

# TDR500

## Cable Fault Locator



- Simple operation
- Warble tone generator
- Velocity Factor from 0.30 to 0.99
- Range to 3km
- Tough ABS case
- IP54 Environmental protection
- Carry case and test leads included
- 3 year manufacturers warranty

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### DESCRIPTION

The Megger, TDR500 cable fault locator breaks new ground as a cost effective high specification hand held Time Domain Reflectometer (TDR) for locating faults on metallic cables.

Designed for the field engineer requiring a low cost solution to field testing, the TDR500 offers all the benefits of Megger build quality and reliability in a high quality affordable package.

#### Transmission line testing

The TDR500 is suitable for virtually all types of transmission cable including twisted pair, coaxial and parallel conductors. Condition of the entire cable or section is displayed graphically.

#### 30m to 3 km Range

Suitable for identifying and locating a range of cable faults from a few metres up to 3 Km on non-energised cables. Cable characteristics are clearly displayed on the 122 x 32 pixel LCD display.

#### Simple Operation

Operation of the TDR500 is simplicity itself. No multi-function keys to confuse the operator. Each button has its own dedicated function.

Just connect the test lead to the de-energised cable to be tested. Switch on the TDR and set the Velocity factor.

#### Cable route tracing

The TDR500 can inject an oscillating 810 Hz/1.11 kHz tone onto the de-energised transmission line or power line.

The warble tone allows the engineer to trace the faulty cable pair with the use of a commercially available tone tracing probe.

## BENEFITS

- Hand held operation
- High contrast monochrome graphic LCD display (122 x 32 pixel).
- Resolution to 1% of range.
- Adjustable display contrast
- Environmental protection to IP54
- Display distance in metres or feet.
- Uses standard AA (6LR61) primary or rechargeable cells
- 3 year warranty reduces long term ownership cost

## APPLICATIONS

Non-energised cable testing and tracing including:  
Traditional 'Transmission Medium Test Equipment'

- Telecommunications
- CATV (Cable TV)
- Aerospace
- Electrical Contractors
- Network Installers
- Utilities
- IT Departments
- Railway signalling

### Private networks

- Campus and industrial networks
- Building automation

### Stock control

- Cable distribution channels
- Cable manufacturers

### Industrial communications

- Fieldbus network installations
- Site maintenance engineers

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

## SPECIFICATION

### General

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

### Ranges:

30m, 100m, 300m, 1000m, 3000m (100ft, 300ft, 1000ft, 3000ft, 10000ft)

### 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:

For connection to de-energised cable only

### Output pulse:

5 volts peak to peak into open circuit from 100 Ω source  
Pulse widths determined by range and cable impedance

### Gain:

Automatic with gain and range

### Velocity Factor:

Variable from 0.30 to 0.99 in steps of 0.01

### Refresh Rate:

Three times per second

### Power Down:

Automatic after 5 minutes with no key press

### Warble:

5 V pk-pk from 100 Ω, alternating between 810 Hz and 1110 Hz

### Batteries

Six LR6 (AA) type batteries, Manganese-alkali or nickel-cadmium or nickel-metal-hydride cells

### Nominal voltage:

9 V for Alkali or 7.2 V for NiCad.

### Battery consumption:

100 mA nominal. (30 hours continuous use)

### Safety

This instrument is to be used on de-energised cable only.

### EMC

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

### Mechanical

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

**Case Dimensions**

230 mm (9 inches) x 115 mm (4.5 inches) x 48 mm (2 inches)

**Instrument weight** 0.6kg (1.32lbs)**Case material**

ABS

**Connectors**

BNC terminal

**Test Lead**

300mm long with croc clips

**Display**

122 X 32 pixel Graphics LCD

**Environmental****Operational Temperature:**

-15°C to +50°C (5°F to 122°F)

**Storage Temperature:**

-20°C to 70°C (-4°F to 158°F)

**ORDERING INFORMATION**

<b>Item (Qty)</b>	<b>Order No.</b>
Cable Fault Locator	TDR500
<b>Included Accessories</b>	
Test & Carry case with strap	6420-125
Test lead set	6231-694
User Guide	6172-726

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Registered to ISO 14001 Reg no. EMS 61597

**TDR500\_DS\_en\_V10**

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