



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-2 has been designed for quick and accurate fault location and qualification of loaded and non loaded telecommunication 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-2 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-2 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. For non loaded cable 16 m
 2. For non loaded cable..... 32 m
 3. For non loaded cable 64 m
 4. For non loaded cable..... 160 m
 5. For non loaded cable..... 320 m
 6. For non loaded cable..... 640 m
 7. For non loaded cable..... 1600 m
 8. For non loaded cable..... 3200 m
 9. For all cables 6400 m
 10. For all cables 16000 m
 11. For loaded cables..... 32000 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

For non loaded cables
 V/2..... 45 to 150 m/μs
 VOP..... 30 to 99 %
 For non loaded cables
 V/2..... 1.2 to 30 m/μs
 VOP..... 0.8 to 20 %

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	Transmit on L1
XTALK CONTINUOUS	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 μs
 Width for loaded cables: 330 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:
 For non loaded cables . 100, 135, 150 Ohm balanced
 For loaded cables 600 Ohm balanced
 Input protection 200 V DC
 Balance control up to 900 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. humidity 55% at +45°C (<35g/m3)
 Protection..... IP 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-2 464-000-002

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 Adapter378-000-000
 Car Lighter power adapter EAA 20462-000-000
 Loop Pulsing Device ES 2002366-000-000
 Loop Pulsing Device ELP 400475-000-000
 Spare battery464-210-000