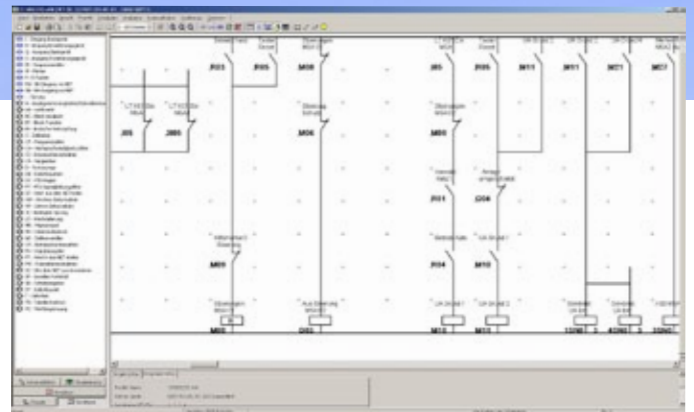


Danger High Voltage!

easy control relays for medium-voltage
switchboards up to 24 kV

Depending on the output required, the power supply of complex utility buildings such as train stations, department stores, clinics or IT centers is implemented using a medium-voltage power distribution system, transformers and low-voltage distribution systems connected in the circuit. Redundant system configurations ensure a largely continuous power supply. The Spanish company Ormazabal has used Moeller control technology for a long time for the automatic switching of two medium-voltage power distribution systems.

In a current project in North Rhine-Westphalia, an extension of the power supply is required for the new section of a building complex. The three medium-voltage system sections consist of 24 panels of the GAE630 series. The requirements set by this globally placed customer were diverse: Extensive resistance to climatic conditions, a zero maintenance concept with SF6 pressure vessels as a hermetically sealed pressure system, minimum space requirements and last but not least, personnel protection with a high level of supply reliability and operation safety. The modular metal enclosed and SF6 insulated switchboard of the Ormazabal GAE630 series met all these requirements. The same requirements also applied to the automatic switching system.



Circuit diagram programming

easySoft offers a highly user-friendly interface for circuit diagram entry, parameter setting and visualization. Time saving offline simulation is also integrated.

High system availability

The power supply company feeds the two separately installed medium-voltage systems via two independent 10 kV networks. The redundant feeders ensure a continuous power supply for the building if one system section fails. The automatic switching between the two medium-voltage switchboard systems installed around 200 meters apart was no less of a challenge, since an IT center in the building complex had to be available at all times. Both medium-voltage systems had to be networked via a fieldbus


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INFO

 **The Company:** www.ormazabal.de

 **Products:** MFD-Titan multi-function display
easy control relay
RMQ control circuit devices
DIL circuit-breakers

 **Quicklink ID:** MS1914 [www.moeller.net]

Ormazabal GmbH is based in Krefeld, and is part of the Spanish Grupo Ormazabal, one of the leading manufacturers worldwide for medium-voltage distribution boards. With around 250 members of staff in Germany, Ormazabal

supplies high-end switchboard systems for all application fields in industry and the power supply sector. Ormazabal combines innovative know-how with many years of experience in medium-voltage technology.

connection and all switching states including all operational messages had to be output on a plain text display.

Reliable automation solution

The control relays of the easy800 series with a remote MFD-80 graphical display (IP 65 front protection) were used due to their high degree of reliability, their excellent price/performance ratio and easy to learn programming. One medium-voltage switchboard system was equipped with an easy819-AC-RC control relay with 12 digital inputs and 6 relay outputs, as well as a local I/O expansion, easy618-AC-RE with an additional 12 DI/ 6 DO. The

second medium-voltage switchboard system likewise integrates an easy819. The devices are networked for automatic switching via easyNet, which can connect up to eight control relays over distances of up to 1000 meters. Previously, the operating states were displayed via indicator lights, and this solution requires a large amount of space, as well as providing diagnostics messages that are unclear. The operating states are now displayed in plain text via the MFD multi-function display, in up to 12 languages if required. The easyHMI can also be installed up to 5 meters away from the control relay.



The "safety alternative"

The redundant structure of the medium-voltage power distribution system ensures optimum system availability in the building.



If one power supply fails, the easy control relay automatically switches to the second power supply feeder. The multi-function display installed in the switch cabinet door provides system status information.

CONCLUSION

Maik Keller, project engineer at Ormazabal: "easy devices considerably simplify the handling of wiring as well as the installation. Thanks to the structured programming, we can also implement individual customer requirements more easily." Michael Bykowski from project sales at Ormazabal added: "Our experience with easy is outstanding, particularly due to its simplicity and the option it offers to expand systems at any time without any problems, making our projects future proof. Moeller's easy enables us to implement customer requirements professionally and efficiently."