

CWBS - CONTACTORS FOR SAFETY APPLICATIONS

Motors

Automation

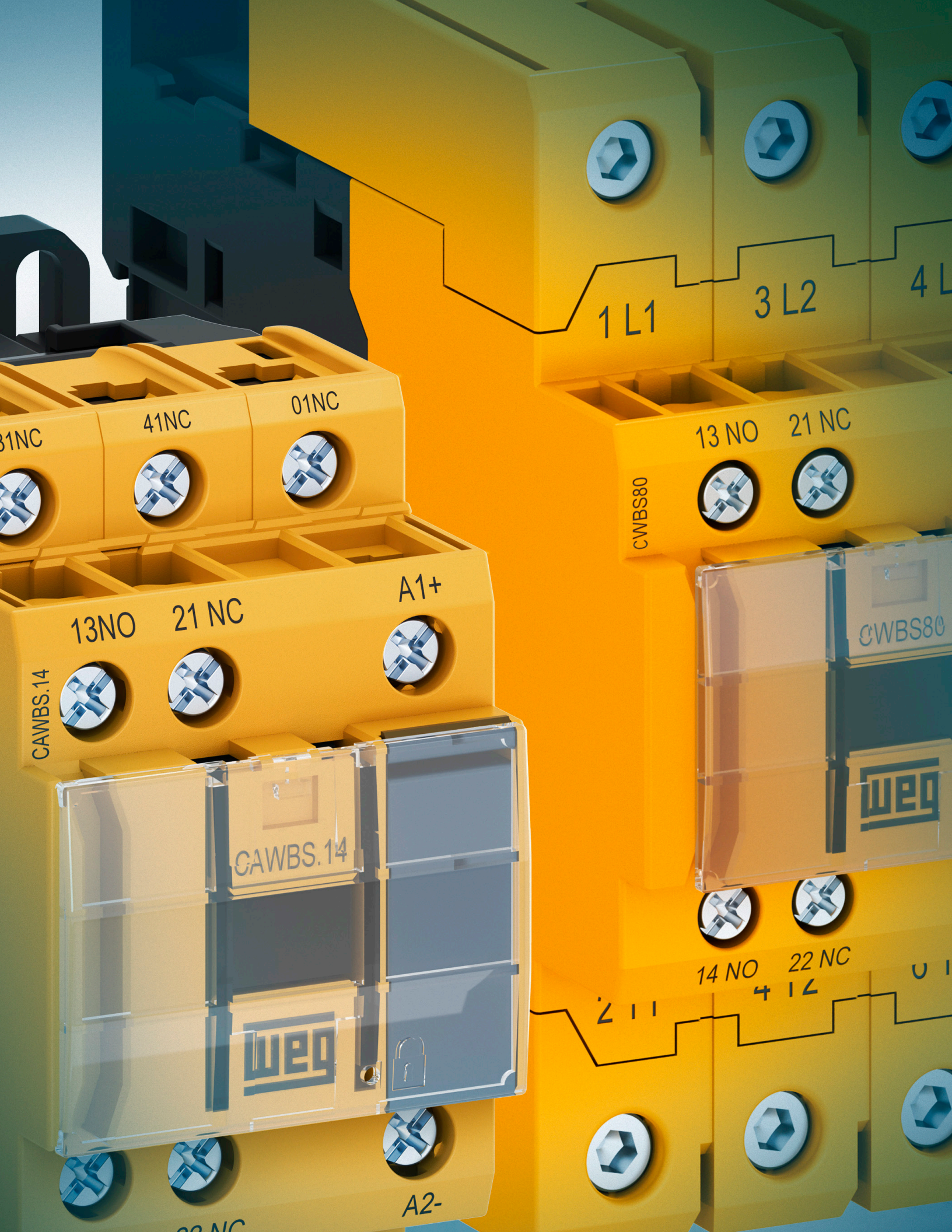
Energy

Transmission and
Distribution

Coatings

Increased Safety for
**Operators and
Equipment**





1 L1

3 L2

4 L

31 NC

41 NC

01 NC

13 NO

21 NC

CWBS80

CAWBS.14

13 NO

21 NC

A1+

CAWBS.14

CWBS80

Weidmann

14 NO

22 NC

2 1 1

4 1 2

U I

A2-

22 NC

Contactors for Safety Applications - CWBS Line

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INCREASED SAFETY

FOR OPERATORS AND EQUIPMENT

WEG's new CWBS line of contactors for safety applications 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 for machines and equipment that must operate in compliance with international safety standards.

Main Characteristics

- Currents from 9 to 125 A (AC-3)
- Supply voltage from 12 to 600 V
- Compact product
- Built-in auxiliary contacts (1NO and 1NC)
- Factory installed 2NO and 2NC auxiliary contact block
- Tool required for auxiliary contact block removal
- Enclosure for surge suppressors
- Easy identification of the control voltage
- "Zero-width" mechanical interlock
- Easy connection busbars for quick assembly of more compact reversing and star-delta starters
- Compact starters can be assembled with the MPW manual motor protectors and RW overload relays
- Compatible with accessories of the whole CWB line
- Quick mounting on 35mm DIN rail or with screws



Benefits



Protection against
inadvertent operation



Protection for operators
and equipment



Fast mounting on DIN rail
35 mm or with screws



Machine safety
applications



Certificate for
worldwide use



Auxiliary contact block
assembled and tested
at the factory

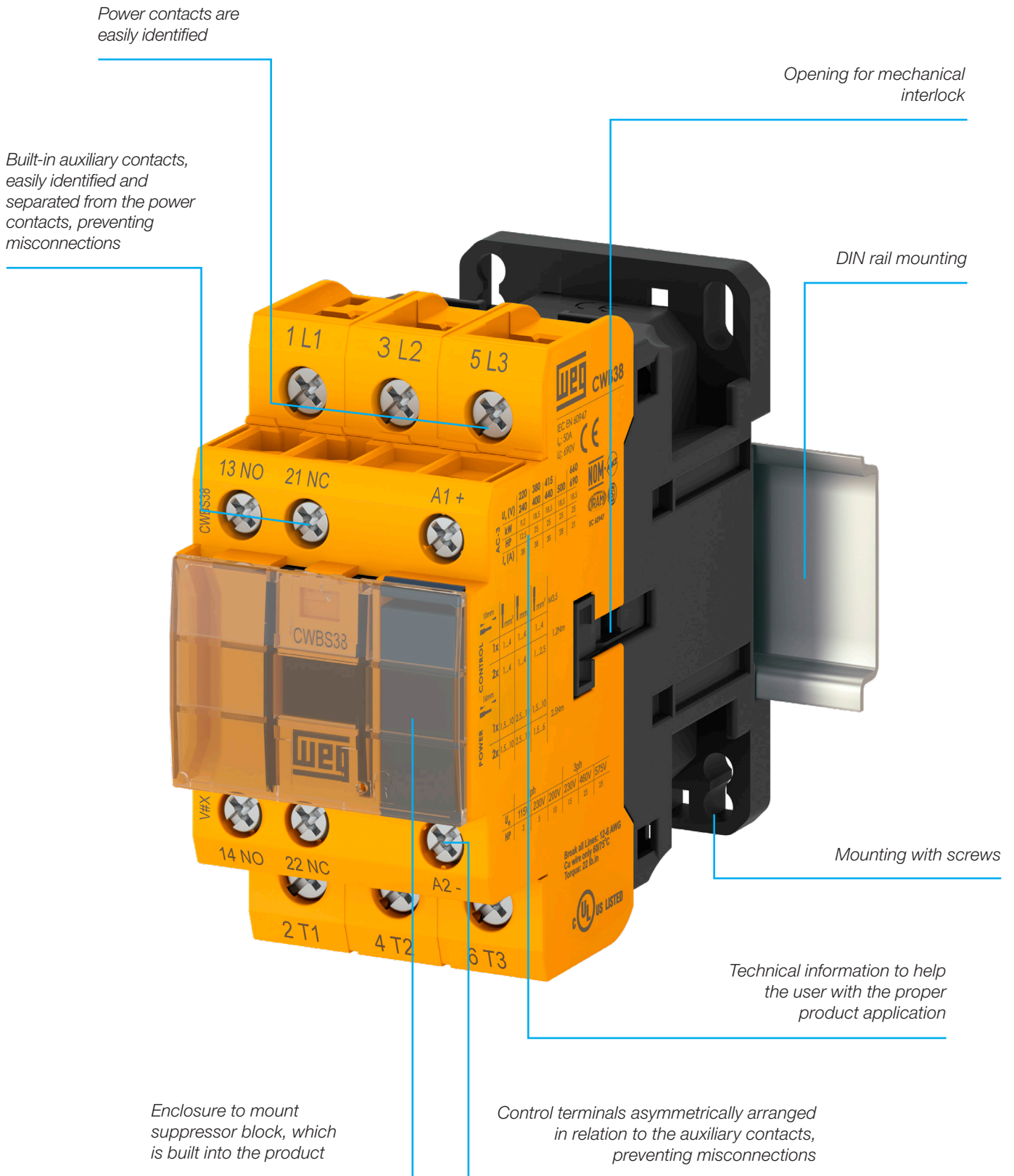


Different color, enabling easy
identification in safety systems
on panels and equipment

Certifications



Construction Features



The diagram illustrates the configuration of auxiliary contacts for a relay under three different coil states. The contacts are labeled as NO (Normally Open), NC (Normally Closed), and NC (Normally Closed), and NO (Normally Open).

- De-energized coil:** The relay is in its rest position. The NO contacts are open, and the NC contacts are closed.
- Energized coil:** The relay is in its energized position. The NO contacts are closed, and the NC contacts are open.
- De-energized coil:** The relay is in its rest position. The NO contacts are open, and the NC contacts are closed. A red oval highlights the NO contact, with a red arrow pointing to it and the text "Welding". A dimension line indicates a distance of ≥ 0.5 mm.

WEG CWBS

IEC EN 60947-1

10A

U: 690V

10kV

1.25mm for 24

1 - 2.5mm²

220/230 V (V) 24 230

DC-13 (A) 3 3.3

AC-18 (A) 3 3.3

MADE IN BRAZIL

HECHO EN BRASIL

WEG CP420 - 89256-900

Jaraguá do Sul - Brazil

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CWBS - Contactors for Safety Applications | 7

Power Contactors for Safety Applications



Three-Pole from 9 A to 125 A (AC-3)

I_e max. ($U_e \leq 440$ V)	$I_e = I_{th}$ ($U_e \leq 690$ V) $\theta \leq 55$ °C	Maximum UL Horsepower						Auxiliary contacts per contactor		Catalog Number	Weight ²⁾
		Single Phase		Three Phase							
AC-3	AC-1										
A	A	115V	230V	200V	230V	480V	575V	NO	NC		kg
9	25	3/4	1 1/2	3	3	5	7 1/2	3	3	CWBS9-33-30 ♦	0.435
12	25	3/4	2	3	3	7 1/2	10	3	3	CWBS12-33-30 ♦	0.435
18	32	1	3	5	5	10	15	3	3	CWBS18-33-30 ♦	0.435
25	40	2	5	7 1/2	7 1/2	15	15	3	3	CWBS25-33-30 ♦	0.553
32	50	3	5	10	10	20	25	3	3	CWBS32-33-30 ♦	0.553
38	50	3	7 1/2	10	10	25	25	3	3	CWBS38-33-30 ♦	0.553
40	60	3	7 1/2	10	15	30	30	3	3	CWBS40-33-30 ♦	0.973
50	90	3	10	15	15	40	40	3	3	CWBS50-33-30 ♦	0.973
65	110	5	10	20	20	50	50	3	3	CWBS65-33-30 ♦	0.973
80	110	7 1/2	15	20	25	50	60	3	3	CWBS80-33-30 ♦	0.973
95	140	7 1/2	20	30	30	75	75	3	3	CWBS95-33-30 ♦	1.683
110	150	10	25	30	40	75	100	3	3	CWBS110-33-30 ♦	1.683
125	175	10	25	40	40	100	125	3	3	CWBS125-33-30 ♦	1.723

Replace "♦" by the control voltage code¹⁾.

Alternating Current (CWBS9...110)

Code	D02	D15
V (50/60 Hz)	24	120

Direct Current (CWBS9...80)

Code	C03
V dc	24

Alternating Current / Direct Current with Electronic Module (CWBS95...125)³⁾

Code	E04	E65
V ac (50/60 Hz) and V dc	24...60 V	110...255 V

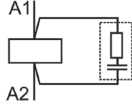
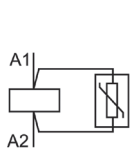
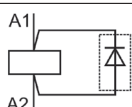
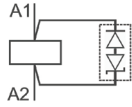
Notes: 1) Other voltages on request.

2) Weight for contactors with control circuit in alternating current. For control circuit in direct current, add 0.110 kg to the CWBS9...18 models, 0.120 kg to the CWBS25...38 models, or 0.060 kg to the CWBS40...80 models. For CWBS95...125 with electronic coil, add 0.010 kg to AC models.

3) Electronic coils contain built-in surge suppression

Accessories

Surge Protectors - Plug-In Type

Illustrative figure	Use with	Voltages	Diagram	Catalog Number	Weight kg
	CWBS9...110	24...48 V 50/60 Hz		RCBD53	0.008
		50...127 V 50/60 Hz		RCBD55	
		130...250 V 50/60 Hz		RCBD63	
		12...48 V 50/60 Hz / 12...60 V dc		VRBE49	
		50...127 V 50/60 Hz / 60...180 V dc		VRBE34	
		130...250 V 50/60 Hz / 180...300 V dc		VRBE50	
		277...380 V 50/60 Hz / 300...510 V dc		VRBE41	
		400...510 V 50/60 Hz		VRBD73	
		12...600 V dc		DIBC33 ¹⁾	
		12...250 V dc		DIZBC26 ²⁾	

Notes: 1) Contactors with direct current control assembled with DIB suppressor blocks increase the opening time by 6 times. Do not use on contactors with BFBS auxiliary contact blocks with NC contacts.

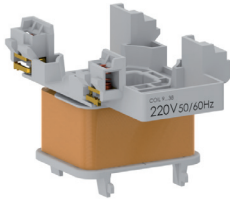
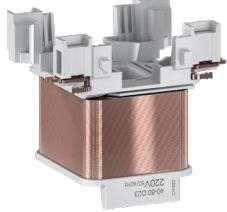
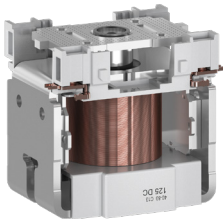
2) Contactors with direct current control assembled with DIZB suppressor blocks increase the opening time by 4 times.

Mechanical Interlock

Illustrative figure	Use with	Description	Catalog Number	Weight kg
	CWBS9...38	Mounting set for interlocking two contactors with the same frame type. Fitting through snaps without tools. Content: lock + 2 clips	IM1	0.004
	CWBS40...125	Mounting set for interlocking two contactors with the same frame type. Fitting through snaps without tools.	IM2	

Accessories

Spare Coils for Contactors

Illustrative figure	Use with	Control type	Catalog Number	Weight kg
	CWBS9...38	AC	BRB-38 ♦	0.08
	CWBS40...80	AC	BRB-80 ♦	0.09
	CWBS40...80	DC	BRB-80 ♦	0.40
	CWBS95/110	AC	BRB-110 ♦	0.15
	CWBS95...125	AC/DC ¹⁾	BRB-125 ♦	0.15

Replace “♦” by the control voltage code.

Alternating Current (CWBS9...110)

Code	D02	D07	D13	D23	D24	D25	D33	D34	D35	D36	D39
V (50/60 Hz)	24	48	110	220	230	240	380	400	415	440	480

Direct Current (CWBS9...80)

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

Alternating Current/Direct Current with Electronic Module (CWBS95...125)¹⁾

Code	E04	E64	E65	E66
V ac (50/60 Hz) and V dc	24...60 V	48...130 V	110...255 V	250...500 V

Note: 1) Electronic coils contain built-in surge suppression.

Technical Data

Application of Contactors on Direct Current Circuits¹⁾

Utilization Category DC-1 (L/R ≤1ms)

Models		CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80	CWBS95	CWBS110	CWBS125
U _e	Poles in series	Rated operational current I _g (A)												
≤24 V	1	20	20	25	40	50	50	60	90	110	110	140	150	175
	2	20	20	25	40	50	50	60	90	110	110	140	150	175
	3	20	20	25	40	50	50	60	90	110	110	140	150	175
≤48 V	1	20	20	25	40	50	50	60	90	110	110	140	150	175
	2	20	20	25	40	50	50	60	90	110	110	140	150	175
	3	20	20	25	40	50	50	60	90	110	110	140	150	175
≤60 V	1	20	20	25	40	50	50	60	90	110	110	140	150	175
	2	20	20	25	40	50	50	60	90	110	110	140	150	175
	3	20	20	25	40	50	50	60	90	110	110	140	150	175
≤125 V	1	4	4	4	7	7	7	15	15	15	15	19	22	24
	2	20	20	25	40	50	50	60	90	110	110	140	150	175
	3	20	20	25	40	50	50	60	90	110	110	140	150	175
≤220 V	1	1	1	1	1	1	1	2	2	2	2	2.5	2.9	3.2
	2	4	4	4	7	7	7	10	10	10	10	13	15	16
	3	20	20	25	32	32	32	50	50	50	50	64	73	80
≤440 V	1	0.4	0.4	0.4	0.4	0.5	0.5	1	1	1	1	1.3	1.5	1.6
	2	1	1	1	1	1	1	2	2	2	2	2.5	2.9	3.2
	3	4	4	4	7	7	7	10	10	10	10	13	15	16
≤600 V	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	0.4	0.4	0.4	0.4	0.5	0.5	1	1	1	1	1.3	1.5	1.6
	3	4	4	4	5	5	5	2	2	2	2	2.5	2.9	3.2

Utilization Category DC-3 (L/R ≤2.5ms)

Models		CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80	CWBS95	CWBS110	CWBS125
U _e	Poles in series	Rated operational current I _g (A)												
≤24 V	1	18	18	22	36	45	45	55	80	100	100	127	145	159
	2	18	18	22	36	45	45	55	80	100	100	127	145	159
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤48 V	1	18	18	22	36	45	45	55	80	100	100	127	145	159
	2	18	18	22	36	45	45	55	80	100	100	127	145	159
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤60 V	1	18	18	22	36	45	45	55	80	100	100	127	145	159
	2	18	18	22	36	45	45	55	80	100	100	127	145	159
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤125 V	1	2	2	2	3	3	3	5	5	5	5	6.4	7.3	8.0
	2	14.4	14.4	17.6	28.8	36	36	44	64	80	80	102	116	127
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤220 V	1	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	1	1.3	1.5	1.6
	2	2	2	2	3	3	3	5	5	5	5	6.4	7.3	8.0
	3	18	18	22	28	28	28	45	45	45	45	57	65	72
≤440 V	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	0.3	0.3	0.3	0.5	0.5	0.5	1	1	1	1	1.3	1.5	1.6
	3	1.5	1.5	1.5	1.5	3	3	5	5	5	5	6.4	7.3	8.0
≤600 V	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	0.5	0.5	0.5	0.5	0.5	0.5	1	1	1	1	1.3	1.5	1.6

Note: 1) Service duty according to IEC/EN 60947-4-1:

DC-1 (non-inductive or slightly inductive loads, resistive furnaces).

DC-3 (shunt-motors: starting, plugging and inching. Dynamic braking of DC motors).

DC-5 (series-motors: starting, plugging and inching. Dynamic braking of DC motors).

Technical Data

Application of Contactors on Direct Current Circuits¹⁾

Utilization Category DC-5 (L/R ≤15ms)

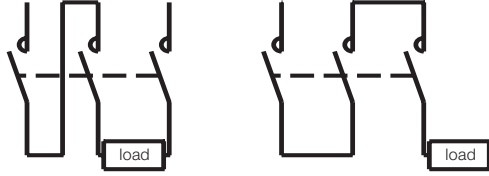
Models		CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80	CWBS95	CWBS110	CWBS125
U _e	Poles in series	Rated operational current I _e (A)												
≤24 V	1	18	18	22	36	45	45	55	80	100	100	127	145	159
	2	18	18	22	36	45	45	55	80	100	100	127	145	159
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤48 V	1	18	18	22	36	45	45	55	80	100	100	127	145	159
	2	18	18	22	36	45	45	55	80	100	100	127	145	159
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤60 V	1	18	18	22	36	45	45	55	80	100	100	127	145	159
	2	18	18	22	36	45	45	55	80	100	100	127	145	159
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤125 V	1	2	2	2	3	3	3	5	5	5	5	6	7	8
	2	14.4	14.4	17.6	28.8	36	36	44	64	80	80	102	116	127
	3	18	18	22	36	45	45	55	80	100	100	127	145	159
≤220 V	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	1.6	1.6	1.6	2.4	2.4	2.4	4	4	4	4	5.1	5.8	6.4
	3	16.2	16.2	19.8	25.2	25.2	25.2	40.5	40.5	40.5	40.5	52	59	64
≤440 V	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	0.9	0.9	0.9	0.9	1.8	1.8	3	3	3	3	3.8	4.4	4.8
≤600 V	1	-	-	-	-	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-	-	-	-	-

Wiring Diagrams

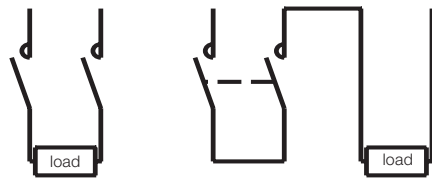
1 Poles in series



3 Poles in series



2 Poles in series



Note: 1) Service duty according to IEC/EN 60947-4-1:

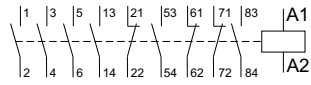
DC-1 (non-inductive or slightly inductive loads, resistive furnaces).

DC-3 (shunt-motors: starting, plugging and inching. Dynamic braking of DC motors).

DC-5 (series-motors: starting, plugging and inching. Dynamic braking of DC motors).

Technical Data

Contact Numbering According to IEC/EN 60947

Diagram	Configuration	Auxiliary contacts		Reference
		NO	NC	
Three-pole power contactors with built-in auxiliary contact				CWBS9...125 A
	33	3	3	CWBSxx.33.30

Technical Data

Basic Data

Models			CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38
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	(V)	690					
	UL, CSA	(V)	600					
Rated impulse-withstand voltage U_{imp}	IEC/EN 60947-1	(kV)	6					
Frequency limits		(Hz)	25...400					
Mechanical life	AC coil	(millions of operations)	10					
	DC coil	(millions of operations)	10					
Electrical life	I_e AC-3	(millions of operations)	2.0	2.0	1.8	1.6	1.6	1.2
Protection rating (IEC/EN 60529)	Main terminals		IP10 (frontal)					
	Coil and auxiliary contacts		IP20 (frontal)					
Mounting			Screws or 35mm DIN 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	Operation		-25 °C...+55 °C					
	Storage		-55 °C...+80 °C					
Maximum operation altitude without modification in the rated values ¹⁾			3,000 m					

Models			CWBS40	CWBS50	CWBS65	CWBS80	CWBS95	CWBS110	CWBS125
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	(V)	1,000						
	UL, CSA	(V)	600						
Rated impulse-withstand voltage U_{imp}	IEC/EN 60947-1	(kV)	6						
Frequency limits		(Hz)	25...400						
Mechanical life	AC coil	(millions of operations)	6						
	DC coil	(millions of operations)	6						
Electrical life	I_e AC-3	(millions of operations)	1.6	1.6	1.6	1.2	1.1	1.0	1.0
Protection rating (IEC/EN 60529)	Main terminals		IP10 (frontal)						
	Coil and auxiliary contacts		IP20 (frontal)						
Mounting			Screws or 35mm DIN 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	Operation		-25 °C...+55 °C						
	Storage		-55 °C...+80 °C						
Maximum operation altitude without modification in the rated values ¹⁾			3,000 m						

Note: 1) For altitudes of 3,000...4,000 m ($0.90xI_{and} 0.80xU_i$) and 4,000...5,000 m ($0.80xI_{and} 0.75xU_i$).

Technical Data

Control Circuit - Alternate Current (AC)

Models			CWBS9...38	CWBS40...80	CWBS95/110
Rated insulation voltage Ui (pollution degree 3)	IEC/EN 60947-4-1	(V)	690	1,000	1,000
	UL, CSA	(V)	600	600	600
Standard voltages at 50/60 Hz			12...500	24...500	24...500
Coil operation limits	At 50 Hz	(xUs)	0.8...1.1	0.8...1.1	0.8...1.1
	At 60 Hz	(xUs)	0.8...1.1	0.8...1.1	0.8...1.1
Average coil consumption 50/60 Hz (operation at 60 Hz)	Closed magnetic circuit	(VA)	7.5	17.5	25
	Power factor switched on	(cos φ)	0.27	0.28	0.40
	Thermal power dissipation	(W)	1.5...2.5	4...5.5	9...11
	Closing of the magnetic circuit	(VA)	75	185	410
	Power factor switching on	(cos φ)	0.7	0.55	0.48
Average coil consumption 50/60 Hz (operation at 50 Hz)	Closed magnetic circuit	(VA)	9	27	27
	Power factor switched on	(cos φ)	0.24	0.25	0.4
	Thermal power dissipation	(W)	1.5...2.5	5.5...7.8	11...13.4
	Closing of the magnetic circuit	(VA)	90	202	426
	Power factor switching on	(cos φ)	0.8	0.56	0.5
Average operating time	Closing of the NO contacts	(ms)	15...25	10...15	8...12.5
	Opening of the NO contacts	(ms)	8...12	8...12	4...8

Control Circuit - Direct Current (DC)

Models			CWBS9...38	CWBS40...80	CWBS95...125
Rated insulation voltage Ui (pollution degree 3)	IEC/EN 60947-4-1	(V)	690	1,000	-
	UL, CSA	(V)	600	600	-
Standard voltages			12...500	12...500	-
Coil operation limits			0.8...1.1	0.8...1.1	-
Average DC coil consumption	Closed magnetic circuit	(W)	5.8	10.6	-
	Closing of the magnetic circuit	(W)	5.8	105.5	-
Average operating time	Closing of the NO contacts	(ms)	35...45	20...30	-
	Opening of the NO contacts	(ms)	8...12	4...8	-

Control Circuit - Electronic Coils (AC/DC)

Models			CWBS9...38	CWBS40...80	CWBS95...125
Rated insulation voltage Ui (pollution degree 3)	IEC 60947-4-1, VDE 0660	(V)	-	-	1,000
	UL, CSA	(V)	-	-	600
Standard voltages			-	-	24...500
Coil operation limits			-	-	0.8...1.1
	in V dc	(xUs)	-	-	0.8...1.1
	at 50 Hz	(xUs)	-	-	0.8...1.1
	at 60 Hz	(xUs)	-	-	0.8...1.1
Average consumption			-	-	1.0 x Us and cold coil
AC power supply (60 Hz)	Closed magnetic circuit	(VA)	-	-	10.8
	Power factor	(cos φ)	-	-	0.47
	Thermal power dissipation	(W)	-	-	5.1
	Closing of the magnetic circuit	(VA)	-	-	217
	Power factor	(cos φ)	-	-	0.88
DC power supply	Closed magnetic circuit	(W)	-	-	2...5
	Closing of the magnetic circuit	(W)	-	-	180...220
Operation average time	Closing of the NO contacts	(ms)	-	-	32...48
	Opening of the NO contacts	(ms)	-	-	30...55

Technical Data

Main Contacts

Models			CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80	CWBS95	CWBS110	CWBS125
Rated operational current I _e	AC-3 (U _e ≤440 V)	(A)	9	12	18	25	32	38	40	50	65	80	95	110	125
	AC-4 (U _e ≤440 V)	(A)	4.4	5.8	8.5	10.4	14	14	18.5	21	27	40	52	58	65
	AC-1 (θ ≤55 °C, U _e ≤690 V)	(A)	25	25	32	40	50	50	60	90	110	110	140	150	175
Rated operational voltage U _e	IEC/EN 60947-4-1	(V)	690						1,000						
	UL, CSA	(V)	600						600						
Conventional thermal current I _{th} (θ ≤55 °C)		(A)	25	25	32	40	50	50	60	90	110	110	140	150	175
Making capacity - IEC/EN 60947		(A)	250	250	300	450	550	550	550	1,000	1,000	1,000	1,100	1,200	1,375
Breaking capacity IEC/EN 60947	(U _e ≤400 V)	(A)	250	250	300	450	550	550	550	1,000	1,000	1,000	1,100	1,200	1,375
	(U _e = 500 V)	(A)	220	220	250	350	450	450	480	880	880	880	970	1,000	1,200
	(U _e = 690 V)	(A)	150	150	180	250	350	350	350	640	640	640	700	765	870
Permissible short-time current (no current following during recovery time of 15 min and θ ≤40 °C)	1s	(A)	210	210	240	380	400	430	720	820	900	900	1,200	1,350	1,430
	10s	(A)	105	105	145	240	260	310	320	400	520	640	720	780	860
	1min	(A)	60	60	80	120	130	150	165	230	340	360	410	470	515
	10min	(A)	30	30	40	50	60	60	85	110	130	130	140	150	175
Short circuit protection of main contacts	@600 V - UL/CSA	(kA)	5										10		
	Coordination type 1	(A)	25	40	50	63	63	63	80	100	125	160	224	250	315
Fuse (gL/gG)	Coordination type 2	(A)	20	20	25	35	50	50	63	80	100	125	160	160	200
Average impedance per pole		(mΩ)	2.5	2.5	2.5	2	2	2	1.6	1.6	1.6	1.6	0.7	0.7	0.7
Average power dissipation per pole	AC-1	(W)	1.5	1.5	2.5	3.2	5	5	6	13	19	19	15	17	21
	AC-3	(W)	0.2	0.4	0.8	1.2	2	3	3	4	7	10	7	9	11
Minimum switching capacity ¹⁾	(V/mA)		50/100												
Utilization category AC-3															
Rated operational current I _e (θ ≤55 °C)	U _e ≤440 V	(A)	9	12	18	25	32	38	40	50	65	80	95	110	125
	U _e ≤500 V	(A)	9	12	15.8	23	28.5	28.5	35	45	55	75	84	97	110
	U _e ≤690 V	(A)	7	9	12.8	16.5	21	21	32	35	40	50	61	70	80
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	22	30	37
		(HP)	3	4	6	8.7	10	12.5	15	20	25	29	30	40	50
	380/400 V	(kW)	4	5.5	7.5	12.5	15	18.5	18.5	22	30	37	45	55	55
		(HP)	5.5	7.5	10	16.8	20	25	25	29	40	50	60	75	75
	415/440 V	(kW)	4.5	6.5	9.2	12.5	15	18.5	22	30	37	45	55	55	75
		(HP)	6	8.7	12.5	16.8	20	25	29	40	50	60	75	75	100
	500 V	(kW)	5.5	7.5	10	15	18.5	18.5	22	30	37	55	55	55	75
		(HP)	7.5	10	13.4	20	25	25	29	40	50	74	75	75	100
	660/690 V	(kW)	5.5	7.5	11	15	18.5	18.5	30	33	37	45	55	55	75
		(HP)	7.5	10	15	20	25	25	40	44	50	60	75	75	100
Maximum percentage	600 ops./h	(%)	100	100	100	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	14	14	18.5	21	27	40	52	58	65
	(U _e ≤500 V)	(A)	3.9	5.1	8	12	13.5	13.5	17.5	17.6	23	33	46	51	57
	(U _e ≤690 V)	(A)	2.8	3.7	5.4	12	12.8	12.8	14	17	22	26	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)	1.5	1.5	2.2	3	4	4	4.5	5.5	7.5	11	15	16.5	18.5
		(HP)	2	2	3	4	5.4	5.4	6	7.4	10	14.7	20	22	25
	380/400 V	(kW)	2.2	3.7	4	5.5	7.5	7.5	9.2	11	15	18.5	22	28	30
		(HP)	3	5	5.4	7.4	10	10	12.3	14.7	20.1	24.8	30	38	40
	415/440 V	(kW)	2.2	3	3.7	5.5	7.5	7.5	11	11	15	22	30	33	37
		(HP)	3	4	5	7.4	10	10	14.7	14.7	20.1	30	40	44	50
	500 V	(kW)	2.2	3	5	7.5	9	9	11	15	18.5	22	30	30	37
		(HP)	3	4	6.7	10	12	12	14.7	20.1	25	30	40	40	50
	660/690 V	(kW)	2.2	3	5	10	11	11	12.5	15	20	25	30	30	45
		(HP)	3	4	6.7	13.4	14.7	14.7	16.8	20.1	26.8	33.5	40	40	60

Note: 1) To ensure the correct conduction verification (for testing and use) of the power contacts, a minimum voltage and current of 50 V and 100 mA, respectively, must be used. For applications with lower values, the auxiliary contacts must be used.

Technical Data

Main Contacts

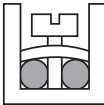
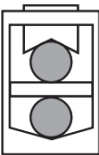
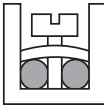
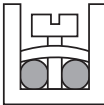
Models			CWBS9	CWBS12	CWBS18	CWBS25	CWBS32	CWBS38	CWBS40	CWBS50	CWBS65	CWBS80	CWBS95	CWBS110	CWBS125
			Utilization category AC-1												
			3P (NO)												
Conventional thermal current	$\theta \leq 55\text{ }^{\circ}\text{C}$ (A)	25	25	32	40	50	50	60	90	110	110	140	150	175	
	$\theta \leq 65\text{ }^{\circ}\text{C}$ (A)	20	20	26	32	40	40	48	72	88	88	112	121	140	
	$\theta \leq 75\text{ }^{\circ}\text{C}$ (A)	18	18	22	28	35	35	42	63	77	77	98	106	123	
Maximum orientative operational current according to the ambient temperature $\theta \leq 55\text{ }^{\circ}\text{C}$ ($U_e \leq 690\text{ V}$) (A)		25	25	32	40	50	50	60	90	110	110	140	150	175	
Maximum orientative operational power $\theta \leq 55\text{ }^{\circ}\text{C}$ (three-phase resistors)	240 V (kW)	10.4	10.4	13.3	16.6	20.8	20.8	24.9	37.4	45.7	45.7	58.2	62.4	72.7	
	400 V (kW)	17.3	17.3	22.2	27.7	34.6	34.6	41.6	62.4	76.2	76.2	97.0	103.9	121.2	
	440 V (kW)	19.1	19.1	24.4	30.5	38.1	38.1	45.7	68.6	83.8	83.8	106.7	114.3	133.4	
	500 V (kW)	21.7	21.7	27.7	34.6	43.3	43.3	52.0	77.9	95.3	95.3	121.2	129.9	151.6	
	690 V (kW)	29.9	29.9	38.2	47.8	59.8	59.8	71.7	107.6	131.5	131.5	167.3	179.3	209.1	
Actual values for connections	2 poles in parallel	$I_b \times 1.7$													
	3 poles in parallel	$I_b \times 2.4$													
	4 poles in parallel	-													
Maximum percentage of the current	600 ops./h (%)	100	100	100	100	100	100	100	100	100	100	100	100	100	

Auxiliary Contacts

Models			CWBS9...125 (built-in)		BFBS (Front mounted blocks)	
Standards			IEC 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 _m (θ ≤55 °C)			(A)			
Rated operational current I _e			10			
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			
	600 V	(A)	0.1			
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)			
Control circuit reliability			(V / mA)			
Electrical life			(millions of operations)			
Mechanical life			(millions of operations)			
Non-overlapping time between NO and NC contacts			(ms)			
Impedance of the contacts			(mΩ)			

Technical Data

Terminal Capacity and Tightening Torque

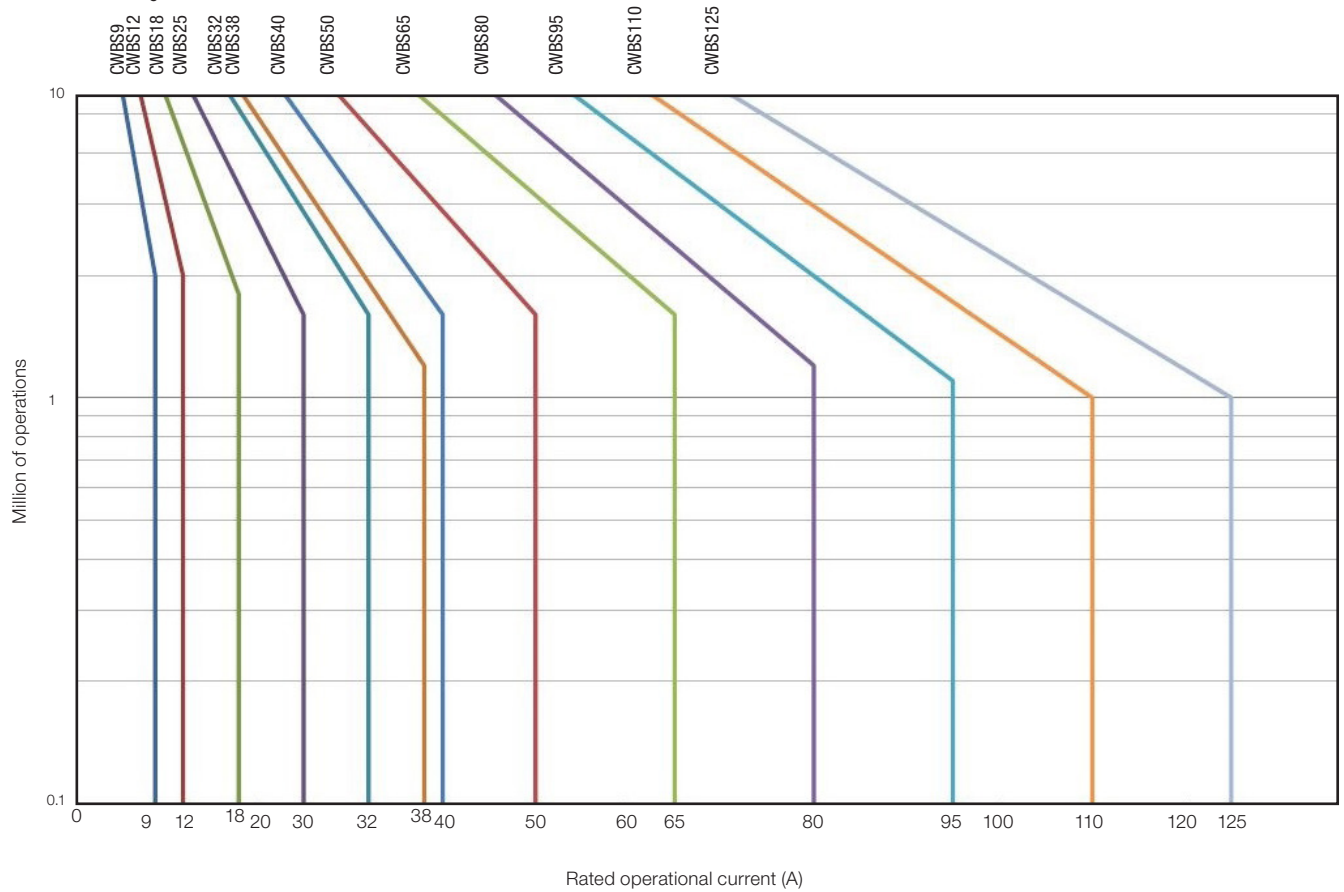
		Conductor cross-section				
Power circuit						
Models		CWBS9...18	CWBS25...38	CWBS40...80	CWBS95...125	
Mounting system screw type		Phillips number 2	Phillips number 2	ALLEN 4 mm	ALLEN 4 mm	
Flexible conductor without terminal	(mm²)		1 x 1...6 2 x 1...6	1 x 2.5...10 2 x 2.5...10	-	-
Flexible conductor with terminal	(mm²)		1 x 1...6 2 x 1...4	1 x 1.5...10 2 x 1.5...6	-	-
Solid wire	(mm²)		1 x 1...6 2 x 1...6	1 x 2.5...10 2 x 2.5...10	-	-
Tightening torque	(Nm)		1.7	2.5	-	-
Flexible conductor without terminal	(mm²)		-	-	1 x 2.5...35 2 x 2.5...35	1 x 2.5...70 2 x 2.5...70
Flexible conductor with terminal	(mm²)		-	-	1 x 2.5...35 2 x 2.5...35	1 x 2.5...70 2 x 2.5...70
Solid wire	(mm²)		-	-	1 x 2.5...35 2 x 2.5...35	1 x 2.5...25 2 x 2.5...25
Tightening torque	(Nm)		-	-	5.0	6.0
Control circuit and built-in auxiliary contacts						
Models		CWBS9...125				
Mounting system screw type		Phillips number 2				
Flexible conductor without terminal	(mm²)		1 x 1...4 2 x 1...4			
Flexible conductor with terminal	(mm²)		1 x 1...4 2 x 1...2.5			
Solid wire	(mm²)		1 x 1...4 2 x 1...4			
Tightening torque	(Nm)		1.0			
Auxiliary contact blocks						
Models		BFBS (frontal)				
Mounting system screw type		M3.5 Slot / Philips				
Conductor cross-section						
Flexible conductor without terminal	(mm²)		1 x 1...2.5 2 x 1...2.5			
Flexible conductor with terminal	(mm²)		1 x 1...2.5 2 x 1...2.5			
Solid wire	(mm²)		1 x 1...2.5 2 x 1...2.5			
Tightening torque	(Nm)		1.0			



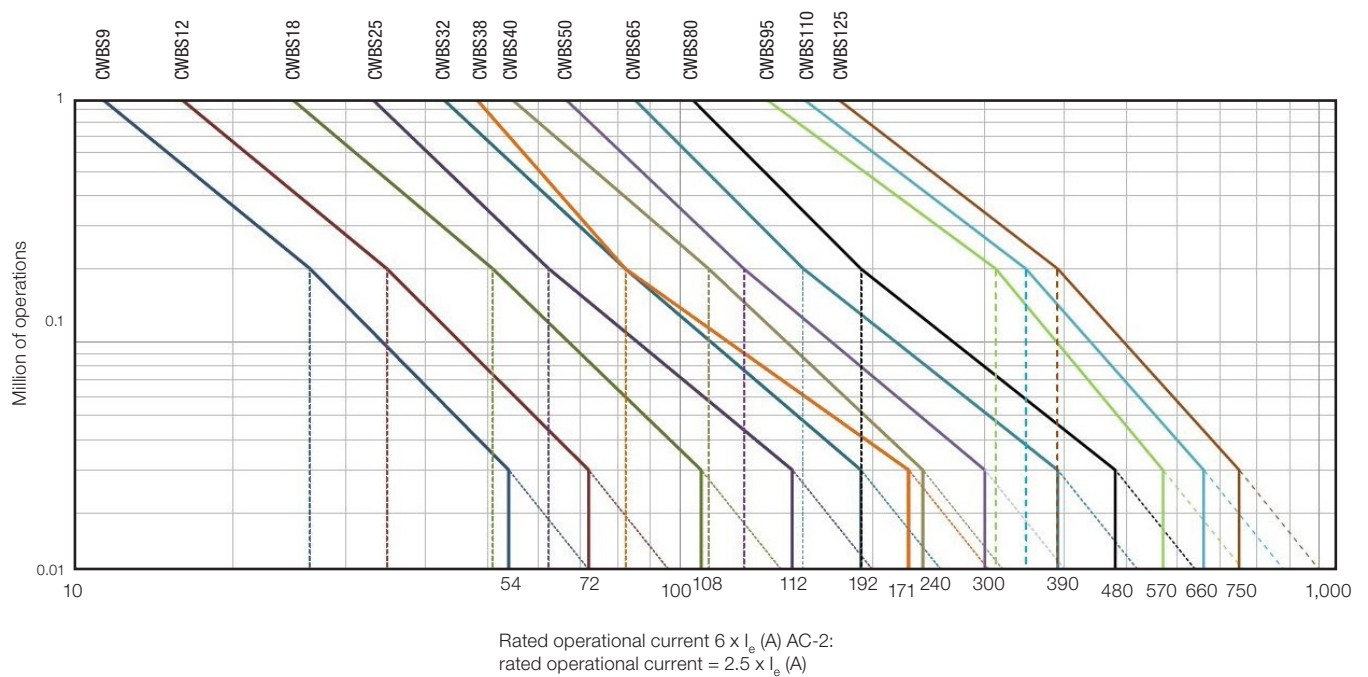
Technical Data

Electrical Lifespan Curves

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



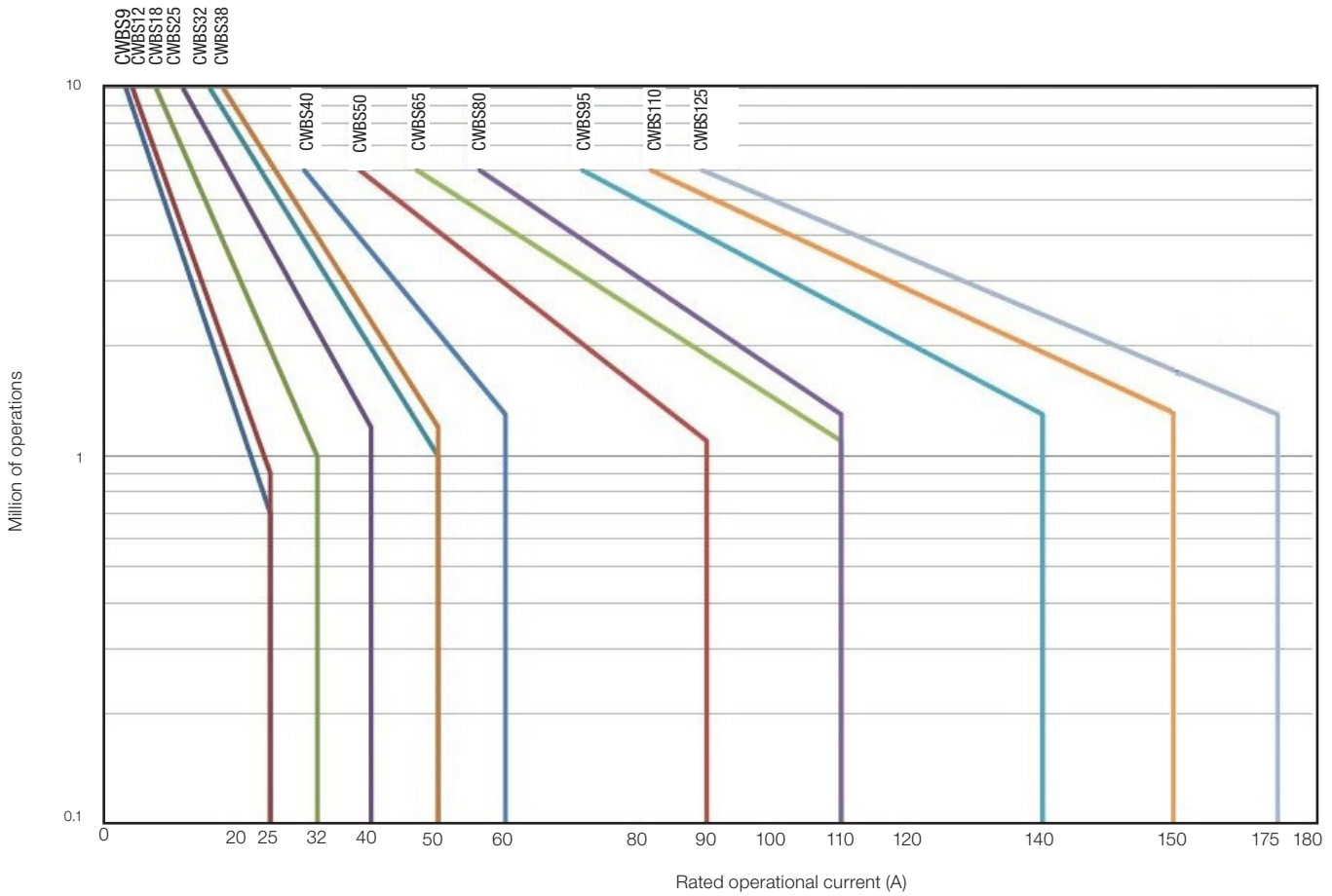
Category AC-4 and AC-2 ($U_e \leq 440 \text{ V ac}$)



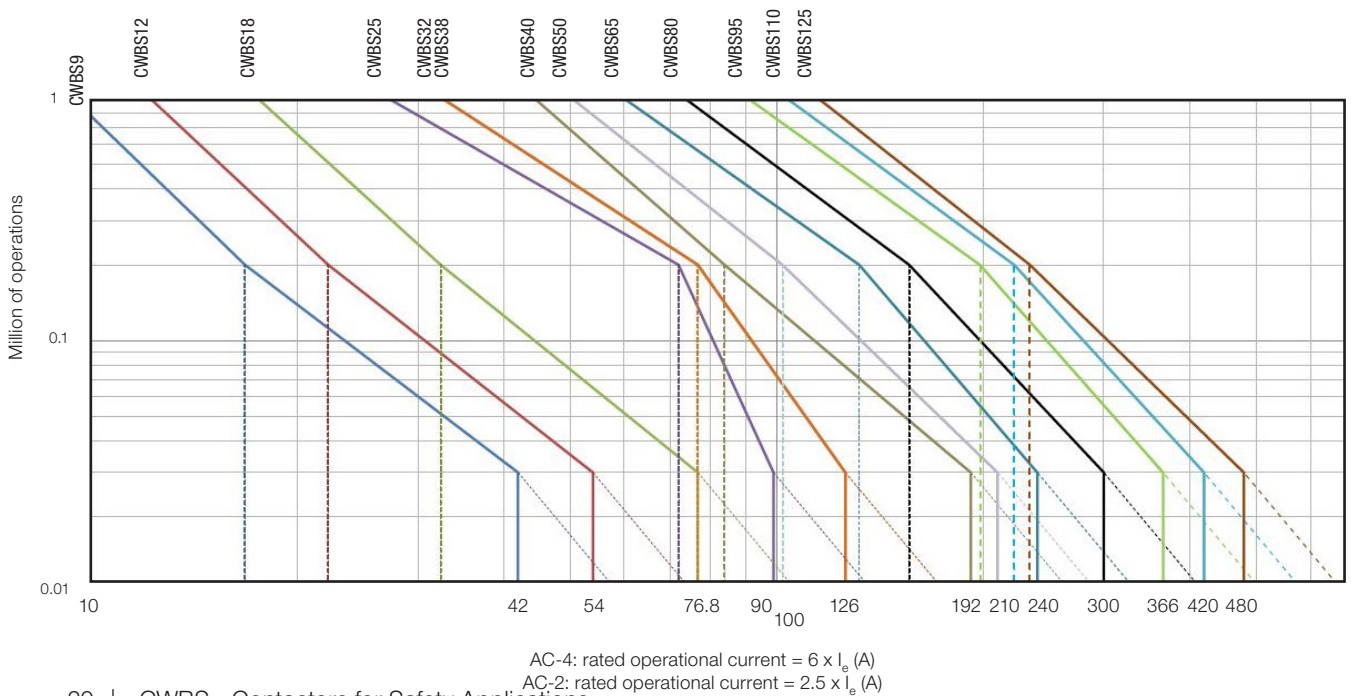
Technical Data

Electrical Lifespan Curves

Category AC-1 ($U_e \leq 690 \text{ V ac}$)

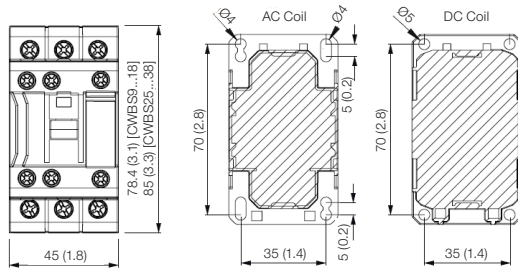


Categories AC-4 e AC-2 ($U_e \leq 660 / 690 \text{ V}$)

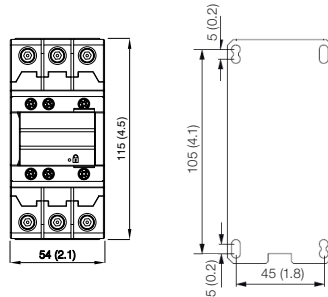


Dimensions - mm (inch)

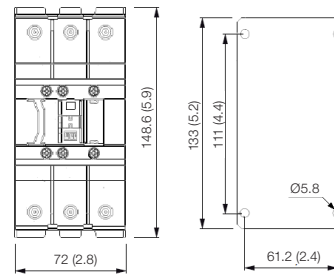
CWBS9...38



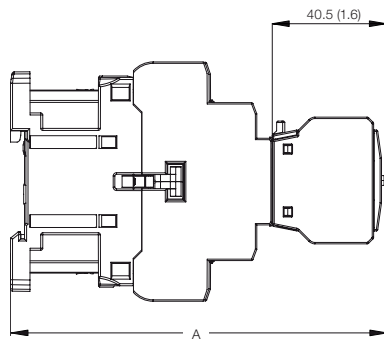
CWBS40...80



CWBS95...125

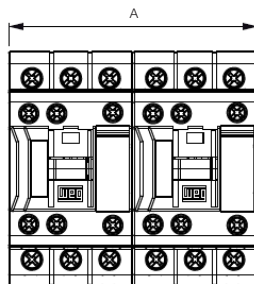


CWBS9...125 + BFBS (Front-Mounted Contact Blocks)



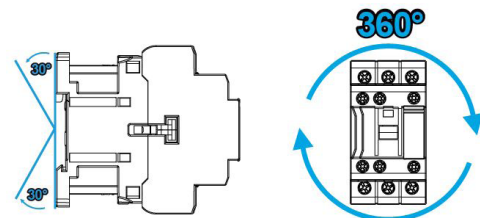
Models	A	
	AC Coil	DC Coil
CWBS9...18	130 (5.1)	139.2 (5.5)
CWBS25...38	133.4 (5.3)	142.6 (5.6)
CWBS40...80	161.1 (6.3)	161.1 (6.3)
CWBS95...125	184.5 (7.3)	184.5 (7.3)

CWBS9...125 + IM (Mechanical Interlock)



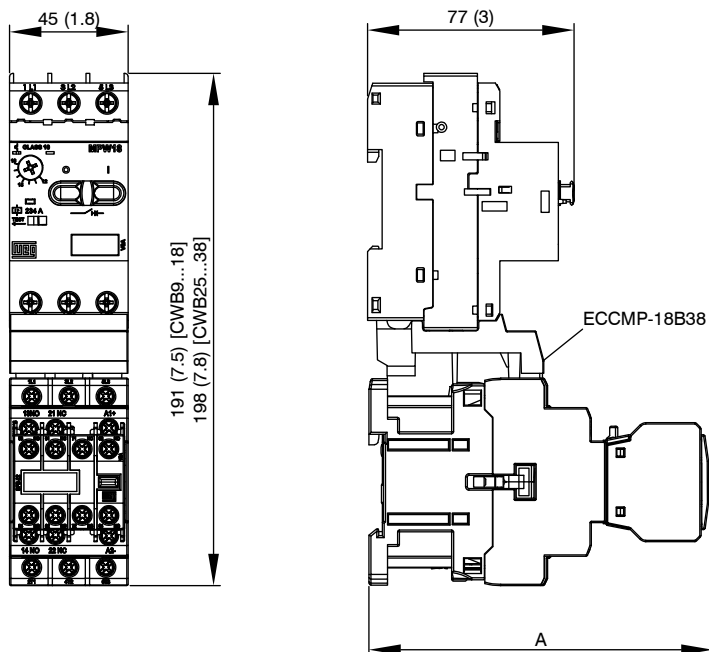
Models	Interlock	A
CWBS9...18	IM1	90 (3.5)
CWBS40...80	IM2	108 (4.3)
CWBS95...125		144 (5.7)

Mounting Position CWBS9...125



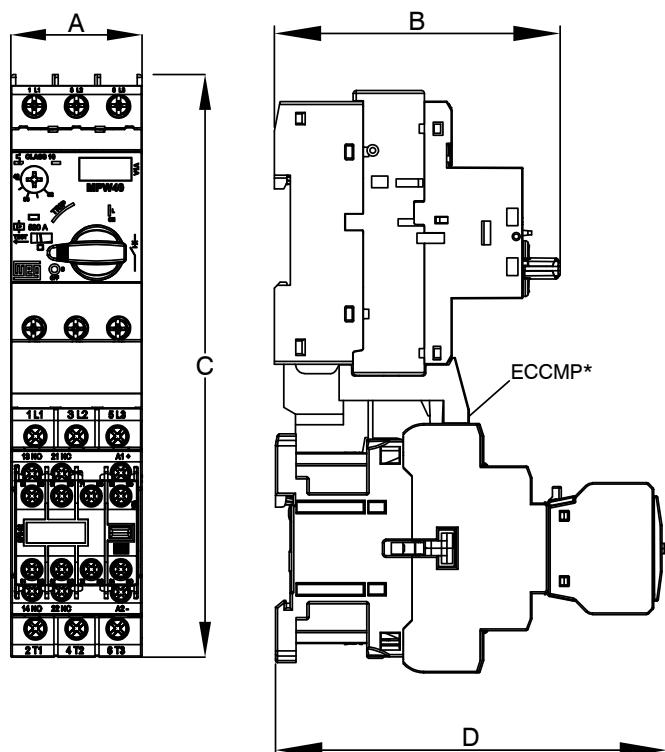
Dimensions - mm (inch)

CWBS9...38 + MPW18



	Assembly with MPW18			
	AC coil contactor		DC coil contactor	
	CWBS9...18	CWBS25...38	CWBS9...18	CWBS25...38
A	130 (5.1)	133.4 (5.3)	139.2 (5.5)	142.6 (5.6)

CWBS9...38 + MPW40 CWBS40...80 + MPW80

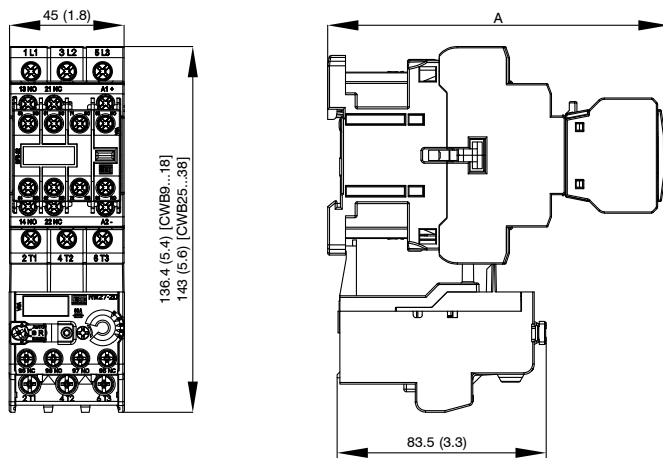


	Assembly with MPW40			
	AC coil contactor		DC coil contactor	
	CWBS9...18	CWBS25...38	CWBS9...18	CWBS25...38
A	45 (1.8)			
B	98 (3.9)			
C	191.4 (7.5)	198 (7.8)	191.4 (7.5)	198 (7.8)
D	130 (5.1)	133.4 (5.3)	139.2 (5.5)	142.6 (5.6)
*	ECCMP-40B38		ECCMP-40B38DC	

	Assembly with MPW80	
	AC coil contactor	DC coil contactor
	CWBS40...80	CWBS40...80
A	54 (2.1)	
B	156.6 (6.2)	
C	263 (10.4)	
D	161.1 (6.3)	
*	ECCMP-80B80	

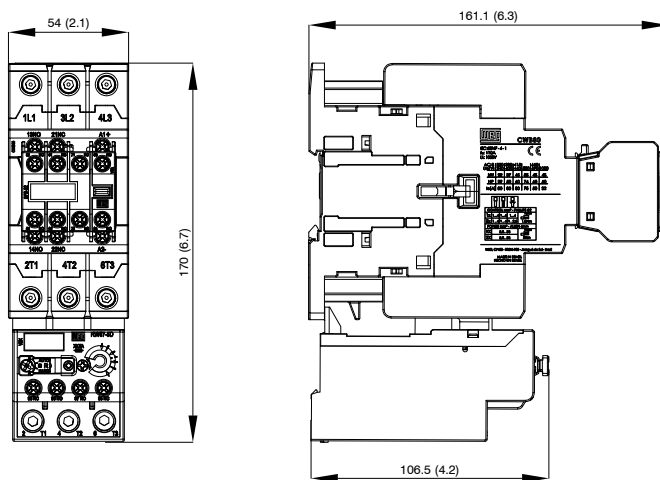
Dimensions - mm (inch)

CWBS9...38 + RW27-2D

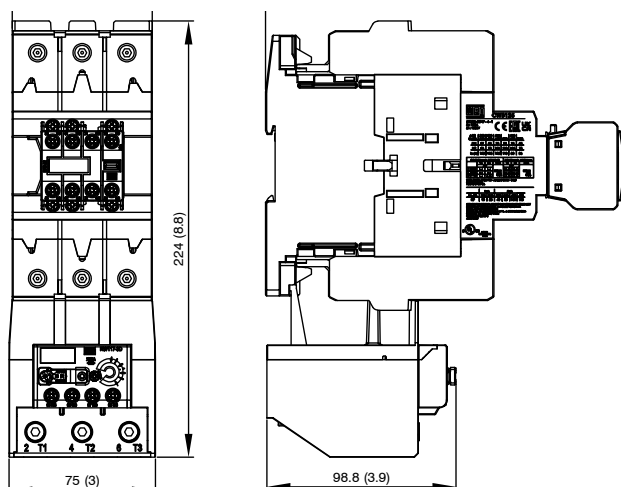


	Assembly with RW27-2D			
	AC coil contactor		DC coil contactor	
	CWBS9...18	CWBS25...38	CWBS9...18	CWBS25...38
A	130 (5.1)	133.4 (5.3)	139.2 (5.5)	142.6 (5.6)

CWBS40...80 + RW67-5D



CWBS95...125 + RW117-3D



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