch your materials purchasing dollar by testing insulators for recycling
- Use as a maintenance tool to verify insulator string integrity prior to shunting insulator bells when energized maintenance work is performed
- Will not promote flashover when used on energized insulators because it functions as an insulator as well as an insulator tester



# HD ELECTRIC COMPANY

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## FEATURES

- Universal spline for attachment to a hotstick
- Built-in power supply 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, with a maximum leakage current of 50 microamps on an expanded scale
- Powered by a lithium-ion battery, which can last for several days of testing (depending on usage)
- Rechargeable overnight from 120/240VAC
- Operating range of -25°F (-32°C) to 125°F (52°C)
- Lightweight – weighs only 3 lbs. (1.36kg)
- Operating frequency of 50/60Hz

This product can be hand held for convenient testing of de-energized insulators in store yards, reclaim areas and in the field just prior to installation of insulators on the line. The tester is equipped with a universal spline for use with a hotstick allowing for convenient energized testing of insulators immediately prior to live line work. It is capable of testing insulators in a string at all voltage levels.

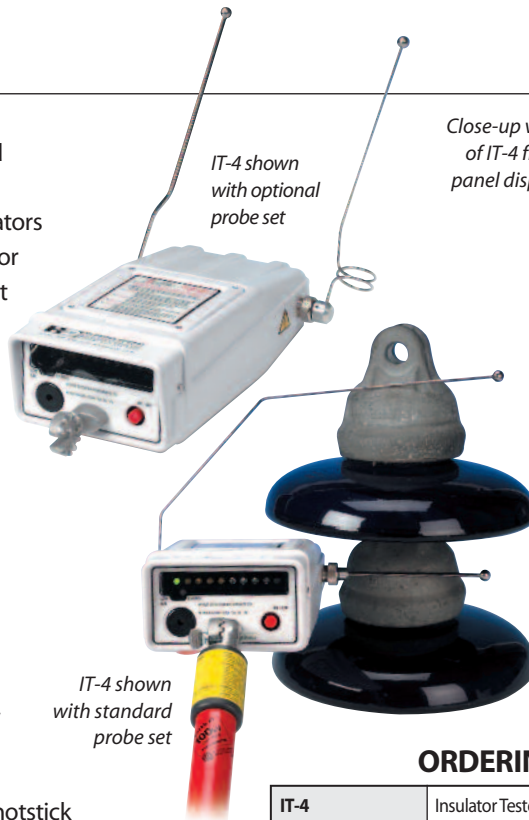
## OPERATION

The IT-4 Insulator Tester is a self-contained unit. There are two probes that attach to the instrument. They can be adjusted in three different positions for individual preference. Once the probes are in place, it is ready to test de-energized porcelain, glass, suspension or cap and pin insulators. Simply hold the unit by the universal spline and press the red power button. To test an insulator, place one probe on the cap of the insulator and the other on the pin. If the LED display is lit past the second yellow LED and/or the buzzer sounds, the insulator is conductive and should be tested for surface contamination.

Testing for surface contamination is just as easy. Placing the probes on the skirt of the insulator will determine if the surface is conductive. If the surface is found to be conductive, the insulator should be cleaned and retested.

Testing multi-piece insulators while they remain in service can also be done with the IT-4. Attach a hotstick to the universal spline on the front of the instrument, and by following the same testing procedures, defective insulators can be identified in the field while energized, with no disruption of service.

**The IT-4 can help a utility increase system reliability, reduce customer complaints and stretch their materials budget by recycling good insulators.**



Close-up view of IT-4 front panel display



IT-4 with carrying case



## ORDERING INFORMATION

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
IT-4/220P	Insulator Tester; Includes Battery, (1) Standard Side Bent Probe, (1) Standard Straight Probe, 220VAC Charging Adapter and CS-IT4 Case
025-02040-SUB	Standard Straight Side Test Probe - 6-1/2" Length - To Only Be Used With Standard Bent Side Probe
025-02035-SUB	Standard Bent Side Test Probe - To Only Be Used With Standard Straight Side Probe
025-02045-SUB	Optional Pigtail Test Probe - To Only Be Used With Optional Straight Back Probe
025-02050-SUB	Optional Straight Back Test Probe - 11" Length - To Only Be Used With Optional Pigtail Probe
CS-IT4	Rugged Carrying Case
S-4H, S-6H	Optional Fixed Length Hotstick - Fiberglass Hotstick, Foam Filled, 1-1/2" OD With Universal Spline, Hand Guard and Crutch Tip - Specify 4' or 6' Length (1.2m or 1.8m)
<b>Parts List for IT-4 Tools with New Lithium-Ion Battery (3-pin charger plug)</b>	
075-02020-8VLI	Lithium-Ion Replacement Battery
025-02220-120V	120VAC Charger
050-02050-12V	12VDC Charging Cord
050-00310-PRX	220V Adapter Kit
<b>Parts List for IT-4 Tools with Older Lead-Acid Battery (2-pin charger plug)</b>	
075-IT3-8VX4	8VDC Sealed Lead Acid Rechargeable Battery
025-02070-120V	120VAC Charger
050-02000-12V	12VDC Charging Cord
050-02025-220V	220V Adapter Kit

All sales are subject to the terms and conditions of the Limited Warranty and Limitation of Liability set forth in the product Instruction Manual and at [www.HDElectricCompany.com](http://www.HDElectricCompany.com). Users must read and agree to the Limitation terms, as stated, before using the product.

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

HD Electric Company is ISO 9001:2015 certified

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