TOP-TECHNIC



■ CIRCUIT BREAKERS MC – COMPACT DESIGN IN 4 SIZES.



UNDERVOLTAGE RELEASES WITH
UNDERVOLTAGE RELEASE, 2 EARLY-MAKE AUXILIARY CONTACTS TYPE MC1-XUHIVL



OFF-DELAY TYPE MC-UVU, MC-XUVL



■ MECHANICAL INTERLOCK FOR (DOOR COUPLING-) TWIST GRIPS & **TUNNEL TERMINAL FOR MC1**



■ RESIDUAL CURRENT RELEASE **RELAY FIR**



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"One should not wish to predict the future, but to make it possible."

Antoine de Saint-Exupéry, French aviator and writer

MCBS, ACBS, LOAD-BREAK SWITCHES

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COMPACT DESIGN IN 4 FRAME SIZES FOR HIGH-PERFORMANCE APPLICATIONS



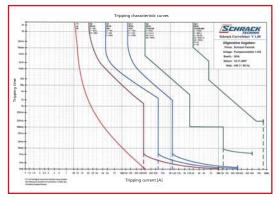
MC circuit breakers are members of the family of encapsulated compact circuit breakers from 15 to 1.600 A with only four frame sizes. These circuit breakers can be used universally – from the smallest of service distribution boards, to machine controls or motor starter combinations, up to large energy distribution systems with a maximum short-circuit breaking capacity of 150 kA. Special versions are available for smaller power ratings with phase failure sensitivity for motor and motor-related applications. The range of circuit breakers is rounded off nicely with switch actuation using toggle-lever, rotary or remote operators. Shunt, undervoltage and earth fault and residual-current releases complete the range. Thanks to their high utilisation category DC-3, they can be used universally for DC applications: from photovoltaics through power backup batteries to sophisticated control and protection of DC shunt motors in reverse and jog mode. The new MC-A circuit breakers are the ideal protection devices for DC power networks with operating voltages up to 750 V and operating currents up to 500 A. Equipped with thermomagnetic release systems, accurate r.m.s detection of operating and residual currents is assured. These contacts feature a double-break system which enables safe switching in high-energy networks with short-circuit currents up to 70,000 A.

■ UNIFORM ACCESSORIES / UNIVERSAL CONNECTION SYSTEM



Simply retrofit your accessories from the front. The installation location is the same for all frame sizes. The auxiliary contacts and trip indicators are contact elements of the SCHRACK range of command and signalling devices. They are available in screw or tension spring technology. This reduces installation times and cuts costs. Effective shunt and undervoltage releases, also available combined with early-make auxiliary contacts for Emergency Stop functions or load-shedding circuits, offer elegant solutions for a broad spectrum of applications. The connection features of MC circuit breakers enable you to respond effectively to your system's demands, whatever they may be. Whether using copper or aluminium cables, copper bands or copper rails – these MCs have the right solution for any connection type. An accessory increases touch protection.

EASIER VISUALISATION, COMPARISON AND DOCUMENTATION OF CHARACTERISTIC CURVES

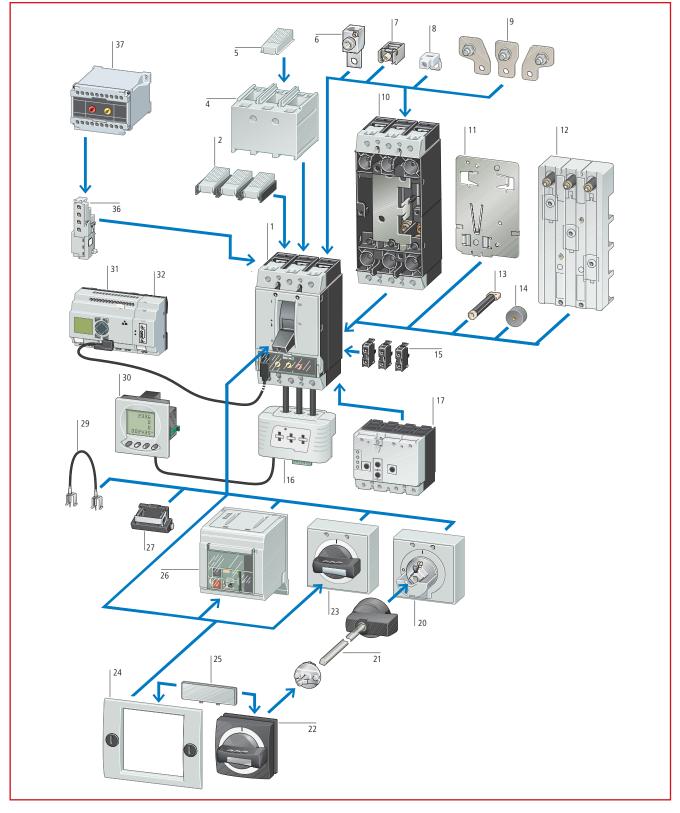


The free characteristic curve software CurveSelect supports the documentation of the switches used in complete control systems. All setting parameters are easy to determine, display in graphical form and print with the characteristic curves. A direct comparison of MC circuit breakers with MO circuit breakers in combination with h.b.c fuses, for example, enables you to assess the selectivity for the overload and time-delayed overcurrent range.

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■ CIRCUIT BREAKERS MC – SYSTEM OVERVIEW



- Circuit breakers MC, load-break switches MC.-PN, MC.-N
- 2. IPX2 finger protection for box terminal
- 4. Cover
- 5. IPX2 finger protection for cover
- 6. Tunnel terminal for Al and Cu cables
- 7. Box terminal
- 8. Control circuit terminal
- 10. Plug-in and extension unit
- 11. Clip plate
- 12. Busbar adapter

- 13. Rear connection
- 14. Spacers
- 15. Standard auxiliary contact, trip-indicating auxiliary contact
- 16. Measurement and communication module
- 17. Residual-current release
- 20. Rotary drive with shaft support
- 21. Extension shaft
- 22. Door coupling rotary handle
- 23. Rotary handle with rotary drive
- 24. Door sealing frame

- 25. External warning/additional plate
- 26. Remote operator
- 27. Toggle lever locking device
- 29. Mechanical interlock
- 30. Display
- 31. DMI module
- 32. Profibus interface
- 36. Undervoltage release
- 37. Time-delay device

■ TYPE KEY FOR COMPACT CIRCUIT BREAKERS



■ TYPE KEY FOR COMPACT CIRCUIT BREAKERS 690 V AC

DESCRIPTION	N FRAME SIZE	BREAKING CAPACITY 415	SWITCH / TYPE		NO. OF POLE	s	TRIPPING UNIT	RATI	ED UNINTERI 20 A –	RUPTED CUF 1600 A	RENT
M	C .	_	_	-	•	_		•	•	•	•
M	1 Up to 160	A Basis 25 kA	Circuit breaker	3-pole	1 1-pole	-	System protection, thermomagnetic				
	2 Up to 300	A Comfort 36 kA	Load-break switch Remote release	-	4-pole		System protection, electronic				
	3 Up to 630	A Normal 50 kA	PN Load-break switch No remote release				Selective and generator protection, electronic				
	4 Up to 1600	A High 150 kA	Accessories				Motor contactor, thermomagnetic M E Motor contactor, electronic				

■ TYPE KEY FOR COMPACT CIRCUIT BREAKERS 1000 V DC

DESCRIPTION	FRAME SIZE	SWITCH TYPE	N	O. OF POLE	S	CURR		NTERRU 60 A –					
M C		•	-	•	-	•	•	•	•	-	S1	-	DC
M C	2 –	Load-break switch Remote release	_	4 4-pole	-					-	S1 Main switch Disconnector	-	DC Up to 1000 V

4Up to 1400

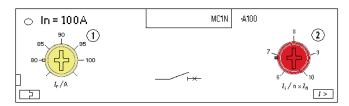
Up to 500 A

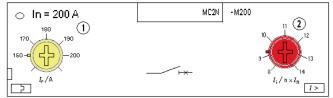
Up to 1400 A

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ADJUSTMENT INFORMATION FOR THERMOMAGNETIC RELEASE MC1 AND MC2 FOR 3- AND 4-POLE VERSION





■ SCHRACK-INFO

1 OVERLOAD RELEASE Ir

The overload release can be adjusted in a range from 0.8 to 1 x ln.

(2) NON-DELAYED SHORT-CIRCUIT INSTANTANEOUS RELEASE II

To avoid damage to the system or to protect the switch itself, a non-delayed short-circuit release is necessary at very high short-circuit currents. In switches with system or line protection release, it can be adjusted from 6 to 10 x ln, in switches with motor contactor release from 8 to 14×10 .

FOR SYSTEM AND LINE PROTECTION

FOR .	SISIEM WIN	D LINE PRO	TECTION	
MC1	MC2	MC3	OVERLOAD	SHORT-CIRCUIT-
I _u /A	I _u /A	I _u /A	RELEASE I,/A	RELEASE I,/A
20	20		0.8-1x I _n	350
25	25		0.8–1x I _n	350
32	32		0.8-1x I _n	350
40	40		0.8-1x I _n	8-10x I _n
50	50		0.8-1x I _n	6-10x I _n
63	63		0.8-1x I _n	6-10x I _n
80	80		0.8-1x I _n	6-10x I _n
100	100		0.8–1x I _n	6-10x I _n
125	125		0.8-1x I _n	6-10x I _n
160	160		0.8-1x I _n	MC1: 8x I _n /6–10x I _n
	200		0.8-1x I _n	
	250		0.8-1x I _n	
	300	320	0.8–1x I _n	
		400	0.8-1x I _n	
		500	0.8-1x I _n	

■ FOR MOTOR PROTECTION

MC1	MC2	OVERLOAD	SHORT-CIRCUIT
I _u /A	I _u /A	RELEASE I,/A	RELEASE I,/A
		0.8-1x I _n	350
		0.8–1x I _n	350
		0.8-1x I _n	10-14x I _n
40		0.8–1x I _n	8–14x I _n
50		0.8-1x I _n	8–14x I _n
63		0.8–1x I _n	8–14x I _n
80		0.8-1x I _n	8–14x I _n
100		0.8–1x I _n	MC1: 8–12.5x I _n
			MC2: 8–14x I _n
	125	0.8-1x I _n	8–14x I _n
	160	0.8–1x I _n	8–14x I _n
	200	0.8–1x I _n	8–14x I _n

ADJUSTMENT INFORMATION FOR ELECTRONIC RELEASES MC2, 3 AND 4 FOR 3- AND 4-POLE VERSION

■ FOR INSTALLATION, LINE, SELECTIVE AND GENERATOR PROTECTION

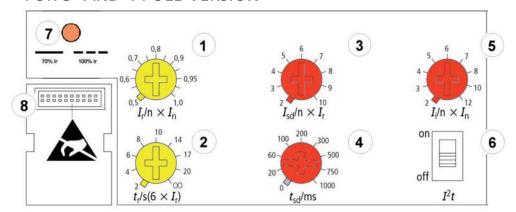
MC2	MC3	MC4	OVERLOAD-	SHORT-CIRCUIT	SHORT-CIRCUIT
I _u /A	I _u /A	I _u /A	RELEASE I,/A	RELEASE I _{sd} /A	RELEASE I _i /A
100	250	630	0.5-1x I _n	2-10x I _r	2-12x I _n
160	400	800	0.5-1x I _n	2-10x I _r	2-12x I _n
250	630	1000	0.5-1x I _n	2-10x I _r	2-12x I _n
		1250	0.5-1x I _n	2-10x I _r	2-12x I _n
		1600	0.5-1x I _n	2-10x I _r	2-12x I _n
		2000	0.5-1x I _n	2–6x I _r	2–8x I _r

FOR MOTOR PROTECTION

МСЗ	OVERLOAD	SHORT-CIRCUIT
I _u /A	RELEASE I,/A	RELEASE I _i /A
	0.5–1x I _n	2-14x I,
	0.5–1x I _n	2-14x I,
220	0.5–1x I _n	2-14x I,
350	0.5–1x I _n	2–14x I,
450	0.5–1x I _n	2-14x I,
	I _u /A 220 350	I _u /A RELEASE I _r /A 0.5–1x I _n 0.5–1x I _n 220 0.5–1x I _n 350 0.5–1x I _n



ADJUSTMENT INFORMATION FOR ELECTRONIC RELEASES MC2, 3 AND 4 FOR 3- AND 4-POLE VERSION



SCHRACK-INFO

(1) OVERLOAD RELEASE Ir

The overload release has 13 possible settings (from 0.5 to 1×1). The nominal current of the device In is multiplied with the factor for the overload setting to obtain the calculated overload release current Ir.

(2) TIME DELAY SETTING TO OVERCOME CURRENT PEAKS tr

Electronic releases mimic the characteristics of a bi-metal. While each mechanical bi-metal has its own particular characteristic, electronics allow you to generate various characteristics (with different time delays). The time delay setting is defined using the time after which the circuit breaker trips at an overload of 6 x Ir. In a standard circuit breaker, tripping occurs after approx. 8 to 10 s. The setting can be selected in steps of tr = 2, 4, 6, 8, 10, 14, 17, 20 or ∞ (without bi-metal release). Longer tripping times may be necessary, for example, if motors with hard-to-start drives are connected downstream. Unexpected premature trips are prevented. Lower settings are important for the protection of electronic system components. tr = 10 s should be selected for standard applications.

3 DELAYED SHORT-CIRCUIT RELEASE Isd

MC delayed short-circuit releases are suitable for the time-selective construction of networks. Once the short-circuit current reaches the pre-set response value of the instantaneous release (2 to $10 \times Ir$), the switch will trip after the pre-set time-delay tsd. The lsd is based on the pre-set Ir.

(4) TIME DELAY tsd (BASED ON Isd)

The response time for the delayed short-circuit release can be adjusted to 9 steps, from 0 to 1000 ms.

5 NON-DELAYED SHORT-CIRCUIT INSTANTANEOUS RELEASE II

Also with time-selective network designs, for very high short-circuit currents, a non-delayed release is necessary to prevent damage to the system and to protect the switch itself. The response value of the non-delayed instantaneous release can be adjusted between 2 and 12 x In. The Ii is based on the nominal current In of the switch.

(6) I2t SETTING ON/OFF

In the event of an overload, a circuit breaker will trip after a current-dependent delay. As soon as the over-current exceeds the response value of the short-circuit instantaneous release Ii, the overload characteristic curve abruptly terminates. Depending on the short-time delay setting, tripping will occur within milliseconds. The break in the characteristic curve can endanger the selectivity, if a fuse was chosen as the downstream protection device. Therefore, the tripping time can be increased electronically by a ramp function (I²t = ON). The resulting tripping time is determined by the maximum permissible thermal energy I²t.

7 LED OVERLOAD INDICATOR "ALARM"

The LED lights up before the switch triggers if an overload was detected by the electronic system. Upon reaching 70% Ir, the LED will light permanently, at 100% Ir, the LED will flash slowly, and from 120% Ir it will flash rapidly. The circuit breaker will switch off after a time that depends on the tripping characteristic curve.

(8) DATA INTERFACE

Retrieval of diagnostics and operational data with PC/laptop or DMI (Data Management Interface). The (optional) DMI module allows the display, evaluation and measurement of current values, has built-in motor starter functions, and enables the parameterisation and control of circuit breakers with electronic releases. An optional bus coupler makes it possible to connect automation systems (SPS/PLS) at any time (e.g. Profibus DP).

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■ CIRCUIT BREAKER 1-POLE UP TO 125 A WITH FIXED THERMAL MAGNETIC RELEASE TYPES MC1B-A, MC1C-A, MC1N-A, MC1H-A



SCHRACK-INFO

- For system and line protection
- Fixed overload release I_r
- Fixed short-circuit release la
- Lift terminals as standard, screw terminals as accessories
- Breaking capacity 25 kA at 230/240 V, 50/60 Hz
- Specifications acc. to IEC/EN 60947-2
- Rated uninterrupted current = rated current
- Available accessories: cover for 1-pole screw terminal, screw terminal IP2x finger protection, toggle locking device
- For dimensions, see from page 677.

	ADJUSTN	MENT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
1-POLE (BASIC BREAKING O	MC1B-1-AF					
20 A/25 kA	20	350	MC1B-1-AF20	9004840664546		MC120118
25 A/25 kA	25	480	MC1B-1-AF25	9004840664553		MC125118
32 A/25 kA	32	480	MC1B-1-AF32	9004840664560		MC132118
40 A/25 kA	40	480	MC1B-1-AF40	9004840664577		MC140118
50 A/25 kA	50	750	MC1B-1-AF50	9004840664584		MC150118
63 A/25 kA	63	750	MC1B-1-AF63	9004840664591		MC163118
80 A/25 kA	80	1000	MC1B-1-AF80	9004840664614		MC180118
100 A/25 kA	100	1000	MC1B-1-AF00	9004840664621		MC110118
125 A/25 kA	125	1000	MC1B-1-AF125	9004840664638		MC112118

■ CIRCUIT BREAKER 3-POLE UP TO 160 A WITH THERMAL MAGNETIC RELEASE TYPES MC1B-A, MC1C-A, MC1N-A, MC1H-A



SCHRACK-INFO

ADJUSTMENT RANGE

- For system and line protection
- Adjustable overload release I_r: 0.8 1 x I_n (factory setting 0.8 x I_n)
- Adjustable short-circuit release I: 6 10 x In (factory setting 6 x In); except MC.-A40: 8 - 10 x In
- Lift terminals as standard, screw terminals as accessories
- Breaking capacity 25 / 36 / 50 / 100 kA at 415 V 50/60 Hz
- Specifications acc. to IEC/EN 60947-2
- Rated uninterrupted current = rated current
- For dimensions, see from page 677.

	ADJUSTI	MENT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
3-POLE (BASIC BREAKING	CAPACITY) 25 kA					
20 A/25 kA	1520	fix 350	MC1B-A20	9004840403268		MC120131
25 A/25 kA	2025	fix 350	MC1B-A25	9004840403275	988	MC125131
32 A/25 kA	2532	fix 350	MC1B-A32	9004840403282		MC132131
40 A/25 kA	3240	320400	MC1B-A40	9004840261745	988	MC140131
50 A/25 kA	4050	300500	MC1B-A50	9004840261752	988 0-0	MC150131
63 A/25 kA	5063	380630	MC1B-A63	9004840261769	988	MC163131
80 A/25 kA	6380	480800	MC1B-A80	9004840261776	999 0-0	MC180131
100 A/25 kA	80100	6001000	MC1B-A100	9004840261783	988 0-0	MC110131
125 A/25 kA	100125	7501250	MC1B-A125	9004840261790		MC112131
160 A/25 kA	125160	fix 1280	MC1B-A160	9004840403299	988 0- 9	MC116131
3-POLE (NORMAL BREAKIN	NG CAPACITY) 50 ka					
20 A/50 kA	1520	fix 350	MC1N-A20	9004840403558		MC120231
25 A/50 kA	2025	fix 350	MC1N-A25	9004840403565	988	MC125231
32 A/50 kA	2532	fix 350	MC1N-A32	9004840403572		MC132231
40 A/50 kA	3240	320400	MC1N-A40	9004840261806	999 0-0	MC140231
50 A/50 kA	4050	300500	MC1N-A50	9004840261813	000	MC150231
63 A/50 kA	5063	380630	MC1N-A63	9004840261820	988 0-0	MC163231
80 A/50 kA	6380	480800	MC1N-A80	9004840261837	999 0-0-	MC180231
100 A/50 kA	80100	6001000	MC1N-A100	9004840261844	988 0-9	MC110231
125 A/50 kA	100125	7501250	MC1N-A125	9004840261851	999 0-0-	MC112231
160 A/50 kA	125160	fix 1280	MC1N-A160	9004840403589	355 0-5	MC116231
3-POLE (HIGH BREAKING C	APACITY) 100 ka					
20 A/100 kA	1520	fix 350	MC1H-A20	9004840628722		MC120331
25 A/100 kA	2025	fix 350	MC1H-A25	9004840628739		MC125331
32 A/100 kA	2532	fix 350	MC1H-A32	9004840628746		MC132331
40 A/100 kA	3240	320400	MC1H-A40	9004840628753		MC140331
50 A/100 kA	4050	300500	MC1H-A50	9004840628760		MC150331
63 A/100 kA	5063	380630	MC1H-A63	9004840628777		MC163331
80 A/100 kA	6380	480800	MC1H-A80	9004840628784		MC180331
100 A/100 kA	80100	6001000	MC1H-A100	9004840628791		MC110331
125 A/100 kA	100125	7501250	MC1H-A125	9004840628807		MC112331
160 A/100 kA	125160	fix 1280	MC1H-A160	9004840628814		MC116331



CIRCUIT BREAKER 4-POLE UP TO 160 A WITH THERMAL MAGNETIC RELEASE TYPES MC1B-4-A, MC1C-4-A, MC1N-4-A, MC1H-4-A



SCHRACK-INFO

- For system and line protection
- 100% overload and short-circuit protection
- Adjustable overload release Ir: 0.8 1 x In (factory setting 0.8 x In)
- Adjustable short-circuit release I_i: 6 − 10 x I_n (factory setting 6 x I_n); except MC.-A40: 8 - 10 x In
- Lift terminals as standard, screw terminals as accessories
- Breaking capacity 25 / 36 / 50 /kA at 415 V 50/60 Hz
- Specifications acc. to IEC/EN 60947-2
- Rated uninterrupted current = rated current
- For dimensions, see from page 677.

	ADJUSTN	MENT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
4-POLE (BASIC BREAKING	CAPACITY) 25 ka					
20 A/25 kA	1520	fix 350	MC1B-4-A20	9004840403596		MC120141
25 A/25 kA	2025	fix 350	MC1B-4-A25	9004840403602	000	MC125141
32 A/25 kA	2532	fix 350	MC1B-4-A32	9004840403619	000	MC132141
40 A/25 kA	3240	320400	MC1B-4-A40	9004840385441	000	MC140141
50 A/25 kA	4050	300500	MC1B-4-A50	9004840385458		MC150141
63 A/25 kA	5063	380630	MC1B-4-A63	9004840385465	000	MC163141
80 A/25 kA	6380	480800	MC1B-4-A80	9004840385472	000	MC180141
100 A/25 kA	80100	6001000	MC1B-4-A100	9004840385427	088	MC110141
125 A/25 kA	100125	7501250	MC1B-4-A125	9004840385434	088	MC112141
160 A/25 kA	125160	fix 1280	MC1B-4-A160	9004840403626	088	MC116141
4-POLE (NORMAL BREAKII	NG CAPACITY) 50 ka					
20 A/50 kA	1520	fix 350	MC1N-4-A20	9004840403633		MC120241
25 A/50 kA	2025	fix 350	MC1N-4-A25	9004840403640		MC125241
32 A/50 kA	2532	fix 350	MC1N-4-A32	9004840403657		MC132241
40 A/50 kA	3240	320400	MC1N-4-A40	9004840385588		MC140241
50 A/50 kA	4050	300500	MC1N-4-A50	9004840385595		MC150241
63 A/50 kA	5063	380630	MC1N-4-A63	9004840385694		MC163241
80 A/50 kA	6380	480800	MC1N-4-A80	9004840385700		MC180241
100 A/50 kA	80100	6001000	MC1N-4-A100	9004840385564		MC110241
125 A/50 kA	100125	7501250	MC1N-4-A125	9004840385571		MC112241
160 A/50 kA	125160	fix 1280	MC1N-4-A160	9004840403664		MC116241

CIRCUIT BREAKER, 3-POLE UP TO 100 A WITH THERMAL MAGNETIC RELEASE TYPES MC1B-M, MC1C-M, MC1N-M



SCHRACK-INFO

- For motor-protection
- Adjustable overload release I_r: 0.8 1 x I_n (factory setting 0.8 x I_n); with phase failure sensitivity, tripping class 10 A (2s < Tp \leq 10s)
- Adjustable short-circuit release Ii: 8 14 x In (ex-factory 12 x In); except MC1.-M100: 8 - 12.5 x In (factory setting 12 x In)
- Lift terminals as standard, screw terminals as accessories
- Breaking capacity 25 / 36 / 50 kA at 415 V 50/60 Hz
- Specification acc. to IEC/EN 60947-4 and IEC/EN 60947-2
- Meet all requirements of utilisation category AC3 at 400 VAC
- For dimensions, see from page 677.

800...1250

NOMINAL CURRENT/	ADJUSTI	MENT RANGE							
BREAKING CAPACITY/	OVERLOAD	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.			
POWER/CURRENT	RELEASE (A)	RELEASE (A)							
3-POLE (BASIC BREAKING CA	3-POLE (BASIC BREAKING CAPACITY) 25 kA								
40 A/25 kA/18.5 kW/36 A	3240	320560	MC1B-M40	9004840385496	000 0-0	MC140136			
50 A/25 kA/22 kW/41 A	4050	400700	MC1B-M50	9004840385502	000	MC150136			
63 A/25 kA/30 kW/55 A	5063	504882	MC1B-M63	9004840385519	000 0-0	MC163136			
80 A/25 kA/37 kW/68 A	6380	6401120	MC1B-M80	9004840385526	999 0-0	MC180136			
100 A/25 kA/55 kW/99 A	80100	8001250	MC1B-M100	9004840385489	000 0-0	MC110136			
3-POLE (NORMAL BREAKING	CAPACITY) 50 kA								
40 A/50 kA/18.5 kW/36 A	3240	320560	MC1N-M40	9004840385724		MC140236			
50 A/50 kA/22 kW/41 A	4050	400700	MC1N-M50	9004840385731		MC150236			
63 A/50 kA/30 kW/55 A	5063	504882	MC1N-M63	9004840385748		MC163236			
80 A/50 kA/37 kW/68 A	63 80	640 1120	M80-MC1N	9004840385755		MC180236			



80...100

100 A/50 kA/55 kW/99 A

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LOAD-BREAK SWITCH UP TO 160 A TYPES MC1-PN, MC1-PN-4, MC1-N, MC1-N-4



SCHRACK-INFO

- Rated uninterrupted current up to 160 A
- MC1-PN two switch positions 0/I, no remote release
- MC1-N, with trip positions "0", "+"; "I", with remote release, can be equipped with undervoltage/shunt release and trip-indicating auxiliary contact
- Connection terminals as standard, screw terminals as accessories
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947-3 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Specifications acc. to IEC/EN 60947-2
- Rated uninterrupted current = rated current
- Rated short-circuit breaking capacity: I_{cm} 2.8 kA
- Rated short-time current protection: I_{cw} 2 kA
- For dimensions, see from page 677.

RATED UNINTERRUPTED CURRENT	MAX. BACK-UP FUSE (gL)	TYPE	EAN-CODE	AVAILABLE	ORDER NO.
	FOR LOAD-BREAK SWITCHES (AgL)				
3-POLE, NO REMOTE RELEASE POSS	SIBLE				
63 A	125 A	MC1-PN-63	9004840262216	000	MC163034
100 A	125 A	MC1-PN-100	9004840262223	000	MC110034
125 A	125 A	MC1-PN-125	9004840262230	000	MC112034
160 A	160 A	MC1-PN-160	9004840551334	088 0-0	MC116034
4-POLE, NO REMOTE RELEASE POSS	SIBLE				
63 A	125 A	MC1-PN-4-63	9004840385816		MC163044
100 A	125 A	MC1-PN-4-100	9004840385762	088	MC110044
125 A	125 A	MC1-PN-4-125	9004840385809	000	MC112044
160 A	160 A	MC1-PN-4-160	9004840551341		MC116044
3-POLE, REMOTE RELEASE POSSIBLE					
63 A	125 A	MC1-N-63	9004840262254		MC163035
100 A	125 A	MC1-N-100	9004840262261		MC110035
125 A	125 A	MC1-N-125	9004840262278	688 0-0	MC112035
160 A	160 A	MC1-N-160	9004840614428	088	MC116035
4-POLE, REMOTE RELEASE POSSIBLE					
63 A	125 A	MC1-N-4-63	9004840385557		MC163045
100 A	125 A	MC1-N-4-100	9004840385533		MC110045
125 A	125 A	MC1-N-4-125	9004840385540	080	MC112045
160 A	160 A	MC1-N-4-160	9004840627237		MC116045

RESIDUAL-CURRENT RELEASE RELAY TYPES MC1-XFI.R, MC1-4-XFI.R, MC1-XFI.U, MC1-4-XFI.U



SCHRACK-INFO

- Suitable for use in three- and single-phase systems
- Pulse current sensitive acc. to core-balance principle
- For 3- and 4-pole circuit breakers and load-break switches MC1, MC1-N, not for MC1-PN
- Dependant on mains power Ue = 200 415 V 50/60 Hz
- Meets IEC/EN 60947-2
- Bottom mounting up to 100 A, installed from the right up to 125 A
- Complete unit
- For dimensions, see from page 677.

■ TECHNICAL DATA

- At $I_{\Delta n} = 0.03$ A: Time delay t_v permanently set to 10 ms.
- Alarm message > 30 % Idn via yellow LED.
- Trip-indicating auxiliary contacts can be fitted by user (max. 2 auxiliary contacts): NO: Order No: MM216376, NC: Order No: MM216378 are reset via a reset toggle lever.
- · When using the trip-indicating auxiliary contacts in the FI module, the NC contact works as an NO contact and the NO contact as an NC contact.
- Not for use in XCS insulated enclosures.
- Type MC1-XFI...U cannot be combined with shunt or undervoltage releases and an early-make auxiliary contact.
- Rated short-circuit breaking capacity values are determined by installed MC1 or when using a load-break switch MC1-N by the back-up fuse to be used.

FOR TYPE	RATED	DELAY	TYPE	EAN CODE	AVAILABLE	ORDER NO.
	RESIDUAL CURRENT (In)	TIME (ms)				
3-POLE ATTACHMEN	T FROM THE RIGHT UP TO 160	A 🔯				
MC1/MC1-N	0.03	10	MC1-XFI30R	9004840507416		MC194603
MC1/MC1-N	0.3	10	MC1-XFI300R	9004840507454		MC194604
MC1/MC1-N	0.03-0.1-0.3-0.5-1-3	10, 60, 150, 300, 450	MC1-XFIR	9004840507478	000	MC194605
4-POLE ATTACHMEN	T FROM THE RIGHT UP TO 160	A 🖂				
MC1-4 / MC1-N-4	0.03	10	MC1-4-XFI30R	9004840507447		MC194606
MC1-4 / MC1-N-4	0.3	10	MC1-4-XFI300R	9004840507461	999	MC194607
MC1-4 / MC1-N-4	0.03-0.1-0.3-0.5-1-3	10, 60, 150, 300, 450	MC1-4-XFIR	9004840507485	000	MC194608
3-POLE ATTACHMEN	T FROM THE BOTTOM UP TO	100 A 🔀				
MC1/MC1-N	0.03	10	MC1-XFI30U	9004840587302		MC194609
MC1/MC1-N	0.3	10	MC1-XFI300U	9004840587319		MC194610
MC1/MC1-N	0.03-0.1-0.3-0.5-1-3	10, 60, 150, 300, 450	MC1-XFIU	9004840587326		MC194611
4-POLE ATTACHMENT	T FROM THE BOTTOM UP TO	100 A 🖂				
MC1-4 / MC1-N-4	0.03	10	MC1-4-XFI30U	9004840587333		MC194612
MC1-4 / MC1-N-4	0.3	10	MC1-4-XFI300U	9004840587340		MC194613
MC1-4 / MC1-N-4	0.03-0.1-0.3-0.5-1-3	10, 60, 150, 300, 450	MC1-4-XFIU	9004840587524		MC194614





SOCKET AND PLUG-IN MODULE FOR MC1



SCHRACK-INFO

- 3-pole version
- For circuit breaker MC1 and load-break switch MC1-N
- Plug-in module only available in combination with switch
- Socket can be ordered separately and pre-assembled
- Order control circuit plug unit separately
- Cannot be used in combination with MC1-XFI (residual current release relay)
- For dimensions, see from page 677.

TECHNICAL DATA

• In max. at 20 °C: 125A at 70 °C: 100 A

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
SOCKET				
Socket, 3-pole	MC1-XSVS	9004840651614		MC196777

PLUG-IN MODULE

Plug-in module, 3-pole (supplied with switch, add an S to end of switch part number)

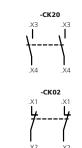
ACCESSORIES FOR PLUG-IN STYLE ASSEMBLY MC2/MC2-N

Control circuit plug unit for aux switches, undervoltage-/shunt release MC1/2-XSVHI 9004840263664 MC296705

STANDARD AUXILIARY CONTACT / TRIP-INDICATING AUXILIARY **CONTACT TYPE M22**







SCHRACK INFO

- Switches with the main contacts, used for indicating and interlocking tasks
- General trip indication "+" with trip due to voltage release, overload release or short-circuit-release

■ TECHNICAL DATA

Breaking capacity: AC15: 4 A / 230 VAC

DC13: 3 A / 24 VDC M22-K: 0.3 A / 220 VDC M22-CK: 0.2 A / 220 VDC

TIPS & TRICKS

The trip-indicating auxiliary contact is the same contact as the standard auxiliary contact. It derives its function from its place of installation (left is the alarm contact).

Maximum component installation MC1 with auxiliary contacts: 1 x standard auxiliary contact (HIN) M22-K.. or M22CK..

+ 1 x trip-indicating auxiliary contact (HIA) M22-K.. or M22-CK..

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
1 NO contact with screw terminals	M22-K10	9004840176254	000 0-0	MIVI216376
1 NC contact with screw terminals	M22-K01	9004840176261	000 0-0	MIM216378
2 NO contacts with spring terminals	M22-CK20	9004840547047	000	MM107898
2 NC contacts with spring terminals	M22-CK02	9004840547054	000 0-0	MM107899
1 NO contact + 1 NC contact with spring terminals	M22-CK11	9004840625783	000	MM107940

EARLY-MAKE AUXILIARY CONTACT TYPE MC1-XHIVL





SCHRACK INFO

• For interlock- and load-shedding circuits as well as for early make of undervoltage release in main switch/Emergency-stop applications.

TECHNICAL DATA

- Early-make during switch on and off (manual switch): approx. 20 ms
- Not in connection with undervoltage release MC1-XU... or shunt release MC1-XA...
- Breaking capacity: AC15: 4 A / 230 VAC

DC13: 3 A / 24 VDC, 0.2 A / 220 VDC

TIPS & TRICKS

Maximum component installation MC1: 1 x early-make auxiliary contact

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Early-make auxiliary switch, 2 NO contacts including 3 m cable	MC1 XHIVL	9004840262292		MC199432

UNDERVOLTAGE RELEASE TYPES MC1-XUL





SCHRACK INFO

- Non-delayed breaking of circuit breaker MC/load-breaking switch MC-N when the control voltage drops below 35% -70% Us.
- For use in Emergency Stop devices in connection with EMERGENCY STOP button
- Installed in breaker
- Without auxiliary contact
- Other voltages and connection versions available on request

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC1-XHIV.

VOLTAGE	VERSION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC	incl. 3 m cable	MC1-XUL24AC	9004840262308	000	MC199462
24 VDC	incl. 3 m cable	MC1-XUL24DC	9004840262346	000	MC199481
208 - 240 VAC	incl. 3 m cable	MC1-XUL208-240 AC	9004840262322	000	MC199471
380 - 440 VAC	incl. 3 m cable	MC1-XUL380-440 AC	9004840262339		MC199473



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SCHRACK INFO

- With 2 early-make auxiliary contacts
- For early-make of the undervoltage release in main switch applications and for interlock- and load-shedding circuits
- Installed in breaker
- Other voltages and connection versions available on request

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Early-make of auxiliary contacts during switch on and off (20 ms). Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC1-XHIV.

VOLTAGE	VERSION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 VAC	incl. 3 m cable	MC1-XUHIVL208-240 AC	9004840262421	000	MC199565
380 - 440 VAC	incl. 3 m cable	MC1-XUHIVL380-440 AC	9004840262438		MC199567

UNDERVOLTAGE RELEASE, OFF-DELAY TYPES MC-UVU, MC-XUVL







SCHRACK INFO

- Voltage drops of less than 16 s do not cause MC circuit breakers or MC-N load-break switches to trip.
- Voltage range: 220-240 VAC 50/60 Hz

380-440 VAC 50/60 HZ 480-550 VAC 50/60 HZ 24 VDC / AC

• For dimensions, see from page 677.

■ TECHNICAL DATA

- Time-delay adjustable between 70 ms 4 s
- With additional external capacitor: $30,000 \mu F \ge 35 \text{ V up to 8 s}$ $90,000 \mu F \ge 35 \text{ V up to } 16 \text{ s}$
- Special release MC1-XUVL is required.
- Cannot be installed simultaneously with early-make auxiliary contact MC1-XHIV... or shunt release MC1-XA....
- Time-delay device for separate assembly (Mounting: DIN rail or screws).
- Use control transformer for other operating voltages.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Time delay device	MC-UVU	9004840520392	000	MC190154
Special undervoltage release				
for time-delay device UVU	MC1 XUVL	9004840520408		MC191607





SHUNT RELEASE TYPE MC1-XAL





SCHRACK INFO

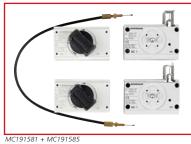
- Without auxiliary contact
- Switches are tripped by a voltage pulse or by applying uninterrupted voltage

TIPS & TRICKS

When the shunt release is de-energised, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Shunt release cannot be installed simultaneously with undervoltage releases or early-make auxiliary contact MC1-XHIV.

VOLTAGE	VERSION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC/DC	incl. 3 m cable	MC1-XAL24AC/DC	9004840262476	088 0-0	MC199736
208 - 250 VAC/DC	incl. 3 m cable	MC1-XAL208-250 AC/DC	9004840262490	000 0-0	MC199744

MECHANICAL INTERLOCK FOR (DOOR COUPLING-) ROTARY HANDLES FOR MC1



SCHRACK INFO

- Rotary handle on switch or door coupling rotary handle additionally required.
- Cannot be combined with door sealing frame
- At least 2 interlocking modules are required to construct a mechanical interlock.
- Order Bowden cable separately
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock	MC1-XMV	9004840403190	000	MC191581
Bowden cable 225 mm	MC XBZ225	9004840403206	000 0-0	MC191585
Bowden cable 600 mm	MC XBZ600	9004840403213	088 0-5	MC191586
Bowden cable 1000 mm	MC XBZ600	9004840403220		MC191587



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ROTARY HANDLES DIRECTLY ON SWITCH FOR MC1



SCHRACK INFO

- Complete with rotary drive
- Can also be combined with door sealing frame
- For dimensions, see from page 677.

TECHNICAL DATA

Available in the following versions:

Type MC.-XDV

Lockable in position "0" (up to three padlocks), black/grey

Type MC.-XDVR

Lockable in position "0" (up to three padlocks), EMERGENCY STOP red/yellow

Type MC.-XDTV

Lockable in position "0" on handle, modification also available in position "1", black/grey

Type MC.-XDTVR

Lockable in position "0", ENERGENCY STOP red/yellow

Version with door interlock:

- Door sealing frame supplied with door interlock
- Rotary handle can be rotated 90° for switches mounted horizontally
- In the ON position, can be defeated from the outside using a 1 mm pin
- Cannot be defeated in the locked OFF and ON positions
- Door can be opened in OFF
- Can only be switched on when door closed

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rotary handle for MC1, lockable, black/grey	MC1-XDV	9004840262728	088	MC190125
Rotary handle for MC1, lockable, emergency stop red/yellow	MC1-XDVR	9004840262773	000	MC190135
Rotary handle for MC1 with door interlock, lockable, black/grey	MC1 CDTV	9004840262759	088	MC190131
Rotary handle for MC1 with door interlock, lockable, emergency stop red/yellow	MC1 XDTVR	9004840262803		MC190142



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DOOR COUPLING ROTARY HANDLES UND MAIN SWITCH KITS FOR MC1







SCHRACK INFO

- Complete including rotary drive and coupling parts
- Degree of protection IP66
- Rotary handle can be rotated 90° for switches mounted horizontally
- Cannot be defeated in the locked OFF and ON positions
- Can be modified when in the unlocked ON position, can be defeated from the outside with a screwdriver
- Door can be opened in OFF
- External warning plate/additional plate can be clipped on
- For dimensions, see from page 677.

NOTE

· Order extension shaft separately!

■ TECHNICAL DATA

Available in the following versions:

Type MC.-XTVD

Lockable in position "0" on handle, with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDV

Lockable in position "0" on handle and switch, with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDVR

Lockable in position "0" on handle and switch with up to three padlocks, with door interlock, EMERGENCY STOP red/yellow

Main switch kit consisting of:

- Door coupling rotary handle + rotary drive XTVD/XTVDR
- Extension shaft XV4
- External warning plate
- Lightning arrow

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
DOOR COUPLING ROTARY HANDLES				
For MC1 with door interlock, lockable, black/grey	MC1 XTVD	9004840262872	000	MC190166
For MC1 with door interlock, lockable, "0", "1", black/grey	MC1-XTVDV	9004840262902	088	MC190172
For MC1 with door interlock, lockable, emergency stop red/yellow	MC1 XDTVR	9004840262933	088 0-0	MC190178
MAIN SWITCH KITS				
For MC1 lockable, black/grey	MC1-XHB	9004840263565		MC196626
For MC1 lockable, emergency stop red/yellow	MC1-XHBR	9004840263596	000	MC196632

EXTENSION SHAFT FOR MC1



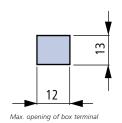
SCHRACK INFO

- For maximum cabinet depths of 400 or 600 mm
- Can be cut to required length
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Extension axis for MC1 max. 400 mm	MC1/2-XV4	9004840263053	888	MC191232
Extension axis for MC1 max. 600 mm	MC1/2-XV6	9004840262964	000 0-0	MC190191

BOX TERMINALS FOR MC1





SCHRACK INFO

- Standard connection for all MC1, MC1-PN and MC1-N switches
- Conversion kit if switch is equipped with screw terminal
- Contains parts for one switch side
- Installed within the switch housing
- Use cover plate MC1(-4)-XKSA
- Terminal capacities:

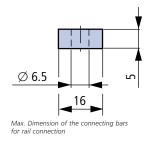
Cu wires 1 x (10 to 70 mm²)

Cu wires 2 x (6 to 25 mm²)

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Box terminal up to 160 A (3 pcs. included) for MC1	MC1-160-XKC	9004840386974		MC190015
Box terminal up to 160 A (4 pcs. included) for MC1-4	MC1-160-4-XKC	9004840263848		MC197075

SCREW CONNECTION FOR MC1





SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Installation outside switch housing
- Cover MC1-XKSA included
- Terminal capacities:

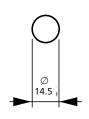
Cu cable lugs 1 x (10 to 70 mm²), 2 x (6 – 25 mm²) 1 x (10 to 35 mm²), 2 x (10 – 35 mm²) Al cable lugs

• For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Screw terminal , 3 pcs. for MC1	MC1-XKS	9004840262629	000	MC190019
Screw terminal 4 pcs. for MC1-4	MC1-4-XKS	9004840386981		MC196725

TUNNEL TERMINAL FOR MC1





SCHRACK INFO

- Contains parts for one switch side, top or bottom
- With control circuit terminal for 1 x (0.75 to 2.5 mm²), 2 x (0.75 to 1.5 mm²) Cu wire
- Installation outside switch housing
- Maximum specified cross-section can only be connected stranded and without end sleeve.
- Attachment of cover MC1(-4)-XKSA required (included)
- Terminal capacities: Cu cable, AI cable 95 mm²
- For dimensions, see from page 677.

■ TECHNICAL DATA

- For Cu- and AI cables
- Including cover
- Stranded round conductor / stranded sector-shaped conductor
- Use with flexible and highly-flexible conductor end sleeves

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Tunnel terminal 95 mm², 3-pole for MC1	MC1-X kA	9004840263749	000	MC196730
Tunnel terminal 95 mm², 4-pole for MC1-4	MC1-4-X kA	9004840386998		MC196731

REAR CONNECTION FOR MC1



SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Terminal capacities:

Cu cable lugs 1 x (10 to 70 mm²⁾, 2 x (6 to 25 mm²) Al cable lugs 1 x (10 to 35 mm²), 2 x (10 to 35 mm²)

• For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rear connection, 3-pole for MC1	MC1-XKR	9004840263756		MC196734

CONTROL CIRCUIT TERMINAL FOR MC1



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SCHRACK INFO

- Contains parts for two terminals located at top or bottom for 3/4-pole switches
- Included with tunnel terminal
- Terminal capacities: Screw terminal 1 x (0.75 to 2.5 mm²), 2 x (0.75 to 1.5 mm²)
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Control circuit connection for box terminal MC1	MC-XSTK	9004840263893	688 0-6	MC196739
Control circuit connection for screw terminal for MC1	MC1-XSTS	9004840262827		MC190150



SCHRACK INFO

- Protection against accidental contact where cable lugs, rails are connected or tunnel terminals are used
- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Degree of protection IP4X front, side and rear, IP1X on the connection side when using insulated conductor material
- Cover plate already comes with tunnel terminals
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Terminal cover, 3-pole for MC1	MC1-XKSA	9004840262636	000	MC190021
Terminal cover, 4-pole for MC1-4	MC1-4-XKSA	9004840387018	000	MC196741

CONNECTION COVER, KNOCKOUT FOR BOX TERMINAL

SCHRACK INFO

- Contains parts for one switch side, top or bottom
- For 3- or 4-pole switches
- · Connection cover can be knocked out
- To increase touch protection for box terminal (simplified finger protection)

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Terminal cover, 3-pole for MC1	MC1-XKSFA	9004840520514	600	MC190780

IP2X FINGER PROTECTION FOR DIRECT-MOUNTED MC1 SWITCHES





SCHRACK INFO

- Increases the protection against accidental contact to IP2X
- Protection when reaching into the cable connection area when cables are connected
- MC1-XIPK and MC1-4-XIPK for direct mounting on switches
- MC1-XIPA and MC1-4-XIPA only in combination with cover plate XKSA
- Contains parts for one switch side, top or bottom
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
FOR BOX TERMINAL				
Finger protection, 3-pole for MC1	MC1-XIPK	9004840387025	888	MC196744
Finger protection, 4-pole for MC1	MC1-4-XIPK	9004840387032		MC196745

FOR TERMINAL COVER

Finger protection, 3-pole for MC1	MC1-XIPA	9004840387049	000 000	MC196748
Finger protection, 4-pole for MC1	MC1-4-XIPA	9004840387056		MC196749

INSULATED ENCLOSURE XCI



SCHRACK INFO

- Only for switches with box terminals for direct cable connection
- With door coupling rotary handle
- Complete including all necessary functional parts
- Degree of protection IP65
- MC1-XCI23 housing with flanges
- MC1-XCI43 are fitted with gland plates
- For dimensions, see from page 677.

▼ TECHNICAL DATA

Enclosure suitable for installation of circuit-breakers and load-break switches for separate mounting with top and bottom cable entry.

Including fixing straps for wall mounting. Short circuit protection at 415 V 50/60 Hz up to 10 kA.

Not in combination with remote operator, plug-in or withdrawable unit.

Additional insulated terminal for 4th or 5th pole must be ordered separately.

Available in the following versions:

Standard, black/grey

Lockable in position "0" on handle with up to 3 padlocks. Additionally with cover interlock.

For EMERGENCY STOP, red/yellow

Lockable on handle and switch lockable with up to 3 padlocks in position "0" on handle. Additionally with cover interlock and lockable at switch in position "0".

DESCRIPTION	MAX. RATED UNINTERRUPTED CURRENT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
STANDARD, BLACK/GREY					
For MC1, 3-pole	≤63 A	MC1-XCl23-TVD	9004840520545		MC191522
For MC1-4, 3- or 4-pole	≤ 125 A	MC1-XCI43-TVD	9004840520552		MC191523
For MC1-4, 3- or 4-pole	≤160 A	MC1-XCI43/2-TVD	9004840520521		MC194645

FOR EMERGENCY STOP. RED/YELLOW

For MC1, 3-pole	≤63 A	MC1-XCI23-R	9004840520569	MC191527
For MC1-4, 3- or 4-pole	≤ 125 A	MC1-XCI43-R	9004840520576	MC191528
For MC1-4, 3- or 4-pole	≤160 A	MC1-XCI43/2-R	9004840520538	MC194646



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COMPONENT ADAPTERS FOR CIRCUIT-BREAKERS AND LOAD-BREAK SWITCHES FOR 60 mm BUSBAR SYSTEM, MC1





SCHRACK INFO

- For mounting on flat copper rails 12 x 5 mm to 30 x 10 mm
- Double T and triple T profile
- For snapping onto de-energised busbar
- Rated operating voltage Ue: 690 V
- For dimensions, see from page 677.

■ TECHNICAL DATA

MC 1 up to 160 A:

- For switches with standard box terminal connection
- Connected to system via terminal strips at top
- In connection with IP2X finger protection, possible to increase protection against accidental contact on outgoing side

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
60 mm busbar adapter 160 A for MC1, 3-pole	32570	9004840417722	988	MC195700

DOOR SEALING FRAME FOR MC1



SCHRACK INFO

- For toggle levers, rotary handles with rotary drive and remote operator
- Degree of protection IP40
- For rectangular cut-out on doors and enclosures with material thicknesses of 1.5 5 mm
- External warning plate / additional plate (optional) clipped
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Door sealing frame for MC1	MC1-XBR	9004840262988	000	MC190195

TOGGLE LEVER LOCKING DEVICE FOR MC1



SCHRACK INFO

- Off position lockable with up to 3 padlocks (shackle thickness 4 8 mm)
- Cannot be combined with door sealing frame
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Toggle lever locking device for MC1	MC1-XKAV	9004840520606		MC190199

SPACER FOR MC1



SCHRACK INFO

- Enables fast and low-priced adjustment of various frame sizes with/without rotary handle or remote operator at same front depth
- Grid depth 17.5 mm, thread M4
- One set contains 4 x spacers
- Maximum component installation 4 pcs. per fastening screw
- 2 fastening screws included for each circuit breaker MC1
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Spacer for MC1	MC1/2-XAB	9004840263008	000	MC190203

CLIP PLATE FOR MC1



SCHRACK INFO

- Enables snap fit of circuit breakers / load-break switch to DIN rail (35 mm rail)
- For dimensions, see from page 677.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Clip plate for MC1	MC1-XC35	9004840263022	088	MC190213



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CIRCUIT BREAKER 3-POLE UP TO 300 A WITH THERMAL MAGNETIC RELEASE TYPES MC2B-A, MC2C-A, MC2N-A, MC2H-A



SCHRACK-INFO

- For system and line protection
- Adjustable overload release I_r: 0.8 1 x I_n (factory setting 0.8 x I_n)
- Adjustable short-circuit release I: 6 10 x In (factory setting 6 x In); except MC.-A40: 8 - 10 x In
- Screw terminals as standard, lift terminals as option
- Breaking capacity 25 / 36 / 50 / 150 kA at 415 V 50/60 Hz
- Meets IEC/EN 60947-2

ADJUSTMENT RANGE

- Rated uninterrupted current = rated current
- For dimensions, see from page 684.

RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.					
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)									
3-Pole (Basic Breaking Capacity) 25 ka											
160 A/25 kA	125160	9601600	MC2B-A160	9004840261875	000 0-0	MC216131					
200 A/25 kA	160200	12002000	MC2B-A200	9004840261882	000	MC220131					
250 A/25 kA	200250	15002500	MC2B-A250	9004840261899	000 0-0	MC225131					
300 A/25 kA	240300	20002500	MC2B-A300	9004840551150	000	MC230131					
3-POLE (COMFORT BREAKIN	P-POLE (COMFORT BREAKING CAPACITY) 36 kA										
160 A/36 kA	125160	9601600	MC2C-A160	9004840552225	000 0-0	MC216431					
200 A/36 kA	160200	12002000	MC2C-A200	9004840552232	000	MC220431					
250 A/36 kA	200250	15002500	MC2C-A250	9004840552249	050 0=0	MC225431					
300 A/36 kA	240300	20002500	MC2C-A300	9004840552256	688 0-0	MC230431					
3-POLE (NORMAL BREAKIN	G CAPACITY) 50 kA										
125 A/50 kA	100125	7501250	MC2N-A125	9004840261905	000 0=0	MC212231					
160 A/50 kA	125160	9601600	MC2N-A160	9004840261912	688 0-0	MC216231					
200 A/50 kA	160200	12002000	MC2N-A200	9004840261929	088 0-0	MC220231					
250 A/50 kA	200250	15002500	MC2N-A250	9004840261936	088 0-0	MC225231					
300 A/50 kA	240300	20002500	MC2N-A300	9004840551167		MC230231					
3-POLE (HIGH BREAKING CA	APACITY) 150 kA										
20 A/150 kA	1520	fix 350	MC2H-A20	9004840405057		MC202331					
25 A/150 kA	2025	fix 350	MC2H-A25	9004840405064		MC205331					
32 A/150 kA	2532	fix 350	MC2H-A32	9004840405040		MC232331					
40 A/150 kA	3240	320400	MC2H-A40	9004840261943		MC240331					
50 A/150 kA	4050	300500	MC2H-A50	9004840261950		MC250331					
63 A/150 kA	5063	380630	MC2H-A63	9004840261967	088 0-0	MC263331					
80 A/150 kA	6380	480800	MC2H-A80	9004840261974		MC280331					
100 A/150 kA	80100	6001000	MC2H-A100	9004840261981	088 0-0	MC210331					
125 A/150 kA	100125	7501250	MC2H-A125	9004840261998		MC212331					
160 A/150 kA	125160	9601600	MC2H-A160	9004840262001		MC216331					
200 A/150 kA	160200	12002000	MC2H-A200	9004840262018		MC220331					
250 A/150 kA	200250	15002500	MC2H-A250	9004840262025		MC225331					
300 A/150 kA	240300	20002500	MC2H-A300	9004840551174		MC230331					

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CIRCUIT BREAKER 4-POLE UP TO 300 A WITH THERMAL MAGNETIC RELEASE TYPES MC2B-4-A, MC2N-4-A, MC2H-4-A



SCHRACK-INFO

- For system and line protection
- Adjustable overload release I_r: 0.8 1 x I_n (factory setting 0.8 x I_n)
- Adjustable short-circuit release I: 6 10 x In (factory setting 6 x In); except MC.-A40: 8 - 10 x In
- Screw terminals as standard, lift terminals as option
- Breaking capacity 25 / 50 / 150 kA at 415 V 50/60 Hz
- Meets IEC/EN 60947-2
- Rated uninterrupted current = rated current
- Switches also available with reduced N-wire release
- For dimensions, see from page 684.

	ADJUSTMI	ENT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
4-POLE (BASIC BREAKING CA						
160 A/25 kA	125160	9601600	MC2B-4-A160	9004840385830	999 0-0	MC216141
200 A/25 kA	160200	12002000	MC2B-4-A200	9004840385847	999	MC220141
250 A/25 kA	200250	15002500	MC2B-4-A250	9004840385854	000	MC225141
300 A/25 kA	240300	20002500	MC2B-4-A300	9004840551181		MC230141
4-POLE (NORMAL BREAKING	CAPACITY) 50 kA					
125 A/150 kA	100125	7501250	MC2N-4-A125	9004840386103		MC212241*
160 A/50 kA	125160	9601600	MC2N-4-A160	9004840386110	000	MC216241*
200 A/50 kA	160200	12002000	MC2N-4-A200	9004840386127	000	MC220241*
250 A/50 kA	200250	15002500	MC2N-4-A250	9004840386134	989	MC225241*
300 A/50 kA	240300	20002500	MC2N-4-A300	9004840551198		MC230241*
4-POLE (HIGH BREAKING CAP	· · · · · · · · · · · · · · · · · · ·					
20 A/150 kA	1520	fix 350	MC2H-4-A20	9004840405071		MC202341
25 A/150 kA	2025	fix 350	MC2H-4-A25	9004840405088		MC205341
32 A/150 kA	2532	fix 350	MC2H-4-A32	9004840405095		MC232341
40 A/150 kA	3240	320400	MC2H-4-A40	9004840385946		MC240341
50 A/150 kA	4050	300500	MC2H-4-A50	9004840385953		MC250341
63 A/150 kA	5063	380630	MC2H-4-A63	9004840385960		MC263341
80 A/150 kA	6380	480800	MC2H-4-A80	9004840385977		MC280341
100 A/150 kA	80100	6001000	MC2H-4-A100	9004840385892		MC210341
125 A/150 kA	100125	7501250	MC2H-4-A125	9004840385908		MC212341
160 A/150 kA	125160	9601600	MC2H-4-A160	9004840385915		MC216341
200 A/150 kA	160200	12002000	MC2H-4-A200	9004840385922		MC220341
250 A/150 kA	200250	15002500	MC2H-4-A250	9004840385939		MC225341
300 A/150 kA	240300	20002500	MC2H-4-A300	9004840551204		MC230341

^{*} Switches also available with reduced N-conductor release (MC2..241R), IR N-conductor = 0.6 x IR external conductor



■ MOTOR CONTACTOR, 3-POLE UP TO 200 A WITH THERMAL MAGNETIC RELEASE TYPES MC2B-M, MC2N-M



SCHRACK-INFO

- Adjustable overload release Ir: 0.8 1 x In (factory setting 0.8 x In); with phase failure sensitivity, tripping class 10 A (2s < Tp \leq 10s)
- Adjustable short-circuit release Ii: 8 14 x In (factory setting 12 x In);
- Terminal screws as standard, lift terminals as option
- Breaking capacity 25 / 50 kA at 415 V 50/60 Hz
- Specification acc. to IEC/EN 60947-4 and IEC/EN 60947-2
- Meet all requirements of utilisation category AC3 at 400 VAC
- For dimensions, see from page 684.

NOMINAL CURRENT/	ADJUSTME					
BREAKING CAPACITY/	OVERLOAD	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
POWER/CURRENT	RELEASE (A)	RELEASE (A)				
3-POLE (BASIC BREAKING CAPA	ACITY) 25 kA					
125 A/25 kA/55 kW/99 A	100125	10001750	MC2B-M125	9004840385861		MC212136
160 A/25 kA/75 kW/134 A	125160	12802240	MC2B-M160	9004840385878	088 0-0	MC216136
200 A/25 kA/110 kW/196 A	160200	16002800	MC2B-M200	9004840385885	000 0-0	MC220136
3-POLE (NORMAL BREAKING C	APACITY) 50 ka					
125 A/50 kA/55 kW/99 A	100125	10001750	MC2N-M125	9004840386172		MC212236
160 A/50 kA/75 kW/134 A	125160	12802240	MC2N-M160	9004840386189		MC216236
200 A/50 kA/110 kW/196 A	160200	16002800	MC2N-M200	9004840386196		MC220236



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■ CIRCUIT BREAKER UP TO 250 A 3-/4 POLE WITH DELAYED ELECTRONIC RELEASE TYPES MC2N-VE, MC2H-VE, MC2N-4-VE, MC2H-4-VE



SCHRACK-INFO

- System and line protection
- Selective and generator protection
- 3- and 4-pole version
- RMS value measurement and "thermal memory"
- Adjustable overload release I_r: 0.5 1 x I_n (factory setting 0.8 x I_n)
- Adjustable time delay setting to overcome current peaks tr: 2 20 s at 6 x Ir as well as infinity
- Adjustable delayed short-circuit releases Isd: 2 10 x I_r (factory setting 6 x I_r)
- Adjustable time delay tsd: Levels: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (factory setting 0)
- Non-delayed short-circuit release (Ii: fixed 12 x In)
- Screw terminals as standard, lift terminals as option
- Specifications acc. to IEC/EN 60947-2
- Rated uninterrupted current = rated current
- Switches also available with reduced N-wire release
- For dimensions, see from page 684.

	ADJUSTMENT RAN	NGE							
RATED CURRENT/	OVERLOAD	SHORT-CIRCUIT RE	LEASE	TYPE	EAN CODE	AVAILABLE	ORDER NO.		
BREAKING CAPACITY	RELEASE (A)	NON-DELAYED (A)	DELAYED (A)						
3-POLE (NORMAL BREA	KING CAPACITY)	50 kA							
100 A/50 kA	50100	1200	1001000	MC2N-VE100	9004840262094	988 0-0	MC210233		
160 A/50 kA	80160	1920	1601600	MC2N-VE160	9004840262100	988 0-0	MC216233		
250 A/50 kA	125250	3000	2502500	MC2N-VE250	9004840262117	000 0-0	MC225233		
3-POLE (HIGH BREAKING	G CAPACITY) 150	kA							
100 A/150 kA	50100	1200	1001000	MC2H-VE100	9004840262124		MC210333		
160 A/150 kA	80160	1920	1601600	MC2H-VE160	9004840262131		MC216333		
250 A/150 kA	125250	3000	2502500	MC2H-VE250	9004840262148		MC225333		
4-POLE (NORMAL BREA	KING CAPACITY)	50 kA							
100 A/50 kA	50100	1200	1001000	MC2N-4-VE100	9004840386141	088 0-0	MC210243*		
160 A/50 kA	80160	1920	1601600	MC2N-4-VE160	9004840386158	000 0-0	MC216243*		
250 A/50 kA	125250	3000	2502500	MC2N-4-VE250	9004840386165	000 0-0	MC225243*		
4-POLE (HIGH BREAKING	4-POLE (HIGH BREAKING CAPACITY) 150 kA								
100 A/150 kA	50100	1200	1001000	MC2H-4-VE100	9004840385984		MC210343		
160 A/150 kA	80160	1920	1601600	MC2H-4-VE160	9004840385991		MC216343		
250 A/150 kA	125250	3000	2502500	MC2H-4-VE250	9004840386004		MC225343		

^{*} Switch also available with reduced N-conductor release (MC2...243R), lx N-conductor = 0.6 x lx external conductor

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■ MOTOR PROTECTION, 3 POLE UP TO 220 A WITH ELECTRONIC RELEASE TYPES MC2N-ME, MC2H-ME



140 A/100 kA/75 kW/134 A

220 A/100 kA110 kW/196 A

SCHRACK-INFO

- Adjustable overload release Ir: 0.5 1 x In (factory setting 0.8 x In)
- Adjustable short-circuit release Ii: 2 14 x In (factory setting 12 x In)
- Adjustable time delay setting to overcome current peaks tr: 2 20 s at 6 x lr, as well as infinity (without overload release), (factory setting 10 s)
- RMS value measurement and "thermal memory"
- Phase failure sensitivity
- Screw terminals as standard, lift terminals as option
- Specification acc. to IEC/EN 60947-4 and IEC/EN 60947-2
- Meet all requirements of utilisation category AC3 at 400 VAC
- For dimensions, see from page 684.

140...1960

220...3080

NOMINAL CURRENT/	ADJUSTME	NT RANGE					
BREAKING CAPACITY/	OVERLOAD	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.	
POWER/CURRENT	RELEASE (A)	RELEASE (A)					
3-POLE (NORMAL BREAKING C	APACITY) 50 ka						
90 A/50 kA/45 kW/81 A	4590	901260	MC2N-ME90	9004840386226		MC290237	
140 A/50 kA/75 kW/134 A	70140	1401960	MC2N-ME140	9004840386202		MC214237	
220 A/50 kA/110 kW/196 A	110220	2203080	MC2N-ME220	9004840386219	000	MC222237	
3-POLE (HIGH BREAKING CAPACITY) 100 kA							
90 A/100 kA/45 kW/81 A	4590	901260	MC2H-ME90	9004840386035		MC290337	

MC2H-ME140

MC2H-ME220



70...140

110...220

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MC214337

MC222337

LOAD-BREAK SWITCH UP TO 250 A TYPES MC2-PN, MC2-PN-4, MC2-N, MC2-N-4

SCHRACK-INFO



- 3- and 4-pole versions
- Rated uninterrupted current up to 250 A
- MC2-PN two switch positions 0/I, no remote release
- MC2-N, with trip positions "0", "+"; "I", with remote release, can be equipped with undervoltage/shunt release and trip-indicating auxiliary contact
- Screw terminals as standard, lift terminals as option
- Can be combined with remote operator MC-XR
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947-3 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Specifications acc. to IEC/EN 60947-2
- Rated uninterrupted current = rated current
- Rated short-circuit breaking capacity: I_{cm} 5.5 kA
- Rated short-time current protection: I_{cw} 3.5 kA
- For dimensions, see from page 684.

RATED UNINTERRUPTED CURRENT	MAX. BACK-UP FUSE (gL)	TYPE	EAN-CODE	AVAILABLE	ORDER NO.
	FOR LOAD-BREAK SWITCHES (AgL)				
3-POLE, NO REMOTE RELEASE POSS	SIBLE				
160 A	250	MC2-PN-160	9004840386271	900 0-0	MC216034
200 A	250	MC2-PN-200	9004840386288	000	MC220034
250 A	250	MC2-PN-250	9004840386295	000 0-0	MC225034
4-POLE, NO REMOTE RELEASE POSS	SIBLE				
160 A	250	MC2-PN-4-160	9004840386301		MC216044
200 A	250	MC2-PN-4-200	9004840386318		MC220044
250 A	250	MC2-PN-4-250	9004840386325	000	MC225044
3-POLE, REMOTE RELEASE POSSIBLE	Ē				
160 A	250	MC2-N-160	9004840386042	900 0-0-	MC216035
200 A	250	MC2-N-200	9004840386059	999	MC220035
250 A	250	MC2-N-250	9004840386066	000 0-0	MC225035

4-POLE, REMOTE RELEASE POSSIBLE

160 A	250	MC2-N-4-160 9	9004840386073	988 0-0	MC216045
200 A	250	MC2-N-4-200 9	9004840386080		MC220045
250 A	250	MC2-N-4-250 9	9004840386097	000	MC225045



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LOAD-BREAK SWITCHES UP TO 200 A/1000 V TYPES MC2-N-4-...-S1-DC



SCHRACK-INFO

- 4-pole version / 2-pole switching
- Rated uninterrupted current up to 200 A
- With trip positions "0", "+", "I", with remote release, can be equipped with undervoltage or shunt release and trip-indicating auxiliary contact
- Terminal screws as standard, jumper kits* optional
- Can be combined with remote operator MC-XR
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Specifications acc. to IEC/EN 60947-3
- Rated uninterrupted current = rated current
- Rated short-time current protection: I_{cw} 3 kA
- Not available with plug-in technology
- For dimensions, see from page 684.

NOTE

- MC-S1-DC ... cannot be combined with withdrawable unit and/or rear connection
- If Ui > 1000 V DC, cannot be combined with early-make auxiliary contacts MC ... XHIV and box terminal MC.-4-XKC
- Connection technology MC...-S1-DC: 2-pole switching requires series connection of 2 poles each See accessories of jumper kits MC.-4-XKV..

RATED UNINTERRUPTED CURRENT	MAX.	TYPE	EAN CODE	AVAILABLE	ORDER NO.
AT DC 22-B/65 °C*	BACK-UP FUSE (gR)				
4-POLE, REMOTE RELEASE POSSIBLE	E				
160 A	200	MC2-N-4-160-S1-DC	9004840626834		MC216045DC
200 A	200	MC2-N-4-200-S1-DC	9004840626841		MC220045DC

JUMPER KIT FOR TYPE MC2....-S1-DC / 1000V DC



SCHRACK-INFO

- Type contains parts for upper switch side for 4-pole switches
- MC2-N...-S1-DC that are used with 2 poles for DC
- Each jumper switches 2 current paths in series
- Supply and outlet at bottom or top selectable
- For dimensions, see from page 684.

101	C25000.	_

RATED UNINTERRUPTED CURRENT A°C	DEGREE OF PROTECTION TYPE		EAN-CODE	AVAILABLE	ORDER NO.
200 A/65 °C, 160 A/70 °C	IP2x	MC2-4-XKV2P	9004840626919		MC290602

RESIDUAL-CURRENT RELEASE UP TO 250 A TYPES MC2-4-XFI, MC2-4-XFIA



SCHRACK-INFO

- Direct mounting on 4-pole circuit breaker MC-2 and load-break switch MC2-N
- Type MC2-4-XFI pulse current sensitive accord. to core-balance principle
- Specifications acc. to IEC/EN 60947-2
- Bottom mounting up to 250 A
- Not suitable for MC2-N-...DC
- For dimensions, see from page 684.

TECHNICAL DATA

- Independent of mains and auxiliary voltage, $U_e = 280 \text{ V} 690 \text{ V}$ 50/60 Hz
- Auxiliary contact: 1 NO, 1 NC reset via Reset function
- Type XFI(A)30: Rated residual current I_{An} = 0.03 A, suitable for personal protection according to IEC/EN 60947-2 Annex B and VDE 664 Parts 2 and 3
- Type XFIA: Rated residual current $I_{\Delta n} = 0.1-0.3-1 \text{ A}$ / XFI = 0.1-0.3-1-3 A, time delay tv = 60-150-300-450 ms, AC/DC current-sensitive accord. to core-balance principle (0-100 kHz)
- Internal supply voltage U_e = 50–400 V
- Observe response threshold depending on frequency!

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
4-POLE BOTTOM MOUNTING PULSE-CURRENT SENSITIVE				
FI personal protection 30 mA In for MC2-4	MC2-4-XFI30	9004840523041		MC296719V2
FI 0.1-3 A In for MC2-4	MC2-4-XFI	9004840523058	000	MC296720V2
4-POLE BOTTOM MOUNTING AC/DC SENSITIVE				
FI personal protection 30 mA In for MC2-4	MC2-4-XFIA30	9004840523072		MC292345V2
FI 0.1-1 A In for MC2-4	MC2-4-XFIA	9004840523089		MC292346V2



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SOCKET UND PLUG-IN MODULE FOR MC2



SCHRACK-INFO

- 3- and 4-pole versions
- For circuit breaker MC2 and load-break switch MC2-N
- · Plug-in module only available in combination with switch
- Socket can be ordered separately and pre-assembled
- Order control circuit plug unit separately
- Not suitable for MC2-N-...DC
- Cannot be used in combination with MC2-4-XFI (residual current release relay)
- For dimensions, see from page 684.

■ TECHNICAL DATA

• In max. at 40 °C: 230 A MC2

250 A MC2-E (electronic release)

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
SOCKET				
Socket, 3-pole	MC2-XSVS	9004840263640	000 0-	MC296699
Socket, 4-pole	MC2-4-XSVS	9004840387421		MC296700

PLUG-IN MODULE

Plug-in module, 3-pole (supplied with switch, add an S to end of switch part number)

Plug-in module, 4-pole (supplied with switch, add an S to end of switch part number)

ACCESSORIES FOR PLUG-IN STYLE ASSEMBLY MC2/MC2-N

Control circuit plug unit for auxiliary contact, undervoltage-/shunt release	MC1/2-XSVHI	9004840263664	MC296705
Control circuit plug unit for remote operator	MC2-XSVR	9004840263671	MC296706



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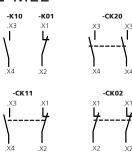
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STANDARD AUXILIARY CONTACT / TRIP-INDICATING AUXILIARY **CONTACT TYPE M22**





SCHRACK INFO

- Switches with the main contacts, used for indicating and interlocking tasks
- General trip indication "+" with trip due to voltage release, overload release or short-circuit-release

TECHNICAL DATA

Breaking capacity: AC15: 4 A / 230 VAC DC13: 3 A / 24 VDC M22-K: 0.3 A / 220 VDC

M22-CK: 0.2 A / 220 VDC

TIPS & TRICKS

The trip-indicating auxiliary contact is the same contact as the standard auxiliary contact. It derives its function from its place of installation (left is the alarm contact).

Maximum component installation MC2 with auxiliary contact:

- 2 x standard auxiliary contact (HIN) M22-K.. or M22CK..
- + 1 x trip-indicating auxiliary contact (HIA) M22-K.. or M22-CK..

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
1 NO contact with screw terminals	M22-K10	9004840176254	088	MM216376
1 NC contact with screw terminals	M22-K01	9004840176261	000	MM216378
2 NO contacts with spring terminals	M22-CK20	9004840547047	000	MM107898
2 NC contacts with spring terminals	M22-CK02	9004840547054	000	MM107899
1 NO contact + 1 NC contact with spring terminals	M22-CK11	9004840625783	088	MM107940

■ EARLY-MAKE AUXILIARY CONTACT TYPE MC2-XHIV





SCHRACK INFO

• For interlock- and load-shedding circuits as well as for early make of undervoltage release in main switch/Emergency-stop applications.

TECHNICAL DATA

- Early-make during switch on and off (manual switch): approx. 20 ms
- Not in connection with undervoltage release MC2-XU... or shunt release MC2-XA...
- Breaking capacity: AC15: 4 A / 230 VAC DC13: 3 A / 24 VDC

TIPS & TRICKS

Maximum component installation MC2: 1 x early-make auxiliary contact

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Early-make auxiliary switch, 2 NO	MC2/3-XHIV	9004840262285	000	MC299430

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UNDERVOLTAGE RELEASE TYPES MC2-XU





SCHRACK INFO

- Non-delayed switching of circuit breaker MC/ load-break switch MC-N when the control voltage drops below 35% - 70% Us.
- For use in emergency stop devices in connection with EMERGENCY STOP button
- Installed in breaker
- Without auxiliary contact
- Other voltage variants available upon request.

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC2-XHIV.

VOLTAGE	VERSION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC	Screw terminals	MC2/3-XU24AC	9004840262360	088	MC299491
24 VDC	Screw terminals	MC2/3-XU24DC	9004840262407	000	MC299509
208 - 240 VAC	Screw terminals	MC2/3-XU208-240 AC	9004840262384	000	MC299499
380 - 440 VAC	Screw terminals	MC2/3-XU380-440 AC	9004840262391		MC299501

UNDERVOLTAGE RELEASE WITH TWO EARLY-MAKE AUXILIARY CONTACTS TYPES MC2-XUHIV





SCHRACK INFO

- With 2 early-make auxiliary contacts
- For early-make of the undervoltage release in main switch applications and for interlock- and load-shedding circuits
- Installed in breaker
- Other voltage variants available upon request.

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Early-make of auxiliary contacts during switch on and off (20 ms). Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC2-XHIV.

VOLTAGE	VERSION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 VAC	Screw terminals	MC2/3-XUHIV208-240 AC	9004840262452	000	MC299591
380 - 440 VAC	Screw terminals	MC2/3-XUHIV380-440 AC	9004840262469		MC299594



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UNDERVOLTAGE RELEASE, OFF-DELAY TYPES MC-UVU, MC-XUV







SCHRACK INFO

• Voltage drops of less than 16 s do not cause MC circuit breakers or MC-N loadbreak switches to trip...

Voltage range: 220-240 VAC 50/60 HZ

> 380-440 VAC 50/60 HZ 480-550 VAC 50/60 HZ

24 VDC / AC

• For dimensions, see from page 684.

TECHNICAL DATA

- Time-delay adjustable between 70 ms 4 s
- With additional external capacitor: $30,000 \ \mu F \ge 35 \ V \ up \ to \ 8 \ s$ 90,000 $\mu F \ge 35 \text{ V up to } 16 \text{ s}$
- Special release MC2/3-XUV is required.
- Cannot be installed simultaneously with early-make auxiliary contact MC2-XHIV... or shunt release MC2-XA....
- Time-delay device for separate assembly (Mounting: DIN rail or screws).
- Use control transformer for other operating voltages.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Time delay device	MC-UVU	9004840520392	888 0-8	MC190154
Special undervoltage release for time-delay device UVU	MC2/3-XUV	9004840520613	088	MC299527

SHUNT RELEASE TYPES MC2-XA





SCHRACK INFO

- Without auxiliary contact
- Switches are tripped by a voltage pulse or by applying uninterrupted voltage
- Other voltage variants available upon request.

■ TECHNICAL DATA

When the shunt release is de-energised, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Shunt release cannot be installed simultaneously with undervoltage release or early-make auxiliary contact MC1-XHIV.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC/DC	MC2/3-XA24AC/DC	9004840262506	000	MC299754
110 - 130 VAC/DC	MC2/3-XA110-130 AC/DC	9004840262513		MC299760
208 - 250 VAC/DC	MC2/3-XA208-250 AC/DC	9004840262520	888 0=0	MC299763



REMOTE OPERATOR FOR MC2



SCHRACK INFO

- Remote operator can be combined with circuit breaker MC and load-break switch MC-N, but not with load-break switch MC-PN.
- Do not switch off switch simultaneously via remote control and release via undervoltage/ shunt release.
- 1 auxiliary contact MM-K(CK).. must be installed in circuit breaker (included with remote operator)
- For dimensions, see from page 684.

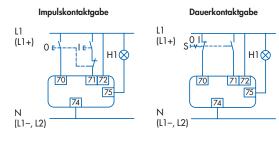
■ TECHNICAL DATA

- On/Off switching and reset by means of permanent or pulse contact
- Types XR: can be synchronised and locked
- Types XRD: cannot be synchronised, cannot be locked
- Switching time, ON: ≤ 60 ms
- Local switching by hand possible

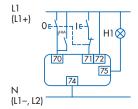
- Pause between Off and On: 3 s. On command is ignored
- Function of terminal 75: Ready for ON signal, when the cover is closed and not locked.

AC-15: 2 A / 400 V DC-13: 0.2 A / 220 V

CIRCUIT DIAGRAMS



Impulskontaktgabe mit automatischer Rückführung in die O-Stellung nach Schalterauslösung über Ausgelöst-Hilfskontakt



SWITCHING CYCLE - XR



VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 V AC can be synchronised	MC2-XR208-240 AC	9004840262605	000	MC299832
208 - 240 V AC cannot be synchronised	MC2-XRD208-240 AC	9004840552218		MC299833
Additional cover for 4-pole switches	MC2-XAVPR	9004840386899	988	MC296677

MECHANICAL INTERLOCK FOR (DOOR COUPLING) ROTARY HANDLES FOR MC2



- Rotary handle on switch or door coupling rotary handle additionally required.
- Cannot be combined with door sealing frame
- At least 2 interlocking modules are required to construct a mechanical interlock.
- Order Bowden cable separately
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock	MC2-XMV	9004840403237	088 0-	MC291582
Bowden cable 225 mm	MC XBZ225	9004840403206	000 0-0	MC191585
Bowden cable 600 mm	MC XBZ600	9004840403213	000	MC191586
Bowden cable 1000 mm	MC XBZ600	9004840403220		MC191587

MECHANICAL INTERLOCK FOR REMOTE OPERATOR MC2-XR





SCHRACK INFO

- For 2 switches of the same or next frame size side by side
- Side-by-side mounting
- Mounted on top of each other, long version
- Contains parts for 2 switches
- Remote operators also required
- Not suitable for remote operators XRD
- For dimensions and maximum switch clearances, see from page 684.

NOTE

Cannot be combined with rotary handles, door coupling rotary handles and early-make auxiliary contacts.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock for MC2	MC2-XMVR	9004840520286	000	MC294543
Mechanical interlock for MC2 long version	MC2-XMVRL	9004840520996		MC294548
Mechanical interlock for MC2/3	MC2/3-XMVR	9004840520736		MC294544
Mechanical interlock for MC2/3 long version	MC2/3-XMVRL	9004840520804		MC294549

ROTARY HANDLES DIRECTLY ON SWITCH FOR MC2



SCHRACK INFO

- Complete with rotary drive
- Can also be combined with door sealing frame
- For dimensions, see from page 684.

■ TECHNICAL DATA

Available in the following versions:

Type MC.-XDV

Lockable in position "0" (up to three padlocks), black/grey

Type MC.-XDVR

Lockable in position "0" (up to three padlocks), EMERGENCY STOP red/yellow

Type MC.-XDTV

lockable in position "0" on handle, modification also available in position "1", black/grey

Type MC.-XDTVR

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Lockable in position "0", ENERGENCY STOP red/yellow

Version with door interlock type XDTV, XDTVR:

- Door sealing frame supplied with door interlock
- Rotary handle can be rotated 90° for switches mounted horizontally
- In the ON position, can be defeated from the outside using a 1 mm pin
- Cannot be defeated in the locked OFF and ON positions
- Door can be opened in OFF
- Can only be switched on when door closed

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rotary handle for MC2 lockable, black/grey	MC2-XDV	9004840262735		MC290127
Rotary handle for MC2 lockable, Emergency Stop, red/yellow	MC2-XDVR	9004840262780	000	MC290137
Rotary handle for MC2 with door interlock, lockable, black/grey	MC2-XDTV	9004840262766		MC290133
Rotary handle for MC2 with door interlock, lockable, Emergency Stop, red/yellow	MC2-XDTVR	9004840262810		MC290144







SCHRACK INFO

- Complete including rotary drive and coupling parts
- Degree of protection IP66
- Rotary handle can be rotated 90° for switches mounted horizontally
- Cannot be defeated in the locked OFF and ON positions
- Can be modified when in the unlocked ON position, can be defeated from the outside with a screwdriver
- Door can be opened in OFF
- External warning plate/additional plate can be clipped on
- For dimensions, see from page 684.

NOTE

• Order extension shaft separately!

■ TECHNICAL DATA

Available in the following versions:

Type MC.-XTVD

Lockable in position "0" on handle, with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDV

Lockable in position "0" on handle and switch, with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDVR

Lockable in position "0" on handle and switch with up to three padlocks, with door interlock, EMERGENCY STOP red/yellow

Main switch kit consisting of:

- Door coupling rotary handle + rotary drive XTVD/XTVDR
- Extension shaft XV4
- External warning plate
- Lightning arrow

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
DOOR COUPLING ROTARY HANDLES				
For MC2 with door interlock, lockable, black/grey	MC2-XTVD	9004840262889	988 0-0	MC290168
For MC2 with door interlock, lockable, "0", "1", black/grey	MC2-XTVDV	9004840262919	000	MC290174
For MC2 with door interlock, lockable, Emergency Stop, red/yellow	MC2-XTVDVR	9004840262940	000	MC290180
MAIN SWITCH KITS				
For MC2 lockable, black/grey	MC2-XHB	9004840263572		MC296627
For MC2 lockable, Emergency Stop, red/yellow	MC2-XHBR	9004840263602		MC296633

EXTENSION SHAFT FOR MC2



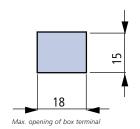
SCHRACK INFO

- For maximum cabinet depths of 400 or 600 mm
- · Can be cut to required length
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE ORDER NO.
Extension shaft for MC2 max. 400 mm	MC1/2-XV4	9004840263053	9004840263053 MC191232
Extension shaft for MC2 max. 600 mm	MC1/2-XV6	9004840262964	9004840262964 MC190191

BOX TERMINALS FOR MC2



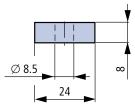


SCHRACK INFO

- Conversion kit for switches with screw connection
- Contains parts for one switch side
- Installed within the switch housing
- Use cover plate MC2-XKSA
- Terminal capacities: Cu wires 1 x (4 to 185 mm²) Cu wires 2 x (4 to 70 mm²)
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Box terminal up to 160 A (3 pcs. included) for MC2	MC2-160-XKC	9004840263077	988	MC292240
Box terminal up to 250 A (3 pcs. included) for MC2	MC2-250-XKC	9004840263084	000	MC292244
Box terminal up to 160 A (4 pcs. included) for MC2-4	MC2-4-160-XKC	9004840387063	080	MC296755
Box terminal up to 250 A (4 pcs. included) for MC2-4	MC2-4-250-XKC	9004840387070		MC296756

SCREW CONNECTION FOR MC2



Max. Dimension of the connecting bars for rail connection

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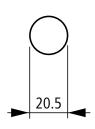
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- Standard connection for all MC2, MC2-PN and MC2-N switches
- Conversion kit if switch was equipped with box terminal
- Installed within the switch housing
- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Terminal capacities: Cu cable lugs 1 x (4 to 185 mm²), 2 x (4 to 70 mm²) Al cable lugs 1 x (10 to 50 mm²), 2 x (10 to 50 mm²)
- Use special cable lugs MC2 XKS...

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Screw terminal , 3-pole for MC2	MC2-XKS	9004840387087		MC290030
Screw terminal , 4-pole for MC2-4	MC2-4-XKS	9004840387094		MC296750

TUNNEL TERMINAL FOR MC2





SCHRACK INFO

- Contains parts for one switch side, top or bottom
- Standard with control circuit terminal for 1 x (0.75 to 2.5 mm²) 2 x (0.75 to 1.5 mm²)
- Terminal capacities: Cu wires, Al wires 1 x (16 to 185 mm²*)
- Installation outside switch housing
- For dimensions, see from page 684.

■ TECHNICAL DATA

- For copper and aluminium cables, depending cable manufacturer, up to 240 mm²*
- Including cover
- Stranded round conductor / stranded sector-shaped conductor

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Tunnel terminal 185 mm², 3 pcs. included, for MC2	MC2-X kA	9004840373462	000 0-	MC291457
Tunnel terminal 185 mm², 4-pole, 4 pcs. included, for MC2-4	MC2-4-X kA	9004840387209	000 0-0	MC291458

REAR CONNECTION FOR MC2



SCHRACK INFO

- Contains parts for one switch side, top or bottom
- Terminal capacities:

Cu cable lugs 1 x (4 to 185 mm²), 2 x (4 to 70 mm²) 1 x (10 to 50 mm²), 2 x (10 to 50 mm²) Al cable lugs

• For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rear connection, 3-pole MC2	MC2-XKR	9004840263770	088	MC296765
Rear connection, 4-pole MC2-4	MC2-4-XKR	9004840387100		MC296768

CONTROL CIRCUIT TERMINAL FOR MC2



- Contains parts for two terminals located at top or bottom for 3/4-pole switches
- Included with tunnel terminal
- Degree of protection IP1X
- Terminal capacities: Screw terminal 1 x (0.75 to 2.5 mm²), 2 x (0.75 to 1.5 mm²)
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Control circuit connection for box terminal MC2	MC2-XSTK	9004840263893	000 0-0	MC196739
Control circuit connection for screw terminal MC2	MC2-XSTS	9004840262834	988	MC290156

TERMINAL COVER FOR MC2



SCHRACK INFO

- Protection against accidental contact when cable lugs/rails are connected or tunnel terminals are used
- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Degree of protection IP4X front, side and rear, IP1X on the connection side when using insulated conductor material
- Cover plate already comes with tunnel terminals
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Terminal cover, 3-pole for MC2	MC-XKSA	9004840262643	000 0-0	MC290038
Terminal cover, 4-pole for MC2-4	MC2-4-XKSA	9004840387117	000 0-0	MC296770

CABLE LUG FOR MC2



SCHRACK INFO

- Special cable lug in slimline design
- The cable lugs must be insulated when using without a cover plate.
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Cable lug 95 mm²	MC2-XKS95	9004840263855	088 0-0	MC299775
Cable lug 120 mm²	MC2-XKS120	9004840263862	000	MC299776
Cable lug 150 mm²	MC2-XKS150	9004840263879	088 0-0	MC299777
Cable lug 185 mm ²	MC2-XKS185	9004840263787	000 0-0	MC290032

CONNECTION COVER, KNOCKOUT FOR BOX TERMINAL

- Contains parts for one switch side, top or bottom
- For 3- or 4-pole switches
- Connection cover can be knocked out
- To increase touch protection for box terminal (simplified finger protection)

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Connection cover, knockout, 3-pole for MC2	MC2-XKSFA	9004840520675		MC294640
Connection cover, knockout, 4-pole for MC2	MC2-4-XKSFA	9004840520668	000	MC294641

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IP2X FINGER PROTECTION DIRECT-MOUNTED ON MC2 SWITCHES





SCHRACK INFO

- Increases the protection against accidental contact to IP2X
- · Protection when reaching into the cable connection area when cables are connected in box terminal
- For 2 conductors, minimum cross-section is 25 mm²
- MC2-XIPK and MC2-4-XIPK for direct mounting on switches
- MC2-XIPA and MC2-4-XIPA only in connection with cover plate MC2(-4)-XKSA
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
FOR SWITCHES WITH BOX TERMINAL				
Finger protection, 3-pole for MC2	MC2-XIPK	9004840387124	000	MC296773
Finger protection, 4-pole for MC2-4	MC2-4-XIPK	9004840387155		MC296774
FOR SWITCHES WITH TERMINAL COVER				
Finger protection, 3-pole for MC2	MC2-XIPA	9004840387162	000 0-0	MC296777
Finger protection, 4-pole for MC2-4	MC2-4-XIPA	9004840387179		MC296778

INSULATED ENCLOSURE XCI



SCHRACK INFO

- Only for switches with box terminals for direct cable connection
- With door coupling rotary handle
- Complete including all necessary functional parts
- Degree of protection IP65
- · Comes with gland plates
- For dimensions, see from page 684.

TECHNICAL DATA

Enclosure suitable for installation of circuit-breakers and load-break switches for separate mounting with top and bottom cable entry. Including fixing straps for wall mounting.

Short circuit protection at 415 V 50/60 Hz up to 10 kA.

Not in combination with remote operator, plug-in or withdrawable unit.

Additional insulated terminal for 4th or 5th pole must be ordered separately.

Available in the following versions:

Standard, black/grey

Lockable in position "0" on handle with up to 3 padlocks. Additionally with cover interlock.

For EMERGENCY STOP, red/yellow

Lockable on handle and switch with up to 3 padlocks in position "0" on handle. Additionally with cover interlock and lockable at switch in position "0".

DESCRIPTION	MAX. RATED UNINTERRUPTED CURRENT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
STANDARD, BLACK/GREY					
For MC2 and MC2-4	≤200 A	MC2-XCI43-TVD	9004840520682		MC291524
For MC2 and MC2-4	≤ 250 A	MC2-XCI45-TVD	9004840520729		MC290418

FOR EMERGENCY STOP, RED/YELLOW

For MC2 and MC2-4 <= 250 A MC2-XCI45-TVDR 9004840520712 M



COMPONENT ADAPTERS FOR CIRCUIT-BREAKERS AND LOAD-BREAK SWITCHES FOR 60 mm BUSBAR SYSTEM MC2





SCHRACK INFO

- For mounting on flat copper rails 12 x 5 mm to 30 x 10 mm
- Double T and triple T profile
- Mounted via terminal -, screw fixing
- Rated operational voltage Ue: 690 V
- Cover also required (MC2-XKR4)
- For dimensions, see from page 684.

TECHNICAL DATA

MC 2 up to 250 A:

- Top or bottom connection to system as required
- Cover plate MC2-XKR4 required

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
60 mm busbar adapter 250 A, 3-pole	32140	9004840413700	000 0-0	MC291400
Cover for component adapter, 3-pole	MC2-XKR4	9004840523065	000 0-0	MC291666V2

DOOR SEALING FRAME FOR MC2



SCHRACK INFO

- For toggle levers, rotary handles with rotary drive and remote operator
- Degree of protection IP40
- For rectangular cut-out on doors and enclosures with material thicknesses of 1.5 5 mm
- External warning plate / additional plate (optional) clipped
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Door sealing frame for MC2	MC2-XBR	9004840262995	000 0-0-	MC290197



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TOGGLE LEVER LOCKING DEVICE FOR MC2



SCHRACK INFO

- Off position lockable with up to 3 padlocks (shackle thickness 4 8 mm)
- Cannot be combined with door sealing frame
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Toggle lever locking device for MC2	MC2/3-XKAV	9004840521009		MC290201

SPACERS FOR MC2



SCHRACK INFO

- · Enables fast and low-priced adjustment of various frame sizes with/without rotary handle or remote operator at same front depth
- Grid depth 17.5 mm, thread M4
- One set contains 4 x spacers
- Maximum component installation 4 pcs. per fastening screw
- 2 fastening screws included for each circuit breaker MC2
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Spacers for MC2	MC1/2-XAB	9004840263008	969	MC190203

CLIP PLATE FOR MC2



SCHRACK INFO

- Enables snap fit of circuit breakers / load-break switch to DIN rail (75 mm rail)
- Not suitable for switches with remote operator
- For dimensions, see from page 684.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Clip plate for MC2	MC2-XC75	9004840263039		MC290215



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■ CIRCUIT BREAKER 3/4-POLE UP TO 500 A WITH THERMAL MAGNETIC RELEASE TYPES MC3C-A, MC3N-A, MC3H-A, MC3N-4-A, MC3H-4-A



SCHRACK-INFO

- System and line protection
- 3- and 4-pole versions
- Adjustable overload release Ir: 0.8 1 x In (factory setting 0.8 x In)
- Adjustable short-circuit release I₁: 8 10 x I₂ (factory setting 8 x I₂)
- Breaking capacity 36 / 50 / 150 kA at 415 V 50/60 Hz
- Screw terminals as standard, lift terminals as option
- Rated uninterrupted current = rated current
- For dimensions, see from page 692.

	ADJUSTME	NT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
3-POLE (COMFORT BREAKING	CAPACITY) 36 kA					
320 A/50 kA	250320	19203200	MC3C-A320	9004840552263		MC332431
400 A/50 kA	320400	24004000	MC3C-A400	9004840552270	999	MC340431
500 A/50 kA	400500	30005000	MC3C-A500	9004840552287		MC350431
3-POLE (NORMAL BREAKING	CAPACITY) 50 ka					
320 A/50 kA	250320	19203200	MC3N-A320	9004840551211		MC332231
400 A/50 kA	320400	24004000	MC3N-A400	9004840551228	999 0-0	MC340231
500 A/50 kA	400500	30005000	MC3N-A500	9004840551235	900 0-0-	MC350231
3-POLE (HIGH BREAKING CAPA	ACITY) 150 kA					
320 A/150 kA	250320	19203200	MC3H-A320	9004840551242		MC332331
400 A/150 kA	320400	24004000	MC3H-A400	9004840551259		MC340331
500 A/150 kA	400500	30005000	MC3H-A500	9004840551266		MC350331
4-POLE (NORMAL BREAKING	CAPACITY) 50 ka					
320 A/50 kA	250320	19203200	MC3N-4-A320	9004840551273		MC332241
400 A/50 kA	320400	24004000	MC3N-4-A400	9004840551280		MC340241
500 A/50 kA	400500	30005000	MC3N-4-A500	9004840551297		MC350241
4-POLE (HIGH BREAKING CAPA	ACITY) 150 kA					
320 A/150 kA	250320	19203200	MC3H-4-A320	9004840551310		MC332341
400 A/150 kA	320400	24004000	MC3H-4-A400	9004840551327		MC340341
500 A/150 kA	400500	30005000	MC3H-4-A500	9004840551303		MC350341



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CIRCUIT BREAKER 3/4-POLE UP TO 630 A WITH ELECTRONIC RELEASE TYPES MC3N-AE, MC3H-AE, MC3N-4-AE, MC3H-4-AE



SCHRACK-INFO

- System and line protection
- Selective and generator protection
- 3- and 4-pole version
- RMS value measurement and "thermal memory"
- Adjustable overload release I_r: 0.5 1 x I_n (factory setting 0.8 x I_n)
- Adjustable short-circuit release I: 2 12 x In (factory setting 6 x In) for MC3...-AE250/400: 2 – 11 x l_n (factory setting 6 x l_n) for MC3....-AE630: 2 - 8 x In (factory setting 6 x In)
- Breaking capacity 50 / 150 kA at 415 V 50/60 Hz
- Screw terminals as standard, lift terminals as option
- Rated uninterrupted current = rated current
- Switches also available with reduced N-wire release
- For dimensions, see from page 692.

	ADJUSTME	ENT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
3-POLE (NORMAL BREAKING	CAPACITY) 50 kA					
250 A/50 kA	125250	5002750	MC3N-AE250	9004840262032	000 0-0	MC325232
400 A/50 kA	200400	8004400	MC3N-AE400	9004840262049	666 0-6	MC340232
630 A/50 kA	315630	12605040	MC3N-AE630	9004840262056	000 0=0	MC363232
3-POLE (HIGH BREAKING CAP	ACITY) 150 kA					
250 A/150 kA	125250	5002750	MC3H-AE250	9004840262063		MC325332
400 A/150 kA	200400	8004400	MC3H-AE400	9004840262070		MC340332
630 A/150 kA	315630	12605040	MC3H-AE630	9004840262087		MC363332
4-POLE (NORMAL BREAKING	CAPACITY) 50 kA					
400 A/50 kA	200400	8004400	MC3N-4-AE400	9004840386424	000 0-0	MC340242*
630 A/50 kA	315630	12605040	MC3N-4-AE630	9004840386431	000 O-0	MC363242*
4-POLE (HIGH BREAKING CAP	ACITY) 150 kA					
400 A/150 kA	200400	8004400	MC3H-4-AE400	9004840386332		MC340342
630 A/150 kA	315630	12605040	MC3H-4-AE630	9004840386349		MC363342

^{*} Switch also available with reduced N-conductor release (MC3..242R), l_R N-conductor = 0.6 x l_R external conductor



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CIRCUIT BREAKER, 3/4 POLE UP TO 630 A WITH DELAYED ELECTRONIC RELEASE TYPES MC3N-VE, MC3H-VE, MC3N-4-VE, MC3H-4-VE



- System and line protection
- Selective and generator protection
- 3- and 4-pole version
- RMS value measurement and "thermal memory"
- Adjustable overload release I_r: 0.5 1 x I_n (factory setting 0.8 x I_n)
- Adjustable time delay setting to overcome current peaks t.: 2 20 s at 6 x I_r as well as infinity
- Adjustable delayed short-circuit releases Isa: 2 10 x Ir (factory setting 6 x Ir) MC3...-4-VE630: $2 - 7 \times I_r$ (factory setting $6 \times I_r$)
- Adjustable time delay tsd: Levels: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (factory setting 0)
- Adjustable non-delayed short-circuit release Ii: 2 12 x In (factory setting 12 x In) MC3...-VE250/400: 2 – 11x I_n (factory setting 6 x I_n) MC3...-VE630: 2 - 8x In (factory setting 6 x In)
- Switchable i²t constant function (factory setting: OFF)
- Screw terminals as standard, lift terminals as option
- Rated uninterrupted current = rated current
- For dimensions, see from page 692.

		ADJUSTMENT RAN	GE				
RATED CURRENT/	OVERLOAD	SHORT-CIRCUIT REL	.EASE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	NON-DELAYED (A)	DELAYED (A)				
3-POLE (NORMAL BREAK	ING CAPACITY)	50 kA					
250 A/50 kA	125250	5002750	2502500	MC3N-VE250	9004840262155		MC325233
400 A/50 kA	200400	8004400	4004000	MC3N-VE400	9004840262162	988	MC340233
630 A/50 kA	315630	12605040	4724410	MC3N-VE630	9004840262179	988	MC363233
3-POLE (HIGH BREAKING	CAPACITY) 150	kA					
250 A/150 kA	125250	5002750	2502500	MC3H-VE250	9004840262186		MC325333
400 A/150 kA	200400	8004400	4004000	MC3H-VE400	9004840262193		MC340333
630 A/150 kA	315630	12605040	4724410	MC3H-VE630	9004840262209		MC363333
4-POLE (NORMAL BREAK	ING CAPACITY)	50 kA					
400 A/50 kA	200400	8004400	4004000	MC3N-4-VE400	9004840386448		MC340243
630 A/50 kA	315630	12605040	4724410	MC3N-4-VE630	9004840386455	988	MC363243
4-POLE (HIGH BREAKING	4-POLE (HIGH BREAKING CAPACITY) 150 kA						
400 A/150 kA	200400	8004400	4004000	MC3H-4-VE400	9004840386356		MC340343
630 A/150 kA	315630	12605040	4724410	MC3H-4-VE630	9004840386363		MC363343

■ MOTOR PROTECTION, 3-POLE UP TO 450 A WITH ELECTRONIC RELEASE TYPES MC3N-ME, MC3H-ME



SCHRACK-INFO

- Adjustable overload release Ir: 0.5 1 x In (factory setting 0.8 x In)
- Adjustable short-circuit release Ii: 2 14 x In (factory setting 12 x In)
- Adjustable time delay setting to overcome current peaks t₁: 2 − 20 s at 6 x l₁, as well as infinity (without overload release), (factory setting 10 s)
- RMS value measurement and "thermal memory"
- Phase failure sensitivity
- Screw terminals as standard, lift terminals as option
- Specification acc. to IEC/EN 60947-4 and IEC/EN 60947-2
- Circuit breakers satisfy all requirements of utilisation category AC3 at 400 V AC
- For dimensions, see from page 692.

NOMINAL CURRENT/	ADJUSTM	ENT RANGE				
BREAKING CAPACITY/	OVERLOAD	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
POWER/CURRENT	RELEASE (A)	RELEASE (A)				
3-POLE (NORMAL BREAKING C	APACITY) 50 ka					
220 A/50 kA/110 kW/196 A	110220	2203080	MC3N-ME220	9004840386479		MC322237
350 A/50 kA/200 kW/349	175350	3504900	MC3N-ME350	9004840386486	000 0-0	MC335237
450 A/50 kA/250 kW/437 A	225450	4506300	MC3N-ME450	9004840615241		MC345237

3-POLE (HIGH BREAKING CAPACITY) 150 kA

220 A/150 kA/110 kW/196 A	110220	2203080	MC3H-ME220	9004840386370	MC322337
350 A/150 kA/200 kW/349	175350	3504900	MC3H-ME350	9004840386387	MC335337
450 A/150 kA/250 kW/437 A	225450	4506300	MC3H-ME450	9004840628852	MC345337



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LOAD-BREAK SWITCH UP TO 630 A TYPES MC3-PN, MC3-PN-4, MC3-N, MC3-N-4



SCHRACK-INFO

- 3- and 4-pole versions
- Rated uninterrupted current up to 630 A
- MC3-PN two switch positions 0/I, no remote release
- MC3-N, with trip positions "0", "+"; "I", with remote release, can be equipped with undervoltage/shunt release and trip-indicating auxiliary contact
- For load-break switches type MC...-N, undervoltage/shunt releases and trip-indicating auxiliary contacts can also be used.
- Can be combined with remote operator MC-XR...
- Screw terminals as standard, lift terminals as option
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947-3 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Rated uninterrupted current = rated current
- Rated short-circuit breaking capacity: I_{cm} 25 kA
- Rated short-time current protection: I_{cw} 12 kA
- For dimensions, see from page 692.

RATED UNINTERRUPTED CURRENT	MAX. BACK-UP FUSE (gL)	TYPE	EAN-CODE	AVAILABLE	ORDER NO.
	FOR LOAD-BREAK SWITCHES (AgL)				
3-POLE, NO REMOTE RELEASE POSS	SIBLE				
400 A	630	MC3-PN-400	9004840386493	000 0-0	MC340034
630 A	630	MC3-PN-630	9004840386523	988 0-0	MC363034
4-POLE, NO REMOTE RELEASE POSS	SIBLE				
400 A	630	MC3-PN-4-400	9004840386509		MC340044
630 A	630	MC3-PN-4-630	9004840386516		MC363044
3-POLE, REMOTE RELEASE POSSIBLE	.				
400 A	630	MC3-N-400	9004840386394	000 0-0-	MC340035
630 A	630	MC3-N-630	9004840386462	000	MC363035
4-POLE, REMOTE RELEASE POSSIBLE	E				
400 A	630	MC3-N-4-400	9004840386400		MC340045
630 A	630	MC3-N-4-630	9004840386417	999 0-0	MC363045



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LOAD-BREAK SWITCHES UP TO 500 A/1000 V TYPES MC3-N-4-...-S1-DC





SCHRACK-INFO

- 4-pole version / 2-pole switching
- Rated uninterrupted current up to 500 A
- With trip positions "0", "+", "I", with remote release, can be equipped with undervoltage or shunt release and trip-indicating auxiliary contact
- Terminal screws as standard, jumper kits* optional
- Can be combined with remote operator MC-XR
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Specifications acc. to IEC/EN 60947-3
- Rated uninterrupted current = rated current
- Rated short-time current protection: I_{cw} 5 kA
- Not available with withdrawable unit
- For dimensions, see from page 692.

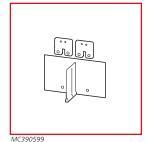
NOTE

- MC-S1-DC ... cannot be combined with withdrawable unit and/or rear connection
- If Ui > 1000 V DC, cannot be combined with early-make auxiliary contacts MC ... XHIV and box terminal MC.-4-XKC
- Connection technology MC...-S1-DC: 2-pole switching requires series connection of 2 poles each See accessories of jumper kits MC.-4-XKV..

RATED UNINTERRUPTED CURRENT	MAX.	TYPE	EAN CODE	AVAILABLE	ORDER NO.
AT DC 22-B/65 °C*	BACK-UP FUSE (gR)				
4-POLE, REMOTE RELEASE POSSIBLE					
320 A	500	MC3-N-4-320-S1-DC	9004840626858		MC332045DC
400 A	500	MC3-N-4-400-S1-DC	9004840626872		MC340045DC
500 A	500	MC3-N-4-500-S1-DC	9004840627312		MC350045DC

JUMPER KITS FOR TYPES MC3....-S1-DC / 1000V DC









SCHRACK-INFO

- Types contain parts for upper switch side for 4-pole switches
- MC3-N...-S1-DC that are used with 2 poles for DC
- Each jumper switches 2 current paths in series
- Supply and outlet at bottom or top selectable
- For dimensions, see from page 692.

RATED UNINTERRUPTED CURRENT A/°C	DEGREE OF PROTECTION	TYPE	EAN-CODE	AVAILABLE	ORDER NO.
For MC3-N-320(400)-S1-DC					
with cover, 400 A/70°C	IP2x	MC3-4-XKV2P	9004840626926		MC390602
For MC3-N-400(500)-S1-DC					
with insulating plates, 500 A/50°C, 400 A/70°C	IP00	MC3-4-XKVI2P	9004840627367		MC390599
For MC3-N-400(500)-S1-DC with cover					
and heat sinks, 500 A/55°C, 400 A/70°C	IP1x	MC3-4-XKV2P-K	9004840627343		MC390601
For MC3-N-500-S1-DC					
with insulating plates and heat sinks, 500 A/65	5°C IP00	MC3-4-XKVI2P-K	9004840627350		MC390600



SOCKET BASE AND WITHDRAWABLE MODULE FOR MC3





■ SCHRACK-INFO

- 3- and 4-pole version
- For circuit breaker MC3 and load-break switch MC3-N
- Not suitable for MC3-N-...DC
- For dimensions, see from page 692.

■ TECHNICAL DATA

- Withdrawable unit complete with control circuit plug unit
- In max. at 20 °C − 605 A
- I_n max. at 40 ° C − 550 A
- Mounting position: vertical, 90° left
- 3 positions: retracted, test, extended. The 3 positions are shown mechanically.
- Auxiliary contacts can also be used for remote signalling. Either an NC or NO contact per position.
- All connections of auxiliary switches (HIA, HIN, HIV) and undervoltage and shunt releases to the control circuit plug units are already present.
- Withdrawable unit and withdrawable module only available in combination with switch.
- Add an A to switch part number (e.g.: MC340232A) Switch will be supplied ready for use with withdrawable feature.
- Socket base can be ordered separately and supplied pre-assembled.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
SOCKET BASE				
Socket base, 3-pole	MC3-XAVS	9004840263701	086 0-0	MC396711
Socket base, 4-pole	MC3-4-XAVS	9004840387469		MC396712

WITHDRAWABLE MODULE

Withdrawable module, 3-pole (delivered with switch, add an A to switch part number)

Withdrawable module, 4-pole (delivered with switch, add an A to switch part number)



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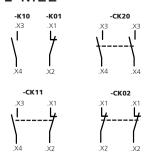


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STANDARD AUXILIARY CONTACT / TRIP-INDICATING AUXILIARY **CONTACT TYPE M22**





SCHRACK INFO

- Switches with the main contacts, used for indicating and interlocking tasks
- General trip indication "+" with trip due to voltage release, overload release or short-circuit-release

TECHNICAL DATA

Breaking capacity: AC15: 4 A / 230 VAC DC13: 3 A / 24 VDC

M22-K: 0.3 A / 220 VDC M22-CK: 0.2 A / 220 VDC

TIPS & TRICKS

The trip-indicating auxiliary contact is the same contact as the standard auxiliary contact. It derives its function from its place of installation (left is the alarm contact).

Maximum component installation MC3 with auxiliary contact: 3 x standard auxiliary contact (HIN) M22-K.. or M22CK..

+ 1 x trip-indicating auxiliary contact (HIA) M22-K.. or M22-CK..

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
1 NO contact with screw terminals	M22-K10	9004840176254	999 0-0	MM216376
1 NC contact with screw terminals	M22-K01	9004840176261	000	MM216378
2 NO contacts with spring terminals	M22-CK20	9004840547047	989	MM107898
2 NC contacts with spring terminals	M22-CK02	9004840547054	000	MM107899
1 NO contact + 1 NC contact with spring terminals	M22-CK11	9004840625783	000 0-0	MM107940

EARLY-MAKE AUXILIARY CONTACT TYPE MC3-XHIV





SCHRACK INFO

• For interlock- and load-shedding circuits as well as for early make of undervoltage release in main switch/Emergency-stop applications.

TECHNICAL DATA

- Not in connection with undervoltage release MC3-XU... or shunt release MC3-XA... Early-make during switch on and off (manual switch): approx. 20 ms
- Not in connection with remote operator MC-XR Undervoltage or shunt releases
- Breaking capacity: AC15: 4 A / 230 VAC

DC13: 3 A / 24 VDC, 0.2 A / 220 VDC

TIPS & TRICKS

Maximum component installation with auxiliary contact:

1 x early-make auxiliary contact

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Early-make auxiliary switch, 2 NO	MC2/3-XHIV	9004840262285	000	MC299430

UNDERVOLTAGE RELEASE TYPES MC3-XU





SCHRACK INFO

- For use in emergency stop devices in connection with EMERGENCY STOP
- Installed in breaker
- Without auxiliary contact
- Non-delayed switching of circuit breaker MC/ load-break switch MC-N when the control voltage drops below 35% - 70% Us.
- Other voltage variants available upon request.

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC2-XHIV.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC 50/60 Hz	MC2/3-XU24AC	9004840262360	000 0-0	MC299491
24 VDC 50/60 Hz	MC2/3-XU24DC	9004840262407	000 0-0	MC299509
208 - 240 VAC 50/60 Hz	MC2/3-XU208-240 AC	9004840262384	000 0-0	MC299499
380 - 440 VAC 50/60 Hz	MC2/3-XU380-440 AC	9004840262391		MC299501

UNDERVOLTAGE RELEASE WITH TWO EARLY-MAKE AUXILIARY CONTACTS TYPES MC3-XUHIV





SCHRACK INFO

- With 2 early-make auxiliary contacts
- For early-make of the undervoltage release in main switch applications and for interlock- and load-shedding circuits
- Installed in breaker
- Other voltage variants available upon request.

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Early-make of auxiliary contacts during switch on and off (20 ms). Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC2-XHIV.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 VAC	MC2/3-XUHIV240 AC	9004840262452	000	MC299591
380 - 440 VAC	MC2/3-XUHIV400 AC	9004840262469		MC299594



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UNDERVOLTAGE RELEASE, OFF-DELAY TYPES MC-UVU, MC-XUV







SCHRACK INFO

• Voltage drops of less than 16 s do not cause MC circuit breakers or MC-N load-break switches to trip...

• Voltage range: 220-240 VAC 50/60 HZ

380-440 VAC 50/60 HZ 480-550 VAC 50/60 HZ

24 VDC / AC

• For dimensions, see from page 692.

TECHNICAL DATA

- Time-delay adjustable between 70 ms 4 s
- With additional external capacitor: $30,000 \mu F \ge 35 \text{ V up to 8 s}$ $90,000 \mu F \ge 35 \text{ V up to } 16 \text{ s}$
- Special release MC2/3-XUV is required.
- Cannot be installed simultaneously with early-make auxiliary contact MC2-XHIV... or shunt release MC2-XA....
- Time-delay device for separate assembly (Mounting: DIN rail or screws).
- Use control transformer for other operating voltages.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Time delay device	MC-UVU	9004840520392	958	MC190154
Special undervoltage release for time-delay device UVU	MC2/3-XUV	9004840520613	000 0-0	MC299527

SHUNT RELEASE TYPES MC3-XA





SCHRACK INFO

- Without auxiliary contact
- Switches are tripped by a voltage pulse or by the application of uninterrupted voltage
- Other voltage variants available upon request.

NOTE

When the shunt release is de-energised, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Shunt release cannot be installed simultaneously with undervoltage release.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC/DC	MC2/3-XA24AC/DC	9004840262506	000	MC299754
110 - 130 VAC/DC	MC2/3-XA110-130 AC/DC	9004840262513		MC299760
208 - 250 VAC/DC	MC2/3-XA208-250 AC/DC	9004840262520	955	MC299763



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REMOTE OPERATOR FOR MC3



SCHRACK INFO

- Remote operator can be combined with circuit breaker MC and load-break switch MC-N, but not with load-break switch MC-PN.
- Do not switch off switch simultaneously via remote control and release via undervoltage/ shunt release.
- 1 auxiliary contact MM-K(CK).. must be installed in circuit breaker (included with remote operator)
- Other voltage variants available upon request.
- For dimensions, see from page 692.

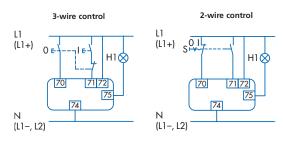
TECHNICAL DATA

- On/Off switching and reset by means of continuous or pulse contact.
- Can be synchronised
- Switching time, ON: ≤ 80 ms
- Local switching by hand possible
- Pause between Off and On: 3 sec. On command is ignored

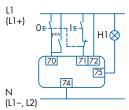
• Function of terminal 75: Ready for operation signal, when cover is closed and not locked.

AC-15: 2 A / 400 V DC-13: 0.2 A / 220 V

CIRCUIT DIAGRAMS



3-wire control with automatic return to 0 position after the switch has tripped via auxiliary contact



SWITCHING CYCLE



VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 V AC	MC3-XR208-240 AC	9004840262612	000	MC399850
Additional cover for 4-pole switches	MC3-XAVPR	9004840386967	000 000	MC396678

MECHANICAL INTERLOCK FOR (DOOR COUPLING-) ROTARY HANDLES FOR MC3



SCHRACK INFO

- · Rotary handle on switch or door coupling rotary handle additionally required.
- Cannot be combined with door sealing frame
- At least 2 interlocking modules are required to construct a mechanical interlock.
- Order Bowden cable separately
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock	MC3-XMV	9004840403244	988 0-0	MC391583
Bowden cable 225 mm	MC XBZ225	9004840403206	000	MC191585
Bowden cable 600 mm	MC XBZ600	9004840403213	000	MC191586
Bowden cable 1000 mm	MC XBZ600	9004840403220		MC191587





MECHANICAL INTERLOCK FOR REMOTE OPERATOR MC3-XR





SCHRACK INFO

- For 2 switches of the same or next frame size side by side
- Side-by-side mounting
- Mounted on top of each other, long version
- Type contains parts for 2 switches
- Remote operators also required
- · For dimensions and maximum switch clearances, see from page 692.

NOTE

Cannot be combined with rotary handles, door coupling rotary handles and early-make auxiliary contacts.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock for MC2/3	MC2/3-XMVR	9004840520736		MC294544
Mechanical interlock for MC2/3 long version	MC2/3-XMVRL	9004840520804		MC294549
Mechanical interlock for MC3	MC3-XMVR	9004840520293	050	MC394545
Mechanical interlock for MC3 long version	MC3-XMVRL	9004840521108		MC394550
Mechanical interlock for MC3/4	MC3/4-XMVR	9004840520705		MC394546
Mechanical interlock for MC3/4 long version	MC3/4-XMVRL	9004840521092		MC394551

ROTARY HANDLE DIRECTLY ON SWITCH FOR MC3



SCHRACK INFO

- Complete with rotary drive
- Can also be combined with door sealing frame
- For dimensions, see from page 692.

TECHNICAL DATA

Available in the following versions:

Type MC.-XDV

Lockable in position "0" (up to three padlocks), black/grey

Type MC.-XDVR

Lockable in position "0" (up to three padlocks), EMERGENCY STOP red/yellow

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rotary handle for MC3 lockable, black/grey	MC3-XDV	9004840262742	988	MC390129
Rotary handle for MC3 lockable, Emergency Stop, red/yellow	MC3-XDVR	9004840262797	000 0-0	MC390140



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DOOR COUPLING ROTARY HANDLES AND MAIN SWITCH KITS FOR MC3







SCHRACK INFO

- Complete including rotary drive and coupling parts
- Degree of protection IP66
- Rotary handle can be rotated 90° for switches mounted horizontally
- Cannot be defeated in the locked OFF and ON positions
- Can be modified when in the unlocked ON position, can be defeated from the outside with a screwdriver
- Door can be opened in OFF
- External warning plate/additional plate can be clipped on
- For dimensions, see from page 692.

NOTE

• Order extension shaft separately!

TECHNICAL DATA

Available in the following versions:

Type MC.-XTVD

Lockable in position "0" on handle with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDV

Lockable in position "0" on handle and switch with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDVR

Lockable in position "0" on handle and switch with up to three padlocks, with door interlock, EMERGENCY STOP red/yellow

Main switch kit consisting of:

- Door coupling rotary handle + rotary drive XTVD/XTVDR
- Extension shaft XV4
- External warning plate
- Lightning arrow

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
DOOR COUPLING ROTARY HANDLES				
For MC3 with door interlock, lockable, black/grey	MC3-XTVD	9004840262896	000 0-0	MC390170
For MC3 with door interlock, lockable, "0", "1", black/grey	MC3-XTVDV	9004840262926	000	MC390176
For MC3 with door interlock, lockable, Emergency Stop, red/yellow	MC3-XTVDVR	9004840262957	000 0-0	MC390182
MAIN SWITCH KITS				
For MC3 lockable, black/grey	MC3-XHB	9004840263589		MC396628
For MC3 lockable, Emergency Stop, red/yellow	MC3-XHBR	9004840263619		MC396634



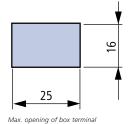
SCHRACK INFO

- For maximum cabinet depths of 400 or 600 mm
- Can be cut to required length
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Extension shaft for MC3, max. 400 mm	MC3/4-XV4	9004840263060	988	MC391234
Extension shaft for MC3, max. 600 mm	MC3/4-XV6	9004840262971	000 0-0	MC390193

BOX TERMINALS FOR MC3





SCHRACK INFO

- Installed within the switch housing
- If $U_e \ge 525$ V AC, use cover plate MC3(-4)-XS kA
- Conversion kit for switches with screw connection
- · Contains parts for one switch side
- Terminal capacities:

Copper lines/cables 500 A: 1 x (35 to 240 mm²⁾

2 x (16 to 120 mm²)

Copper strip 630 A: 10 x (24 x 1) + 5 x (24 x 1) or 2 x (8 x 24 x 1)

• For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Box terminal (3 pcs. included) for MC3	MC3-XKC	9004840262674	888	MC390042
Box terminal (4 pcs. included) for MC3-4	MC3-4-XKC	9004840387186		MC396783



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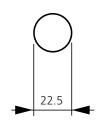


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TUNNEL TERMINAL FOR MC3







SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3 or 4-pole switches
- Standard with control circuit terminal for 1 x (0.75 to 2.5 mm²), 2 x (0.75 to 1.5 mm²) Cu wire
- Terminal capacities:

XKA1 max. 350 A: Cu/Al cable 1 x (16 to 185 mm^{2*)}

XKA2 max. 630 A: Cu/Al cable 2 x (50 to 240 mm²)

(* depending on cable manufacturer up to 240 mm² can be connected)

- Installation outside switch housing
- Cover MC3(-4)-XKSA (included)
- For dimensions, see from page 692.

■ TECHNICAL DATA

- For Cu- and AI cables
- Including cover
- Stranded round conductor / stranded sector-shaped conductor

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Tunnel terminal 185 mm² for MC3 3-pole	MC3-XKA1	9004840373493	088 0-0	MC391459
Tunnel terminal 2 x 240 mm² for MC3 3-pole	MC3-XKA2	9004840373486		MC391461
Tunnel terminal 185 mm² for MC3-4 4-pole	MC3-4-XKA1	9004840387216	088	MC391460
Tunnel terminal 2 x 240 mm ² for MC3-4 4-pole	MC3-4-XKA2	9004840387223	000	MC391462

CABLE LUG FOR MC3



SCHRACK INFO

- Special cable lug in slimline design
- The cable lugs must be insulated when using without a cover plate.
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Cable lug 185 mm², for MC3	MC3/4-XKS185	9004840263886		MC390040
Cable lug 240 mm², for MC3	MC3/4-XKS240	9004840262667	000	MC390041

REAR CONNECTION FOR MC3



SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Terminal capacities: Copper cable 2 x (16 240 mm²)
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rear connection, 3-pole for MC3	MC3-XKR	9004840263800		MC396792
Rear connection, 4-pole for MC3-4	MC3-4-XKR	9004840387230		MC396795

CONNECTION WIDTH EXTENSION FOR MC3

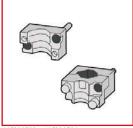


SCHRACK INFO

- Contains parts for one switch side incl. phase isolator
- Central holes, max. 2 cable lugs per phase
- Distance between pole centres 70 mm
- Terminal capacities: Cu cable lugs 2 x 300 mm² Cu rail 2 x (10 x 50)
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Connection width extension, 3-pole 630 A for MC3	MC3-XKV70	9004840417951	989	MC390514
Connection width extension, 4-pole 630 A for MC3	MC3-4-XKV70	9004840417968	000	MC390515

CONNECTION TERMINALS FOR CONNECTION WIDTH EXTENSION MC3



MC390782 + MC390784

SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Only in combination with connection width extension
- Use with flexible and highly-flexible conductor end sleeves
- Standard with control circuit terminal for 1 x (0.75 to 2.5 mm²) or 2 x 0.75 to 1.5 mm² Cu wire
- Terminal capacities: Copper cable 2 x (120 300 mm²) Copper strip 2 x (11 x 21 x 1)
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE				
Terminals for connection width extension, 500 A for cable	MC3-XK300	9004840521023		MC390782
Terminals for connection width extension, 630 A for strip	MC3-XK22X21	9004840521030		MC390784

4-POLE

Terminals for connection width extension, 500 A for cable	MC3-4-XK300	9004840521016	MC390783
Terminals for connection width extension, 630 A for strip	MC3-4-XK22X21	9004840521047	MC390785

PHASE ISOLATOR FOR MC3



SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Are included in the connection width extension MC3(-4)-XKV70
- Insulation protection where cable lugs, busbars or flat conductor are connected.
- Cannot be combined with tunnel terminal, rear connection
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Phase isolator for MC3 (2 pcs.)	MC3-XKP	9004840417975		MC390512
Phase isolator for MC3-4 (3 pcs.)	MC3-4-XKP	9004840417982		MC390513

CONTROL CIRCUIT TERMINAL FOR MC3



SCHRACK INFO

- Contains parts for two terminals located at top or bottom for 3/4-pole switches
- Included with tunnel terminal
- Terminal capacities: Screw terminal 1 x (0.75 to 2.5 mm²), 2 x (0.75 to 1.5 mm²)
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Control circuit connection for box terminal MC3	MC-XSTK	9004840263893	088 0-0	MC196739
Control circuit connection for screw terminal MC3	MC3/4-XSTS	9004840387247	000 0-0	MC396797

TERMINAL COVER FOR MC3



MC390045

- Protection against accidental contact when cable lugs/rails are connected or tunnel terminals are used
- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Degree of protection IP4X front, side and rear, IP1X on the connection side when using insulated conductor material
- Cover plate already comes with tunnel terminals
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Terminal cover, 3-pole, for MC3	MC3-XKSA	9004840262681	000 0-0	MC390045
Terminal cover, 4-pole, for MC3-4	MC3-4-XKSA	9004840387254	000	MC396801

■ IP2X FINGER PROTECTION DIRECT-MOUNTED ON SWITCHES MC3





SCHRACK INFO

- Increases the protection against accidental contact to IP2X
- · Protection when reaching into the cable connection area when cables are connected in box terminal
- For 2 conductors, minimum cross-section is 70 mm²
- MC3-XIPK and MC3-4-XIPK for direct mounting on switches
- MC3-XIPA and MC3-4-XIPA only in combination with cover plate MC3(-4)-XKSA
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
FOR SWITCHES WITH BOX TERMINAL				
Finger protection, 3-pole, for MC3	MC3-XIPK	9004840387261	000 0-0	MC396804
Finger protection, 4-pole, for MC3-4	MC3-4-XIPK	9004840387278		MC396805
FOR SWITCHES WITH TERMINAL COVER				
Finger protection, 3-pole, for MC3	MC3-XIPA	9004840387285		MC396808
Finger protection, 4-pole, for MC3-4	MC3-4-XIPA	9004840387292		MC396809

INSULATED ENCLOSURE XCI



SCHRACK INFO

- Only for switches with box terminals for direct cable connection
- With door coupling rotary handle
- Complete including all necessary functional parts
- Degree of protection IP65
- Comes with gland plates
- For dimensions, see from page 692.

■ TECHNICAL DATA

Enclosure suitable for installation of circuit-breakers and load-break switches for separate mounting with top and bottom cable entry. Including fixing straps for wall mounting.

Short circuit protection at 415 V 50/60 Hz up to 10 kA.

Not in combination with remote operator, plug-in or withdrawable unit.

Additional insulated terminal for 4th or 5th pole must be ordered separately.

Available in the following versions:

Standard, black/grey

Lockable in position "0" on handle with up to 3 padlocks. Additionally with cover interlock.

For EMERGENCY STOP, red/yellow

Lockable on handle and switch with up to 3 padlocks. Lockable in the position "0" on handle. Additionally with cover interlock and lockable at switch in position "0".

DESCRIPTION	MAX. RATED UNINTERRUPTED CURRENT	TYPE	EAN CODE	AVAILABLE	ORDER NO.	
STANDARD, BLACK/GREY						
For MC3(-4)	≤400 A	MC3-XCI48-TVD	9004840521078		MC391525	
FOR EMERGENCY STOP, RED/YELLOW						
For MC2(A)	< 100 A	MC3 ACINS 1/D	000/19/0521095		MC201520	



COMPONENT ADAPTERS FOR CIRCUIT-BREAKERS AND LOAD-BREAK SWITCHES FOR 60 mm BUSBAR SYSTEM MC3



SCHRACK INFO

- Cover plate MC-XKR necessary for frame size 2 and 3.
- For mounting on flat copper rails 12 x 5 mm to 30 x 10 mm
- Double T and triple T profile
- For snapping onto the voltage-free busbar
- Rated operational voltage Ue: 690 V
- For dimensions, see from page 692.

■ TECHNICAL DATA

MC 3 up to 630 A:

- Connection to system from top
- Cover plate MC3-XKR13 with rear connection required for component adapter

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
60 mm busbar adapter 550 A for MC3, 3-pole	32170	9004840413694	000	MC391700
Cover for component adapter, 3-pole	MC3-XKR13	9004840403312	000	MC391668

DOOR SEALING FRAME FOR MC3



SCHRACK INFO

- For toggle levers, rotary handles with rotary drive and remote operator
- Degree of protection IP40
- For rectangular cut-out on doors and enclosures with material thicknesses of 1.5 5 mm
- External warning plate / additional plate (optional) clipped
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Door sealing frame for MC3	MC3-XBR	9004840415735		MC394645



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TOGGLE LEVER LOCKING DEVICE FOR MC3



SCHRACK INFO

- Off position lockable with up to 3 padlocks (shackle thickness 4 8 mm)
- Cannot be combined with door sealing frame
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Toggle lever locking device for MC3	MC2/3-XKAV	9004840521009		MC290201

SPACERS FOR MC3



SCHRACK INFO

- Enables fast and low-priced adjustment of various frame sizes with/without rotary handle or remote operator at same front depth
- Grid depth 17.5 mm, thread M5
- One set contains 4 x spacers
- 4 fastening screws included per switch
- For dimensions, see from page 692.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Spacers for MC3	MC3/4-XAB	9004840263015	988	MC390211



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■ CIRCUIT BREAKER 3/4-POLE UP TO 1600 A WITH ELECTRONIC RELEASE TYPES MC4N-AE, MC4H-AE, MC4N-4-AE, MC4H-4-AE



SCHRACK-INFO

- System and line protection
- 3- and 4-pole versions
- RMS value measurement and "thermal memory"
- Adjustable overload release I_r: 0.5 1 x I_n (factory setting 0.8 x I_n)
- Adjustable short-circuit release I: 2 − 12 x In (factory setting 6 x In)
- Breaking capacity 50 / 85 kA at 415 V 50/60 Hz
- Screw terminals as standard
- Rated uninterrupted current = rated current
- For dimensions, see from page 700.

	ΔDILISTME	NT RANGE				
RATED CURRENT/	OVERLOAD,	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.
	•		IIIL	LAN CODE	AVAILABLE	ONDER NO.
BREAKING CAPACITY	RELEASE (A)	RELEASE (A)				
3-POLE (NORMAL BREAKING	<u> </u>					
630 A/50 kA	315630	12607560	MC4N-AE630	9004840263091	000	MC463232
800 A/50 kA	400800	16009600	MC4N-AE800	9004840263107	000 0-0	MC480232
1000 A/50 kA	5001000	200012000	MC4N-AE1000	9004840263114	000 0-0	MC410232
1250 A/50 kA	6301250	250015000	MC4N-AE1250	9004840263121	999	MC412232
1600 A/50 kA	8001600	320019200	MC4N-AE1600	9004840263138	000	MC416232
3-POLE (HIGH BREAKING CAP	ACITY) 85 kA					
630 A/85 kA	315630	12607560	MC4H-AE630	9004840263145		MC463332
800 A/85 kA	400800	16009600	MC4H-AE800	9004840263152		MC480332
1000 A/85 kA	5001000	200012000	MC4H-AE1000	9004840263169		MC410332
1250 A/85 kA	6301250	250015000	MC4H-AE1250	9004840263176		MC412332
1600 A/85 kA	8001600	320019200	MC4H-AE1600	9004840263183		MC416332
4-POLE (NORMAL BREAKING	CAPACITY) 50 kA					
800 A/50 kA	400800	16009600	MC4N-4-AE800	9004840386813	000	MC480242
1000 A/50 kA	5001000	200012000	MC4N-4-AE1000	9004840386783		MC410242
1250 A/50 kA	6301250	250015000	MC4N-4-AE1250	9004840386790		MC412242
1600 A/50 kA	8001600	320019200	MC4N-4-AE1600	9004840386806		MC416242
4-POLE (HIGH BREAKING CAP	ACITY) 85 kA					
800 A/85 kA	400800	16009600	MC4H-4-AE800	9004840386660		MC480342
1000 A/85 kA	5001000	200012000	MC4H-4-AE1000	9004840386639		MC410342
1250 A/85 kA	6301250	250015000	MC4H-4-AE1250	9004840386646		MC412342
1600 A/85 kA	8001600	320019200	MC4H-4-AE1600	9004840386653		MC416342

Higher breaking capacity available upon request.





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■ CIRCUIT BREAKER, 3/4 POLE UP TO 1600 A WITH DELAYED ELECTRONIC RELEASE TYPES MC4N-VE, MC4H-VE, MC4N-4-VE, MC4H-4-VE



SCHRACK-INFO

- System and line protection
- Selective and generator protection
- 3 and 4-pole versions
- Rated uninterrupted current = rated current
- For dimensions, see from page 700.

■ TECHNICAL DATA

- RMS value measurement and "thermal memory"
- Adjustable overload release Ir: 0.5 1 x In (factory setting 0.8 x I_n)
- Adjustable time delay setting to overcome current peaks t_r: 2 - 20 s at 6 x I_r as well as infinity
- Adjustable delayed short-circuit releases Isd: $2 - 10 x I_r$ (factory setting $6 x I_r$)
- Adjustable time delay tsd: Levels: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms (factory setting 0)
- Adjustable non-delayed short-circuit release I: $2 - 12 \times I_n$ (factory setting $12 \times I_n$)
- Switchable i²t constant function (factory setting: OFF)
- MC4.-VE...: 2 12 x ln (factory setting 12 x ln)
- Switches also available with reduced N-wire release

		ADJUSTMENT RA	NGE				
RATED CURRENT/	OVERLOAD	SHORT-CIRCUIT RE	ELEASE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
BREAKING CAPACITY	RELEASE (A)	NON-DELAYED (A)	DELAYED (A)				
3-POLE (NORMAL BREA	KING CAPACITY)	50 kA					
630 A/50 kA	315630	12607560	6306300	MC4N-VE630	9004840263190		MC463233
800 A/50 kA	400800	16009600	8008000	MC4N-VE800	9004840263206	666 0- 6	MC480233
1000 A/50 kA	5001000	200012000	100010000	MC4N-VE1000	9004840263213	000 0-0-	MC410233
1250 A/50 kA	6301250	250015000	125012500	MC4N-VE1250	9004840263220	088 0-0	MC412233
1600 A/50 kA	8001600	320019200	160016000	MC4N-VE1600	9004840263237	000 0-0-	MC416233
3-POLE (HIGH BREAKING	G CAPACITY) 85 k	κA					
630 A/85 kA	315630	12607560	6306300	MC4H-VE630	9004840263244		MC463333
800 A/85 kA	400800	16009600	8008000	MC4H-VE800	9004840263251		MC480333
1000 A/85 kA	5001000	200012000	100010000	MC4H-VE1000	9004840263268		MC410333
1250 A/85 kA	6301250	250015000	125012500	MC4H-VE1250	9004840263275		MC412333
1600 A/85 kA	8001600	320019200	160016000	MC4H-VE1600	9004840263282	000 0-0	MC416333

4-POLE (NORMAL BREAKING CAPACITY) 50 kA

800 A/50 kA	400800	16009600	8008000	MC4N-4-VE800	9004840386851		MC480243
1000 A/50 kA	5001000	200012000	100010000	MC4N-4-VE1000	9004840386820	000	MC410243*
1250 A/50 kA	6301250	250015000	125012500	MC4N-4-VE1250	9004840386837		MC412243*
1600 A/50 kA	8001600	320019200	160016000	MC4N-4-VE1600	9004840386844		MC416243

4-POLE (HIGH BREAKING CAPACITY) 85 kA

800 A/85 kA	400800	16009600	8008000	MC4H-4-VE800 9004840386707	MC480343
1000 A/85 kA	5001000	200012000	100010000	MC4H-4-VE1000 9004840386677	MC410343
1250 A/85 kA	6301250	250015000	125012500	MC4H-4-VE1250 9004840386684	MC412343
1600 A/85 kA	8001600	320019200	160016000	MC4H-4-VE1600 9004840386691	MC416343

^{*} Switch also available with reduced N-conductor release (MC4..243R), In N-conductor = 0.6 x In external conductor





■ MOTOR PROTECTION, 3-POLE UP TO 1400 A WITH ELECTRONIC RELEASE TYPES MC4N-ME, MC4H-ME



SCHRACK-INFO

- Adjustable overload release I_r: 0.5 1 x I_n (factory setting 0.8 x I_n)
- Adjustable short-circuit release Ii: 2 14 x In (factory setting 12 x In)
- Adjustable time delay setting to overcome current peaks tr: 2 20 s at $6 \times lr$, as well as infinity (without overload release), (factory setting 10 s)
- RMS value measurement and "thermal memory"
- Phase failure sensitivity
- Screw terminals as standard, lift terminals as option
- Specification acc. to IEC/EN 60947-4 and IEC/EN 60947-2
- Circuit breakers satisfy all requirements of utilisation category AC3 at 400 V AC
- For dimensions, see from page 700.

1400...19600

NOTES

Rated operational power/current at 690 VAC:

MC4-ME550: $P_e = 560 \text{ kW}$; $I_e = 550 \text{ A}$

MC4-ME875 (ME1400): $P_{e \text{ max.}} = 600 \text{ kW}$; $I_{e} = 588 \text{ A}$

700...1400

NOMINAL CURRENT/	ADJUSTME	ENT RANGE							
BREAKING CAPACITY/	OVERLOAD	SHORT-CIRCUIT	TYPE	EAN CODE	AVAILABLE	ORDER NO.			
POWER AC3/CURRENT AC3	RELEASE (A)	RELEASE (A)							
3-POLE (NORMAL BREAKING CA	APACITY) 50 ka								
550 A/50 kA/315 kW/544 A	275550	5507700	MC4N-ME550	9004840386875		MC455237			
875 A/50 kA/500 kW/820 A	438875	87512250	MC4N-ME875	9004840386882		MC487237			
1400 A/50 kA/630 kW/1066 A	7001400	140019600	MC4N-ME1400	9004840386868		MC414237			
3-POLE (HIGH BREAKING CAPAC	3-POLE (HIGH BREAKING CAPACITY) 85 kA								
550 A/85 kA/315 kW/544 A	275550	5507700	MC4H-ME550	9004840386721		MC455337			
875 A/85 kA/500 kW/820 A	438875	87512250	MC4H-ME875	9004840386738		MC487337			



1400 A/85 kA/630 kW/1066 A

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MC4H-ME1400

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■ LOAD-BREAK SWITCH 3-/4-POLE UP TO 1600 A, FOR REMOTE RELEASE TYPES MC4-N, MC4-N-4



SCHRACK-INFO

- 3- and 4-pole versions
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947-3 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Rated uninterrupted current up to 1600 A
- With trip positions "0", "+"; "I", with remote release, can be equipped with undervoltage/shunt release and trip-indicating auxiliary contact
- Can be combined with remote operator MC-XR...
- Screw terminals as standard
- Rated uninterrupted current = rated current
- Rated short-circuit breaking capacity: I_{cm} 53 kA
- Rated short-time current protection: I_{cw} 25 kA
- For dimensions, see from page 700.

RATED UNINTERRUPTED CURRENT	MAX. BACK-UP FUSE (gL)	TYPE	EAN-CODE	AVAILABLE	ORDER NO.
	FOR LOAD-BREAK SWITCHES (AgL)				
3-POLE, REMOTE RELEASE POSSIBLE					
800 A	1600	MC4-N-800	9004840263299		MC480035
1000 A	1600	MC4-N-1000	9004840263305	088 0-0	MC410035
1250 A	1600	MC4-N-1250	9004840263312	000 0-0	MC412035
1600 A	1600	MC4-N-1600	9004840263329	088	MC416035
4-POLE, REMOTE RELEASE POSSIBLE	Ē.				
000 4	1600	NACA NI A 000	0004040206776		N 4 C 4 O O O 4 E

800 A	1600	MC4-N-4-800 9004840386776	MC480045
1000 A	1600	MC4-N-4-1000 9004840386745	MC410045
1250 A	1600	MC4-N-4-1250 9004840386752	MC412045
1600 A	1600	MC4-N-4-1600 9004840386769	MC416045



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LOAD-BREAK SWITCHES UP TO 1400 A/1000 V TYPES MC4-N-4-...-S1-DC





SCHRACK-INFO

- 4-pole version / 2-pole switching
- Rated uninterrupted current up to 1400 A
- With trip positions "0", "+", "I", with remote release, can be equipped with undervoltage or shunt release and trip-indicating auxiliary contact
- Terminal screws as standard, jumper kits* optional
- Can be combined with remote operator MC-XR
- Properties of main switches including positive drive according to IEC/EN 60204 and VDE 0113
- Isolating characteristics according to IEC/EN 60947 and VDE 0660, protection against accidental contact according to VDE 0160 Part 100
- Specifications acc. to IEC/EN 60947-3
- Rated uninterrupted current = rated current
- Rated short-time current protection: I_{cw} 25 kA
- Not available with withdrawable unit
- For dimensions, see from page 700.

NOTE

- MC-S1-DC ... cannot be combined with withdrawable unit and/or rear connection
- If Ui > 1000 V DC, cannot be combined with early-make auxiliary contacts MC ... XHIV and box terminal MC.-4-XKC
- Connection technology MC...-S1-DC: 2-pole switching requires series connection of 2 poles each See accessories of jumper kits MC.-4-XKV..

RATED UNINTERRUPTED CURRENT	MAX.	TYPE	EAN CODE	AVAILABLE	ORDER NO.			
AT DC 21-B/65 °C*	BACK-UP FUSE (gR)							
4-POLE, REMOTE RELEASE POSSIBLE	4-POLE, REMOTE RELEASE POSSIBLE							
800 A	1600	MC4-N-4-800-S1-DC	9004840628920		MC480045DC			
1000 A	1600	MC4-N-4-1000-S1-DC	9004840626889		MC410045DC			
1250 A	1600	MC4-N-4-1250-S1-DC	9004840626896		MC412045DC			
1400 A	1600	MC4-N-4-1400-S1-DC	9004840626902		MC414045DC			

JUMPER KITS FOR TYPE MC4....-S1-DC / 1000 V DC





SCHRACK-INFO

- Types contain parts for upper switch side for 4-pole switches
- MC4-N...-S1-DC that are used with 2 poles for DC
- Each jumper switches 2 current paths in series
- Supply and outlet at bottom or top selectable
- ≥ 1250 A: FOR 65 °C ambient temperature, Connector at the bottom of module plates MC4-4-XKM2S-1600
- For dimensions, see from page 700.

RATED UNINTERRUPTED CURRENT A°C	DEGREE OF PROTECTION	TYPE	EAN-CODE	AVAILABLE	ORDER NO.
For MC4-NS1-DC					
with cover, 1400 A/40 °C, 1250 A/65 °C	IP2x	MC4-4-XKV2P	9004840626933		MC490602
For MC4-N-1400-S1-DC					
with heat sink, 1400 A/65 °C	IP00	MC4-4-XKV2P-1400	9004840626940		MC490612





SCHRACK-INFO

- 3- and 4-pole version
- For circuit breaker MC4 and load-break switch MC4-N
- Not suitable for MC4-N-...-DC
- For dimensions, see from page 700.

TECHNICAL DATA

- Withdrawable unit complete with control circuit plug unit
- I_n max. at 20 °C − 1600 A
- In max. at 40 °C − 1500 A
- Mounting position: vertical
- 3 positions: retracted, test, extended. The 3 positions are shown mechanically.
- Auxiliary contacts can also be used for remote signalling. Either an NC or NO contact per position.
- All connections of auxiliary switches (HIA, HIN, HIV) and undervoltage and shunt releases to the control circuit plug units are already present.
- Withdrawable unit and withdrawable module only available in combination with switch.
- Add an A to switch part number (e.g.: MC463233A), will be supplied prepared for withdrawable units.
- Socket base can be ordered separately and supplied pre-assembled.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
SOCKET BASE				
Socket base, 3-pole	MC4-XAVS	9004840263718	000 0-0	MC496713
Socket base, 4-pole	MC4-4-XAVS	9004840387476		MC496714

WITHDRAWABLE MODULE

Withdrawable module, 3-pole (delivered with switch, add an A to switch part number)

Withdrawable module, 4-pole (delivered with switch, add an A to switch part number)



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EARLY-MAKE AUXILIARY CONTACT TYPE MC4-XHIV





TIPS & TRICKS

Maximum component installation with auxiliary contact:

1 x early-make auxiliary contact

SCHRACK INFO

• For interlock- and load-shedding circuits as well as for early-make of undervoltage release in main switch/Emergency-stop applications.

TECHNICAL DATA

- Not in connection with undervoltage release MC4-XU... or shunt release MC4-XA... Early-make during switch on and off (manual switch): approx. 20 ms
- Not in connection with remote operator MC-XR Undervoltage- or shunt voltage releases
- Breaking capacity: AC15: 4 A / 230 VAC

DC13: 3 A / 24 VDC, 0.2 A / 220 VDC

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Early-make auxiliary switch, 2 NO contacts	MC4-XHIV	9004840263336	·	MC496172



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UNDERVOLTAGE RELEASE TYPES MC4-XU





SCHRACK INFO

- For use in emergency stop devices in connection with EMERGENCY STOP
- Installed in breaker
- Without auxiliary contact
- Non-delayed switching of circuit breaker MC/ load-break switch MC-N when the control voltage drops below 35% - 70% Us.
- Other voltage variants available upon request.

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC4-XHIV.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC	MC4-XU24AC	9004840263343	050	MC496189
24 VDC	MC4-XU24DC	9004840263381		MC496204
208 - 240 VAC	MC4-XU208-240AC	9004840263367	999 0-	MC496193
380 - 440 VAC	MC4-XU380-440AC	9004840263374		MC496194

UNDERVOLTAGE RELEASE WITH TWO EARLY-MAKE AUXILIARY CONTACTS TYPES MC4-XUHIV





SCHRACK INFO

- With 2 early-make auxiliary contacts
- For early-make of the undervoltage release in main switch applications and for interlock- and load-shedding circuits
- Installed in breaker
- Other voltage variants available upon request.

TIPS & TRICKS

When the undervoltage release is de-energised, accidental contact with the main contacts of the switch is safely prevented during attempts to switch on. Early-make of auxiliary contacts during switch on and off (20 ms). Undervoltage release cannot be installed simultaneously with a shunt release or early-make auxiliary contact MC4-XHIV.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 VAC	MC4-XUHIV208-240AC	9004840263404		MC496221
380 - 440 VAC	MC4-XUHIV380-440AC	9004840263411		MC496222



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SHUNT RELEASE TYPES MC4-XA





SCHRACK INFO

- Without auxiliary contact
- Switches are tripped by a voltage pulse or by applying uninterrupted voltage
- Other voltage variants available upon request.

■ TECHNICAL DATA

When the shunt release is de-energised, accidental contact with the main contacts of the switch during attempts to switch on is safely prevented. Shunt release cannot be installed at the same time with undervoltage releases or early-make auxiliary contact MC4-XHIV.

VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
24 VAC/DC	MC4-XA24AC/DC	9004840263428	080	MC496447
208 - 250 VAC/DC	MC4-XA208-250AC/DC	9004840263466		MC496451



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REMOTE OPERATOR FOR MC4

SCHRACK INFO

- Remote operator can be combined with circuit breaker MC and load-break switch MC-N, but not with load-break switch MC-PN.
- Do not switch off switch simultaneously via remote control and release via undervoltage/shunt release.
- 1 auxiliary contact MM-K(CK).. must be installed in circuit breaker (included with remote operator)
- Other voltage variants available upon request.
- For dimensions, see from page 700.

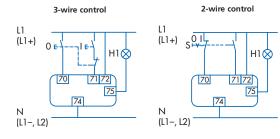
■ TECHNICAL DATA

- On/Off switching and reset by means of continuous or pulse contact.
- Can be synchronised
- Switching time, ON: ≤ 100 ms
- Local switching by hand possible
- Pause between Off and On: 3 sec. On command is ignored

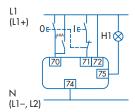
• Function of terminal 75: Ready for operation signal, when cover is closed and not locked.

AC-15: 2 A / 400 V DC-13: 0.2 A / 220 V

CIRCUIT DIAGRAMS



3-wire control with automatic return to 0 position after the switch has tripped via auxiliary contact



SWITCHING CYCLE



VOLTAGE	TYPE	EAN CODE	AVAILABLE	ORDER NO.
208 - 240 V AC	MC4-XR208-240AC	9004840263626	888	MC496685

MECHANICAL INTERLOCK FOR (DOOR COUPLING) ROTARY HANDLES FOR MC4



SCHRACK INFO

- · Rotary handle on switch or door coupling rotary handle additionally required.
- Cannot be combined with door sealing frame
- At least 2 interlocking modules are required to construct a mechanical interlock.
- Order Bowden cable separately
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock	MC4-XMV	9004840403251		MC491584
Bowden cable 225 mm	MC XBZ225	9004840403206	000 0-0	MC191585
Bowden cable 600 mm	MC XBZ600	9004840403213	988	MC191586
Bowden cable 1000 mm	MC XBZ600	9004840403220		MC191587

MECHANICAL INTERLOCK FOR REMOTE OPERATOR MC4-XR





SCHRACK INFO

- For 2 switches of the same or next frame size side by side
- Side-by-side mounting
- Mounted on top of each other, long version
- Contains parts for 2 switches
- Remote operators also required
- For dimensions and maximum switch clearances, see from page 700.

NOTE

Cannot be combined with rotary handles, door coupling rotary handles and early-make auxiliary contacts.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Mechanical interlock for MC3/4	MC3/4-XMVR	9004840520705		MC394546
Mechanical interlock for MC3/4 long version	MC3/4-XMVRL	9004840521092		MC394551
Mechanical interlock for MC4	MC4-XMVR	9004840520309	000	MC494547
Mechanical interlock for MC4 long version	MC4-XMVRL	9004840521184		MC494552

ROTARY HANDLE DIRECTLY ON SWITCH FOR MC4



SCHRACK INFO

- Complete with rotary drive
- Can also be combined with door sealing frame
- For dimensions, see from page 700.

■ TECHNICAL DATA

Available in the following versions:

Type MC.-XDV

Lockable in position "0" (up to three padlocks), black/grey

Type MC.-XDVR

Lockable in position "0" (up to three padlocks), EMERGENCY STOP red/yellow

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rotary handle for MC4 lockable, black/grey	MC4-XDV	9004840263503	888 0- 6	MC496608
Rotary handle for MC4 lockable, Emergency Stop, red/yellow	MC4-XDVR	9004840263510		MC496610

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MC494614 - Rotary drive

SCHRACK INFO

- Complete including rotary drive and coupling parts
- Degree of protection IP66
- Rotary handle can be rotated 90° for switches mounted horizontally
- Cannot be defeated in the locked OFF and ON positions
- Can be modified when in the unlocked ON position, can be defeated from the outside with a screwdriver
- Door can be opened in OFF
- External warning plate/additional plate can be clipped on
- For dimensions, see from page 700.

NOTE

• Order extension shaft separately!

TECHNICAL DATA

Available in the following versions:

Type MC.-XTVD

Lockable in position "0" on handle with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDV

Lockable in position "0" on handle and switch with up to three padlocks, with door interlock, black/grey

Type MC.-XTVDVR

Lockable in position "0" on handle and switch with up to three padlocks, with door interlock, EMERGENCY STOP red/yellow

Main switch kit consisting of:

- Door coupling rotary handle + rotary drive XTVD/XTVDR
- Extension shaft XV4
- External warning plate
- · Lightning arrow

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
DOOR COUPLING ROTARY HANDLES				
For MC4 with door interlock, lockable, black/grey	MC4-XTVD	9004840263534	000 0-0	MC496614
For MC4 with door interlock, lockable, "0", "1", black/grey	MC4-XTVDV	9004840263541		MC496616
For MC4 with door interlock, lockable, Emergency Stop, red/yellow	MC4-XTVDVR	9004840263558		MC496618
MAIN SWITCH KITS				
For MC4 lockable, black/grey	MC4-XHB	9004840405026		MC491779
For MC4 lockable, Emergency Stop, red/yellow	MC4-XHBR	9004840405033		MC491842

EXTENSION SHAFT FOR MC4



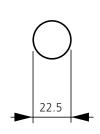
SCHRACK INFO

- For maximum cabinet depths of 400 or 600 mm
- · Can be cut to required length
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Extension shaft for MC4, max. 400 mm	MC3/4-XV4	9004840263060	686 0-6	MC391234
Extension shaft for MC4, max. 600 mm	MC3/4-XV6	9004840262971	088 0-0	MC390193

TUNNEL TERMINAL FOR MC4





SCHRACK INFO

- Installation outside switch housing
- Contains parts for one switch side located at top or bottom for 3 pole switches
- Comes with terminal for control circuit cabling as standard for copper conductors 1 x (0.75 to 2.5 mm 2), 2 x (0.75 to 1.5 mm 2)
- Terminal capacities: Cu/Al cable 1 x (50 to 240 mm²) to 4 x (50 to 240 mm²)
- For dimensions, see from page 700.

TECHNICAL DATA

- For Cu and Al cables, max. 1400 A
- Including cover
- Stranded round conductor / stranded sector-shaped conductor

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Tunnel terminal 4 x 240 mm ² for MC4 3-pole	MC4-X kA	9004840263817	000	MC496836
Tunnel terminal 4 x 240 mm² for MC4 4-pole	MC4-4-X kA	9004840387384	000	MC496837

RIBBON CABLE FOR MC4



SCHRACK INFO

- In ≤ 1100 A
- When mounting switch on conductive mounting plates you must use cover plate MC4(-4)-XKSA
- Use cover plate for phase isolator plates
- Contains parts for one switch side, top or bottom
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Flat conductor terminal for MC4/MC4-N, 3-pole	MC4-XKB	9004840387360	088	MC496829
Flat conductor terminal for NCA AMACA N. A. A. pala	MC4 4 VVD	0004040307377		NAC406931

CABLE LUG FOR MC4



SCHRACK INFO

- Special cable lug in slimline design
- The cable lugs must be insulated when using without a cover plate.
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Cable lug 185 mm², for MC4	MC3/4-XKS185	9004840263886	000	MC390040
Cable lug 240 mm², for MC4	MC3/4-XKS240	9004840262667	000	MC390041

REAR CONNECTION FOR MC4



SCHRACK INFO

- Contains parts for one switch side, top or bottom
- Can be mounted additionally: module plate MC4...-XKM... or connection width extension MC4-...-XKV...
- Max. terminal capacities 1250 A: Cu cable lugs 1 x (120 to 185 mm²), 2 x (95 to 185 mm²), 4 x (35 to 185 mm²) Al cable lugs 1 x 185 mm², 2 x (70 to 185 mm²), 4 x (50 to 185 mm²)
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Rear connection, 3-pole for MC4	MC4-XKR	9004840263824		MC496842

PHASE ISOLATOR FOR MC4



SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Are included in the connection width extension MC4(-4)-XKV...
- Insulation protection where cable lugs, busbars or flat conductor are connected.
- Cannot be combined with tunnel terminal, rear connection
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Phase isolator for MC4 (2 pcs.)	MC4-XKP	9004840560404	000 0-	MC496873
Phase isolator for MC4-4 (3 pcs.)	MC4-4-XKP	9004840560411		MC496874

MODULE PLATE FOR MC4







SCHRACK INFO

- For M10 screws, can be bored for M12 screws
- Use special cable lugs in slimline design
- Can be mounted to switch with screw connection
- Contains parts for one switch side, top or bottom
- Insulation through cover plate MC4(-4)-XKSA or phase isolator MC4(-4)-XKP necessary
- For dimensions, see from page 700.

■ TECHNICAL DATA

- Terminal capacities, 1 bore: Cu cable lugs 1 x (120 to 300 mm²), 2 x (95 up to 300 mm²)
- Terminal capacities, 2 bore: Cu cable lugs 2 x (95 to 185 mm²), 4 x (35 up to 185 mm²)
- Connection width extension: 2 x (95 to 300 mm²)

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE				
Module plate 1-hole for MC4/MC4-N, $I_n \le 1250 \text{ A}$	MC4-XKM1	9004840387308	000	MC496814
Module plate 2-hole for MC4/MC4-N, I _n ≤ 1400 A	MC4-XKM2	9004840387315	000	MC496820
Connection extension MC4 3-pole 1600 A	MC4-XKM2S-1600	9004840403336	000	MC494473

4-POLE

Module plate 1-hole for MC4-4/MC4-N-4, $l_n \le 800~\text{A}$	MC4-4-XKM1	9004840387322	MC496815
Module plate 2-hole for MC4-4/MC4-N-4, $I_n \le 1000 \text{ A}$	MC4-4-XKM2	9004840387339	MC496821
Connection extension MC4 4-pole 1600 A	MC4-4-XKM2S-1600	9004840403343	MC494474



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CONNECTION WIDTH EXTENSION FOR MC4



SCHRACK INFO

- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches including phase isolator.
- 5x bore for up to 6 cable lugs per phase
- Can be mounted to switch with screw connection
- Phase isolator included
- 4 mm bore holes fitted for control circuit terminal
- Terminal capacities: Cu cable lugs 4 x 300 mm², 6 x (95 to 240 mm²)
- For dimensions, see from page 700.

TECHNICAL DATA

Pole centre distance on MC4 (-4)-XKV95:	95 mm
Installation possible for current transformer:	up to width 130 mm at rail width of 80 mm
Pole centre distance on MC4 XKV110:	107.5 mm
Installation possible for current transformer:	up to width 135 mm at rail width of 80 mm
Pole centre distance on MC4-4-XKV120:	122 mm
Installation possible for current transformer:	up to width 164 mm at rail width of 80 mm

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Connection width extension MC4 3-pole 1600 A	MC4-XKV95	9004840387346	088	MC496826
Connection width extension MC4 4-pole 1600 A	MC4-4-XKV95	9004840387353		MC496827
Connection width extension MC4 3-pole 1600 A long version	MC4-XKV110	9004840521146	000	MC491593
Connection width extension MC4 4-pole 1600 A long version	MC4-4-XKV120	9004840521153		MC491594

TERMINAL COVER FOR MC4



SCHRACK INFO

- Protection against accidental contact where cable lugs, rails are connected or tunnel terminals are used
- Contains parts for one switch side located at top or bottom for 3- or 4-pole switches
- Degree of protection IP4X front, side and rear, IP1X on the connection side when using insulated conductor material
- Cover plate already comes with tunnel terminals
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Terminal cover for MC4, 3-pole	MC4-XKSA	9004840263831	988	MC496846
Terminal cover for MC4, 4-pole	MC4-4-XKSA	9004840387407		MC496847



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DOOR SEALING FRAME FOR MC4



SCHRACK INFO

- For toggle levers, rotary handles with rotary drive and remote operator
- Degree of protection IP40
- For rectangular cut-out on doors and enclosures with material thicknesses of 1.5 5 mm
- External warning plate / additional plate (optional) clipped
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Door sealing frame for MC4	MC4-XBR	9004840403329		MC494646

SPACERS FOR MC4



SCHRACK INFO

- Enables fast and low-priced adjustment of different frame sizes with/without rotary handle or remote control to identical front depths
- Grid depth 17.5 mm, thread M5
- One set contains 4 x spacers
- 4 fastening screws included per switch
- For dimensions, see from page 700.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Spacers for MC4	MC3/4-XAB	9004840263015	088	MC390211



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RESIDUAL CURRENT RELEASE RELAY FIR







SCHRACK INFO

- Residual current release relay in combination with external corebalance transformers. Switch-off can be achieved with undervoltageand shunt voltage releases or a contactor.
- For dimensions, see page 712.

TECHNICAL DATA

Version corresponds to:	IEC 947-2, IEC	C 755, IEC 10	008, IEC 100	9	
Sensitivity:	Pulse current	sensitive, t	уре А		
Rated control supply voltage U _s (V):	230 +/- 20%	(50/60 Hz)		
Rated operational power P _e (W):	3				
Relay contacts:	1 CO integrated				
Rated voltage of relay contacts:	250 V AC				
	100 V DC				
Rated current of the relay contacts:	6 A				
Rated residual currents:	FIR-003	l△n	А	0.03	
	FIR-03	l△n	А	0.3	
	FIR-5	l△n	А	0.03 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5	
Time delay:	FIR-003	t _v	s	0.02 (non-delayed)	
	FIR-03	t _v	S	0.02 (non-delayed)	
	FIR-5	t _v	S	0.02 - 0.1 - 0.3 - 0.5 - 1 - 3 - 5	

Residual current warning with FIR-5

0.5 Hz: 25% – 50% I $_{\Delta}_{n}$ (every 2 s)

by flashing red LED, flashing frequency: 1 Hz: 50% – 75% $I_{\Delta_{\mbox{\scriptsize n}}}$ (every 1 s)

2 Hz: 75% – <100% I_{Δ}_n (2 x per second)

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
RESIDUAL CURRENT RELEASE RELAY				
Rated residual current I _n = 0.03 A pulse current sensitive	FIR-003	9004840421538		MC900001
Rated residual current I _n = 0.3 A pulse current sensitive	FIR-03	9004840421545	-	MC900002
Rated residual current I _n = 0.035 A pulse current sensitive	FIR-5	9004840421552	088	MC900003

RESIDUAL CURRENT RELEASE RELAY WITH DISPLAY

Rated residual current I _n = 0.033 A pulse current sensitive	FIRD-3	on request
Rated residual current I _n = 0.0330 A pulse current sensitive	FIRD-30	on request



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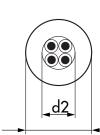


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CORE-BALANCE TRANSFORMER FIR-WS, FIR-WR







d1≥ 1.5xd2

- d1 ... Internal diameter of transformer
- d2 ... External diameter of cable

SCHRACK INFO

- The internal diameter of the transformer d1 must be 1.5x larger than the total diameter d2 of the inserted conductors.
- For load circuits with inrush current . 4 x l_n, magnetic shielding is required.
- For dimensions, see page 712.

Core-balance transformer, round

Maximur	Maximum nominal current		ter
Energy distribution	Motor/capacitor	Transformer type	Maximum wire diameter
(A)	(A)	FIR-W d1(mm)	d2 (mm)
50	50	20	13
150	100	30	20
150	100	35	23
400	200	70	47
600	250	105	70
1200	630	140	93
1800	800	210	140

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
CORE-BALANCE TRANSFORMER, ROUND				
Inner diameter 20 mm	FIR-WS-20	9004840421569		MC900020
Inner diameter 30 mm	FIR-WS-30	9004840421576	688 0-8	MC900030
Inner diameter 35 mm	FIR-W-35	9004840421583	000	MC900035
Inner diameter 70 mm	FIR-W-70	9004840421590	688	MC900070
Inner diameter 105 mm	FIR-W-105	9004840421606	000	MC900105
Inner diameter 140 mm	FIR-W-140	9004840421613	688	MC900140
Inner diameter 210 mm	FIR-W-210	9004840421620		MC900210

CORE-BALANCE TRANSFORMER, RECTANGULAR

70x175 mm (inner opening)	FIR-WR-175	9004840421637	000 0-0	MC910175
115x305 mm (inner opening)	FIR-WR-305	9004840421644		MC910305
150x350 mm (inner opening)	FIR-WR-350	9004840421651		MC910350

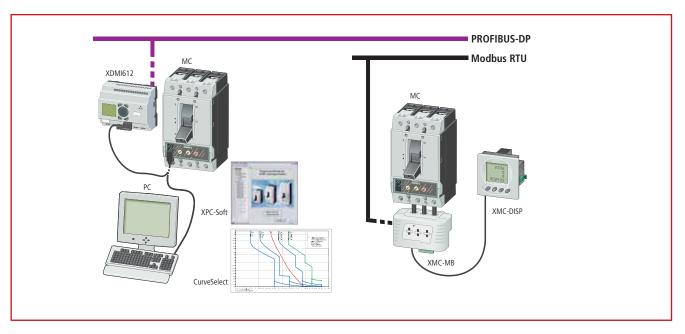
SHIELDING FOR ROUND CORE-BALANCE TRANSFORMER

SI IIEEDING I OK KOOND	COLE DADARE TOTAL OTTAL	
For FIR-W-35	9004840465471	MC900010
For FIR-W-70	9004840465488	MC900011
For FIR-W-105	9004840465495	MC900012
For FIR-W-140	9004840465501	MC900013
For FIR-W-210	9004840465518	MC900014





COMPONENTS FOR ENERGY MEASUREMENT AND COMMUNICATION



SCHRACK INFO

For the compact circuit breakers MC, SCHRACK Technik offers the following components for energy measurement and communications:

- MC-XPC-Soft: Diagnostic software
- CurveSelect: Characteristic curve software for displaying the tripping characteristics
- MC-XMC-MB: Measurement and communication module
- MC-XDMI612: Data management interface with fieldbus connection for PROFIBUS DP and bus-wide diagnostic software

XPC-SOFT

MC circuit breakers with electronic release provide all the necessary diagnostic data via a built-in interface directly to the USB or COM port of a connected PC. If an overload or short-circuit occurs, the MC immediately shuts down the system and documents the events with date and time if a PC is connected. Using XPC-Soft, the user can look at the history and analyse the possible cause.

The software can also output trend curves of the power consumption as MS Excel spreadsheets.

CURVE SELECT

The characteristic curve software that is available free of charge allows a setting-specific display of tripping characteristic curves of several protective devices using the same time and current scales. Evaluating the interaction and selectivity of SCHRACK circuit breakers MC, open circuit breakers MON, motor protection switches BE, miniature circuit breakers and NH fuses is made considerably easier.

DATA MANAGEMENT INTERFACE WITH PROFIBUS-DP INTERFACE

The Data Management Interface MC-XDMI612 with a field bus circuit for PROFIBUS-DP is available for this purpose. The advantages of this solution are:

- A local indication on the built-in display shows all parameters of the circuit breaker
- The DMI can modify the tripping parameters of the switch by software. (Remote configuration)
- A total of 6 inputs and 6 outputs on the DMI can be used for remote control and for any user functions.
- A differentiated tripped message can be signalled locally via the outputs
- A central bus-wide diagnosis according to the FDT standard can be realised via the DMI with the DPV1 module. This requires the software MC-XPC-SOFT.

MEASUREMENT AND COMMUNICATION MODULE

If the task is measuring and optimising of power consumption, the MC-XMC module is the right product. It is designed as a compact unit with built-in current transformers, which determines the power and energy data by phase from the current and voltage measurements. The data is provided on the Modbus RTU. Applications up to 500 A can be served with the XMC; the measurements have high accuracy of 0.5%. Cable, rails or flat connectors may be used. The conductors are not cut, but routed through a tunnel in the device. An optional external door display allows direct local indication of measured values.

DIAGNOSTICS AND PARAMETERISATION SOFTWARE



SCHRACK-INFO

For the diagnosis of circuit breakers with electronic release via a PC and for the parameterisation of the DMI module via a PC. Including necessary connection cable between MC and PC (MC-XPC-CAB) and DMI and PC (DMI-XPC-CAB). Can only be used in combination with circuit breakers with electronic releases.

TECHNICAL DATA

PC software for direct connection to all MC circuit breakers with electronic release or for connection to the DMI module, including connecting cable. Protection parameters: Online display and characteristic representation, export option to characteristics program. Warning and trip signals: Reads diagnostics memory even in de-energised state. Load currents: Display and trend representation. Recording and export feature to MS-Excel for load currents and diagnosis signals. Configuration of the DMI: Motor starter, remote operator, assignment of the input and outputs and displays.

EXAMPLE

Should an overload, short circuit or other fault arise, your system or installation must be switched off immediately so as not to put staff at risk and to prevent damage to property. Once your installation has been switched off, you should address the following questions:

- Where is the fault?
- What can be done about it?
- When can the installation be reconnected to the mains?

The MC circuit breaker provides all the answers. It not only interrupts the current supply in a fraction of a second, but also directly documents which phases are affected at the location of the fault, what chain of events brought about the fault, which settings have been changed and much more.

TIPS & TRICKS

Trip

Intelligent MC circuit breakers record the cause of a trip in their internal memory. The memory s detailed information about ten events, which allows you to rapidly get to the root of the fault based on specific information. The information is displayed clearly and concisely with the MC-XPCSOFT application. The file can be d, printed out and emailed to enable subsequent analysis of the fault. The MC event log clears up inconsistencies and transmission errors over the entire lifecycle of the circuit breaker and low-voltage installation. Even replaced switches can be traced based on their internal serial number. MC-XPC-SOFT supports 9 languages for world-wide use.

MC protection settings

By using selectively staggered MCs, the power interruption is limited to the areas actually affected by the fault. In this way, the impact and cost of any fault are minimised without compromising on security. MC-XPC-SOFT is able to precisely show the active tripping characteristic and the planned selectivity using the pre-selected switch setting and tripping characteristic. This means you can choose the best-possible protection parameters in direct comparison with parent and child switching devices, even at implementation time. Any faults can be recognised immediately thanks to visual comparison between the different protection settings. This is also possible for visualising adjustments such as those which are possible any time in low-voltage distribution boards. Even adjustment to a predefined motor characteristic is possible using a graphics-based optimisation of the protection features to the inrush, starting and operating current of the motor.

Documenting the current requirement

MC does not only supply useful data in the event of a current interruption: In regular mode, the circuit breaker can also be used to generate load analyses. To do so, simply connect the MP to a PC - MCXPC-SOFT will immediately begin documenting the RMS values of all phases. MC can be used to document the development of the current requirement in detail. For example, you can record the precise load development for an entire working week. Afterwards, you can further process and compare this data using the log function in MS Excel® file format. In this way, you can get a good overview of insightful current developments. In this way, you can improve the efficiency of your production processes and develop your power distribution system with regard to the future. This will soon make the MC an indispensible part of your Resource Management.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Diagnostics and parameterisation software	MC-XPC-KIT			on request





DIAGNOSIS AND COMMUNICATION

DATA MANAGEMENT INTERFACE (DMI MODULE)



SCHRACK-INFO

PC software for direct connection to all MC circuit breakers with electronic releases. Access to diagnostics and operational data, recorded current values, motor starter function, parameterisation and control of circuit breakers with electronic release. A vast range of remote diagnosis capabilities and remote operation via Fieldbus in combination with a Fieldbus interface. Includes connecting cable between MC and DMI (length: 2 m) for MC2.E, MC3.E and MC4.E. For dimensions, see page 709.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Data Management Interface	MC-XDMI612			on request

PROFIBUS MODULE DPV1



SCHRACK-INFO

- Fieldbus interface to PROFIBUS DPV1 slave
- Connected to the DMI module and has the same contour appearance.
- Addressable 1 to 126
- For dimensions, see page 709.

TECHNICAL DATA

Connection to the DMI module for transfer of the phase currents, parameter, status and diagnostics data as well as the position of the circuit-breaker (wiring of the auxiliary contact to the DMI inputs). DMI configuration via field bus. Actuation of the remote operator (via DMI output wiring). Detection of digital inputs and actuation of the outputs via the Fieldbus. Can be operated with class 1 and class 2 masters.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Profibus module	MC-XDMI-DPV1			on request

MEASUREMENT AND COMMUNICATION MODULE XMC-MB



SCHRACK-INFO

- To measure current, voltage, power and energy
- The module has three built-in current transformers and three voltage taps that provide contact by self-tapping screws by piercing through the cable insulation.
- Power supply 24 VDC
- 2 SO pulse outputs
- Modbus interface (slave)
- The total energy consumption value is d permanently on the module
- The display unit DISP MC-XMC can be connected for local display of measurement data
- Expandable with max. two additional groups of MC-XMC

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Measurement and communication module	MC-XMC-MB			on request

DIGITAL DISPLAY UNIT XMC-DISP



SCHRACK-INFO

- For door mount (connected as a local display)
- For all measurement and communication modules with Modbus interface
- Phase-related indication of currents, voltages, power and energy values
- Dimensions: 96 x 96 mm

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Digital display unit	MC-XMC-DISP			on request

SWITCHED-MODE POWER SUPPLY FOR DMI MODULE



SCHRACK-INFO

- For DMI module
- Rated input voltage: 50/60 Hz 115/230 V AC
- Rated output voltage (residual ripple): 24 V DC (± 3%)
- Rated output current: 1.25 A
- Identical contours with DMI module
- For dimensions, see page 709.

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
Switched-mode power supply 100-240 V AC/24 V DC 1.25 A	EASY400-POW	9004840199178		EA212319

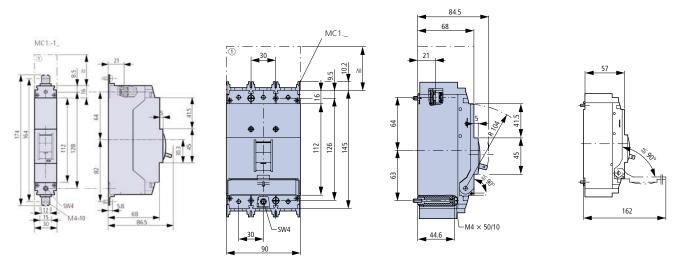


I KNOW WHERE TO FIND IT!

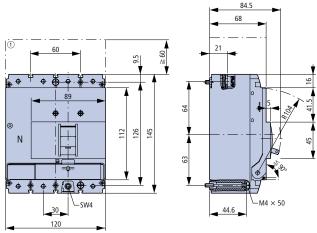
WITH THE SCHRACK TECHNIK LIVE-PHONE APP

- Access technical product information at any time and from everywhere
- See availability and price immediately
- Order desired products easily

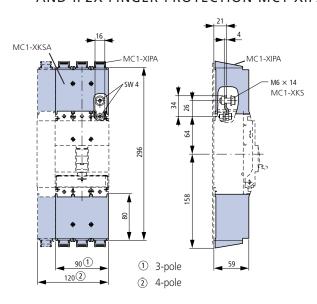
- FRAME SIZE 1: BASIC UNITS AND ACCESSORIES
- CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 1-POLE AND 3-POLE TYPES MC1B, MC1B1-1, MC1C, MC1N, MC1H, MC1-PN, MC1-N



- ① Blow-out area, minimum clearance to other parts \geq 60 mm
- CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 4-POLE TYPES MC1B-4, MC1C-4, MC1N-4, MC1H-4, MC1-PN-4, MC1-N-4

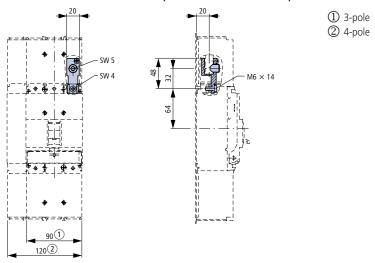


- ① Blow-out area, minimum clearance to other parts \geq 60 mm
- COVERS MC1-XKSA, MC1-4-XKSA FOR SCREW CONNECTION MC1-XKS, MC1-4-XKS AND IP2X FINGER-PROTECTION MC1-XIPA, MC1-4-XIPA

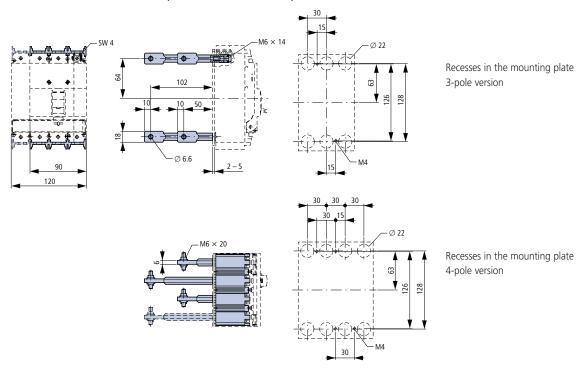




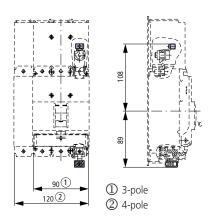
■ TUNNEL TERMINAL, TYPES MC1-XKA, MC1-4-XKA



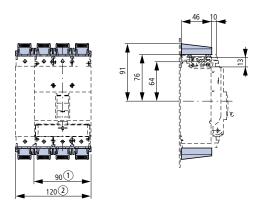
■ REAR CONNECTION, TYPES MC1-XKR, MC1-4-XKR



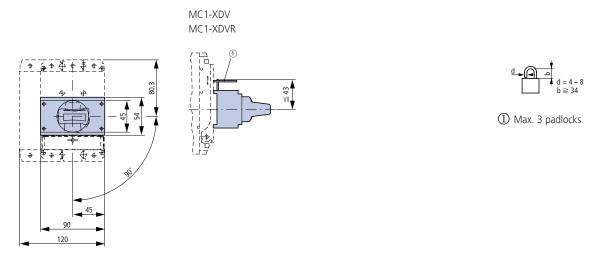
CONTROL LINE TERMINAL TYPE MC1-XSTK (-XSTS)



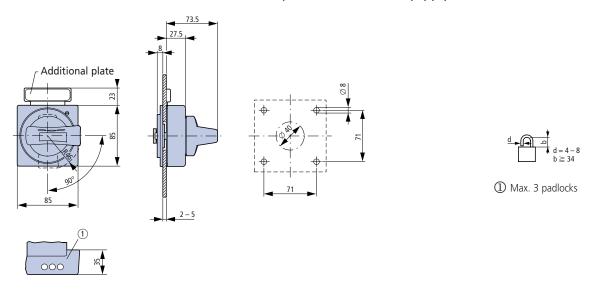
■ IP2X FINGER PROTECTION TYPES MC1-XIPK, MC1-4-XIPK



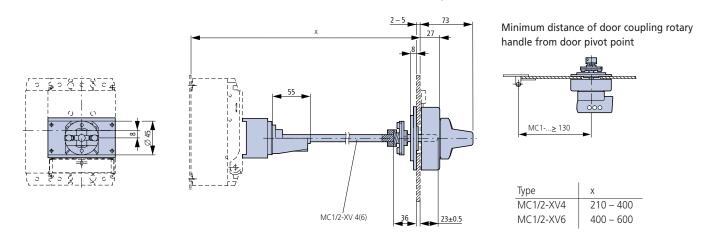
■ ROTARY OPERATOR, ROTARY HANDLE ON SWITCH, TYPES MC1-XDV, MC1-XDVR



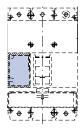
■ DOOR COUPLING ROTARY HANDLE, TYPE MC1-XTVD(V)(R)



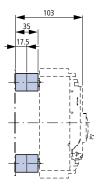
■ DOOR COUPLING ROTARY HANDLE WITH EXTENSION AXIS, TYPES MC1/2-XV4...6



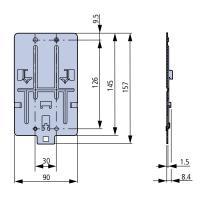
■ INSTALLATION POSITION FOR UNDERVOLTAGE RELEASE MC1-XUL(XUVL), SHUNT RELEASE MC1-XAL, EARLY-MAKE AUXILIARY SWITCH MC1-XHIVL AND UNDERVOLTAGE RELEASE WITH 2 EARLY-MAKE CONTACTS MC1-XUHIVL



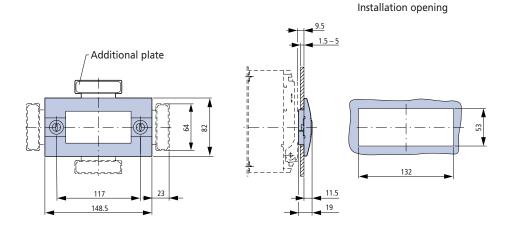
SPACER TYPE MC1/2-XAB



CLIP PLATE TYPE MC1-XC35



DOOR SEALING FRAME, TYPE MC1-XBR

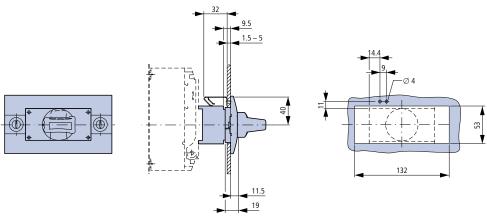




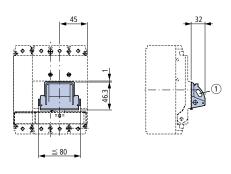
FRAME SIZE 1: ACCESSORIES

■ ROTARY HANDLE ON SWITCH WITH DOOR LOCK TYPE MC1-XDTV(R)

Installation opening



■ TOGGLE LEVER LOCKING DEVICE, TYPE MC-XKAV

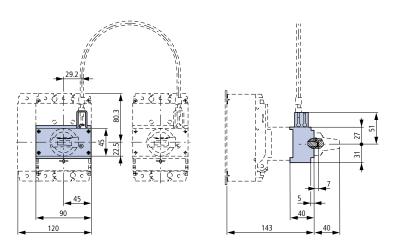




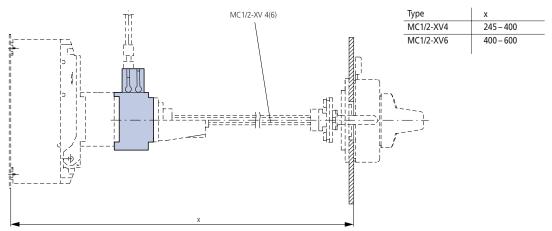
① Max. 3 padlocks

■ MECHANICAL INTERLOCK, TYPES MC1-XMV, MC1-XDV(R), MC1-XMV, MC1-XTVD(V)(R)

MC1-XMV + MC1-XDV(R)



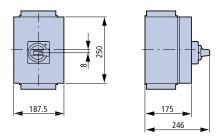
MC1-XMV + MC1-XTVD(V)(R)



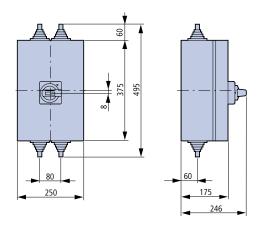
FRAME SIZE 1: ACCESSORIES

■ INSULATED ENCLOSURE, TYPES MC1-XCI23-TVD (R), MC1-XCI43-TVD (R), MC1-XCI43/2-TVD (R)

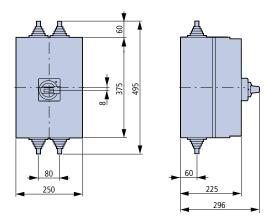
MC1-XCI23-TVD/TVDR



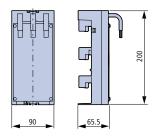
MC1-XCI43-TVD/TVDR



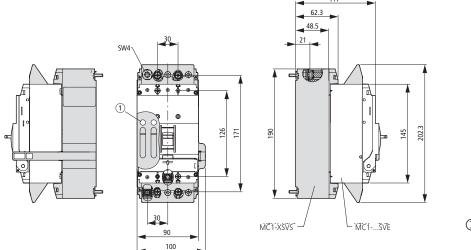
MC1-XCI43/2-TVD/TVDR



■ COMPONENT ADAPTER, TYPE 32570



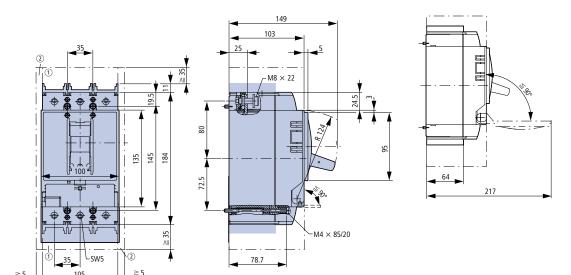
■ SOCKET, TYPES MC1-XSVS WITH MC1-...-SVE, MC1-N-...-SVE



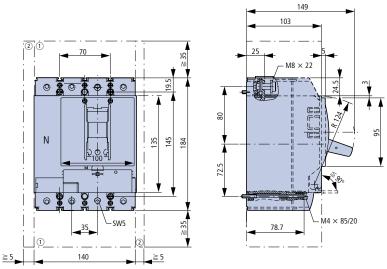


① Max. 2 padlocks

CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 3-POLE TYPES MC2B, MC2C, MC2N, MC2H, MC2-PN, MC2-N



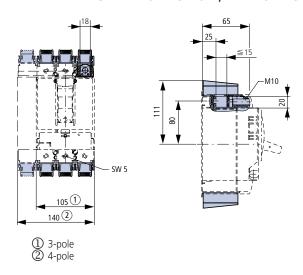
- ① Blow-out area, minimum clearance to other parts \geq 35 mm
- ② Minimum clearance to adjacent parts ≥ 5 mm
- CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 4-POLE TYPES MC2B-4, MC2N-4, MC2H-4, MC2-PN-4, MC2-N-4, MC2-N-4-...S1-DC



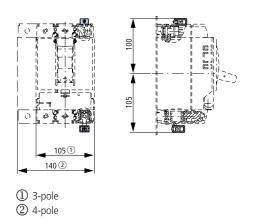
- ① Blow-out area, minimum clearance to other parts \geq 35 mm
- ② Minimum clearance to adjacent parts ≥ 5 mm

■ FRAME SIZE 2: ACCESSORIES

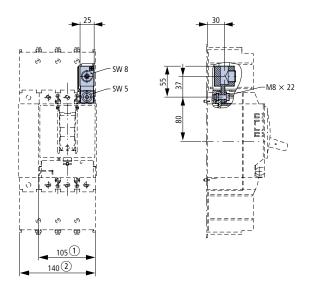
■ BOX TERMINAL, TYPES MC2-...XKC, MC2-4-...XKC / IP2X FINGER PROTECTION, TYPES MC2-XIPK, MC2-4-XIPK



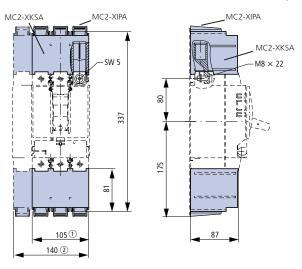
CONTROL LINE TERMINAL TYPES MC2-XSTS, MC-XSTK



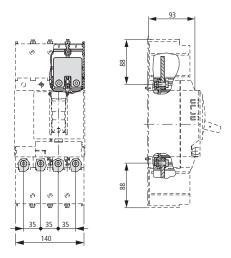
■ TUNNEL TERMINAL TYPES MC2-XKA, MC2-4-XKA



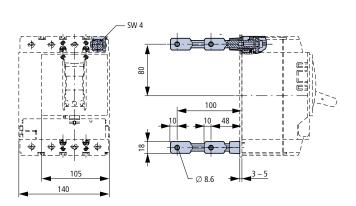
COVER MC2 XKSA, MC2-4-XKSA FOR CABLE LUG MC2-XKS AND IP2X FINGER PROTECTION MC2-XIPA, MC2-4-XIPA

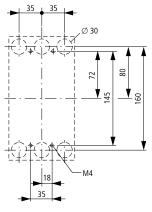


■ JUMPER KIT, TYPE MC2-4-XKV2P

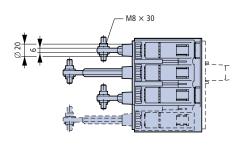


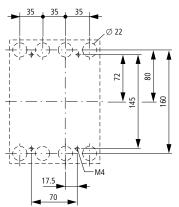
■ REAR CONNECTION, TYPES MC2-XKR, MC2-4-XKR





Recesses in the mounting plate 3-pole version

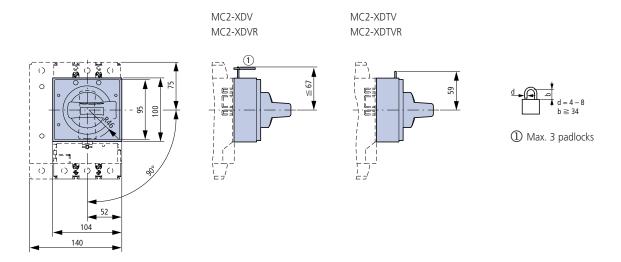




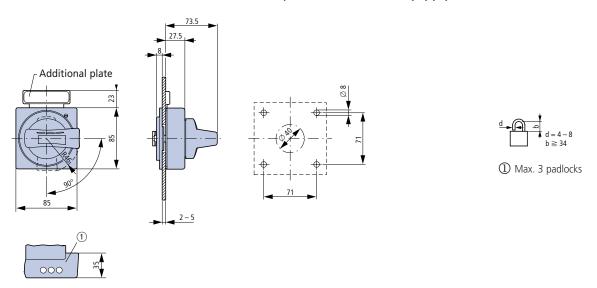
Recesses in the mounting plate 4-pole version

FRAME SIZE 2: ACCESSORIES

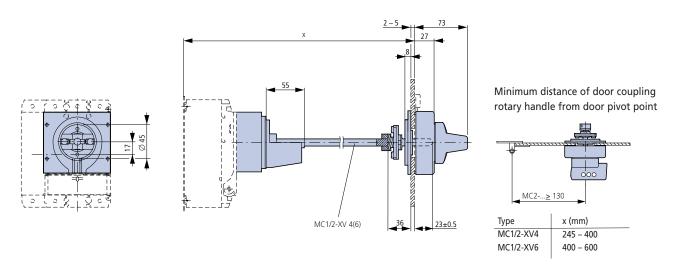
■ ROTARY OPERATOR, ROTARY HANDLE ON SWITCH, TYPES MC2-XDV, MC2-XDVR, MC2-XDTV, MC2-XDTVR



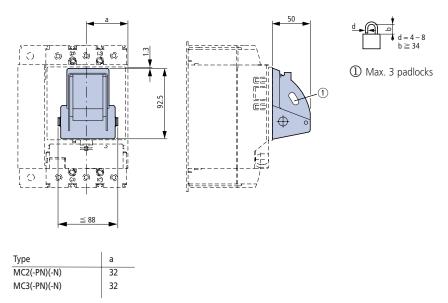
■ DOOR COUPLING ROTARY HANDLE, TYPE MC2-XTVD(V)(R)



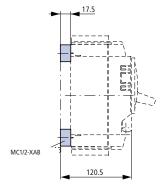
■ DOOR COUPLING ROTARY HANDLE WITH EXTENSION SHAFT, TYPES MC2-XTVD(V)(R), MC1/2-XV4...6



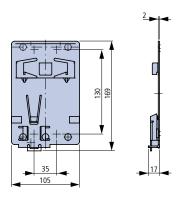
■ TOGGLE LEVER LOCKING DEVICE, TYPE MC2/3-XKAV



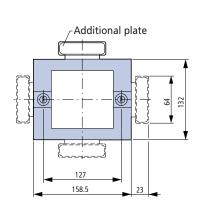
SPACER TYPE MC1/2-XAB

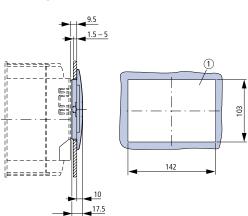


CLIP PLATE TYPE MC2-XC75



DOOR SEALING FRAME, TYPE MC2-XBR



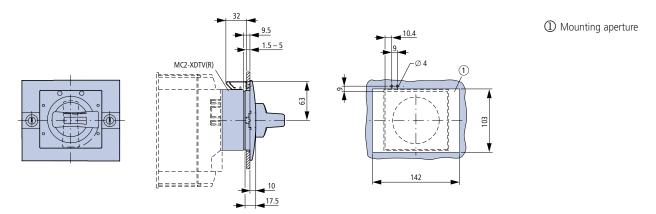


① Mounting aperture

Page

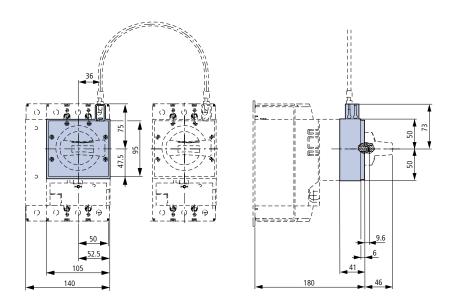
688

■ ROTARY HANDLE ON SWITCH WITH DOOR LOCK, TYPE MC2-XDTV(R)

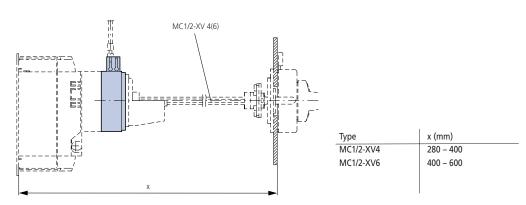


MECHANICAL INTERLOCK, TYPES MC2 XMV WITH ROTARY HANDLES MC2-XD/MC2-XTVD(V)(R)

MC2-XMV + MC2-XD

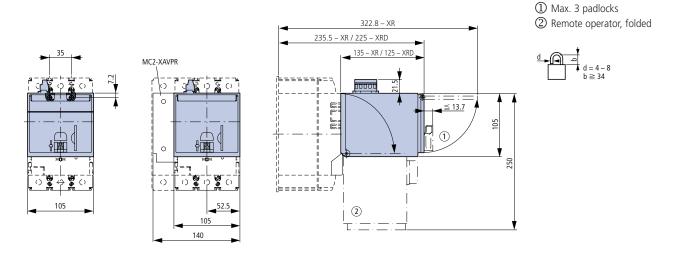


MC2-XMV + MC2XTVD(V)(R)

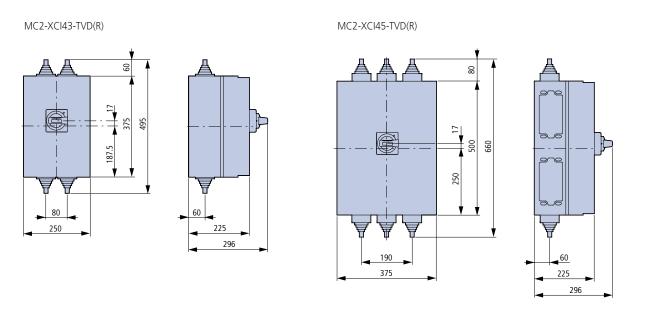




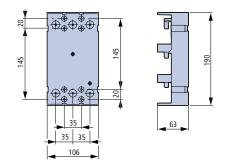
■ REMOTE OPERATOR, TYPE MC2-XR... / -XRD



■ INSULATED ENCLOSURE, TYPES MC2-XCI43-TVD(R), MC2-XCI45-TVD(R)

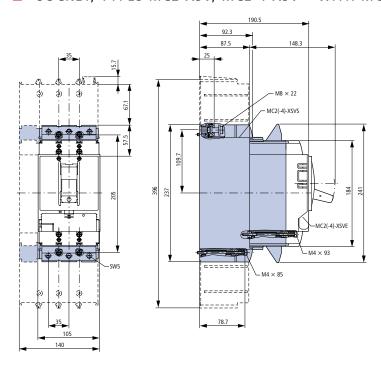


■ COMPONENT ADAPTER, TYPE 32140

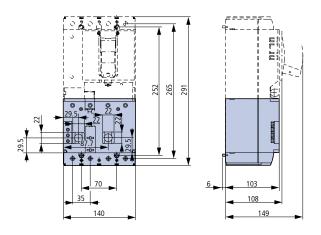


■ FRAME SIZE 2: ACCESSORIES

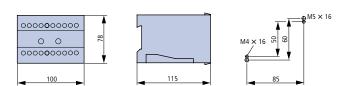
■ SOCKET, TYPES MC2-XSV, MC2-4-XSV – WITH MC2(-4)-....-SVE



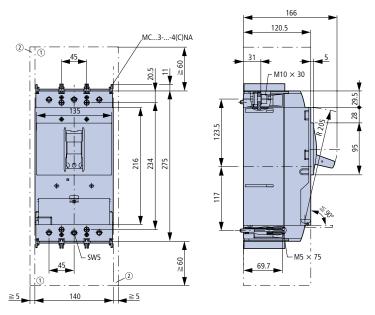
■ RESIDUAL-CURRENT RELEASE, TYPES MC2-XFI..., MC2-4-XFI...

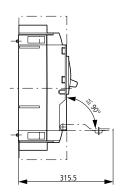


■ UNDERVOLTAGE RELEASE, OFF-DELAY, TYPE MC-UVU

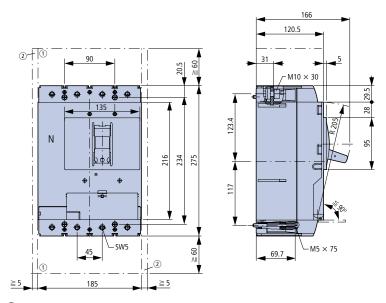


CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 3-POLE TYPES MC3C, MC3N, MC3H, MC3-PN, MC3-N



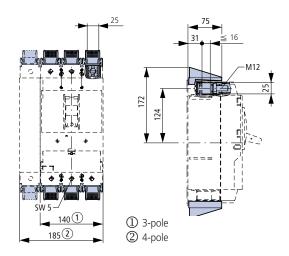


- ① Blow-out area, minimum clearance to other parts \geq 60 mm
- ② Minimum clearance to adjacent parts ≥ 5 mm
- CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 4-POLE TYPES MC3N-4, MC3H-4, MC3-PN-4, MC3-N-4, MC3-N-4-...-S1-DC

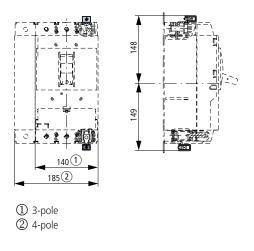


- ① Blow-out area, minimum clearance to other parts \geq 60 mm
- ② Minimum clearance to adjacent parts \geq 5 mm

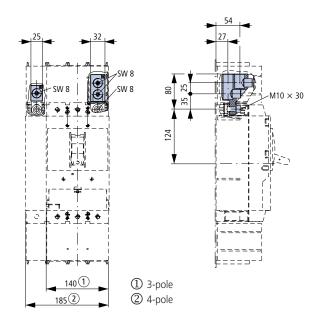
- **■** FRAME SIZE 3: ACCESSORIES
- BOX TERMINAL, TYPES MC3-XKC, MC3-4-XKC / IP2X FINGER PROTECTION, TYPES MC3-XIPK, MC3-4-XIPK



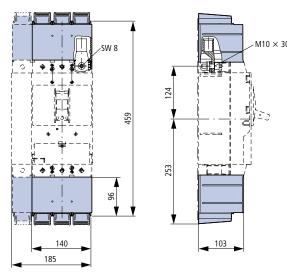
CONTROL LINE TERMINAL TYPES MC3/4-XSTS, MC-XSTK



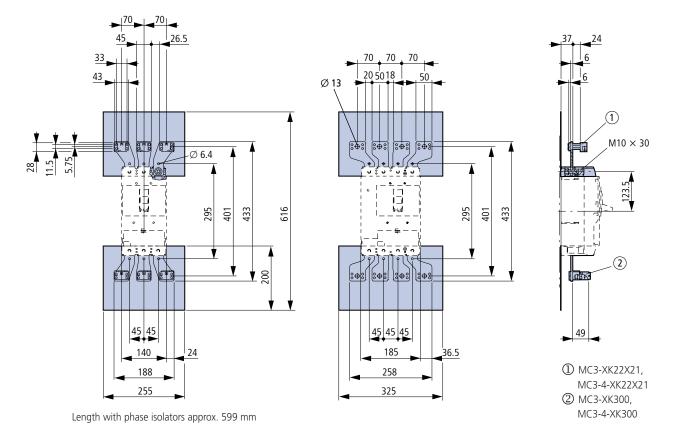
TUNNEL TERMINAL TYPES MC3-4-XKA1...2, MC3-XKA1...2



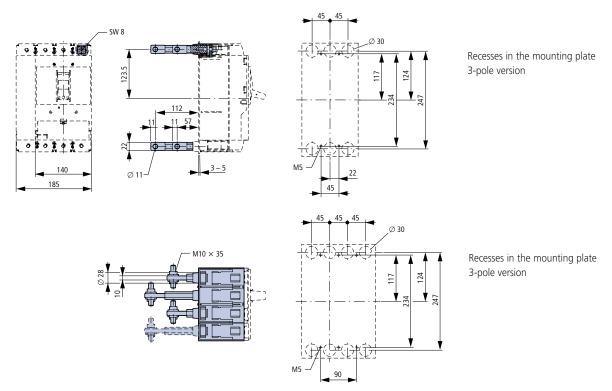
COVERS MC3(-4)-XKSA FOR CABLE LUG MC3-XKS185 AND IP2X FINGER PROTECTION MC3(-4)-XIPA



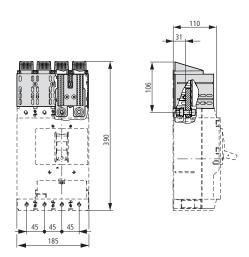
CONNECTION WIDTH EXTENSION, TYPES MC3-XKV70, MC3-4-XKV70 / CONNECTION TERMINALS, TYPES MC3-XK22X21, MC3-4-XK22X21, MC3-XK300, MC3-4-XK300



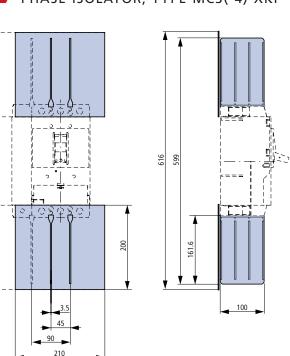
■ REAR CONNECTION, TYPES MC3-XKR, MC3-4-XKR



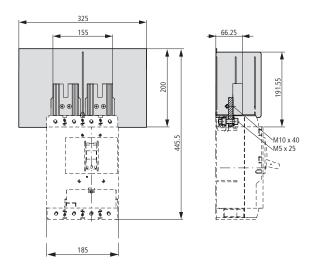
JUMPER KITS TYPES MC3-4-XKV2P, MC3-4-XKV2P-K



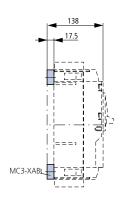
■ PHASE ISOLATOR, TYPE MC3(-4)-XKP

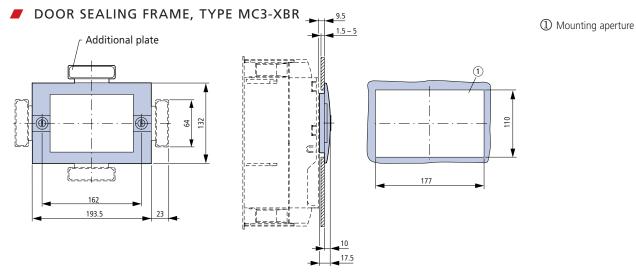


JUMPER KITS TYPES MC3-4-XKVI2P, MC3-4-XKVI2P-K



■ SPACER TYPE MC3/4-XAB

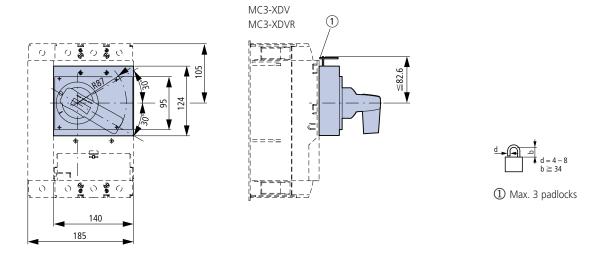




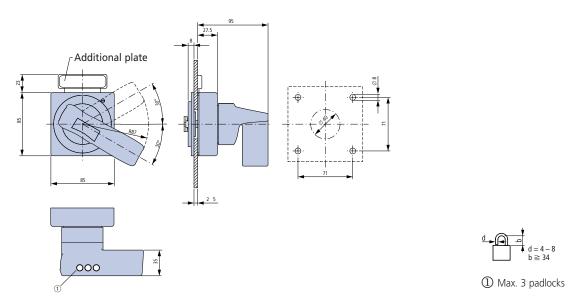


FRAME SIZE 3: ACCESSORIES

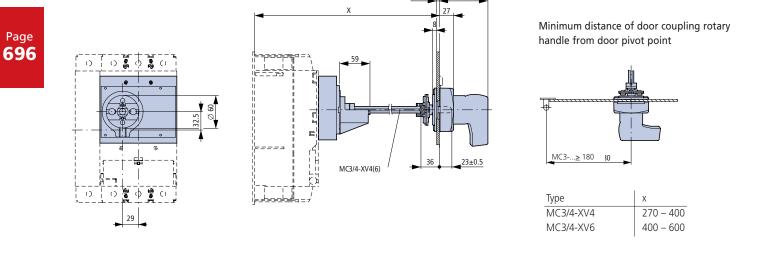
■ ROTARY DRIVE, ROTARY HANDLE ON SWITCH, TYPES MC3-XDV, MC3-XDVR



DOOR COUPLING ROTARY HANDLE, TYPE MC3-XTVD(V)(R)...



■ DOOR COUPLING ROTARY HANDLE WITH EXTENSION SHAFT, TYPES MC3-XTVD(V)(R), MC3/4-XV4...6

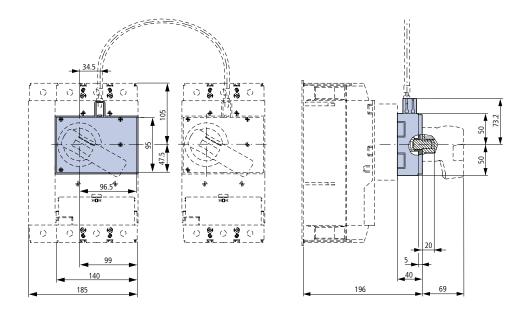


Page

FRAME SIZE 3: ACCESSORIES

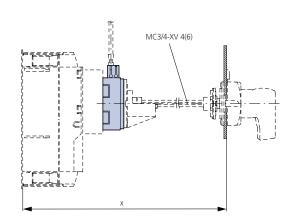
■ MECHANICAL INTERLOCK, TYPE MC3-XMV WITH ROTARY HANDLE MC3-XD(R)

MC3-XMV + MC3-XDV(R)



■ MECHANICAL INTERLOCK, TYPE MC3 XMV WITH DOOR COUPLING ROTARY HANDLE MC3-XTVD(V)(R)

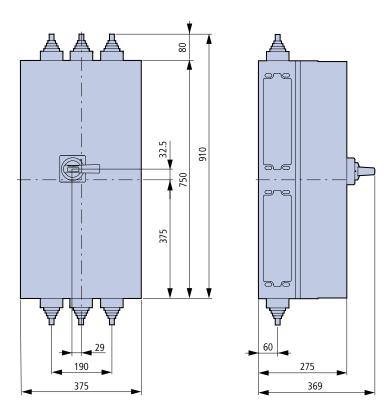
MC3-XMV + MC3-XTVD(V)(R)



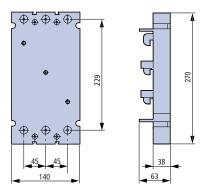
Туре	x (mm)
MC3/4-XV4	305 – 400
MC3/4-XV6	400 – 600

■ FRAME SIZE 3: ACCESSORIES

■ INSULATED ENCLOSURE, TYPE MC3-XCI48-TVD



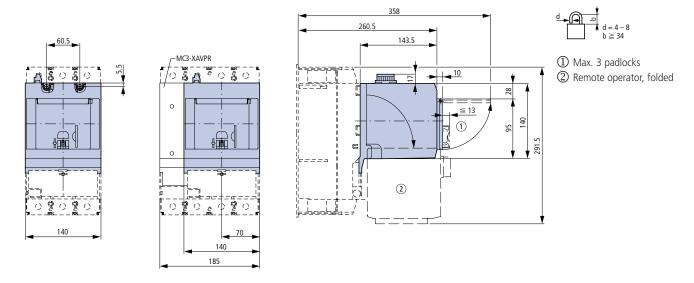
■ COMPONENT ADAPTER, TYPE 32170



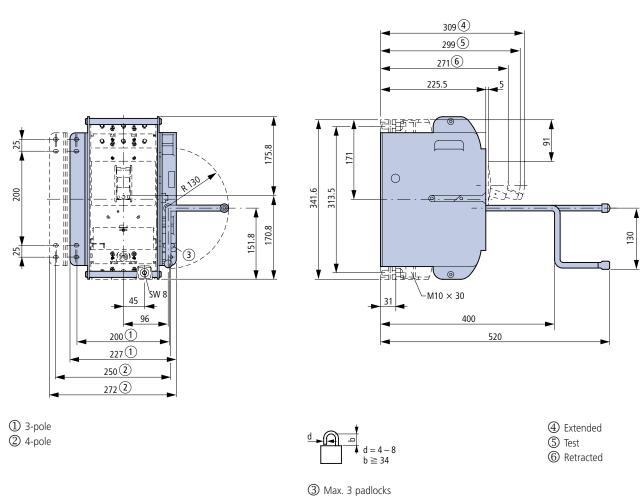
Page **698**

■ FRAME SIZE 3: ACCESSORIES

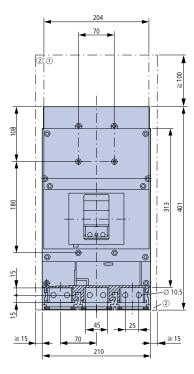
■ REMOTE OPERATOR, TYPE MC3-XR...



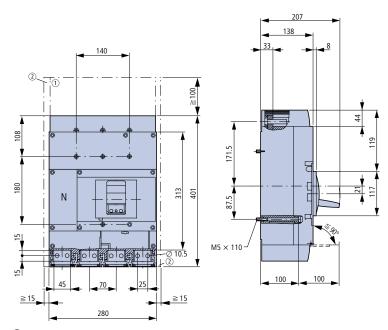
■ WITHDRAWABLE UNIT WITH CONTROL CIRCUIT PLUG UNIT TYPE MC3-XAV



- FRAME SIZE 4: BASIC UNITS
- CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 3-POLE TYPES MC4N, MC4H, MC4-PN, MC4-N



- ① Blow-out area, minimum clearance to other parts \geq 100 mm to 690 V; \geq 200 mm to 1000 V
- ② Minimum clearance to adjacent parts ≥ 15 mm
- CIRCUIT-BREAKER / LOAD-BREAK SWITCH, 4-POLE TYPES MC4N-4, MC4H-4, MC4-PN-4, MC4-N-4, MC4-N-4-...S1-DC

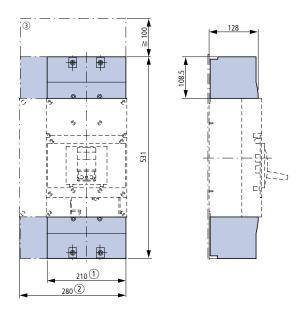


- ① Blow-out area, minimum clearance to other parts ≥ 100 mm
- ② Minimum clearance to adjacent parts ≥ 15 mm

SCHRACK

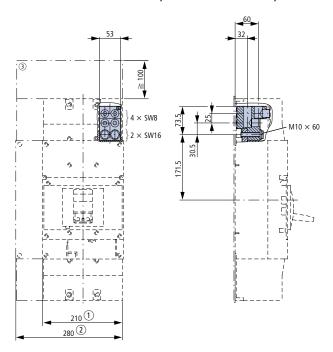
■ FRAME SIZE 4: ACCESSORIES

COVER PLATE, TYPES MC4-XKSA, MC4-4-XKSA



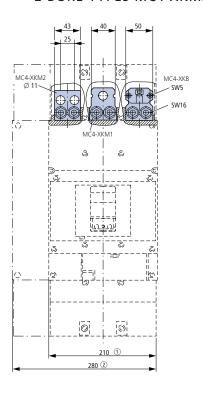
- ① 3-pole ② 4-pole
- ③ Clearance to conductive parts \geq 100 mm to 690 V; \geq 200 mm at 1000V

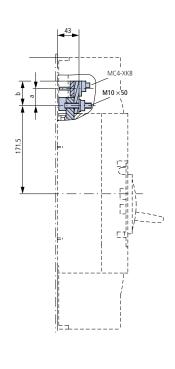
■ TUNNEL TERMINAL, TYPES MC4-XKA, MC4-4-XKA



FRAME SIZE 4: ACCESSORIES

■ SCREW CONNECTION MODULE PLATE 1 BORE, TYPES MC4-XKM1, MC4-4-XKM1,
2 BORE TYPES MC4-XKM2, MC4-4-XKM2 / RIBBON CABLE, TYPES MC4-XKB, MC4-4-XKB

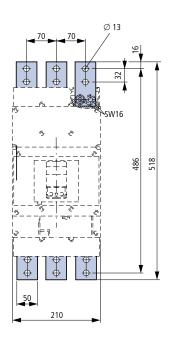


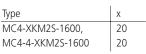


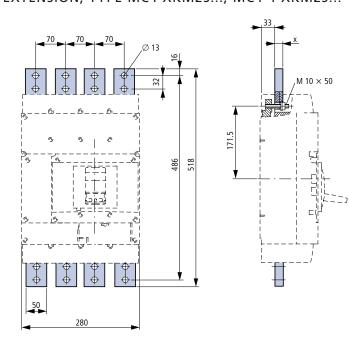
Туре	a	b
MC4(-4)-XKM1	36	47
MC4(-4)-XKM2	32	40
MC4(-4)-XKB	-	47

- ① 3-pole
- 2 4-pole
- 3 Clearance to conductive parts
 - ≥ 100 mm to 690 V;
 - ≥ 200 mm at 1,000 V

■ CONNECTION WIDTH EXTENSION, TYPE MC4-XKM2S..., MC4-4-XKM2S...

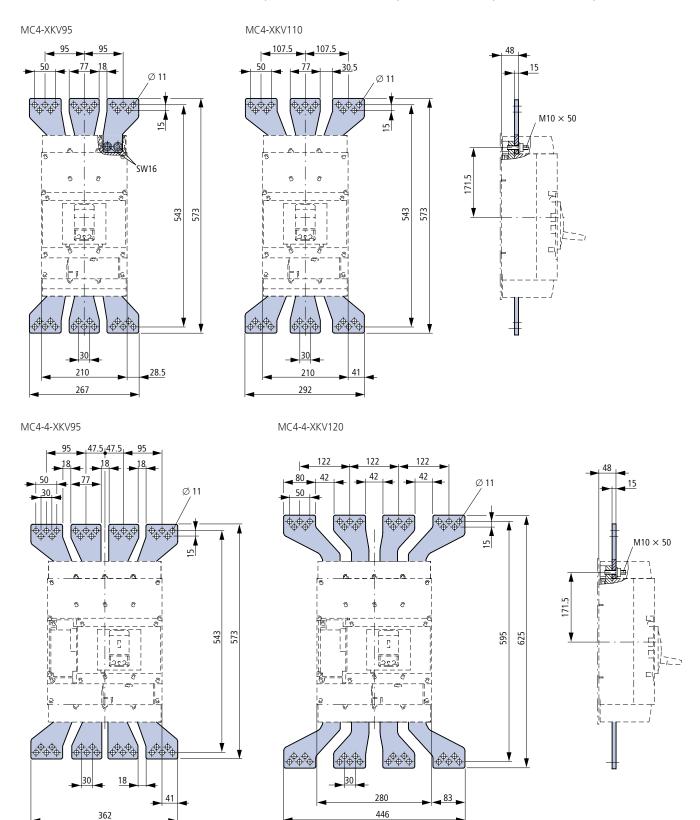






■ FRAME SIZE 4: ACCESSORIES

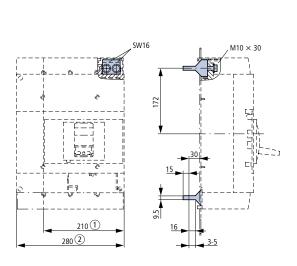
■ CONNECTION WIDTH EXTENSION, TYPES MC4-XKV95, MC4-XKV110, MC4-4-XKV95, MC4-4-XKV120



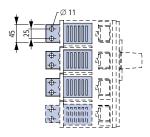
362

FRAME SIZE 4: ACCESSORIES

■ REAR CONNECTION, TYPES MC4-XKR, MC4-4-XKR



Recesses in the mounting plate 4-pole version



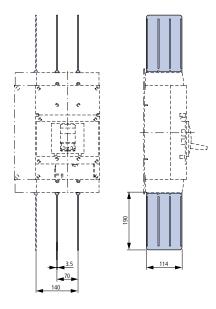
208 ①

Recesses in the mounting plate 3-pole version

Rear-side connection also possible with 90° rotation.

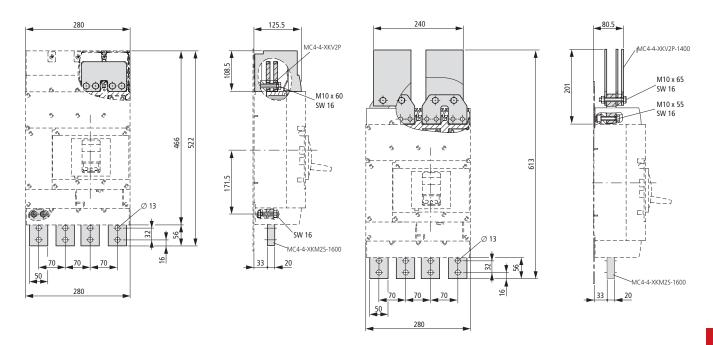
- ① 3-pole
- 2 4-pole

■ PHASE ISOLATORS, TYPES MC4-XKP, MC4-4-XKP



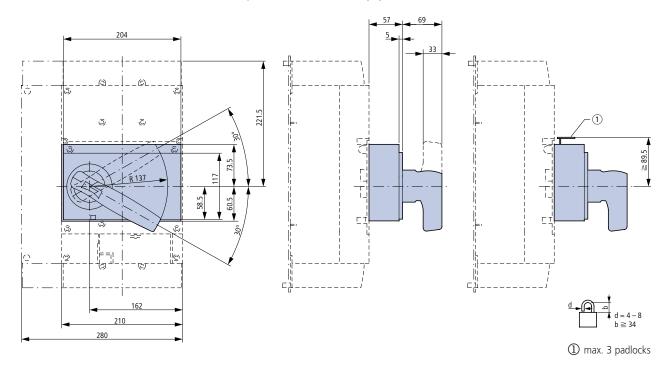
■ JUMPER KITS, TYPE MC4-4-XKV2P

■ JUMPER KITS, TYPE MC4-4-XKV2P-1400

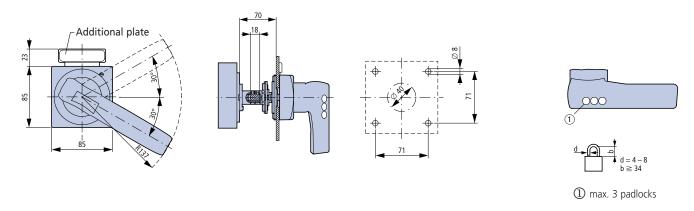


FRAME SIZE 4: ACCESSORIES

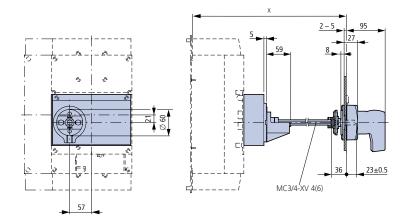
■ ROTARY HANDLE ON SWITCH, TYPE MC4-XDV(R)



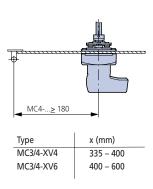
■ DOOR COUPLING ROTARY HANDLE, TYPE MC4-XTVD(V)(R)...



■ DOOR COUPLING ROTARY HANDLE WITH EXTENSION SHAFT, TYPES MC4-XTVD(V)(R), MC3/4-XV4(6)



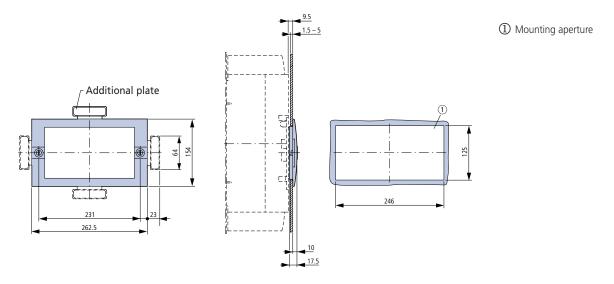
Minimum distance of door coupling rotary handle from door pivot point





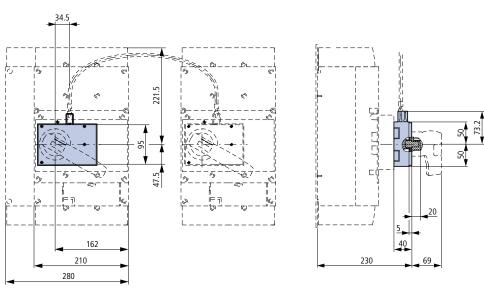
FRAME SIZE 4: ACCESSORIES

DOOR SEALING FRAME, TYPE MC4-XBR

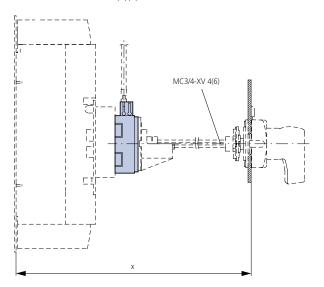


■ MECHANICAL INTERLOCK, TYPE MC4-XMV WITH ROTARY HANDLES MC4-XD(R)/MC4-XTVD(V)(R)

MC4-XMV + MC4-XDV(R)

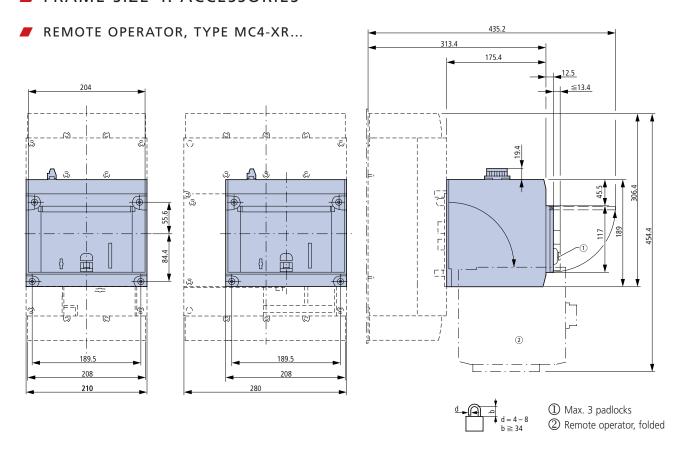


MC4-XMV + MC4-XTVD(V)(R)

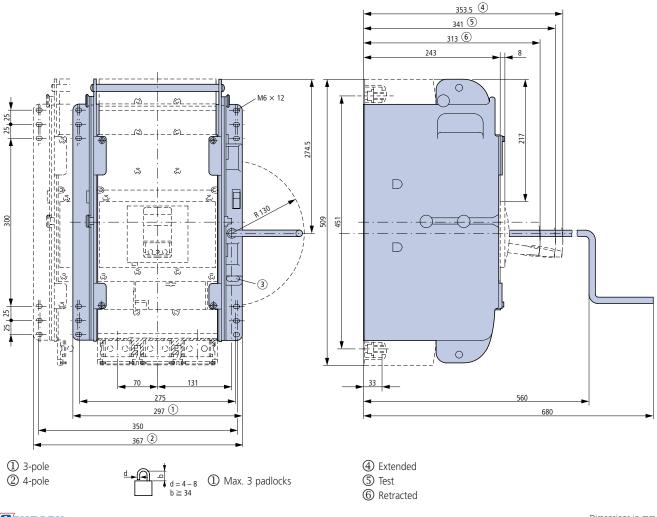


Туре	x (mm)
MC3/4-XV4	335 – 400
MC3/4-XV6	400 – 600

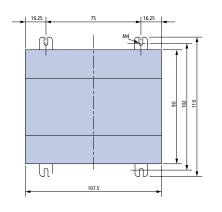
FRAME SIZE 4: ACCESSORIES

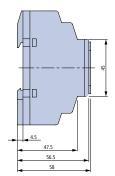


■ WITHDRAWABLE UNIT WITH CONTROL CIRCUIT PLUG UNIT TYPE MC4-XAV



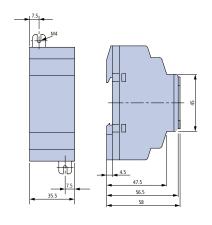
■ DATA MANAGEMENT INTERFACE (DMI MODULE)

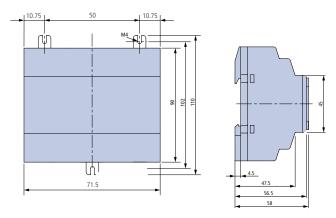




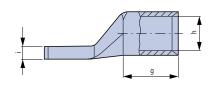
PROFIBUS MODULE DPV1

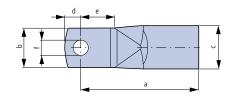
SWITCHED-MODE POWER SUPPLY EASY400-POW





■ PIPE CABLE LUGS MC.-XKS...





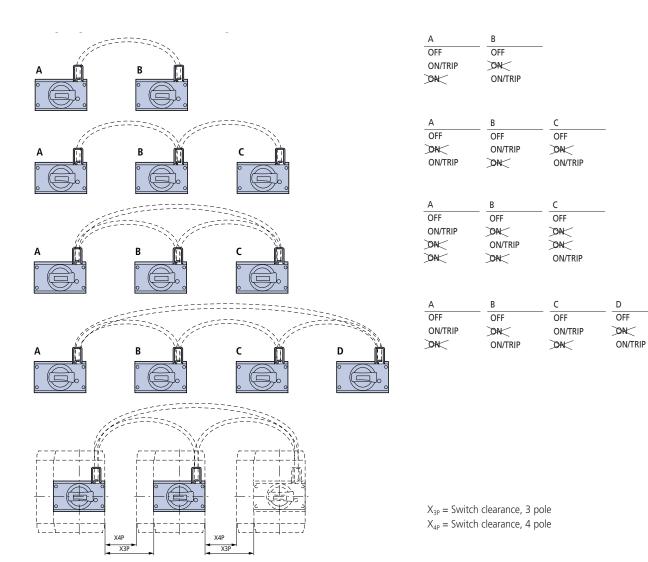
To press in the cable lugs, the pressing tool K22, HK60/22 or EK22 from Klauke is required with the following inserts: $\frac{1}{2} \frac{1}{2} \frac{1}{$

R22/95 for 95 mm² R22/120 for 120 mm² R22/150 for 150 mm² R22/185 for 185 mm² R22/240 for 240 mm²

Dimensions

Cable lug types	Usable for	Nominal cross-section	Terminal bolts	Dimensio in mm	ns							
		mm²	≤	a	b	c	d	e	f	g	h	ļi .
MC2-XKS95	MC2	MC2	M8	53+2	23±0,5	18±0,2	10±1	19	8,5	25	13,5	4,4
MC2-XKS120	MC2	MC2	M8	56+2	23±0,5	19,5±0,2	10±1	19	8,5	26	15	4,4
MC2-XKS150	MC2	MC2	M8	61+2	23±0,5	21±0,2	10 <u>+</u> 1	19	8,5	30	16,5	4,4
MC2-XKS185	MC2	MC2	M8	65 <u>±</u> 1,5	22 <u>±</u> 1	24±0,36	9+1	19 ^{+2,5}	8,5 ^{+0,05}	60±2	19±0,4	7
MC3-XKS185	MC3, MC4	MC3, MC4	M10	65	24,5	24	11,5	18	10,5	30	19	7,0
MC3-XKS240	MC3, MC4	MC3, MC4	M10	72	31	26	11,5	19	10,5	35	21	6,0

INTERLOCKING VERSIONS AND COMBINATION OPTIONS TYPES MC, MC...-XBZ-...



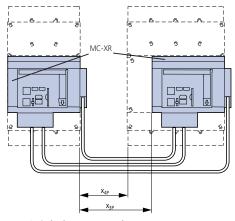
MC-XBZ2	25					right switch				
Max. switch clearance		MC1		MC2		MC3		MC4		
		X3P	X4P	X3P	X4P	X3P	X4P	X3P	X4P	
left switch	1	mm	mm	mm	mm	mm	mm	mm	mm	
MC1	3/4-pole	135	105	120	85	135	90	125	80	
MC2	3/4-pole	135	105	120	85	135	90	125	80	
MC3	3/4-pole	90	75	75	35	85	40	80	45	
MC4	3/4-nole	50	35	40	15	25		15		

MC-XBZ6	00					right switch				
Max. switch clearance		MC1		MC2		MC3		MC4		
		X3P	X4P	X3P	X4P	X3P	X4P	X3P	X4P	
left switch		mm	mm	mm	mm	mm	mm	mm	mm	
MC1	3/4-pole	510	480	495	460	510	465	475	405	
MC2	3/4-pole	510	480	495	460	510	465	475	405	
MC3	3/4-pole	460	430	450	410	460	415	460	390	
MC4	3/4-pole	400	370	380	340	400	375	390	320	

MC-XBZ1	000					right swit	right switch				
Max. swi	tch clearance	MC1		MC2		MC3		MC4			
		X3P	X4P	X3P	X4P	X3P	X4P	X3P	X4P		
left switch	1	mm	mm	mm	mm	mm	mm	mm	mm		
MC1	3/4-pole	910	880	895	860	910	865	865	795		
MC2	3/4-pole	910	880	895	860	910	865	865	795		
MC3	3/4-pole	820	790	850	810	860	815	860	790		
MC4	3/4-pole	750	720	730	700	800	775	790	720		

■ MECHANICAL INTERLOCK FOR REMOTE OPERATOR

TYPE MC...-XMVR(L)



 X_{3P} = Switch clearance, 3 pole X_{4P} = Switch clearance, 4 pole

Mechanical interlock XMVR (Side-by-side mounting)

MCXMV	'R								
Max. swit	ch clearance		right switch						
		MC2		MC3		MC4			
		ХЗр	X4p	ХЗр	X4p	ХЗр	X4p		
left swit	ch	mm	mm	mm	mm	mm	mm		
MC2	3/4-pole	130	95	95	50	-	-		
MC3	3/4-pole	-	_	135	90	155	85		
MC4	3/4-pole	-	ı	-	-	120	50		

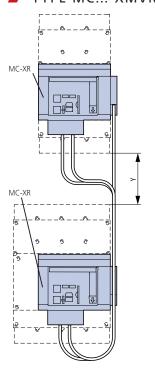
X = max. switch clearance

Mechanical interlock XMVRL (Mounting in adjacent control cabinet sections)

MCXMV	/RL								
Max. swit	tch clearance		right switch						
		MC2		MC3		MC4			
		ХЗр	X4p	ХЗр	X4p	ХЗр	X4p		
left swit	ch	mm	mm	mm	mm	mm	mm		
MC2	3/4-pole	350	315	420	385	-	-		
MC3	3/4-pole	-	-	400	365	460	390		
MC4	3/4-pole	_	-	-	-	420	350		

X = max. switch clearance

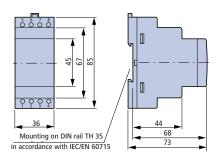
TYPE MC...-XMVRL



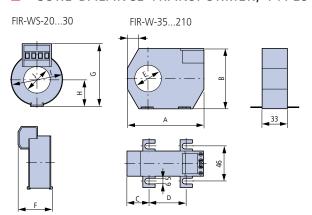
Mechanical interlock XMVRL (mounting on top of one another)

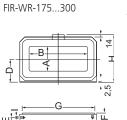
MCXMV	/RL			
Max. swit	tch clearance	Switch		
		upper		
		MC2	MC3	MC3
		3/4-pole	3/4-pole	3/4-pole
		Υ	Y	Y
Switch le	ower	mm	mm	mm
MC2	3/4-pole	220	225	-
MC3	3/4-pole	-	220	230
MC4	3/4-pole	-	-	230

Y = max. switch clearance



■ CORE-BALANCE TRANSFORMER, TYPES FIR-WS-20...30, FIR-W-35...210





FIR-WS-30	32	70	30	59	30	
		ı		ı		
	Α	В	С	D	E	F
FIR-W-35	100	79	26	48,5	35	35
FIR-W-70	130	110	32	66	70	52
FIR-W-105	170	146	38	94	105	72
FIR-W-140	220	196	48,5	123	140	97
FIR-W-210	299	284	69	161	210	141

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G

60

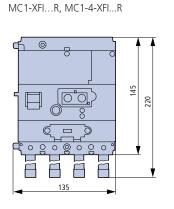
32

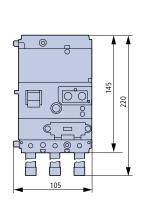
FIR-WS-20

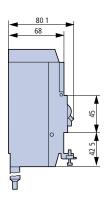
Rectangular core-balance transformer

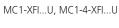
Туре	Α	В	С	D	Е	F	G	Н	1
FIR-WR-175	70	175	225	85	22	46	261	176	7,5
FIR-WR-305	115	305	360	116	25	55	402	240	8
FIR-WR-350	150	350	415	140	28	55	460	285	8

■ RESIDUAL-CURRENT RELEASE, TYPES MC1-XFI...R, MC1-4-XFI...R, MC1-XFI...U, MC1-4-XFI...U



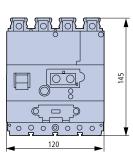


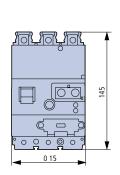


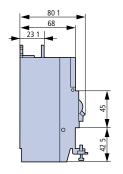


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712







Contacts per plug-in slot HIA and HIN

NO = normally open contact NC = normally closed contact

1 NO 1 NC 2 NO 2 NC 1 NO + 1 NC

■ COMPONENT INSTALLATION WITH AUXILIARY SWITCHES

■ MAXIMUM COMPONENT INSTALLATION AND POSITION OF INTERNAL ACCESSORIES

		1	2	3
		HIN	HIA	MCXHIV(2S)
				or -XA
				or -XU
		(normal)	(tripped)	(early-make)
	MC1, MC1-N	1	1	1
	MC2, MC2-N	2	1	1
(2)	MC3, MC3-N	3	1	1
	MC4, MC4-N	3	2	1 1)
31	MC1-PN	1	-	1 ²⁾
	MC2-PN	2	-	1 ²⁾
	MC3-PN	3	-	1 ²⁾
$\bigcirc \bigcirc \bigcirc \bigcirc \bigcirc$	HIN = M22-K (or M22-CK		

HIN = M22-K.. or M22-CK.. HIA = M22-K.. or M22-CK..

Note: 1) With MC4/MC4-N, the HIV is not early-closing.

²⁾ Only XHIV(2S) possible

■ MO AIR CIRCUIT BREAKERS



NOMINAL CURRENT MAX 6300 A, 3 SWITCHING CAPACITY CLASSES, 5 ELECTRONIC RELEASES, 3- AND 4-POLE VERSIONS

MO air circuit breakers offer full coverage of the 630 - 6300A range with just three contact frame sizes. The nominal current of all contacts can be optimally adjusted to the expansion stage using rating plugs. The smallest rating plug has 250A and at that even with a setting range of 0,4 to 1xln.

STANDARD DIMENSIONS, EASY TO PLAN

The MO has a uniform frame height and -depth for all current ranges. Only the width of the circuit breaker varies, depending on the number of poles and the frame size. MOs for permanent installation and withdrawable models have identical widths.

CONNECTION SYSTEM

MO circuit breakers up to 5000A come with horizontal connections as standard. The MO 6300A is fitted with vertical connections. The following connections are available as optional extras: Vertical connections, front-side connections and flange connections.

RATED CURRENT MODULE

This replaceable module allows the user to reduce the nominal current of the device for optimal system adjustment, e.g. when commissioning a sub-system. The correct rating plug to choose is one which most closely matches the system's nominal current.

FRAME SIZE AND SHORT-CIRCUIT BREAKING CAPACITY

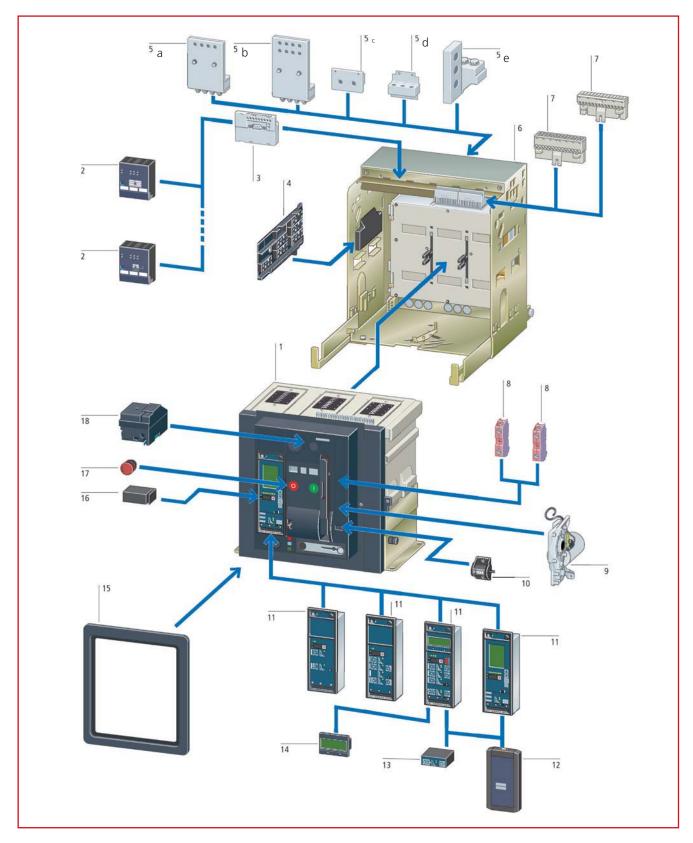
FRAME SIZE 1	FRAME SIZE 2	FRAME SIZE 3
250A	250A	
315A	315A	
400A	400A	
500A	500A	
630A	630A	
700A	700A	
A008	800A	
1000A	1000A	
1250A	1250A	1250A
1600A	1600A	1600A
2000A	2000A	2000A
	2500A	2500A
	3200A	3200A
		4000A
		5000A
		6300A

RATED BREAKING CAPACITY I_{ω} at AC 500V (kA) / I_{ω} at DC 300V (kA):

Frame Size 1: B = 55 kA, N = 66 kAFrame Size 2: B = 66 kA, N = 80 kAFrame Size 3: H = 100 kA



■ MO AIR CIRCUIT BREAKERS – SYSTEM OVERVIEW



- 1. MO circuit breaker, between 630A and 6.300 A
- 2. External expansion modules
- 3. Communication module for PROFIBUS
- 4. Position indicator contact: Module for guide frame
- 5. Main connection elements:
 - a. Front connection
 - b. Front connection, double bole
- c. Flange connection
- d. Horizontal connection, rear-side
- e. Vertical connection, rear-side
- 6. Guide frame
- 7. Auxiliary plug connector

10. Operating cycle counter

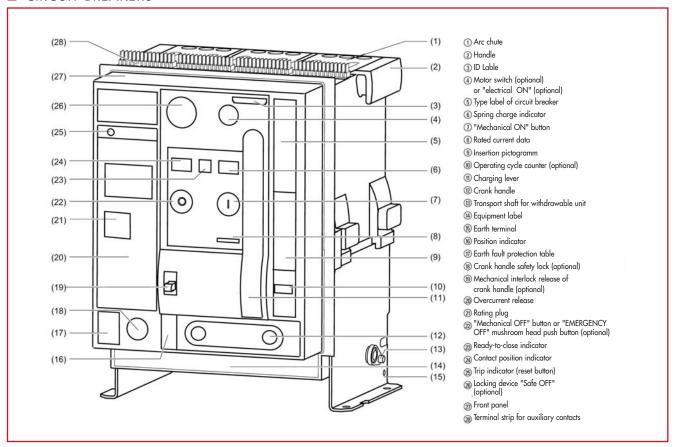
- 8. Auxiliary contact
- 9. Motor operator
- 11. Electronic release

- 12. Parametric device
- 13. Earth-fault protection module
- 14. 4-line LCD display
- 15. Door sealing frame
- 16. Rating plug
- 17. EMERGENCY STOP mushroom push button
- 18. Closing magnet, voltage release

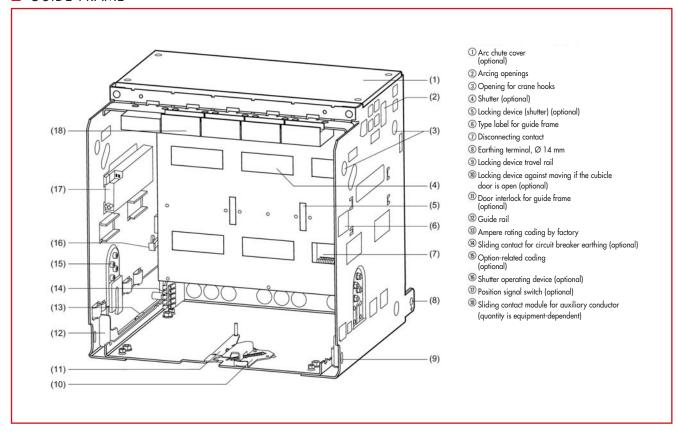


■ MO AIR CIRCUIT BREAKERS – BREAKDOWN OF FUNCTIONS

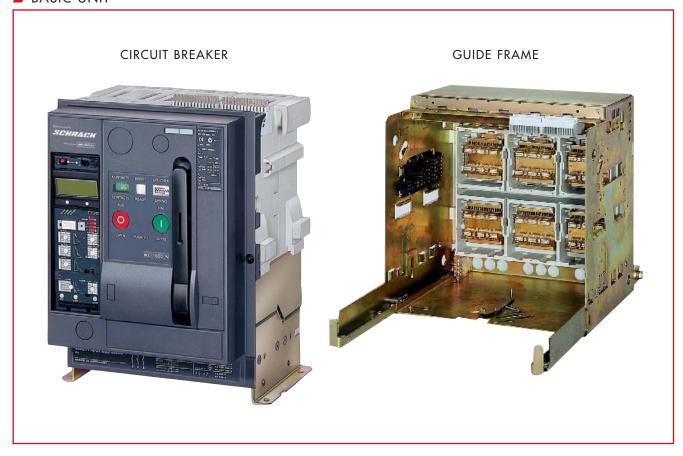
CIRCUIT BREAKERS



■ GUIDE FRAME



■ BASIC UNIT



ACCESSORIES



VOLTAGE RELEASE



UNDERVOLTAGE RELEASE



COMBI-TRANSFORMER



CURRENT TRANSFORMER FOR EARTH-FAULT MEASUREMENT



CLOSING MAGNET



OPERATING CYCLE COUNTER



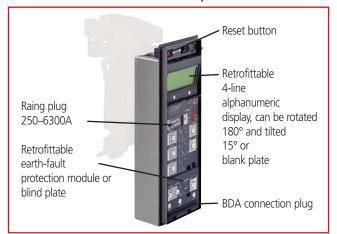
RESET MAGNET



MOTOR OPERATOR



FUNCTIONS OF THE ETU (ELECTRONIC TRIP UNITS) OVERCURRENT RELEASE















FUNCTIONS OF THE OVERCURRENT RELEAS	E	ETU15B	ETU25B	ETU27B
BASIC PROTECTION FUNCTIONS				
Overload protection	L	V	V	V
Short-time delayed short-circuit protection	S		✓	✓
Instantaneous short-circuit protection	I	V	V	V
Neutral conductor protection	N			✓
Earth-fault protection	G			~

ADDITIONAL FUNCTIONS

Neutral conductor protection can be switched off		 V
Neutral conductor protection can be adjusted		
Short-time-delayed short-circuit protection can be switched on/off		
Instantaneous short-circuit protection can be switched on/off		
Thermal memory can be switched on/off		
Load monitoring		
Short-time-delayed short-circuit protection can be switched to l²t		
Instantaneous short-circuit protection can be adjusted	✓	
Overload protection switch-selectable I ⁴ t		
Overload protection can be switched on/off		
Switch-selectable parameter sets		

PARAMETERISATION AND DISPLAY

Parameterisation by rotary switch (10 steps)	V	✓	V
Parameterisation by communication (absolute values)			
Parameterisation by menu (absolute values)			
Parameterisation of additional protection functions			
LCD, alphanumeric			
LCD, graphical			

METERING FUNCTION

Metering function Plus	 	

COMMUNICATION

CubicleBUS	 	
Communication via PROFIBUS-DP	 	
Communication via Ethernet	 	

✓ Standard -- not available □ optional







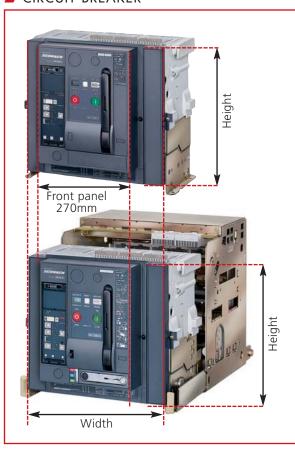




ETU45B	ETU76B
✓	✓
	✓
✓	V
~	V
V	V
	·
✓	V
	· · · · · · · · · · · · · · · · · · ·
V	✓
	·
✓	V
·	
V	<i>V V V</i>
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V	V
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■ MO AIR CIRCUIT BREAKERS TO 6,300A – MOUNTING VERSIONS

CIRCUIT BREAKER



Identical **width** for fixed installation and draw-out circuit breaker (with guide)

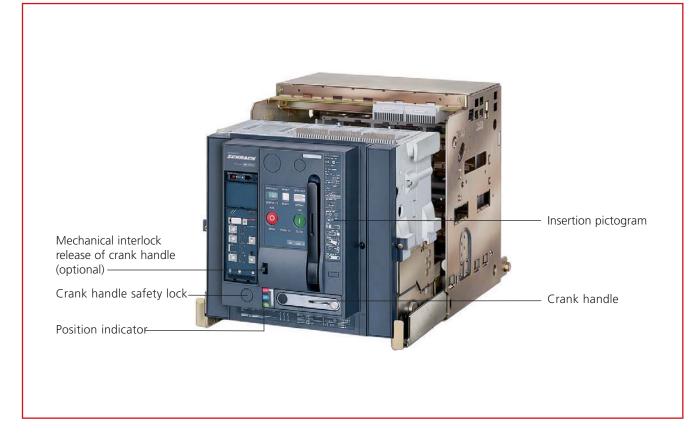
	3 pole	4 pole
Sze 1	320 mm	410 mm
Sze 2	460 mm	590 mm
Sze 3	704 mm	914 mm

Identical **height** for each frame size fixed- and draw-out circuit breakers!

Same **depth** for each frame size (Sze)

Fixed installation: Sze 1 = Sze 2 = Sze 3 = 357 mm Draw-out (with guide): Sze 1 = Sze 2 = Sze 3 = 471 mm

■ DRAW-OUT CIRCUIT-BREAKER (ADD-ON FOR PERMANENT INSTALLATION)







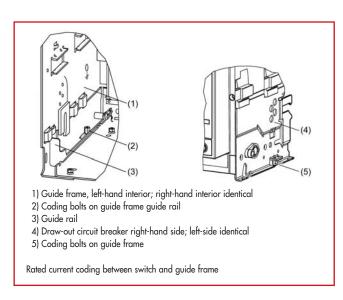
■ MO AIR CIRCUIT BREAKERS TO 6300A – GENERAL DATA

Rated current coding between circuit breaker and guide frame

Draw-out circuit breaker and guide frame come with one rated current coding as standard. The coding ensures that only circuit breakers can be inserted into a guide rail when its contact blades fit the contact fins on that guide rail (see diagram).

Option-related coding

Draw-out circuit breaker and guide frame can subsequently be equipped with an option-related coding facility. This ensures that circuit breakers with different equipment can only be inserted into certain guide rails. The circuit breaker cannot be inserted in a guide rail which has a different coding. 36 coding options are available.



POSITION INDICATOR CONTACTS FOR GUIDE FRAME

The guide frame can be equipped with position indicator contacts. These contacts can be used to determine the position of the circuit breaker in the guide frame.

Two versions are available:

Option 1

Connected position 1 C/O
Test position 1 C/O
Disconnected position 1 C/O

Option 2

Connected position 3 C/Os
Test position 2 C/Os
Disconnected position 1 C/O

POSITIONS OF THE DRAW-OUT CIRCUIT BREAKER IN THE GUIDE FRAME

	Diagram	Position indicator	Primary circuit	Secondary circuit	Switch cabinet door	Shutter
Maintenance position	(1) (2)	STATE OF THE STATE	disconnected	disconnected	open	closed
Disconnected position	(3)	TEST DISCON	disconnected	disconnected	closed	closed
Test position		TEST DISCON	disconnected	connected	closed	closed
Connected position		OMECT THE TOTAL OF	connected	connected	closed	open
(1) secondary circuit	(2) primary circuitt	(3) switch cabinet door	(4) shutter			

PHASE DIVIDING WALLS

The system constructor can produce phase-isolating walls made from insulating material as a barrier to arc faults. Guide slots have been fitted along the rear panel of the permanently installed circuit breaker or guide frame.

COVER FOR ARCING CHAMBER

A cover for the arcing chamber is available as an optional addon for the guide frame. It provides protection for switchgear parts located immediately above the circuit breaker.

■ DOOR SEALING FRAME AND COVER

MO circuit breakers have degree of protection IP20 as standard. A door seal frame for IP41 and a cover for IP55 are also available when a higher degree of protection is required for the switchgear.

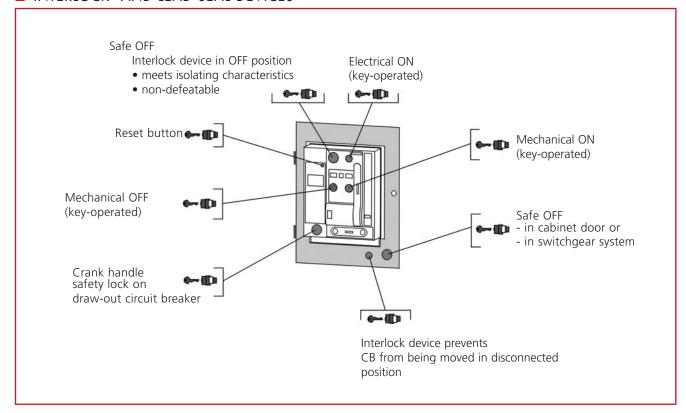


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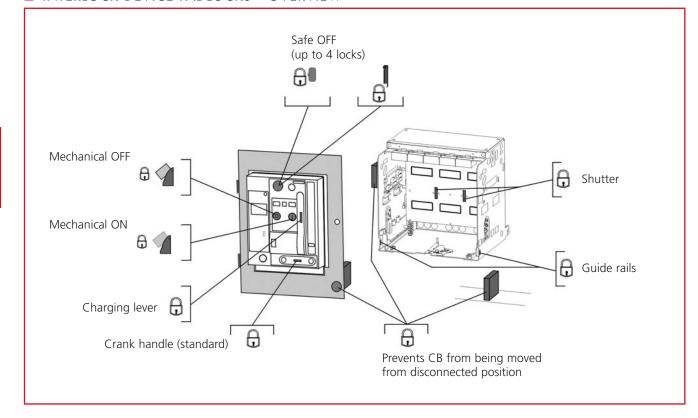
■ MO AIR CIRCUIT BREAKERS – LOCKING OPTIONS

- INTERLOCKING OPTIONS
 - Internal and external accessory, can easily be retrofitted at any time
 - Various interlocking options secure energy distribution within critical production processes

■ INTERLOCK- AND LEAD SEAL DEVICES



■ INTERLOCK DEVICE PADLOCKS - OVERVIEW







■ AIR CIRCUIT BREAKERS MO – INTERLOCKING

■ SCHRACK-INFO

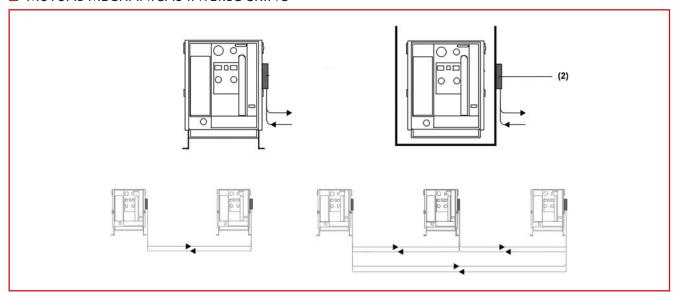
The module for mutual mechanical interlocking can be implemented for two or three ACBs and is simple to adapt to the respective verson. Fixed-mounted and withdrawable circuit breakers are compatible and can be implemented together in a single system.

- Internal and external accessories can be fitted at any time
- · Miscellaneous interlocking possibilities ensure power distribution of critical production processes

The following minimum conditions have to be achieved:

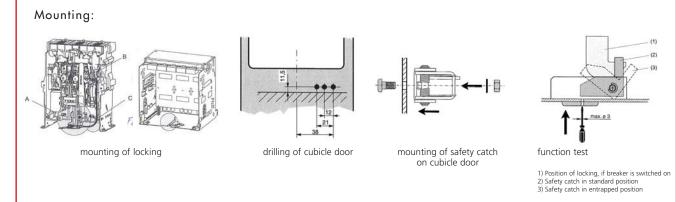
- Bowden wires have to run in a straight line, bents have to be avoided
- The bending radius of the bowden wire has to be > 500 mm
- The summation of all bending angles of the bowden wire must not exceed 640°
- All ACBs to be locked have to be placed in a way that all conditions mentioned above can be fullfilled, when using a 2m or 4,5m long bowden wire.
- The laying of the bowden wire has to be done prior to the adjustment of the interlocking.
- Openings or cut-outs in system elements have to be done in a way that the feed through of the bowden wire is possible without interfearing its function.

MUTUAL MECHANICAL INTERLOCKING



■ INTERLOCKING OF CUBICLE DOOR

The cubicle door cannot be opened if the fixed-mounted circuit breaker is closed (transmission of the locking signal by means of bowden wire), or if the withdrawable circuit breaker is in connected position.





■ FRAME SIZE 1 TO 2000A - REAR-SIDE CONNECTION, HORIZONTAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE AV	'AILABLE	ORDER NO.
3-POLE 55 kA						
800 A	43	55 kA	MO1B-800	9004840417418		MO108232
1000 A	43	55 kA	MO1B-1000	9004840412697		MO110232
1250 A	43	55 kA	MO1B-1250	9004840412802		MO112232
1600 A	43	55 kA	MO1B-1600	9004840402216		MO116232
2000 A	43	55 kA	MO1B-2000	9004840685541		MO120232
3-POLE 66 kA						
800 A	43	66 kA	MO1N-800	9004840417432		MO108332
1000 A	43	66 kA	MO1N-1000	9004840412710		MO110332
1250 A	43	66 kA	MO1N-1250	9004840412826		MO112332
1600 A	43	66 kA	MO1N-1600	9004840412857		MO116332
2000 A	43	66 kA	MO1N-2000	9004840685602		MO120332
4-POLE 55 kA						
800 A	50	55 kA	MO1B-4-800	9004840417425		MO108242
1000 A	50	55 kA	MO1B-4-1000	9004840412703		MO110242
1250 A	50	55 kA	MO1B-4-1250	9004840412819		MO112242
1600 A	50	55 kA	MO1B-4-1600	9004840412840		MO116242
2000 A	50	55 kA	MO1B-4-2000	9004840685572		MO120242
4 POLE 66 kA						
800 A	50	66 kA	MO1N-4-800	9004840417449		MO108342
1000 A	50	66 kA	MO1N-4-1000	9004840412796		MO110342
1250 A	50	66 kA	MO1N-4-1250	9004840412833		MO112342

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66 kA

66 kA

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9004840685633

MO116342

MO120342



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MO1N-4-1600

MO1N-4-2000

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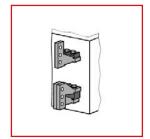
1600 A

2000 A



■ FRAME SIZE 1 TO 2000A - REAR-SIDE CONNECTION, VERTICAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

M	0	1	1	6	2	3	2

DESCRIPTION	WEIGHT (kg)	I _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	43	55 kA	MO1B-800	upon request	upon request	MO108231
1000 A	43	55 kA	MO1B-1000	upon request	upon request	MO110231
1250 A	43	55 kA	MO1B-1250	upon request	upon request	MO112231
1600 A	43	55 kA	MO1B-1600	upon request	upon request	MO116231
2000 A	43	55 kA	MO1B-2000	upon request	upon request	MO120231

3-POLE 66 kA

800 A	43	66 kA	MO1N-800	upon request	upon request	MO108331
1000 A	43	66 kA	MO1N-1000	upon request	upon request	MO110331
1250 A	43	66 kA	MO1N-1250	upon request	upon request	MO112331
1600 A	43	66 kA	MO1N-1600	upon request	upon request	MO116331
2000 A	43	66 kA	MO1N-2000	upon request	upon request	MO120331

4-POLE 55 kA

800 A	50	55 kA	MO1B-4-800	upon request	upon request	MO108241
1000 A	50	55 kA	MO1B-4-1000	upon request	upon request	MO110241
1250 A	50	55 kA	MO1B-4-1250	upon request	upon request	MO112241
1600 A	50	55 kA	MO1B-4-1600	upon request	upon request	MO116241
2000 A	50	55 kA	MO1B-4-2000	upon request	upon request	MO120241

4-POLE 66 kA

800 A	50	66 kA	MO1N-4-800	upon request	upon request	MO108341
1000 A	50	66 kA	MO1N-4-1000	upon request	upon request	MO110341
1250 A	50	66 kA	MO1N-4-1250	upon request	upon request	MO112341
1600 A	50	66 kA	MO1N-4-1600	upon request	upon request	MO116341
2000 A	50	66 kA	MO1N-4-2000	upon request	upon request	MO120341



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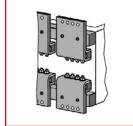
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■ FRAME SIZE 1 TO 2000A - CONNECTION, FRONT, SINGLE BORE





■ SCHRACK INFO

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DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	43	55 kA	MO1B-800	upon request	upon request	MO108233
1000 A	43	55 kA	MO1B-1000	upon request	upon request	MO110233
1250 A	43	55 kA	MO1B-1250	upon request	upon request	MO112233
1600 A	43	55 kA	MO1B-1600	upon request	upon request	MO116233
2000 A	43	55 kA	MO1B-2000	upon request	upon request	MO120233
3-POLE 66 kA						
800 A	43	66 kA	MO1N-800	upon request	upon request	MO108333
1000 A	43	66 kA	MO1N-1000	upon request	upon request	MO110333
1250 A	43	66 kA	MO1N-1250	upon request	upon request	MO112333
1600 A	43	66 kA	MO1N-1600	upon request	upon request	MO116333
2000 A	43	66 kA	MO1N-2000	upon request	upon request	MO120333
4-POLE 55 kA						
800 A	50	55 kA	MO1B-4-800	upon request	upon request	MO108243
1000 A	50	55 kA	MO1B-4-1000	upon request	upon request	MO110243
1250 A	50	55 kA	MO1B-4-1250	upon request	upon request	MO112243
1600 A	50	55 kA	MO1B-4-1600	upon request	upon request	MO116243
2000 A	50	55 kA	MO1B-4-2000	upon request	upon request	MO120243

MO1N-4-800

MO1N-4-1000

MO1N-4-1250

MO1N-4-1600

MO1N-4-2000

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800 A

1000 A

1250 A

1600 A

2000 A



66 kA

66 kA

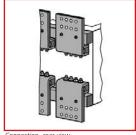
66 kA

66 kA

66 kA

■ FRAME SIZE 1 TO 2000A - CONNECTION, FRONT, DOUBLE BORE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	43	55 kA	MO1B-800	upon request	upon request	MO108234
1000 A	43	55 kA	MO1B-1000	9004840413113		MO110234
1250 A	43	55 kA	MO1B-1250	9004840413151		MO112234
1600 A	43	55 kA	MO1B-1600	9004840413199		MO116234
2000 A	43	55 kA	MO1B-2000	9004840685558		MO120234
3-POLE 66 kA						
800 A	43	66 kA	MO1N-800	upon request	upon request	MO108334
1000 A	43	66 kA	MO1N-1000	9004840413137		MO110334
1250 A	43	66 kA	MO1N-1250	9004840413175		MO112334
1600 A	43	66 kA	MO1N-1600	9004840413212		MO116334
2000 A	43	66 kA	MO1N-2000	9004840685619		MO120334
4-POLE 55 kA						
800 A	50	55 kA	MO1B-4-800	upon request	upon request	MO108244

4-POLE 66 kA

1000 A

1250 A

1600 A

2000 A

800 A	50	66 kA	MO1N-4-800	upon request upon request	MO108344
1000 A	50	66 kA	MO1N-4-1000	9004840413144	MO110344
1250 A	50	66 kA	MO1N-4-1250	9004840413182	MO112344
1600 A	50	66 kA	MO1N-4-1600	9004840413229	MO116344
2000 A	50	66 kA	MO1N-4-2000	9004840685640	MO120344

MO1B-4-1000

MO1B-4-1250

MO1B-4-1600

MO1B-4-2000



50

50

50

55 kA

55 kA

55 kA

55 kA

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9004840413168

9004840413205

9004840685589

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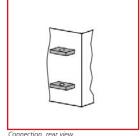
MO110244 MO112244

MO116244

MO120244

■ FRAME SIZE 2 TO 3200A - REAR-SIDE CONNECTION, HORIZONTAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	l _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	56	66 kA	MO2B-2000	9004840412994		MO220232
2500 A	59	66 kA	MO2B-2500	9004840413038		MO225232
3-POLE 80 kA						
800 A	56	80 kA	MO2N-800	9004840417463		MO208332
1000 A	56	80 kA	MO2N-1000	9004840417487		MO210332
1250 A	56	80 kA	MO2N-1250	9004840417500		MO212332
1600 A	56	80 kA	MO2N-1600	9004840412895		MO216332
2000 A	56	80 kA	MO2N-2000	9004840413014		MO220332
2500 A	59	80 kA	MO2N-2500	9004840413052		MO225332
3200 A	64	80 kA	MO2N-3200	9004840413090		MO232332
4-POLE 66 kA						
2000 A	67	66 kA	MO2B-4-2000	9004840413007		MO220242
2500 A	71	66 kA	MO2B-4-2500	9004840413045		MO225242
4-POLE 80 kA						
800 A	67	80 kA	MO2N-4-800	9004840417470		MO208342
1000 A	67	80 kA	MO2N-4-1000	9004840417494		MO210342
1250 A	67	80 kA	MO2N-4-1250	9004840417517		MO212342
1600 A	67	80 kA	MO2N-4-1600	9004840412901		MO216342
2000 A	67	80 kA	MO2N-4-2000	9004840413021		MO220342
2500 A	71	80 kA	MO2N-4-2500	9004840413069		MO225342
3200 A	77	80 kA	MO2N-4-3200	9004840413106		MO232342

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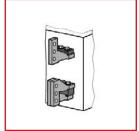
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■ FRAME SIZE 2 TO 3200A - REAR-SIDE CONNECTION, VERTICAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	56	66 kA	MO2B-2000	upon request	upon request	MO220231
2500 A	59	66 kA	MO2B-2500	upon request	upon request	MO225231
3-POLE 80 kA						
800 A	56	80 kA	MO2N-800	upon request	upon request	MO208331
1000 A	56	80 kA	MO2N-1000	upon request	upon request	MO210331
1250 A	56	80 kA	MO2N-1250	upon request	upon request	MO212331
1600 A	56	80 kA	MO2N-1600	upon request	upon request	MO216331
2000 A	56	80 kA	MO2N-2000	upon request	upon request	MO220331
2500 A	59	80 kA	MO2N-2500	upon request	upon request	MO225331
3200 A	64	80 kA	MO2N-3200	upon request	upon request	MO232331
4-POLE 66 kA						
2000 A	67	66 kA	MO2B-4-2000	upon request	upon request	MO220241
2500 A	71	66 kA	MO2B-4-2500	upon request	upon request	MO225241
4-POLE 80 kA						
800 A	67	80 kA	MO2N-4-800	upon request	upon request	MO208341
1000 A	67	80 kA	MO2N-4-1000	upon request	upon request	MO210341
1250 A	67	80 kA	MO2N-4-1250	upon request	upon request	MO212341
1600 A	67	80 kA	MO2N-4-1600	upon request	upon request	MO216341
2000 A	67	80 kA	MO2N-4-2000	upon request	upon request	MO220341
2500 A	71	80 kA	MO2N-4-2500	upon request	upon request	MO225341
3200 A	77	80 kA	MO2N-4-3200	upon request	upon request	MO232341



I KNOW WHERE TO FIND IT!

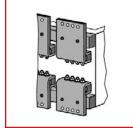
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■ FRAME SIZE 2 TO 3200A - CONNECTION, FRONT, SINGLE BORE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION I) (5101 T (1)		7.05	5444 6005		000000000
DESCRIPTION	WEIGHT (kg)	lcu	ТҮРЕ	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	56	66 kA	MO2B-2000	upon request	upon request	MO220233
2500 A	59	66 kA	MO2B-2500	upon request	upon request	MO225233
3-POLE 80 kA						
800 A	56	80 kA	MO2N-800	upon request	upon request	MO208333
1000 A	56	80 kA	MO2N-1000	upon request	upon request	MO210333
1250 A	56	80 kA	MO2N-1250	upon request	upon request	MO212333
1600 A	56	80 kA	MO2N-1600	upon request	upon request	MO216333
2000 A	56	80 kA	MO2N-2000	upon request	upon request	MO220333
2500 A	59	80 kA	MO2N-2500	upon request	upon request	MO225333
3200 A	64	80 kA	MO2N-3200	upon request	upon request	MO232333
4-POLE 66 kA						
2000 A	67	66 kA	MO2B-4-2000	upon request	upon request	MO220243
2500 A	71	66 kA	MO2B-4-2500	upon request	upon request	MO225243
4-POLE 80 kA						
800 A	67	80 kA	MO2N-4-800	upon request	upon request	MO208343
1000 A	67	80 kA	MO2N-4-1000	upon request	upon request	MO210343
1250 A	67	80 kA	MO2N-4-1250	upon request	upon request	MO212343
1600 A	67	80 kA	MO2N-4-1600	upon request	upon request	MO216343
2000 A	67	80 kA	MO2N-4-2000	upon request	upon request	MO220343
2500 A	71	80 kA	MO2N-4-2500	upon request	upon request	MO225343
3200 A	77	80 kA	MO2N-4-3200	upon request	upon request	MO232343

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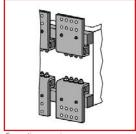


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Quick access customer service

■ FRAME SIZE 2 TO 3200A - CONNECTION, FRONT, DOUBLE BORE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

0225232	Connection, rear v

DESCRIPTION	WEIGHT (kg)	I _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	56	66 kA	MO2B-2000	9004840413274		MO220234
2500 A	59	66 kA	MO2B-2500	9004840413311		MO225234
3-POLE 80 kA						
800 A	56	80 kA	MO2N-800	upon request	upon request	MO208334
1000 A	56	80 kA	MO2N-1000	upon request	upon request	MO210334
1250 A	56	80 kA	MO2N-1250	upon request	upon request	MO212334
1600 A	56	80 kA	MO2N-1600	9004840413250		MO216334
2000 A	56	80 kA	MO2N-2000	9004840413298		MO220334
2500 A	59	80 kA	MO2N-2500	9004840413335		MO225334
3200 A	64	80 kA	MO2N-3200	9004840413373		MO232334
4-POLE 66 kA						
2000 A	67	66 kA	MO2B-4-2000	9004840413281		MO220244
2500 A	71	66 kA	MO2B-4-2500	9004840413328		MO225244
4-POLE 80 kA						
800 A	67	80 kA	MO2N-4-800	upon request	upon request	MO208344
1000 A	67	80 kA	MO2N-4-1000	upon request	upon request	MO210344
1250 A	67	80 kA	MO2N-4-1250	upon request	upon request	MO212344
1600 A	67	80 kA	MO2N-4-1600	9004840413267		MO216344
2000 A	67	80 kA	MO2N-4-2000	9004840413304		MO220344
2500 A	71	80 kA	MO2N-4-2500	9004840413342		MO225344
3200 A	77	80 kA	MO2N-4-3200	9004840413380		MO232344



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■ FRAME SIZE 3 TO 6300A - REAR-SIDE CONNECTION, HORIZONTAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

MO340432

DESCRIPTION	WEIGHT (kg)	l _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	82	100 kA	MO3H-4000	upon request	upon request	MO340432
5000 A	82	100 kA	MO3H-5000	upon request	upon request	MO350432
6300 A	90	100 kA	MO3H-6300	upon request	upon request	MO363432
4-POLE 100 kA						
4000 A	99	100 kA	MO3H-4-4000	upon request	upon request	MO340442
5000 A	99	100 kA	MO3H-4-5000	upon request	upon request	MO350442
6300 A	100	100 kA	MO3H-4-6300	upon request	upon request	MO363442

FRAME SIZE 3 TO 6300A - REAR-SIDE CONNECTION, VERTICAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	l _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	82	100 kA	MO3H-4000	upon request	upon request	MO340431
5000 A	82	100 kA	MO3H-5000	upon request	upon request	MO350431
4300 A	00	100 l.A	MO3H 4300			MO242421

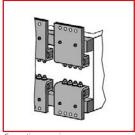
4-POLE 100 kA

4000 A	99	100 kA	MO3H-4-4000	upon request	upon request	MO340441
5000 A	99	100 kA	MO3H-4-5000	upon request	upon request	MO350441
6300 A	108	100 kA	MO3H-4-6300	upon request	upon request	MO363441

Page

■ FRAME SIZE 3 TO 6300A - CONNECTION, FRONT, SINGLE BORE





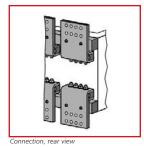
■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	99	100 kA	MO3H-4000	upon request	upon request	MO340433
4-POLE 100 kA						
4000 A	99	100 kA	MO3H-4-4000	upon request	upon request	MO340443

■ FRAME SIZE 3 TO 6300A - CONNECTION, FRONT, DOUBLE BORE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	99	100 kA	MO3H-4000	upon request	upon request	MO340434
4-POLE 100 kA						
4000 A	99	100 kA	MO3H-4-4000	upon request	upon request	MO340444



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■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device. Replacement switch for existing frames. The nominal current must be appropriate for the guide frame.

MO116235

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	45	55 kA	MO1B-800	upon request	upon request	MO108235
1000 A	45	55 kA	MO1B-1000	upon request	upon request	MO110235
1250 A	45	55 kA	MO1B-1250	upon request	upon request	MO112235
1600 A	45	55 kA	MO1B-1600	upon request	upon request	MO116235
2000 A	45	55 kA	MO1B-2000	upon request	upon request	MO120235

3-POLE 66 kA

800 A	45	66 kA	MO1N-800	upon request	upon request	MO108335
1000 A	45	66 kA	MO1N-1000	upon request	upon request	MO110335
1250 A	45	66 kA	MO1N-1250	upon request	upon request	MO112335
1600 A	45	66 kA	MO1N-1600	upon request	upon request	MO116335
2000 A	45	66 kA	MO1N-2000	upon request	upon request	MO120335

4-POLE 55 kA

800 A	54	55 kA	MO1B-4-800	upon request	upon request	MO108245
1000 A	54	55 kA	MO1B-4-1000	upon request	upon request	MO110245
1250 A	54	55 kA	MO1B-4-1250	upon request	upon request	MO112245
1600 A	54	55 kA	MO1B-4-1600	upon request	upon request	MO116245
2000 A	54	55 kA	MO1B-4-2000	upon request	upon request	MO120245

4-POLE 66 kA

800 A	54	66 kA	MO1N-4-800	upon request	upon request	MO108345
1000 A	54	66 kA	MO1N-4-1000	upon request	upon request	MO110345
1250 A	54	66 kA	MO1N-4-1250	upon request	upon request	MO112345
1600 A	54	66 kA	MO1N-4-1600	upon request	upon request	MO116345
2000 A	54	66 kA	MO1N-4-2000	upon request	upon request	MO120345

FRAME

Page

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Guide frame for frame size 1

upon request



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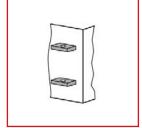




MO - FRAME SIZE 1 / WITHDRAWABLE MODELS

FRAME SIZE 1 TO 2000A - WITH GUIDE FRAME, REAR-SIDE CONNECTION, HORIZONTAL





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	l _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	70	55 kA	MO1B-800	upon request	upon request	MO108236
1000 A	70	55 kA	MO1B-1000	9004840413397		MO110236
1250 A	70	55 kA	MO1B-1250	9004840413434		MO112236
1600 A	70	55 kA	MO1B-1600	9004840413472		MO116236
2000 A	70	55 kA	MO1B-2000	9004840685565		MO120236
3-POLE 66 kA						
800 A	70	66 kA	MO1N-800	upon request	upon request	MO108336
1000 A	70	66 kA	MO1N-1000	9004840413410		MO110336
1250 A	70	66 kA	MO1N-1250	9004840413458		MO112336
1600 A	70	66 kA	MO1N-1600	9004840413496		MO116336
2000 A	70	66 kA	MO1N-2000	9004840685626		MO120336
4-POLE 55 kA						
800 A	84	55 kA	MO1B-4-800	upon request	upon request	MO108246
1000 A	84	55 kA	MO1B-4-1000	9004840413403		MO110246
1250 A	84	55 kA	MO1B-4-1250	9004840413441		MO112246
1600 A	84	55 kA	MO1B-4-1600	9004840413489		MO116246
2000 A	84	55 kA	MO1B-4-2000	9004840685596		MO120246
4-POLE 66 kA						
800 A	84	66 kA	MO1N-4-800	upon request	upon request	MO108346

MO1N-4-1000

MO1N-4-1250

MO1N-4-1600

MO1N-4-2000



84

84

84

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9004840413427

9004840413465

9004840413502

9004840685657

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1000 A

1250 A

1600 A

2000 A



MO110346

MO112346

MO116346

MO120346

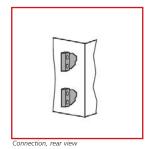
66 kA

66 kA

66 kA

66 kA





55 kA

70

■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

upon request

MO120237

MO116236

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	70	55 kA	MO1B-800	upon request	upon request	MO108237
1000 A	70	55 kA	MO1B-1000	upon request	upon request	MO110237
1250 A	70	55 kA	MO1B-1250	upon request	upon request	MO112237
1600 A	70	55 kA	MO1B-1600	upon request	upon request	MO116237

MO1B-2000

upon request

3-POLE 66 kA

2000 A

800 A	70	66 kA	MO1N-800	upon request	upon request	MO108337
1000 A	70	66 kA	MO1N-1000	upon request	upon request	MO110337
1250 A	70	66 kA	MO1N-1250	upon request	upon request	MO112337
1600 A	70	66 kA	MO1N-1600	upon request	upon request	MO116337
2000 A	70	66 kA	MO1N-2000	upon request	upon request	MO120337

4-POLE 55 kA

800 A	84	55 kA	MO1B-4-800	upon request	upon request	MO108247
1000 A	84	55 kA	MO1B-4-1000	upon request	upon request	MO110247
1250 A	84	55 kA	MO1B-4-1250	upon request	upon request	MO112247
1600 A	84	55 kA	MO1B-4-1600	upon request	upon request	MO116247
2000 A	84	55 kA	MO1B-4-2000	upon request	upon request	MO120247

4-POLE 66 kA

800 A	84	66 kA	MO1N-4-800	upon request	upon request	MO108347
1000 A	84	66 kA	MO1N-4-1000	upon request	upon request	MO110347
1250 A	84	66 kA	MO1N-4-1250	upon request	upon request	MO112347
1600 A	84	66 kA	MO1N-4-1600	upon request	upon request	MO116347
2000 A	84	66 kA	MO1N-4-2000	upon request	upon request	MO120347



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- Order desired products easily



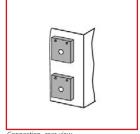


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MO - FRAME SIZE 1 / WITHDRAWABLE MODELS

■ FRAME SIZE 1 TO 2000A – WITH GUIDE FRAME AND CONNECTING FLANGE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

Connection, rear v	/ie

DESCRIPTION	WEIGHT (kg)	I _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 55 kA						
800 A	70	55 kA	MO1B-800	upon request	upon request	MO108238
1000 A	70	55 kA	MO1B-1000	upon request	upon request	MO110238
1250 A	70	55 kA	MO1B-1250	upon request	upon request	MO112238
1600 A	70	55 kA	MO1B-1600	upon request	upon request	MO116238
2000 A	70	55 kA	MO1B-2000	upon request	upon request	MO120238
3-POLE 66 kA						
800 A	70	66 kA	MO1N-800	upon request	upon request	MO108338
1000 A	70	66 kA	MO1N-1000	upon request	upon request	MO110338
1250 A	70	66 kA	MO1N-1250	upon request	upon request	MO112338
1600 A	70	66 kA	MO1N-1600	upon request	upon request	MO116338
2000 A	70	66 kA	MO1N-2000	upon request	upon request	MO120338

4-POLE 55 kA

800 A	84	55 kA	MO1B-4-800	upon request	upon request	MO108248
1000 A	84	55 kA	MO1B-4-1000	upon request	upon request	MO110248
1250 A	84	55 kA	MO1B-4-1250	upon request	upon request	MO112248
1600 A	84	55 kA	MO1B-4-1600	upon request	upon request	MO116248
2000 A	84	55 kA	MO1B-4-2000	upon request	upon request	MO120248

4-POLE 66 kA

800 A	84	66 kA	MO1N-4-800	upon request	upon request	MO108348
1000 A	84	66 kA	MO1N-4-1000	upon request	upon request	MO110348
1250 A	84	66 kA	MO1N-4-1250	upon request	upon request	MO112348
1600 A	84	66 kA	MO1N-4-1600	upon request	upon request	MO116348
2000 A	84	66 kA	MO1N-4-2000	upon request	upon request	MO120348

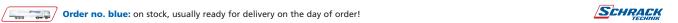


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- Quick access customer service



■ FRAME SIZE 2 TO 3200A – WITHOUT GUIDE FRAME



■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device. Replacement switch for existing frames. The nominal current must be appropriate for the guide frame.

MO232335

DESCRIPTION	WEIGHT (kg)	I _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	60	66 kA	MO2B-2000	upon request	upon request	MO220235
2500 A	63	66 kA	MO2B-2500	upon request	upon request	MO225235
3-POLE 80 kA						
800 A	60	80 kA	MO2N-800	upon request	upon request	MO208335
1000 A	60	80 kA	MO2N-1000	upon request	upon request	MO210335
1250 A	60	80 kA	MO2N-1250	upon request	upon request	MO212335
1600 A	60	80 kA	MO2N-1600	upon request	upon request	MO216335
2000 A	60	80 kA	MO2N-2000	upon request	upon request	MO220335
2500 A	63	80 kA	MO2N-2500	upon request	upon request	MO225335
3200 A	68	80 kA	MO2N-3200	upon request	upon request	MO232335
4-POLE 66 kA						
2000 A	72	66 kA	MO2B-4-2000	upon request	upon request	MO220245
2500 A	76	66 kA	MO2B-4-2500	upon request	upon request	MO225245
4-POLE 80 kA						
800 A	72	80 kA	MO2N-4-800	upon request	upon request	MO208345
1000 A	72	80 kA	MO2N-4-1000	upon request	upon request	MO210345
1250 A	72	80 kA	MO2N-4-1250	upon request	upon request	MO212345
1600 A	72	80 kA	MO2N-4-1600	upon request	upon request	MO216345
2000 A	72	80 kA	MO2N-4-2000	upon request	upon request	MO220345
2500 A	76	80 kA	MO2N-4-2500	upon request	upon request	MO225345
3200 A	82	80 kA	MO2N-4-3200	upon request	upon request	MO232345

FRAME

Guide frame for frame size 2 upon request



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MO - FRAME SIZE 2 / WITHDRAWABLE MODELS

FRAME SIZE 2 TO 3200A - WITH GUIDE FRAME, REAR-SIDE CONNECTION, **HORIZONTAL**





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	91	66 kA	MO2B-2000	900484041355	7	MO220236
2500 A	102	66 kA	MO2B-2500	900484041359	5	MO225236

3-POLE 80 kA

800 A	91	80 kA	MO2N-800	upon request	upon request	MO208336
1000 A	91	80 kA	MO2N-1000	upon request	upon request	MO210336
1250 A	91	80 kA	MO2N-1250	upon request	upon request	MO212336
1600 A	91	80 kA	MO2N-1600	9004840413533	3	MO216336
2000 A	91	80 kA	MO2N-2000	900484041357	l	MO220336
2500 A	102	80 kA	MO2N-2500	9004840413618	3	MO225336
3200 A	113	80 kA	MO2N-3200	9004840413656	5	MO232336

4-POLE 66 kA

2000 A	109	66 kA	MO2B-4-2000	9004840413564	MO220246
2500 A	123	66 kA	MO2B-4-2500	9004840413601	MO225246

4-POLE 80 kA

800 A	109	80 kA	MO2N-4-800	upon request	upon request	MO208346
1000 A	109	80 kA	MO2N-4-1000	upon request	upon request	MO210346
1250 A	109	80 kA	MO2N-4-1250	upon request	upon request	MO212346
1600 A	109	80 kA	MO2N-4-1600	9004840413540)	MO216346
2000 A	109	80 kA	MO2N-4-2000	9004840413588	3	MO220346
2500 A	123	80 kA	MO2N-4-2500	9004840413625	5	MO225346
3200 A	136	80 kA	MO2N-4-3200	9004840413663	3	MO232346



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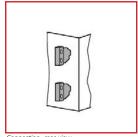
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FRAME SIZE 2 TO 3200A - WITH GUIDE FRAME, REAR-SIDE CONNECTION, **VERTICAL**





SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

M0220236

connection,	rear	view	

DESCRIPTION	WEIGHT (kg)	I _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA						
2000 A	91	66 kA	MO2B-2000	upon request	upon request	MO220237
2500 A	102	66 kA	MO2B-2500	upon request	upon request	MO225237
3-POLE 80 kA						
800 A	91	80 kA	MO2N-800	upon request	upon request	MO208337
1000 A	91	80 kA	MO2N-1000	upon request	upon request	MO210337
1250 A	91	80 kA	MO2N-1250	upon request	upon request	MO212337
1600 A	91	80 kA	MO2N-1600	upon request	upon request	MO216337
2000 A	91	80 kA	MO2N-2000	upon request	upon request	MO220337
2500 A	102	80 kA	MO2N-2500	upon request	upon request	MO225337
3200 A	113	80 kA	MO2N-3200	upon request	upon request	MO232337
4-POLE 66 kA						
2000 A	109	66 kA	MO2B-4-2000	upon request	upon request	MO220247
2500 A	123	66 kA	MO2B-4-2500	upon request	upon request	MO225247
4-POLE 80 kA						
800 A	109	80 kA	MO2N-4-800	upon request	upon request	MO208347
1000 A	109	80 kA	MO2N-4-1000	upon request	upon request	MO210347
1250 A	109	80 kA	MO2N-4-1250	upon request	upon request	MO212347
1600 A	109	80 kA	MO2N-4-1600	upon request	upon request	MO216347
2000 A	109	80 kA	MO2N-4-2000	upon request	upon request	MO220347

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123

136

80 kA

80 kA

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WITH THE SCHRACK TECHNIK LIVE-PHONE APP

upon request

upon request

upon request

upon request

Access technical product information at any time and from everywhere

MO225347

MO232347

See availability and price immediately

MO2N-4-2500

MO2N-4-3200

Order desired products easily



2500 A

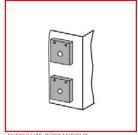
3200 A



MO - FRAME SIZE 2 / WITHDRAWABLE MODELS

■ FRAME SIZE 2 TO 3200A – WITH GUIDE FRAME AND CONNECTING FLANGE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

ANSCHLUSS-RÜCKANSICHT

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 66 kA		<u> </u>				
2000 A	91	66 kA	MO2B-2000	upon request	upon request	MO220238
2500 A	102	66 kA	MO2B-2500	upon request	upon request	MO225238
3-POLE 80 kA						
800 A	91	80 kA	MO2N-800	upon request	upon request	MO208338
1000 A	91	80 kA	MO2N-1000	upon request	upon request	MO210338
1250 A	91	80 kA	MO2N-1250	upon request	upon request	MO212338
1600 A	91	80 kA	MO2N-1600	upon request	upon request	MO216338
2000 A	91	80 kA	MO2N-2000	upon request	upon request	MO220338
2500 A	102	80 kA	MO2N-2500	upon request	upon request	MO225338
3200 A	113	80 kA	MO2N-3200	upon request	upon request	MO232338
4-POLE 66 kA						
2000 A	109	66 kA	MO2B-4-2000	upon request	upon request	MO220248
2500 A	123	66 kA	MO2B-4-2500	upon request	upon request	MO225248
4 POLE OO LA						
4-POLE 80 kA	100	00.14	110011 1 000			110000010
800 A	109	80 kA	MO2N-4-800	upon request	upon request	MO208348
1000 A	109	80 kA	MO2N-4-1000	upon request	upon request	MO210348
1250 A	109	80 kA	MO2N-4-1250	upon request	upon request	MO212348
1600 A	109	80 kA	MO2N-4-1600	upon request	upon request	MO216348
2000 A	109	80 kA	MO2N-4-2000	upon request	upon request	MO220348
2500 A	123	80 kA	MO2N-4-2500	upon request	upon request	MO225348
3200 A	136	80 kA	MO2N-4-3200	upon request	upon request	MO232348



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■ FRAME SIZE 3 TO 6300A – WITHOUT GUIDE FRAME



SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device. Replacement switch for existing frames. The nominal current must be appropriate for the guide frame.

MO340435

DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	88	100 kA	MO3H-4000	upon request	upon request	MO340435
5000 A	88	100 kA	MO3H-5000	upon request	upon request	MO350435
6300 A	96	100 kA	MO3H-6300	upon request	upon request	MO363435
4-POLE 100 kA						
4000 A	106	100 kA	MO3H-4-4000	upon request	upon request	MO340445
5000 A	106	100 kA	MO3H-4-5000	upon request	upon request	MO350445
6300 A	108	100 kA	MO3H-4-6300	upon request	upon request	MO363445

FRAME

Guide frame for frame size 3 upon request

FRAME SIZE 3 TO 6300A - WITH GUIDE FRAME, REAR-SIDE CONNECTION, **HORIZONTAL**





SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

5000 A
6300 A

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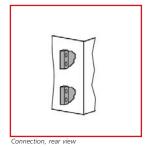
DESCRIPTION	WEIGHT (kg)	l _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	148	100 kA	MO3H-4000	upon request	upon request	MO340436
5000 A	148	100 kA	MO3H-5000	upon request	upon request	MO350436
6300 A	160	100 kA	MO3H-6300	upon request	upon request	MO363436

4-POLE 100 kA

4000 A	190	100 kA	MO3H-4-4000	upon request	upon request	MO340446
5000 A	190	100 kA	MO3H-4-5000	upon request	upon request	MO350446
6300 A	227	100 kA	MO3H-4-6300	upon request	upon request	MO363446

FRAME SIZE 3 TO 6300A - WITH GUIDE FRAME, REAR-SIDE CONNECTION, **VERTICAL**





SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

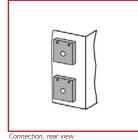
DESCRIPTION	WEIGHT (kg)	lcu	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	148	100 kA	MO3H-4000	upon request	upon request	MO340437
5000 A	148	100 kA	MO3H-5000	upon request	upon request	MO350437
6300 A	166	100 kA	MO3H-6300	upon request	upon request	MO363437

4-POLE 100 kA

4000 A	190	100 kA	MO3H-4-4000	upon request	upon request	MO340447
5000 A	190	100 kA	MO3H-4-5000	upon request	upon request	MO350447
6300 A	227	100 kA	MO3H-4-6300	upon request	upon request	MO363447

FRAME SIZE 3 TO 6300A - WITH GUIDE FRAME AND CONNECTING FLANGE





■ SCHRACK INFO

Basic unit without release, factory assembled with selected components and delivered as complete device.

DESCRIPTION	WEIGHT (kg)	l _{CU}	TYPE	EAN CODE	AVAILABLE	ORDER NO.
3-POLE 100 kA						
4000 A	148	100 kA	MO3H-4000	upon request	upon request	MO340438

4-POLE 100 kA

4000 A	190	100 kA	MO3H-4-4000	upon request	upon request	MO340448



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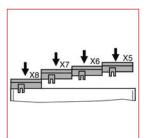
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- See availability and price immediately
- Order desired products easily



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OVERVIEW





■ SCHRACK-INFO

Calculation of the required number of auxiliary supply connectors

- Draw-out version: The auxiliary contacts automatically contact when the circuit-breaker is inserted in the guide frame. There are a range of connection models for connection of the auxiliary cable to the circuit breaker (see adjacent diagrams).
- Fixed version: The connection is carried out through a hand-held connector. The connectors are fitted with coded pins, which prevents any confusion with regard to the slots.

The number of auxiliary supply connectors required depends on:

- The operator type
- Overcurrent release with/without current transformer
- Type and quantity of the auxiliary releases
- The number of the auxiliary contacts
- Communication connection COM 15

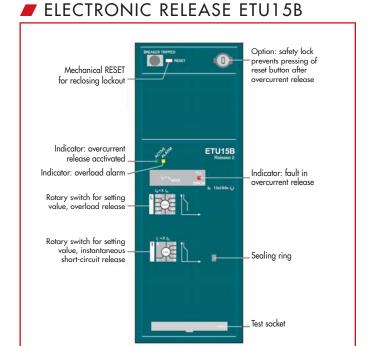
Complete devices always come with all the required connectors

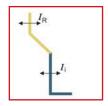
a First auxiliary supply connector X6 always required. b Operator Manual operator with memory with mechanical call Manual operator with stored-energy feature with electrical dosing Manual operator with stored-energy feature with electrical dosing O Manual/motor operator with stored-energy feature with mechanical and electrical closing to Wercurrent release ETU 58, ETU258, ETU258 (ETU278 Overcurrent release ETU458, ETU258, ETU278 Overcurrent release ETU458, ETU258, ETU278 Ports for external current transformers for overload protection in the N conductor and earth-fault protection Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) Auxiliary release d With/without 1st auxiliary release (Voltage release F1) Auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) E Auxiliary switch blocks 1 st auxiliary switch blocks 2N/O + 2N/C 1 and 2nd auxiliary switch block AN/O + AN/C or 6N/O + 2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 F Communications module With/voltage and auxiliary switch block AN/O + AN/C or 6N/O + 2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 F Communications module COM15 With communications module COM15 With communications module COM15 Signaling switch on first and second auxiliary release 522 + S23 g Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected), equired if g1 not selected) F Stored-energy status s21 (only possible if f2 not selected, required if g1 not selected) F Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) F Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) F Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) F Renoter case inpulling switch S20 Renoter case inpullin			No. of auxiliary supply co	Terminal nnectors
Manual operator with memory with mechanical call Manual operator with stored-energy feature with electrical closing Manual operator with stored-energy feature with mechanical and electrical closing C Wercurrent release C Overcurrent release ETU15B, ETU25B, ETU27B Ports for external current transformers for overload protection in the N conductor and earth-fault protection Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) Auxiliary release With/without 1st auxiliary release (Voltage release F1) Auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) Auxiliary switch blocks Ist auxiliary switch block Voltage release F2, undervoltage release F3, delayable undervoltage release F4 Communications module Without communications module COM15 Vith communications module COM15 Vith communications module COM15 Vith communications module COM15 Vith communications module COM15 Signaling switch S24 Stored-energy status indication S21 Electrical On button S10 Signaling switch on first auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if £2 not selected) Signaling switch on first auxiliary release S22 (only possible if £2 not selected) Signaling switch on first auxiliary release S22 (only possible if £2 not selected) Signaling switch on second auxiliary release S23 (only possible if £2 not selected, required if g1 not selected) Signaling switch on first auxiliary release S23 (only possible if £2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if £2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if £2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on first auxiliary release S23	a	First auxiliary supply connector X6 always required.	1	Х6
Manual operator with stored-energy feature with electrical closing Manual/motor operator with stored-energy feature with mechanical and electrical closing Covercurrent release Covercurrent release ETU15B, ETU25B, ETU27B Overcurrent transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) Auxiliary release Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) Auxiliary release With/without 1st auxiliary release (Voltage release F1) Outling and auxiliary release (Voltage release F2) Auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 2st auxiliary switch block 2N/O + 2N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 From a 2nd auxiliary switch block 2N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 From a 2nd auxiliary switch block 2N/O + 2N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 From a 2nd auxiliary switch block 3N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 From a 2nd auxiliary switch block 3N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 From a 2nd auxiliary switch on 5N/O + 3N/C (required if g1 not selected) +1 From a 2nd auxiliary switch on 5N/O + 3N/C (required if g1 not selected) +1 From a 3nd auxiliary switch on 5N/O + 3N/C (required if g1 not selected) +1 From a 3nd auxiliary switch on 5N/O +3N/C (required if g1 not selected) +1 From a 3nd auxiliary switch on 5N/O +3N/C (required if g1 not selected) +1 From a 3nd auxiliary switch on 5N/O +3N/C (required if g1 not selected) +1 From a 3nd auxiliary switch on 5N/O +3N/C (required if g1 not selected) +1 From a	b	Operator		
Manual/motor operator with stored-energy feature with mechanical and electrical closing +1 Overcurrent release Covercurrent release ETU-5B, ETU-25B, ETU-25B Overcurrent release ETU-5B, ETU-25B (internal Cubicle BUS) +1 Ports for external current transformers for overload protection in the N conductor and earth-fault protection Current transformer integral to N conductor (required for 2 pole circuit breakers when c2 is not selected) +1 Current transformer installed in the neutral conductor (required if c2 or c3 not selected) +1 Auxiliary release With/without 1st auxiliary release (Voltage release F1) 0 2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) +1 e Auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 With communications module COM15 With communications module COM15 Signaling switch on birts and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch on first and second auxiliary release S22 (only possible if f2 not selected) +1 Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Auxiliary switch S12 (only possible if f1 not operator selected) Auxiliary switch S12 (only possible if f1 not operator selected) Auxiliary switch S12 (only possible if f1 not selected) Auxiliary switch S12 (only possible if f1 not selected) Auxiliary switch S12 (only possible if f1 not selected) Auxiliary switch S12 (only possible if f1 not selected) Auxiliary switch S12 (only possible if f2 not selected) Auxiliary switch S12 (only possible if f2 not selected) A	b1	Manual operator with memory with mechanical call	0	
Overcurrent release Overcurrent release Overcurrent release ETU15B, ETU25B, ETU27B Overcurrent release ETU15B, ETU25B, ETU27B Overcurrent release ETU15B, ETU25B, ETU25B Overcurrent transformer instelled in the neutral conductor (required fir 20 or all selected) **Total Auxiliary release EV01tage release F1) Overcurrent release EV01tage release F1) Overcurrent release ETU15B, ETU25B, ETU25B, ETU25B Overcurrent release ETU15B, ETU25B, ETU25B, ETU25B Overcurrent release ETU15B, ETU25B, ETU25B, ETU25B Overcurrent transformer instelled in the neutral conductor (required if ba or all selected) **Total Auxiliary release EV01tage release F1} Overcurrent release ETU15B, ETU25B, ETU	o2		0	X6
Overcurrent release ETU15B, ETU25B, ETU27B Overcurrent release ETU15B, ETU25B (internal Cubicle BUS) Ports for external current transformers for overload protection in the N conductor and earth-fault protection Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) 4.1 Current transformer installed in the neutral conductor (required if c2 or c3 not selected) 4.1 Auxiliary release With/without 1st auxiliary release (Voltage release F1) 2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) 4.1 Auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) Without communications module Without communications module COM15 With communications module COM15 Tripped signal switch S24 Stored-energy status indication S21 Electrical On button S10 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Ready-to-close signalling switch S20 Notor cut-off switch S12 (only possible if motor operator selected) Remote reset magnet F7 (required if c2 not selected) Remote reset magnet F7 (required if c2 not selected)	о3	Manual/motor operator with stored-energy feature with mechanical and electrical closing	+1	X5
Overcurrent release ETU45B, ETU76B (internal Cubicle BUS) Ports for external current transformers for overload protection in the N conductor and earth-fault protection Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) Auxiliary release Mith/without 1st auxiliary release (Voltage release F1) 2nd auxiliary selease (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) Auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) Without communications module Without communications module COM15 With communications module COM15 Optional signals witch 524 Stored-energy status indication S21 Electrical On button S10 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Optional signals/accessories Stored-energy status S21 (only possible if f2 not selected) Electrical ON button S10 (only possible if f2 not selected) Stored-energy status S21 (only possible if f2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1 or g2 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Ready-to-close signalling switch S20 Ready-to-close signalling switch S20	:	***************************************		
Ports for external current transformers for overload protection in the N conductor and earth-fault protection Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) +1 Auxiliary release With/without 1st auxiliary release (Voltage release F1) 0 2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) +1 Auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 2N/O + 2N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 0 With communications module COM15 0 Tripped signal switch S24 stored-energy status indication S21 Electrical On button S10 • Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected) +1 Stored-energy status S21 (only possible if f2 not selected, required if g1 not selected) +1 Stored-energy status S21 (only possible if f2 not selected, required if g1, g2 or g3 +1 not selected) +1 Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) +1 Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) +1 Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) +1 Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) +1 Signaling switch on first auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) +1 Remote reset magnet F7 (required if c2 not selected) +1 Remote reset magnet F7 (required if c2 not selected) +1 Remote reset magnet F7 (required if c2 not selected) +1			0	
Current transformer integral to N conductor (required for 3 pole circuit breakers when c2 is not selected) Auxiliary release With/without 1st auxiliary release (Voltage release F1) 2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) 1 Auxiliary switch blocks 1 st auxiliary switch blocks 1 st auxiliary switch block 2N/O + 2N/C 2 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 With communications module COM15 Vifu communications module COM15 Stored-energy status indication S21 Electrical On button S10 Signaling switch S24 (only possible if f2 not selected) Stored-energy status S21 (only possible if f2 not selected) Electrical ON button S10 (only possible if f2 not selected, required if g1 or g2 not selected) Electrical ON button S10 (only possible if f2 not selected, required if g1 or g2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on first auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Reacty-to-close signalling switch S20 Notor cut-off switch S12 (only possible if motor operator selected) Remote reset magnet F7 (required if c2 not selected) Remote reset magnet F7 (required if c2 not selected)	:2	Overcurrent release ETU45B, ETU76B (internal Cubicle BUS)	+1	X8
Auxiliary release With/without 1st auxiliary release (Voltage release F1) 2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) 1 2nd auxiliary switch blocks 1 st auxiliary switch block 2N/O + 2N/C 2 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 With communications module COM15 Vith communications module COM15 Tripped signal switch 524 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 +1 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second suxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second suxiliary release S23 (only possible if f2 not selected) Signaling switch on second suxiliary release S24 (only possible if f2 not selected) Signaling switch on second suxiliary release S24 (only possible if f2 not selected) Signaling switch on second suxiliary release S25 (only selected) Signaling switch on second suxiliary release S2		Ports for external current transformers for overload protection in the N conductor and earth-fault protection		
Auxiliary release With/without 1st auxiliary release (Voltage release F1) 2 and auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) 41 Auxiliary switch blocks 1 st auxiliary switch block 2N/O + 2N/C 1 and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 With communications module COM15 With communications module COM15 Tripped signal switch S24 Stored-energy status indication S21 Electrical On button S10 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected) Electrical ON button S10 (only possible if f2 not selected, required if g1 not selected) Electrical ON button S10 (only possible if f2 not selected, required if g1 or g2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 H not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Ready-to-close signalling switch S20 Notor cut-off switch S12 (only possible if motor operator selected) Remote reset magnet F7 (required if c2 not selected) Remote reset magnet F7 (required if c2 not selected)	3		+1	X8
With/without 1st auxiliary release (Voltage release F1) 2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) 4nd auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) 4nd Communications module Communications module COM15 With communications module COM15 With communications module COM15 Tripped signal switch S24 Stored-energy status indication S21 Electrical On button \$10 Signaling switch on first and second auxiliary release \$22 + \$23 Optional signals/accessories Tripped signal switch \$24 (only possible if f2 not selected) Stored-energy status \$21 (only possible if f2 not selected) Signaling switch on first auxiliary release \$22 + \$23 Optional signals/accessories Tripped signal switch \$21 (only possible if f2 not selected) Signaling switch on first auxiliary release \$22 (only possible if f2 not selected) Signaling switch on second auxiliary release \$23 (only possible if f2 not selected, required if g1 or g2 not selected) Signaling switch on second auxiliary release \$23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release \$23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Ready-to-close signalling switch \$20 Motor cut-off switch \$12 (only possible if motor operator selected) Remote reset magnet F7 (required if c2 not selected) H1 Remote reset magnet F7 (required if c2 not selected)	:4	Current transformer installed in the neutral conductor (required if c2 or c3 not selected)	+1	X8
Auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4) Auxiliary switch blocks 1st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 With communications module COM15 Tripped signal switch S24 Stored-energy status indication S21 Electrical On button S10 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected) Stored-energy status S21 (only possible if f2 not selected) Stored-energy status S21 (only possible if f2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 Thin ot selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Ready-to-close signalling switch S20 Motor cut-off switch S12 (only possible if motor operator selected) Remote reset magnet F7 (required if c2 not selected)	i			
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1 st auxiliary switch block 2N/O + 2N/C 1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 0 With communications module COM15 0 Coccupies the entire terminal strip X7, making the following options no longer possible: 1 Tripped signal switch S24 1 Stored-energy status indication S21 1 Electrical On button S10 2 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories 1 Tripped signal switch S24 (only possible if f2 not selected) 1 Stored-energy status S21 (only possible if f2 not selected, required if g1 not selected) 1 Stored-energy status S21 (only possible if f2 not selected, required if g1 not selected) 1 Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 1 not selected) 2 Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) 3 Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) 3 Ready-to-close signalling switch S20 4 Motor cut-off switch S12 (only possible if motor operator selected) 4 Remote reset magnet F7 (required if c2 not selected) 4 Remote reset magnet F7 (required if c2 not selected) 4 Remote reset magnet F7 (required if c2 not selected) 4 Remote reset magnet F7 (required if c2 not selected)	2	2nd auxiliary release (Voltage release F2, undervoltage release F3, delayable undervoltage release F4)	+1	X5
1. and 2nd auxiliary switch block 4N/O + 4N/C or 6N/O +2N/C or 5N/O + 3N/C (required if b3 or d2 not selected) +1 Communications module Without communications module COM15 With communications module COM15 OUTILITY (September 1)				
Communications module Without communications module COM15 With communications module COM15- occupies the entire terminal strip X7, making the following options no longer possible: Tripped signal switch S24 Stored-energy status indication S21 Electrical On button S10 Signaling switch on first and second auxiliary release S22 + S23 Optional signals/accessories Tripped signal switch S24 (only possible if f2 not selected) Stored-energy status S21 (only possible if f2 not selected, required if g1 not selected) Electrical ON button S10 (only possible if f2 not selected, required if g1 or g2 not selected) Signaling switch on first auxiliary release S22 (only possible if f2 not selected, required if g1, g2 or g3 not selected) Signaling switch on second auxiliary release S23 (only possible if f2 not selected, required if g1, g2 or g3 or g4 not selected) Ready-to-close signalling switch S20 Motor cut-off switch S12 (only possible if motor operator selected) Remote reset magnet F7 (required if c2 not selected) Remote reset magnet F7 (required if c2 not selected) H1 Remote reset magnet F7 (required if c2 not selected)				Х6
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7 Motor cut-off switch \$12 (only possible if motor operator selected) 8 Remote reset magnet F7 (required if c2 not selected) +1 +1 +1	,	g4 not selected)		X6
Remote reset magnet F7 (required if c2 not selected) +1			-	X5
	•			X8
Total number of guxiliary supply connectors (max 4)	jβ	Kemote reset magnet F/ (required it c2 not selected)	+1	X8
interval of the state of the st	1	Total number of auxiliary supply connectors	(max. 4)	



SCHRACK INFO

Basic protection for installations and systems without time-selective grading up to 3200A.





TECHNICAL DATA

- Adjustable overload release with I^2t characteristic with fixed time delay $t_R = 10$ seconds at 6 x I_R
- Instantaneous short-circuit protection, adjustable between 2...8 x In
- Overload indicator
- Setting of protective functions by means of rotary switch

DESCRIPTION	TYPE	EAN CODE AVAILABLE	ORDER NO.
ELECTRONIC RELEASE ETU15B - FACTORY INSTALLED			
With protection function LI	ETU15B	9004840413816	MO890150



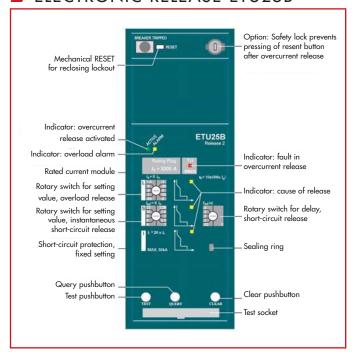
I KNOW WHERE TO FIND IT!

THE SCHRACK TECHNIK WEB SHOP WITH NAVIGATOR WWW.SCHRACK.COM



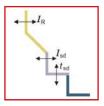
- Finding product information made easy
- Buying products around the clock
- Quick access customer service

■ ELECTRONIC RELEASE ETU25B



SCHRACK INFO

Classic protection for installations, motors and systems using time-selcetive grading up to 6300A.



■ TECHNICAL DATA

- Adjustable overload release with I^2t characteristic with time delay $t_R = 10$ seconds at 6 * I_R
- Short time-delay short-circuit protection, adjustable from 1,25 ... 12 * In and
- Instantaneous short-circuit protection, fixed to 20 * In, max. 55kA
- Replaceable rating plug allows instant adaptability to the required system currents, thus ensuring overload protection of 100 A to 6300 A
- Overload indicator
- Display of cause of release through LED
- Option for testing the release
- Setting of protective functions by means of rotary switch

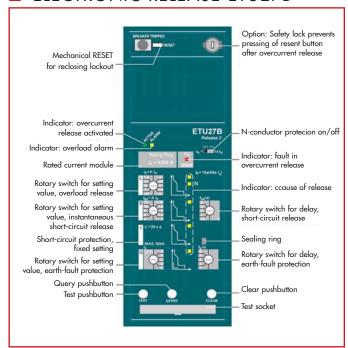
DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
ELECTRONIC RELEASE ETU25B - FACTORY INSTALLED				
With protection function LSI	ETU25B	90048404138	23	MO890250



I KNOW WHERE TO FIND IT!

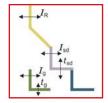
- Access technical product information at any time and from everywhere
- See availability and price immediately
- Order desired products easily

ELECTRONIC RELEASE ETU27B



SCHRACK INFO

Classic protection for installations, motors and systems using time-selcetive grading up to 6300A.



■ TECHNICAL DATA

- Adjustable overload release with I^2t characteristic with fixed time delay $t_R = 10$ seconds at 6 x I_R
- Short-time delay short-circuit protection, adjustable from 1,25 ... 12 x ln
- Instantaneous short-circuit protection, fixed at 20 x In, max. 50 kA
- Replaceable rating plug allows instant adaptability to the required system currents, thus ensuring overload protection of 100 A to 6300 A
- Overload indicator
- Display of cause of release through LED
- Option for testing the release
- Connectable neutral conductor protection
- Permanently integrated earth-fault protection for the calculation of the earth-fault current through vectorial current summation
- Current transformer for N conductor has to be ordered separately
- Setting of protective functions by means of rotary switch

DESCRIPTION	TYPE	EAN CODE	AVAILABLE	ORDER NO.
ELECTRONIC RELEASE ETU27B - FACTORY INSTALLED				
With protection function LSING	ETU27B	upon request	upon request	MO890270



I KNOW WHERE TO FIND IT!

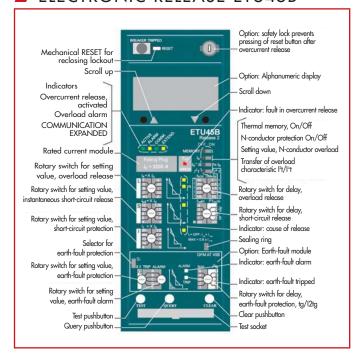
THE SCHRACK TECHNIK WEB SHOP WITH NAVIGATOR WWW.SCHRACK.COM



- Finding product information made easy
- Buying products around the clock
- Quick access customer service

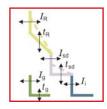


ELECTRONIC RELEASE ETU45B



SCHRACK INFO

An inexpensive allrounder for intelligent installations and all sorts of industrial applications - "Internal Cubicle BUS".



■ TECHNICAL DATA

- Adjustable overload release with I2t characteristic with fixed time delay $t_R = 10$ seconds at 6 x I_R
- Short-time delay short-circuit protection, adjustable from 1,25 ... 12 x ln
- Instantaneous short-circuit protection, fixed at 20 x In, max. 50 kA
- Replaceable rating plug allows instant adaptability to the required system currents, thus ensuring overload protection of 100 A to 6300 A
- Overload indicator
- Display of cause of release through LED
- Option for testing the release
- Adjustable time-lag class for overload protection
- Switch-selectable characteristic of the overload and short-time delay short-circuit range (current discriminate) for finer selectivity conditioning to downstream fuses or protective devices
- Thermal memory as restart protection in the case of tripped motor circuits
- Connectable and adjustable neutral conductor protection
- Modular earth-fault protection, with separately adjustable alarm and trip function
- Communication interface, metering function (Plus), connection of external modules as option or retrofit option
- Optional high-contrast display with viewing angle adjustment
- Setting of protective functions by means of rotary or slide switch

DESCRIPTION	TYPE	EAN CODE AVAILABLE	ORDER NO.
ELECTRONIC RELEASE ETU45B - FACTORY INSTALLED			
With LSIN protective function, without display	ETU45B	9004840413847	MO890450
With LSIN protective function, with display	ETU45B	9004840466874	MO89D450
With LSING protective function			
incl. earth-fault protection unit, without display		upon request upon request	MO89045G

Order current converter for N conductor protection, and current converter for sensing ground fault current in earthed neutral conductor of transformer separately. The internal transformers for neutral conductors can be ordered by adding a "Z" and short order code "F23".

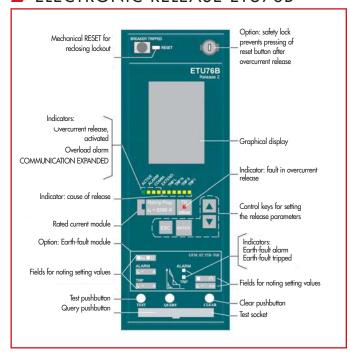






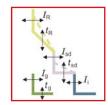
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ELECTRONIC RELEASE ETU76B



SCHRACK INFO

The multitalented system with graphical display for network analysis - "integrated Cubicle BUS".



TECHNICAL DATA

- Adjustable overload release with I2t characteristic with fixed time delay $t_R = 10$ seconds at 6 x I_R
- Short-time delay short-circuit protection, adjustable from 1,25 ... 12 x ln
- Instantaneous short-circuit protection, fixed at 20 x In, max. 50 kA
- Replaceable rating plug allows instant adaptability to the required system currents, thus ensuring overload protection of 100 A to 6300 A
- Overload indicator
- Display of cause of release through LED
- Option for testing the release
- Adjustable time-lag class for overload protection
- Switch-selectable characteristic of the overload and short-time delay short-circuit range (current discriminate) for finer selectivity conditioning to downstream fuses or protective devices
- Thermal memory as restart protection in the case of tripped motor circuits
- Connectable and adjustable neutral conductor protection
- Modular earth-fault protection, with separately adjustable alarm and trip function
- Communication interface, metering function (Plus), connection of external modules as option or retrofit option
- Two protective parameter sets that can be stored separately in the release (switch selectable through external signal)
- Overload protection that can be switched off for use with modern operating mechanism technology
- Adjustable lag of the delayed short-circuit protection up to 4000 ms
- Neutral conductor protection adjustable to $l_N = 2 \times l_n$
- Setting of protective functions by means of Breaker Data Adapter or through communication interface
- Graphical display of all parameters and event/curve characteristics
- Storage of events and causes of release for specific error analysis
- High contrast, background-lit graphical display with sleep mode

DESCRIPTION	TYPE	EAN CODE AVAILABLE	ORDER NO.
ELECTRONIC RELEASE ETU76B - FACTORY INSTALLED			
With protection function LSIN	ETU76B	9004840413854	MO890760
With LSING protective function incl. earth-fault protection unit	ETU76B	upon request upon request	MO89076G

Order current converter for N conductor protection, and current converter for sensing ground fault current in earthed neutral conductor of transformer separately. The internal transformers for neutral conductors can be ordered by adding a "Z" and short order code "F23".





RATING PLUG



■ SCHRACK INFO

The Rating Plug is a replaceable module that enables users to reduce the rated device current for optimum adaptation to the system; e. g. during startup of a plant selection. The Rating Plug should be selected so that it roughly corresponds to the rated current of the system

rated current in(a)	Order number	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
FOR FRAME SIZE 1, 2		
250	MO90AA51	MO800B02
315	MO90AA52	MO800B03
400	MO90AA53	MO800B04
500	MO90AA54	MO800B05
630	MO90AA55	MO800B06
800	MO90AA56	MO800B08
1000	MO90AA57	MO800B10
FOR FRAME SIZE 1, 2, 3		
FOR FRAME CITE 1 O O		
	MO90AA58	MO800B12
1250	MO90AA58 MO90AA61	MO800B12 MO800B16
1250 1600		
1250 1600 FOR FRAME SIZE 2, 3		
1250 1600 FOR FRAME SIZE 2, 3	MO90AA61	MO800B16
1250 1600 FOR FRAME SIZE 2, 3 2000 2500	MO90AA61 MO90AA62	MO800B16 MO800B20
FOR FRAME SIZE 1, 2, 3 1250 1600 FOR FRAME SIZE 2, 3 2000 2500 3200 4000	MO90AA61 MO90AA62 MO90AA63	MO800B16 MO800B20 MO800B25
1250 1600 FOR FRAME SIZE 2, 3 2000 2500 3200	MO90AA61 MO90AA62 MO90AA63 MO90AA64	MO800B16 MO800B20 MO800B25 MO800B32
1250 1600 FOR FRAME SIZE 2, 3 2000 2500 3200	MO90AA61 MO90AA62 MO90AA63 MO90AA64	MO800B16 MO800B20 MO800B25 MO800B32
1250 1600 FOR FRAME SIZE 2, 3 2000 2500 3200 4000	MO90AA61 MO90AA62 MO90AA63 MO90AA64	MO800B16 MO800B20 MO800B25 MO800B32



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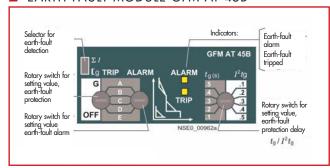


■ EARTH-FAULT PROTECTION MODULE

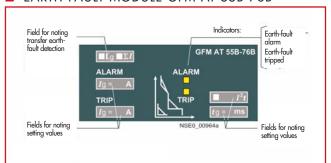
SCHRACK-INFO

The earth-fault release "G" detects fault currents that flow above ground and present a fire hazard to the system. The adjustable time lag allows the selective staggering of consecutively arranged circuit-breakers. When setting the parameters at the over current release, a selection can be made between "report" (alarm) and "trigger" (trip) if the set current value is exceeded. The cause of the release is displayed on a LED when the query button is pressed. Protection release ETU27B is equipped with an earth-fault protection module, ETU45B, ETU55B and ETU76B can be retrofitted.

EARTH-FAULT MODULE GFM AT 45B



■ EARTH-FAULT MODULE GFM AT 55B-76B



DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
GFM AT 45B (for ETU 45B only) Alarm and trigger	MO90AT53	-
GFM AT 55B-76B (for ETU76B only) Alarm and trigger	MO90AT56	-

DISPLAY



DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
4-line dsplay for ETU45B	MO90AT81	_

■ EMC FILTER

SCHRACK INFO

Radio interference suppresion filter for accentuating common-mode interferences (e. g. in IT networks, resulting from frequency converters). (Asymmetric) insertion loss in 40 kHz to 10 MHz > 40 dB range.

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
EMC Filter	MO90AK32	MO800F31



TRANSFORMER FOR N CONDUCTOR

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Internal transformers for Neutral conductor – includes wiring	kit	
Frame size 1	MO90AA11	MO810F23
Frame size 2	MO90AA12	MO820F23
Frame size 3	MO90AA13	MO830F23
External transformer for N conductor		
Frame size 1	MO90AA21	-
Frame size 2	MO90AA22	-
Frame size 3	MO90AA23	-
External transformer for N conductor with connection pieces		
Frame size 1	MO90AA31	-
Frame size 2	MO90AA32	_

AUTOMATIC RESET OF THE RECLOSING LOCKOUT

■ SCHRACK INFO

Frame size 3

If the ETU is released the circuit-breaker cannot be reclosed until the release has been either electrically or manually reset. With the option "automatic reset of the reclosing lockout", the circuit-breaker is ready-to-close immediately after a release. The reset of the manual trip indicator is not contained in this option.

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Lead sealable cover plate for ETU15B to ETU55B	MO90AT45	-
Lead-sealable cover plate for ETU76	MO90AT46	-
Automatic reset of the reclosing lock out	MO90AK21	MO800K01
Remote reset magnet – for mechanical trip display DC 24 V	MO90AK03	MO800K10
Remote reset magnet – for mechanical trip display AC 208-240 V/DC 220-250 V	MO900AK06	MO800K13
Retrofittable internal Cubicle BUS wiring for connection to Terminal X8 -		
(male connectors not included) for ETU45B to ETU76B	MO90AK30	-
Retroffitable internal wiring for connecting external N- and G transformers to Terminal X8 –		
(male connectors not included)	MO90AK31	-



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ORDER NUMBER

ORDER NO.

■ LOCKING DEVICES

SCHRACK INFO

DESCRIPTION

"Safe OFF" switch-independent interlock device to prevent unauthorised closing

This special feature available for draw-out circuit breakers prevents closing independently of the switch, thus satisfying main switch conditions to EN 60204 (VDE 0113) - Mains disconnecting equipment. Unauthorised closing is not possible after replacement of the circuit breaker. The circuit breaker must be switched off to activate the interlock. The interlock device is blocked when the circuit breaker is switched on. The blocking is only effective when the key has been removed. The safety key can only be removed in the "OFF" position.

	AS SPARE PART	FACTORY INSTALLED
Locking device against unauthorised closing, in operator panel		
Mains equipment meets EN 60204 (VDE 0113) regulations for main switches.		
Installation kit FORTRESS or CASTELL	MO900BA31	-
Made by Ronis	MO90BA33	MO800S08
Made by KIRK-Key	MO90BA34	-
Made by Profalux	MO90BA35	MO800S09
Made by CES	MO90BA36	MO800S01
Made by IKON	MO90BA38	MO800S03
Installation kit for padlocks	MO90BA41	MO800S07

Locking device against unauthorised closing, for draw-out circuit breaker

Mains equipment meets EN 60204 (VDE 0113) regulations for main switches, comprising lock in cabinet door, effective in operating position, the function remains the same when replacing the switch.

Made by CES	MO90BA51	MO800R61
Made by IKON	MO90BA53	-
Made by KIRK key	MO90BA57	-
Made by Ronis	MO90BA58	MO800R68
Made by Profalux	MO90BA50	MO800R60

Locking device for operator lever using padlock

Locking device for operating lever (padlock not inc	uded) MO90BA71	MO800S33

Lock device to prevent movement of withdrawable circuit breaker - Safety lock for mounting on switch

Made by CES	MO90BA73	MO800S71
Made by IKON	MO90BA75	-
Made by Profalux	MO90BA76	MO800S75
Made by Ronis	MO90BA77	MO800S76

■ SEALING CAP FOR MECHANICAL ON/OFF

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Protective covers for mechanical ON/OFF		
each comprising 2 transparent covers for sealing or attachment of padlocks,		
Cover with 6,35 mm bore (for tool actuation), lock mount for safety lock for key operation		
Lock not included	MO90BA21	-
Made by CES	MO90BA22	-
Made by IKON	MO90BA24	-



LOCKING MECHANISMS

■ SCHRACK INFO

Locking device against moving if the cubicle door is open for withdrawable circuit-breakers

The crank handle is blocked if the cubicle door is open and cannot be withdrawn. It is not possible to move withdrawable circuit-breakers. The blocking is only effective if the crank handle is inserted.

Interlocking of cubicle door

The cubicle door cannot be opened if the

- fixed-mounted circuit-breaker ist closed (transmission of the locking signal by means of Bowden wire) or
- if the withdrawable circuit-braker is in connected position

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Prevents movement of draw-out circuit breaker in disconnect position, comprisin	g Bowden cable and lock in cabine	t door
Made by CES	MO90BA81	MO800R81
Made by IKON	MO90BA83	-
Made by Profalux	MO90BA85	MO800R85
Made by Ronis	MO90BA86	MO800R86
Installation kit for padlocks	MO90BA87	-
Prevents opening of cabinet door in ON position (defeatable)		
For permanent installation	MO90BB12	MO800R30
Prevents opening of cabinet door in ON position (defeatable)		
For guide frame	MO90BB13	MO800S30
Prevents movement while cabinet door open		
For guide frame	MO90BB15	MO800R50

■ MECHANICAL INTERLOCK

SCHRACK INFO

Mutual mechanical circuit-breaker interlocking

The module for mutual mechanical interlocking can be implemented for two or three circuit-breakers and is simple to adapt to the respective version. Fixed-mounted and withdrawable circuit-breakers are compatible and can be implemented together in a single system.

The circuit-breakers can be installed either next to one another or on top of one another, whereby the distance between circuit-breakers is determined only by the length of the Bowden wire.

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Mutual mechanical interlock, with Bowden cable 2000 mm (one required per circuit bre	eaker)	
Module for fixed-mounted circuit breakers	MO90BB21	MO800S55
Module for draw-out circuit breaker with frame. To be ordered separately.	MO90BB24	MO800R55
Module for guide frame. To be ordered separately.	MO90BB22	MO800R56
Module for draw-out circuit breaker. To be ordered separately.	MO90BB23	MO800R57
Bowden cable		
2000 mm	MO90BB45	-
3000 mm	MO90BB46	-
4500 mm	MO90BB47	-



SIGNALISATION AND CONTROL



SCHRACK INFO

Ready-to-close signalling switch

MO circuit breaker come with a visual ready-to-close signal indicator as standard. The option is also available to indicate ready-to-close using a signalling switch. This signalling switch is included as standard for switches operated via a communications interface.

Signalling switch for auxiliary release

One signalling contact is available per auxiliary release for polling switch status of the auxiliary releases.

Tripped signal switch

In the event that the circuit breaker tripped due to an overload, short-circuit, earth-fault or extended protection function, this can be indicated with a tripped signal switch. This indicator switch is available as an option. This signalling switch is included as standard for circuit breakers operated via a communications interface.

Operating cycle counter

A 5-digit operating cycle counter is available in connection with the motor operator. The counter increments by "1" once the storage spring is fully charged.

"Electrical ON" button

Used for the electrical switch-on of the circuit breaker via a local, electical "ON" or remote operation.

Sealable cap covers "Electrical ON" button

The "Electrical ON button" comes with a sealable cap as standard.

Motor cut off switch

Rotary switch for switching off (automatic charging) of motor operator.

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Ready-to-close signalling switch	MO90AH01	MO800C22
Signalling switch, 1st auxiliary release	MO90AH02	MO800C26
Signalling switch, 2nd auxiliary release	MO90AH03	MO800C27
Tripped signal switch	MO90AH04	MO800K07
Mechanical operating cycle counter	MO90AH07	MO800C01
Stored energy status signalling switch	MO90AH08	MO800C20
Position indicator switch for guide frame, 1st block (3rd microswitch)	MO90AH11	MO800R15
Position indicator switch for guide frame, 2nd block (6th microswitch)	MO90AH12	MO800R16
Electical ON button (button+wiring) with sealable cap	MO90AJ02	MO800C11
Electical ON button (button+wiring) with CES installation kit	MO90AJ03	MO800C12
Motor cut-off switch, assembly on operator panel	MO90AJ06	MO800S25
EMERGENCY OFF button, mushroom button instead of mechanical OFF button	MO90BA72	MO800S24



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■ TEST DEVICES

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Manual test device for overcurrent releases ETU15B to ETU76B		
for testing overcurrent release functions	MO90AT31	-
Function test device for testing release characteristic curves		
for overcurrent releases ETU15B to ETU76B	MO90AT44	-

■ CAPACITOR STORAGE DEVICE

SCHRACK INFO

Rated control voltage must be the same as the rated control voltage of the voltage release unit. Also suitable for circuit breakers 3VL and 3WN.

RATED CONTROL VOLTAGE/	ORDER NO.	ORDER NUMBER
RATED CONTROL VOLTAGE	AS REPLACEMENT PART	FACTORY INSTALLED
For voltage release AC 50/60 Hz 110-127/DC 110-115 V	MO90BA13	-
For voltage release AC 50/60 Hz 220-240/DC 220-250 V	MO90BA14	-

AUX. PLUG CONNECTORS







DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Make connectors for circuit breakers	MO90AB01	-
Auxiliary supply connector for circuit breaker or guide frame,		
Screw connection (SIGUT)	MO90AB03	-
Auxiliary supply connector for circuit breaker or guide frame,		
Screwless connection type (tension spring)	MO90AB04	-
Coding set for fixed installation (X5 to X8)	MO90AB07	-
Sliding contact module for for guide frame	MO90AB08	-
Dummy block for circuit breaker	MO90AB12	-



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✓ 1ST AUXILIARY RELEASE AFTER ETU



SCHRACK INFO

Up to two auxiliary release switches can be installed at the same time. The 1st release must always be a voltage release. 2nd auxiliary release see below

MO90AD01

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Shunt release		
DC 24 V - 100 % ED	MO90AD01	MO890B00
DC 30 V	MO90AD02	MO890C00
DC 48 V	MO90AD03	MO890D00
DC 60 V	MO90AD04	MO890E00
DC 110 V/AC 110 V	MO90AD05	MO890F00
DC 220 V/AC 230 V	MO90AD06	MO890G00

2ND AUXILIARY RELEASE AFTER ETU



■ SCHRACK INFO

Possible combinations:

1 shunt release or 1 undervoltage release or 2 shunt releases

or 1 shunt release + 1 undervoltage release.

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Shunt release		
DC 24 V - 100 % ED	MO90AD01	MO890B00
DC 30 V	MO90AD02	MO890C00
DC 48 V	MO90AD03	MO890D00
DC 60 V	MO90AD04	MO890E00
DC 110 V/AC 110 V	MO90AD05	MO890F00
DC 220 V/AC 230 V	MO90AD06	MO890G00

Undervoltage release – undelayed (\geq 80ms), short time-delayed (\leq 200ms)

DC 24 V	MO90AE01	MO8900J0
DC 30 V	MO90AE02	MO890K00
DC 48 V	MO90AE03	MO890L00
DC 60 V	MO90AE07	MO890U00
DC 110-125 V/AC 110-127 V	MO90AE04	MO890M00
DC 220-250 V/AC 208-240 V	MO90AE05	MO890N00
AC 380-415 V	MO90AE06	MO890P00

Undervoltage release - time-delayable 0,2 s to 3,2 sec

DC 48 V	MO90AE11	MO890Q00
DC 110-125 V/AC 110-127 V	MO90AE12	MO890R00
DC 220-250 V/AC 208-240 V	MO90AE13	MO890S00
AC 380-415 V	MO90AE14	MO890T00



■ MOTOR OPERATOR



■ SCHRACK INFO

For automatic charging of the stored energy mechanism.

Is switched on when the stored energy mechanism is released and the control voltage is available

Automatically switches off after charging. Manual actuation of the storage can function independently

MO90AF04

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Motor operator DC 220-250 V/AC 208-240 V	MO90AF04	MO894000
Motor operator DC 110-125 V/AC 110-127 V	MO90AF05	MO895000
Motor operator DC 24-30 V	MO90AF06	MO896000

AUXILIARY CONTACTS



1 N/O + 1 N/C additionally

■ SCHRACK INFO

• Always includes 2 N/O + 2 N/C

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
2 N/O + 2 N/C additionally	MO90AG01	MO890004
4 N/O additionally	-	MO890007
3 N/O + 1 N/C additionally	-	MO890008
2 N/O additionally	MO90AG02	-



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MO90AG03

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DOOR SEALING FRAME, COVER



MO800T40

removable cover is opened from both sides	MO90AP02	-
Safety cover IP55 is not for use in combination with door sealing frame,		
Door sealing frame	MO90AP01	MO80T400
	AS SPARE PART	FACTORY INSTALLED
DESCRIPTION	ORDER NO.	ORDER NUMBER

■ SHUTTER

Frame size 2

Frame size 3

SCHRACK INFO

The cover strips of the shutter lock the laminated contacts of the guide frame if the withdrawable circuit-breaker is withdrawn so that they fulfil the function of a touch guard.

The cover strips can be manually opened with the strip lifter.

The cover strips can be fixed in different positions with padlocks and protected from unauthorized manipulation.

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Shutter 3 pole		
Frame size 1	MO90AP04	MO810R21
Frame size 2	MO90AP06	MO820R21
Frame size 3	MO90AP07	MO830R21
Shutter 4 pole		
Frame size 1	MO90AP08	MO814R21



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MO90AP11

MO90AP12

MO824R21

MO834R21



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■ ARC CHUTE COVER/SHUTTER

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Arc chute cover Parts set for guide frame, 3 pole		
Frame size 1	MO90AS32	MO810R20
Frame size 2	MO90AS36	MO820R20
Frame size 3	MO90AS38	MO830R20
Arc chute cover Parts set for guide frame, 4 pole		
Frame size 1	MO90AS42	MO814R10
Frame size 2	MO90AS44	MO824R10
Frame size 3	MO90AS46	MO834R10

■ SUPPORT BRACKET

SCHRACK INFO

For mounting fixed-installed circuit breakers vertically, for frame sizes 1 and 2 only (1 set = 2 pcs.).

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Support bracket, frame size 1/2	MO90BB50	-

■ CUBICLE BUS MODULES

DESCRIPTION	ORDER NO.	ORDER NUMBER
	AS SPARE PART	FACTORY INSTALLED
Digital output module with rotary coding switch, relay outputs	MO90AT26	-
Digital output module, configurable, relay outputs	MO90AT20	-
Digital input module	MO90AT27	-
Analogue output module	MO90AT23	-
ZSS module	MO90AT21	-



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PARAMETERISATION SYSTEMS, COMMUNICATION

DESCRIPTION	ORDER NO.
Breaker Data Adapter (BDA)	
Parameterisation, operation, monitoring and diagnosis of SENTRON circuit breakers via the local interface:	
Breaker Data Adapter, connecting cable to SENTRON 3WL circuit breakers and to programming device	
(e.g. laptop); runs on Internet Explorer with JAVA2 VM 1.4.0-01	MO90AT28
BDA Plus	
Same as BDA, also with Ethernet interface for connection to Ethernet/Intranet/Internet	MO90AT33
Connecting cable for BDA Plus	
Connecting cable for BDA Plus Conencting cable for connection of BDA Plus to Terminal X8 on SENTRON 3WL circuit breaker. Required	
	MO90BC21
Conencting cable for connection of BDA Plus to Terminal X8 on SENTRON 3WL circuit breaker. Required	MO90BC21
Conencting cable for connection of BDA Plus to Terminal X8 on SENTRON 3WL circuit breaker. Required	MO90BC21
Conencting cable for connection of BDA Plus to Terminal X8 on SENTRON 3WL circuit breaker. Required when a COM 15 or other external CUBICLE BUS modules are not present, 2 m in length.	MO90BC21
Conencting cable for connection of BDA Plus to Terminal X8 on SENTRON 3WL circuit breaker. Required when a COM 15 or other external CUBICLE BUS modules are not present, 2 m in length. Switch ES Power parameterisation software	MO90BC21

ACCESSORIES FOR COMMUNICATION

ORDER NO.
MO90BC04
MO90BC02
MO90BC03
MO90BC05
MO90BB70
MO90BB68

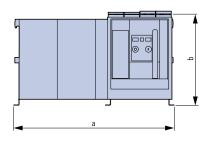
■ RETROFFITING AND REPLACEMENT PARTS

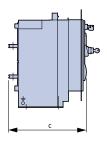
DESCRIPTION	ORDER NO.
PROFIBUS retrofit kit	
Retrofit kit for PROFIBUS communication includes COM15, BSS and cable kit for all MO circuit breakers	
of 3WL type with ETU45B, ETU55B and ETU76B releases	MO90AT12
COM15 PROFIBUS Module	MO90AT15
Breaker Status Sensor (BSS)	MO90AT16
Plus measurement function (requires voltage transformer)	MO90AT03



EXTERNAL DIMENSIONS, DOOR CUTOUTS

CIRCUIT BREAKER / SWITCH DISCONNECTOR MO





	Fixed-mounting			Withdro	wable unit	ts
	а	b	C1)	а	b	c1)
MO1	320	434	357	320	460	471
MO2	460	434	357	460	460	471
MO3	704	434	357	704	460	471
MO1 - 4	410	434	357	410	460	471
MO2 - 4	590	434	357	590	460	471
MO2 - 4	914	434	357	914	460	471

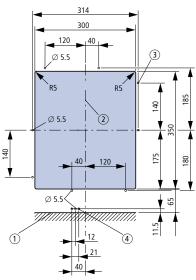
1) Including dimension for horizontal connection.

Height "b" to upper edge of control circuit plug in screw termination for circuit breaker/ switch disconnector with $U_e \le 690$ V. See detail drawing for deviations for $U_e=1000 \text{ V}$.

DOOR CUTOUTS

Door cutout for control panel

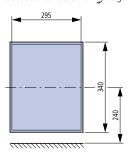
using door sealing frame



- Mounting surface
 Centre of IZM/IN control panel
 B mounting bores for door sealing frame
 A mounting bores for door interlock

Door cutout with edge protection

Cutout after assembling edge protection



MO1 − 3/4 POLE

FIXED-MOUNTING AND OPTIONAL CONNECTION FEATURES

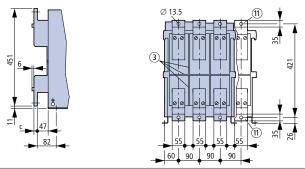
Standard design, horizontal connection

9 1 8 33.5 541.5 (3) 434 130 150 106

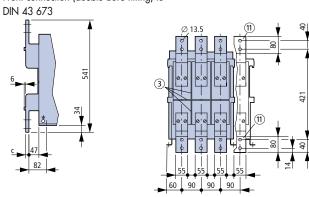
4 × Ø 9

Optional connection features

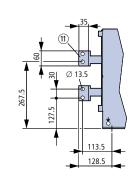
Front connection (single-bore fitting)

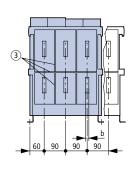


Front connection (double-bore fitting) to



Vertical connection





3.	-1. 11. 11.				\$ 150 \$ 100 \$ 100	275
-	60	90	90	90	 	

urrent l _u	а	b	С	Mounting sp slots (4 mm)
000 1				© SIOIS (4 IIIIII

Rated cu up to 1000 A 10 10 10 1250 – 1600 A 15 15 15

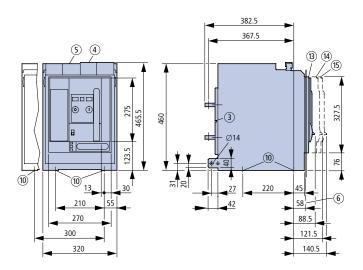
- pace for removing of arcing chamber covers
- wide, 5 mm deep) for supporting phase partions in the system
- 3 Control circuit plug, screw terminals
- Control circuit plug, spring terminals
 Dimension to inside of closed switchgear door
- Fixing points for the circuit-breaker in the system
 Interlock in OFF (optional accessory)
- 8 key operation (optional accessory)
- 9 Connection area
- (1) When front connections are used, a partition between busbar and arcing space must be fitted on the system side.

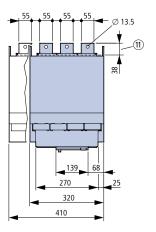


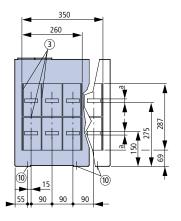
■ MO1 - 3/4 POLE

WITHDRAWABLE UNITS AND OPTIONAL CONNECTION FEATURES

Standard design, horizontal connection

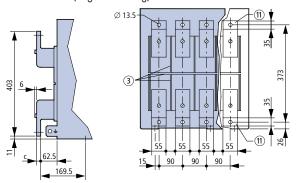




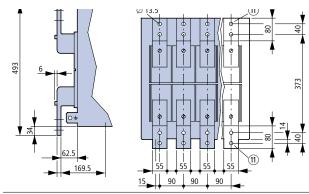


Optional connection features

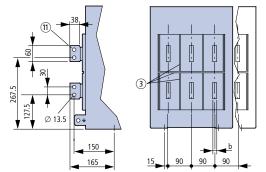
Front connection (single-bore fitting)



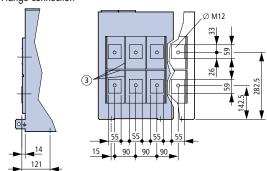
Front connection (double-bore fitting) meets DIN 43 673



Vertical connection



Flange connection



- Rated current I b а up to 1000 A 10 10 10 1250 - 1600 A 15 15 15
- 3 Slots (4 mm wide, 5 mm deep) for supporting phase partitions in the system
- Control circuit plug, screw terminals
- © Control circuit plug, spring terminals
 © Dimension to inside of closed switchgear door
 © Fixing holes, [10 mm
- (11) Connection area
- 13 MO in connected position
- (14) MO in test position
- 13 MO in disconnected position

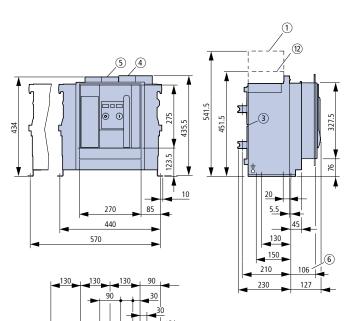
When front connections are used, a partition between busbar and arcing space must be fitted on the system side.



MO2 − 3/4 POLE

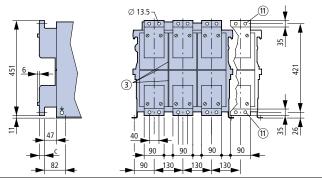
FIXED-MOUNTING AND OPTIONAL CONNECTION TECHNOLOGY

Standard design, horizontal connection

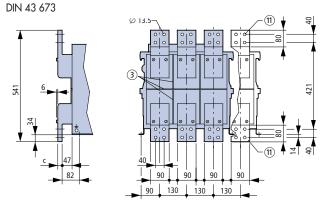


Optional connection features

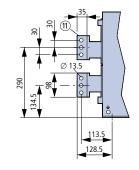
Front connection (single-bore fitting)

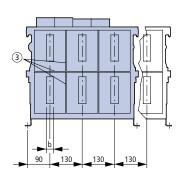


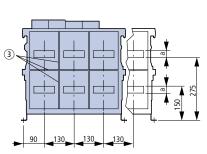
Front connection (double-bore fitting) to



Vertical connection







590

Rated current I _u	а	b	С
up to 2000 A	10	10	10
2500 A	15	15	20
3200 A	30	30	20

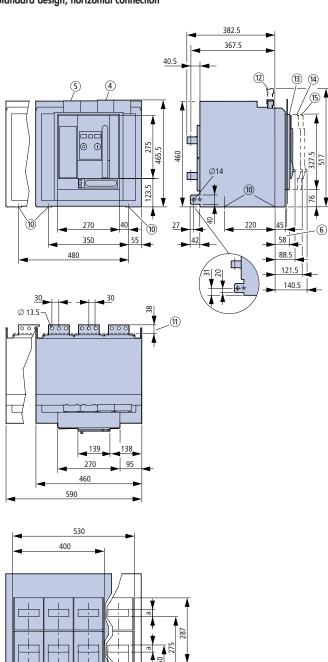
- $\ensuremath{\mathbb{O}}$ Mounting space for removal of arcing chamber covers
- With $U_0 = 1000 \text{ V}$, 175 mms are required for removing of the arcing chamber.
- 3 Slots (4 mm wide, 5 mm deep) for supporting phase partions in the system
 - Control circuit plug, screw terminals
- © Control circuit plug, spring terminals
 © Dimension to inside of closed switchgear door
- $\ensuremath{{\ensuremath{\mathbb{C}}}}$ Fixing points for the circuit-breaker in the system
- (1) Connection area
- ②Circuit breaker top edge- AC-1000V version only

When front connections are used, a partition between busbar and arcing space must be fitted on the system side.

■ MO2 - 3/4 POLE

WITHDRAWABLE UNITS AND OPTIONAL CONNECTION FEATURES

Standard design, horizontal connection



With $U_{\rm e}$ = 1000 V, 175 mms are required for removal of the arcing chamber.

- 3 Slots (4 mm wide, 5 mm deep) for supporting phase partions in the system

 4 Control circuit plug, screw terminals

- © Control circuit plug, spring terminals
 © Dimension to inside of closed switchgear door
 © Fixing holes, % 10 mm

55 45 130 130 130

(11) Connection area

10

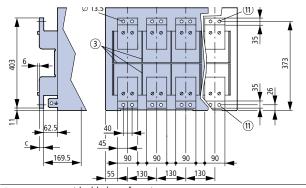
- (2) Circuit breaker top edge- AC-1000V version only
- 13 MO in connected position
- 14 MO in test position
- 15 MO in disconnected position

When front connections are used, a partition between busbar and arcing space must be fitted on the system side.



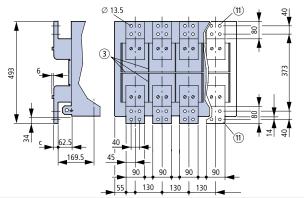
Optional connection features

Front connection (single-bore fitting)

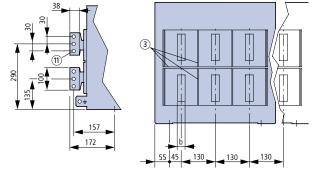


Front connection (double-bore fitting) to

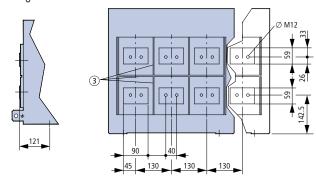
DIN 43 673



Vertical connection



Flange connection

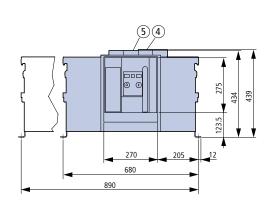


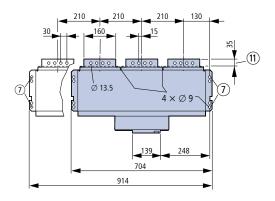
Rated current I _u	а	b	с
up to 2000 A	10	10	10
2500 A	15	15	20
3200 A	30	30	20

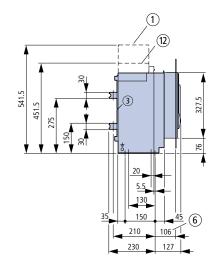
■ MO3 - 3/4 POLE

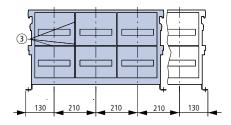
FIXED-MOUNTING

Standard design, horizontal connection ≤6300A





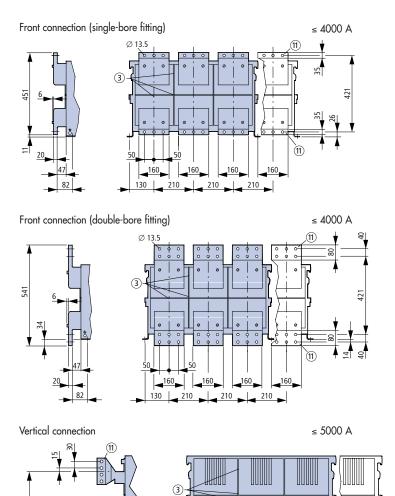




- $\ensuremath{\mathbb{O}}$ Mounting space for removal of arcing chamber covers
- With $U_{\rm e} = 1000$ V, 175 mms are required for removal of the arcing chamber.
- 3 Slots (4 mm wide, 5 mm deep) for supporting phase partions in the system 4 Control circuit plug, screw terminals

- © Control circuit plug, spring terminals
 © Dimension to inside of closed switchgear door
- Tixing points for the circuit-breaker in the system
- ① Connection area
- © Circuit breaker top edge- AC-1000V version only
- When front connections are used, a partition between busbar and arcing space must be fitted on the system side.

OPTIONAL CONNECTION FEATURES



10 20

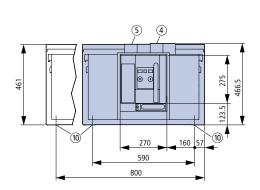
210

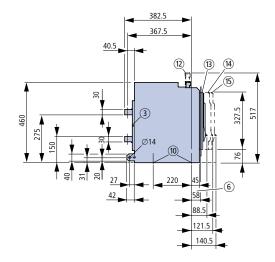
210

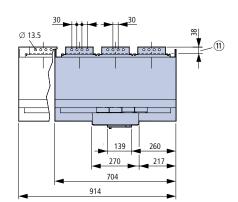
■ MO3 - 3/4 POLE

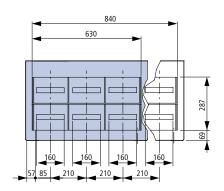
OPTIONAL CONNECTION FEATURES

Standard design, horizontal connection ≤5000 A









		r.
Rated current I _u	а	b
4000 A	40	210
5000 A	40	210
6300 A	5	245

- $\ \, \ \, \ \,$ Slots (4 mm wide, 5 mm deep) for supporting phase partions in the system $\ \, \ \,$ Control circuit plug, screw terminals

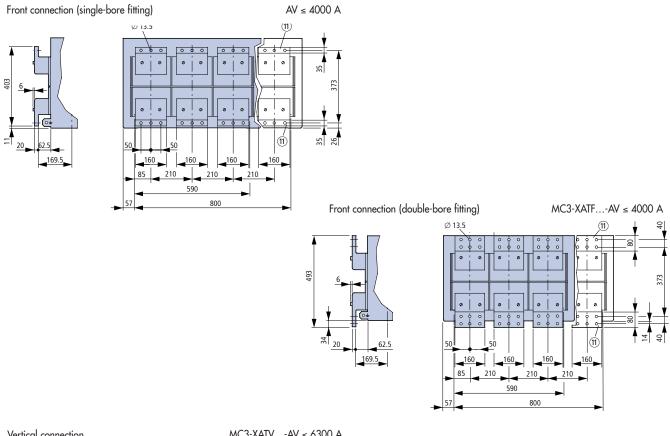
- © Control circuit plug, screw terminals
 © Dimension to inside of closed switchgear door
 © Fixing holes, Ø 10 mm

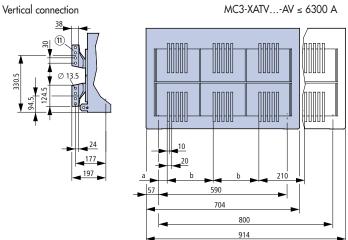
- Connection area
 Circuit breaker top edge- AC-1000V version only
 MO in connected position
- MO in test position
- 13 MO in disconnected position

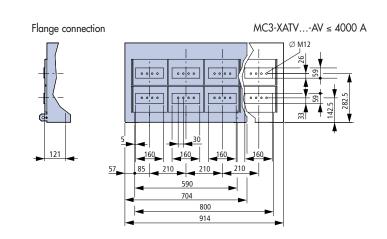
When front connections are used, a partition between busbar and arcing space must be fitted on the system side.

■ MO3 - 3/4 POLE

OPTIONAL CONNECTION FEATURES, WITHDRAWABLE UNITS





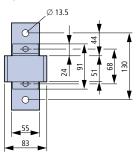


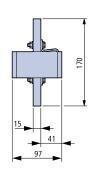


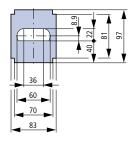
■ MO1, MO2, MO3

MEASURING TRANSDUCER, VOLTAGE RELEASE

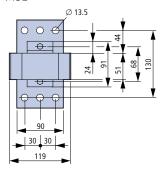
Measuring transducer for N conductor protection and earth-fault protection $\ensuremath{\mathsf{MO1}}$

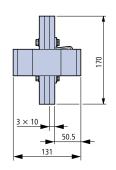


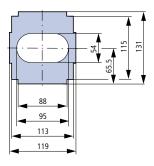




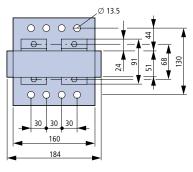


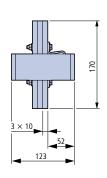


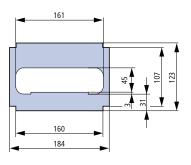












Voltage transformer

for MO with measuring function for assembly on 35mm top-hat rail

