

## 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 measurement ranges and cable types
- Standard-compliant, safe measurements on live 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.

With a minimum measurement range of up to 7 m, both devices are especially suitable for locating faults in the vicinity, e.g. in home connections. 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 storage for 50 measurements and the option to compare the trace of an active TDR measurement with a stored 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 propagation speed can be adjusted
- Output pulse from 3 ns to 3 ms
- Integrated audio frequency generator 810 – 1 100 Hz
- 2 measurement modes available:
  - Single shot for locating simple, permanent faults
  - Continuous scanning for locating intermittent faults
- Precise determination of cable length and distance to the fault
- Stable and robust construction – specially designed for field use
- Water and dust-proof in compliance with IP 54

#### TDR 500

- Variable gain control

#### TDR 510

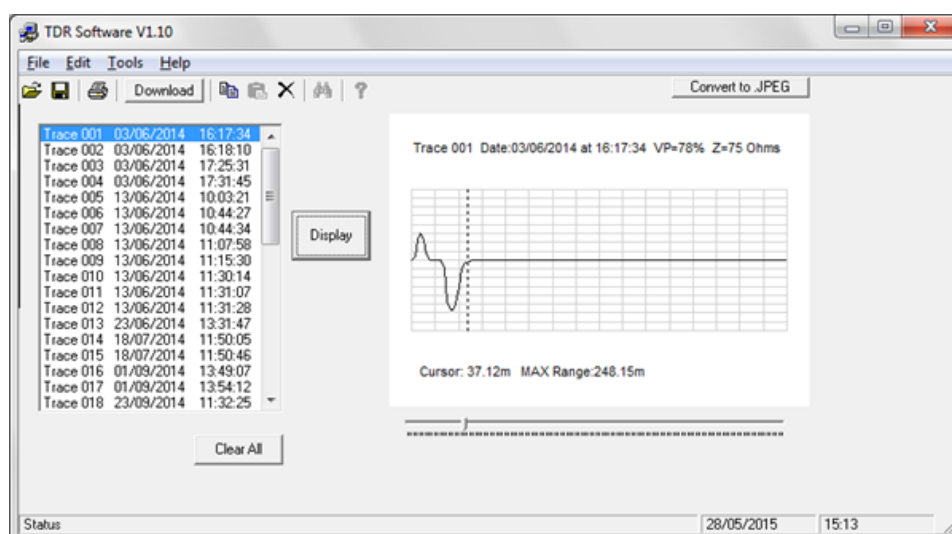
- 50 traces storage capacity
- Trace comparison on the instrument
- USB interface for data exchange between PC and TDR 510
- Windows-based TDR software for analysis and further processing of measurement data on the PC (up to 3 stored results can be compared)

\* Option

## Technical data

Cable fault location			General	
Output pulse	5 V (in open circuit)		Rechargeable battery	4 x 1.5 V alkaline batteries IEC LR6
Output pulse width	3 ns – 3 ms		Automatic switch off	TDR 500: 1, 2, 3, 5 min or disabled TDR 510 1, 2, 3 min or disabled
Output impedance	25, 50, 75 or 100 Ohm; adjustable		Display	LCD display (128 x 64 pixel), with background lighting
Sampling rate	2 measurements/s or single measurement (not in 3 km /6 km range)		Ambient temperature (operational)	-10 to +50 °C
Audio frequency generator	810 – 1 100 Hz		Storage temperature	-20 to +70 °C
Measurement range	Metre / Feet:	Kilometre / Feet:	Dimensions (W x H x D)	Approx. 165 x 90 x 37 mm
	7 / 23	1 / 3 280	Weight	Approx. 350 g (12 oz.)
	15 / 49	2 / 6 560	Overvoltage protection	AC 250 V
	30 / 98	3 / 9 850	Measurement category (with optional separation filter)	CAT IV / 600 V Working voltage DC or AC <sub>rms</sub> to earth: 600 V Impulse withstand voltage: 8 000 V
	60 / 197	6 / 19 000	Degree of protection	IP 54
	120 / 394		Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU) and EMC Directive (2014/30/EU)
	250 / 820		<b>Data Management (TDR 510)</b>	
	500 / 1 640		Data interface	USB 2.0
Measurement range selection	Manual		Storage capacity	50 measurements
Propagation speed	Adjustable: – 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 propagation speed)			

## 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

- SF IV-600 separation filter (CAT IV / 600 V), incl.
  - Connection 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.
  - Connection 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