



Portable Cable Fault Locator TFL 5

Compact and lightweight cable fault locator TFL 5 is most suitable for field application. It uses state of the art digital technology for precise location of faults in underground metallic cables. It is a menu driven microprocessor based Time Domain Reflectometer (TDR), which can locate open or short circuit faults on any type of metallic cables. The advanced circuitry utilizes high-speed sampling of 500 Ms/s for better resolution of echograms.

The instrument incorporates a unique feature of automatic placement of measuring cursor at fault point. This makes it totally user friendly and any operator having minimal knowledge can successfully locate the fault.

Features

Very small size, easily portable light weight, Palm-held ABS plastic housing

Easy to use Menu driven operation

Automatic and manual measurement modes by cursor

Data storage of test settings for quick recall

Data storage of up to 20 Test results

Printout facility with Ext. Printer or a PC via RS 232 Serial port

Use of high speed Micro-controller

Use of high resolution back-lit LCD Display

Very low power requirement with built in Lithium-Ion rechargeable batteries Capable of giving 8-10 hrs. of uninterrupted working

Built in battery charger

Improved minimum and maximum fault location range

Tests any type of telecom, coaxial, network or power cables

Automatic / Manual settings for VOP for different types of cables

Zoom for detailed examination around fault point

Self check facility

Auto shut down under idle running condition

Low-Battery Indication

Operation

The cable fault locator TFL 5 is a portable field instrument working on Time Domain Reflectometry (TDR) principle, using advanced digital technology. It is designed to locate faults in any type of metallic cables, such as unloaded telecommunication or power, network or co-axial cables. It sends a pulse of energy on the cable that propagates towards the far end. This pulse returns to the sending end from the point of mismatch of impedance. The transmitted and reflected pulses simultaneously appear on the LCD screen as an echogram and a measuring cursor is automatically set to the point of fault. The location of the measuring cursor computes the fault distance from the sending end. However, in case of complex fault, the cursor can be set manually at the fault point.

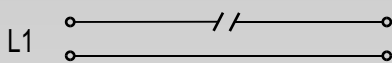
The velocity factor (VOP) is automatically set for the type of cable selected through the menu.

However, it can be set manually by getting the reflection on a known length of same type of cable.

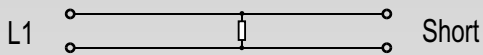
The active echogram of a faulty pair/core can be compared with the healthy one stored in one of the memory locations. The data of echograms can be downloaded to a PC through the RS 232 port.

TFL 5 can typically locate open and short circuit faults. It can also be used for other faults such as series and shunt, split pairs and ingress of moisture faults. It can also indicate locations of cable joints.

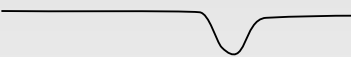
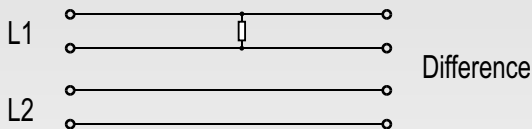
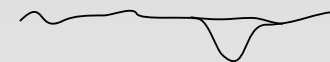
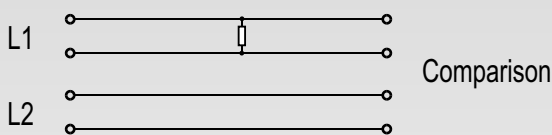
Open circuit (series) fault



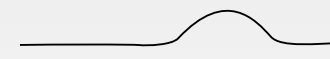
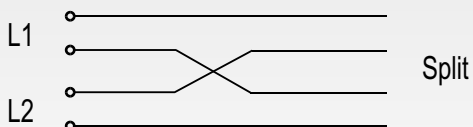
Short circuit (shunt) fault



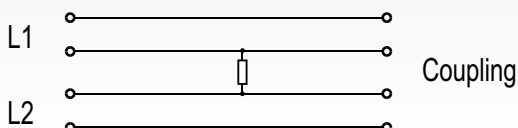
Comparison



Split



Coupling





Specifications

Description	Specification
1. Fault Distance Range (In Meters)	50m, 100m, 200m, 800m, 1600m, 3000m & 6000m
2. Measurement Mode	Auto or Manual
3. Fault Measurement Accuracy	$\pm 1\% \pm 1 \text{ m}$
4. Pulse Width	30 nsec to 3msec
5. Pulse Waveform	Square
6. Pulse Amplitude	24 V pp
7. Cable Constant (VOP) range	50 to 150 m/ μs
8. Measurement dead zone	1 meter
9. Auto Measurement dead zone	15 meter
10. Output Impedance	50-150 Ohms
11. Sampling Speed	500 MS/s
12. Memory Location	Sufficient to store 20 Wave-forms set-ups
13. Serial port for PC / Printer	RS 232C
14. Resolution	20 cm
15. Gain Range Control	1:10
16. Display Readout	Liquid Crystal Display 320 x 240 Pixel (Back-lit)
17. Power Supply	7.2 V rechargeable Li - Ion battery 2.2 AH Capacity built in charger Ext. DC Input : 12 V
18. Timer	Built in timer automatically switches off after 5 minutes to save the battery power.
19. Alarm	It gives audible alarm when high voltage (> 50V) appears on test leads, ensuring operator's safety
20. Weight	1 kg approx.
21. Dimensions	205 x 160 x 54 mm approx.
22. Accessories	Operation/Service Manual Mains cable Output cable PC Software for data transfer Serial Cable (RS 232C) Carrying Case
23. Environmental Spec.	Operation : 00 ^o C to 50 ^o C Storage : -10 ^o C to 60 ^o C
24. Working Temperature	0 ^o C to 55 ^o C

POWER

TELECOM

WATER

Leadership thru innovation