

MOULDED CASE CIRCUIT BREAKERS MSX RANGE

Whether it's industrial installations, buildings or infrastructure, the distribution of electrical power must meet increasingly stringent requirements in safety and efficiency. The MCCB's MSX provide complete protection against short circuits and overloads. They are ideal for industrial and advanced service applications.

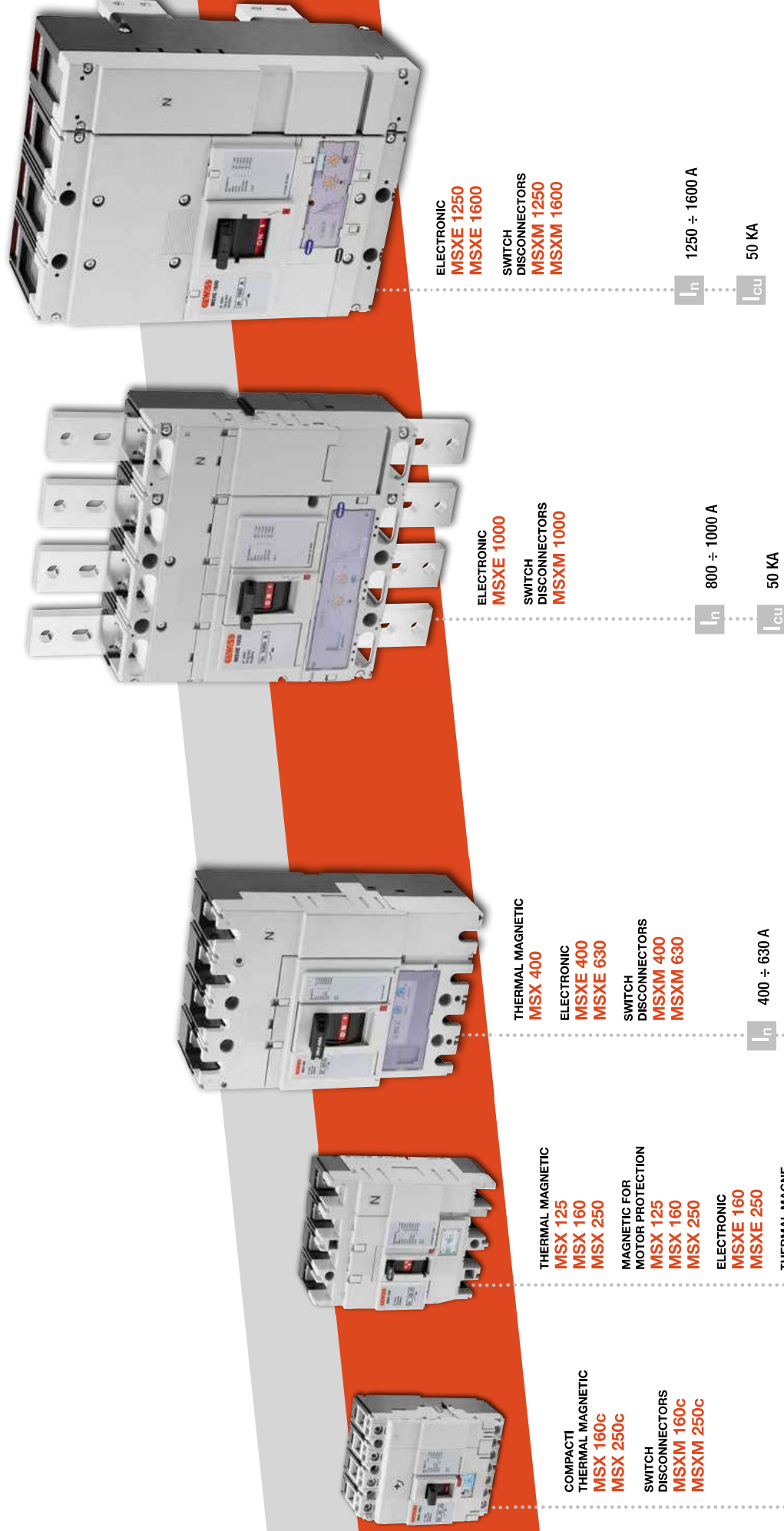


MAIN CHARACTERISTICS OF THE RANGE

- RCCB protection integrated in the MCCB
- Compatibility with QDX GEWISS distribution boards and cabinets
- Immediate MCCB status indication using coloured displays
- Maximum precision in adjustments
- Wide range of accessories

PRODUCT OVERVIEW

MCCB'S MSX UP TO 1600 A



MSX

MCCBs up to 1600 A

MCCB's MSX provide safety and reliability in circuit protection and isolation up to 1600A. The 5 available versions: MSXc - MSX - MSXD - MSXE - MSXM makes the ranges ideal for every application and offer the right selection based on the type of function and need.

Application solutions

A up to 1600 A

Breaking capacity

KA 16-65kA

Rated current adjustment

In Thermal magnetic MCCBs: 0.63÷1

Electronic MCCBs: 0.4÷ 1

MSXc - Compact MCCBs up to 250 A
and breaking capacity up to 25kA

MSX - Thermal magnetic and magnetic MCCBs up to 400 A
and breaking capacity up to 65kA

MSXD - Thermal magnetic MCCBs + RCD up to 250 A
and breaking capacity up to 36kA

MSXE - Electronic MCCBs up to 1600 A
and breaking capacity up to 65kA

MSXM Switch disconnectors up to 1600A

LONGER LIFE CYCLE

Installing a durable product is a good environmental policy. By installing a MCCB the service life is at least 30,000 mechanical operations (size 250 A). This means 22,000 more operations than those recommended by IEC 60947-2, the international standard governing switches.

- Modularity of the project to allow easy disassembly and elimination of components and accessories. Organic parts do not contain embedded metal elements.
- Clear marking of materials to allow easy identification and correct recycling.



INTEGRATED RCCB

Integrated RCCB protection with the same dimensions as a traditional thermal magnetic MCCB, without the need for the installation of external relays or additional blocks.



CABLE MECHANICAL INTERLOCK

Flexibility of use thanks to the possibility of combining MCCBs of different sizes, also positioned in different columns and without the use of plates dedicated to interlocking.



EASIER ADJUSTMENTS

Easier adjustments with preset curves and rotary selectors on the front of MCCB.



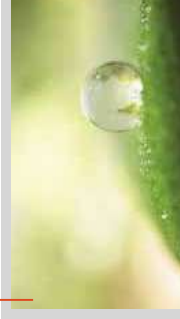
UNCHANGED PERFORMANCE AT HIGH TEMPERATURES

Superior reliability and performance even at high temperatures, no downgrading of performance up to 50°C.



ECO MATERIALS

Lead-free welds and cadmium-free contacts.



SIMPLIFIED INSTALLATION

Fast and easy accessory integration thanks to clip installation that does not require dedicated tools.



MSX RANGE

Models and functions



MSXc

Compact MCCBs

Compact, high-performance models for cost and space savings, great quality at a competitive price. The MCCBs are double-insulated and equipped with terminals for connection with cables without terminals, more practical for smaller currents. Internal accessories, such as releases and auxiliary contacts, are easy to install thanks to clip hooks and are common throughout the line. The single-screw front access door also identifies the installation position of the various accessories and makes assembly and maintenance easy.

MSX

Traditional MCCBs

MSX line models with higher breaking capacities, 36 kA and 65 kA. They ensure superior interruption performance, protecting valuable parts of the electrical system. The MSX range also allows the mechanical and electrical interlock, which prevents the parallel (simultaneous) insertion of two MCCBs. For all models, it is possible to mount a motor operator that allows the opening and closing of the MCCB remotely. Easy installation and maintenance due to the possibility of removing, thanks to the kit, individual MCCBs in a simple and immediate way.

MSXM

Switch disconnectors

Switch disconnectors for the safe opening and closing of electrical circuits, even under load. All models in the MSXM range share the same internal accessories (releases and auxiliary contacts) and the same external accessories (rotary handles and motor commands) of the respective MCCB's MSXc and MSX.

MSXc
16 kA - 25 kA
≤125 A
160 A
250 A
400 A
630 A
800-1000 A
1250 A
1600 A

MSX
36 kA - 65 kA
≤125 A
160 A
250 A
400 A
630 A
800-1000 A
1250 A
1600 A

MSXM
≤125 A
160 A
250 A
400 A
630 A
800-1000 A
1250 A
1600 A

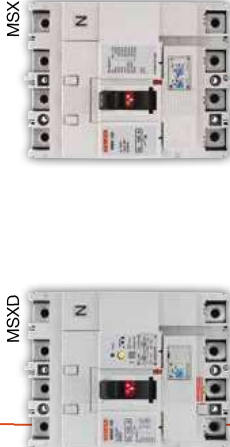
	MSX 125	-
	MSX 160	MSXM 160c
	MSX 250	MSXM 250c
	MSX 400	MSXM 400
	-	MSXM 630
	-	MSXM 1000
	-	MSXM 1250
	-	MSXM 1600

MSX RANGES

Models and functions



3 PROTECTIONS IN A SINGLE MCCB



SAME SIZE AS A TRADITIONAL THERMAL MAGNETIC MCCB

MSXD

THERMAL MAGNETIC MCCB + RCD

These models provide protection against overload, short circuit and current dispersion. Three protections in a single device with the same dimensions as a traditional thermal magnetic MCCB, high performance and simple installation for increased safety and space saving. Each model has the same dimensions, fixing points and performance as a thermal magnetic MCCB and also ensures differential protection without the need for external relays or additional blocks.



MSXE

Electronic MCCBs

Electronic MCCBs models offer great adjustment flexibility; their curves can be adjusted to suit a wide range of application conditions. The operating current can be adjusted from 0.4 to 1 x In. The MSXE models are ready to use with the preset current time intervention curves visible on the front of the product, each curve can be configured with two simple adjustments: **the left trimmer** adapts the nominal current of the MCCB according to the conductor flow **rate**, **the right trimmer** allows you to select one of the preset time-current intervention curves.

MSXD	25 kA - 36 kA
≤125 A	MSXD 125
160 A	MSXD 160
250 A	MSXD 250
400 A	-
630 A	-
800-1000 A	-
1250 A	-
1600 A	-

MSXE	36 kA - 50 kA - 65 kA
≤125 A	
160 A	MSXE 160
250 A	MSXE 250
400 A	MSXE 400
630 A	MSXE 630
800-1000 A	MSXE 1000
1250 A	MSXE 1250
1600 A	MSXE 1600

MSXc - MSX - MSXE RANGE

Technical data

TYPE	MSX 160c		MSX 250c		MSX 125		MSX 160 - MSX 250	
Standard	IEC EN 60947-2		IEC EN 60947-2		IEC EN 60947-2		IEC EN 60947-2	
Rated current (In)	(A) 25, 40, 63, 80, 100, 125, 160		160, 250		20, 32, 50, 63, 100, 125		160, 250	
Category of use	A		A		A		A	
Number of poles	3.3+N		3.3+N		3.4		3.4	
Rated frequency	(Hz) 50/60		50/60		50/60		50/60	
Rated operational voltage (Ue)	(V) 525 AC - 250 DC		525 AC - 250 DC		690 AC - 250 DC		690 AC - 250 DC	
Rated impulse withstand voltage (Uimp)	(kV) 8		8		8		8	
Overvoltage category	IV		IV		IV		IV	
Rated insulation voltage (Ui)	690		800		800		800	
Rated breaking capacity (Icu)								
Alternating current	(kA) 220/240V	25	35	25	35	50	85	65
	400/415V	16	25	16	25	36	65	36
	440V	10	15	10	15	25	50	25
	525V	6	7.5	6	7.5	22	25	25
	690V	-	-	-	-	6	6	7.5
Direct current	(kA) 250V	13	20	13	15	25	40	40
Service breaking capacity (Ics)								
Alternating current	(kA) 220/240V	13	18	13	27	50	85	65
	400/415V	8	13	8	19	36/30	36/33	36
	440V	5	7.5	5	12	25	25	25
	525V	3	4	3	6	22	22	25
	690V	-	-	-	-	6	6	7.5
Direct current	(kA) 250V	7	10	7	12	19	40	40
Type of protection	Adjustable thermal Fixed magnetic	Adjustable thermal Adjustable magnetic		Adjustable thermal Adjustable magnetic		Adjustable thermal Adjustable magnetic		Adjustable thermal Adjustable magnetic
Versions	Fixed	Fixed		Fixed		Fixed		Fixed
Mounting on DIN rail by means of the accessory	yes	yes		yes		yes		yes
Mounting position	any	any		any		any		any
Up/line/down/line power supply	yes	yes		yes		yes		yes
Terminals	Front for cables (FW)	■ (25A÷100 A)		-		□		-
	Front (FC)	■ (125-160 A)		■		■		■
	Front extended (FB)	□ (63÷160 A)		□		□		□
	Front extended spread terminals (FB)	□ (63÷160 A)		□		-		-
	Rear (RC)	□ (63÷160 A)		□		□		□
Electrical life (415 V AC)	(No. cycles) 14,000 (≤125A) 10,000 (160 A)	6,000		30,000		20,000 (MSX 160) 10,000 (MSX 250)		
Mechanical life	(No. cycles) 20,000	18,000		30,000		30,000		
Can be equipped with motor operator	no	yes		yes		yes		yes
Interlock type	-	Lever / Cable		Lever / Cable		Lever / Cable		Lever / Cable
Operating temperature	(°C) -5 +65	-5 +65		-5 +65		-5 +65		-5 +65
Reference temperature	(°C) 50	50		50		50		50
Storage temperature	(°C) -20 +60	-20 +60		-20 +60		-20 +60		-20 +60
Relative humidity	45%-85%	45%-85%		45%-85%		45%-85%		45%-85%
Dimensions	Width (3P / 4P)	(mm) 75 / 100		105 / 140		90 / 120		105 / 140
	Height	(mm) 130		165		155		165
	Depth	(mm) 68		68		68		68
Weight (3P / 4P)	(kg) 0.8 / 1	1.5 / 1.9		1.1 / 1.4		1.5 / 1.9		

■ = supplied as standard □ = optional - = not available * max 225A* max 536a

MSXE 160 - MSXE 250		MSX 400		MSXE 400 - MSXE 630		MSXE 1000		MSXE 1250		MSXE 1600	
IEC EN 60947-2		IEC EN 60947-2		IEC EN 60947-2		IEC EN 60947-2		IEC EN 60947-2		IEC EN 60947-2	
40, 125, 160, 250		400		400, 630		800		1000		1600	
A		A		B (MSXE 400) / A (MSXE 630)		B		A		B	
3.3+N,4		3.3+N,4		3.3+N,4		3.4		3.4		3.4	
50/60		50/60		50/60		50/60		50/60		50/60	
690 AC		690 AC - 250 DC		690 AC		690 AC		690 AC		690 AC	
8		8		8		8		8		8	
IV		IV		IV		IV		IV		IV	
800		800		800		800		800		800	
65	85	50	85	50	85	85	85	85	85	85	85
36	65	36	50	36	50	50	50	50	50	50	50
25	50	30	45	25	45	45	45	45	45	45	45
25	25	22	30	15	30	30	30	30	30	30	30
7.5	7.5	15	15	10	15	15	20	15	15	15	15
-	-	40	40	-	-	-	-	-	-	-	-
65	85	50	85	50	85	85	85	85	85	85	85
36	36	36	50	36	50	50	50	38	38	38	38
25	25	30	45	25	45	45	50	34	34	34	34
25	25	22	30	15	30	30	30	23	23	23	23
7.5	7.5	15	15	10	15	15	20	15	15	15	15
-	-	40	40	-	-	-	-	-	-	-	-
LSI Electronics		Adjustable thermal Adjustable magnetic		Electronic LSI Electronic LSiG		Electronic LSI Electronic LSiG		Electronic LSI Electronic LSiG		Electronic LSI Electronic LSiG	
Fixed Plug-in¹	Fixed Plug-in	Fixed Plug-in	Fixed Plug-in²	Fixed Plug-in	Fixed Plug-in	Fixed Plug-in	Fixed Plug-in	Fixed	Fixed	Fixed	Fixed
no	no	no	no	no	no	no	no	no	no	no	no
any	any	any	any	any	any	any	any	any	any	any	any
yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
-	-	-	-	-	-	-	-	-	-	-	-
■	■	■	■	■	■	■	■	■	■	■	■
□	□	□	□	□	□	□	□	□	□	□	□
-	-	□	□	□	□	-	-	-	-	-	-
□	□	□	□	□	□	□	□	□	■	■	■
10,000	4,500	4,500	4,500	4,500	4,000	4,000	4,000	4,000	4,000	2,000	2,000
30,000	15,000	15,000	15,000	15,000	10,000	10,000	5,000	5,000	5,000	5,000	5,000
yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Lever / Cable	Lever / Cable	Lever / Cable	Lever / Cable	Lever / Cable	Lever / Cable	Lever / Cable	Lever / Cable	Cable	Cable	Cable	Cable
-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65
40	50	50	40	40	40	40	40	40	40	40	40
-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60
45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%	45%÷85%
105 / 140	140 / 185	140 / 185	140 / 185	140 / 185	210 / 280	210 / 280	210 / 280	210 / 280	210 / 280	210 / 280	210 / 280
165	260	260	260	260	273	273	370	370	370	370	370
103	103	103	103	103	103	103	120	120	140	140	140
2.3 / 3.1	4.3 / 5.6	4.3 / 5.7 (MSXE 400- 5 / 6.5 (MSXE 630)				9.1 / 12.3	11 / 14.8	19.8 / 25	27 / 35		

MSXM RANGE

Technical data

TYPE	MSXM 160c	MSXM 250c	MSXM 400 – MSXM 630	MSXM 1000	MSXM 1250	MSXM 1600
Standard	IEC EN 60947-3	IEC EN 60947-3	IEC EN 60947-3	IEC EN 60947-3	IEC EN 60947-3	IEC EN 60947-3
Rated current (In)	(A) 160	250	400, 630	800 1000	1250	1600
Category of use	AC-23A DC-22A	AC-23A DC-22A	AC-23A DC-22A	AC-23A DC-22A	AC-23A DC-22A	AC-23A DC-22A
Number of poles	3,4	3,4	3,4	3,4	3,4	3,4
Rated frequency	50/60	50/60	50/60	50/60	50/60	50/60
Rated operational voltage (Ue)	690 AC 250 DC	690 AC 250 DC	690 AC 250 DC	690 AC 250 DC	690 AC 250 DC	690 AC 250 DC
Rated impulse withstand voltage (Uimp)	(kV) 8	8	8	8	8	8
Overvoltage category	IV	IV	IV	IV	IV	IV
Rated insulation voltage (Ui)	690	800	800	800	800	800
Rated short-circuit making capacity (Icm)	2,8	6	9	17	32	45
Brief allowable rated current for 0.3s (Icw)	2	3	5	10	15	20
Versions	Fixed	Fixed	Fixed Plug-in ¹	Fixed, Plug-in	Fixed	Fixed
Mounting on DIN rail by means of the accessory	yes	yes	no	no	no	no
Mounting position	any	any	any	any	any	any
Upline/downline power supply	yes	yes	yes	yes	yes	yes
Front for cables (FW)	-	-	-	-	-	-
Front (FC)	■	■	■	■	-	-
Front Extended (FB)	□	□	□	□	■	■
Front extended spread terminals (FB)	□	□	□	-	-	-
Rear (RC)	□	□	□	□	□	■
Electrical life (415 V AC)	10,000	6,000	4,500	4,000	4,000	2,000
Mechanical life	20,000	18,000	15,000	10,000	5,000	5,000
Can be equipped with motor operator	no	yes	yes	yes	yes	yes
Interlock type	-	Lever / Cable	Lever / Cable	Lever / Cable	Cable	Cable
Operating temperature	(°C) -5 +65	-5 +65	-5 +65	-5 +65	-5 +65	-5 +65
Reference temperature	(°C) 50	50	50	50	50	50
Storage temperature	(°C) -20 +60	-20 +60	-20 +60	-20 +60	-20 +60	-20 +60
Relative humidity	45%+85%	45%+85%	45%+85%	45%+85%	45%+85%	45%+85%
Width (3P / 4P)	(mm) 75 / 100	105 / 140	140 / 185	210 / 280	210 / 280	210 / 280
Height	(mm) 130	165	260	273	370	370
Depth	(mm) 68	68	103	103	120	140
Weight (3P / 4P)	(kg) 0.7 / 0.9	1.5 / 1.9	4.2 / 5.6 (MSXM 400) 4.4 / 5.8 (MSXM 630)	8.5 / 11.5 10.4 / 14	18.2 / 23.4	24.9 / 32.9

■ = supplied as standard □ = optional - = not available ¹ max 536A

MSXD RANGE

Technical data

TYPE	MSXD 125	MSXD 160 – MSXD 250
Standard	IEC 60947-1 IEC 60947-2 IEC 60755	IEC 60947-1 IEC 60947-2 IEC 60755
Rated current (In)	(A) 20, 32, 50, 63, 100, 125	160, 250
Category of use	A	A
Number of poles	3+N	3+N
Rated frequency	50/60	50/60
Rated operational voltage (Ue)	525 AC	525 AC
Rated impulse withstand voltage (Uimp)	(kV) 8	8
Overvoltage category	IV	IV
Rated insulation voltage (Ui)	525	525
Rated breaking capacity (Icu)		
	220/240V (kA) 35	50 35
	400/415V (kA) 25	36 25
	440V (kA) 15	25 15
	525V (kA) 8	22 10
Service breaking capacity (Ics)		
	220/240V (kA) 27	50 27
	400/415V (kA) 19	36/30 19
	440V (kA) 12	25 12
	525V (kA) 6	22 7.5
Type of protection	Adjustable thermal Fixed Magnetic Adjustable residual current	Adjustable thermal Fixed Magnetic Adjustable residual current
Versions	Fixed	Fixed
Mounting on DIN rail by means of the accessory	yes	yes
Mounting position	any	any
Upline/downline power supply	yes	yes
Front for cables (FW)	□	-
Front (FC)	■	■
Front extended (FB)	□	□
Front extended spread terminals (FB)	-	-
Rear (RC)	□	□
Electrical life (415 V AC)	(No. cycles) 30,000	10,000
Mechanical life	(No. cycles) 30,000	10,000
Can be equipped with motor operator	yes	yes
Interlock type	-	-
Operating temperature	(°C) -5 +65	-5 +65
Reference temperature	(°C) 50	50
Storage temperature	(°C) -20 +60	-20 +60
Relative humidity	45%+85%	45%+85%
Width (3P / 4P)	(mm) 90 / 120	105 / 140
Height	(mm) 155	165
Depth	(mm) 68	68
Weight (3P / 4P)	(kg) 1.1 / 1.4	1.5 / 1.9

■ = supplied as standard □ = optional - = not available