

## **TDR500/3**

# **Handheld TDR**



- **Simple operation**
- **AUTO set up for instant use**
- **Ultra fast pulse for near end fault identification**
- **Trace HOLD feature**
- **IP54 rating offers real life working**
- **Designed for use on all metallic cable pairs**

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### **DESCRIPTION**

The TDR500/3 is a hand held, compact Time Domain Reflectometer for locating faults on metallic cables. It has a minimum resolution of 0.1 m/0.3 ft and a 5 km/15 kft maximum range depending on velocity factor selected and cable type.

Four output impedances are available (25, 50, 75, and 100  $\Omega$ ) and a velocity factor between 0.2 and 0.99 will meet any cable test requirements

The TDR500/3 has a simple selection option which together with a 4 way control switch offers an intuitive operation for the user.

### **FEATURES**

An AUTO selection option ensures that the most effective parameters are selected depending on the range required, aiding rapid diagnosis of the TDR trace. A clear operator controlled cursor allows instant measurement of the distance to the fault.

A trace HOLD feature also allows the operator to hold a trace on the screen, something not seen on most other handheld TDRs. Extra high resolution together with white-light backlight and grey scale tones give the graphical display a vibrancy, aiding the user in identifying key events on the trace.

- Backlit graphics monochrome LCD (256 x 128)
- Adjustable display contrast
- Resolution to 0.1 m
- For use on Telecom TNV-3 circuit, or 150V CAT IV power circuits

- Power blocking filter not required
- Environmental protection to IP54
- 2ns pulse for near end fault location
- AUTO option selecting gain and pulse for each range
- Display distance in metres or feet
- Uses five AA (LR6) primary cells

### SPECIFICATIONS

Except where otherwise stated, this specification applies at an ambient temperature of 20 °C.

#### General Ranges

10 m, 25 m, 100 m, 250 m, 1000 m, 2500 m, 5000 m (30 ft, 75 ft, 300 ft, 750 ft, 3000 ft, 7500 ft, 15000 ft)

**Accuracy:** ±1% of range ± pixel at 0.67 VF  
[Note- The measurement accuracy is for the indicated cursor position only and is conditional on the velocity factor being correct.]

**Resolution:** 1% of range

**Input protection:** This instrument complies with IEC61010-1 for connection to live systems up to 150 V CAT IV when used with the optional fused test lead set.

**Output pulse:** 5 volts peak to peak into open circuit. Pulse widths determined by range and cable

**Gain:** Set for each range with three user selectable steps (in manual operating mode)

**Velocity factor:** Variable from 0.2 to 0.99 in steps of 0.01

**TX null:** Automatic

**Power down:** Automatic after 5 minutes with no key press

**Backlight:** Stays on for 1 minute with no key press

**Batteries:** Five LR6 (AA) type batteries, Manganese alkali or nickel metal-hydride cells

**Battery life:** Up to 14 hours (typical)

**Mechanical:** The instrument is designed for use indoors or outdoors and is rated to IP54.

**Case dimensions:** 230 mm (9 in) x 115 mm (4.5 inches) x 48 mm (2 inches)

**Instrument weight:** 0.6 kg (1.32 lbs)

**Case material:** ABS

**Connectors:** Two 4 mm-safety terminals

**Test leads (TDR500/3):** 2 metres long consisting of 2 x 4 mm shrouded connector to miniature crocodile clips

**Display:** 256 x 128 pixel Graphics LCD

#### Environmental

**Operating temperature** -15 °C to +50 °C (5 °F to 122 °F)

**Storage temperature:** -20 °C to 70 °C (-4 °F to 158 °F)

**Safety:** When using the optional fused test lead set this instrument complies with IEC61010-1 for connection to live systems with less than 300 V between the terminals and up to 150 V CAT IV to earth

**EMC:** Complies with Electromagnetic Compatibility Specifications (Light industrial) BS EN 61326-1, with a minimum performance of 'B' for all immunity tests

### ORDERING INFORMATION

Item (Qty)	Cat. No.
<b>Included accessories</b>	
Time Domain Reflectometer	1002-227
<b>Included accessories</b>	
Hard carry case	5410-420
Miniature clip test lead set	6231-652
User guide CD	2002-178
<b>Optional accessories</b>	
Fused test lead set	1002-015