telergon
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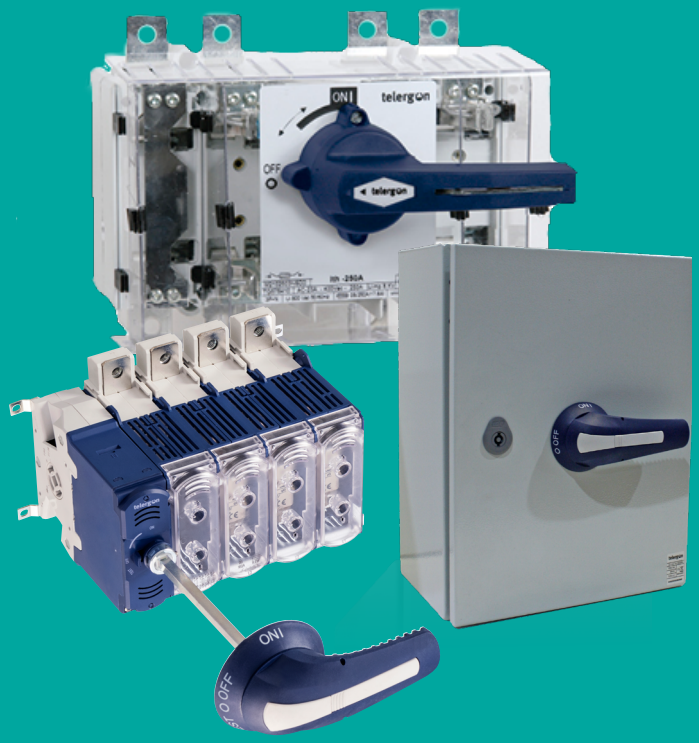


M3 & M21 SERIES
Fuse switch-disconnectors

IEC
c UL us
LISTED

www.telergon.com

gorlan

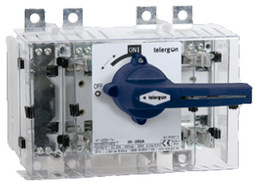
Fuse switch-disconnectors

What is a fuse switch-disconnectors?

A combination of a switch to disconnect the circuit and a fuse to shut the circuit off the event of a problem. When installing or maintaining equipment on the circuit, or the circuit itself, the switch provides a method to manually shut off the power.

This load break switches have a fuse provision in the switch and enclosure assembly, enabling you to open and close the circuit while providing overcurrent and short-circuit protection.

M3 SERIES
32A-250A
Compact solution



M21 SERIES
400A-800A

CIF SERIES
Enclosed solutions
(metal & polyester)

ON LOAD make and break applications. Double break contacts

Finger protected switches and shrouds

Test position available up to 250 A.

Padlockable panel handle in OFF position. Defeteable panel handle.

Fixed and detachable neutral versions.

Up to 200 kA short circuit rating.

Cage connection up to 100A
Lug connection up to 800A.

Front or lateral operation (only in M3 series). Easy to install.

Available for NFC, DIN, BS and Class J fuses.

IP65 / NEMA 4X handles.

APPLICATIONS

Temporary power distribution panels

HVAC

Motor control centers

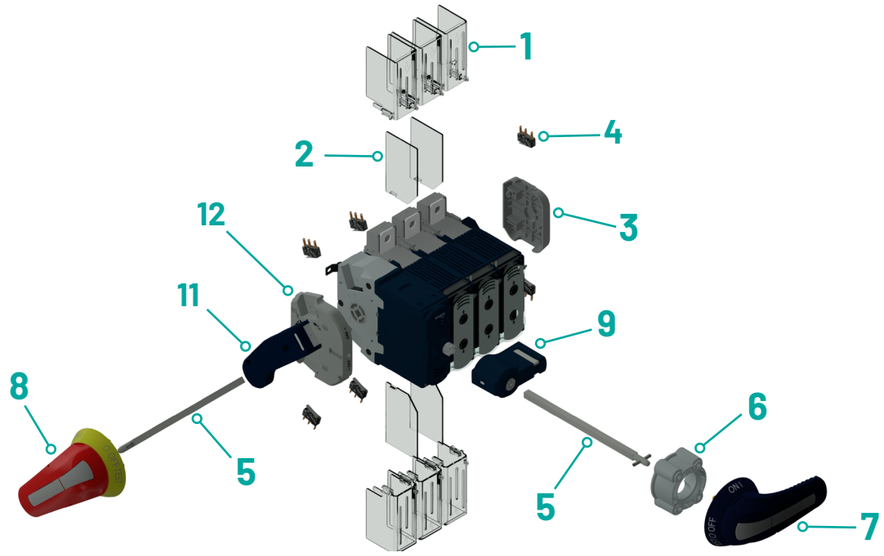
Power electronics

Photovoltaics (SSVT)

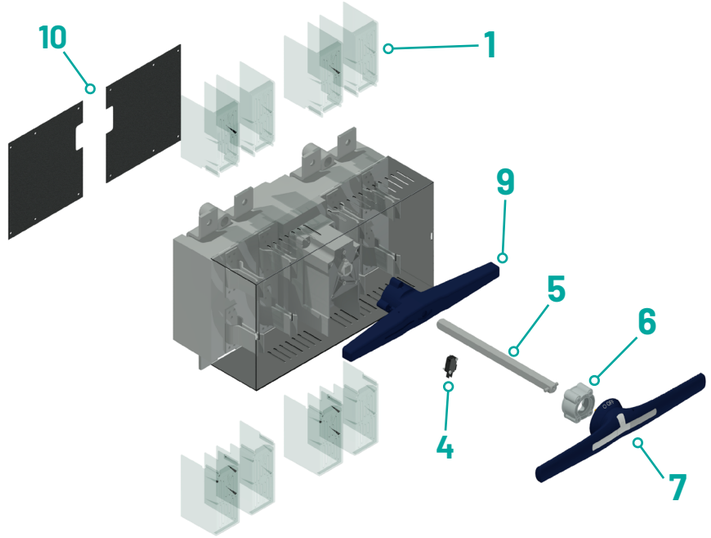
Switchboards

Festival sites

SERIES M3



SERIES M21



1	Terminal shroud	5	Shaft extension	9	Direct handle
2	Phase barrier	6	Shaft guide	10	Rear protective plate
3	Simultaneous contact holder	7	External handle	11	Side operation direct handle
4	Auxiliary contact	8	Side operation external handle	12	Front contact holder

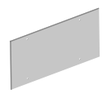
M3 SERIES | 2P, 3P, 3P+N & 3P+DN | 32A-250A

Amp.	Fuse	Size	Connection	2P	3P	3P+N *(1)	3P+DN (fixed detachable neutral)	Front operation: Direct handle	L (mm)	Standard: ON-OFF	Standard: ON-OFF-TEST	Emergency: ON-OFF	Emergency: ON-OFF-TEST
				Code	Code	Code	Code	Code		Code	Code	Code	Code
32	BS-A1-A2	00		M3-00322PBB10	M3-00323PBB10	M3-00323NBB10	M3-00323DBB10	DM3SIB1	177	DM3SAB2	DM3SAB1	DM3SRB2	DM3SRB1
50	14x51			M3-00502PBC20	M3-00503PBC20	M3-00503NBC20	M3-00503DBC20						
63	BS-A2-A3			M3-00632PBB20	M3-00633PBB20	M3-00633NBB20	M3-00633DBB20						
	NH000			M3-00632PBD20	M3-00633PBD20	M3-00633NBD20	M3-00633DBD20						
80	BS-A3			M3-00802PBB30	M3-00803PBB30	M3-00803NBB30	M3-00803DBB30						
100	22x58			M3-01002PBC30	M3-01003PBC30	M3-01003NBC30	M3-01003DBC30						
	NH000			M3-01002PBD30	M3-01003PBD30	M3-01003NBD30	M3-01003DBD30						
100	BS-A3	0		M3-01002PTB30	M3-01003PTB30	M3-01003NTB30	M3-01003DTB30	DM3SIB1	177	DM3SAB2	DM3SAB1	DM3SRB2	DM3SRB1
125	BS-A3			M3-01252PTB30	M3-01253PTB30	M3-01253NTB30	M3-01253DTB30						
	22x58			M3-01252PTC30	M3-01253PTC30	M3-01253NTC30	M3-01253DTC30						
	NH00			M3-01252PTD40	M3-01253PTD40	M3-01253NTD40	M3-01253DTD40						
160	NH00			M3-01602PTD40	M3-01603PTD40	M3-01603NTD40	M3-01603DTD40						
160	BS-A4	1		M3-01602PSB50	M3-01603PSB50	M3-01603NSB50	M3-01603DSB50	DM3SI11	227	DM3SA12	DM3SA11	DM3SR12	DM3SR11
	NH0			M3-01602PSD90	M3-01603PSD90	M3-01603NSD90	M3-01603DSD90						
200	BS-B1-B2			M3-02002PSB60	M3-02003PSB60	M3-02003NSB60	M3-02003DSB60						
250	NH1			M3-02502PSD50	M3-02503PSD50	M3-02503NSD50	M3-02503DSD50						
	BS-B3			M3-02502PSB80	M3-02503PSB80	M3-02503NSB80	M3-02503DSB80						

Size	Side operation: Direct handle *(2)	L (mm)	Standard: ON-OFF	Standard: ON-OFF-TEST	Emergency: ON-OFF	Emergency: ON-OFF-TEST	Auxiliary contacts *(3) (1 unit)	Auxiliary contacts holder *(7): Early make contacts	Auxiliary contacts holder *(7): Simultaneous contacts	Shaft extensions: L (mm)	Shaft extensions	Phase barriers: P	Phase barriers	Terminal shrouds *(4)	Shaft guide
	Code		Code	Code	Code	Code	Code	Code	Code		Code		Code	Code	Code
00	DM3SSB1	177	DM3SBB2	DM3SBB1	DM3SAB2	DM3SAB1	DM3AUB1	DM3AMB1	DM3ASB1	250	DM3EP01	-	-	-	DS-EC00
			DM3SEB2	DM3SEB1	DM3SRB2	DM3SRB1				387	DM3EP02				
0	DM3SSB1	177	DM3SBB2	DM3SBB1	DM3SAB2	DM3SAB1	DM3AUB1	DM3AMB1	DM3ASB1	250	DM3EP01	2P	DM3SF01 *(6)	DM3CU01	DS-EC00
												3P	DM3SF02 *(6)	DM3CU02	
												3P+N	DM3SF03 *(6)	DM3CU03	
			DM3SEB2	DM3SEB1	DM3SRB2	DM3SRB1				387	DM3EP02	DN	-	DM3CU04 *(8)	
1	DM3SS11	227	DM3SB12	DM3SB11	DM3SA12	DM3SA11	DM3AUB1	DM3AM11	DM3AS11	375	DM3EP11	2P	DM3SF11	DM3CU11	DS-EC00
												3P	DM3SF12	DM3CU12	
												3P+N	DM3SF13	DM3CU13	
			DM3SE12	DM3SE11	DM3SR12	DM3SR11				536	DM3EP12	DN	-	DM3CU14 *(8)	

M21 SERIES | 3P, 3P+N & 3P+FN | 400A-800A

Amp.	Fuse	Size	Connection	3P	3P+N *(1)	3P+FN	Manual handle: Direct handle	External handle (shaft included)	
				Code	Code	Code	Code	Code	
400	NH2	2		M2104003PSD20	M2104003NSD20	M2104003FSD20	DM2SI21		DS-LA22
400	BSB1...BSB4			M2104003PSB50	M2104003NSB50	M2104003FSB50			DS-LR22
630	NH3	3		M2106303PSD30	M2106303NSD30	M2106303FSD30	DM2SI31		DS-LA31
800	NH3			M2108003PSD30	M2108003NSD30	M2108003FSD30			
630	BSC1... BSC2			M2106303PSB70	M2106303NSB70	M2106303FSB70			DS-LR31
800	BSC1... BSC3			M2108003PSB80	M2108003NSB80	M2108003FSB80			



Size	Shaft extensions: □	L (mm)	Code	Auxiliary contacts *(5): 1NO+1NC	2NO+2NC	Rear protective plate	Terminal shrouds *(4): 3P input	3P output	3P+N input / output	Shaft guide
				Code	Code	Code	Code	Code	Code	Code
2	14	345	DS-EP23	D5LAU01	D5LAU02	3P DM2PP21	DM2CU21	DM2CU22	DM2CU23	DS-EC00
						3P+N DM2PP22				
3	14	345	DS-EP23	D5LAU01	D5LAU02	3P DM2PP31	DM2CU31	DM2CU32	DM2CU33	DS-EC00
						3P+N DM2PP32				

*(1) Neutral pole early make & late break. Also available 4P.
*(2) With the side handle code, the auxiliary contacts holder is included (DM3AMB1/DM3AM11), as it is required for installation.
*(3) To be used as signaling or control contacts. Ie = 0.1A at 125 VAC and 0.1A at 30 VDC (resistive loads) (M3) This code includes just an individual auxiliary contact (1 pc per package), so it is necessary to order as many pcs as it would be needed of any type of contact.
*(4) One set for input or output.

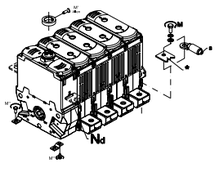
*(5) To be used as signaling or control contacts – Ie = 16A (resistive loads) 4A (inductive loads) at 250 Vac. (M21)
*(6) In 22x58 and BS size the device includes directly the phase barriers.
*(7) With the switch 1NO+1NC early make contact (ON-OFF position) and 1NO+1NL early make contact (TEST position) can be fixed. Maximum capacity with holders:
3N0+3NC for OFF position (2 early make contacts and 1 simultaneous)
2N0+2NC for TEST position (2 early make contacts)

TECHNICAL DATA

IEC-EN-UNE 60947-1 IEC-EN-UNE 60947-3				00					0			1			2	3	
				32 A	50 A	63 A	80 A	100 A	100 A	125 A	160 A	160 A	200 A	250 A	400 A	630 A	800 A
Fuse type				BS-A1-A2	NFC 14x51	NH000 BS-A2-A3	BS-A3	NH000 NFC 22x58	BS A3	NH00 | BS-A3 NFC 22x58	NH00	NH0 | BS-A4	BS-B1-B2	NH1 BS-B3	NH2 BSB4	NH3 BSC1... BSC2	NH3 BSC1... BSC3
Electrical features	Thermal current in ambient at 35ºC (and temporariliy 40 ºC) *(1)	Ith	A	32	50	63	80	100	100	125	160	160	200	250	400	630	800
	Rated insulation voltage	Ui	Vac	1.000					1.000	1.000		1.000			1.000	1.000	1.000
	Rated impulse withstand voltage	Uimp	kV	8					8	8		12			12	12	12
	AC rated operational current *(2) (Rated frequency 50 / 60 Hz)	Ue 415 V AC21A	A	32	50	63	80	100	100	125	160	160	200	250	400	630	800
		Ue 415 V AC22A	A	32	50	63	80	100	100	125	160	160	200	250	400	630	800
		Ue 415 V AC23A/ AC23B	A	32	50	63	80	80	100	125	160*	160	200	250	400	630	630
	Power losses in fuses *(3)	NH/DIN	W	-	-	5,8	-	6,6	-	9	11,2	12,9	-	17	30	48	57
		BS	W	2,9	-	5,6	6.5	-	8,5	11,3	-	14	14	18	29	44	63
		NFC	W	-	5	-	-	9	-	11,4	-	-	-	-	-	-	-
	Rated breaking capacity	400 V; cos φ = 0,35÷0,45	A	256	400	504	640	640	800	1.000	1.280	1.280	1.600	2.000	3.200	5.040	5.040
	Rated making capacity	400 V; cos φ = 0,45	A	320	500	630	800	800	1.000	1.250	1.600	1.600	2.000	2.500	4.000	6.300	6.300
Short circuit behaviour	Conditional short-circuit current *(4)	NH/DIN/NFC	kA rms	-	100	100	-	100	-	100	100	-	-	100	100	100	100
		BS	kA rms	80	-	80	80	-	80	80	-	80	80	80	100	100	100
	Maximum cut - off current		kA (peak)	4,2	9,5	10,5	14	14	16,5	16,5	19,5	29	29	32	43	60,8	60,8
Mechanical data	Durability, number of operating cycles *(5)		Cycles	10.000					8.000			8.000			5.000		3.000
	Maximum weight	2P	kg	0,6	0,6	0,6	0,7	0,7	1	1		2,6			-	-	-
		3P	kg	0,85	0,85	0,85	1	1	1,3	1,3		3,4			6,6	13	13
		3P+N	kg	1,1	1,1	1,1	1,3	1,3	1,6	1,6		4,2			8	15	15

*Category of operation B.
*(1) According to IEC 60947-1, section 7.1.1. Minimum ambient temperature -5 ºC.
*(2) Other voltages and / or utilization categories. Please consult.
*(3) Power dissipation values of fuse - links used in type tests. Please consult for fuse - links with higher power dissipation.
*(4) With a protective device limiting the cut - off current and the joule integral to the indicated values.
*(5) According to the standards, for other values please consult.

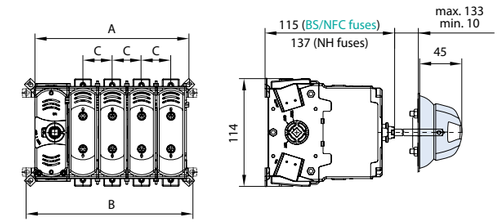
CONNECTION CAPACITY



Size		Ith	S min. (Cu)		S max. (Cu)		H max (Cu)		L max (Cu)			M	
			mm²	AWG	mm²	AWG	mm	In	mm	in		Nxm	lbf·in
M3	00	32A	6	10	1x25	1x4	-	-	-	-	-	2	17.7
		50A	10	8									
		63A	16	6									
		80A	25	4	50	1							
		100A	35	3									
	0	100A	35	3	70	00	3	⅛	25	1	M8	6	53
		125A	50	1									
		160A	70	00									
	1	160A	70	00	185	350	7	9/32	30	1 3/16	M10	18	159
		200A	95	000									
		250A	120	250 kmil									
M21	2	400A	240	500	240	500	6	15/64	40	1 37/64	M10	24	212
	3	630A	2x185	2x400	2x185	2x400	2x7	2 9/32	50	1 31/32	M12	45	398
		800A	2x240	2x500	2x240	2x500					M8	13	115

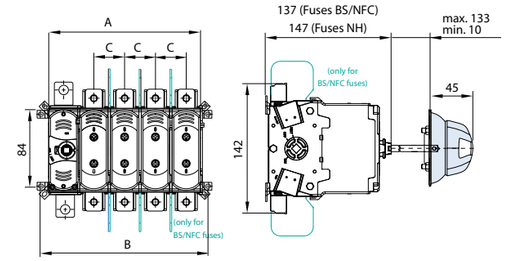
DIMENSIONAL DRAWINGS (mm)

M3
00



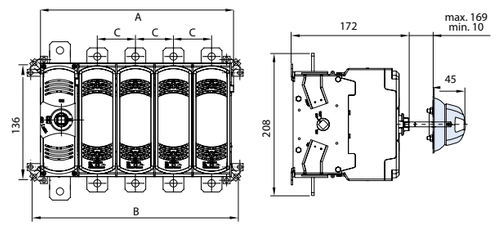
		A			B			C
		2P	3P	3P+N	2P	3P	3P+N	
NH BS NFC	32A 50A 63A	93	120	147	106	133	160	27
	80A 100A	101	132	163	114	145	176	31

M3
0



		A			B			C
		2P	3P	3P+N	2P	3P	3P+N	
NH	125A 160A	109	144	179	123	158	193	35
BS NFC	100A 125A 160A	110	146	182	124	160	196	36

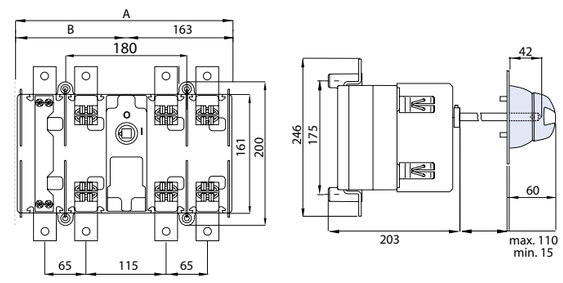
M3
1



		A			B			C
		2P	3P	3P+N	2P	3P	3P+N	
BS NH	160A 200A 250A	168	223	278	192	247	302	55

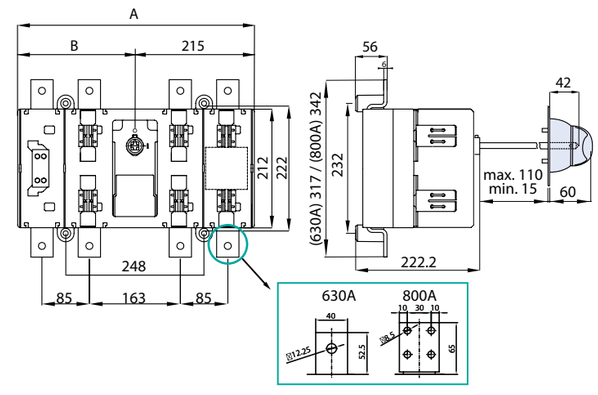
* 3P+DN dimensions are the same as the 3P

M21
2



		A		B	
		3P	3P+N	3P	3P+N
BS NH	400A	274	329	111	166

M21
3



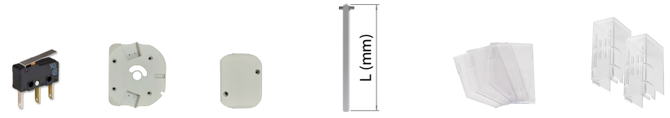
		A		B	
		3P	3P+N	3P	3P+N
BS NH	630A 800A	381	426	166	211

* 3P+FN dimensions are the same as the 3P+N

M3 SERIES | 3P, 3P+N & 3P+DN | 30A-200A

c UL us LISTED

	Amp.	Fuse	Size	Connection	3P	3P+N *(1)	3P+DN (detachable neutral)	Front operation				
								Direct handle	External handle (shaft included)			
											Standard	Emergency
					Code	Code	Code	Code	L		ON-OFF Code	ON-OFF TEST Code
UL	30	J21x57	00		M3-00303PBJ300L	M3-00303NBJ300L	M3-00303DBJ300L	DM3SIB1	177 (mm) 6.96 (inch)		DM3SAB2	DM3SAB1
											DM3SRB2	DM3SRB1
	60	J27x60	0		M3-00603PTJ400L	M3-00603NTJ400L	M3-00603DTJ400L	DM3SIB1	177 (mm) 6.96 (inch)		DM3SAB2	DM3SAB1
											DM3SRB2	DM3SRB1
	100	J29x117	1		M3-01003PSJ500L	M3-01003NSJ500L	M3-01003DSJ500L	DM3SI11	227 (mm) 8.93 (inch)		DM3SA12	DM3SA11
	200	J41x146			M3-02003PSJ600L	M3-02003NSJ600L	M3-02003DSJ600L				DM3SR12	DM3SR11



Size	Side operation*(2)					Auxiliarycontacts *(3) (1 unit)	Auxiliary contacts holder		Shaft extensions		Phase barriers		Terminal shrouds *(4)
	Direct handle	External handle (shaft included)					Early make contacts	Simultaneous contacts					
				Standard	Emergency								
	Code	L		ON-OFF Code	ON-OFF TEST Code	Code	Code	Code	L mm inch	Code	P	Code	Code
00	DM3SSB1	177 (mm) 6.96 (inch)		DM3SBB2	DM3SBB1	DM3AUB1	DM3AMB1	DM3ASB1	250 9.84	DM3EP01	-	-	-
				DM3SEB2	DM3SEB1				387 15.23	DM3EP02			
0	DM3SSB1	177 (mm) 6.96 (inch)		DM3SBB2	DM3SBB1	DM3AUB1	DM3AMB1	DM3ASB1	250 9.84	DM3EP01	3P	*(5)	DM3CU020L
											3P+N		DM3CU030L
				DM3SEB2	DM3SEB1				387 15.23	DM3EP02	DN		DM3CU04*(6)
1	DM3SS11	227 (mm) 8.93 (inch)		DM3SB12	DM3SB11	DM3AUB1	DM3AM11	DM3AS11	375 14.76	DM3EP11	3P	DM3SF12	DM3CU12
											3P+N	DM3SF13	DM3CU13
				DM3SE12	DM3SE11				536 21.10	DM3EP12	DN	-	DM3CU14*(6)

*(1) Neutral pole early make & late break.
*(2) With the side handle code, the auxiliary contacts holder is included (DM3AMB1/DM3AM11), as it is required for installation.
*(3) To be used as signaling or control contacts. Ie = 0.1A at 125 VAC and 0.1A at 30 VDC (resistive loads)
This code includes just an individual auxiliary contact (1 pc per package), so it is necessary to order as many pcs as it would be needed of any type of contact.

*(4) One set for input or output.
*(5) In this size the device (UL) includes directly the phase barriers.
*(6) This code only includes the terminal shrouds for the detachable neutral pole, it is necessary to order the code for 3P terminal shrouds as well: DM3CU020L or DM3CU12.

TECHNICAL DATA

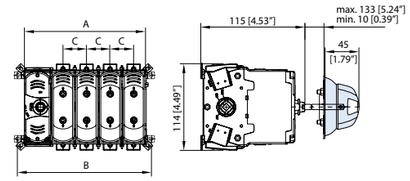
UL98 / CSA 22.2 NO.4					00	0	1	
					30 A	60 A	100 A	200 A
Fuse type					J 21x57	J 27x60	J 29x117	J 41x146
Ratings	Rated Thermal current			A	30	60	100	200
	General purpose amp rating		600Vac	A	30	60	100	200
	Max. Operating voltage			Vac	600			
	Max. HP rating / motor FLA current	3 Phase	240Vac	HP/A	7,5/22	15/42	30/80	50/130
			480Vac	HP/A	15/21	30/40	60/77	100/124
			600Vac	HP/A	20/22	50/52	75/77	125/125
	Short-circuit rating at 600Vac			kA	200			
Mechanical endurance	Minimum number of mechanical operations				10000		10000	8000
	Number of electrical operations				6000			

CONNECTION RANGE

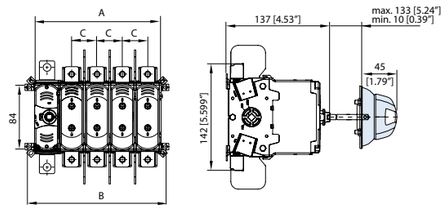
Size	Ith	Wire range Flange	Busbar (Max) Terminal	Tightening torque
		AWG	mm	lb·inch
00	30A	#10-2	-	17.7
0	60A	#6 ⅔	20	53
1	100A	#3AWG-300kcmil	30	159
	200A	#3/0AWG-300kcmil	30	159

DIMENSIONAL DRAWINGS

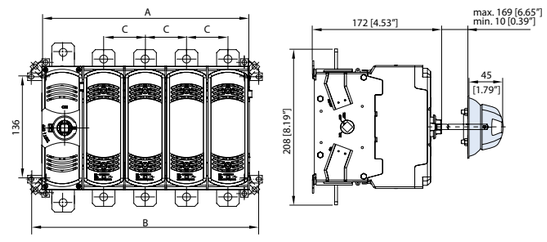
M3 00



M3 0



M3 1



			A		B		C
			3P	3P+N	3P	3P+N	
J	30A	mm	132	163	145	176	31
		inch	5.19"	6.41"	5.73"	6.95"	1.23"

			A		B		C
			3P	3P+N	3P	3P+N	
J	60A	mm	146	182	160	196	36
		inch	5.74"	7.15"	6.31"	7.73"	1.42"

			A		B		C
			3P	3P+N	3P	3P+N	
J	100A 200A	mm	223	278	247	302	55
		inch	8.81"	10.97"	9.72"	11.89"	2.57"

* 3P+DN dimensions are the same as the 3P

CIF SERIES | METAL SHEET ENCLOSED | 50 A - 800 A

GENERAL CHARACTERISTICS

- DIN, NFC and BS fuses.
- IP65 protection degree.
- Wall mounting.
- RAL 7035.
- 3P & 3P+N versions.

Amp.	Fuse	Size	Connection	Series	3P	3P+N *(1)	Enclosure dimensions	Auxiliary contacts *(2) 1NO+1NC	Cable entry	Fixing brackets	Cubrebornes*(3)	
											3P	3P+N
					Code	Code		Code			Code	Code
50	14x51	00		M3	**CIF23C00503PBC2**	**CIF23C00503NBC2**	**300x300x200**	**DM3AUB1**	**125x215**	**20105079**	-	-
63	NH000			M3	**CIF23C00633PBD2**	**CIF23C00633NBD2**	**300x300x200**	**DM3AUB1**	**125x215**	**20105079**	-	-
100	22x58			M3	**CIF23C01003PBC3**	**CIF23C01003NBC3**	**300x300x200**	**DM3AUB1**	**125x215**	**20105079**	-	-
100	NH000			M3	**CIF23C01003PBD3**	**CIF23C01003NBD3**	**300x300x200**	**DM3AUB1**	**125x215**	**20105079**	-	-
125	22x58	0		M3	**CIF23C01253PTC3**	**CIF23C01253NTC3**	**400x400x200**	**DM3AUB1**	**125x285**	**20105079**	**DM3CU02**	**DM3CU03**
125	NH00			M3	**CIF23C01253PTD4**	**CIF23C01253NTD4**	**400x400x200**	**DM3AUB1**	**125x285**	**20105079**	**DM3CU02**	**DM3CU03**
160	NH00			M3	**CIF23C01603PTD4**	**CIF23C01603NTD4**	**400x400x200**	**DM3AUB1**	**125x285**	**20105079**	**DM3CU02**	**DM3CU03**
250	NH1	1		M3	**CIF23C02503PSD5**	**CIF23C02503NSD5**	**600x400x250**	**D5LAU01**	**125x285**	**20105079**	**DM3CU12**	**DM2CU13**
400	NH2	2		M21	**CIF22C04003PSD2**	**CIF22C04003NSD2**	**800x600x260**	**D5LAU01**	**485x125**	**20105079**	**DM3CU22*(4)**	**DM2CU23**
630	NH3	3		M21	**CIF22C06303PSD3**	**CIF22C06303NSD3**	**1000x600x260**	**D5LAU01**	**485x125**	**20105079**	**DM3CU32*(4)**	**DM2CU33**
800	NH3			M21	**CIF22C08003PSD3**	**CIF22C08003NSD3**	**1000x600x260**	**D5LAU01**	**485x125**	**20105079**	**DM3CU32*(4)**	**DM2CU33**

*(1) Neutral pole early make & late break. Also available (M3) 4P & 3P+DN / (M21)- 4P & 3P+FN under request.
*(2) To be used as signaling or control contacts – Ie = 0.1A at 125 VAC and 0.1A at 30 VDC (resistive loads) (M3) / Ie = 16A (resistive loads) 4A (inductive loads) at 250 Vac (M21).
Whilst closing, it closes after the main contacts. Whilst opening, it opens before the main contacts.
*(3) One set for input or output.
*(4) Output.

CIF SERIES | POLYESTER ENCLOSED | 50 A - 250 A

Amp.	Fuse	Size	Connection	Series	3P	3P+N *(1)	Enclosure dimensions	Auxiliary contacts *(2) 1NO+1NC	Fixing brackets	Terminal shrouds *(3)	
										3P	3P+N
					Code	Code		Code		Code	Code
50	14x51	00		M3	**CIF23P00503PBC2**	**CIF23P00503NBC2**	**400x300x200**	**DM3AUB1**	**20105085**	-	-
63	NH000			M3	**CIF23P00633PBD2**	**CIF23P00633NBD2**	**400x300x200**	**DM3AUB1**	**20105085**	-	-
100	22x58			M3	**CIF23P01003PBC3**	**CIF23P01003NBC3**	**400x300x200**	**DM3AUB1**	**20105085**	-	-
100	NH000			M3	**CIF23P01003PBD3**	**CIF23P01003NBD3**	**400x300x200**	**DM3AUB1**	**20105085**	-	-
125	22x58	0		M3	**CIF23P01253PTC3**	**CIF23P01253NTC3**	**400x400x200**	**DM3AUB1**	**20105085**	**DM3CU02**	**DM3CU03**
125	NH00			M3	**CIF23P01253PTD4**	**CIF23P01253NTD4**	**400x400x200**	**DM3AUB1**	**20105085**	**DM3CU02**	**DM3CU03**
160	NH00			M3	**CIF23P01603PTD4**	**CIF23P01603NTD4**	**400x400x200**	**DM3AUB1**	**20105085**	**DM3CU02**	**DM3CU03**
250	NH1	1		M3	**CIF23P02503PSD5**	**CIF23P02503NSD5**	**600x400x230**	**DM3AUB1**	**20105085**	**DM3CU12**	**DM2CU13**

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