

TS®54 TDR

Overview

Premium Voice, Data, and Video Telephone Test Set

The innovative **TS54 TDR** (Time Domain Reflector) is perfect for voice, data and video technicians and communication service provider technicians who need a best-in-class test set combined with a powerful TDR and toner. Fluke Networks took the **best telephone test set** features and design and combined them into one. There's nothing else like the TS54 TDR on the market today. No longer will you need to carry a separate TDR, toner, pair identifier and butt-in test set—everything you need is in one newly redesigned and compact package.

The TS54 delivers 20% more extreme weather protection with the latest advancements to our patented RainSafe™, DropSafe™ and DataSafe™ technology. This means the TS54 is weatherproof and rugged and able to butt in on live DSL lines to test POTS quality without crashing data service.

DropSafe™ PRO – passed 20-foot drop test onto concrete

RainSafe™ PRO – protection for extreme weather conditions

DataSafe™ PRO – prevents disruption of data transmission on the line

High-visibility keypad with glow-in-the-dark keys for any outside plant environment

Extra-large, backlit LCD screen

Familiar, cell phone-like menu and user interface

Two-way, hands-free speakerphone

Low battery and mute indication

Optional headset



Features

TDR – find cable length measurement and locate faults on virtually all types of cable including twisted pair, coaxial, and parallel conductors

Toner – five separate tones for fast and easy differentiation between multiple wire pairs

SmartTone® – short the correct pair and tone changes for exact pair identification

Additional key testing functions include:

Data indication – warns when data is present on the line

Voltage indication/measurement – identifies potential line problems

Current (mA) indication/measurement– verifies sufficient line current

Caller-ID with Call Waiting — verifies functional service

DTMF Digit Grabbing — isolates faulty customer premise equipment

Detects dial tone, places and receives calls

Polarity



Extra-large, backlit LCD screen



Glow-in-the-dark keys for any outside plant environment

Specifications

ELECTRICAL	
Current range (Off-Hook)	10 mA to 100 mA
DC Resistance	
Off-Hook	150 Ω nominal
On-hook	3 M Ω
AC Impedance	
Off-hook	600 Ω nominal; 300 Hz to 3400 Hz
On-hook	120 k Ω ; 300 Hz to 3400 Hz
Headset impedance	32 Ω
Rotary Dial Output	
Pulsing rate	10 pps $\pm$ 1 pps
Break/make ratio	60/40
Interdigit interval	300 ms
Resistance during break	100 k Ω
DTMF Output	
Tone frequency error	$\pm$ 1.5% maximum
Tone level	-3 dBm combined (typical)
High versus low tone difference	2 dB $\pm$ 2 dB

SPEED DIALING	
Memory capacity	9 speed dial memories of 23 digits, plus one last number redial memory
PBX pause duration	User programmable; default of 4 seconds
Hook flash duration	User programmable; default of 500 ms
Automatic shut-off duration	User programmable; default of 2 minutes
Voltage measurement	
Range	4 V dc to 140 V dc
Current measurement	
Range	0 mA to 100 mA
TDR	
Range	3,000 feet (914 m)
Accuracy	± 2 m ± 5 %
SmartTone toner	
Frequencies	Steady tone: 950 Hz Alternating tones: 950 Hz and 1480 Hz
Power	
Battery type	9 V alkaline battery
Physical	
Dimensions	8.3 in x 3.2 in x 2.6 in (211 mm x 81 mm x 66 mm)(without belt clip)
Weight	1.16 lb (0.53 kg) (without belt clip)
Water resistance	The test set is rain and moisture resistant

ENVIRONMENTAL	
Temperature range	
Handset speech and dialing functions	-22°F to 140 °F (-30°C to 60°C)
LCD function	-13°F to 140°F (-25°C to 60°C)
Storage	-22°F to 150°F (-30°C to 66°C)
Altitude	To 10,000 ft. (3,000 m) max
Relative humidity	95% to 30°C 75% to 40°C 45% to 50°C 30% to 60°C
Safety	
Regulatory compliance	Complies with ANSI/ISA 82.02.01 (61010-1) 2004, CAN/ CSA-C22.2 No. 61010-1-04, UL 61010-1 (2004) and IEC 61010-1:2010 for measurement category I, 300 V dc maximum, pollution degree 2
Maximum transient voltage	1500 V
EMC	Complies with EMC EN61326-1

Notes: Specifications subject to change without notice.

Ordering Guide

ITEM NUMBER	DESCRIPTION
TS54-A-09-TDR	Test Set + TDR, ABN with Piercing Pin
TS54-BANA	Test Set + TDR, 4 MM Banana, Extra-large Alligator Clips, Test Probe

Accessories Guide

ITEM NUMBER	DESCRIPTION
BELTCLIP-TS	Belt Clip
LEAD-PIRC-PIN	Test Leads with Piercing Pin Clips
LEAD-CO-346A	Test Leads with a 346A Plug for the Central Office1
LEAD-ABN-PPIN	Test Leads with Angled Bed-of-Nails (ABN) and Piercing Pin Clips
LEAD-ALIG-CLP	Test Leads with Alligator Clips
LEAD-ABNPRJ11	Test Leads with an RJ-11 Plug, Angled Bed-of-Nails (ABN), and Piercing Pin Clips
TEST-LEAD-BANA-CLP	Test Leads with a 4 mm Banana Plug, Alligator Clips, and Test Probe
HEADSET-TS	Headset

1. When you use these test leads, the TDR accuracy specifications do not apply.