

# SCOPE

## CFL SG 0810 Surge Generator



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

## The Product

Fault occurrence on underground cables cannot be avoided due to many factors in prevailing conditions. Long outage of a cable from service results in heavy loss of revenue to the power distribution company, production loss to industries and unpleasant condition to consumers. Therefore, it is necessary to restore the supply in minimum possible time. This calls for appropriate instruments fulfilling all the requirement of the job.

Surge Generator is the backbone of underground cable fault locator test systems. Surge Generator is used with a Prelocator and SIM Filter for fault distance measurement and also used with Pin Pointer Set for pinpointing the exact fault spot.

SCOPE offers CFL SG 0810, Surge Generator with output of 8kV and 1000 Joules. It is ideal choice for fault location on all types of power cables from LV to MV. CFL SG series is equipped with different Protections, Interlocks and Auto-discharge facility to ensure user safety during operation. User friendly controls, adequate form factor, contact free HV terminations makes this CFL SG series most durable and best-designed sets in the segment.



## Application

### Prelocation of fault distance

- Impulse Current Method (ICM): Surge Generator applies HV Surge across the faulty core and armour of the cable, which creates a short circuit across the fault point. This momentarily short circuit produces Current Transients, captured by Current Coupler connected on the return HV path. These transients will be analysed on Prelocator connected to the Current Coupler, to calculate approximate Fault Distance.
- Secondary Impulse Method (SIM): The Surge Generator plays vital role in conjunction with a SIM Filter and pre-locator instrument to produce arc at the fault point for short term. The standing arc at fault point facilitates easy and accurate fault distance measurement.

### Pinpointing

Surge Generator can produce repetitive surges across the faulty core and armour of the cable, which will create electromagnetic field across the cable path and a thumping sound at fault point. These electromagnetic and acoustic signals will be detected by Pinpointing Sensor (Ground Microphone) and receiver with headphones used to find exact fault point.

## Features

- Compact, lightweight, and housed in rugged aluminum case
- Ideal choice for fault location on all type of power cables
- Backbone of cable fault locator system
- Generates short duration high voltage surge for fault break down
- Built-in Current Coupler to determine the fault distance in conjunction with Prelocator unit
- Repetitive surges applied for pinpointing the exact fault location in conjunction Pinpointing set
- Supports SIM/ARC method for locating high resistance & flashing faults along with Prelocator and SIM Filter from CFL Series
- Easy setup and intelligent protections make the high voltage testing safe & reliable
- Compatible with other models of SCOPE CFL Series



## Benefits

### Protections / Interlocks

- Variac Zero Interlock
- Input Supply Fuse Protection
- MCB trip control under overload condition
- Over Current Protection
- Output Cable Plug Interlock
- Key Lock Switch
- Selection Switch Interlock
- Emergency OFF
- Over Temperature Protection
- Input Voltage Protection
- Earth OK Interlock
- Automatic discharge upon shutdown





### Indications






- HV ON / OFF
- Earth OK
- Manual Impulse
- I/P Voltage Error

## Specifications

Parameter	CFL SG 0810
Output Voltage Ranges	0 - 2kV / 4kV / 8kV selectable
Output Energy	Max. 1000J in each voltage range
Impulse Sequence (Surge Rate)	Single Impulse (Manual) / 3 Sec / 6 Sec / 9 Sec or Single Impulse (Manual) / 2 Sec / 4 Sec / 8 Sec (Optional)
Output Indication	Moving Coil Analog Meter for Output Voltage measurement
Measurement Accuracy	±5% of selected range
Input Supply	230V AC ± 10%, 50/60Hz ± 10%, Single Phase
Cooling Type	Air Cooled
Dimensions	725 x 540 x 780 mm
Weight (without wheels and test leads)	90kg approx.
Environmental (Operation)	0°C to 50°C, up to 95% RH (Non-Condensing)
Environmental (Storage)	-10°C to 55°C, up to 95% RH (Non-Condensing)

## Scope Of Supply

Items	Test Lead Set Configuration			
	5m TLS	10m TLS	25m TLS	50m TLS
 CFL SG 0810 mounted on wheels	1 No	1 No	1 No	1 No
 1 x HV Output Cable	5m	10m	25m	50m
 1 x Master Earthing Cable	5m	10m	25m	50m
 1 x Mains Supply Cable	5m	5m	5m	5m

Items		Test Lead Set Configuration			
		5m TLS	10m TLS	25m TLS	50m TLS
	1 x Cable Drum (Manual/Motorised)	Optional	Optional	Optional	Optional
	Test Lead Set (as per Order Code) with Carrying Case	1 No	1 No	1 No	1 No
	Factory Test & Calibration Report	1 No	1 No	1 No	1 No
	Operation Manual	1 No	1 No	1 No	1 No
	Spare Fuse Set	1 Set	1 Set	1 Set	1 Set

## Ordering Code

Example: CFL SG 0810 **F F F 2 F N F N T R I N** #

CFL SG 0810 **F F F F F**

F	Reserved	Customized	Z
F	Reserved	None*	N
F	Reserved	Industrial Plug	V
1	Single, 2S, 4S, 8S	Universal Plug	U
2	Single, 3S, 6S, 9S*	Indian Plug*	I
Z	Customized	110V ± 10%, 50Hz AC Input	Q
F	Reserved	230V ± 10%, 50Hz AC Input*	R
N	None*	Customized Length of Test Lead Set	Z
Z	Customized	50m Test Lead Set	G
F	Reserved	25m Test Lead Set	E
N	None*	15m Test Lead Set	R
1	Manual Cable Drum	10m Test Lead Set	M
2	Motorized Cable Drum	5m Test Lead Set*	T

Note: \*- Standard Feature/Accessory

# - CFL SG 0810 (Order Code: FFF2FNFNTRIN)- Cable Fault Surge Generator with Surge Sequence of Single / 3S / 6S / 9S, 5m Test Lead Set, 230V ± 10%, 50/60Hz AC Input, Indian Plug.

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