

# Rittal – The System.

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## Dormann + Winkels: Saving time with RiLine Compact

### CUSTOMER REFERENCES

Electrical engineering & automation



**Customer:** Dormann + Winkels GmbH  
**Industry:** Switchgear engineer  
**Company size:** 30 employees  
**Established:** 1977  
**Headquarters:** Kerken, Germany

Switchgear engineering company Dormann + Winkels mostly manufactures systems for the metal industry. In a new project, the medium-sized company was commissioned to build the switchgear for an aluminium cold rolling mill in Romania. The drives for the rolling stand, the equipment for unwinding and rewinding the coils, and the coil conveyor systems all use electric motors. “In the past, positioning the electrical components

for small auxiliary drives presented us with problems all the time.” Says Kornelius Wolters, Project Manager at switchgear manufacturer Dormann + Winkels, describing a typical problem that occurs repeatedly in switchgear for rolling mills. In using Rittal’s RiLine Compact, Dormann + Winkels is implementing an elegant solution to efficiently position large and small drive controls in the switchgear.



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**“With RiLine Compact, installation time is cut by around 30 to 40 per cent.”**

Cornelius Wolters,  
project manager at Dormann + Winkels

## THE PROJECT

### The Challenge

- Positioning of electrical components for small auxiliary drives without using an additional enclosure

### The Solution

- RiLine Compact for positioning small and big auxiliary drives within one switchgear (in 24 Rittal TS 8 enclosures)



### Large enclosures full of frequency converters

It is not just the large electric motors that need to be fed with power. As well as the large main drives, numerous other small consumers need to be supplied by the switchgear. In the case of the aluminium cold rolling mill, these include pump drives, extraction units and brakes. That is why, in the past, a separate enclosure was often planned. With the system for the aluminium mill, the customer wanted each auxiliary drive to be installed in the same enclosure as the main drives.

The large frequency converters for the electric drives in the switchgear are installed in Rittal TS 8 enclosures. The drives are powered using a central supply unit and a busbar system. The size of the frequency converters varies according to the power of the electric drives. For the biggest drives installed in the aluminium cold rolling mill, the frequency converter requires a complete enclosure. The entire switchgear system consists of 24 TS 8 enclosures. Modern electric drives with frequency converters that support four-quadrant operation can feed back energy when braking. This type of solution is especially efficient if all the frequency converters use a shared DC intermediate circuit. Dormann + Winkels achieves this using a separate two-pole busbar system. The company uses the RiLine PLS system from Rittal for both the infeed busbar system and the DC intermediate circuit.

### An elegant solution with RiLine Compact

To produce an even more compact switchgear system, Dormann + Winkels developed a solution based on RiLine Compact. RiLine Compact can also be used to build smaller distributors with a busbar system. The new solution consists of a busbar system that is fully shock-hazard protected. The permanently installed cover features slits through which the components can make contact with the busbars. The mechanical attachment and contacting of components with the integrated busbar system is performed in a single step and without using tools. This way, RiLine Compact can be easily fitted with the necessary switchgear and protective components, such as motor starters. This makes installation much simpler and faster than with conventional individual wiring.

The switchgear for the aluminium cold rolling mill uses RiLine Compact systems installed in the enclosure from the side. All the outputs of the auxiliary drives and smaller consumers are logically assigned to the main drives of the relevant switchgear section. This makes the switchgear more transparent and makes things far easier, particularly for maintenance and servicing work. Extensions or changes to the switchgear are also extremely simple to carry out with RiLine Compact – the individual switchgear and protective devices can be supplemented or replaced without any difficulty. The electricians in the Romanian rolling mill thus benefit from the increased safety.

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