



CableTroll® 2440

Fault Passage Indicator for underground cables (6-36kv)

CableTroll®2440 is designed for mounting in the front panel of Ring Main Units, on single core cables.

The indicator detects and indicates Earth faults and Short Circuit faults in underground cable networks.

Features:

- The design of the housing is based DIN 43700/IEC 61554
- Micro-controller based indicator.
- Programmable functions by dipswitches.
- Red LED for earth- and short circuit-faults.
- Green LED for Voltage/Current present
- Yellow LED for low battery
- Output for external indication
- Relay contacts for remote fault indication to SCADA-system via RTU, and low battery warning.
- Powered from internal long life battery
- Multi reset-functions: Automatic on voltage/ current return, programmable timer or manual by pushbutton.
Remote Test/Reset from SCADA system



Functional Description

CableTroll®2440 is a fault passage indicator (FPI) for application in radial or open ring cable network, for installation into RMU's with single core cables where sensors can be mounted in a safe area, one sensor each phase.

All indicators located between the feeding transformer and the fault location will indicate the passage of the fault current and the fault can be quickly located.

Trip level for earth fault detection is user settable in 4 different levels in the range from 20—160A and for short-circuit; 4 levels from 250A — 1000A.

In addition timer reset can be programmed for automatic reset after 2 or 4 hours (other values are software programmable) and fault current duration can be set from 40 to 300ms.



Technical Specifications

Application:	Earth fault and short circuit fault indication for single phase underground cables in the MV- voltage network (6-36kV)
Grounding system:	Isolated-, resistor- and solidly grounded networks.
Sensors:	3 x Magnetic pick up sensors "Open core type". Equipped with a 3m 0,75mm ² cable. Sensors to be earthed by a separate wire. Cable ties for fixing the sensors to MV-cables are included.
Fault-detection:	Earth fault I_0 : 20, 40, 80 or 160A Short circuit $I_{>>}$: 250, 500, 750 or 1000A Duration: 40, 100, 200 or 300ms
Inrush blocking ON/OFF:	If ON: 5 sec blocking after energising of cable
CB-trip criteria ON/OFF:	If ON; circuit breaker must trip the cable within 5s after fault detection
Reset	Auto: By return of voltage; Cap. testpoint or LV(12-250VAC) OR load current > 10% of $I_{>>}$ setting *) *) If $I_{>>} = 500A$; Load current for autoreset & Inrush blocking must be > 50A. By timer; 2 or 4 hrs (other values software programmable) Manual: Pushbutton on front panel
Indications:	1 LED (red) for Earth faults/ShortCircuit indication (f= 1/2 Hz) 1 LED (green) for Voltage / Current Presence Indication 1 LED (yellow) for "Low battery" indication (f= 1/15 Hz) Output for external indication; LED-2, 3,6V, max 18mA (limited by a 100Ω resistor). Flashing freq: 0,5Hz, duty cycle: 2,5%
Remote Indication:	Two Normally Open contacts (30W @ 60V / 0,5A DC): 1) Earth fault/Short circuit Fault, closed until RESET 2) "Low battery Warning" closing if less than 20% remaining battery capacity. (Active until battery is replaced)
Power supply:	1 Lithium Cell 3.6V, 3.8Ah (included) > 1500 flashing hours with ext indication LED-2 Lifetime battery: 10 years / 1500h flashing hours
Temp:	- 40 to +70°C
Housing:	Polycarbonate, panel mounting housing,
Dimension:	Main Unit 92x45x95mm, acc. to DIN 43700 / IEC 61554 Packaging box: 326x200x66mm
Weight:	ca 1650g (Main Units & Current sensors in packaging box)

Ordering Information

Product no: 01-2440-00	CT 2440 incl. 3 Current sensors
Product no: 2240	LED-2, external indication LED
Product no: 07-1057-00	Replacement battery (KBB-15) 3.6V, 3,8Ah Lithium

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



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