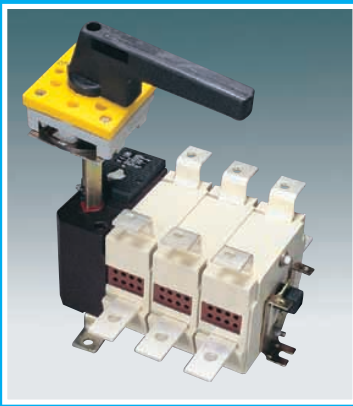




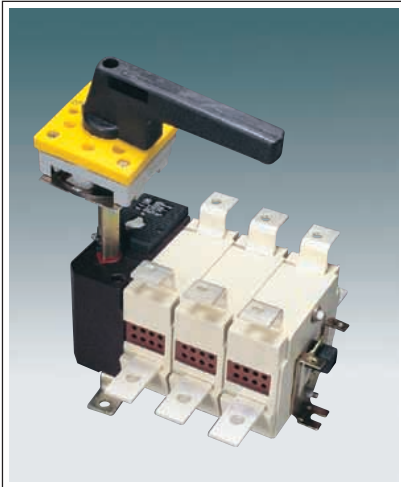
## Type SP Switches & Switch Fuse Units





# Type SP Switches & Switch Fuse Units

Switchfuse-(fuse BS type)



Switchfuse-(fuse-knife blade)



Auxiliary switch



SP range from **GE Power Controls** is the most compact and high performance panel mounting switch and switch fuse units. These are tested and certified to IS 13947-3/IEC 60947-3. An ideal solution for both power control and motor control applications. The range is available for both BS type Fuselinks (bolted version) and DIN type Fuselinks (blade contact), in 3 pole and 4 pole versions with a wide range of accessories.

## Features

- Modular construction with compact dimensions.
- 4 breaks per pole for high making and breaking capacities.
- Complete isolation of fuse in 'OFF' position.
- 'Easy to add on' field fittable accessories.
- No movement of fuses.
- Positive red colour ON/OFF indication by directly driven contact mechanism.
- Ample terminal capacity to suit Aluminium cable and Busbar termination.
- 4 pole unit with neutral advance switching system.
- Phase barrier/terminal barriers are of flame retardant materials.
- Maintenance free with high Mechanical and Electrical life.
- Low weight for easier handling and mounting.

## Range :

SPØ3, SPØ3D - 125A

SP Ø5, SPØ5D - 250A

SPØ7, SPØ7D - 400A,

for lower rating please refer to SP32 catalogue.

## Accessories For SPØ3/SPØ5/SPØ7

- Options for Front Drive kit
- FD kit with door interlock (supplied as standard along with unit).
- FD kit with door interlock and padlocking facility.
- FD kit with door interlock and door interlock defeat facility.
- FD kit with door interlock, door interlock defeat and padlocking facility.
- FD kit with X-Y mismatch
- Neutral terminal kit.
- Auxiliary contact kit (1 NO + 1NC potential free contacts 415V, 10A).
- Solid Copper link kit.



Technical Particulars	
Rated thermal current I <sub>th</sub>	A
Rated operational current I <sub>e</sub> , AC 23A at 415V,50Hz	A
Rated Operational voltage, U <sub>e</sub>	A
Rated Insulation voltage, U <sub>i</sub> (AC)	V
Rated Short time withstand current, I <sub>cw</sub> (1 sec.)	kA
Maximum possible fuse rating	A
Type reference of GE Power Controls Fuselinks (Max.)	--
Rated fused short circuit making capacity (rms value)	kA
Rated fused short circuit withstand capacity (rms value)	kA
Rated Operational Power at 415V, AC 23A	
kW	
Rated making capacity at 415V, AC 23A as per IEC60947-3/IS 13947-3	A
Rated breaking capacity at 415V, AC 23A as per IEC60947-3/IS 13947-3	A
Electrical operations	
Mechanical operations	
Weight 3P, 4P	Kg
Terminal Capacity (in Sq. mm. Max.)	
- Phase	--
- Switched Neutral	--
- Fixed Neutral	--

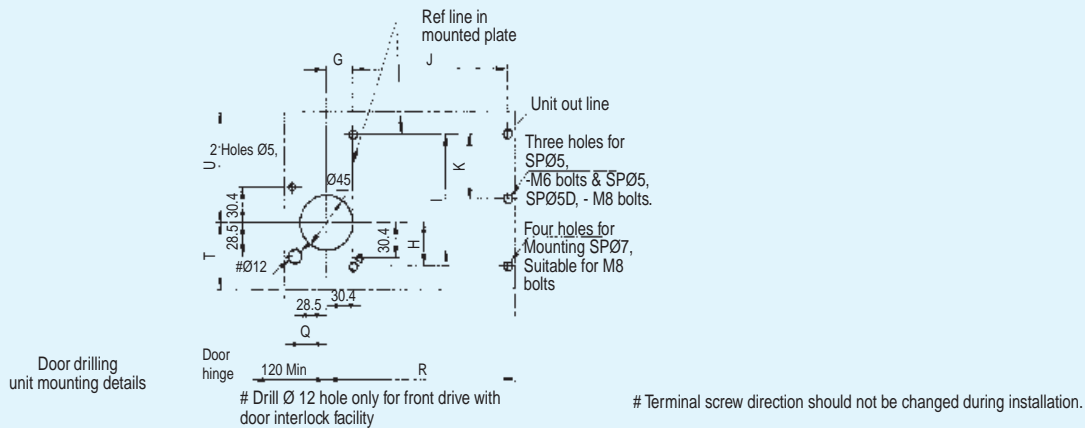
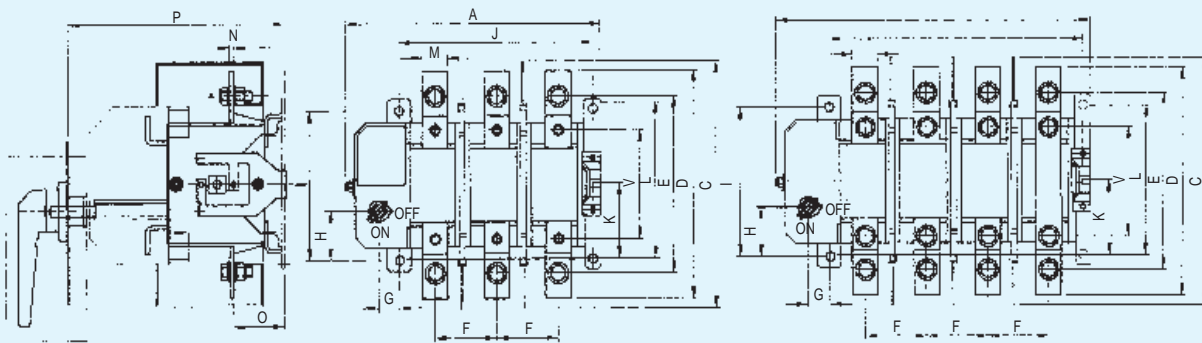
Switch type 'SP'				
	SPØ3	SPØ5	SPØ7	SPØ
	160	250	400	125
	125	250	400	125
	415	415	415	415
	660	660	660	660
	4	8	10	--
	--	--	--	125
	--	--	--	TSD
	--	--	--	80
	--	--	--	80
	65	130	200	65
	1250	2500	4000	1250
	1000	2000	3200	1000
	1000	1000	1000	1000
	15000	10000	10000	15000
	2.7,3.1	4.5, 5.1	5.6, 6.5	2.6,
	120	240	300	120
	120	240	300	120
	35	70	150	35

#### Dimensional details for SP Switch Fuse Units for BS type fuses (in mm)

Type	SPØ3	SPØ3	SPØ5	SPØ5	SPØ7	SPØ7
Ref.	3P	4P	3P	4P	3P	4P
A	198	238	225	271	291	359
C	211	211	216	216	216	216
D	152	152	216	216	216	216
E	124	124	168	168	174	174
F	40	40	46	46	68	68
G	24.5	24.5	21	21	21	21
H	37.7	37.7	50	50	50	50
I	114	114	148	148	148	148
J	139	179	163	209	229	297
K	57	57	74	74	--	--
L	--	--	--	--	148	148
M	20	20	25	25	36	36
N	3	3	4	4	4	4
O	39	39	51	51	51	51
P	195....	195....	218....	218....	218....	218....
	225	225	248	248	248	248
Q	37.5	37.5	34	34	34	34
R	171	211	191	237	257	325
T	58	58	84	84	84	84
U	96	96	132	132	132	132
V	73	73	111	111	133	133

# Type SP Switches & Switch Fuse Units

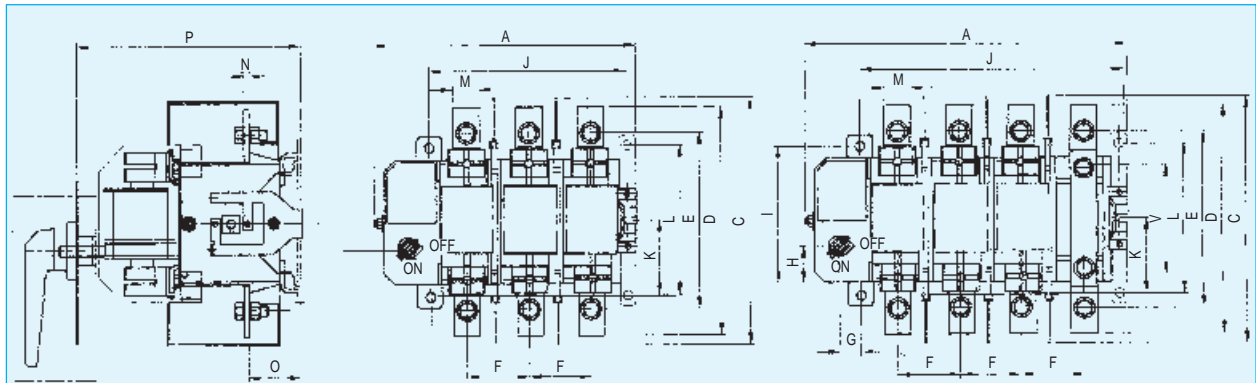
Switch fuse type 'SP'			Switch fuse type 'SPO - D'		
PØ3	SPØ5	SPØ7	SPØ3D	SPØ5D	SPØ7D
25	250	400	125	250	400
25	250	400	125	250	400
15	415	415	415	415	415
60	660	660	660	660	660
--	--	--	--	--	--
25	250	400	125	250	400
SDS125	TSF250	TSMS400	VSB125	VSF250	VSK400
0	80	80	80	80	80
0	80	80	80	80	80
5	130	200	65	130	200
250	2500	4000	1250	2500	4000
000	2000	3200	1000	2000	3200
000	1000	1000	1000	1000	1000
5000	10000	10000	15000	10000	10000
2.6, 3.0	4.3, 5.0	5.7, 6.7	2.6, 3.0	4.3, 5.0	5.7, 6.7
--	--	--	--	--	--
20	240	300	120	240	300
20	240	300	120	240	300
5	70	150	35	70	150





# Type SP Switches & Switch Fuse Units

## Dimensional details for SP0 Type Switch Fuse Units for DIN type fuses ( in mm )



Terminal screw direction should not be changed during installation  
 Door drilling / unit mounting details as per details for SP03, SP05, SP07 and 4P

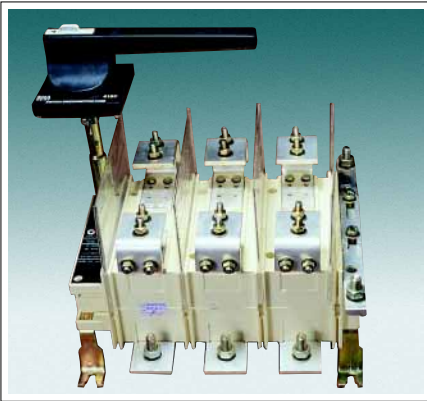
Type	SP03D	SP03D	SP05D	SP05D	SP07D	SP07D
Ref.	3P	4P	3P	4P	3P	4P
A	198	238	255	316	291	359
C	211	211	216	216	216	216
D	152	152	216	216	216	216
E	124	124	168	168	174	174
F	40	40	61	61	68	68
G	24.5	24.5	21	21	21	21
H	37.7	37.7	50	50	50	50
I	114	114	148	148	148	148
J	139	179	193	254	229	297
K	57	57	74	74	--	--
L	--	--	--	--	148	148
M	20	20	25	25	36	36
N	3	3	4	4	4	4
O	39	39	51	51	51	51
P	195.... 225	195.... 225	218.... 248	218.... 248	218.... 248	218.... 248
Q	37.5	37.5	34	34	34	34
R	171	211	221	282	257	325
T	58	58	84	84	84	84
U	96	96	132	132	132	132



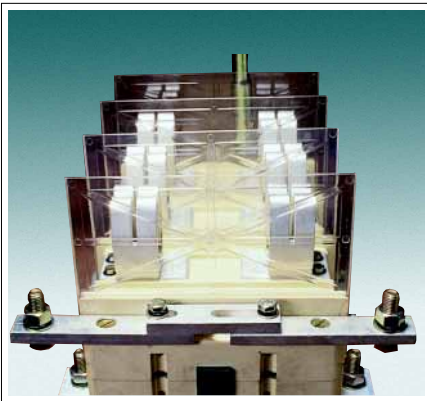
## SP 630/800 - Switch Disconnecter Fuse



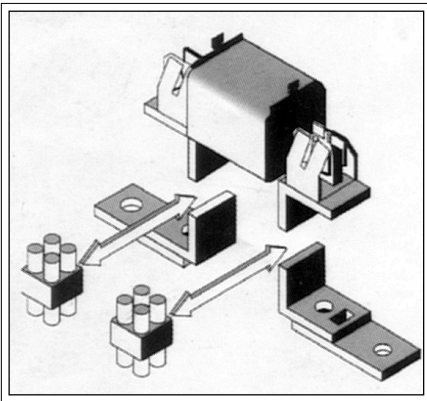
Fuse BS Type



Fuse-knife Blade



Roller Contacts



**GE Power Controls** introduces the most compact and high performance SP range of Switch Disconnecters in 630A & 800A ratings. This range is available for both BS type fuselinks (bolted version) and Din type fuselinks (blade contacts) in 3 Pole + isolable Neutral and 3 Pole + Switched Neutral version with a wide range of accessories. These switches conform to IEC 9473 and IS 13947-3.

Features :

- Compact Dimensions - saves panel space and hence cost.
- 8 rollers per break for high making & breaking capacities.
- Isolation of Fuses on both sides :
  - Replacement of Fuse with total protection to operating personnel.
  - Power Source can be connected either to top or bottom.
- Easy to add on field fittable accessories like switched 4th pole, phase barriers, aux switches.
- Stationary fuses eliminates popping of fuses during switches operations.
- Positive contact indicational
- Front drive with standard features like :
  - Door - interlock facility in ON position
  - Interlock defeat facility
  - Padlocking facility for both ON and OFF position
  - Drive coupling with radial and axial tolerance of  $\pm 5\text{mm}$  (x-y mismatch)
  - Adjustable drive shaft
- Rated for both AC as well as DC applications.
- High mechanical and electrical life.
- Low weight for easier handling and mounting.
- Roller contact mechanism.
- Large terminals to accommodate aluminium conductor.

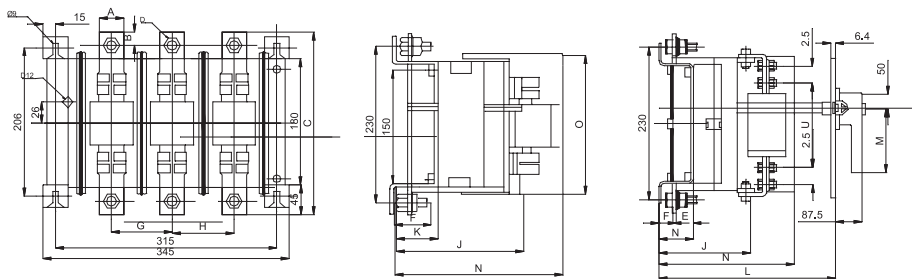
The moving contact system is based on multiple spring loaded, silver plated copper rollers which are secured through spring loaded steel retainer. The spring pressure is so designed that contact friction is minimised and rollers rotate and wipe the fixed knife contacts. Because of the multiple rollers, each section carries only a fraction of the current leading to reduction of electro dynamic counter force. This feature alongwith high closing speed of the switch results in high make on fault capacity. At the same time increase of electro dynamic force between parallel current paths in rollers prevents opening of contacts under high short-circuits thus leading to high short-circuit withstand capacity. The extreme breaking capacity is achieved primarily by dividing the breaking process amongst eight rollers in each break. This consequently results in reduction of arcing time and contact erosion, thereby increasing the contact life.



# SP 630/800 - Switch Disconnecter Fuse

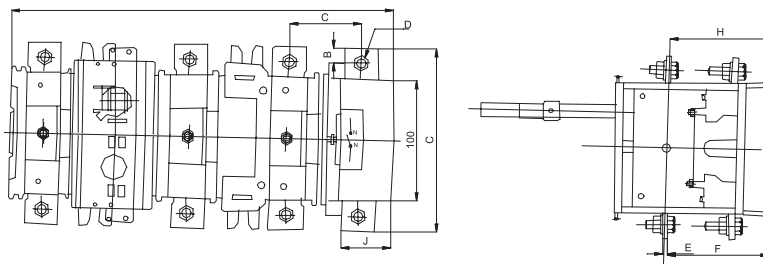
Technical Particulars	Unit	Switch Disconnecter		Switch Disconnecter Fuse	
		SP630	SP800	SP630	SP800
Rated thermal current Ith	A	630	800	630	800
Rated thermal current Ie, 440V, 50Hz, AC-23A	A	630	800	630	800
Rated Operational Voltage, Ue	V	440	440	440	440
Rated Insulation Voltage, Ui (AC)	V	1000	1000	1000	1000
Rated Short time withstand current, Icw (1sec.), rms	KA	25	25	-	-
Rated impulse withstand voltage (Uimp)	KV	10	10	10	10
Maximum possible fuse rating	A	NA	NA	630	800
Rated fused short circuit making capacity (ms value)	KA	NA	NA	80	80
Rated fused short circuit withstand capacity (ms value)	KA	NA	NA	80	80
Rated Operational Power at 440V, AC23	KW	354	435	345	435
Rated making capacity at 415V, AC23	A	6300	8000	6300	8000
Rated breaking capacity at 415V, AC23	A	5040	6400	5040	6400
Rated operational current Ie: dc					
at 220V L/R=15ms, 2 pole in series, DC 23	A	630	800	630	800
at 440V L/R=15ms, 3 pole in series, DC 23	A	630	800	630	800
Rated capacitor power, 415V AC	Kvar	315	390	315	390
Mechanical endurance (operations)		3000	3000	3000	3000
Weight	Kg	14	14.3	14	14.3
Switched neutral pole Ith (Isolable)	A	630/630	630/630	630/630	630/630
Neutral links Ith	A	630	630	630	630
Fuse DIN Type	Type	NA	NA	VST	VST
Fuse BS Type	Type	NA	NA	TSL	TSL

Dimensional Details - for 3 Pole + Isolable Neutral  
Range : SP 630-800 DIN/BS



Type	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	V
SP630	40	20.5	270	M12	6	43	87	87	60	193	67.5	250-265	200	260	205	M8	133	M12
SP800	50	20.5	280	M12	6	43	87	87	60	193	67.5	250-265	200	260	205	M8	133	M12

For 3 Pole + Switched Neutral Pole  
Range : SP 630-800 DIN/BS



Type	A	B	C	D	E	F	G	H	I	J
SP630/800DIN BS	32	20	180	M12	6	89	95	108	397	53



# SP 630/800 - Switch Disconnecter Fuse

(A) Handle assembly & Technical data. Please see fig. 3 & 4 below.

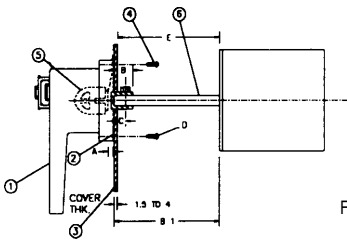


Figure 1

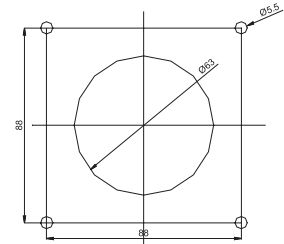
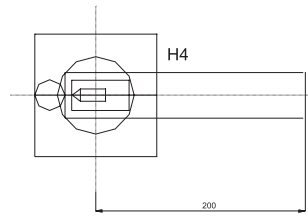


Figure 2

1. Handle 2. Gasket 3. Door 4. Mounting Screw 4 pcs. 5. Drive coupling 6. Switch shaft with profile

Type	A	B	B1	C	D	E
H4	7.0 ± 1	22.5	>23.5	3.5 ± 5	P5X13	>14

(B) Minimum distance from hinge > 100mm in sheet steel compartment in a panel enclosure from center of mounting hole as per fig. 5 below

(C) Panel drilling details and Handle assembly

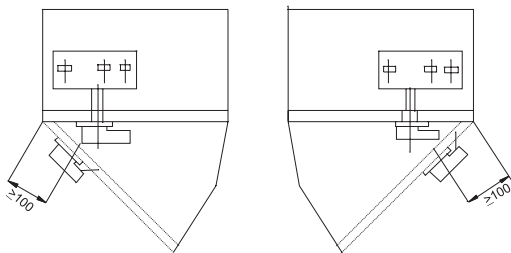
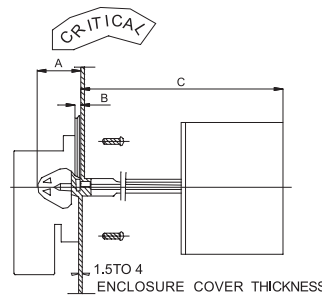
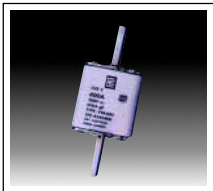


Figure 3

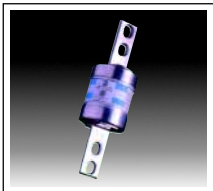


Check adjustment dimensions A & B (Critical) of drive coupling as given in fig. 6

Also maintain depth of panel cover "C" with reference of mounting leg of SP switch inside the compartment.



Amps	VST	Code Reference
315	VST 315	SFD8350315
355	VST 355	SFD8350355
400	VST 400	SFD8350400
500	VST 500	SFD8350500
630	VST 630	SFD8350630



Amps	VST	Code Reference
560	VST 560	SFB8370560
630	VST 630	SFB8370630
670	VST 670	SFB8370670
710	VST 710	SFB8370710
750	VST 750	SFB8370750
800	VST 800	SFB8370800

Rating	A	B	C	
			Min.	Max.
630A-800A	45.5 ± 1	7.0 ± 1	250	265

(D) Insert operating shaft in drive coupling to have profile matching to prevent false assembling as per fig 7&8 below

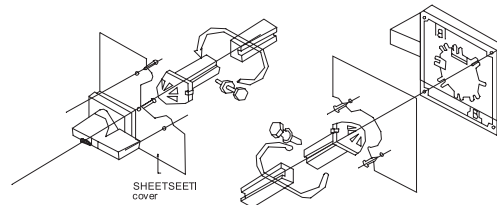


Figure 4

Figure 5

Note : SP Range of SD & SDF is available from 32A to 800A. For details please refer to our catalogues on lower ratings.



## GE Power Controls

**NORTH**  
4, Community Centre,  
Panchsheel Park,  
New Delhi-110017  
Tel.: 011-6497807-10  
Fax : 011-6497812/13

**SOUTH**  
Temple Towers,  
6th Floor, 476, Anna Salai,  
Nandanam,  
Chennai - 600035  
Tel.: 044-4329179/80, 4353776/769  
Fax : 044-4337325

**EAST**  
Berger House,  
4th Floor, 129, Park Street,  
Calcutta - 700017  
Tel.: 033-2292156/2161007  
Fax : 033-2292918

**WEST**  
Mahalakshmi Engg. Estate,  
Block No. 571,  
3rd Floor, Lady Jamsaedi,  
1st Cross Road, Mahim,  
Mumbai - 400016  
Tel.: 022-4448570 Fax : 022-4442921

**H.O.**  
GE Power Controls India Private Limited  
1106/6, Balaji Complex  
A.M. Industrial Estate  
Guruvbhavipalya, Hosur Road  
Bangalore-560 068  
Ph : +91 (080) 572 5140, 41, 42  
Fax : +91 (080) 572 4947