

LOK 20

Fault Indicator for Medium Voltage Overhead Lines

- ❑ Microprocessor-based device for fast fault finding on the MV overhead lines using advanced SW algorithms
- ❑ Flashlight fault indication, visible at least 300 m
- ❑ Reliable operation, independent of geometrical arrangement of conductors
- ❑ Self testing
- ❑ Infra red remote control
- ❑ Solar panel for continuous battery charging
- ❑ Simple installation
- ❑ Minimum maintenance

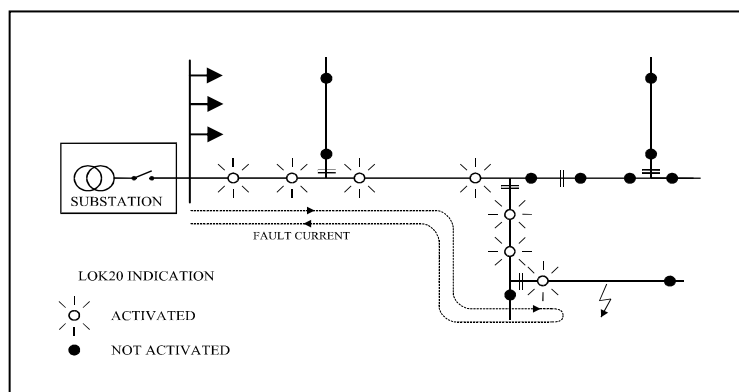


GENERAL DESCRIPTION

Fault indicator LOK 20 was designed for fast faults locating on medium voltage overhead lines. It detects faults by monitoring magnetic field strength and phase changes caused by line-currents.

LOK 20 should be placed on poles of important network sections. When line fault occurs, only indicators installed between feeding substation and the fault will activate its flashlight signal.

Flashlight signal is visible in bright daylight at least from 300 m. Every fault is registered also on LCD display - fault counter, located on the front panel. The battery is charged by solar panel, placed on the pole above the device.



Range of application:

- medium-voltage overhead distribution network: 4 ... 35 kV , 50 Hz *
- impedance earthed system, solidly earthed system, isolated neutral system
- wooden, concrete, metal pole
- earth-fault detection independent of conductors' geometric arrangement

Fault detection:*

- Fault type:
 - Earth fault
 - Short circuit
- Earth-fault current detection sensitivity: adjustable: 2 to 30 A*
- Fault duration: - 80 ms ... 5 s
- Fault discrimination:
 - two faults separated by a time period of less than 0,6 s are considered to represent one fault
 - two faults separated by a time period of more than 0,6 s are considered to represent two faults

Setting the distance from the conductors:

By means of a jumper: 4, 5, 6, 7, 8, 10, 12 and 14 m

Fault indication: *

- via the flashlight, indication duration: 2 hours or until interrupted by means of the IR remote control or 10 seconds after normal line-operation has been detected
- via the fault counter (LCD display)

Function test (self-test):

- by means of the TEST key within the indicator casing
- by means of a IR remote control, maximum distance: 10 m at no direct sunlight
- The test result is signalized via the flashlight and LCD.

Inputs / Outputs:

- relay output for remote indication (optional)
- serial port RS232C (optional)

Power supply:

- lead battery 6 V / 3,5 Ah @ 20° C, maintenance-free
- battery charging via the solar module, temperature compensation included
- battery lifetime: 7 years

Operation temperature range:

-25° C ... +70° C

Mechanical construction:

- aluminum indicator-casing, protection level: IP65, physical dimensions: 260 x 160 x 90 mm
- indicator's carrier plate with screws
- solar module: $P_n = 3,6$ W, physical dimensions: 310 x 310 x 25 mm
- solar module carrier with screws

Standards:

- device: EN61000-6-4, EN61000-6-2
- RoHS

Packing:

Total weight of the package approx. 5 kg

Package physical dimensions: 29.5 dm³ (L x W x H: 380 x 370 x 210 mm)

* Some operational parameters regarding fault detection and indication can be customized.