



# E2570 Combined TDR/RFL Handheld Tester

Spirent's E2570 Combined TDR/RFL Handheld Tester is a unique, battery-powered test instrument that combines the power of a voltmeter, a time domain reflectometer (TDR), insulation resistance, and a resistive fault locator (RFL). With this series of measurements, field technicians can not only quickly locate typical line faults such as opens, shorts, and poor joints, they can also locate high-resistance insulation faults, including ground and battery contacts.

## Simple to Operate

With a user-friendly, intuitive interface and no need to make manual calculations or use bridge nulls, the E2570 is an appealing option for users with a minimum of training.

## Long-Range Capability with High Resolution at Short Ranges

Operating in TDR mode, the E2570 can locate faults up to 9800 feet away and with a resolution of 3.9 inches at a range of 30 feet.

## User-Definable Gauge and Temperature Selection

When resistive measurement techniques are employed to locate and measure faults, it is essential that the wire gauge and temperature are taken into account. By entering this information into the E2570, you can easily obtain accurate measurements.

## Multi-Gauge Selection

Line models consisting of up to 99 sections can be formed from selectable gauges to ensure that accurate representations can be made of the line under test.

## Verification Facility

The E2570 is supplied with a standard verification box to ensure that the instrument's bridge facility is measuring accurately.

## No Dead Zone with Internal Balance Control

An internal balance control is provided to cancel the mismatch between the unit and the line under test, making it easier to locate faults close to the unit.

## Lightweight—Ideal for Field Use

Weighing in at only 1.32 lb. with batteries, the lightweight E2570 is ideal for use in the field.

## Automatic Power-Down Feature

After five minutes with no user action, the unit automatically switches off to conserve battery power.

## Clear LCD Graphic Display

Regardless of working environment, the E2570's clear LCD with backlight facility ensures easy reading of results. Fault distances are indicated digitally within seconds.



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Analyze | Assure | Accelerate™

## General Specifications

### Physical Characteristics

<b>Case dimensions (L x W x H)</b>	7.48 x 3.54 x 2.12 in.
<b>Display dimensions</b>	1.73 x 2.28 in.
<b>LCD display</b>	128 x 64 graphic with backlight
<b>Case material</b>	ABS & Polycarbonate
<b>Weight (with batteries)</b>	1.32 lb.
<b>Leads</b>	6 feet
<b>Connectors</b>	Four 4mm safety terminals

### Power

<b>Battery consumption</b>	80 mA nominal 120 mA nominal with a backlight
<b>Power down</b>	Automatic after 5 minutes with no key depression
<b>Batteries</b>	6 AA-size manganese-alkali or nickel-cadmium cells
<b>Nominal battery voltage</b>	9 V with manganese-alkali cells 7.2 V with nickel-cadmium cells
<b>Battery low</b>	6.5 V nominal

### Environmental Requirements

<b>Bump</b>	To IEC 68-2-29
<b>Free fall</b>	To IEC 1010, Clause 8.4
<b>Vibration</b>	To IEC 1010, Clause 8.3
<b>Impact</b>	To IEC 1010, Clause 8.2
<b>Operational temperature</b>	5° to 122°F
<b>Storage temperature</b>	-40° to 158°F
<b>Cold temperature</b>	To IEC 68-2-1
<b>Dry heat</b>	To IEC 68-2-2
<b>Damp heat</b>	To IEC 68-2-3

### Protection, Safety, and EMC

<b>Protection</b>	<ul style="list-style-type: none"> <li>■ Withstands ringing tone.</li> <li>■ Withstands 300 V DC or 250 V AC</li> </ul>
<b>Safety</b>	Complies with IEC 1010
<b>EMC</b>	Complies with BS EN 50081.1 and BS EN 50082.1

## Technical Specifications

TDR	Range	Resolution	Accuracy
	30 ft., 90 ft., 300 ft., 900 ft., 3000 ft., 9000 ft., Auto range	1% of range	<ul style="list-style-type: none"> <li>■ ±1% of range at 0.67 VF</li> <li>■ ±1% of range ±1 pixel for 30 and 90 ft ranges</li> </ul>
<b>Gain</b>	Automatically selected with range with four user-selectable steps		
<b>Velocity Factor</b>	0.30 to 0.99 in steps of 0.01		
<b>TDR Pulse</b>	5 V peak into open circuit		
<b>Output impedance</b>	100 Ω		
<b>TDR Update Rate</b>	Once per second		
<b>Temperature Compensation</b>	4 to 140°F in 0.5°F steps		
RFL (at 68°F)	Range	Resolution	Accuracy
<b>Fault&lt;1 MW</b>	0–190 Ω	0.1 Ω	±0.2% of reading ±1 digit
<b>Fault&lt;5 MW</b>	190–2000 Ω	1.0 Ω	±0.2% of reading ±3 digits
<b>Fault&lt;20 MW</b>			±0.2% of reading ±6 digits
<b>Gauges</b>	AWG 18, 19, 22, 24, 26		
<b>Bridge Line Voltage</b>	100 V DC nominal at 100 mA nominal		
<b>Insulation Resistance</b>	0–19 MΩ 19 M–200 MΩ	0.01 MΩ 0.1 MΩ	±2% of reading ±1 digit
<b>Loop Resistance</b>	0–190 Ω 190–200 Ω	0.1 Ω 1.0 Ω	±0.2% of reading ±1 digit
<b>Voltage</b>	-250 to 250 V DC	±1 Volt	1% of range

## Ordering Information

### Model

<b>E2570—Combined TDR/RFL Handheld Tester (North America)</b>	E2570-NA
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### Spares and Accessories

<b>Battery 1.5 V IEC LR6</b>	CEJ0006
<b>Carry Case</b>	DDP0035
<b>Test Lead (includes clips)</b>	DFK0095
<b>Instruction Manual</b>	CMR0106
<b>Verification Box</b>	DFK0096

All units are shipped standard with carrying case, leads, batteries, and instruction manual.

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