GE
Grid Solutions

SPO

Vertical Break Folding Arm Disconnect Switch From 245 kV to 800 kV

GEs' disconnect switches are the result of over 75 years of experience in developing high voltage switches that have proven their reliability in the scorching climates of Arizona (USA), Australia and Sudan, in the extremely cold territories of Canada, Russia and Sweden, in the tropical weather of Panama, Indonesia, Malaysia and Venezuela and in regions with intense seismic activity such as Chile and California (USA). GE is one of the world's largest manufacturers of disconnectors with units installed in more than 130 countries around the world.

Compact Design

The SPO disconnect switch is designed with a folding arm which allows the blade sections to fold in on themselves in a vertical plane in the open position. The overall height of the arm in the open position is only 60% of the longitudinal dimension. As a consequence, substation crossing structures and wires can be lower and less expensive than using conventional vertical break disconnect switches. The center of gravity of the live part is always much lower than on a conventional vertical break disconnect switch, meaning better performance during an earthquake as well as faster, smoother and rebound-free operation.

Reliability

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Performance

Closure of the disconnect switch is created by the rotation of the insulator, which causes the blade to unfold in such a manner that the jaws rise in a straight horizontal plane.

Thanks to the knee type movement, the moving contact penetration in the jaw is not affected by eventual site misregulation. As contact pressure is applied to the reverse loop jaw fingers by stainless steel springs insultated at one end, the possiblity of annealing the springs due to their carrying current is eliminated. The blade is counter-balanced so that only frictional forces must be overcome when operating the switch.

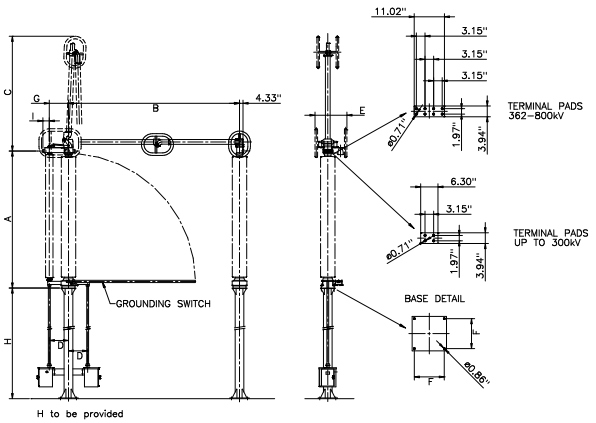
Quality

The design principles, the technical know-how and experience of GE's experts and the careful selection of suppliers ensure that only top quality materials are used during production, allowing an excellent life cycle cost.

Customer Benefits

- High performance and reliability
- Reduced vertical space requirements
- Contact penetration not affected by eventual site misregulations
- Up to 20 mm (¾") ice
- Built-in earthing switches and arc restrictors available
- Virtually maintenance-free
- Easy installation and commissioning

imagination at work



Customized layouts available upon request. Phase-to-phase distance defined by substation layout

Certification

All GE disconnector manufacturing sites worldwide are certified according to ISO 9001, ISO 14001 and OHSAS 18001.

GE designs, manufactures, tests and delivers its disconnectors in accordance with the latest ANSI and IEC standards, as well as GB Chinese national standards.

Installation and Maintenance

The SPO does not require any special tools to be adjusted and is recognised worldwide as an easy to install and adjust disconnector.

The SPO is virtually maintenance-free thanks to its lifetime greased or self-lubricating parts and corrosion free materials.

Ground Switches

The SPO can be equipped or easily retrofitted with one or two ground switches.

Technical data (ANSI)*

Rated voltage kV	Rated current A / Short time current kA	BIL kV	A inches	B inches	C inches	D inches	E inches	F inches	G inches	H inches
245	4000 / 63	1050	8' 4¼"	9' 10"	5' 7"	1' 4¾"	1' 7¾"	1' 1½"	1' 11¾"	6¾"
362	4000 / 63	1300	9' 9½"	12' 1¾"	7' 8½"	1' 11½"	2' 7½"	1' 3¾"	2' 7½"	7¾"
550	4000 / 63	1800	13' 7½"	17' 6¾"	9' 4¼"	1' 11½"	3' 3¾"	1' 3¾"	2' 7½"	7¾"
800	4000 / 63	2050	17' 1¼"	19' 8¼"	12' 7½"	1' 11½"	3' 3¾"	1' 3¾"	2' 7½"	7¾"

* IEC ratings also available

Optional Devices

The SPO can be fitted with arcing horns or with the more performant bus transfer contacts (IEC 62271-102 Annex B).

The integrated ground switches used on double circuit overhead lines can also be fitted with induced current switching devices (IEC 62271-102 Annex C).

For more information please contact
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