



Line Troll[®] LT110T μ (r)

Fault Passage Indicator for overhead lines (66-138kv)

LineTroll[®]110T μ Fault Indicator indicates earth- and shortcircuit-faults by detection of changes in the magnetic field set up by the fault current. The indicator can detect and independently indicate both permanent and transient faults. A cluster of red LED's for permanent fault and one green LED for transient fault. An orange LED will give indication on low battery status. High visibility,

Features LineTroll[®]110T μ :

- Programmable operating parameters
- High visibility (> 12 lumens)
- Usable on all Sub-Transmission Voltage distribution networks 66-138KV.
- Usable on multi circuit systems
- Voltage or current as start criteria (programmable)
- Dual indications (permanent and transient faults)
- Resistant to tough weather conditions
- Battery capacity monitoring

Special version LT-110T μ r, is available with integrated radio for SCADA-monitoring



Functional Description

LineTroll[®]110T μ continuously monitors the line voltage and phase current, the sources of information it needs to operate. The unit is fully self-contained, no external transformers or connections is required.

During normal line conditions, LineTroll[®]110T μ remains extinguished.

The indicator is looking for a specific sequence of line conditions to happen before it starts flashing. The general sequence is as follows:

- A. The line should be energised (voltage or current present) for a minimum of 5 seconds.
- B. Di/Dt: The line current should increase rapidly by the amount of a user set value (the step level).
Threshold: The line current exceeding a preset current level
- C. The line should be de-energised.
(voltage or current not present)

The user may program the conditions for operation to suit his local requirement by manipulating a bank of micro-switches inside the indicator.

Note: Voltage or current as start and stop criteria is user programmable.

Technical Specifications

Application:	Short circuit and Earth fault indication for overhead lines.	
	System Voltage:	HV-distr.- & transmission lines (66-138kV)
	Grounding system:	Resistor and solidly grounded
Fault-detection:	Sensitivity Di/Dt:	500, 1000A*
	Sensitivity threshold:	500, 1000A*
	Duration:	> 60ms (20ms on request)
Inrush-blocking:		5 sec
Reset:	Automatic:	Re- energized line (Voltage or current)* A) Minimum reset current: 50A, or B) Minimum reset voltage: 50kV
	Timer:	2, 6, 12, or 24 hours *
	Manual:	By magnet (& remote for LT-110T μ r)
	*) User programmable by micro-switches.	
Indication:		1 Green LED for transient fault 4 Red LED's for permanent fault 1 Red/orange LED for low battery indication
	Intensity:	> 12 lumens
Power supply:		1 Lithium Cell (D size 16,5 Ah)
	Battery change:	Every 1200 flash hours, norm. every 7-8 years
Mounting:	Hot-stick	Live-line mounting with Shot gun hot stick
	Conductor size:	5-36mm
Temp:		-40 to +85 deg
Housing:	Material:	Polycarbonate, UV-stabilized Line-clutch: Polyamide
	Dimension:	235 x 158mm
	Weight:	482g (including battery)
	Degree of protection:	IP54
Packaging information:	Number of units each kit:	3 units
	Dim. box with units:	165x260x250mm
	Weight (3 units):	1635g
Special version:	LT-110T μ r:	Integrated 2,4GHz radio
	Datarate/Messages:	250kbps / Fault & status (battery & comm.)
	Tx power / Rx sens:	1mW / -90dBm
	Range:	> 20m LoS (margin 20dB)
	Concentrator:	Nortroll's CmT 110C / 115C

Ordering Information

Product no: 04-1300-00	LineTroll [®] 110T μ
Product no: 04-1300-01	LineTroll [®] 110T μ r (with radio for SCADA-integration)
Product nr: 1056	KBB-11 replacement battery

About Nortroll AS

Since the foundation in 1976, 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

Your Representative

LineTroll[®]

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