

Technical Data

Common Characteristics

Conformity to Standards	-	IS/IEC 60947-3
Rated Operational Voltage (Ue)	V	415
Rated Operational Frequency	Hz	50 / 60
Suitability for Isolation	-	YES
Pollution Degree as per IEC / IS	-	3
Ambient / Cubicle Service Temp.	°C	40
IP Level after mounting	-	IP 54
Number of Poles	-	3/4P*

(4th Pole always 100% rated in 4 Pole switches)

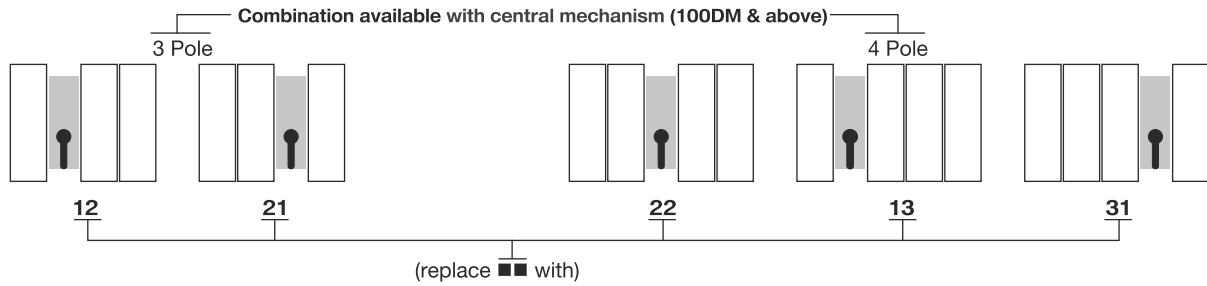
*Other Pole configuration available on request

Replace '●' with 3 in case of 3 pole or with 4 in case of 4 pole

Parameters

Rated insulation voltage and Rated operational voltage AC-20 and DC-20	pollution degree 3	50 Hz 1 min	V
Dielectric strength			kV
Rated impulse withstand voltage			kV
Rated thermal current in ambient 40°C	in open air		A
	In Enclosure		A
Min. cable cross section		Cu	mm ²
Rated operational current AC -21 A		upto 415V	A
		440-690V	A
Rated operational current AC -22 A		upto 415V	A
		440-500V	A
		690V	A
Rated operational current AC -23 A		upto 415V	A
		440V	A
		500V	A
		690V	A
Rated operational current/poles in series DC - 21 A		48V	A
		110	A
		220	A
Rated operational current/poles in series DC - 22 A		48V	A
		110V	A
		220V	A
Rated operational current/poles in series DC - 23 A		48V	A
		110V	A
		220V	A
Rated operational power AC- 23 The KW - ratings are accurate for three - phase 1500 R.P.M standard asynchronous motors.		220-240V	kW
		400-415	kW
		440V	kW
		500 V	kW
		690 V	kW

2) IEC-947-3, utilization category B, infrequent operation



D Type		K Type	D Type	DM Type	
25	40	63	125	125	160
750	750	750	750	1000	1000
6	6	6	6	6	6
4	4	4	4	8	8
25	40	63	125	125	160
25	40	63	125	125	160
6	10	16	50	50	70
25	40	63	125	125	160
25	40	63	125	125	160
25	40	63	125	125	160
25	40	63	125	125	160
-	-	-	-	125	160
20	30	38	125	125	160
20	25	38	63	70	100
20	25	32	63	70	100
11	20	20	50	50	80
25/3	40/3	63/3	125/3	125/2	160/2
25/3	40/3	63/3	125/3	125/3	160/3
25/3	40/3	63/3	125/3	125/3	160/3
25/3	40/3	63/3	75/3	125/2	160/2
25/3	40/3	63/3	75/3	125/3	160/3
25/3	40/3	50/3	50/3	125/3	160/3
25/3	40/3	63/3	75/3	125/2	160/2
-	-	35/3	50/3	125/3	160/3
-	-	25/3	50/3	125/3	160/3
4	7.5	11	22	22	45
7.5	11	18.5	37	37	75
7.5	11	18.5	37	37	75
7.5	15	18.5	37	37	75
9	15	15	45	45	75

Technical Data

Parameters

Rated breaking capacity in category AC-23		upto 415V	A
		440V	A
		500V	A
		690V	A
Rated breaking capacity/poles in series in category DC-23		upto 48 V	A
		110V	A
		220V	A
Rated conditional Short Circuit current r.m.s		690V/500V	kA
Rated conditional short circuit current r.m.s and corresponding cut off current of the fuse in single phase test according to IEC 269	Cut Off/Back up fuse Rating	50KA, 415V	kA
		50KA,500V	kA
		50KA, 690V	kA
		80KA, 500V	kA
Rated short time withstand current	r.m.s. value l _{cw}	690V 1 sec	kA
Rated short circuit making capacity	Peak value I _{cm}	690/500 V	kA
Rated capacitor rating	the capacitor rating are limited by the fuse link	400~415 V	kVAr
Power loss/ pole	at rated operational current		W
Mechanical endurance	Divided by two for operational cycle		Oprs.
Electrical Endurance	At 0.65pf		Oprs.
Weight without accessories	with handle and shaft	3 pole	kg
		4 pole	kg
Terminal bolt size	Metric thread diameter x length		mm
Terminal tightening torque	counter torque required		Nm
Operating Torque	3-pole switch disconnecter		Nm

Catalogue Reference



Mounting

EABW	Plastic Enclosure, Gray base & Gray cover (25A-63A)
EACL	Plastic Enclosure, Gray base & Yellow cover (25A-63A)
ELCL / ELBL	Aluminum Enclosure, Gray base & Gray cover (16A-125A) (Refer our Enclosed Switch Catalogue for more info.)
E	In Sheet Steel Enclosure
Blank	Without Enclosure



Rating

40	40A
800	800A
2500	2500A

D Type		K Type	D Type	DM Type	
25	40	63	125	125	160
200	320	504	1000	1000	1280
160	200	320	504	560	800
160	200	256	504	560	800
128	200	256	400	400	504
100/3	160/3	250/3	300/3	500/2	640/2
		150/3	200/3	500/3	640/3
		100/3	200/3	500/3	640/3
-	-	-	-	-	-
6/25	6/40	8/63	13/125	13/125	18/160
6/25	6/40	8/63	13/125	13/125	18/160
4/25	4/40	6/63	10/125	10/125	10/160
6.5/25	6.5/40	10/63	15/125	15/125	20/160
0.5	0.5	1	1.5	5	5
0.7	0.7	1.4	2.7	8	8
			50	50	60
0.6	1.6	2.8	6.3	6.3	9
20000	20000	20000	20000	20000	20000
5000	5000	5000	5000	5000	5000
0.2	0.2	0.3	0.4	1.6	1.8
0.25	0.25	0.4	0.5	2	2.25
				M8x25	M8x25
0.8	0.8	2	6	8	8
1	1	1.2	2	2.5	2.5



Switch Type

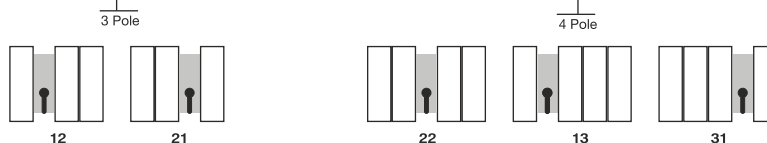
D	Old Series, 25A, 40A, 63A, 100A & 125A
DM	Compact Series, 100 ~ 400A
K	63A, 400A - 800A, 3 pole
P	1000A - 3150A
C	Toggle Type 25A - 125A



No. of Poles

3	3 Pole
4	4 Pole

Combination available with central mechanism



Mechanism Type

Blank	Front Operated
SO	Side Operated, 63 - 800A (not applicable for combinations with central mechanism)

Technical Data

Common Characteristics

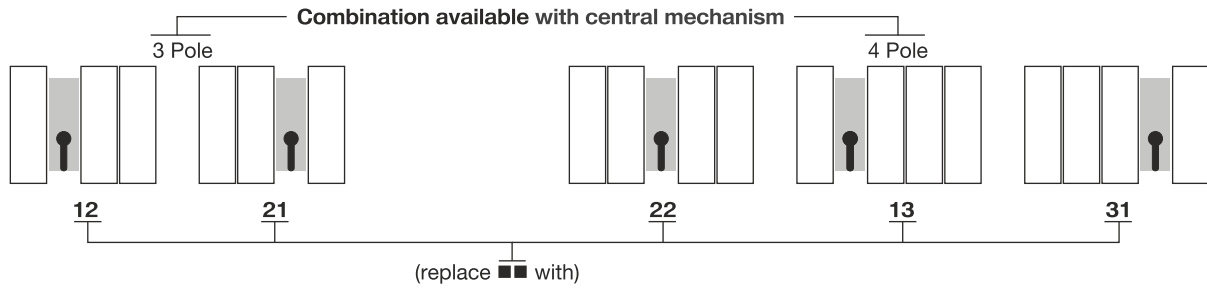
Conformity to Standards	-	IEC 60947-3 / IS 13947-3
Rated Operational Voltage (Ue)	V	415
Rated Operational Frequency	Hz	50 / 60
Suitability for Isolation	-	YES
Pollution Degree as per IEC / IS	-	3
Ambient / Cubicle Service Temp.	°C	40
IP Level after mounting	-	IP 54
Number of Poles (4th Pole always 100% rated in 4 Pole switches) *Other Pole configuration available on request	-	3P / 4P*

Replace '•' with 3 in case of 3 pole or with 4 in case of 4 pole

Parameters

Rated insulation voltage and Rated operational voltage AC-20 and DC-20	pollution degree 3	50 Hz 1 min	V
Dielectric strength			kV
Rated impulse withstand voltage			kV
Rated thermal current in ambient 40°C	in open air		A
	In Enclosure		A
Min. cable cross section		Cu	mm ²
Rated operational current AC -21 A		upto 415V	A
		440-690V	A
		1000V	A
Rated operational current AC -22 A		upto 415V	A
		440-500V	A
		690V	A
		1000V	A
Rated operational current AC -23 A		upto 415V	A
		440V	A
		500V	A
		690V	A
		1000V	A
Rated operational current/poles in series DC - 21 A		48V	A
		110	A
		220	A
		440	A
		750	A
Rated operational current/poles in series DC - 22 A		48V	A
		110V	A
		220V	A
		440V	A
		750V	A

1) IEC-947-3, utilization category B, infrequent operation



DM Type				K Type				P/K Type				
200	250	315	400	400	630	800	1000	1250	1600	2000	2500	3150
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
10	10	10	10	10	10	10	8	8	8	8	8	8
12	12	12	12	12	12	12	8	8	8	8	8	8
200	250	315	400	400	630	800	1000	1250	1600	2000	2500	3150
200	250	315	400	400	630	720	1000	1250	1600	2000	2300	2600
95	120	185	240	240	2x185	2x240	2x(60x5)	2x(80x5)	2x(100x5)	3x(100x5)	4x(100x5)	3x(100x10)
200	250	315	400	400	630	800	1000	1250	1600	2000 ¹⁾	2500 ¹⁾	3150 ¹⁾
200	250	315	400	400	630	800	1000	1250	1600	2000 ¹⁾	2500 ¹⁾	3150 ¹⁾
200	250	315	400	400	630	630	-	-	-	-	-	-
200	250	315	400	400	630	800	1000	1250	1600	1600 ¹⁾	1600 ¹⁾	1600 ¹⁾
200	250	315	400	400	630	800	1000	1250	1600	1600 ¹⁾	1600 ¹⁾	1600 ¹⁾
200	250	315	400	400	630	800	-	-	-	-	-	-
200	250	315	315	400	630	630	-	-	-	-	-	-
200	250	315	400	400	630	720	1000	1000	1000	1000 ¹⁾	1000 ¹⁾	1000 ¹⁾
200	250	315	400	400	590	670	-	-	-	-	-	-
200	250	315	400	400	580	600	-	-	-	-	-	-
200	250	315	350	350	350	350	-	-	-	-	-	-
125	125	125	125	125	150	150	-	-	-	-	-	-
200/2	250/2	315/2	400/2	400/1	630/1	800/1	1000/1	1250/1	1600/1	-	-	-
200/2	250/2	315/2	400/2	400/2	630/2	800/2	1000/2	1250/2	1600/2	-	-	-
200/2	250/2	315/2	-	-	-	-	-	-	-	-	-	-
200/3	250/3	315/3	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
200/2	250/2	315/2	400/2	400/1	630/1	800/1	-	-	-	-	-	-
200/2	250/2	315/2	400/2	400/2	400/2	500/2	-	-	-	-	-	-
200/2	250/2	315/2	400/2	400/2	400/2	500/2	-	-	-	-	-	-
200/3	250/3	315/3	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-

Technical Data

Parameters

Rated operational current/poles in series DC-23 A		48V	A
		110V	A
		220V	A
		440V	A
		750V	A
Rated operational power AC-23 The KW-ratings are accurate for three-phase 1500 R.P.M standard asynchronous motors.		220-240V	kW
		400-415	kW
		440V	kW
		500 V	kW
		690 V	kW
Rated breaking capacity in category AC -23		upto 415V	A
		440V	A
		500V	A
		690V	A
Rated breaking capacity/poles in series in category DC -23		upto 48 V	A
		110V	A
		220V	A
		440V	A
		750V	A
Rated conditional Short Circuit current r.m.s		690V/500V	kA
Rated conditional short circuit current r.m.s and corresponding cut off current of the fuse in single phase test according to IEC 269	Cut Off/Back up fuse Rating	50KA, 415V	kA
		50KA,500V	kA
		50KA, 690V	kA
		80KA, 500V	kA
Rated short time withstand current	r.m.s. Value Icw	0.2 sec	kA
		690V 1 sec	kA
Rated short circuit making capacity	Peak value Icm	690/500 V	kA
Rated capacitor power	the capacitor rating are limited by the fuse link	400~415 V	kVAr
Power loss/ pole	at rated operational current		W
Mechanical endurance	Divided by two for operational cycle		Oprs.
Electrical Endurance	At 0.65pf		Oprs.
Weight without accessories	with handle and shaft	3 pole	kg
		4 pole	kg
Terminal bolt size	Metric thread diameter x length		mm
Terminal tightening torque	counter torque required		Nm
Operating Torque	3-pole switch disconnecter		Nm

Ratings	25 - 40 Type D	63 Type K/D	100-125 Type D
Handle - Black ⁷⁾	CSSDZX111	CSSDZX111	CSSDZX104
Handle Shaft	CSP5X70	CSP5X70	CSP5X70
Handle Mounting Kit	-	-	-
Door Mounting Kit, 3P / 4P	DMK1/1A	DMK1/3	DMK2/3
Changover Mechanism	CSSDZW 6	CSSDZW 6/1	CSSDZW 6/1
Auxiliary Contact - 1NO + 1NC, 3P-4P	CSSDZX 49/87	CSSDZX 79/55	CSSDZX 52/55
Auxiliary Contact - 2NO + 2NC, 3P-4P	CSSDZX 50/88	CSSDZX 80/56	CSSDZX 53/56
Terminal Shrouds	-	-	SF701
Extended Terminals, 3P/4P	-	-	ET325/ET326
Key Interlock	CSSDZW-16	CSSDZW-16	CSSDZW-16
Castle Lock	CSSDZW-15	CSSDZW-15	CSSDZW-15
Neutral Link	-	-	-

2) PF 0.65 3) Max. Distance between busbar support and switch terminal shall be 70 mm 3) Metallic Handle for 2500 ~3150A 4) Red / Yellow available on request.

DM Type				K Type			P/K Type					
200	250	315	400	400	630	800	1000	1250	1600	2000	2500	3150
200/2	250/2	315/2	400/2	400/1	630/1	800/1	-	-	-	-	-	-
200/2	250/2	315/2	400/2	400/2	630/2	800/2-	-	-	-	-	-	-
200/2	250/2	315/2	400/2	400/2	630/2	630/2	-	-	-	-	-	-
200/3	250/3	315/3	400/3	400/3	400/3	400/3	-	-	-	-	-	-
200/4	250/4	315/4	-	-	-	-	-	-	-	-	-	-
55	75	90	132	132	180	200	250	250	250	250	250	250
90	132	160	200	200	315	355	400	400	400	400	400	400
110	132	160	200	315	355	355	400	400	400	400	400	400
132	160	200	315	315	355	355	450	450	450	450	450	450
170	200	250	315	315	355	355	-	-	-	-	-	-
1600	2000	2520	3200	3200	5040	5760	8000	8000	8000	8000	8000	8000
1600	2000	2520	3200	3200	4720	5360	-	-	-	-	-	-
1600	2000	2520	3200	3200	4640	4800	-	-	-	-	-	-
1600	2000	2520	2800	2800	2800	2800	-	-	-	-	-	-
800/2	1000/2	1260/2	-	-	-	-	-	-	-	-	-	-
800/2	1000/2	1260/2	-	-	-	-	-	-	-	-	-	-
800/2	1000/2	1260/2	-	-	-	-	-	-	-	-	-	-
800/3	1000/3	1260/3	-	-	-	-	-	-	-	-	-	-
800/4	1000/4	1260/4	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
25 200	27 250	30 315	36 400	36 400	54 630	62 800	-	-	-	-	-	-
25 200	27 250	30 315	36 400	36 400	54 630	62 800	-	-	-	-	-	-
25 200	27 250	30 315	36 400	36 400	54 630	62 800	-	-	-	-	-	-
28 200	30 250	32 315	42 400	42 400	60 630	70 800	-	-	-	-	-	-
17.5	17.5	17.5	17.5	38	38	38	100	100	100	110	110	110
8	8	8	8	20	20	24	50 ²⁾	50 ²⁾	50 ²⁾	80 ²⁾	80 ²⁾	80 ²⁾
35	35	35	35	65	80	80	105	105	105	105	105/140	105/140
90	110	140	180	250	300	330	-	-	-	140	-	-
3.5	5.5	8.5	13	13	22	40	27	40	67	80	90	140
16000	16000	16000	10000	10000	10000	10000	6000	6000	6000	1200	1200	1200
1000	1000	1000	1000	1000	1000	500	500	500	500	100	100	100
3	3	3	3.3	5.2	6.2	6.2	16.3	16.3	17.5	35	37	37
3.7	3.7	3.7	4	6.4	7.6	7.6	20.5	20.5	22.5	45	47	47
M8x25	M10x30	M10x30	M10x40	M10x40	M12x40	M12x40	M12x60	M12x60	M12x60	M12x60	M12x60	M12x60
30..44	30..44	30..44	30..44	30..44	50..75	50..75	50..75	50..75	50..75	50..75	50..75	50..75
8.2	8.2	8.2	8.2	17	21	21	21	21	21	50	50	50

100 - 160 Type DM	200 - 400 Type DM	400 - 800 Type D/K	1000 - 1600 Type P	2500 - 3150 Type P
CSWH 80 S6	CSWH 80 S8	CSWH 145 S12	CSWH 220 S12	CSWH 220 S12/CSDA 86)
CSP6X165	CSP8X240	CSP12X255	CSP12X255	CSP12X325
-	HMK-2	HMK-1-1	HMK-3-1	-
-	-	-	-	-
CSSDZW 6/1	CSSDZW 6/1	CSSDZW 11	CSSDZW 12	CSSDZW 12
CSSDZX 1	CSSDZX 37	CSSDZX 33	CSSDZX 35	CSSDZX 35
CSSDZX 16	CSSDZX 38	CSSDZX 34	CSSDZX 36	CSSDZX 36
SF702	SF703	SF703(200-400)/SF704(630-800)	-	-
ET327/ET328	ET329/ET330	ET329/ET330(upto 400/	-	-
CSSDZW-16	CSSDZW-5	CSSDZW-5	CSSDZW-5	CSSDZW-5
CSSDZW-15	CSSDZW-4	CSSDZW-4	CSSDZW-4	CSSDZW-4
-	-	CSSDFZX85	CSSDZX159	CSSDZX159(2Nos.)

Mounting Instruction for Accessories

Auxiliary Contact

For CSSD25-125A

- Unscrew the two grub screws and remove the bush from the switch.
- Fit the auxiliary bracket onto the switch and place the locking bush on it.
- Fit the cam and screw it with the locking bush.
- Fit auxiliary contact at the corner and screw it diagonally.
- Fit the two NO/NC auxiliary at the other corner and screw it properly, if required.

For CSSD100-160A Compact (ZX1, ZX16)

- Place the auxiliary and name plate at rear end (opposite to mechanism) by ensuring name plate between auxiliary and switch and screw them properly.
- Fit the cam on the main shaft and screw it on the flat surface of the shaft.

For CSSD200-400A Compact (ZX37, ZX38)

- Fit the auxiliary contact on the top of mechanism and screw it diagonally at the provided holes properly.
- Fit the two NO/NC auxiliary at the top of the auxiliary and screw it diagonally, if required.

For CSSD 400-800A (ZX33, ZX34)

- Fit the auxiliary contact on the top of mechanism and screw it diagonally on the provided thread.
- Fit the two NO/NC auxiliary at the top of the auxiliary and screw it diagonally, if required.

For CSSD1000-3150A (ZX35, ZX36)

- Fit the cam on the tubular shaft with the square bush.
- Fit the auxiliary contact along with the bracket (Z type) by screwing diagonally, if provided separately.
- Place and screw the auxiliary contact onto the mechanism by matching of bracket hole and tubular shaft.

Auxiliary Contacts ratings

- Thermal Rating 10A
- AC 15 @ 415V - 4A
- DC 13 @ 220V - 1A

Castle Lock

- Make a hole in panel door for fitment of castle lock as per given drawing.
- Fit the castle lock onto the panel door from front.
- Fit the lever onto the lock shaft in unlock position from back and tighten the lever by providing U clamp and screw.
- Fit the Square pipe assembly with the switch main shaft and adjust the position so that the lever can lock it from behind of this assembly and tighten the screw.

Key Interlock

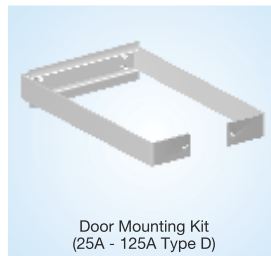
- Make a hole in the panel door for castle lock fitment as per given drawing.
- Fit the key lock onto the panel door from front.
- Fit the lever onto the lock shaft and circlip it in unlock position.
- Fit the square pipe assembly with the switch main shaft and adjust the position so that the lever can lock it in groove provided and tighten the screw.

Door Mounting Kit (25-125A)

- Fit the switch at the rear using din rail mounting channel.
- Mount the channel using hole provided for screwing on the door.

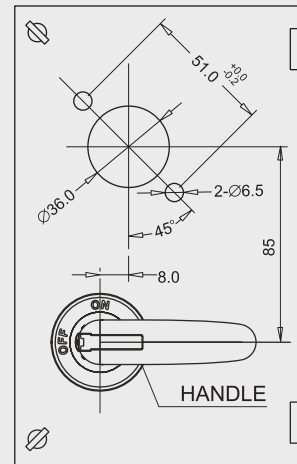
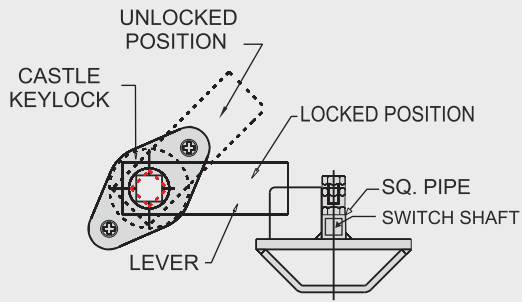
Handle mounting Kit (200A-1800A)

- Unscrew the bolt (provided for earthing on mechanism) and Philips head screw (given below the earth bolt) as shown in model.
- Fit the handle mounting bracket and tighten the bolt and screw.
- Fit the handle assembly on given profile of the mounting kit.



Dimensional Details

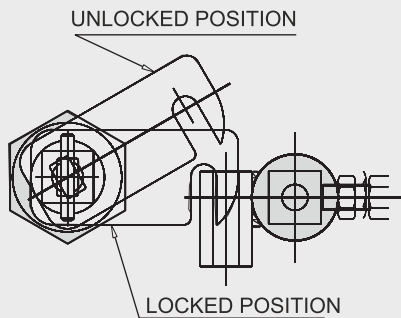
Castle Lock



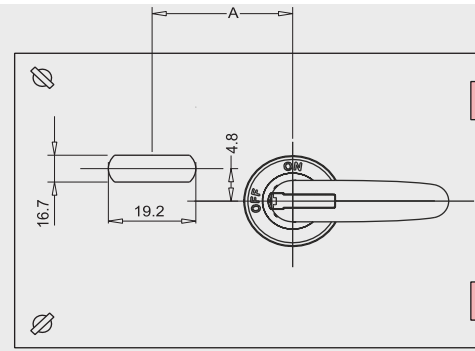
Panel Drilling Plan

Catalogue No.	Type of Switch
CSSDZW15	CSSD 25~160A
CSSDZW4	CSSD 400~3150A
CSSDZW4A	CSSD 200~400ADM

Key Interlock

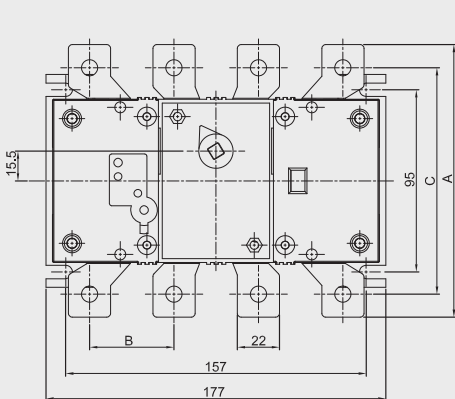


Panel Punching Plan

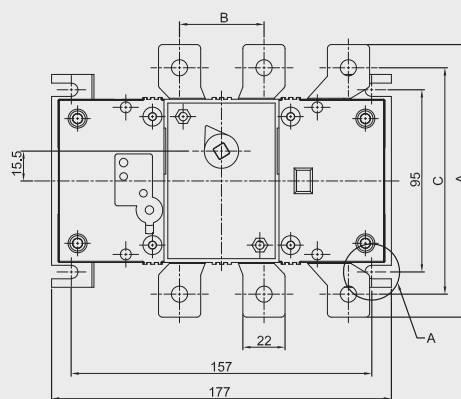


Catalogue No.	Type of Switch	'A'
CSSDZW16	CSSD 25~160A	60.7 ±0.3
CSSDZW5	CSSD 400~3150A	66.0 ±0.3
CSSDZW5A	CSSD 200~400A DM	66.0 ±0.3

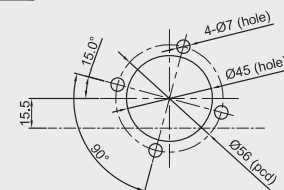
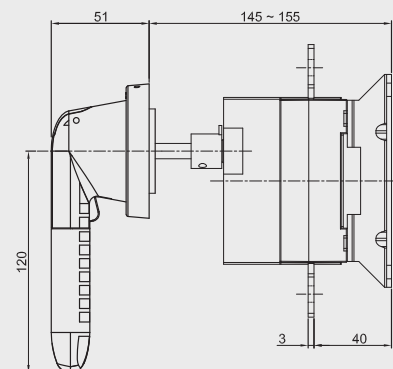
CSSD125~250NM3 & NM4



4 POLE

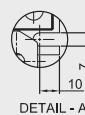


3 POLE



HANDLE MOUNTING DETAIL

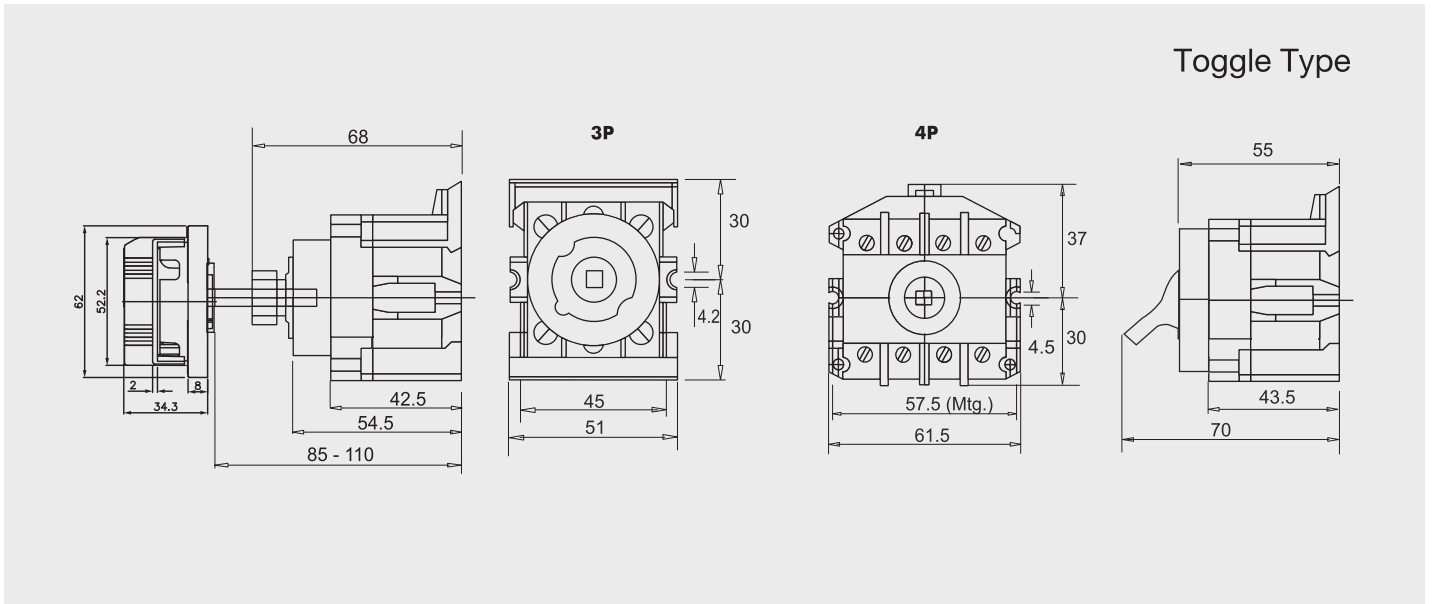
RATING	A	B	C
125~200A	142	44	118
250A	160	49	135



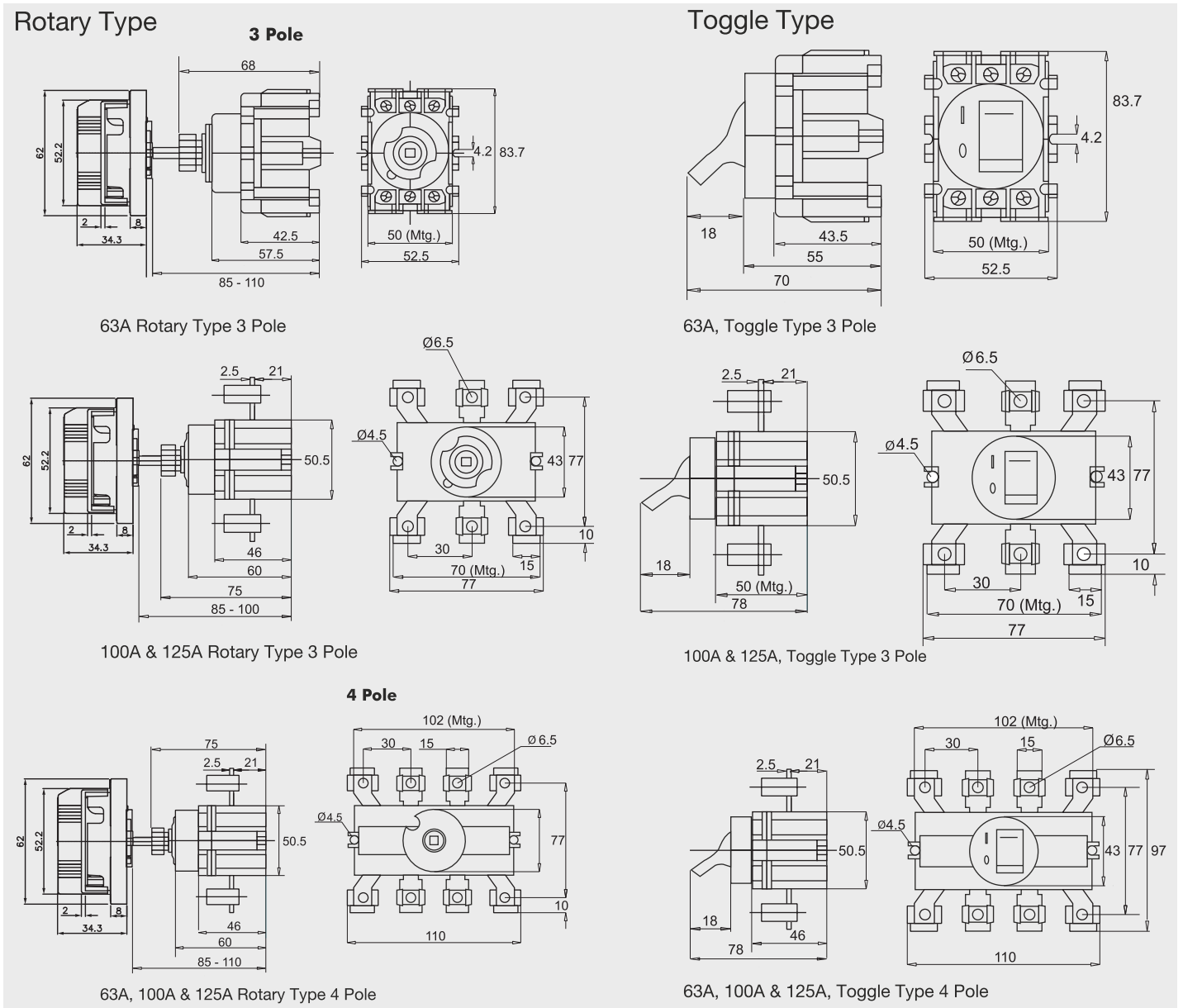
DETAIL - A

Dimensional Details

25A & 40A

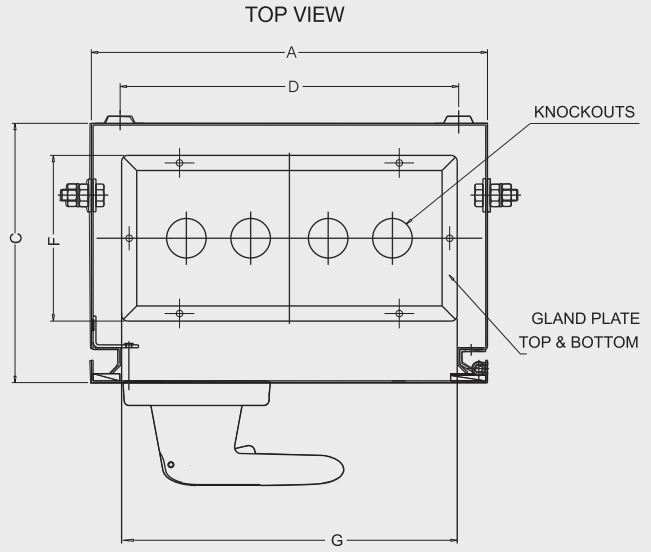
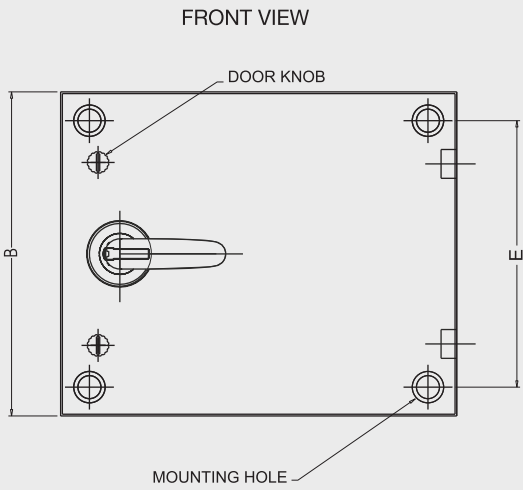


63A, 100A & 125A (Type D/K)



ILLUSTRATIONS NOT TO SCALE

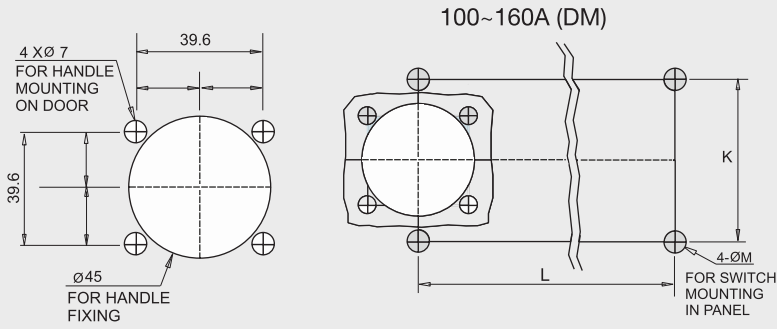
SS Enclosure 100A - 400A (DM) & 400A - 3150A



Rating	A	B	C	D	E	F	G
100 ~ 160A (DM-3P/4P)	275	275	180	235	235	115	233
200~ 400A (DM-3P/4P)	325	400	220	285	360	155	283
400A (K-3P/4P)							
630 - 800A (3P)	400	400	220	360	360	155	358
630 - 800A (4P)							
1000 - 1800A (3P/4P)	600	500	275	560	460	210	558
1000 - 1250A (4P) & 2500 - 3150A (3P)	600	600	350	560	560	285	483
1600 - 3150A (4P)	700	600	350	660	560	285	658

SS Enclosure Details	
Gasket Type	EPDM Sponge Rubber
Cover Sheet Thickness	18 SWG
Gland Sheet Thickness	16 SWG
Enclosure Paint Shade	Basalt Gray RAL 7012
Door Paint Shade	Light Gray RAL 7035
IP Level	IP54
Door Hinge Degree	120°
Earthing Studs	2

Mounting Details, 100A - 400A (DM) & 400A - 3150A



For Mounting Details

Rating	K	L		M	U	V
		TP	4P			
100A - 160A	60	160	200	7	-	-
400A	150	151	197	7	7	28
630A	150	183	245	7	7	28
800A	150	199	269	7	7	28
1000A - 1250A	190	278	358	9	24.5	-
1600A - 1800A	190	396	535	9	24.5	-
2500A - 3150A	190	403	542	9	24.5	-

