

Auto Recloser

15.5 kV | 38 kV | 800 A / 1200 A / 1600 A |

25 kA (Recloser) / 31.5 kA (Circuit Breaker)



FEATURES

Exceptional integrated solutions

- Package consists of:
 - 3 Phase or 3 x 1 Ø operation
 - Gang operated or independent pole vacuum auto-recloser (or circuit breaker)
 - **Huge Permanent Magnet operating mechanism - (7500 Newtons over 35mm travel)**
 - Embedded cast resin current transformers 5B20, 3 VA, 1amp secondary
 - Bushings embedded line & load voltage dividers
 - Integrated control cabinet complete with:
 - PMA controller system
 - Native Onboard Relay & Administrative Device (NORAD) system
 - Battery & battery charger system
 - Heavy duty cablings with one or two sided connectors
- Recloser or sectionalizer, stand-alone or auto restoration
- SCADA compatible
- 50,000 mechanical operations
- For Recloser Duty - O - 500 ms - C / O - 2sec - C / O - 5sec - C / O
- For Breaker Duty - O - 300 ms - C / O - 3 min C / O
- Hydrophobic Cycloaliphatic Epoxy (HCEP) pole assemblies
- Mechanical trip
- Lock-out
- Versatile mounting arrangements,
 Custom mounting configurations per customer specification

COMPREHENSIVE AUTO RECLOSER RELAY

- 3 stage overcurrent protection (directional / non-directional) 50 – 50 T – 51 - 67
- Fast & delayed trip curves for phase and ground faults
- Fifty (50) trip curves (ANSI, recloser & customized curves)
- Negative sequence (46) protection
- Broken conductor protection (46BC)
- Sensitive ground fault (SGF) (50 / 51G) protection
- Zero seq. harmonic restraint
- Cold load pick-up protection w / 2nd harmonic & inrush restraint
- Independent dual directional (67) settings
- Synch Check (25) element
- Up to five (5) shot auto reclosing
- Four (4) setting groups
- Automatic, power flow regulated settings group change-over

CONTROL BUTTONS

- Local / Remote
- Open / Close
- Recloser On / Off
- Hot line Tag
- Protection On / Off
- Ground fault protection On / Off
- Reset
- Battery Test

PANEL STATUS INDICATION (LEDs)

- Recloser status: On / Off
- Control position: Local / Remote
- Fault indication (R, Y, B, SGF, Directional)
- Broken conductor – Negative Seq
- Synchronization indication - permissive
- Hot line Tag
- Inrush detected
- Mechanical lock-out
- Loss of AC aux. power
- Control cabinet door open
- Battery overcharged
- Battery charger failure
- System error (self-diagnosis)



MEASUREMENT FUNCTION: (LCD)

- Source side voltage
- Load side voltage
- Current
- Active power (kW)
- Reactive Power (kVAR)
- Apparent power (kVA)
- Active energy (kWh)
- Reactive energy (kVARh)
- Power factor
- Frequency
- Phase angle
- Harmonics (to 32nd)
- Total harmonic distortion (THD)

COUNTER: (LCD)

- Field R.T.U. - restart counter
- Recloser trip counter
- Fault counter (R, Y, B, N, SEF)

MEMORY:

- Over 20,000 event records
- Download-able waveform records
- Fault recorder (up to 4 faults)
- Maximum demand – Current
- Maximum demand – Power

COMMUNICATION:

- SCADA: DNP 3.0, 61850
- Setting: MODBUS

OPTIONAL ACCESSORIES:

- External PT
- Lightning arrestors (either or both sides)
- Integral / external control transformer

PMA CONTROLLER:

- Micro-controller
- Integrated capacitor charging, switch mode power supply
- Long-life, high-energy capacitors
- High capacity MOSFETs
- A wide range of aux. supply
- Trip circuit continuity supervision
- Self-diagnostics
- Output contacts for trip circuit & PMA controller health



AUTO RECLOSER - 15.5 kV | 38 kV | 800 A/1200 A/ 1600 A | 25 kA

TECHNICAL PARAMETERS

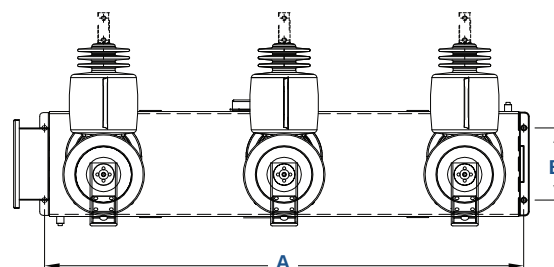
SI. NO.	PARAMETER	15.5 kV	38 kV
1	Rated Voltage (kV)	15.5	38
2	Rated Frequency (Hz)	60	60
3	Rated one minute power frequency withstand voltage	36	80
4	Rated Lightning impulse withstand voltage (kVp) BIL	110	170/200
5	Rated Current (A)	800 / 1200 / 1600	800 / 1200 / 1600
6	Rated short circuit breaking capacity (kA)	20 / 25 / 31.5*	20 / 25 / 31.5*
7	Rated short circuit making capacity (kA)	52 / 65* / 82	52 / 65* / 82
8	Rated short time withstand current (kA)	31.5*	31.5*
9	Rated short time withstand duration (sec)	3	3
10	Rated operating sequence	O-500ms-C/O-2s-C/O-5s-C/O*	
11	Closing time	<65ms	
12	Tripping time	<45ms	
13	Rated auxiliary voltage	24 V DC/ 120 V AC/ 240 V AC	
14	Rated auxiliary voltage tolerance	50% to 110% ≥	
15	Mechanical life	50,000 operations	
16	Electrical life at rated current	20,000 operations	
17	Electrical life at 100% short circuit breaking capacity	100 operations	
18	Auxiliary contact	4 N.O. + 4 N.C.	
19	Interrupting medium	Vacuum	
20	Insulating medium	Solid dielectric	
21	Operating mechanism	Magnetic actuator	
22	Degree of protection (Switching unit)	NEMA 4	
23	Degree of protection (Control unit)	NEMA 4 & 4x optional	
24	Standard	IEEE C37.60	

*For Breaker Duty - O-300 ms -CO - 3 min CO

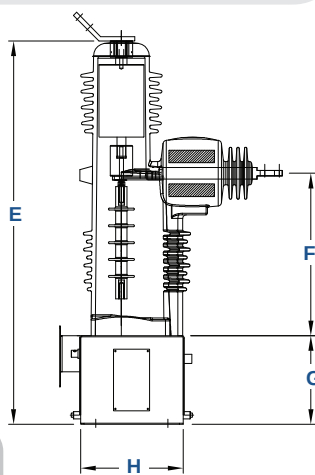
DIMENSIONS

Millimeters | Inches

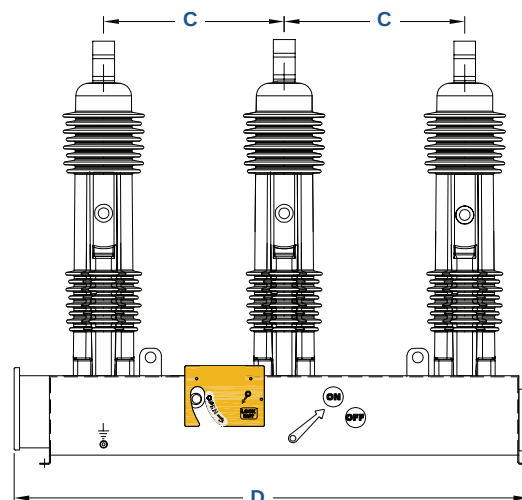
	15kV	38kV
A	1007 39.65	1327 52.24
B	180 7.09	200 7.87
C	375 14.76	500 19.69
D	1105 45.24	1425 57.83
E	778 31.21	1061 41.79
F	275 10.83	450 17.71
G	245 9.65	245 9.65
H	225 8.82	284 11.18



TOP VIEW



SIDE VIEW



FRONT VIEW