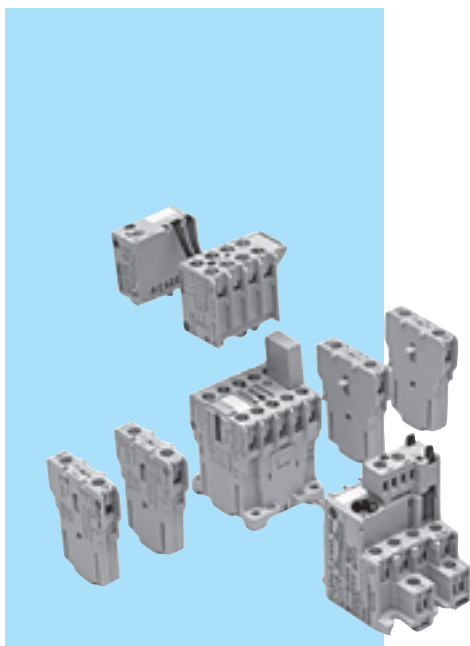




Three and four pole minicontactors 6, 9 and 12A (AC3) 20A (AC1)

- Control circuit: Alternating current up to 600V
Direct current up to 440V
- Terminal numbering in accordance with EN 50012
- Fixing by clipping onto 35 mm DIN rail (EN 50022-35) or by screws
- Screws and fast-on terminals protected against accidental contact in accordance with VDE 0106 T.100 and VBG4
- Versions: Ring terminal and printed circuit terminals
- Facility to mount instant and timed auxiliary contact blocks and voltage suppressor block
- Degree of protection IP20 (EN 60529).
- Maximum number of auxiliary contacts to be added: 6

Standards

IEC/EN 60947-1	BS 4794
IEC/EN 60947-4-1	NFC 63-110
IEC/EN 60947-5-1	CSA C22.2/14
EN 50003	VDE 0660
EN 50005	SEV 10254
EN 50012	JIS C8325
UL 508	JEM 1038
NEMA ICS-1	CENELEC HD 419

General data

	MC0...	MC1...	MC2...
Maximum number of poles	4	4	4
Rated thermal current (I_{th}) $\theta \leq 60^{\circ}\text{C}$ ⁽¹⁾	(A) 20	20	20
Rated operational current I_e ⁽²⁾ (3x440V, 50/60Hz, AC3)	(A) 6	9	12
Rated insulation current U_i	(V) 750	750	750
Rated operational current U_e	(V) 690	690	690

Standard voltages

To complete the catalogue number, replace the symbol ♦ by the code corresponding to the voltage and frequency of the control circuit (other voltages on request)

Alternating current (V). Bifrequency coil

♦	10	1	2	9	3	4	5	6	7	8	12	13
AC	12	24	42	48	110	120	220	230	240	440	380	400
50/60Hz					115							

Operating voltages limits with bifrequency coils:

With 60Hz = 0.85 to 1.1 x U_s

With 50Hz = 0.8 to 1.1 x U_s in continuous service (ED=100%) with a maximum ambient temperature of 40°C

Alternating current (V).

♦	A	E	G	K	M	N	S	U	W	Y
AC			48	115		220	260	380	415	500
50Hz				127		240		400	440	
AC	6	32	60		208	240		440	480	600
60Hz					220	277				

Direct current (V)

♦	A	B	C	D	E	F	G	H	I	J	K	L	N	17	R	S	16
DC	6	12	32	24	36	42	48	60	72	110	120	125	220	230	240	250	440

Direct current (V) - Wide voltage range

♦	WD	WE	WG	WI	WJ	WN
DC	24	33	48	72	110	220

Approvals



- Order codes ● pg. C.3
- Auxiliary contact blocks ● pg. C.6
- Accessories ● pg. C.8
- Technical data ● pg. C.23
- Terminal numbering ● pg. C.29
- Dimensions ● pg. C.50

Three pole minicontactors



Max.operat.current Non-inductive loads	Motors <440V, 3 ~ 50/60Hz AC3 ⁽³⁾ A	Admissible power AC3					Aux. contacts		Control circuit: Alternating current		Control circuit: Direct current	
		1-phase		3-phase					Cat. no. ⁽¹⁾	Pack	Cat. no. ⁽¹⁾	Pack
		115V	220V	220V 230V	380V 400V	500V						
AC1 ⁽²⁾ A	A	kW HP	kW HP	kW HP	kW HP	kW HP						
Terminal: screw												
20	6	0.37 0.5	0.75 1	1.5 2	2.2 3	3 4	1	0	MC0A310AT ◆	20	MC0C310AT ◆	10
							0	1	MC0A301AT ◆	20	MC0C301AT ◆	10
20	9	0.56 0.75	1.12 1.5	2.2 3	4 5.5	4 5.5	1	0	MC1A310AT ◆	20	MC1C310AT ◆	10
							0	1	MC1A301AT ◆	20	MC1C301AT ◆	10
20	12	0.75 1	2 2.6	3 4	5.5 7.3	5.5 7.3	1	0	MC2A310AT ◆	20	MC2C310AT ◆	10
							0	1	MC2A301AT ◆	20	MC2C301AT ◆	10
Terminal: ring terminal												
20	6	0.37 0.5	0.75 1	1.5 2	2.2 3	3 4	1	0	MC0A310AR ◆	20	MC0C310AR ◆	10
							0	1	MC0A301AR ◆	20	MC0C301AR ◆	10
20	9	0.56 0.75	1.12 1.5	2.2 3	4 5.5	4 5.5	1	0	MC1A310AR ◆	20	MC1C310AR ◆	10
							0	1	MC1A301AR ◆	20	MC1C301AR ◆	10
20	12	0.75 1	2 2.6	3 4	5.5 7.3	5.5 7.3	1	0	MC2A310AR ◆	20	MC2C310AR ◆	10
							0	1	MC2A301AR ◆	20	MC2C301AR ◆	10
Terminal: faston 2x2.8 insulated (5)												
16 ⁽⁴⁾	6	0.37 0.5	0.75 1	1.5 2	2.2 3	3 4	1	0	MC0A310AF ◆	20	MC0C310AF ◆	10
							0	1	MC0A301AF ◆	20	MC0C301AF ◆	10
16 ⁽⁴⁾	9	0.56 0.75	1.12 1.5	2.2 3	4 5.5	4 5.5	1	0	MC1A310AF ◆	20	MC1C310AF ◆	10
							0	1	MC1A301AF ◆	20	MC1C301AF ◆	10
Terminal: printed circuit												
20	6	0.37 0.5	0.75 1	1.5 2	2.2 3	3 4	1	0	MC0A310AI ◆	20	MC0C310AI ◆	10
							0	1	MC0A301AI ◆	20	MC0C301AI ◆	10
20	9	0.56 0.75	1.12 1.5	2.2 3	4 5.5	4 5.5	1	0	MC1A310AI ◆	20	MC1C310AI ◆	10
							0	1	MC1A301AI ◆	20	MC1C301AI ◆	10
20	12	0.75 1	2 2.6	3 4	5.5 7.3	5.5 7.3	1	0	MC2A310AI ◆	20	MC2C310AI ◆	10
							0	1	MC2A301AI ◆	20	MC2C301AI ◆	10
									MB0A ◆	10	MB0C ◆	10

(1) To complete the catalogue number, replace the symbol ♦ by the code corresponding to the voltage and frequency of the control circuit (other voltages on request) (see C.2)

(2) Electrical endurance AC-1: MC0... 0.2 × 10⁶ operations

MC1... 0.3 × 10⁶ operations

MC2... 0.35 × 10⁶ operations

(3) Electrical endurance AC-3: MC0... (6A) = 1.2 × 10⁶ operations

MC1... (9A) = 0.85 × 10⁶ operations

MC2... (12A) = 0.6 × 10⁶ operations

(4) Terminal with wire 1.5 mm²: I_e = 16A

with wire 1 mm²: I_e = 10A

Insulated terminal type B 2.8 × 0.8 and wire 1 mm² I_e = 8A in accordance with DIN 46247.

(5) Fast-on 1 × 6.3 terminals on request (replace letter F by H in the catalogue number)

For reference numbers,
see chapter X, pg. X.4



Three pole interface contactors

	Max. oper. current		Admissible power AC3					Aux. contacts		Voltage 24V D.C. coil 1.2W ⁽¹⁾			Voltage 24V D.C. coil 2W ⁽²⁾		
	Non-inductive load AC1 A	Motors <440V, 3 ~ 50/60Hz AC3 ⁽³⁾ A	1-phase		3-phase			.3 .4	.1 .2	Cat. no. ⁽¹⁾	Ref. no.	Pack	Cat. no. ⁽¹⁾	Ref. no.	Pack
			115V	220V	220V	380V	500V								
					230V	400V									
			kW	kW	kW	kW	kW								
	Terminal: screw														
	20	6	0.37	0.75	1.5	2.2	3	1	0	MC0I310ATD	100570	10	MC0K310ATD	100574	10
								0	1	MC0I301ATD	100571	10	MC0K301ATD	100575	10
	20	9	0.56	1.12	2.2	4	4	1	0	MC1I310ATD	100572	10	MC1K310ATD	100576	10
								0	1	MC1I301ATD	100573	10	MC1K301ATD	100577	10
	20	12	0.75	2	3	5.5	5.5	1	0	MC2I310ATD	100559	10	MC2K310ATD	103590	10
								0	1	MC2I301ATD	100538	10	MC2K301ATD	103591	10
	Spare coil														
										MB0ID	100470	10	MB0KD	100471	10

(1) No possibility of adding instantaneous auxiliary contact blocks.

(2) Facility to mount an instantaneous auxiliary contact block of two contacts or two instantaneous auxiliary contact blocks of one contact.

(3) Electrical endurance AC-3:

MC0... (6A) = 1.2×10^6 operations.MC1... (9A) = 0.85×10^6 operations.MC2... (12A) = 0.6×10^6 operations.

Four poles minicontactors



Max.oper.current		Admissible power AC3					Poles		Control circuit: Alternating current		Control circuit: Direct current		
Non-inductive load	Motors <440V, 3 ~ 50/60Hz AC3 ⁽³⁾ A	1-phase		3-phase					Cat. no. ⁽¹⁾	Pack	Cat. no. ⁽¹⁾	Pack	
		115V 220V	220V 380V 500V 230V 400V										
AC1 ⁽²⁾ A	A	kW HP	kW HP	kW HP	kW HP	kW HP			Ref. no. see bottom		Ref. no. see bottom		
Screw terminal													
20	6	AC1					4	0	MC0A400AT ♦	20	MC0C400AT ♦	10	
		1.8	3.5	6.1	10.5	13.8	2	2	MC0AB00AT ♦	20	MC0CB00AT ♦	10	
		-	-	-	-	-	0	4	MC0AA00AT ♦	20			
		AC3											
		0.37	0.75	1.5	2.2	3							
		0.5	1	2	3	4							
20	9	AC1					4	0	MC1A400AT ♦	20	MC1C400AT ♦	10	
		2.3	4.4	7.5	13	17	2	2	MC1AB00AT ♦	20	MC1CB00AT ♦	10	
		-	-	-	-	-	0	4	MC1AA00AT ♦	20			
		AC3											
		0.56	1.12	2.2	4	4							
		0.75	1.5	3	5.5	5.5							
20	12	AC1					4	0	MC2A400AT ♦	20	MC2C400AT ♦	10	
		2.3	4.4	7.5	13	17	2	2	MC2AB00AT ♦	20	MC2CB00AT ♦	10	
		-	-	-	-	-							
		AC3											
		0.75	2	3	5.5	5.5							
		1	2.6	4	7.3	7.3							
Terminal: faston 2x2.8 insulated (5)													
20	6	AC1					4	0	MC0A400AF ♦	20	MC0C400AF ♦	10	
		1.8	3.5	6.1	10.5	13.8	2	2	MC0AB00AF ♦	20	MC0CB00AF ♦	10	
		-	-	-	-	-	0	4	MC0AA00AF ♦	20			
		AC3											
		0.37	0.75	1.5	2.2	3							
		0.5	1	2	3	4							
16 ⁽⁴⁾	9	AC1					4	0	MC1A400AF ♦	20	MC1C400AF ♦	10	
		2.3	4.4	7.5	13	17	2	2	MC1AB00AF ♦	20	MC1CB00AF ♦	10	
		-	-	-	-	-	0	4	MC1AA00AF ♦	20			
		AC3											
		0.56	1.12	2.2	4	4							
		0.75	1.5	3	5.5	5.5							
Terminal: printed circuit													
20	6	AC1					4	0	MC0A400AI ♦	20	MC0C400AI ♦	10	
		1.8	3.5	6.1	10.5	13.8	2	2	MC0AB00AI ♦	20	MC0CB00AI ♦	10	
		-	-	-	-	-	0	4	MC0AA00AI ♦	20			
		AC3											
		0.37	0.75	1.5	2.2	3							
		0.5	1	2	3	4							
20	9	AC1					4	0	MC1A400AI ♦	20	MC1C400AI ♦	10	
		2.3	4.4	7.5	13	17	2	2	MC1AB00AI ♦	20	MC1CB00AI ♦	10	
		-	-	-	-	-	0	4	MC1AA00AI ♦	20			
		AC3											
		0.56	1.12	2.2	4	4							
		0.75	1.5	3	5.5	5.5							
Spare coil										MB0A ♦	10	MB0C ♦	10

(1) To complete the catalogue number, replace the symbol ♦ by the code corresponding to the voltage and frequency of the control circuit (see C.2)

(2) Electrical endurance AC-1: MC0... 0.2 × 10⁶ operations
MC1... 0.3 × 10⁶ operations
MC2... 0.35 × 10⁶ operations

(3) Electrical endurance AC-3: MC0... (6A) = 1.2 × 10⁶ operations
MC1... (9A) = 0.85 × 10⁶ operations
MC2... (12A) = 0.6 × 10⁶ operations

(4) Terminal with wire 1.5 mm²: I_e = 16A
with wire 1 mm²: I_e = 10A
Insulated terminal type B 2.8 × 0.8 and wire of 1 mm² I_e = 8A in accordance with DIN 46247.

(5) Faston 1 × 6.3 terminals on request, (replace letter F by H in the catalogue number).

For reference numbers, see chapter X, pg. X.4



Instantaneous auxiliary contact blocks**Front mounting**

Number contacts	Combinations with basic contactor 10E	Contacts in acc. with EN 50012	Contacts in acc. with EN 50005	Aux. contacts		Cat. no.	Ref. no.	Pack
• Two or four additional contacts, to cover combinations of 3 or 5 contacts without increasing the surface are of the basic contactor								
Screw terminal								
2	21E	11		1	1	MACN211AT	100999	10
2	12E	02		0	2	MACN202AT	100998	10
2			20	2	0	MARN220AT	100994	10
2			11	1	1	MARN211AT	100993	10
2			02	0	2	MARN202AT	100992	10
4	41E	31		3	1	MACN431AT	100997	10
4	32E	22		2	2	MACN422AT	100996	10
4	23E	13		1	3	MACN413AT	100995	10
4			40	4	0	MARN440AT	100991	10
4			31	3	1	MARN431AT	100990	10
4			22	2	2	MARN422AT	100989	10
4			13	1	3	MARN413AT	100988	10
4			04	0	4	MARN404AT	100987	10
Ring terminal								
2	21E	11		1	1	MACN211AR	103557	10
2	12E	02		0	2	MACN202AR	103558	10
2			20	2	0	MARN220AR	103349	10
2			11	1	1	MARN211AR	103350	10
2			02	0	2	MARN202AR	103351	10
4	41E	31		3	1	MACN431AR	103559	10
4	32E	22		2	2	MACN422AR	103560	10
4	23E	13		1	3	MACN413AR	103561	10
4			40	4	0	MARN440AR	103352	10
4			31	3	1	MARN431AR	103353	10
4			22	2	2	MARN422AR	103354	10
4			13	1	3	MARN413AR	103355	10
4			04	0	4	MARN404AR	103300	10

Instantaneous auxiliary contact blocks

Lateral mounting



Number contacts	Combinations with basic contactor 10E	Contacts in acc. with EN 50012	Contacts in acc. with EN 50005	Aux. contacts	Cat. no.	Ref. no.	Pack

- One or two additional blocks, to cover combinations of 1 or 2 contacts without increasing the height of the basic unit contactor

Screw terminal							
1	20	10		1	0	MACL110AT	100560
1	11E	01		0	1	MACL101AT	100561
Ring terminal							
1	20	10		1	0	MACL110AR	103555
1	11E	01		0	1	MACL101AR	103556
Terminal: faston 2x2.8 insulated (1)							
1	20	10		1	0	MACL110AF	100562
1	11E	01		0	1	MACL101AF	100563
Terminal: printed circuit							
1	20	10		1	0	MACL110AI	100564
1	11E	01		0	1	MACL101AI	100565

- One or two additional blocks, when up to 6 or 7 contacts are needed (combination possible with frontal blocks)
- One or two additional blocks on both sides, to cover up to five contacts (combination possible only with lateral blocks)

Screw terminal							
1			10	1	0	MARL110ATS	100519
1			01	0	1	MARL101ATS	100520
Ring terminal							
1			10	1	0	MARL110ARS	103299
1			01	0	1	MARL101ARS	103298
Terminal: faston 2x2.8 insulated (1)							
1			10	1	0	MARL110AFS	100521
1			01	0	1	MARL101AFS	100522
Terminal: printed circuit							
1			10	1	0	MARL110AIS	100523
1			01	0	1	MARL101AIS	100524

- (1) Terminal with wire 1 mm²: I_e = 10A
Insulated terminal type B 2.8 x 0.8 with wire 1 mm²: I_e = 8A, in accordance with DIN 46247

Accessories

	For use with:	Time	Function	Ue	Cat. no.	Ref. no.	Pack
 Electronic timer block	Lateral or front fixing to the contactor						
	MCR, MC_ ...	0.5 - 60 seg.	delay ON	24... 250V AC/DC	MREBC10AC2	100541	10
	MCR, MC_ ...	0.2 - 24 seg.	delay ON	24... 250V AC/DC	MREBC20AC2	100542	10
 DIN rail adaptor for electronic timer block	For fixing onto EN 50022-35						
	MREBC...				MVB0R	100543	10
	For use with:	Type	Control	Ue	Cat. no.	Ref. no.	Pack
 Voltage suppressor block	Connection and (plug-in) fixing on to the connector						
	MCRA, MC_ ...	R/C	AC	12...60V 50/60Hz	MP0AAE1	100544	10
	MCRA, MC_ ...	R/C	AC	72... 250V 50/60Hz	MP0AAE2	100545	10
	MCRC, MC_ ...	Diode	DC	6...250V DC	MP0CAE3	100546	10
	MCRC, MC_ ...	Varistor	AC/DC	24-48V	MP0DAE4	100536	10
	For use with:	Phases	Terminal capacity	Ue	Cat. no.	Ref. no.	Pack
 Pole paralleling links	To connect two, three or four phases in parallel						
	MC_ ...	2, 3, 4 (parallel)	Ø4.5mm - 16mm ²		MVPOC	100600	10
	For use with:				Cat. no.	Ref. no.	Pack
 Mechanical interlock	Mechanical interlock and pole jumpers						
	MCR, MC_ ...				MMH0	100547	10
	For use with:				Cat. no.	Ref. no.	Pack
Identification	MCR, MC_ ...	Labels (10 sheets of 260 labels)			EAT 260	100548	1
	MCR, MC_ ...	Labelling plate base. Plug-in labelling plate bases (50 pieces in one pack)			SPR	100549	1

Multipack. Series M and Series CL

To reduce the amount of waste packaging material and to save time during installation, we offer the opportunity to order contactors in a multipack without the individual packaging.

	Product	Type	Standard pack	Multipack (1)
	Minicontactors	MC0A...MC2A	20	40
	Contactors	CL00A...CL25A...	20	40
		CL03...CL45...	10	20

(1) The quantity ordered must be a multiple of the quantity in each multipack (with the same frame/size and coil voltage)

How to order

To order a multipack, add the suffix **MP** to the standard catalogue number

Example		Standard pack	Multipack
		MC0A310ATN	MC0A310ATN MP (40 pieces)
		CL03A400MJ	CL03A400MJ MP (20 pieces)

