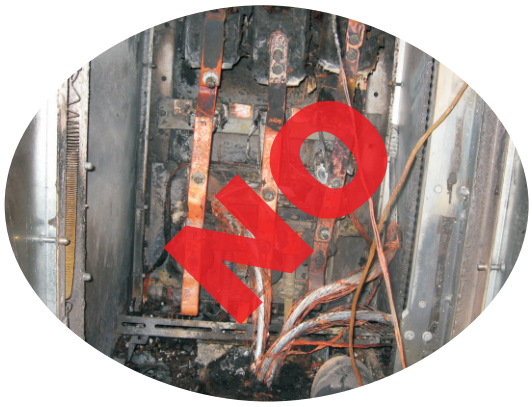
ELGA
ELECTRICAL DISTRIBUTION EQUIPMENT

ARC PROTECTION SYSTEM NOLA

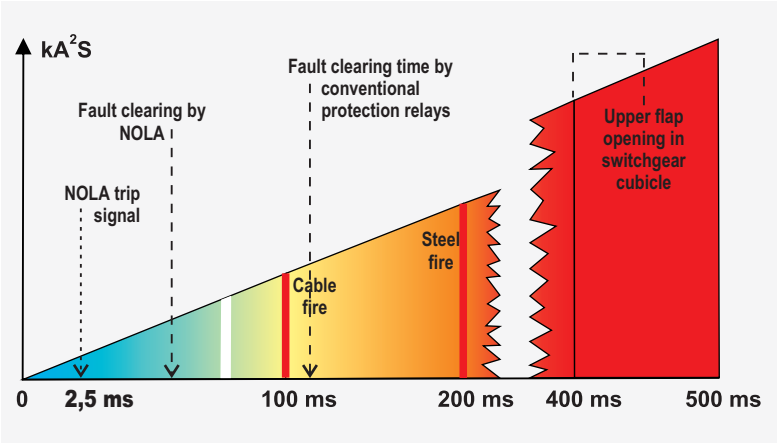
The new arc protection relay NOLA-03-M with extension unit NOLA-02-S are designed to be used for the protection of medium and low-voltage switchgear to increase personnel safety and minimize equipment damage. The central unit type NOLA-03-M operates independently or together with the extension unit NOLA-02-S. This unit helps to create selective arc protection system increasing number of sensors and extending the area to be protected.



RELAY NOLA-03-M FEATURES

- Three-phase overcurrent function - as additional criteria for trip decision
- Loop-type fiber arc sensor for arc detection and light intensity measuring
- Two high-speed semiconductor outputs for fast tripping (<=2,5 ms), much faster than conventional protection relays
- Two relay outputs for trip signalization and circuit breaker failure protection
- Two fiber optic or RS-485 interfaces for the connection of other Master or slave units (up to 16)
- 5 push-button membrane keyboard for local configuration
- Informative OLED display and 9 LED indicators for reliable information presenting even at low temperatures
- USB port for PC configuration, event evaluation and software upgrade
- Event logs (650 events) and real-time clock
- Configured by the FREE NOLASET software tool
- Continuous self-supervision and monitoring of sensor fibers, operating voltages and cabling between master units and slave units
- Selective tripping of the faulted feeder (with NOLA-02-S)

In an arc situation, the fault place is quickly localized by inspecting the area covered by the sensor fiber that detected the arc.
The trip output is provided with two high-speed, galvanically isolated IGBT semi-conductor outputs, HSO1 and HSO2, and a relay output TRIP3. These outputs can be used in DC and AC circuits.
The system reacts only to very fast light changes and automatically adapts itself to the surrounding light background. Maximum sensitivity of the light sensors is found in the infrared range of spectrum.
The upgraded system permanently measures light attenuation in fiber loops. The new relay NOLA-03-M design allows to build systems of two or more master units. Free NOLASET software tool helps to configure and test such complicated systems.



Arc duration and resulting damage

TECHNICAL DATA

Current inputs

Rated current	1A / 5A
Triggering current setting step	0.1A / 0.5A
Max triggering current	5A / 25A
Short time current for 1s	500A
Rated frequency	50 / 60 Hz

Outputs

Contacts HSO1 ir HSO2:

Rated voltage	24…260 V dc/ac
Continuous carry	3 A
Make and carry for 0.5 s	10 A
Time constant	<2.5ms

Contacts TRIP, TRIP DEL, IRF:

Rated voltage	260 V dc/ac
Continuous carry	3 A
Breaking capacity	60W, 125VA
Time constant	<10ms

Inputs

RESET, TRIP MON:

Logical 1	≥24...260 V dc /ac
Logical 0	≤12 V dc/ac
Uaux (Power Supply)	110 - 260 V dc/ ac, 48 - 110 V dc/ac

Optical fiber

Max length	50 m
Cable type	Plastic optical fiber, not jacketed
Core diameter	1 mm

RS-485 link

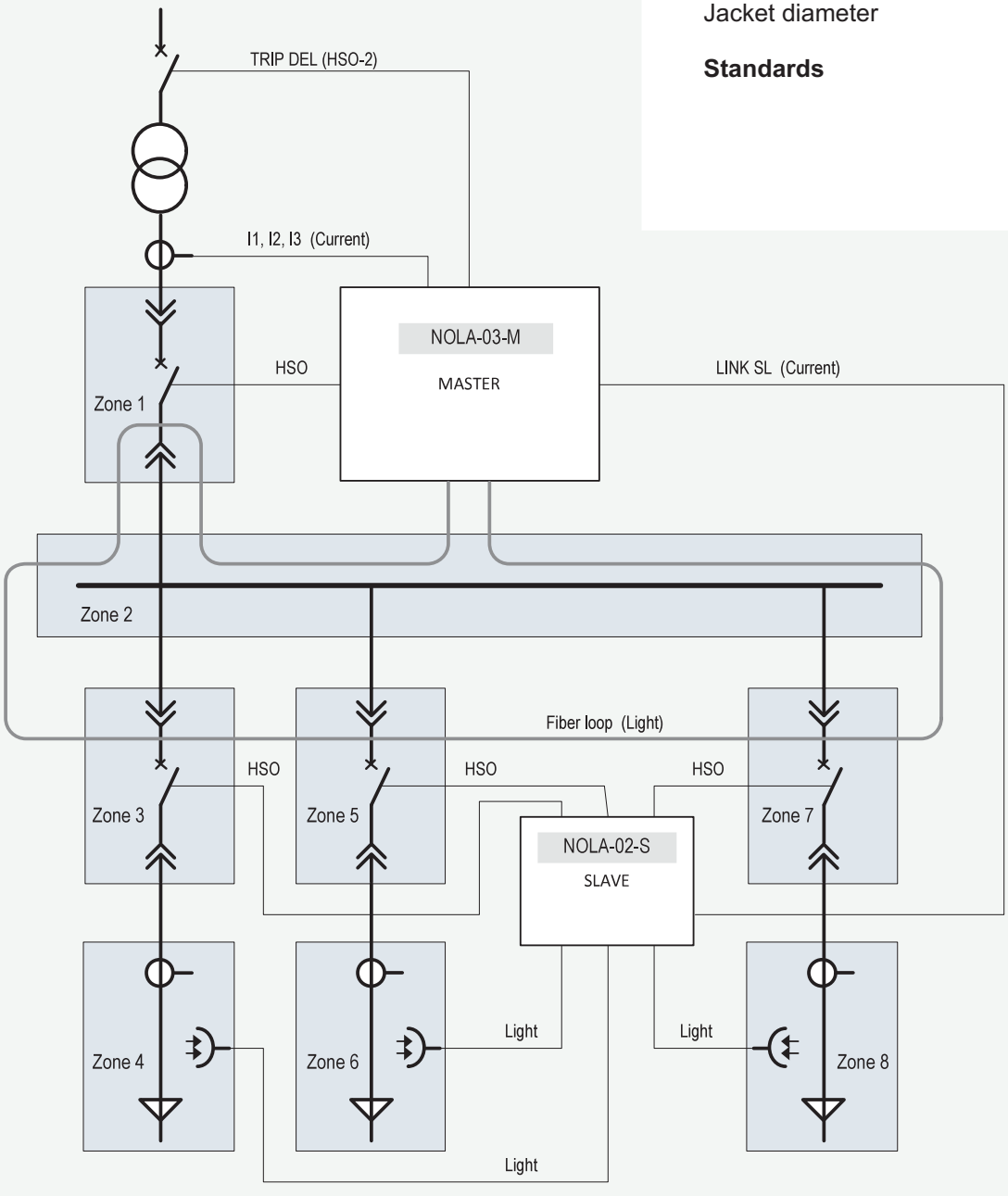
Max cable length	60 m
Cable type	Ethernet, shielded

Optical link

Max cable length	100 m
Cable type	Plastic optical fiber, polyethylene jacketed
Core diameter	1 mm
Jacket diameter	2.2 mm

Standards

IEC60255-5,
IEC60255-11,
IEC60255-22,
EN61000 (3/4/5/6),
EN60529:1999



SELECTIVE ARC PROTECTION SYSTEM

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