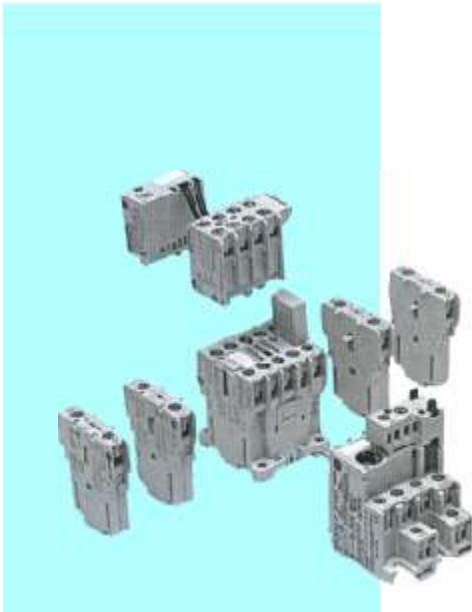




# Contactor



## 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	JEM1038
NEMA ICS-1	CENELEC HD 419

### General Data

		MC0...	MC1...	MC2...
Maximum number of poles		4	4	4
Rated thermal current (I <sub>th</sub> ) $\theta \leq 60^\circ$	(A)	20	20	20
Rated operational current I <sub>e</sub>	(A)	6	9	12
(3x440V, 50/60Hz, AC3)				
Rated insulation current U <sub>i</sub>	(V)	750	750	750
Rated operational current U <sub>e</sub>	(V)	690	690	690



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## Three pole minicontactors



Max. Operat.Current		Admissible Power AC3					Aux. contact		Coil 230 VAC 50Hz		
Non inductive loads	Motor <440V, 3-50/60Hz	1-phase		3-phase					Cat. No	Code. No	
		115V	220V	220V-230V	380V-400V	500V					
AC(1)	AC(2)	KW HP	KW HP	KW HP	KW HP	KW HP					
A	A	HP	HP	HP	HP	HP					
Terminal: Screw	20	6	0.37	0.75	1.5	2.2	3	1	0	MCOA310ATN	405100154
			0.5	1	2	3	4	0	1		
20	9	9	0.56	1.12	2.2	4	4	1	0	MC1A310ATN	405100214
			0.75	1.5	3	5.5	5.5	0	1		
20	12	12	0.75	2	3	5.5	5.5	1	0	MC2A310ATN	405103574
			1	2.6	4	7.3	7.3	0	1		

- (1) Electrical endurance AC-1: MCO...0.2 x 10<sup>6</sup> operations  
 MC1...0.3 x 10<sup>6</sup> operations  
 MC2...0.35 x 10<sup>6</sup> operations
- (2) Electrical endurance AC-3: MCO...(6A) = 1.2 x 10<sup>6</sup> operations  
 MC1...(9A) = 0.85 x 10<sup>6</sup> operations  
 MC2...(12A) = 0.6 x 10<sup>6</sup> operations

## Instantaneous auxiliary contact blocks



Number contacts	Combinations with Basic contactor 10E	Contact in acc. with EN 50012	Contact in acc. with EN 50005	Aux contact	Cat. no	Code. no
• 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	21 E	1 1		1 1	MACN211AT	405100999
2			2 0	2 0	MARN220AT	405100994
2			0 2	0 2	MARN202AT	405100992
4	32 E	2 2		2 2	MACN422AT	405100996

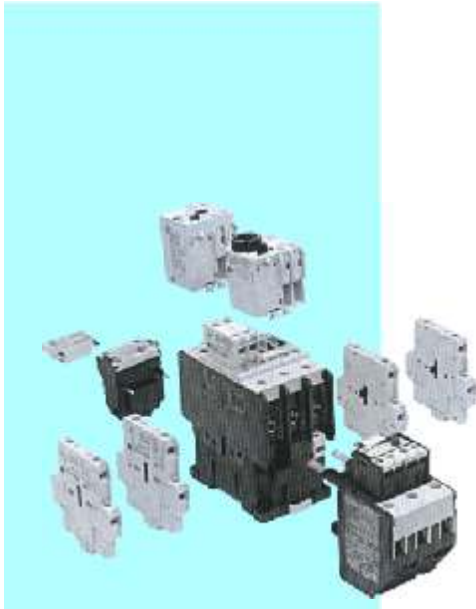
- (1) Terminal with wire 1 mm<sup>2</sup> : I<sub>e</sub> = 10A  
 Insulated terminal type B 2.8 x 0.8 with wire 1 mm<sup>2</sup> : I<sub>e</sub> = 8A, in accordance with DIN 46247



Number contacts	Combinations with Basic contactor 10E	Contact in acc. with EN 50012	Contact in acc. with EN 50005	Aux contact	Cat. no	Code. no
• 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			1 0	1 0	MARL110ATS	405100513
1			0 1	0 1	MARL101ATS	405100514



# Contactors



Three and four pole contactors  
9 to 105A (AC3)  
25 to 140A (AC1)

- Control circuit: Alternating current up to 690V  
Direct current up to 440V
- Terminal numbering in accordance with EN 50005 and EN 50012
- Fixing by clipping onto 35mm DIN rail EN 50022 - 35 or by screws
- Screws protected against accidental contact in accordance with VDE 0106,T.100, VBG4.
- Ring terminal version
- Three coil terminals
- Mounting possibilities of front/side instantaneous auxiliary contact blocks timed auxiliary contact blocks, mechanical latch, transient suppressor block and interface modules.
- Degree of protection : IP20 to CL00...CL02  
IP10 to CL25...CL10
- Maximum number of auxiliary contacts : 4 for CL00...CL25  
6 for CL04...CL45  
8 for CL06...CL10

## Standards

IEC/EN 60947-1	CSA C22.2/14
IEC/EN 60947-4-1	NFC 63-110
IEC/EN 60947-5-1	ASE 1025
EN 50005	UNE 20109
UL 508	VDE 0660
NEMA ICS-1	CENELEC HD 419
BS 5424 & 775	



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## Three pole contactors. Screw Terminal



Max. Operat. Current		Admissible Power AC3				Electrical endurance	Aux. contact	Coil 230 VAC 50 Hz	
Non inductive loads	Motor <440V, 3-50/60Hz	220V-230V	380V-400V	415-440V	500V				
AC(1)	AC(3)	KW HP	KW HP	KW HP	KW HP	Cat. AC3 Operations		Cat. No	Code. No
A	A								
25	9	2.2	4	4	5.5	2x10 <sup>6</sup>	0 0	CL00A300TN	405104044
		3	5.5	5.5	7.5		1 0	CL00A310TN	405104054
							0 1	CL00A301TN	405104064
25	12	3	5.5	5.5	7.5	2x10 <sup>6</sup>	0 0	CL01A300TN	405104074
		4	7.5	7.5	10		1 0	CL01A310TN	405104084
							0 1	CL01A301TN	405104094
32	18	4	7.5	7.5	10	1.7x10 <sup>6</sup>	0 0	CL02A300TN	405104104
		5.5	10	10	13.5		1 0	CL02A310TN	405104114
							0 1	CL02A301TN	405104124
45	25	7.5	11	11	15	1.2x10 <sup>6</sup>	0 0	CL25A300TN	405110804
		10	15	15	20		1 0	CL25A310TN	405112344
							0 1	CL25A301TN	405112354
45	25	7.5	12	12	15	2x10 <sup>6</sup>	0 0	CL03A300MN	405104134
		10	16	16	20		1 0	CL03A310MN	405104144
							0 1	CL03A301MN	405104154
60	32	9.0	16	16	19	2x10 <sup>6</sup>	0 0	CL04A300MN	405104164
		12	22	22	25		1 0	CL04A310MN	405104174
							0 1	CL04A301MN	405104184
60	40	11.0	18.5	22	25	2x10 <sup>6</sup>	0 0	CL45A300MN	405110814
		15	25	30	34		1 1	CL45A311MN	405112804
90	50	15.0	22	25	30	1.8x10 <sup>6</sup>	0 0	CL06A300MN	405104214
		20	30	34	40		1 1	CL06A311MN	405104224
110	65	18.5	30	37	40	1.7x10 <sup>6</sup>	0 0	CL07A300MN	405104234
		25	40	50	55		1 1	CL07A311MN	405104244
110	80	22.0	37	45	45	1.5x10 <sup>6</sup>	0 0	CL08A300MN	405104254
		30	50	60	60		1 1	CL08A311MN	405104264
140	95	25.0	45	50	55	1.7x10 <sup>6</sup>	0 0	CL09A300MN	405104274
		34	60	68	75		1 1	CL09A311MN	405104284
140	105	30.0	55	55	65	1.5x10 <sup>6</sup>	0 0	CL10A300MN	405104294
		40	75	75	88		1 1	CL10A311MN	405104304


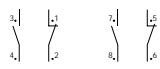




Spare Coils


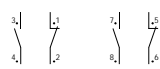

CL00 - CL25	LB1AN	405104634
CL03 - CL45	LB3AN	405104644
CL06 - CL10	LB4AN	405104654
Coil + electronic module CL06E - CL10E		



## Auxiliary contact blocks

Instantaneous		Number of contact	Contacts	Type	Time	Cat. No	Code. No	
 Frontal Mounting	Terminal: Screw							
	1	1	0	0	0	BCLF10	405104700	
	1	0	1	0	0	BCLF01	405104701	
	2	1	1	0	0	BCLL11	405104707	
 Side	Terminal: screw							
	2	1	1	0	0	BCLL11	405104707	
Pneumatic timer								
 Front Mounting	Terminal: screw							
	2	0	0	1	1	Delay ON	0.1 - 30 sec.	BTLF30C

## Accessories

Interlock		Number of contact	Contacts	For use with:	Time	Cat. No	Code. No	
 Mechanical	-	-	-	-		CL00 ... CL10	BELA	405104723
								
Electronic timer Module		For use with:	Control circ.	Type	Time	Cat.No	Code.No	
 Electronic timer Module	Fixation to the coil terminals, that allows simultaneous use with the auxiliary contact blocks.							
	CL00 ... CL10	24-250V AC/DC	delay ON	1.5 - 45 sec.	BETL45C	405113603		



## Spares

For use with:	Number of sets	Type	Cat. No	Code. No
CL00_ _ _	3	NO	V31200B	405104738
CL01_3_	3	NO	V31201B	405104739
CL02_3_	3	NO	V31202B	405104741
CL25_3_	3	NO	V31225B	405104757
CL03_3_	3	NO	V31203B	405104743
CL04_3_	3	NO	V31204B	405104745
CL45_3_	3	NO	V31245B	405104758
CL06_ _ _	3	NO	V31206B	405104749
CL07_3_	3	NO	V31207B	405104750
CL08_3_	3	NO	V31208B	405104752
CL09_ _ _	3	NO	V31209B	405104754
CL10_ _ _	3	NO	V31210B	405104755



## Contactors



Three and four pole contactors  
150 to 825A (AC3)  
200 to 1250A (AC1)

- Control circuit: Alternating current up to 690V  
Direct current up to 500V
- Degree of protection IP00 (IPxxB with accessories)
- CK07...CK13: auxiliary and coil terminals originally protected against accidental contacts.
- Protection for power contacts on request (see accessories)
- Terminals protected against accidental contacts according to
- VDE 0106, T.100, VBG4.
- CK\_E with electronic module suitable for DC and AC. (50/60Hz)
- CK contactors always provided with one auxiliary contact block BCLL11 (1NO+1NC)

## Standards

IEC/EN 60947-1	CSA C22.2/14
IEC/EN 60947-4-1	CENELEC HD 419
IEC/EN 60947-5-1	NFC 63-110
EN 50005	ASE 1025
UL 508	UNE 20109
NEMA ICS-1	VDE 0660
BS 5424 & 775	



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## Three pole contactors



Max. Operat. Current		Admissible Power AC3					Electrical endurance	Coil 230 VAC 50Hz	
Non inductive loads	Motor <440V, 3-50/60Hz	220V-230V	380V-400V	415-440V	400V	500V			
AC(1)	AC(3)	KW HP	KW HP	KW HP	KW HP	KW HP	Cat. AC3 Operations	Cat. No	Code. No
A	A								
250	150	45 60	75 100	80 108	80 108	100 135	1.7x10 <sup>6</sup>	CK75CA311N	405133188
250	185	55 75	90 125	100 135	100 135	110 150	1.2x10 <sup>6</sup>	CK08CA311N	405133187
315	205	65 88	110 150	125 170	125 170	132 180	1.7x10 <sup>6</sup>	CK85BA311N	405104474
315	250	75 100	132 180	132 180	132 180	160 220	1.5x10 <sup>6</sup>	CK09BE311N	405104489
450	309	90 125	160 220	160 220	185 250	200 270	1,1x10 <sup>6</sup>	CK95BE311N	405104614
600	420	125 170	220 300	230 312	230 312	300 405	1x10 <sup>6</sup>	CK10CE311N	405133286
700	550	160 220	280 380	315 425	315 425	400 540	0.8x10 <sup>6</sup>	CK11CE311N	405133288
1000	700	220 300	375 510	400 540	425 540	480 650	0.7x10 <sup>6</sup>	CK12BE311N	405104519
1250	825	250 340	450 610	450 610	450 610	500 680	0.7x10 <sup>6</sup>	CK13BA311N	405104524

Spare coil

	CK75CA3	...CK08CA3	C12168N	405104894
		CK85BA3	C04255N	405104814
		CK13BA3	C08998N	405104834
		CK13BA3	C09120N	405204790
Control circuit with incorporated rectifier bridge				
	CK75CE3	...CK08CE3	KB4EN	405104958
Coil		...CK95BE3	KB5EN	405104858
		CK12BE3	KB6EN	405104868
	CK10CE3	...CK11CE3	KB7EN	405113672
	CK75CE3	...CK08CE3	KM4EN	405104968
Electronic module	CK85BE3	...CK95BE3	KM5EN	405104878
		CK12BE3	KM6EN	405104888
	CK10CE3	...CK11CE3	KM7EN	405113430





## Auxiliary instantaneous contact blocks



Number of contact	Contacts	Cat. No	Code. No
2	 2    2        2    2	BCLL11	405104707

## Spares

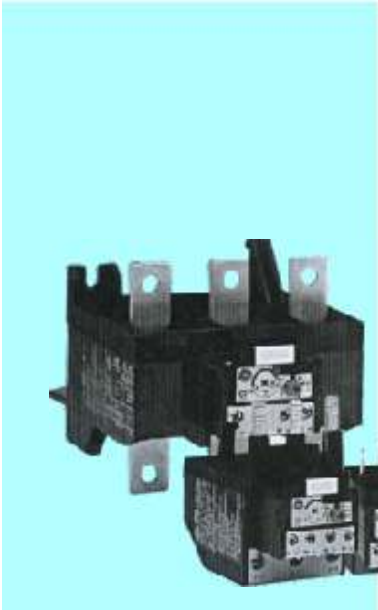


For use with:	Type	Cat.No	Cat. No	Code. No
One set consists of two fixed contacts, one moving contact and accessory parts. When contact replacement is needed, it is recommended to replace all the contacts at the same time.				
CK07B	NA		V1107BA	405113612
CK75C	NA		V1175CA	405113613
CK08C	NA		V1108CA	405113614
CK85B	NA		V1185BA	405113615
CK09B	NA		V1109BA	405113616
CK95B	NA		V1195BA	405113617
CK10C	NA		V1110CE	405113618
CK11C	NA		V1111CE	405113619
CK12B	NA		V1112BA	405113620
CK13B	NA		V1113BA	405113621





# Thermal Overload Relay



## Thermal Overload Relays For contactor from 0.16 to 850A

- Control circuit up to 690V AC
- Power circuit:
  - RT1, RT12: up to 690V
  - RT2, RT22, RT3, RT32, RT4/4L, RT5/5L & RT6/6L: up to 1000V
- Thermal protection against normal overloads.
- Three pole differential (phase unbalance protection).
- Protection against long starting times.
- Automatic ambient temperature compensation between 25°C y + 60°C.
- Front mounted test button.
- Trip indication.
- Independent auxiliary contacts with double rupture (1NO + 1NC).
- Function selector:
  - Manual RESET
  - Manual RESET and STOP
  - Automatic RESET with STOP
  - Automatic RESET without STOP

### Standards

IEC/EN 60947-4-1	CSA 22.2/14
IEC/EN 60947-5-1	NI C 63-650
UNE 115	VDE 0660
NFC 63-650	UL 508
CEI 17-50	

### Approvals



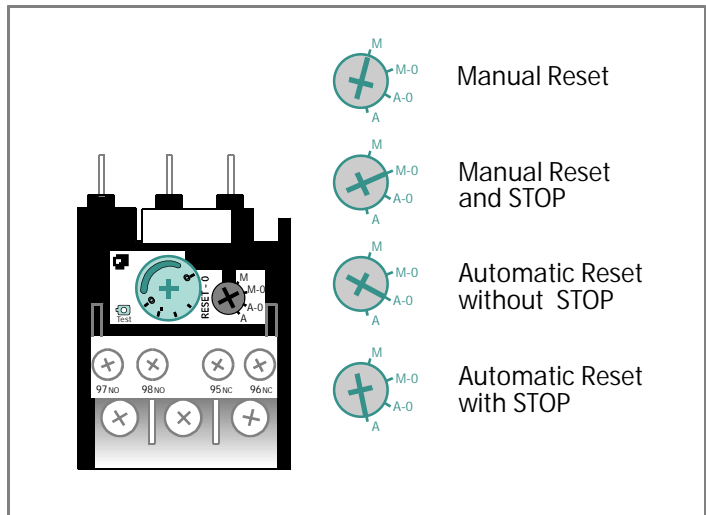
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## Thermal overload relays for contactor



	For use with:	Setting range (Regulation)		Fuse (1) Pack aM gL-gG		Screw Terminal Cat.No	Code. No
		Min. A	max. A	A	A		
		Class 10A	CL00	0.16	0.26		
	CL01	0.25	0.41	2	2	RT1C	406113701
	CL02	0.4	0.65	2	2	RT1D	406113702
	CL25	0.65	1.1	2	2	RT1F	406113703
	CL03	1.0	1.5	4	6	RT1G	406113704
	CL04	1.3	1.9	4	6	RT1H	406113705
	CL45	1.8	2.7	6	10	RT1J	406113706
		2.5	4.0	8	16	RT1K	406113707
		4.0	6.3	12	20	RT1L	406113708
		5.5	8.5	16	20	RT1M	406113709
		8.0	12.0	20	25	RT1N	406113710
		10.0	16.0	25	35	RT1P	406113711
		14.5	18.0	32	50	RT1S	406113712
		17.5	22.0	40	50	RT1T	406113713
		21.0	26.0	40	63	RT1U	406113714
		25.0	32.0	50	80	RT1V	406113715
		30.0	40.0	63	100	RT1W	406113716
Class 10	CL05	30	43	80	125	RT2E	406113721
	CL06	42	55	100	160	RT2G	406113722
	CL07	54	65	125	160	RT2H	406113723
	CL08	64	82	125	200	RT2J	406113724
	CL09	78	97	125	200	RT2L	406113725
	CL10	90	110	160	250	RT2M	406113726
Class 10	CK75	90	120	160	250	RT3D	406113729
	CK08	110	140	200	315	RT3E	406113730
	Direct mounting	140	190	250	355	RT3F	406113731
	CK85	120	190	250	315	RT4N	406113732
	CK09	175	280	315	400	RT4P	406113733
	CK12	250	400	500	630	RT5C	406113752
		315	500	630	800	RT5D	406113753
		430	700	800	1000	RT5E	406113754
	CK13	500	850	100	1250	RT6A	406113760