

## TYPE VSA20A RECLOSER

### EQUIPMENT SPECIFICATIONS:

Automatic Circuit Recloser with Vacuum Interruption and Air Insulation

### STANDARDS:

The circuit breaker covered by this specification shall be designed, manufactured, and tested in accordance with ANSI C37.60 and ANSI C37.61.

### QUALITY

The manufacturing facility shall be independently certified to meet ISO 9001 Standards.

### RATINGS:

Maximum Design Voltage (kV)	15.5
Nominal Operating Voltage (kV)	2.4-14.4
Basic Insulation Level (kV)	110
60 Hertz Withstand Voltage (kV)	
Dry, one minute	50
Wet, ten seconds	45
Max. RIV at 1.0 MHZ/9.41 kv (microvolts)	100
Continuous Current Rating (amps)	1200
Symmetric Interrupting Current (amps)	20,000
Cable Charging Current (amps)	2
Magnetizing Current (amps)	42
General Purpose Capacitance Current	250
Switching (amps)	
3 Second Current, Symmetric (amps)	20,000
Momentary Current, Asymmetric (amps)	32,000

### MECHANICAL LIFE:

2500 Close-Open Operations

### DUTY CYCLE:

<u>PERCENT OF INTERRUPTING RATING</u>	<u>MAXIMUM CIRCUIT X/R RATIO</u>	<u># OF UNIT OPERATIONS</u>
15-20	4	88
45-55	8	112

**FEATURES:**

The recloser will be mechanically and electrically trip-free.

All three poles of the recloser will be operated simultaneously by a solenoid-spring operating mechanism.

The recloser will be opened and closed by means of energy provided by a motor operating at 240 Vac, 60 Hz and stored in springs for both tripping and closing operations.

Bushings will be of "wet" porcelain and will have a standard creepage distance of 17" inches.

Bushing terminals will be threaded stud type, 1 1/4-12 UNF2A,

Current interruption will occur in vacuum interrupters, one interrupter per phase.

It will be possible to replace one or all bushings without any re-alignment or adjustment of the vacuum interrupters or operating mechanism.

The recloser interrupting time will be 0.042 seconds

Resistance-type heaters will be provided in the interrupter and operating mechanism cabinets, to prevent moisture condensation.

The recloser will be shipped mounted in a substation mounting frame.

The mounting frame extension will have a ground pad which will accommodate two No. 2/0 to 250 MCM conductors

Sensing bushing current transformers, 2000:1 ratio, for use with the recloser control, will be mounted internally in the recloser on bushings 1, 3, and 5.

A 4 - digit counter will be provided in the operating mechanism.

The recloser will use a motor operator to charge opening and closing springs; solenoids will be used for the tripping and closing operations.

A contact position indicator, externally visible, will be provided.

Two external pull rings will be provided to manually trip and close the breaker.

A spring operator condition indicator will be provided, one to close the recloser and one to trip the breaker.

The recloser will be capable of manual trip and manual close on a maximum fault. Closing springs can be charged manually by means of a crank (150 turns), through a gear box.

**SPRING CHARGING MOTOR:**

	<u>STANDARD</u>	<u>ACCESSORY</u>
Operating voltage (Vac)	240	120
Voltage Range (Vac)	160-257	90-127
Maximum Current RMSA (amperes)	13	18
Steady State Current (amperes)	8	9
Motor Running Time (cycles)	40	40

**CONTROLS:**

The recloser will be capable of operation with any of the following: Form 3, Form 3A, Form 4A, or Form 4C Type ME recloser control.

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