

TDR500/3-CTV

Handheld TDR



- **Simple operation**
- **AUTO set up for instant use**
- **Ultra fast pulse for near end fault identification**
- **Trace HOLD feature**
- **IP54 rating provides durability during real world operation**
- **Designed for use on all CATV cables**

DESCRIPTION

The TDR500/3-CTV 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/15,000 ft maximum range depending on velocity factor selected and cable type.

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

The TDR500/3-CTV has a simple selection option which, together with a 4-way control switch, offers an intuitive operation for the user. The unit is supplied in a soft canvas carrying bag with shoulder strap and rugged snap hook to attach to tool belt, ladder or cable.

APPLICATIONS

The TDR500/3-CTV is primarily designed for service technicians in the CATV industry. It is ideal for testing the physical integrity of cables within a network. The unit is also capable of locating illegal cable taps. Specific cable conditions identified include:

- Bends or crimps in the cable in the cable
- Taps and splits
- Cuts or shorts in the cable
- Water saturations

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 freeze 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 4 in. (10 cm)
- 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 meters or feet
- Uses five AA 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: $\pm 1\%$ of range $\pm$ 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 (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.

Instrument weight: 0.6 kg (1.32 lbs)

Connectors: Two 4 mm-safety terminals

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.
TDR500/3-CTV Time Domain Reflectometer	1005-984
Included accessories	
Carry case and strap	2001-322
Instrument rubber boot with built-in stand	6121-636
Socket BNC to 2 x 4 mm 500 Ohm	25965-154
Plug straight BNC adapter	90014-785
Test leads	6231-694
User guide CD	2002-178

UK
Archcliffe Road Dover
CT17 9EN England
T +44 (0) 1304 502101
F +44 (0) 1304 207342
UKsales@megger.com

UNITED STATES
4271 Bronze Way
Dallas TX 75237-1019 USA
T 800 723 2861 (USA only)
T +1 214 333 3201
F +1 214 331 7399
USsales@megger.com

OTHER TECHNICAL SALES OFFICES
Valley Forge USA, College Station USA,
Sydney AUSTRALIA, Täby SWEDEN, Ontario
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