

SCOPE

CFL SIMF Secondary Impulse Filter



Locate Cable Faults Easily & Quickly With...
...CFL Series

The Product

Secondary Impulse Filter

Underground cable faults cannot be avoided due to many factors such as ageing, moisture ingress, road widening, infrastructure improvement, digging carried out for repairs of other underground utilities etc. These faults generally take long time to detect and hence long time to repair the damaged cables and restore the power supply. Long outages cause heavy production loss to industries, revenue loss to power distribution companies and inconvenience to consumers. This calls for quick fault location and restoration of power supply in minimum possible time.

An ordinary fault locating kit comprising of Surge Generator and Pinpointing set can take long time to locate fault point. SCOPE offers SIM Filter instrument that can give the High Resistance fault distance with the help Prelocator and Surge Generator for reaching the spot quickly and pinpointing the fault in a short time.

The CFL SIMF, Cable Fault Secondary Impulse Filter from SCOPE is the ultimate solution for locating underground cable faults in minimum time. It uses advanced technology for fault distance measurement which helps even an unskilled operator to locate the fault accurately.



1. Signal Port
2. Power ON Indication
3. SIM / ICM Mode Selector Switch

The Measurement

Secondary Impulse / Arc Reflection / Multiple Impulse Method (SIM/ARC/MIM)

Localization of the cable faults with a high fault resistance is usually difficult using low-voltage TDR method. To localize these types of faults, the SIM Filter needs to be used in conjunction with the CFL SG Series High Voltage Surge Generators (Thumper) and CFL PL Series Prelocators. The essence of the Arc Reflection Method is that with the help of CFL SG Series High Voltage Surge Generator, a short-time electric arc is created in the place of cable damage and this arc time gets prolonged by the use of SIM Filter. Synchronously with the arc, the Prelocator performs the measurement. Thus, we can transform the high resistance fault into a low resistance fault or short circuit fault and the fault location can be identified easily with the simultaneous application of TDR by Prelocator. However, to achieve this, the Prelocator need to be coupled properly with the Surge generator and SIM filter in SIM mode. However, multiple signatures of Arc Reflection Method (ARC) or, Secondary Impulse Method (SIM) are taken in quick succession and they are compared together to identify the fault location most clearly.

Impulse Current Method (ICM/ICE)

In case of high resistance or flashing faults, the SIM/ARC/MIM method may not be able to give the result due to corroded cable sheath or damping of returned TDR signals. Hence, we use current transient method for Prelocation of fault. This is commonly known as Impulse Current Method (ICM or, ICE) and preferred for longer cables. In ICM / ICE mode, the Prelocator need to be used in conjunction with the CFL SG Series High Voltage Surge Generator (Thumper) and SIM Filter is kept in ICM Mode. During momentarily breakdown or flashover at the fault, current transients are generated, those are oscillates back to the source end, sensed through the SIM Filter and displayed on Prelocator for further analysis of fault distance.

Special Features

- Compact, Lightweight and Rugged
- User friendly operation
- Automatic soft discharge upon shutdown
- Selector Switch for SIM and ICM Mode
- Elegant, aluminum housing

Specifications

Parameters	CFL SIMF
ARC Stabilization Time	≥20ms
HV Input	Up to 35kV DC with Negative Polarity
Power Supply	230V ± 10%, 50 Hz AC, Single Phase
Environmental	-10°C to +50°C, up to 95% RH (Non-Condensing)
Dimension	380mm x 282mm x 535 mm
Weight	17 kg

Standard Accessories

Mains Cord	1 No.
Master Earthing Cable	1 No.
HV Connecting Cables	1 Set
Soft Carrying Bag for Main Instrument and other accessories	1 No.

Ordering Code

Example: CFL SIMF

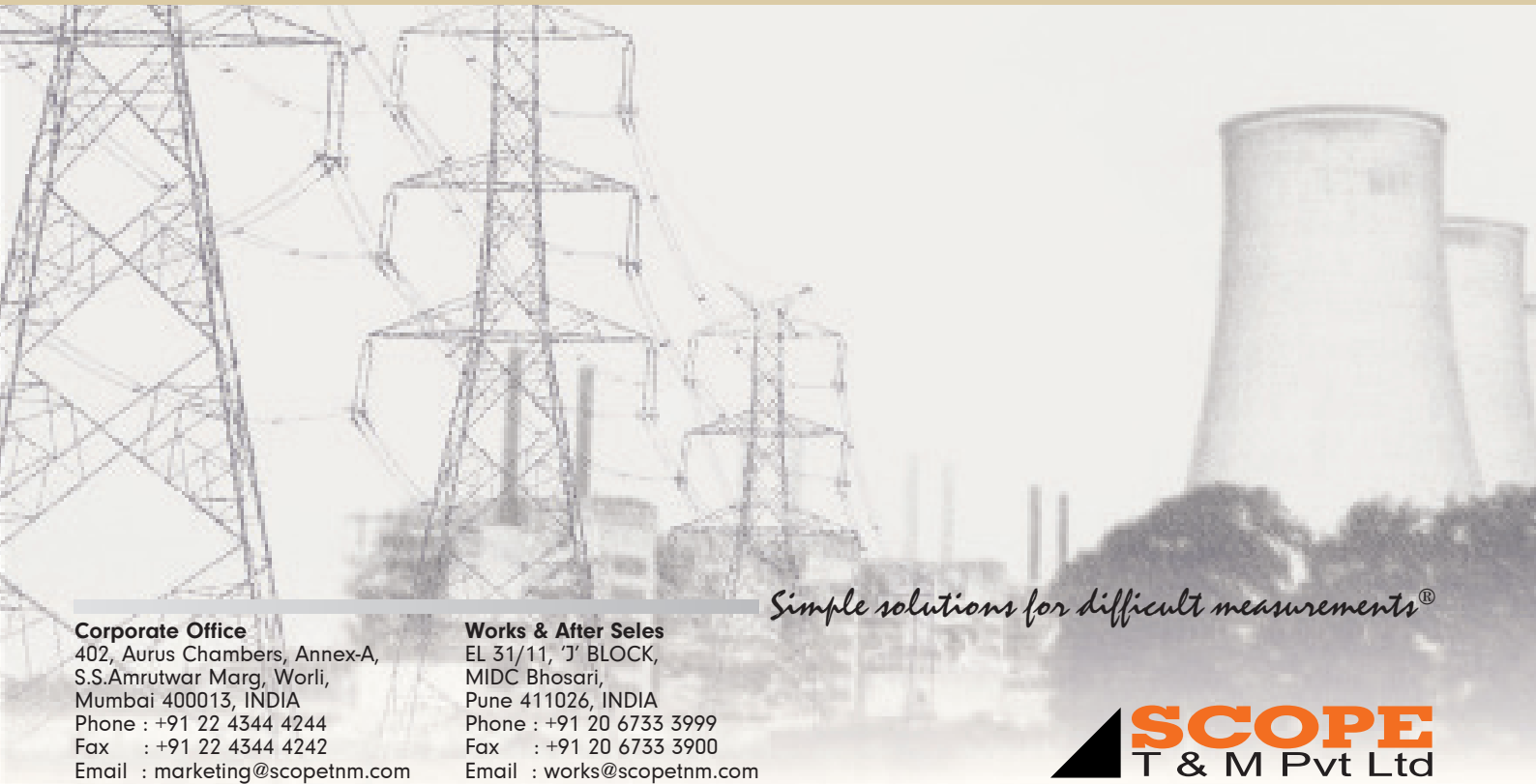
F F F F F N F F F R I N

CFL SIMF

F	Reserved	None	N
F	Reserved	Customised	Z
F	Reserved	Indian Plug	I
F	Reserved	Universal Plug	U
F	Reserved	Industrial Plug	V
N	None	400V ± 15%, 50/60Hz AC Input	Y
Z	Customised	230V ± 15%, 50/60Hz AC Input	R
F	Reserved	110V ± 15%, 50/60Hz AC Input	Q
F	Reserved	Reserved	F

Generation, Transmission,
Distribution, Industry ...

... there is **SCOPE**
always!



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