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 Ω) 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

Note	**Except where otherwise stated, this specification applies at an ambient temperature of 20 °C**
Range	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
Battery	Five LR6 (AA) type batteries, Manganese alkali or nickel metal-hydride cells
Battery life	Up to 14 hours (typical)
IP rating	The instrument is designed for use indoors or outdoors and is rated to IP54
Dimensions	230 mm x 115 mm x 48 mm (LBD)
Weight	0.6 kg
Case	ABS
Connectors	Two 4 mm-safety terminals
Test lead	(19 mm spaced TDR500/3): 1 pair 2 meters long consisting of 2 x 4 mm shrouded connector to miniature crocodile clips
Display	256 x 128 pixel Graphics LCD

ENVIRONMENTAL

Operating temperature range and humidity	-15 °C to +50 °C (5 °F to 122 °F)
Storage temperature range and humidity	-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

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

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