

SFL 12 Sheath Fault Tester



Description

Sheath Fault Tester SFL12 is a powerful system. It is an intact sheath of a plastic insulated medium, high or extra high voltage cable is the prerequisite for the avoidance of water ingress and subsequent cable faults. Different test can be carried using sheath fault locator.

Sheath/earth faults is develop in any type of underground cable network such as low, medium, high voltage power cables or unshielded multi core control cables.

It can be a manufacturing defect or can be caused by

improper handling during laying / external damage /any other reason due to which the metallic armor or cores develop leakage with the mass of earth. These faults can remain undetected for longtime as they do not hamper the working of the cable. It develops into a fully fledged fault over a period of time.

That can successfully locate sheath/earth faults on any type of cable.

It offers different modes such as DC test / HV Test, Burning, pre-location and pin-pointing.

Application

It is use to Conditioning / DC Test / Burn, Pre-locate and Pin-point sheath faults in underground extra high voltage power cable transmission networks.

Features

- There manually selectable convince DC ranges for application.
- Cable and cable sheath testing up to 12 kV between metallic sheath / armoured and mass of earth.
- Automatic sheath fault pre-location with high precision measuring bridge method.
- Cable sheath fault pin pointing by pool of potential method.
- Automatic discharging facility of cable under test, in case of power failure or after switching off.
- Conversion of high-resistance faults in low-voltage cables.
- Burn mode for conditioning the sheath fault.
- It is extremely user friendly in obtaining the fault distance; it uses a micro-controller based fault distance calculator that enables the operator to get the pre-location measurements with precise accuracy.
- Continues operation for extended period in case of pin-point difficult sheath faults.
- Rugged construction and easy to carry on site.



Working Principle

Completely isolated cable (including earth connections removed at both ends) is subjected to HV Test up to 12kV DC with respect to the mass of earth. This gives diagnostic result of the health of the insulation of the cable under test.

A high resistance nature of the fault on the cable can be altered by burning it. This is necessary in some specific cases. SFL derives Voltage drop from either end of the cable, which is used for evaluating the fault distance from the test end using bridge method. Voltage drops on the conductors are measured on either side of the cable with respect to earth. Digital meter offers precise readings required for calculating fault distance.

Output of sheath fault locator is connected between the cable and the mass of earth at pulsed mode. The DC current flows through the cable up to fault point and returns back through the mass of the earth to the sending end. This produces currents in the ground whose paths fan out at the fault point.

These currents can be monitored by two metallic ground sticks connected to a highly sensitive receiver with center zero galvanometer gives deflection in one direction before the fault point on the cable length and changes the direction beyond the fault point. Null (no deflection) is achieved at the fault point.

Function

Sheath Fault Locator is a device that works on the potential difference voltage method for cable testing, cable sheath testing, fault pre-location and fault pin pointing.

It works on the bridge measuring principle using the Murray loop method. The fault pre-location analyses are done automatically with feeding proper data and the results are displayed digitally.

Standard Accessories

- HV Cable 6sq mm single core screen cable 5 meter length
- Mains supply cord 3 meter length.
- Yellow / Green 10 sq mm earthing cable 5 meter length
- Sheath Fault Locator EFL 1 - 1No.
- Earth Spikes - 2Nos

Standard Warranty	One Year
Other models available	Sheath Fault Tester SFL 1 (6kV)
Associated receiver use to pin-point cable faults with sheath fault tester	Sheath Fault Locator EFL 1

Specifications

Sheath Fault Tester SFL 12

Power Supply	230V AC \pm 10%, 50 Hz, Single phase
Test Voltages	0 - 3, 0 - 6 & 0 - 12 kV DC continuously variable
Test Current	3 kV - 400 mA, 6 kV - 200 mA, 12 kV - 100 mA DC
HV Range Selection	Manual
Indication	ON / OFF lamp indication, Analog moving coil meter for output voltage (kV) indication, Analog moving coil meter for output current (mA) indication, Over heat LED indication, Fault pre-location distance on LCD display & Sheath voltage drop indication on DPM
Pulse ratio for Pin-pointing	1:3 second and 1:6 second selectable ON OFF time ratio
Cooling System	Air Cooled
Fault distance Calculator	LCD display-16x2 characters with back light
DPM Power Supply	6V, 1.5Ah Rechargeable battery

Over Load Protection	Mains Input current MCB switch in Live & Fast blow fuse in input mains supply.
Safety Protection	Variac Zero inter-lock, Output cable Plug inter-lock, HV Switch inter-lock & Over Heat Protection
Earth Discharge	Soft automatic discharge through in-built solenoid
Working Temp.	0 Deg C ~ 55 Deg C
Storage Temp.	- 5 Deg C ~ 60 Deg C
Dimensions	555 (L) x 355 (W) x 620 (H) mm + Handle 50mm + Wheel 65mm
Weight	70 Kg Approx

Sheath Fault Locator EFL 1

Meter.	5 - 0 - 5uA
Sensitivity	High & Low
Input resistance without amplifier	700 K Ohm
Input resistance with amplifier	100 K Ohm
Current Supply	1.5V x 8 Alkaline AA size cells
Dimensions	215 (L) x 200 (D) x 80 (H) mm
Weight	0.8 kg Approx.

Telemetrics Equipments Pvt. Ltd.

Pune

www.telemetrics.in

5, 7 & 8 Electronic Sadan II, MIDC, Bhosari, Pune - 411026 Maharashtra, INDIA.

sales@telemetrics.in

+91-20-27122936 / 27123176

CIN
U99999MH1976PTC 018745



TELEMETRICS EQUIPMENTS PVT. LTD.