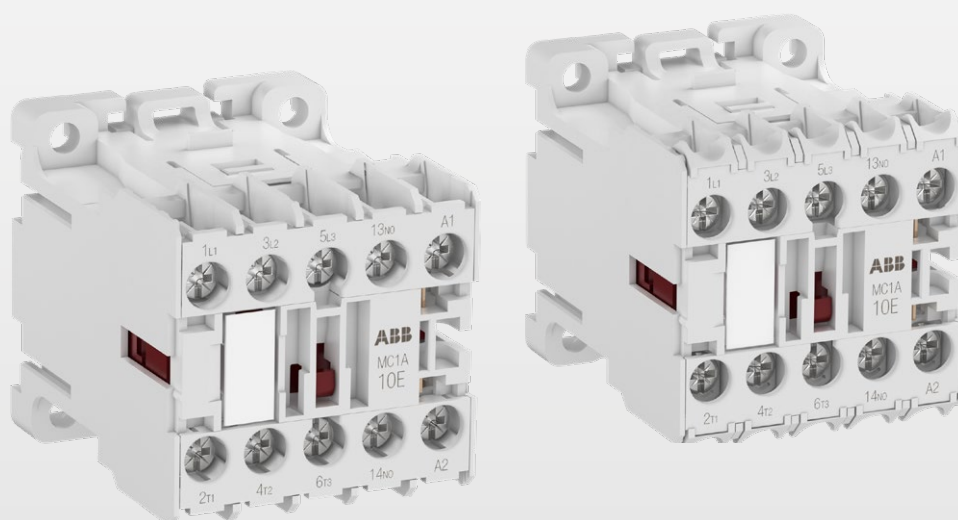


M mini contactors and contactor relays

Reliability, always



- Dimension optimized performance solution
- Wide set of variants
- Secure connection in all the applications.



—

For more information please find our electronic data sheets online, for example:

or www.abb.com/productdetails/MC1A310AT1
www.abb.com/productdetails/1SAL102617R9901

M mini contactors and contactor relays

3 Presentation

5 Overview

3-pole mini contactors - 4 to 5.5 kW

With screw terminals

6	MC1A	AC operated
7	MC2A	AC operated
8	MC1C	DC operated
9	MC2C	DC operated
10	MC1I, MC1K, MC2I, MC2K	DC operated - low consumption

For ring tongue ferrules

11	MC1A..R, MC2A..R	AC operated
12	MC1C..R	DC operated
13	MC1K..R	DC operated - low consumption

4-pole mini contactors - 4 to 5.5 kW

With screw terminals

14	MC1A	AC operated
15	MC2A	AC operated
16	MC1C, MC2C	DC operated
17	MC1I, MC1K	DC operated - low consumption

For ring tongue ferrules

18	MC1A..R	AC operated
19	MC1C..R	DC operated
20	MC1K..R	DC operated - low consumption

4-pole mini contactor relays

With screw terminals

21	MCRA	AC operated
22	MCRC	DC operated
23	MCRI, MCRK	DC operated - low consumption

For ring tongue ferrules

24	MCRA..R	AC operated
25	MCRC..R	DC operated
26	MCRK..R	DC operated - low consumption

27 Accessories

31 Technical data

40 Terminal marking and product positioning

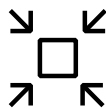
42 Accessories dimensions

M mini contactors and contactor relays

Reliability, always



The M contactors range is a performance-dimension optimized solution for all the purposes. Its high reliability, even in extreme conditions, combined to the small sizes and the safe connections lead to easy design and compact panels.



Space-saving

Small dimensions for big projects

The M range devices are a great solution when high performances are needed but the space is limited. The small dimensions of the products and the possibility to mount them side by side will maximize the cost efficiency of the cabinets without making compromises.



Reliability in extreme conditions

Made for all the applications

The technology used in the design of the contactors and the wide set of variants available guarantee reliability of operation with heavy working conditions as well. Instability of the network, high altitude and extreme temperatures will not be a limit anymore.



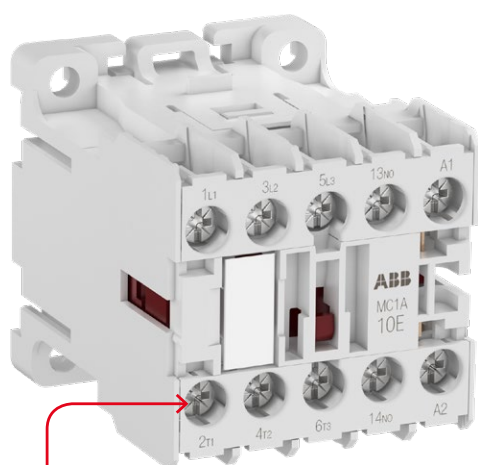
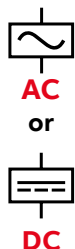
Optimum interface

Never without a solution

A wide set of coils is provided for matching all the requirements: pure AC or DC for very fast switching, with low energy consumption for direct control by PLC and with extended operating limits to face voltage fluctuations. A complete offer for realizing your projects.

M mini contactors and contactor relays

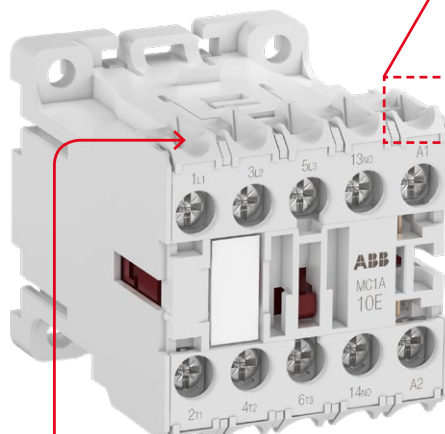
Efficient - High performances in small dimensions



Screw

Screw terminals

The same screw is used for all the terminals and circuits of the device for an efficient and fast screwing. The connection is always stable, the range of usable wire dimensions wide and the maintenance easy.

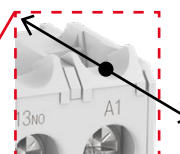


Ring tongue ferrules

With specific screw terminal

A large set of contactors and contactor relays is equipped with specific screw terminals; these allow quick and simple installations using ring tongue ferrules. A must for applications with shocks and vibrations and when the solidity of the connection is a crucial factor.

Lugs easy connection



Wide range of accessories

Up to 6 auxiliary contacts can be mounted on the devices, on the side or the front and with both the connection types. Electronic timers, surge suppressors and parallel connection links are also available in the assortment.

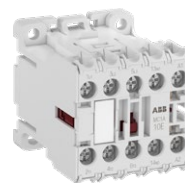
Assemble your reversing starter

Thanks to the mechanical interlock and the connection sets a compact reversing starter can be easily assembled for motor controlling in both directions. Auxiliary contact blocks can be installed on the front or on both sides of the reversing contactor.

Compact protection

The M mini contactors are fully compatible with the T16 thermal overload relays for creating a very compact but still effective solution to defend your loads against current overloads and phase failures.

M mini contactors



			Screw terminals		Screw terminals for ring tongue ferrules			
AC Control supply 								
3-pole contactors			Coil consumption (50 Hz) 5.3 VA	Type	MC1A..T	MC2A..T	MC1A..R	MC2A..R
4-pole contactors			Coil consumption (50 Hz) 5.3 VA	Type	MC1A..T	MC2A..T	MC1A..R	–
DC Control supply 								
3-pole contactors			Coil consumption 3 W	Type	MC1C..T	MC2C..T	MC1C..R	–
3-pole low consumption contactors			Coil consumption 1.2 / 2 W	Type	MC1L..T / MC1K..T	MC2L..T / MC2K..T	MC1K..R	–
3-pole extended limits coil contactors			Coil consumption 4 W	Type	MC1C..TW	MC2C..TW	–	–
4-pole contactors			Coil consumption 3 W	Type	MC1C..T	–	MC1C..R	–
4-pole low consumption contactors			Coil consumption 1.2 / 2 W	Type	MC1L..T / MC1K..T	–	MC1K..R	–
4-pole extended limits coil contactors			Coil consumption 4 W	Type	MC1C..TW	MC2C..TW	–	–
IEC	Rated operational power AC-3	230 V	kW	2.2	3	2.2	3	
		400 V	kW	4	5.5	4	5.5	
		500 V	kW	4	5.5	4	5.5	
		690 V	kW	4 (1)	4 (1)	4 (1)	4 (1)	
UL/CSA	Rated operational current AC-1	400 V, $\theta \leq 55\text{ }^{\circ}\text{C}$	A	20	20	20	20	
		200 V AC	hp	3	3	3	3	
	3-phase motor rating	240 V AC	hp	3	3	3	3	
		380-425 V AC	hp	3	5	3	5	
		440-480 V AC	hp	5	7.5	5	7.5	
		500-600 V AC	hp	5	10	5	10	
		General use rating		A	20 (600 V)	20 (600 V)	20 (600 V)	20 (600 V)

Main accessories

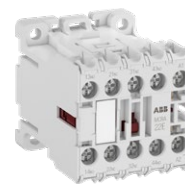
Auxiliary contact blocks	Front mounting	MACN / MARN
	Side mounting	MACL / MARL
Electronic timers		MREBC
Connection sets	For reversing contactors	WKMIU
Surge suppressors		MP0

Overload relays

Thermal overload relays	Class 10	T16
Thermal and phase failure protection, with single setup possible		

(1) Valid for N.O. contacts only.

M mini contactor relays



			Screw terminals	Screw terminals for ring tongue ferrules
AC Control supply 				
4-pole contactor relays	Coil consumption (50 Hz) 5.3 VA	Type	MCRA..T	MCRA..R
DC Control supply 				
4-pole contactor relays	Coil consumption 3 W	Type	MCRC..T	MCRC..R
4-pole low consumption contactor relays	Coil consumption 1.2 / 2 W	Type	MCRL..T / MCRK..T	MCRK..R
4-pole extended limits coil contactor relays	Coil consumption 4 W	Type	MCRC..TW	–
IEC Rated operational current AC-15	240 V	A	6	6
	400 V	A	4	4
	24 V	A	5	5
UL/CSA Pilot duty			A600, Q600	
Main accessories				
Auxiliary contact blocks	Front mounting		MARN	
	Side mounting		MARL	
Electronic timers			MREBC	
Surge suppressor			MP0	

MC1A 3-pole mini contactors with screw terminals

4 kW
AC operated



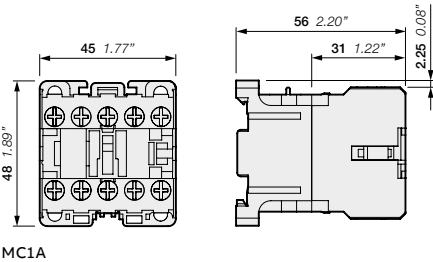
MC1A310AT

MC1A 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c		Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC	V 50 Hz	V 60 Hz				
400 V AC-3 kW	AC-1 A	hp	A						
4	20	5	20	24	24	1 0	MC1A310AT1	1SAL102617R9901	0.170
						0 1	MC1A301AT1	1SAL102638R9901	0.170
				48	48	1 0	MC1A310AT9	1SAL100298R9901	0.170
						0 1	MC1A301AT9	1SAL100320R9901	0.170
				110...115	110...120	1 0	MC1A310ATJ	1SAL100213R9901	0.170
						0 1	MC1A301ATJ	1SAL100223R9901	0.170
				120	120	1 0	MC1A310AT4	1SAL102620R9901	0.170
						0 1	MC1A301AT4	1SAL102641R9901	0.170
				–	208...220	1 0	MC1A310ATM	1SAL102611R9901	0.170
						0 1	MC1A301ATM	1SAL220348R9901	0.170
				220...230	220...230	1 0	MC1A310AT6	1SAL102622R9901	0.170
						0 1	MC1A301AT6	1SAL102643R9901	0.170
				220...240	240...277	1 0	MC1A310ATN	1SAL100214R9901	0.170
						0 1	MC1A301ATN	1SAL100224R9901	0.170
				240	240	1 0	MC1A310AT7	1SAL102623R9901	0.170
						0 1	MC1A301AT7	1SAL102995R9901	0.170
				380...400	440	1 0	MC1A310ATU	1SAL100215R9901	0.170
						0 1	MC1A301ATU	1SAL100225R9901	0.170
				415...440	480	1 0	MC1A310ATW	1SAL102615R9901	0.170
						0 1	MC1A301ATW	1SAL102636R9901	0.170
				500	600	1 0	MC1A310ATY	1SAL102616R9901	0.170
						0 1	MC1A301ATY	1SAL102637R9901	0.170

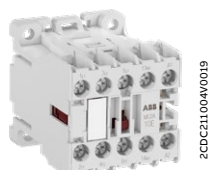


Main dimensions mm, inches

MC2A 3-pole mini contactors with screw terminals

5.5 kW

AC operated



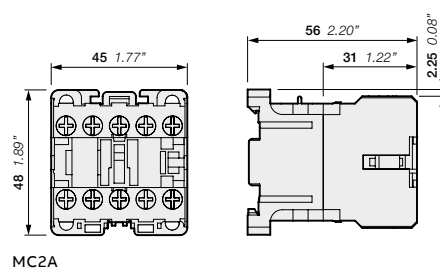
MC2A310AT

MC2A 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit		Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC	voltage Uc					Pkg (1 pce)
400 V AC-3	AC-1			V 50 Hz	V 60 Hz				kg
5.5	20	7.5	20	24	24	1 0	MC2A310AT1	1SAL103577R9902	0.170
						0 1	MC2A301AT1	1SAL103569R9902	0.170
				48	48	1 0	MC2A310AT9	1SAL103268R9902	0.170
						0 1	MC2A301AT9	1SAL103269R9902	0.170
				110...115	110...120	1 0	MC2A310ATJ	1SAL103573R9902	0.170
						0 1	MC2A301ATJ	1SAL103565R9902	0.170
				120	120	1 0	MC2A310AT4	1SAL101644R9902	0.170
						0 1	MC2A301AT4	1SAL101641R9902	0.170
				–	208...220	1 0	MC2A310ATM	1SAL103835R9902	0.170
						0 1	MC2A301ATM	1SAL100046R9902	0.170
				220...230	220...230	1 0	MC2A310AT6	1SAL103579R9902	0.170
						0 1	MC2A301AT6	1SAL103571R9902	0.170
				220...240	240...277	1 0	MC2A310ATN	1SAL103574R9902	0.170
						0 1	MC2A301ATN	1SAL103566R9902	0.170
				240	240	1 0	MC2A310AT7	1SAL101875R9902	0.170
						0 1	MC2A301AT7	1SAL101877R9902	0.170
				380...400	440	1 0	MC2A310ATU	1SAL103575R9902	0.170
						0 1	MC2A301ATU	1SAL103567R9902	0.170
				415...440	480	1 0	MC2A310ATW	1SAL135704R9902	0.170
						0 1	MC2A301ATW	1SAL135705R9902	0.170
500	600	1 0	MC2A310ATY	1SAL101876R9902	0.170				
		0 1	MC2A301ATY	1SAL101907R9902	0.170				



MC2A

Main dimensions mm, inches

MC1C 3-pole mini contactors with screw terminals

4 kW

DC operated



MC1C310AT

MC1C 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1pce) kg
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC					
400 V AC-3 kW	AC-1 A	hp	A	V DC				

MC1C mini contactors

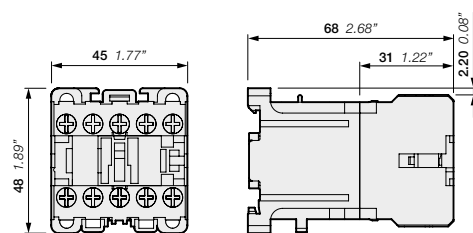
4	20	5	20	12	1 0	MC1C310ATB	1SAL100210R9901	0.250
					0 1	MC1C301ATB	1SAL100220R9901	0.250
				24	1 0	MC1C310ATD	1SAL100216R9901	0.250
					0 1	MC1C301ATD	1SAL100226R9901	0.250
				24 with Diode	1 0	MC1C310ATDD	1SAL113312R9901	0.250
					0 1	MC1C301ATDD	1SAL113328R9901	0.250

MC1C mini contactors with extended operating limits coil

4	20	5	20	24*	1 0	MC1C310ATWD	1SAL220373R9901	0.250
					0 1	MC1C301ATWD	1SAL220372R9901	0.250
				48*	1 0	MC1C310ATWG	1SAL100380R9901	0.250
					0 1	MC1C301ATWG	1SAL200795R9901	0.250
				110*	1 0	MC1C310ATWJ	1SAL220371R9901	0.250
					0 1	MC1C301ATWJ	1SAL220370R9901	0.250
				125*	1 0	MC1C310ATWL	1SAL220460R9901	0.250
					0 1	MC1C301ATWL	1SAL220459R9901	0.250
				220*	1 0	MC1C310ATWN	1SAL220369R9901	0.250
					0 1	MC1C301ATWN	1SAL220368R9901	0.250

* With the extended operating limits coils:

- at nominal voltage, U_c, a higher number of additional auxiliary contacts can be attached to the device
- a wider range of voltages, -30% ≤ U_c ≤ +30%, can be used for the operation with a limitation of the number of auxiliary contacts.



MC1C

Main dimensions mm, inches

MC2C 3-pole mini contactors with screw terminals

5.5 kW

DC operated



MC2C310AT

MC2C 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC					
400 V AC-3 kW	AC-1 A	hp	A	V DC				

MC2C mini contactors

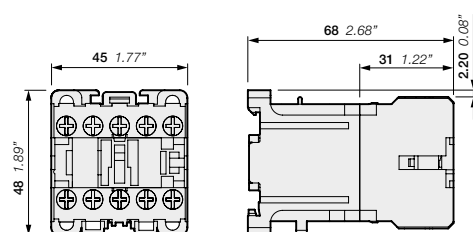
5.5	20	7.5	20	12	1 0	MC2C310ATB	1SAL103588R9902	0.250
					0 1	MC2C301ATB	1SAL103589R9902	0.250
				24	1 0	MC2C310ATD	1SAL103584R9902	0.250
					0 1	MC2C301ATD	1SAL103580R9902	0.250
				24 with Diode	1 0	MC2C310ATDD	1SAL101926R9902	0.250
					0 1	MC2C301ATDD	1SAL101955R9902	0.250

MC2C mini contactors with extended operating limits coil

5.5	20	7.5	20	24*	1 0	MC2C310ATWD	1SAL102378R9902	0.250
					0 1	MC2C301ATWD	1SAL102379R9902	0.250
				48*	1 0	MC2C310ATWG	1SAL101951R9902	0.250
					0 1	MC2C301ATWG	1SAL101958R9902	0.250
				110*	1 0	MC2C310ATWJ	1SAL102381R9902	0.250
					0 1	MC2C301ATWJ	1SAL102382R9902	0.250
				125*	1 0	MC2C310ATWL	1SAL204887R9902	0.250
					0 1	MC2C301ATWL	1SAL204886R9902	0.250
				220*	1 0	MC2C310ATWN	1SAL100442R9902	0.250
					0 1	MC2C301ATWN	1SAL100435R9902	0.250

* With the extended operating limits coils:

- at nominal voltage, U_c, a higher number of additional auxiliary contacts can be attached to the device
- a wider range of voltages, -30% ≤ U_c ≤ +30%, can be used for the operation with a limitation of the number of auxiliary contacts.



MC2C

Main dimensions mm, inches

MC1I, MC1K, MC2I, MC2K 3- pole mini contactors with screw terminals

4 to 5.5 kW

DC operated - low consumption



MC2I310AT



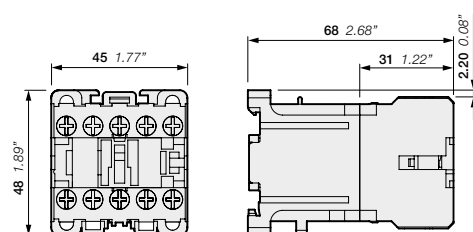
MC2K310AT

MC..I and MC..K 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- control circuit: DC operated
- coil with very low energy consumption; suitable for direct control by PLC outputs
- only for K variants: add-on auxiliary contact blocks for front or side mounting (up to 2 additional contacts)
- wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC					Pkg (1 pce)
400 V AC-3 kW	AC-1 A	hp	A	V DC				kg
DC operation 24 V / 1.2 W								
4	20	7.5	20	24	1 0	MC1I310ATD	1SAL100572R9901	0.250
					0 1	MC1I301ATD	1SAL100573R9901	0.250
5.5	20	7.5	20	24	1 0	MC2I310ATD	1SAL100559R9902	0.250
					0 1	MC2I301ATD	1SAL100538R9902	0.250
DC operation 24 V / 2 W								
4	20	7.5	20	24	1 0	MC1K310ATD	1SAL100576R9901	0.250
					0 1	MC1K301ATD	1SAL100577R9901	0.250
5.5	20	7.5	20	24	1 0	MC2K310ATD	1SAL103590R9902	0.250
					0 1	MC2K301ATD	1SAL103591R9902	0.250



MC1I, MC1K, MC2I, MC2K

Main dimensions mm, inches

MC1A..R, MC2A..R 3-pole mini contactors for ring tongue ferrules

4 to 5.5 kW

AC operated



MC1A310AR

2CDC211009V0019



MC2A310AR

2CDC211010V0019

MC1A..R and MC2A..R 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive circuits up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

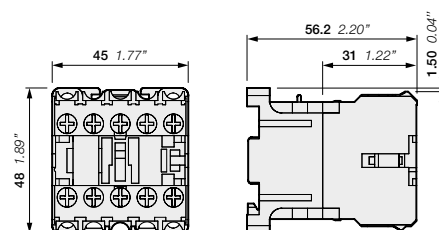
IEC		UL/CSA		Rated control circuit voltage Uc		Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current $\theta \leq 55^\circ\text{C}$	3-phase motor rating	General use rating						Pkg (1 pce)
400 V		480 V	600 V AC						
AC-3	AC-1								
kW	A	hp	A	V 50 Hz	V 60 Hz				kg

MC1A mini contactors

4	20	5	20	24	24	1 0	MC1A310AR1	1SAL103386R9901	0.170
						0 1	MC1A301AR1	1SAL103399R9901	0.170
				110 ... 115	110 ... 120	1 0	MC1A310ARJ	1SAL100182R9901	0.170
						0 1	MC1A301ARJ	1SAL100175R9901	0.170
				220 ... 230	220 ... 230	1 0	MC1A310AR6	1SAL102157R9901	0.170
						0 1	MC1A301AR6	1SAL102158R9901	0.170

MC2A mini contactors

5.5	20	7.5	20	24	24	1 0	MC2A310AR1	1SAL103412R9902	0.170
						0 1	MC2A301AR1	1SAL103425R9902	0.170
				110 ... 115	110 ... 120	1 0	MC2A310ARJ	1SAL103414R9902	0.170
						0 1	MC2A301ARJ	1SAL103427R9902	0.170
				220 ... 230	220 ... 230	1 0	MC2A310AR6	1SAL102175R9902	0.170
						0 1	MC2A301AR6	1SAL102176R9902	0.170



MC1A..R, MC2A..R

Main dimensions mm, inches



MC1C..R 3-pole mini contactors for ring tongue ferrules

4 kW
DC operated



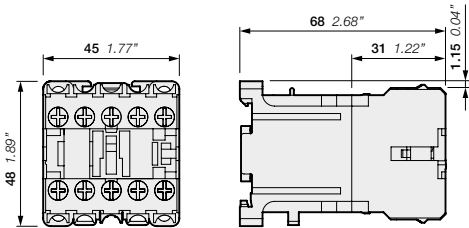
MC1C310AR

MC1C..R 3-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive circuits up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC					Pkg (1 pce)
400 V AC-3 kW	AC-1 A	hp	A	V DC				kg
4	20	5	20	12	1 0	MC1C310ARB	1SAL101847R9901	0.250
					0 1	MC1C301ARB	1SAL101848R9901	0.250



MC1C..R

Main dimensions mm, inches

MC1K..R 3-pole mini contactors for ring tongue ferrules

4 kW

DC operated - low consumption

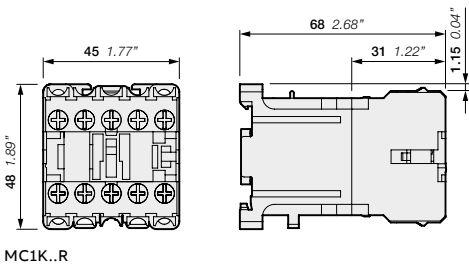


MC1K..R 3-pole interface mini contactors are high performance but space saving solution for the control of small motors and resistive circuits up to 690 V AC and 220 V DC.

These contactors are designed with 3 main poles and one built-in auxiliary contact:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: DC operated
- coil with very low energy consumption; suitable for direct control by PLC outputs
- add-on auxiliary contact blocks for front or side mounting (up to 2 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
Rated operational power	current θ ≤ 55 °C	3-phase motor rating	General use rating					
400 V AC-3 kW	AC-1 A	480 V hp	600 V AC A	V DC				
DC operation 24 V / 2 W								
4	20	5	20	24	1 0	MC1K310ARD	1SAL103446R9901	0.250
					0 1	MC1K301ARD	1SAL101858R9901	0.250



Main dimensions mm, inches

MC1A 4-pole mini contactors with screw terminals

4 to 5.5 kW

AC operated



MC1A400AT

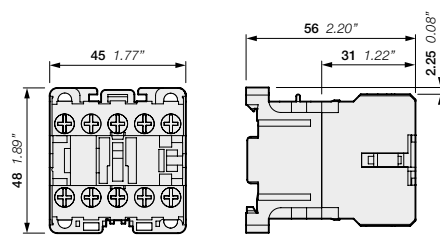
MC1A 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage Uc		Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC						Pkg (1 pce)
400 V	AC-1			V 50 Hz	V 60 Hz				kg
kW	A	hp	A						
4 N.O. main poles									
4	20	5	20	24	24	0 0	MC1A400AT1	1SAL102986R9901	0.170
				48	48	0 0	MC1A400AT9	1SAL100296R9901	0.170
				110 ... 115	110 ... 120	0 0	MC1A400ATJ	1SAL100363R9901	0.170
				120	120	0 0	MC1A400AT4	1SAL102989R9901	0.170
				–	208 ... 220	0 0	MC1A400ATM	1SAL102980R9901	0.170
				220 ... 230	220 ... 230	0 0	MC1A400AT6	1SAL102991R9901	0.170
				220 ... 240	240 ... 277	0 0	MC1A400ATN	1SAL100364R9901	0.170
				240	240	0 0	MC1A400AT7	1SAL103101R9901	0.170
				380 ... 400	440	0 0	MC1A400ATU	1SAL100365R9901	0.170
				415 ... 440	480	0 0	MC1A400ATW	1SAL102984R9901	0.170
				500	600	0 0	MC1A400ATY	1SAL102985R9901	0.170
2 N.O. + 2 N.C. main poles									
4	20	5	20	24	24	0 0	MC1AB00AT1	1SAL103007R9901	0.170
				48	48	0 0	MC1AB00AT9	1SAL100400R9901	0.170
				110 ... 115	110 ... 120	0 0	MC1AB00ATJ	1SAL100373R9901	0.170
				120	120	0 0	MC1AB00AT4	1SAL103010R9901	0.170
				–	208 ... 220	0 0	MC1AB00ATM	1SAL103001R9901	0.170
				220 ... 230	220 ... 230	0 0	MC1AB00AT6	1SAL103012R9901	0.170
				240	240	0 0	MC1AB00AT7	1SAL103099R9901	0.170
				220 ... 240	240 ... 277	0 0	MC1AB00ATN	1SAL100374R9901	0.170
				380 ... 400	440	0 0	MC1AB00ATU	1SAL100375R9901	0.170
				415 ... 440	480	0 0	MC1AB00ATW	1SAL101834R9901	0.170
				500	600	0 0	MC1AB00ATY	1SAL103006R9901	0.170

Note: Other contact configuration available. Please consult your ABB local sales organization.



MC1A

Main dimensions mm, inches

MC2A 4-pole mini contactors with screw terminals

4 to 5.5 kW

AC operated



MC2A400AT

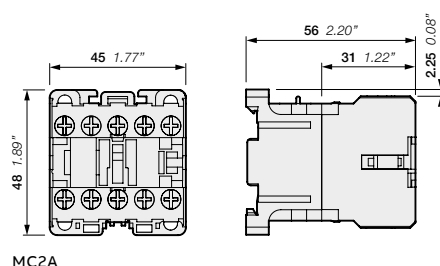
MC2A 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c		Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC						
400 V AC-3	AC-1 A	hp	A	V 50 Hz	V 60 Hz				
4 N.O. main poles									
5.5	20	7.5	20	24	24	0 0	MC2A400AT1	1SAL101645R9902	0.170
				48	48	0 0	MC2A400AT9	1SAL116195R9902	0.170
				110 ... 115	110 ... 120	0 0	MC2A400ATJ	1SAL116184R9902	0.170
				120	120	0 0	MC2A400AT4	1SAL101647R9902	0.170
				–	208 ... 220	0 0	MC2A400ATM	1SAL101912R9902	0.170
				220 ... 230	220 ... 230	0 0	MC2A400AT6	1SAL103595R9902	0.170
				220 ... 240	240 ... 277	0 0	MC2A400ATN	1SAL116177R9902	0.170
				240	240	0 0	MC2A400AT7	1SAL101910R9902	0.170
				380 ... 400	440	0 0	MC2A400ATU	1SAL103292R9902	0.170
				415 ... 440	480	0 0	MC2A400ATW	1SAL116193R9902	0.170
				500	600	0 0	MC2A400ATY	1SAL101915R9902	0.170
2 N.O. + 2 N.C. main poles									
5.5	20	7.5	20	24	24	0 0	MC2AB00AT1	1SAL101648R9902	0.170
				48	48	0 0	MC2AB00AT9	1SAL248068R9902	0.170
				110 ... 115	110 ... 120	0 0	MC2AB00ATJ	1SAL110548R9902	0.170
				120	120	0 0	MC2AB00AT4	1SAL101650R9902	0.170
				–	208 ... 220	0 0	MC2AB00ATM	1SAL101918R9902	0.170
				220 ... 230	220 ... 230	0 0	MC2AB00AT6	1SAL103027R9902	0.170
				220 ... 240	240 ... 277	0 0	MC2AB00ATN	1SAL135699R9902	0.170
				240	240	0 0	MC2AB00AT7	1SAL101917R9902	0.170
				380 ... 400	440	0 0	MC2AB00ATU	1SAL101919R9902	0.170
				415 ... 440	480	0 0	MC2AB00ATW	1SAL247441R9902	0.170
				500	600	0 0	MC2AB00ATY	1SAL101923R9902	0.170

Note: Other contact configuration available. Please consult your ABB local sales organization.



MC2A

Main dimensions mm, inches

MC1C, MC2C 4-pole mini contactors with screw terminals

4 to 5.5 kW

DC operated



MC1C400AT



MC2C400AT

MC1C, MC2C 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

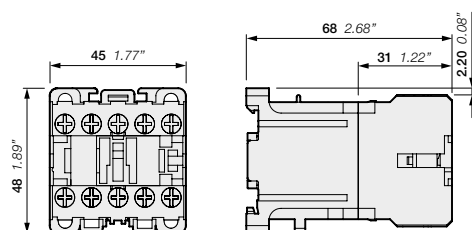
- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage Uc	Auxiliary contacts fitted 	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC					Pkg (1 pce)
400 V AC-3	AC-1							kg
kW	A	hp	A	V DC				
4 N.O. main poles								
4	20	5	20	12	0 0	MC1C400ATB	1SAL100360R9901	0.250
				24	0 0	MC1C400ATD	1SAL100366R9901	0.250
				24	0 0	MC1C400ATDD	1SAL101841R9901	0.250
				with Diode				
4 N.O. main poles mini contactors with extended operating limits coil								
4	20	5	20	24*	0 0	MC1C400ATWD	1SAL220344R9901	0.250
				48*	0 0	MC1C400ATWG	1SAL220364R9901	0.250
				110*	0 0	MC1C400ATWJ	1SAL220342R9901	0.250
				125*	0 0	MC1C400ATWL	1SAL220462R9901	0.250
				220*	0 0	MC1C400ATWN	1SAL220340R9901	0.250
5.5	20	7.5	20	24*	0 0	MC2C400ATWD	1SAL101961R9902	0.250
				48*	0 0	MC2C400ATWG	1SAL101962R9902	0.250
				110*	0 0	MC2C400ATWJ	1SAL101963R9902	0.250
				125*	0 0	MC2C400ATWL	1SAL101964R9902	0.250
				220*	0 0	MC2C400ATWN	1SAL100445R9902	0.250
2 N.O. + 2 N.C. main poles mini contactors with extended operating limits coil								
4	20	5	20	24*	0 0	MC1CB00ATWD	1SAL220345R9901	0.250
				48*	0 0	MC1CB00ATWG	1SAL220366R9901	0.250
				110*	0 0	MC1CB00ATWJ	1SAL220343R9901	0.250
				125*	0 0	MC1CB00ATWL	1SAL220461R9901	0.250
				220*	0 0	MC1CB00ATWN	1SAL220341R9901	0.250
5.5	20	7.5	20	24*	0 0	MC2CB00ATWD	1SAL101965R9902	0.250
				48*	0 0	MC2CB00ATWG	1SAL101966R9902	0.250
				110*	0 0	MC2CB00ATWJ	1SAL101967R9902	0.250
				125*	0 0	MC2CB00ATWL	1SAL204888R9902	0.250
				220*	0 0	MC2CB00ATWN	1SAL101968R9902	0.250

Note : Other contact configuration available. Please consult your ABB local sales organization.

* With the extended operating limits coils:

- at nominal voltage, U_c , a higher number of additional auxiliary contacts can be attached to the device
- a wider range of voltages, $-30\% \leq U_c \leq +30\%$, can be used for the operation with a limitation of the number of auxiliary contacts.



MC1C, MC2C

Main dimensions mm, inches

MC1I, MC1K 4-pole mini contactors with screw terminals

4 kW

DC operated - low consumption

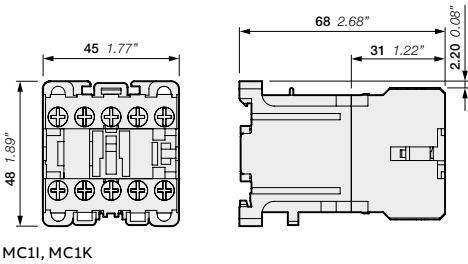


MC1I, MC1K 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive loads up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

- control circuit: DC operated
- coil with very low energy consumption; suitable for direct control by PLC outputs
- only for K variants: add-on auxiliary contact blocks for front or side mounting (up to 2 additional contacts)
- wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage Uc	Type	Order code	Weight Pkg (1 pce) kg
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC				
400 V AC-3 kW	AC-1 A	hp	A	V DC			
DC operation 24 V / 1.2 W							
4	20	5	20	24	MC1I400ATD	1SAL101840R9901	0.250
DC operation 24 V / 2 W							
4	20	5	20	24	MC1K400ATD	1SAL100569R9901	0.250

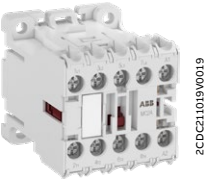


Main dimensions mm, inches



MC1A..R 4-pole mini contactors for ring tongue ferrules

4 kW
AC operated



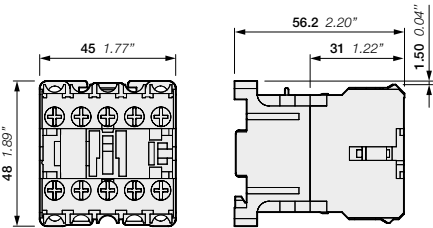
MC1A400AR

MC1A..R 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive circuits up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage Uc		Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating 480 V	General use rating 600 V AC						Pkg (1 pce)
400 V AC-3 kW	AC-1 A	hp	A	V 50 Hz	V 60 Hz				kg
4 N.O. main poles									
4	20	5	20	24	24	0 0	MC1A400AR1	1SAL102160R9901	0.170
				110 ... 115	110 ... 120	0 0	MC1A400ARJ	1SAL102166R9901	0.170
				220 ... 230	220 ... 230	0 0	MC1A400AR6	1SAL102164R9901	0.170
2 N.O. + 2 N.C. main poles									
4	20	5	20	24	24	0 0	MC1AB00AR1	1SAL102172R9901	0.170
				110 ... 115	110 ... 120	0 0	MC1AB00ARJ	1SAL102174R9901	0.170
				220 ... 230	220 ... 230	0 0	MC1AB00AR6	1SAL102173R9901	0.170



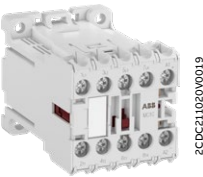
MC1A..R

Main dimensions mm, inches

MC1C..R 4-pole mini contactors for ring tongue ferrules

4 kW

DC operated



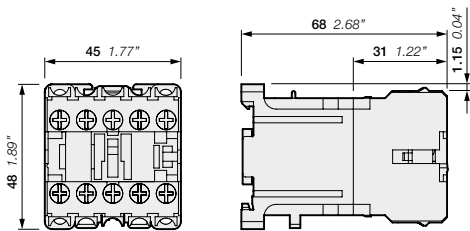
MC1C400AR

MC1C..R 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive circuits up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight
Rated operational power	current $\theta \leq 55^{\circ}\text{C}$	3-phase motor rating 480 V	General use rating 600 V AC					Pkg (1 pce)
400 V	AC-1			V DC				kg
kW	A	hp	A					
4 N.O. main poles								
4	20	5	20	12	0 0	MC1C400ARB	1SAL101859R9901	0.250



MC1C..R

Main dimensions mm, inches



MC1K..R 4-pole mini contactors for ring tongue ferrules

4 kW

DC operated - low consumption



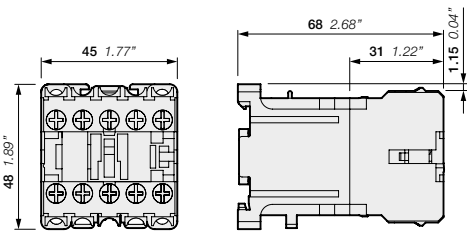
MC1K400AR

MC1K..R 4-pole mini contactors are a high performance but space saving solution for the control of small motors and resistive circuits up to 690 V AC and 220 V DC.

These contactors are designed with 4 main poles:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: DC operated
- coil with very low energy consumption; suitable for direct control by PLC outputs
- add-on auxiliary contact blocks for front or side mounting (up to 2 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

IEC		UL/CSA		Rated control circuit voltage U _c	Type	Order code	Weight
Rated operational power	current θ ≤ 55 °C	3-phase motor rating	General use rating				Pkg (1 pce)
400 V		480 V	600 V AC				
AC-3	AC-1						
kW	A	hp	A	V DC			kg
4	20	5	20	24	MC1K400ARD	1SAL101860R9901	0.250

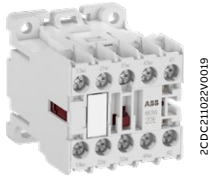


MC1K..R

Main dimensions mm, inches

MCRA 4-pole mini contactor relays with screw terminals

AC operated



MCRA040AT

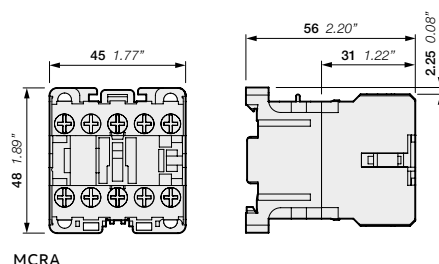
MCRA 4-pole mini contactor relays are a high performance but space saving solution used for control functions or for switching small loads up to 6 A.

These contactors are designed with 4 poles with various contact combinations:

- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

Rated control circuit voltage Uc		Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce)
V 50 Hz	V 60 Hz				kg
4 N.O. poles					
24	24	4 0	MCRA040AT1	1SAH102013R9900	0.170
48	48	4 0	MCRA040AT9	1SAH108237R9900	0.170
110 ... 115	110 ... 120	4 0	MCRA040ATJ	1SAH100003R9900	0.170
120	120	4 0	MCRA040AT4	1SAH102016R9900	0.170
–	208 ... 220	4 0	MCRA040ATM	1SAH102007R9900	0.170
220 ... 230	220 ... 230	4 0	MCRA040AT6	1SAH102018R9900	0.170
220 ... 240	240 ... 277	4 0	MCRA040ATN	1SAH100004R9900	0.170
240	240	4 0	MCRA040AT7	1SAH103106R9900	0.170
380 ... 400	440	4 0	MCRA040ATU	1SAH100005R9900	0.170
415 ... 440	480	4 0	MCRA040ATW	1SAH102011R9900	0.170
500	600	4 0	MCRA040ATY	1SAH102012R9900	0.170
3 N.O. + 1 N.C. poles					
24	24	3 1	MCRA031AT1	1SAH102034R9900	0.170
48	48	3 1	MCRA031AT9	1SAH108238R9900	0.170
110 ... 115	110 ... 120	3 1	MCRA031ATJ	1SAH100013R9900	0.170
120	120	3 1	MCRA031AT4	1SAH102037R9900	0.170
–	208 ... 220	3 1	MCRA031ATM	1SAH102028R9900	0.170
220 ... 230	220 ... 230	3 1	MCRA031AT6	1SAH102039R9900	0.170
220 ... 240	240 ... 277	3 1	MCRA031ATN	1SAH100014R9900	0.170
240	240	3 1	MCRA031AT7	1SAH103105R9900	0.170
380 ... 400	440	3 1	MCRA031ATU	1SAH100015R9900	0.170
415 ... 440	480	3 1	MCRA031ATW	1SAH102032R9900	0.170
500	600	3 1	MCRA031ATY	1SAH102033R9900	0.170
2 N.O. + 2 N.C. poles					
24	24	2 2	MCRA022AT1	1SAH220438R9900	0.170
48	48	2 2	MCRA022AT9	1SAH108236R9900	0.170
110 ... 115	110 ... 120	2 2	MCRA022ATJ	1SAH100023R9900	0.170
120	120	2 2	MCRA022AT4	1SAH102058R9900	0.170
–	208 ... 220	2 2	MCRA022ATM	1SAH102049R9900	0.170
220 ... 230	220 ... 230	2 2	MCRA022AT6	1SAH102060R9900	0.170
220 ... 240	240 ... 277	2 2	MCRA022ATN	1SAH100024R9900	0.170
240	240	2 2	MCRA022AT7	1SAH102061R9900	0.170
380 ... 400	440	2 2	MCRA022ATU	1SAH100025R9900	0.170
415 ... 440	480	2 2	MCRA022ATW	1SAH102053R9900	0.170
500	600	2 2	MCRA022ATY	1SAH102054R9900	0.170

Note : Other contact configuration available. Please consult your ABB local sales organization.



MCRA

Main dimensions mm, inches

MCRC 4-pole mini contactor relays with screw terminals

DC operated



MCRC040AT

MCRC 4-pole mini contactor relays are a high performance but space saving solution used for control functions or for switching small loads up to 6 A.

These contactors are designed with 4 poles with various contact combinations:

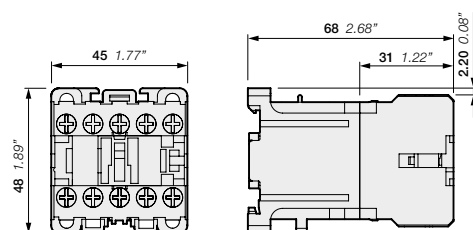
- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

Rated control circuit voltage U _c	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
VDC				
4 N.O. poles				
12	4 0	MCRC040ATB	1SAH100000R9900	0.235
24	4 0	MCRC040ATD	1SAH100006R9900	0.235
24 with Diode	4 0	MCRC040ATDD	1SAH113311R9900	0.235
3 N.O. + 1 N.C. poles				
12	3 1	MCRC031ATB	1SAH100010R9900	0.235
24	3 1	MCRC031ATD	1SAH100016R9900	0.235
24 with Diode	3 1	MCRC031ATDD	1SAH113325R9900	0.235
2 N.O. + 2 N.C. poles				
12	2 2	MCRC022ATB	1SAH100020R9900	0.235
24	2 2	MCRC022ATD	1SAH100026R9900	0.235
24 with Diode	2 2	MCRC022ATDD	1SAH113324R9900	0.235
4 N.O. poles MCRC mini contactors relays with extended operating limits coil				
24*	4 0	MCRC040ATWD	1SAH220410R9900	0.235
48*	4 0	MCRC040ATWG	1SAH220463R9900	0.235
110*	4 0	MCRC040ATWJ	1SAH220407R9900	0.235
125*	4 0	MCRC040ATWL	1SAH220458R9900	0.235
220*	4 0	MCRC040ATWN	1SAH220404R9900	0.235
3 N.O. + 1 N.C. poles mini contactors relays with extended operating limits coil				
24*	3 1	MCRC031ATWD	1SAH220409R9900	0.235
48*	3 1	MCRC031ATWG	1SAH100070R9900	0.235
110*	3 1	MCRC031ATWJ	1SAH220406R9900	0.235
125*	3 1	MCRC031ATWL	1SAH220457R9900	0.235
220*	3 1	MCRC031ATWN	1SAH220403R9900	0.235
2 N.O. + 2 N.C. poles mini contactors relays with extended operating limits coil				
17 ... 32	2 2	MCRC022ATWD	1SAH220408R9900	0.235
34 ... 62	2 2	MCRC022ATWG	1SAH100082R9900	0.235
77 ... 143	2 2	MCRC022ATWJ	1SAH107171R9900	0.235
87 ... 162	2 2	MCRC022ATWL	1SAH220456R9900	0.235
154 ... 286	2 2	MCRC022ATWN	1SAH220402R9900	0.235

Note: Other contact configuration available. Please consult your ABB local sales organization.

* With the extended operating limits coils:

- at nominal voltage, U_c, a higher number of additional auxiliary contacts can be attached to the device
- a wider range of voltages, -30% ≤ U_c ≤ +30%, can be used for the operation with a limitation of the number of auxiliary contacts.



MCRC

Main dimensions mm, inches

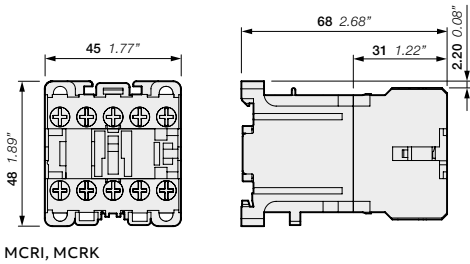
MCRI, MCRK 4-pole mini contactor relays with screw terminals

DC operated - low consumption



- MCRI, MCRK 4-pole mini contactor relays are a high performance but space saving solution used for control functions or for switching small loads up to 6 A.
- These contactors are designed with 4 poles with various contact combinations:
- control circuit: DC operated
 - coil with very low energy consumption; suitable for direct control by PLC outputs
 - only for K variants: add-on auxiliary contact blocks for front or side mounting (up to 2 additional contacts)
 - wide range of accessories
 - suitable for rail or wall mounting.

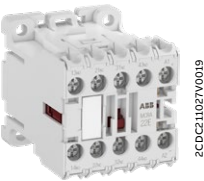
Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
VDC				
DC operation 24 V / 1.2 W				
24	4 0	MCRI040ATD	1SAH100530R9900	0.235
	3 1	MCRK031ATD	1SAH100531R9900	0.235
	2 2	MCRI022ATD	1SAH100532R9900	0.235
DC operation 24 V / 2 W				
24	4 0	MCRK040ATD	1SAH100533R9900	0.235
	3 1	MCRK031ATD	1SAH100534R9900	0.235
	2 2	MCRK022ATD	1SAH100535R9900	0.235



Main dimensions mm, inches

MCRA..R 4-pole mini contactor relays for ring tongue ferrules

AC operated



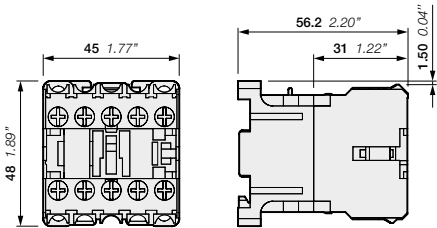
MCRA040AR

MCRA..R 4-pole mini contactor relays are a high performance but space saving solution used for control functions or for switching small loads up to 6 A.

These contactors are designed with 4 poles with various contact combinations:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: AC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

Rated control circuit voltage Uc		Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
V 50 Hz	V 60 Hz				
4 N.O. poles					
24	24	4 0	MCRA040AR1	1SAH102177R9900	0.170
110 ... 115	110 ... 120	4 0	MCRA040ARJ	1SAH102179R9900	0.170
220 ... 230	220 ... 230	4 0	MCRA040AR6	1SAH102178R9900	0.170
3 N.O. + 1 N.C. poles					
24	24	3 1	MCRA031AR1	1SAH102180R9900	0.170
110 ... 115	110 ... 120	3 1	MCRA031ARJ	1SAH102182R9900	0.170
220 ... 230	220 ... 230	3 1	MCRA031AR6	1SAH102181R9900	0.170
2 N.O. + 2 N.C. poles					
24	24	2 2	MCRA022AR1	1SAH102183R9900	0.170
110 ... 115	110 ... 120	2 2	MCRA022ARJ	1SAH100485R9900	0.170
220 ... 230	220 ... 230	2 2	MCRA022AR6	1SAH102184R9900	0.170



MCRA..R

Main dimensions mm, inches

MCRC..R 4-pole mini contactor relays for ring tongue ferrules

DC operated

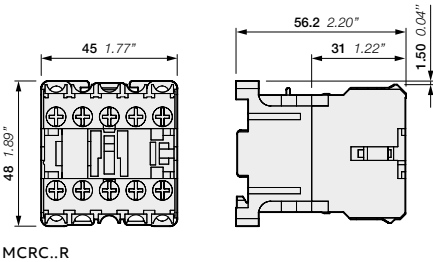


MCRC..R 4-pole mini contactor relays are a high performance but space saving solution used for control functions or for switching small loads up to 6 A.

These contactors are designed with 4 poles with various contact combinations:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: DC operated
- add-on auxiliary contact blocks for front or side mounting (up to 6 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
VDC				
12	4 0	MCRC040ARB	1SAH101994R9900	0.245
	3 1	MCRC031ARB	1SAH101996R9900	0.245
	2 2	MCRC022ARB	1SAH101998R9900	0.245

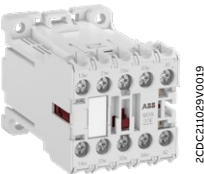


Main dimensions mm, inches



MCRK..R 4-pole mini contactor relays for ring tongue ferrules

DC operated - low consumption



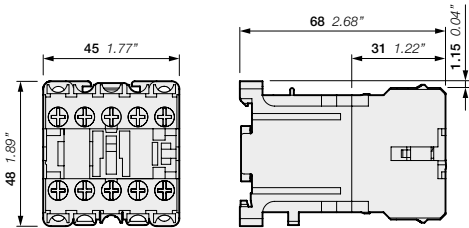
MCRK040AR

MCRK 4-pole mini contactor relays are a high performance but space saving solution used for control functions or for switching small loads up to 6 A.

These contactors are designed with 4 main poles with various contact combinations:

- specific screw terminals for an easy connection with ring tongue ferrules
- control circuit: DC operated
- coil with very low energy consumption; suitable for direct control by PLC outputs
- add-on auxiliary contact blocks for front or side mounting (up to 2 additional contacts) and a wide range of accessories
- suitable for rail or wall mounting.

Rated control circuit voltage Uc	Auxiliary contacts fitted	Type	Order code	Weight Pkg (1 pce) kg
VDC				
DC operation 24 V / 2 W				
24	4 0	MCRK040ARD	1SAH101995R9900	0.245
	3 1	MCRK031ARD	1SAH101997R9900	0.245
	2 2	MCRK022ARD	1SAH100540R9900	0.245

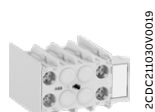


MCRK..R

Main dimensions mm, inches

Auxiliary contact blocks for MC1 and MC2 mini contactors

With screw terminals and specific screw terminals for ring tongue ferrules



MACN211AT

2CDC211030V0019



MACN422AT

2CDC211031V0019



MACL110AT

2CDC211034V0019

Screw terminals

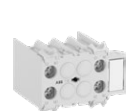
Suitable for	Auxiliary contacts	Type	Order code	Weight
				Pkg (1 pce) kg

Front mounted instantaneous auxiliary contact blocks

All MC1 and MC2 variants Contacts in accordance with EN 50012	1 1	MACN211AT	1SAL100999R9906	0.030
	0 2	MACN202AT	1SAL100998R9906	0.030
	3 1	MACN431AT	1SAL100995R9906	0.040
	2 2	MACN422AT	1SAL100996R9906	0.040
	1 3	MACN413AT	1SAL100997R9906	0.040
All MC1 and MC2 variants Contacts in accordance with EN 50005	2 0	MARN220AT	1SAL100994R9906	0.030
	1 1	MARN211AT	1SAL100993R9906	0.030
	0 2	MARN202AT	1SAL100992R9906	0.030
	4 0	MARN440AT	1SAL100991R9906	0.040
	3 1	MARN431AT	1SAL100990R9906	0.040
	2 2	MARN422AT	1SAL100989R9906	0.040
	1 3	MARN413AT	1SAL100988R9906	0.040
	0 4	MARN404AT	1SAL100987R9906	0.040

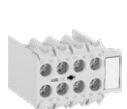
Side mounted instantaneous auxiliary contact block

All MC1 and MC2 variants Contacts in accordance with EN 50012	1 0	MACL110AT	1SAL100560R9906	0.017
	0 1	MACL101AT	1SAL100561R9906	0.017
All MC1 and MC2 variants Contacts in accordance with EN 50005	1 0	MARL110ATS	1SAL100519R9906	0.017
	0 1	MARL101ATS	1SAL100520R9906	0.017



MARN211AR

2CDC211032V0019



MARN422AR

2CDC211033V0019



MACL110AR

2CDC211035V0019

Specific screw terminals for ring tongue ferrules

Suitable for	Auxiliary contacts	Type	Order code	Weight
				Pkg (1 pce) kg

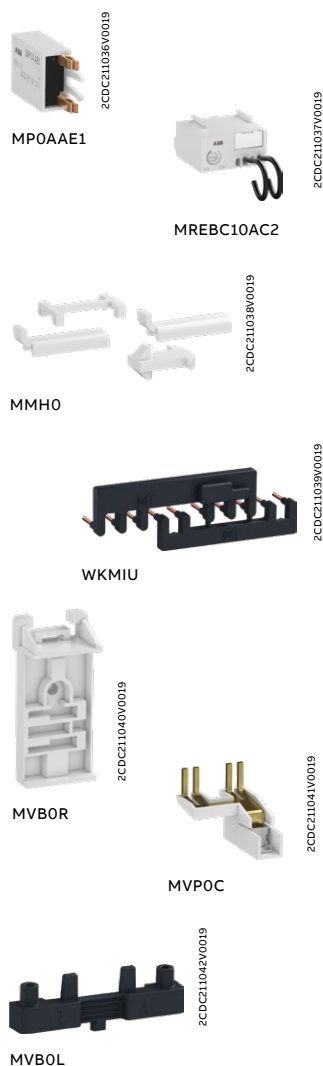
Front mounted instantaneous auxiliary contact blocks

All MC1 and MC2 variants Contacts in accordance with EN 50012	1 1	MACN211AR	1SAL103557R9906	0.030
	0 2	MACN202AR	1SAL103558R9906	0.030
	3 1	MACN431AR	1SAL103559R9906	0.040
	2 2	MACN422AR	1SAL103560R9906	0.040
	1 3	MACN413AR	1SAL103561R9906	0.040
All MC1 and MC2 variants Contacts in accordance with EN 50005	2 0	MARN220AR	1SAL103349R9906	0.030
	1 1	MARN211AR	1SAL103350R9906	0.030
	0 2	MARN202AR	1SAL103351R9906	0.030
	4 0	MARN440AR	1SAL103352R9906	0.040
	3 1	MARN431AR	1SAL103353R9906	0.040
	2 2	MARN422AR	1SAL103354R9906	0.040
	1 3	MARN413AR	1SAL103355R9906	0.040
	0 4	MARN404AR	1SAL103300R9906	0.040

Side mounted instantaneous auxiliary contact block

All MC1 and MC2 variants Contacts in accordance with EN 50012	1 0	MACL110AR	1SAL103555R9906	0.017
	0 1	MACL101AR	1SAL103556R9906	0.017
All MC1 and MC2 variants Contacts in accordance with EN 50005	1 0	MARL110ARS	1SAL103299R9906	0.017
	0 1	MARL101ARS	1SAL103298R9906	0.017

Other accessories for MC1 and MC2 mini contactors



Suitable for	Rated control circuit voltage			Protection type	Type	Order code	Pkg qty	Weight (1 pce)
	Uc	V 50 Hz	V 60 Hz					
	V DC							kg

Surge suppressors for contactor coils

All MC1 and MC2 DC operated variants	6 ... 250	–	–	Diode	MP0CAE3	1SAL100546R9906	1	0.006
All MC1 and MC2 AC operated variants	–	12 ... 60	12 ... 60	R/C	MP0AAE1	1SAL100544R9906	1	0.006
	–	72 ... 250	72 ... 250	R/C	MP0AAE2	1SAL100545R9906	1	0.006
All MC1 and MC2 variants	24 ... 48	24 ... 48	24 ... 48	Varistor	MP0DAE4	1SAL100536R9906	1	0.006
	50 ... 127	50 ... 127	50 ... 127	Varistor	MP0DAE5	1SAL204848R9906	1	0.006
	130 ... 250	130 ... 250	130 ... 250	Varistor	MP0DAE6	1SAL204849R9906	1	0.006

Electronic timers

All MC1 and MC2 variants	24 ... 250	24 ... 250	24 ... 250	0.5 ... 60 sec.	MREBC10AC2	1SAL100541R9906	1	0.040
				0.2 ... 24 sec	MREBC20AC2	1SAL100542R9906	1	0.040

DIN rail adapter for electronic timers

All MREBC variants	MVB0R	1SAL100543R9906	1	0.003
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Mechanical interlock

All MC1 and MC2 variants	MMH0	1SAL100547R9906	1	0.003
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Parallel connecting link

All MC1 and MC2 variants	MVP0C	1SAL100600R9906	1	0.010
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Connection sets for reversing contactors

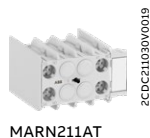
All MC1 and MC2 variants	WKMIU	1SAL101421R9906	1	0.030
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Lütze® rail adapter for contactors and contactor relays

All MC1 and MC2 variants	MVB0L	1SAL101830R9906	30	0.002
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Auxiliary contact blocks for MCR mini contactor relays

With screw terminals and specific screw terminals for ring tongue ferrules



MARN211AT



MARN422AT



MARL110AT

Screw terminals

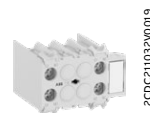
Suitable for	Auxiliary contacts	Type	Order code	Weight
				Pkg (1 pce) kg

Front mounted instantaneous auxiliary contact blocks

All MCR variants	2 0	MARN220AT	1SAL100994R9906	0.030
Contacts in accordance with EN 50005	1 1	MARN211AT	1SAL100993R9906	0.030
	0 2	MARN202AT	1SAL100992R9906	0.030
	4 0	MARN440AT	1SAL100991R9906	0.040
	3 1	MARN431AT	1SAL100990R9906	0.040
	2 2	MARN422AT	1SAL100989R9906	0.040
	1 3	MARN413AT	1SAL100988R9906	0.040
	0 4	MARN404AT	1SAL100987R9906	0.040

Side mounted instantaneous auxiliary contact block

All MCR variants	1 0	MARL110AT	1SAL100513R9906	0.017
	0 1	MARL101AT	1SAL100514R9906	0.017
	1 0	MARL110ATS	1SAL100519R9906	0.017
	0 1	MARL101ATS	1SAL100520R9906	0.017



MARN211AR



MARN422AR



MARL110AR

Specific screw terminals for ring tongue ferrules

Suitable for	Auxiliary contacts	Type	Order code	Weight
				Pkg (1 pce) kg

Front mounted instantaneous auxiliary contact blocks

All MCR variants	2 0	MARN220AR	1SAL103349R9906	0.030
Contacts in accordance with EN 50005	1 1	MARN211AR	1SAL103350R9906	0.030
	0 2	MARN202AR	1SAL103351R9906	0.030
	4 0	MARN440AR	1SAL103352R9906	0.040
	3 1	MARN431AR	1SAL103353R9906	0.040
	2 2	MARN422AR	1SAL103354R9906	0.040
	1 3	MARN413AR	1SAL103355R9906	0.040
	0 4	MARN404AR	1SAL103300R9906	0.040

Side mounted instantaneous auxiliary contact block

All MCR variants	1 0	MARL110AR	1SAL103356R9906	0.017
	0 1	MARL101AR	1SAL103357R9906	0.017
	1 0	MARL110ARS	1SAL103299R9906	0.017
	0 1	MARL101ARS	1SAL103298R9906	0.017

Other accessories for MCR mini contactor relays



MP0AAE1

2CDC211036V0019



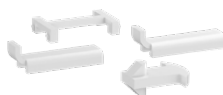
MREBC10AC2

2CDC211037V0019



MVB0R

2CDC211040V0019



MMH0

2CDC211038V0019



MVB0L

2CDC211042V0019

Suitable for	Rated control circuit voltage			Protection type	Type	Order code	Pkg qty	Weight (1 pce)
	Uc	V DC	V 50 Hz	V 60 Hz				

Surge suppressors for contactor coils

All MCR	6 ... 250	–	–	Diode	MP0CAE3	1SAL100546R9906	1	0.006
DC operated variants	–	–	–	–	–	–	–	–
All MC1 and MC2	–	12 ... 60	12 ... 60	R/C	MP0AAE1	1SAL100544R9906	1	0.006
AC operated variants	–	72 ... 250	72 ... 250	R/C	MP0AAE2	1SAL100545R9906	1	0.006
All MCR variants	24 ... 48	24 ... 48	24 ... 48	Varistor	MP0DAE4	1SAL100536R9906	1	0.006
	50 ... 127	50 ... 127	50 ... 127	Varistor	MP0DAE5	1SAL204848R9906	1	0.006
	130 ... 250	130 ... 250	130 ... 250	Varistor	MP0DAE6	1SAL204849R9906	1	0.006

Electronic timers

All MCR variants	24 ... 250	24 ... 250	24 ... 250	0.5 ... 60 sec.	MREBC10AC2	1SAL100541R9906	1	0.040
				0.2 ... 24 sec	MREBC20AC2	1SAL100542R9906	1	0.040

DIN rail adapter for electronic timers

All MREBC variants	MVB0R	1SAL100543R9906	1	0.003
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Mechanical interlock

All MCR variants	MMH0	1SAL100547R9906	1	0.003
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Lütze® rail adapter for contactors and contactor relays

All MCR variants	MVB0L	1SAL101830R9906	30	0.002
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MC1, MC2 3-pole and 4-pole mini contactors

Technical data

Main pole – Utilization characteristics according to IEC

Contactor types	AC operated		MC1A	MC2A
	DC operated		MC1C	MC2C
Standards			IEC/EN 60947-1, IEC/EN 60947-4-1	
Rated operational voltage Ue max			690 V AC, 440 V DC	
Rated frequency (without derating)			DC or 50 / 60 Hz	
AC-1 Utilization category for air temperature close to contactor $\theta \leq 55^{\circ}\text{C}$				
Ie / Rated operational current AC-1	230 V	20 A		
Ue max $\leq 690\text{ V}$, 50/60 Hz	400 V	20 A		
	500 V	20 A		
	690 V	20 A		
AC-1 Utilization category for air temperature close to contactor $55 < \theta \leq 70^{\circ}\text{C}$				
Ie / Rated operational current AC-1	230 V	16 A		
Ue max $\leq 690\text{ V}$, 50/60 Hz	400 V	16 A		
	500 V	16 A		
	690 V	16 A		
AC-3 Utilization category for air temperature close to contactor $\theta \leq 55^{\circ}\text{C}$				
Ie / Rated operational current AC-3	230 V	9 A	12 A	
 3-phase motors	400 V	9 A	12 A	
	500 V	8 A	10 A	
	690 V	5 A (1)	5 A (1)	
	Rated operational power AC-3	230 V	2.2 kW	3 kW
 1500 r.p.m. 50 Hz 1800 r.p.m. 60 Hz 3-phase motors	400 V	4 kW	5.5 kW	
	500 V	4 kW	5.5 kW	
	690 V	4 kW (1)	4 kW (1)	
AC-4 Utilization category for air temperature close to contactor $\theta \leq 55^{\circ}\text{C}$				
Ie / Rated operational current AC-4	230 V	9 A		
 3-phase motors	400 V	9 A		
	500 V	8 A		
	690 V	5 A (1)		
	Rated operational power AC-4	230 V	2.2 kW	
 1500 r.p.m. 50 Hz 1800 r.p.m. 60 Hz 3-phase motors	400 V	4 kW		
	500 V	4 kW		
	690 V	4 kW (1)		
	DC-1 Utilization category for air temperature close to contactor $\theta \leq 55^{\circ}\text{C}$			
Ie / Rated operational current DC-1 with 3 poles in series	24 V	20 A		
	48 V	20 A		
	60 V	20 A		
	125 V	10 A		
	220 V	8 A		
DC-3 Utilization category for air temperature close to contactor $\theta \leq 55^{\circ}\text{C}$				
Ie / Rated operational current DC-3 with 3 poles in series	24 V	12 A		
	48 V	9 A		
	60 V	9 A		
	125 V	6 A		
	220 V	2.5 V		
DC-5 Utilization category for air temperature close to contactor $\theta \leq 55^{\circ}\text{C}$				
Ie / Rated operational current DC-5 with 3 poles in series	24 V	9 A		
	48 V	8 A		
	60 V	7 A		
	125 V	2 A		
	220 V	0.8 V		
Rated making capacity			10 x Ie AC-3 acc. to IEC/EN 60947-4-1, 12 x Ie AC-4 acc. to IEC/EN 60947-4-1	
Rated breaking capacity			8 x Ie AC-3 acc. to IEC/EN 60947-4-1, 10 x Ie AC-4 acc. to IEC/EN 60947-4-1	
Short-circuit protection device for contactors without thermal O/L relay - motor protection excluded			Type 1: 32 A / Type 2: 20 A	
Ue $\leq 500\text{ V}$ AC - fuse type gG				
Rated short-time withstand current Icw at 40 °C ambient temperature, in free air from a cold state	10 s	72 A	96 A	
Maximum breaking capacity cos $\phi = 0.45$	at 400 V	90 A	120 A	
Maximum electrical switching frequency	AC	300 cycles/h (AC-1), 1200 cycles/h (AC-3), 150 cycles/h (AC-4)		
	DC	600 cycles/h		

(1) Valid for N.O. contacts only.

MC1, MC2 3-pole and 4-pole mini contactors

Technical data

Main pole – Utilization characteristics according to UL/NEMA/CSA

Contactor types	AC operated	MC1A	MC2A
	DC operated	MC1C	MC2C
Standards		UL 60947-1, UL 60947-4-1	
Maximum operational voltage		600 V AC	
UL/CSA general use rating		20 A / 600 V	
UL/CSA maximum 1-phase motor rating for air temperature close to contactor $\theta \leq 40^\circ\text{C}$			
Full load current	115 V AC	9.8 A	9.8 A
	230 V AC	10 A	12 A
Horse power rating	115 V AC	0.5 hp	0.5 hp
	230 V AC	1.5 hp	2 hp
UL/CSA maximum 3-phase motor rating for air temperature close to contactor $\theta \leq 40^\circ\text{C}$			
Full load current (1)	200 V AC	11 A	11 A
	240 V AC	9.6 A	9.6 A
	380-415 V AC	6.1 A	9.7 A
	440-480 V AC	7.6 A	11 A
	550-600 V AC	6.1 A	11 A
Horse power rating (1)	200 V AC	3 hp	3 hp
	240 V AC	3 hp	3 hp
	380-415 V AC	3 hp	5 hp
	440-480 V AC	5 hp	7.5 hp
	550-600 V AC	5 hp	10 hp
Short-circuit protection device for contactors without thermal overload relay - motor protection excluded			
Fuse rating	600 V	50 A	
Fuse type, 600 V	600 V	Class J	

(1) For the corresponding kW/A or hp/A values of 1500 r.p.m, 50 Hz or 1800 r.p.m, 60 Hz, 3-phase motors, see "Motor rated operational powers and currents".

General technical data

Contactor types	AC operated	MC1A	MC2A
	DC operated	MC1C	MC2C
Rated insulation voltage U_i			
acc. to IEC/EN 60947-4-1		750 V	
acc. to UL/CSA		600 V	
Rated impulse withstand voltage U_{imp}		6 kV	
Ambient air temperature, close to contactor			
Operation	Fitted with thermal overload relay	-25 ... +55 °C	
	Without thermal overload relay	-40 ... +55 °C	
Storage		-55 ... +80 °C	
Climatic withstand		Acc. to IEC 60947-1 Annex Q	
Maximum operating altitude (without derating)		3000 m	
Mechanical durability		10 ⁷ operating cycles	
Electrical durability			
	AC-1 20 A	210 000 operating cycles	260 000 operating cycles
	AC-3 400 V	900 000 operating cycles (9 A)*	800 000 operating cycles (12 A)*
	AC-4 400 V	30 000 operating cycles (9 A)*	35 000 operating cycles (9 A)*
Resistance to shock		Half-sine	
acc. IEC/EN 60068-2-27		25 g / 11 ms	
acc. to IEC/EN 60947-1 Annex. Q		Category E	
Resistance to vibrations		Sinusoidal	
acc. IEC/EN 60068-2-6		5 g / 3 ... 150 Hz	
acc. to IEC/EN 60947-1 Annex. Q		Category E	

* Valid for 3-pole mini contactors.

MC1, MC2 3-pole and 4-pole mini contactors

Technical data

Magnet system characteristics for MC1A, MC2A contactors

Contactor types		AC operated	MC1A	MC2A
Coil operating limits acc. to IEC/EN 60947-4-1		AC supply	0.85 ... 1.1 x Uc	
AC control voltage				
Rated control circuit voltage Uc		See ordering tables		
Coil consumption	Average pull-in value (50 Hz)	26 VA		
	Average pull-in value (60 Hz)	32 VA		
	Average holding value (50 Hz)	5.3 VA		
	Average holding value (60 Hz)	4.5 VA		
Drop-out voltage in % of Uc min		20 ... 75%		

Magnet system characteristics for MC1C, MC2C contactors

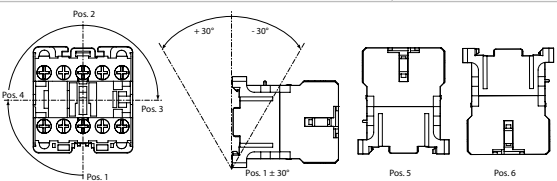
Contactor types	DC operated	MC1C	MC2C
Coil operating limits acc. to IEC/EN 60947-4-1	DC supply	0.85 ... 1.1 x Uc	
DC control voltage			
Rated control circuit voltage Uc		See ordering tables	
Coil consumption (1)	Average pull-in value	3 W	
	Average holding value	3 W	
Drop-out voltage in % of Uc min		10 ... 75%	

(1) Low consumption mini contactors: see coil consumption on ordering details pages.

Magnet system characteristics for MC1C, MC2C contactors with extended operating limits coils

		MC1C		MC2C	
Contactor types		DC operated			
Coil operating limits acc. to IEC/EN 60715		DC supply		0.85 ... 1.1 x U _c	
DC control voltage					
Rated control circuit voltage U _c		See ordering tables			
Coil consumption	Average pull-in value	4 W			
	Average holding value	4 W			
Drop-out voltage in % of U _c min		10 ... 65%			

Mounting characteristics and conditions for use

Contactor types	AC operated	MC1A	MC2A
	DC operated	MC1C	MC2C
Mounting positions			
Mounting distances	The contactors can be assembled side by side		
Fixing			
On rail acc. to IEC/EN 60715	35 x 7.5 mm or 35 x 15 mm		
By screws (not supplied)	4 screws at the 4 angles - M4		

MC1, MC2 3-pole and 4-pole mini contactors

Technical data

Built-in auxiliary contact according to IEC

Types	Built-in auxiliary contacts	
Standards	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated operational voltage U_e max	690 V AC, 440 V DC	
Rated frequency (without derating)	DC or 50 / 60 Hz	
Conventional free-air thermal current I_{th} $\theta \leq 55^\circ\text{C}$	16 A	
I_e / Rated operational current AC-15	240 V	6 A
	400 V	4 A
	500 V	2.5 A
	690 V	1.5 A
I_e / Rated operational current DC-13	24 V	5 A
	48 V	3.5 A
	125 V	0.7 A
	250 V	0.3 A
	440 V	0.25 A
Short-circuit protection device	10 A, Type gG	
Minimum switching capacity with failure rate acc. to IEC/EN 60947-5-4	17 V / 5 mA	
Maximum electrical switching frequency	AC-15	360 cycles/h
	DC-13	360 cycles/h

Built-in auxiliary contact according to UL/CSA

Types	Built-in auxiliary contacts	
Standards	UL 60947-1, UL 60947-5-1	
Maximum operational voltage	600 V AC	
Pilot duty	A600, Q600	

Connection characteristics

Main terminals		
	Screw terminals with cable clamp	Conductors with insulated ring tongue ferrule
Connection capacity		
Main conductors (poles + built-in auxiliary terminals)		
 Rigid: solid	1 x	0.75 ... 4 mm ²
 Rigid: solid	2 x	0.75 ... 2.5 mm ²
 Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
 (insulated or not)	2 x	0.75 ... 1.5 mm ²
 Lugs	Ø mm >	–
	L mm <	6.6 mm
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 12 ... 18
Stripping length	9 mm	
Tightening torques	0.8 ... 1.0 Nm / 7 lb.in	
Coil terminals		
 Rigid: solid	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
 (insulated or not)	2 x	0.75 ... 1.5 mm ²
 Lugs	Ø mm >	–
	L mm <	6.6 mm
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 12 ... 18
Stripping length	9 mm	
Tightening torques	0.8 Nm / 7 lb.in	
Degree of protection acc. to IEC/EN 60947-1 and IEC/EN 60529	IP20	
All terminals	(screws of unused terminals must be tightened)	
Screw terminals		
All terminals	M3	M3.5
Screwdriver type	Flat Ø 5.5 mm / Pozidriv 2	

MCR 4-pole mini contactor relays

Technical data

Main pole – Utilization characteristics according to IEC

Contactor types	AC operated	MCRA
	DC operated	MCRC
Standards		IEC/EN 60947-1, EN 60947-5-1
Rated operational voltage U _e max		690 V AC, 440 V DC
Rated frequency (without derating)		DC or 50 / 60 Hz
Conventional free-air thermal current I _{th} θ ≤ 55 °C		16 A
I _e / Rated operational current AC-15	240 V	6 A
	400 V	4 A
	500 V	2.5 A
	690 V	1.5 A
I _e / Rated operational current DC-13	24 V	5 A
	48 V	3.5 A
	125 V	0.7 A
	250 V	0.3 A
	440 V	0.25 A
Short-circuit protection device for contactors U _e ≤ 500 V AC, fuse type gG		10 A
Minimum switching capacity		17 V / 5 mA
Maximum electrical switching frequency	AC-15	600 cycles/h
	DC-13	600 cycles/h

Main pole – Utilization characteristics according to UL/NEMA/CSA

Contactor types	AC operated	MCRA
	DC operated	MCRC
Standards		UL 60947-1, UL 60947-5-1
Maximum operational voltage		600 V AC
Pilot duty		A600, Q600

MCR 4-pole mini contactor relays

Technical data

General technical data

Contactor relay types	AC operated	MCRA
	DC operated	MCRC
Rated insulation voltage U_i		
acc. to IEC 60947-5-1		750 V
acc. to UL/CSA		600 V
Rated impulse withstand voltage U_{imp}		6 kV
Electromagnetic compatibility		
Ambient air temperature close to contactor relay	Operation in free air	-40 ... +55 °C
	Storage	-55 ... +80 °C
Climatic withstand		Acc. to IEC / EN 60947-1 Annex. Q
Maximum operating altitude (without derating)		3000 m
Mechanical durability		10 ⁷ operating cycles
Resistance to shock		Half-sine
acc. IEC/EN 60068-2-27		25 g / 11ms
acc. to IEC/EN 60947-1 Annex. Q		Category E
Resistance to vibrations		Sinusoidal
acc. IEC/EN 60068-2-6		5 g / 3 ... 150 Hz
acc. to IEC/EN 60947-1 Annex. Q		Category E

Magnet system characteristics for MCRA contactor relays

Contactor relay types		AC operated	MCRA
Coil operating limits		AC supply	0.85 ... 1.1 x U_c
acc. to IEC/EN 60947-4-1			
AC control voltage			
Coil consumption	Average pull-in value (50 Hz)		26 VA
	Average pull-in value (60 Hz)		32 VA
	Average holding value (50 Hz)		5.3 VA
	Average holding value (60 Hz)		4.5 VA
Drop-out voltage in % of U_c min			20 ... 75%

Magnet system characteristics for MCRC contactor relays

Contactor relay types		DC operated	MCRC
Coil operating limits acc. to IEC/EN 60947-5-1		DC supply	0.85 ... 1.1 x U_c
DC control voltage			
Coil consumption (1)	Average pull-in value		3 W
	Average holding value		3 W
Drop-out voltage in % of U_c min			10 ... 75%

(1) Low consumption mini contactors: see coil consumption on ordering details pages.

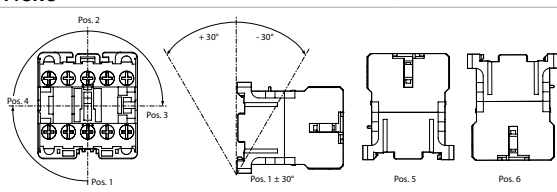
Magnet system characteristics for MCRC contactor relays with extended operating limits coils

Contactor types		DC operated	MCRC
Coil operating limits acc. to IEC/EN 60947-4-1		DC supply	0.85 ... 1.1 x U_c
DC control voltage			
Rated control circuit voltage U_c			See ordering tables
Coil consumption	Average pull-in value		4 W
	Average holding value		4 W
Drop-out voltage in % of U_c min			10 ... 65%

MCR 4-pole mini contactor relays

Technical data

Mounting characteristics and conditions for use

Contactor types	AC operated	MCRA
	DC operated	MCRC
Mounting positions		
Mounting distances	The contactors can be assembled side by side.	
Fixing	On rail acc. to IEC/EN 60715	35 x 7.5 mm or 35 x 15 mm
	By screws (not supplied)	4 screws at the 4 angles - M4

Connection characteristics

Main terminals		
	Screw terminals with cable clamp	Conductors with insulated ring tongue ferrule
Connection capacity		
Auxiliary terminals		
 Rigid: solid	1 x	0.75 ... 4 mm ²
 Flexible without ferrule	2 x	0.75 ... 2.5 mm ²
 Flexible with ferrule	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible with ferrule (insulated or not)	1 x	0.75 ... 2.5 mm ²
 Flexible with ferrule (insulated or not)	2 x	0.75 ... 1.5 mm ²
 Lugs	Ø mm >	–
	L mm <	3.6 mm
Connection capacity acc. to UL/CSA	1 or 2 x	6.6 mm
Stripping length		–
Tightening torques		0.8 Nm / 7 lb.in
Coil terminals		
 Rigid: solid	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²
 Flexible with ferrule	1 x	0.75 ... 2.5 mm ²
 Flexible with ferrule (insulated or not)	2 x	0.75 ... 1.5 mm ²
 Lugs	Ø mm >	–
	L mm <	3.6 mm
Connection capacity acc. to UL/CSA	1 or 2 x	6.6 mm
Stripping length		–
Tightening torques		0.8 Nm / 7 lb.in
Degree of protection acc. to IEC/EN 60947-1 and IEC/EN 60529	IP20	
All terminals	(screws of unused terminals must be tightened)	
Screw terminals		
All terminals	M3	M3.5
Screwdriver type	Flat Ø 5.5 mm / Pozidriv 2	

Accessories

Technical data

Auxiliary contacts for front mounting and side mounting according to IEC

Types	MACN, MARN, MACL, MARL	
Standards	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated operational voltage U _e max	690 V AC	
Rated frequency (without derating)	DC or 50 / 60 Hz	
Conventional free-air thermal current I _{th} θ ≤ 55 °C	10 A	
I _e / Rated operational current AC-15	240 V	6 A
	400 V	4 A
	500 V	2.5 A
	690 V	1.5 A
I _e / Rated operational current DC-13	24 V	4 A
	48 V	2 A
	125 V	0.55 A
	250 V	0.27 A
	440 V	0.15 A
Short-circuit protection device	10 A, Type gG	
Minimum switching capacity with failure rate acc. to IEC/EN 60947-5-4	17 V / 5 mA	
Maximum electrical switching frequency	AC-15	360 cycles/h
	DC-13	360 cycles/h

Auxiliary contacts for front mounting and side mounting according to UL/CSA

Types	MACN, MARN, MACL, MARL	
Standards	UL 60947-1, UL 60947-5-1	
Max. operational voltage	600 V AC	
Pilot duty	A600, Q600	

Connection characteristics

Auxiliary terminals			
		Screw terminals with cable clamp	Conductors with insulated ring tongue ferrule
Connection capacity			
Auxiliary terminals			
 Rigid: solid	1 or 2 x	0.75 ... 2.5 mm ²	–
 Flexible without ferrule	1 or 2 x	0.75 ... 2.5 mm ²	–
 Flexible with ferrule	1 x	0.75 ... 2.5 mm ²	–
 (insulated or not)	2 x	0.75 ... 1.5 mm ²	–
 Lugs	Ø mm >	–	3.6 mm
	L mm <	–	6.6 mm
Connection capacity acc. to UL/CSA	1 or 2 x	AWG 12 ... 18	–
Stripping length		9 mm	–
Tightening torques		0.8 Nm / 7 lb.in	
Degree of protection acc. to IEC/EN 60947-1 and IEC/EN 60529			
Auxiliary terminals		IP20	
Screw terminals		(screws of unused terminals must be tightened)	
All terminals		M3.5	
Screwdriver type		Flat Ø 5.5 mm / Pozidriv 2	

Accessories

Technical data

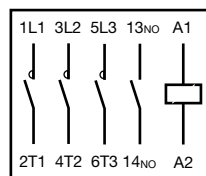
Electronic timers

Insulation Voltage		750 V
Impulse withstand voltage Uimp		4 kV
Control voltage, Uc	50 Hz, 60 Hz, DC	24-250 V
Tolerance of control voltage		85% - 110%
Timing range		0.5 s - 60 s (+/- 6 s)
Ambient air temperature close to the timer	Operation in free air	-25 °C ... +55 °C
	Storage	-55 °C ... +80 °C
Recovery time		100 ms
Repeatability		+/-1 %
Temperature variation of delay	% / °C	0.05
Degree of protection		IP20
Mounting position		Any

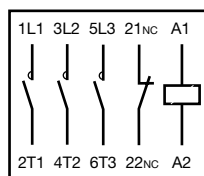
MC.. 3-pole and 4-pole mini contactors, MCR.. 4-pole mini contactor relays

Terminal marking and product positioning

MC.. 3-pole mini contactors

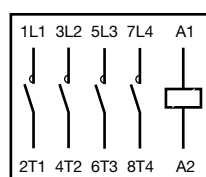


MC..310A

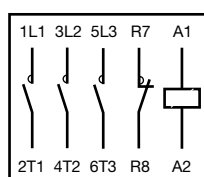


MC..301A

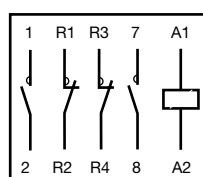
MC.. 4-pole mini contactors



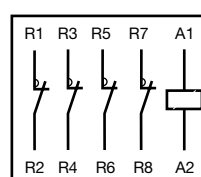
MC..400A



MC..C00A

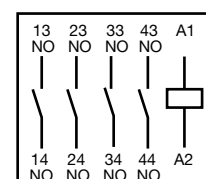


MC..B00A

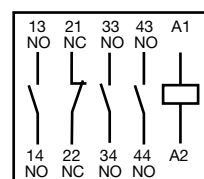


MC..A00A

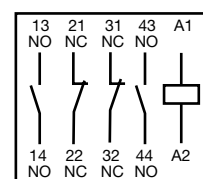
MC.. 4-pole mini contactor relays



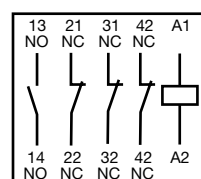
MCR..040A



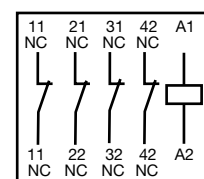
MCR..031A



MCR..022A



MCR..013A



MCR..004A

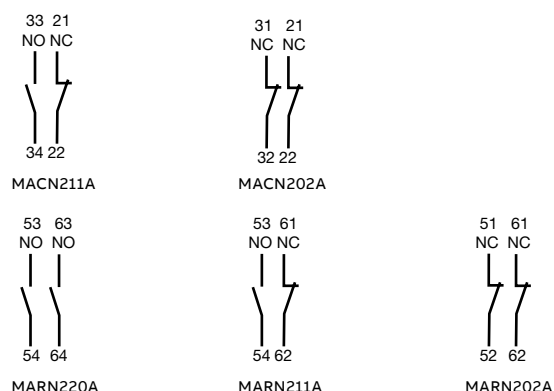
Auxiliary contact blocks for MC1 and MC2 mini contactors

Terminal marking and product positioning

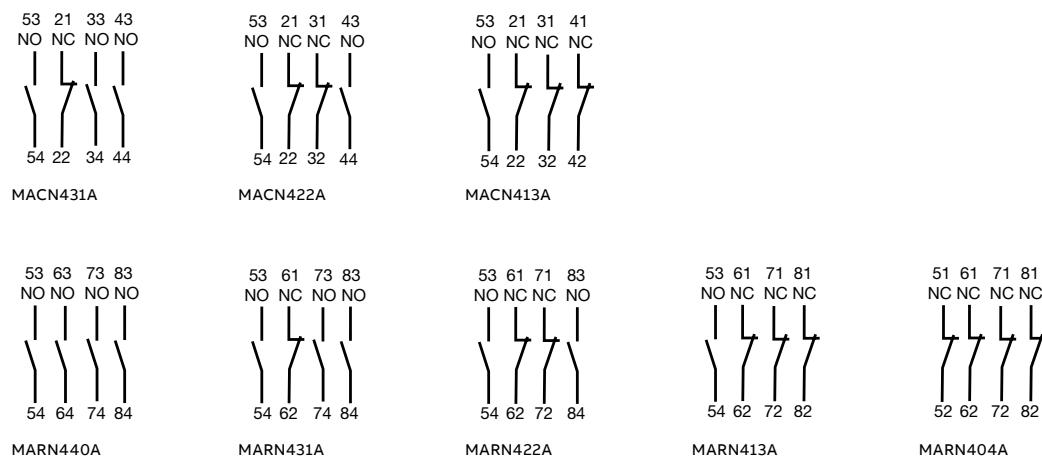
MACL..., MARL... side mounted (left or right) 1-pole auxiliary contact block



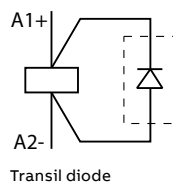
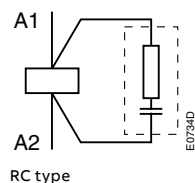
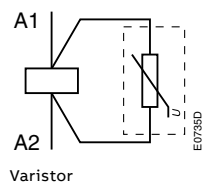
MACN..., MARN.. front mounted 2-pole auxiliary contact block



MACN..., MARN.. front mounted 4-pole auxiliary contact block

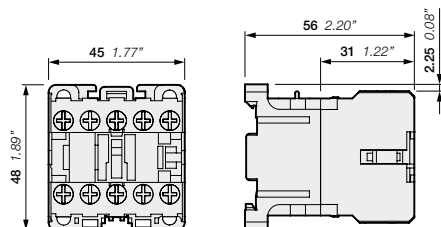


Surge suppressors

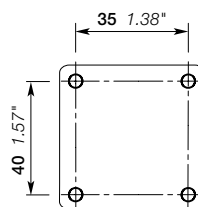


MC.. mini contactors and MCR.. mini contactor relays - AC operated with screw terminals and specific screw terminals for ring tongue ferrules

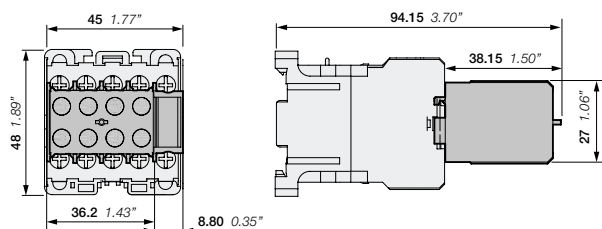
Dimensions



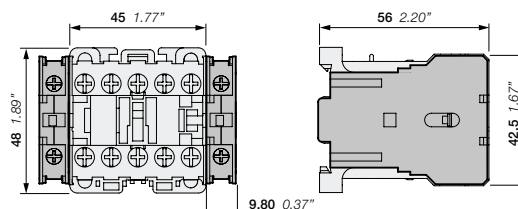
MC1A, MC2A, MCRA, MC1A..R, MC2A..R, MCRA..R



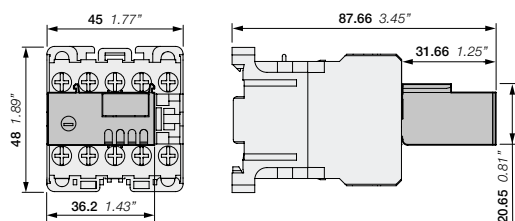
Drilling plan



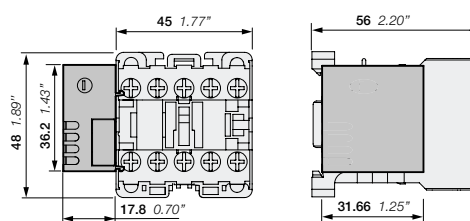
MC1A, MC2A, MCRA, MC1A..R, MC2A..R, MCRA..R
+ MACN2..., MARN2.. 2-pole auxiliary contact block
MACN4..., MARN4.. 4-pole auxiliary contact block



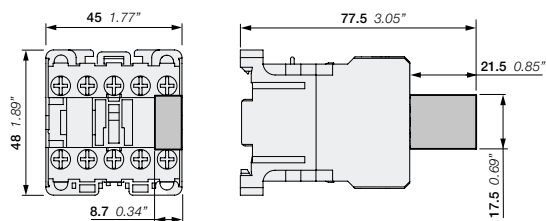
MC1A, MC2A, MCRA, MC1A..R, MC2A..R, MCRA..R
+ MACL..., MARL.. 1-pole auxiliary contact block



MC1A, MC2A, MCRA, MC1A..R, MC2A..R, MCRA..R
+MREBC front mounted electronic timer



MC1A, MC2A, MCRA, MC1A..R, MC2A..R, MCRA..R
+MREBC side mounted electronic timer

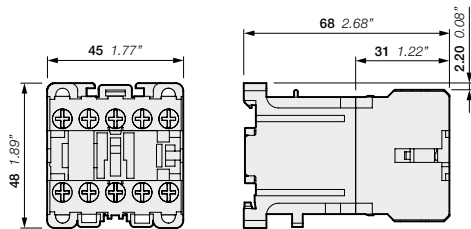


MC1A, MC2A, MCRA, MC1A..R, MC2A..R, MCRA..R
+MP0A surge suppressor

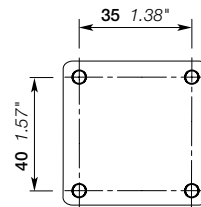
MC.. mini contactors and MCR.. mini contactor relays - DC operated

With screw terminals and specific screw terminals for ring tongue ferrules

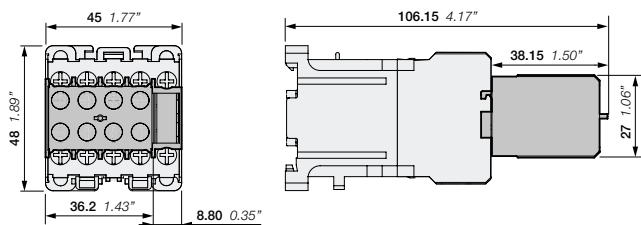
Dimensions



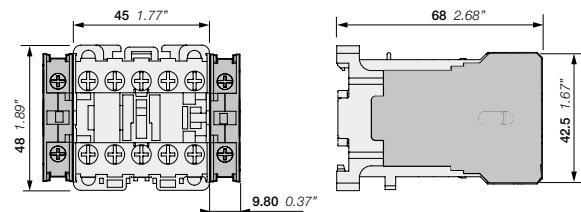
MC1C, MC2C, MCRC, MC1C..R, MC2C..R, MCRC..R



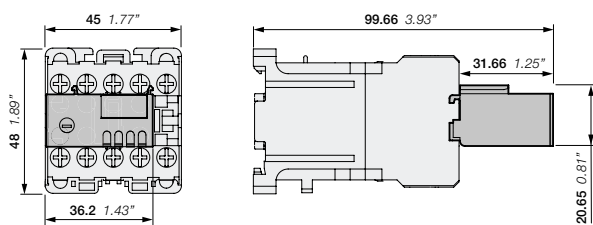
Drilling plan



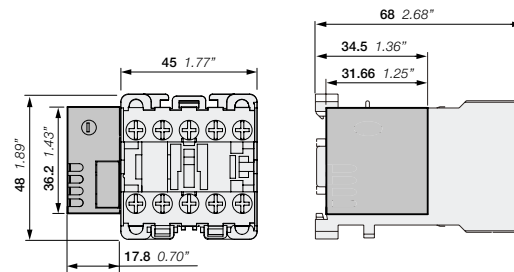
MC1C, MC2C, MCRC, MC1C..R, MC2C..R, MCRC..R
 + MACN2.., MARN2.. 2-pole auxiliary contact block
 MACN4.., MARN4.. 4-pole auxiliary contact block



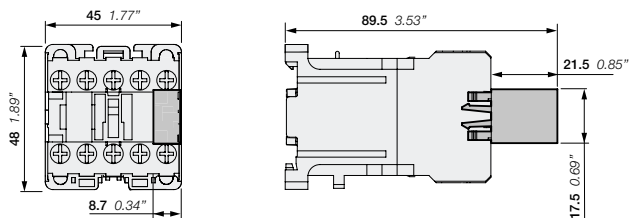
MC1C, MC2C, MCRC, MC1C..R, MC2C..R, MCRC..R
 + MACL.., MARL.. 1-pole auxiliary contact block



MC1C, MC2C, MCRC, MC1C..R, MC2C..R, MCRC..R
 +MREBC front mounted electronic timer



MC1C, MC2C, MCRC, MC1C..R, MC2C..R, MCRC..R
 +MREBC side mounted electronic timer



MC1C, MC2C, MCRC, MC1C..R, MC2C..R, MCRC..R
 +MPOA surge suppressor



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