

TDR 500 / TDR 510

BAUR Handheld Time Domain Reflectometer



Example: TDR 500

Quick cable fault location at the touch of a button

- Configurable for various measuring ranges and cable types
- Standard-compliant, safe measurements on life cables through the measurement category CAT IV / 600 V (with the separation filter*)
- Ideal for fault location in the area of telecommunication, video technology, data and security technology

The BAUR handheld time domain reflectometer TDR 500 and TDR 510 are used for fault location in all metal cables such as power cables, coaxial cables, data cables and communication cables. With the time domain reflectometry, cables are tested for interruption, short-circuit, contact, illegal branching (electricity theft), water leaks and other cabling faults that alter the impedance of the cable. Simultaneously, the cable length is determined and the distance to the fault is displayed.

Through the measurement range up to 7 m, both devices are especially suitable for locating faults in the vicinity, e.g. in service lines. But even in long measurement routes up to 6 km, TDR 500 and TDR 510 show a high measurement accuracy.

TDR 510: The BAUR TDR 510 comes with a device memory for 50 measurements and the option to compare the trace of an active TDR measurement with a saved trace. With the TDR software, the stored measurement data can be downloaded to a PC via the USB interface and processed further. To compare historical measurement data with the current measurements, the measurement data can also be loaded the other way, from PC to TDR 510.

Functions

- Fault location in low voltage, coaxial, control and data cables as well as communication and CCTV cables
- Detection of all faults altering the impedance, such as short-circuits, cable interruptions, wiring faults, etc.
- Joint location
- Location and identification of cable pairs

Features

- Compact and light time domain reflectometer weighing only 350 g
- Measurement category CAT IV / 600 V for maximum safety in compliance with EN 61010 (with the separation filter*)
- 11 measurement ranges between 7 m and 6 km
- Cable impedance of 25, 50, 75 and 100 Ohm and the signal propagation speed can be adjusted
- Output pulse from 3 ns to 3 ms
- Integrated audio frequency transmitter 810 – 1100 Hz
- 2 measurement modes available:
 - Single pulse for locating simple, permanent faults
 - Continuous scanning for locating intermittent faults
- Water and dust-proof in compliance with IP 54

TDR 500

- Variable gain control

TDR 510

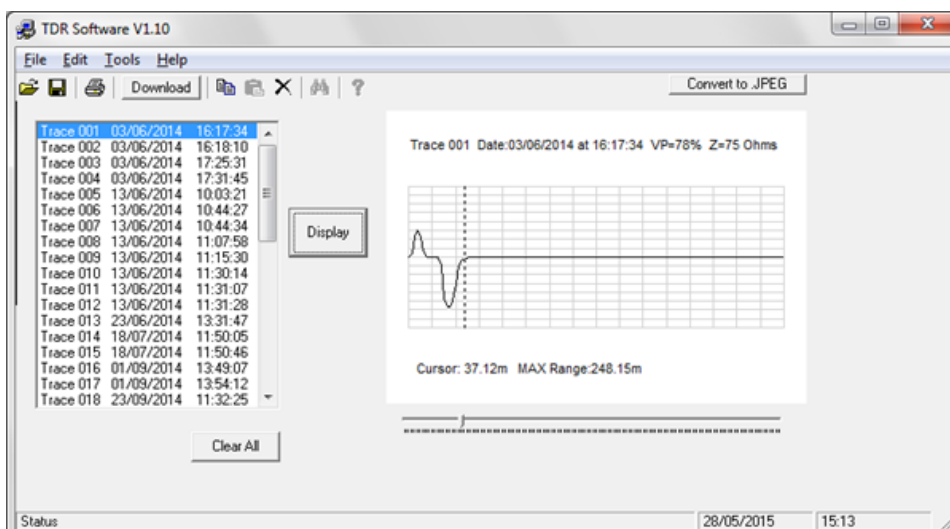
- Integrated memory for up to 50 measurements
- Trace comparison: possibility to compare the trace of an active measurement with a stored trace.
- USB interface for data exchange between PC and TDR 510
- Windows-based TDR software for analysis and further processing of measurement data on the PC (up to 3 stored traces can be compared)

*Option

Technical data

Cable fault location																	
Pulse voltage	5 V (in open circuit)																
Pulse width	3 ns – 3 ms																
Output impedance	25, 50, 75 or 100 ohm; adjustable																
Sampling rate	2 measurements/s or single measurement (not in 3 km /6 km range)																
Audio frequency transmitter	810 – 1100 Hz																
Measurement range	<table border="0"> <tr> <td>Metre / Feet:</td> <td>Kilometre / Feet:</td> </tr> <tr> <td>7 / 23</td> <td>1 / 3 280</td> </tr> <tr> <td>15 / 49</td> <td>2 / 6 560</td> </tr> <tr> <td>30 / 98</td> <td>3 / 9 850</td> </tr> <tr> <td>60 / 197</td> <td>6 / 19 000</td> </tr> <tr> <td>120 / 394</td> <td></td> </tr> <tr> <td>250 / 820</td> <td></td> </tr> <tr> <td>500 / 1 640</td> <td></td> </tr> </table>	Metre / Feet:	Kilometre / Feet:	7 / 23	1 / 3 280	15 / 49	2 / 6 560	30 / 98	3 / 9 850	60 / 197	6 / 19 000	120 / 394		250 / 820		500 / 1 640	
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Measurement range selection	Manual																
Velocity of propagation (v/2), adjustable	<ul style="list-style-type: none"> – between 1 – 99% as velocity factor (ratio of the transmitted pulse speed to the speed of light) – in m/μs or ft/μs (displayed as v/2) 																
Resolution	Approx. 1% of measurement range																
Accuracy	1% of selected measurement range (at homogeneous velocity of propagation)																
General																	
Rechargeable battery	4 x 1.5 V alkali batteries IEC LR6																
Automatic switch off	TDR 500: 1, 2, 3, 5 min or disabled TDR 510: 1, 2, 3 min or disabled																
Display	LCD with background lighting, screen resolution 128 x 64 pixels																
Ambient temperature (operational)	-10°C to +50°C																
Storage temperature	-20 to +70 °C																
Dimensions (W x H x D)	Approx. 90 x 165 x 37 mm																
Weight	Approx. 350 g (12 oz.)																
Overvoltage protection	AC 250 V																
Measurement category (with optional separation filter)	CAT IV / 600 V Mains nominal voltage (outer phase-neutral phase) DC or AC _{rms} : 600 V																
Degree of protection	IP 54																
Safety and EMC	CE compliant in accordance with Low Voltage Directive (2014/35/EC), EMC Directive (2014/30/EC)																
Data Management (TDR 510)																	
Data interface	USB 2.0																
Storage capacity	50 measurements																
Separation filter (option)																	
Rated voltage	CAT IV 600 V																
Rated frequency	50/60 Hz																
Fuses	1000 V; 0.5 A quick (6.3 x 32 mm)																
Dimensions (W x H x D)	Approx. 85 x 50 x 28.5 mm																
Weight	Approx. 200 g																

TDR 510 – Screenshot of the TDR software



TDR 500 standard delivery

- BAUR time domain reflectometer TDR 500
- 2 connection cables, 0.5 m each
- 2 crocodile clips
- Carrying bag incl. carrying strap
- User manual



TDR 510 standard delivery

- BAUR time domain reflectometer TDR 510
- TDR software on CD-ROM
- 2 connection cables, 0.5 m each
- 2 crocodile clips
- USB cable
- Carrying bag incl. carrying strap
- User manual



Options for TDR 500/510

Set 1

- Separation filter SF IV-600 (CAT IV / 600 V), incl.
 - Safety measurement cable, fix mounted 0.5 m
 - Fuses for separation filter
 - Spare fuse
 - Insulated crocodile clips (2 pcs), CAT IV / 600
 - Transport case for TDR 500/510 and accessories

Set 2

- SF IV-600 separation filter (CAT IV / 600 V) and Fluke Pro3000* analog sensor, incl.
 - Safety measurement cable, fix mounted 0.5 m
 - Fuses for separation filter
 - Spare fuse
 - Insulated crocodile clips (2 pcs), CAT IV / 600
 - Transport case for TDR 500/510 and accessories

* Note: the TDR 500/510 can be used in combination with the Fluke Pro3000 analog sensor for cable location and tracing.



* Fluke Pro3000 available in Set 2