

CB 80 to 200 A, multipolar versions



4 types for each calibre:

AC poles and control circuit

CBA 55 80,
CBA 55 150,
CBA 55 200.

DC poles and AC control circuit

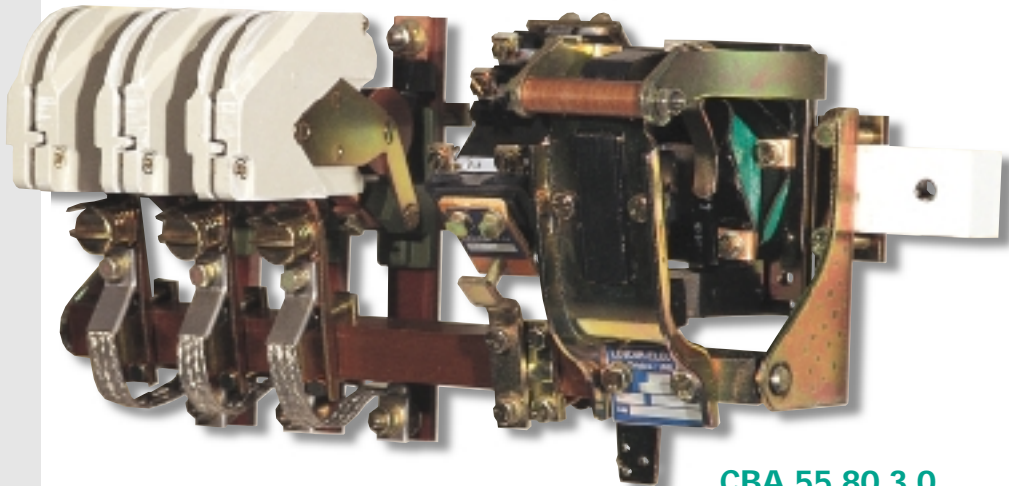
CBFC 55 80,
CBFC 55 150,
CBFC 55 200.

AC poles and DC control circuit

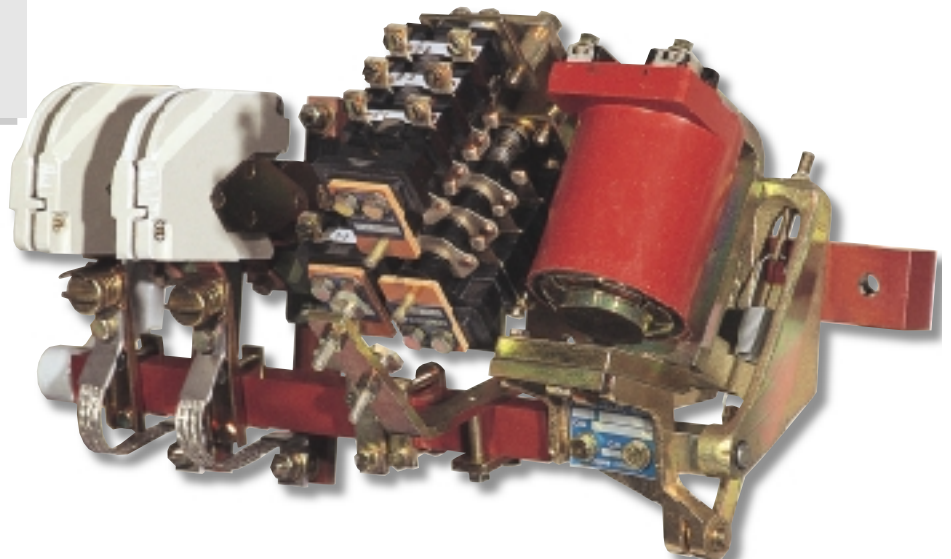
CBPA 57 80,
CBPA 57 150,
CBPA 57 200.

DC poles and DC control circuit

CBC 57B 80,
CBC 57B 150,
CBC 57B 200.



CBA 55 80 3.0



CBC 57 B 80 2.0

Calibres 80, 150 and 200 A

Single pin main poles and copper contacts (C) for current use, semi-intensive and intensive duties (AC_2-AC'2-AC_3-AC_4-DC_2-DC_3-DC_4-DC_5).

- Calibre 80 and 150: 1 to 4 poles for each type.
 - Calibre 200: 1 to 2 poles for CBC and CBPA contactors, 1 to 4 poles for CBA and CBFC contactors.
- On request, contactors can be equipped with:
- silver or silver alloy contacts (M) for continuous, semi-intensive and intensive duties, especially recommended for low voltages and corrosive atmospheres (AC_1-AC_2-AC'2-AC_3-DC_1-DC_2-DC_3-DC_4-DC_5 duties).
 - closing electromagnet is located at the right side of the poles:
 - supply from an AC source: laminated magnetic circuit;
 - supply from a DC source: solid magnetic circuit, without power-saving device up to contactors 150 A, 3 poles, with power-saving device for contactors 150 A, 4 poles; and contactors 200 A, 2 poles.

Options

- For currents 50 % lower than the nominal thermal DC current, adaptation of the arc-blowout coil to the current of use.
- Mechanical latching with single or double electrical release.
- Metallic support for «Ronis type» lock (lock not supplied).
- Opening poles without mechanical overlapping with the closing poles.
- Adaptation for mechanical locking facility for contactors of different ranges.
- Poles with different calibres and supplied with different currents.
- Closing electromagnet mounted on the left side of the poles.
- Longer attachment bars.



AC contactors

U_e up to 660 V, 50/60 Hz

Standards IEC 947-4-1		80*			150*			200*		
Thermal nominal current⁽¹⁾ AC_1	A	100			250			320		
connecting section	mm ²	35			70			95		
Nominal insulation voltage	V	1000			1000			1000		
Nominal operating voltage										
AC, 40 to 60 Hz	V	660			660			660		
Maximum controlled powers										
AC voltage	V	220	380	500/660	220	380	500/660	220	380	500/660
(2) AC_2 - AC_3 duties	kW	22	45	60	65	110	145	80	132	160
AC_23 duties	kVA	33	55	70	80	132	160	100	170	220
Maximum currents of use										
continuous duty	A	100			250			320		
Short-time current, t ≤ 40°C										
1 s	kA	1			1.75			2.5		
5 s	kA	0.5			0.8			1.15		
10 s	kA	0.35			0.57			0.81		
15 s	kA	0.3			0.51			0.7		
30 s	kA	0.23			0.42			0.56		
1 min	kA	0.19			0.31			0.43		
3 min	kA	0.14			0.3			0.4		
10 min	kA	0.12			0.26			0.35		
Nominal thermal current under 400 Hz	A	60			113			150		
Allowable overcurrent/time										
AC	kA eff/s	1/1			1.75/1 ⁽³⁾			2.5/1 ⁽³⁾		
Current switch-off rating										
AC voltage	V	500			500			500		
cos φ = 0.3	kA eff	1.3 ⁽⁴⁾			1.85 ⁽⁴⁾			2.75 ⁽⁴⁾		
Current switch-on rating										
AC cos φ = 0.3	kA eff	1.3 ⁽⁴⁾			1.85 ⁽⁴⁾			2.75 ⁽⁴⁾		
Mechanical endurance	millions of operations	3.5/10 ⁽⁵⁾			3.5/10 ⁽⁵⁾			3.5/10 ⁽⁵⁾		

Control circuit

Nominal voltages	AC, 50 Hz	V	24 - 48 - 110 - 127 - 220 - 380 - 500		
	DC	V	12 - 24 - 48 - 115 - 220		
Maximum consumptions			inrush/hold		
AC	1P	VA	900/120		900/120
	2P	VA	900/120		1500/175
	3P	VA	900/120		1500/175
	4P	VA	1500/175		2000/127
DC	1P	W	36		36
	2P	W	36		36
	3P	W	36		36
	4P	W	36		43
L/R constant of electromagnet	open/closed	ms			
Closing time	at U _n	ms	25/45		35/60
	at 0.85 U _n	ms			
Opening time	at U _n	ms			
	between command and - separation of contacts	ms	45		45
	- total opening of electromagnet	ms			
	- complete opening	ms	300		300

(1) in open air.

(2) motor 1500 rpm:

30 operations/h: long start-up,

120 operations/h: short start-up.

(3) for C type contacts; for M type contacts values are as follows:

Calibres	kA eff
80	1
150	1.75
200	2.75

(4) for M and C type contacts, consult us.

(5) 1st figure: CBA contactor,

2nd figure: CBPA contactor.

* possible blowout calibration:

CB 80 A: 1-2-3-4-6-10-16-25-40 A.

CB 150 A: 1-2-3-4-6-10-16-25-40-80 A.

CB 200 A: 1-2-3-4-6-10-16-25-40-80-150 A.

• Temperature factor to be applied to the poles or the current controlled according to the ambient temperature (around the contactor):

1.04	40 < t < 45°C
1.08	45 < t < 50°C
1.12	50 < t < 55°C
1.19	55 < t < 60°C

• Factor to be applied to the contactor for poles connected in parallel, this factor already includes a safety margin:

	2 poles in parallel	3 poles in parallel
AC	I.th 1 pole x 2 x 0.7	I.th 1 pole x 3 x 0.66

• The current switch-off rating of poles connected in parallel remains the same as for a single pole.



DC contactors
U_e up to 500 V_{DC}

Standards IEC 947-4-1		80*	150*	200*			
Thermal nominal current⁽¹⁾ DC_1	A	100	250	320			
connecting section	mm ²	35	70	95			
Nominal insulation voltage	V	1000	1000	1000			
Nominal operating voltage							
DC	V	500 ⁽²⁾	500 ⁽²⁾	500 ⁽²⁾			
Maximum controlled powers							
DC voltage	V	220/250	440/500	220/250	440/500	220/250	440/500
DC_2 - DC_4 duties	kW	22	44	45	90	66	132
Maximum currents of use							
continuous duty	A	100	250	320			
Short-time current, t ≤ 40°C							
1 s	kA	1	1.75	2.5			
5 s	kA	0.5	0.8	1.15			
10 s	kA	0.35	0.57	0.81			
15 s	kA	0.3	0.51	0.7			
30 s	kA	0.23	0.42	0.56			
1 min	kA	0.19	0.31	0.43			
3 min	kA	0.14	0.3	0.4			
10 min	kA	0.12	0.26	0.35			
Allowable overcurrent/time							
DC	kA/s	1/1	1.75/1	2.5/1 ⁽³⁾			
Current switch-off rating							
DC voltage	V	500	500	500			
L/R = 15 ms	kA	0.7 ⁽⁴⁾	0.8 ⁽⁴⁾	3.5 ⁽⁴⁾			
Current switch-on rating							
DC L/R = 15 ms	kA	0.7 ⁽⁴⁾	0.8 ⁽⁴⁾	3.5 ⁽⁴⁾			
Mechanical endurance	millions of operations	3.5/10 ⁽⁵⁾	3.5/10 ⁽⁵⁾	3.5/10 ⁽⁵⁾			

Control circuit

Nominal voltages	AC, 50 Hz	V			
	DC	V			
Maximum consumptions	inrush/hold				
AC	1P	VA	900/120	900/120	1500/175
	2P	VA	900/120	1500/175	2000/127
	3P	VA	900/120	1500/175	2000/127
	4P	VA	1500/175	2000/127	2000/127
DC	1P	W	36	36	36
	2P	W	36	36	43
	3P	W	36	36	
	4P	W	36	43	
L/R constant of electromagnet	open/closed	ms			
Closing time	at U _n	ms	25/45	35/60	35/60
	at 0.85 U _n	ms			
Opening time	at U _n	ms			
	between command and				
	- separation of contacts	ms	45	45	45
	- total opening of electromagnet	ms			
	- complete opening	ms	300	300	300

- (1) in open air.
(2) for voltage of use greater than 500 V, consult us.
(3) for C contacts; for M type contacts values are as follows:

Calibres	kA eff
80	1
150	1.75
200	2.75

- (4) for M and C type contacts, consult us.
(5) 1st figure: CBA contactor,
2nd figure: CBPA contactor.

* possible blowout calibration:
CB 80 A: 1-2-3-4-6-10-16-25-40 A,
CB 150 A: 1-2-3-4-6-10-16-25-40-80 A,
•CB 200 A: 1-2-3-4-6-10-16-25-40-80-150 A.

- Temperature factor to be applied to the poles or the current controlled according to the ambient temperature (around the contactor):

1.04	40 < t < 45°C
1.08	45 < t < 50°C
1.12	50 < t < 55°C
1.19	55 < t < 60°C

- Factor to be applied to the contactor for poles connected in parallel, this factor already includes a safety margin:

	2 poles in parallel	3 poles in parallel
DC	1.th 1 pole x 2 x 0.8	1.th 1 pole x 3 x 0.75

The current switch-off rating of poles connected in parallel remains the same as for a single pole.