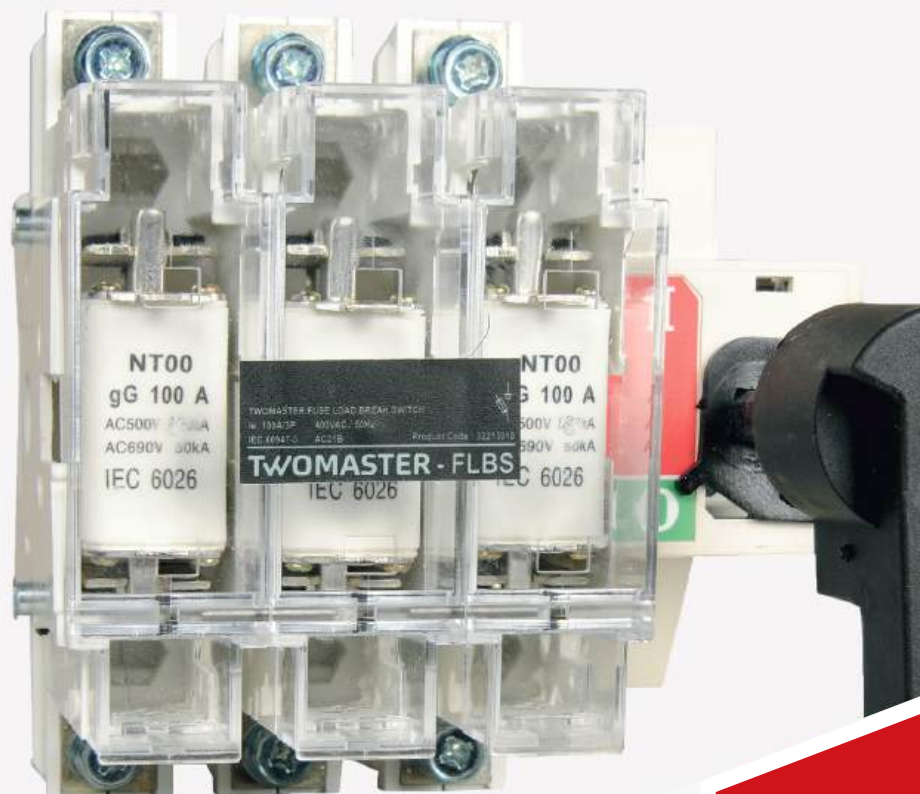


TWOMASTER



TWOMASTER FLBS
Fused Load Break Switches
100A-1250A

TWOMASTER FLBS

Fused Load Break Switches

100A-1250A

TWOMASTER


The solution for

- Motor load break
- Protection of industrial processes

Compliance with standards

- IEC 60947-3
- IEC 60269-1
- IEC 60269-2

Approvals and certifications

China Quality Certification Centre



Product Description

FLBS type is of modular design structure. Ensure load making and breaking and reliable over current and short circuit protection. Obviously visible off state. It has 2 poles, 3 poles and 4 poles (3 poles and on and off neutral pole). Total 18 specifications from 100A-1250A. FLBS series fuse group of isolation switch (called as switch for short) is a kind of multipoles manual operation switch, adopting the glass fiber reinforced unsaturated polyester resin casing, having high dielectric performance, protective capability and safe operation. The operation mechanism is a spring-accumulating and accelerating instant-release device, which makes instant making and breaking of the double gap contact. It is no relationship with the speed of operation handle. It is strong humidity and resistant properties.

Structure And Operation Modes

Front direct operation: The handle is installed on the right side of switch.

Side direct operation: The handle is installed on the right side of switch.

Front operation outside the board: The handle is installed in the front of distribution board door

Side operation outside the board: The handle is installed on the right side of the distribution board.

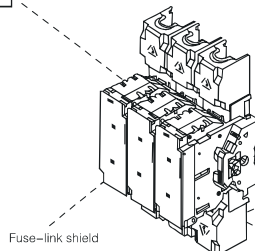
Product Code

TWOMASTER-FLBS Fused Load Break Switch						
Rating (A)	Product Code	No. of poles	Fuse Size	Direct handle	External handle & Shaft	Auxiliary contact
100	32213010	3 Pole	NH 000	included	32200002	32210011 (1NA/1NK) 32210012 (2NA/2NK)
	32214010	4 Pole				
160	32213016	3 Pole	NH 00			
	32214016	4 Pole				
250	32213025	3 Pole	NH 1			
	32214025	4 Pole				
400	32213040	3 Pole	NH 2			
	32214040	4 Pole				
630	32213063	3 Pole	NH 3			
	32214063	4 Pole				
1250	32213120	3 Pole	NH 4			
	32214120	4 Pole				

1 NC or NO Auxiliary contact



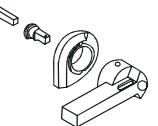
2 NC or NO Auxiliary contact



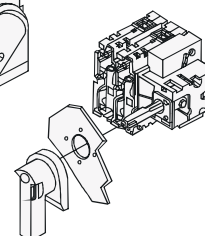
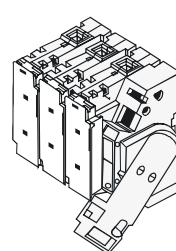
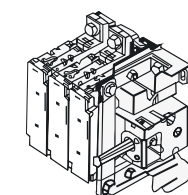
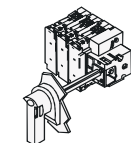
Fuse-link shield



Extended shaft is used for operation outside the board



Combined Neutral wire connection



TWOMASTER FLBS

Fused Load Break Switches

100A-1250A

Technical Parameters

Type	100A	160A	250 A	400 A	630 A	800 A	800A	1250A
Number of poles	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4	2, 3, 4
Assigned thermal current $I_{th}(35\text{ }^{\circ}\text{C})$	100 A	160 A	250 A	400 A	630 A	800 A	800 A	1250 A
NFC/DIN fuse size	NH000	NH00	NH1	NH2	NH3	NH3	NH4	NH4
Rated operating voltage $U_e(V)$	690 V	600 V	690 V	690 V	690 V	690 V	415 V	415 V
Rated insulation voltage $U_i(V)$	800	800	800	1,000	1,000	1,000	1,000	1,000
Rated impulse withstand voltage $U_{imp}(kV)$	8	8	8	12	12	12	12	12
Short-circuit characteristics								
Prospective short-circuit current at $U_e 400/415V$ AC (kA rms)	50	100	100	50	100	100	100	100
Prospective short-circuit current at $U_e 660/690V$ AC (kA rms)	50	50	50	50	100	100	-	-
Rated operating current I_e (A)								
Nominal voltage	Operating category	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾	A/B ⁽¹⁾
415 V AC	AC 21 A / AC 21 B	100/100	160/160	250/250	400/400	-/630	-/800	-/800
415 V AC	AC 22 A / AC 22 B	100/100	160/160	250/250	400/400	-/630	-/800	-/800
415 V AC	AC 23 A / AC 23 B	100/100	160/160	250/250	400/400	-/630	-/800	-/800
500 V AC	AC 21 A / AC 21 B	100/100	160/160	250/250	-/400	-/630	-/800	-/800
500 V AC	AC 22 A / AC 22 B	100/100	160/160	250/250	-/400	-/630	-/800	-/800
500 V AC	AC 23 A / AC 23 B	100/100	160/160	250/250	-	-	-	-
690 V AC	AC 20 A / AC 20 B	100/100	160/160	250/250	400/400	630/630	800/800	800/800
690 V AC	AC 21 A / AC 21 B	100/100	160/160	250/250	-/400	-/630	-/800	-/800
690 V AC ⁽²⁾	AC 22 A / AC 22 B	100/100	160/160	250/250	-/400	-/630	-/800 ⁽⁶⁾	-/800
690 V AC ⁽²⁾	AC 23 A / AC 23 B	80/80	125/125	250/250	250/315			
220 V DC	DC 21 A / DC 21 B	100/100	100/100	250/250	- /400A ⁽³⁾	- /630A ⁽³⁾		
220 V DC	DC 22 A / DC 22 B	100/100	100/100	250/250				
220 V DC	DC 23 A / DC 23 B	80/80	125/125	200/200				
440 V DC	DC 21 A / DC 21 B	100 ⁽³⁾ /100 ⁽³⁾	100 ⁽³⁾ /100 ⁽³⁾	250 ⁽³⁾ /250 ⁽³⁾	- /400A ⁽⁴⁾	- /630A ⁽⁴⁾		
440 V DC	DC 22 A / DC 22 B	100 ⁽³⁾ /100 ⁽³⁾	100 ⁽³⁾ /100 ⁽³⁾	250 ⁽³⁾ /250 ⁽³⁾				
440 V DC	DC 23 A / DC 23 B	80 ⁽³⁾ /80 ⁽³⁾	125 ⁽³⁾ /125 ⁽³⁾	200 ⁽³⁾ /200 ⁽³⁾				
Rated operating power in AC-23 (kW)								
At U_e 415 VAC without pre-break auxiliary contact ^{(1)/(5)}		51/51	80/80	132/132	220/220	355/355	450/450	560/560
At U_e 690 VAC without pre-break auxiliary contact ^{(1)/(5)}		90/90	110/110	220/220	220/295	295/400	400/400	400/475
Reactive power (kvar)								
At U_e 415 VAC ⁽⁵⁾		45	75	115	185	290	365	460
Mechanical characteristics								
Durability (number of operating cycles)		10 000	10 000	10 000	10 000	5 000	8 000	3 000
Storage temperature ($^{\circ}\text{C}$)		-50 ... +85						
Operating temperature ($^{\circ}\text{C}$)		-20 ... +70						
Regulatory compliance		IEC 60947-3						
Certification		CCC						

(1) Category with index A = frequent operation / Category with index B = infrequent operation.

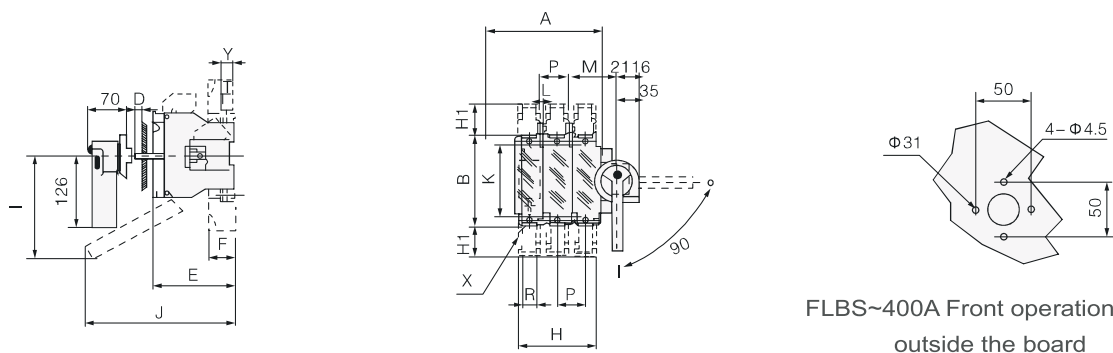
(2) With terminal shrouds or phase barrier.

(3) 3-pole device with 2 poles in series for the '+' and 1 pole for the '-'.

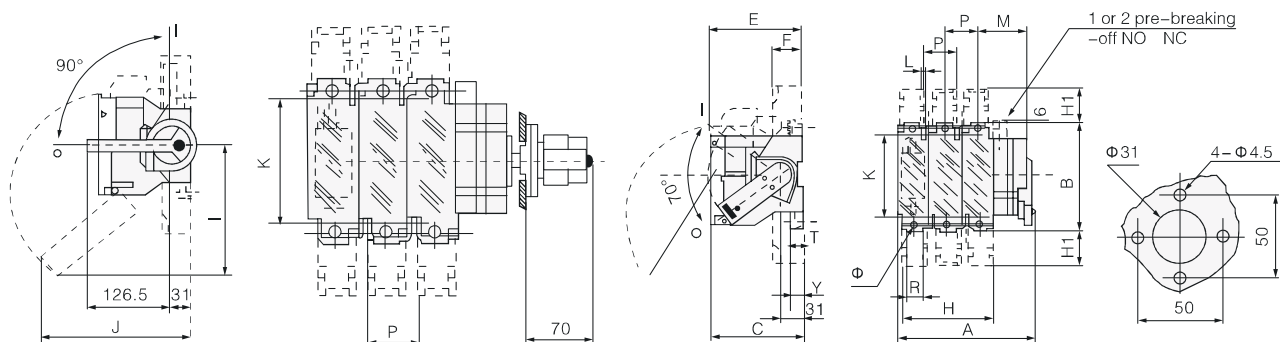
(4) 4-pole device with 2 poles in series per polarity.

(5) The power value is given for information only; the current values vary from one manufacturer to another.

(6) For a rated operational voltage $U_e = 400$ VAC.

Dimensions
100A-400A/I Overall And Mounting Size Of Fuse Group Of Isolation Switch


Specification	Fuse-link model	Overall and mounting dimensions																
		A	B	D	E	F	H	H1	I	J	K	L	M	P	R	T	ΦX	Y
100A/3	0~00C	152	118	20~30	117				159	145	106	5.4	62.5	32				
100A/4	0~00C	184	118	20~30	117				159	145	106	5.4	62.5	32				
160/3	0~00	164	162	28~30	126	44	108	53	141	189	127	5.4	65	36	20	2.5	8.5	19.5
160/4	0~00	200	162	28~30	126	44	144	53	141	189	127	5.4	65	36	20	2.5	8.5	19.5
250/3	1	236	195	28~30	146	65	180	75	185	251	162	6.4	90.5	60	32	2.5	11	19.5
250/4	1	296	195	28~30	146	65	240	75	185	251	162	6.4	90.5	60	32	2.5	11	19.5
400/3	2	278	205	28~30	149	65	192	75	200	260	172	6.4	121	66	50	3	11	20
400/4	2	344	205	28~30	149	65	258	75	200	260	172	6.4	121	66	50	3	11	20



Specification	Fuse-link model	Overall and mounting dimensions																
		A	B	C	E	F	H	H1	I	J	K	L	M	P	R	T	ΦX	Y
100A/3	0~00C	133	118	134	126.5		116.5		159	145	106	5.4	36	32				
100A/4	0~00C	164	118	117	126.5		116.5		159	145	106	5.4	36	32				
160/3	0~00	150	162	173	126.5	44	108	53	141	189	127	5.4	38	36	20	2.5	8.5	19.5
160/4	0~00	186	162	173	126.5	44	144	53	141	189	127	5.4	38	36	20	2.5	8.5	19.5
250/3	1	253	195	173	146	65	180	75	185	251	162	6.4	81	60	32	2.5	11	19.5
250/4	1	313	195	173	146	65	240	75	185	251	162	6.4	81	60	32	2.5	11	19.5
400/3	2	271	205	173	149	65	192	75	200	260	172	6.4	86	66	50	3	11	20
400/4	2	337	205	173	149	65	250	75	200	260	172	6.4	86	66	50	3	11	20

TWOMASTER FLBS

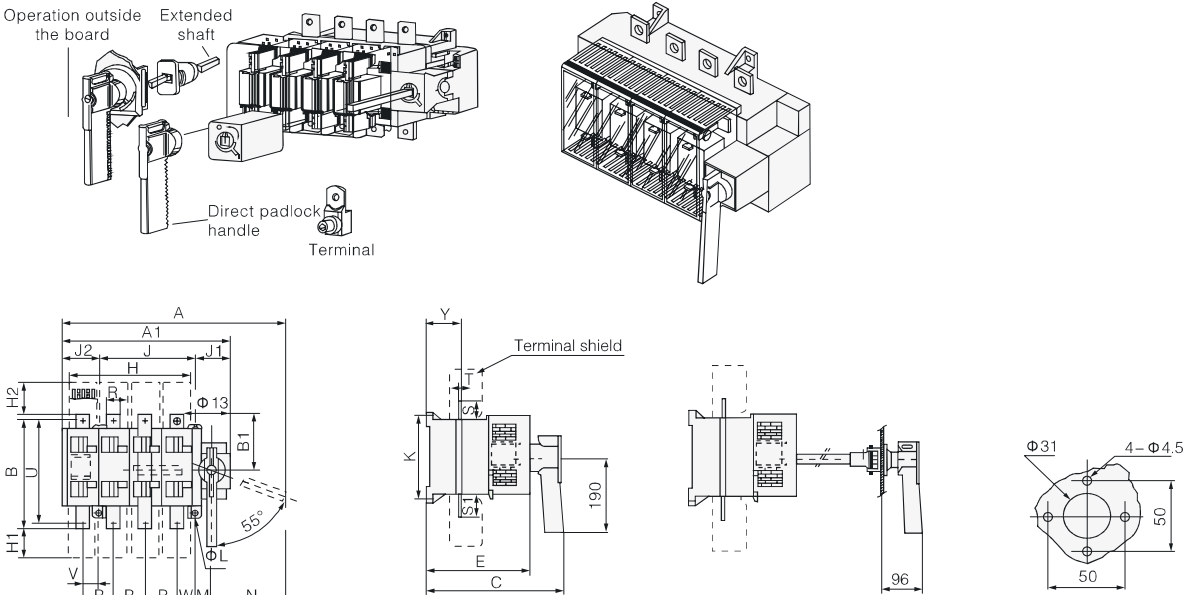
Fused Load Break Switches

100A-1250A



Dimensions

400-630A/I Overall And Mounting Size Of Fuse Group Of Isolation Switch



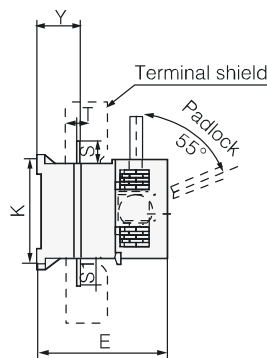
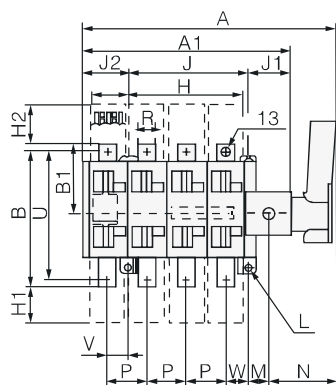
400A~630A Front direct operation

400~630A Front operation outside the board

Specification	Fuse-link model	Overall and mounting dimensions																								
		A	A1	B	B1	C	E	H	H1	H2	J	J2	J1	K	M	N	P	R	S	S1	T	V	U	W	ΦL	Y
400A/3	2	414	285	238	115	307	221	190	71	79	210	70	65	180	32.5	162	65	32	35	43	5	40.5	208	39.5	7	69
400A/4	2	474	345	238	115	307	221	255	71	79	210	70	65	180	32.5	162	65	32	35	43	5	24.5	208	39.5	7	69
630A/3	3	470	345	300	150	348	268	235	85	85	250	100	76	250	38.5	162	80	50	50	50	7	45.5	260	44.5	9	72
630A/4	3	550	425	300	150	348	268	315	85	85	250	100	76	250	38.5	162	80	50	50	50	7	34.5	260	44.5	9	72

Dimensions

400-630A/I Overall And Mounting Size Of Fuse Group Of Isolation Switch



400~630A Side direct operation

Specification	Fuse-link model	Overall and mounting dimensions																							
		A	A1	B	B1	E	H	H1	H2	J	J2	J1	K	M	N	P	R	S	S1	T	V	U	W	ΦL	Y
400A/3	2	500	285	238	115	221	190	71	79	210	70	65	180	32.5	119	65	32	30	43	5	40.5	208	39.5	7	69
400A/4	2	560	345	238	115	221	255	71	79	210	70	65	180	32.5	119	65	32	30	43	5	24.5	208	39.5	7	69
630A/3	3	550	345	300	150	268	235	85	85	250	100	76	250	38.5	119	80	50	50	50	7	45.5	260	44.5	9	72
630A/4	3	630	425	300	150	268	315	85	85	250	100	76	250	38.5	119	80	50	50	50	7	34.5	260	44.5	9	72

