



Switch Fuse Changeover Switches



Other Product Range

Load Break Switch

- ▶ Range : 63A - 3150A, 3 & 4 Pole, 415V AC.
- ▶ Conforms to IS / IEC 60947-3.
- ▶ Tested at CPRI Bhopal for AC-23A duty.
- ▶ Total Safety- all moving and live parts covered.
- ▶ Compact design with insulated material legs.
- ▶ Quick make & quick break mechanism.
- ▶ Unique safety handle with door pad locking.
- ▶ Available in open execution and steel sheet enclosure.



Onload Changeover

- ▶ Range with Triple safety : 63 - 3150A, 3 & 4 Pole, 415V AC as per IS/IEC 60947-3.
- ▶ Silver plated current carrying parts, AC 23A.
- ▶ Flexibility for termination of supply & mounting positions.
- ▶ Available in open execution/steel sheet enclosure.
- ▶ Auxiliary contacts upto 2NO - 2NC.



By Pass Switch

- ▶ Range : 125A - 1600A, 4 Pole, 415V AC.
- ▶ Conforms to IS / IEC 60947-3.
- ▶ Tested for AC-23A utilization category.
- ▶ Total Safety- all moving and live parts covered.
- ▶ Switch is designed for specific need in IT industries where UPS and servo stabilizer provides main source of supply.

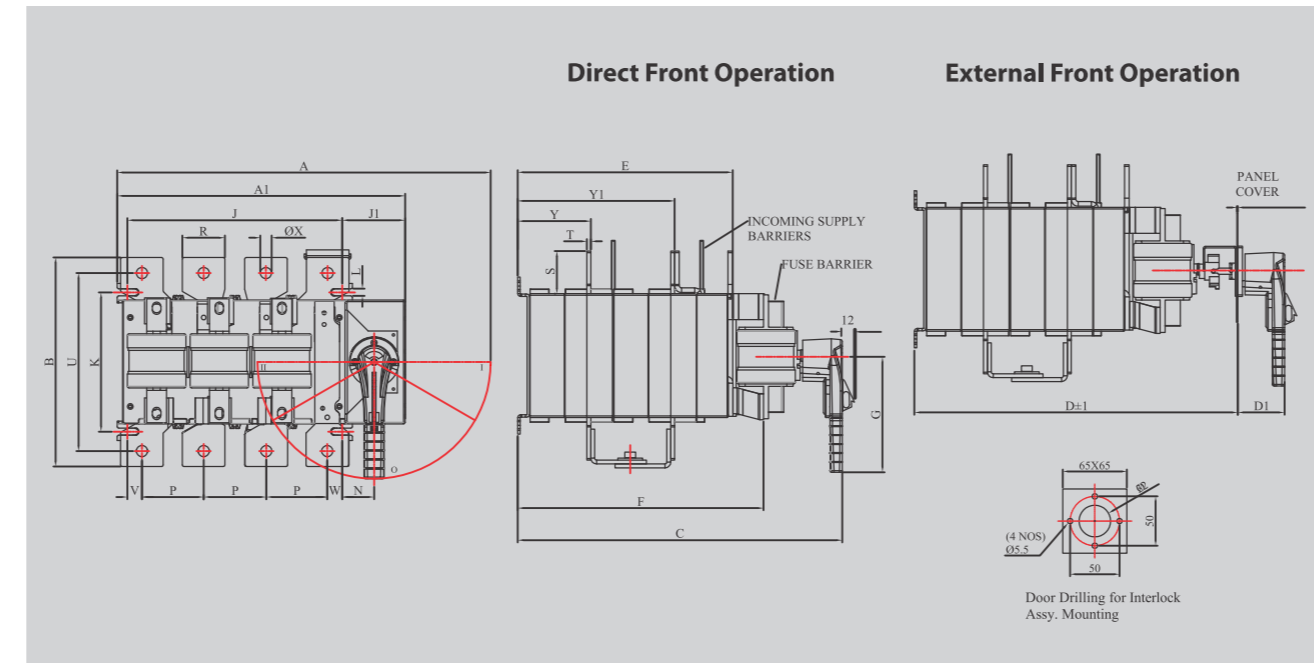


Switch Fuse Changeover Switches



Dimensional Details:

Switch Fuse Changeover 125-630A



RATING	OVER ALL DIMENSION										FIXING OF SWITCH										CONNECTION TERMINAL										SW. WT.
	A	A1	B	C	D	D1	E	F	G	J	J1	K	L	N	P	R	S	T	U	V	W	ØX	Y	Y1	Open Ex.						
4 x 125A	305	228	141	288	300	65	175	212	116	162	57	95	6.5	26	44	25	35	3	118	15	15	8.5	64	130	5.5 Kg.						
4 x 160A	390	290	192	330	344	65	202	236	150	217	61	111	6.5	27	64	32	46	4.5	152	9.5	15	12.5	72	148	10.2 Kg.						
4 x 200A	390	290	192	330	344	65	202	236	150	217	61	111	6.5	27	64	32	46	4.5	152	9.5	15	12.5	72	148	10.2 Kg.						
4 x 250A	390	290	192	330	344	65	202	236	150	217	61	111	6.5	27	64	32	46	4.5	152	9.5	15	12.5	72	148	10.2 Kg.						
4 x 320A	390	290	192	330	344	65	202	236	150	217	61	111	6.5	27	64	32	46	4.5	152	9.5	15	12.5	72	148	10.2 Kg.						
4 x 400A	472	372	270	420	426	65	273	318	150	280	80	180	9	40	72	40	40	5	206	30	30	11	95	203	19.3 Kg.						
4 x 630A	472	372	270	420	426	65	273	318	150	280	80	180	9	40	80	55	55	5	230	20	20	14.5	95	203	25.6 Kg.						

All Dimensions in MM
Notes: Tolerance on all dimensions ±5%

HPL/SFCOS/02-23



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AV Switch Fuse Changeover Switches

125A - 630A



Sailent Features

- Quick Make & Quick Break manual independent mechanism (Spring Loaded Contacts).
- Arc chute plates to enhance contact life
- Universal Terminals compatible for both Aluminum and Copper Bus or Thimble.
- Total safety : All moving and live parts shrouded. Terminal shroud, source separator, phase barrier as standard feature.
- High thermal & dynamic withstand capacity. Resistant to Tropical conditions, conductors, mold & enclosure designed considering safety.
- Auxiliary contact upto 2 NO-2 NC.
- Protection against over current and short circuit faults by fuses of high rupturing capacity of 80kA rms.
- Conforms to IS / IEC: 60947-3.





Switch Fuse Changeover Switches



Definition & Function

HPL Switch Fuse Changeover is a manually operated 4 pole Switch Fuse with position I-O-II with backup protective devices as HRC fuses mounted in RYB phases. The switch is provided with an isolating Neutral & offers protection in position I as well as in position II to load connected to common outgoing circuit.

Advantage

The particular concepton of HPL Switch Fuse Changeover, 4 pole gives the following advantages:

While breaking the circuit, guarantees sufficient air sectioning clearance.

- Protection against over currents & short circuit faults by fuses of high rupturing capacity , 80 kA rms. Compact & standardised sizes for range 125 A-630A. and ideal for switch board manufacturers.
- Strong endurance & resistance to heat (Tropicalised) 3 Stable positions (I-O-II) & possible switching from one to the other on load. Thereby fulfilling the role switching device with protection for two modes of supply-one from electricity board & other from standby Source - generator and providing back up protection.
- Suitable for incoming and outgoing Power Distribution feeders.
- Available in Open execution, Steel sheet Enclosure & Direct Mounted.
- Unique Safety Handle with built in padlock facility.

Highlights

- ▶ Conforms to IS/IEC:60947-3.
- ▶ Available in 6 frame sizes... rated current from 63A to 3150A in 3 Pole & 4 Pole versions.
- ▶ Universal Terminals compatible for both Aluminum and Copper Bus or Thimble.
- ▶ Quick Make & Quick Break mechanism (spring loaded mechanism).
- ▶ No bouncing contacts with spring loaded contact.
- ▶ Arc chute plates to enhance contact life.
- ▶ 100% Neutral rating... true 4 pole switch.
- ▶ Protection against over current and short circuit faults by fuses of high rupturing capacity of 80kA rms.
- ▶ Clear indication of 'ON', 'OFF' and 'ON' Position (I - O - II).
- ▶ Vertical or lateral mounting.
- ▶ Total safety : All moving and live parts shrouded. Terminal shroud, source separator, phase barrier as standard feature.
- ▶ ROHS Compliant.

Approvals & Test

- Time tested
- Customer Accepted
- CPRI Tested
- ISO 9001 Certified



Globally Accepted
exporting to over
25 countries



Switch Fuse Changeover Switches



Fuse Details :- (Bolted Type)

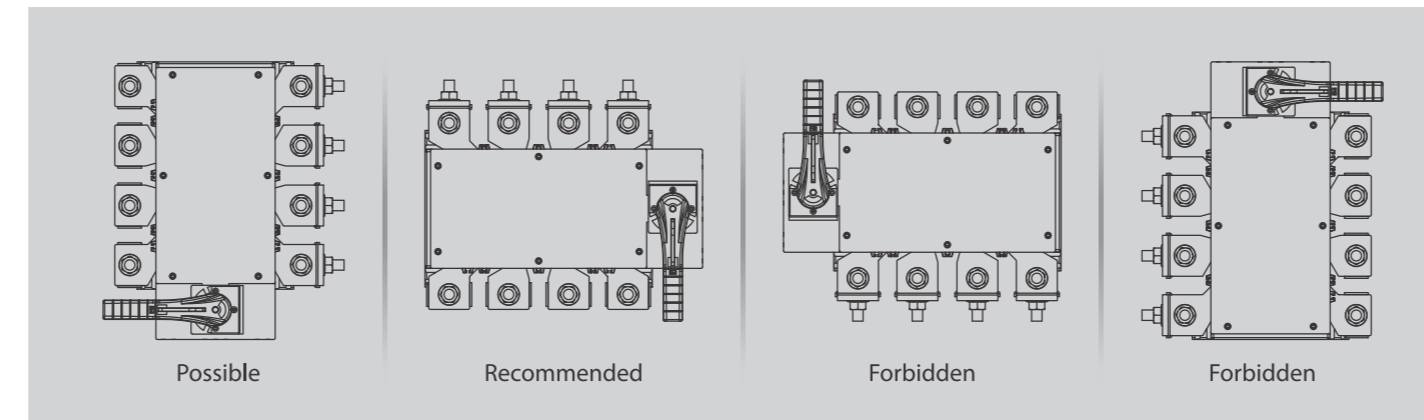
Available in 6 ratings from 125-630A with 3 poles & Neutral switched.

Fuses are as per IS:13703 (part 2) 1993/IEC 269-2-1 (1987).

- ▶ Front operation.
- ▶ External padlockable handle with door interlocking arrangement mounted on an enclosure door or on the panel cover.
- ▶ Pad locking arrangement can accommodate 3 pad locks for safety.

Rating Size in Amps	Size	Suitable HRC Fuse Ref
125A	A-4	LK-TCP
160A	A-4	LK-TCP
200A	A-4	LK-TSF
250A	B-1	LK-TSK
320A	B-1	LK-TSK
400A	C-1	LK-TSMS (Big)
630A	C-1	LK-TTS

Mounting Orientation



- ▶ Terminal Shroud & Phase barrier as standard design product
- ▶ Enclosed operating rod
- ▶ 3 lock pad lockable handle in both ON & OFF positions



Steel Enclosure

Switch fuse changeover can be supplied in sheet steel enclosure, made of thick guage steel sheet, protected with phosphate coating by seven tank system and powder coated for long life.

All enclosure are fitted with top and bottom end plates with adequately sized knockouts for cables



Switch Fuse Changeover Switches



Specification Electrical & Mechanical Characteristic

Specification

Frame Sizes	Current Rating						
	Frame-1	Frame-2			Frame-3		
Thermal Current (Ith) 40°C	125A	160A	200A	250A	320A	400A	630A
Max. Normal rating of fuses	125	160	200	250	315	400	630
Insulation voltage Ui (Vac)	1000	1000	1000	1000	1000	1000	1000
Dielectric strength (Vac) 50 Hz 1 minute	5000	5000	5000	5000	5000	8000	8000
Impulse voltage (KV)	6	6	6	8	8	12	12

Rated Operational Current Ie (A)

415 Vac: AC 23A	125	160	200	250	320	400	630
500 Vac: AC 23A	100	130	160	200	250	315	315
260V dc: DC 21A	125	160	200	250	320	400	630
DC 22A	125	160	200	250	320	400	500
DC 23A	125	160	160	200	250	400	500
440V dc: DC 21A	125	160	200	250	320	400	500
DC 22A	125	130	160	200	250	400	500
DC 23A	125	130	160	200	250	400	500

Motor Power (KW) 415V

415 Vac without pre break Aux. Contact	63	70	80	132	160	200	220
500 Vac without pre break Aux. Contact	60	63	63	140	220	220	220
690 Vac without pre break Aux. Contact	50	55	55	90	150	150	150
415 Vac with pre break Aux. Contact	63	70	80	132	160	220	355
500 Vac with pre break Aux. Contact	70	80	80	160	220	280	355
690 Vac with pre break Aux. Contact	100	110	110	110	220	220	295
Motor Reactive 415 Vac (kVAR)	50	55	60	100	125	150	2x125

Overload Capacity

Short circuit current with fuses (kA RMS)	80	80	80	80	80	80	80
Fuse Rating	125	160	200	250	315	400	630
Peak short circuit making capacity (kA RMS)	20	20	20	30	45	45	45
Admissible short time current 1 sec (KA RMS)	7	9	9	13	13	13	13

Making & Breaking Characteristics

Breaking capacity (A RMS) 415 Vac pf=0.35	1000	1280	1600	2000	2520	3200	5040
Making capacity (A RMS) 415 Vac pf=0.35	1250	1600	2000	2500	3150	4000	6300

Endurance

Mechanical Life (No. of Operations)	8000	8000	8000	8000	5000	5000	5000
Electrical Life (No. of Operations)	1000	1000	1000	1000	1000	1000	1000
Operating Torque (N-m)	9.5	11	11	11	11	17	17

Connection

Min. Cu. Cable / Bus bar size (mm ²)	50	70	95	120	185	30x5x2	40x5x2
Min. Al. Cable / Bus bar size (mm ²)	70	95	150	185	240	32x8x2	40x8x2