

TDR1000/2

Cable Fault Locator



- **Simple operation**
- **Fast fault find facility**
- **TX Null transmission pulse nulling**
- **Adjustable cable impedance**
- **No blocking filter required**
- **IP54 rating**
- **3 year warranty**

DESCRIPTION

The TDR1000/2 is a hand held, compact Time Domain Reflectometer for locating faults on metallic cables. It has a minimum resolution of 0.1m/0.3ft and a 3km/9kft maximum range depending on Velocity factor selected and cable type.

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

Enhanced key pad navigation

Control of the TDR1000/2 has been simplified with each key having a dedicated function, such as cursor left and right, Velocity factor, range etc. Training times are dramatically reduced, and with less chance of time consuming mistakes, productivity is improved.

TX Null

TX Null eliminates the 'dead zone' at the start of the displayed trace, normally obscured by the transmission pulse. By adjusting the TX Null control the user can see these 'near end' faults clearly.

Fast Find key

Reduces the time taken to find major reflections on the cable. One press of the find key automatically adjusts the range and gain and positions the cursor to the major event on the cable within seconds, removing the need for the engineer to gradually scroll through the ranges looking for the fault or the end of cable reflection.

BENEFITS

- Backlit graphics monochrome LCD (128x64)
- Adjustable display contrast
- Resolution to 0.1 m
- For use on Telecom TNV-3 circuit, or 300V CAT III power circuits
- Power blocking filter not required
- Environmental protection to IP54
- User selectable output impedance 25 Ω , 50 Ω , 75 Ω and 100 Ω
- 'TX Null' adjustment for near end fault location
- Range, gain and cursor automatically adjusted to find event on press of a button
- Display distance in metres or feet
- Uses six AA (6LR61) primary cells

SPECIFICATION

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

General

Ranges: 10 m, 30 m, 100 m, 300 m, 1000 m, 3000 m
(30 ft, 100 ft, 300 ft, 1000 ft, 3000 ft, 10000 ft)

Accuracy: $\pm 1\%$ of range \pm pixel at 0.67VF

[**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 300 V CAT III. Fused leads must be used if the voltage between the terminals exceeds 300 V.

Output pulse: 5 volts peak to peak into open circuit.
Pulse widths determined by range and cable

Impedance:	25 Ω	50 Ω	75 Ω	100 Ω
10m	7ns	7ns	7ns	7ns
30m	20ns	20ns	20ns	20ns
100m	100ns	60ns	100ns	100ns
300m	300ns	120ns	170ns	300ns
1000m	1000ns	520ns	680ns	1000ns
3000m	3000ns	2020ns	2340ns	3000ns

Gain: Set for each range with four user selectable steps

Velocity Factor: Variable from 0.2 to 0.99 in steps of 0.01

TX Null: 0 Ω to 120 Ω

Refresh Rate: Selectable from the menu. Once per second or three times a second

Power Down: Automatic after 5 minutes with no key press

Backlight: Stays on for 1 minute when activated

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

Safety: This instrument complies with IEC61010-1 for connection to live systems up to 300 V CAT III. Fused leads must be used if the voltage between the terminals exceeds 300 V

EMC: Complies with Electromagnetic Compatibility Specifications (Light industrial) BS EN 61326-1, 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: 230 mm (9 in) x 115 mm (4.5 inches) x 48 mm (2 inches)

Instrument weight: 0.6kg (1.32lbs)

Case material: ABS

Connectors: Two 4mm-safety terminals

Test Leads: 2 metres long consisting of 2 x 4mm shrouded connector to miniature crocodile clips

Display: 128 x 64 pixel Graphics LCD

Environmental

Operational Temperature: -15°C to +50°C (5°F to 122°F)

Storage Temperature: -20°C to 70°C (-4°F to 158°F)

ORDERING INFORMATION

Item (Qty)	Order No.
Time Domain Reflectometer	TDR1000/2
Included Accessories	
Test & Carry case with strap	6420-125
Miniature Clip Test Lead Set	6231-652
User Guide	6172-443
Optional Accessories	
Fused Test Lead Set	6111-218