



SERVING
SAFETY

Mors Smitt Industrial Technology

High performance electromechanical relays

Protection and control for power transmission and distribution

Auxiliary · Tripping · Supervision · Pilot wire

**MORS
SMITT™**



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High performance electromechanical relays



Protection and control for power transmission
and distribution

Mors Smitt Industrial Technology

Mors Smitt introduces a new range of high performance protection and control relays for the power transmission and distribution market.

High voltage protection and control

The Actus series is a new generation of electromechanical relays specifically designed for high voltage protection and control applications. High performance and reliability remains paramount while production lead times are optimized.

The Actus series range is packaged in a draw out case system and can be either flush panel or 19" rack mounted. The effect of a fault on a power system is dependent on the speed with which the fault can be detected and isolated. The Actus series provides the interface between the protection system, the circuit breaker and control equipment.

Application of the Actus multicontact highspeed trip relays ensures fast operation of less than 8 ms. The unique patented design and topology ensures minimal contact bounce.

Safety and reliability

Modern protection schemes incorporate ever increasing functionality through the application of digital techniques to protection relay technology. The requirement for high reliable tripping and control relay elements does however remain and often constitutes a significant cost and space requirement when considering protection panel designs.

The Actus system provides a compact, flexible and high performance solution, while at the same time reducing the cost and lead times normally associated with this class of device. A wide voltage operating range and user selectable low or high burden tripping relay operation reduces the number of model variations.

Not just our products and services but also our production sites are focussed on environmental performance improvements by certification according the ISO 9001:2008 and ISO 14001:2004.



Actus relays rack



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Actus relays

The Actus series represents a new generation of high reliability electromechanical relays for power utility protection and control applications.

The modular draw out case system is suitable for both flush panel & 19 inch 4U high rack mounting. M4 screw terminals are provided with optional CT shorting switches. The cases are of powder coated metal construction for durability & screening from radiated electrical noise. In addition to the wide range of standard relay models, full custom designs are available to meet specific customer needs.

MSAR - High performance auxiliary relays

- Low burden auxiliary relay
- High reliability double action contacts
- High operate speed and low bounce
- 5 or 12 heavy duty contacts
- Self-reset, hand reset or hand/electrical reset
- Electromechanical flag indication
- Wide range of operating voltages



Available types

- MSAR5 Single element, 5 contacts
- MSAR12 Single element, 12 contacts
- MSAR25 Dual element, 2x 5 contacts

MSXR - Supervision relays

- Supervision of CB trip circuits, supply & CB coil integrity
- Low AC burden
- No external resistors required
- High operate speed and low bounce
- Self-reset, hand reset or hand/electrical reset
- Electromechanical flag indication
- Wide range of operating voltages
- Fixed time delay



Available types

- MSXR5-1 Trip relay
- MSXR5-4 Trip supply
- MSXR5-6 Trip circuit

MSPR - Pilot wire intertrip send relays

- Fast pick-up time (< 8 ms)
- 5 kV or 15 kV Isolation Intertrip SEND relay
- High reliability double action contacts
- High operate speed and low bounce
- Selectable low or high burden
- Configurable operate period
- 5 heavy duty contacts
- Electromechanical flag indication
- Wide range of operating voltage



Available types

- MSPR5 Send relay, 5 contacts
- MSPR12 Receive relay, 12 contacts

MSTR - High speed tripping relays

- High reliability double action contacts
- High operate speed and low bounce
- User selectable low or high burden
- 5 or 12 heavy duty contacts
- Self-reset, hand reset or hand/electrical reset
- Electrical reset interlock
- Electromechanical flag indication
- Wide range of operating voltages



Available types

- | | |
|--------|------------------------------------|
| MSTR5 | High or low burden,
5 contacts |
| MSTR12 | High or low burden,
12 contacts |

MS1X50 - Trip & close module

The MS1X50 trip & close module has been designed to provide a cost effective & feature rich solution for the manual control & indication of CB status. The trip & close buttons control heavy duty output contacts which are suitable for application on all nominal system voltages up to 250 VDC.

- Large size push buttons
- High visibility CB status LED's
- Suitable for 24, 32, 48, 110/125 & 240/250 VDC supplies
- Optional CB spring charge status LED
- Optional locking cover
- Heavy duty output contacts with optional arc suppression circuitry
- Optional custom engraving
- Optional lamp test button & output contact
- Optional integrated control circuit steering diodes



Available types

- | | |
|--------|---|
| MS1X50 | Circuitbreaker,
trip & close
module |
|--------|---|

MS4M - Test blocks & plugs

Test links are an important accessory for protection, metering & control panels. They enable test technicians to quickly & safely isolate protection relays so that test signals may be injected & system performance verified.

- Suitable for standard or shrouded 4 mm banana plugs
- Optional automatic CT shorting function
- Optional automatic DC auxiliary isolation
- High current / voltage rating
- Compatibility with Areva & Reyrolle test blocks
- 3x 75 mm + 3x 180 mm 'finger safe' shrouded shorting leads per test plug



Available types

- | | |
|---------|------------|
| MS4M300 | Test block |
| MS4M320 | Test plug |

For the complete range of products contact our sales office.

Detailed information and datasheets available on www.nieaf-smitt.com/actus

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