

WORLD OF RELAYS

RITOM SA RELIES ON HYDROPOWER | CMA | INTRODUCING | THE NEW CUSTOMER PORTAL

EDITORIAL

Dear readers,
World of Relays is much more than a slogan. It represents our commitment to offering a complete and coherent relay portfolio, tailored to the real-world requirements of our customers, from simple standard functions to demanding industrial and infrastructure projects. The products, applications, and services presented in this edition all follow this guiding principle.

With the CMA, we are expanding our portfolio with a simple and robust solution for traditional applications. In many projects, added value does not come from increased complexity, but from clear, proven components that can be integrated quickly and reliably. A thoughtfully extended product range is a key element of our understanding of *the World of Relays*.

A particularly striking example of this is the Ritom power plant in Ticino. For more than a century, the facility has supplied energy for railway operations through the Gotthard corridor. Its comprehensive modernization combines tradition and innovation in an impressive way. We are proud that our relays contribute to the safe and reliable control of this important infrastructure.

Another significant milestone is the recent relaunch of our website, complemented by the introduction of a Business Login. This enables our business customers to access key information directly, such as product availability from stock, and to place orders conveniently through the website. The objective is clear: to simplify interactions with our customers and partners, increase transparency, and improve efficiency for everyone involved.

All of these developments are driven by a common principle: enhancing existing solutions in a targeted way, without unnecessary complexity, but with clear and practical benefits. This is how we define the *World of Relays*: a comprehensive product universe combined with well-mastered functionality, proven long-term reliability, and intelligent access to information.

We wish you an enjoyable and insightful read and look forward to discussing your applications and challenges with you.



Alexandre El Soda
CEO, ComatReleco AG



APPLICATION – GREEN ENERGY – RITOM SA RELIES ON HYDROPOWER

Anyone who has traveled south through Switzerland's Ticino region will have noticed them: the striking penstocks near Piotta. Since 1917, they have carried water from Lake Ritom down to the power plant in the valley, 840 meters below, where electricity for railway operations in the Gotthard Base Tunnel was previously generated.

As part of the renewal of the operating concession, Swiss Federal Railways (SBB), together with the Canton of Ticino and Azienda Elettrica Ticinese (AET) as the operational partner, founded Ritom SA and comprehensively modernized and expanded the Ritom power plant. Over the past eight years, a new powerhouse, a compensation basin, underground waterways, and additional technical installations have been constructed. The result is a state-of-the-art pumped-storage power plant capable of generating both 16.7 Hz railway power and 50 Hz grid power.



Digital first, then reality

Due to the project's high level of complexity and the numerous interfaces between civil construction, plant engineering, and electrical installation, the power plant was first planned as a digital model.
This model-based engineering approach made it possible to identify and resolve potential conflicts before construction began. As a result, planning risks were minimized, execution quality improved, and unnecessary costs and delays during implementation were avoided.

Relay technology and signal interfacing

Wherever possible, relay sockets with screwless connection systems were used. The relays perform switching and interfacing tasks within the control cabinets, ensuring the reliable execution of control commands for pumps, valves, and other plant components. Corresponding feedback contacts transmit operating states back to the control system for monitoring and control purposes.



Pumps, valves, and gate mechanisms are automated through electrically driven actuators



Control cabinets equipped with ComatReleco relays and monitoring devices ensure reliable control of actuators and provide dependable feedback to the supervisory control level.

Azienda Elettrica Ticinese (AET) is a public utility established by the Canton of Ticino in 1958 with the mission of generating and supplying electricity. Working together for a sustainable future driven by renewable energy.

Why ComatReleco relays?

The ComatReleco Push-In relay socket family was selected for its compact design, tool-free Push-In connection technology, and flexible wiring options.
The standardized marking strip holders support clear equipment identification and improve maintenance efficiency. Thanks to the space-saving design and ease of handling, installation effort, control cabinet space requirements, and service times could all be reduced.

Control engineering at its best

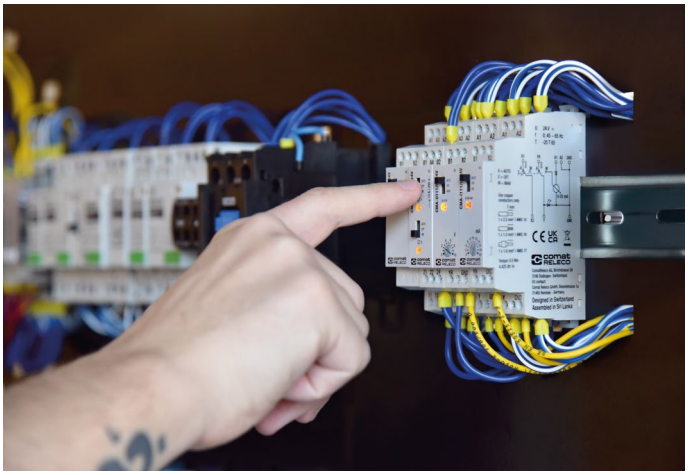
The operation of the Ritom power plant is entirely demand-driven, and in two different ways. On one side, it supplies the SBB's 16.7 Hz railway power network serving the Gotthard and Ceneri Base Tunnels. On the other, it feeds electricity into the 50 Hz public grid of the Canton of Ticino, each with its own demand peaks and operating requirements.
Naturally, the monitoring and control of generators, pumps, valves, cooling systems, voltage levels, and all electrical installations are fully automated and digitalized. Plant functions are distributed across several specialized control cabinets, while operational and process data from all plant systems are consolidated in a central control room, from where the entire facility is supervised and controlled. More than 1,600 ComatReleco relays, monitoring devices, and alarm units from the MR family have been installed throughout the facility. They help ensure reliable interaction between the different plant systems and contribute to the safe monitoring and control of power plant operations at all times.

ComatReleco Products in use

- C9 Industrial Relays
- C12 Industrial Relays
- C4 Industrial Relays
- MRx Monitoring Relays

CMA – MORE CONTROL, SAFER INTERVENTION AND GREATER OPERATIONAL RELIABILITY

In modern building automation and industrial systems, selected functions must remain operable even when direct intervention is required. The new CMA coupling module family with manual control is designed precisely for this purpose. It enables the safe manual operation of system components within automated installations, while ensuring that the higher-level controller remains informed of the current operating mode at all times.
The result is a compact and practical interface solution for applications where reliable manual override and clear system transparency are essential.



The CMA family allows users to switch safely between automatic and manual operation. In digital applications, selected loads can be switched manually. In analogue applications, control values can be set manually via 0…10 V or 0…20 mA signals. In all versions, a dedicated feedback contact reports the current operating mode back to the control system, helping to maintain transparency and preventing uncertainty during operation, commissioning, service or troubleshooting.

This makes CMA particularly useful wherever components such as valves, pumps, ventilation units, heating coils and other field devices need to be checked, activated or adjusted independently of the main controller. During commissioning, maintenance or fault finding, manually operable interface modules make it possible to test individual functions quickly and in a controlled way. They also support continued operation when the control system is temporarily unavailable.

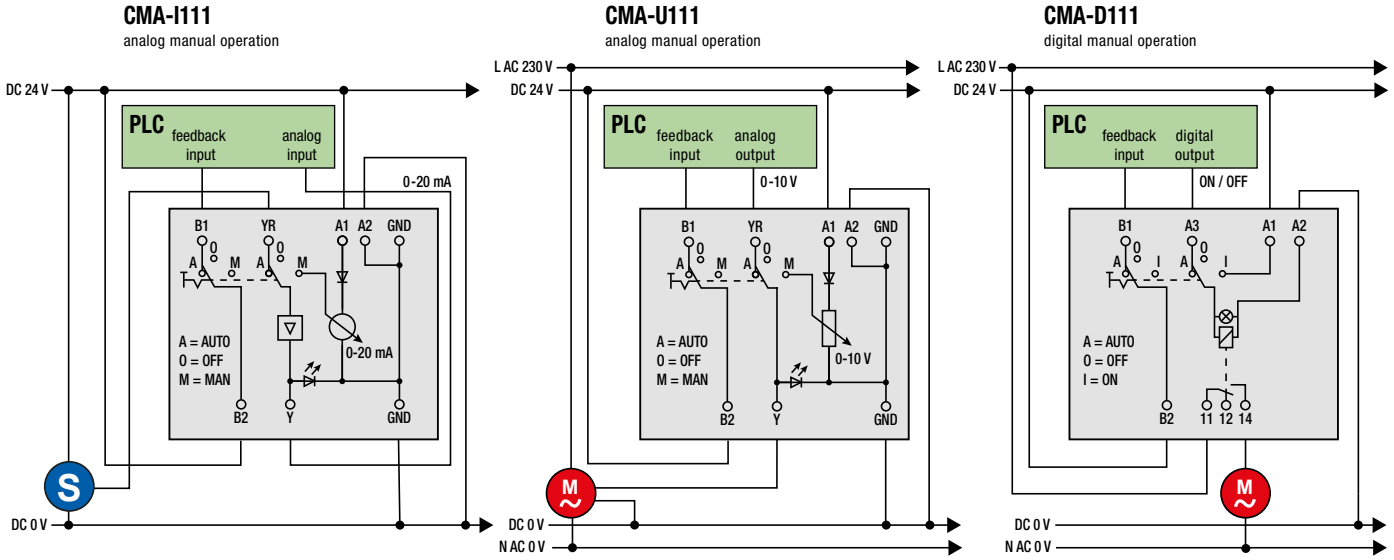
The CMA family includes four coordinated variants for different signal types and requirements:

CMA-D111/UC24V with 1 digital channel and 1 changeover contact
CMA-D211/UC24V with 2 digital channels and 2 changeover contacts
CMA-U111/UC24V for analogue 0…10 V applications
CMA-I111/UC24V for analogue 0…20 mA applications

This consistent family concept provides a clear and efficient solution across both digital switching and analogue control tasks.

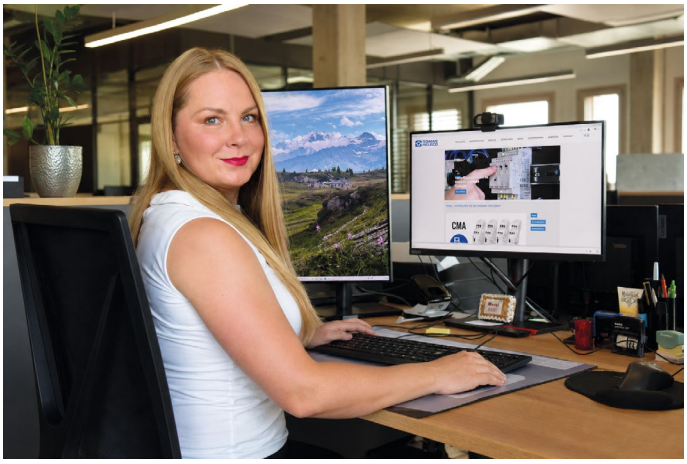
Alongside its functional benefits, CMA has been developed for easy cabinet integration. The modules offer simple wiring, intuitive operation and a compact 17.5 mm housing width for DIN rail mounting. The analogue versions additionally provide setpoint-dependent LED indication, giving users a direct visual reference of the output state. To simplify installation even further, accessories such as 2-pole, 4-pole and 8-pole potential bridge bars are available.

With the new CMA family, ComatReleco offers a solution that combines manual control, operating mode feedback and compact integration in one product range. The practical advantages are clear: greater operational reliability, faster commissioning, simplified troubleshooting and dependable emergency operation when manual access to selected functions is needed most. CMA brings safe manual control into automated systems — clearly, compactly and reliably.



S (Sensor): Temperature sensors, level sensors, pressure sensors, flow meters, displacement sensors, strain gauges, etc.
M (Motor): Control valves, regulating valves, damper actuators, frequency converters, servo drives, dimming actuators, metering pumps, etc.

INTRODUCING – CUSTOMER LOGISTICS AND PROCUREMENT WITH KAROLINA IZBRANDT



Karolina combines professional ambition with the search for a place that truly suits her lifestyle. Switzerland offers her both: an international and challenging work environment at ComatReleco, as well as close access to mountains and nature. By making the move, she wanted to refocus her career while also finding a new sense of belonging in her personal life.

What have you learned in your previous roles that helps you in your current position?

Ever since my apprenticeship, there has been a common thread running through my career: international business in an industrial environment. My curiosity about different cultures and my affinity for numbers sparked an early interest in international trade processes.

Over the years, I have worked with customers from a wide range of industries and developed a deep understanding of distributor business models, first in sales and administration, and later while supporting an international distributor network across Europe.

At ComatReleco, I can apply this experience in export customer logistics and understand the needs of our international customers and distributors. At the same time, our extensive product portfolio gives me the opportunity to learn something new every day.

One important lesson I have learned is that successful customer relationships are not built on facts and figures alone. Trust, developed over time, is just as essential for long-term cooperation and success.

How does working with customers differ from working with suppliers?

In Procurement, I support two of our production sites in China. Purchasing is a highly analytical field and, given the current market and raw material situation, also a particularly challenging one. This makes thorough demand analysis and forward-looking planning especially important, even though unexpected developments can change priorities at any time.

Customer Logistics, on the other hand, is all about maintaining a constant presence. The focus is on quickly understanding our customers' varying needs and responding flexibly to changes.

The two areas are very different, and that is exactly what makes the combination so exciting for me. At ComatReleco, our motto, "We give our all for our customers," is genuinely lived every day. That is something I truly appreciate.

What motivated you to move to Switzerland?

It was the combination of an exciting and challenging position at ComatReleco and my very first impression of the team and the company culture. That combination was simply unbeatable.

At the same time, I had long wanted to live closer to nature and spend my free time outdoors, in the mountains, and surrounded by wide-open landscapes. I also felt the need to specialize more strongly in my professional career and establish a new anchor point in my life.

For me, Switzerland brings together many things: international trade, a dynamic industrial environment, and close proximity to nature.

So it was not only a professional decision, but also a decision about a certain way of working and living. I am very grateful and happy to be here today.



WEBSITE – THE NEW COMATRELECO CUSTOMER PORTAL IS NOW ONLINE

With the new customer login, you gain direct access to stock availability and can conveniently submit order requests online. This makes availability checks easier and significantly streamlines the ordering process.

We are expanding our website with a new customer area featuring an online shop function. There, you can view available stock levels in real time and submit order requests quickly and easily online. We have deliberately chosen not to display prices. Instead, your order confirmation will include your individual pricing conditions, all agreed discounts, and the confirmed delivery date.

If you would like to use the new customer portal, simply send an email to **info@comatreleco.com**. We will be happy to set up your personal access for you.

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