tsensor

CT-6
CONTINUITY TESTER

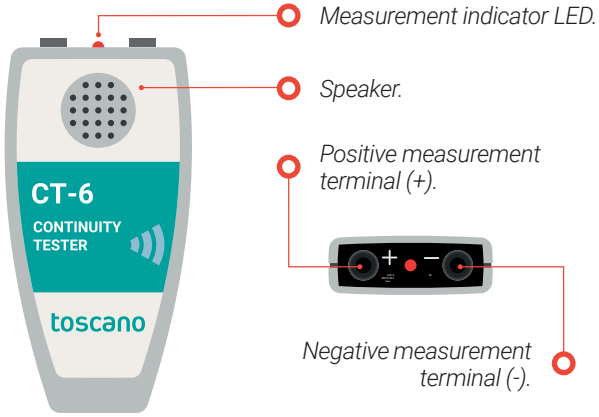
Tester
for leakage detection.



Ed.3.26

BEFORE USING THE DEVICE, MAKE SURE THERE IS NO VOLTAGE PRESENT IN THE INSTALLATION.

Parts and connections

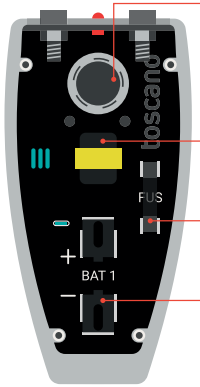


Measurement indicator LED.

Speaker.

Positive measurement terminal (+).

Negative measurement terminal (-).



Speaker (rear side)

Transformer

Fuse

Battery holder (rear side).

How to use

The CT6 tester is an electrical resistance tester (Ohm, Ω) that emits an acoustic signal proportional to the magnitude of the reading. If the resistance value is low, the device will emit a high-pitched signal. If the resistance value is very high, it will emit a low-pitched signal.

The CT6 device also features an LED on the top, next to the speaker, indicating the magnitude of the reading. This LED flashes proportionally to the magnitude of the reading: slowly for high resistance values, and continuously and rapidly — remaining lit at very low resistance values.

To check continuity in coils, conductors, windings, contacts, etc., connect both test probes to the element being measured.

If there is no electrical contact between the measuring points, the device will not emit any signal; conversely, if electrical contact exists, the device will emit a high-pitched signal.

If the sound is very low-pitched, there is poor contact due to current leakage or malfunction caused by moisture.

CT-6 CONTINUITY TESTER Specifications

TECHNICAL		
	Maximum sensitivity	1 MΩ (from 10 Hz to 10 kHz)
	Current between measurement probes	10 mA
	Battery	LR23, 12 V (included)

Warnings for use

To avoid electric shock, the safety provisions and VDE requirements on excessive contact voltages must be observed when working with voltages above 75 V (60 V) DC to 50 V (25 V) AC. The values in parentheses apply to restricted environments (e.g. medical, agricultural, etc.).

Before each test, make sure the measuring leads and the meter are in proper condition, e.g. check for broken cables or discharged batteries. Before taking a measurement, make sure the measuring leads and the instrument are in perfect condition.

The test probes must only be held by the surfaces provided for this purpose. Direct contact with the measurement tips must always be avoided.

The meter must only be used within the measurement circuit categories predetermined for it.

Before each use, check that the device is working correctly by short-circuiting the measuring tips; the unit will emit a high-pitched buzz and the LED on the top will light up. Otherwise, the battery must be replaced.

The instrument must only be used within the specified ranges and in low-voltage installations up to 30 V. For installations with a higher voltage, the CT6 device includes a replaceable fuse to protect it against possible overloads.

CT5 is not designed for voltage measurement, whether in direct current or alternating current. If the measuring tips are mistakenly connected to a live line, the internal fuse will blow and must be replaced before further testing can be carried out.

If the operator's safety can no longer be guaranteed, the instrument must be taken out of service and secured against unintended or improper use.

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Safety can no longer be guaranteed in the following cases:

- **Visible damage.**
- **If the device no longer performs the necessary checks correctly.**
- **Excessively prolonged or improper storage.**
- **Damage caused during transport.**
- **Depleted batteries.**

Applications

- **Windings**
- **Electrical panels**
- **Automotive**
- **Electronics**
- **Household appliances**
- **Home**
- **Industry**

Diode testing

To test any type of semiconductor diode, apply the test probes to the diode's terminals. If it is in perfect condition, it will sound in one direction and not when the probes are reversed. If it sounds in both directions, or in neither, the diode is faulty.

Capacitor testing

When the probes are connected to the capacitor's terminals, the tester will emit a signal that becomes progressively lower in pitch, indicating that the capacitor is charging. When testing a high-capacitance capacitor, the tester may not emit a signal, due to insufficient voltage to charge it.

Other applications

Water level and moisture detection

In wells and boreholes, connect one probe to earth and the other to a long cable lowered into the borehole; when the end of the cable makes contact with the water surface, the tester will emit an acoustic signal. To detect moisture, touch the surface with both probes, keeping some distance between them. The signal will become higher-pitched as moisture increases (walls, floor, wood, grain, etc.).

Testing, leakage detection, and continuity checking of electric motors

To check the condition of an electric motor, take a measurement between each phase and the motor's chassis or earth. If the CT6 tester emits an acoustic signal when measuring between a phase and the chassis or earth, this indicates a current leakage from that phase to earth. On three-phase motors, where a measurement between the terminals of each phase is possible, the CT6 device will emit an acoustic signal related to the number of turns in each phase's winding. The signals should be identical. A difference between phases indicates a short circuit in the winding whose tone differs from the others.

Inductors and transformers

When the CT6 device is connected to the terminals of an inductor or coil, the device will emit an acoustic signal much higher-pitched than usual when the measuring probe tips are joined. Similarly, when connecting the device to the terminals of a transformer, it may emit a higher-pitched signal than usual.

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