



## Bridge - TDR Combo/Fault Locator TFL B5

A Time Domain Reflectometer (TDR) has limitations of locating open and short circuit faults only. Low insulation faults are beyond the scope of such instruments. This calls for an instrument that can offer complete solution to the problems faced in the field. TFL B5 combines a TDR and an advanced bridge capable of locating any fault on telecommunication and pilot cables.

It can locate open or short circuit faults up to 15 km length with precise accuracy on TDR mode. Further, the advanced bridge mode can locate any low insulation fault up to 20 M Ohm.

Additionally, there is provision of IR measurement of the cable insulation at 100 V DC for carrying out regular insulation tests.

## Features

- Battery operated, light weight ABS plastic housing
- Easy to use Menu driven operation
- Automatic and Manual measurement
- Data storage of test settings
- Data storage of last test results
- Use of high speed micro-controller
- Use of high resolution back-lit LCD display
- Very low power requirement with built in NiMh battery
- Capable of giving more than five hours of uninterrupted working
- Built in battery charger
- Improved minimum and maximum fault location ranges
- Tests any type of telecom, coaxial, network or power cable
- Zoom for detailed examination around fault point
- IR Measurement of insulation properties
- Low insulation fault distance measurement with bridge method
- Low battery indication
- Auto shut down under idle running condition
- Self check facility

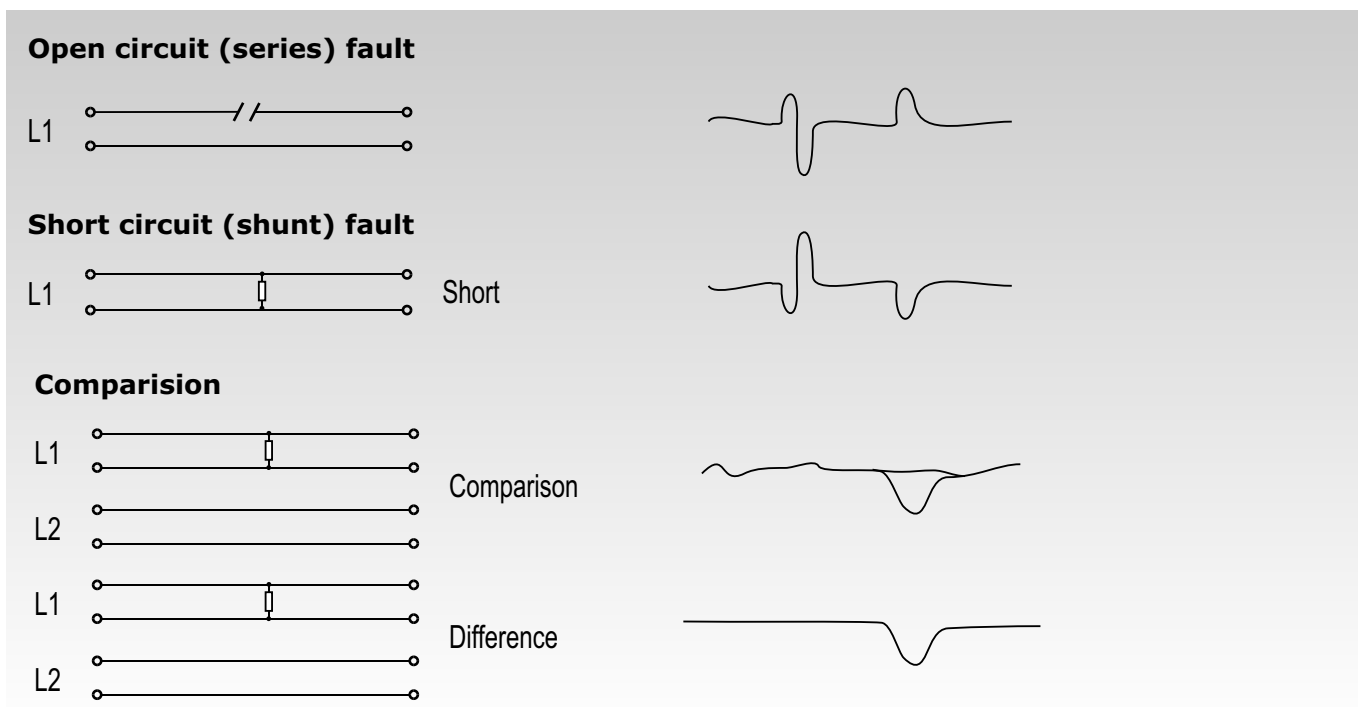
— **TDR Mode**

The cable fault locator TFL B5 is a portable field instrument working on Time Domain Reflectometry (TDR) principle and bridge methods, 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. The measuring cursor brought to the point of fault gives the fault distance from sending end. The location of the measuring cursor computes the fault distance from the sending end.

The velocity factor (VOP) is set as per the default values given in the table. However, it can be set 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 the volatile memory.

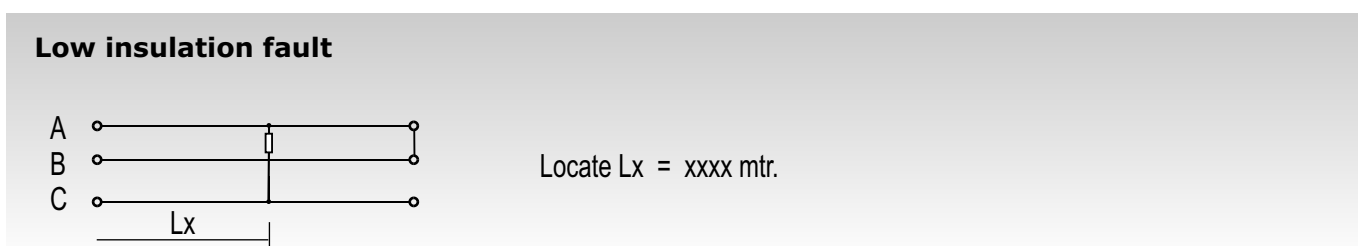
TFL B 5 can typically locate open and short circuit faults on TDR mode. It can be used for other faults such as series and shunt, split pairs and ingress of moisture faults. It can also indicate locations of cable joints.



— **Bridge mode:**

The instrument has menu driven insulation tester capable of giving IR test up to 100 V DC and displays insulation resistance in Meg Ohm.

A healthy core/pair is used to get the loop resistance of the cable under test. When the faulty core/pair is connected to the instrument, balancing of the bridge is done automatically by the intelligent circuit incorporated in the instrument. However, the balancing can also be done manually in specific cases. After the balancing, the result of the fault distance from sending end is displayed on the screen.





## Specifications

Description	TDR Mode	BRIDGE Mode
1. Fault distance ranges	200 m, 500 m, 1 km, 2 km,	15 km
2.	4 km, 8 km, 15 km	
3. Measurement modes	Manual	Auto and Manual
4. Accuracy	+/- 1 % or +/- 1m	+/- 0.5 %
5. Pulse width	100 ns 4 μs	Loop impedance 2 k Ohm
6. Pulse amplitude	40 V pp	Test Voltage 100 V DC
7. Cable constant (VOP) range	50 to 300 m/μs	Low insulation fault location up to 20 Meg Ohm
8. Measurement dead zone	1 m	
9. Output impedance	50 to 150 Ohm	
10. Gain	14 db	
11. Memory	One, volatile	
12. Resolution	0.5% up to 1 km & 1% for higher ranges	

## General specifications

1. Display readout	Large LCD screen 114 x 64 sq. mm with 240 x 128 Pixel (Back- lit)
2. Power supply	12 V rechargeable NiMh battery 2.5 Ah capacity
3. Dimensions	280 x 175 x 205 mm
4. Weight	1.5 kg
5. Accessories	Operation manual, Testing leads, Mains cable, Carrying case
6. Environmental specs	Operation : 0° C to 50° C Storage : -10° C to 60° C

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