PEWA
Messtechnik GmbH

Weidenweg 21
58239 Schwerte

Tel.: 02304-96109-0
Fax: 02304-96109-88
E-Mail: info@pewa.de
Homepage : www.pewa .de

TDR2000/3 and TDR2010
Advanced Dual Channel TDR

- **Comprehensive Dual Channel capability with dual aspect display.**
- **AUTO set up mode for instant use.**
- **Ultra fast pulse for near end fault identification.**
- **AutoFind guidance to potential fault.**
- **IP54 rating offers real life working.**
- **Designed for use on all metallic paired cables.**

DESCRIPTION

The Megger® TDR2000/3 and TDR2010 are state of the art, dual channel, high resolution, compact Time Domain Reflectometers with a colour screen for locating faults on paired metallic cables.

Both TDRs have a minimum resolution of 0.1m/0.3ft and a 20km/60kft maximum range depending on the velocity factor selected and the cable type.

Five output impedances are available (25, 50, 75, 100, 125 ohms) and an auto impedance matching feature. The velocity factor can be set between 0.2 and 0.99 to meet any cable test requirements.

FEATURES AND BENEFITS

The TDR20xx series has a large, high resolution, colour, WVGA display with easy set up features. Directional control buttons, together with soft keys, provide intuitive and easy operation for the user.

An AUTO selection option ensures that the most effective parameters are selected depending on the range required, aiding rapid diagnosis of the TDR trace. The ability to manually override the auto function allows fine tuning to enable identification of hard to determine faults.

Dual trace and dual cursor capabilities allow full flexibility, giving the operator full control and instant indication of distance between two points.

A trace comparison feature also allows close examination between trace conditions. Extra high resolution together with a white-light backlight, user definable tones and colour give the graphical display a vibrance, aiding the user in identifying key events on the trace.

Trace Storage

100 internal trace memories provide for the storage and recall of test results. The traces can be recalled to the display for analysis or compared with an active display to aid in fault location.

Alternatively the stored results can be downloaded to a computer, via the USB port, using the TraceXpert software and USB lead provided.

Fault identification

Megger's own built-in AutoFind mode allows for speedy identification of faults. One press of the AutoFind key automatically adjusts the range and gain, and positions the cursor to the first major event on the cable. Press the AutoFind key again and the cursor will jump to the next detected disturbance.

For those who wish to maintain manual control, manual operation allows full override access to refine the response for easy fault identification.

Trace Tagging

The addition of a trace tagging function on the TDR2010 allows the user to maintain accurate records of circuit details against every saved result. This is retrieved into the TraceXpert software for inclusion in the master record and for use on reports.

TraceXpert PC software

The TDR2000/3 and TDR2010 come complete with the Megger TraceXpert software which gives full control over downloading, reporting and uploading of saved trace results. Designed around a database and programmed for ease of use and simplicity, TraceXpert offers the ideal application for all your data processing requirements.

Megger

Models

The TDR20xx series is available in 3 models.

TDR2000/3

A fully featured high resolution TDR with backlit colour display and powered by Li-ion rechargeable battery batteries. This model comes complete with 2 pairs of mini-clip Test Leads.

TDR2000/3P

The same as the TDR2000/3 but with Dual fused test leads replacing the mini-clip leads

TDR2010

The same as the TDR2000/3 but with Trace Tagging and additional Colour Scheme selection.

BENEFITS

- Backlit graphics colour LCD (800x480)
- Adjustable display contrast
- Resolution to 0.1 m
- AutoFind guide to potential fault location
- 100 trace on board memory
- USB connection to PC allowing upload and download of traces
- "TraceXpert" PC software analysis tool
- For use on Telecom TNV-3 circuit, or 150V CAT IV power circuits
- Power blocking filter built-in
- Environmental protection to IP54
- Selectable output impedance (25, 50, 75,100 and 125Ω)
- 2ns pulse for near end fault location
- AUTO option selecting gain and pulse for each range
- AUTO option matches output impedance to cable
- Display distance in metres or feet
- Li-ion rechargeable battery (12 hours typical life)

SPECIFICATIONS

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

GENERAL

Range

Up to 20000m with a minimum resolution of 0.1m

m	ft	ns
10	30	125
25	75	250
50	150	500
100	300	100
250	750	2500
500	1500	5000
1000	3000	10000
2500	7500	25000
5000	15000	50000
10000	30000	100000
20000	60000	200000

Accuracy	±1% of range ±1 pixel at 0.67 VF [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 to protect the user in the event of connection to live systems up to 150 V CAT IV. This instrument is designed for use on de-energised systems but fused leads must be used if the potential voltage between terminals could exceed 300 V.
Output pulse	Up to 20 volts peak to peak into open circuit. Pulse widths determined by range and cable.
Gain	Set for each range with user selectable steps (in Manual operating mode)
Velocity factor	Variable from 0.2 to 0.99 in steps of 0.01
TX null	Automatic
Power down	User programmable auto power off timer 1, 5, 10 mins or never
Battery	Li-ion rechargeable battery
Battery charge time	6 hours at 0 °C to 40 °C
Battery life	12 hours typical
Safety	This instrument complies with IEC61010-1 for connection to live systems up to 150 V CAT IV or 300 V CAT III. Fused leads must be used if the voltage between the terminals exceeds 300 V. Compliant with EN60950-1, EN61010-3, UN38.3 and EN62133
EMC	Complies with Electromagnetic Compatibility Specifications (Light industrial) BS EN 61326-1, with a minimum performance of 'B' for all immunity tests.

MECHANICAL

IP rating	The instrument is designed for use indoors or outdoors and is rated to IP54.
Case	ABS
Dimensions	290 mm (11.4 in) x 190 mm (7.5 inches) x 55 mm (2.2 inches)
Weight	1.7kg (3.8lbs)
Connectors	Four 4mm-safety terminals and two F connectors. Other standard push on adapters will fit the TDR20xx series.
Test lead	1.5 metres long consisting of 2 x 4mm shrouded connector to miniature crocodile clips (TDR2000/3 and TDR2010) or 1.5 metre fused leads (TDR2000/3P)

Megger

Display	800 x 480 pixel colour graphics LCD, viewable in external environments. **Colour Schemes** Selectable - TDR2000/3 x2 TDR2010 x8 Custom - TDR2000/3 x1 TDR2010 x2
Backlight	Permanent backlight with all colour schemes

ENVIRONMENTAL

Operating temperature range and humidity	-15 °C to +50 °C (5 °F to 122 °F)
Storage temperature range and humidity	-20 °C to 70 °C (-4 °F to 158 °F)

ORDERING INFORMATION

Description	Order Code
Ordering information	
TDR2010 UK Dual Channel Comms	1005-447
TDR2010 EU Dual Channel Comms	1005-448
TDR2010 US Dual Channel Comms	1005-449
TDR2010 INT Dual Channel Comms	1005-450
TDR2000/3 UK Time Domain Reflectometer	1003-036
TDR2000/3P UK Time Domain Reflectometer	1003-037
TDR2000/3 EU Time Domain Reflectometer	1003-339
TDR2000/3P EU Time Domain Reflectometer	1003-342
TDR2000/3 US Time Domain Reflectometer	1003-334
TDR2000/3P US Time Domain Reflectometer	1003-341
Included accessories	
2 x Miniature Clip Test Lead Set	6231-654
Dual fused test lead set (2 pairs)	1002-136
Download kit	1003-353
Carry case	1003-217
User guide CD	2003-074
AC-DC charger	1003-352

Description	Order Code
Optional accessories	
Fused test lead set	1002-015
Replacement battery	1002-552
Terminal adaptor kit	1003-218
Miniature clip test lead set	6231-652
AC power lead - UK	25970-028
AC power lead - EU	6180-334
AC power lead - US	25970-002