

IEC Non-Fusible Disconnect Switches

IEC UL Modular Non-Fused (M163 - M4000E03)

The M-series Load Break Switch is the most compact industrial-grade switch on the market. Capable of making or breaking loads up to 690V (IEC), 600V (UL), it is suitable as a motor disconnect. Extremely compact and robust, these switches are modular but also exist in a door-mounting version. A wide assortment of handles, shafts and accessories are available to accommodate any installation requirement.



Highlights:

- Compact
- Robust
- DIN-rail, base, or door- mounting
- Choice of handles and shafts
- Padlockable
- Side-mount auxiliary contacts and additional poles
- Double-break, silver-plated contacts

Applications:

- Line of sight disconnect
- Electrical isolation
- Branch-circuit switch
- Motor disconnect

Ratings IEC:

Volts : 690VAC
Amps : 16, 25, 40, 63, 80, 100, and 125A

Ratings UL:

Volts : 600VAC
Amps : 20, 30, 40, 63, 80, 100, and 125A

Suitable as motor disconnect up to 40hp

Catalog Number Designation

		M	80	3		
Switch	M = Mersen AC Switch MD = Mersen DC Switch					
Ampacity	16 to 1200					
Type	Blank = non-fused UL508 U = non-fused UL98 J = J fused F = NFC fused	E = IEC non-fused CC = CC fused D = DIN fused B = BS-88 fused				
Number of Poles/Left side of Handle	AC: 0, 1, 2, 3, 3N, 4, etc. (N = neutral) DC: 0, 1, 2,3,4					
Number of Poles/Right side of Handle	AC: Blank = < 200A non-fused, 0, 1, 2, 3, 3N, 4, etc. (N = neutral) DC: Blank = < 100A, 0, 1, 2, 3, 4					
Revision	Blank = 0					
Special Configurations	S = side-operated CH = Changeover	DM = door-mounting N = Non-fused switched Neutral				

Approvals:

- UL 508 listed E196672
- IEC 60947-3



IEC Non-Fusible Disconnect Switches

IEC Disconnect Switches—Front Operated



M163



M163DM



M633



M633DM



M100U3 - M125E3

Switch Body

Ampere Rating	16	25	40	63	80	100	125
Base Part #	M163	M253	M403	M633	M803	M100U3	M125E3
Door-mounted version	M163DM	M253DM	M403DM	M633DM	M803DM	M100U3DM	

Direct Front Operation Locking Handle

	HD40	HD40	HD40	HD125	HD125	HD125	HD125
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Handles and Shafts



External Front Operation

Selector Style IP65, NEMA 1, 3R, 12	HSBX	HSBX	HSBX	HSBX	HSBX	HSBX	HSBX
Shaft Lengths: 85, 130, 180, 250 Ex. SA130	SA__	SA__	SA__	SA__	SA__	SA__	SA__
Door mounted version (no shaft required)	HSBPDM	HSBPDM	HSBPDM	HSBWDM	HSBWDM	HSBWDM	HSBWDM
Pistol Style IP65, NEMA 1, 3R, 12	HB45	HB45	HB45	HB45	HB45	HB45	HB45
NEMA Type 4, 4X	HB45X	HB45X	HB45X	HB45X	HB45X	HB45X	HB45X
Shaft Lengths: 210, 290 Ex. SPA210	SPA__	SPA__	SPA__	SPA__	SPA__	SPA__	SPA__

B=Black. Substitute 'R' for 'B' if a red handle is desired. Ex. HR65

Accessories



4P40

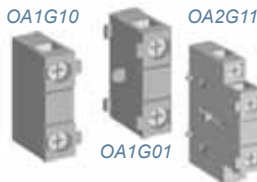
4P80

Fourth Poles

Limited to one additional pole per switch	4P40	4P40	4P40	4P80	4P80	4P125	4P125
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Neutral Poles

Limited to one additional pole per switch	NP40	NP40	NP40	NP80	NP80	NP125	NP125
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OA1G10

OA1G01

OA2G11

Terminal Shrouds

3-pole, 1 terminal shroud for 3 poles	TS40-3	TS40-3	TS40-3	TS63-3	TS63-3	TS125-3	TS125-3
1 to 4-poles, 1 terminal shroud per pole	TS40-1	TS40-1	TS40-1	TS63-1	TS63-1	TS125-1	TS125-1

Auxiliary Contacts

NC left or right side mounting	OA1G01	OA1G01	OA1G01	OA1G01	OA1G01	OA1G01	OA1G01
NO left or right side mounting	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10
NO+NC (Mounting on either side)	OA2G11	OA2G11	OA2G11	OA2G11	OA2G11	OA2G11	OA2G11

IEC Non-Fusible Disconnect Switches

IEC Front and Side Operated



M200E03S



M630E03

Switch Body

Ampere Rating	200	250	315	400	630	800
Base Part #	M200E	M250E	M315E	M400E	M630E	M800E
3-pole	03, 30S	03, 30S	03, 30S	03, 30S	03, 30S	03, 30S

Handles and Shafts

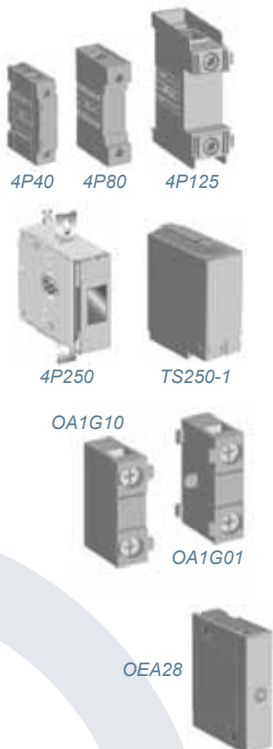


Direct Front Operation Locking Handle						
	HD250	HD250	HD400	HD400	HD800	HD800

External Front Operation							
Pistol Style	NEMA 1, 3R, 12	HB65/HB80	HB65/HB80	HB125	HB125	HB125	HB125
	NEMA 4, 4X	HB65X/HB80X	HB65X/HB80X	HB125X	HB125X	HB125X	HB125X
Pistol Type, right side operation		HB65S	HB65S	HB145S	HB145S	HB145S	HB145S
Shaft— Lengths 210, 290, 360, 430 Ex. SPA210		SPA__	SPA__	SFB__	SFB__	SFB__	SFB__
Shaft— Lengths 280, 325, 395 Ex. SFB325							

B = Black. Substitute "R" for "B" if red handle is desired. Ex. HR80.

Accessories



Fourth Poles						
	4P250	4P250	4P400	4P400	4P800	4P800

Neutral Poles						
	NP250	NP250	NP400	NP400	NP800	NP800

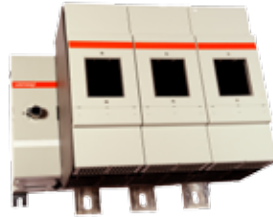
Terminal Shrouds						
Kit for 3 poles	TS250-13	TS250-13	TS400-13	TS400-13	TS800-13	TS800-13
Kit for 4 poles	TS250-14	TS250-14	TS400-14	TS400-14	TS800-14	TS800-14

Shorter terminal shrouds versions are also available if desired. Ex. TS250S-13 for switches up to 250A

Auxiliary Contacts						
Normally Open	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10
Normally Closed	OA3G01	OA3G01	OA3G01	OA3G01	OA3G01	OA3G01
Module for SF aux. contacts	OEA28	OEA28	OEA28	OEA28	OEA28	OEA28

IEC Non-Fusible Disconnect Switches

IEC Front and Side Operated



M1250E03

Switch Body

Ampere Rating	1000	1250	1600	2000	2500	3200	4000
Base Part #	M1000E	M1250E	M1600E	M2000E	M2500E	M3200E	M4000E
3-pole	03	03	03	03	03	03	03

Direct Front Operation Locking Handle

	HD1000	HD1000	HD1000	HD1000	HD1000	HD1000	HD1000
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External Front Operation

Pistol Style NEMA 1, 3R, 12	HB274	HB274	HB274	HB274	HB274	HB274	HB274
NEMA 4, 4X	HB274X	HB274X	HB274X	HB274X	HB274X	HB274X	HB274X
Shaft— Lengths: 280, 325,395 Ex. SFB325	SFB__	SFB__	SFB__	SFB__	SFB__	SFB__	SFB__

B=Black. Substitute 'R' for 'B' if a red handle is desired. Ex. HR274

Handles and Shafts



Fourth Poles

	4P1250	4P1250	4P1600	4P2500	4P2500		
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Neutral Poles

	NP1250	NP1250	NP1600				
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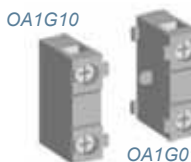
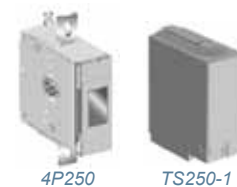
Terminal Shrouds

Kit for 3 poles	TS1600-13	TS1600-13	TS1600-13				
Kit for 4 poles	TS1600-14	TS1600-14	TS1600-14				

Auxiliary Contacts

Normally Open	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10	OA1G10
Normally Closed	OA3G01	OA3G01	OA3G01	OA3G01	OA3G01	OA3G01	OA3G01
Module for SF aux. contacts	OEA28	OEA28	OEA28	OEA28	OEA28	OEA28	OEA28

Accessories



IEC Non-Fusible Disconnect Switches

Technical Data

Technical data according to IEC 60947-3											
General purpose amp rating	pf= 0.7...0.8	-40° to 40 °C	A	16	25	40	63	80	100	125	
Rated insulation voltage and rated operational voltage AC20/DC20		Pollution degree 3	V	750	750	750	750	750	750	750	
Dielectric strength		50 Hz 1min.	kV	6	6	6	6	6	6	6	
Rated impulse withstand voltage			kV	8	8	8	8	8	8	8	
Rated thermal current and rated operational current AC20/DC20		ambient 40°C ²⁾	In open air	A	25	32	40	63	80	115	125
		ambient 40°C ²⁾	In enclosure	A	25	32	40	63	80	115	125
		ambient 60°C	In enclosure	A	20	25	32	50	63	80	100
..with minimum conductor cross section		Cu	mm ²	4	6	10	16	25	35	50	
Rated operational current, AC-21A		up to 415 V	A	16	25	40	63	80	100	125	
		440...690 V	A	16	25	40	63	80	100	125	
Rated operational current, AC-22A		up to 415 V	A	16	25	40	63	80	100	125	
		440...500 V	A	16	25	40	63	80	100	125	
		690 V	A	16	25	40	63	80	100	125	
Rated operational current, AC-23A		up to 415 V	A	16	20	23	63	75	80	90	
		440 V	A	16	20	24	63	65	65	78	
		500 V	A	16	20	23	45	58	60	70	
		690 V	A	10	11	12	20	20	40	50	
Rated operational current / poles in series, DC-21A		24...48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1	
		110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2	
		220 V	A	16/3	25/3	32/3	63/4	80/4	100/4	125/4	
		440 V	A	16/4	16/4	16/4	16/4	16/4			
		500 V	A	16/4	16/4	16/4	16/4	16/4			
		750 V	A	16/8	25/8	32/8					
Rated operational current / poles in series, DC-22A		24...48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1	
		110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2	
		220 V	A	16/3	25/3	32/4	45/4	45/4	63/4	80/4	
		440 V	A	10/4	10/4	10/4	10/4	10/4			
Rated operational current / poles in series, DC-23A		24...48 V ¹⁾	A	16/1	25/1	32/1	63/1	80/1	100/1	125/1	
		110 V	A	16/2	25/2	32/2	63/2	80/2	100/2	125/2	
		220 V	A	16/4	25/4	32/4	45/4	45/4	63/4	63/4	
		440 V	A	10/4	10/4	10/4	10/4	10/4			
Rated operational power, AC-23 (These values are given for guidance and may vary according to the motor manufacturer)		220...240 V	kW	3	4	5.5	11	22	22	22	
		400...415 V	kW	7.5	9	11	22	37	37	45	
		440 V	kW	7.5	9	11	22	37	37	45	
		500 V	kW	7.5	9	11	22	37	37	45	
		690 V	kW	7.5	9	11	15	18.5	37	45	
Rated breaking capacity, AC-23A		up to 415 V	A	128	160	184	360	640	640	720	
		440 V	A	128	160	184	360	448	520	624	
		500 V	A	128	160	184	360	464	480	560	
		690 V	A	80	88	96	160	160	320	40	
Rated breaking capacity/poles in series, DC-23A		24...48 V	A	64/1	100/1	128/1	180/1	252/1	400/1	500/1	
		110 V	A	64/2	100/2	128/2	180/2	252/2	400/2	500/2	
		220 V	A	64/3	100/4	128/4	180/4	180/4	252/4	252/4	
		440 V	A	40/4	40/4	40/4	40/4	40/4			
		750 V	A	64/8	64/8	64/8					
Rated conditional short-circuit current I_p (r.m.s.) and corresponding max. allowed cut-off current \hat{I}_c . The cut-off current \hat{I}_c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269)		I_p (r.m.s.)	50 kA	kA	6.5	6.5	6.5	13	13	16.5	16.5
		Max Fuse rating gG/aM	≤ 415 V	A	40/32	40/32	40/32	100/80	100/80	125/125	125/125
		I_p (r.m.s.)	100 kA	kA				17	17		
		Max Fuse rating gG/aM	≤ 500 V	A				100/80	100/80		
		I_p (r.m.s.)	10 kA	kA						8.2	8.2
		Max Fuse rating gG/aM	≤ 690 V	A						125/100	125/100
Rated short-time withstand current		I_p (r.m.s.)	50 kA	kA	4	4	4	11	11	10	10
		Max Fuse rating gG/aM	≤ 690 V	A	25/16	25/16	25/16	80/63	80/63	63/63	63/63
Rated short-time making capacity		r.m.s. -value I_{cw}	690 V, 0.25 s	kA							
		r.m.s. -value I_{cm}	690 V, 1 s	kA	0.5	0.5	0.5	1	1.5	2.5	2.5
Rated short-time making capacity		Peak value I_{cm}	690 V/500 V	kA	0.705	0.705	0.705	1.4	2.1	3.6	3.6
Rated capacitor power		The capacitor ratings are limited by the fuse link	400...415 V	kVAr	6.5	10	15	25	30	40	50
Power loss / pole		At rated operational current		W	0.3	0.6	1.6	2.8	4.5	4.0	6.3
Mechanical endurance		Divide by two for operation cycles		Oper.	20 000	20 000	20 000	20 000	20 000	20 000	20 000
Weight without accessories		3-pole		kg	0.11	0.11	0.11	0.27	0.27	0.36	0.36
		4-pole		kg	0.15	0.15	0.15	0.35	0.35	0.50	0.50
Cable size		Cu-wire size suitable for terminal clamps		mm ²	0.75...10	0.75...10	0.75...10	1.5...35	1.5...35	10...70	10...70
Terminal tightening torque		Counter torque required		Nm	0.8	0.8	0.8	2	2	6	6
Operating torque		3-pole switch-disconnector		Nm	1	1	1	1.2	1.2	2	2

1) Below 48 V, two poles in parallel up to M80 are recommended particularly in polluted atmosphere.

2) Acc. to IEC 60947-1, § 6.1.1.

IEC Non-Fusible Disconnect Switches

Technical Data

Technical data according to IEC 60947-3									
General purpose amp rating	pf= 0.7...0.8	-40° to 40 °C	A	200	250	315	400	630	800
Rated insulation voltage and rated operational voltage AC20/DC20	Pollution degree 3		V	1 000	1 000	1 000	1 000	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10	10
Rated impulse withstand voltage			kV	12	12	12	12	12	12
Rated thermal current and rated operational current AC20/DC20	ambient 40°C ⁴⁾	In open air	A	200	250	315	400	630	800
	ambient 40°C ⁴⁾	In enclosure	A	200	250	315	400	630	800
...with minimum conductor cross section	Cu		mm ²	95	120	185	240	2x185	2x240
Rated operational current, AC-21A		≤ 500 V	A	200	250	315	400	630	800
		690 V	A	200	250	315	400	630	800
		1000 V	A	200	250	315	400	630	800
Rated operational current, AC-22A		≤ 500 V	A	200	250	315	400	630	800
		690 V	A	200	250	315	400	630	800
		1000 V	A	200	250	315	400	630	800
Rated operational current, AC-23A		≤ 500 V	A	200	250	315	400	630	800
		690 V	A	200	250	315	400	630	800
		1000 V	A	135	135	200	200	400	400
Rated operational current / poles in series, DC-21A ¹⁾		24...110 V	A	200/2	250/2	315/1 ²⁾	400/1 ²⁾	630/1	800/1
		220 V	A	200/2	250/2	315/2 ²⁾	400/2 ²⁾	630/1	800/1
		440 V	A	200/3	250/3	315/3	360/3	630/2	800/2
		660 V	A	200/4	230/4 ²⁾	315/4	360/4	630/4 ²⁾	650/4 ²⁾
Rated operational current / poles in series, DC-21B		800 V	A	200/5	250/5	315/5	400/5	600/5	600/5
		1000 V	A	200/6	250/6	315/6	400/6	600/6	600/6
Rated operational power, AC-23 ³⁾		230 V	kW	60	75	100	132	200	250
		400 V	kW	110	140	160	220	355	450
		415 V	kW	110	145	180	230	355	450
		500 V	kW	132	170	220	280	400	560
		690 V	kW	200	250	315	400	630	800
Rated breaking capacity, AC-23A		≤ 500 V	A	1 600	2 000	2 520	3 200	5 040	6 400
		690 V	A	1 600	2 000	2 520	3 200	5 040	6 400
Rated conditional short-circuit current I_p (r.m.s.) and corresponding max. allowed cut-off current \hat{i}_c . The cut-off current \hat{i}_c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269)	Max Fuse rating I_p (r.m.s.)	100 kA, 500 V	kA	40.5	40.5	61.5	61.5	90	90
		gG/aM	A	315/315	315/315	500/450	500/450	800/1 000	800/1 000
	Max Fuse rating I_p (r.m.s.)	80 kA, 690 V	kA	40.5	40.5	59	59	83.5	83.5
		gG/aM	A	355/315	355/315	500/500	500/500	800/1 000	800/1 000
Rated short-time withstand current	r.m.s. -value I_{cw}	≤ 1000 V 0,15 s	kA	15	15	31	31	38	38
		≤ 1000 V 0,25 s	kA	15	15	24	24	36	36
		≤ 1000 V 1 s	kA	8	8	15	15	20	20
Rated short-time making capacity	Peak value I_{cm}	≤ 1000 V	kA	30	30	65	65	80	80
Rated capacitor power When no initial charge on the capacitor	The capacitor ratings are limited by the fuse links	415 V	kVAr	100	115	145	180	250	310
		500 V	kVAr	120	135	175	215	300	375
		690 V	kVAr	160	190	250	325	450	550
Power loss / pole		At rated operational current	W	4	6.5	6.5	10	25	40
Mechanical endurance		Divide by two for operation cycles	Oper.	20 000	20 000	16 000	16 000	10 000	10 000
Weight without accessories		3-pole switch	kg	1.2	1.2	2.2	2.2	5.2	5.2
Terminal bolt size		Metric thread diameter x length	mm	M8x25	M8x25	M10x30	M10x30	M12x40	M12x40
Terminal tightening torque		Counter torque required	Nm	15-22	15-22	30-44	30-44	50-75	50-75
Operating torque		3-pole switch-disconnector	Nm	7	7	16	16	27	27

1) Further ratings on request.

2) Category B.

3) These values are given for guidance and may vary acc. to the motor manufacturer.

4) Acc. to IEC 60947-1, § 6.1.1.

IEC Non-Fusible Disconnect Switches

Technical Data

Technical data according to IEC 60947-3								
General purpose amp rating	pf= 0.7...0.8	-40° to 40 °C	A	1000	1250	1600	2000	2500
Rated insulation voltage and rated operational voltage AC20/DC20	Pollution degree 3		V	1 000	1 000	1 000	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10	10	10	10
Rated impulse withstand voltage			kV	12	12	12	12	12
Rated thermal current and rated operational current AC20/DC20 ..with minimum conductor cross section	ambient 40°C ⁵⁾	In open air	A	1 000	1 250	1 600	2 000	2 500
	ambient 40°C ⁵⁾	In enclosure	A	1 000	1 250	1 600		
	ambient 60°C	In enclosure	A					
	Cu		mm ²	2x300	2x400	2x500	3x500	4x500
Rated operational current, AC-21A		up to 690 V	A	1 000	1 250	1 600	2 000 ²⁾	2 500 ²⁾
		1000 V	A	1 000	1 250	1 600		
Rated operational current, AC-22A		up to 500 V	A	1 000	1 250	1 600	2 000 ^{2) 3)}	2 500 ^{2) 3)}
		690 V	A	1 000	1 250	1 600	2 000 ^{2) 3)}	2 500 ^{2) 3)}
Rated operational current, AC-23A		up to 500 V	A	1 000	1 250	1 250		
		690 V	A	1 000	1 250	1 250		
Rated operational power, AC-23A (These values are given for guidance and may vary acc. to the motor manufacturer)		400...415 V	kW	560	710	710		
		440 V	kW	630	800	800		
		500 V	kW	710	900	900		
		690 V	kW	1 000	1 200	1 200		
		up to 500 V	A	10 000	10 000	10 000		
Rated breaking capacity, AC-23A		690 V	A	10 000	10 000	10 000		
Rated conditional short-circuit current I_p (r.m.s.) and corresponding max. allowed cut-off current \hat{i}_c . The cut-off current \hat{i}_c refers to values listed by fuse manufacturers (single phase test acc. to IEC60269)	I_p (r.m.s.)	80 kA	kA	100	100	100		
	Max. OFA_fuse size gG/aM	≤ 415 V	A	1 250/1 250	1 250/1 250	1 250/1 250		
	I_p (r.m.s.)	100 kA	kA	106	106	106		
	Max. OFA_fuse size gG/aM	≤ 500 V	A	1 250/1 250	1 250/1 250	1 250/1 250		
	I_p (r.m.s.)	50 kA	kA					
Rated short-time withstand current	r.m.s.-value I_{cw}	690 V 0.25 s	kA	50	50	50	80	80
		690 V 1 s	kA	50	50	50	55	55
Rated short circuit making capacity	Peak value I_{cm}	415 V	kA					
		500 V	kA					
		690 V	kA	1104)	1104)	1104)	176	176
	Max. distance from switch frame to nearest busbar/cable support		mm	150	150	150	150	150
Rated capacitor power When no initial charge on the capacitor	The capacitor ratings are limited by the fuse links	415 V	kVAr	460	575	575		
		500 V	kVAr	550	690	690		
		690 V	kVAr	750	950	950		
Power loss / pole		At rated operational current	W	19	29	48	55	85
Mechanical endurance		Divide by two for operation cycles	Oper.	6 000	6 000	6 000	6 000	6 000
Weight without accessories		3-pole	kg	14.1	14.1	15.2	22	22
		4-pole	kg	18	18	19.5	28	28
Terminal bolt size	Metric thread diameter x length		mm	M12x50	M12x50	M12x60	M12x60	M12x60
Terminal tightening torque	Counter torque required		Nm	50...75	50...75	50...75	50...75	50...75
Operating torque	3-pole switch-disconnector		Nm	65	65	65	65	65

1) Extended phase distance (185 mm).

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

3) Phase barriers or terminal shrouds must be used on both sides of the switch at voltages ≥ 500 V.

4) The value is 92 kA for 4-pole switch-disconnectors.

5) Acc. to IEC60947-1, § 6.1.1.

IEC Non-Fusible Disconnect Switches

Technical Data IEC Products

Technical data according to IEC 60947-3					
General purpose amp rating	pf= 0.7...0.8	-40° to 40 °C	A	3200	4000
Rated insulation voltage	Pollution degree 3		V	1 000	1 000
Dielectric strength		50 Hz 1min.	kV	10	10
Rated impulse withstand voltage			kV	8	8
Rated thermal current in ambient 35°C and temporarily 40°C		In open air	A	3200	4 000/ 3 800 ¹⁾
...with minimum conductor cross section	Cu		mm ²	4 x 1 000	5 x 1 000
Rated operational Voltage AC20B, DC20B			V	1 000	1,000
Rated operational current, AC-21B		up to 415 V	A	3,200	4 000/ 3 800 ²⁾
Rated operational current, AC-22B		up to 415 V	A	3,200	4 000/ 3 800 ²⁾
Rated operational current, AC-23A		up to 500 V	A	1 000	4 000/ 3 800 ²⁾
		690 V	A	1 000	4 000/ 3 800 ²⁾
Rated short-time withstand current	r.m.s. -value I_{sw}	690 V 1 s	kA	60	60
	Peak value I_{cm}	690 V	kA	176	176
Rated short circuit making capacity	Max. distance from switch frame to nearest busbar/cable support		mm	150	150
	With rated current		W	95	130/120 ³⁾
Mechanical endurance	Divide by two for operation cycles		Oper.	5,000	5,000
Weight without accessories		3-pole	kg	24.7	28.9
		4-pole	kg	32.1	37.7
Standard shaft and mounting depth	Square dimension x length of shaft		mm	12 x 280	12 x 280
	Corresponding mounting depth		mm	251 - 380	251 - 380
			Type	HB274	HB274
Terminal tightening torque	Counter torque required		Nm	50...75	50...75
Operating torque	for 3- and 4-pole switches		Nm	65	65

1) The rated thermal current without wide phase distance is 3800A

2) The rated operational current without wide phase distance is 3800A

3) Power loss without wide phase distance is 120W

IEC Non-Fusible Disconnect Switches

IEC Non-Fused switches, front-operated

Part #	Description	Ref #
M163	IEC UL508 Switch 16A 3p	A1043188
M253	IEC UL508 Switch 25A 3p	B1043189
M403	IEC UL508 Switch 40A 3p	C1043190
M633	IEC UL508 Switch 63A 3p	D1043191
M803	IEC UL508 Switch 80A 3p	E1043192
M100U3	IEC UL98 Switch 100A 3p	F1043193
M125E3	IEC Switch 125A 3p	G1043194
M163DM	IEC UL508 Switch 16A 3p DM	E1043169
M253DM	IEC UL508 Switch 25A 3p DM	F1043170
M403DM	IEC UL508 Switch 40A 3p DM	K1043174
M633DM	IEC UL508 Switch 63A 3p DM	M1043176
M803DM	IEC UL508 Switch 80A 3p DM	N1043177
M100U3DM	IEC UL98 Switch 100A 3p DM	P1043178
M200E03	IEC Switch 200A 3p 0+3 pos.	H1043195
M250E03	IEC Switch 250A 3p 0+3 pos.	K1043197
M315E03	IEC Switch 315A 3p 0+3 pos.	M1043199
M400E03	IEC Switch 400A 3p 0+3 pos.	P1043201
M630E03	IEC Switch 630A 3p 0+3 pos.	R1043203
M800E03	IEC Switch 800A 3p 0+3 pos.	T1043205
M1000E03	IEC Switch 1000A 3p 0+3 pos.	W1043207
M1250E03	IEC Switch 1250A 3p 0+3 pos.	X1043208
M1600E03	IEC Switch 1600A 3p 0+3 pos.	Y1043209
M2000E03	IEC Switch 2000A 3p 0+3 pos.	Z1043210
M2500E03	IEC Switch 2500A 3p 0+3 pos.	A1043211
M3200E03	IEC Switch 3200A 3p 0+3 pos.	B1043212
M4000E03	IEC Switch 4000A 3p 0+3 pos.	C1043213

IEC Non-Fused switches, side-operated

Part #	Description	Ref #
M200E30S	IEC Switch 200A 3p R side op.	J1043196
M250E30S	IEC Switch 250A 3p R side op.	L1043198
M315E30S	IEC Switch 315A 3p R side op.	N1043200
M400E30S	IEC Switch 400A 3p R side op.	Q1043202
M630E30S	IEC Switch 630A 3p R side op.	S1043204
M800E30S	IEC Switch 800A 3p R side op.	V1043206

Handles

Part #	Description	Ref #
HD40	Handle direct Switch 40A	L1043405
HSBX	Handle selector black	M1043406
HSRX	Handle selector red	N1043407
HB45	Handle black 45mm IP65 NEMA 3R	L1043911
HB45X	Handle black 45mm IP65 NEMA 4X	M1043912
HR45	Handle red 45mm IP65 NEMA 3R	Q1043915
HR45X	Handle red 45mm IP65 NEMA 4X	R1043916
HD125	Handle direct Switch 125A	K1043404
HD250	Handle direct Switch 250A	W1043391
HD400	Handle direct Switch 400A	X1043392
HD800	Handle direct Switch 800A	Y1043393
HD1000	Handle direct Switch 1000A	J1043403
HB65	Handle black 65mm IP65 NEMA 3R	W1043368
HB65S	Handle black 65mm Right Side	A1044361
HB65X	Handle black 65mm IP65 NEMA 4X	X1043369
HB80	Handle black 80mm IP65 NEMA 3R	Y1043370
HB80X	Handle black 80mm IP65 NEMA 4X	Z1043371
HB95	Handle black 95mm IP65 NEMA 3R	N1043913
HB95X	Handle black 95mm IP65 NEMA 4X	P1043914
HB125	Handle black 125mm IP65 NEMA 3R	A1043372
HB125X	Handle black 125mm IP65 NEMA 4X	B1043373
HB145	Handle black 145mm IP65 NEMA 3R	C1043374
HB145S	Handle black 145mm Right Side	B1044362
HB145X	Handle black 145mm IP65 NEMA 4X	D1043375
HB274	Handle black 274mm IP65 NEMA 3R	D1043398
HB274X	Handle black 274mm IP65 NEMA 4X	E1043376
HB330	Handle black 330mm IP65 NEMA 3R	E1043399
HB330X	Handle black 330mm IP65 NEMA 4X	F1043377
HR65	Handle red 65mm IP65 NEMA 3R	G1043378
HR65X	Handle red 65mm IP65 NEMA 4X	H1043379
HR80	Handle red 80mm IP65 NEMA 3R	F1043400
HR80X	Handle red 80mm IP65 NEMA 4X	J1043380
HR95	Handle red 95mm IP65 NEMA 3R	S1043917
HR95X	Handle red 95mm IP65 NEMA 4X	T1043918
HR125	Handle red 125mm IP65 NEMA 3R	K1043381
HR125X	Handle red 125mm IP65 NEMA 4X	L1043382
HR145	Handle red 145mm IP65 NEMA 3R	M1043383
HR145X	Handle red 145mm IP65 NEMA 4X	N1043384
HR274	Handle red 274mm IP65 NEMA 3R	G1043401
HR330	Handle red 330mm IP65 NEMA 3R	H1043402
HSBPDM	Handle Select black snap door	X1044358
HSBWDM	Handle Select black screw door	Y1044359
HSRPDM	Handle Select red snap door	E1047792
HSRWDM	Handle Select red screw door	D1047791

IEC Non-Fusible Disconnect Switches

Shafts

Part #	Description	Ref #
SA85	Shaft selector handle 6x6x85mm	J1043426
SA105	Shaft select. handle 6x6x105mm	K1043427
SA120	Shaft select. handle 6x6x120mm	L1043428
SA130	Shaft select. handle 6x6x130mm	M1043429
SA180	Shaft select. handle 6x6x180mm	N1043430
SA250	Shaft pistol handle 6x6x250mm	R1043433
SPA130	Shaft pistol handle 6x6x130mm	V1043919
SPA210	Shaft pistol handle 6x6x210mm	P1043431
SPA290	Shaft pistol handle 6x6x290mm	Q1043432
SPA360	Shaft pistol handle 6x6x360mm	W1043920
SPA430	Shaft pistol handle 6x6x430mm	X1043921
SFB185	Shaft SwitchFuse 12x12x185mm	F1048897
SFB280	Shaft SwitchFuse 12x12x280mm	F1043423
SFB325	Shaft SwitchFuse 12x12x325mm	G1043424
SFB395	Shaft SwitchFuse 12x12x395mm	H1043425

Terminal Shrouds

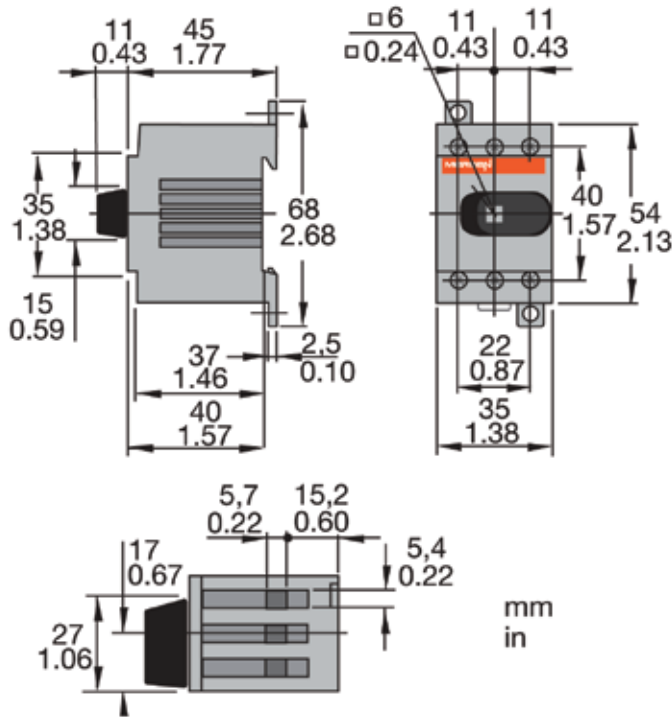
Part #	Description	Ref #
TS40-1	Term.shrd 40A switch 1p S	B1043442
TS40-3	Term.shrd 40A switch 3p L	C1043443
TS63-1	Term.shrd 63A switch 1p S	D1043444
TS63-3	Term.shrd 63A switch 3p L	E1043445
TS125-1	Term.shrd 125A switch 1p S	F1043446
TS125-3	Term.shrd 25A switch 3p L	G1043447
TS250-13	Term.shrd 250A switch 1p L /3	P1043454
TS250-14	Term.shrd 250A switch 1p L /4	A1043464
TS400-13	Term.shrd 400A switch 1p L /3	Q1043455
TS400-14	Term.shrd 400A switch 1p L /4	B1043465
TS800-13	Term.shrd 800A switch 1p L /3	R1043456
TS800-14	Term.shrd 800A switch 1p L /4	C1043466
TS1600-13	Term.shrd 1600A switch 1p L /3	S1043457
TS1600-14	Term.shrd 1600A switch 1p L /4	D1043467
TS2500-13	Term.shrd 2500A switch 1p L /3	T1043458
TS2500-14	Term.shrd 2500A switch 1p L /4	E1043468
TS250S-13	KIT 3 Term.shrd M250 1p S	P1048905
TS250S-14	KIT 4 Term.shrd M250 1p S	Q1048906
TS400S-13	KIT 3 Term.shrd M400 1p S	R1048907
TS400S-14	KIT 4 Term.shrd M400 1p S	S1048908
TS800S-13	KIT 3 Term.shrd M800 1p S	T1048909
TS800S-14	KIT 4 Term.shrd M800 1p S	V1048910

Other Accessories

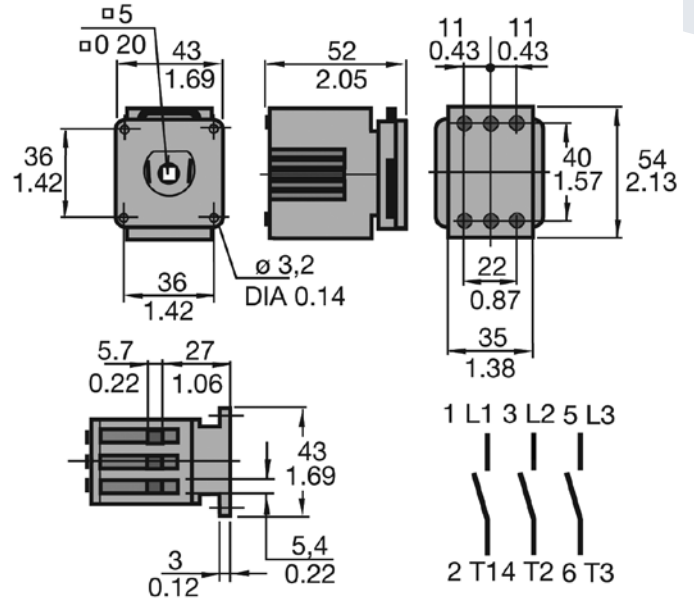
Part #	Description	Ref #
OA1G01	Auxiliary Contact NC Right	N1043476
OA1G10	Auxiliary Contact NO left	P1043477
OA2G11	Aux. Contact NO+NC Switch 125A	Q1043478
4P60	Fourth pole for M60 NF switches	T1043481
4P80	Fourth pole for M80 NF switches	V1043482
4P125	Fourth pole for M125 switches	W1043483
NP40	Neutral pole for M40 NF switches	X1043484
NP80	Neutral pole for M80 NF switches	Y1043485
NP125	Neutral pole for M125 switches	Z1043486
OA1G01	Auxiliary Contact NO Right	N1043476
OA1G10	Auxiliary Contact NC left	P1043477
OA2G11	Aux. Contact NO+NC Switch 125A	Q1043478
OA3G01	Aux.Contact NC Switch 160-2500A	R1043479
OA4B1C	Aux.Contact 1+1 SF 40A	K1043473
OSZ4	Mounting plate OA1G10/OA3G01	L1043474
OEA28	Module for SF aux. contacts	M1043475
4P125	Fourth pole for M125 NF switches	W1043483
4P250	Neutral pole for M250 NF switches	A1043487
4P400	Neutral pole for M400 NF switches	B1043488
4P800	Neutral pole for M800 NF switches	C1043489
4P1250	Neutral pole for M1250 NF switches	D1043490
4P1600	Neutral pole for M1600 NF switches	E1043491
4P2500	Neutral pole for M2500 NF switches	F1043492

IEC Non-Fusible Disconnect Switches

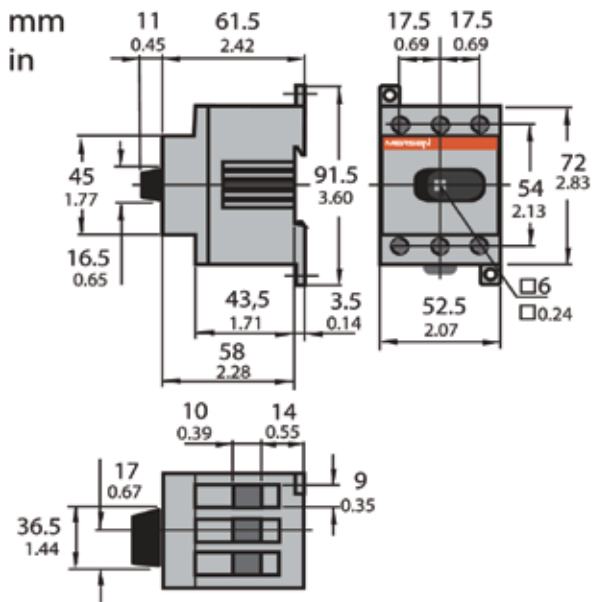
M163, M253, M403, Front operated



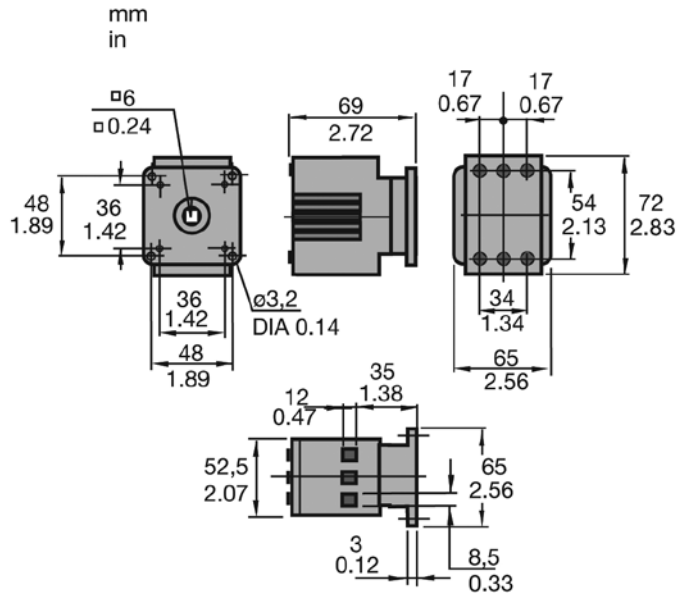
M163DM, M253DM, M403DM



M633-M803, Front operated

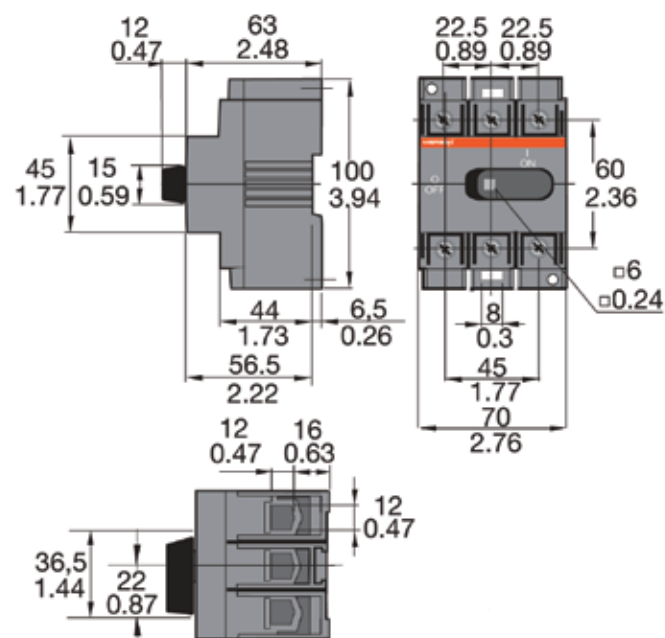


M633DM, M803DM

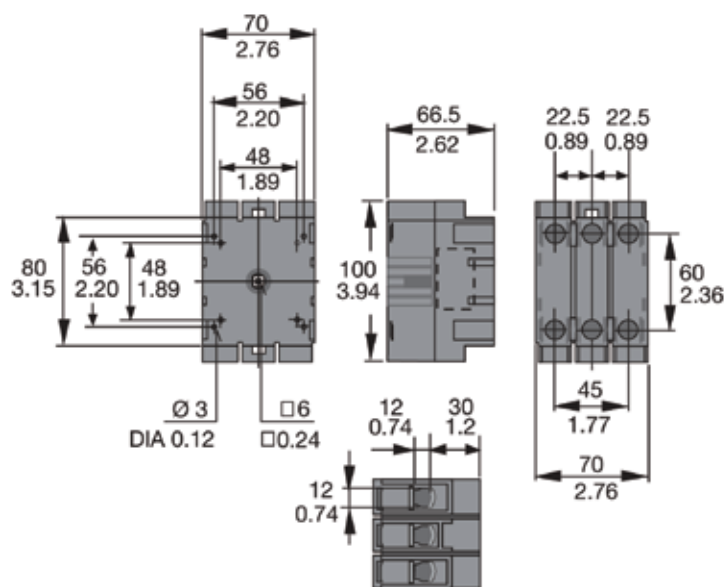


IEC Non-Fusible Disconnect Switches

M100U3-M125E3, Front operated

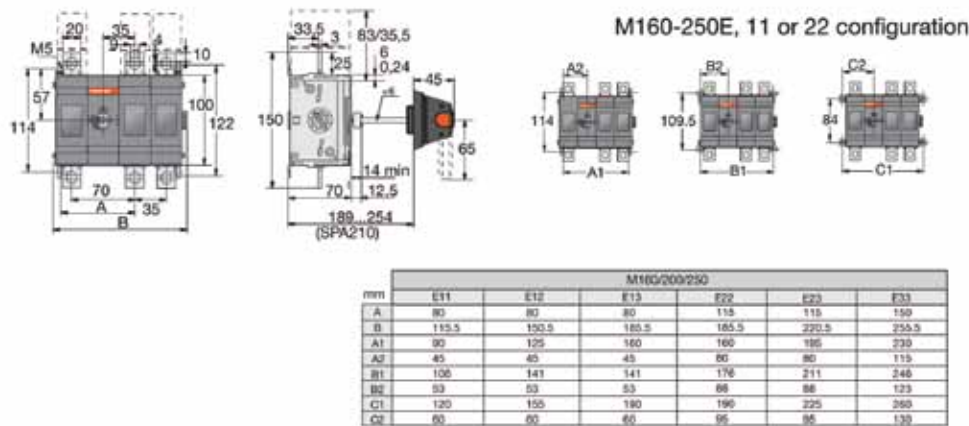
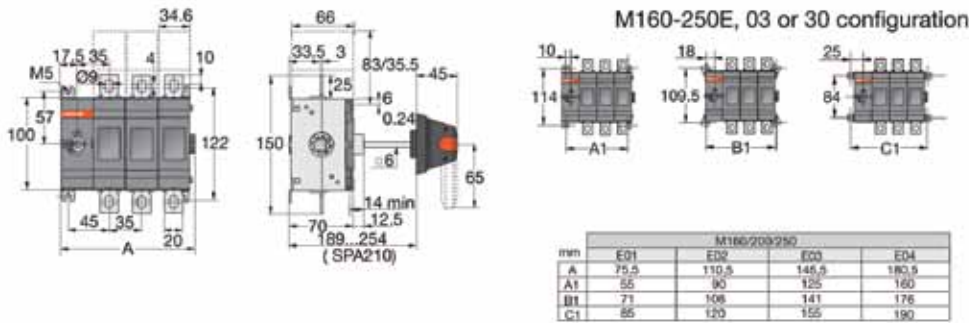


M100U3DM

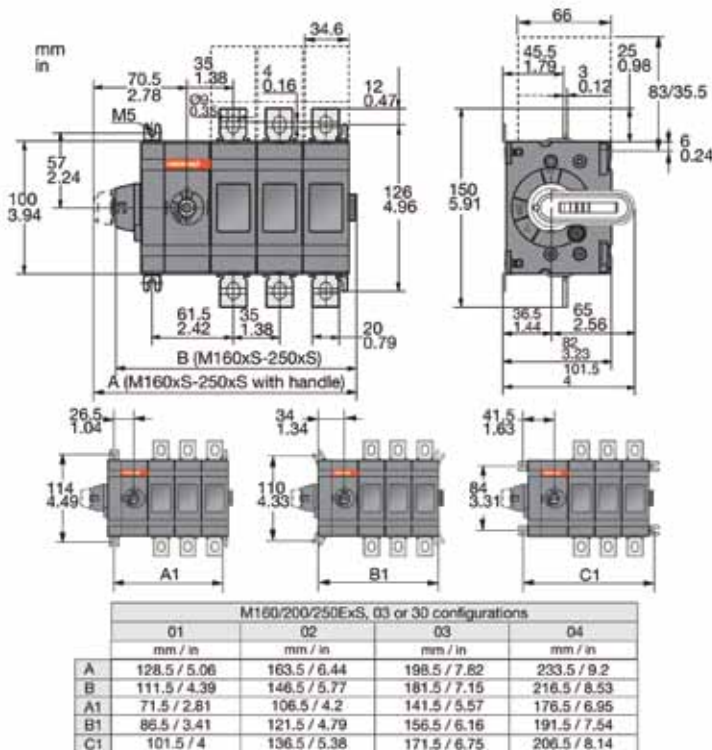


IEC Non-Fusible Disconnect Switches

M160Ex/M200Ex/M250Ex, Front operated



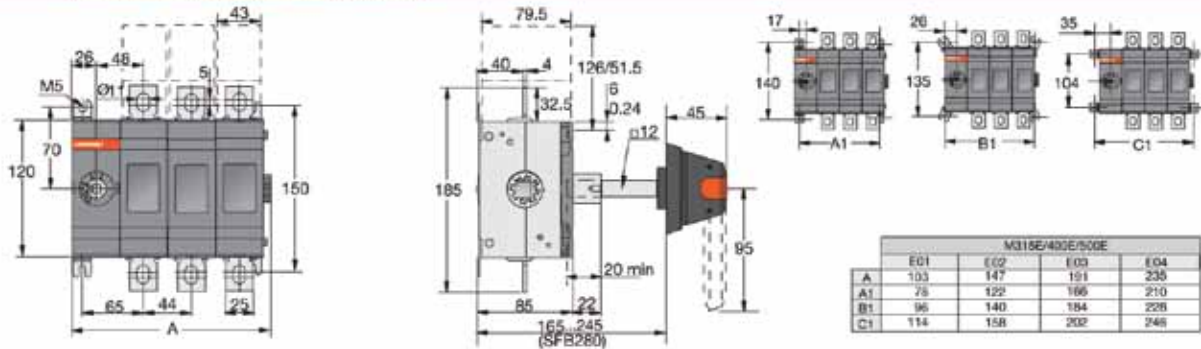
M160ExS/M200ExS/M250ExS, Side operated



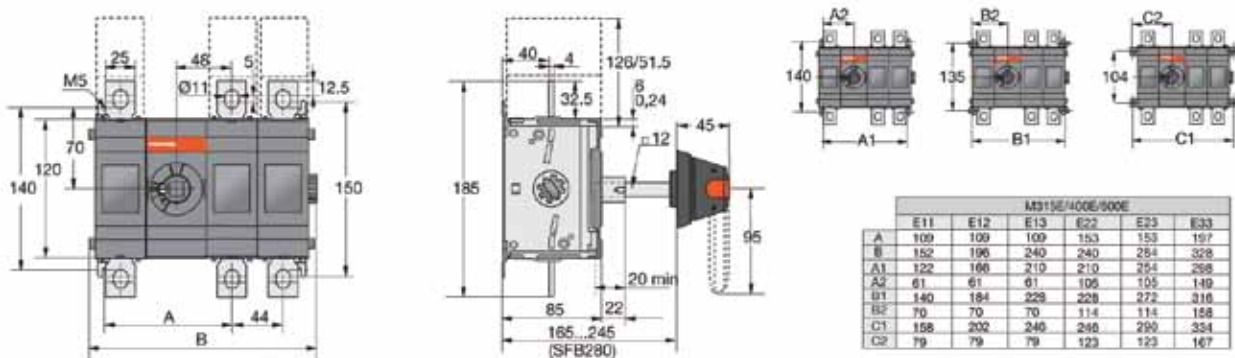
IEC Non-Fusible Disconnect Switches

M315-500x, Front operated

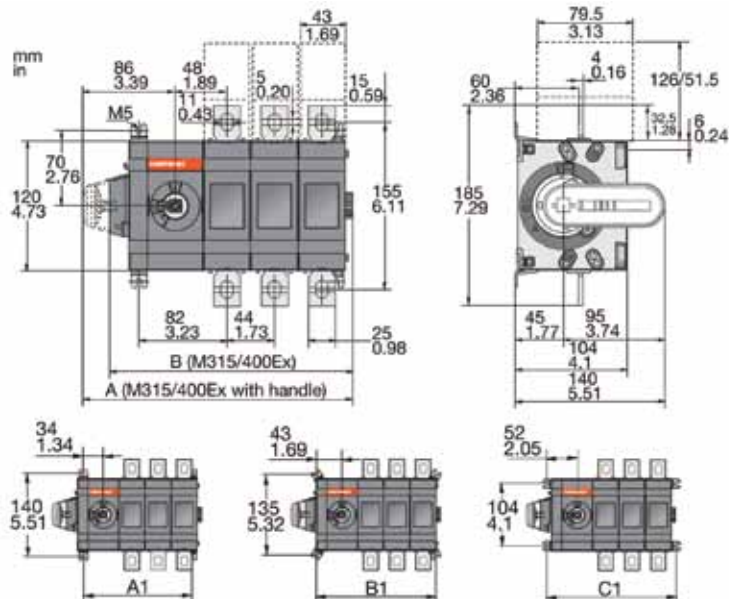
M315E - 500E, 03 or 30 configuration



M315E - 500E 11 to 22 configurations



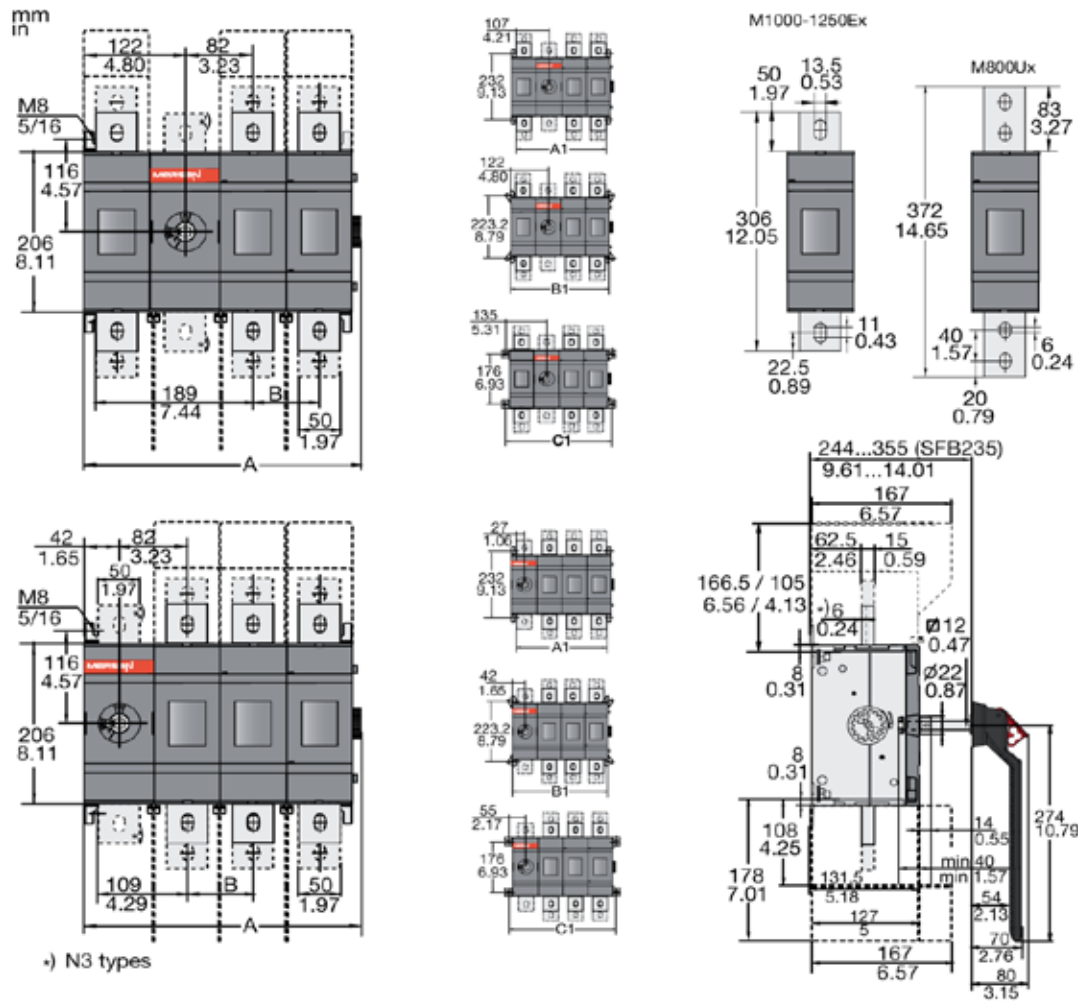
M315-500xS, Side operated



M315/400/500Ex, 03 and 30 configuration				
ES01	ES02	ES03	ES04	
mm / in	mm / in	mm / in	mm / in	
A	163 / 6.42	207 / 8.16	251 / 9.89	295 / 11.62
B	138 / 5.44	182 / 7.17	226 / 8.9	270 / 10.64
A1	95 / 3.74	139 / 5.48	183 / 7.21	227 / 8.94
B1	113 / 4.45	157 / 6.18	201 / 7.92	245 / 9.65
C1	131 / 5.16	175 / 6.89	219 / 8.63	263 / 10.36

IEC Non-Fusible Disconnect Switches

M1000-1600x, front operated

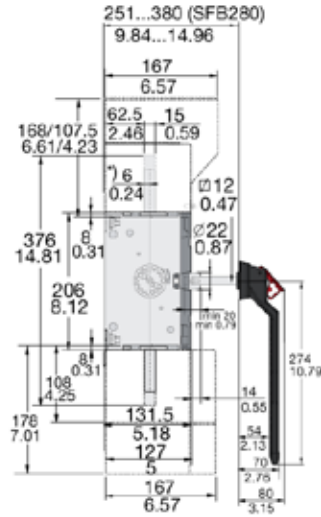
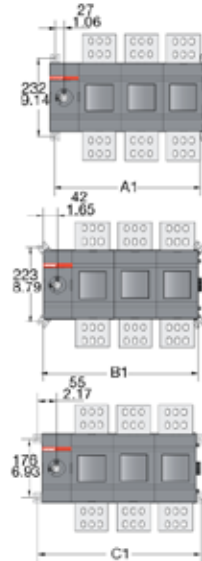
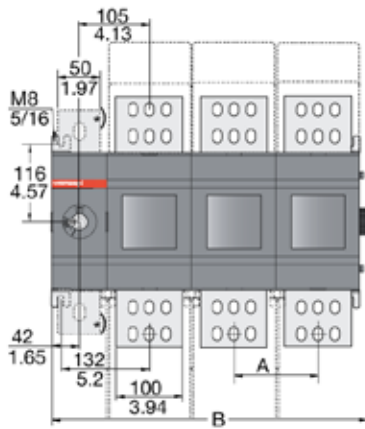
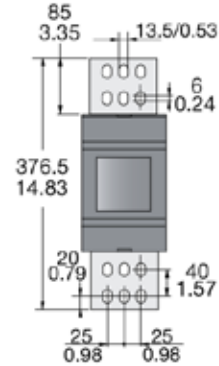
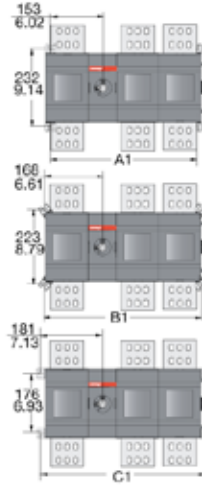
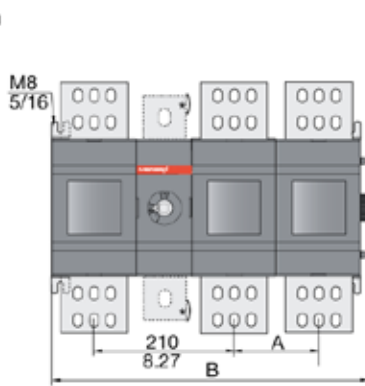


		M1000/1250/1600Ex M800U/1200U							
		01	02	03	04	11	12	13	22
A	mm	174.50	254.50	334.50	414.50	254.50	334.50	414.50	414.50
	in	6.87	10.02	13.17	16.32	10.02	13.17	16.32	16.32
B	mm		80	80	80		80	80	80
	in		3.15	3.15	3.15		3.15	3.15	3.15
A1	mm	134	214	294	374	214	294	374	374
	in	5.28	8.43	11.57	14.72	8.43	11.57	14.72	14.72
B1	mm	164	244	324	404	244	324	404	404
	in	6.46	9.61	12.76	15.91	9.61	12.76	15.91	15.91
C1	mm	190	270	350	430	270	350	430	430
	in	7.48	10.63	13.78	16.93	10.63	13.78	16.93	16.93

IEC Non-Fusible Disconnect Switches

M2000-2500x, Front operated

mm
in



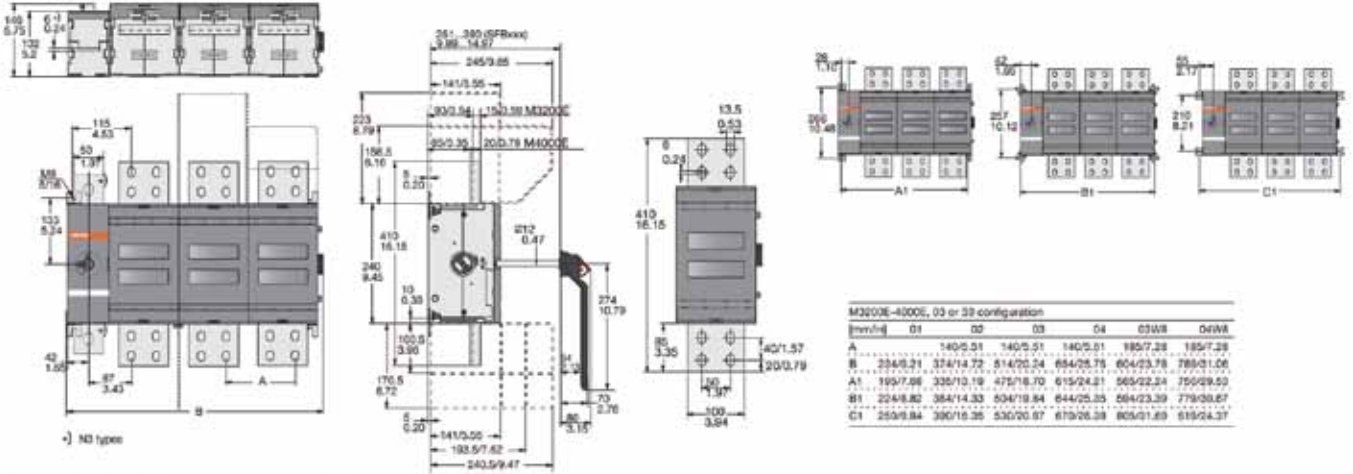
•) N3 types

		M2000/2500Ex							
		01	02	03	04	11	12	13	22
A	mm		126	126	126		126	126	126
	in		4.96	4.96	4.96		4.96	4.96	4.96
B	mm	220.5	346.5	472.5	598.5	346.5	472.5	598.5	598.5
	in	8.68	13.64	18.60	23.56	13.64	18.60	23.56	23.56
A1	mm	180	306	432	558	306	432	558	558
	in	7.09	12.05	17.01	21.97	12.05	17.01	21.97	21.97
B1	mm	210	336	462	588	336	462	588	588
	in	8.27	13.23	18.19	23.15	13.23	18.19	23.15	23.15
C1	mm	236	362	488	614	362	488	614	614
	in	9.29	14.25	19.21	24.17	14.25	19.21	24.17	24.17

IEC Non-Fusible Disconnect Switches

M3200-4000x, Front operated

M3200-4000E, 03 or 30 configuration



M3200-4000E, 11 to 22 configuration

