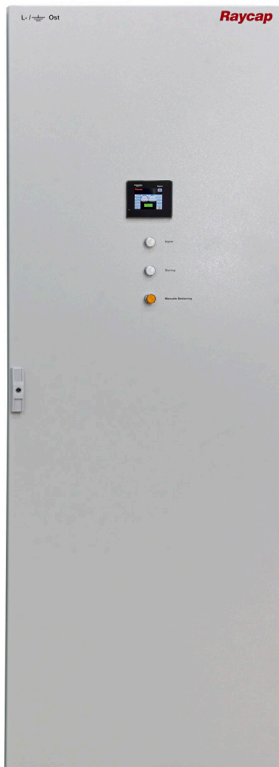


Railway Solutions

RHP-SCD Product Series

Voltage Limiting Device

The RHP-SCD is a reliable voltage limiting device designed for mainline and urban railway networks. It ensures the effective protection of personnel and passengers against impermissible touch voltage caused by operational currents or short-circuit/fault currents. It is typically installed in traction power substations, sectioning posts and passenger stations.



The RHP-SCD (Raycap's High Performance Short Circuiting Device) is a Class 4 voltage limiting device compliant with the railway standard EN 50526-2. It is fully recoverable and fulfils both VLD-O and VLD-F types of requirements as described in EN 50122-1 / IEC 62128-1.

The device is typically connected between the current return path (negative busbar) and the structure or traction earth. It can be installed at substations, sectioning posts, passenger stations, workshops and other critical locations.

Its operation is based on the coordination of a Strikesorb® metal oxide varistor surge suppression bloc, a controlled thyristor bloc and a normally closed contactor bloc ensuring all expected safety principles.

When impermissible touch voltage is developed, the RHP-SCD limits it to very low safe values by efficiently short-circuiting the negative rail and the earth. The programmable automatic opening of the RHP-SCD limits the effects of stray currents. In case of insulation faults (e.g. accidental short-circuits with the contact lines), the RHP-SCD generates a durable conductive path between the overloaded area and the substation and is able to carry the traction fault current until the fault is cleared by the traction high speed circuit breaker. Embedded state-of-the-art protection technology against lightning and transient overvoltage guarantees optimum equipment protection.

Benefits

- Fast response time
- Efficient elimination of dangerous overvoltage to very low safe voltage values
- Guaranteed reversibility for long term currents and high-short circuit currents
- Low residual voltage ensured by patented Strikesorb surge protection technology
- Combined protection for personnel, passengers and equipment
- Bidirectional operation
- Redundant triggering via electronic cards and PLC
- Control & monitoring functions
- Alarm & status remote signaling

Railway Solutions
RHP-SCD Product Series
Voltage Limiting Device

Electrical	RHP-SCD
VLD class per EN 50526-2	4
Nominal voltage of traction system	750V / 1500V / 3000V
Nominal triggering voltage [U_{Tn}]	120V or 60V*
Non-triggering voltage [U_w]	115V or 55V*
Max. leakage current at [U_w]	50mA*
Short time withstand current [I_w]	70kA/30ms*
Rated current [I_r]	1250A or 1600A or 2000A*
Max. residual voltage at I_w	50V
Max. residual voltage at I_r	50V
Nominal lightning current [I_{imp-n}]	25kA (8/20 μ s)
High current impulse [$I_{imp-high}$]	100kA (8/20 μ s)
High charge impulse [I_{imp-hc}]	25kA (10/350 μ s)

Power Supply	
Supply Voltage	110VDC or 230VAC*
Power consumption	<120W (min. fusing : 15A)

Mechanical	
Temperature Range, Operation	-25°C to +55°C
Weight	+/-300kg depending on version
Environmental protection	IP55

Standards Compliance	
EN 50526-2	* Other values and products available on request

Product Diagram

[mm]

