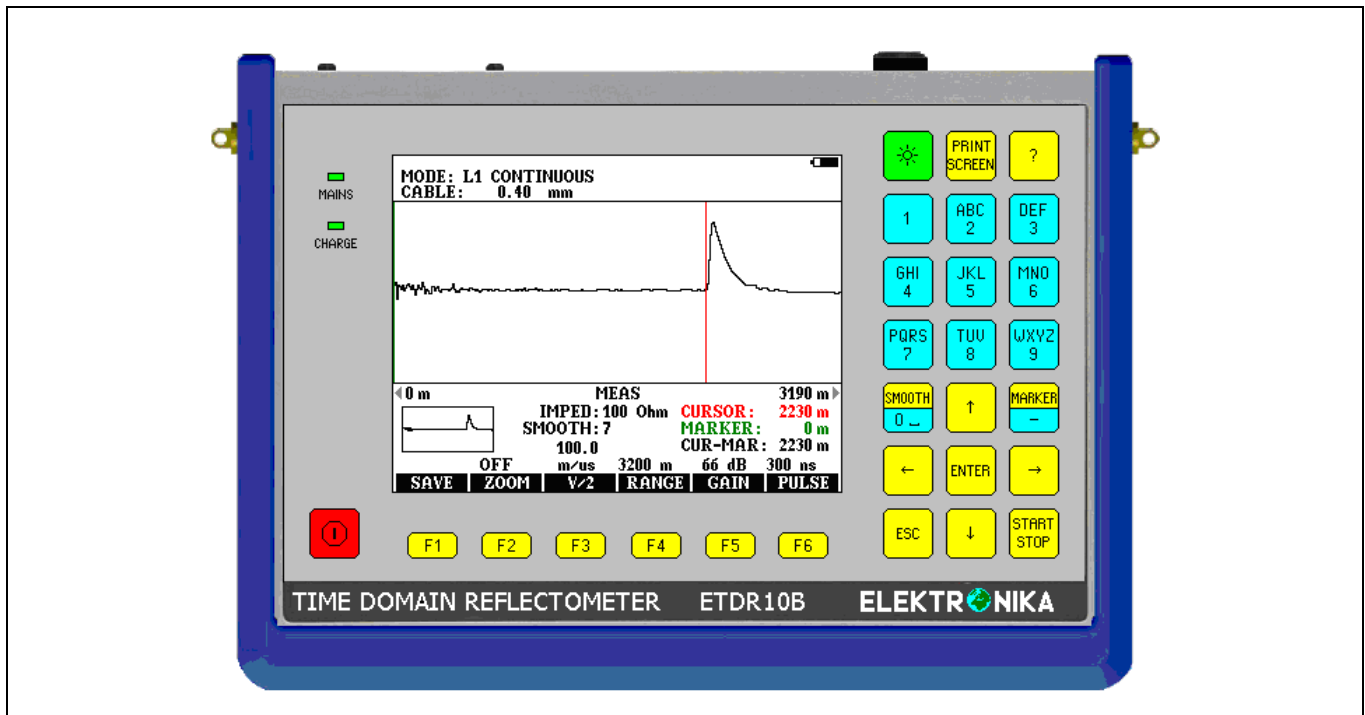


## WHERE IS THE FAULT?



## ETDR 10B GIVES THE ANSWER!



## APPLICATIONS

The ETDR 10B has been designed for quick and accurate fault location and qualification of balanced energy and unloaded telecom cables applying impulse reflection technique. The large color LCD display provides crystal clear wave forms.

The various measuring modes provide accurate location of discontinuities and errors like open circuit, short circuit, loose contact, wet section etc.

Loop Pulsing Device (ELP 400) is available to make the TDR measurements easier when the test object is a branched network.

Blocking Filter (EBF 20) is available to protect inputs when living low voltage energy cables are tested.

ETDR 10B employs optimized pulsing and sampling methods, supported with advanced filtering and signal processing techniques, to reach the maximum range and clean waveform for easier fault interpretation.

If you select the cable type from the cable library and set the measuring range covering the length of the cable to be tested, then: V/2, gain, pulse width, and the distance dependent compensation of cable attenuation are automatically set as default.

3 to 10 ns pulse widths for close-in resolution. Faults as near as 0.5 m from the pedestal can be easily located.

Help facility with sample traces and useful topic related information.

## FEATURES

- TDR for balanced cables
- Automatic detection of the fault
- Small size, suitable for using in the field at different weather conditions
- Widest range in a hand-held cable fault locator up to 16 km
- Language selectable: English, Russian, German, Italian, French
- Dual balanced input enables:
  - Examination of live lines
  - Comparison of two live lines
  - Difference between two live lines
  - Location of crosstalk points
  - Location of intermittent faults
  - Comparison of live line to memory
  - Difference between live line and memory
- Memory for storage waveforms and settings
- Clear waveform display of full trace for accurate diagnosis. 5' color display with backlight
- Zoom for detailed examination
- Cable library for standard and user defined cable types
- Results can be transferred to PC via USB cable, via WLAN or can be stored on memory stick.
- Internal rechargeable lithium-ion battery pack

**SPECIFICATIONS**

**Measuring ranges**

- 1. .... 16 m
  - 2. .... 32 m
  - 3. .... 64 m
  - 4. .... 160 m
  - 5. .... 320 m
  - 6. .... 640 m
  - 7. .... 1600 m
  - 8. .... 3200 m
  - 9. .... 6400 m
  - 10. .... 16000 m
- (Maximum range depends on cable features)

**Evaluation of results**

with cursor and marker in meters

**Zoom**

Selectable ..... OFF, 2.5, 5

**Resolution**

with zoom ..... 0.06% of range  
 without zoom ..... 0.3% of range

**Accuracy**

Sampling ..... 0.01 m  
 Fault location ..... 0.2% of range

**Propagation velocity**

V/2 ..... 45 to 150 m/μs  
 VOP ..... 30 to 99 %

**Measuring modes**

L1 AUTOMATIC	With auto configuration
L1 CONTINUOUS	Repeated measurements with averaging
L1 LONG TIME	Location of loose contacts and intermittent faults
L1 SINGLE	One single measurement
L2 CONTINUOUS	Repeated measurements with averaging
L1 & L2 L1 - L2	Comparison of two pairs
XTALK AUTOMATIC XTALK CONTINUOUS	Transmit on L1 Receive on L2
L1 & MEMORY L1 - MEMORY	Comparison with memory

**Pulse characteristics**

Amplitude: ..... max 10V peak to peak to open circuit  
 Widths: 3, 6, 10, 30, 60, 100, 300, 600 ns 1, 3, 6 μs  
 The provided pulse width changed with range.  
 The pulse amplitude changed with gain and width

**Gain control**

Range ..... 0 to 90 dB  
 Steps ..... 6 dB/step

**Line connection**

Impedances: ..... 100,135, 150 Ohm balanced  
 Input protection ..... 230V RMS 50 Hz 500 V DC  
 Balance control ..... up to 250 Ohm

**Memory locations**

For waveforms ..... 50  
 For setups ..... 10  
 For user stored PVF values ..... 10  
 For standard cable parameters ..... 30

**General Specifications**

**Power supply**

Internal rechargeable lithium-ion battery pack  
 Operation time ..... min. 10 hours  
 Charging (without taking the battery pack out)  
 From 230 V mains ..... with mains adapter  
 From 12 V car battery .... with car adapter (option)  
 Charging time ..... approx. 3 hours

**Display** ..... 5' color TFT LCD

**Connectors**

For mains or 12V car adapter 2.1/5.5 mm socket  
 L1 and L2 line connectors. 4 mm banana sockets  
 USB-MIC/B ..... to connect PC or memory stick

**Ambient temperature ranges**

Normal operation ..... -10 to +50°C  
 Rel. humidity ..... 30% to 75% (<25g/m3)  
 Limits of operation ..... -10 to +50°C  
 Rel. humidity ..... 5% to 95% (<29g/m3)  
 Storage and transport ..... -20 to +70°C  
 Rel. humidity ..... 55% at +45°C (<35g/m3)

**Protection** ..... IP 54

Shockproof ..... EN 60068-2-27 Shock

**Dimensions** ..... 224 x 160 x 44 mm

Weight ..... ~1,2 kg

\* without condensation

**ORDERING INFORMATION**

**TIME DOMAIN REFLECTOMETER**

**ETDR 10B** ..... 474-000-000

**Including:**

- Operating Manual
- Short form operation instructions
- Calibration Certificate
- Measuring Cable (red)
- Measuring Cable (black)
- USB stick & adapter
- USB cable for PC connection
- Mains adapter
- Battery pack (built-in)
- Carrying case

**Options:**

- ECA 10 Coaxial Adapter ..... 378-000-000
- Car Lighter power adapter EAA 20... 462-000-000
- Loop Pulsing Device ELP400 ..... 475-000-000
- Blocking Filter EBF 20 ..... 476-000-000
- Spare battery ..... 464-210-000

ELEKTRONIKA reserves the right to change specifications without prior notice !

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