DISTRIBUTION SOLUTIONS

R-MEC spring dead tank outdoor vacuum circuit breaker

Best spring mechanism driving industry leader breaker

Within R-MEC outdoor breaker's well proven outdoor housing, the best-in-class vacuum interrupters are driven by the ABB EL spring-based mechanism with more than 3M units installed worldwide.

Its smart design enables easier maintenance and faster component replacement, minimizing training time for new users.

Enhanced reliability

- The reliable EL spring mechanism has the largest installed base in medium voltage circuit breakers globally and it is currently used by the industry leaders ABB VD4 and ADVAC
- World leading vacuum interrupters rated for 30,000 full load operations
- Highest interruption performance ensured through E2 electrical endurance class
- Extremely reliable in any environmental conditions from -30°C to +40°C
- Fully tested according to latest versions of IEEE and IEC standards

Seamless integration

- Wide range of coils and motor power supply voltages
- Extensive control compartment space to host relays, meters and control devices
- Up to 2 CTs per bushing for metering or protection

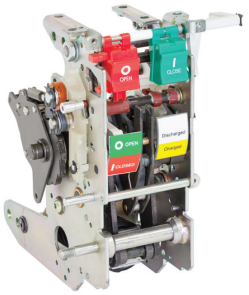
Easy to use and maintain

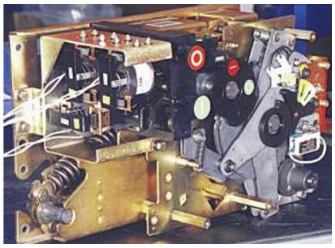
- EL mechanism's modular design allows the removal or replacement of coils, motors, auxiliary contacts, and other components within minutes
- Manual lever to load the springs ensures operation even without power supply
- Long term energy storage in springs for consecutive operations, even in case of lack of main power supply
- Minimum training needed for new personnel
- Very limited number of spare parts required

Safe operation

- Minor personnel exposure during maintenance since the mechanism design allows replacement of coils and motor by removing a single screw
- Manual emergency trip button accessible from the exterior, possibility for lockout to avoid remote closing commands during servicing activitie

ABB EL spring mechanism used in the R-MEC provides superior performances compared to traditional spring mechanisms





Features	**ABB R-MEC** spring mechanism	**Traditional** spring mechanism
Quantity of parts	✔ Considerably less parts	✖ High quantity of parts and hardware
Time to replace any part	✔ Very fast replacement of components	✖ Time-consuming process
Training time	✔ Easy training for new users	✖ Only highly trained technicians can perform maintenance
Spare parts inventory size	✔ Very limited spare parts inventory	✖ Large and very diverse inventory required
Coils monitory method	✔ Smart coil monitoring	✖ Traditional monitoring system

Technical Data		
Rated max. voltage		**15.5 kV**
Rated frequency	Hz	50/60
Continuous current	A	1250
Lightning impulse (BIL)/Chopped wave	kV	110
Power frequency withstand	kV	50
Short circuit interrupting current	kA	...31.5
Max interrupting time	Cycles	3
Electrical Endurance	Class	Class E2
Close & Latch	kA	82 (3s)
Back-to-back capacitor bank switching current	A	630 (Class C1)
Transient inrush current	kA	20
Transient inrush frequency	Hz	4240
Mechanical life		10,000 operations (Class M2)
Rated operating duty		O - 0.3s - CO – 15s – CO
Operating Temperature		-30°C to +40°C (-22°F to 104°F)
Ingress Protection		IP54 / NEMA3R
Testing Standards		IEEE C37.09 and IEC 62271-100

More product information:

abb.com/mediumvoltage

1YEPTSR10195E010 Rev. A – December 2019