

# LineTroll® 111K

Pole-Mounted Fault Indicator for 6-66 kV Overhead Line

Let LineTroll 111K track down your faulty sections and save you the guesswork and time involved in traditional methods of fault-finding.

NORTROLL LIGHTS YOUR WAY!

# **MONEY-SAVER**

- Faster restoration of customers supplies during fault conditions.
   Reduce fault reclosures, reduce wear and tear.
- Works with single and 3-phase line configurations.
- One version only reduced inventory.

### **VERSATILE**

- User settable fault sensitivity, trip and reset parametars.
- Extended reset time with low-power LED indication.
- Automaticly adapts to load current (di/dt).
- · Optional output realy contacts.

# SIMPLE INSTALATION

- Mounts approximately 3 m below conductors.
- No special tools required.
- Reduced total mounting costs.

## **HIGH VISIBILITY**

- · Omnidirectional Xenon tube flash-light.
- Special designed lens for long distance monitoring.



A reliable energy supply is a must in all modern societies.

LineTrol 111K offers a cost effective way to reduce outage times, thus improving the quality of supply

NORTROLL has gained considerable experience in the field of fault location and remote control in distribution network sience 1976.. We offer a full range of equipment that is operating under the most extreme climatic conditions.





# **Functional Priniple**

**LineTroll 111K** contains magnetic and electric field sensors surveying line current and line voltage. The magnetic sensor automaticly adapts to line current, detecting rapid current increases only.

The electric field sensor is monitoring the presence of line voltage.

The sensor signals are processed and

compared with user set alarm criterias. When a line fault (which is fulfilling the alarm criterias) occurs, all indicators installed between the feeding point and the fault location will give an alarm.

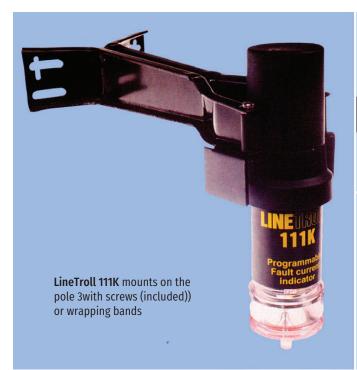
An Xenon light unit indicates the passage of the fault current, giving an omni-directional high intesity flash.

# Installation

**LineTroll 111K** mounts on the pole 3 - 5 m below the lines, see User Guide for details.

**LineTroll 111K** mounts with screws (included) or wrapping bands

**LineTroll 111K** is tested with a magnet after installation.





Extended indication time through flashing LED

Detection indication and reset parameters are programed by user set microswitches



# **Technical Specification**

### **Detection:**

Short Circuits: I<sub>sc</sub>>2 \* I<sub>load</sub>. Earth Faults: Sensitivity set by user: maximum 4A

**Note:** These are approximate values. For detailed information, see LineTroll 111K User Guide

#### Indication:

Xenon flash unit.

Discharge energy: 0,2 Joule

Flashin frequency: 7-12 flashes/min

Extended indication time through flashing LED

#### Indication:

To avoid detection of inrush current, the indicator is blockedfor 3 sconds after reenergizing.

#### Reset:

- Voltage reset
- Timer reset (indication time user set in 4 steps from 1.5 to 12 hrs.)
- Manually by special test tool.

All 3 alternatives can be set

independently.

Ambient temperature: -40 to +70°C

Power supply: 3,6V 13Ah Lithium

battery.

Weight: 750 grams including mounting

bracket

Optional:

Mounting/testing tool for hot-stick.
Relay contacts kit for remote indication.

# **Ordering Information**

Prod. № 1110 LineTroll 111K - Programmable fault current indicator

Prod. № 1070 TBX-10 - Test tool for on-site testing

Prod. № 1067 KBB-12 - 3,6V/13Ah Lithium battery kit

Prod. № 1068 Realy kit for LT 111K - REaly contacts kit for remote indication



### **About Nortroll AS**

Since the foundation in 1977, Nortroll AS has devoted its activities to the development of equipment aiming to reduce electric utilities outage times. We offers a wide range of products for fault detection and remote operation in the MV Distribution Network.

**Your Representative** 

