Southern States
The Quality Name in High Voltage Switching

CATALOG FLYER

CapSwitcher®

Capacitor
Switching Device
38 kV – 170 kV

Purpose specific device provides reliable, long-life performance.

The need for quality power has never been greater. This has led to an increase in the use of capacitor banks to improve power factor. The Southern States ***CapSwitcher***® high voltage capacitor switching device has been specifically developed to provide restrike free switching of capacitor banks. This reliable, long-life, special purpose SF_6 capacitor switch utilizes closing resistors for mitigating voltage transients and current inrush.

FEATURES

- Closing resistors minimize voltage and current transients
- Design virtually eliminates restrikes
- Simple, cost effective, mechanical design that provides repeatability
- Long Life (10,000 operations)
- Eliminates need for inrush reactors
- Interrupting rating allows use as protective device

SPECIFICATIONS

Maximum Voltage Ratings
38 kV – 170 kV

Capacitive Current Switch Rating
600 A (38 kV to 72.5 kV)
650 A (123 kV to 170 kV)

Primary Interrupting Ratings
25 kA RMS Sym (38 kV to 72.5 kV)
40 kA RMS Sym (123 kV to 170 kV)

Short Time Withstand Ratings
40 kA RMS Sym (1 sec)
(38 kV to 72.5 kV)

63 kA RMS Sym (18 cycles)
(123 kV to 170 kV)

Application
Single Bank or Back-to-Back
Grounded or Ungrounded

CapSwitcher®

Capacitor Switching Device 38 kV – 170 kV

RATINGS

Maximum Voltage Rating (kV)	38	48.3	72.5	123	145	170
BIL (kV)	200	250	350	550	650	750
Continuous Current	600 A			650 A		
Primary Fault Interrupting Rating	25 kA RMS * (standard and -50° C)			40 kA RMS (standard) 25 kA RMS (optional -50° C)		
Short-Time Symmetrical Withstand	40 kA RMS/Sec			40 kA RMS (3 sec) 63 kA RMS (18 cycles)		
Endurance Life	10,000 operations			10,000 operations		
Ambient Temperature Rating	-40° C to +50° C (standard) -50° C to +50° C (optional)			-40° C to +50° C (standard) -50° C to +50° C (optional)		

* 31.5 kA rating available (-40° C to +50° C only)

Capacitor Switching Ratings (IEEE C37.09a-2005)

Maximum Voltage Rating (kV)	38	48.3	72.5	123	145	170
Capacitive Switching Current	600 A			650 A		
High Frequency Transient Making Current	18 kA peak at 4630 Hz			20 kA peak at 4600 Hz		
Closing Resistor Value	12 Ω, 30 Ω, or 90 Ω	20 Ω, or 40 Ω	40 Ω, or 80 Ω	37.5 Ω, 75 Ω, or 150 Ω	37.5 Ω, 75 Ω, 150 Ω or 300 Ω	75 Ω, 150 Ω, or 300 Ω

KEY ADVANTAGES

- Makes and breaks circuit in SF_6
- Designed and tested for restrike-free performance
- Closing resistors provide reliable and consistently repeatable transient suppression
- Multiple resistor sizes allow performance optimization
- Closing resistor eliminates need for inrush reactors
- Common gas system with pressure gauge, density switch, low pressure alarm and trip on low gas pressure contacts provides both local visual and remote status indication
- Simple, easy erection minimizes field installation time
- Straight forward mechanical design insures long life, repeatable operation

Rated Duty Cycle:

CO – 5 min – CO – 5 min –CO

Note: The 5 minutes is to allow the substation capacitor bank to discharge

The actual spring charge time is 15 seconds

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