

RLSwitcher® 36-550 kV Reactor switcher



HV Switching

Switch Reactors with confidence and certainty

- Switching shunt reactors can impose a severe duty on the connected system, the switching device, and the shunt reactor.
- The low magnitude current the switching device is asked to clear, along with the high magnitude and extremely fast transient recovery voltage, establish an environment that can lead to damaging interrupter reignitions.
- The RLSwitcher®, with its patented interrupter design, deliberately delays current interruption for the first couple of current zeros so that when current interruption does occur the likelihood of a reignition is reduced and if they occur, are of a reduce magnitude.

Ratings

Rated voltage	U_r (kV)	17.5	36	36	72.5	123	145	170	245	362	420	550	
Rated lightning impulse withstand voltage to earth	U_p (kV _p)	95	200	200	350	550	650	750	900	1300	1425	1800	
Maximum shunt reactor capacity	(MVAR)	100	105	105	67	135	158	185	267	395	305	400	
Rated continuous current	I_r (A)	3000	1600	1600	1200				630				440
Rated shunt reactor breaking current	I_{5b} (A)	3000	1600	1600	539				630				440
Rated short-circuit breaking current	I_{sc} (kA)	NA	NA	25	36				NA				
Interrupting time	(cycles)	3	3	5	3				3				
Rated short-time withstand current	I_k (kA)	40	40	25	40				40				
Rated duration of short-circuit	t_k (s)	2	2	3	3				3				
Rated peak withstand current	I_p (kA _p)	108	108	62.5	104				164				
Rated short-circuit making current	I_{ma} (kA _p)	40	40	25	40				63				
Insulator design	-	Composite			Porcelain				Composite				
Ambient temperature range	(°C)	-40/+40	-40/+50	-40/+50	-30/+50				-30/+50				-40/+50

Benefits

- Patented Interrupter minimizes probability and magnitude of re-ignitions
- Reduced Turn-to-Turn voltage stress on reactor windings
- Simplified design improves reliability
- Local and remote gas monitoring system
- Compact design can fit in tight spaces
- Reduced maintenance costs when compared to traditional electronically controlled
- Switching designs (ie. Synchronous or zero voltage controlled operation)

Key advantages

- Very low probability of re-ignitions
- Re-ignitions, if they occur, are of low magnitude
- Makes and breaks circuit in SF₆
- Single mechanism spring-open, spring-close up to 245 kV designs
- Independent pole, multi-gap interrupter with spring-open, spring-close mechanisms for 362 kV and 550 kV
- Local visual indication of gas pressure provided by color coded temperature compensated gas gauge
- Gas system with gas density switch with low pressure alarm and low pressure lockout for remote status monitoring