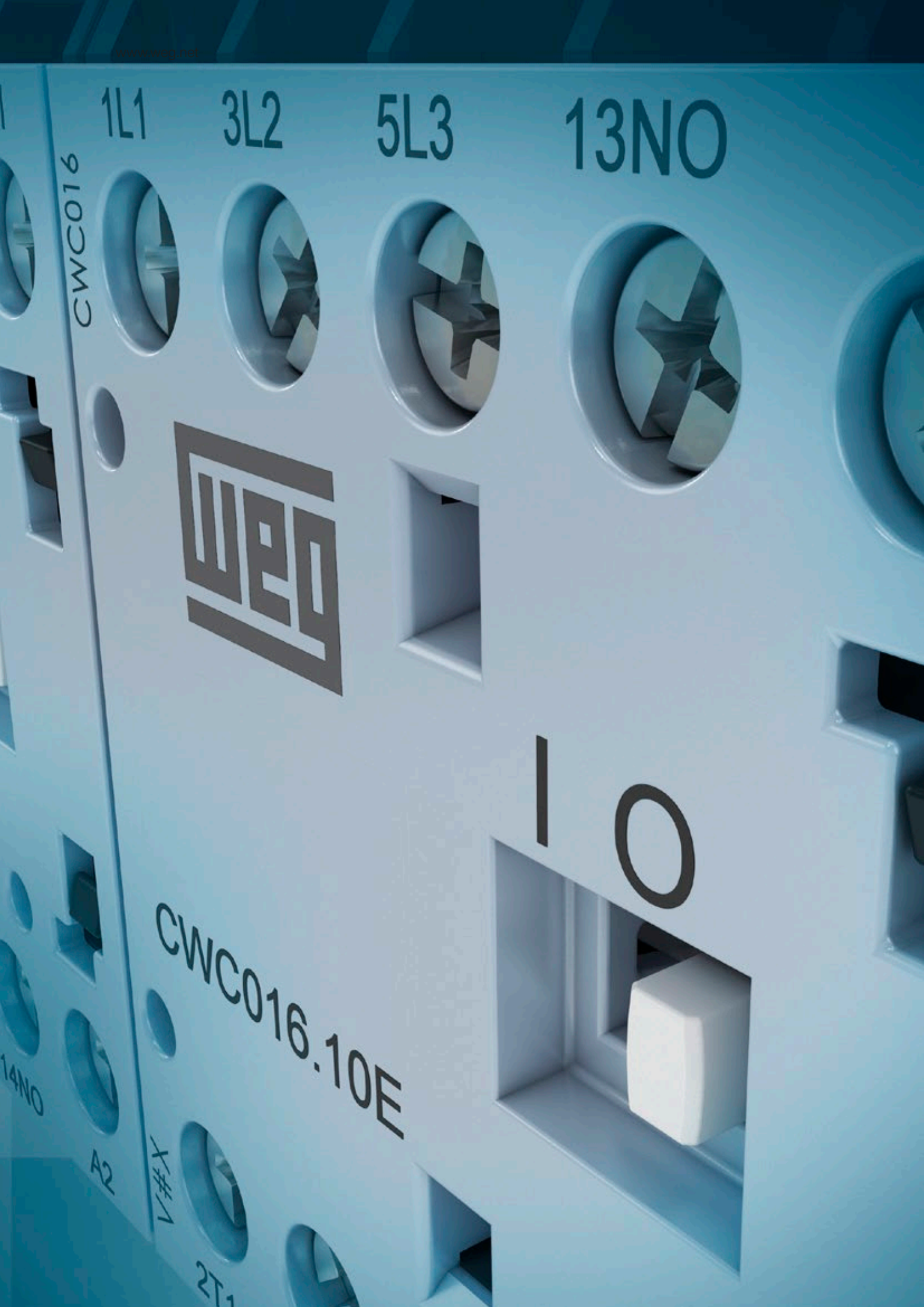
COMPACT CONTACTORS CWC0

Your best solution for electrical
switching operations



Motors | Automation | Energy | Transmission & Distribution | Coatings


1L1
3L2
5L3
13NO
CWC016
CWC016.10E
I
O
14NO
A2

Compact Contactors CWC0



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Your best solution for

Electrical Switching Operations

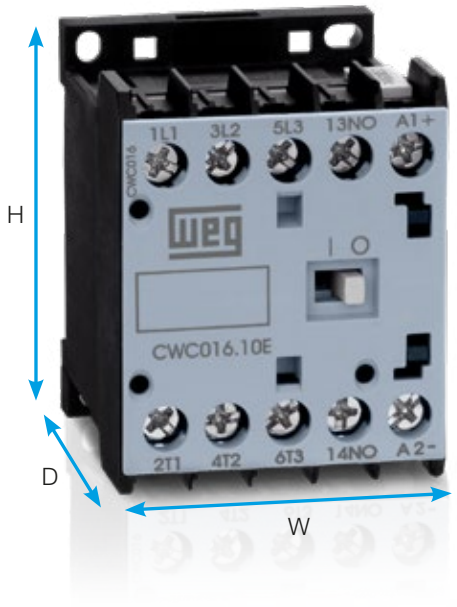


Compact Contactors - CWC0

Developed according to international standards IEC/EN 60947 (CE) and UL 508 (USA), they meet the requirements of a wide range of applications around the world. Ideal for applications where conventional contactors are too large for the space available and where streamlined projects are necessary. Although small, they are able to switch loads up to 690 V. They present high performance in electrical switching operations, reaching over one million operations.

Versions

- Three-pole (3NA) up to 22 A @ AC-3
- Four-pole (4NO or 2NO+2NC) up to 16 A @ AC-3
- Auxiliary (4NO, 3 NO+1NC, 3NC+1NO, 2NO+2NC) up to 10 A @ AC-15
- Contactors with AC and DC coil with the same size up to 16 A (CWC07...16) and a wide range of coil voltages available





Applications

The characteristics of the contactors make them suitable for applications in different segments:

- Wood
- Food
- Refrigeration
- Pumping systems
- Machines and processes in general
- Irrigation systems
- Buildings
- Illumination
- Vehicle barriers and automatic gates













Main Certifications

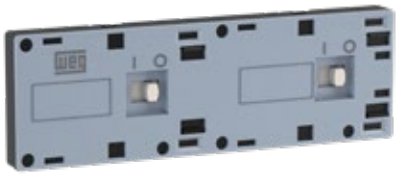
SABS - South Africa

ISO 9001

Mechanical Interlock

Mechanical interlock without addition of side space. It allows the CWC07...16 contactors to be mounted side by side, providing better use of space in panels for reversing and star-delta starters. This accessory is mounted in the front, and no tools are required for the installation. Its use does not prevent the addition of auxiliary contact blocks, surge suppressor blocks, and other accessories connected to the power terminals.







Efficiency in the Mounting

The mounting on DIN rail 35 mm (EN 50022-35) provides fast and efficient installations. Its mounting base allows up to four fastening points, making the installation flexible and totally compatible with most existing contactors, simplifying its replacement by the CWC0 lines.

Safety in Installation

All the contactors have degree of protection IP20 to prevent inadvertent contacts with the live parts without requiring additional accessories.





Surge Suppressor Blocks

Designed to prevent current or voltage surges on the command circuit, the suppressor blocks of the CWC0 line were developed with the clip fastening system without using cables. The assembly and disassembly do not require any tools. Available in the versions: varistor, resistor-capacitor, diode and Zener diode.









Indication of Position or State

Front identification of the state of the contactor by means of indicator in the place marked with “I” (ON) and “O” (OFF). Contactors, even installed with accessories, allow the view of their state.



Mirror and Mechanically Linked Contacts

In order to meet the requirements of the safest and most demanding machine and equipment applications, the contactors were developed according to IEC/EN 60947-4-1 - Annex F, about “Mirror Contacts), and IEC/EN 60947-5-1 - Annex L, about “Mechanically Linked Contacts".



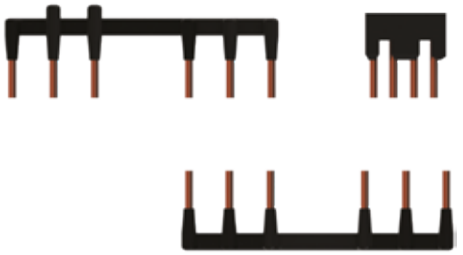
IEC/EN 60947-5-1 Symbol Mechanically Linked Contacts



IEC/EN 60947-4-1 Symbol Mirror Contacts

Connection Busbars

Developed for customers that need to save time, avoid errors and standardize operations in the assembly of motor starters on electrical panels. Available in the reversing and star-delta versions, they also allow to add protections (MPW motor-protective circuit breakers or RW17 overload relays) together with these contactors.







Built-In Auxiliary Contacts - 1NO or 1NC

They meet the needs of most applications without requiring any additional contacts, reducing items in the inventory. They have self-cleaning characteristics by means of sliding contacts, providing high reliability in low voltage and current (17 V / 5 mA) switching operations.



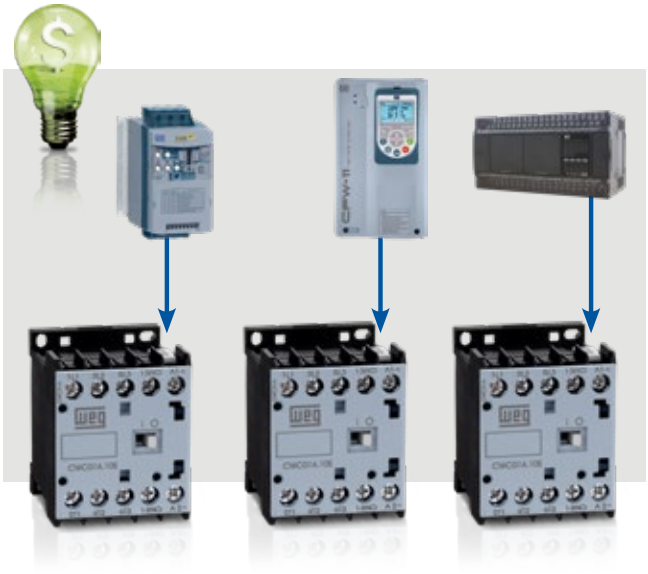
Additional Contact Blocks

Available in the frontal version, they allow the expansion of 4 or 2 auxiliary contacts per contactor. Assembly and disassembly without tools. They have self-cleaning characteristics by means of sliding contacts, providing high reliability in low voltage and current (17 V / 5 mA) switching operations. Numbering according to EN 50005 and EN 50012.



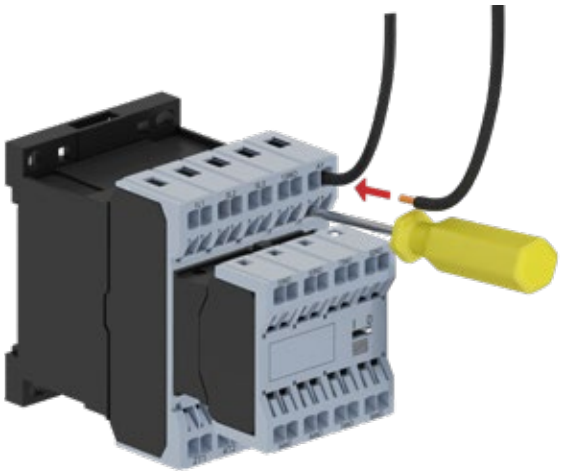
Drive Control

Low-consumption, direct current coils (5.8 W) enable the direct drive of the contactors via PLCs, inverter outputs or soft-starter, without using relay interfaces. Low and extremely low-consumption coils allow to reduce power supplies and command transformers, ensuring better use of the energy resources and lower costs on your electrical panel.



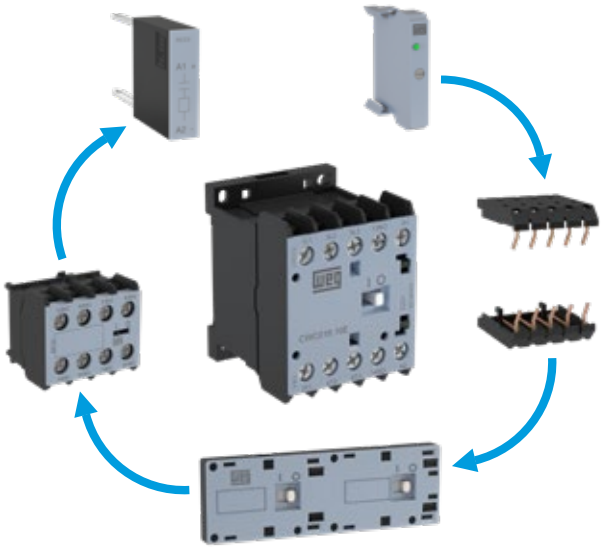
Faster and Securer Connections

The cage clamp connections of the CWC07...16 contactors provide faster installation of power cables and accessories. Using a screwdriver, it is possible to make the connections in a shorter time in comparison to screw terminals. Due to special springs on the connection terminals, retightening is not necessary, because the connection system ensures constant pressure on the cables.



Wide Range of Accessories

All the accessories are interchangeable between the CWC07...16 and CWCA0 models, enabling the optimization of items and greater flexibility of their applications. Example: the same front contact block, suppressor blocks, interlock and mechanical retention may be installed in different models of contactors.



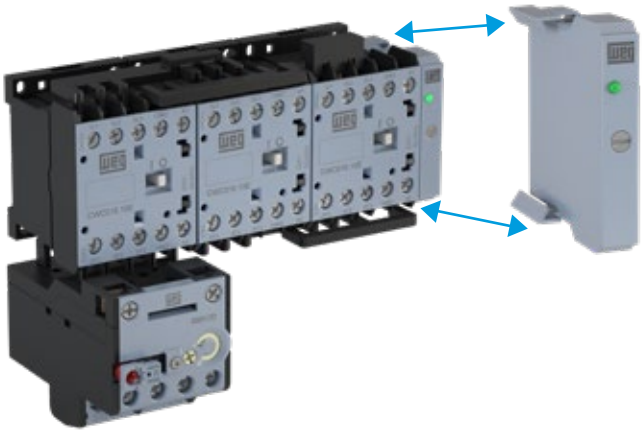
Compact Starters

The most compact starters on the market up to 25 A. Contactors fully compatible with the RW17 overload relays and MPW18 e MPW40 motor-protective circuit breakers, enabling the installation of direct on-line starters up to 9.2 kW / 12.5 cv @ 380 V and star-delta starters up to 22 kW / 30 cv @ 380 V.



Timer Blocks

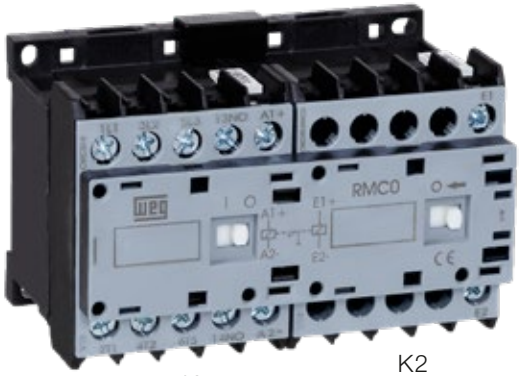
Extremely compact electronic timers only 9 mm wide. They are installed on the side of the CWC07...25 contactors without tools, allowing timing between 0.3s and 1,800s (30min) at voltages of 24...240 V ac/V dc. Models with Power up Delay (TEC0), Power down Delay (TDC0) and for star-delta starters (TETC0).



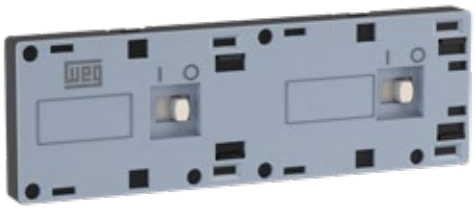
RMC0 Mechanical Retention Block

It allows to keep the electrical contacts of the contactors operated without continuous supply of its coil. Ideal for circuits with a low number of switching operations, such as: ventilation systems, illumination, etc. The front mounting of this accessory on two contactors mounted side by side allows the mechanical retention of one contactor (K1).

After a command pulse on the coil of contactor K1 (minimum duration of 100ms), this accessory will keep its contacts retained. For contactor K1 to return to its initial state, it is necessary a command pulse on the coil of contactor K2 (RESET), releasing the mechanical retention of contactor K1. If the coil of contactor K2 keeps energized, the RMC0 accessory will not actuate on contactor K1. Accessory compatible with CWC07...16 and CWCA contactors, front contact blocks, suppressor blocks and timers.



K1 K2



Environmentally Friendly

Manufactured with materials of low impact on the environment and according to the RoHS international requirements.

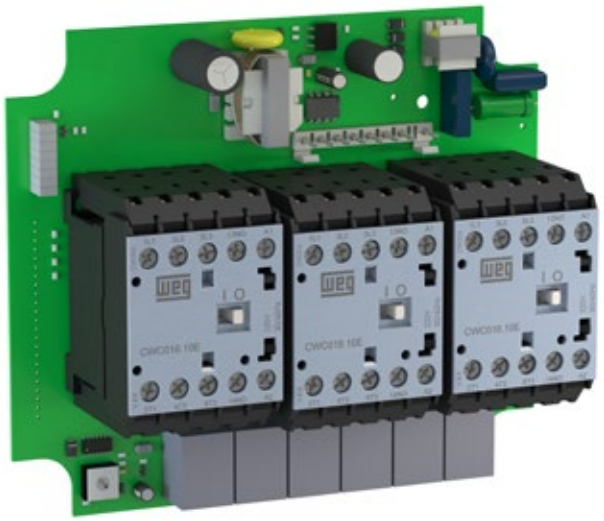


Issued by the Parliament and by the European Council, the RoHS restricts the use of hazardous substances on electronic products traded in the countries members of the EU, prohibiting the ingress of new products on the market in case they contain lead, cadmium, hexavalent chromium, mercury, polybrominated biphenyl (PBB) and polybrominated diphenyl ethers (PBDE). The CWC0 line complies with the RoHS requirements.

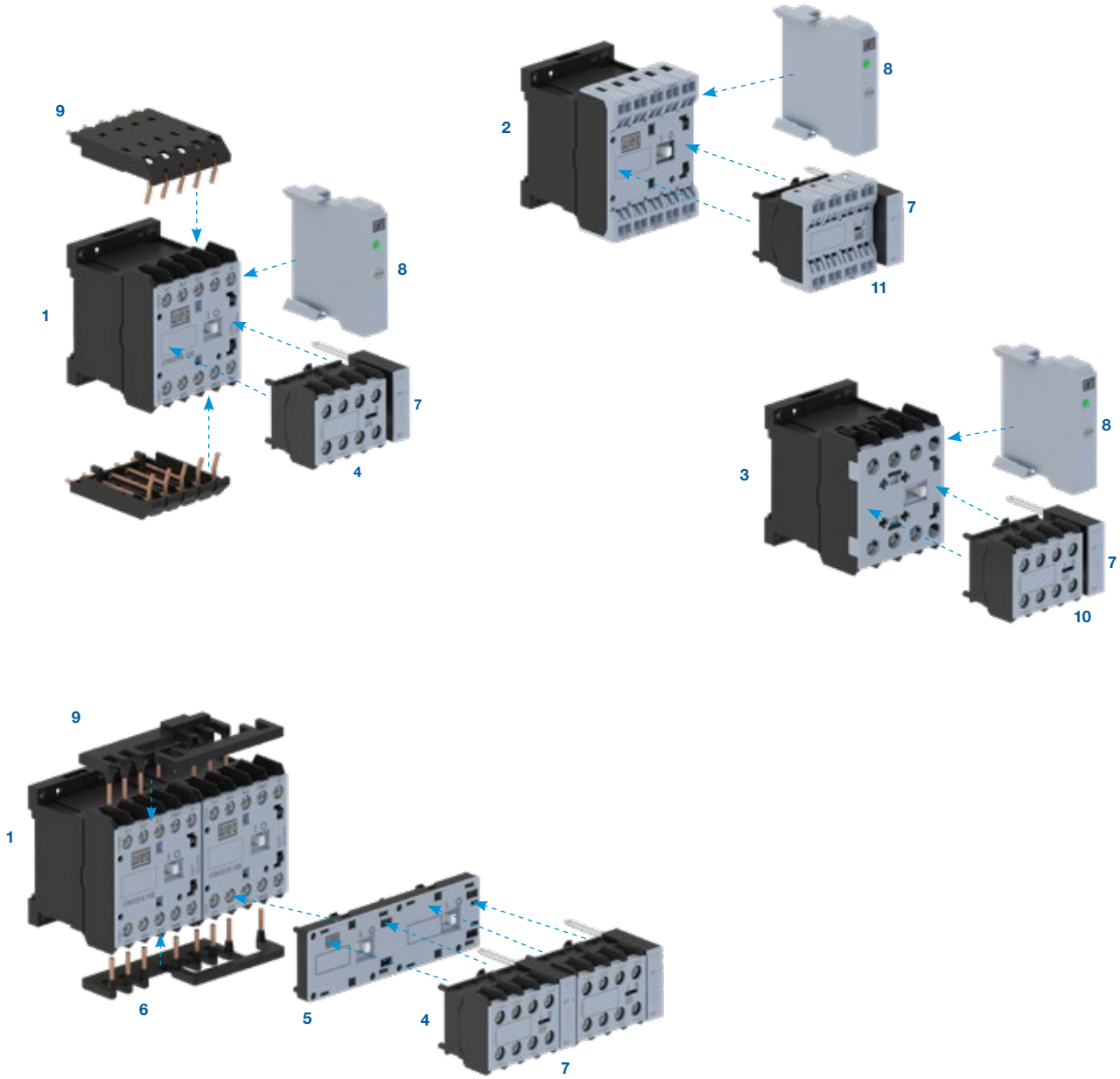
Connectors for CIC0 Printed Circuit Boards

The accessory allows mounting the CWC07...16 and CWCA contactors with screw terminal on printed circuit boards. Ideal for OEMs (automatization of vehicle barriers, automatic gates, fans, etc.) that require operations with robust components developed for specific applications, such as the switching of electric motors. Connectors manufactured with metallic terminals with special coating for better adherence of the weld and support in plastic flame resistant material.





CWC0 Compact Contactors - Accessories Overview



1 - Compact contactors CWC07...16 and CWCA0 (screw terminal)
2 - Compact contactors CWC07...12_S and CWCA0_S (spring terminal)
3 - Compact contactor CWC025 (screw terminal)
4 - Auxiliary contact block BFC (screw terminal)
5 - Mechanical interlock block BIC0 or latch block RMC0
6 - Easy connection busbars
7 - Surge supressor blocks RCC0 (RC), VRC0 (varistor), DIC0 (diode), RCAC0 (RC), DIZC0 (diode+zener)
8 - Electronic timers TEC0, TDC0 and TETC0
9 - Block module for printed circuit board CIC0
10 - Auxiliary contact block BFC025 (screw terminal)
11 - Auxiliary contact block BFC_S (spring terminal)

CWC0 Compact Contactors - Selection Table







Three-Pole - 7 A to 22 A (AC-3)[4]

Rated operational current I_e AC-3 ($U_e \leq 440$ V)	Conv. thermal current $I_{th} = I_e$ AC-1	Maximum rated operational power of three-phase motors 50/60 Hz[1]						Built-in auxliary contacts		Reference to complete with control voltage code		AC coil	DC coil
		220 V 230 V	380 V	400 V 415 V	440 V	500 V	660 V 690 V	3 4	1 2	Screw terminal	Spring terminal	Weight	
A	A	kW /HP	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	NO	NC			kg	
7	18	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	1 0	0 1	CWC07-10-30♦ CWC07-01-30♦	CWC07-10-30♦S CWC07-01-30♦S	0.195	0.230
9	20	2.2 / 3	4 / 5	4 / 5	4.5 / 6	4.5 / 6	4 / 5	1 0	0 1	CWC09-10-30♦ CWC09-01-30♦	CWC09-10-30♦S CWC09-01-30♦S		
12	22	3 / 4	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	1 0	0 1	CWC012-10-30♦ CWC012-01-30♦	CWC012-10-30♦S CWC012-01-30♦S		
16	22	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	1 0	0 1	CWC016-10-30♦ CWC016-01-30♦	- -		
22	32	5.5 / 7.5	11 / 15	11 / 15	11 / 15	11 / 15	11 / 15	0	0	CWC025-00-30♦	-	0.200	-

Replace "♦" with the appropriate coil voltage code[2].

AC coil - 50/60 Hz											
Applicable for CWC07…CWC025 models											
Coil voltage codes	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V ac - 50/60 Hz	24	48	110	220	230	240	380	400	415	440	480

DC coil - Standard consumption coil					
Applicable for CWC07…CWC016 models					
Coil voltage codes	C03	C06	C07	C12	C15
V dc	24	42	48	110	220

DC coil - Low consumption coil[3]					
Applicable for CWC07…CWC016 models					
Coil voltage codes	L03	L06	L07	L12	L15
V dc	24	42	48	110	220

Notes: 1) For 50/60 Hz three-phase, 4 poles WEG standard motors. These values are only for reference and may change on the number of poles and motor design;
2) Other voltages available;
3) The compact contactor CWC0 with low consumption coil allows only 2 additional auxiliary contacts;
4) For selection of accessories, check page 18.

CWC0 Compact Contactors - Selection Table





Three-Pole Reversing Starter with Mechanical Interlock - 7 A to 16 A (AC-3)[3]

Rated operational current I_e AC-3 ($U_e \leq 440$ V)	Conv. thermal current $I_{th} = I_e$ AC-1	Maximum rated operational power of three-phase motors 50/60 Hz[1]						Built-in auxiliary contacts		Reference to complete with control voltage code		AC coil	DC coil
		220 V 230 V	380 V	400 V 415 V	440 V	500 V	660 V 690 V	•3 / •4	•1 / •2	Screw terminal	Spring terminal	Weight	
A	A	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	NO	NC			kg	
7	18	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	1 0	0 1	CWCI07-10-30♦ CWCI07-01-30♦	CWCI07-10-30♦S CWCI07-01-30♦S	0.395	0.480
9	20	2.2 / 3	4 / 5	4 / 5	4.5 / 6	4.5 / 6	4 / 5	1 0	0 1	CWCI09-10-30♦ CWCI09-01-30♦	CWCI09-10-30♦S CWCI09-01-30♦S		
12	22	3 / 4	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	1 0	0 1	CWCI012-10-30♦ CWCI012-01-30♦	CWCI012-10-30♦S CWCI012-01-30♦S		
16	22	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	1 0	0 1	CWCI016-10-30♦ CWCI016-01-30♦	– –		

Replace "♦" with the appropriate coil voltage code[2].

AC coil - 50/60 Hz											
Applicable for CWC07…CWC025 models											
Coil voltage codes	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V ac - 50/60 Hz	24	48	110	220	230	240	380	400	415	440	480

DC coil - Standard consumption coil					
Applicable for CWCI07…CWCI016 models					
Coil voltage codes	C03	C06	C07	C12	C15
V dc	24	42	48	110	220

Notes: 1) For 50/60 Hz three-phase, 4 poles WEG standard motors. These values are only for reference and may change on the number of poles and motor design;
2) Other voltages available;
3) For selection of accessories, check page A18.

CWC0 Compact Contactors - Selection Table



Three-Pole for Printed Circuit Boards - 7 A to 16 A (AC-3)[4]

Rated operational current I_e AC-3 ($U_e \leq 440$ V)	Conv. thermal current $I_{th} = I_e$ AC-1	Maximum rated operational power of three-phase motors 50/60 Hz[1]						Built-in auxiliary contacts		Reference to complete with control voltage code	AC coil	DC coil
		220 V 230 V	380 V	400 V 415 V	440 V	500 V	660 V 690 V	•3 / •4	•1 / •2		Weight	
A	A	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	NO	NC		kg	
7	18	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	1 0	0 1	CWC07-10-30♦I CWC07-01-30♦I	0.395	0.480
9	20	2.2 / 3	4 / 5	4 / 5	4.5 / 6	4.5 / 6	4 / 5	1 0	0 1	CWC09-10-30♦I CWC09-01-30♦I		
12	22	3 / 4	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	1 0	0 1	CWC012-10-30♦I CWC012-01-30♦I		
16	22	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	1 0	0 1	CWC016-10-30♦I CWC016-01-30♦I		

Replace "♦" with the appropriate coil voltage code[2].

AC coil - 50/60 Hz											
Applicable for CWC07…CWC025 models											
Coil voltage codes	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V ac - 50/60 Hz	24	48	110	220	230	240	380	400	415	440	480

DC coil - Standard consumption coil					
Applicable for CWC07…CWC016 models					
Coil voltage codes	C03	C06	C07	C12	C15
V dc	24	42	48	110	220

DC coil - Low consumption coil[3]					
Applicable for CWC07…CWC016 models					
Coil voltage codes	L03	L06	L07	L12	L15
V dc	24	42	48	110	220

Notes: 1) For 50/60 Hz three-phase, 4 poles WEG standard motors. These values are only for reference and may change on the number of poles and motor design;
2) Other voltages available;
3) The compact contactor CWC0 with low consumption coil allows only 2 additional auxiliary contacts;
4) For selection of accessories, check page 18.

CWC0 Compact Contactors - Selection Table





Control Relay[3)]

Rated thermal current I_{th} AC-1 A	Rated current I_e AC-15 A					Reference to complete with control voltage code		AC coil	DC coil
	220 V 230 V	380 V 400 V	415 V 440 V	500 V	660 V 690 V	Screw terminal	Spring terminal	Weight kg	
10	10	6	5	4	2	CWCA0-22-00♦	CWCA0-22-00♦S	0.180	0.200
						CWCA0-31-00♦	CWCA0-31-00♦S		
						CWCA0-40-00♦	CWCA0-40-00♦S		
						CWCA0-13-00♦	CWCA0-13-00♦S		
						CWCA0-04-00♦	CWCA0-04-00♦S		

Replace "♦" with the appropriate coil voltage code[1)].

AC coil - 50/60 Hz											
Applicable for CWC07…CWC025 models											
Coil voltage codes	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V ac - 50/60 Hz	24	48	110	220	230	240	380	400	415	440	480

DC Coil - Standard consumption					
Applicable for CWCA0 models					
Coil voltage codes	C03	C07	C09	C12	C15
V dc	24	48	60	110	220

DC Coil - Low consumption[2)]					
Applicable for CWCA0 models					
Coil voltage codes	L03	L06	L07	L12	L15
V dc	24	42	48	110	220

Notes: 1) Other voltages available;
2) The compact contactor CWC0 with low consumption coil allows only 2 additional auxiliary contacts;
3) For selection of accessories, check page 18.

CWC0 Compact Contactors - Selection Table





Four-Pole (4P and 2P/2R) up to 22 A (AC-1)[3)]

Conventional thermal current $I_e=I_{th}$ AC-1 A	Main contacts		Reference to complete with control voltage code		AC coil	DC coil
	NO	NC	Screw terminal	Spring terminal	Weight kg	
18	4	0	CWC07-00-40♦	CWC07-00-40♦S	0.195	0.230
20			CWC09-00-40♦	CWC09-00-40♦S		
22			CWC012-00-40♦	CWC012-00-40♦S		
22			CWC016-00-40♦	-		
18	2	2	CWC07-00-22♦	CWC07-00-22♦S		
20			CWC09-00-22♦	CWC09-00-22♦S		
22			CWC012-00-22♦	CWC012-00-22♦S		
22			CWC016-00-22♦	-		

Replace "♦" with the appropriate coil voltage code[1)].

AC coil - 50/60 Hz											
Applicable for CWC07…CWC025 models											
Coil voltage codes	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V ac - 50/60 Hz	24	48	110	220	230	240	380	400	415	440	480

DC Coil - Standard consumption					
Applicable for CWC07...CWC016 four-pole (4NO) models					
Coil voltage codes	C03	C07	C09	C12	C15
V dc	24	48	60	110	220

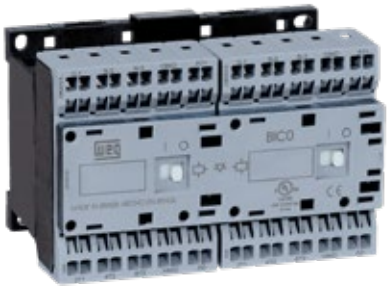
DC Coil - Low consumption[2)]					
Applicable for CWC07...CWC016 four-pole (4NO) models					
Coil voltage codes	L03	L06	L07	L12	L15
V dc	24	42	48	110	220

DC Coil (0.75 x Uc)					
Applicable for CWC07...CWC016 four-pole 2P/2R (2NO+2NC) models					
Coil voltage codes	R03	R06	R07	R12	R15
V dc	24	42	48	110	220

Notes: 1) Other voltages available;
2) The compact contactor CWC0 with low consumption coil allows only 2 additional auxiliary contacts;
3) For selection of accessories, check page 18.

CWC0 Compact Contactors - Selection Table





Three-Pole with Latch Block - 5.6 A to 12.8 A (AC-3)[3)4)]

Rated operational current I_e AC-3 ($U_e \leq 440$ V)	Conv. thermal current $I_{th} = I_e$ AC-1	Maximum rated operational power of three-phase motors 50/60 Hz[1)]						Built-in auxiliary contacts		Reference to complete with control voltage code		AC coil	DC coil
		220 V 230 V	380 V	400 V 415 V	440 V	500 V	660 V 690 V	3 4	1 2	Screw terminal	Spring terminal	Weight	
A	A	kW /HP	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	NO	NC			kg	
5.6	14.4	1.1 / 1.5	2.2 / 3	2.2 / 3	2.2 / 3	2.2 / 3	3 / 4	1 0	0 1	CWCH7-10-30♦ CWCH7-01-30♦	CWCH7-10-30♦S CWCH7-01-30♦S	0.395	0.480
7.2	16	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3.7 / 5	1 0	0 1	CWCH09-10-30♦ CWCH09-01-30♦	CWCH09-10-30♦S CWCH09-01-30♦S		
9.6	17.6	2.2 / 3	4.5 / 6	4.5 / 6	4.5 / 6	5.5 / 7.5	5.5 / 7.5	1 0	0 1	CWCH012-10-30♦ CWCH012-01-30♦	CWCH012-10-30♦S CWCH012-01-30♦S		
12.8	17.6	3 / 4	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	7.5 / 10	7.5 / 10	1 0	0 1	CWCH016-10-30♦ CWCH016-01-30♦	CWCH016-10-30♦S CWCH016-01-30♦S		

Control Relay with Latch Block

Rated operational current Ie		Number of auxiliary contacts		Reference code to complete with voltage code		AC coil	DC coil
AC-14 / AC-15 ($U_e \leq 230$ V)	DC-13 ($U_e \leq 24$ V)	3 4	1 2	Screw terminal	Spring terminal	Weight	
A	A	NO	NC			kg	
8	4.8	2	2	CWCHA0-22-00♦	CWCHA0-22-00♦S	0.377	0.444
8	4.8	3	1	CWCHA0-31-00♦	CWCHA0-31-00♦S		
8	4.8	4	-	CWCHA0-40-00♦	CWCHA0-40-00♦S		
8	4.8	1	3	CWCHA0-13-00♦	CWCHA0-13-00♦S		
8	4.8	-	4	CWCHA0-04-00♦	CWCHA0-04-00♦S		

Replace "♦" with the appropriate coil voltage code[2)].

AC coil - 50/60 Hz											
Applicable for CWC07…CWC025 models											
Coil voltage codes	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V ac - 50/60 Hz	24	48	110	220	230	240	380	400	415	440	480

DC coil - Standard consumption coil					
Applicable for CWCH07...CWCH016 models					
Coil voltage codes	C03	C06	C07	C12	C15
V dc	24	42	48	110	220

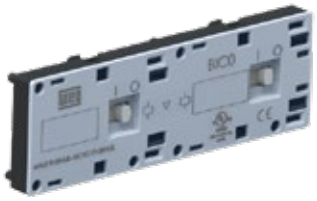
Notes: 1) For 50/60 Hz three-phase, 4 poles WEG standard motors. These values are only for reference and may change depending on the number of poles and motor design;
2) Other voltages available;
3) For selection of accessories, check page 18;
4) For further information about CWCH0 an its operation, check page 30.

Accessories

Auxiliary Contact Blocks

Illustrative picture	For use with	Max. number of contacts/ compact contator	Auxiliary contacts		For use with CWC0 (3 pole)		For use with CWC0 (4 pole)		For use with CWCA0		Weight
					Reference code		Reference code		Reference code		
			NO	NC	Screw terminal	Spring terminal	Screw terminal	Spring terminal	Screw terminal	Spring terminal	kg
 	CWC07...16 CWCA0	2	2	0	BFC0-20	BFC0-20S	BFC4-20	BFC4-20S	BFCA-20	BFCA-20S	0.03
			1	1	BFC0-11	BFC0-11S	BFC4-11	BFC4-11S	BFCA-11	BFCA-11S	
			0	2	BFC0-02	BFC0-02S	BFC4-02	BFC4-02S	BFCA-02	BFCA-02S	
		4	4	0	BFC0-40[1]	BFC0-40S[1]	BFC4-40[1]	BFC4-40S[1]	BFCA-40[1]	BFCA-40S[1]	
			2	2	BFC0-22[1]	BFC0-22S[1]	BFC4-22[1]	BFC4-22S[1]	BFCA-22[1]	BFCA-22S[1]	
			0	4	BFC0-04[2]	BFC0-04S[2]	BFC4-04[2]	BFC4-04S[2]	BFCA-04[2]	BFCA-04S[2]	
			3	1	BFC0-31[1]	BFC0-31S[1]	BFC4-31[1]	BFC4-31S[1]	BFCA-31[1]	BFCA-31S[1]	
			1	3	BFC0-13[2]	BFC0-13S[2]	BFC4-13[2]	BFC4-13S[2]	BFCA-13[2]	BFCA-13S[2]	
	CWC025	2	2	0	BFC025-20	-	-		-		
			1	1	BFC025-11	-	-		-		
			0	2	BFC025-02	-	-		-		
		4	2	2	BFC025-22	-	-		-		

Mechanical Interlock[2]

Illustrative picture	For use with	Description	Reference code	Weight kg
	CWC07...16 CWCA0	- Front mouting; - For the mechanical interlock using 2 compact contactors (AC or DC coil); - Can be mounted with the following accessories: auxiliary contact block, surge suppressor and timers.	BIC0	0.014

Mechanical Latch Block[2]

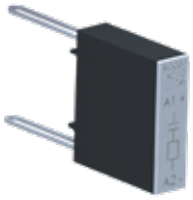
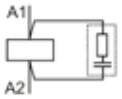
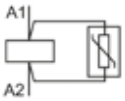
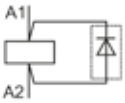
Illustrative picture	For use with	Description	Reference code	Weight kg
	CWC07...16 CWCA0	- Front mouting; - For the mechanical interlock using 2 compact contactors (AC or DC coil); - Can be mounted with the following accessories: auxiliary contact block, surge suppressor and timers.	RMC0	0.014

Notes: 1) The compact contactors CWC0 with DC low consumption coils allows only 2 additional auxiliary contacts. For applications that use 4 auxiliary contacts use CWC0 with standard DC coils.
2) Not suitable to be used with CWC0 compact contactors or CWCA0 control relays with DC Low Consumption coils (coil voltage code "L").

Accessories

Surge Suppressors

- Fast front mounting (clip on)
- Can be mounted with all the accessories

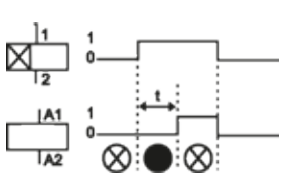
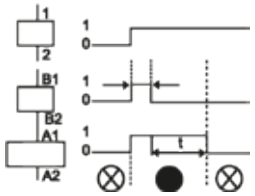
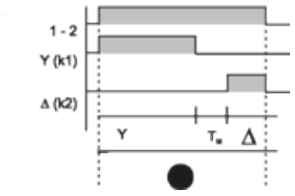
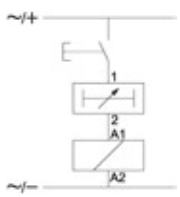
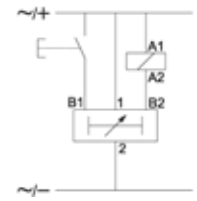
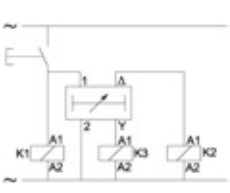
Illustrative picture	For use with	Circuit diagram	Voltages	Reference code	Weight kg
	CWC07...25 CWCA0		12-24 V 50/60 Hz	RCC0-1 D49	0.008
			24-48 V 50/60 Hz	RCC0-2 D53	
			50-127 V 50/60 Hz	RCC0-3 D55	
			130-250 V 50/60 Hz	RCC0-4 D63	
			275-380 V 50/60 Hz	RCC0-5 D84	
			400-510 V 50/60 Hz	RCC0-6 D73	
	CWC07...16 CWCA0		180...230 V 50/60 Hz	RCAC0 D87[1)]	
	CWC07...25 CWCA0		12-48 V 50/60 Hz / 12-60 V dc	VRC0-1 E49	
			50-127 V 50/60 Hz / 60-180 V dc	VRC0-2 E34	
			130-250 V 50/60 Hz / 180-300 V dc	VRC0-3 E50	
			277-380 V 50/60 Hz / 300-510 V dc	VRC0-4 E41	
			400-510 V 50/60 Hz	VRC0-5 D73	
	CWC07...16 CWCA0		12-600 V dc	DIC0-1 C33	
			12...250 V dc	DIZC0 C26	

Note: 1) To protect snubbers against overvoltage peaks caused by the switching off of the contactors with AC coils. It is recommended to use in circuits with residual current over than (Us/230 V)x1.4 mA. (Us = Rated voltage).

Eletronic Timing Relay

- Right-side fast mounting
- Up to 30 minutes timing
- LED status indication

Illustrative picture	Function	Timing	Voltages	Reference code		Weight kg
	On-Delay (TEC0)	3 - 0.3 to 3 seconds	24-240 V 50/60 Hz - DC	TEC0-U003S-E05		0.02
		10 - 1 to 10 seconds		TEC0-U010S-E05		
		30 - 3 to 30 seconds		TEC0-U030S-E05		
		60 - 6 to 60 seconds		TEC0-U060S-E05		
		100 - 10 to 100 seconds		TEC0-U100S-E05		
		300 - 30 to 300 seconds		TEC0-U300S-E05		
		1,800 - 180 to 1,800 seconds		TEC0-U030M-E05		
	Off-Delay (TDC0)	-	24-60 V 50/60 Hz - DC 100-240 V 50/60 Hz - DC	24-60 V ac/dc	100-240 V ac/dc	
		3 - 0.3 to 3 seconds		TDC0-U010S-E04	TDC0-U003S-E09	
		10 - 1 to 10 seconds		TDC0-U003S-E04	TDC0-U010S-E09	
		30 - 3 to 30 seconds		TDC0-U030S-E04	TDC0-U030S-E09	
		60 - 6 to 60 seconds		TDC0-U060S-E04	TDC0-U060S-E09	
		100 - 10 to 100 seconds		TDC0-U100S-E04	TDC0-U100S-E09	
		300 - 30 to 300 seconds		TDC0-U300S-E04	TDC0-U300S-E09	
		1,800 - 180 to 1,800 seconds		TDC0-U030M-E04	TDC0-U030M-E09	
	Start-Delta (TETC0)	30 - 3 to 30 seconds	24-28 V 50/60 Hz	TETC0-U030S-D52		
			110-130 V 50/60 Hz	TETC0-U030S-D61		
			220-240 V 50/60 Hz	TETC0-U030S-D66		

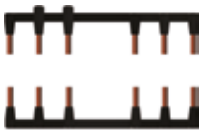
Functions	On-Delay TEC0	Off-Delay TDC0	Start-Delta TETC0
Functionals diagrams Led On Led Off			
Diagrams			

Accessories

Printed Circuit Board Link Module

Illustrative picture	For use with	Description	Reference code	Weight kg
	CWC07...16 CWCA0	- Direct mounting on the terminals - Allows direct mounting on printed circuit board - Same current capacity (up to 16 A in AC-3 and 22 A in AC-1)	CIC0	0.130

Reversing Wiring Kits



Rated operational current I_e AC - 3 ($U_e \leq 440$ V) A	Max. rated operational power of three-phase motors 50/60 Hz						Compact contactors	Reference code	Weight kg
	220 V 230 V kW /HP	380 V kW / HP	400 V 415 V kW / HP	440 V kW / HP	500 V kW / HP	660 V 690 V kW / HP	K1 = K2		
7	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	CWC07	ECC0-R (with electrical interlock)	0.13
9	2.2 / 3	4 / 5	4 / 5	4.5 / 6	4.5 / 6	4 / 5	CWC09	ECC0-RNI (without electrical interlock)	
12	3 / 4	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	5.5 / 7.5	CWC012		
16	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	CWC016		

Star-Delta Wiring

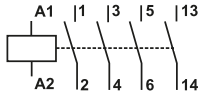
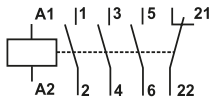
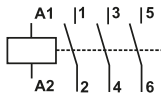
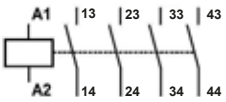
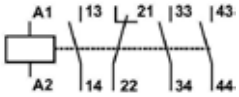
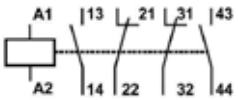
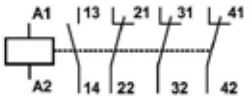
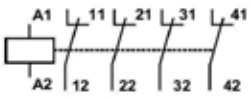
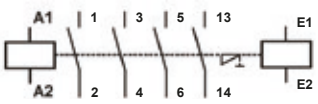
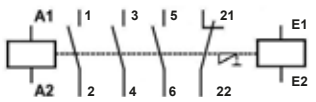
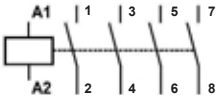


Rated operational current I_e AC - 3 ($U_e \leq 440$ V) A	Max. rated operational power of three-phase motors 50/60 Hz			Compact contactors		Reference code	Weight kg
	220-230 V kW / HP	400-415 V kW / HP	660-690 V kW / HP	K1 = K2	K3		
12	3.7 / 5	5.5 / 7.5	5.5 / 7.5	CWC07	CWC07	ECC0-SD	0.13
18	3.7 / 5	7.5 / 10	9.2 / 12.5	CWC012			
25	5.5 / 7.5	11 / 15	15 / 20	CWC016	CWC09		



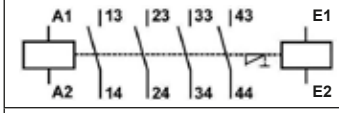
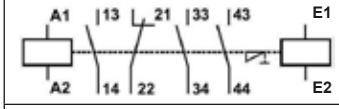
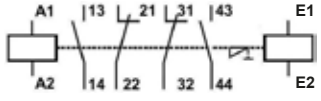
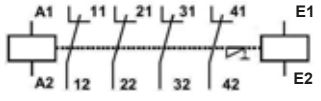
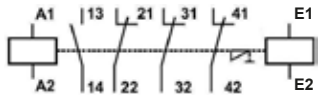
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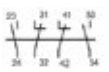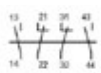
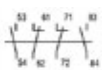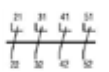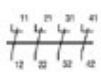
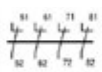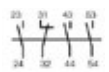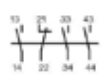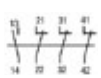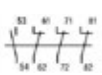
Terminal Markings

Circuit diagram	Auxiliary contacts configuration	Auxiliary contacts		Contactor base reference
		NO	NC	
Three-pole compact contactors with built-in auxiliary contact				
	10	1	0	CWC07-10-30♦ CWC09-10-30♦ CWC012-10-30♦ CWC016-10-30♦
	01	0	1	CWC07-01-30♦ CWC09-01-30♦ CWC012-01-30♦ CWC016-01-30♦
Three-pole compact contactors without built-in auxiliary contact				
	00	0	0	CWC025-00-30♦
Control relay				
	40	4	0	CWCA0-40-00♦
	31	3	1	CWCA0-31-00♦
	22	2	2	CWCA0-40-00♦
	13	1	3	CWCA0-13-00♦
	04	0	4	CWCA0-04-00♦
Three-pole compact contactors with built-in auxiliary contact and latch block				
	10	1	0	CWCH07-10-30♦ CWCH09-10-30♦ CWCH012-10-30♦ CWCH016-10-30♦
	01	0	1	CWCH07-01-30♦ CWCH09-01-30♦ CWCH012-01-30♦ CWCH016-01-30♦
Circuit diagram	**Main contacts configuration**	**Main contacts**		**Contactor base reference**
		NO	**NC**	
Four-pole compact contactors				
	40	4	0	CWC07-00-40♦ CWC09-00-40 CWC012-00-40♦ CWC016-00-40
	22	2	2	CWC07-00-22♦ CWC09-00-22♦ CWC012-00-22♦ CWC016-00-22♦

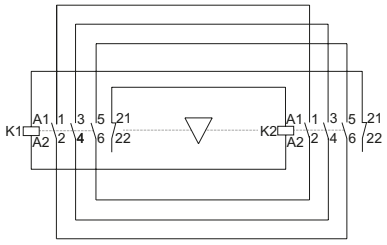
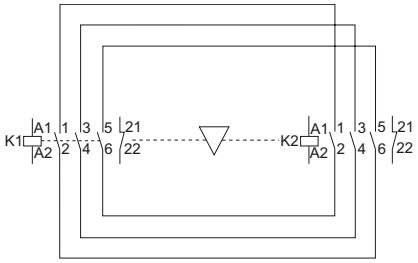
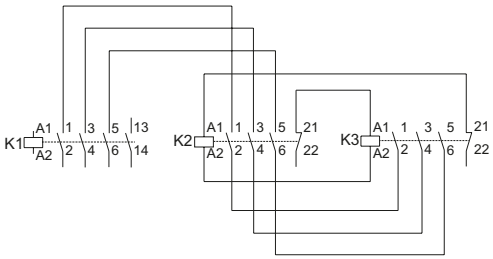
Technical Data

Terminal Markings

Circuit diagram	Auxiliary contacts configuration	Auxiliary contacts		Contactor base reference
		NO	NC	
Control relay with latch block				
	40	4	0	CWCHA0-40-00♦
	31	3	1	CWCHA0-31-00♦
	22	2	2	CWCHA0-22-00♦
	04	0	4	CWCHA0-04-00♦
	13	1	3	CWCHA0-13-00♦

Auxiliary contacts configuration	Auxiliary contacts		For use with (3-pole)		For use with CWC0 (4-pole)		For use with CWCA0	
	NO	NC	Circuit diagram	Reference	Circuit diagram	Reference	Circuit diagram	Reference
Frontal auxiliary contact block								
20	2	0		BFC0-20♦ BFC025-20		BFC4-20♦		BFCA-20♦
11	1	1		BFC0-11♦ BFC025-11		BFC4-11♦		BFCA-11♦
02	0	2		BFC0-02♦ BFC025-02		BFC4-02♦		BFCA-02♦
40	4	0		BFC0-40♦		BFC4-40♦		BFCA-40♦
22	2	2		BFC0-22♦ BFC025-22		BFC4-22♦		BFCA-22♦
04	0	4		BFC0-04♦		BFC4-04♦		BFCA-04♦
31	3	1		BFC0-31♦		BFC4-31♦		BFCA-31♦
13	1	3		BFC0-13♦		BFC4-13♦		BFCA-13♦

Technical Data

Diagram	Components
	CWC07...16 + BIC0 + ECC0-R
	CWC07...16 + BIC0 + ECC0-RNI
	CWC07...16 + ECC0-SD

Technical Data

General Data

Reference code			CWCA0	CWC07	CWC09	CWC012	CWC016	CWC025
Standards			IEC/EN 60947 / UL 508					
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660	(V)	690					
	UL, CSA	(V)	600					
Rated impuse withstand voltage U_{imp} (IEC/EN 60947-1)		(kV)	4					
Rated operational frequency		(Hz)	25...400					
Mechanical lifespan	AC coil Ops x 10^6		10					3
	DC coil Ops x 10^6		12					-
Electrical lifespan	I_e AC-3 Ops x 10^6		-	1.4	1.3	1.2	1.1	0.6
Degree of protection (VDE 0160)	Main circuits		IP20					
	Control circuits and auxiliary contacts		IP20					
Mounting			Screw or DIN rail 35 mm					
Coil terminals			2					
Vibration resistance	Contactor open	(g)	2					
	Contactor closed	(g)	4					
Mechanical shock resistance (½ sinusoid = 11ms)	Contactor open	(g)	6					
	Contactor closed	(g)	10					
Ambient temperature	Operation		-25 °C ...+55 °C					
	Storage		-55 °C ... +80 °C					
Normal values			Up to 3,000 m					
Altitude	90% I_e / 80% U_e		3,000 to 4,000 m					
	80% I_e / 75% U_e		4,000 to 5,000 m					

Control Circuit - Alternating Current (AC)

Reference code			CWCA0, CWC07...16	CWC025
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660	(V)	1,000	1,000
	UL, CSA	(V)	600	600
Coils rated voltage 50 Hz		(V)	10...550	10...550
Coils rated voltage 60 Hz		(V)	12...660	12...660
Coils rated voltage 50/60 Hz		(V)	12...660	12...660
Coils rated voltage				
Coil operating limits		(xUs)	0.85...1.1	
Coil 60 Hz	Pick up	(xUs)	0.4...0.76	0.4...0.76
	Drop out	(xUs)	0.25...0.65	0.25...0.65
Coil 50/60 Hz	Pick up	(xUs)	0.5...0.8	0.5...0.8
	Drop out	(xUs)	0.2...0.6	0.2...0.6
Average consumption			1.0 x Us coil cold state	
Coil 60 Hz	Magnetic circuit closed	(VA)	2.5...3.5	10.8....13.2
	Power factor	(cos φ)	0.28	0.32
	Power dissipation per pole	(W)	2.6	-
	Magnetic circuit closing	(VA)	35	72
	Power factor	(cos φ)	0.85	0.93
Coil 50/60 Hz	Magnetic circuit closed	(VA)	2...3	7.6...11.6
	Magnetic circuit closing	(VA)	30	67
Average time	Closing NO contacts	(ms)	8...20	13...16
	Opening NO contacts	(ms)	6...13	13.5...17

Control Circuit - Direct Current (DC)

Reference code			CWCA0, CWC07...16		CWC07...16
Coil type			Conventional	Low consumption	4P (2P/2R)
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660	(V)	1,000		
	UL, CSA	(V)	600		
Standard voltages		(V)	12...440		
Coil operating limits		(xUs)	0.85...1.1		
	Pick up	(xUs)	0.4...0.7		
	Drop out	(xUs)	0.15...0.4		
Power consumption			1.0 x Us coil cold state		
	Magnetic circuit closed	(W)	2.6...3.7	1.7...2.7	2.9...4
	Magnetic circuit closing	(W)	2.6...3.7	1.7...2.7	2.9...4
Operation time	Closing NO contacts	(ms)	35...45		
	Opening NO contacts	(ms)	7...12		

Technical Data

Power Circuit

Reference code			CWC07	CWC09	CWC012	CWC016	CWC025
Rated operational current I_e	AC-3 ($U_e \leq 440$ V)	(A)	7	9	12	16	22
	AC-4 ($U_e \leq 440$ V)	(A)	2.8	3.5	4.5	5	9
	AC-1 ($\theta \leq 55$ °C, $U_e \leq 690$ V)	(A)	18	20	22	22	32
Rated operational voltage U_e	IEC/EN 60947-4-1, VDE 0660	(V)	690				
	UL, CSA[1)]	(V)	600				
Rated thermal current I_{th} ($\theta \leq 55$ °C)		(A)	18	20	22	22	32
Making capacity - IEC/EN 60947		(A)	70	90	120	160	250
Breaking capacity IEC/EN 60947	($U_e \leq 400$ V)	(A)	50	72	96	128	200
	(U_e=500 V)	(A)	50	72	96	128	200
	(U_e=690 V)	(A)	35	54	72	96	150
Short-time current (no current flowing during recovery time of 10 min and $\theta \leq 40$ °C)	1 seg	(A)	250	250	250	250	-
	5 seg	(A)	125	125	125	125	-
	10 seg	(A)	95	95	95	95	-
	30 seg	(A)	70	70	70	70	-
	1 min	(A)	50	50	50	50	-
	3 min	(A)	40	40	40	40	-
Protection against short-circuits with fuses (gL/gG)	@600 V - UL/CSA[1)]	(kA)	5				
	Coordination type 1	(A)	35	35	35	35	50
	Coordination type 2	(A)	20	20	25	25	35
Average impedance per pole		(mΩ)	6	6	5	5	6
Average power dissipation per pole	AC-1	(W)	1.9	2.4	2.4	2.4	6.1
	AC-3	(W)	0.3	0.5	0.7	1.3	3.8
Utilization category AC-3							
Rated operational current I_e ($\theta \leq 55$ °C)	$U_e \leq 440$ V	(A)	7	9	12	16	22
	$U_e \leq 500$ V	(A)	6.2	7.5	8.8	13	16
	$U_e \leq 690$ V	(A)	4.5	5.5	6.6	10	13
	$U_e \leq 1{,}000$ V	(A)	Not available				
Rated operational power[1)]	220 / 230 V	(kW)	1.5	2.2	3	3.7	5.5
		(cv)	2	3	4	5	7.5
	380 / V	(kW)	3	3.7	5.5	7.5	11
		(cv)	4	5	7.5	10	15
	400 / 415 V	(kW)	3	3.7	5.5	7.5	11
		(cv)	4	5	7.5	10	15
	440 V	(kW)	3.7	4.5	5.5	7.5	11
		(cv)	5	6	7.5	10	15
	500 V	(kW)	3.7	4.5	5.5	7.5	11
		(cv)	5	6	7.5	10	15
	660 / 690 V	(kW)	3	3.7	5.5	7.5	11
		(cv)	4	5	7.5	10	15
Max. electrical operational per hour	600 ops./h	(%)	100	100	100	100	100
	1,200 ops./h	(%)	75	75	75	75	75
	3,000 ops./h	(%)	50	50	50	50	50
Utilization category AC-4							
Rated operational current I_e AC-4 ($U_e \leq 440$ V)		(A)	2.8	3.5	4.5	5	9
Rated operational power[1)] (200,000 operations)	220 / 230 V	(kW)	0.55	0.75	0.75	1.1	2.2
		(cv)	0.7	1	1	1.5	2.9
	380 / 400 V	(kW)	1.1	1.1	1.8	2.2	4
		(cv)	1.5	1.5	2.4	2.9	5.4
	415 V	(kW)	1.1	1.5	2.2	2.2	4.5
		(cv)	1.5	2	2.9	2.9	6
	440 V	(kW)	1.1	1.5	2.2	2.2	4.5
		(cv)	1.5	2	2.9	2.9	6
	500 V	(kW)	1.1	1.5	2.2	2.2	4.5
		(cv)	1.5	2	2.9	2.9	6
	660 / 690 V	(kW)	1.1	1.5	2.2	2.2	4.5
		(cv)	1.5	2	2.9	2.9	6

Note: 1) For 50/60 Hz three-phase, 4 poles WEG standard motors. These values are only for reference and may change on the number of poles and motor design.

Technical Data

Power Circuit

Reference code			CWC07	CWC09	CWC012	CWC016	CWC025
			Utilization category AC-1				
			3P (NO) or 4P (4NO)				3P (NO)
Rated thermal current I_{th} ($\theta \leq 55$ °C)		(A)	18	20	22	22	32
Maximum operational current (up to 690 V)	$\theta \leq 40$ °C	(A)	18	20	22	22	32
	$\theta \leq 55$ °C	(A)	18	20	22	22	32
	$\theta \leq 70$ °C	(A)	14.4	16	17.6	17.6	25.6
Maximum operational power $\theta \leq 55$ °C 3-phase resistors	220 / 230 V	(kW)	6.8	7.5	8.3	8.3	12
	380 / 400 V	(kW)	11.5	13	14.5	14.5	21
	415 / 440 V	(kW)	13	14.5	16	16	23
	500 V	(kW)	14.8	16.5	18	18	26
	660 / 690 V	(kW)	20	22	25	25	36
Current values for connection of	2 poles in parallel		I_e x 1.7				
	3 poles in parallel		I_e x 2.4				
	4 poles in parallel		I_e x 3.2				
Percentage of the max. operational current at	600 ops./h	(%)	100				
	1,200 ops./h	(%)					
	3,000 ops./h	(%)					
			2P (NO/NC) or 4P (2NO + 2NC)				2P (NO/NC)
Maximum operational power $\theta \leq 55$ °C (resistive load)	220 / 230 V	(kW)	3.9	4.4	4.8	4.8	6.6
	380 / 400 V	(kW)	6.8	7.6	8.4	8.4	11.4
	415 / 440 V	(kW)	7.5	8.4	9.2	9.2	12.5
	500 V	(kW)	8.6	9.5	10.5	10.5	14.5
	660 / 690 V	(kW)	11.8	13.1	14.4	14.4	19.5

UL Power Ratings

Reference code			CWC07	CWC09	CWC012	CWC016	CWC025
General purpose current	(600 V)	(A)	18	20	22	22	30
1-phase	110 / 120 V	(HP)	1/3	1/3	1/2	1	1 1/2
	208 V	(HP)	3/4	1/2	1/2	2	3
	220 / 240 V	(HP)	3/4	1/2	2	2	3
3-phase	110 / 120 V	(HP)	3/4	1	1 1/2	2	3
	200 V	(HP)	1 1/2	2	3	3	5
	220 / 240 V	(HP)	1 1/2	3	3	5	7 1/2
	440 / 480 V	(HP)	5	5	7 1/2	10	15
	550 / 600 V	(HP)	5	7 1/2	7 1/2	10	15

Built-In Auxiliary Contacts

Reference code			CWC07...16	CWCA0
Standards			IEC/EN 60947-5-1, IEC/EN 60947-4-1	
Rated insulation voltage U_i (pollution degree 3)	IEC/EN, VDE 0660	(V)	690	
	UL, CSA	(V)	600	
Rated operational voltage U_e	IEC/EN, VDE 0660	(V)	690	
	UL, CSA	(V)	600	
Rated thermal current I_{th} ($\theta \leq 55$ °C)		(A)	10	
Rated operational current I_e				
AC-15 (IEC/EN 60947-5-1)	$U_e \leq 240$ V	(A)	10	
	380-400 V	(A)	6	
	415-440 V	(A)	5	
	500 V	(A)	4	
	660-690 V	(A)	2	
UL, CSA			A600	
DC-13 (IEC/EN 60947-5-1)	24 V	(A)	6	
	48 V	(A)	4	
	110 V	(A)	2	
	220 V	(A)	0.7	
UL, CSA			Q600	
Making capacity (rms)	$U_e \leq 400$ V 50/60 Hz - AC-15	(A)	10 x I_e (AC-15)	
Breaking capacity (rms)	$U_e \leq 400$ V 50/60 Hz - AC-15	(A)	10 x I_e (AC-15)	
Max.fuse class gL-gG without welding (short-circuit protection) gL/gG		(A)	10	
Control circuit reliability		(V / mA)	17 / 5	
Electrical endurance		(millions operations)	1	
Mechanical endurance		(millions operations)	10	

Technical Data

Auxiliary Contacts

Reference code			BFC0 / BFC025
Standards			IEC/EN 60947-5-1, IEC/EN 60947-4-1
Rated insulation voltage U_i (pollution degree 3)	IEC/EN, VDE 0660	(V)	1,000
	UL, CSA[1)]	(V)	600
Rated operational voltage U_e	IEC/EN, VDE 0660	(V)	690
	UL, CSA[1)]	(V)	600
Rated thermal current I_{th} ($\theta \leq 55$ °C)		(A)	10
Rated operational current I_e			
AC-15 (IEC/EN 60947-5-1)	$U_e \leq 240$ V	(A)	10
	380-400 V	(A)	6
	415-440 V	(A)	6
	500 V	(A)	4
	660-690 V	(A)	-
UL, CSA[1)]			A600
DC-13 (IEC/EN 60947-5-1)	24 V	(A)	1.5
	60 V	(A)	0.5
	110 V	(A)	0.4
	220-240 V	(A)	0.4
UL, CSA[1)]			Q600
Making capacity (rms)	$U_e \leq 400$ V 50/60 Hz - AC-15	(A)	30
Breaking capacity (rms)	$U_e \leq 400$ V 50/60 Hz - AC-15	(A)	3
Max.fuse class gL-gG without welding (short-circuit protection)		(A)	10
Control circuit reliability		(V / mA)	17 / 5
Electrical endurance		(millions operations)	1
Mechanical endurance		(millions operations)	10

Electronic Timer Relays

Reference code	TEC0, TDC0, TETC0	
Rated insulation voltage (U_i)	V	300
Supply voltage (U_e)	1 - 2 terminals	24...240 V dc/ V ac 50/60 Hz (TEC0)
		24...60 V dc/ V ac 50/60 Hz (TDC0)
		100...240 V dc/ V ac 50/60 Hz (TDC0)
		220-240 V ac 50/60 Hz (TETC0)
		110-130 V ac 50/60 Hz (TETC0)
		24-28 V ac 50/60 Hz (TETC0)
Control voltage (U_c) only TDC0	2 - B1 terminals	24...60 V dc/ V ac 50/60 Hz (TDC0)
		100...240 V dc/ V ac 50/60 Hz (TDC0)
Voltage operational limits		0.85...1.1 x Uc (V ac)
		0.8...1.25 x Uc (V dc)
Consumption	mA	≤ 5
Minimum time for reset (recovery time)	ms	650
Minimum control time (only TDC0)	ms	50
Setting accuracy (% of the full scale value)	%	+/-5
Repeat accuracy	%	+/-1
Changeover time Y - Δ	ms	50

Technical Data

Terminal Capacity and Tightening Torque - Power and Built-In Auxiliary Terminals

Reference code	CWC07...CWC016 / CWCA0			CWC025		
Screw type	M3x 8 Flat / Phillips			M3.5x 9 Flat / Phillips		
Power terminal and built-in auxiliary terminal[1)]	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm²	1x 0.5...2.5 2x 0.5...1.5	1x 0.75...2.5 2x 0.75...2.5	1x 0.5...2.5 2x 0.5...2.5	1x 1...6 2x 1...2.5 2x 2.5...4	1x 1...6 2x 1...2.5 2x 2.5...6	1x 1...6 2x 1...2.5 2x 2.5...6
AWG (UL)	18...12			18...10		
Tightening torque (N.m)	1.1			1.5		
Tightening torque (lb.in) (UL)	10			13		

Note: 1) Built-in auxiliary terminals not available for CWC025.

Terminal Capacity and Tightening Torque - Coil Terminals

Reference code	CWC07...CWC025 / CWCA0		
Screw type	M3.5x 8 Flat / Phillips		
Coil terminals	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm²	1x 0.5...2.5 2x 0.5...1.5	1x 0.75...2.5 2x 0.75...2.5	1x 0.5...2.5 2x 0.5...2.5
AWG (UL)	22...12		
Tightening torque (N.m)	1.1		
Tightening torque (lb.in) (UL)	10		

Terminal Capacity and Tightening Torque - Auxiliary Contact Blocks

Reference code	BFC0 / BFCA / BFC4 / BFC025		
Screw type	M3.5x9 Flat / Phillips		
Auxiliary contact block	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm²	1x 0.5...2.5 2x 0.5...1.5	1x 0.75...4 2x 0.75...2.5	1x 0.5...4 2x 0.5...2.5
AWG (UL)	22...14		
Tightening torque (N.m)	1.1		
Tightening torque (lb.in) (UL)	10		

Terminal Capacity - Power, Coil and Auxiliary Contact Blocks

Reference code	CWC07_S... CWC012_S / CWCA0_S		BFC0_S / BFCA_S / BFC4_S
Terminal type	Spring terminal		
Power terminal	Finely stranded with end sleeve	Solid	
mm²	2x 1...1.5	2x 1...1.5	
Auxiliary contact block / built-in auxiliary terminal / or coil terminal	Finely stranded with end sleeve	Solid	Solid or finely stranded with end sleeve
mm²	2x 0.5...1.5	2x 0.5...1.5	2x 0.5...1.5
AWG	18...12		22...16

Technical Data

Utilization Category DC-1, DC-3 and DC-5

DC-1(L/R ≤ 1ms)

	Reference	CWC07	CWC09	CWC012	CWC016	CWC025
U_e	Serie poles	Rated operational current I_e (A)				
≤ 24 V	1	10	10	16	16	18
	2	15	15	20	20	25
	3	15	15	22	22	25
	4	15	15	22	22	-
≤ 48 V	1	10	10	13	13	16
	2	15	15	20	20	25
	3	15	15	22	22	25
	4	15	15	22	22	-
≤ 60 V	1	8	8	10	10	13
	2	15	15	18	18	25
	3	15	15	22	22	25
	4	15	15	22	22	-
≤ 125 V	1	4	4	5	5	6
	2	8	8	10	10	13
	3	12	12	16	16	18
	4	15	15	19	19	-
≤ 220 V	1	0.6	0.6	0.7	0.7	1
	2	5	5	6	6	8
	3	9	9	10	10	14
	4	12	12	15	15	-
≤ 440 V	1	0.2	0.2	0.3	0.3	0.4
	2	0.6	0.6	0.7	0.7	1.5
	3	3.5	3.5	4	4	5
	4	8	8	9	9	-
≤ 600 V	1	-	-	-	-	-
	2	0.2	0.2	0.3	0.3	0.6
	3	1	1	1.5	1.5	2
	4	2	2	4	4	-

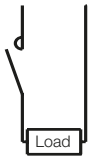
DC-3(L/R ≤ 2.5ms)

	Reference	CWC07	CWC09	CWC012	CWC016	CWC025
U_e	Serie poles	Rated operational current I_e (A)				
≤ 24 V	1	9	9	9	9	10
	2	12	12	12	12	15
	3	15	15	15	15	18
	4	15	15	15	15	-
≤ 48 V	1	8	8	8	8	10
	2	12	12	12	12	15
	3	15	15	15	15	18
	4	15	15	15	15	-
≤ 60 V	1	5	5	5	5	8
	2	10	10	10	10	13
	3	14	14	14	14	18
	4	15	15	15	15	-
≤ 125 V	1	1.5	1.5	1.5	1.5	2
	2	5.5	5.5	5.5	5.5	7
	3	10	10	10	10	13
	4	14	14	14	14	-
≤ 220 V	1	0.4	0.4	0.4	0.4	0.6
	2	1.5	1.5	1.5	1.5	2
	3	7	7	7	7	8
	4	11	11	11	11	-
≤ 440 V	1	-	-	-	-	-
	2	0.2	0.2	0.2	0.2	0.3
	3	1	1	1	1	1.5
	4	3	3	3	3	-
≤ 600 V	1	-	-	-	-	-
	2	-	-	-	-	-
	3	0.6	0.6	0.6	0.6	0.8
	4	1.5	1.5	1.5	1.5	-

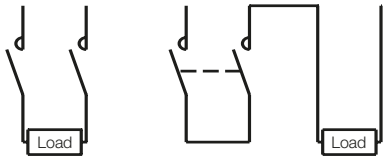
DC-5(L/R ≤ 15ms)

	Reference	CWC07	CWC09	CWC012	CWC016	CWC025
U_e	Serie poles					
≤ 24 V	1	8	8	8	8	10
	2	12	12	12	12	14
	3	15	15	15	15	18
	4	15	15	15	15	-
≤ 48 V	1	8	8	8	8	9
	2	12	12	12	12	14
	3	15	15	15	15	18
	4	15	15	15	15	-
≤ 60 V	1	5	5	5	5	7
	2	10	10	10	10	12
	3	14	14	14	14	18
	4	15	15	15	15	-
≤ 125 V	1	1.5	1.5	1.5	1.5	0.8
	2	5.5	5.5	5.5	5.5	5
	3	9	9	9	9	12
	4	14	14	14	14	-
≤ 220 V	1	0.4	0.4	0.4	0.4	-
	2	0.7	0.7	0.7	0.7	0.8
	3	2.5	2.5	3	3	3
	4	9	9	9	9	-
≤ 440 V	1	-	-	-	-	-
	2	-	-	-	-	-
	3	0.3	0.3	0.3	0.3	0.5
	4	0.7	0.7	0.7	0.7	-
≤ 600 V	1	-	-	-	-	-
	2	-	-	-	-	-
	3	-	-	-	-	-
	4	0.2	0.2	0.2	0.2	-

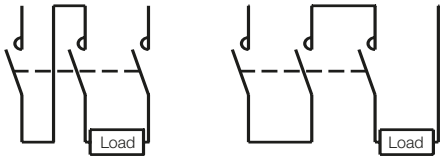
1 Serie Pole



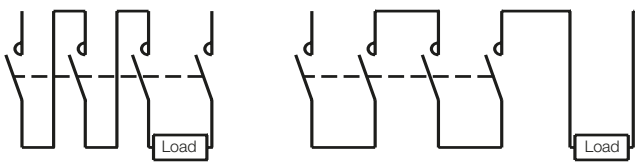
2 Serie Poles



3 Serie Poles

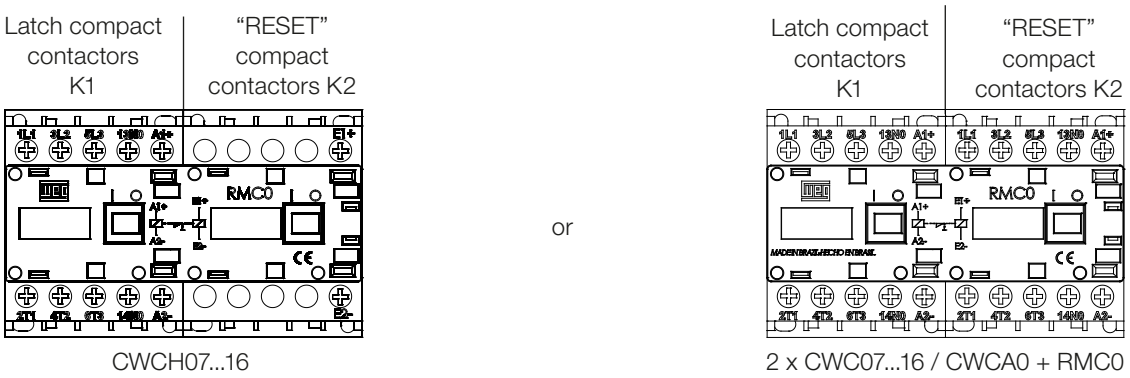


4 Serie Poles



Technical Data

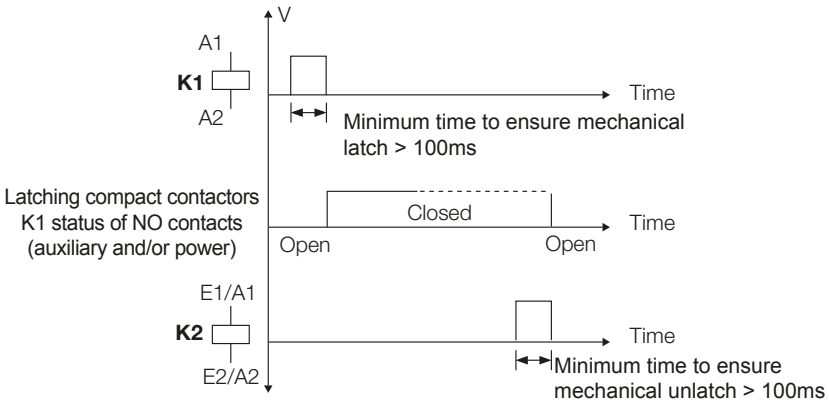
Operation Description of Latch Block RMC0 or CWCH0



CWCH07...16

2 x CWC07...16 / CWCA0 + RMC0

Functional Diagram



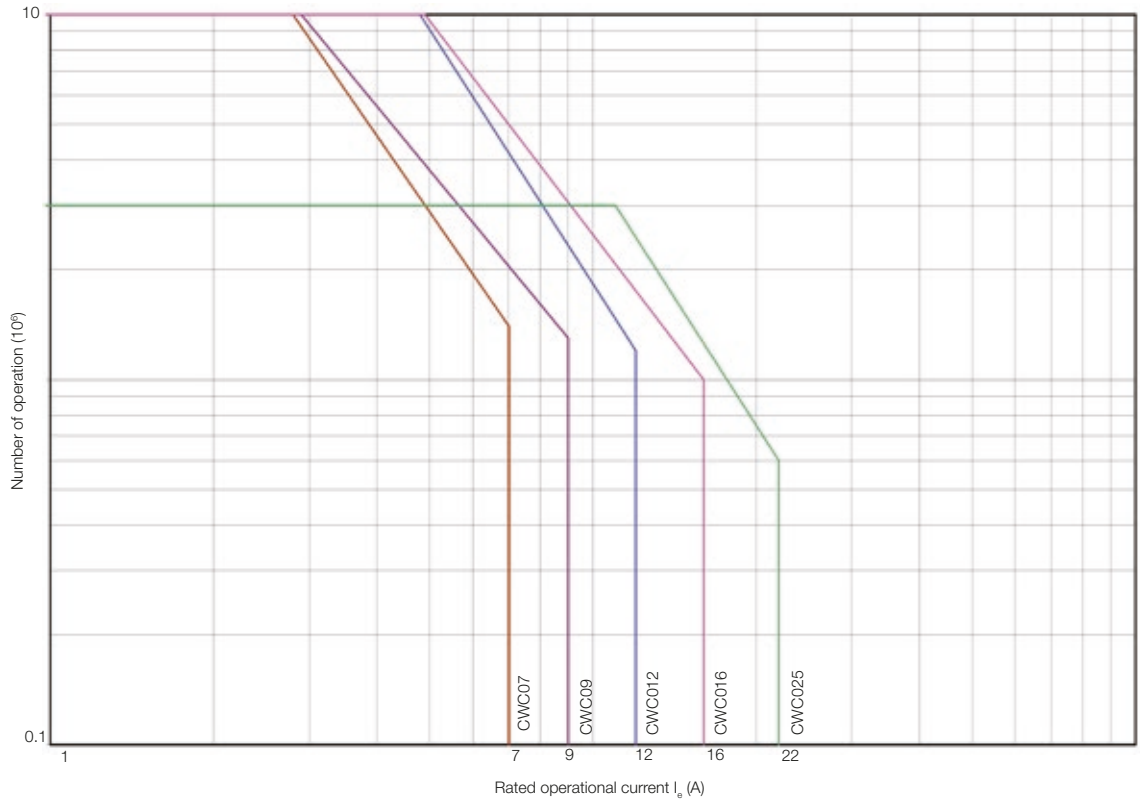
- After a minimum pulse of 100ms on compact contactors coil (K1), the RMC0 will keep K1 contacts switched on.
- The compact contactors K1 will only return to rest position after compact contactors coil (K2) be energized by a releasing pulse.
- The mechanical latch will always and only happen on compact contactors (K1).

Note: if RESET compact contactors coil (K2) remains energized, the latching of compact contactors (K1) is not enabled.

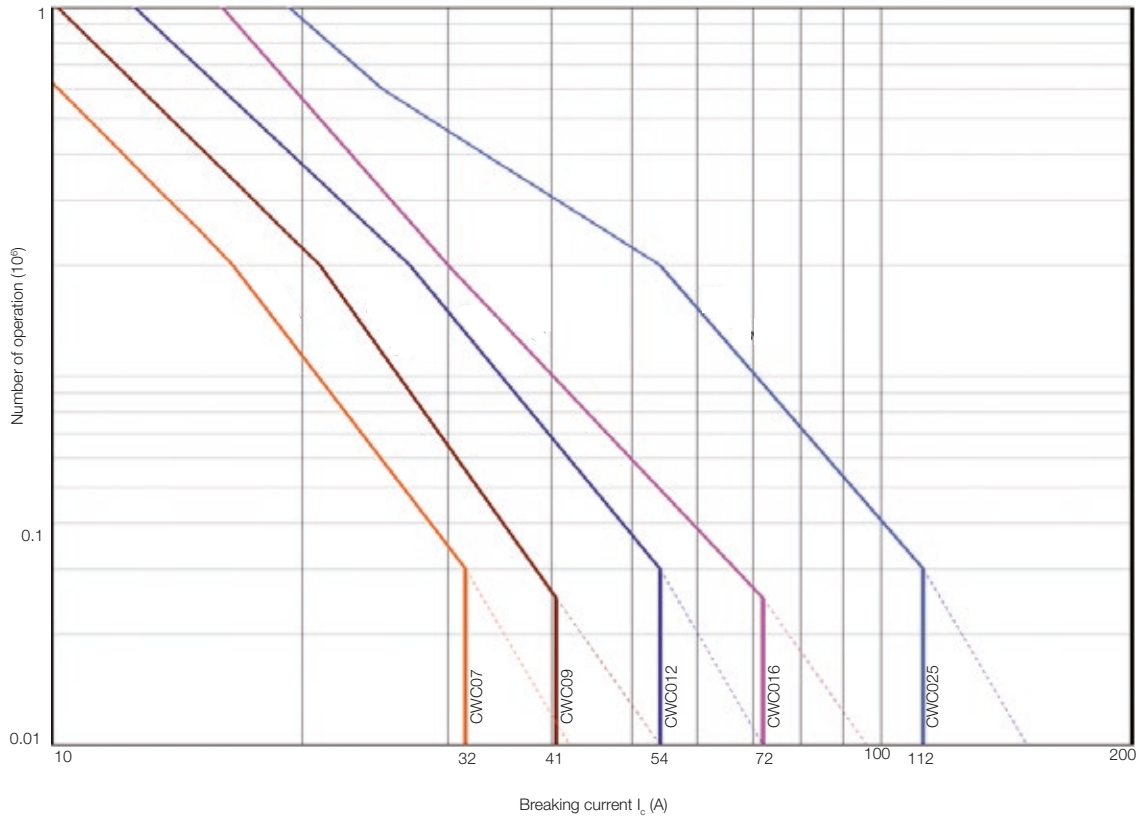
Technical Data

Electrical Lifespan

AC-3 (U_e ≤ 440 V ac)

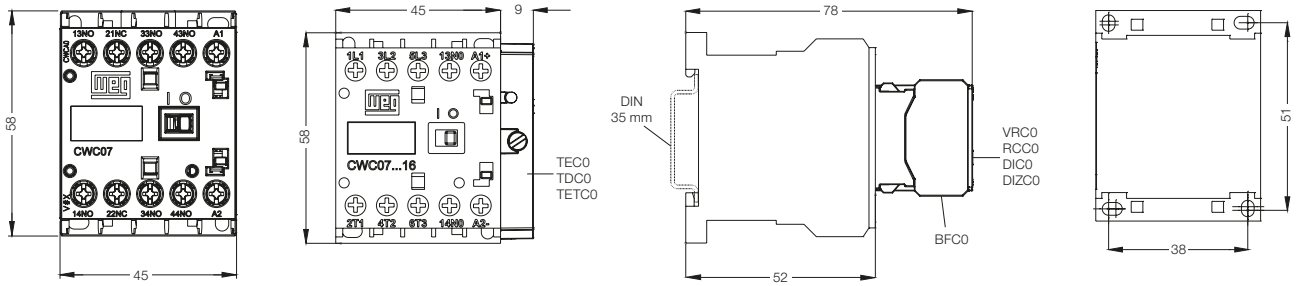


AC-4 (U_e ≤ 440 V ac)

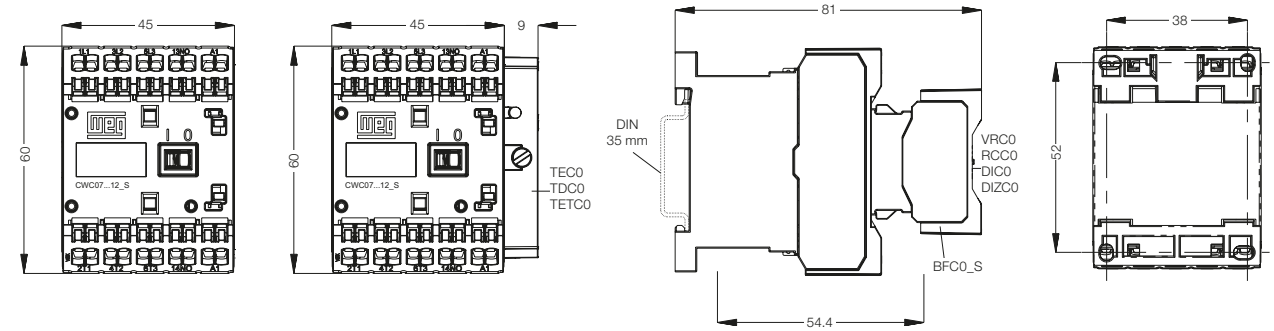


Dimensions (mm)

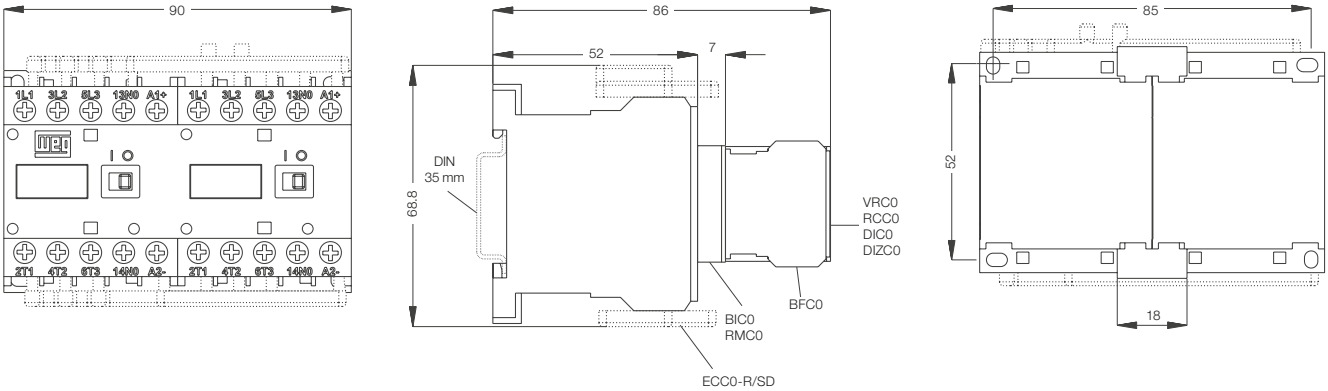
CWC07...16 and CWCA0 - (AC and DC Coil) - Screw Terminal



CWC07...012_S, and CWCA0_S - (AC and DC Coil) - Spring Terminal



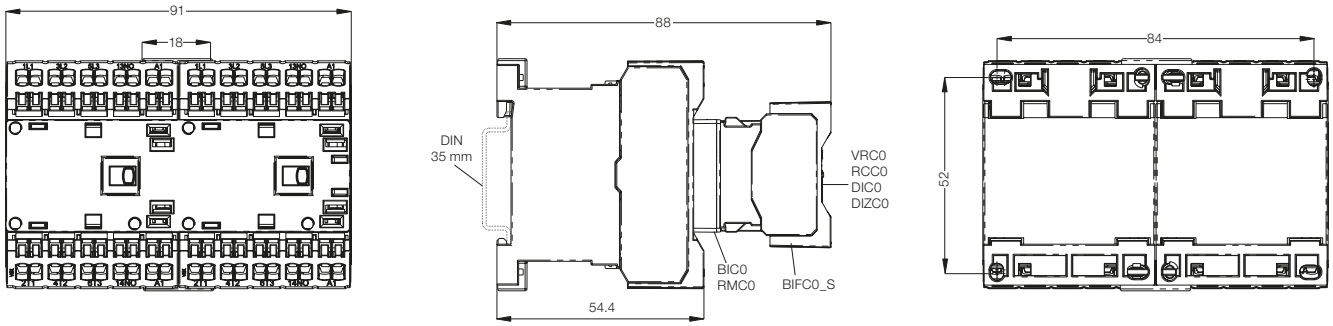
CWCI07...16[1] + ECC0-R and CWCH07...16[2] - Screw Terminal



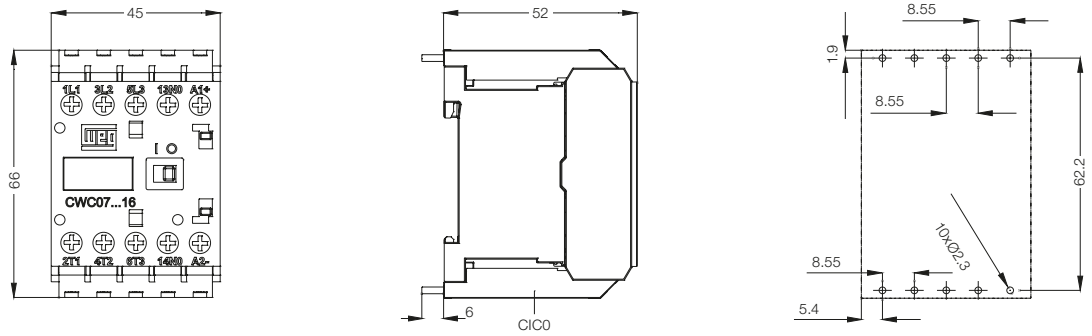
Notes: 1) Same dimensional of 2 x CWC07...16 + BIC0.
2) Same dimensional of 2 x (CWC07...16/CWCA0) + RMC0.

Dimensions (mm)

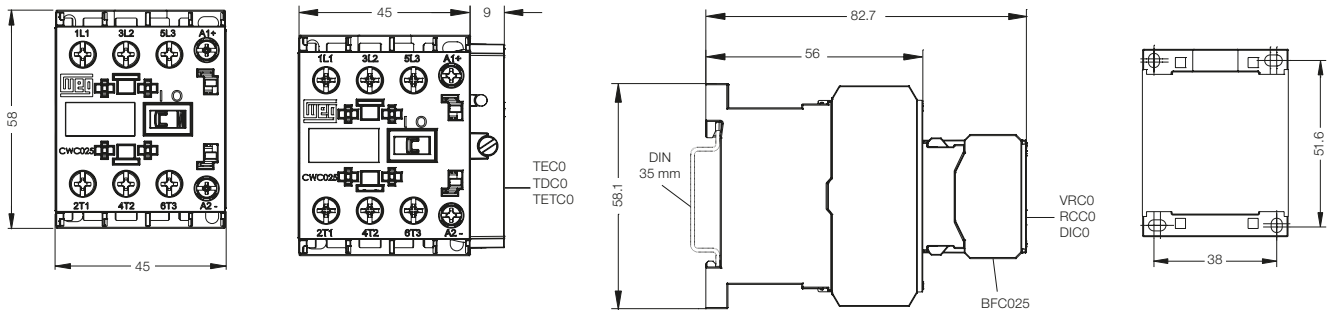
CWCI07...12[1] or CWCH07...12/CWCHA0[2] - Spring Terminal



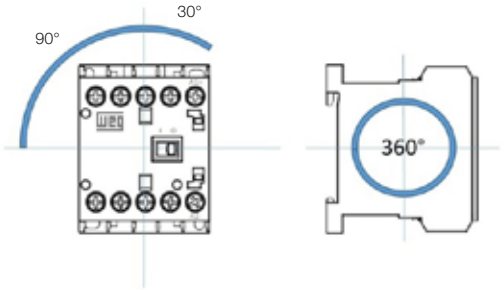
CWC07...16♦I[3] - Printed Circuit Boards



CWC025



Mounting Position of All Compact Contactors



Notes: 1) Same dimensional of 2 x CWCI07...16_S + BIC0.
2) Same dimensional of 2 x (CWC07...16_S/CWCA0_S) + RMC0.
3) Same dimensional CWC07...16 + CIC0.



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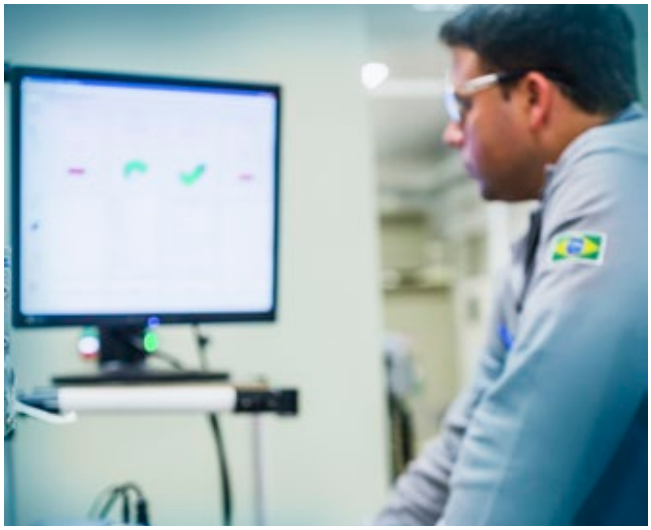
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The values shown are subject to change without prior notice.
The information contained is reference values.