

FAULT INDICATOR LODESTAR CL0.5B

HIGH ACCURACY OF ALL TYPES OF FAULTS DETECTION



Connects to SCADA by
communication units

EFFECTS OF IMPLEMENTATION AT ENERGY FACILITIES



ECONOMIC BENEFITS

Stable and reliable power supply attracts investments and supports economic growth



REDUCTION OF UNDER-SUPPLY OF ELECTRICITY

More consistent and steady flow of electricity to consumers, minimizing potential disruptions in power supply



REDUCTION OF COSTS FOR THE IMPLEMENTATION AND OPERATION OF EQUIPMENT



IMPROVING THE RELIABILITY OF POWER SUPPLY TO CONSUMERS

Investments in smart grid technologies, monitoring, management and diagnostics of power grids improve their reliability



The registering of faults is based on special intelligent algorithm, that makes possible to detect PtG fault and its direction from 0.5A. Real time sensors communication open up a wide range of communication sensors possibilities for data analysis.



Detection of direction
of all types of faults

BENEFITS

- **Minimum fault sensing 0,5A**
- **Different indication patterns:** via ultra bright LEDs, in SCADA system or in LodeStar App
- **Extended memory.** More than 200 last events can be saved in the memory and displayed in LodeStar App
- Can be used in **any types grids** with any types of neutral grounding
- **Used in radial and double-fed lines**
- **Auto-adjustable PtG detection** – no need to tune the residual current threshold
- **Simple instalation** by hot stick tool



FAULT INDICATOR LODESTAR CL0.5B

Types of registered events	PtP, PtG, Transient faults
Short circuit current sensitivity	20 A
Automatic fault current threshold adjustment	+
Zero sequence current sensitivity	0.5 A
Detection of direction of zero sequence current flow	+
Voltage monitoring	+
General description of devices	
Overhead line voltage range	6-35 kV
Grid's frequency	50/60 Hz
Visual indication	<ul style="list-style-type: none"> • Blinking ultra-bright LEDs; • detection range up to 100 m (during the day), up to 500 m (at night); • a set of sequences, depending on the capability of the model.
LED brightness	At least 20000 mcd per LED, 360° view
Number of alarms stored in the internal non-volatile memory	Up to 20 000
Remote control (for field config)	Bluetooth BLE (2,4 GHz)
Remote communication	Pole-mounted communication unit (GSM) is needed for transmitting information from the indicators to the data collection server.
Types of actuation control	<ul style="list-style-type: none"> • Visual; • by short-range radio channel (handheld remote control); • remote via Komorsan & SCADA (communication unit is needed).
Reset display	<ul style="list-style-type: none"> • Voltage restoration; • by timer; • magnet; • from the portable control.
Indicator health control	<ul style="list-style-type: none"> • Magnet; • portable remote control; • remotely (communication unit is needed).
Changing settings (setpoints)	<ul style="list-style-type: none"> • On the short-range radio channel using a portable remote control; • remotely using the «KOMORSAN Web-client» software (communication unit is needed).
SMS notification (communication unit is needed)	<ul style="list-style-type: none"> • Up to 5 phone numbers; • composition of the message: GPS coordinates, type of accident, serial number.
Reading GPS coordinates	Yes
Time to prepare the kit for repeated triggering	No more than 3 sec.
Integration with SCADA systems	Connection to any existing SCADA easily via IEC 60870-5-104 by using KOMORSAN software (communication unit is needed);
Source of power	1 removable lithium battery (19 Ah)
Total indication time	> 2000 hours
Indicator life	130000 hours
Battery life (in standby mode)	8-10 years
Thresholds	
Absolute current threshold	20÷1000 A
Differential current threshold in A	20÷500 A
Differential current threshold in %	50÷500%
Current withstand (IEEE495, 4.4.7)	25 kA/500 ms
Inrush current restraint	0-200 ms
Setting the reset timer	Arbitrarily from 1 hour to 8 days
The minimum duration of the emergency process	0,02 s
Exploitation	
Installation location	On the overhead line (conductor)
Conductor diameters	5-40 mm
Installation on live line	+
Temperature range	Operating at an ambient temperature from - 40 °C to + 85 °C
Protection class	IP 68 according IEC
Impact of climatic environmental factors	<ul style="list-style-type: none"> • Resistant to UV radiation; • resistant to wind load of 40 m/s without ice and 23 m/s with ice with 35 mm wall thickness.
Impact of mechanical factors	<ul style="list-style-type: none"> • Corresponds to exploitation group M1; • resistant to galloping.