



CWB Series Contactors

Overview

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.

Features

- "Zero-width" mechanical interlock
- Simple and compact mounting of surge suppressor blocks
- Available with AC or DC coils
- Simple and organized control circuits
- Additional contact blocks
- Easy access power and control terminals



CWB9-11-30D15



CWB25-11-30D15



CWB80-11-30D15



UL File No. E202315



CWB9-11-30C03



CWB25-11-30C03



CWB80-11-30C03

CWB Contactor Catalog Number Sequence

CWB	12	-	11	-	30	D15						
Contactor Series <i>CWB-IEC</i>	Current Rating (IEC) 9: 9A 12: 12A 18: 18A 25: 25A 32: 32A 38: 38A 40: 40A 50: 50A 65: 65A 80: 80A		Auxiliary Contacts 11: 1NO+1NC		Power Poles 30: 3 NO Power Poles	Voltage Code						
						<table border="1"> <thead> <tr> <th>AC Voltage</th> <th>DC Voltage</th> </tr> </thead> <tbody> <tr> <td>D15: 120V</td> <td rowspan="3">C03: 24V</td> </tr> <tr> <td>V24: 208-240V</td> </tr> <tr> <td>D39: 480V</td> </tr> </tbody> </table>	AC Voltage	DC Voltage	D15: 120V	C03: 24V	V24: 208-240V	D39: 480V
AC Voltage	DC Voltage											
D15: 120V	C03: 24V											
V24: 208-240V												
D39: 480V												

Table intended as reference only and not to create part numbers.



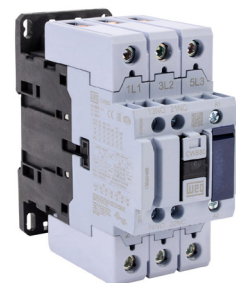
CWB Series Contactors

CWB Series Three-Pole Contactors – AC and AC/DC Coil – Selection Guide

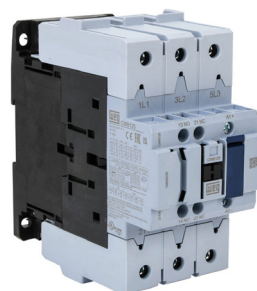
Part Number	Price	Coil Voltage	Ie Max (Ue ≤ 440V)	Maximum UL Horsepower						Built-In Auxiliary Contacts Per Contactor		Drawing
				Single-Phase		Three-Phase				N.O.	N.C.	
			AC-3 (A)	115V	230V	200V	230V	480V	575V			
AC Coil												
CWB9-11-30D15	\$29.50	120VAC	9	0.75	1.5	3	3	5	7.5	1	1	PDF
CWB9-11-30V24	\$29.50	208-240 VAC										PDF
CWB9-11-30D39	\$29.50	480VAC										PDF
CWB12-11-30D15	\$33.00	120VAC	12	0.75	2	3	3	7.5	10	1	1	PDF
CWB12-11-30V24	\$33.00	208-240 VAC										PDF
CWB12-11-30D39	\$33.00	480VAC										PDF
CWB18-11-30D15	\$40.50	120VAC	18	1	3	5	5	10	15	1	1	PDF
CWB18-11-30V24	\$40.50	208-240 VAC										PDF
CWB18-11-30D39	\$40.50	480VAC										PDF
CWB25-11-30D15	\$47.00	120VAC	25	2	5	7.5	7.5	15	15	1	1	PDF
CWB25-11-30V24	\$47.00	208-240 VAC										PDF
CWB25-11-30D39	\$47.00	480VAC										PDF
CWB32-11-30D15	\$56.00	120VAC	32	3	5	10	10	20	25	1	1	PDF
CWB32-11-30V24	\$56.00	208-240 VAC										PDF
CWB32-11-30D39	\$56.00	480VAC										PDF
CWB38-11-30D15	\$65.00	120VAC	38	3	7.5	10	10	25	25	1	1	PDF
CWB38-11-30V24	\$64.00	208-240 VAC										PDF
CWB38-11-30D39	\$65.00	480VAC										PDF
CWB40-11-30D15	\$66.00	120VAC	40	3	7.5	10	15	30	30	1	1	PDF
CWB40-11-30V24	\$66.00	208-240 VAC										PDF
CWB40-11-30D39	\$66.00	480VAC										PDF
CWB50-11-30D15	\$88.00	120VAC	50	3	10	15	15	40	40	1	1	PDF
CWB50-11-30V24	\$88.00	208-240 VAC										PDF
CWB50-11-30D39	\$88.00	480VAC										PDF
CWB65-11-30D15	\$101.00	120VAC	65	5	10	20	20	50	50	1	1	PDF
CWB65-11-30V24	\$101.00	208-240 VAC										PDF
CWB65-11-30D39	\$101.00	480VAC										PDF
CWB80-11-30D15	\$107.00	120VAC	80	7.5	15	20	25	50	60	1	1	PDF
CWB80-11-30V24	\$107.00	208-240 VAC										PDF
CWB80-11-30D39	\$107.00	480VAC										PDF
CWB95-11-30D02	\$139.00	24VAC	95	7.5	20	30	30	75	75	1	1	PDF
CWB95-11-30D15	\$139.00	120VAC										PDF
CWB95-11-30D24	\$139.00	230VAC										PDF
CWB95-11-30D39	\$139.00	480VAC										PDF
CWB95-11-30D77	\$139.00	208VAC										PDF
CWB110-11-30D02	\$160.00	24VAC	110	10	25	30	40	75	100	1	1	PDF
CWB110-11-30D15	\$160.00	120VAC										PDF
CWB110-11-30D24	\$160.00	230VAC										PDF
CWB110-11-30D39	\$160.00	480VAC										PDF
CWB110-11-30D77	\$160.00	208VAC										PDF



CWB9-11-30D15



CWB80-11-30D39





CWB125-11-30E65

AC/DC Coil With Electronic Module												
CWB95-11-30E04	\$172.00	24-60 VAC/DC	95	7.5	20	30	30	75	75	1	1	PDF
CWB95-11-30E65	\$172.00	110-255 VAC/DC										PDF
CWB110-11-30E04	\$210.00	24-60 VAC/DC	125	10	25	40	40	100	125	1	1	PDF
CWB110-11-30E65	\$210.00	110-255 VAC/DC										PDF
CWB125-11-30E04	\$286.00	24-60 VAC/DC										PDF
CWB125-11-30E65	\$286.00	110-255 VAC/DC										PDF



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CWB Series Three-Pole Contactors – DC Coil – Selection Guide

Part Number	Price	Coil Voltage (VDC)	Ie Max (Ue ≤ 440V)	Maximum UL Horsepower						Built-In Auxiliary Contacts Per Contactor				Drawing	
				AC-3 (A)	Single-Phase		Three-Phase				N.O.		N.C.		
					115V	230V	200V	230V	480V	575V					
CWB9-11-30C03	\$35.00	24	9	0.75	1.5	3	3	5	7.5	1		1	PDF		
CWB12-11-30C03	\$41.00		12	0.75	2	3	3	7.5	10	1		1	PDF		
CWB18-11-30C03	\$49.00		18	1	3	5	5	10	15	1		1	PDF		
CWB25-11-30C03	\$50.00		25	2	5	7.5	7.5	15	15	1		1	PDF		
CWB32-11-30C03	\$71.00		32	3	5	10	10	20	25	1		1	PDF		
CWB38-11-30C03	\$79.00		38	3	7.5	10	10	25	25	1		1	PDF		
CWB40-11-30C03	\$85.00		40	3	7.5	10	15	30	30	1		1	PDF		
CWB50-11-30C03	\$121.00		50	3	10	15	15	40	40	1		1	PDF		
CWB65-11-30C03	\$139.00		65	5	10	20	20	50	50	1		1	PDF		
CWB80-11-30C03	\$165.00		80	7.5	15	20	25	50	60	1		1	PDF		



[CWB9-11-30C03](#)



[CWB80-11-30C03](#)



CWB Series Contactors Accessories



BFB-11



BLB-11



BFB-20



BFB-22



BFB-40



BFB-04

WEG CWB Series Contactors Accessories – Front Mounted Auxiliary Contact Blocks Selection Guide

Part Number	Price	For Use With	Max. number of additional contacts/contactor	Auxiliary contacts		Weight g [oz]	Dimensional Drawing
				NO	NC		
<u>BFB-11</u>	\$8.00	CWB9 through CWB80	4	1	1	63 [2.22]	<u>PDF</u>
<u>BFB-20</u>	\$8.25			2	0	63 [2.22]	<u>PDF</u>
<u>BFB-22</u>	\$12.50			2	2	63 [2.22]	<u>PDF</u>
<u>BFB-40</u>	\$12.50			4	0	63 [2.22]	<u>PDF</u>
<u>BFB-04</u>	\$12.50			0	4	63 [2.22]	<u>PDF</u>

NOTES: The maximum number of auxiliary contacts assembled on the contactor is 4.

WEG CWB Series Contactors Accessories – Side Mounted Auxiliary Contact Blocks Selection Guide

Part Number	Price	For Use With	Max. Number of Additional Contacts/Contactor	Auxiliary Contacts		Weight g [oz]	Dimensional Drawing
				NO	NC		
<u>BLB-11</u>	\$8.75	CWB9 through CWB80	4	1	1	34 [1.20]	<u>PDF</u>

NOTE: The maximum number of auxiliary contacts assembled on the contactor is 4.

WEG CWB Series Contactors Accessories – Plug-In Surge Suppressors Selection Guide

Part Number	Price	For Use With	Voltage	Diagram	Weight g [oz]	Dimensional Drawing
<u>VRB-E34</u>	\$12.50	CWB9 through CWB80	50-127 VAC 50/60 Hz 60-180 VDC		8 [0.28]	<u>PDF</u>
<u>VRB-E50</u>	\$12.50		130-250 VAC 50/60 Hz 180-300 VDC		8 [0.28]	<u>PDF</u>
<u>VRB-D73</u>	\$12.50		400-510 VAC 50/60 Hz		8 [0.28]	<u>PDF</u>
<u>DIB-C33</u>	\$12.50		12-600 VDC		8 [0.28]	<u>PDF</u>



DIB-C33

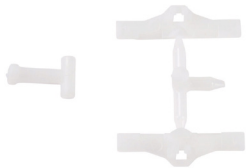


VRB-E34



CWB Series Contactors Accessories and Spare Parts

WEG CWB Series Contactors Accessories – Mechanical Interlock Selection Guide



IM1

Part Number	Price	For Use With	Description	Dimensional Drawing
IM1	\$5.25	CWB9 through CWB38	Mounting set for interlocking two contactors with the same frame type. Fitting through snaps without tools.	PDF
IM2	\$6.50	CWB40 through CWB80		PDF

WEG CWB Series Contactors Accessories Easy-Connection Reversing Bar Connection Kit for Reversing Starters – Selection Guide

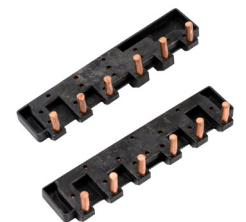


IM2

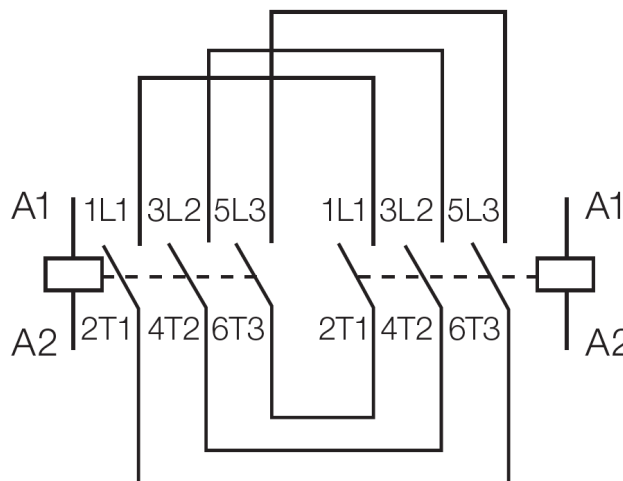
Part Number	Price	For Use With	Hp Values Declared on Direct and Reversing Starters Per UL 60947-4-1, Test Cycles. Three-Phase Voltage (V)		Weight g [oz]	Dimensional Drawing	
			K1=K2	220-240 V (hp)			440-480 V (hp)
EC-R1	\$24.00	CWB9		3	5	2.83 [0.10]	PDF
		CWB12		3	7.5		PDF
		CWB18		5	10		PDF
		CWB25		7.5	15		PDF
		CWB32		10	20		PDF
		CWB38		10	25		PDF
EC-R2	\$29.50	CWB40		15	30	7.09 [0.25]	PDF
		CWB50		15	40		PDF
		CWB65		20	50		PDF
		CWB80		25	50		PDF



EC-R1



EC-R2



Electric Diagram



CWB Series Contactors

Terminal Markings According to IEC/EN 60947				
Diagram	Configuration	Auxiliary Contacts		Reference Code
		NO	NC	
3-Pole 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
	40	4	0	BFB-40
	22	2	2	BFB-22
	04	0	4	BFB-04
Side Mounted Auxiliary Contact Block				
	11	1	1	BLB-11



CWB Series Contactors

WEG CWB Series Contactors Specifications – General Specifications

		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
Compliance		IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508									
Rated Insulation Voltage U (Pollution Degree 3)	IEC/EN 60947-4-1	690V						1000V			
	UL, CSA	600V									
Rated Impulse-Withstand Voltage U_{imp}	IEC/EN 60947-1	6kV									
Frequency Limits		25-400 Hz									
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		With screws or DIN 35mm 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	4g									
	Closed Contactor	4g									
Resistance to mechanical shocks (½ sine wave=11ms - IEC/EN 60068-2-27)	Open Contactor	10g									
	Closed Contactor	15g									
Ambient Temperature	Operating	-25°C to +55°C [-13°F to +131°F]									
	Storage	-55°C to +80°C [-67°F to +176°F]									
Maximum Operation Altitude Without Modification of Rated Values¹		3000m [9843ft]									

¹ For altitudes of 3000-4000 m [9843-13123 ft] (0.90 x I_e and 0.80 x U_i) and 4000-5000 m [13123-16404 ft] (0.80 x I_e and 0.75 x U_i).

WEG CWB Series Contactors Specifications – Control Circuit (AC)

		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
Compliance		IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508									
Rated Insulation Voltage U (Pollution Degree 3)	IEC/EN 60947-4-1	690V						1000V			
	UL, CSA	600V						600V			
Standard Voltages at 50/60 Hz		12 to 600 V						24 to 600 V			
Coil Operating Limits		0.8 to 1.1 xUs						0.8 to 1.1 xUs			
Coil 50/60 Hz	Pick Up	0.5 to 0.8 xUs						0.5 to 0.8 xUs			
	Drop Out	0.2 to 0.6 xUs						0.2 to 0.6 xUs			
Average Consumption (50Hz/60Hz)	Magnetic Circuit Closed	9 / 7.5 VA						27 / 17.2 VA			
	Power Factor Switching On (cos φ)	0.8 / 0.7						0.56 / 0.55			
	Power Factor Switched On (cos φ)	0.24 / 0.27						0.25 / 0.28			
	Thermal Power Dissipation	5-7 / 5-7 W						3.7-6.3 / 3.7-6.3 W			
	Closing the Magnetic Circuit	90 / 75 VA						202 / 185 VA			
Operation Average Time of NO Contacts (Closing/Opening)		15 to 25 ms / 8 to 12 ms						10 to 15 ms / 8 to 12 ms			

WEG CWB Series Contactors Specifications – Control Circuit (DC)

		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
Compliance		IEC/EN 60947-1, IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508									
Rated Insulation Voltage U (Pollution Degree 3)	IEC/EN 60947-4-1	690V						1000V			
	UL, CSA	600V						600V			
Standard Voltages		12 to 500 V						12 to 500 V			
Coil Operating Limits		0.8 to 1.1 xUs						0.8 to 1.1 xUs			
	Pick Up	0.5 to 0.8 xUs						0.5 to 0.8 xUs			
	Drop Out	0.1 to 0.4 xUs						0.1 to 0.4 xUs			
Average Consumption (50Hz/60Hz)		1.0x use the coil cold						1.0x use the coil cold			
	Magnetic Circuit Closed	5.8 W						10.6 W			
	Closing the Magnetic Circuit	5.8 W						53.5 W			
Operation Average Time of NO Contacts (Closing/Opening)		35 to 45 ms / 8 to 12 ms						20 to 30 ms / 4 to 8 ms			
Thermal Power Dissipation		5 to 7 W						12 to 16 W			



CWB Series Contactors

WEG CWB Series Contactors Specifications – Main Contacts

		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80	
Rated operational current I_e	AC-3 ($U_e \leq 440$ V)	A	9	12	18	25	32	38	40	50	65	80
	AC-4 ($U_e \leq 440$ V)	A	4.4	5.8	8.5	10.4	13.7	13.7	18.5	18.5	26	32
	AC-1 ($\theta \leq 55$ °C, $U_e \leq 690$ V)	A	25	25	32	40	50	50	60	90	110	110
Rated operational voltage U_e	IEC/EN 60947-4-1	V	690V						1000V			
	UL, CSA	V	600V									
Conventional thermal current I_{th} ($\theta \leq 55$ °C)		A	25	25	32	40	50	50	60	90	110	110
Making capacity – IEC/EN 60947		A	250	250	300	450	550	550	550	1000	1000	1000
Breaking capacity – IEC/EN 60947	$U_e \leq 400$ V)	A	250	250	300	450	550	550	550	1000	1000	1000
	$U_e = 500$ 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 $\theta \leq 40$ °C)	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 (RK5)	@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 ($\theta \leq 55$ °C)	$U_e \leq 440$ V	A	9	12	18	25	32	38	40	50	65	80
	$U_e \leq 500$ V	A	9	12	15.8	23	28.5	28.5	35	45	55	75
	$U_e \leq 690$ 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
		hp	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
		hp	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
		hp	6	8.7	12.5	16.8	20	25	29	40	50	60
	500V	kW	5.5	7.5	10	15	18.5	18.5	22	30	37	55
		hp	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
		hp	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
	Utilization category AC-4											
Rated operational current I_e	($U_e \leq 440$ V)	A	4.4	5.8	8.5	10.4	13.7	13.7	18.5	18.5	26	32
	($U_e \leq 500$ V)	A	3.9	5.1	7.5	12	13.9	13.9	17.5	23.5	28.5	33
	($U_e \leq 690$ 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
		hp	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
		hp	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
		hp	2.9	4.0	5.0	7.4	10.1	10.1	14.7	14.7	20.1	29.5
	500V	kW	2.2	3	5	7.5	9	9	11	15	18.5	22
		hp	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
		hp	2.9	4.0	6.7	13.4	14.7	14.7	16.8	20.1	26.8	33.5



CWB Series Contactors

WEG CWB Series Contactors Specifications – Main Contacts

		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80	
<i>Utilization category AC-1 (3P NO)</i>												
Conventional thermal current I_{th} ($\theta \leq 55^\circ\text{C}$)		A	25	25	32	40	50	50	60	90	110	110
Maximum orientative operational current according to ambient temperature		$\theta \leq 60^\circ\text{C } U_e \leq 690\text{V}$	A	25	25	32	40	50	50	60	90	110
Max Operational Power $\theta \leq 55^\circ\text{C}$ (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
	500V	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		$I_e \times 1.7$									
	3 poles in parallel		$I_e \times 2.4$									
	4 poles in parallel		-									
Percentage of maximum operational current	600 ops/h	%	100	100	100	100	100	100	100	100	100	100

WEG CWB Series Contactors Specifications – Auxiliary Contacts

		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80
<i>Utilization category AC-1 (3P NO)</i>											
Compliance		60947-5-1	IEC/EN								
Rated Insulation Voltage U_j (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} ($\theta \leq 55^\circ\text{C}$)		A	10								
Rated Operational Current I_e											
AC-15 (IEC/EN 60947-5-1)	220/230 V	A	10								
	380/400 V	A	4								
	500V	A	2.5								
	660/690 V	A	1.5								
DC-13 (IEC/EN 60947-5-1)	24V	A	4								
	48V	A	2								
	110V	A	0.7								
	220V	A	0.3								
	440V	A	0.15								
Making Capacity	$U_e \leq 690\text{V}$ 50/60 Hz – AC-15	A	10 x I_e								
Breaking Capacity	$U_e \leq 400\text{V}$ 50/60 Hz – AC-15	A	1 x I_e								
Short Circuit Protection With Fuse (RK5)		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 Contacts		m Ω	2.5								



CWB Series Contactors

WEG CWB Series Contactors Specifications – Terminal Capacity and Tightening Torque

Power Circuit														
		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80	CWB95	CWB110	CWB125
Mounting System Screw Type		Phillips Number 2			Phillips Number 2			Allen (4mm)			Allen (4mm)			
Flexible Conductor Without Terminal	AWG		1 x 16-10		1 x 16-10		1 x 14-3		1 x 2.5-70					
			2 x 16-10		2 x 16-10		2 x 14-3		2 x 2.5-70					
Flexible Conductor With Terminal	AWG		1 x 16-10		1 x 16-8		1 x 14-3		1 x 2.5-70					
			2 x 16-12		2 x 16-10		2 x 14-3		2 x 2.5-70					
Solid Wire	AWG		1 x 16-10		1 x 14-18		1 x 14-3		1 x 2.5-70					
			2 x 16-10		2 x 14-18		2 x 14-3		2 x 2.5-70					
Tightening Torque	N•m [lb•ft]	1.7 [1.25]			2.5 [1.84]			5.0 [3.69]			6.0 [4.43]			

Control and Auxiliary Circuit – Terminal Capacity and Tightening Torque

Control and Auxiliary Circuit – Terminal Capacity and Tightening Torque														
		CWB9	CWB12	CWB18	CWB25	CWB32	CWB38	CWB40	CWB50	CWB65	CWB80	CWB95	CWB110	CWB125
Mounting System Screw Type		Phillips Number 2					Phillips Number 2					Phillips Number 2		
Flexible Conductor Without Terminal	AWG	1 x 16-12		1 x 16-12		1 x 16-12		1 x 16-12		1 x 1-4				
		2 x 16-12		2 x 16-12		2 x 16-12		2 x 16-12		2 x 1-4				
Flexible Conductor With Terminal	AWG	1 x 16-12		1 x 16-12		1 x 16-12		1 x 16-12		1 x 1-4				
		2 x 16-14		2 x 16-14		2 x 16-14		2 x 16-14		2 x 1-2.5				
Solid Wire	AWG	1 x 16-12		1 x 16-12		1 x 16-12		1 x 16-12		1 x 1-4				
		2 x 16-12		2 x 16-12		2 x 16-12		2 x 16-12		2 x 1-4				
Tightening Torque	N•m [lb•ft]	1.0 [0.74]					1.0 [0.74]					1.0 [0.74]		

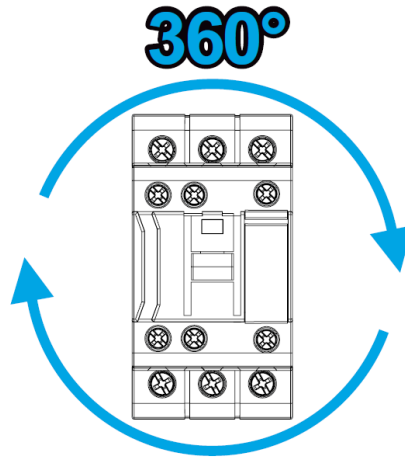
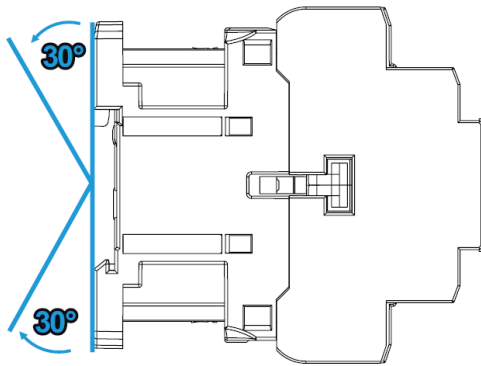
Auxiliary Contact Blocks – Terminal Capacity and Tightening Torque

		BFB (Front)					BLB (Side)		
Mounting System Screw Type		Phillips Number 2							
Flexible Conductor Without Terminal	AWG	1 x 16-14		1 x 16-14		1 x 16-14		1 x 16-14	
		2 x 16-14		2 x 16-14		2 x 16-14		2 x 16-14	
Flexible Conductor With Terminal	AWG	1 x 16-14		1 x 16-14		1 x 16-14		1 x 16-14	
		2 x 16-14		2 x 16-14		2 x 16-14		2 x 16-14	
Solid Wire	AWG	1 x 16-14		1 x 16-14		1 x 16-14		1 x 16-14	
		2 x 16-14		2 x 16-14		2 x 16-14		2 x 16-14	
Tightening Torque	N•m [lb•ft]	1.0 [0.74]							



CWB Series Contactors

Mounting Position (CWB9 through CWB80)





CWB Series Contactors

CWB Technical Specifications			
	CWB95	CWB110	CWB125
Compliance With Standards	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL 60947		
Rated Insulation Voltage U_i (Pollution Degree 3)	IEC/EN 60947-4-1: 1000V UL, CSA: 600V		
Rated Impulse-Withstand Voltage U_{imp} IEC/EN 60947-1	6kV		
Frequency Limits	25-400 Hz		
Mechanical Lifespan	AC coil: 6 million cycles DC coil: 6 million cycles		
Electrical Lifespan, I_e AC-3	1.1 million cycles	1.0 million cycles	1.0 million cycles
Degree of Protection (IEC/EN 60529)	Main terminals: IP10 (front) Coil and auxiliary contacts: IP20 (front)		
Mounting	By screws or DIN 35mm 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: 4g Closed contactor: 4g		
Resistance to Mechanical Shocks (½ senoid = 11ms - IEC/EN 60068-2-27)	Open contactor: 10g Closed contactor: 15g		
Ambient Temperature	Operating: -25°C to 55°C [-13°F to 131°F] Storage: -55°C to 80° [-67°F to 176°F]		
Maximum operation altitude without modification in the rated values¹	3000m [9842.5 ft]		

Note 1: For altitudes of 3,000 - 4,000 m (0.90xle and 0.80xUi) and of 4,000 - 5,000 m (0.80xle and 0.75xUi).

Control Circuit – Alternating Current (AC) Technical Specifications		
CWB95/110		
Rated Insulation Voltage U_i (Pollution Degree 3)	IEC/EN 60947-4-1: 1000V UL, CSA: 600V	
Standard Voltages at 50/60 Hz	24-500 V	
Coil Operating Limits	At 50Hz: 0.8 - 1.1 xUs At 60Hz: 0.8 - 1.1 xUs	
Average Consumption Coil 50/60 Hz (60Hz Operation)	Magnetic circuit closed	25VA
	Power factor switched on	0.40 (cos Φ)
	Thermal power dissipation	9 - 11 W
	Closing of the magnetic circuit	410VA
	Power factor switching on	0.48 (cos Φ)
Average Consumption Coil 50/60 Hz (60Hz Operation)	Magnetic circuit closed	27VA
	Power factor switched on	0.4 (cos Φ)
	Thermal power dissipation	11 - 13.4 W
	Closing of the magnetic circuit	426VA
	Power factor switching on	0.5 (cos Φ)
Average Operating Time	Closing of the NO contacts	8 - 12.5 ms
	Opening of the NO contacts	4 - 8 ms



CWB Series Contactors

Control Circuit – Electronic Coils (AC/DC) Technical Specifications		
<i>CWB95/110</i>		
Rated Insulation Voltage U_i (Pollution Degree 3)	IEC 60947-4-1, VDE 0660: 1000V UL, CSA: 600V	
Standard Voltages	24-500 V	
Coil Operating Limits	At V DC: 0.8 - 1.1 xUs At 50Hz: 0.8 - 1.1 xUs At 60Hz: 0.8 - 1.1 xUs	
Average Consumption	1.0 x Us and cold coil	
AC Power Supply (60Hz)	Magnetic circuit closed	10.8 VA
	Power factor	0.47 (cos Φ)
	Thermal power dissipation	5.1 W
	Closing of the magnetic circuit	217VA
	Power factor	0.88 (cos Φ)
DC Power Supply	Magnetic circuit closed	2 - 5 W
	Closing of the magnetic circuit	180 - 220 W
Average Operating Time	Closing of the NO contacts	32 - 48 ms
	Opening of the NO contacts	30 - 55 ms



CWB Series Contactors

Main Contacts Technical Specifications

		CWB95	CWB110	CWB125	
Rated operational current I_e	AC-3 (Ue ≤440 V) (A)	95	110	125	
	AC-4 (Ue ≤440 V) (A)	52	58	65	
	AC-1 ($\theta \leq 55^\circ\text{C}$, Ue ≤690 V) (A)	140	150	175	
Rated operational voltage U_e	IEC/EN 60947-4-1 V	1000			
	UL, CSA V	600			
Conventional thermal current I_{th} ($\theta \leq 55^\circ\text{C}$)	(A)	140	150	175	
Making capacity - IEC/EN 60947	(A)	1100	1200	1375	
Breaking capacity IEC/EN 60947	(Ue ≤400 V) (A)	1100	1200	1375	
	(Ue =500 V) (A)	970	1000	1200	
	(Ue =690 V) (A)	700	765	870	
Acceptable short-time current (no current flowing during recovery time of 15min and $\theta \leq 40^\circ\text{C}$)	1s (A)	1200	1350	1430	
	10s (A)	720	780	860	
	1min (A)	410	470	515	
	10min (A)	140	150	175	
Short circuit protection of the main contacts Fuse (gL/gG)	@600 V - UL/CSA kA	5	5	10	
	Coordination type 1 (A)	-	-	-	
	Coordination type 2 (A)	-	-	-	
Impedance Per Pole	(m Ω)	0.7	0.7	0.7	
Average power dissipation per pole	AC-1 (W)	15	17	21	
	AC-3 (W)	7	9	11	
Minimum switching capacity¹	(V/mA)	50/100			
Utilization Category AC-3					
Rated Operational Current I_e ($\theta \leq 55^\circ\text{C}$)	(Ue ≤440 V) (A)	95	110	125	
	(Ue =500 V) (A)	84	97	110	
	(Ue =690 V) (A)	61	70	80	
Orientative rated operational power Three-phase induction motors (50/60 Hz) IV poles - 1800 rpm	220/240 V	(kW)	22	30	37
		(cv)	30	40	50
	380/400 V	(kW)	45	55	55
		(cv)	60	75	75
	415/440 V	(kW)	55	55	75
		(cv)	75	75	100
	500 V	(kW)	55	55	75
		(cv)	75	75	100
	660/690 V	(kW)	55	55	75
		(cv)	75	75	100
	Maximum percentage	600 ops/hr (%)	100	100	100
	Utilization Category AC-4				
Rated operational current I_e	(Ue ≤440 V) (A)	52	58	65	
	(Ue =500 V) (A)	46	51	57	
	(Ue =690 V) (A)	33	37	41	
Orientative rated operational power Three-phase induction motors (50/60 Hz) IV poles - 1,800 rpm (200,000 operations)	220/240 V	(kW)	15	16.5	18.5
		(cv)	20	22	25
	380/400 V	(kW)	22	28	30
		(cv)	30	38	40
	415/440 V	(kW)	30	33	37
		(cv)	40	44	50
	500 V	(kW)	30	30	37
		(cv)	40	40	50
	660/690 V	(kW)	30	30	45
		(cv)	40	40	60

Note 1: In order to achieve acceptable reliability for application and/or continuity test on the power contacts, a minimum voltage and current of 50V and 100mA, respectively, must be used. For lower values, the auxiliary contacts must be used.



CWB Series Contactors

Auxiliary Contacts Technical Specifications Utilization Category AC-1 3P and 4P (NO)

		<i>CWB9 - 125, (built-in)</i>	<i>BFB (front mounted)</i>	<i>BLB (side mounted)</i>
Compliance With 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} ($\theta \leq 55$ °C)	(A)	10		
Rated Operational Current I_e				
AC-15 (IEC/EN 60947-5-1)	220/230 V (A)	10		
	380/440 V (A)	4		
	500V (A)	2.5		
	660/690 V (A)	1.5		
DC-13 (IEC/EN 60947-5-1)	24V (A)	4		
	48V (A)	2		
	110V (A)	0.7		
	220V (A)	0.3		
	440V (A)	0.15		
	600V (A)	0.1		
Making Capacity	$U_e \leq 690$ V 50/60 Hz - AC-15 (A)	$10 \times I_e$		
Breaking Capacity	$U_e \leq 400$ V 50/60 Hz - AC-15 (A)	$1 \times I_e$		
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		
Contact Impedance	(m Ω)	2.5		



CWB Series Contactors Accessories



BFB-11



BLB-11



BFB-20



BFB-22



BFB-40



BFB-04

WEG CWB Series Contactors Accessories – Front Mounted Auxiliary Contact Blocks Selection Guide

Part Number	Price	For Use With	Max. number of additional contacts/contactor	Auxiliary contacts		Weight g [oz]	Drawing
				NO	NC		
BFB-11	\$8.00	CWB9 through CWB80	4	1	1	63 [2.22]	PDF
BFB-20	\$8.25			2	0	63 [2.22]	PDF
BFB-22	\$12.50			2	2	63 [2.22]	PDF
BFB-40	\$12.50			4	0	63 [2.22]	PDF
BFB-04	\$12.50			0	4	63 [2.22]	PDF

NOTES: The maximum number of auxiliary contacts assembled on the contactor is 4.

WEG CWB Series Contactors Accessories – Side Mounted Auxiliary Contact Blocks Selection Guide

Part Number	Price	For Use With	Max. Number of Additional Contacts/Contactor	Auxiliary Contacts		Weight g [oz]	Drawing
				NO	NC		
BLB-11	\$8.75	CWB9 through CWB80	4	1	1	34 [1.20]	PDF

NOTE: The maximum number of auxiliary contacts assembled on the contactor is 4.

WEG CWB Series Contactors Accessories – Plug-In Surge Suppressors Selection Guide

Part Number	Price	For Use With	Voltage	Diagram	Weight g [oz]	Drawing
VRB-E34	\$12.50	CWB9 through CWB80 CWBS9 through CWBS80	50-127 VAC 50/60 Hz 60-180 VDC		8 [0.28]	PDF
VRB-E50	\$12.50		130-250 VAC 50/60 Hz 180-300 VDC		8 [0.28]	PDF
VRB-D73	\$12.50		400-510 VAC 50/60 Hz		8 [0.28]	PDF
DIB-C33*	\$12.50		12-600 VDC		8 [0.28]	PDF

* Contactors CWB9...110 with DC coils assembled with surge suppressor DIB will increase the opening time by 6 times. The surge suppressor cannot be used with BLB or BFB auxiliary contact blocks that contain N.C. contacts.



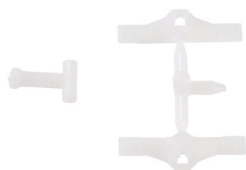
DIB-C33



VRB-E34



CWB Series Contactors Accessories and Spare Parts



IM1

WEG CWB Series Contactors Accessories – Mechanical Interlock Selection Guide				
Part Number	Price	For Use With	Description	Drawing
<u>IM1</u>	\$5.25	CWB9 through CWB38 CWBS9 through CWBS38	Mounting set for interlocking two contactors with the same frame type. Fitting through snaps without tools.	<u>PDF</u>
<u>IM2</u>	\$6.50	CWB40 through CWB125 CWBS40 through CWBS80		<u>PDF</u>

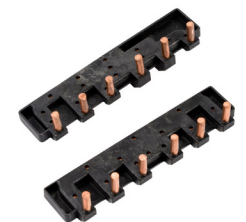


IM2

WEG CWB Series Contactors Accessories Easy-Connection Reversing Bar Connection Kit for Reversing Starters – Selection Guide						
Part Number	Price	For Use With	Hp Values Declared on Direct and Reversing Starters Per UL 60947-4-1, Test Cycles. Three-Phase Voltage (V)		Weight g [oz]	Drawing
			K1=K2	220-240 V (hp)		
<u>EC-R1</u>	\$24.00	CWB9	3	5	2.83 [0.10]	<u>PDF</u>
		CWB12	3	7.5		<u>PDF</u>
		CWB18	5	10		<u>PDF</u>
		CWB25	7.5	15		<u>PDF</u>
		CWB32	10	20		<u>PDF</u>
		CWB38	10	25		<u>PDF</u>
<u>EC-R2</u>	\$29.50	CWB40	15	30	7.09 [0.25]	<u>PDF</u>
		CWB50	15	40		<u>PDF</u>
		CWB65	20	50		<u>PDF</u>
		CWB80	25	50		<u>PDF</u>
<u>EC-R3</u>	\$38.50	Reversing connection kit, for use with CWB95 to CWB125 series contactors. Line and loadside connection bars included.				<u>PDF</u>



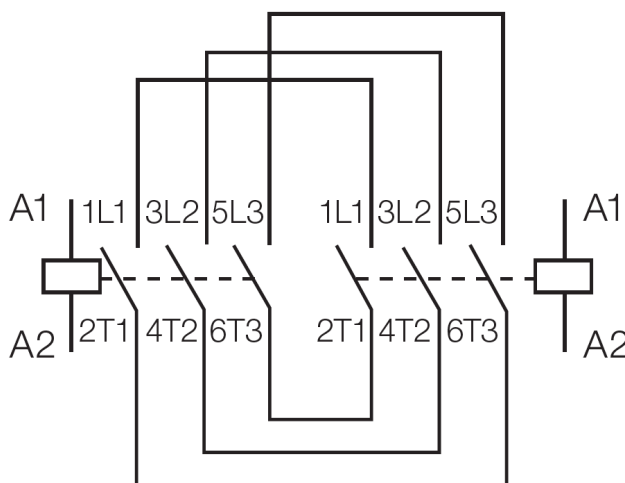
EC-R1



EC-R2



EC-R3



Reversing Bar Connection Kit Electrical Wiring Diagram



CWBS Series Contactors For Safety Applications

Safety Assurance for Operators and Equipment

WEG's new CWBS line of contactors for safety applications (from 9A to 80A in AC-3) was developed in compliance with IEC and UL standards.

These contactors feature mechanically-linked contacts (IEC/EN 60947-5-1) and mirror contacts (IEC/EN 60947-4-1), which provide proper operation of safety circuits of machines and equipment that must operate in compliance with international safety standards, including the Brazilian machine safety standard (NR12).



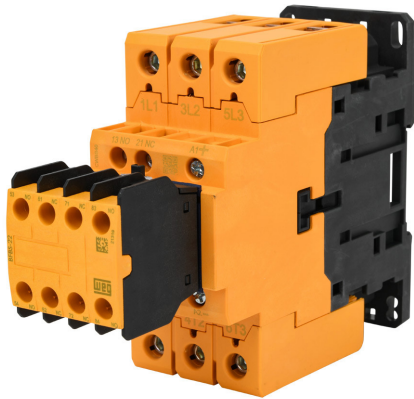
Characteristics

CWBS Power Contactors

- TÜV certification for mechanically linked contacts (IEC 60947-5-1 - Annex L) and mirror contacts (IEC 60947-4-1 - Annex F)
- 45mm wide up to 38A and 54mm wide in models from 40 to 80A, with six built-in auxiliary contacts (3 NO + 3 NC)
- Choice of up to six auxiliary contacts
- Compact starters can be assembled with MPW40 and MPW80 manual motor protectors and with RW27-2D and RW67-5D thermal relays.



CWBS Series Contactors For Safety Applications



CWBS40-33-30C03

Features

- Mechanically linked contacts (IEC 60947-5-1 - Annex L) and mirror contacts (IEC 60947-4-1 - Annex F)
- Available in versions up to 80A (AC-3)
- Includes 3NO/3NC mechanically linked/mirror contacts
- Compact starters can be assembled with MPW40 and MPW80 manual motor protectors and RW27-2D, RW67-5D overload relays

Benefits



Protection against inadvertent operation



Protection for operators and equipment



Machine safety applications



Certificate for worldwide use



Fast mounting on DIN rail 35 mm or with screws



Auxiliary contact block assembled and tested at the factory

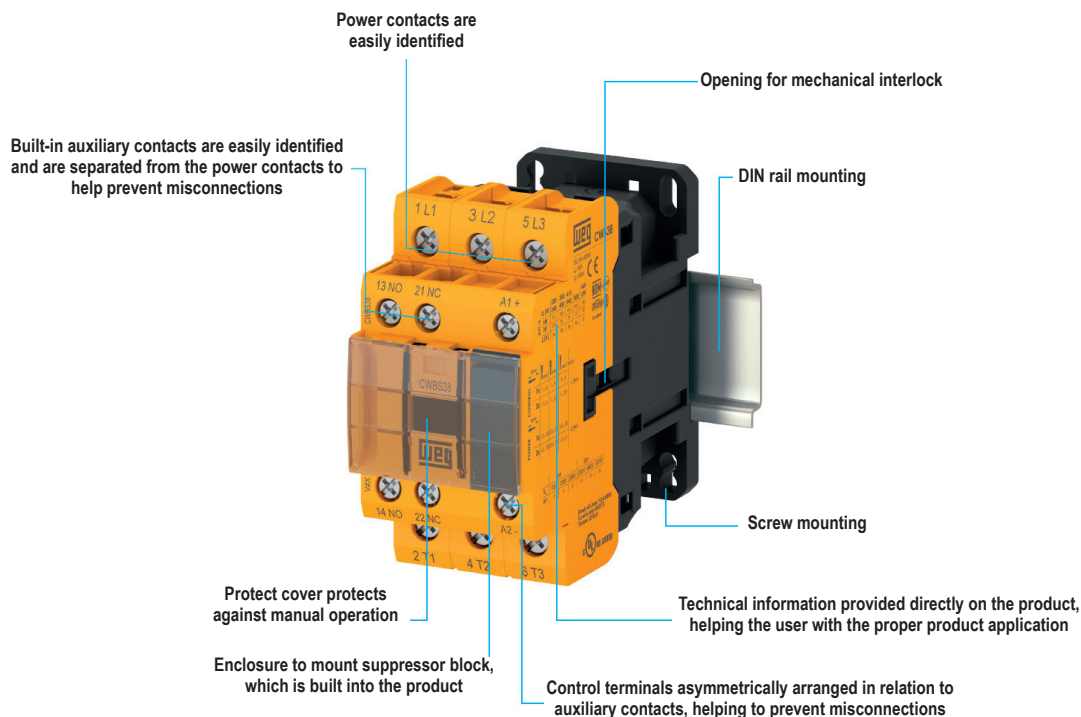


Specific color that enables easy identification on panels and equipment

Certifications



UL file # E202315

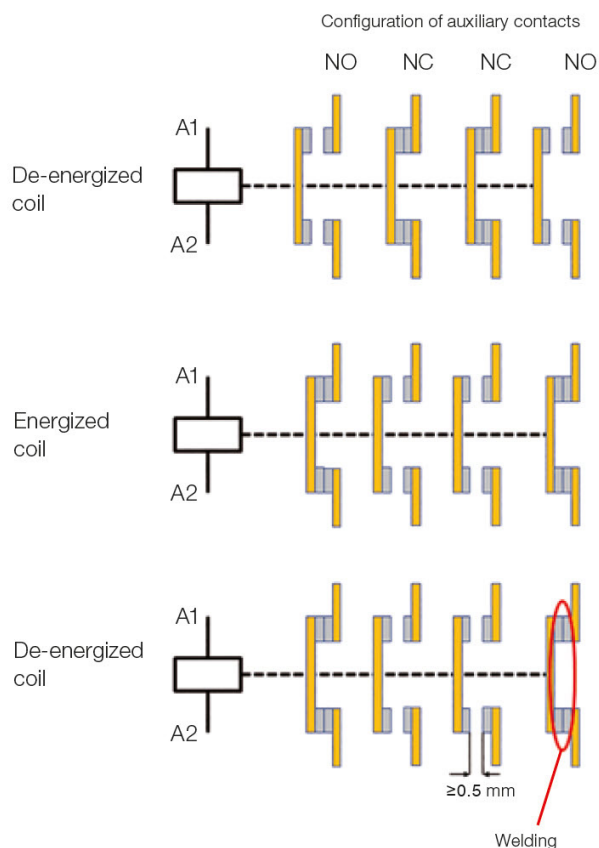


WEG CWBS Series Contactors For Safety Applications

Mechanically Linked Contacts (IEC/EN 60947-5-1 – Annex L)



Applicable to the auxiliary contacts used in auxiliary control circuits those contacts can be built into the contactor or blocks of external auxiliary contacts mounted on the contactors. According to IEC/EN 60947-5-1 - Annex L, open contacts and closed contacts cannot be simultaneously closed. In case welding occurs on the NO contacts, the NC contacts must remain open, and in case welding occurs on the NC contacts, the NO auxiliary contacts must remain open. The example given here shows that characteristic.



Mechanically linked contact elements have previously been referred to in technical documents as forced contacts, positively activated contacts, linked contacts and positively guided contacts. Contactors with that characteristic are often used in self-monitoring circuits combined with safety interfaces (e.g., safety relays) used in the automation and safety of machinery and equipment. Contactors which do not meet that requirement may damage the equipment or harm the operator.



Side view showing the symbols which identify mechanically linked contacts.

Mirror Contact (IEC/EN 60947-4-1 – Annex F)



Applicable to auxiliary contacts mechanically linked to the power contacts. When the contactor coil is energized, the power contacts will be closed and at the same time the NC auxiliary contacts will be open. Those auxiliary contacts are called mirror contacts.

NOTE 1: A typical application of mirror contacts is to have, in the machine control circuit, a highly reliable monitoring of the status of the contactor. However, mirror contacts should not be relied upon exclusively as a means to ensure safety.

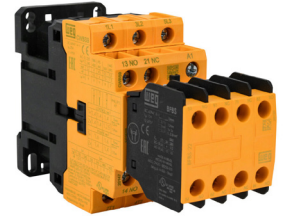
NOTE 2: Mirror contacts have previously been referred to as positively safety contacts, forced contacts, linked contacts, or positively driven contacts.



CWBS Series Contactors For Safety Applications

WEG CWBS Series Three-Pole Contactors for Safety Applications Selection Guide

Part Number	Price	Coil Voltage	Ie Max (Ue≤440V) AC-3 (A)	Maximum UL Horsepower						Built-In Auxiliary Contacts Per Contactor		Drawing
				Single-Phase		Three-Phase				N.O.	N.C.	
				115V	230V	200V	230V	480V	575V			
AC Coil												
CWBS9-33-30D02	\$78.00	24VAC	9	0.75	1.5	3	3	5	7.5	3	3	PDF
CWBS9-33-30D15	\$78.00	120VAC										PDF
CWBS12-33-30D02	\$87.00	24VAC	12	0.75	2	3	3	7.5	10	3	3	PDF
CWBS12-33-30D15	\$87.00	120VAC										PDF
CWBS18-33-30D02	\$99.00	24VAC	18	1	3	5	5	10	15	3	3	PDF
CWBS18-33-30D15	\$99.00	120VAC										PDF
CWBS25-33-30D02	\$111.00	24VAC	25	2	5	7.5	7.5	15	15	3	3	PDF
CWBS25-33-30D15	\$111.00	120VAC										PDF
CWBS32-33-30D02	\$129.00	24VAC	32	3	5	10	10	20	25	3	3	PDF
CWBS32-33-30D15	\$129.00	120VAC										PDF
CWBS38-33-30D02	\$144.00	24VAC	38	3	7.5	10	10	25	25	3	3	PDF
CWBS38-33-30D15	\$144.00	120VAC										PDF
CWBS40-33-30D02	\$162.00	24VAC	40	3	7.5	10	15	30	30	3	3	PDF
CWBS40-33-30D15	\$162.00	120VAC										PDF
CWBS50-33-30D02	\$182.00	24VAC	50	3	10	15	15	40	40	3	3	PDF
CWBS50-33-30D15	\$182.00	120VAC										PDF
CWBS65-33-30D02	\$220.00	24VAC	65	5	10	20	20	50	50	3	3	PDF
CWBS65-33-30D15	\$220.00	120VAC										PDF
CWBS80-33-30D02	\$248.00	24VAC	80	7.5	15	20	25	50	60	3	3	PDF
CWBS80-33-30D15	\$248.00	120VAC										PDF



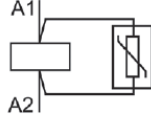
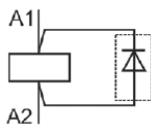
[CWBS9-33-30D02](#)



[CWBS80-33-30D15](#)

DC Coil												
CWBS9-33-30C03	\$89.00	24VDC	9	0.75	1.5	3	3	5	7.5	3	3	PDF
CWBS12-33-30C03	\$99.00											12
CWBS18-33-30C03	\$113.00		18	1	3	5	5	10	15	3	3	PDF
CWBS25-33-30C03	\$126.00		25	2	5	7.5	7.5	15	15	3	3	PDF
CWBS32-33-30C03	\$148.00		32	3	5	10	10	20	25	3	3	PDF
CWBS38-33-30C03	\$165.00		38	3	7.5	10	10	25	25	3	3	PDF
CWBS40-33-30C03	\$193.00		40	3	7.5	10	15	30	30	3	3	PDF
CWBS50-33-30C03	\$210.00		50	3	10	15	15	40	40	3	3	PDF
CWBS65-33-30C03	\$244.00		65	5	10	20	20	50	50	3	3	PDF
CWBS80-33-30C03	\$271.00		80	7.5	15	20	25	50	60	3	3	PDF

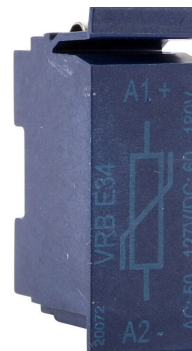
WEG CWBS Series Contactors Accessories and Spare Parts

WEG CWBS Series Contactors Accessories – Plug-In Surge Suppressors Selection Guide						
Part Number	Price	For Use With	Voltage	Diagram	Weight g [oz]	Drawing
<u>VRB-E34</u>	\$12.50	CWBS9 through CWBS80	50-127 VAC 50/60 Hz 60-180 VDC		8 [0.28]	<u>PDF</u>
<u>DIB-C33*</u>	\$12.50		12-600 VDC		8 [0.28]	<u>PDF</u>

* Contactors CWB9...110 with DC coils assembled with surge suppressor DIB will increase the opening time by 6 times. The surge suppressor cannot be used with BLB or BFB auxiliary contact blocks that contain N.C. contacts.

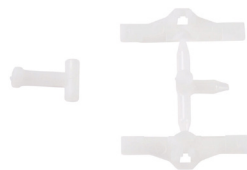


DIB-C33



VRB-E34

WEG CWBS Series Contactors Accessories – Mechanical Interlock Selection Guide				
Part Number	Price	For Use With	Description	Drawing
<u>IM1</u>	\$5.25	CWBS9 through CWBS38	Mounting set for interlocking two contactors with the same frame type. Fitting through snaps without tools.	<u>PDF</u>
<u>IM2</u>	\$6.50	CWBS40 through CWBS80		<u>PDF</u>



IM1



IM2



CWBS Series Contactors Specifications

Technical Specifications											
		CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80
Compliance With 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)	690V						1000V			
	UL, CSA (V)	600V									
Rated Impulse Withstand Voltage U_{imp}	IEC/EN 60947-4-1 (kV)	6kV									
Frequency Limits		(Hz) 25 - 400									
Mechanical Life	AC coil (millions of operations)	10						6			
	DC coil (millions of operations)	10						6			
Electrical Life	I_e AC-3 (millions of operations)	2.0	2.0	1.8	1.6	1.6	1.2	1.6	1.6	1.6	1.2
Degree of Protection (IEC 60529) $\Phi\Phi$	Main terminals	IP10 (front)									
	Coil and auxiliary contacts	IP20 (front)									
Mounting		Screws or DIN rail 35 mm (EN 50022)									
Coil Connection Points	Contactors with AC coil	2									
	Contactors with DC coil	2									
Resistance to Vibrations (IEC 60068-2-6)	Open contactor (g)	4									
	Closed contactor (g)	4									
Resistance to mechanical shocks ($\frac{1}{2}$ sine wave = 11ms - IEC 60068-2-27)	Open contactor (g)	10									
	Closed contactor (g)	15									
Ambient Temperature	Operation	-25°C to 55°C [-13°F to 131°F]									
	Storage	-55°C to 80° [-67°F to 176°F]									
Maximum operation altitude without modification in the rated values¹		3000m [9842.5 ft]									

Note 1: For altitudes of 3,000 - 4,000 m (0.90xle and 0.80xUi) and of 4,000 - 5,000 m (0.80xle and 0.75xUi).

Control Circuit – Alternating Current (AC) Technical Specifications					
		CWBS9 - 38		CWBS40 - 80	
Rated Insulation Voltage U_i (Pollution Degree 3)	IEC/EN 60947-4-1 (V)	690		1000	
	UL, CSA (V)	600		600	
Standard Voltages at 50/60 Hz	(V)	12 - 600		24 - 600	
Coil Operation 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 coil consumption 50/60 Hz	Closed magnetic circuit (VA)	7.5		17.5	
	Power factor switched on (cos Φ)	0.27		0.28	
	Thermal power dissipation (W)	1.5 - 2.5		4 - 5.5	
	Closing of the magnetic circuit (VA)	75		185	
	Power factor (cos Φ)	0.7		0.55	
Average Commute Time	Closing of the NO contacts (ms)	15 - 25		10 - 15	
	Opening of the NO contacts (ms)	8 - 12		8 - 12	



CWBS Series Contactors

Specifications

Control Circuit – Direct Current (DC) Technical Specifications			
		<i>CWBS9 - 38</i>	<i>CWBS40 - 80</i>
Rated Insulation Voltage U_i (Pollution Degree 3)	IEC/EN 60947-4-1 (V)	690	1000
	UL, CSA (V)	600	600
Standard Voltages	(V)	12 - 600	12 - 500
Coil Operation 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 DC Coil Consumption	Closed magnetic circuit (W)	5.8	10.6
	Closing of the magnetic circuit (W)	5.8	105.5
Average Commute Time	Closing of the NO contacts (ms)	35 - 45	20 - 30
	Opening of the NO contacts (ms)	8 - 12	4 - 8



CWBS Series Contactors Specifications

Main Contacts Technical Specifications												
		CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80	
Rated operational current I_e	AC-3 (Ue ≤440 V) (A)	100	12	18	25	32	38	40	50	65	80	
	AC-4 (Ue ≤440 V) (A)	4.4	5.8	8.5	10.4	13.7	13.1	18.5	18.5	26	32	
	AC-1 (θ ≤55 °C, 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						1000				
	UL, CSA V	600										
Conventional thermal current I_{th} (θ ≤55 °C)	(A)	25	25	32	40	50	50	60	90	110	110	
Making capacity - IEC/EN 60947	(A)	250	250	300	450	550	550	550	1000	1000	1000	
Breaking capacity IEC/EN 60947	(Ue ≤400 V) (A)	250	250	300	450	550	550	550	1000	1000	1000	
	(Ue =500 V) (A)	220	220	250	350	450	450	480	880	880	880	
	(Ue =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 °C)	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)	61	61	84	120	138	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	25	35	40	63	63	63	80	100	125	
Average 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	
Reliability¹	(V/mA)	50/100										
Utilization Category AC-3												
Rated Operational Current I_e (θ ≤55 °C)	(Ue ≤440 V) (A)	100	12	18	25	32	38	40	50	65	80	
	(Ue =500 V) (A)	9	12	45.8	23	28.5	28.5	35	45	55	75	
	(Ue =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 - 1800 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/hr (%)	100	100	100	100	100	100	100	100	100	100	
Utilization Category AC-4												
Rated Operational Current I_e	(Ue ≤440 V) (A)	4.4	5.8	8.5	10.4	13.7	13.7	18.5	18.5	26	32	
	(Ue =500 V) (A)	3.9	5.1	7.5	12	13.9	13.9	17.5	23.5	28.5	33	
	(Ue =690 V) (A)	2.8	3.7	5.4	12	12.8	12.8	14	18	22	28	
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

Note 1: In order to achieve acceptable reliability for application and/or continuity test on the power contacts, a minimum voltage and current of 50V and 100mA, respectively, must be used. For lower values, the auxiliary contacts must be used.



CWBS Series Contactors

Specifications

Main Contacts Technical Specifications

Utilization Category AC-1

3P (NO)

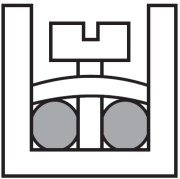
		CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80
Conventional thermal current I_{th} ($\theta \leq 55^\circ\text{C}$)	(A)	25	25	32	40	50	50	60	90	110	110
Maximum orientative operational current according to the ambient temperature	$\theta \leq 60^\circ\text{C}$ ($U_e \leq 690\text{ V}$) (A)	25	25	32	40	50	50	60	90	110	110
Maximum operational power $\theta \leq 55^\circ\text{C}$ (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
Actual values for connections	2 poles in parallel	$I_e \times 1.7$									
	3 poles in parallel	$I_e \times 2.4$									
Percentage of maximum operational current	600 ops/h (%)	100	100	100	100	100	100	100	100	100	100

Auxiliary Contacts Technical Specifications

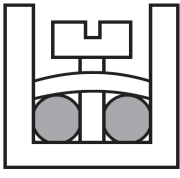
		CWBS9 - 80 (built in)	BFBS (front mounted blocks)
Compliance with the standards		IEC 60947-5-1	IEC 60947-5-1
Rated insulation voltage U_i (pollution degree 3)	(V)	690	690
	(V)	600	600
Rated operational voltage U_e	(V)	690	690
	(V)	600	600
Conventional thermal current I_{th} ($\theta \leq 55^\circ\text{C}$)	(A)	10	10
Rated operational current I_e			
AC-15 (IEC/EN 60947-5-1)	220/230 V (A)	10	10
	380/440 V (A)	4	4
	500V (A)	2.5	2.5
	660/690 V (A)	1.5	1.5
DC-13 (IEC/EN 60947-5-1)	24 V (A)	4	4
	48 V (A)	2	2
	110 V (A)	0.7	0.7
	220 V (A)	0.3	0.3
	440 V (A)	0.15	0.15
Making capacity	$U_e \leq 690\text{ V}$ 50/60 Hz - AC-15 (A)	$10 \times I_e$	$10 \times I_e$
Breaking capacity	$U_e \leq 400\text{ V}$ 50/60 Hz - AC-15 (A)	$1 \times I_e$	$1 \times I_e$
Short circuit protection with fuse (gL/gG)	(A)	10	10
Control circuit reliability	(V/ma)	17 / 5	17 / 5
Electrical life	(millions of operations)	1	1
Mechanical life	(millions of operations)	10	10
Non-overlapping time between NO and NC contacts	(ms)	1.5	1.5
Impedance of the contacts	(m Ω)	2.5	2.5

WEG CWBS Series Contactors Specifications

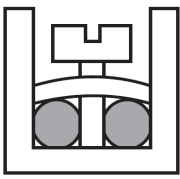
WEG CWBx Series Contactors Specifications – Terminal Capacity and Tightening Torque

			<i>Power Circuit</i>									
			<i>CWBx9</i>	<i>CWBx12</i>	<i>CWBx18</i>	<i>CWBx25</i>	<i>CWBx32</i>	<i>CWBx38</i>	<i>CWBx40</i>	<i>CWBx50</i>	<i>CWBx65</i>	<i>CWBx80</i>
Mounting System Screw Type			Phillips Number 2				Phillips Number 2			Allen (4mm)		
Flexible Conductor Without Terminal/Ferrules	AWG		1 x 16-10		1 x 16-10		1 x 14-3					
			2 x 16-10		2 x 16-10		2 x 14-3					
Flexible Conductor With Terminal/Ferrules	AWG		1 x 16-10		1 x 16-8		1 x 14-3					
			2 x 16-12		2 x 16-10		2 x 14-3					
Solid Wire	AWG		1 x 16-10		1 x 14-18		1 x 14-3					
			2 x 16-10		2 x 14-18		2 x 14-3					
Tightening Torque	N•m [lb•ft]		1.7 [1.25]		2.5 [1.84]		5.0 [3.69]					

Control and Auxiliary Circuit – Terminal Capacity and Tightening Torque

			<i>CWBx9</i>	<i>CWBx12</i>	<i>CWBx18</i>	<i>CWBx25</i>	<i>CWBx32</i>	<i>CWBx38</i>	<i>CWBx40</i>	<i>CWBx50</i>	<i>CWBx65</i>	<i>CWBx80</i>
Mounting System Screw Type			Phillips Number 2						Phillips Number 2			
Flexible Conductor Without Terminal/Ferrules	AWG		1 x 16-12		1 x 16-12		1 x 16-12					
			2 x 16-12		2 x 16-12		2 x 16-12					
Flexible Conductor With Terminal/Ferrules	AWG		1 x 16-12		2 x 16-14		1 x 16-12					
			2 x 16-14		2 x 16-14		2 x 16-14					
Solid Wire	AWG		1 x 16-12		1 x 16-12		1 x 16-12					
			2 x 16-12		2 x 16-12		2 x 16-12					
Tightening Torque	N•m [lb•ft]		1.0 [0.74]		1.0 [0.74]		1.0 [0.74]					

Auxiliary Contact Blocks – Terminal Capacity and Tightening Torque

			<i>BFB (Front)</i>				<i>BLB (Side)</i>				
Mounting System Screw Type			Phillips Number 2								
Flexible Conductor Without Terminal/Ferrules	AWG		1 x 16-14		1 x 16-14		1 x 16-14				
			2 x 16-14		2 x 16-14		2 x 16-14				
Flexible Conductor With Terminal/Ferrules	AWG		1 x 16-14		2 x 16-14		1 x 16-14				
			2 x 16-14		2 x 16-14		2 x 16-14				
Solid Wire	AWG		1 x 16-14		1 x 16-14		1 x 16-14				
			2 x 16-14		2 x 16-14		2 x 16-14				
Tightening Torque	N•m [lb•ft]		1.0 [0.74]		1.0 [0.74]		1.0 [0.74]				