

DISTRIBUTION SOLUTIONS

GridShield®

Dual Voltage Sensing Recloser



Improve system reliability and reduce downtime with the GridShield recloser – a dual voltage sensing, maintenance-free and reliable, solid dielectric vacuum interruption recloser.

Key features

- Unparalleled HCEP (hydrophobic cycloaliphatic epoxy) embedded poles with reliable sensors and vacuum interrupter with mean time to failure of over 10 years
- Dual voltage sensing with $\pm 1\%$ accuracy with standard LEA output – compatible with ABB, SEL, Beckwith recloser controllers
- Cleaner installation and maintenance-free design
- Site-ready units for simple installation
- Automation ready
- Operator safety with dead tank construction
- Dead-Line operation

Key ratings

- 15 to 38kV
- Up to 1250A Continuous
- Up to 16kA Interruption
- Up to 170kV BIL

The GridShield recloser has an innovative pole design that provides excellent reliability using ABB vacuum interrupters, advanced design technology, and HCEP solid dielectric insulation. The GridShield recloser is equipped with dual high accuracy voltage sensors and is available with a wide range of recloser controls such as ABB RER620, ABB RER615, Beckwith M-7679 and Schweitzer SEL-651R.

Operation

On 15kV and 27kV units, the recloser pole contains high accuracy embedded voltage sensors in both the vertical and horizontal bushings. Alternatively, on all 15/27/38kV units, integrated dual voltage sensing is also available.

An embedded voltage sensor in the horizontal bushing and an integrated voltage sensor on the vertical bushing allows dual voltage sensing capability without separate cables. These voltage sensors, in addition to the embedded 600:1 current transformer in the horizontal bushing, enable 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 true 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 material of the poles provides the best insulation for outdoor use, shedding water and debris, thus reducing the probability of flashovers even in heavily polluted areas
 - High accuracy sensing across operating ambient range eliminates need for other stand-alone sensors to support applications such as CVR and VVO
- The integrated voltage sensor and pole can be removed simultaneously, allowing for ease of pole replacement
- Modularity allows easy replacement of poles and sensors
- Simple integration
 - Compatible with easy-to-use ABB RER620, Beckwith M-7679 and SEL-651R recloser controls – use existing style numbers/fully interchangeable
 - Site-ready units with voltage transformer, surge arresters, and animal guards are available, minimizing any work to prepare the unit for installation
 - Cleaner installation by using a simple splitter instead of a junction box
 - Less cable management with integrated voltage sensor signals routed through the single control cable
 - Streamlined components and design for simplified and safer interaction with the unit

Technical data				
Rated max voltage	15.5	27	38	kVrms
Rated continuous current	1000	1000	1250	A
Rated symmetrical interrupting current	12.5	12.5	16	kArms
Rated lightning impulse withstand (BIL)	125	150	170	kV
Voltage withstand (wet & dry) for 60s	60	60	60	kV
External creep distance H2-ground	38.00 (960)	38.00 (960)	50.70 (1288)	in (mm)
External creep distance H1-H2	45.00 (1160)	45.00 (1160)	49.80 (1260)	in (mm)
High voltage unit weight per pole	115 (52)	115 (52)	151 (55)	lbs (kg)

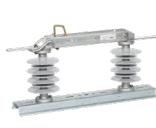
Complete the recloser installation with world-class ABB switches and instrument transformers!



By-pass switch (RBD)



Loadbreak insulator switch (LSID)



Disconnect switch (DCD)



27kV voltage transformer with ResiVolt™ technology (VOG-15R)