



FEATURES

- TDR for balanced cables
- Easy to operate
- 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, 320 x 240 LCD 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
- Unit adjustment between V/2 and VOP

APPLICATIONS

The ETDR 10A-1 has been designed for quick and accurate fault location and qualification of balanced energy and unloaded telecom cables using impulse reflection technique.

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

Loop Pulsing Device (ES 2002) is available to make the TDR measurements easier when the test object is a branched network.

ETDR 10A-1 employs optimized pulsing and sampling methods, supported with advanced filtering and signal processing techniques, to reach the maximum measurement range and clean waveform for easier fault interpretation.

ETDR 10A-1 is designed for ease-of-use. If you select the cable type from the on board cable library and set the measurement range covering the length of the cable to be tested, 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.

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

SelectableOFF, 2.5, 5

Resolution

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

Accuracy

Sampling0.01 m
Fault location 0.2% of range

Propagation velocity

V/2 45 to 150 m/ μ s
 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 for non loaded cables:
 3, 6, 10, 30, 60, 100, 300, 600 ns 1, 3, 6 μ s
 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 mainswith mains adapter
 From 12 V car battery with car adapter (option)
 Charging time approx. 3 hours
 Display 320x240 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/Bto 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. humidity55% at +45°C (<35g/m³)
 ProtectionIP 54
 Shockproof EN 60068-2-27 Shock
 Dimensions 200 x 100 x 40 mm
 Weight 0.8 kg

ORDERING INFORMATION

TIME DOMAIN REFLECTOMETER

ETDR 10A-1 464-000-001

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 ES 2002 366-000-000
- Spare battery 464-210-000

ELEKTRONIKA reserves the right to change specifications without prior notice !

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