

Portable Cable Fault Location Unit Model CFL-2050M

The Portable Unit CFL-2050M is designed to locate faults in power energy cables.



The Portable Unit CFL-2050M

performs the following functions:

- Transformation of high-resistance or swelling damages of power cables rated from 0,4 to 35 kV to low-resistance damages (burn down of cable);
- Locating the exact place of the fault by inductive method;
- Creating conditions for defining the distance to fault by pulse and acoustic methods.

The Portable Unit CFL-2050M

provides a burn-down function. When connected to a cable, it transforms high-resistance or swelling damages of power cables rated from 0,4 to 35 kV to low-resistance damages.

The unit has a powerful low-frequency generator with three fixed frequencies. This generator when placed directly on a cable it allows locating and isolating faults of high-voltage power electric cables:

- by induction method phase-to-phase short circuits, the resistance value of the fault can be from 0,05 Ohms up to 500 Ohms;
- by acoustic method "swelling faults" and other types of faults associated with high-voltage discharge in the location of a fault;
- tracing and measuring the depth of buried cable;
- cable selection identification of the desired cable from the bunch of other cables;
- precise location of cable sheath/jacket faults.



Advantages of Portable Unit CFL-2050M:

- ▶ **Compact.** Compact rugged design that combines cable burn-down and fault location devices.
- ▶ **Efficiency.** When connected to a cable all complex planned operations are carried out in one step.
- ▶ **Industrial culture.** Attached "pockets" provide storage space for all related connecting cables and associated tools.
- ▶ **Mobility.** Convenient portability allows a single operator to easily transport it within the territory of an enterprise or a power station.
- ▶ **Cost efficient.** The CFL-2050M combines two systems in one, a burn down device and an inductive fault locator device, giving you an affordable solution that is also time efficient allowing to save time on preparation and the process as a whole.
- ▶ **Investment return and profit:** The basic expense remains at minimum but effectiveness and results produced are at a high level.



Structure of the main modules

1. Burn Down Module

The burn down module allows creating a conductive bridge between cable cores or between a cable core and the metal cable shield. Further, the burn down voltage within the limits of a step is regulated automatically. In order to avoid the reactive current losses at high burn down voltages, three of the high-voltage steps have a rectified voltage, the remaining - variable.

TECHNICAL CHARACTERISTICS:

Power-supply voltage: 220 ± 22 V, 50 Hz

1. Current consumed by the unit when applied to a network in an "idling" mode, is no more than 3A
2. Current consumed by the unit when applied to a network in short circuit mode, is no more than 57A
3. Output voltage of the unit in "idling" mode
1-6 steps (varying ± 15 %) 0,17-22 kV
4. Short circuit current at the output of the unit
1-6 steps (varying ± 15 %) 64-0,7 A
5. Maximum power consumed by the unit when applied to a network, is no more than 12 kW
6. Time of continuous work of the unit in burn down mode (with 20 minutes break), is no more than 20 minutes.

2. Inductive Fault Locator Module

The Inductive generator has:

- current protection from overload and short circuit on its output;
- restriction of output voltage in idling mode;
- built-in indication of output current and voltage on the primary winding of the output transformer;
- conformity of the generator output with the load on the maximum power output is carried out in 5 ranges.

TECHNICAL CHARACTERISTICS:

Power-supply voltage:

Current consumed by the unit, (A), is no more than
Output power given by the generator to a matched load, (VA), is not less than

Active frequencies of the generator, Hz,

220±22 V, 50 Hz

4

550

480, 1023, 10434

Search receiver SR-01

- self-contained receiver
- battery voltage control mode



TECHNICAL CHARACTERISTICS:

Operating frequencies of the receiver, Hz,

Band pass on fixed frequencies on the 0,7 Hz level

Sensitivity of the receiver from the input of induction detector μV, is not worse than

Average time of continuous work of the receiver from newly charged batteries is approximately

480,1023,10434

10

50

10 hours

Induction detector IP-01 provides:

- reception of signals on frequencies of 50 Hz, 480 Hz, 1023 Hz, 10434 Hz.

Acoustic detector AP-01 provides:

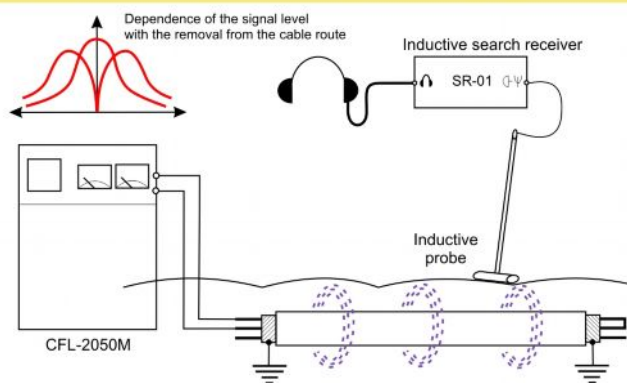
- reception of signals in the range from 200 to 2000 Hz.

Induction detector IP-08:

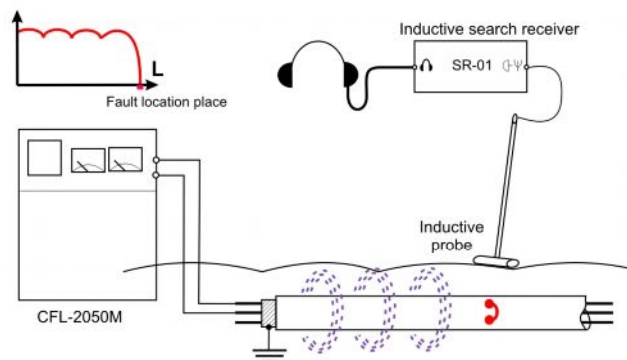
- reception of signals on a frequency of 480 Hz;
- identifies the desired cable from the bunch of others.

A-frame

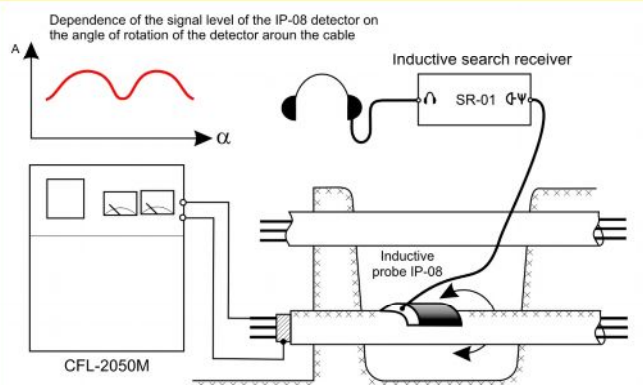
- measurement of potential difference on the surface of the ground;
- pinpointing of cable sheath faults.



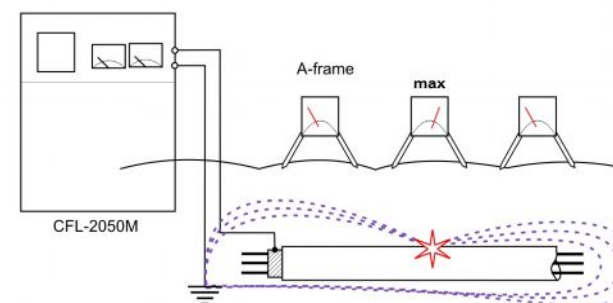
Detection of the cable route and the depth of the buried cable with the help of inductive method



Detection of the short circuit place between the strands of the voltage cable by the inductive method



Detection of the required cable from the bunch of others



Detection of the fault of the cable sheath by the potential method

"EMZ"

HOLDING COMPANY



P.O.Box: 41016,
6308 Larnaca, Cyprus
Tel: +357 24 821788,
Fax: +357 24 821787
vitald@vitaldrive.net
www.vitaldrive.net

Yaroslavl
electromechanical plant



150029, Russia,
Yaroslavl, Dekabristov st., 14
Tel: (4852)215754, (4852) 326925
Fax: (4852)326925
sales@emzlv.ru, main@emzlv.ru
www.emzlv.ru

ISO 9001:2000

