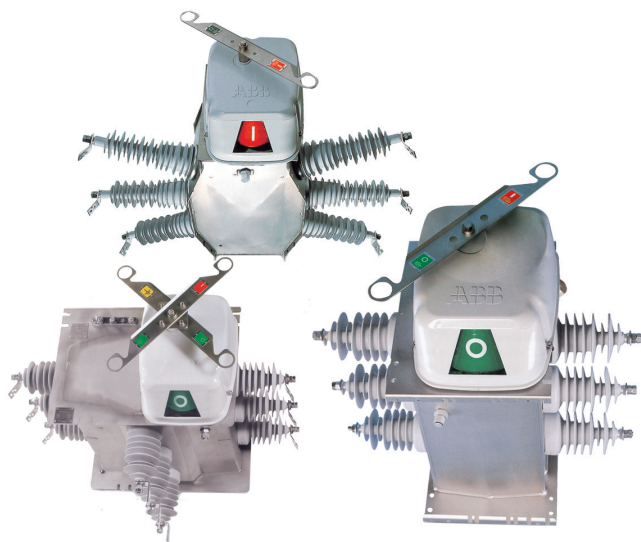


SECTOS – pole mounted SF₆ gas insulated load break switch 12- 36 kV



ABB's Sectos offers reliable maintenance free operation even in the most demanding climatic conditions, including salt laden atmospheres, corrosive industrial pollution, snow and ice. It has excellent load breaking and fault making capacity and satisfies the isolation requirements specified for load break switch.

Design:

The three-phase switch unit is mounted inside a sealed 3mm stainless steel tank filled with SF₆ gas. The stainless steel tank is designed for its maximum robustness and minimum welding line to minimize corrosion, and specifically to guarantee the safety of the operation personnel even with the internal arc faults at the maximum fault capacity.

Advanced and integrated Helium leakage detecting and filling equipment are adopted, which ensuring SF₆ leakage of each switch is less than 0.1% per year.

The independent spring operating mechanism adopt ABB patent spiral spring, provides a guaranteed load break and fault making capability by ensuring the opening and closing speed of the switch.

Key features of the product

- fully enclosed switch
- no external moving parts
- robust design, field tested around the world
- replaceable external silicon bushing
- various creepage version available
- speed of contact independent from operator
- direct connection of cable heads to the switch
- manual or motor operation
- optional earthing switch up to 24 kV
- unique 3-way, double switch in one enclosure

- various installation mode
- safety interlocking
- current and voltage measurement
- available sensor solution
- installation of protective surge arresters directly on the switch
- low power consumption of motor
- automatic sectionalizer function
- type tested according IEC

Customer benefits and savings

- maintenance free
- reliability in most demanding conditions
- easy upgradable from manual to motor
- easy and fast installation
- dedicated supporting structures for various poles
- installation of the current and voltage measurement system and surge arresters directly on switch –space saving and installation time reduction
- possibility to install under voltage – reduction of undelivered energy and SAIDI, SAIFI indicators
- complete package together with automation from one global supplier

Safety

- no external arc
- mechanical and electrical interlocking
- high making capability up to 50 kA
- clearly visible and reliable position indicator

- open break fulfilling disconnecter requirements
- internal arc proof
- low gas indication and locking
- safety valve for gas pressure release
- optional earthing switch

Automation

ABB is able to deliver complete solution of automatic sectionalizer, tailor made according to specific needs.

Functionality which could be implemented:

- three phase non-direction or directional fault detection
- non-direction or directional earth fault detection
- fault location
- automatic sectionalizing schemes
- power quality measurement
- remote control – communication protocols IEC61850, IEC 60870-5-101/104, DNP3, Modbus.

Technical data

Type		NXB & NXBD		NXA
Rated Voltage	kV	12	24	36
Power frequency withstand voltage, 50Hz				
– to earth and between phases	kV	28	50	70
– across the isolating distance	kV	32	60	80
Lightning impulse withstand voltage				
– to earth and between phases	kV	75	125	170
– across the isolating distance	kV	85	145	195
Current ratings				
Rated normal current	A	630	630	630
Mainly active load breaking current	A	630	630	400/630
Number of breaking operations CO	n	400	400	400/100
Line-charging breaking current	A	50	50	40
Cable-charging breaking current	A	50	50	40
Earth fault breaking current	A	50	50	185
Cable charging breaking current under earth fault conditions	A	29	29	80
No-load transformer breaking current	A	6,3	6,3	20
Short-circuit ratings				
Short-time withstand current, I _k /time	kA	20 /3s	20 /3s	12,5/3s
Peak withstand current	kA	50	50	31,5
Short-circuit making current	kA	50	50	31,5
Number of making operations				
– main switch (CL E3)	n	5	5	5
– earthing switch 50 kA (CL E2)	n	3	3	-
– earthing switch 31,5 kA (CL E3)	n	5	5	-
Creepage distance	mm	620	620/960	1440
Mechanical endurance CO	n	5000	5000	5000
Ambient air temperature limits	°C	-40; +60	-40; +60	-40; +60
Standards	IEC 62271-1; IEC 62271-102; IEC 62271-103			

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