



## **MEGGER® QualiFyr TDR500**

- **Simple operation**
- **Warble tone generator**
- **Velocity factor from 0.30 to 0.99**
- **Range to 10,000 ft (3 km)**
- **Tough ABS case**
- **IP54 environmental protection**
- **Carry case and test leads included**
- **3-year warranty**

# Hand-Held Time Domain Reflectometer

## **DESCRIPTION**

The MEGGER® QualiFyr TDR500 breaks new ground as a cost-effective, high specification hand-held Time Domain Reflectometer for locating faults on metallic cables. Designed for the field engineer requiring a low cost solution to field testing, the QualiFyr TDR500 offers all the benefits of MEGGER quality and reliability in an affordable package.

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

Suitable for identifying and locating a range of cable faults from 100 ft to 10,000 feet on non-energized cables. Cable characteristics are clearly displayed on the 122 x 32 pixel LCD.

Operation of the QualiFyr TDR500 is simplicity itself. No multifunction keys to confuse the operator. Each button has its own dedicated function. Simply connect the test lead to the de-energized cable to be tested. Switch on the TDR and set the velocity factor. The TDR500 can inject an oscillating 810 Hz/1.11 kHz tone onto the de-energized 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.

## **APPLICATIONS**

Non-energized 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

### **Industrial Communications**

- Fieldbus network installations
- Site maintenance engineers

## **FEATURES AND BENEFITS**

- Warble tone mode — no need to change test equipment while testing. Reduces amount of test equipment carried.
- Short range mode (100 ft) — accurate on near-end faults. Ideal for short cable lengths.
- Insulated test lead — cannot touch signal conductors, thus protecting the user from electrical shock.
- Dry cell or rechargeable batteries — readily available power source.
- Automatic power off — reduces battery consumptions and increases battery life.
- IP54 case — protects instrument against dust and water. Useful for indoor and outdoor applications.

**SPECIFICATIONS**

Except where otherwise stated, this specification applies at an ambient temperature of 68° F (20° C).

**General**

**Ranges**

100 ft, 300 ft, 1000 ft, 3000 ft, 10,000 ft (30 m, 100 m, 300 m, 1000 m, 3000 m)

**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-energized cable only

**Output pulse**

5 V peak to peak into open circuit from 100Ω 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 a second

**Power Down**

Automatic after 5 minutes with no key press

**Warble**

5V peak to peak from 100Ω, alternating between 810 Hz and 1110 Hz

**Display**

122 x 32 pixels graphics LCD

**Batteries**

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

**Nominal voltage**

9 V for alkali or 7.2 V for NiCad

**Battery Consumption**

100 mA nominal (30 hours continuous use)

**Safety**

Instrument to be used on unenergized cable only

**EMC**

Complies with Electromagnetic Compatibility Specifications (Light industrial) BS/EN61326-1, 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**

9 H x 4.5 W x 2 D in. (230 H x 115 W x 48 D mm)

**Weight**

1.32 lb (0.6 kg)

**Case Material**

ABS

**Connectors**

BNC terminal

**Test Lead**

11.8 in. (300 mm) long with croc. clips

**Environmental**

**Operational Temperature**

5° F to 122° F (-15° C to +50° C)

**Storage Temperature**

-4° F to +158° F (-20° C to +70° C)

**Operational Humidity**

95% at 104° F (40° C)



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**ORDERING INFORMATION**

Item (Qty)	Cat. No.
MEGGER® QualiFyr TDR500 .....	TDR500
<b>Included Accessories:</b>	
Test and carry case with straps .....	EV6420-125
Lead set .....	EV6231-694
User guide .....	EV6172-726

