CWB Line

Developed according to IEC 60947 and UL 508 international standards, the new WEG CWB line of contactors meets the requirements of a wide range of industrial applications. The CWBs are designed with the visual pattern and identity of WEG, a brand recognized worldwide for its quality.



Standard Features:

- "Zero-Width" Mechanical Interlock
- Simple and Compact Mounting of Surge Suppressor Blocks
- Contactor Coil Operated on AC or DC
- Simple and Organized Control Circuits
- Additional Contact Blocks
- Easy Access Power and Control Terminals

UL File No. E202315

CWB Contactor Catalog Number Sequence

CWB	12	-	11	-	30	D15

Contactor Series

CWB - IEC
CWBN - NEMA

Current Rating

IEC	9: 9 Amps
	12: 12 Amps
	18: 18 Amps
	25: 25 Amps
	32: 32 Amps
	38: 38 Amps
	40: 40 Amps
	50: 50 Amps
	65: 65 Amps
	80: 80 Amps
NEMA	00: 9 Amps
	0: 18 Amps
	1: 25 Amps
	2: 50 Amps

Auxiliary Contacts

11: 1NO + 1NC

Power Poles

30: 3 NO Power Poles

Voltage Code

AC Voltage	DC Voltage
D02: 24V AC	C02: 12V DC
D07: 48V AC	C03: 24V DC
D15: 120V AC	C07: 48V DC
D77: 208V AC	C09: 60V DC
V24: 208 - 240V AC	C12: 110V DC
D25: 240V AC	C13: 125V DC
D33: 380V AC	C15: 220V DC
D39: 480V AC	
D45: 600V AC	

Data is subject to change without notice.

Selection Table

Three-Pole CWB Contactors from 9 A to 80 A (AC-3)

Ie máx. (Ue ≤440 V)	Ie = Ith (Ue ≤690 V) θ ≤55 °C	Maximum UL Horsepower						Built-in auxiliary contacts per contactor		Catalog Number	List Price AC Coil	List Price DC Coil	Multiplier
AC-3 A	AC-1 A	Single Phase		Three Phase				3 4 NO	1 2 NC				
		115V	230V	200V	230V	480V	575V						
9	25	3/4	1.5	3	3	5	7 1/2	1	1	CWB9-11-30*	$72	$118	Z1
12	25	3/4	2	3	3	7 1/2	10	1	1	CWB12-11-30*	$89	$123	
18	32	1	3	5	5	10	15	1	1	CWB18-11-30*	$103	$150	
25	40	2	5	7 1/2	7 1/2	15	15	1	1	CWB25-11-30*	$118	$177	
32	50	3	5	10	10	20	25	1	1	CWB32-11-30*	$140	$220	
38	50	3	7.5	10	10	25	25	1	1	CWB38-11-30*	$164	$282	
40	60	3	7 1/2	10	15	30	30	1	1	CWB40-11-30*	$164	$282	
50	90	3	10	15	15	40	40	1	1	CWB50-11-30*	$225	$310	
65	110	5	10	20	20	50	50	1	1	CWB65-11-30*	$255	$350	
80	110	7 1/2	15	20	25	50	60	1	1	CWB80-11-30*	$270	$417	

Three-Pole CWB NEMA Rated Sizes 00 - 2

Ie máx. (Ue ≤440 V)	Ie = Ith (Ue ≤690 V) θ ≤55 °C	Maximum UL Horsepower						Built-in auxiliary contacts per contactor		Catalog Number	List Price AC Coil	List Price DC Coil	Multiplier
AC-3 A	AC-1 A	Single Phase		Three Phase				3 4 NO	1 2 NC				
		115V	230V	200V	230V	480V	575V						
9	25	4-Mar	1 1/2	3	3	5	7 1/2	1	1	CWBN00-11-30*	$103	$150	Z1
18	32	1	3	5	5	10	15	1	1	CWBN0-11-30*	$118	$177	
25	40	2	5	7 1/2	7 1/2	15	15	1	1	CWBN1-11-30*	$164	$220	
50	90	3	10	15	15	40	40	1	1	CWBN2-11-30*	$233	$330	

Replace "♦" by the appropriate coil voltage code[3].

Alternating Current

Code	D02	D07	D15	D77	D25	D33	D39	D45	V24
V (50/60 Hz)	24	48	120	208	240	380	480	600	208-254v

Direct Current

Code	C03	C07	C09	C12	C13	C15
V dc	24	48	60	110	125	220

Notes: 1) Orientative values.
2) Weight for contactors with control circuit in alternate current. For control circuit in direct current, add 0.121 kg to the alternating-current models.
3) Other voltages on request.

Contactors

CWB Series

Accessories and Spare Parts

Front Mounted Auxiliary Contact Blocks[4)]



.063 kg

For use with	Max. nº of additional contacts / contactor	Auxiliary contacts NO	Auxiliary contacts NC	Catalog Number	List Price	Multiplier
CWB9...38	4 / CWB9...38 4 / CWB40...80 4 / CWB00...2	1	1	BFB-11[1)]	$20	Z1
		2	0	BFB-20	$20	
		0	2	BFB-02[1)]	$20	
		2	2	BFB-22[1)]	$32	
		2	2	BFB-22 EL[3)]	$32	
		4	0	BFB-40	$32	
		0	4	BFB-04[1)]	$32	
		3	1	BFB-31[1)]	$32	
		1	3	BFB-13[1)]	$32	

Side Mounted Auxiliary Contact Blocks[4)]



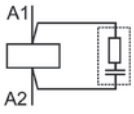
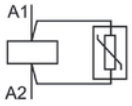
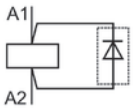
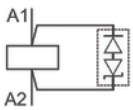
.034 kg

For use with	Max. nº of additional contacts / contactor	Auxiliary contacts NO	Auxiliary contacts NC	Catalog Number	List Price	Multiplier
CWB9...38	4 / CWB9...38 4 / CWB40...80 4 / CWB00...2	1	1	BLB-11[1)]	$22	Z1
		2	0	BLB-20		
		0	2	BLB-02[1)]		
		1	1	BLRB-11[1)2)]		
		2	0	BLRB-20[2)]		
		0	2	BLRB-02[1)2)]		

Plug-In Surge Suppressors



.008 kg

For use with	Voltage	Diagram	Catalog Number	List Pice	Multiplier
CWB9...38 CWB40...80 CWB00...2	24...48 V 50/60 Hz		RCB-D53	$30	Z1
	50...127 V 50/60 Hz		RCB-D55		
	130...250 V 50/60 Hz		RCB-D63		
	12...48 V 50/60 Hz / 12...60 V dc		VRB-E49		
	50...127 V 50/60 Hz / 60...180 V dc		VRB-E34		
	130...250 V 50/60 Hz / 180...300 V dc		VRB-E50		
	277...380 V 50/60 Hz / 300...510 V dc		VRB-E41		
	400...510 V 50/60 Hz		VRB-D73		
	12...600 V dc		DIB-C33		
	12...250 V dc		DIZB-C26		

Notes: 1) The arrangement of the contacts meets IEC 60947-4-1 Annex F (Mirror Contact) and IEC 60947-5-1 Annex L (Mechanically Linked Contact) requirements.
2) For combination of 2 side-mounted auxiliary contact blocks at the same side of the contactor.
3) BFB-22-EL: besides the regular contacts NO and NC, there are two special contacts: early make and late break.
4) The maximum number of auxiliary contacts assembled on the contactor are 4.

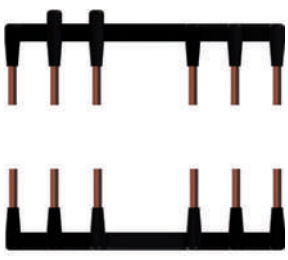
Data is subject to change without notice.

Accessories and Spare Parts

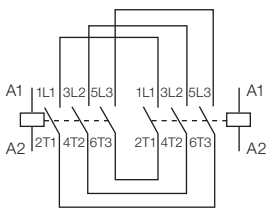
Mechanical Interlock

Image	For use with	Description	Catalog Number	List Price	Multiplier
	CWB9...38 CWB00...1	Mounting set for interlocking two contactors with the same frame type. Fitting through snaps without tools.	IM1	$12	Z1
	CWB40...80 CWB2		IM2	$15	

Easy-Connection Setting of the Power Terminals for Reversing Starters

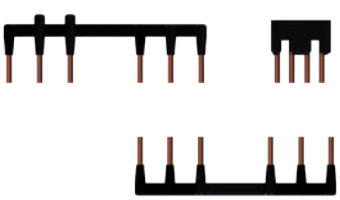
Image	For use with	Orientative rated operational power for reversing starters (AC-4 duty) for three-phase 4-pole motors - 60 Hz - 1,800 rpm		Catalog Number	List Price	Multiplier
	K1=K2	230 V kW / cv	400 V kW / cv			
	CWB9/CWB00	1.5 / 2.0	2.2 / 2.9	EC-R1	$60	Z1
	CWB12	1.5 / 2.0	3.7 / 5.0			
	CWB18/CWB0	2.2 / 2.9	4 / 5.4			
	CWB25/CWB1	3 / 4.0	5.5 / 7.4			
	CWB32	4 / 5.4	7.5 / 10.1			
	CWB38	4 / 5.4	7.5 / 10.1			
	CWB40	4.5 / 6.0	9.2 / 12.3	EC-R2	$75	
	CWB50/CWB2	5.5 / 7.4	11 / 14.7			
	CWB65	7.5 / 10.1	15 / 20.1			
	CWB80	11 / 14.7	18.5 / 24.8			

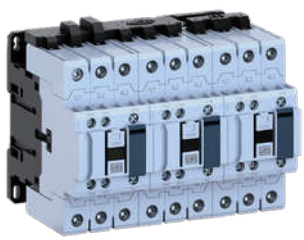


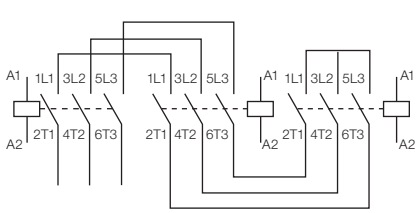


Electric diagram

Power Terminal Easy-Connection Set for Star-Delta Starters

Image	For use with		Orientative rated operational power in AC-3 Three-phase motor - IV poles - 1,800 rpm		Catalog Number	List Price	Multiplier
	K1=K2	K3	230 V kW / cv	400 V kW / cv			
	CWB9	CWB9	4 / 5.4	7.5 / 10	EC-SD1	$75	Z1
	CWB12	CWB9	5.5 / 7.5	11 / 15			
	CWB18	CWB12	9.2 / 12.5	15 / 20			
	CWB25	CWB18	11 / 15	22 / 30			
	CWB32	CWB18	15 / 20	-			
	CWB38	CWB25	18.5 / 25	30 / 40			
	CWB50	CWB40	22 / 30	45 / 61	EC-SD2	$90	
	CWB65	CWB40	30 / 40	55 / 75			
	CWB80	CWB50	45 / 61	75 / 102			





Electric diagram

Contactors

CWB Series

Accessories and Spare Parts

Spare Coils for Contactors[1)]

Image	For use with	Control type	Reference to fill in with the control voltage	List Price	Multiplier
	CWB9...38 CWB00...1	AC	**BRB-38♦**	**$22**	Z1
	CWB40...80 CWB2	AC	**BRB-80♦**	**$40**	
	CWB40...80 CWB2	DC	**BRB-80♦**	**$110**	

Replace "♦" by the appropriate coil voltage code.

To complete the Part Number, replace "♦" by the appropriate coil voltage code.

Alternating Current

Coil voltage code	D02	D07	D13	D15	D17	D77	D23	D24	D25	D33	D34	D35	D36	D39	D45
V (50/60 Hz)	24	48	110	120	127	208	220	230	240	380	400	415	440	480	600

Note: other coil voltages available upon request.

Direct Current

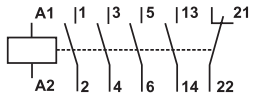
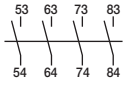
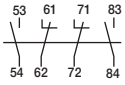
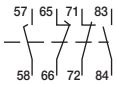
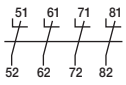
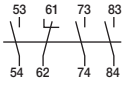
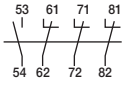
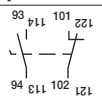
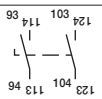
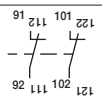
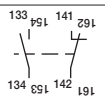
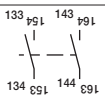
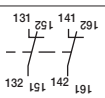
Code	C03	C07	C09	C12	C13	C15
V dc	24	48	60	110	125	220

Note: 1) Spare coil in direct current (DC) only for CWB40...80 A.

Data is subject to change without notice.

Technical Data

Terminal Markings According to IEC/EN 60947

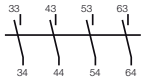
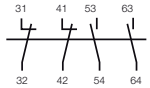
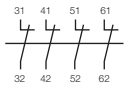
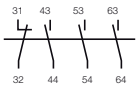
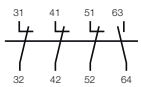
Diagram	Configuration	Auxiliary contacts		Reference code
		NO	NC	
3-poles contactors with built-in auxiliary contacts				
	11	1	1	CWB9-11-30♦ CWB12-11-30♦ CWB18-11-30♦ CWB25-11-30♦ CWB32-11-30♦ CWB38-11-30♦ CWB40-11-30♦ CWB50-11-30♦ CWB65-11-30♦ CWB80-11-30♦
Front mounted auxiliary contact blocks				
	20	2	0	BFB-20
	11	1	1	BFB-11
	02	0	2	BFB-02
	40	4	0	BFB-40
	22	2	2	BFB-22
	22	2	2	BFB-22 EL
	04	0	4	BFB-04
	31	3	1	BFB-31
	13	1	3	BFB-13
Side mounted auxiliary contact blocks				
	11	1	1	BLB11
	20	2	0	BLB20
	02	2	0	BLB02
	11	1	1	BLRB11
	20	2	0	BLRB20
	02	2	0	BLRB02

Contactors

CWB Series

Technical Data

Terminal Markings According to EN 50012

Diagram	Configuration	Auxiliary contacts		Reference code
		NO	NC	
Front mounting auxiliary contact blocks				
	20	2	0	BFB-20 EN
	11	1	1	BFB-11 EN
	02	0	2	BFB-02 EN
	40	4	0	BFB-40 EN
	22	2	2	BFB-22 EN
	04	0	4	BFB-04 EN
	31	3	1	BFB-31EN
	13	1	3	BFB-13 EN

Data is subject to change without notice.

Technical Data

General Data

Reference code			CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
Compliance with the standards			IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508									
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1	(V)	690 V						1,000 V			
	UL, CSA	(V)	600 V									
Rated impulse-withstand voltage U_{imp}	IEC/EN 60947-1	(kV)	6 kV									
Frequency limits		(Hz)	25...400									
Mechanical lifespan	AC coil (million cycles)		10						6			
	DC coil (million cycles)		10						6			
Electrical lifespan	I_e AC-3 (million cycles)		2.0	2.0	1.8	1.6	1.6	1.2	1.6	1.6	1.6	1.2
Degree of protection (IEC/EN 60529)	Main terminals		IP10 (front)									
	Coil and auxiliary contacts		IP20 (front)									
Mounting			By screws or DIN 35 mm rail (EN 50022)									
Coil connection points	Contactors with AC coil		2									
	Contactors with DC coil		2									
Vibration resistance (IEC/EN 60068-2-6)	Open contactor	(g)	4									
	Closed contactor	(g)	4									
Resistance to mechanical shocks (½ sine wave = 11ms - IEC/EN 60068-2-27)	Open contactor	(g)	10									
	Closed contactor	(g)	15									
Ambient temperature	Operating		-25 ºC...+55 ºC									
	Storage		-55 ºC...+80 ºC									
Maximum operation altitude without modification in the rated values[1)]			3,000 m									

Control Circuit - Alternating Current (AC)

Reference code			CWB9...38		CWB40...80	
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1	(V)	690		1,000	
	UL, CSA	(V)	600		600	
Standard voltages at 50/60 Hz		(V)	12...600		24...600	
Coil operating limits		(xUs)	0.8...1.1		0.8...1.1	
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			Operating at 60 Hz	Operating at 50 Hz	Operating at 60 Hz	Operating at 50 Hz
Coil 50/60 Hz	Magnetic circuit closed	(VA)	7.5	9	17.2	27
	Power factor switching on	(cos φ)	0.7	0.8	0.55	0.56
	Power factor switched on		0.27	0.24	0.28	0.25
	Thermal power dissipation	(W)	5...7	5...7	3.7...6.3	3.7...6.3
	Closing of the magnetic circuit	(VA)	75	90	185	202
Operation average time	Closing of the NO contacts	(ms)	15...25		10...15	
	Opening of the NO contacts	(ms)	8...12			

Control Circuit - Direct Current (DC)

Reference code			CWB9...38	CWB40...80
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1	(V)	690	1,000
	UL, CSA	(V)	600	600
Standard voltages		(V)	12...500	12...500
Coil operationg limits		(xUs)	0.8...1.1	0.8...1.1
	Pick up	(xUs)	0.5...0.8	0.5...0.8
	Drop out	(xUs)	0.1...0.4	0.1...0.4
Average consumption			1.0 x use the coil cold	1.0 x use the coil cold
	Magnetic circuit closed	(W)	5.8	14.5
	Closing of the magnetic circuit	(W)	5.8	105
Operation average time	Closing of the NO contacts	(ms)	35...45	20...30
	Opening of the NO contacts	(ms)	8...12	4...8
Thermal power dissipation		(W)	5...7	12...16

Note: 1) For altitudes of 3,000...4,000 m (0.90 x I_e and 0.80 x U_i) and of 4,000...5,000 m (0.80 x I_e and 0.75 x U_i).

Contactors

CWB Series

Technical Data

Main Contacts

Reference code			CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
Rated operational current I_e	AC-3 (U_e ≤440 V)	(A)	9	12	18	25	32	38	40	50	65	80
	AC-4 (U_e ≤440 V)	(A)	4.4	5.8	8.5	10.4	13.7	13.7	18.5	18.5	26	32
	AC-1 (θ ≤55 ºC, Ue ≤690 V)	(A)	25	25	32	40	50	50	60	90	110	110
Rated operational voltage U_e	IEC/EN 60947-4-1	(V)	690 V					1,000 V				
	UL, CSA	(V)	600 V									
Conventional thermal current I_{th} (θ ≤55 ºC)		(A)	25	25	32	40	50	50	60	90	110	110
Making capacity - IEC/EN 60947		(A)	250	250	300	450	550	550	550	1,000	1,000	1,000
Breaking capacity IEC/EN 60947	(U_e ≤400 V)	(A)	250	250	300	450	550	550	550	1,000	1,000	1,000
	(U_e = 500 V)	(A)	220	220	250	350	450	450	480	880	880	880
	(U_e = 690 V)	(A)	150	150	180	250	350	350	350	640	640	640
Acceptable short-time current (no current flowing during recovery time of 15min and θ ≤40 ºC)	1s	(A)	210	210	240	380	400	430	720	820	900	900
	10s	(A)	105	105	145	240	260	310	320	400	520	640
	1min	(A)	60	60	80	120	130	150	165	230	340	360
	10min	(A)	30	30	40	50	60	60	85	110	130	130
Short circuit protection of the main contacts Fuse (gL/gG)	@600 V - UL/CSA	(kA)	5									
	Coordination type 1	(A)	25	40	50	63	63	63	80	100	125	160
	Coordination type 2	(A)	20	20	25	35	50	50	63	80	100	125
Impedance per pole		(mΩ)	2.5	2.5	2.5	2	2	2	1.6	1.6	1.6	1.6
Average power dissipation per pole	AC-1	(W)	1.5	1.5	2.5	3.2	5	5	6	13	19	19
	AC-3	(W)	0.2	0.4	0.8	1.2	2	3	3	4	7	10
Utilization category AC-3												
Rated operational current I_e (θ ≤55 ºC)	U_e ≤440 V	(A)	9	12	18	25	32	38	40	50	65	80
	U_e ≤500 V	(A)	9	12	15.8	23	28.5	28.5	35	45	55	75
	U_e ≤690 V	(A)	7	9	12.8	16.5	21	21	32	35	40	50
Orientative rated operational power Three-phase induction motors (50/60 Hz) IV poles - 1,800 rpm	220/240 V	(kW)	2.2	3	4.5	6.5	7.5	9.2	11	15	18.5	22
		(cv)	3	4	6	8.7	10	12.5	15	20	25	29
	380/400 V	(kW)	4	5.5	7.5	12.5	15	18.5	18.5	22	30	37
		(cv)	5.5	7.5	10	16.8	20	25	25	29	40	50
	415/440 V	(kW)	4.5	6.5	9.2	12.5	15	18.5	22	30	37	45
		(cv)	6	8.7	12.5	16.8	20	25	29	40	50	60
	500 V	(kW)	5.5	7.5	10	15	18.5	18.5	22	30	37	55
		(cv)	7.5	10	13.4	20	25	25	29	40	50	74
	660/690 V	(kW)	5.5	7.5	11	15	18.5	18.5	30	33	37	45
		(cv)	7.5	10	15	20	25	25	40	44	50	60
Maximum percentage	600 ops./h	(%)	100	100	100	100	100	100	100	100	100	100
Utilization category AC-4												
Rated operational current I_e	(U_e ≤440 V)	(A)	4.4	5.8	8.5	10.4	13.7	13.7	18.5	18.5	26	32
	(U_e ≤500 V)	(A)	3.9	5.1	7.5	12	13.9	13.9	17.5	23.5	28.5	33
	(U_e ≤690 V)	(A)	2.8	3.7	5.4	12	12.8	12.8	14	18	22	26
Orientative rated operational power Three-phase induction motors (50/60 Hz) IV poles - 1,800 rpm (200,000 operations)	220/240 V	(kW)	1.5	1.5	2.2	3	4	4	4.5	5.5	7.5	11
		(cv)	2.0	2.0	2.9	4.0	5.4	5.4	6.0	7.4	10.1	14.7
	380/400 V	(kW)	2.2	3.7	4	5.5	7.5	7.5	9.2	11	15	18.5
		(cv)	2.9	5.0	5.4	7.4	10.1	10.1	12.3	14.7	20.1	24.8
	415/440 V	(kW)	2.2	3	3.7	5.5	7.5	7.5	11	11	15	22
		(cv)	2.9	4.0	5.0	7.4	10.1	10.1	14.7	14.7	20.1	29.5
	500 V	(kW)	2.2	3	5	7.5	9	9	11	15	18.5	22
		(cv)	2.9	4.0	6.7	10.1	12.1	12.1	14.7	20.1	24.8	29.5
	660/690 V	(kW)	2.2	3	5	10	11	11	12.5	15	20	25
		(cv)	2.9	4.0	6.7	13.4	14.7	14.7	16.8	20.1	26.8	33.5

Data is subject to change without notice.

Technical Data

Main Contacts

Reference code			CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
			Utilization category AC-1									
			3P (NO)									
Conventional thermal current Ith (θ ≤55 ºC)		(A)	25	25	32	40	50	50	60	90	110	110
Maximum orientative operational current according to the ambient temperature	θ ≤60 ºC (Ue ≤690 V)	(A)	25	25	32	40	50	50	60	90	110	110
Max. operational power θ ≤55 ºC (three-phase resistors)	220/230 V	(kW)	9.5	9.5	12	15	19	19	22.5	34	42	42
	380/400 V	(kW)	16.5	16.5	21	26	33	33	39.5	59	72.5	72.5
	415/440 V	(kW)	19	19	24.5	30.5	38	38	45.5	68.5	84	84
	500 V	(kW)	21.5	21.5	27.5	34.5	43	43	52	77	95	95
	660/690 V	(kW)	28.5	28.5	36.5	45.5	57	57	66	100	125	125
Current values for connection	2 poles in parallel		I_e x 1.7									
	3 poles in parallel		I_e x 2.4									
	4 poles in parallel		-									
Percentage of maximum operational current	600 ops./h	(%)	100	100	100	100	100	100	100	100	100	100

Auxiliary Contacts

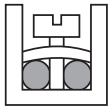
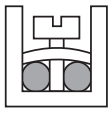
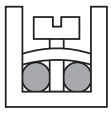
Reference code			CWB9...38 (built-in)	BFB (front mounted)	BLB (side mounted)
Compliance with the standards			IEC/EN 60947-5-1		
Rated insulation voltage U_i (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660	(V)	690		
	UL, CSA	(V)	600		
Rated operational voltage U_e	IEC/EN 60947-4-1, VDE 0660	(V)	690		
	UL, CSA	(V)	600		
Conventional thermal current I_{th} (θ ≤55 ºC)		(A)	10		
Rated operational current I_e					
AC-15 (IEC/EN 60947-5-1)	220/230 V	(A)	10		
	380/440 V	(A)	4		
	500 V	(A)	2.5		
	660/690 V	(A)	1.5		
DC-13 (IEC/EN 60947-5-1)	24 V	(A)	4		
	48 V	(A)	2		
	110 V	(A)	0.7		
	220 V	(A)	0.3		
	440 V	(A)	0.15		
Making capacity	U_e ≤690 V 50/60 Hz - AC-15	(A)	10 x I_e		
Breaking capacity	U_e ≤400 V 50/60 Hz - AC-15	(A)	1 x I_e		
Short circuit protection with fuse (gL/gG)		(A)	10		
Control circuit reliability	(V / mA)		17 / 5		
Electrical lifespan	(million cycles)		1		
Mechanical lifespan	(million cycles)		10		
Non-overlapping time between NO and NC contacts		(ms)	1.5		
Impedance of the contacts		(mΩ)	2.5		

Contactors

CWB Series

Technical Data

Terminal Capacity and Tightening Torque

			Conductor cross-section		
Power circuit					
Model			**CWB9...18**	**CWB25...38**	**CWB40...80**
Mounting system screw type			Phillips number 2	Phillips number 2	ALLEN 4 mm
Flexible conductor without terminal	AWG		1 x 16-10 2 x 16-10	1 x 16-10 2 x 16-10	1 x 14-3 2 x 14-3
Flexible conductor with terminal	AWG		1 x 16-10 2 x 16-12	1 x 16-8 2 x 16-10	1 x 14-3 2 x 14-3
Solid wire	AWG		1 x 16-10 2 x 16-10	1 x 14-18 2 x 14-18	1 x 14-3 2 x 14-3
Tightening torque	(Nm)		1.7	2.5	5.0
Control and auxiliary circuit					
Models			**CWB9...38**		**CWB40...80**
Mounting system screw type			Phillips number 2		Phillips number 2
Flexible conductor without terminal	AWG		1 x 16-12 2 x 16-12		1 x 16-12 2 x 16-12
Flexible conductor with terminal	AWG		1 x 16-12 2 x 16-14		1 x 16-12 2 x 16-14
Solid wire	AWG		1 x 16-12 2 x 16-12		1 x 16-12 2 x 16-12
Tightening torque	(Nm)		1.0		1.0
Auxiliary contact blocks					
Models			**BFB (front)**	**BLB (side)**	
Mounting system screw type			Phillips number 2		
Conductor cross-section					
Flexible conductor without terminal	AWG		1 x 16-14 2 x 16-14		
Flexible conductor with terminal	AWG		1 x 16-14 2 x 16-14		
Solid wire	AWG		1 x 16-14 2 x 16-14		
Tightening torque	(Nm)		1.0		

Data is subject to change without notice.

Technical Data

General Data

Reference code			CWBN00	CWBN0	CWBN1	CWBN2
Compliance with the standards			IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508			
Rated insulation voltage Ui (pollution degree 3)	IEC/EN 60947-4-1	(V)	690 V			1,000 V
	UL, CSA	(V)	600 V			
Rated impulse-withstand voltage Uimp	IEC/EN 60947-1	(kV)	6 kV			
Frequency limits		(Hz)	25...400			
Mechanical lifespan	AC coil	(million cycles)	10			6
	DC coil	(million cycles)	10			6
Electrical lifespan	Ie AC-3	(million cycles)	2.0	1.8	1.6	1.6
Degree of protection (IEC/EN 60529)	Main terminals		IP10 (front)			
	Coil and auxiliary contacts		IP20 (front)			
Mounting			By screws or DIN 35 mm rail (EN 50022)			
Coil connection points	Contactors with AC coil		2			
	Contactors with DC coil		2			
Vibration resistance (IEC/EN 60068-2-6)	Open contactor	(g)	4			
	Closed contactor	(g)	4			
Resistance to mechanical shocks (½ sine wave = 11ms - IEC/EN 60068-2-27)	Open contactor	(g)	10			
	Closed contactor	(g)	15			
Ambient temperature	Operating		-25 ºC...+55 ºC			
	Storage		-55 ºC...+80 ºC			
Maximum operation altitude without modification in the rated values1)			3,000 m			

Control Circuit - Alternating Current (AC)

Reference code			CWBN00...1		CWBN2	
Rated insulation voltage Ui (pollution degree 3)	IEC/EN 60947-4-1	(V)	690		1,000	
	UL, CSA	(V)	600		600	
Standard voltages at 50/60 Hz		(V)	12...600		24...600	
Coil operating limits		(xUs)	0.8...1.1		0.8...1.1	
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			Operating at 60 Hz	Operating at 50 Hz	Operating at 60 Hz	Operating at 50 Hz
Coil 50/60 Hz	Magnetic circuit closed	(VA)	7.5	9	17.2	27
	Power factor switching on	(cos ϕ)	0.7	0.8	0.55	0.56
	Power factor switched on		0.27	0.24	0.28	0.25
	Thermal power dissipation	(W)	5...7	5...7	3.7...6.3	3.7...6.3
	Closing of the magnetic circuit	(VA)	75	90	185	202
Operation average time	Closing of the NO contacts	(ms)	15...25		10...15	
	Opening of the NO contacts	(ms)	8...12			

Control Circuit - Direct Current (DC)

Reference code			CWBN00...1	CWBN2
Rated insulation voltage Ui (pollution degree 3)	IEC/EN 60947-4-1	(V)	690	1,000
	UL, CSA	(V)	600	600
Standard voltages		(V)	12...500	12...500
Coil operationg limits		(xUs)	0.8...1.1	0.8...1.1
	Pick up	(xUs)	0.5...0.8	0.5...0.8
	Drop out	(xUs)	0.1...0.4	0.1...0.4
Average consumption			1.0 x use the coil cold	1.0 x use the coil cold
	Magnetic circuit closed	(W)	5.8	14.5
	Closing of the magnetic circuit	(W)	5.8	105
Operation average time	Closing of the NO contacts	(ms)	35...45	20...30
	Opening of the NO contacts	(ms)	8...12	4...8
Thermal power dissipation		(W)	5...7	12...16

Note: 1) For altitudes of 3,000...4,000 m (0.90 x Ie and 0.80 x Ui) and of 4,000...5,000 m (0.80 x Ie and 0.75 x Ui).

Contactors

CWBN

Technical Data

Main Contacts

Reference code			CWBN00	CWBN0	CWBN1	CWBN2
Rated operational current Ie	AC-3 (Ue ≤440 V)	(A)	9	18	25	50
	AC-4 (Ue ≤440 V)	(A)	4.4	8.5	10.4	18.5
	AC-1 (0 ≤55 ºC, Ue ≤690 V)	(A)	25	32	40	90
Rated operational voltage Ue	IEC/EN 60947-4-1	(V)	690 V			1,000 V
	UL, CSA	(V)	600 V			
Conventional thermal current Ith (0≤55 ºC)		(A)	25	32	40	90
Making capacity - IEC/EN 60947		(A)	250	300	450	1,000
Breaking capacity IEC/EN 60947	(Ue ≤400 V)	(A)	250	300	450	1,000
	(Ue = 500 V)	(A)	220	250	350	880
	(Ue = 690 V)	(A)	150	180	250	640
Acceptable short-time current (no current flowing during recovery time of 15min and 0 ≤40 ºC)	1s	(A)	210	240	380	820
	10s	(A)	105	145	240	400
	1min	(A)	60	80	120	230
	10min	(A)	30	40	50	110
Short circuit protection of the main contacts Fuse (gL/gG)	@600 V - UL/CSA	(kA)	5			
	Coordination type 1	(A)	25	50	63	100
	Coordination type 2	(A)	20	25	35	80
Impedance per pole		(m)	2.5	2.5	2	1.6
Average power dissipation per pole	AC-1	(W)	1.5	2.5	3.2	13
	AC-3	(W)	0.2	0.8	1.2	4
Utilization category AC-3						
Rated operational current Ie (0 ≤55 ºC)	Ue ≤440 V	(A)	9	18	25	50
	Ue ≤500 V	(A)	9	15.8	23	45
	Ue ≤690 V	(A)	7	12.8	16.5	35
Orientative rated operational power Three-phase induction motors (50/60 Hz) IV poles - 1,800 rpm	220/240 V	(kW)	2.2	4.5	6.5	15
		(cv)	3	6	8.7	20
	380/400 V	(kW)	4	7.5	12.5	22
		(cv)	5.5	10	16.8	29
	415/440 V	(kW)	4.5	9.2	12.5	30
		(cv)	6	12.5	16.8	40
	500 V	(kW)	5.5	10	15	30
		(cv)	7.5	13.4	20	40
	660/690 V	(kW)	5.5	11	15	33
		(cv)	7.5	15	20	44
Maximum percentage	600 ops./h	(%)	100	100	100	100
Utilization category AC-4						
Rated operational current Ie	(Ue ≤440 V)	(A)	4.4	8.5	10.4	18.5
	(Ue ≤500 V)	(A)	3.9	7.5	12	23.5
	(Ue ≤690 V)	(A)	2.8	5.4	12	18
Orientative rated operational power Three-phase induction motors (50/60 Hz) IV poles - 1,800 rpm (200,000 operations)	220/240 V	(kW)	1.5	2.2	3	5.5
		(cv)	2.0	2.9	4.0	7.4
	380/400 V	(kW)	2.2	4	5.5	11
		(cv)	2.9	5.4	7.4	14.7
	415/440 V	(kW)	2.2	3.7	5.5	11
		(cv)	2.9	5.0	7.4	14.7
	500 V	(kW)	2.2	5	7.5	15
		(cv)	2.9	6.7	10.1	20.1
	660/690 V	(kW)	2.2	5	10	15
		(cv)	2.9	6.7	13.4	20.1

Data is subject to change without notice.

Technical Data

Main Contacts

Reference code			CWBN00	CWBN0	CWBN1	CWBN2
			Utilization category AC-1			
			3P (NO)			
Conventional thermal current Ith (0 ≤55 ºC)		(A)	25	32	40	90
Maximum orientative operational current according to the ambient temperature	0≤60 ºC (Ue ≤690 V)	(A)	25	32	40	90
Max. operational power 0 ≤55 ºC (three-phase resistors)	220/230 V	(kW)	9.5	12	15	34
	380/400 V	(kW)	16.5	21	26	59
	415/440 V	(kW)	19	24.5	30.5	68.5
	500 V	(kW)	21.5	27.5	34.5	77
	660/690 V	(kW)	28.5	36.5	45.5	100
Current values for connection	2 poles in parallel		Ie x 1.7			
	3 poles in parallel		Ie x 2.4			
	4 poles in parallel		-			
Percentage of maximum current	600 ops./h operational	(%)	100	100	100	100

Auxiliary Contacts

Reference code			CWBN00 (built-in)	BFB (front mounted)	BLB (side mounted)
Compliance with the standards			IEC/EN 60947-5-1		
Rated insulation voltage Ui (pollution degree 3)	IEC/EN 60947-4-1, VDE 0660	(V)	690		
	UL, CSA	(V)	600		
Rated operational voltage Ue	IEC/EN 60947-4-1, VDE 0660	(V)	690		
	UL, CSA	(V)	600		
Conventional thermal current Ith (0≤55 ºC)		(A)	10		
			Rated operational current Ie		
AC-15 (IEC/EN 60947-5-1)	220/230 V	(A)	10		
	380/440 V	(A)	4		
	500 V	(A)	2.5		
	660/690 V	(A)	1.5		
DC-13 (IEC/EN 60947-5-1)	24 V	(A)	4		
	48 V	(A)	2		
	110 V	(A)	0.7		
	220 V	(A)	0.3		
	440 V	(A)	0.15		
Making capacity	Ue ≤690 V 50/60 Hz - AC-15	(A)	10 x Ie		
Breaking capacity	Ue ≤400 V 50/60 Hz - AC-15	(A)	1 x Ie		
Short circuit protection with fuse (gL/gG)		(A)	10		
Control circuit reliability	(V / mA)		17 / 5		
Electrical lifespan	(million cycles)		1		
Mechanical lifespan	(million cycles)		10		
Non-overlapping time between NO and NC contacts		(ms)	1.5		
Impedance of the contacts		(mΩ)	2.5		

Contactors

CWBN

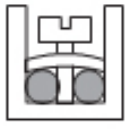
Technical Data

Terminal Capacity and Tightening Torque

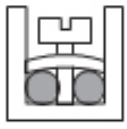
Power circuit

Model		CWBN00/CWBN0	CWBN1	CWBN2
Mounting system screw type		Phillips number 2	Phillips number 2	ALLEN 4 mm
Flexible conductor without terminal		1 x 1...6 mm2 / 16...10 AWG 2 x 1...6 mm2 / 16...10 AWG	1 x 2.5...10 mm2 / 14...8 AWG 2 x 2.5...10 mm2 / 14...8 AWG	1 x 2.5...35 mm2 / 14...2 AWG 2 x 2.5...35 mm2 / 14...2 AWG
Flexible conductor with terminal		1 x 1...6 mm2 / 16...10 AWG 2 x 1...4 mm2 / 16...12 AWG	1 x 1.5...10 mm2 / 16...8 AWG 2 x 1.5...6 mm2 / 16...10 AWG	1 x 2.5...35 mm2 / 14...2 AWG 2 x 2.5...35 mm2 / 14...2 AWG
Solid wire		1 x 1...6 mm2 / 16...10 AWG 2 x 1...6 mm2 / 16...10 AWG	1 x 2.5...10 mm2 / 14...8 AWG 2 x 2.5...10 mm2 / 14...8 AWG	1 x 2.5...35 mm2 / 14...2 AWG 2 x 2.5...35 mm2 / 14...2 AWG
Tightening torque		1.7 Nm / 15 lb.in	2.5 Nm / 22 lb.in	5.0 Nm / 60 lb.in

Control and auxiliary circuit

Models		CWBN00..1	CWBN2
Mounting system screw type		Phillips number 2	Phillips number 2
Flexible conductor without terminal		1 x 1...4 mm2 / 16....12 AWG 2 x 1...4 mm2 / 16....12 AWG	1 x 1...4 mm2 / 16...12 AWG 2 x 1...4 mm2 / 16...12 AWG
Flexible conductor with terminal		1 x 1...4 mm2 / 16....12 AWG 2 x 1...2.5 mm2 / 16....14 AWG	1 x 1...4 mm2 / 16...12 AWG 2 x 1...2.5 mm2 / 16...14 AWG
Solid wire		1 x 1...4 mm2 / 16...12 AWG 2 x 1...4 mm2 / 16...12 AWG	1 x 1...4 mm2 / 16...12 AWG 2 x 1...4 mm2 / 16...12 AWG
Tightening torque		1.0 Nm / 8.8 lb.in	1.0 Nm / 8.8 lb.in

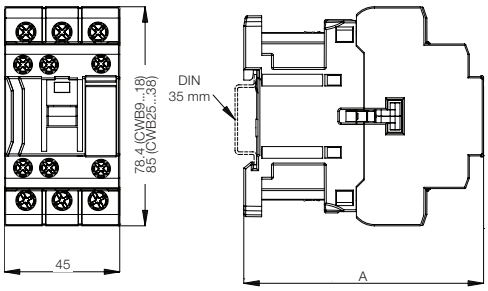
Auxiliary contact blocks

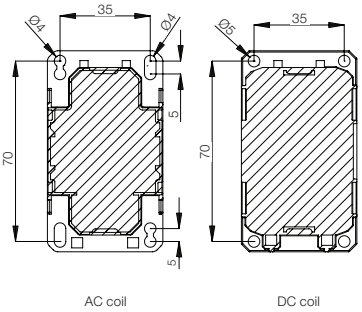
Models		BFB (front)	BLB (side)
Mounting system screw type		Phillips number 2	
		Conductor cross-section	
Flexible conductor without terminal		1 x 1...2.5 mm2 / 16...14 AWG 2 x 1...2.5 mm2 / 16...14 AWG	1 x 1...2.5 mm2 / 16...14 AWG 2 x 1...2.5 mm2 / 16...14 AWG
Flexible conductor with terminal		1 x 1...2.5 mm2 / 16...14 AWG 2 x 1...2.5 mm2 / 16...14 AWG	1 x 1...2.5 mm2 / 16...14 AWG 2 x 1...2.5 mm2 / 16...14 AWG
Solid wire		1 x 1...2.5 mm2 / 16...14 AWG 2 x 1...2.5 mm2 / 16...14 AWG	1 x 1...2.5 mm2 / 16...14 AWG 2 x 1...2.5 mm2 / 1...1.5/16 AWG
Tightening torque		1.0 Nm / 8.8 lb.in	

Data is subject to change without notice.

Dimensions (mm)

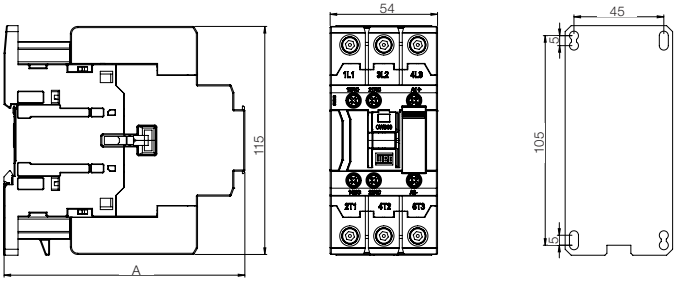
CWB9...18, CWB25...38, CWB00...1





Models	A	
	AC coil	DC coil
CWB9...18 CWB00...0	89.5	98.5
CWB25...38 CWB1	93	102.2

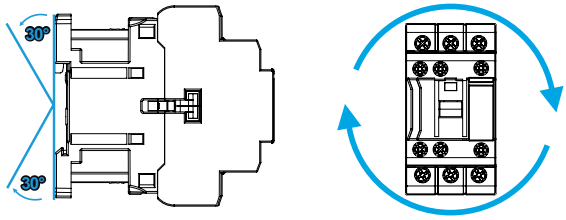
CWB40...80, CWB2



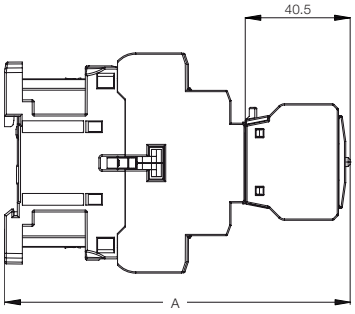
Models	A	
	AC coil	DC coil
CWB40...80 CWB2	120.6	120.6

Mounting Position

CWB9...80

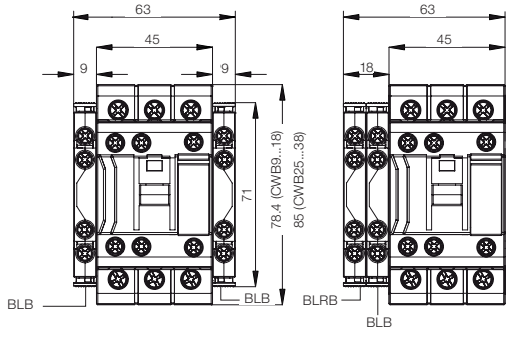


CWB9...18, CWB25...38, CWB40...80 + BFB (Front Mounted Auxiliary Contact Block)

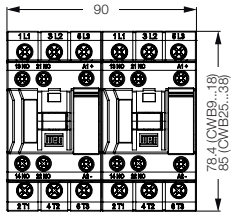


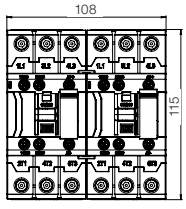
Models	A	
	AC coil	DC coil
CWB9...18	130	136.2
CWB25...38	133.4	142.6
CWB40...80	161.1	161.1

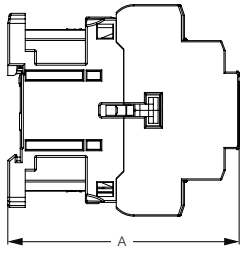
CWB9...18, CWB25...38 + BLB (Side Mounted Auxiliary Contact Block)



2 x CWB9...38 + IM1 (Mechanical Interlock)
2 x CWB40...80 + IM2 (Mechanical Interlock)

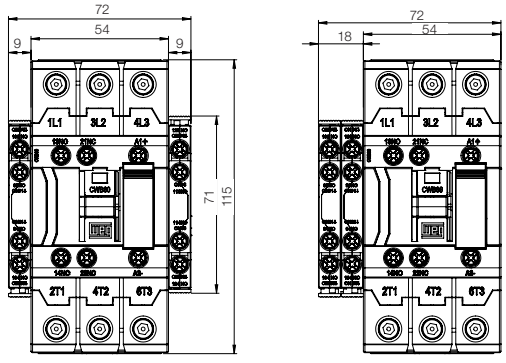






Models	A	
	AC coil	DC coil
CWB9...18	89.5	98.5
CWB25...38	93	102.2
CWB40...80	120.6	120.6

CWB40...80 + BLB (Side-Mounted Contact Block)

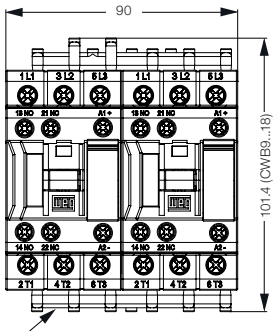


Contactors

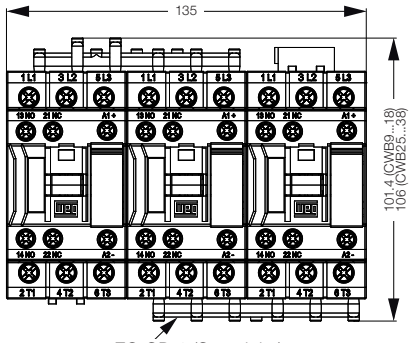
CWB Series

Dimensions (mm)

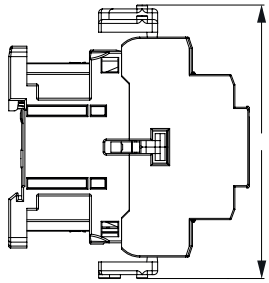
CWB9...38 + Easy Connection Busbars



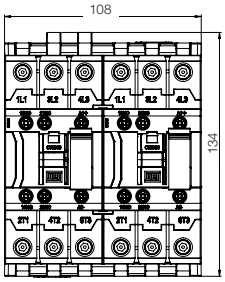
EC-R-1 (Reversing)



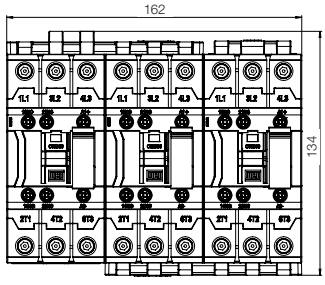
EC-SD-1 (Star-delta)



CWB40...80 + Easy Connection Busbars

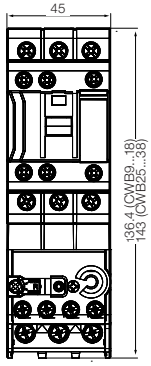


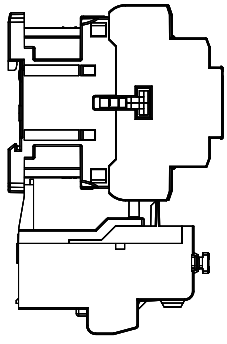
EC-R-2 (Reversing)



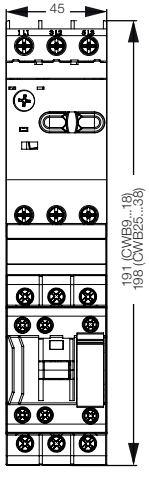
EC-SD-2 (Star-delta)

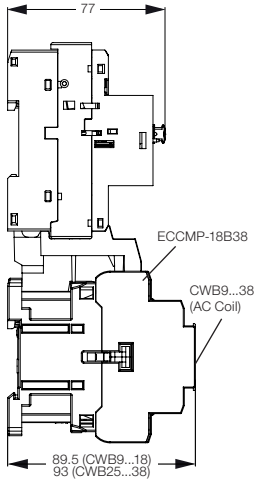
CWB9...38 + RW27-2D (Overload Relay)



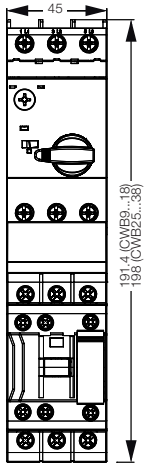


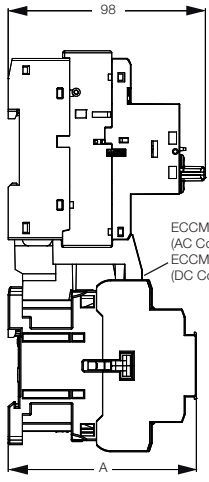
CWB9...38 + MPW16/18 (Manual Motor Protector)





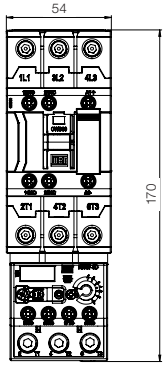
CWB9...38 + MPW25/40 (Manual Motor Protector)

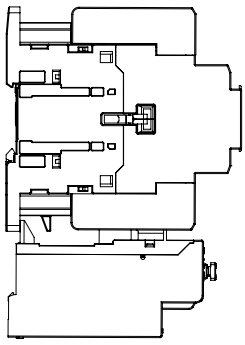




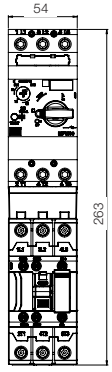
Models	A	
	AC coil	DC coil
CWB9...18	89.5	98.5
CWB25...38	93	102.2

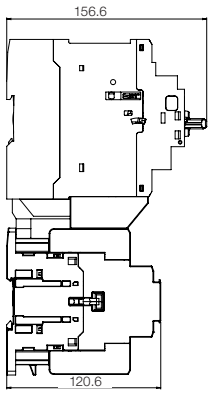
CWB40 + RW67-5D (Overload Relay)





CWB40...80 + MPW80 (Manual Motor Protector)





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