

MSV & FSV medium-voltage vacuum roll-in replacement circuit breakers

ANSI 4.76/8.25/15 kV at 250-1,000 MVA,
1,200-3,000 amperes

Roll-in replacement breakers provide a cost-effective way to upgrade to current vacuum technology while increasing equipment reliability and minimizing downtime. Siemens provides the experience your company needs to successfully extend the life of your equipment. Our circuit breakers are manufactured using the same fixtures as the original Allis-Chalmers and Siemens-Allis breakers.

Why replacement breakers?

- Increased reliability and performance
- Reduced operating and maintenance expenditures
- Reduced downtime, minimal changeover time during upgrade
- Preserved investment in existing cubicles
- Improved employee and environmental safety

Why Siemens?

- **Long operational life**
Siemens replacement breakers have an expected life of 30,000 mechanical operations and a maintenance interval of 10 years or 10,000 mechanical operations, which far exceeds most operational requirements in industrial and utility applications.
- **Direct interchangeability**
Siemens replacement breakers, including those that utilize our patented MOC-Saver™ design, are interchangeable with no adjustments required from cubicle to cubicle regardless of the number of MOC switch banks within the existing cubicles.
- **Extensive experience**
Siemens has supplied thousands of medium-voltage replacement breakers from our manufacturing facility in Wendell, North Carolina, successfully completing over 750 projects since 1983. Over 350 breakers are located in nuclear 1E rated applications.

- **Standardized design**
Siemens utilizes the 3AH operator for our complete family of over 150 different medium-voltage replacement breaker designs, reducing spare parts and training requirements. Over 350,000 3AH series circuit breakers are in service worldwide.



Siemens 5-MSV
(replacement for Allis-Chalmers MA)



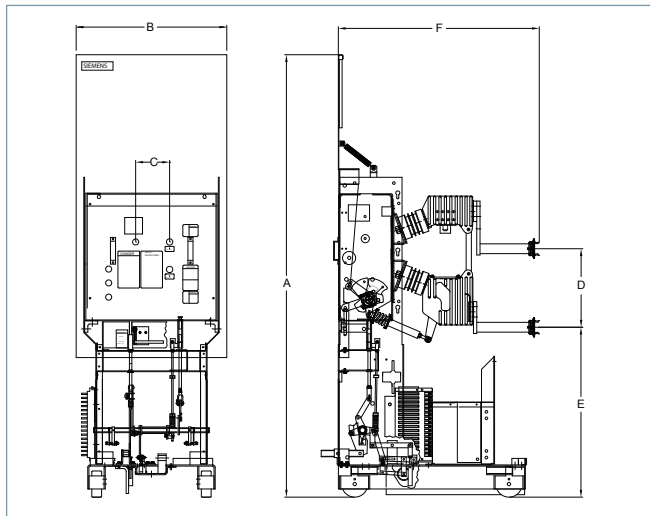
Siemens 15-FSV
(replacement for Allis-Chalmers FA, FB, FC)

For Allis-Chalmers and Siemens-Allis type MA and FA, FB, FC

The following circuit breakers are available as pre-engineered designs:

Replacement circuit breaker	Nominal voltage class	Nominal 3-phase MVA class	Maximum voltage	Voltage range factor	Interrupting time	Full wave withstand test voltage	Continuous current (60 Hz)	Short circuit current (at max kV)	Close and latch capability	Nominal weights
			E	K				I	1.6 x KI	
	kV	MVA	kV rms		Cycles	kV Peak	Amperes	kA rms	kA rms	lbs.
5MSV-250	4.16	250	4.76	1.254	5	60	1,200, 2,000	29	58	600
5MSV-350	4.16	350	4.76	1.19	5	60	1,200, 2,000	41	78	1,200
5FSV-350	4.16	350	4.76	1.19	5	60	3,000	41	78	1,500
7FSV-500	7.2	500	8.25	1.25	5	95	1,200, 2,000	33	66, 77	875
15FSV-500	13.8	500	15	1.3	5	95	1,200, 2,000	18	37, 58	860
15FSV-750	13.8	750	15	1.3	5	95	1,200, 2,000	28	58, 77	860
15FSV-750	13.8	750	15	1.3	5	95	3,000	28	58, 77	1,450
15FSV-1000	13.8	1,000	15	1.3	5	95	1,200, 2,000	37	77	1,200
15FSV-1000	13.8	1,000	15	1.3	5	95	3,000	37	77	1,450

Dimensions (inches)			
	5MSV	5FSV	7/15FSV
A	67.00	80.06	80.06
B	22.63	31.13	31.13
C	12.00	12.00	12.00
D	26.00	31.00	31.00
E	31.00	44.50	44.50



Sample dimensional diagram – MSV

3AH operator features:

- Spring charge motor mechanism – lifetime lubricated gear box
- Operating linkage – machine parts versus stamped metal
- Change-out of components – easily accessible
- Vacuum contact erosion indication – easily verifiable

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