MEGGER® TDR1000

- **Eliminates the transmission pulse 'dead zone'**
- **10m to 3Km Measurement Ranges**
- **25, 50, 75 and 100Ω Cable Matching**
- **Suitable for Coax, Telecom, Datacom & Power cables**
- **Large high resolution backlit display**
- **Dust and shower proof to IP54**

Hand-Held Time Domain Reflectometer

DESCRIPTION

The MEGGER® TDR1000 is an advanced instrument capable of identifying a wide range of cable faults using a technique called Time Domain Reflectometry (TDR). It offers exceptional features and a range capability normally associated with bigger, more expensive instruments. The measurement range spans between 10m and 3km (30Ft to 9,000Ft), with a minimum resolution of 0.1m (4 inches).

The MEGGER® TDR1000 can be used on any cable consisting of at least two insulated metallic elements, one of which may be the armouring or screen of the cable. The TDR1000 has internal matching networks to allow testing of 25Ω, 50Ω, 75Ω and 100Ω cables. (These correspond to power, coaxial data and data/telecoms cable).

The instrument can be closely matched to the cable using the balance control allowing long lengths of cable to be easily tested and faults close the instrument to be seen. The propagation velocity value can be similarly adjusted to match the cable, thus ensuring an accurate distance measurement can be directly read. To enable a wider range of faults to be detected, the gain of the instrument is also variable, allowing more minor faults to be identified over the entire length of the cable.

Other user adjustable settings include changing the distance measurement units between metres and feet and adjusting the propagation velocity units between a ratio and a distance per microsecond. Display contrast can be set to compensate for all viewing conditions and a backlight assists in low ambient light conditions.

APPLICATIONS

Telephony

Provides fast and accurate results when uncovering transmission related problems. Designed to be carried on a linesman's belt and used in the first line of defence when diagnosing and locating cable faults. Able to identify Bridge taps and splices, the presence of water in cables, opens or shorts in A, B and earth (tip, ring and sheath), Capacitive networks, load coils, wet and high resistance splices.

CATV

Ideal for testing the physical integrity of cables within a network. Specific cable conditions that can be identified include bends, crimps, cuts, shorts, taps, splits and water saturation. The unit is also capable of locating illegal cable taps.

Power

An ideal tool for identifying faults on secondary power cables particularly burnouts in aluminium conductors, good splices, wet splices and high resistance splices, and shorts between phases or phase and ground. When used on energised circuits, a mains blocking filter must be used.

FEATURES AND BENEFITS

- TX Null allows the transmitted pulse to be nulled out so cable features can be detected at the beginning of the displayed trace.
- Pulse widths down to 7ns allow for accurate discrimination between features.
- Pulse widths up to 3000ns and four gain settings allow for the detection of cable features up to 3km away.
- IP54 weatherproof enclosure ensures operation in inclement conditions often encountered in the field.
- Very versatile instrument with matching networks for 25Ω, 50Ω, 75Ω and 100Ω which allows for testing of power, coax and data/telecom cables.

SPECIFICATION

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

General

Ranges:
10m, 30m, 100m, 300m, 1000m, 3000m
(30ft, 90ft, 300ft, 9000ft, 3000ft, 9000ft)

Accuracy:	±1% of range ±pixel at 0.67VF
Resolution:	1% of range.
Gain:	Set for each range with four user selectable steps.
Velocity Factor:	Variable from 0.30 to 0.99 in steps of 0.01
Output pulse:	5 volts peak to peak into open circuit
Output impedance:	User selectable between 25Ω, 50Ω, 75Ω, 100Ω
TX Null:	0Ω to 120Ω
Update Rate:	Once every second for 5 minutes after last key press.
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, nickel-cadmium or nickel-metal-hydride cells

Nominal voltage; 9V for Alkali of 7.2V for NiCad or NiMH

Low battery warning occurs at 6.5V

Battery consumption 100mA nominal 140mA with backlight (20/30 hours continuos use depending on backlight dependency)

Safety:
This instrument meets the safety requirements of IEC 61010 part 1 to 150V cat III. If it is to be used in situations where hazardous live voltages may be encountered, then an additional blocking filter must be used.

EMC:
Complies with Electromagnetic Compatibility Specifications (Light industrial)
BS/EN50081-1-1992
BS/EN50082-1-1992

Mechanical

The instrument is designed for use indoors or outdoors and is rated to IP54.

Case Dimensions:	230 mm long 115 mm wide 48 mm deep
Instrument weight:	0.6kg (1.32lbs)
Case material:	ABS
Connectors:	Two 4mm safety terminals.
Lead:	2 metres
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 to158°F)

Operational Humidity:
95% at +40°C

ORDERING INFORMATION

Item (Qty)	Order Code
TDR1000	6410-984
Included Accessories	
Test and Carry Pouch	6420-125
Miniature Clip Test Lead Set	6231-652
User Guide	6172-443

Optional Accessories	
Mains Blocking Filter	6220-669

UNITED KINGDOM
ARCHCLIFFE ROAD, DOVER, KENT CT17 9EN
ENGLAND
PHONE: +44 (0)1304-502100
FAX: +44 (0)1304-502300/207342
EMAIL: avosales.dover @avointl.com

UNITED STATES
4651 S. WEST MORELAND ROAD
DALLAS, TX 75237-1017 USA
PHONE: (214) 330-3255
FAX: (214) 333-3533
EXPORT FAX: (214) 337-3038

AVO INTERNATIONAL