

LoadSwitches





OVER 130 YEARS OF ELECTRICAL EXCELLENCE

Dorman Smith Switchgear Limited

With over 130 years of experience in switchgear design and production Dorman Smith Switchgear Limited continues to provide high quality equipment for low-voltage electrical distribution and circuit protection.

Our product range begins with single-pole and neutral distribution board systems and continues up to custom designed, factory built low-voltage electrical switchboards for a broad range of commercial, industrial and retrofit applications.

We continue to build on our extensive technical knowledge and awareness of customer and market demands, operating conditions and current regulations.

This breadth of experience supports the development and manufacturing techniques of our electrical products to exceed the industry standards.

Loadswitches



Overview

LoadSwitch is a mechanical device capable of making, carrying and breaking current under normal circuit conditions. Switches safely disconnecting electrical systems from the power grid is essential to protecting humans as well as the systems themselves. LoadSwitches are available in a comprehensive portfolio of switching devices for safe and efficient switching of electrical equipment and Automatic/Manual changeover.

Loadline switches are suitable for large number applications like Motor control centres, switchboards and as an in-comer in various equipment's and machines.

Loadline switches are available in Enclosed type and open execution.

switches are available in Motorized type for remote and automatic operation.

Index

Content	Page No.
OnLoad Switch Disconnectors	5
OnLoad Changeover Switches	15
Offload Changeover Switches	33
Automatic Transfer Switches - MLB Frame	37
Automatic Transfer Switches - LM Frame	47
Technical Data	49

OnLoad Switch Disconnecter



LoadSwitch

OnLoad Switch Disconnecter

L Type from 63A to 3150A

Overview

The Dorman Smith make L Type On Load Switch Disconnecter is a 3 / 4 Pole, manually operated device for connection / disconnection of incoming supply & load. It ensures safe isolation and is suitable for use in individual enclosures, switchboards, lighting and power panels.

Main Features:

1. Conforms to IEC 60947-3
2. Available in 6 frame sizes, rated current from 63A to 3150A
3. Compact Design
4. Quick make & Quick Break mechanism (spring load contact)
5. Two stable positions (I-O)
6. Clear Indication of 'ON' & 'OFF' position (I-O)
7. Line load reversibility
8. Arc chute plates to enhance contact life
9. High mechanical & electrical life
10. 100% neutral rating, true 4 pole switch
11. Vertical or lateral mounting
12. Resistant to tropical conditions & polluted environment
13. Total safety: All moving and live parts covered
14. Self-extinguishing fiberglass re-inforced insulating body
15. Terminal cover and phase barrier accessories available
16. Rotary handle with built in door padlock facility
17. Three lock pad lock, lockable in ON & OFF positions
18. Option for mechanically interlocking two isolators
19. ROHS Compliant
20. Wide range of accessories
21. High thermal & dynamic withstand capacity
22. Available in skeleton or housed
23. Option for direct operation or extended rotary handle
24. AC23 A Category
25. Bounce free contacts



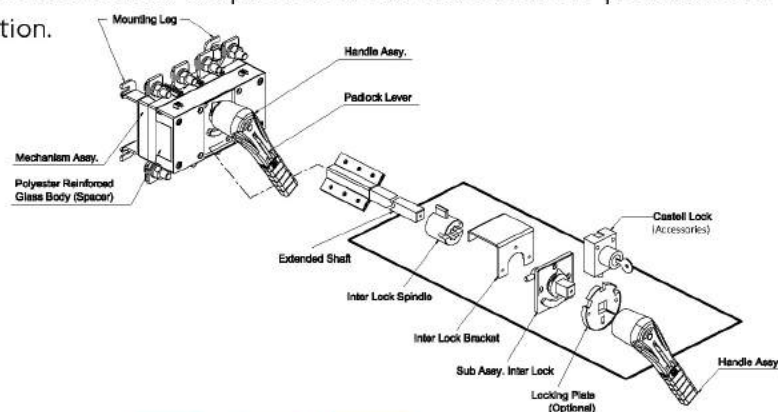
Operational Overview:

Direct

The pad lockable handle is mounted directly on the switch disconnecter and is lockable in OFF & ON position.

External

The pad lockable handle is to be mounted on the panel door and lockable in OFF position. Door interlocking feature as standard in ON position.

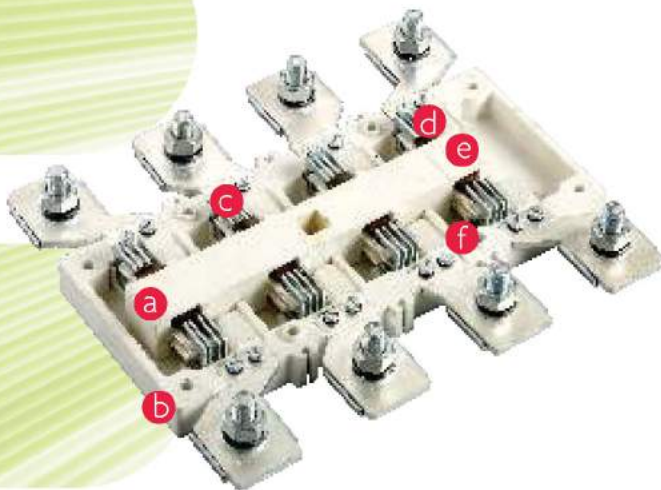


LoadSwitch

OnLoad Switch Disconnecter

Arc Chamber:

It is specially designed and provided with arc chute plates with an arc channel as a flow guide to reduce the arc length. This improves the capability to extinguish the arc. This enhances the life of the moving and stationary contacts thereby increasing the life of the product.



- a : OFF
- b : Housing
- c : Arc Chute Plates
- d : Stationary Contact
- e : ON
- f : Moving Contact

SL03P63R/DR/AX

SL	Skeleton Disconnecter
0	Frame
3P	Pole - 3/4
63	Ampere
R/DR	R - Extendable Rotary Handle + Shaft DR - Direct Mounted Rotary Handle
AX	Auxiliary Contact 1 NO + 1 NC

HL03P63R/DR/AX

HL	Housed Disconnecter
0	Frame
3P	Pole - 3/4
63	Ampere
R/DR	R - Extendable Rotary Handle + Shaft DR - Direct Mounted Rotary Handle
AX	Auxiliary Contact 1 NO + 1 NC

Skeleton Type Switch Disconnecter

Current Rating (A)	3 Pole Product Code	4 Pole Product Code
63A	SL03P63R	SL04P63R
80A	SL03P80R	SL04P80R
100A	SL03P100R	SL04P100R
125A	SL13P125R	SL14P125R
160A	SL13P160R	SL14P160R
200A	SL13P200R	SL14P200R
250A	SL23P250R	SL24P250R
320A	SL23P320R	SL24P320R
400A	SL33P400R	SL34P400R
630A	SL33P630R	SL34P630R
800A	SL43P800R	SL44P800R
1000A	SL53P1000R	SL54P1000R
1250A	SL53P1250R	SL54P1250R
1600A	SL53P1600R	SL54P1600R
2000A	SL53P2000R	SL54P2000R
2500A	SL53P2500R	SL54P2500R
3150A	SL53P3150R	SL54P3150R



Housed Type Switch Disconnecter

Current Rating (A)	3 Pole Product Code	4 Pole Product Code
63A	HL03P63R	HL04P63R
80A	HL03P80R	HL04P80R
100A	HL03P100R	HL04P100R
125A	HL13P125R	HL14P125R
160A	HL13P160R	HL14P160R
200A	HL13P200R	HL14P200R
250A	HL23P250R	HL24P250R
320A	HL23P320R	HL24P320R
400A	HL33P400R	HL34P400R
630A	HL33P630R	HL34P630R
800A	HL43P800R	HL44P800R
1000A	HL53P1000R	HL54P1000R
1250A	HL53P1250R	HL54P1250R
1600A	HL53P1600R	HL54P1600R
2000A	HL53P2000R	HL54P2000R
2500A	HL53P2500R	HL54P2500R
3150A	HL53P3150R	HL54P3150R



LoadSwitch

OnLoad Switch Disconnecter

Accessories

Handle:

- Single Hand Operated Handle for ratings up to 630A
- Two Hand Operated Handle for ratings 800A and above
- Provision for providing 3 padlocks in OFF position
- Telescopic operating shaft for varied depth adjustment

Direct Mounted Rotary Handle

Current Rating	Product code
63A - 100A	SD0RH1
125A - 200A	SD1RH1
250A - 320A	SD2RH1
400A - 630A	SD3RH1
800A	SD4RH1
1000A - 3150A	SD5RH1

- Door mounted Rotary Handle with extendable shaft and door interlock assembly
- Extension handles for operation of switch disconnectors housed in enclosures
- Handles available in lengths of 300mm

Current Rating	Product code
63A - 100A	SD0RH2
125A - 200A	SD1RH2
250A - 320A	SD2RH2
400A - 630A	SD3RH2
800A	SD4RH2
1000A - 3150A	SD5RH2

Auxiliary Contact:

Auxiliary contacts, with 1NO + 1NC can be supplied factory fitted in the switch for signalling

Current Rating	Product code
63A - 100A	SD0AUX1
125A - 320A	SD0AUX1
400A - 3150A	SD0AUX1

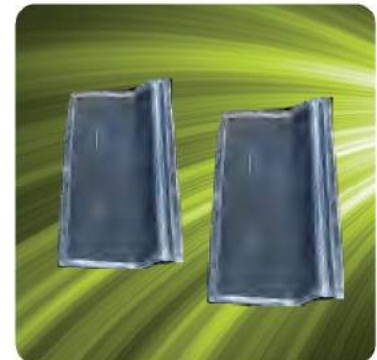
Add AX in Ordering code for factory fitted Auxiliary contacts



Terminal Interphase Barriers:

Terminal Barriers are made up to transparent polycarbonate flame retardant material to provide inter-phase separation.

Current Rating	Product code
63A - 100A	SD0TB
125A - 200A	SD1TB
250A - 320A	SD2TB
400A - 630A	SD3TB
800A	SD4TB
1000A - 3150A	SD5TB



Terminal Shrouds:

Terminal shrouds are made up of transparent polycarbonate flame retardant material to provide protection against accidental contact to live terminal.

Current Rating	Product code
63A - 100A	SD0TS
125A - 200A	SD1TS
250A - 320A	SD2TS
400A - 630A	SD3TS
800A	SD4TS
1000A - 3150A	SD5TS



Mechanical Interlock

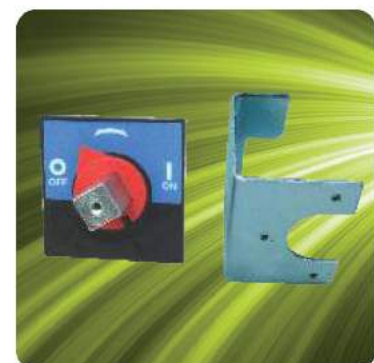
Accessories for interlocking 2 or more Switch Disconnectors

Symbol	Product Code
DS1	KBOLTLOCK-DS1
DS2	KBOLTLOCK-DS2
DS3	KBOLTLOCK-DS3
DS4	KBOLTLOCK-DS4
DS5	KBOLTLOCK-DS5
DS6	KBOLTLOCK-DS6
DS7	KBOLTLOCK-DS7
DS8	KBOLTLOCK-DS8



Door Interlock Assembly

Door Interlock Assemblies used with extended handles to allow opening of enclosure door only when switch disconnecter is in OFF position.



Switch Disconnecter 63A - 100A

Overall Dimension							Fixing of SW.						Connection Terminal							SW. W.T.			
Rating	A	B	C	D	D1	E	G	J	K	L	M	N	O	P	R	S	T	U	V	W	ØX	Y	Open Ex.
4 x 63A	148	106	98	126	45	62	80	135	58	5.5	14	67.5	67.5	27	14	18	2.5	91	20.5	34	6.5	42	1 Kg.
4 x 80A	148	106	98	126	45	62	80	135	58	5.5	14	67.5	67.5	27	14	18	2.5	91	20.5	34	6.5	42	1 Kg.
4 x 100A	148	106	98	126	45	62	80	135	58	5.5	14	67.5	67.5	27	15	18	2.5	91	20.5	34	6.5	42	1 Kg.

Switch Disconnecter 125A - 630A

Overall Dimension							Fixing of SW.						Connection Terminal							SW. W.T.		
Rating	A	B	C	D	E	G	J	K	L	M	N	O	P	R	S	T	U	V	W	ØX	Y	Open Ex.
4 x 125A	180	141	150	164	94	116	162	95	6.5	15	81	81	44	22	28	3	118	15	15	8.5	46	1.8 Kg
4 x 160A	180	155	150	164	94	116	162	95	6.5	15	81	81	47	25	35	4	123	10.5	10.5	10	46	2.1 Kg
4 x 200A	180	155	150	164	94	116	162	95	6.5	15	81	81	47	25	35	4	123	10.5	10.5	10	46	2.1 Kg
4 x 250A	240	192	160	176	104	150	217	111	6.5	20	109	109	64	32	46	4.5	152	15	9.5	12.5	48	3.1 Kg
4 x 320A	240	192	160	176	104	150	217	111	6.5	20	109	109	64	32	46	4.5	152	15	9.5	12.5	48	3.1 Kg
4 x 400A	304	240	200	212	144	150	280	180	9	30	140	140	72	40	40	5	206	30	30	11	69	6.0 Kg
4 x 630A	304	270	200	212	144	150	280	180	9	30	140	140	80	55	55	5	230	20	20	14.5	69	7.0 Kg

Switch Disconnecter 800A - 1600A

Overall Dimension							Fixing of SW.						Connection Terminal							SW. W.T.		
Rating	A	B	C	D	E	G	J	K	L	M	N	O	P	R	S	T	U	V	W	ØX	Y	Open Ex.
4 x 800A	373	320	235	234	164	165	340	220	11	28	170	170	80	50	60	6	267	50	50	15	67	11.7 Kg
4 x 1000A	505	330	235	234	164	165	474	220	11	28	237	237	120	63	65	6	273	50	63		65	16.5 Kg
4 x 1250A	505	330	235	234	164	165	474	220	11	28	237	237	120	63	65	7	273	50	63		66	16.8 Kg
4 x 1600A	505	361	235	234	164	165	374	220	11	28	237	237	120	80	80	15	281	50	63		70	23.0 Kg

Switch Disconnecter 2000A - 3150A

Overall Dimension					Fixing of SW.						Connection Terminal							SW. W.T.	
Rating	A	B	C	D	E	J	K	M	N	O	P	S	T	U	V	W	Y	Y1	Open Ex.
4 x 2000A	505	450	323	335	251	474	220	28	237	237	120	125	8	371	50	64	72	155	38.0 Kg
4 x 2500A	505	450	323	335	251	474	220	28	237	237	120	125	10	371	50	64	73	156	39.5 Kg
4 x 3150A	505	500	323	335	251	474	220	28	237	237	120	150	15	401	50	64	75	159	58.0 Kg

Frame Sizes	Frame 3		Frame 4	Frame 5					
Thermal Current (I _{th}) 40°C	400A	630A	800A	1000A	1250A	1600A	2000A	2500A	3150A
Max. Normal rating of fuses	400	630	800	1000	1250	2 x 800	2 x 1000	2 x 1250	2 x 1250
Insulation Voltage U _i (Vac)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Dielectric strength (Vac) 50Hz 1 minute	8000	8000	8000	8000	10000	10000	10000	10000	10000
Impulse Voltage (kV)	12	12	12	12	12	12	12	12	12
Rated Operational Current I _e (A)									
415Vac: AC 23A	400	630	800	1000	1000	1000	1250	1250	1250
415Vac: AC 21A	400	630	800	1000	1250	1600	2000	2500	3150
500Vac: AC 23A	315	315	630	1000	1000	1000	1000	1000	1000
260Vdc: AC 21A	400	630	800	1000	1250	1600	2000	2000	2000
DC 22A	400	500	800	1000	1250	1250	1250	1250	1250
DC 23A	400	500	800	1000	1250	1250	1250	1250	1250
440Vdc: DC 21A	400	500	630	1000	1250	1600	2000	2000	2000
DC 22A	400	500	800	1000	1250	1250	1250	1250	1250
DC 23A	400	500	800	1000	1000	1000	1000	1000	1000
Short Circuit Ratings									
Short circuit current with fuses (kA RMS)	80	80	80	80	80	80	80	80	80
Fuse Rating	400	630	800	1000	1250	2 x 800	2 x 1000	2 x 1250	2 x 1250
Peak short circuit making capacity (kA RMS)	45	45	55	105	105	110	110	110	120
Admissible short time current 1 sec (kA RMS)	13	13	26	50	50	50	50	50	55
Breaking capacity (A RMS) 415Vac pf = 0.35	3200	5040	6400	8000	8000	8000	10000	10000	10000
Making capacity (A RMS) 415Vac pf = 0.35	4000	6300	8000	10000	10000	10000	12500	12500	12500
Endurance									
Mechanical Life (No. of Operations)	5000	5000	4000	4000	4000	3000	3000	2500	2500
Electrical Life (No. of Operations)	1000	1000	500	500	500	500	500	500	500
Operating Torque (N-m)	17	17	40	40	40	40	60	60	60
Connection									
Min. Cu. Cable / Busbar size (mm ²)	30x5x2	40x5x2	50x5x2	60x5x2	80x5x2	100x5x2	100x5x3	100x5x4	100x10x3
Min. Al. Cable / Busbar size (mm ²)	32x8x2	40x8x2	50x8x2	50x10x2	63x12x2	100x8x2	100x10x3	100x10x4	-

LoadSwitch

OnLoad Switch Disconnecter

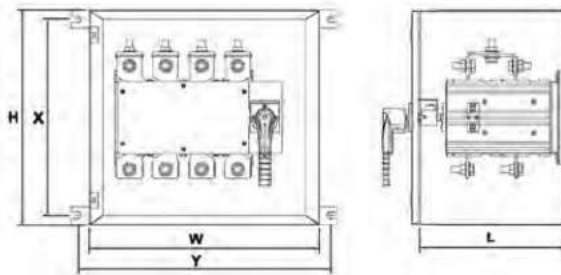
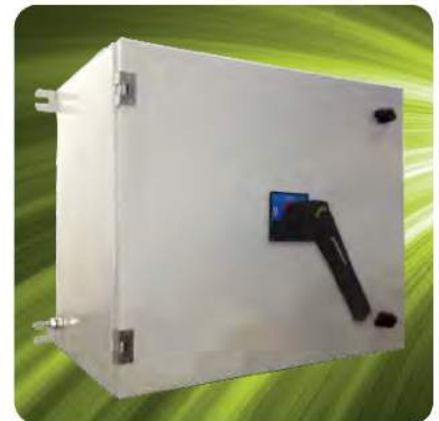
Main Features:

- **Black Handle Pad lockable in I – O position**
- Sheet steel door – 1.2mm & body – 1.6mm for 63A to 800A
- Sheet steel door & body – 2.0mm for 1000A to 3150A
- RAL 7035, light grey
- **Epoxy Polyester powder coating**
- Two external earthing points on each side
- Wall mounted with 4 bolts
- **Door interlocking system allows opening of door only in OFF position**
- Incoming & outgoing easily interchangeable at site
- **Removable plate top & bottom**
- Door with solid hinges



Dimensions

Rating	L	W	H	X	Y
63A - 100A	180	255	143	215	210
125A - 200A	260	365	190	325	290
250A - 320A	345	455	200	415	375
400A - 630A	395	575	237	515	425
800A	500	680	258	620	550
1000A - 1600A	630	655	258	600	655
2000A - 2500A	630	750	363	685	655



OnLoad Changeover Skeleton Switch



63A



125 A



250 A



400 A



630A



1000A

Overview

Key Features

- Quick Make & Quick Break mechanism.
- Any pole can be used as neutral pole.
- AC23 utilisation category
- Bounce free contacts
- Available in 3 stable positions with indications for Normal Power supply on, Standby power supply on and an OFF position (I-O-II).
- High Mechanical & Electrical life with 100% Neutral rating...true 4 pole switch.
- Available with Wide range of accessories.
- Suitable for incoming and outgoing feeders.
- Bridging bars mounted on all ratings as standard feature.
- Available in open execution and sheet steel Enclosure.
- visualized breaking
- Unique rotary handle with built in door padlock facility suitable direct front operation and External door mounted type
- Resistant to Tropical conditions & polluted environment.
- High thermal & dynamic withstand capacity.

Benefits

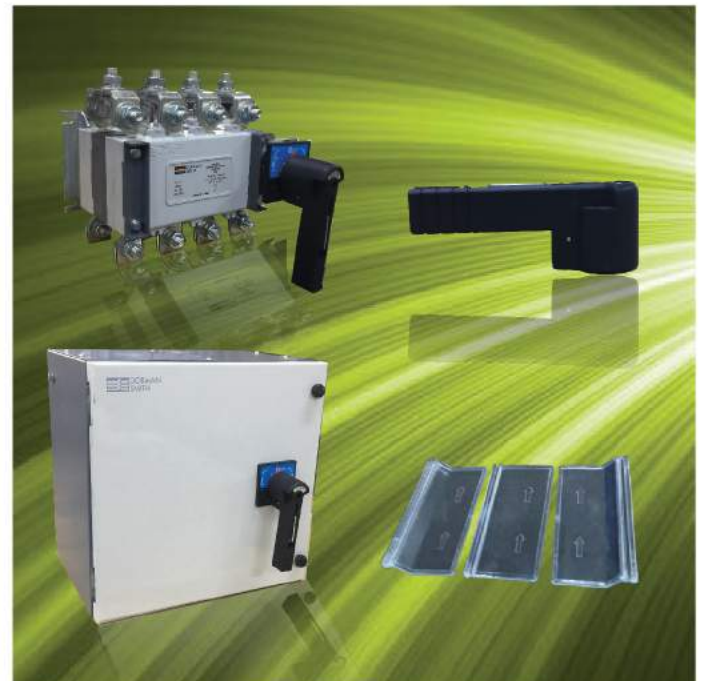
- Easy installation.
- Totally safety and Suitable for both aluminum & copper termination
- Compact in size
- Simple operation
- Safe to use

Compliance

- Switches EN 60947-3
- ROHS Compliant

The Dorman smith Elegance series On Load changeover switch has been designed and manufactured in accordance with IEC/EN 60947-3. Given their utilisation category of AC23. Elegance series On Load changeover switch is compact design of 4 Pole manually operated switch consisting of two sets of terminals for connecting two incoming supply sources. These changeover switches are available in open Execution (Skeleton type) and sheet steel enclosure type. It ensures safe operation of On Load changeover between two source and safety isolation. These changeovers are suitable to use in individual enclosures, switch boards, lighting and power panels etc. The Elegance series product portfolio includes a wide range from 63A to 3150A in 6 Frame

On Load changeover switch units are supplied in IP55 sheet steel boxes also. The robust steel enclosures are with light grey RAL 7035 epoxy powder coating and have doors that open 90° for ease of access. Provision for padlocking in ON/OFF position available



LoadSwitch

OnLoad Changeover Switches

Operational Principle

Principle

Stationary contacts R, Y, B, N Phase are fixed to the moulded housing. 4 sets of moving contacts housed in a carrier are moved towards right for ON or left for OFF. The moving contacts slide on to the stationary contacts to make the circuit.

Position indication provided on front of switch, on the operating shaft.

In position 'I', supply I (Main) is connected to the load, supply II is off.

In position 'O', supply I & II are both disconnected from the load.

In position 'II', supply II (Standby) is connected to the load, supply I is off. Hence in none of the cases, supply I & II are connected simultaneously.

Technology

The Arc Chamber is specially designed and provided with arc chute plates with an arc channel as a flow guide to reduce the arc length, thereby improving the capability of extinguishing the arc. This enhances the life of the moving & stationary contacts thereby increasing the life of the product.

Body parts are made of superior quality of thermoset plastics to withstand the stringent short circuit conditions where it has to see very high thermodynamic stresses. Its high insulation strength avoids any damage to the product.

Handle: The pad lockable handle is mounted directly on the onload changeover switch and is lockable in both OFF & ON positions.

Handle : The pad lockable handle is mounted on the panel door and lockable in both OFF & ON positions. The external front operation ensures that the door is locked in ON position.



- a : OFF
- b : Housing
- c : Arc Chute Plates
- d : Stationary Contact
- e : ON
- f : Moving Contact

Frame 0

Technical Specification

Thermal Current (Ith) 40 C	Frame 0 63 A	Frame 0 100 A
Max. Normal rating of fuses	63	100
Insulation volatage Ui (Vac)	750	750
Dielectric strength (Vac) 50 Hz 1 minute	4000	4000
Impulse volatage (IN)	6	6
Rated Operational Current(A)		
415 Vac AC 23A	63	100
500 Vac: AC 23A	55	55
260V dc: DC 21A	63	100
DC 22A	63	100
DC 23A	63	63
440V dc: DC 21A	63	100
DC 22A	63	100
DC 23A	63	63
Motor Power (KW) 415V		
415 Vac without pre break Aux. Contact	30	30
500 Vac without pre break Aux. Contact	30	30
690 Vac without pre break Aux. Contact	22	22
415 Vac with pre break Aux. Contact	30	30
500 Vac with pre break Aux. Contact	30	30
690 Vac with pre break Aux. Contact	35	35
Motor Reactive 415 Vac (INAR)	25	25
Overload Capacity		
Short circuit current with fuses (kA RMS)	80	80
Fuse Rating	63	100
Peak short circuit making capacity (kA RMS)	15	15
Admissible short time current 1 sec (kA RMS)	5	5
Making & Breaking Characteristics		
Breaking capacity (A RMS) 415 Vac 0-0.35	504	504
Making capacity (A RMS) 415 Vac pf=0.35	630	630
Endurance		
Mechanical Life (No. of Operations)	10000	10000
Electrical Life (No. of Operations)	2500	1500
Operating Force (N-m)	3.5	3.5
Connection		
Min. Cu. Cable / Bus bar size (mm ²)	16	25
Min. Al. Cable / Bus bar size (mm ²)	25	25X2



LoadSwitch

OnLoad Changeover Switch

Frame 1



Technical Specification

Thermal Current (Ith) 40 C	100 A	125	200
Max. Normal rating of fuses	100	125	200
Insulation volatage Ui (Vac)	750	1000	1000
Dielectric strength (Vac) 50 Hz 1 minute	4000	5000	5000
Impulse volatage (IN)	6	6	6
Rated Operational Currentle(A)			
415 Vac AC 23A	100	125	200
500 Vac: AC 23A	55	100	160
260V dc: DC 21A	100	125	200
DC 22A	100	125	200
DC 23A	63	125	160
440V dc: DC 21A	100	125	200
DC 22A	100	125	160
DC 23A	63	125	160
Motor Power (KW) 415V			
415 Vac without pre break Aux. Contact	30	63	80
500 Vac without pre break Aux. Contact	30	63	63
690 Vac without pre break Aux. Contact	22	55	55
415 Vac with pre break Aux. Contact	30	63	80
500 Vac with pre break Aux. Contact	30	80	80
690 Vac with pre break Aux. Contact	35	110	110
Motor Reactive 415 Vac (INAR)	25	55	60
Overload Capacity			
Short circuit current with fuses (kA RMS)	80	80	80
Fuse Rating	100	125	200
Peak short circuit making capacity (kA RMS)	15	20	20
Admissible short time current 1 sec (kA RMS)	5	7	7
Making & Breaking Characteristics			
Breaking capacity (A RMS) 415 Vac 0-0.35	504	1000	1600
Making capacity (A RMS) 415 Vac pf=0.35	630	1250	2000
Endurance			
Mechanical Life (No. of Operations)	10000	8000	8000
Electrical Life (No. of Operations)	1500	1000	1000
Operating Force (N-m)	3.5	9.5	9.5
Connection			
Min. Cu. Cable / Bus bar size (mm ²)	25	50	95
Min. Al. Cable / Bus bar size (mm ²)	25X2	70	150

Frame 2 & 3

Technical Specification

Thermal Current (Ith) 40 C	Frame2	Frame3	
	250 A	400 A	630 A
Max. Normal rating of fuses	250	400	630
Insulation volatage Ui (Vac)	1000	1000	1000
Dielectric strength (Vac) 50 Hz 1 minute	5000	8000	8000
Impulse volatage (IN)	8	12	12
Rated Operational Current(A)			
415 Vac AC 23A	250	400	630
500 Vac: AC 23A	200	315	315
260V dc: DC 21A	250	400	630
DC 22A	250	400	500
DC 23A	200	400	500
440V dc: DC 21A	250	400	500
DC 22A	200	400	500
DC 23A	200	400	500
Motor Power (KW) 415V			
415 Vac without pre break Aux. Contact	132	200	220
500 Vac without pre break Aux. Contact	140	220	220
690 Vac without pre break Aux. Contact	90	150	150
415 Vac with pre break Aux. Contact	132	220	355
500 Vac with pre break Aux. Contact	160	280	355
690 Vac with pre break Aux. Contact	110	220	295
Motor Reactive 415 Vac (INAR)	100	150	2 X 125
Overload Capacity			
Short circuit current with fuses (kA RMS)	80	80	80
Fuse Rating	250	400	630
Peak short circuit making capacity (kA RMS)	30	45	45
Admissible short time current 1 sec (kA RMS)	13	13	13
Making & Breaking Characteristics			
Breaking capacity (A RMS) 415 Vac 0-0.35	2000	3200	5040
Making capacity (A RMS) 415 Vac pf=0.35	2500	4000	6300
Endurance			
Mechanical Life (No. of Operations)	8000	5000	5000
Electrical Life (No. of Operations)	1000	1000	1000
Operating Force (N-m)	11	17	17
Connection			
Min. Cu. Cable / Bus bar size (mm ²)	120	30X5X2	40X5X2
Min. Al. Cable / Bus bar size (mm ²)	185	32X8X2	40X8X2



LoadSwitch

OnLoad Changeover Switch

Frame 4 & 5



Technical Specification

Thermal Current (Ith) 40 C	Frame 4		Frame 5
	800 A	1000 A	1250 A
Max. Normal rating of fuses	800	1000	1250
Insulation volatage Ui (Vac)	1000	1000	1000
Dielectric strength (Vac) 50 Hz 1 minute	8000	8000	10000
Impulse volatage (IN)	12	12	12
Rated Operational Current(I)			
415 Vac AC 23A	800	1000	1000
500 Vac: AC 23A	630	1000	1000
260V dc: DC 21A	800	1000	1250
DC 22A	800	1000	1250
DC 23A	800	1000	1250
440V dc: DC 21A	630	1000	1250
DC 22A	800	1000	1250
DC 23A	800	1000	1000
Motor Power (KW) 415V			
415 Vac without pre break Aux. Contact	450	560	560
500 Vac without pre break Aux. Contact	450	560	560
690 Vac without pre break Aux. Contact	185	400	400
415 Vac with pre break Aux. Contact	450	560	710
500 Vac with pre break Aux. Contact	550	710	710
690 Vac with pre break Aux. Contact	475	600	600
Motor Reactive 415 Vac (INAR)	2 X 150	3 X 150	4 X 125
Overload Capacity			
Short circuit current with fuses (kA RMS)	80	80	80
Fuse Rating	800	1000	1250
Peak short circuit making capacity (kA RMS)	55	105	105
Admissible short time current 1 sec (kA RMS)	26	50	50
Making & Breaking Characteristics			
Breaking capacity (A RMS) 415 Vac 0-0.35	6400	8000	8000
Making capacity (A RMS) 415 Vac pf=0.35	8000	10000	10000
Endurance			
Mechanical Life (No. of Operations)	4000	4000	4000
Electrical Life (No. of Operations)	500	500	500
Operating Force (N-m)	40	40	40
Connection			
Min. Cu. Cable / Bus bar size (mm ²)	50X5X2	60X5X2	80X5X2
Min. Al. Cable / Bus bar size (mm ²)	50X8X2	50X10X2	63X12X2

Frame 5

Technical Specification

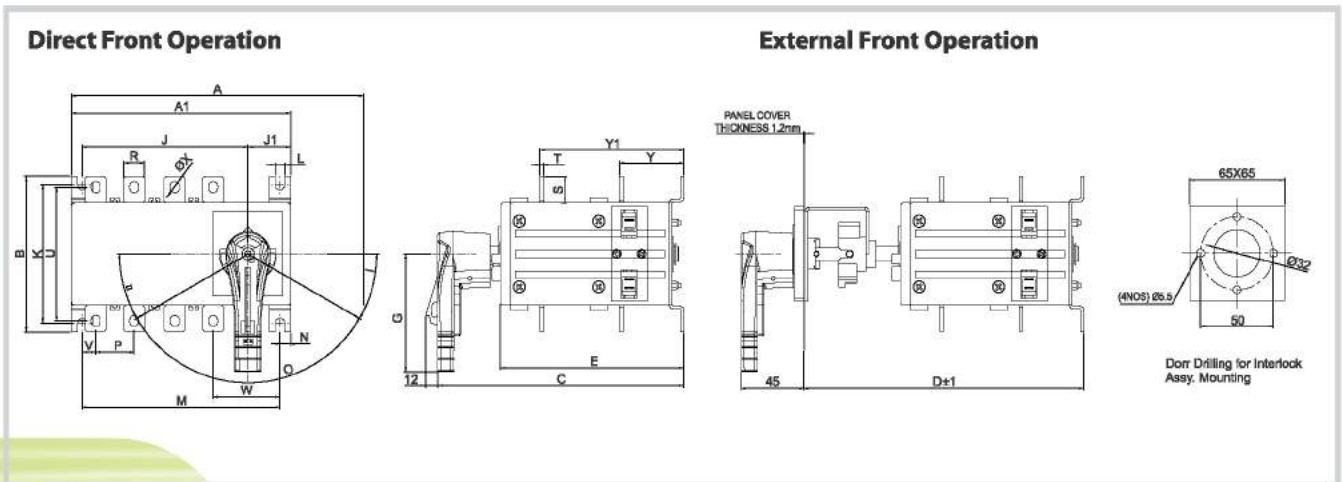
Thermal Current (Ith) 40 C	1600 A	2000 A	2500 A	3150 A
Max. Normal rating of fuses	2 X 800	2 X 1000	2X1250	2X1250
Insulation volatage Ui (Vac)	1000	1000	1000	1000
Dielectric strength (Vac) 50 Hz 1 minute	10000	10000	10000	10000
Impulse volatage (IN)	12	12	12	12
Rated Operational Current(A)				
415 Vac AC 23A	1000	1250	1250	1250
500 Vac: AC 23A	1000	1000	1000	1000
260V dc: DC 21A	1600	2000	2000	2000
DC 22A	1250	1250	1250	1250
DC 23A	1250	1250	1250	1250
440V dc: DC 21A	1600	2000	2000	2000
DC 22A	1250	1250	1250	1250
DC 23A	1000	1000	1000	1000
Motor Power (KW) 415V				
415 Vac without pre break Aux. Contact	560	710	710	710
500 Vac without pre break Aux. Contact	710	710	710	710
690 Vac without pre break Aux. Contact	475	475	750	750
415 Vac with pre break Aux. Contact	710	900	1100	1155
500 Vac with pre break Aux. Contact	900	900	1100	1100
690 Vac with pre break Aux. Contact	750	750	900	900
Motor Reactive 415 Vac (INAR)	5 X 150	6 X 150	7 X 150	9 X 150
Overload Capacity				
Short circuit current with fuses (kA RMS)	80	80	80	80
Fuse Rating	2 X 800	2 X 1000	2 X 1250	2 X 1250
Peak short circuit making capacity (kA RMS)	110	110	110	120
Admissible short time current 1 sec (kA RMS)	50	50	50	55
Making & Breaking Characteristics				
Breaking capacity (A RMS) 415 Vac 0-0.35	8000	10000	10000	10000
Making capacity (A RMS) 415 Vac pf=0.35	10000	12500	12500	12500
Endurance				
Mechanical Life (No. of Operations)	3000	3000	2500	2500
Electrical Life (No. of Operations)	500	500	500	500
Operating Force (N-m)	40	60	60	60
Connection				
Min. Cu. Cable / Bus bar size (mm ²)	100X5X2	100X5X3	100X5X4	100X10X3
Min. Al. Cable / Bus bar size (mm ²)	100X8X2	100X10X3	100X10X4	



LoadSwitch

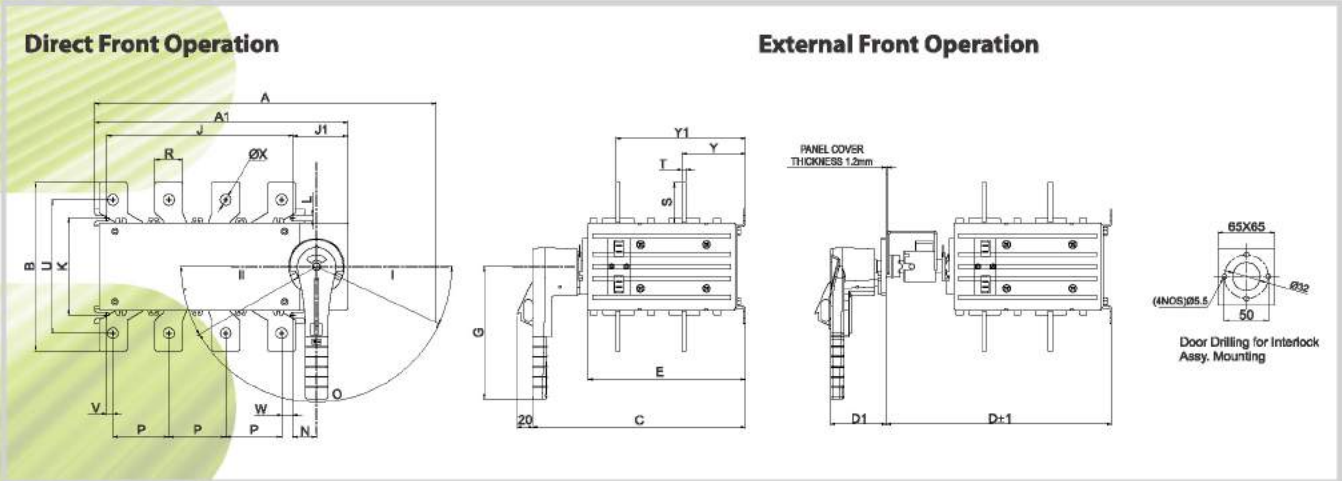
OnLoad Changeover switch

Dimension Details



Frame 0

Rating	A	A1	B	C	D	E	G	J	J1	K	L	M	N	P	R	S	T	U	V	W	ΦX	Y	Y1	open EX
63	203	152	117	168	190	125	86	114	27	95	7	127	14	25	12	18	2	96	3	47	7	24	78	2Kg
100	203	152	117	168	190	125	86	117	2	95	7	127	14	25	14	18	2	96	2	47	7	27	80	2Kg



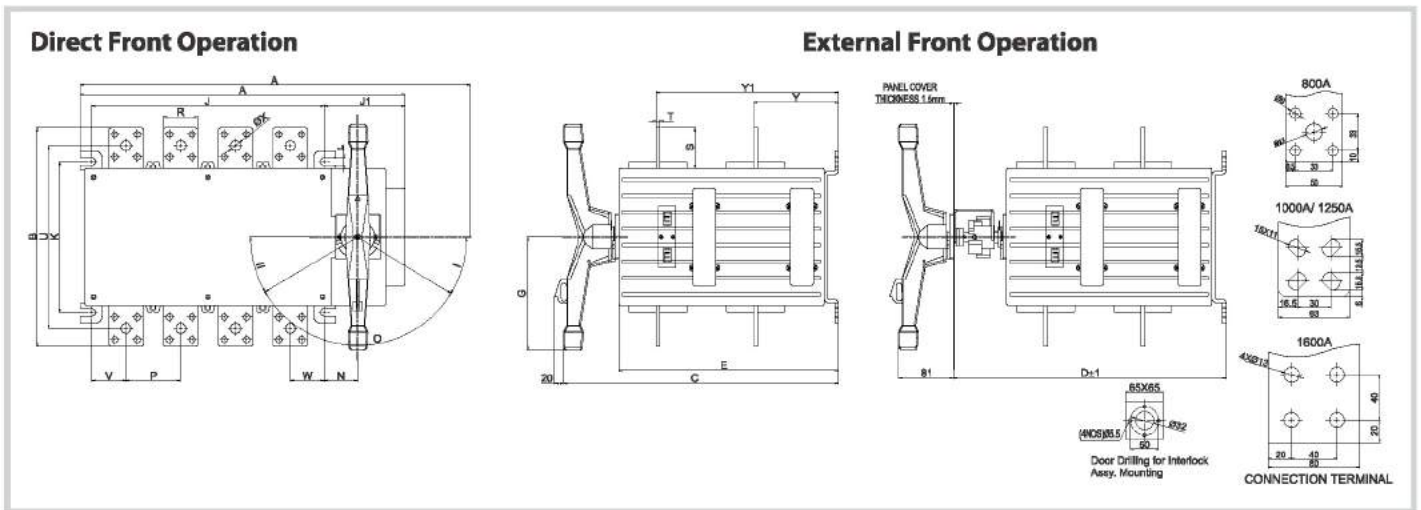
Frame 1 - 3

Rating	A	A1	B	C	D	D1	E	G	J	J1	K	L	N	P	R	S	T	U	V	W	ΦX	Y	Y1	open EX
100	294	230	143	216	237	64	150	115	150	66	95	7	29	46	22	29	3	119	8	8	9	54	120	
125	303	230	140	215	231	56	150	115	165	72	95	7	38	45	22	29	3	120	7	7	9	55	121	
200	305	228	155	227	240	65	160	116	162	57	95	6.5	26	47	25	35	4	123	10.5	10.5	10	64	130	
250	360	286	191	235	245	68	168	116	215	67	111	7	32	65	32	46	3	155	22	22	13	62	137	
400	470	360	240	307	319	71	240	154	270	83	185	9	47	73	40	40	5	205	18	18	11	85	196	
630	470	362	270	310	319	65	245	155	251	84	180	9	48	80	55	55	5	230	31	31	15	86	196	



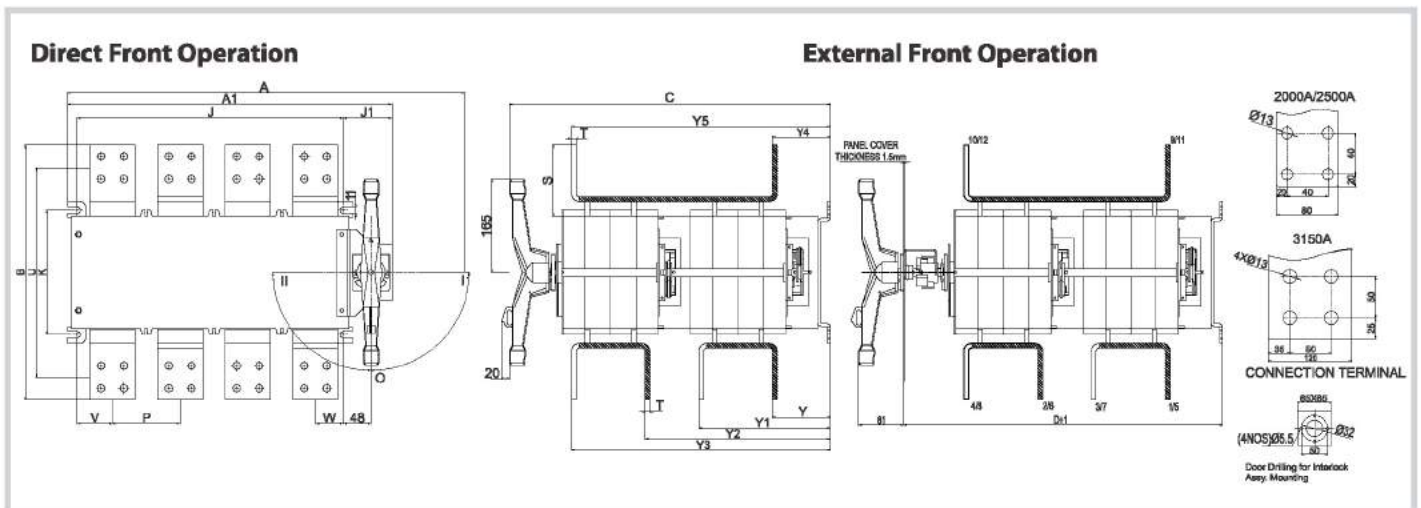
Dimension Details

LoadSwitch OnLoad ChangeOver Switch



Frame 4 - 5

Rating	A	A1	B	C	D	D1	E	G	J	J1	K	L	N	P	R	S	T	U	V	W	ΦX	Y	Y1	open EX
800	572	475	320	402	398	81	321	165	341	116	220	11	49	80	50	60	6	267	50	50	15	124	266	
1000	624	527	330	402	398	81	321	165	474	116	220	11	49	120	63	65	6	273	63	50	15	124	266	
1250	624	527	330	402	398	81	321	165	474	116	220	11	49	120	63	65	7	273	63	50	15	125	267	
1600	624	527	362	402	398	81	321	165	474	116	220	11	49	120	80	80	15	281	63	50	15	129	271	



Frame 5

Rating	A	A1	B	C	D	J	J1	K	P	S	T	U	V	W	Y/Y4	Y1	Y2	Y3/Y4	open EX
4X2000A	703	575	450	570	566	474	85	220	120	125	8	371	64	50	102	233	328	459	
4X2500A	703	575	450	570	566	474	85	220	120	125	10	371	64	50	100	237	326	463	
4X3150A	703	575	450	570	566	474	85	220	120	150	15	401	64	50	94	248	320	474	

OnLoad ChangeOver Housed Switches

Housed Switches



63 A



125 A



250 A



400 A



800 A



1000A-3000A

LoadSwitch OnLoad Changeover Switch

Housed switches

- Quick Make & Quick Break mechanism.
- Adapted to Environments subject
- Any pole can be used as neutral pole.
- AC23 utilisation category
- Bounce free contacts
- 2 external Earthing points
- Available in 3 stable positions with indications for Normal Power supply on, Standby power supply on and an OFF position (I-O-II).
- High Mechanical & Electrical life with 100% Neutral rating...true 4 pole switch.
- Available with Wide range of accessories.
- Suitable for incoming and outgoing feeders.
- Bridging bars mounted on all ratings as standard feature.
- Wall mounted with 4 Bolts
- Door locking system open in OFF position only
- Door with solid hinges
- Epoxy polyester powder coating
- Incoming & outgoing easily interchangeable at site
- Removable plate top and bottom
- Door 1.2mm/Body 1.6mm sheet steel endosome



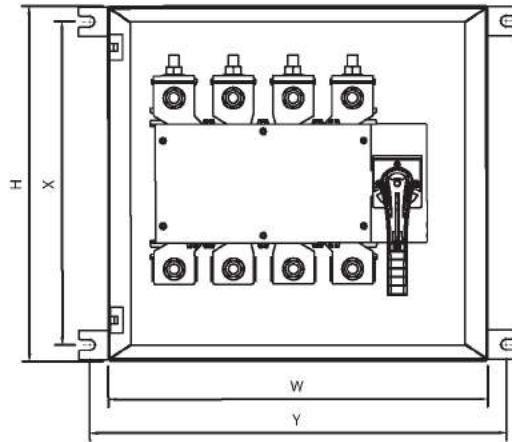
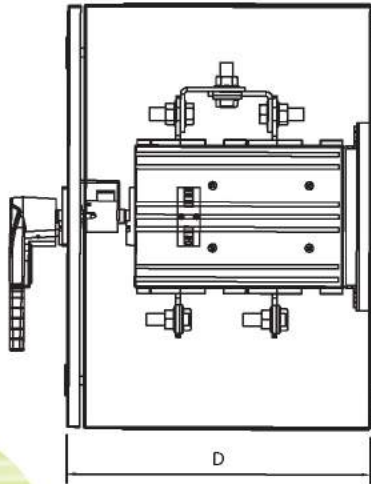
The Dorman smith Elegance series Housed On Load changeover switch has been designed and manufactured in accordance with IEC/EN 60947-3. This enclosure provides protection against live parts as well as environmental factors like dust, water and other hazards. Elegance series On Load changeover switch is compact design of 4 Pole manually operated, consisting of two sets of terminals for connecting two incoming supply sources. The Elegance series product portfolio includes a wide range from 63A to 3150A in 6 Frame



LoadSwitch

OnLoad Changeover switch

OnLoad Changeover Switch with Enclosure 63A-3150A



Rating	W(Width)	H(Height)	D(Depth)	X	Y	Sheet Thickness	
						Cover	Enclosure
63A-100A	215	255	190	215	245	1.2	1.2
125A-200A	290	365	240	325	320	1.2	1.6
250A-320A	350	455	258	415	380	1.2	1.6
400A-630A	475	575	325	515	525	1.2	1.6
800A	800	800	410	720	850	1.2	1.6
1000A-1600A	800	800	410	720	850	1.2	1.6
2000A-3150A	800	1200	596	720	850	1.6	2

Product selection chart

COS040163	
COS	Skeleton(Open) OnLoad Changeover Elegence series
04	4 Pole
01	Frame
63	Ampere

COS040163	
COS	Housed(Enclosed) OnLoad Changeover Elegence series
04	4 Pole
01	Frame
63	Ampere

Product Code Chart

LoadSwitch OnLoad Changeover Switch



Current Rating (A)	Product Code 4 Pole
63	COS040063
100-Frame 0	COS040100
100- Frame 1	COS041100
125	COS041125
160	COS041160
200	COS041200
250	COS042250
400	COS043400
320	COS043320
630	COS043630
800	COS044800
1000	COS0451000
1250	COS0451250
1600	COS0451600
2000	COS0452000
2500	COS0452500
3150	COS0453150

Current Rating (A)	Product Code 4 Pole
63	COE040063
100-Frame 0	COE040100
100- Frame 1	COE041100
125	COE041125
160	COE041160
200	COE041200
250	COE042250
400	COE043400
320	COE043320
630	COE043630
800	COE044800
1000	COE0451000
1250	COE0451250
1600	COE0451600
2000	COE0452000
2500	COE0452500
3150	COE0453150

LoadSwitch

OnLoad Changeover Switch

Handle

- Single Hand Operated Handle for ratings up to 630A
- Two Hand Operated Handle for ratings 800A and above
- Provision for providing padlocks in OFF& ON position
- Telescopic operating shaft for varied depth adjustment

Current Rating	Product Code
63A-100A	CD0RH1
125A-200A	CD1RH1
250A	CD2RH1
320A-630A	CD3RH1
800A	CD4RH1
1000A-3150A	CD5RH1

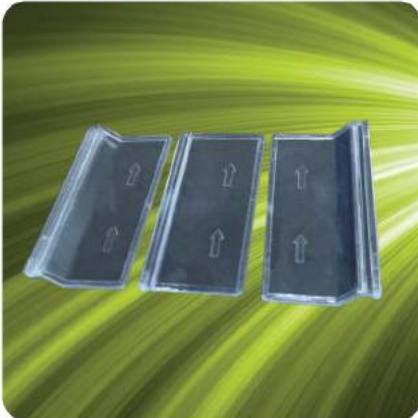
Direct Mounted Rotary Handle

- Door mounted Rotary Handle with extendable shaft and door interlock assembly
- Extension handles for operation of switch disconnectors housed in enclosures
- Handles available in lengths of 300mm

Accessories



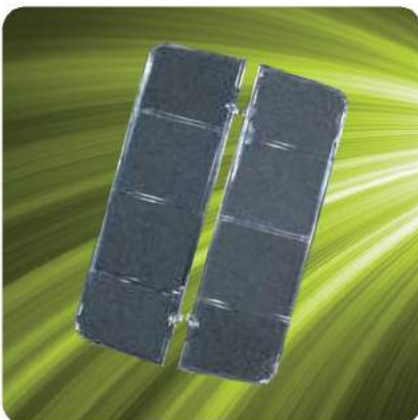
Accessories



Terminal Interphase Barriers:

Terminal Barriers are made up of transparent polycarbonate flame retardant material to provide inter-phase separation.

Current rating	Product Code
63A-100A	CD0TB
125A-200A	CD1TB
250A	CD2TB
320A-630A	CD3TB
800A	CD4TB
1000A-3150A	CD5TB



Terminal Shrouds:

Terminal Shrouds provide complete touch proof design and prevent accidental touching of live terminals. They are click fit type. Due to hinge type design terminal, shroud can be turned by 90 degree, hence terminals can be inspected without removing these shrouds.

Current rating	Product Code
63A-100A	CD0TS
125A-200A	CD1TS
250A	CD2TS
320A-630A	CD3TS
800A	CD4TS
1000A-3150A	CD5TS

LoadSwitch

OnLoad Changeover Switch

Accessories

Door Interlock Assembly

Door Interlock Assemblies used with extended handles to allow opening of enclosure door only when switch disconnecter is in OFF position.



Auxiliary Contact:

Auxiliary contacts, with 2NO + 2NC can be fitted in the switch for signalling.

Current Rating

63A-3150A

Product Code

CDOAUX1



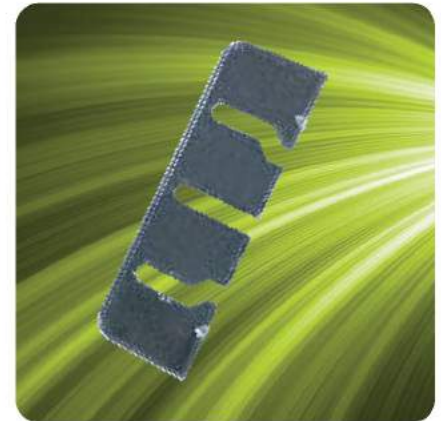
Accessories

Loadline OnLoad Changeover Switch

Source Separator:

Source separators are available as accessories used to isolate two source which provides protection against direct accidental touch with terminals and connecting parts. These are made of transparent polycarbonate flame retardant material. Source Separators are also eliminate possibility of flash over between two supplies due to accidental falling of external objects.

Current rating	Product Code
63A-100A	CD0SS
125A-200A	CD1SS
250A	CD2SS
320A-630A	CD3SS
800A	CD4SS
1000A-3150A	CD5SS



Mechanical Interlock

Accessories for interlocking 2 or more Switch Disconnectors

SYMBOL	Product Code
DS1	KBOLTLOCK-DS1
DS2	KBOLTLOCK-DS2
DS3	KBOLTLOCK-DS3
DS4	KBOLTLOCK-DS4
DS5	KBOLTLOCK-DS5
DS6	KBOLTLOCK-DS6
DS7	KBOLTLOCK-DS7
DS8	KBOLTLOCK-DS8



OffLoad Changeover Switch



Overview

Dorman Smith Elegance offload changeover switches has been designed and manufactured in accordance with IEC/EN 60947-3. Given their utilization category of AC22. Elegance series offload changeover provides safe and reliable transfer of power from main source to another and vice versa. These Changeover Switches are available in epoxy powder coated sheet steel enclosure, The Elegance series offload changeover product portfolio includes a wide range from 16A to 2000A in 4 Frames.



Key Features

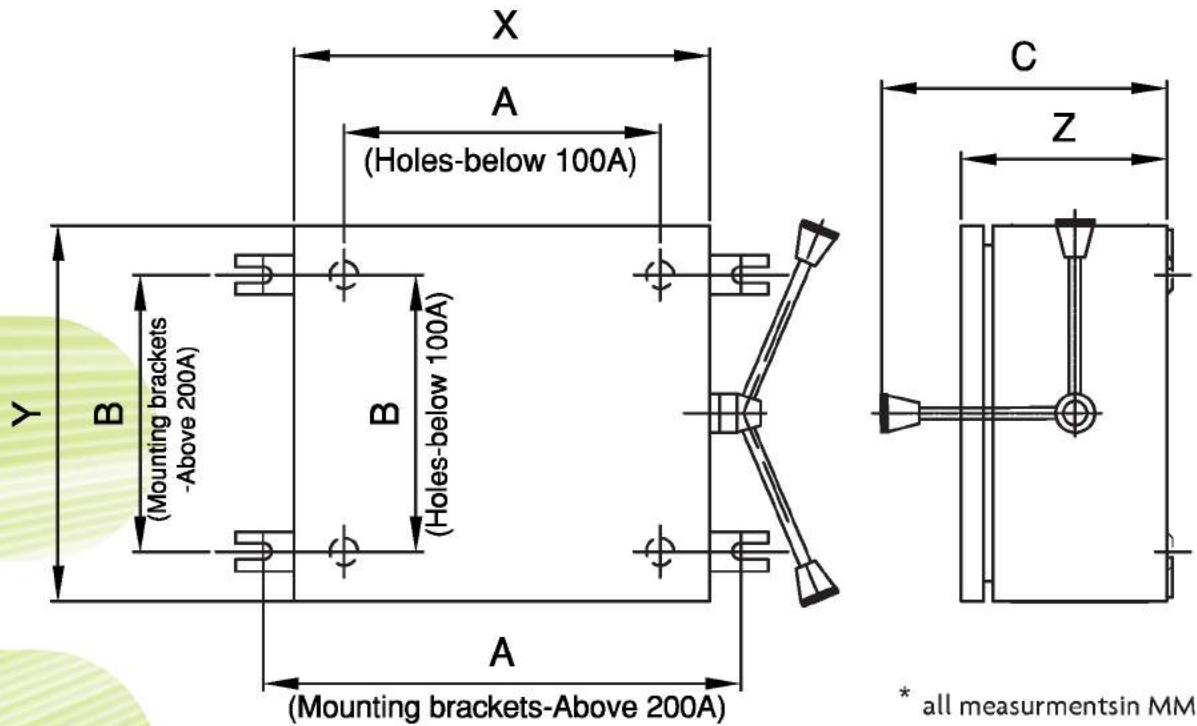
- Side operated with three position I-O-II. Normal Power supply on, Standby power supply on and an OFF position .
- Double pole and four poles version.
- Double pole version available in 32A & 63A - 240VAC and 4 pole from 16A to 2000A
- Suitable for Off Load applications
- Rated Voltage: 415V, 50Hz
- Provision for Door interlocking to ensure that door cannot be opened in "ON" position.
- Termination of Copper & Aluminum cables
- Moving current carrying parts are made of ETP Copper with Silver plating to increased contact life and to ensure low temperature rise at rated current.
- DMC Terminal blocks are provided for Cable termination with excellent Thermal & Dielectric properties Provided with adequate Knock Outs for cable entry and inner mounting holes for easy installation
- Quick make and Quick break mechanism.
- Knife Type mechanism.
- Arcing contacts provision in current rating 200 Amps and above.
- Suitable for individual mounting.
- Any pole suitable for Neutral.



LoadSwitch

OffLoad Changeover Switches

Dimension Details



Current rating	Product Code	X	Y	Z	A	B	C	Size for cable entry & exit	Size of al. conductor	Size of knock-out
Double Pole										
32A	COEF020032	142	200	85	90	150	165		16 SQ.MM	26 MM
63A	COEF020063	210	200	110	160	150	170	180x47	25 SQ.MM	26 MM
Four Pole										
16A	COEF040016	235	186	86	184	136	148		4 SQ.MM	19 MM
32A	COEF040032	210	200	110	160	150	170	180x47	16SQ.MM	26 MM
63A	COEF040063	270	260	130	200	196	235	240x70	25 SQ.MM	32 MM
100A	COEF040100	350	300	135	280	230	240	320x65	50 SQ.MM	32 MM
200A	COEF041200	427	496	240	465	360	345	386x118	150 SQ.MM	50 MM
400A	COEF042400	560	495	300	620	455	470	517x164	300 SQ.MM	51 MM
630A	COEF042630	560	495	300	620	455	470	517x164		51 MM
800A	COEF042800	560	495	300	620	455	470	517x164		51 MM
1000A	COEF0431000	660	615	555	682	550	870	626x205		51 MM
1250A	COEF0431250	660	615	555	682	550	870	626x205		51 MM
1500A	COEF0441500	762	711	665	790	645	920	698x233		51 MM
2000A	COEF0442000	762	711	665	790	645	920	698x233		51 MM

Product selection chart

COEF040163	
COEF	Housed(Enclosed) OffLoad Changeover Elegence series
04	4 Pole/2 Pole
01	Frame
63	Ampere



Product Code chart

Current Rating	Product code
Double Pole	
32A	COEF020032
63A	COEF020063
Four Pole	
16A	COEF040016
32A	COEF040032
63A	COEF040063
100A	COEF040100
200A	COEF041200
400A	COEF042400
630A	COEF042630
800A	COEF042800
1000A	COEF0431000
1250A	COEF0431250
1500A	COEF0441500
2000A	COEF0442000

MLB Frame ATS

(Switch Disconnecter type)



Overview

The MLB Series Automatic Transfer Switch (ATS) has been designed and manufactured in accordance with IEC/EN 60947-6-1, Switch Disconnectors to IEC/EN 60947-3 & General rules IEC/EN 60947-1. MLB series ATS is a combination of motorized electro-mechanically interlocked switch disconnectors and are suitable for use in generator power panels, air conditioning and telecommunications.

Main Features

1. The MLB series ATS product portfolio includes a wide range from 20A to 3200A, 3 pole and 4 Pole motorized changeovers with voltage detection, frequency detection, electro-mechanical interlocking functions, automatic changeover and remote emergency manual control
2. It is integrated with control logic and an additional controller is not required
3. Automatic changeover between main power supply and backup power supply with safety isolation
4. ATS manufactured with fiberglass unsaturated polyester resin, with strong dielectric properties and having high level of protection and reliability in operation
5. Switch mechanism is with the double row type composite contacts, pre-stored energy side pulling motor with micro-electronics/control technology makes true zero arcing (no arc chamber required)
6. Single motor-driven transfer leading to reliable low noise, smooth operation switching
7. Four operation methods possible in MLB ATS:
 - Automatic control operations
 - Manual operation
 - Remote control operation
 - Emergency disconnected operation under automatic start
8. Easy Auto or Manual selection. Operating handle available for manual operation
9. Padlocking facility available on the switch body
10. Intelligent door mounted controller available as an option. This controller interfaces with ATS for Auto/Manual operation with status display. Automatic changeover time can be set within a range of 0-30s
11. Available in 3 stable positions with indications for Normal Power Supply ON, Standby Power Supply ON and an OFF position (I-0-II)
12. Enclosed type ATS available
13. Electrical key lock provided in ATS inhibits automatic operation and allows handle use when the key lock is in manual mode
14. ATS can be switched without any power source in Manual mode with operating handle
15. Contact us for other AC/DC Voltages



LoadSwitch

Automatic Transfer Switch

MLB Series

Enclosed ATS

MLB ATS is also available in enclosed Weather proof Enclosure (IP54).

Main Features

- Assembly confirms to IEC 61439-2
- Enclosure Type - Sheet Steel, epoxy powder coated to Light Grey as per RAL 7035
- Removable Gland plate: Top and Bottom from 20A to 250A
Bottom from 400A to 3200A



Operation Overview

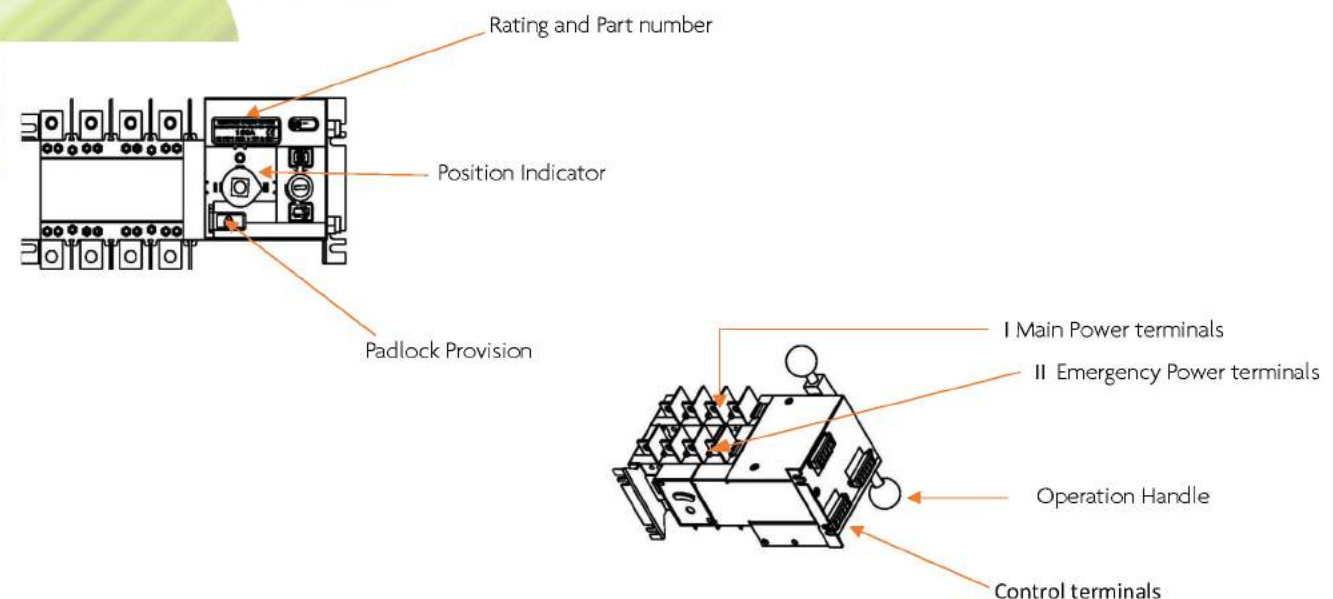
Automatic and Remote Changeover Operation Mode

MLB ATS is equipped with a 2 position electrical key lock. When this key lock is in Auto position ATS will operate as an Automatic changeover or Remote controlled changeover according to the control wiring. Refer wiring diagram for details.

When the key lock is in Manual position the ATS will operate as a Manual changeover with use of the operating handle.

Auto & Manual operations are possible with an intelligent controller. Selection can easily be made from the front panel which also displays the status of the ATS. Controller allows operator to select changeover time between 0-30s. MLB ATS is available with 2 types of controllers

ATS 20A to 3200A



LoadSwitch

Automatic Transfer Switch

MLB Series

MLB ATS is available with 2 types of Microprocessor based controllers

- Normal Standard type controller (MLBCN) with only key pad for selection.

Standard controller is door mounted type with front panel. Auto/Manual selection is possible by selecting self-locking type button in front panel. Status indication available in the front panel.



- LCD Display type controller (MLBCD) with LCD Display and key pad.

Available with LCD display of 2 source parameters. Auto/Manual selection is possible by selection button. All selection and parameters are visible on LCD display.



- MLBCN/MLBCD controller wiring

F1, F2 & F3 terminals are used to start and close the generator. F is the common point.

When main power is normal, F and F2 is closed, F and F1 is open.

When main power is abnormal F and F1 delay by about 3 seconds and closes backup power and at the same time F and F2 will be open.

When R1, R2 are initiated the controller will switch ATS to double break position (OFF) L1, L2 user additional contact for.

Product selction chart

COEMLB04063	
C	Product-Loadline ATS
OE	O-Skeleton type, OE-Enclosed type
M	Motorised
LB	Switch Disconnecter type
04	Poles
063	Current rating



LoadSwitch

Automatic Transfer Switch

MLB Series

Product Chart

Current Rating	Frame	Skeleton Type		Enclosed Type		
		3 Pole	4 Pole	3 Pole	4 Pole	
20A	MLB0	COMLB03020	COMLB04020	COEMLB03020	COEMLB04020	
40A		COMLB03040	COMLB04040	COEMLB03040	COEMLB04040	
63A		COMLB03063	COMLB04063	COEMLB03063	COEMLB04063	
80A		COMLB03080	COMLB04080	COEMLB03080	COEMLB04080	
100A		COMLB03100	COMLB04100	COEMLB03100	COEMLB04100	
125A		COMLB03125	COMLB04125	COEMLB03125	COEMLB04125	
160A		COMLB03160	COMLB04160	COEMLB03160	COEMLB04160	
250A		COMLB03250	COMLB04250	COEMLB03250	COEMLB04250	
400A		MLB1	COMLB13400	COMLB14400	COEMLB13400	COEMLB14400
630A			COMLB13630	COMLB14630	COEMLB13630	COEMLB14630
800A	COMLB13800		COMLB14800	COEMLB13800	COEMLB14800	
1000A	COMLB131000		COMLB141000	COEMLB131000	COEMLB141000	
1250A	COMLB131250		COMLB141250	COEMLB131250	COEMLB141250	
1600A	COMLB131600		COMLB141600	COEMLB131600	COEMLB141600	
2000A	COMLB132000		COMLB142000	COEMLB132000	COEMLB142000	
2500A	COMLB132500		COMLB142500	COEMLB132500	COEMLB142500	
3200A		COMLB133200	COMLB143200	COEMLB133200	COEMLB143200	

Technical Specification

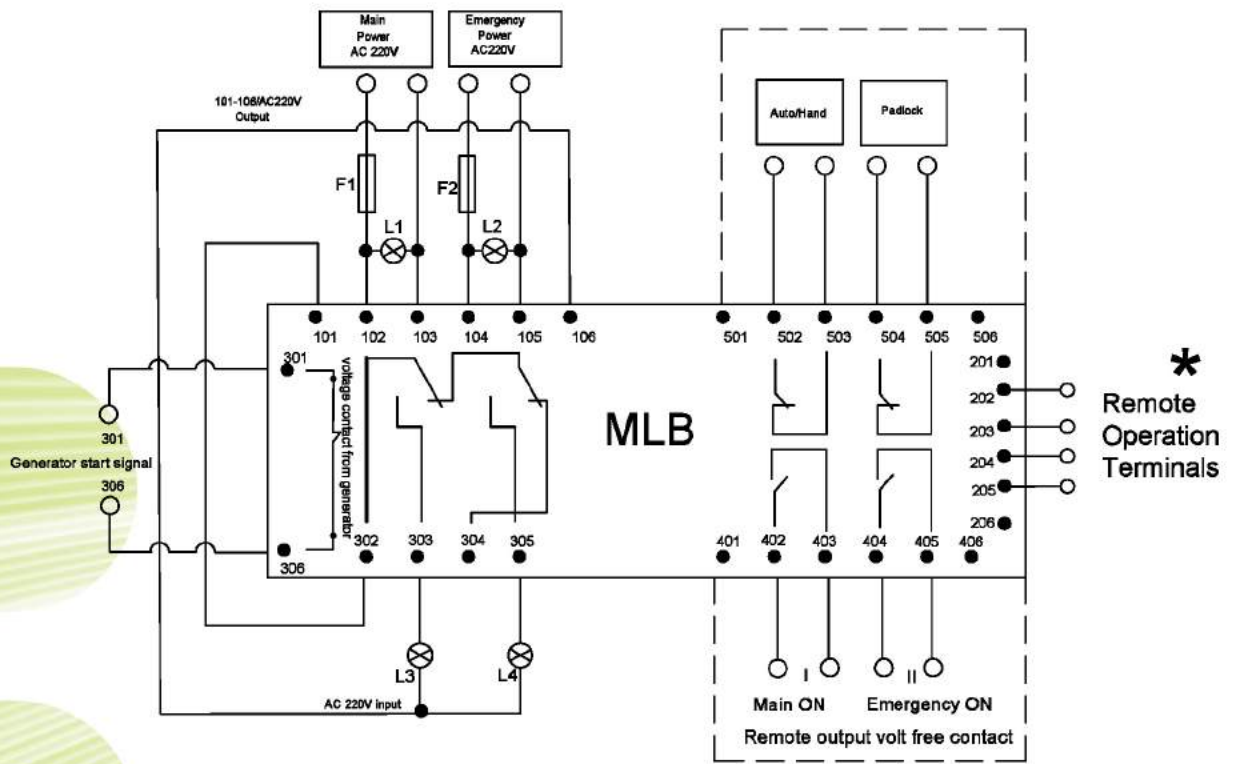
Series	MLB																MLB																																	
Frame Size	0																1																																	
General Parameters																																																		
Nominal Current Ratings In (A)	20	40	63	80	100	125	160	250	400	630	800	1000	1250	1600	2000	2500	3200																																	
Number of Poles																	3P/4P																																	
Compliance to Standard																	IEC 60947-6-1/IEC 60947-3/IEC-60947-1																																	
Electrical Characteristics																																																		
Rated Operation Ue (V)																	440 V AC																																	
Insulation Voltage Ui (V)	750V AC																1000V AC																																	
Rated Impulse withstand Voltage Uimp	8KV AC																12KV AC																																	
Frequency																	50 / 60Hz																																	
Rated making capacity																	10 Ie																																	
Rated Breaking capacity																	8 Ie																																	
Rated limited Short-Circuit Current	50kA																70kA				100kA				120 kA																									
Rated Short-Circuit withstand Current Is Icw	7 kA				9 kA				13 kA				26kA				50kA				55 kA																													
Control voltage																	DC 24V, 48V, 110V & AC 220V																																	
Rated current	AC-31A		20	40	63	80	100	125	160	250	400	630	800	1000	1250	1600	2000	2500	3200																															
	AC-35A		20	40	63	80	100	125	160	250	400	630	800	1000	1000	1000	1250	1250	1250																															
	AC-33A		20	40	63	80	100	125	160	250	400	400	630	800	800	1000	2000	2500	3200																															
Power Consumption (Motor)	Starting		300W				325W				355W				400W				440W				600W																											
	Normal		55W				62W				74W				90W				98W				120W																											
Mechanical Characteristics																																																		
Endurance (number of operating cycle)	10000																5500				4000				3000																									
Weight	3 Poles		7.2				8				8.2				14				15				16				30				34				42				85				76				120			
	4 Poles		7.5				8.5				9				16				17				18				36				40				49				95				98				135			
Changeover Time I - II or I - II	2s				0.6s				0.6s				1.2s				1.8s				2.4s																													

LoadSwitch

Automatic Transfer Switch

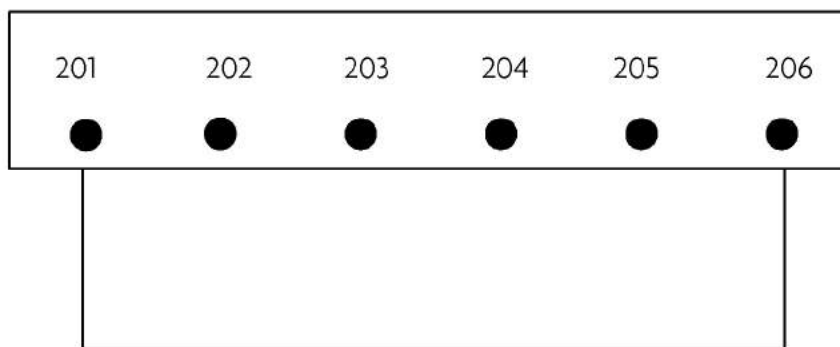
MLB Series

Automatic operation with diagram



- L1- Main Power Healthy
- L2- Emergency Power Healthy
- L3- Main Power ON
- L4- Emergency Power ON

Terminal available above 400A

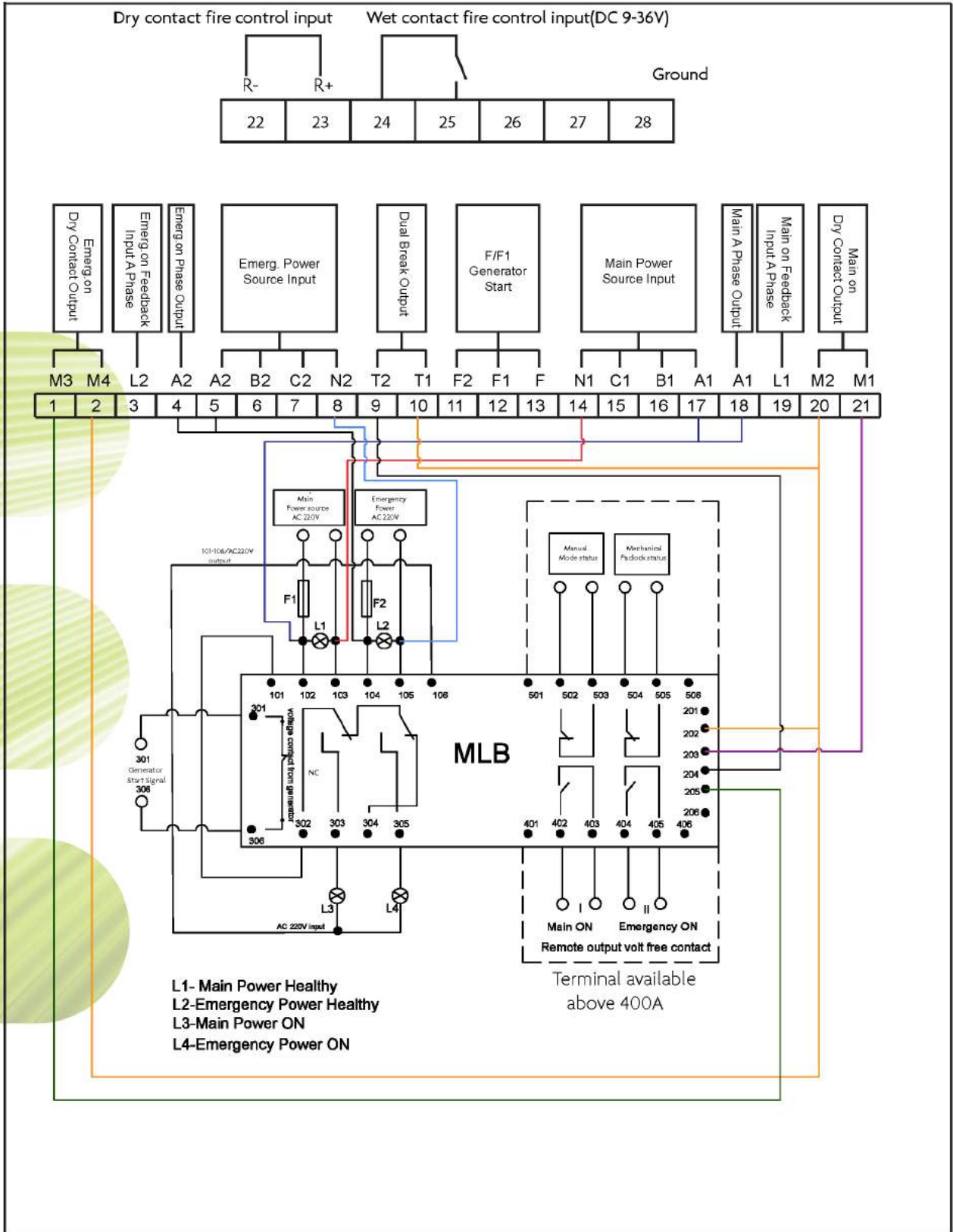


* Remote Operation Terminals

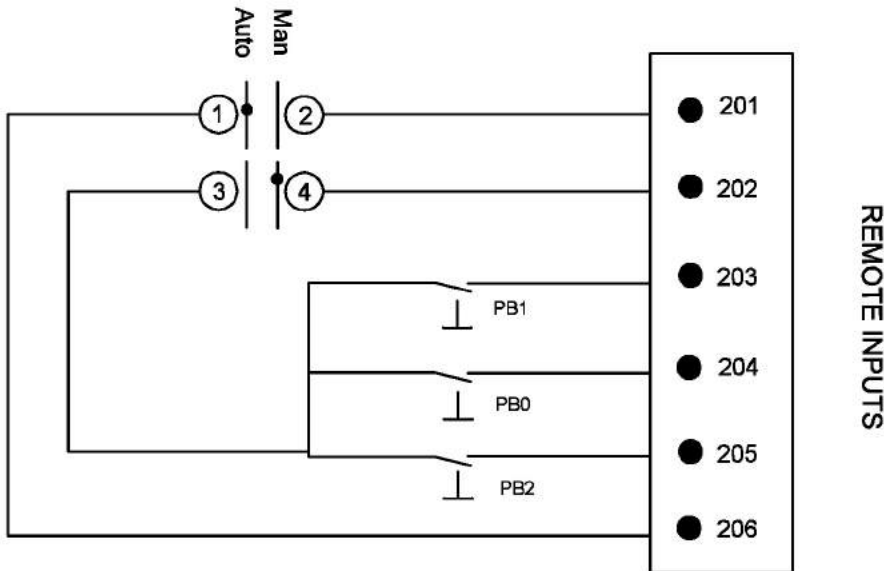
LoadSwitch

Automatic Transfer Switch

MLB Series

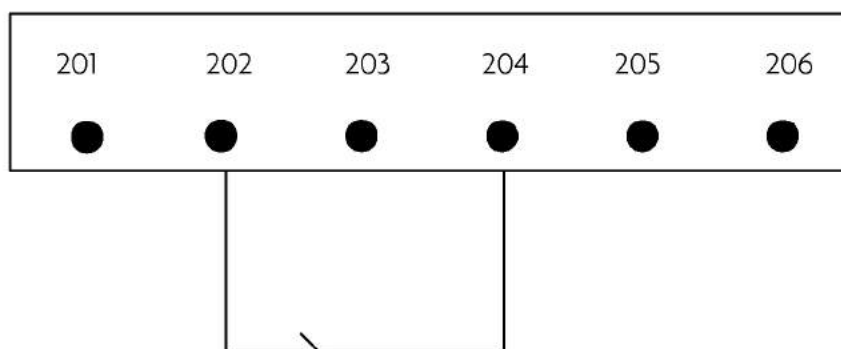


Remote operation with diagram



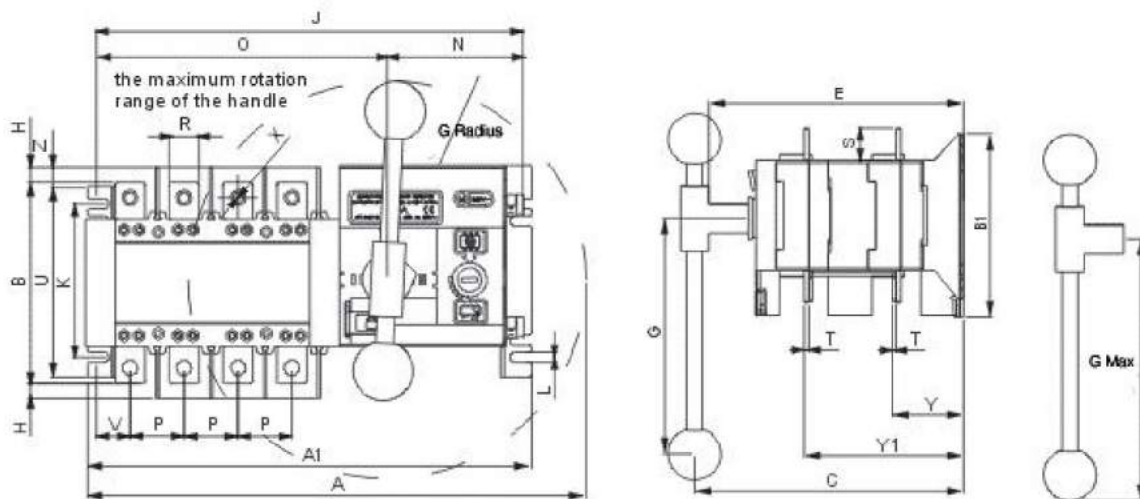
PB0 - OFF
 PB1 - Normal Supply
 PB2 - Emergency Supply

Emergency stop

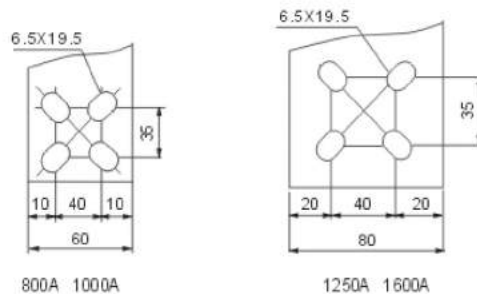


Dimensions

MLB 20A - 1600A



Mounting Dimensions:



MLB 20A- MLB 1600A																							
Rating	A	A1	B	B1	C	E	G	H	J	K	L	N	O	P	R	S	T	U	V	ΦX	Y	Y1	Z
20A-100A	280	244	107	103	150	140	115	19	226	84	7	83.5	142.5	30	14	18	2.5	103	13	6	41.5	93	2
125A-160A	360	303	135	142	213	200	145	10	285	117	7	93	192	36	20	25	3.5	127	21	9	55.5	127.5	4
250A	420	362	159	142	213	200	145	6	343	103	7	93	250	50	25	28	3.5	141	29	11	58	131.5	9
400A/3P	530	370	234	222	286	275	245	20	365	179	9	97	268	65	32	37	5	222	38	11	83	193	6
400A/4P	590	430	234	222	286	275	245	20	425	179	9	97	328	65	32	37	5	222	38	11	83	193	6
630A/3P	530	370	250	222	286	275	245	20	365	179	9	97	268	65	40	45	6	222	38	11	83.5	193.5	14
630A/4P	590	430	250	222	286	275	245	20	425	179	9	97	328	65	40	45	6	222	38	11	83.5	193.5	14
800A-1000A/3P	785	520	328	250	351	340	360	20	503	220	11	88	415	120	60	64	8	250	59	13	109	254	39
800A-1000A/4P	1080	634	328	250	351	340	540	20	617	220	11	88	529	120	60	64	8	250	59	13	109	254	39
1250A/3P	785	520	336	250	351	340	360	20	503	220	11	88	415	120	80	68	8	250	59	13	109	254	43
1250A/4P	1080	634	336	250	351	340	540	20	617	220	11	88	529	120	80	68	8	250	59	13	109	254	43
1600A/3P	785	520	336	250	351	340	360	20	503	220	11	88	415	120	80	68	10	250	59	13	110	255	43
1600A/4P	1080	634	336	250	351	340	540	20	617	220	11	88	529	120	80	68	10	250	59	13	110	255	43

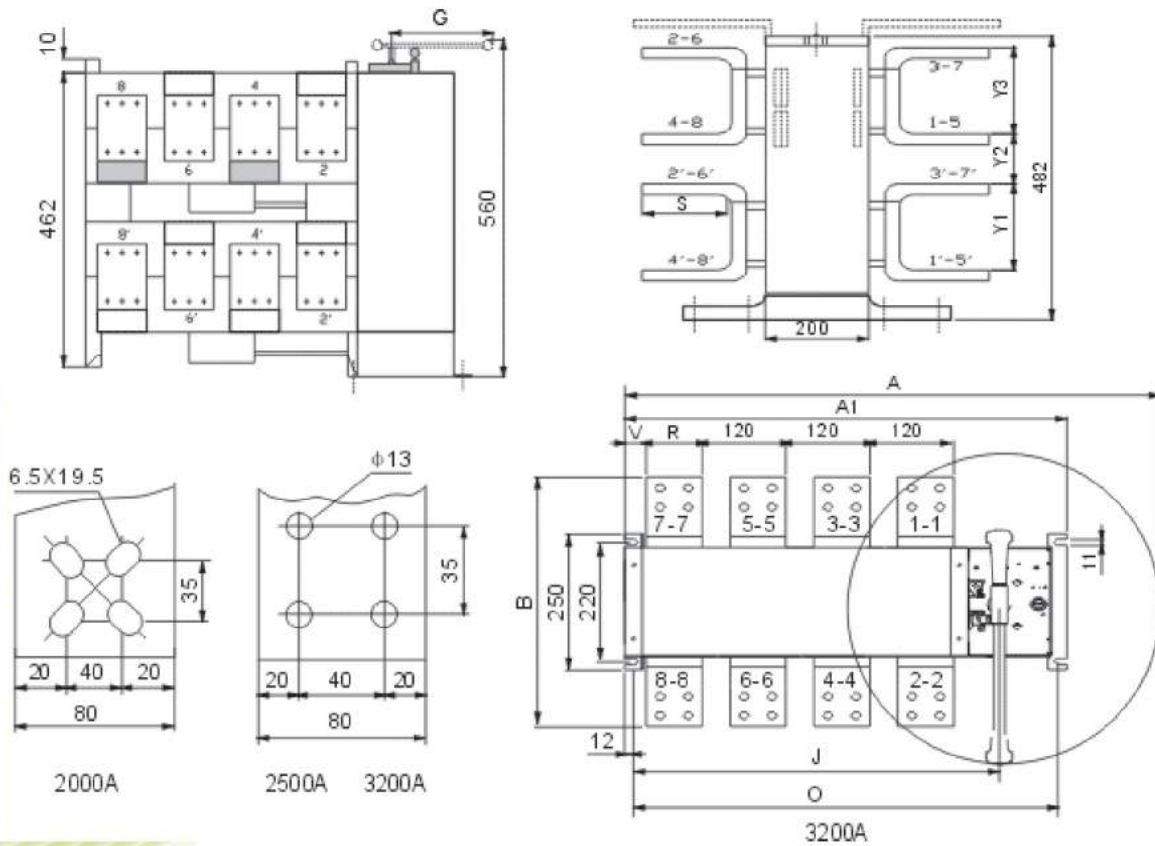
LoadSwitch

Automatic Transfer Switch

MLB Series

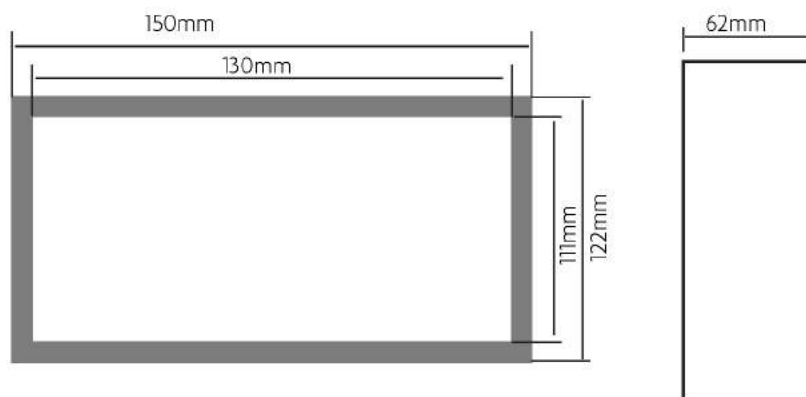
Dimensions

MLB 2000A - 3200A

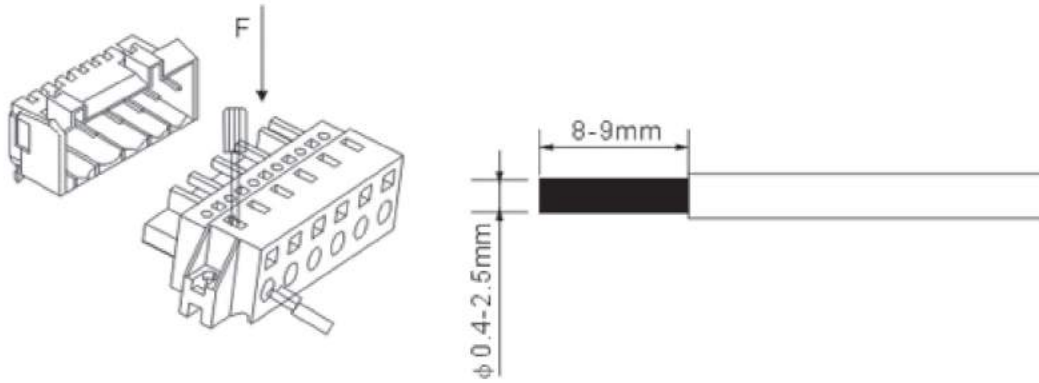


MLB 2000A- MLB 3200A														
Rating	A	A1	B	C	G	J	O	R	S	T	V	Y1	Y2	Y3
2000A/3P	785	535	423	560	360	408	490	80	81	10	30	113	121	113
2000A/4P	1080	650	423	560	540	523	605	80	81	10	30	113	121	113
2500A/3P	785	535	433	560	360	408	490	80	81	15	30	118	116	118
2500A/4P	1080	650	433	560	540	523	605	80	81	15	30	118	116	118
3200A/3P	785	535	443	560	360	408	490	80	81	20	30	123	111	123
3200A/4P	1080	650	443	560	540	523	605	80	81	20	30	123	111	123

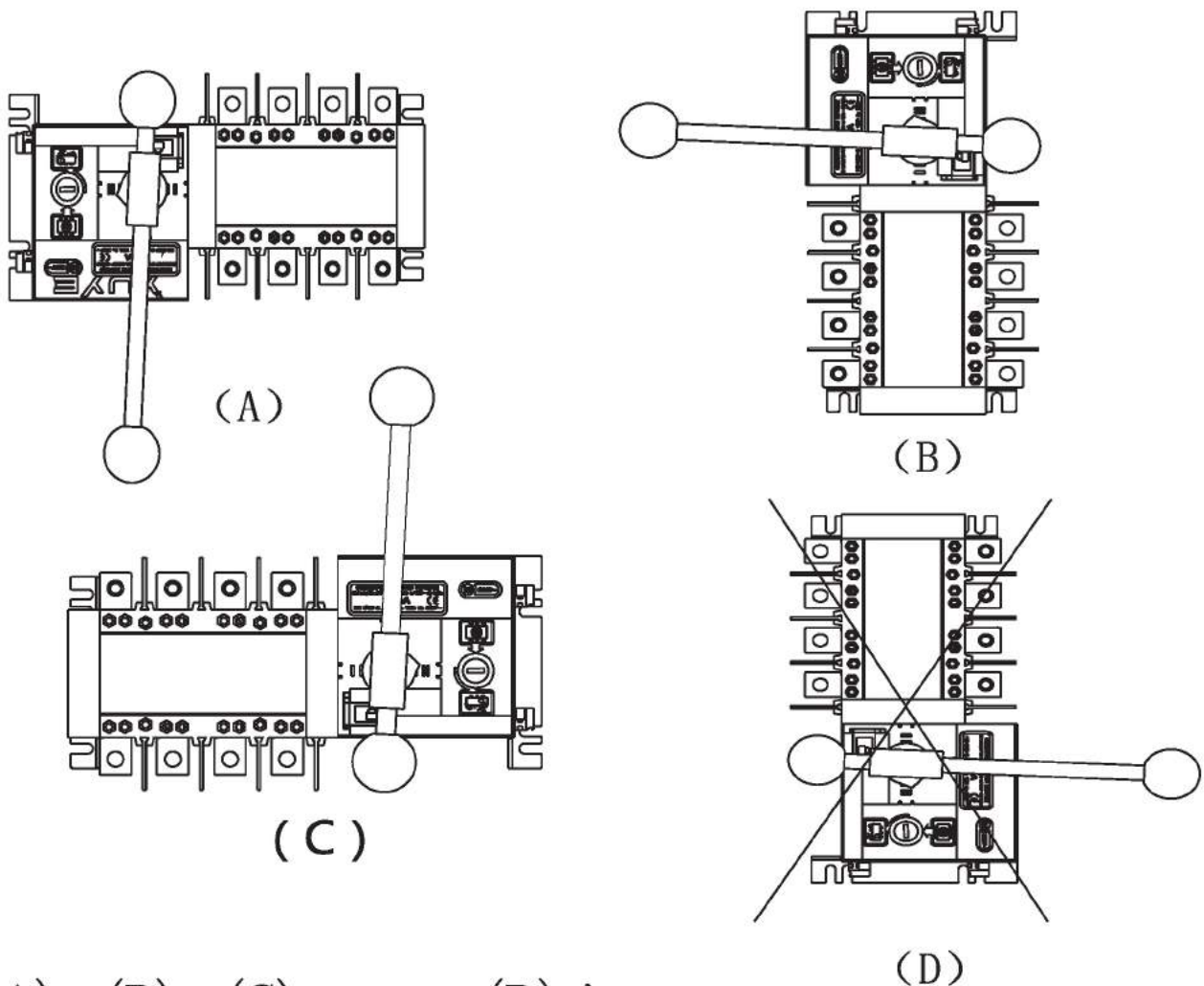
MLBCN/MLBCD- Dimension



Terminals Connection



Installation Method



(A) (B) (C) correct (D) incorrect

LM Frame ATS (MCCB type)



LoadSwitch

Automatic Transfer Switch

LM Frame

Overview

In today's modern world environment, it is essential for Buildings, Hospitals & Industrial Complexes to be able to rely on a continuous power supply. This reliability of power can be achieved by using Dorman smith ATS.

Features

- Intelligent Microprocessor - Dual-Power Automatic Switching
- Transfer operation is initiated and controlled by a compact logic controller
- ATS comprising of motor operated Moulded Case Circuit breakers and interlocks
- Protection, Isolation and switching in one device.
- Complies to IEC 60947-1 General rule, IEC947.2
- Switching and IEC-60947-6-1 Automatic Transfer switch
- Control wirings are pre-wired to terminal strip
- External wiring is simple 6 wire for 2 power sensing and close and open indication outputs
- Indicator Flag for MCCB to show status of the MCCB
- ATS has three stable positions Normal power supply closed, Off and Standby power supply closed
- For Manual operation, switch controller to Manual mode
- ATS will sense the over voltage above 270V AC and under voltage 70-80% of rated voltage.
Time delay of changeover is adjustable from 0.5s to 30s
- ATS default start is in Normal power.
- No. of Mechanical Operations (Cycles) : 2500 – 5000 operations
- No. of Electrical Operations (Cycles) : 500 – 1000 operations

Product Selection

Current Rating (A)	Pole	Cat. No.
63	3P	LM33PAC63
63	4P	LM34PAC63
100	3P	LM33PAC100
100	4P	LM34PAC100
225	3P	LM43PAC225
225	4P	LM44PAC225
400	3P	LM63PAC400
400	4P	LM64PAC400
630	3P	LM63PAC630
630	4P	LM64PAC630
800	3P	LM73PAC800
800	4P	LM74PAC800

Note: For 40°C ambient temperature, add '4' at the end of the Cat. no.

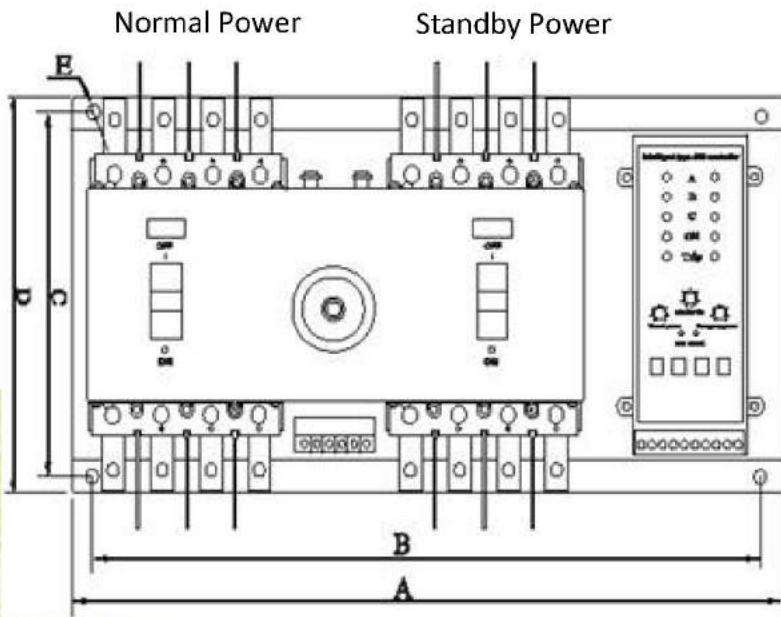


LoadSwitch

Automatic Transfer Switch

LM Frame

Dimensional Details



Current Rating (A)	A		D	B		C	H1	H2	E
	3 Pole	4 Pole		3 Pole	4 Pole				
63	380	405	250	340	385	230	<160	25	9
100	405	435	250	365	395	230	<170	25	9
225	450	480	250	410	440	230	<190	25	9
400	570	620	330	510	560	300	<230	25	11
630	680	740	330	620	680	300	<230	25	11
800	750	620	330	690	760	300	<230	25	11

Wiring Diagram

Normal Power Supply Closed

Normal Power Supply Open

Standby Power Supply Closed

Standby Power Supply Open



Technical Data & Applications

Switch

A switch is a mechanical device capable of making, carrying and breaking current under circuit conditions.

Disconnecter (Isolator)

A disconnector is a mechanical switching device that provides the function of circuit isolation.

Switch Disconnecter


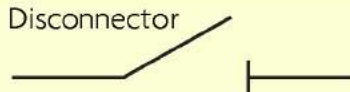
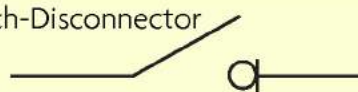
This device combines the functionality of the two foregoing devices; it provides making, carrying, breaking and isolation of current within a circuit.

Functional summary

Term	Features Provided	Features not Provided
Switch	Current rating Operational and insulation voltage Making and breaking of load Short time current rating	Isolation Protection
Disconnecter	Current rating Isolation Operational and insulation voltage Short time current rating	Protection Making/Breaking capability

Suitability for purpose

All of these devices have the ability to carry rated current either continuously or for a period of eight hours under defined conditions. Selection and specification of a specific device depends upon the circuit application.

Function		
Making and breaking current	Isolating	Making, breaking and Isolating
Switch 	Disconnecter 	Switch-Disconnecter 

Switching Applications

For switching applications, the principal functions and capabilities include:

Making and breaking operation

A switch must have the ability to make or break defined load and overload currents at a rated operational voltage, for the useful life of the device.

Short circuit action

The device must have the capability of handling short circuit current and/or through fault and/or fault making.

Protection

The device must interrupt the circuit under overload and/or short circuit conditions.

Isolation

To meet this requirement, the device must ensure disconnection of the supply for safe downstream working. Facilities must be included for safety padlocking in the 'off' position, together with positive indication of the contact position.

Neutral switching

Where the neutral is reliably earthed, it is accepted that the neutral need not be switched except in defined circumstances (e.g. the incoming switch disconnecter in a consumer unit) even though the Wiring Regulations (BS 7671:2001) class the neutral as a current carrying conductor.

In applications where the neutral cannot be confirmed as reliably earthed, the neutral should be switched simultaneously with the phase(s) or alternatively arranged to make before and break after the phase(s).

Technical Data & Applications

Utilisation Category

The utilisation category defines the basic circuit conditions and the switching capability of the device.

Category	Circuit / application
AC20/DC20	<p>Connecting and disconnecting under 'no load'.</p> <p>Assumes all switching operations are carried out by other capable devices before this device is operated.</p>
AC21/DC21	<p>Switching of resistive loads including moderate overloads.</p> <p>Suitable for purely resistive type loads.</p> <p>Device can switch 150% of its rated current under fault conditions.</p>
AC22/DC22	<p>Switching of mixed resistive/inductive loads, including moderate overloads.</p> <p>Suitable for mixed resistive/inductive loads.</p> <p>Device can switch 300% of its rated current under fault conditions.</p>
AC23/DC23	<p>Switching of highly inductive loads.</p> <p>These devices are provided principally as back-up to other means of switching, e.g. contactors. In the event of failure of the functional device, the AC23/DC23 device can safely interrupt a stalled motor current. Where devices are the only means of controlling individual motors they should comply with the requirements of Appendix A of the EN 60947-3 standard.</p>

Note: Switch disconnectors for AC21/DC21, AC22/DC22 and AC23/DC23 categories also have to meet the requirements of AC20/DC20.

For specific and special applications such as switching of capacitors and tungsten lamps not covered by the EN 60947-3 standard the manufacturer's advice should be sought.

Frequent and Infrequent Use

The designation 'A' or 'B' should be appended to utilisation categories to indicate the suitability for frequent or infrequent use in service. The 'Rule of Thumb' definition for full load current switching duty is:

Frequent (A): Up to five times a day for small devices, say up to 100 amps, and once per week for larger devices.

Infrequent (B): One per week for the smaller devices and once per month for the larger devices.

**BRAINTREE, UK**

Dorman Smith Switchgear Limited
8 Swinbourne Drive
Springwood Industrial Estate
Braintree, Essex
CM7 2YG
Tel: +44 (0) 844 225 1063
Fax: +44 (0) 844 225 1064
Email: sales@dormansmith.co.uk
www.dormansmithswitchgear.com

PRESTON, UK

Dorman Smith Switchgear Limited
1 Nile Close
Nelson Court Business Centre
Ashton on Ribble
Preston, Lancashire
PR2 2XU
Tel: +44 (0) 1772 325380
Fax: +44 (0) 1772 325385
Email: sales@dormansmith.co.uk
www.dormansmithswitchgear.com

DUBAI, U.A.E.

Dorman Smith Switchgear LLC
P.O. Box 12872
Dubai
U.A.E.
Tel: +9714 3470226
Fax: +9714 3470002
Email: info@dormansmith.co.uk
www.dormansmithswitchgear.com

DOHA, QATAR

Dorman Smith Switchgear WLL
P.O. Box 40249
Doha
Qatar
Tel: +974 55717161
Fax: +974 44514989

MUSCAT, OMAN

Dorman Smith Switchgear
P.O. Box 143, P.C. 101
Al Wattayah
Sultanate of Oman
Tel: +968 24562534/24562394
Fax: +968 24562830

For further information or to request one of our product catalogues please contact us from the information above. E&OA. Whilst every effort has been made to ensure accuracy, no liability is accepted for the consequences of any error or omissions in this catalogue. Dorman Smith Switchgear Ltd. reserve the right to change or amend any technical specification or product detail without prior notification.