

TELSCOUT TS90

TDR Cable Tester For Fault Locating In Metallic Cables

- Find Distance To Fault In Cable • Know Type of Fault

The TS90 is the most advanced TDR fault locator based on Digital technology that provides distance to fault on :

- Signaling & Telecom Cables
- Telephone Cables
- Control Cables
- Street Lighting
- LV Power Cables
- Airport Cabling
- Coax Radar Installations
- CATV & COAX Networks
- Underground Mining Cables
- Ship Wiring

TS 90 CTRD is the most powerful TDR in its class

The TS90 is designed for "ease-of-use"

you'll spend less time operating the TDR, and more time repairing faults. Simply select the cable type to be tested and the TS90 does the rest. Impedance, Vp, gain, pulse width, and vertical position are automatically selected and adjusted as you scan the cable. Just move the cursor to the fault to pinpoint its location & know the distance to fault.

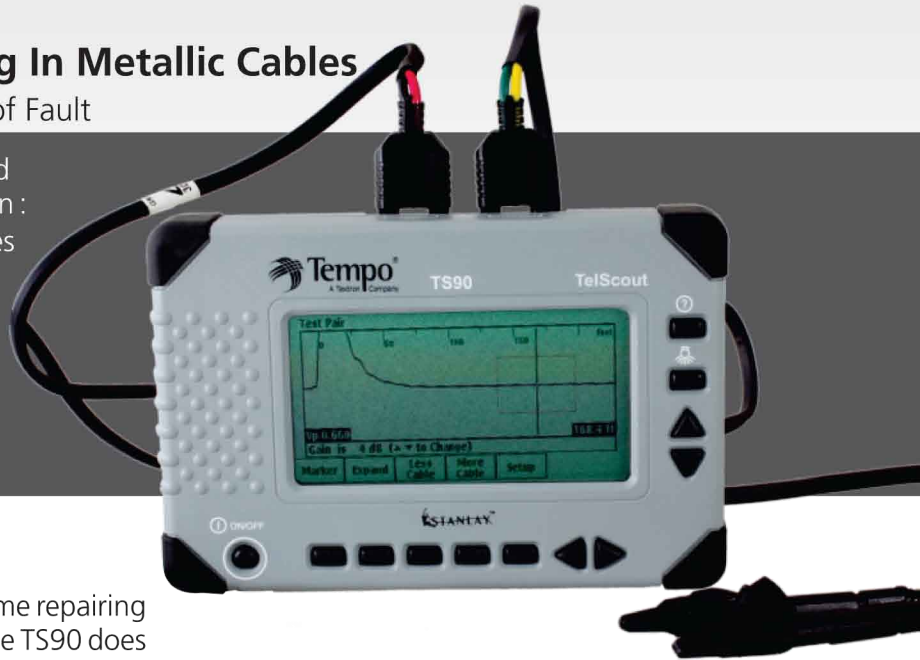
On the performance side, the TS90 employs optimized pulsing and sampling, coupled with advanced filtering and signal processing techniques, to ensure the maximum measurement range. That way, you'll always have a clean waveform for easier fault interpretation Display on a table style large LCD display.

Short Pulse Width

The TS90 provides a 5 ns pulse width for close-in resolution. Faults as near as 3 ft. from the pedestal can be located with ease.

Rugged Package: Performance in a rugged handheld TDR package. Designed to work in any weather condition rain, heat and humidity.

- 15 km (45,000 ft.) Fault Location Capability
- Accuracy (± 3 ft. at 10,000 ft.)
- One-Step Setup
- Configurable for Any Cable Type and Vp (0.300 to 1.000)
- Measures Distance to Fault in Feet, Meters, or Time
- Single-Button Zoom Function
- Two Pair Test Capability
- Automatic Instrument Control Mode
- Splash and Drip Proof
- Pair Comparison Mode
- Splits/Crosstalk Mode
- Intermittent Fault Location
- On-line Tutorials
- Large Backlit Display
- One Button Expand / Full view function
- Help Screen available for all functions

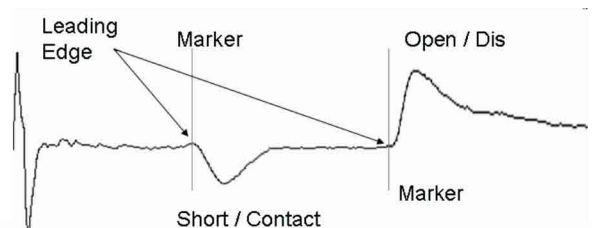


Locate Type of Faults :

- Open & Shorts
- Load Coils
- Bridged Taps/Laterals & Water In Copper Cables split (crosstalk) Earth Fault
- High Resistance
- Low insulation faults.

Secondary Application: Measure Actual Cable Lengths.

Interpreting Waveforms



Principle : Time domain reflectometry, pulse reflection principles to detect impedance changes along a cable.

Specification:	
TelScout TS90 Characteristics	
Test Signal Output	1/2 Sine, balanced
Amplitude	6 V into 105
Output Impedance	105 nominal
Pulse Widths	5 ns to 2,500 ns (automatic)
Input Protection	± 200 V, DC + peak AC, to a maximum of 440 Hz
Maximum Range	15,000 m (45,000 ft.) depending on cable type and condition
Cursor Resolution	0.4% of selected range
Display	5.25-in. high-contrast, high-resolution, backlit LCD, 520 x 200 pixels
Display Ranges	Eleven automatic display ranges plus single-button expand window
Filter	High pass, cutoff frequency 150 kHz, user selectable
Amplifier	5 mV reflection produces a full-screen vertical deflection
Gain	0 to 63 dB
Horizontal Design Accuracy	0.01% \pm 300 ps \pm Vp uncertainty \pm cursor resolution

General Characteristics:	
Power	
Battery Type	Six AA Alkaline.
Operating Time	>4.5 hrs. with backlight off.
Battery Saver	Selectable for 5 to 30 minutes or disabled.
Physical	
Dimensions	141 x 211 x 43 mm
Net Weight	1 kg

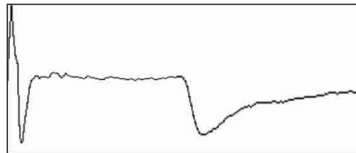
Sample Waveforms

Earth Fault



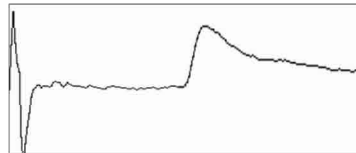
Low impedance fault gives negative reflection. Magnitude of reflection depends on value of fault. Bigger value fault reflects more pulse energy back to TDR.

Contact / Short



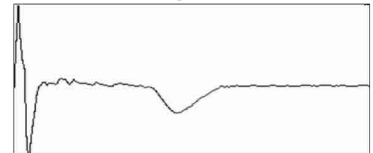
Another low impedance fault. Contacts / Shorts reflect 100% of the pulse energy giving large reflection. Size of reflected pulse depends on distance, pulse width, cable diameter etc.

Open / Disconnect



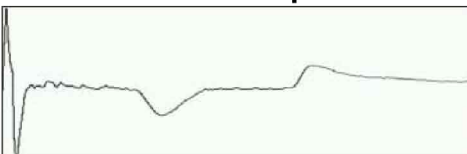
High impedance fault. Opens reflect 100% of the pulse energy giving large reflection. Size of reflected pulse depends on distance, pulse width, cable diameter etc.

Split



A capacitive fault that can be detected using TDR. Splits can give either positive or negative reflections depending on how you connect the 4 wires.

Rectified Split



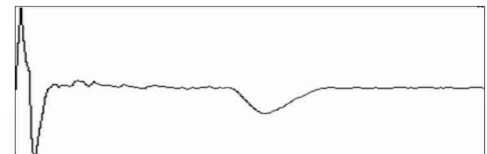
As above. This time the reflection of the re-split can be seen behind the original split. Splits must be taken out where they occur.

High Resistance (HR)



High impedance fault positive reflection. Possibly the hardest faults to find. HRs up to 20 Ω give small reflections. Use plenty of Gain.

Low Insulation



Low impedance fault always gives negative reflection. Size of the reflected pulse depends on the value of the fault. If the insulation breaks down to the extent that contact occurs, 100% pulse energy returned