



## COMPACT CONTACTORS WCC

Your best solution for electrical switching operations



# Your best solution for Electrical Switching Operations

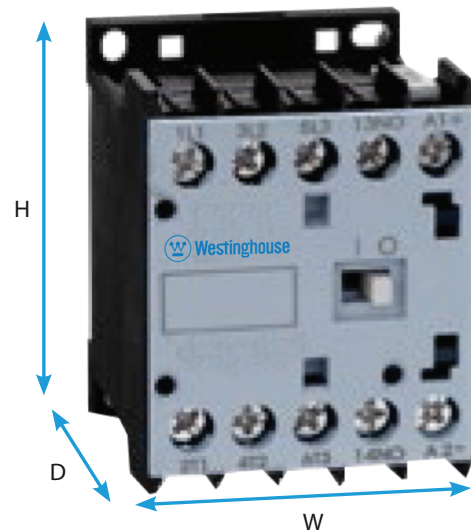


## Compact Contactors - WCC

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 (WCC7...16) and a wide range of coil voltages available

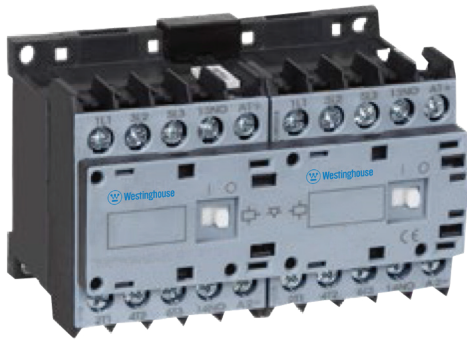


### Mechanical Interlock

Mechanical interlock without addition of side space. It allows the WCC7...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.

### 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 WCC 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.



### 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 WCC lines.



### 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.

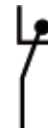


### Mirror and Mechanically Linked Contacts

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".



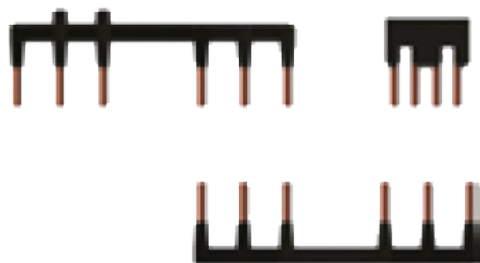
IEC/EN 60947-5-1 Symbol  
Mechanically Linked  
Contacts



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 (WMP motor-protective circuit breakers or WR17 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.

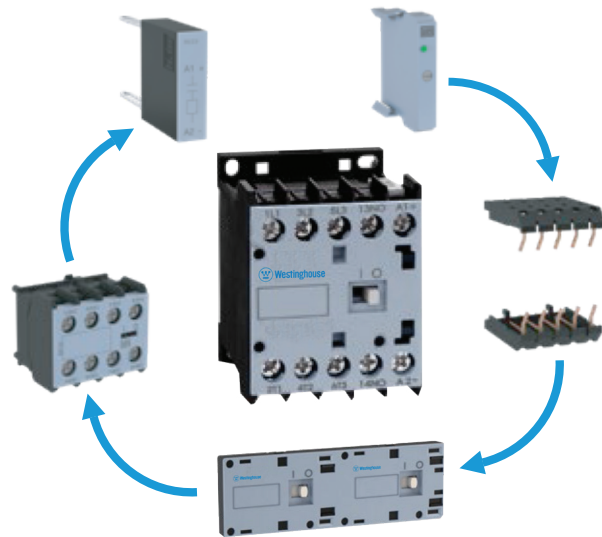


### Drive Control

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.

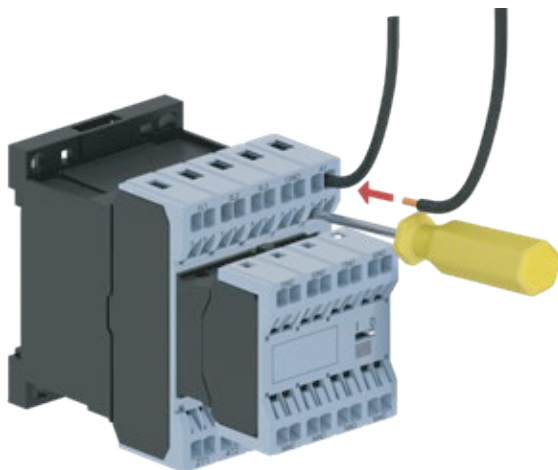
### Wide Range of Accessories

All the accessories are interchangeable between the WCC7...16 and WCCA0 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.



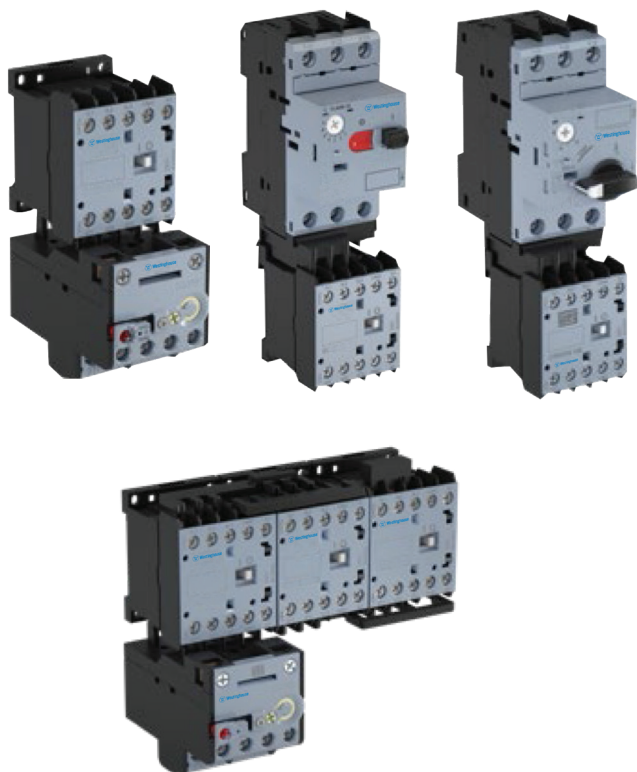
### Faster and Securer Connections

The cage clamp connections of the WCC7...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.



**Compact Starters**

The most compact starters on the market up to 25 A. Contactors fully compatible with the WR17 overload relays and WMP18 e WMP40 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.



**WRC Mechanical Retention Block**

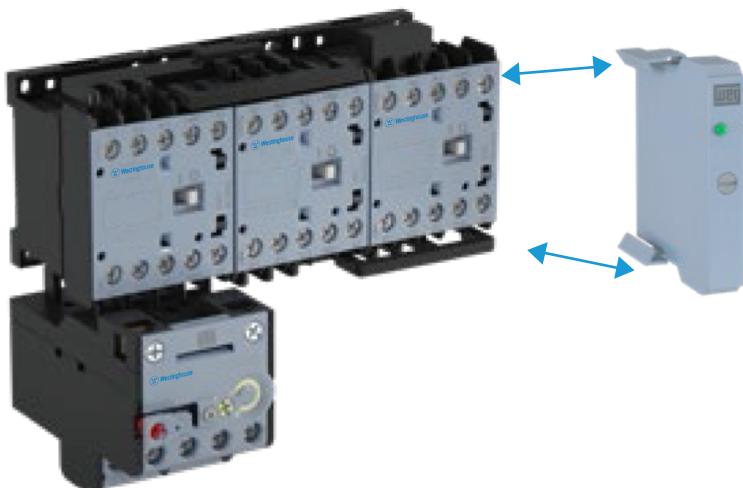
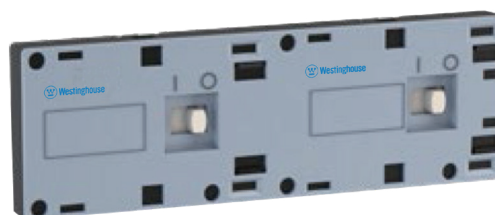
It allows to keep the electrical contacts of the contactors operated without continuous supply of its coil. Ideal for circuits with a low number of switching operations, such as: ventilation systems, illumination, etc. The front mounting of this accessory on two contactors mounted side by side allows 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 WRC accessory will not actuate on contactor K1. Accessory compatible with WCC7...16 and WCC contactors, front contact blocks, suppressor blocks and timers.



**Timer Blocks**

Extremely compact electronic timers only 9 mm wide. They are installed on the side of the WCC7...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 (WTCE), Power down Delay (WTD) and for star-delta starters (WTEC).



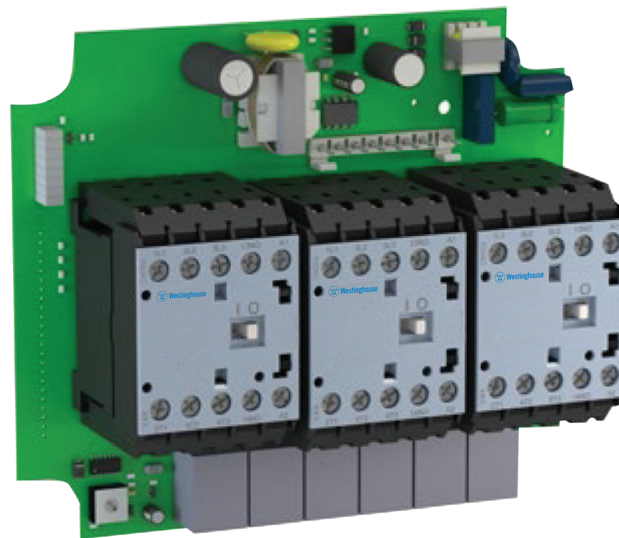
### Environmentally Friendly

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



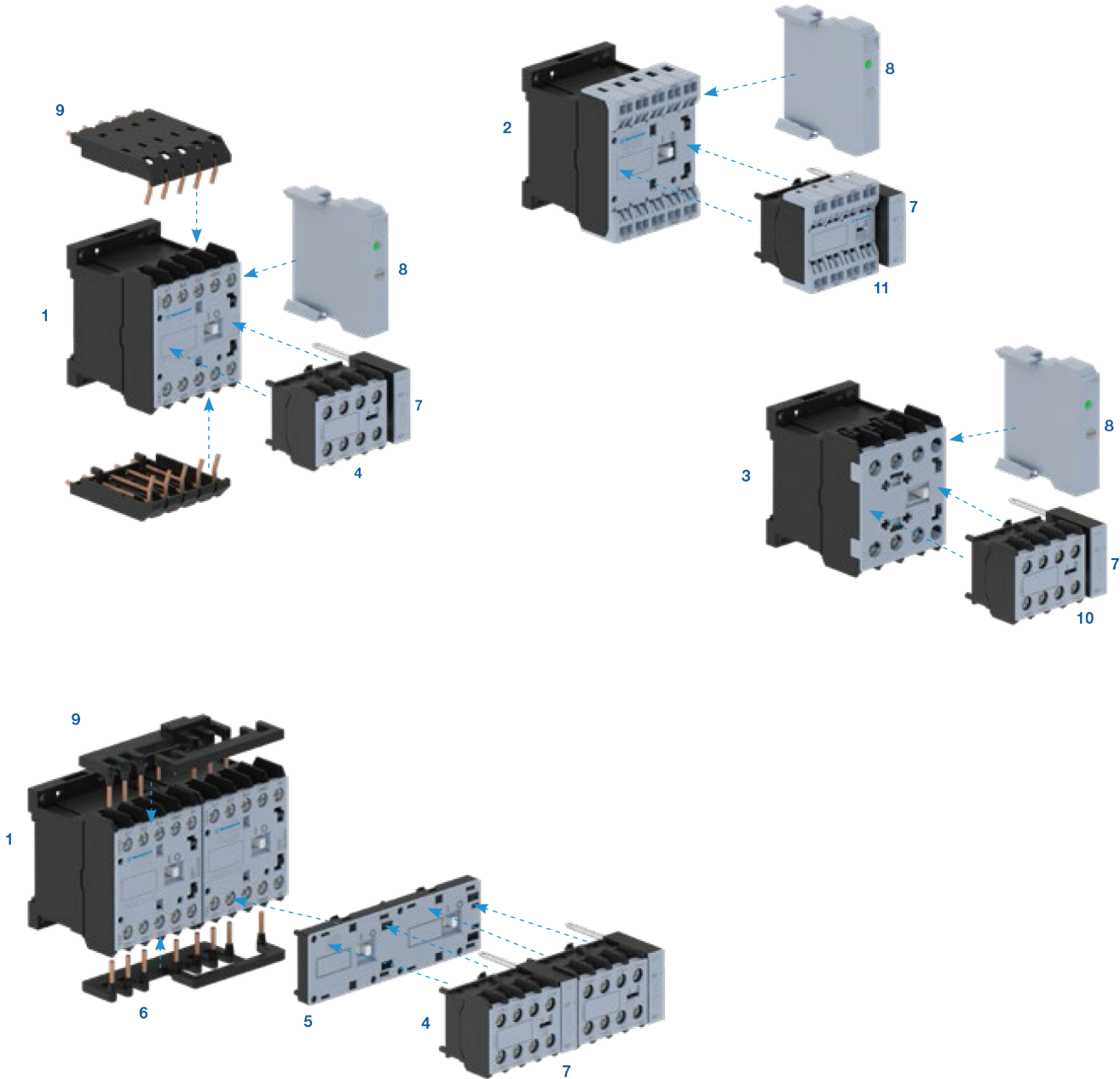
### Connectors for WIC Printed Circuit Boards

The accessory allows mounting the WCC7...16 and WCCA 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.



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 WCC line complies with the RoHS requirements.

# WCC Compact Contactors - Accessories Overview



- 1 - Compact contactors WCC7...16 and WCCA0 (screw terminal)
- 2 - Compact contactors WCC7...12\_S and WCCA0\_S (spring terminal)
- 3 - Compact contactor WCC25 (screw terminal)
- 4 - Auxiliary contact block BFC (screw terminal)
- 5 - Mechanical interlock block WBCI or latch block WRC
- 6 - Easy connection busbars
- 7 - Surge suppressor blocks WRCC (RC), WVRC (varistor), WDIC (diode), WRCAC (RC), WDIZ (diode+zener)
- 8 - Electronic timers WTCE, WTD and WTEC
- 9 - Block module for printed circuit board WIC
- 10 - Auxiliary contact block WBFC25 (screw terminal)
- 11 - Auxiliary contact block WBFC\_S (spring terminal)



## WCC Compact Contactors - Selection Table



2

Compact Contactor WCC

### Three-Pole - 7 A to 22 A (AC-3) <sup>4)</sup>

Rated operational current $I_e$ AC-3 ( $U_e \leq 440$ V) A	Conv. thermal current $I_{th} = I_e$ AC-1 A	Maximum rated operational power of three-phase motors 50/60 Hz <sup>1)</sup>						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  NO	L*1 *2 NC	Screw terminal	Spring terminal	Weight kg	
7	18	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	1 0	0 1	WCC7-10-30 ♦ WCC7-01-30 ♦	WCC7-10-30 ♦ S WCC7-01-30 ♦ 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	WCC9-10-30 ♦ WCC9-01-30 ♦	WCC9-10-30 ♦ S WCC9-01-30 ♦ 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	WCC12-10-30 ♦ WCC12-01-30 ♦	WCC12-10-30 ♦ S WCC12-01-30 ♦ S		
16	22	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	1 0	0 1	WCC16-10-30 ♦ WCC16-01-30 ♦	- -		
22	32	5.5 / 7.5	11 / 15	11 / 15	11 / 15	11 / 15	11 / 15	0	0	WCC25-00-30 ♦	-	0.200	-

Replace "♦" with the appropriate coil voltage code <sup>2)</sup>.

AC coil - 50/60 Hz												
Applicable for WCC7...WCC25 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 WCC7...WCC16 models					
Coil voltage codes	C03		C06		C07
V dc	24		42		48
					110
					220

DC coil - Low consumption coil <sup>3)</sup>					
Applicable for WCC7...WCC16 models					
Coil voltage codes	L03		L06		L07
V dc	24		42		48
					110
					220

Order Reference			
Screw terminal	Ref.No.	Spring terminal	Ref.No.
WCC7-10-30	W605983	WCC7-10-30 ♦ S	W605992
WCC7-01-30	W605984	WCC7-01-30 ♦ S	W605993
WCC9-10-30	W605985	WCC9-10-30 ♦ S	W605994
WCC9-01-30	W605986	WCC9-01-30 ♦ S	W605995
WCC12-10-30	W605987	WCC12-10-30 ♦ S	W605996
WCC12-01-30	W605988	WCC12-01-30 ♦ S	W605997
WCC16-10-30	W605989		
WCC16-01-30	W605990		
WCC25-00-30	W605991		

Notes: 1) For 50/60 Hz three-phase, 4 poles WESTINGHOUSE 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 WCC with low consumption coil allows only 2 additional auxiliary contacts;

# WCC Compact Contactors - Selection Table



## Three-Pole Reversing Starter with Mechanical Interlock - 7 A to 16 A (AC-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						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  NO	L1 *2 NC	Screw terminal	Spring terminal	Weight kg	
7	18	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	1 0	0 1	WCCI07-10-30♦ WCCI07-01-30♦	WCCI07-10-30♦S WCCI07-01-30♦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	WCCI09-10-30♦ WCCI09-01-30♦	WCCI09-10-30♦S WCCI09-01-30♦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	WCCI12-10-30♦ WCCI12-01-30♦	WCCI12-10-30♦S WCCI12-01-30♦S		
16	22	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	1 0	0 1	WCCI16-10-30♦ WCCI16-01-30♦	- -		

Replace "♦" with the appropriate coil voltage code <sup>2)</sup>.

AC coil - 50/60 Hz												
Applicable for WCC7...WCC25 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 WCCI07...WCCI16 models						
Coil voltage codes	C03		C06	C07	C12	C15
V dc	24		42	48	110	220

Order Reference			
Screw terminal	Ref.No.	Spring terminal	Ref.No.
WCCI07-10-30♦	W605998	WCCI07-10-30♦S	W606007
WCCI07-01-30♦	W605999	WCCI07-01-30♦S	W606008
WCCI09-10-30♦	W606000	WCCI09-10-30♦S	W606009
WCCI09-01-30♦	W606001	WCCI09-01-30♦S	W606010
WCCI09-01-30♦	W606002	WCCI12-10-30♦S	W606011
WCCI12-10-30♦	W606003	WCCI12-01-30♦S	W606012
WCCI12-01-30♦	W606004		
WCCI16-10-30♦	W606005		
WCCI16-01-30♦	W606006		

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

# WCC Compact Contactors - Selection Table



2

## Three-Pole for Printed Circuit Boards - 7 A to 16 A (AC-3)

Compact Contactor WCC

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 <sup>1)</sup>						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 NO	1 2 NC	Cat.No.	Ref.No.	Weight	
		kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	kW / HP	kg	kg				
7	18	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	1 0	0 1	WCC7-10-30 ♦ I WCC7-01-30 ♦ I	W606013 W606014	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	WCC9-10-30 ♦ I WCC9-01-30 ♦ I	W606015 W606016		
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	WCC12-10-30 ♦ I WCC12-01-30 ♦ I	W606017 W606018		
16	22	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	1 0	0 1	WCC16-10-30 ♦ I WCC16-01-30 ♦ I	W606019 W606020		

Replace " ♦ " with the appropriate coil voltage code <sup>2)</sup>.

AC coil - 50/60 Hz												
Applicable for WCC7...WCC25 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 WCC7...WCC16 models					
Coil voltage codes	C03	C06	C07	C12	C15
V dc	24	42	48	110	220

DC coil - Low consumption coil					
Applicable for WCC7...WCC16 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 WESTINGHOUSE 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 WCC with low consumption coil allows only 2 additional auxiliary contacts;

# WCC Compact Contactors - Selection Table



## Control Relay

Rated thermal current $I_{th}$ AC-1 A	Rated current $I_{eAC-15}$ 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	WCCA0-22-00♦	WCCA0-22-00♦S	0.180	0.200
						WCCA0-31-00♦	WCCA0-31-00♦S		
						WCCA0-40-00♦	WCCA0-40-00♦S		
						WCCA0-13-00♦	WCCA0-13-00♦S		
						WCCA0-04-00♦	WCCA0-04-00♦S		

Replace "♦" with the appropriate coil voltage code <sup>1)</sup>.

AC coil - 50/60 Hz												
Applicable for WCC7...WCC25 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 WCCA0 models					
Coil voltage codes	C03	C07	C09	C12	C15
V dc	24	48	60	110	220

DC Coil - Low consumption <sup>2)</sup>					
Applicable for WCCA0 models					
Coil voltage codes	L03	L06	L07	L12	L15
V dc	24	42	48	110	220

Order Reference			
Screw terminal	Ref.No.	Spring terminal	Ref.No.
WCCA0-22-00♦	W606021	WCCA0-22-00♦S	W606026
WCCA0-31-00♦	W606022	WCCA0-31-00♦S	W606027
WCCA0-40-00♦	W606023	WCCA0-40-00♦S	W606028
WCCA0-13-00♦	W606024	WCCA0-13-00♦S	W606029
WCCA0-04-00♦	W606025	WCCA0-04-00♦S	W606030

Notes: 1) Other voltages available;

2) The compact contactor WCC with low consumption coil allows only 2 additional auxiliary contacts;



# WCC Compact Contactors - Selection Table



2

Compact Contactor WCC

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

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	WCC7-00-40 ♦	WCC7-00-40 ♦S	0.195	0.230
20			WCC9-00-40 ♦	WCC9-00-40 ♦S		
22			WCC12-00-40 ♦	WCC12-00-40 ♦S		
22			WCC16-00-40 ♦	-		
18	2	2	WCC7-00-22 ♦	WCC7-00-22 ♦S		
20			WCC9-00-22 ♦	WCC9-00-22 ♦S		
22			WCC12-00-22 ♦	WCC12-00-22 ♦S		
22			WCC16-00-22 ♦	-		

Replace " ♦ " with the appropriate coil voltage code <sup>1)</sup>.

AC coil - 50/60 Hz											
Applicable for WCC7...WCC25 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 WCC7...WCC16 four-pole (4NO) models					
Coil voltage codes	C03	C07	C09	C12	C15
V dc	24	48	60	110	220

DC Coil - Low consumption <sup>2)</sup>					
Applicable for WCC7...WCC16 four-pole (4NO) models					
Coil voltage codes	L03	L06	L07	L12	L15
V dc	24	42	48	110	220

DC Coil (0.75 x U <sub>c</sub> )					
Applicable for WCC7...WCC16 four-pole 2P/2R (2NO+2NC) models					
Coil voltage codes	R03	R06	R07	R12	R15
V dc	24	42	48	110	220

Order Reference			
Screw terminal	Ref.No.	Spring terminal	Ref.No.
WCC7-00-40 ♦	W606031	WCC7-00-40 ♦S	W606039
WCC9-00-40 ♦	W606032	WCC9-00-40 ♦S	W606040
WCC12-00-40 ♦	W606033	WCC12-00-40 ♦S	W606041
WCC16-00-40 ♦	W606034	WCC7-00-22 ♦S	W606042
WCC7-00-22 ♦	W606035	WCC9-00-22 ♦S	W606043
WCC9-00-22 ♦	W606036	WCC12-00-22 ♦S	W606044
WCC12-00-22 ♦	W606037		
WCC16-00-22 ♦	W606038		

Notes: 1) Other voltages available;

2) The compact contactor WCC with low consumption coil allows only 2 additional auxiliary contacts;

# WCC Compact Contactors - Selection Table



## Three-Pole with Latch Block - 5.6 A to 12.8 A (AC-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 <sup>1)</sup>						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 NO	L*1 *2 NC	Screw terminal	Spring terminal	Weight 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	WCCH-10-30 ♦ WCCH-01-30 ♦	WCCH-10-30 ♦S WCCH-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	WCCH09-10-30 ♦ WCCH09-01-30 ♦	WCCH09-10-30 ♦S WCCH09-01-30 ♦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	WCCH012-10-30 ♦ WCCH012-01-30 ♦	WCCH012-10-30 ♦S WCCH012-01-30 ♦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	WCCH016-10-30 ♦ WCCH016-01-30 ♦	WCCH016-10-30 ♦S WCCH016-01-30 ♦S		

## Control Relay with Latch Block

Rated operational current $I_e$		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 NO	L*1 *2 NC	Screw terminal	Spring terminal	Weight kg	
8	4.8	2	2	WCCHA0-22-00 ♦	WCCHA0-22-00 ♦S	0.377	0.444
8	4.8	3	1	WCCHA0-31-00 ♦	WCCHA0-31-00 ♦S		
8	4.8	4	-	WCCHA0-40-00 ♦	WCCHA0-40-00 ♦S		
8	4.8	1	3	WCCHA0-13-00 ♦	WCCHA0-13-00 ♦S		
8	4.8	-	4	WCCHA0-04-00 ♦	WCCHA0-04-00 ♦S		

Replace "♦" with the appropriate coil voltage code<sup>2)</sup>.

AC coil - 50/60 Hz											
Applicable for WCC7...WCC25 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 WCCH07...WCCH016 models					
Coil voltage codes	C03		C06		C15
V dc	24		42		220

Order Reference Three-Pole with Latch Block - 5.6 A to 12.8 A (AC-3)				Control Relay with Latch Block			
Screw terminal	Ref.No.	Spring terminal	Ref.No.	Screw terminal	Ref.No.	Spring terminal	Ref.No.
WCCH-10-30 ♦	W606045	WCCH-10-30 ♦S	W606053	WCCHA0-22-00 ♦	W606061	WCCHA0-22-00 ♦S	W606066
WCCH-01-30 ♦	W606046	WCCH-01-30 ♦S	W606054	WCCHA0-31-00 ♦	W606062	WCCHA0-31-00 ♦S	W606067
WCCH09-10-30 ♦	W606047	WCCH09-10-30 ♦S	W606055	WCCHA0-40-00 ♦	W606063	WCCHA0-40-00 ♦S	W606068
WCCH09-01-30 ♦	W606048	WCCH09-01-30 ♦S	W606056	WCCHA0-13-00 ♦	W606064	WCCHA0-13-00 ♦S	W606069
WCCH012-10-30 ♦	W606049	WCCH012-10-30 ♦S	W606057	WCCHA0-04-00 ♦	W606065	WCCHA0-04-00 ♦S	W606070
WCCH012-01-30 ♦	W606050	WCCH012-01-30 ♦S	W606058				
WCCH016-10-30 ♦	W606051	WCCH016-10-30 ♦S	W606059				
WCCH016-01-30 ♦	W606052	WCCH016-01-30 ♦S	W606060				

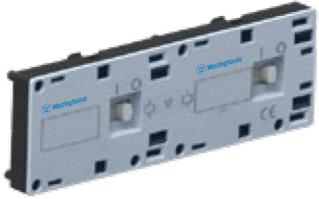
Notes: 1) For 50/60 Hz three-phase, 4 poles WESTINGHOUSE standard motors. These values are only for reference and may change depending on the number of poles and motor design;  
2) Other voltages available;

## Accessories

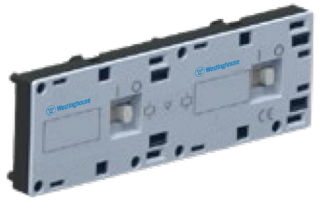
### Auxiliary Contact Blocks

Illustrative picture	For use with	Max. number of contacts/compact contactor	Auxiliary contacts		For use with WCC (3 pole)		For use with WCC (4 pole)		For use with WCCA0		Weight kg
			NO	NC	Reference code		Reference code		Reference code		
					Screw terminal	Spring terminal	Screw terminal	Spring terminal	Screw terminal	Spring terminal	
	WCC7...16 WCCA0	2	2	0	WBFC-20	WBFC-20S	WBC4-20	WBC4-20S	WBCA-20	WBCA-20S	0.03
			1	1	WBFC-11	WBFC-11S	WBC4-11	WBC4-11S	WBCA-11	WBCA-11S	
			0	2	WBFC-02	WBFC-02S	WBC4-02	WBC4-02S	WBCA-02	WBCA-02S	
		4	4	0	WBFC-40 <sup>1)</sup>	WBFC-40S <sup>1)</sup>	WBC4-40 <sup>1)</sup>	WBC4-40S <sup>1)</sup>	WBCA-40 <sup>1)</sup>	WBCA-40S <sup>1)</sup>	
			2	2	WBFC-22 <sup>1)</sup>	WBFC-22S <sup>1)</sup>	WBC4-22 <sup>1)</sup>	WBC4-22S <sup>1)</sup>	WBCA-22 <sup>1)</sup>	WBCA-22S <sup>1)</sup>	
			0	4	WBFC-04 <sup>2)</sup>	WBFC-04S <sup>2)</sup>	WBC4-04 <sup>2)</sup>	WBC4-04S <sup>2)</sup>	WBCA-04 <sup>2)</sup>	WBCA-04S <sup>2)</sup>	
			3	1	WBFC-31 <sup>1)</sup>	WBFC-31S <sup>1)</sup>	WBC4-31 <sup>1)</sup>	WBC4-31S <sup>1)</sup>	WBCA-31 <sup>1)</sup>	WBCA-31S <sup>1)</sup>	
	1	3	WBFC-13 <sup>2)</sup>	WBFC-13S <sup>2)</sup>	WBC4-13 <sup>2)</sup>	WBC4-13S <sup>2)</sup>	WBCA-13 <sup>2)</sup>	WBCA-13S <sup>2)</sup>			
	WCC25	2	2	0	WBFC25-20	-	-	-	-		
			1	1	WBFC25-11	-	-	-	-		
			0	2	WBFC25-02	-	-	-	-		
	4	2	2	WBFC25-22	-	-	-	-			

### Mechanical Interlock<sup>2)</sup>

Illustrative picture	For use with	Description	Reference code	Weight kg
	WCC7...16 WCCA0	<ul style="list-style-type: none"> <li>- Front mounting;</li> <li>- For the mechanical interlock using 2 compact contactors (AC or DC coil);</li> <li>- Can be mounted with the following accessories: auxiliary contact block, surge suppressor and timers.</li> </ul>	WBCI	0.014

### Mechanical Latch Block<sup>2)</sup>

Illustrative picture	For use with	Description	Reference code	Weight kg
	WCC7...16 WCCA0	<ul style="list-style-type: none"> <li>- Front mounting;</li> <li>- For the mechanical interlock using 2 compact contactors (AC or DC coil);</li> <li>- Can be mounted with the following accessories: auxiliary contact block, surge suppressor and timers.</li> </ul>	WRC	0.014

Notes: 1) The compact contactors WCC with DC low consumption coils allows only 2 additional auxiliary contacts. For applications that use 4 auxiliary contacts use WCC with standard DC coils.

2) Not suitable to be used with WCC compact contactors or WCCA0 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	Ref.No.	Weight kg
	WCC7...25 WCCA0		12-24 V 50/60 Hz	WRCC-1 D49	W606071	0.008
			24-48 V 50/60 Hz	WRCC-2 D53	W606072	
			50-127 V 50/60 Hz	WRCC-3 D55	W606073	
			130-250 V 50/60 Hz	WRCC-4 D63	W606074	
			275-380 V 50/60 Hz	WRCC-5 D84	W606075	
			400-510 V 50/60 Hz	WRCC-6 D73	W606076	
	WCC7...16 WCCA0		180...230 V 50/60 Hz	WRAC D87 <sup>1)</sup>	W606077	
	WCC7...25 WCCA0		12-48 V 50/60 Hz / 12-60 V dc	WVRC-1 E49	W606078	
		50-127 V 50/60 Hz / 60-180 V dc	WVRC-2 E34	W606079		
		130-250 V 50/60 Hz / 180-300 V dc	WVRC-3 E50	W606080		
		277-380 V 50/60 Hz / 300-510 V dc	WVRC-4 E41	W606081		
		400-510 V 50/60 Hz	WVRC-5 D73	W606082		
	WCC7...16 WCCA0		12-600 V dc	WDIC-1 C33	W606083	
			12...250 V dc	WDIZ C26	W606084	

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  $(U_s/230 V) \times 1.4 \text{ mA}$ . ( $U_s$  = Rated voltage).

## Electronic 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 (TECO)	3 - 0.3 to 3 seconds	24-240 V 50/60 Hz - DC	WTCE-U003S-E05	0.02			
		10 - 1 to 10 seconds		WTCE-U010S-E05				
		30 - 3 to 30 seconds		WTCE-U030S-E05				
		60 - 6 to 60 seconds		WTCE-U060S-E05				
		100 - 10 to 100 seconds		WTCE-U100S-E05				
		300 - 30 to 300 seconds		WTCE-U300S-E05				
		1,800 - 180 to 1,800 seconds		WTCE-U030M-E05				
		-						
	Off-Delay (TDCO)	3 - 0.3 to 3 seconds	24-60 V 50/60 Hz - DC 100-240 V 50/60 Hz - DC	24-60 V ac/dc		100-240 V ac/dc	WTD-U010S-E04	WTD-U003S-E09
		10 - 1 to 10 seconds		WTD-U003S-E04		WTD-U010S-E09		
		30 - 3 to 30 seconds		WTD-U030S-E04		WTD-U030S-E09		
		60 - 6 to 60 seconds		WTD-U060S-E04		WTD-U060S-E09		
		100 - 10 to 100 seconds		WTD-U100S-E04		WTD-U100S-E09		
		300 - 30 to 300 seconds		WTD-U300S-E04		WTD-U300S-E09		
		1,800 - 180 to 1,800 seconds		WTD-U030M-E04		WTD-U030M-E09		
		-						
	Start-Delta (TETCO)	30 - 3 to 30 seconds	24-28 V 50/60 Hz	WTEC-U030S-D52				
			110-130 V 50/60 Hz	WTEC-U030S-D61				
		220-240 V 50/60 Hz	WTEC-U030S-D66					
Functions	On-Delay WTCE	Off-Delay WTD	Start-Delta WTEC					
Functionals diagrams								
Diagrams								



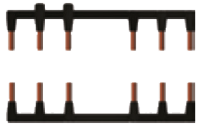
## Accessories

### Printed Circuit Board Link Module

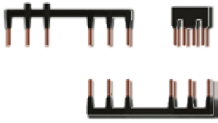
Illustrative picture	For use with	Description	Reference code	Weight kg
	WCC7...16 WCCA0	<ul style="list-style-type: none"> <li>- Direct mounting on the terminals</li> <li>- Allows direct mounting on printed circuit board</li> <li>- Same current capacity (up to 16 A in AC-3 and 22 A in AC-1)</li> </ul>	WIC	0.130

**2**

### Reversing Wiring Kits

Illustrative picture	Rated operational current I <sub>AC-3</sub> (U <sub>e</sub> ≤ 440 V) A	Max. rated operational power of three-phase motors 50/60 Hz						Compact contactors K1 = K2	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			
	7	1.5 / 2	3 / 4	3 / 4	3.7 / 5	3.7 / 5	3 / 4	WCC7	WECC-R (with electrical interlock)	0.13
	9	2.2 / 3	4 / 5	4 / 5	4.5 / 6	4.5 / 6	4 / 5	WCC9	WECC-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	WCC12		
	16	4 / 5	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	7.5 / 10	WCC16		

### Star-Delta Wiring

Illustrative picture	Rated operational current I <sub>AC-3</sub> (U <sub>e</sub> ≤ 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	WCC7	WCC7	WECC-SD	0.13
	18	3.7 / 5	7.5 / 10	9.2 / 12.5	WCC12			
	25	5.5 / 7.5	11 / 15	15 / 20	WCC16			


**Compact Contactor WCC**

# Technical Data

## Terminal Markings

Circuit diagram	Auxiliary contacts configuration	Auxiliary contacts		Contactor base reference
		NO	NC	
<b>Three-pole compact contactors with built-in auxiliary contact</b>				
	10	1	0	WCC7-10-30 ♦ WCC9-10-30 ♦ WCC12-10-30 ♦ WCC16-10-30 ♦
	01	0	1	WCC7-01-30 ♦ WCC9-01-30 ♦ WCC12-01-30 ♦ WCC16-01-30 ♦
<b>Three-pole compact contactors without built-in auxiliary contact</b>				
	00	0	0	WCC25-00-30 ♦
<b>Control relay</b>				
	40	4	0	WCCA0-40-00 ♦
	31	3	1	WCCA0-31-00 ♦
	22	2	2	WCCA0-40-00 ♦
	13	1	3	WCCA0-13-00 ♦
	04	0	4	WCCA0-04-00 ♦
<b>Three-pole compact contactors with built-in auxiliary contact and latch block</b>				
	10	1	0	WCCH07-10-30 ♦ WCCH09-10-30 ♦ WCCH012-10-30 ♦ WCCH016-10-30 ♦
	01	0	1	WCCH07-01-30 ♦ WCCH09-01-30 ♦ WCCH012-01-30 ♦ WCCH016-01-30 ♦
Circuit diagram	Main contacts configuration	Main contacts		Contactor base reference
		NO	NC	
<b>Four-pole compact contactors</b>				
	40	4	0	WCC7-00-40 ♦ WCC9-00-40 ♦ WCC12-00-40 ♦ WCC16-00-40 ♦
	22	2	2	WCC7-00-22 ♦ WCC9-00-22 ♦ WCC12-00-22 ♦ WCC16-00-22 ♦

# Technical Data

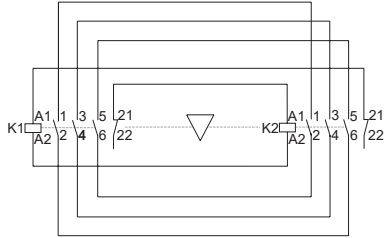
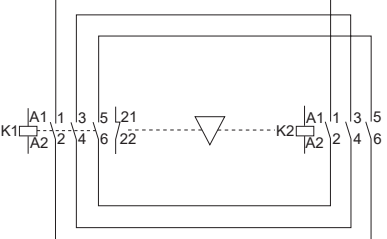
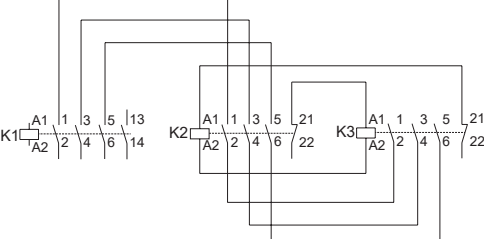
## Terminal Markings

Circuit diagram	Auxiliary contacts configuration	Auxiliary contacts		Contactor base reference
		NO	NC	
Control relay with latch block				
	40	4	0	WCCHA0-40-00 ♦
	31	3	1	WCCHA0-31-00 ♦
	22	2	2	WCCHA0-22-00 ♦
	04	0	4	WCCHA0-04-00 ♦
	13	1	3	WCCHA0-13-00 ♦

Auxiliary contacts configuration	Auxiliary contacts		For use with (3-pole)		For use with WCC (4-pole)		For use with WCCA0	
	NO	NC	Circuit diagram	Reference	Circuit diagram	Reference	Circuit diagram	Reference
Frontal auxiliary contact block								
20	2	0		WBFC-20♦ WBFC25-20		WBC4-20♦		WBCA-20 ♦
11	1	1		WBFC-11♦ WBFC25-11		WBC4-11♦		WBCA-11 ♦
02	0	2		WBFC-02♦ WBFC25-02		WBC4-02♦		WBCA-02 ♦
40	4	0		WBFC-40♦		WBC4-40♦		WBCA-40 ♦
22	2	2		WBFC-22♦ WBFC25-22		WBC4-22♦		WBCA-22 ♦
04	0	4		WBFC-04♦		WBC4-04♦		WBCA-04 ♦
31	3	1		WBFC-31♦		WBC4-31♦		WBCA-31 ♦
13	1	3		WBFC-13♦		WBC4-13♦		WBCA-13 ♦

2 Compact Contactor WCC

# Technical Data

Diagram	Components
	<p>WCC7...16 + WBCI + WECC-R</p>
	<p>WCC7...16 + WBCI + WECC-RNI</p>
	<p>WCC7...16 + WECC-SD</p>



## Technical Data

### General Data

Reference code	WCCA0	WCC7	WCC9	WCC12	WCC16	WCC25
Standards	IEC/EN 60947 / UL 508					
Rated insulation voltage $U_i$ (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660 (V) UL, CSA (V)		690 600			
Rated impulse withstand voltage $U_{imp}$ (IEC/EN 60947-1)	4 (kV)					
Rated operational frequency (Hz)	25...400					
Mechanical lifespan	AC coil Ops x 10 <sup>-6</sup>		10			3
	DC coil Ops x 10 <sup>-6</sup>		12			-
Electrical lifespan	$I_e$ AC-3 Ops x 10 <sup>-6</sup>		-	1.4	1.3	1.2
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	WCCA0, WCC7...16	WCC25
Rated insulation voltage $U_i$ (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660 (V) UL, CSA (V)	1,000 600
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
	Drop out (xUs)	0.25...0.65
Coil 50/60 Hz	Pick up (xUs)	0.5...0.8
	Drop out (xUs)	0.2...0.6
Average consumption	1.0 x Us coil cold state	
Coil 60 Hz	Magnetic circuit closed (VA)	2.5...3.5
	Power factor (cos φ)	0.28
	Power dissipation per pole (W)	2.6
	Magnetic circuit closing (VA)	35
	Power factor (cos φ)	0.85
Coil 50/60 Hz	Magnetic circuit closed (VA)	2...3
	Magnetic circuit closing (VA)	30
Average time	Closing NO contacts (ms)	8...20
	Opening NO contacts (ms)	6...13

### Control Circuit - Direct Current (DC)

Reference code	WCCA0, WCC7...16	WCC7...16
Coil type	Conventional	Low consumption
Rated insulation voltage $U_i$ (pollution degree 3)	Conventional: 1,000 Low consumption: 600	
Standard voltages (V)	12...440	
Coil operating limits (xUs)	0.85...1.1	
Pick up (xUs)	0.4...0.7	
	Drop out (xUs)	
Power consumption	1.0 x Us coil cold state	
	Magnetic circuit closed (W)	2.6...3.7
Magnetic circuit closing (W)	1.7...2.7	
	2.9...4	
Operation time	Closing NO contacts (ms)	
	Opening NO contacts (ms)	

# Technical Data

## Power Circuit

Reference code			WCC7	WCC9	WCC12	WCC16	WCC25
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 <sup>1)</sup>	(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	( $U_e=400$ 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 <sup>1)</sup>	(kA)	5				
	Coordination type 1	(A)	35	35	35	35	50
	Coordination type 2	(A)	20	20	25	25	35
Average impedance per pole		(m $\Omega$ )	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	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 <sup>1)</sup> (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 WESTINGHOUSE 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		WCC7	WCC9	WCC12	WCC16	WCC25	
		Utilization category AC-1					
		3P (NO) or 4P (4NO)				3P (NO)	
Rated thermal current $I_n$ ( $\theta \leq 55^\circ\text{C}$ )	(A)	18	20	22	22	32	
Maximum operational current (up to 690 V)	$\theta \leq 40^\circ\text{C}$	(A)	18	20	22	22	32
	$\theta \leq 55^\circ\text{C}$	(A)	18	20	22	22	32
	$\theta \leq 70^\circ\text{C}$	(A)	14.4	16	17.6	17.6	25.6
Maximum operational power $\theta \leq 55^\circ\text{C}$ 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		$I_n \times 1.7$				
	3 poles in parallel		$I_n \times 2.4$				
	4 poles in parallel		$I_n \times 3.2$				
Percentage of the max. operational current at	600 ops./h	(%)	100				
	1,200 ops./h	(%)					
	3,000 ops./h	(%)					
Maximum operational power $\theta \leq 55^\circ\text{C}$ (resistive load)			2P (NO/NC) or 4P (2NO + 2NC)			2P (NO/NC)	
	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		WCC7	WCC9	WCC12	WCC16	WCC25
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		WCC7...16	WCCA0
Standards		IEC/EN 60947-5-1, IEC/EN 60947-4-1	
Rated insulation voltage $U_i$ (pollution degree 3)	IEC/EN, VDE 0660 (V) UL, CSA (V)	690	
Rated operational voltage $U_e$	IEC/EN, VDE 0660 (V) UL, CSA (V)	690	
Rated thermal current $I_{th}$ ( $\theta \leq 55^\circ\text{C}$ )	(A)	10	
Rated operational current $I_e$			
AC-15 (IEC/EN 60947-5-1)	$U_e \leq 240\text{ V}$	(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)	$U_e \leq 400\text{ V } 50/60\text{ Hz - AC-15}$	(A)	$10 \times I_e(\text{AC-15})$
Breaking capacity (rms)	$U_e \leq 400\text{ V } 50/60\text{ Hz - AC-15}$	(A)	$10 \times I_e(\text{AC-15})$
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		WBFC / WBFC25	
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 <sup>1)</sup> (V)	600	
Rated operational voltage $U_e$	IEC/EN, VDE 0660 (V)	690	
	UL, CSA <sup>1)</sup> (V)	600	
Rated thermal current $I_{th}$ ( $\theta \leq 55^\circ\text{C}$ ) (A)		10	
Rated operational current $I_e$			
AC-15 (IEC/EN 60947-5-1)	$U_e \leq 240\text{ V}$ (A)	10	
	380-400 V (A)	6	
	415-440 V (A)	6	
	500 V (A)	4	
	660-690 V (A)	-	
UL, CSA <sup>1)</sup>		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 <sup>1)</sup>		Q600	
Making capacity (rms)	$U_e \leq 400\text{ V}$ 50/60 Hz - AC-15 (A)	30	
Breaking capacity (rms)	$U_e \leq 400\text{ V}$ 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		WTCE, WTD, WTEC	
Rated insulation voltage (U)		V	300
Supply voltage (U)	1 - 2 terminals	24...240 V dc/ V ac 50/60 Hz (WTCE)	
		24...60 V dc/ V ac 50/60 Hz (WTD)	
		100...240 V dc/ V ac 50/60 Hz (WTD)	
		220-240 V ac 50/60 Hz (WTEC)	
		110-130 V ac 50/60 Hz (WTEC)	
		24-28 V ac 50/60 Hz (WTEC)	
Control voltage (U) only WTD	2 - B1 terminals	24...60 V dc/ V ac 50/60 Hz (WTD)	
		100...240 V dc/ V ac 50/60 Hz (WTD)	
Voltage operational limits		0.85...1.1 x $U_c$ (V ac)	
		0.8...1.25 x $U_c$ (V dc)	
Consumption	mA	$\leq 5$	
Minimum time for reset (recovery time)	ms	650	
Minimum control time (only WTD)	ms	50	
Setting accuracy (% of the full scale value)	%	+/-5	
Repeat accuracy	%	+/-1	
Changeover time Y - $\Delta$	ms	50	

## Technical Data

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

Reference code	WCC7...WCC16 / WCCA0			WCC25		
Screw type	M3x 8 Flat / Phillips			M3.5x 9 Flat / Phillips		
Power terminal and built-in auxiliary terminal <sup>1)</sup>	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
mm <sup>2</sup>	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 WCC25.

### Terminal Capacity and Tightening Torque - Coil Terminals

Reference code	WCC7...WCC25 / WCCA0		
Screw type	M3.5x 8 Flat / Phillips		
Coil terminals	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm <sup>2</sup>	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	WBFC / WBCA / WBC4 / WBFC25		
Screw type	M3.5x9 Flat / Phillips		
Auxiliary contact block	Finely stranded with end sleeve	Stranded and finely stranded without end sleeve	Solid
mm <sup>2</sup>	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	WCC7_S... WCC12_S / WCCA0_S		WBFC_S / WBCA_S / WBC4_S
Terminal type	Spring terminal		
Power terminal	Finely stranded with end sleeve	Solid	
mm <sup>2</sup>	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
mm <sup>2</sup>	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)

U <sub>e</sub>	Reference	WCC7	WCC9	WCC12	WCC16	WCC25
	Serie poles	Rated operational current I <sub>e</sub> (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)

U <sub>e</sub>	Reference	WCC7	WCC9	WCC12	WCC16	WCC25
	Serie poles	Rated operational current I <sub>e</sub> (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	-

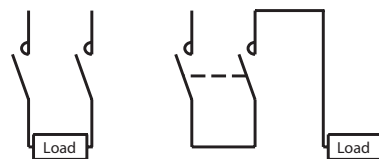
### DC-5(L/R ≤ 15ms)

U <sub>e</sub>	Reference	WCC7	WCC9	WCC12	WCC16	WCC25
	Serie poles	Rated operational current I <sub>e</sub> (A)				
≤ 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	-

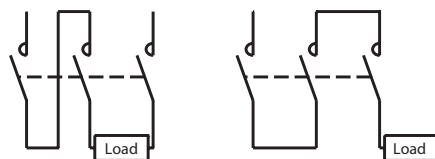
#### 1 Serie Pole



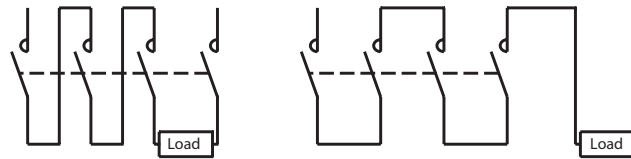
#### 2 Serie Poles



#### 3 Serie Poles

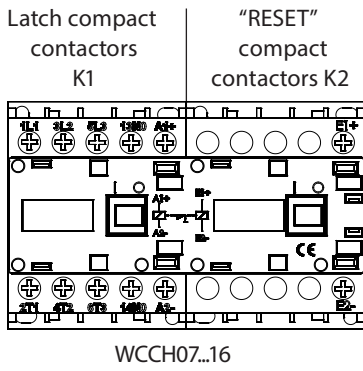


#### 4 Serie Poles

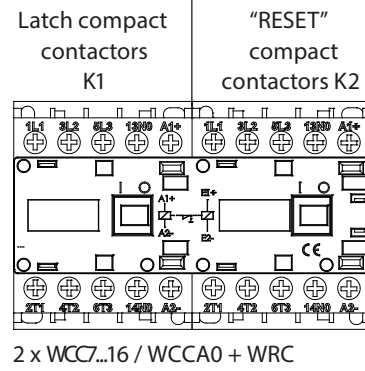


# Technical Data

## Operation Description of Latch Block WRC or WCCH0

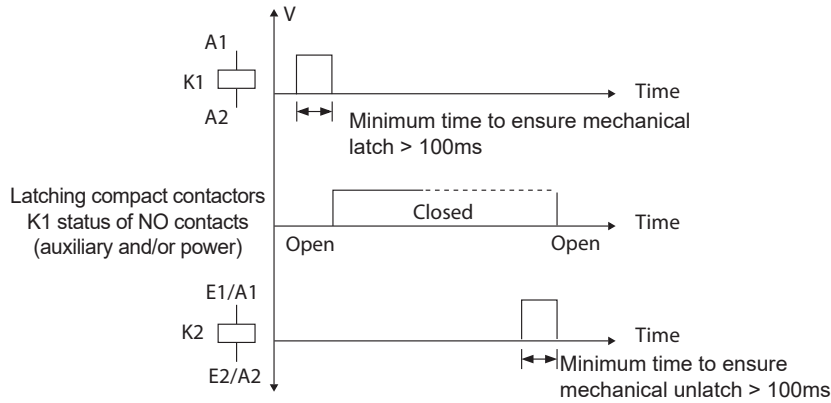


or



2 Compact Contactor WCC

### Functional Diagram



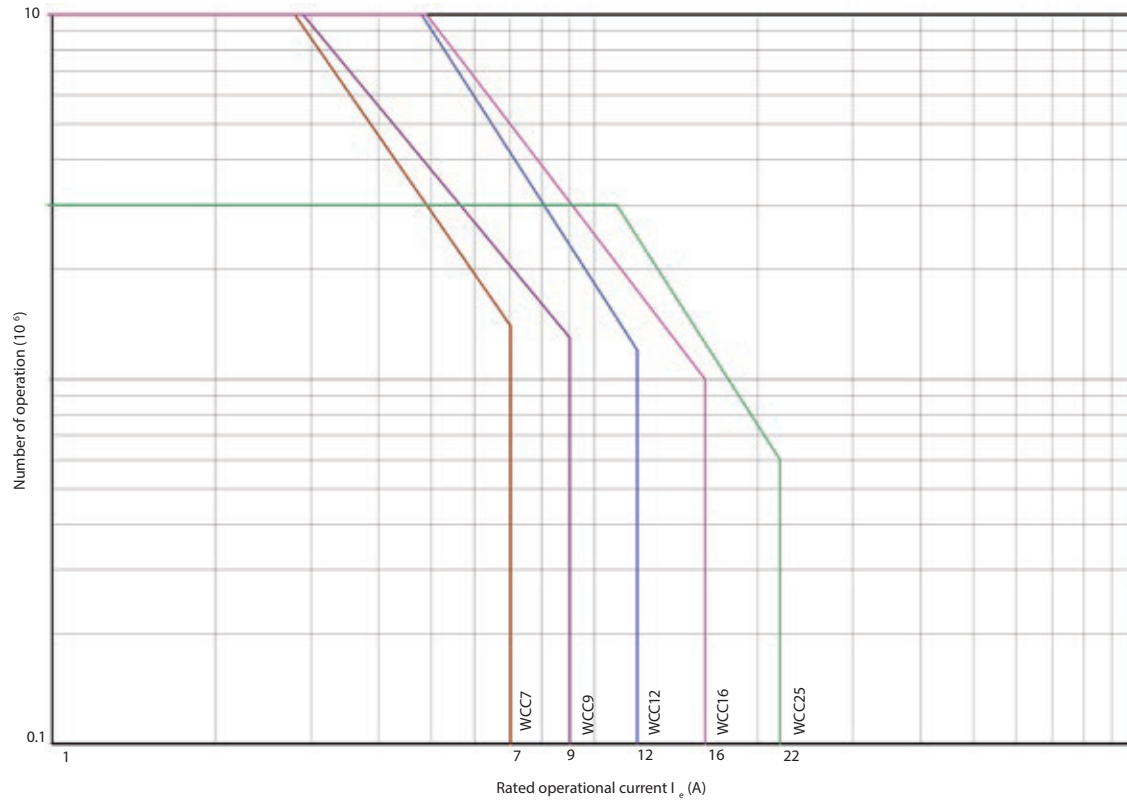
- ▬ After a minimum pulse of 100ms on compact contactors coil (K1), the WRC will keep K1 contacts switched on.
- ▬ The compact contactors K1 will only return to rest position after compact contactors coil (K2) be energized by a releasing pulse.
- ▬ The mechanical latch will always and only happen on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

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

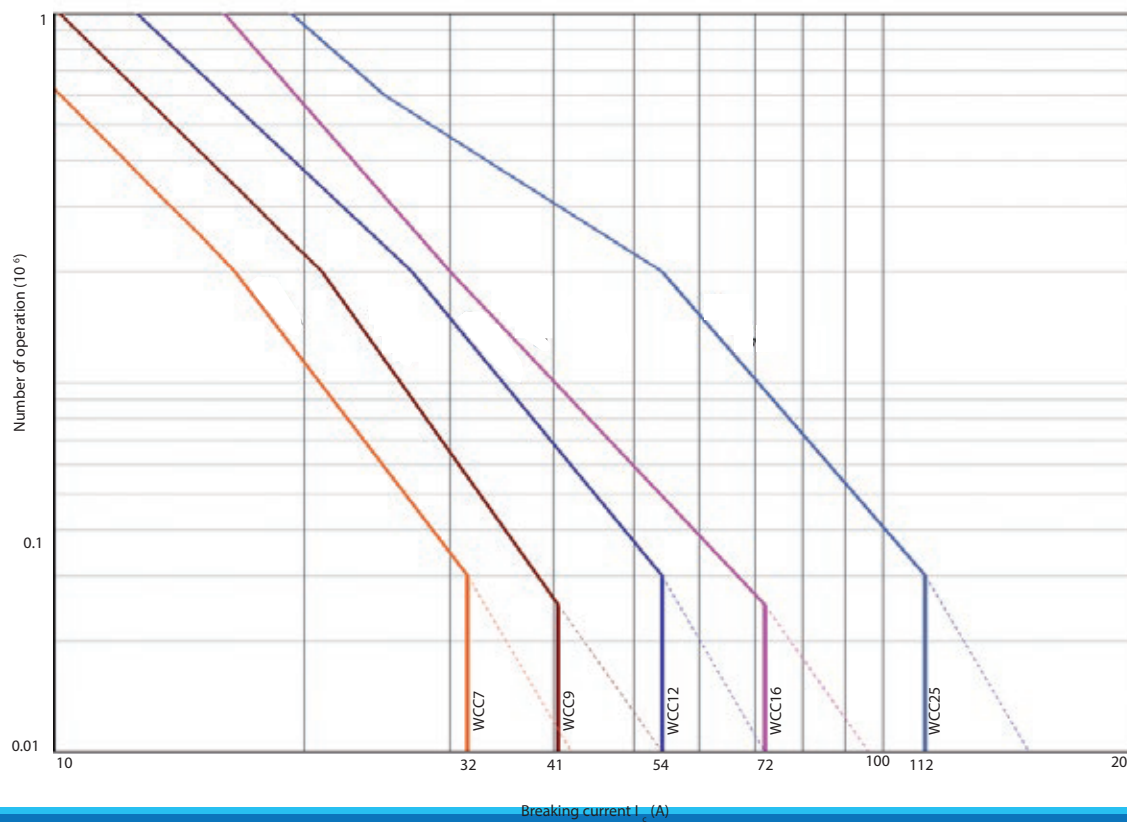
# Technical Data

## Electrical Lifespan

AC-3 ( $U_e \leq 440 \text{ V ac}$ )

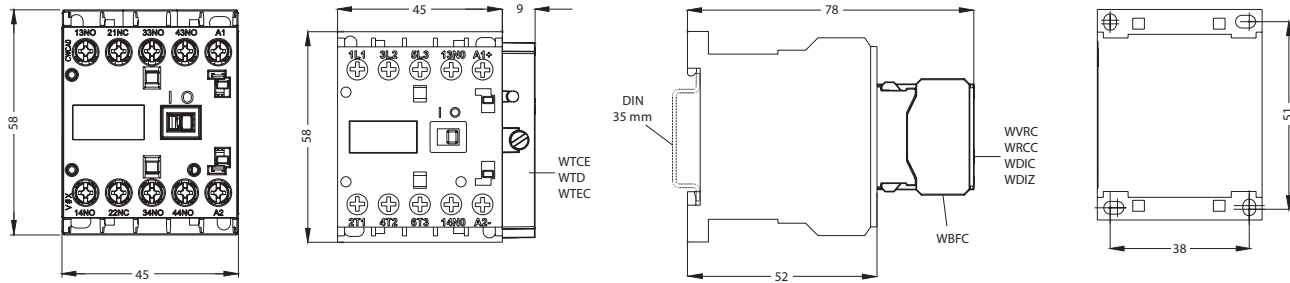


AC-4 ( $U_e \leq 440 \text{ V ac}$ )

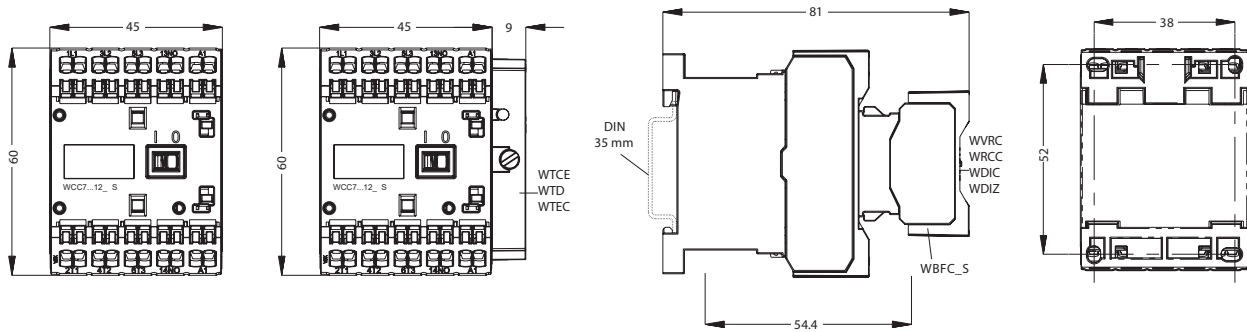


## Dimensions (mm)

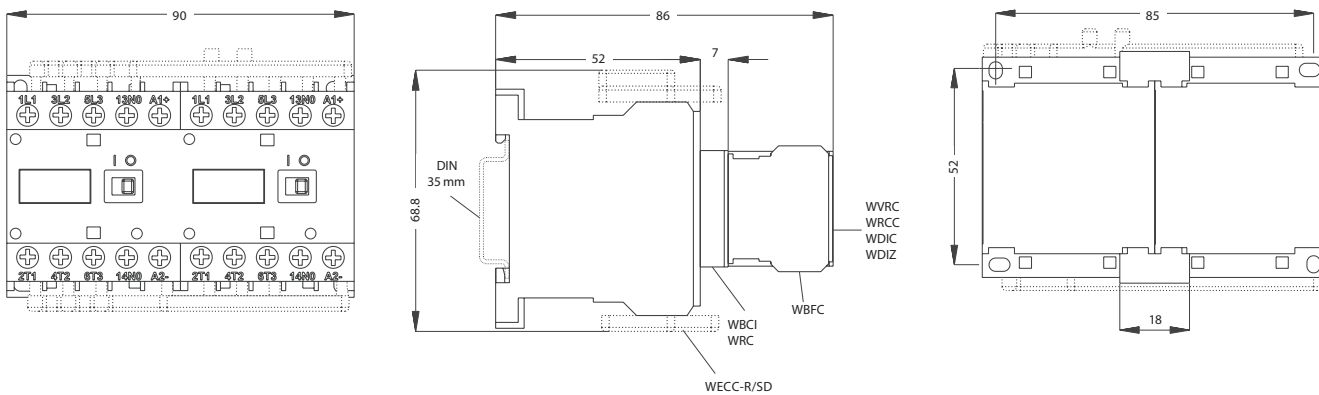
### WCC7...16 and WCCA0 - (AC and DC Coil) - Screw Terminal



### WCC7...012\_S, and WCCA0\_S - (AC and DC Coil) - Spring Terminal



### WCCI07...16<sup>1)</sup> + WECC-R and WCCH07...16<sup>2)</sup> - Screw Terminal

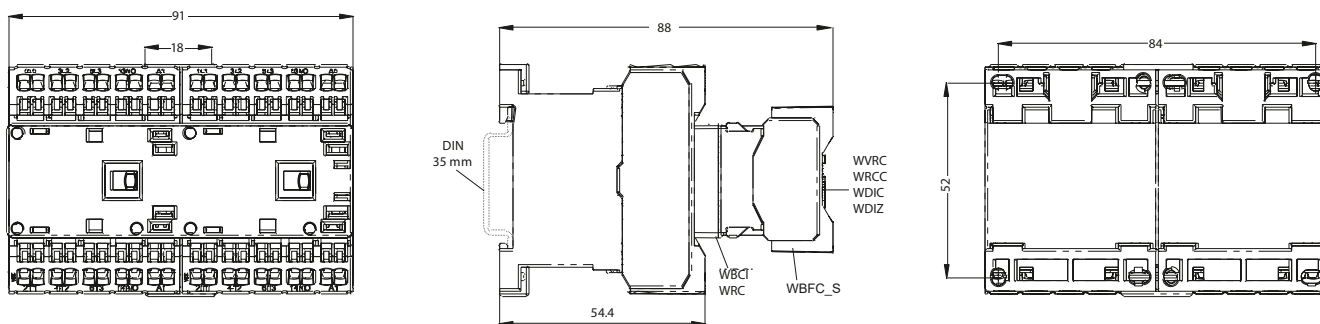


Notes: 1) Same dimensional of 2 x WCC7...16 + WBCI.

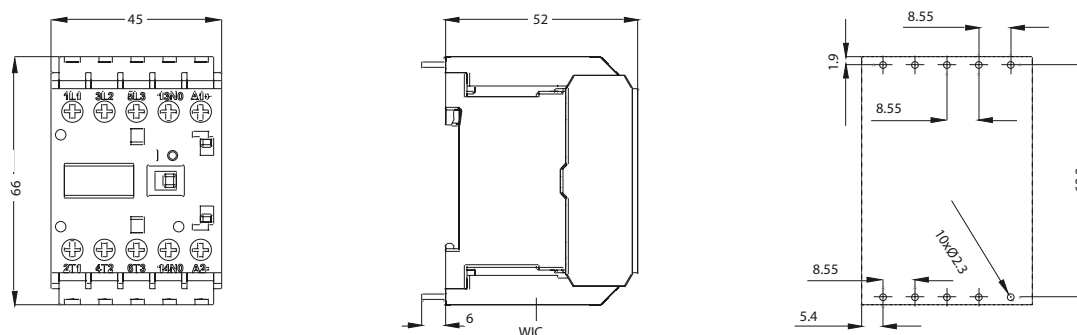
2) Same dimensional of 2 x (WCC7...16/WCCA0) + WRC.

# Dimensions (mm)

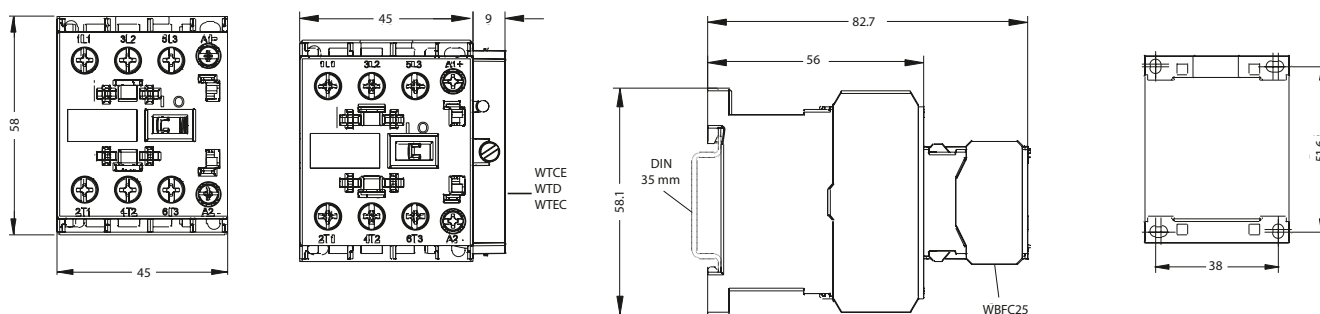
WCCI07...12<sup>1)</sup> or WCCH07...12/WCCHA0<sup>2)</sup> - Spring Terminal



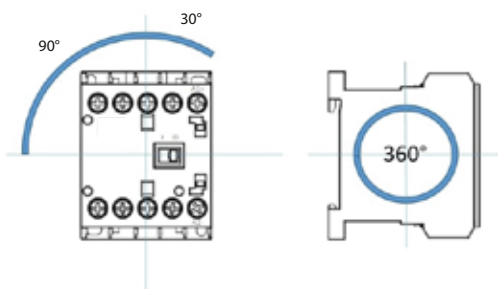
WCC7...16 ♦<sup>3)</sup> - Printed Circuit Boards



WCC25



Mounting Position of All Compact Contactors



- Notes: 1) Same dimensional of 2 x WCCI07...16\_S + WBCI.
- 2) Same dimensional of 2 x (WCC7...16\_S/WCCA0\_S) + WRC.
- 3) Same dimensional WCC7...16 + WIC.