



ComatReleco AG

ComatReleco Expands Portfolio for Railway and Industrial Applications with New Protection, Control and Connectivity Solutions

With the launch of the MRS13R overcurrent protection relay, the CTF timer relays with forcibly guided contacts, and the enhanced Push-in socket family, ComatReleco introduces three product lines specifically designed to meet the growing demands of modern railway and industrial applications.

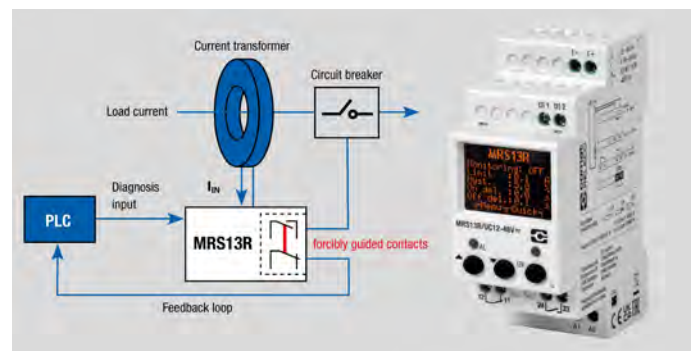
The focus is on increased operational safety, simplified system integration and reduced installation, testing and maintenance efforts. Together, these new solutions address key challenges in protection and control systems while helping system designers, integrators and operators build reliable, efficient and cost-effective installations.

Fast and Resettable Overcurrent Protection for Critical Applications

Electrical systems in rolling stock, railway infrastructure and industrial facilities require dependable protection against overload and short-circuit conditions. At the same time, operators were seeking higher system availability and lower maintenance requirements. With the new **MRS13R** overcurrent protection relay, ComatReleco offers a solution specifically developed for railway applications that delivers fast and accurate protection of electrical systems.

The MRS13R detects hazardous overcurrent conditions within just 3.1 to 4.5 milliseconds. Total reaction

MRS13R - Overcurrent protection relay



time from fault detection to relay operation is less than 20 milliseconds, helping to minimise potential damage to cables, equipment and connected loads.

The relay can be used in conjunction with external current transformers or connected directly to AC and DC loads. A configurable scaling factor simplifies the integration of various current transformer concepts and allows adaptation to a wide range of applications. With a measurement range of $-5A$ to $+5A$, the relay covers numerous monitoring tasks commonly found in railway and industrial systems.

Whenever the measured current exceeds a predefined threshold, the MRS13R activates connected switching devices such as circuit breakers while simultaneously issuing an alarm signal to the control system. An integrated LED indicator and menu-driven display simplify commissioning, configuration and diagnostics during daily operation.

A key advantage over conventional fuses is the relay's automatic reset capability. While traditional protection concepts require the replacement of a blown fuse, the MRS13R automatically returns to its normal operating state once the fault condition has

been cleared. This significantly reduces maintenance effort and minimises system downtime.

Reliable Status Feedback Through Forcibly Guided Contacts

In safety-related applications, clear and reliable status indication is essential. For this reason, the MRS13R is equipped with forcibly guided contacts, ensuring dependable feedback of the actual switching status to PLCs and supervisory control systems. This feature supports fault diagnostics and contributes to higher system safety.

The relay also includes a dedicated diagnostic input that allows operators to verify the mechanical integrity of the relay independently of a real overcurrent event. Functional tests can therefore be performed during commissioning, maintenance activities or periodic inspections without generating an actual fault condition.

This combination of rapid fault detection, automatic reset functionality and reliable status monitoring makes the MRS13R particularly attractive for applications where both system availability and electrical protection are critical requirements.

Hardware-Based Timer Relays as an Alternative to PLC and SIL Solutions

In addition to protection functions, timing functions play a crucial role in modern control and signalling circuits. With the new CTF series, ComatReleco introduces multifunctional timer relays specifically developed for safety-related railway and industrial applications.

The devices combine proven forcibly guided contacts with hardware-based timing functions, providing a cost-effective alternative to PLC-based timing solutions or SIL-certified safety relays in applications where a full safety architecture is not required.

One of the defining characteristics of the CTF series is its fully hardware-based design. Instead of using a microprocessor, the devices use a dedicated application-specific integrated circuit (ASIC). As a result, the relays operate deterministically and remain independent of software versions, firmware updates or programming errors. At the same time, the need for software validation is eliminated.

For system integrators and operators, this translates into a high degree of predictability and reliability. In addition, potential cybersecurity risks are reduced because no programmable components are involved.

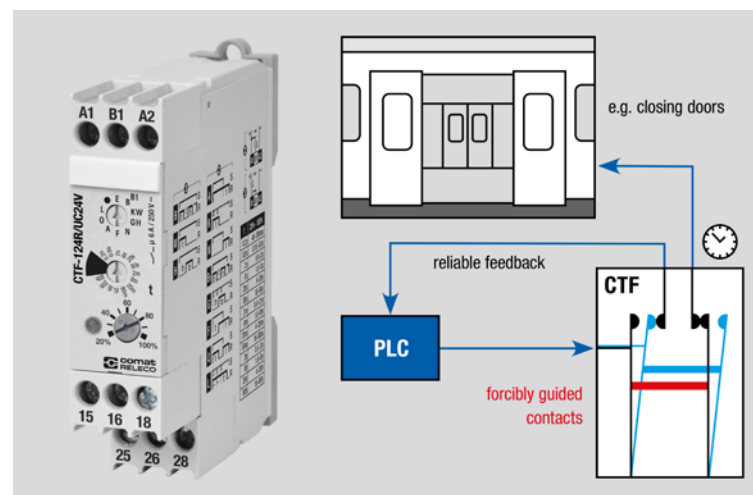
Extensive Timing Functions for Diverse Requirements

The CTF series supports a wide range of timing functions, including:

- On-delay
- Off-delay
- Combined on- and off-delay
- Pulse-on and pulse-off functions
- Pulse generation functions
- Flashing functions
- Delayed pulse (shot) output
- Step-switching functions

With timing ranges from 40 milliseconds up to 80 hours, the relays can handle both short-duration and long-term timing requirements. This makes them suitable for applications such as door control systems, release circuits, interlocking functions, monitoring systems and signalling equipment in railway and industrial environments.

The timer relays are available either with two changeover contacts (2 CO) or with one normally closed and one normally open contact (1 NC + 1 NO). The contacts are rated up to 6 A and feature gold plating to ensure reliable operation even at very low loads. This makes the devices particularly well suited for control and signalling applications.



CTF - Time relay with forcibly guided contacts

Sx-PI - Push-in relay socket family



Forcibly Guided Contacts Enhance Operational Safety

Another key feature of the CTF series is its forcibly guided contacts. Their mechanically linked design prevents both contacts from being closed at the same time, enabling reliable detection of faults such as welded contacts and preventing undefined switching states.

This characteristic is especially important in release, interlocking and monitoring circuits where reliable status feedback is required. Operators benefit from improved diagnostic capabilities and increased confidence in the integrity of the control system.

Despite their broad functionality, the timer relays remain highly compact. With an installation width of just 17.5mm, they are ideally suited for control cabinets where space is at a premium.

Compact Push-in Socket Family Simplifies Installation, Wiring and Saves Space

Complementing its relay portfolio, ComatReleco has expanded its offering with a modern Push-in socket family designed for faster installation, greater flexibility, and more compact control cabinet layouts.

The sockets enable tool-free mounting and removal, reducing installation and maintenance time. Push-in technology allows quick, secure conductor connection without screw terminals. Standardized bridging systems simplify engineering and assembly, while integrated test points and marking options support efficient commissioning and identification.

Up to 25% Less Control Cabinet Space

A key advantage of the new socket family is its compact design. Compared to similar solutions, ComatReleco reports space savings of up to 25%.

As control cabinet space becomes increasingly valuable in railway and industrial applications, compact components create room for future expansion and simplify system design.

Two Independent Conductors per Terminal

The sockets support solid and stranded conductors, with or without ferrules, from 0.34 mm² to 2.5 mm².

A notable feature is the ability to connect two independent conductors per terminal, reducing wiring effort and minimizing the need for additional terminal blocks.

A Comprehensive Approach to Modern Control Systems

Together with the MRS13R overcurrent protection relay and the CTF timer relay family, the new Push-in socket range forms a comprehensive portfolio covering protection, control, and space optimization.

These innovations reinforce ComatReleco's position as a specialist in relay, control, and connection technology while meeting growing demands for availability, safety, and efficiency in modern electrical systems.

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