



UniSec Air-insulated medium voltage secondary distribution switchgear

UniSec switchgear is used in medium voltage secondary power distribution. In particular, it can be used for transformer substations, for control and protection of feeders and power transformers, for infrastructure, airports, hospitals, shopping centres, industries, etc.

UniSec is the ABB solution for a fully automated power distribution network. Supported by sensor technology and the latest in protection relays, it meets even the most demanding requirements in different applications.

UniSec offers a wide range of panels, making it possible to identify the most cost-efficient solution for all applications by combining the available panel types.





Technical data

Rated voltage	kV	12	17.5	24
Test voltage (50-60 Hz x 1 min)	kV	28	38	50
Impulse withstand voltage	kV	75	95	125
Rated frequency	Hz	50-60	50-60	50-60
Rated main busbar current	A	630/800/1250	630/800/1250	630/1250
Rated current of apparatus:				
– VD4/R-Sec - HD4/R-Sec - HD4/RE-Sec removable circuit-breaker	A	630/800	630/800	630
– VD4/R-Sec - HD4/R-Sec withdrawable circuit-breaker	A	630	630	630
– HySec multi-function apparatus	A	630	630	630
– GSec gas switch-disconnector	A	630/800	630/800	630
– Vmax/Sec withdrawable circuit-breaker	A	630/1250	630/1250	–
– VD4/Sec withdrawable circuit-breaker	A	–	–	630/1250
– HD4/Sec withdrawable circuit-breaker	A	630/1250	630/1250	630/1250
– VSC/P withdrawable vacuum contactor	A	400	–	–
Rated short time withstand current	kA (3s)	16 (4)/20 (3)/25 (1) (2)	16 (4)/20 (3)/25 (2)	16 (4)/20 (3)
Peak current	kA	40 (4)/50 (3)/62.5	40 (4)/50 (3)/62.5	40 (4)/50 (3)
Internal arc withstand current (up to IAC AFLR)	kA (1s)	12.5/16 (4)/21/25 (2) (5)	12.5/16 (4)/21/25 (2)	12.5/16 (4)/21



GSec is an SF₆-insulated 3-position switch-disconnector. The contacts of the switch-disconnectors are housed in an enclosure made of two materials: the top part is a moulded resin housing to guarantee the insulation level; the bottom part is made of stainless steel to guarantee metallic segregation and earthing between the busbar compartment and the cable compartment.

This guarantees maximum personnel safety in the case of trips in the line compartment even with the main busbars supplied with power, for example to replace one or more fuses or to check the cables.

The switch-disconnector can be used in combination with fuses, for example for protection of transformers



Available apparatus

- **GSec** type gas switch-disconnector
- **VD₄/R-Sec** removable and withdrawable vacuum circuit- breakers
- **HD₄/R-Sec - HD₄/RE-Sec** removable and withdrawable SF gas circuit-breakers
- **HySec** vacuum circuit-breaker and SF disconnector integrated
- **V_{max}/Sec** withdrawable circuit-breaker up to 17.5 kV
- **VD₄/Sec** withdrawable vacuum circuit-breaker at 24 kV
- **HD₄/Sec** withdrawable SF gas circuit-breaker
- **VSC/P** withdrawable vacuum contactor.