

INTRODUCTION

The Metravi TDRL-912 Cable Fault Locator is especially designed for Telecom Cables and can measure the exact fault location such as the broken line, cross faults, earthing, poor insulation, and poor contact of the lead covered telecom cables as well as plastic telecom cables.

The highlights for this locator are that it can test number of typical faults, features are as follow:

- Digital Gain Adjustment Control to make the gain adjustment very easy.
- Digital Waveform Automatic Identification technique to make sure there is no test dead zone.
- Top-grade ARM single chip micro-computer enables calculations and judge fault waveforms accurately.
- Large colourful LCD display; easy and simple to use.
- High-energy Li-ion battery, provides continuous working capacity for 10 hours (with special charger).



SPECIFICATIONS

- Max range: 8 kms (16kms/32kms are optional)
- Highest resolution: 1m
- Dead Zone: 0m
- Power consumption: 1W
- Weight: 0.38 kg
- Dimensions: 204×100×36 mm
- Working temperature: -15°C ~ 45°C
- Storage temperature: -20°C ~ 55°C
- USB storage (optional): transmit waveform to U disk and analyze the waveform on computer.

WORKING PRINCIPLE

Pulse testing is a kind of remote testing method; one can locate the fault point without testing on the field or testing with end-to-end coordination.

The principle of the theory is:

The instrument emits a pulse to the line. When the line has faults, the pulse reflection will change. If the input and reflection pulse time can be measured, the location of the fault point can be detected.

Suppose the pulse transmission velocity in electric cable velocity is V , the input and reflection time for the pulse to travel between the test point and the fault point is T , the fault distance is L , then:

$$2L=VT$$

$$L=VT/2$$

For example, the sending end transmits a pulse to the cable, after $20\mu s$, the sending end get the reflection pulse If the pulse transmission velocity in the electric cable is $201m/\mu s$, the fault distance L is $L = 201 \times 20 / 2 = 2010m$

*Technical Specifications & Appearance are subject to change without prior notice

TYPES OF FAULTS

Diagnosis of Fault Characteristics

To ensure the accuracy of the testing of the fault point, the testing personnel has to diagnose the fault characters correctly and then choose the most suitable testing mode. The characteristics of telecom cable faults can be simply divided into the following several kinds:

Broken line

One or many cable core lines are broken.

Crossed line

The insulating resistance between the different lines drops and causes communication amplitude drops.

Earthing fault

The insulating resistance between the core line and the lead cover drops and causes low communication quality.

Crosstalk noise

When the cable core insulation material is invaded by water or humidity, the insulating resistance drops and causes low communication quality or even blocks.

Bad insulation

The insulating resistance between different lines and the core drops to a very low level; the communication quality comes under serious influence.

PACKAGE INCLUDES:

Fault Locator, 2 Test Lines, Charger, Carrying Bag, User Manual, CD with Software & U-Disk (only for USB function)



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