

DISTRIBUTION SOLUTIONS

GridShield® 1SP

15/27kV Single-Phase Vacuum Recloser



Improve system reliability and reduce downtime with GridShield 1SP – a maintenance-free and reliable, solid dielectric vacuum interruption recloser that works with the SEL-351RS Kestrel Single-Phase Recloser Control.

Key features

- Unparalleled HCEP (hydrophobic cycloaliphatic epoxy) embedded poles with reliable sensors and vacuum interrupter with mean time to failure of over 10 years
- Maintenance-free design
- Works directly with SEL-351RS Kestrel
- Site-ready units for simple installation
- Automation ready
- Operator safety with dead tank construction
- Dead-Line operation

Key ratings

- 27kV
- 1000A Continuous
- 10kA Interruption
- 150kV BIL

The GridShield 1SP has an innovative pole design that provides excellent reliability using ABB vacuum interrupters, advanced design technology, and HCEP solid dielectric insulation. The GridShield 1SP interfaces with the flexible, easy to program, and automation ready Schweitzer SEL-351RS Kestrel Recloser Control using a 10-pin control cable.

Operation

The recloser pole contains an embedded 600:1 current transformer (CT) in the horizontal bushing, which enables the recloser control to perform accurate metering, control, protection, and automation. The analog signals and recloser status from the pole are sensed by the control cabinet and trip/close actuation signals are sent to the pole's magnetic actuator to open and close the vacuum interrupter. The vacuum interrupter is mechanically linked to the indicator cup to give a truly visual indication of the recloser status. The recloser can be manually tripped and mechanically blocked using the yellow handle.

Benefits

- Unparalleled reliability
 - High voltage unit passed the most rigorous environmental testing at KIPTS with no signs of material erosion, tracking, cracks, or punctures of any insulation
 - Highest creep distance among the recloser poles globally for long-term performance in any environment
 - Peak switching performance with ABB's industry leading vacuum interrupters and magnetic actuator
 - Tested for over 10,000 mechanical operations
- Reduced maintenance
 - Maintenance-free high voltage compartment (interrupting unit) with no consumable components, eliminating the need for a bucket truck to isolate potentials to service electronics
 - HCEP insulating material of the poles provides the best insulation for outdoor use and shedding water and debris, thus reducing the probability of flashovers even in heavily polluted areas

- Simple integration
 - Compatible with easy-to-use SEL-351RS Kestrel Recloser Control
 - Site-ready units with voltage transformer, surge arresters, and animal guards are available, minimizing any work to prepare the unit for installation
 - Streamlined components and design for simplified and safer interaction with the unit

Technical data	Quantity	Unit
Rated max voltage	27	kVrms
Rated continuous current	1000	A
Rated symmetrical interrupting current	10	kArms
Rated lightning impulse withstand (BIL)	150	kV
Voltage withstand (wet/dry) for 60s	60	kV
External creep distance H2-ground	37.8 (960)	in (mm)
External creep distance H1-H2	45.7 (1160)	in (mm)
High voltage unit weight	110 (50)	lbs (kg)