

SANTON LOAD BREAK SWITCHES



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THE 'SLB' SWITCH DISCONNECTORS HAVE BEEN DESIGNED ACCORDING TO STANDARD EN-IEC 60947-3 FOR ITS USE IN LOW VOLTAGE CIVIL AND INDUSTRIAL INSTALLATIONS. MOULDED CASE DESIGN WITH FRAME PARTS OF NON - FLAMMABLE GLASS FIBRE REINFORCED POLYESTER WITH HIGH MECHANICAL AND ELECTRICAL TRACK RESISTANCE AND WITH LOW WATER ABSORPTION. EXCELLENT THERMAL AND DIELECTRIC PROPERTIES OF INSULATING MATERIALS ADJACENT TO CURRENT CARRYING PARTS: DIELECTRIC STRENGTH, ELECTRICAL TRACK RESISTANCE AND DIMENSIONAL STABILITY AT HIGH TEMPERATURES.





Each compact frame size, up to 2000A, is enclosed in a moulded insulated housing, which provides protection against the ingress of dust and foreign bodies. This housing also supports the fixed contact assembly, ensuring that each contact is isolated from the operating mechanism when in the 'OFF' position.

Efficient operation and extended contact life results from the switch operating mechanism and the clip and blade wiping action, fixed and moving contact design.

The fixed contacts form part of the incoming and outgoing terminals, which are of the box clamp type up to 80A and tinned copper lugs from 125A to 2000A ratings.

The SLB range of switches are suitable for AC operation up to 660V single phase or three phase. DC on application.

The moving contact assembly rigidly supports each pair of moving contacts and ensures simultaneous action of each contact pair during switching operations. Each moving contact pair consists of two silver plated copper contacts, spring assisted to ensure efficient contact. This spring assistance also compensates for repulsion stresses developed under normal operating conditions or when the switch is subject to high electro- dynamic forces. Each pole houses separate arc shuts to ensure arc extinguishment during operation.

Manually independent operating mechanisms are of the "stored energy" type. Operation of the handle loads the mechanism up to point that the stored energy in the spring system is sufficient to change the position of the moving contact train ensuring quick make and break operation.

GENERAL INFORMATION

FLAT PACK LOAD BREAK ISOLATING SWITCHES (TYPE CODES)

AC22 RATING	AC23 RATING	3 POLE	3 POLE + SN
50A	50A	SLB40.3	SLB40.4
63A	63A	SLB63.3	SLB63.4
80A	63A	SLB80.3	SLB80.4
125A	125A	SLB125.3	SLB125.4
160A	160A	SLB160.3	SLB160.4
200A	160A	SLB200.3	SLB200.4
250A	250A	SLB250.3	SLB250.4
315A	315A	SLB315.3	SLB315.4
400A	400A	SLB400.3	SLB400.4
630A	630A	SLB630.3	SLB630.4
800A	800A	SLB800.3	SLB800.4
1000A	800A	SLB1000.3	SLB1000.4
1250A	800A	SLB1250.3	SLB1250.4
1600A	1000A	SLB1600.3	SLB1600.4
2000A	1400A	SLB2000.3	SLB2000.4

ACCESSORIES

400MM EXTENSION SHAFT

- 3XS - 50A - 200A
- 4XS - 250A - 400A
- 6XS - 630A - 2000A

RED/YELLOW SAFETY HANDLE

- 3SHN - 50A - 200A
- 4SHN - 250A - 400A
- 5SHN - 630A - 2000A

EARLY BREAK AUXILIARY

- 1EB - 1 n/o or 1 n/c or 1 c/o
- 2EB - 2 n/o or 2 n/c or 2 c/o

FIGURE LOCK ATTACHMENT

- 3FLD - 50A - 200A
- 4FLD - 250A - 315A
- 6FLD - 400A - 2000A

OUTGOING TERMINAL SHROUD (IF REQUIRED)

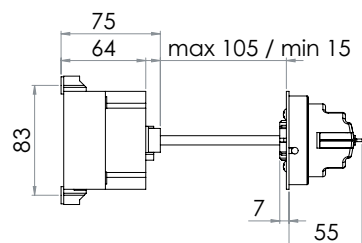
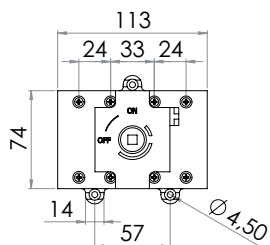
- 420TS - 125A, 160A & 200A
- 4315TS - 250A & 315A
- 463TS - 400A & 630A
- 4100TS - 800A & 1000A
- 4160TS - 1250A & 1600A

DIMENSIONS

50A

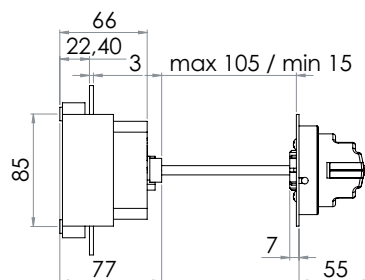
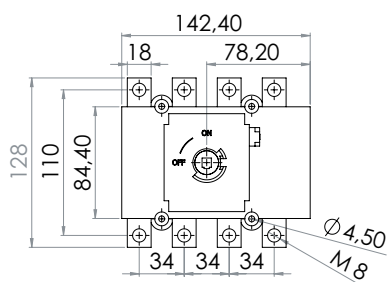
63A

80A

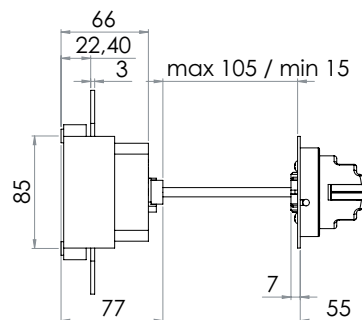
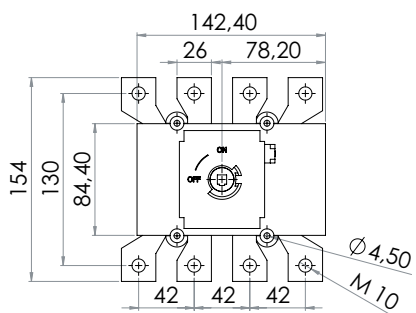


125A

160A



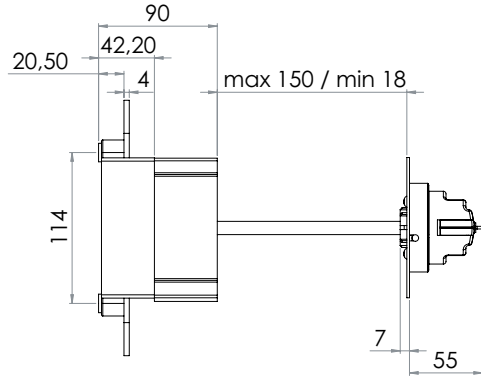
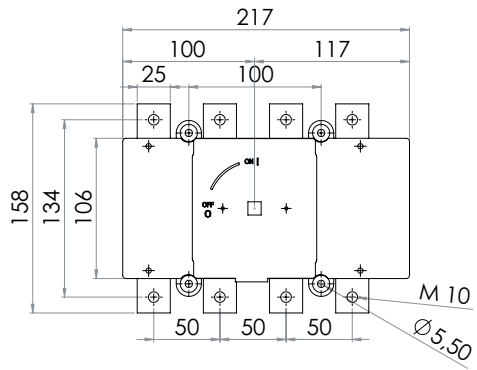
200A



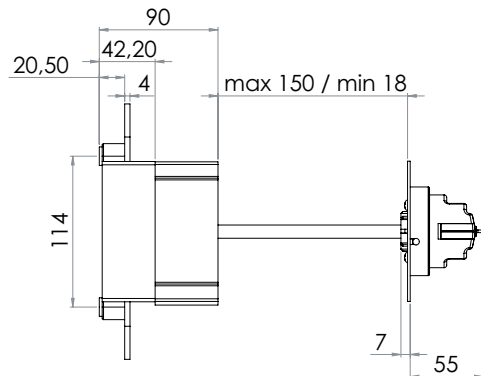
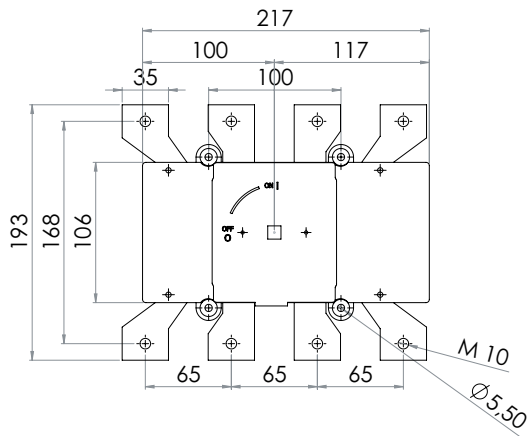
DIMENSIONS

250A

315A

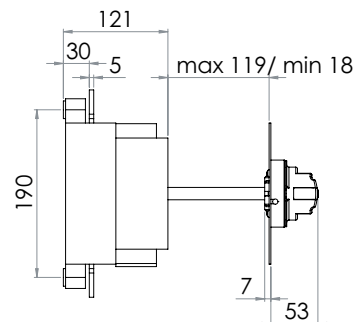
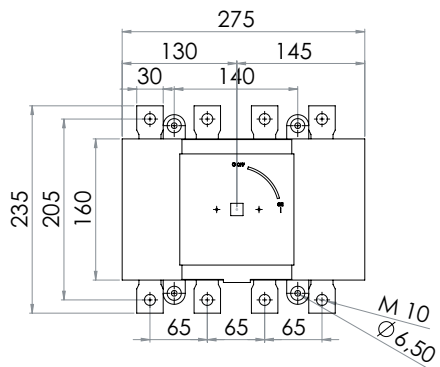


400A



500A

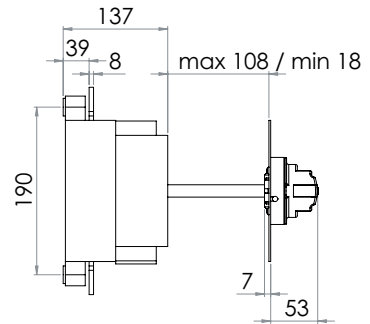
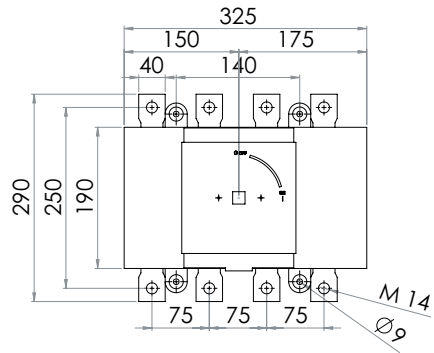
630A



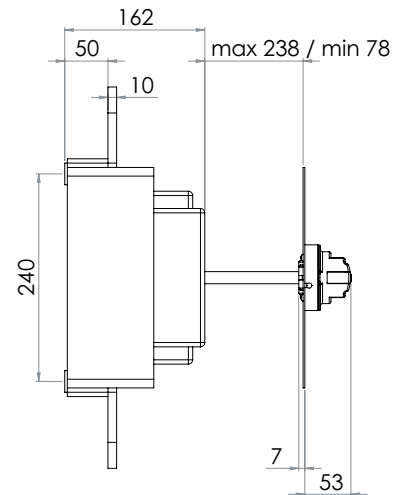
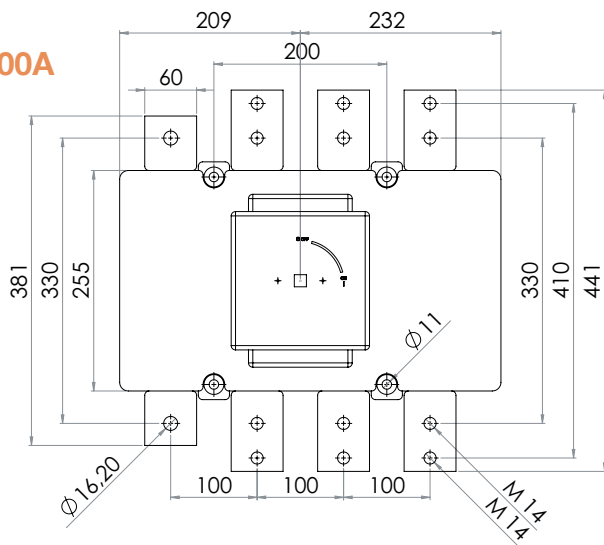
800A

1000A

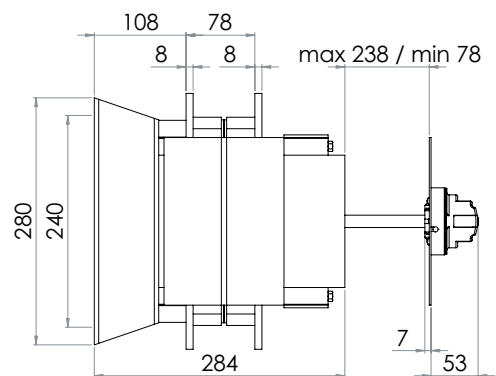
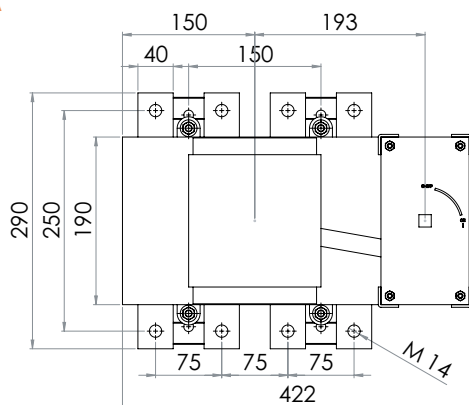
1250A



1600A



2000A

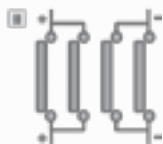
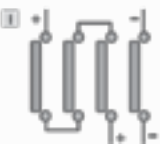


TECHNICAL INFORMATION

According IEC/EN 60947-3						50	63
Rated thermal current	I _{th}		in ambient	40 °C	A	50	63
				50 °C	A	50	63
				65 °C	A	35	44
Rated insulation voltage	U _i				V	800	800
Rated dielectric strenght	50 Hz,	1 min			V	3500	3500
Rated impulse withstand voltage	U _{imp}				kV	8	8
AC rated operational current ^{*(1)}	I _e		400V	AC21A	A	50	63
			400V	AC22A	A	50	63
			400V	AC23A	A	50	63
			500V	AC21A	A	50	63
			500V	AC22A	A	50	63
			500V	AC23A	A	40	50
			690V	AC20A	A	50	63
			690V	AC21A	A	50	63
			690V	AC22A	A	40	50
			690V	AC23A	A	25	32
DC rated operational current ^{*(2)}	I _e		48V	DC23A	A	80	100
			110V	DC21A	A	63	63
			110V	DC23A	A	40	63
			230V	DC21A	A	40	63
			230V	DC23A	A	40	63
			400V	DC21A	A	20	25
			400V	DC23A	A	-	-
			500V	DC20A	A	80	125
			500V	DC23A	A	-	-
AC rated operational power ^{*(3)}	P _e		3x230V	AC23A	kW	15,9	20
			3x400V	AC23A	kW	27,7	34,9
			3x500V	AC23A	kW	27,7	34,9
			3x690V	AC23A	kW	23,9	30,5
Rated capacitor power		400V,	sen φ = 0,65		kVAr	22,5	28,3
Rated breaking capacity		400V,	cos φ = 0,35	- 0,45	A	400	504
Rated maing capacity		400V,	cos φ = 0,45		A	500	630
SHORT - CIRCUIT BEHAVIOUR							
Short-circuit making capacity (peak value) ^{*(4)}	I _{cm}				kA (peak)	5	5
Short-time withstand current (1 sec)	I _{cw}				kA rms	3	3
Conditional short - circuit current (rms value) ^{*(5)}					kA rms	100	100
Maximum cut-off current (peak value)					kA (peak)	10	10
Maximum power diccipation (I ² t)					A2s (x103)	54,7	54,7
Minimum number of mechanical ^{*(6)}					Cycles	30000	30000
Minimum number of electrical operations ^{*(6)}			400V	AC23A	Cycles	1500	1500
Maximum weight (3/4 poles)					Kg	0,4 / 0,4	0,4 / 0,4
CONNECTING CAPACITY							
Rigid cable (CU)					mm ²	25	25
Bar (Thickness / Width)					mm	-	-
Thightening torque					Nm	2	2

80	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000
80	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000
80	125	160	200	250	315	400	500	630	800	1000	1250	1500	2000
56	90	110	140	175	220	280	350	440	560	700	875	1100	1400
800	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
3500	4000	4000	4000	5000	5000	5000	8000	8000	8000	8000	8000	10000	8000
8	8	8	8	8	8	8	12	12	12	12	12	12	12
80	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000
80	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000 ⁽⁷⁾
63	125	160	160	250	315	400	500	630	800	800	800	1000	1400 ⁽⁷⁾
80	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000
63	125	160	200	250	315	400	500	630	800	1000	1000	1250	2000 ⁽⁷⁾
50	100	125	125	200	250	315	400	500	800	800	800	900	1250 ⁽⁷⁾
80	125	160	200	250	315	400	500	630	800	1000	1250	1600	2000
63	125	160	180	250	315	400	500	630	800	1000	1000	1600	2000
50	100	125	160	200	250	250	400	500	630	630	630	1000	1000 ⁽⁷⁾
32	80	80	80	160	160	160	250	315	500	500	500	630	800 ⁽⁷⁾
100	200	200	200	500	500	500	800	1000	1250	1250	1250	2000	2000
80	160	160	200	315	315	400	630	630	800	1000	1000	1600	2000
80	125	160	160	250	315	315	500	630	800	800	800	1600	1600
80	125	160	160	250	315	400	500	630	800	1000	1250	1600	2000
63	125	125	125	250	250	250	500	630	800	800	800	1000	1250
25	63	63	63	250	315	400	500	630	800	1000	1000	1600	2000
-	-	-	-	200	200	200	315	500	630	630	630	800	1000
125	250	250	250	500	500	500	800	1000	1250	1250	1250	2500	2000
-	-	-	-	200	200	200	315	500	630	630	630	800	800
20	39,8	50,9	50,9	79,6	100,3	127,4	159,3	200,7	254,9	254,9	254,9	318,6	446,1
34,9	69,2	88,6	88,6	138,5	174,5	221,7	277,1	349,1	443,4	443,4	443,4	554,2	775,9
34,9	69,2	88,6	88,6	138,5	174,5	218,2	277,1	346,4	554,2	554,2	554,2	623,5	866
30,5	76,4	76,4	76,4	152,9	152,9	152,9	239	301,1	478	478	478	602,3	764,8
28,3	56,2	72	72	112,5	141,8	180,1	225,1	283,7	360,2	360,2	360,2	450,3	630,4
504	1000	1280	1280	2000	2520	3200	4000	5000	6400	6400	6400	8000	11200
630	1250	1600	1600	2500	3150	4000	5000	6300	8000	8000	8000	10000	14000
5	13	13	13	20	20	20	26	26	60	60	60	42	80
3	7	7	7	12	12	12	16	16	25	25	25	35	38
100	100	100	100	100	100	100	100	100	72	72	72	-	-
10	17	20	20	33	33	33	39	39	55	55	55	-	-
54,7	55	198	198	1000	1000	1000	1600	1600	4900	4900	4900	-	-
30000	30000	30000	30000	20000	20000	20000	10000	10000	10000	10000	10000	10000	10000
1500	1000	1000	1000	1000	1000	1000	1000	1000	500	500	500	500	500
0,4 / 0,4	0,85 / 1	0,85 / 1	0,9 / 1	1,7 / 1,9	1,7 / 1,9	1,9 / 2,1	4,2 / 4,5	4,2 / 4,5	7 / 7,6	7 / 7,6	18,5/20,8	18,5/20,8	18,5/20,8
25	95	95	120	185	185	240	2x185	2x240	2x240	2x300	2x300	-	4x300
-	5/25	5/25	5/30	7/25	7/25	7/40	6/40	2x5/40	2x10/50	2x10/50	2x10/50	2x7/80	4x10/50
2	4/13	4/13	13/18	18	18	24	24	45	45	45	45	55	45

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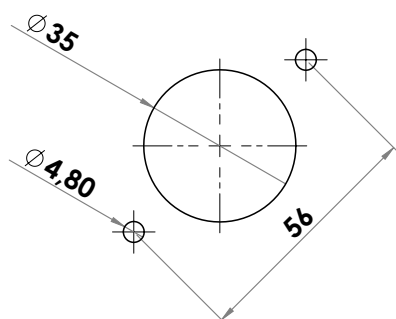
GENERAL INFORMATION

HANDLES AND OPERATING SHAFTS

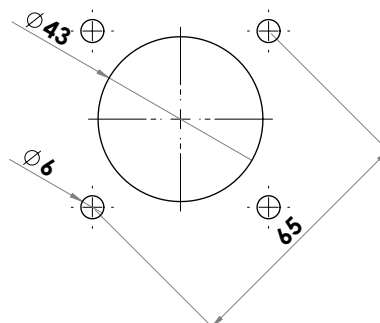
Black moulded handles (IP55) and operating shafts are supplied with each switch for door mounting. Handles may be padlocked in the 'OFF' position and incorporate a door interlocking facility which may be defeated by a competent, authorised operator.



HANDLE FIXING DIMENSIONS



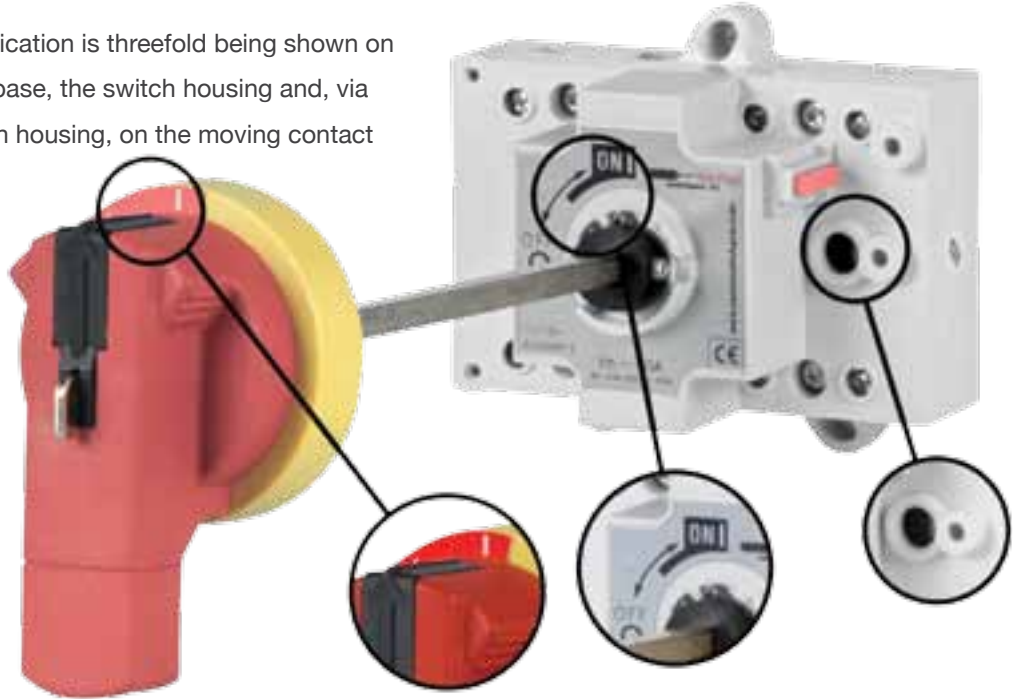
50A - 400A



630A - 2000A

'ON-OFF' POSITION INDICATION

'ON-OFF' position indication is threefold being shown on the operating handle base, the switch housing and, via a window in the switch housing, on the moving contact assembly.



TERMINAL SHROUDS

A SLB switch can be completed with finger safe terminal shrouds. They can be mounted on either the incoming, outgoing or all terminals.



Changes, errors and misprints reserved.

- Available from 50A to 2000A in 3 pole and 3 pole with switched neutral
- Switching of DC and AC loads up to 1000V (AC22 and AC23)
- Rated breaking current of up to 8 times the rated operational current
- High withstanding of currents (up to 100 kA short circuit currents)
- Uninterrupted duties in extreme climates and environments
- Over voltage protection
- Durable isolation according to IEC / EN 60947-3
- Reliable contact position indication according to IEC / EN 60947-3
- Molded case design with high mechanical properties
- Excellent thermal and dielectric properties of insulating materials
- Self-wiping, shock and vibration proof contacts
- Four breaking points per pole with two double-break contacts
- Two stage connect/disconnect contacts (arc protection)
- Positive forced opening of contacts
- Quick action spring loaded energy mechanism



EN-ISO 9001:2008

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