HUBBELL High Voltage Test Business

HIPOTRONICS THE MEASURE OF A LEADER

TDR1150

Cable Dynamics - Time Domain Reflectometer

■ **Hipotronics Model TDR1150** is the most advanced and powerful cable fault-locating tool on the market. Used together with a suitable high voltage coupling device, the TDR1150 accurately pre-locates high voltage cable faults in underground transmission and distribution cable systems.

Basic Mode Operation

Basic mode provides the simplest means of operation for pre-locating most cable faults. The TDR provides step-by-step operation instructions, automatically sets the cable end points, displays the cable length in feet or meters and displays the distance to the cable fault from the hook-up point. The auto range feature fits the cable trace on the screen, regardless of the cable length.

The operator is then prompted to send a single, high voltage pulse down the cable. The TDR displays the high voltage trace, places a fault cursor at the point of the fault, and displays the distance to the fault. There is no need to interpret traces or move cursors. The entire process can be completed within minutes.

Advanced Mode Operation

Advanced Mode operation provides the operator with complete control and setup access of the TDR functions and settings. Typically this is used in cases where the cable type may be unknown, the cable system has a complex system configuration (loop and network systems) or where the fault may be intermittent. It is password protected to prevent unauthorized use. This mode provides more experienced operators with the diagnostic tools they need to find more difficult faults.

TDR functions that can be adjusted include: propagation velocity, pulse width, gain, 3-phase or single-phase display, and trigger delay. Zoom and cursor features are also fully available to the user in Advanced Mode. In addition alternate languages, memory functions, selectable measurement systems and much more are accessible.

Features

- ☑ **Automatic Identification** of Key Cable Parameters (cable length and distance to fault)
- ☑ **Quick Location of Faults**
- ☑ **32 Accessible Memory Locations** for Internal Trace Storage
- ☑ **Large 10.4" VGA** Color Display
- ☑ **Automatic Setup** of sampling rate, gain and pulse width
- ☑ **Step-by-Step Instructions** of System Operation Guides User Through Test
- ☑ **Large, Easy-to-Use** Buttons

Benefits

Multi-Purpose Device - has ability to pre-locate, locate and diagnose cable faults

Easy to Use - device walks user through test procedure; in 5 easy steps you've located the fault

Compatibility - TDR1150 can be used with most other High Voltage Couplers

PC Software and Serial Port - included with standard unit provides long-term storage, evaluation of test results, defining of test protocols and simple software upgrading

Reduce Outage Time - by quickly locating cable faults you reduce outage time and get power back to your customers sooner

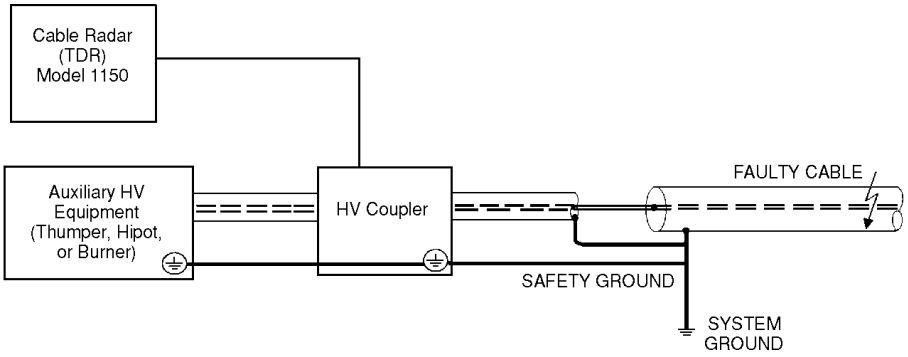
Reduce Cable Damage - using a TDR reduces thumping and therefore damage to the cable

Applications

These devices are generally used by:

- ➔ Electrical Utilities
- ➔ Test Companies
- ➔ Petrochemical Facilities
- ➔ Facility Maintenance

Measuring Setup Diagram



Technical Specifications

General

Power Supply	Battery Operated		Charger Input	-A 120 V AC, 60 Hz -B 230 V AC, 50/60 Hz
Pulse Characteristics	Pulse Amplitude	25 V into 50 Ω	Pulse Width	100 ns to 20 µs (50 ns optional)
Input Protection	480 V AC			
Range	Time	1.28 µs to 0.66 ms	Distance	1 foot to 196,000 feet
Measurement Accuracy	Sample Rate 100 MHz		Resolution 2.5 feet (10 ns)	
Operational Modes	Arc reflection, TDR direct, and current pulse			
Storage	Stores 16 sets of 3 trace signatures	OR	6 pre-recorded setups with information and 10 sets of 3 trace signatures	
Monitor	LCD Display 7.0 inch diagonal			
Environmental	Operating Temperature Storage Temperature		10° F to 122° F (-12° C to 50° C) -40° F to 140° F (-40° C to 60° C)	

Weights and Dimensions (W x H x D, net weight, ship weight)

TDR1150	14" x 9.5" x 6" (360 x 240 x 150 mm)	15 lbs (7 kg)	25 lbs (11.3kg)

Scope of Supply

Qty. 1	TDR1150 in portable, water resistant case
Qty. 1	100/240 V, 12 Vdc power supply (PN211212), with 6 ft (1.8 m) cord
Qty. 1	RG58/U BNC-BNC cable (PN20097), 15 ft (4.6 m)
Qty. 1	BNC/clip cable (PN210946), 2.5 ft (0.76 m)
Qty. 1	Serial interface cable (PN210947), 6.5 ft (2 m)
Qty. 1	Operations Manual and TDR-PC interface software
Qty. 1	Calibration Certificate

Ordering Information

System

Time Domain Reflectometer	**TDR1150-A** **TDR1150-B**
TDR Retrofit Kit to upgrade existing with TDR1150.	**TDR-1150-RTRFT**

More Ordering Information

Accessories

Power supply for TDR-1150, 50/60 Hz, 100-240 V	**1150-PS**
HV Coupler to protect TDR from HV of cable fault locator. **TDR1150 must be used with a coupling device.**	**HVC4100 Series**
Cable Fault Locaters (Thumper) 30 (8µf) and 70 kV (12 or 24 µf).	**CF Series**
Controlled Energy Thumpers 1500 J or 2000 J and 8/16/32 kV output.	**CET Series**
HV Cable Rack with 125 ft of 70 kV cable and 125 ft of safety ground cable.	**8100**
Battery operated acoustical fault detector	**HSDAD**
Secondary fault locator and cable tracer	**HEG3000-T**

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