

# RAILWAY

AC/DC SOLUTIONS & SERVICES



MADE IN FRANCE 



**KOHLER®**



**HIGH SPEED  
CIRCUIT BREAKER**

*SRI* protection  
Up to 8000 A  
Light or Heavy transit system



**CONTROL COMMAND**

Hardware / Software  
SIL development  
Multi-platform



**RECTIFIER**

750 / 1500 / 3000 VDC  
Up to 6 MW  
Fix or withdrawable



**VOLTAGE LIMITING DEVICE**

Dangerous Voltage Protection  
Class 1 to 4  
Indoor or Outdoor



**OUTDOOR LINE EQUIPMENT**

Switch / disconnecter / contactor  
Metallic or insulating enclosures  
Up to IP 66



**INDOOR DC CABINETS**

Isolating / Earthing switch  
Stray Current / Negative Cubicle  
Substation or workshop

The **SRI<sup>®</sup>** protection relay can be integrated on HSCB or VLD products. It has 3 main functions: protection, control command and user interface.

## ► RAILWAY DC LINE PROTECTION FUNCTIONS (ANSI 27/32/50/59...)

Safety SIL2 development according to EN50128 and EN50129.

► **THE CONTROL COMMAND FUNCTION** is easily configurable and adds new services:

- Commissioning assistance
- Help for maintenance:
  - » Predictive maintenance
  - » Manual and datasheet on board
  - » Remote diagnosis
  - » Commissioning assistance

Several protocols are available to communicate with the customer's network : IEC61850, Modbus, ...

► **THE INTERFACE** is fully customizable via a 7-inch color touch screen. Operating and maintenance data can be easily exported with USB plug.

The user can connect his smartphone and tablet to the protection relay through an **android & IOS application**.

### RELIABILITY

**Protection** Managed by dedicated FPGA

**SIL** In compliance with EN 50128/EN 50129 standards

### CONNECTED

Bluetooth, remote connection, ...

### NETWORK COMMUNICATION

IEC61850, Modbus

### OPERATOR ASSISTANCE

Customizable HMI

Control command modification program (with ladder diagram)

Smartphone & tablet applications (Android & IOS)

Network monitoring

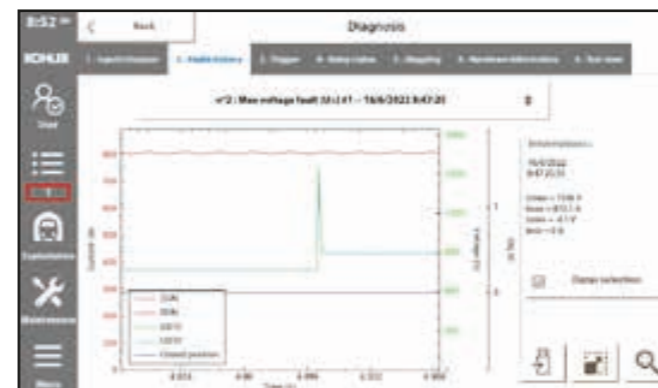
### RAILWAY MAINTENANCE SUPPORT

Remote diagnosis

Support of the maintainer during preventive and curative operation

Predictive maintenance tools

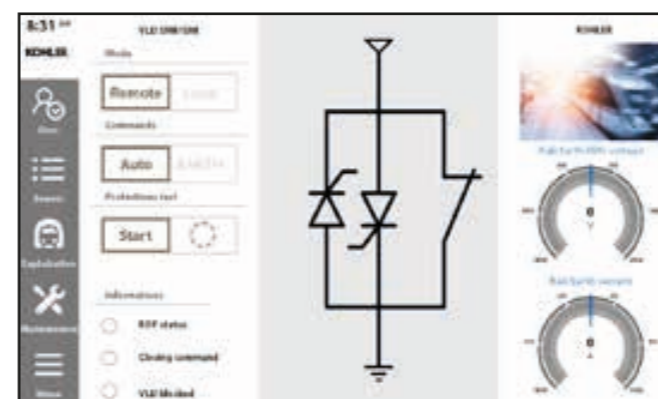
Measure and analysis tools



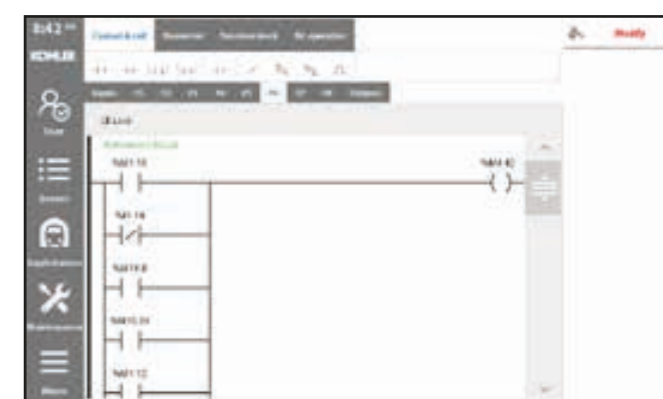
Scope function for real-time network analysis



Line consumption diagram



Voltage limiting device main page



Ladder function for control customization



## ▶ SMART ELECTRICAL SOLUTIONS

BETTER LIFETIME & LIFE CYCLE COST

**KOHLER.** in smart strategy:

- Measure and metering
- Power management
- Predictive maintenance tools
- Temperature control
- Automatic reconfiguration
- Events log
- Wireless connection and iOS & Android App
- Unlicensed and open access system



## ▶ CLEAN ENERGY

SUSTAINABILITY FOR A BETTER PLANET

**KOHLER.** in “green” markets:

- Energy storage system
- Hydrogen power conversion
- Energy Management System
- AC medium voltage static switch

Corporate Social Responsibility:

- Eco-conception
- Sustainable procurement
- Stewardship actions
- Ethic training



## ▶ OVERALL PACKAGES & SOLUTIONS

SAVE SPACE, TIME AND COST

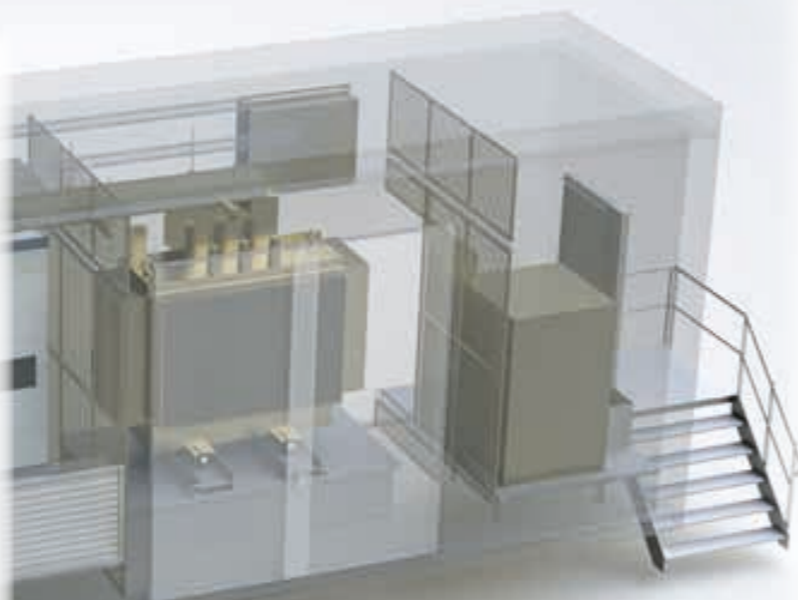
**KOHLER.** in “Plug&Play” electrical sub-stations:

### Engineering:

- Design of MV & LV assemblies
- Thermal & Mechanical studies
- Fire suppression system

### Solutions integration:

- Shelters
- Containers
- Skids
- Modular structures



## ▶ ENGINEERING

YOUR PROJECT IS OUR PROJECT

**KOHLER.** in the making of your design:

- Project management
- Specification
- Simulation & calculation
- Electrical & Mechanical design
- Customization
- Documentation
- Services:
  - » Installation assistance
  - » Commissioning
  - » Training



# ELECTRICAL EQUIPMENT ORIGINAL MANUFACTURER



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- ▶ Control command, automation and industrial IT solutions
- ▶ AC/DC railway solutions and services
- ▶ Electronic solutions
- ▶ Standard production equipment
- ▶ Global offer
- ▶ Customer services, installation, retrofit



**Gimélec**



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