

## TDR500/3

### Handheld TDR



- n **Simple operation**
- n **AUTO set up for instant use**
- n **Ultra fast pulse for near end fault identification**
- n **Trace HOLD feature**
- n **IP54 rating offers real life working**
- n **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.

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

- n Power blocking filter not required
- n Environmental protection to IP54
- n 2ns pulse for near end fault location
- n AUTO option selecting gain and pulse for each range
- n Display distance in metres or feet
- n 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

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#### OTHER TECHNICAL SALES OFFICES

Valley Forge USA, College Station USA,  
Sydney AUSTRALIA, Täby SWEDEN, Ontario  
CANADA, Trappes FRANCE, Oberursel  
GERMANY, Aargau SWITZERLAND, Dubai  
UAE, Mumbai INDIA, Durban SOUTH AFRICA,  
Chonburi THAILAND

#### CERTIFICATION ISO

Registered to ISO 9001:2008 Cert. no. Q 09250  
Registered to ISO 14001:2004 Cert. no. EMS 61597

#### TDR500\_3\_DS\_en\_V01

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