



SDV7™ NON-ARC-RESISTANT AND SDV7-AR™ ARC-RESISTANT

Medium-voltage distribution circuit breakers

15.5 kV, 17.5 kV, 27.6 kV, and 38 kV, up to 40 kA, up to 200 kV BIL

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Features and benefits:

- Arc-resistant, accessibility type 2B, tested to IEEE C37.20.7 enclosure option
- Extended capacitor switching (optional)
- Tested for out-of-phase switching ratings (IEEE C37.09)
- Large relay and control compartment
- Stainless steel exterior hardware
- Porcelain dry-type bushings with extended creep
- Highly reliable vacuum interrupters – MTTF over 55,000 years
- Pair with Siemens protective relays to match any application
- Moderate and high seismic qualification (Zones 1-4) available

- IEEE “rain tested” enclosure (IEEE C37.09)
- Trained and certified local personnel in U.S. available for start-up, commissioning, and maintenance.

Magnetic-actuator operator features:

- Design adapted from type 3AH3 stored-energy operator configuration
- High-voltage compartment configuration identical to stored-energy version
- Design tested to IEEE C37.09
- Built-in fast discharge circuit for electronic controller power capacitors
- Manual opening handle requires very modest force for operation

- UL listing (consult factory)
- Electronic controller life estimated at 30 years.

Stored-energy operator features:

- Time-proven type 3AH3 operator derived from operators introduced in 1977 (over 120,000 produced)
- Common operator for all ratings
- Design tested to IEEE C37.09.

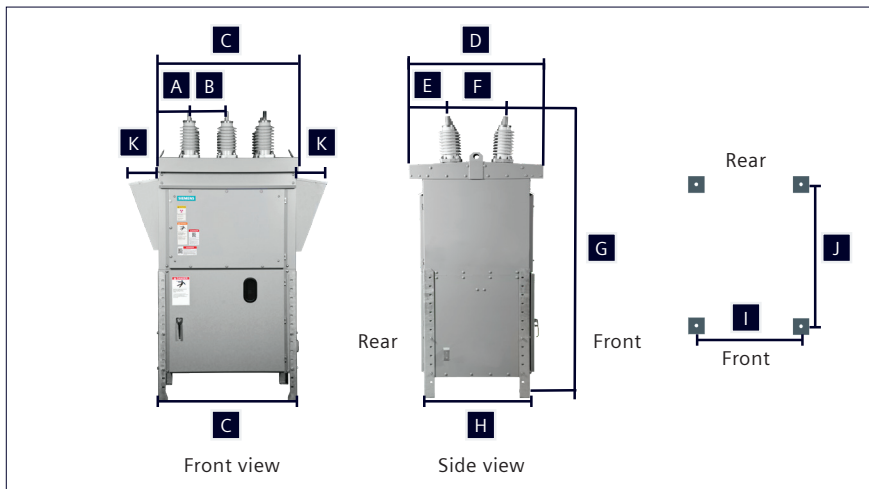
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Technical ratings

Characteristics	Unit	Voltage class					
Maximum voltage	kV	15.5	15.5	17.5	27.6	38.0	38.0
Short-circuit and short-time current	kA, rms	20, 25	31.5 ⁴ , 40 ⁴	20, 25	20, 25	20 ⁴ , 25 ⁴	31.5 ⁴ , 40 ⁴
Lightning-impulse withstand voltage ³	kV	110/142	110/142	110/142	150/194	200/258	200/258
Power-frequency withstand voltage	kV	50	50	50	60	80	80
Continuous current	A, rms	1,200, 2,000	1,200, 2,000, 3,000	1,200, 2,000	1,200, 2000	1,200, 2,000	1,200, 2,000, 2,500
Interrupting time ¹	ms/cycles	50/3	50/3	50/3	50/3	50/3	50/3
u _c TRV peak value transient recovery voltage	kV	29.2	29.2	29.2	52.1	71.7	71.7
t ₃ time to voltage u _c transient recovery voltage	µs	32	32	32	45	59	59
Permissible tripping delay time Y	sec	2	2	2	2	2	2
Closing and latching current	kA peak	52, 65	82, 104	52, 65	52, 65	52, 65	82, 104

Dimensions in inches (mm)

Rating	A	B	C	D	E	F	G	H	I	J	K ²
15.5 kV, 1,200-2,000 A	10.7 (272)	13.0 (330)	47.1 (1,197)	44.5 (1,130)	12.4 (315)	19.8 (503)	92.0-116.0 (2,337-2,945)	36.1 (918)	31.3 (794)	42.7 (1,084)	10.3 (260)
15.5 kV, 3,000 A	12.3 (312)	16.0 (406)	56.5 (1,435)	52.8 (1,340)	15.9 (403)	21.0 (534)	96.0-120.0 (2,438-3,048)	44.2 (1,123)	39.4 (1,001)	52.0 (1,321)	11.4 (290)
17.5 kV, 1,200-2,000 A	10.7 (272)	13.0 (330)	47.1 (1,197)	44.5 (1,130)	12.4 (315)	19.8 (503)	92.0-116.0 (2,337-2,945)	36.1 (918)	31.3 (794)	42.7 (1,084)	10.3 (260)
27.6 kV, 1,200-2,000 A	12.3 (312)	16.0 (406)	56.5 (1,435)	49.8 (1,265)	14.4 (366)	21.2 (538)	96.0-120.0 (2,438-3,048)	44.2 (1,123)	39.4 (1,001)	52.0 (1,321)	11.4 (290)
38.0 kV, 1,200-2,500 A	13.4 (340)	19.5 (495)	67.8 (1,723)	63.0 (1,600)	20.4 (518)	22.2 (563)	120.5-144.5 (3,060-3,670)	55.6 (1,413)	50.9 (1,294)	63.1 (1,604)	16.7 (424)



Available types

Item
SDV7-SE: SDV7 non-arc-resistant with stored-energy operator
SDV7-MA: SDV7 non-arc-resistant with magnetic-actuator operator
SDV7-SE-AR: SDV7-AR arc-resistant with stored-energy operator
SDV7-MA-AR: SDV7-AR arc-resistant with magnetic-actuator operator

Footnotes:

- 50 ms/three-cycle standard for stored-energy operator.
- TRV values are in accordance with IEEE C37.06-2009 TRV peak value u_c roughly equal to historic E₂ value in IEEE C37.06-2000. Value t₃, time to voltage u_c is approximately 1/1.138 times T₂ value in IEEE C37.06-2000.
- First value is full-wave impulse withstand circuit breaker open or closed. Second value is chopped-wave impulse withstand, applicable only with circuit breaker closed.
- Magnetic-actuator availability to be announced for these ratings. Consult factory.
- Arc-resistant only.

Legal Manufacturer

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