

# 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**

### 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 and a 5 km 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 AND BENEFITS

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 whitelight 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**

<b>Note</b>	<b>Except where otherwise stated, this specification applies at an ambient temperature of 20 °C</b>
<b>Range</b>	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)
<b>Accuracy</b>	±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.]
<b>Resolution</b>	1% of range
<b>Input protection</b>	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.
<b>Output pulse</b>	5 volts peak to peak into open circuit. Pulse widths determined by range and cable.
<b>Gain</b>	Set for each range with three user selectable steps (in manual operating mode)
<b>Velocity factor</b>	Variable from 0.2 to 0.99 in steps of 0.01
<b>TX null</b>	Automatic
<b>Power down</b>	Automatic after 5 minutes with no key press
<b>Backlight</b>	Stays on for 1 minute with no key press
<b>Battery</b>	Five LR6 (AA) type batteries, Manganese alkali or nickel metal-hydride cells
<b>Battery life</b>	Up to 14 hours (typical)
<b>IP rating</b>	The instrument is designed for use indoors or outdoors and is rated to IP54
<b>Dimensions</b>	230 mm x 115 mm x 48 mm (LBD)
<b>Weight</b>	0.6 kg
<b>Case</b>	ABS
<b>Connectors</b>	Two 4 mm-safety terminals
<b>Test lead</b>	(19 mm spaced TDR500/3): 1 pair 2 meters long consisting of 2 x 4 mm shrouded connector to miniature crocodile clips
<b>Display</b>	256 x 128 pixel Graphics LCD

**ENVIRONMENTAL**

<b>Operating temperature range and humidity</b>	-15 °C to +50 °C (5 °F to 122 °F)
<b>Storage temperature range and humidity</b>	-20 °C to 70 °C (-4 °F to 158 °F)
<b>Safety</b>	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
<b>EMC</b>	Complies with Electromagnetic Compatibility Specifications (Light industrial) BS EN 61326-1, with a minimum performance of 'B' for all immunity tests

**ORDERING INFORMATION**

Description	Order Code
Time Domain Reflectometer	1002-227
<b>Included accessories</b>	
Hard case	5410-420
Miniature clip test lead set (1 pair)	6231-652
User guide CD	2002-178
<b>Optional accessories</b>	
Split conductor Fused test lead set (1 pair)	1002-015
Pouch - test and carry case	2001-322
Rubber boot with stand	6231-802
Retractable sheath fused test lead (1 pair)	1006-511