

UNDERGROUND CABLE FAULT PRE LOCATING EQUIPMENT

"KUSAM-MECO" underground Cable Fault Pre-locator Model KM-CFL-620 is an automatic Cable Fault Locator which adopts ARM, FPGA & Dot Matrix Color LCD display Technology. This tester combines both pulse reflecting technology (TDR) & intelligent Bridge testing (Bridge) for measuring the exact fault location such as broken line, cross faults, earthing, poor insulation & poor contact of the lead covered cables as well as plastic cables. It is capable of giving IR tests in Bridge mode.

It is a microprocessor based fault locator with a user friendly menu. It is easy to operate. It tests almost all power cables, telecom & signal cables. It has an English menu which is easy to understand & use. With Megameter & Ohmmeter it enables to test insulation resistance & loop resistance. It has USB Port for uploading test data to computer.

**Preliminary Data****FEATURES :**

- Small size, light weight and ABS plastic housing which is ergonomically designed for easy use by user.
- Menu driven simple operation.
- Measurement maximum 8 km in selectable ranges.
- Tests any type of copper telecom and signal cables.
- Range, VOP and Gain are selected automatically.
- Color LCD Display (480 x 280 dots).
- Automatic testing mode.
- Both pulse reflection (TDR) and intelligent bridge (Bridge) testing for open, short, or low insulation cable faults.
- With mega meter it enables to test insulation resistance and loop resistance.
- Six function keys and simple operation.
- Manual testing function is also available.
- With 4 GB USB Pen drive, it is easy to upload memory data to computer.
- Rechargeable lithium battery with intelligent charger
- Continued 8 hours operating time on internal battery.
- Rugged construction and easy to carry on site.

GENERAL SPECIFICATIONS :

- * **Display Readout** : Color LCD : 480*280.
- * **Continued operating time** : 8 hours
- * **Charging time** : 3 hours
- * **Power Supply** : 7.4V Rechargeable Li-ion battery. Charging voltage 230V +/-10%, 50Hz, single phase.
- * **Storage Temperature** : -15°C ~ + 55°C; RH <85%RH.
- * **Working Temperature** : -15°C ~ + 55°C; RH <85%RH.
- * **Dimension** : 212 (L) × 170 (W) × 90 (H) mm (approx.)
- * **Weight** : 1.20 Kg Net (approx.)

Note: All Specification are Subject to change without prior notice.

ELECTRICAL SPECIFICATIONS :

- * **Measurement Mode:** TDR (Time Domain Reflectometer) & Bridge TDR Mode

TDR Mode

- * **Fault Distance Range :** 8 km (240m, 480m, 1000m, 2000m,4000m,8000m)
- * **Fault Measurement Accuracy :** 1 meter
- * **Cable Constant (VOP) range :** 100 - 300
- * **Sampling Speed :** 100 MHZ
- * **Testing accuracy :** +/- 1% x cable length
- * **Auto Measurement dead zone :** 0 Meter
- * **Measurement dead zone :** 0 Meter
- * **Pulse Width :** 40ns---10us
- * **Pulse Waveform :** Two polarity pulse
- * **Pulse Amplitude :** 0 - 30V adjustment adaptive
- * **Impedance matching :** Automatic
- * **Output Impedance :** 25 - 120 adaptive
- * **Gain adjustment:** Automatic and Manual
- * **Gain Range Control:** 0 - 9
- * **Resolution :** 1 Meter
- * **Memory Location :** U - disk
- * **Serial port for PC / Printer :** USB

BRIDGE Mode

- * **The max length of testing cable :** 10 Km
- * **Max poor insulation resistance :** 100 M Ohm
- * **Testing accuracy :** +/- 1% x cable length
- * **Maximum resistance of defective insulation :** 100 M Ohm

OPERATING PRINCIPLE :

TDR Mode

A narrow electromagnetic frequency pulse of 40ns-10us with a fast rise time is sent on the cable that reflects back from the fault point /far end where the impedance was mismatched or changed. The velocity of propagation (VOP) for each cable depending on the cable dimension and material is set and the distance to the fault is then computed automatically and displayed in meter on LCD screen.

BRIDGE Mode

The equipment has menu driven insulation tester capable of giving IR test 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 equipment, balancing of the bridge is done automatically by the intelligent circuit incorporated in the equipment. 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.

- * **ACCESSORIES :** Carrying case, Re-chargeable battery charger / adapter , Connecting test cables, Software CD 4GB Pen Drive and User Manual.

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