

## Cable Fault Locator



### Features

- ★ Direct Digital Distance Readout
- ★ 4½ Digit LED Display
- ★ Time Domain Reflectometry Technique
- ★ Impulse Display on CRT
- ★ ±1% Accurate
- ★ 5 Km & Above Range
- ★ Test any Type of Paired Conductor and Coaxial Cable
- ★ Battery Powered, Light Weight
- ★ Self Check Facility
- ★ Low Batt Indication
- ★ Built in Timer to Save Battery Energy
- ★ Easy to Use
- ★ High Voltage on Lead Indication
- ★ Compares Good Pair & Faulty Pair

### Description

APLAB Model 3039-I cable fault locator is portable, rugged, simple to operate and which can taste, locate & display on the CRT the short & open type of faults in long run of coaxial and twisted pair in telephone and other communication application. It measures the distance to the faults, directly giving a digital readout. It also gives an insight into the joints, cable changes and faults aiding location of the fault.

Model 3039-I works on the principle of Time domain reflectometry (TDR) and locates cable faults upto an approximately distance of 5 Km & above with an accuracy of ±1%. The velocity of propagation (VOP) V/2 for each cable type is set on a three digit thumbwheel switch. It sends out an electrical narrow pulse of 35 to 1800ns width depending on distance to be covered

with a fast rise time. The pulse is then reflected back to the unit from the cable impedance mismatch or the fault location. The distance of the fault is then computed automatically and indicated in meters or feet on a large LED display which will eliminate the manual calculations. Fault type is also identified by the graphic display of the shape of the reflected pulse. It is simpler to operate and less error prone than manual bridge technique.

It being light weight and portable can be carried on the field and can be operated for at least 8 hours on the internal rechargeable batteries. Model 3039-I is provided with rechargeable batteries and an in built battery charger.

## Specifications

<b>Fault Distance Range</b>	: 50m, 100m, 0.3 Km, 1Km, 3Km, 5Km & above.
<b>Fault Measurement Accuracy</b>	: $\pm 1\%$ .
<b>Pulse Width Ranges (ns <math>\pm 10\%</math>)</b>	: 35ns, 50ns, 80ns, 250ns, 800ns & 1800ns (approx.).
<b>Pulse Waveform</b>	: Square.
<b>Pulse voltage</b>	: 22V p-p $\pm 10\%$ .
<b>Output Impedance</b>	: 150 $\Omega$ .
<b>Cable Constant Input</b>	: V/2 in upto 150 meters/ $\mu$ sec (digital).
<b>Fault Distance Read-out</b>	: 5 digit seven segment display.
<b>CRT Display</b>	: 8 x 10 div (1 div = 0.55 cm).
<b>Sensitivity</b>	: 50mV p-p produces one vertical division display.

<b>Power Supply</b>	
Internal	: 10 x 1.2V Rechargeable Ni-Mh Maintenance Free Batteries of at least 8 A-H capacity (Built in Charger 230V $\pm 10\%$ ).
External	: DC 12V - 15V, 1.0 Amp.
<b>Timer</b>	: Built-in timer Switches power off automatically after 10 minutes (approx.) of idle running to save battery energy.
<b>Weight</b>	: 7 Kgs. (approx.).
<b>Dimensions (in mm)</b>	: 355 (D) x 275 (W) x 115 (H) approx.
<b>Standard Accessories</b>	: Instruction Manual - 1 No. Ext. DC Power Lead - 1 No. Test Lead 3 Pin - 2 Nos. Carrying Case - 1 No.
<b>Environmental Specifications</b>	: Normal : 10°C to 40°C RH 85 % Operational : 0°C to 50°C RH 85%.



Specification No. G/TIE-02/02JUL99

For charging battery the instrument can remain in the carrying case.

230V AC



CABLE FAULT LOCATOR

WE PURSUE A POLICY OF CONTINUOUS DEVELOPMENT AND PRODUCT IMPROVEMENT. THUS THE SPECIFICATIONS IN THIS DOCUMENT AND THE LOCATION OF CONTROLS ON THE FRONT PANEL MAY BE CHANGED WITHOUT NOTICE.

## Aplab Test & Measurement Instruments

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