



Reliable and efficient

Power Products of the R&S Group

R&S Group

Products for a reliable power distribution

Our products are designed to fulfill and exceed our customers requirements and expectations.

The products of the R&S Group ensure a safe and reliable supply of power wherever needed. The concentrated know-how of our specialists in the different areas of expertise enables us to develop and provide products and solutions that are exactly aligned with our customer's needs.

It is our highest aim, to always satisfy our customers and to increase the efficiency of the grid. All of our products are designed and manufactured according the latest technologies and meet the latest standards. Please get yourself an impression of the quality of the R&S products and services. Besides our standard products, we also have a passion for project specific requirements.

Each project, no matter how small and how special, will be driven from our side with highest engagement and priority until everything fits in the end.

With our multiple factories and sales offices our employees are always somewhere close to you.

This brochure gives you an overview of our wide product portfolio. For more detailed information we would like to invite you to visit us on www.the-rsgroup.com.



Always with a focus on the environment, during production and the field of application

Our products

Sustainability for different industries

We focus on your needs to find a common solution as your partner.

Power transmission and distribution

Feeding renewable energies from solar- and windparks or from conventional power plants – our widespread portfolio of transformers, switching devices and instrument transformers help to transmit and distribute electrical power in grid systems worldwide.

Industry

Industrial solutions have high needs regarding a reliable power supply. Typically applications require high currents and low voltages. A high stress for the products in use – our products are designed to work under strain and pressure even in harsh environment.

Infrastructure

Office buildings, shopping malls and venues have one thing in common: extremely high energy consumption. Our products ensure a safe power supply and make sure that you are not left in the dark during work or leisure.

Transport

Punctuality of public transportation is strongly linked with the reliability of the products installed. Our high quality products can be applied from the feeding substation all the way to the 25kV overhead line. We make sure that you reach your destination in time.



Our customers are where power is needed

Power products

Switching devices

With our wide spread portfolio of switches for power transmission and distribution we are your professional partner.

Based on many years of experience in design and production of switching devices, R&S manufactures reliable and high quality disconnector- and earthing switches as well as circuit breakers.

High voltage

On HV projects our support starts in the planning phase – with our experience we can support you on the best possible way how to integrate our switches in your substation.

Our disconnectors and earthing switches have proven their reliability in installations worldwide and range from 72,5kV up to 420kV. Depending on the requirements, the disconnectors can be manufactured and delivered in a one-phase or

three-phase arrangement in different designs:

- Vertical
- Horizontal
- Pantograph

As an option, all disconnectors can be equipped with an earthing switch.

Medium voltage

The portfolio for medium voltage includes disconnector and earthing switches as well as circuit breakers. All products are available for indoor and outdoor applications in different designs and are tested up to 38kV.



Pantograph disconnectors installed in a 420kV substation



123kV Horizontal disconnectors with earthing switch during climatic test



Vertical disconnectors 420kV with earthing switch

Power products

Transformers

A basic requirement for the reliable transmission and distribution of electrical power to the end-user is efficient transformers.

Power transformers

Power transformers with a rated power up to 125MVA and a rated voltage up to 170kV are specifically designed for step up/down, rectifier and furnace applications. The transformers are designed and tested according to the latest technical standards and fully comply with IEC.

Distribution transformers

Oil immersed distribution transformers are available in different designs in grades up to 5MVA and 36kV. As an option, our distribution transformers can be equipped with tap changers to switch the voltage ratio during operation.

Cast resin transformers

Our cast resin transformers with up to 25MVA and 52kV are tested according to environmental class E2/E3, climate class C2 and fire class F1. They offer highest reliability of operation in industrial and rail applications as well as in power distribution.

Instrument transformers

Standardized in cast resin encapsulated current and voltage transformers in different designs up to 36kV. All instrument transformers comply with the specifications and requirements for application in power plants and power distribution networks.



Power transformers waiting for transport



Our power transformer factory



Testing bay for cast resin transformers

Railway electrification

Efficient and long-lasting products for a reliable power supply of railway overhead lines.

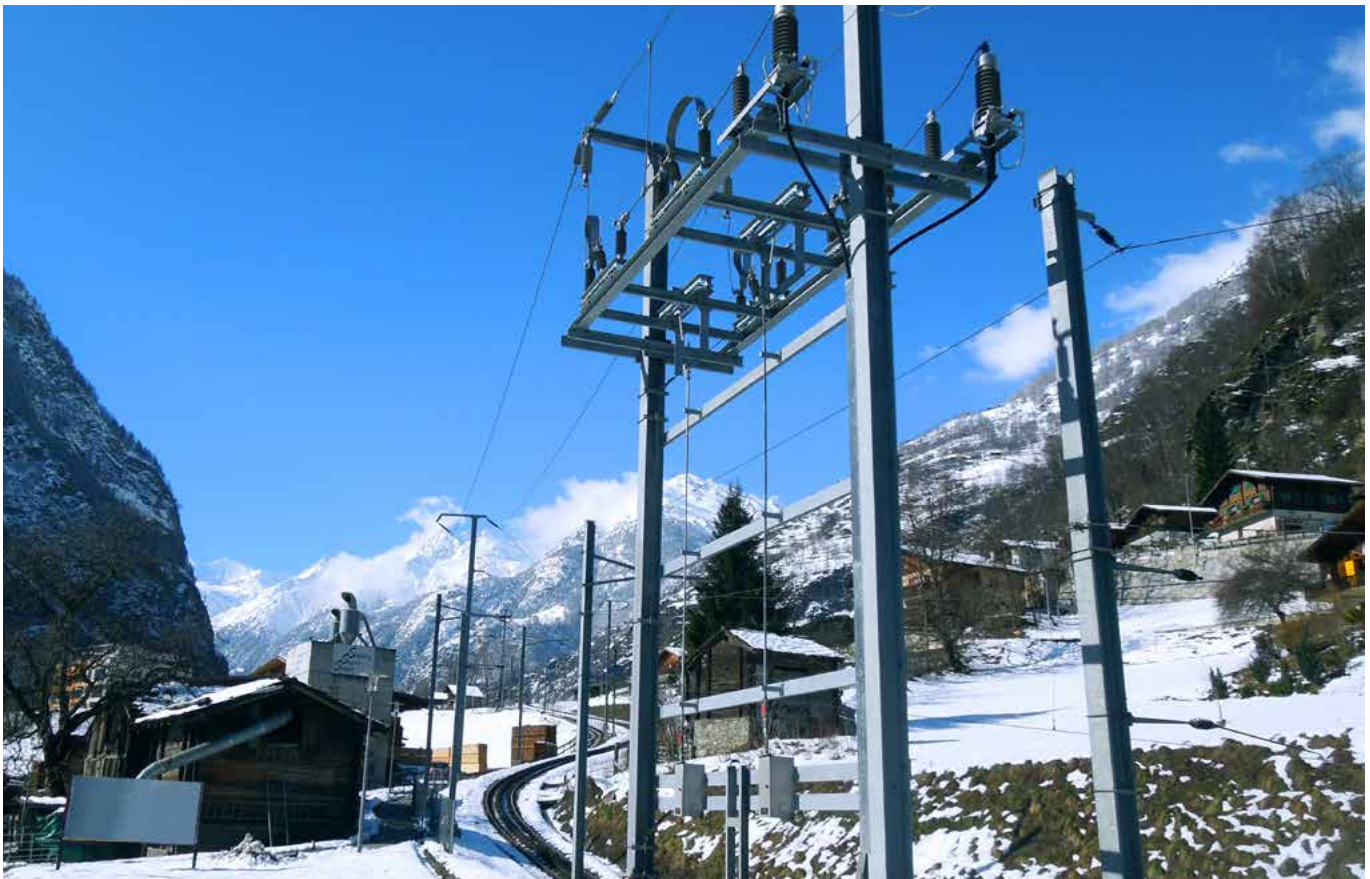
In the area of railway electrification we support our customers and partners with a portfolio targeting the electrification of the overhead line.

- Load break switches
- Disconnectors
- Earthing switches
- Motor drives
- Auxiliary supply transformers

The switches in different designs for different applications range from 15kV to 25kV AC. The reliability of our products has been proven in installations worldwide. Even under most severe environmental conditions like ice, heat or in regions

with high salinity our switches operate at highest reliability. For operation of the switches as well as the integration of a superordinate remote- and monitoring system we offer different motor drive systems with comprehensive accessories.

In order to feed low voltage consumers installed along the railway like the heating of rail switches and the signalization we offer single phase overhead-line transformers.



Railway - switch installed on portal

High current connectors

Plug-connectors for a reliable power supply of machines.

Anywhere in the industry where big machinery and mobile technical equipment has to be supplied with power our high current connectors are coming to play.

No matter if a construction site, a port facility, tunneling or mining – our plug connectors ensure a safe and reliable power supply of your assets. That way they significantly contribute to an uninterrupted power supply. The portfolio of our connectors ranges from male and female connectors to connection boxes and can be used for applications up to 1'000kV and 400A.

To ensure maximum operator and asset safety, all plugs are tested according to IEC and are equipped with safety features that by far outreach the established industry standards. For a safe power supply under most severe environmental conditions our connectors are classified according IP68/IK10.



Application example construction industry

Due to various protective mechanisms like finger protection, voltage coding and smart interlocking systems our connectors are among the safest and most reliable products in the construction industry. On construction sites our products are typically used for:

- Electrical material handling machines
- Compactor machines
- Conveyor belts
- Mobile construction equipment with need for power



Application example tunneling

A typical industry where our high current connectors are used is tunneling. The robust housing withstands environmental conditions like high humidity, dirt and high mechanical stress. Typical machines in the tunneling industry equipped with our high current connectors are

- Rock drilling machine
- Concrete pump
- Concrete sprayer machine
- Mobile Transformer Station

Locations of the R&S Group

International orientation with Swiss origin

The companies of the R&S have a long-standing history and experience in manufacturing power products with the ambition for improvement and innovation.

The R&S Group, is an international oriented Group with its headquarters in Sissach, Switzerland and offices worldwide.

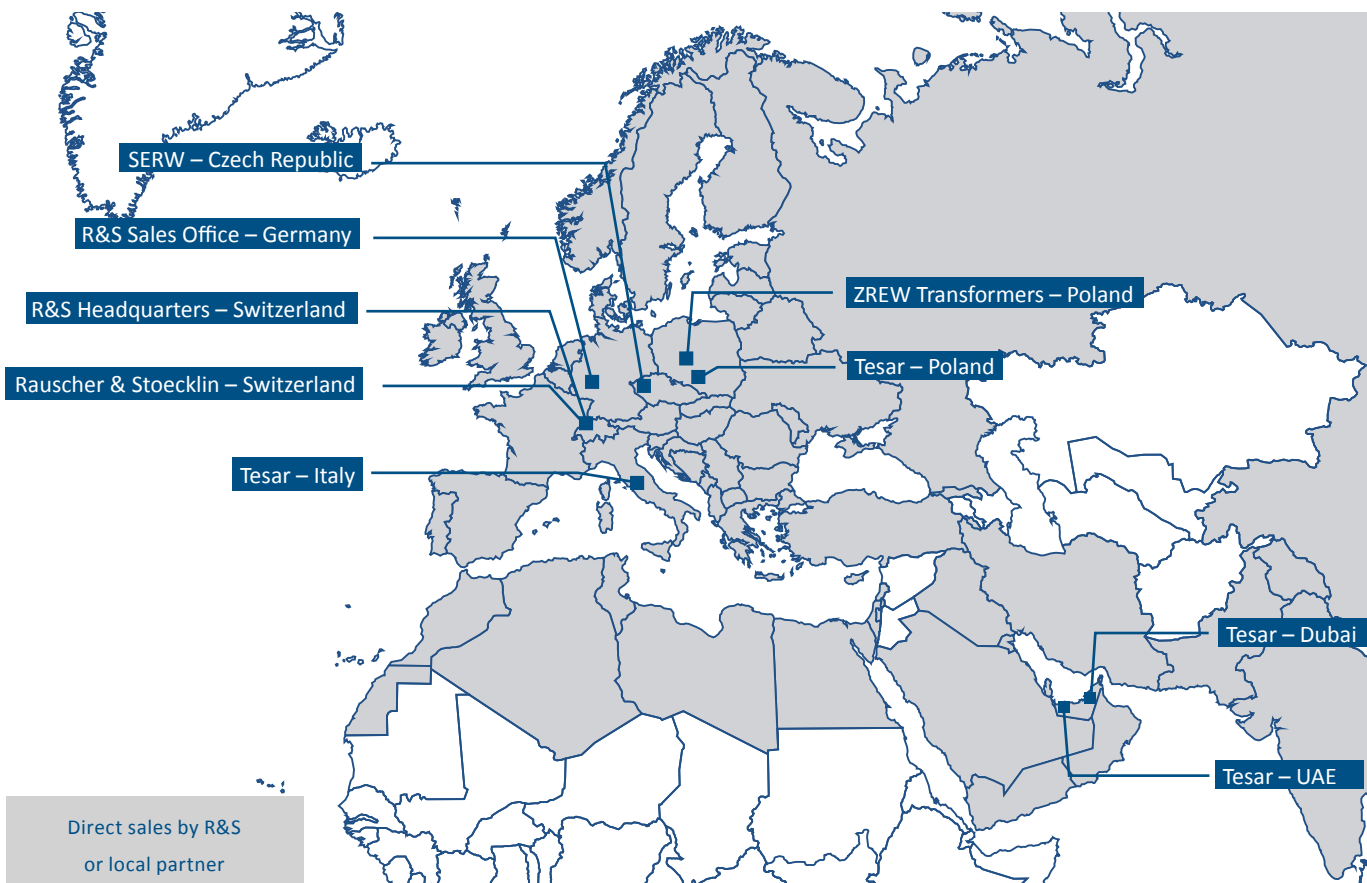
The success of the R&S is built upon:

- Longtime experience of the different companies in their particular core competencies
- Highly motivated and trained employees
- Products based on proven technologies that go hand in hand with innovative and efficient manufacturing processes

The results are products with highest possible quality and reliability for our customers.

Companies of R&S

- Rauscher & Stoecklin
Distribution transformers, railway switches, high current connectors
- SERW
HV and MV switching devices
- ZREW Transformers
Power transformers
- Tesar
Cast resin transformers, distribution transformers, instrument transformers



Our offices worldwide

Product overview



Distribution transformers

Oil immersed distribution transformers up to 36kV and 5MVA

- Hermetically sealed
- Equipped with tap changer as an option



High Voltage Switches

Disconnectors and earthing switches from 72,5kV up to 420kV tested according to IEC 62271 in different designs:

- Vertical
- Horizontal
- Pantograph



Power transformers

Power transformers up to 170kV and 125MVA equipped with state of the art components.

- Step up / Step Down
- Rectifier transformers
- Furnace transformers



Medium voltage switches

MV switches for indoor and outdoor applications with a voltage range up to 38,5kV in single phase and three phase applications

- Circuit breaker
- Disconnectors
- Earthing switches



Cast resin transformers

Cast resin transformers up to 52kV and 25MVA according to EU 548/2014 for different applications, like:

- Power distribution
- Industry
- Infrastructure



Switches for railway applications

Switches with 15kV to 25kV AC and up to 2'000A

- Load break switches
- Disconnectors
- Earthing switches
- motor drive and connection rods



Instrument transformers

Available in block construction as well as cable current transformers up to 36kV.

- Current transformers
- Voltage transformers



Connectors

Our Portfolio contains products from 200A to 400A and up to 1'000V for AC and DC applications.

- Tunneling / mining
- Marine
- Infrastructure / Transport
- Military
- Construction

Companies of R&S

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