

TYPE VSA20B POWER CIRCUIT BREAKER

EQUIPMENT SPECIFICATIONS:

Air-insulated Power Circuit Breaker with vacuum interruption.

STANDARDS:

The circuit breaker covered by this specification shall be designed, manufactured, and tested in accordance with ANSI/IEEE C37.04-1979, ANSI/IEEE C37.06-1987, ANSI/IEEE C37.09-1979 and ANSI/IEEE C37.012-1979.

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
Voltage Range Factor K	1
Rated Impulse Voltage (kV)	110
Trip Solenoid (Vdc)	24
Actuation time (cycles)	1.25
Close Solenoid (Vdc)	24
Actuation time (cycles)	1.5

MECHANICAL LIFE:

2500 Close-Open Operations

FEATURES:

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 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 breaker 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 an electronic reclosing breaker, will be mounted internally in the breaker on bushings 1, 3, and 5.

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

The breaker 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.

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

A spring operator condition indicator will be provided to indicate whether the closing springs are energized. The indicator consists of a mechanical flag for indication and will be visible from the front of the operator cabinet.

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

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