



**SDV-R™ NON-ARC-RESISTANT AND SDV-R-AR™ ARC-RESISTANT**

# Medium-voltage distribution circuit breakers

38 kV, up to 40 kA, up to 200 kV BIL  
[usa.siemens.com/sdv](https://usa.siemens.com/sdv)

The new types SDV-R™ non-arc-resistant and SDV-R-AR™ arc-resistant medium-voltage circuit breakers are an extension of the reliable SDV outdoor distribution circuit breaker family.

They have an integral mechanically- interlocked, fast-acting grounding switch that can reduce total project cost, physical footprint, and environmental impact.

Operator safety can be improved with the arc-resistant option tested to IEEE C37.20.7, accessibility type 2B.

## Features:

- Optimal solution for renewable energy applications
- Fast switching time to ground, which limits transient voltage excursion to low levels, eliminates the need for grounding transformers saving installation and maintenance costs and physical space, and removes the risk of transformer oil spills
- Pair with Siemens protective relays to match any application
- Time-proven stored-energy operator design tested to IEEE C37.09-2018
- Highly reliable vacuum interrupters with MTTF over 55,000 years
- Moderate and high seismic qualification (Zones 1-4) available
- Porcelain dry-type bushings with extended creep
- 10-year warranty (optional)
- UL Listing will be available
- Installation and commissioning, maintenance agreements, aftermarket parts, and 24/7 emergency services.

**SIEMENS**

**Technical ratings**

Characteristics	Unit	Voltage class		
Maximum voltage	kV	38.0	38.0	38.0
Short-circuit and short-time current	kA, rms	25	31.5	40
Lightning-impulse withstand voltage <sup>3</sup>	kV	200/258	200/258	200/258
Power-frequency withstand voltage	kV	80	80	80
Continuous current	A, rms	1,200, 2000	1,200, 2,000	1,200, 2,000
Interrupting time <sup>1</sup>	ms/cycles	50/3	50/3	50/3
u <sub>c</sub> TRV peak value transient recovery voltage	kV	71.7	71.7	71.7
t <sub>3</sub> time to voltage u <sub>c</sub> transient recovery voltage	μs	59	59	59
Permissible tripping delay time Y	sec	2	2	2
Closing and latching current	kA peak	65	82	104
Closing time	ms	<45	<45	<45
Opening time	ms	<30	<30	<30
Mechanical switching time (vacuum circuit breaker open to ground switch close)	ms	12-16	12-16	12-16
Grounding switch short-time current	kA	12.5	12.5	12.5
Grounding switch closing and latching current	kA	32.5	32.5	32.5

**Additional ratings for SDV-R-AR:**

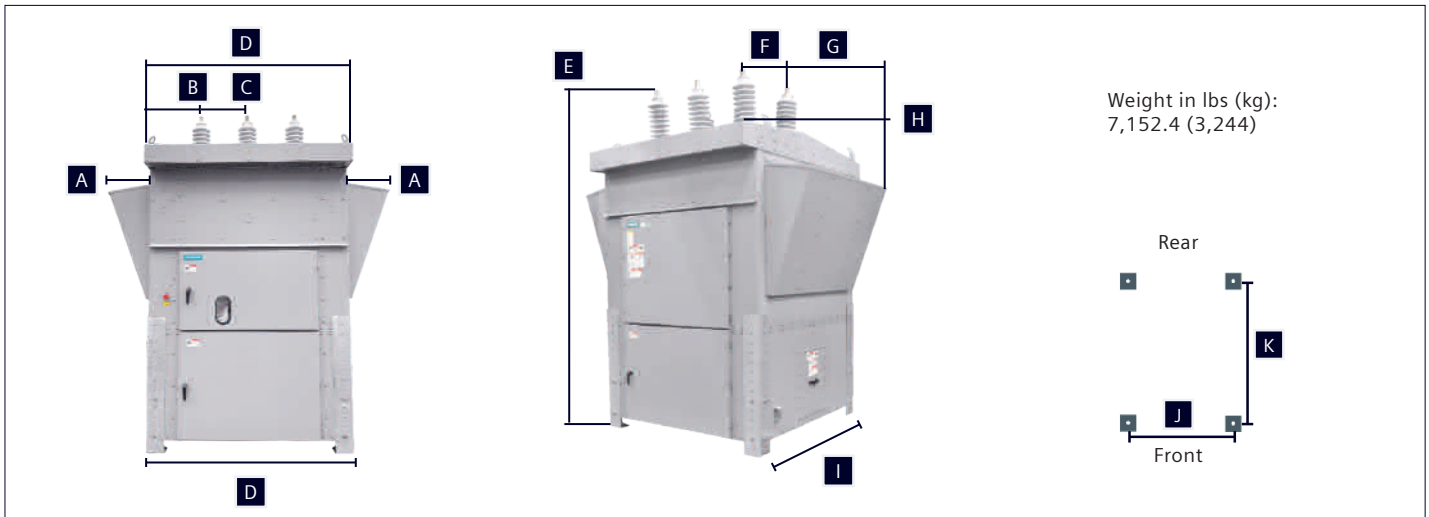
- Accessibility type 2B
- Internal arcing short-circuit current 25, 31.5, or 40 kA
- Arcing duration 0.5 s.

**Footnotes:**

1. TRV values are in accordance with IEEE C37.04-2018
2. 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.

**Dimensions in inches (mm)**

Rating	A	B	C	D	E	F	G	H	I	J	K
SDV-R-AR arc resistant	15.6 (395)	14.6 (371)	19.5 (495)	68.2 (1,733)	128.3-149.3 (3,259-3,792)	33.1 (841)	28.5 (723)	82.2 (2,089)	68.5 (1,740)	61.2 (1,578)	61.5 (1,561)



**Legal Manufacturer**

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Order No. SIDS-T40084-01-4AUS  
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