

FAULT INDICATOR LODESTAR CL25 BM



No need of additional communication devices

SIMPLE SOLUTION FOR FAST FAULT DETECTION

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



Online monitoring is possible — devices include SMS-gateway. Data transmission to SCADA system using **DNP3 protocol**.



Optimal factory settings allow CL25BM to be used without any configurations in most cases. Just activate the device and place it on a conductor — CL25BM will do its job in the best possible way.

BENEFITS

- **Minimum fault sensing 25A**
- **Brightest Light 360° Visibility** - 3 ultra bright wide-angle LEDs provide overlapping fields of light
- **Simple installation** - using a single hot stick
- **Easy to replace** - no additional settings are required;
- **Dynamically changing sensitivity** based on a load current
- **Auto-Detect Network Frequency** — intellectual algorithms allow it to work in networks with frequency of 50 or 60Hz without reconfiguration
- **Enhanced resistance** to interference conditions in the air
- **Connection to any existing SCADA** easily via IEC 60870-5-104 by using KOMORSAN software



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Types of registered events	PtP, PtG
Short circuit current sensitivity	25 A
Automatic fault current threshold adjustment	+
Zero sequence current sensitivity	25 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	Lodestar CLXX-Master is equipped with a GSM channel, 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.
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.
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.
SMS notification	<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	<ul style="list-style-type: none"> • Connection to any existing SCADA easily via IEC 60870-5-104 by using KOMORSAN software; • built-in GSM modem (for Lodestar Master FPI); • data transmission to SCADA system using DNP3 protocol.
Source of power	<ul style="list-style-type: none"> • 3 removable lithium batteries (19 Ah) in Lodestar CLxx Master; • 1 removable lithium battery (19 Ah) in Lodestar CLxx S.
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.