

CB 75 400 to 1000 A



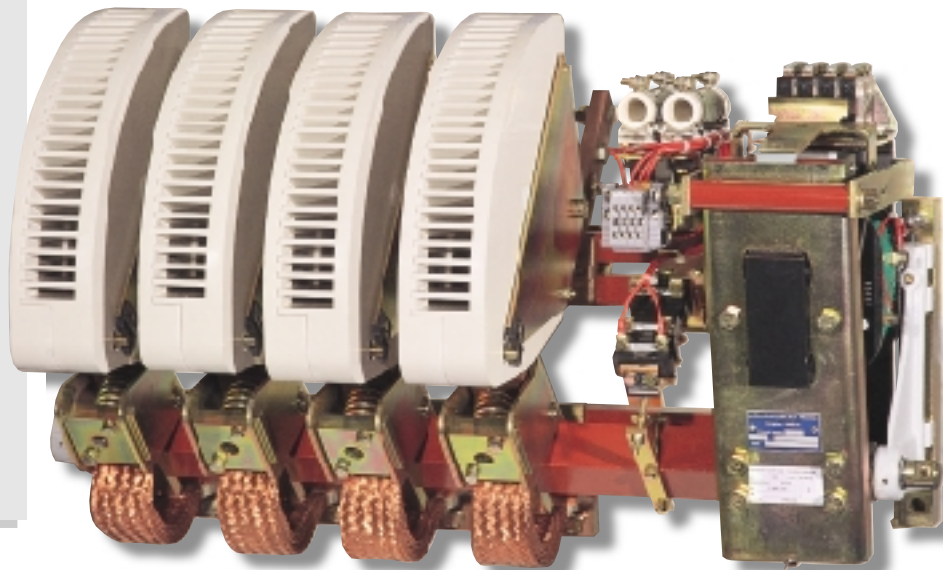
2 types for each calibre:

AC poles

CBA 75 400,
CBA 75 500,
CBA 75 630,
CBA 75 800,
CBA 75 1000.

DC poles

CBFC 75 400,
CBFC 75 500,
CBFC 75 630,
CBFC 75 800,
CBFC 75 1000.



CBA 75 1000 4.0 Reinforced insulation

Standard versions

- 1 to 4 single pin main poles with silver pad contacts.
- Closing electromagnet mounted on the right side of the poles, (on request, it can be mounted on the left) and laminated magnetic circuit.
 - control circuit supplied from an AC source:
 - for calibres 400 (1 to 4 poles), 500 and 630 (1 to 2 poles), without economy resistor.
 - over, rectified and power-saved current via a rectifier mounted on the contactor.
 - control circuit supplied from a DC source: power-saved circuit with economy resistor.
- Mechanical locking: vertical type.

Auxiliary contacts

- 2 NO + 2 NC available on D blocks on the whole range (2 extra D blocks can be mounted on request).
- Control circuit supplied from an AC source: one M block, form F2.01Y, on calibres 500 and 630, from 3 to 4 poles and on calibres 800 and 1000: from 1 pole as control circuit is rectified and coil power-saved via 1 NC overlap contact, 1 NO + 1 NC free auxiliary contacts.
- Control circuit supplied from a DC source: on the whole range, one block type F2.01Y with one NC overlap contact for inserting the economy resistor and 1 NO + 1 NC free auxiliary contacts.

Options

- NO or NC delayed block, TP 86 type (this one also includes 4 free instant contacts, i.e. 3 NO + 1NF).
- Addition of D type and M type auxiliary contact blocks according to different versions.
- Device to hold the contactor closed in case of untimely micro-cuts for contactors that are not equipped with a mechanical latching.
- Mechanical latching with single or double electrical release.
- Self-protective device for the release coil(s).
- Metallic support for 'Ronis type' lock (lock not supplied).
- Horizontal or back-to-back mechanical locking.
- Poles of different calibres and supplied with different currents.



AC contactors

Ue up to 1000 V, 50/60 Hz

Standards: IEC 947-4-1

Alternating current		CBA Type 75															
		400			500			630			800			1000			
Thermal nominal current ⁽¹⁾ AC_1	A	500/500			500/500			630/630			800/800			1000/1000			
Current of use frequency limitations	Hz	50 - 60			50 - 60			50 - 60			50 - 60			50 - 60			
Nominal insulating voltage	V	1000			1000			1000			1000			1000			
connecting section	mm ²	240			300			400			500			600			
Nominal operating voltage, 40 to 60 Hz ⁽⁴⁾	V	660	1000 ⁽⁶⁾		660	1000 ⁽⁶⁾		660	1000 ⁽⁶⁾		660	1000 ⁽⁶⁾		660	1000 ⁽⁶⁾		
Maximum controlled powers																	
voltage	V	220	380	500/660		220	380	500/660		220	380	500/660		220	380	500/660	
AC_2 - AC_3 duty cycle	kW	110	220	220		150	250	250		160	250	250		220	440	440	
AC_23 duty cycle	kVA	170	290	350		170	290	350		210	360	490		275	475	620	
Short-time current, t ≤ 40°C																	
1 s	kA	10			12			14			24			26			
5 s	kA	4.5			5.75			6.5			11			12.5			
10 s	kA	3.25			4			4.5			7.8			8.5			
15 s	kA	2.7			3.4			3.8			6.5			7			
30 s	kA	1.9			2.4			2.7			4.6			5			
1 min	kA	1.4			1.78			2			3.3			3.65			
3 min	kA	0.88			1.1			1.3			2			2.3			
10 min	kA	0.62			0.79			0.92			1.38			1.6			
Nominal thermal current under 400 Hz	A	380			380			480			640			800			
Allowable overcurrent time	kA eff/s	4.5/5			5.75/5			6.5/5			11/5			12.5/5			
Current switch-off rating																	
operating voltage	V	500	660	1000		500	660	1000		500	660	1000		500	660	1000	
cos φ = 0.3	kA eff	6.5	6	2.5		8.5	8	3.3		8.5	8	3.3		12	12	7.5	
Current switch-on rating cos φ = 0.3	kA eff	6.5			8.5			8.5			12			12			
Mechanical endurance	millions of operations	3			3			3			3			3			

Control circuit

Nominal voltage	AC, 50 Hz	V	24 - 48 - 110 - 127 - 220 - 380 - 500														
	DC	V	24 - 48 - 115 - 220 - 440 - 500														
Maximum consumptions	inrush/hold																
AC ⁽²⁾	1P	VA	2000/175			2000/175			2000/175			500/30			500/30		
	2P	VA	2000/175			2000/225			2500/225			500/30			500/30		
	3P	VA	2000/175			525/30			525/30			750/66			750/66		
	4P	VA	2000/175			525/30			525/30			750/66			750/66		
DC	1P	W	400/26			400/26			400/26			500/30			500/30		
	2P	W	400/26			525/30			525/30			500/30			500/30		
	3P	W	400/26			525/30			525/30			750/66			750/66		
	4P	W	525/30			525/30			525/30			750/66			750/66		

Average time of operation at nominal voltage⁽⁵⁾

Constant L/R rate of electromagnet open/closed																	
Closing time at Un	AC	ms	40			40			40								
	DC	ms	90			90			90			120			120		
Opening time at Un between command and separation of contacts																	
	AC	ms	20			20			20								
	DC	ms	25			25			25			38			38		

(1) in open air.

(2) bold type ratings: rectified and power-saved control circuit voltage.

(3) diodes are warranted up to a network overload of 3 Un efficient.

(4) if nominal operation voltage > 1000 V, please consult us.

(5) closing time is measured from the supply of the closing coil until the contact of main poles. Opening time is measured from the supply of the tripping coil until the separation of main poles.

(6) reinforced insulation for use under 1000 V, please specify it when you order.

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

• Arcing time depends on the circuit controlled by the main contacts. In three-phase current, arcing time is normally inferior to 15 ms. The receiver is insulated from the network after a time corresponding to the opening time plus the arcing time.

• 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	1.th 1 pole x 2 x 0.7	1.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.

• Maximum consumptions:

Bold type ratings:

- AC: control circuit is supplied with rectified and power-saved current via a rectifier mounted on the contactor⁽³⁾.

- DC: control circuit is power-saved.

For technical features of opening poles, see CEX.



DC contactors

U_e up to 2000 V_{DC}

Standards: IEC 947-4-1

Direct current		CBFC Type 75															
		400			500			630			800			1000			
Thermal nominal current⁽¹⁾ DC₁	A	500/500			500/500			630/630			800/800			1000/1000			
Nominal insulating voltage	V	1000															
connecting section	mm ²	240			300			400			500			600			
Nominal operating voltage	V	500	1000 ⁽⁶⁾		500	1000 ⁽⁶⁾		500	1000 ⁽⁶⁾		500	1000 ⁽⁶⁾		500	1000 ⁽⁶⁾		
Maximum controlled powers	voltage	V	220/250	440/500		220/250	440/500		220/250	440/500		220/250	440/500		220/250	440/500	
	DC: 2 - DC: 4 duty cycle	kW	90	180		110	220		110	220		175	350		175	350	
Short-time current, t ≤ 40°C																	
	1 s	kA	10			12			14			24			26		
	5 s	kA	4.5			5.75			6.5			11			12.5		
	10 s	kA	3.25			4			4.5			7.8			8.5		
	15 s	kA	2.7			3.4			3.8			6.5			7		
	30 s	kA	1.9			2.4			2.7			4.6			5		
	1 min	kA	1.4			1.78			2			3.3			3.65		
	3 min	kA	0.88			1.1			1.3			2			2.3		
	10 min	kA	0.62			0.79			0.92			1.38			1.6		
Allowable overcurrent / time	kAeffs	4.5/5			5.75/5			6.5/5			11/5			12.5/5			
Current switch-off rating L/R = 15 ms																	
	voltage applied	V	500	700	1000	500	700	1000	500	700	1000	500	700	1000	500	700	1000
	single-pole	kA	6			8			8			19			19		
	two-pole ⁽⁶⁾	kA	6		5	10		7	10		7	17		10	17		10
	voltage applied	V	1500	1800	2000	1500	1800	2000	1500	1800	2000	1500	1800	2000	1500	1800	2000
	three-pole ⁽⁶⁾	kA	5	2	1.5	7	2.5	2.5	7	2.5	2.5	10	8	6	10	8	6
	four-pole ⁽⁶⁾	kA	5			7			7			10			10		
Current switch-on rating L/R = 15 ms	KA	6/500 V			10.5/500 V			10.5/500 V			19/500 V			19/500 V			
Mechanical endurance	millions of operations	3			3			3			3			3			
Control circuit																	
Nominal voltage	AC, 50 Hz	V	24 - 48 - 110 - 127 - 220 - 380 - 500														
	DC	V	24 - 48 - 115 - 220 - 440 - 500														
Maximum consumptions	inrush/hold																
AC ⁽²⁾	1P	VA	2000/175			2000/175			2000/175			500/30			500/30		
	2P	VA	2000/175			2000/225			2500/225			500/30			500/30		
	3P	VA	2000/175			525/30			525/30			750/66			750/66		
	4P	VA	2000/175			525/30			525/30			750/66			750/66		
DC	1P	W	400/26			400/26			400/26			500/30			500/30		
	2P	W	400/26			525/30			525/30			500/30			500/30		
	3P	W	400/26			525/30			525/30			750/66			750/66		
	4P	W	525/30			525/30			525/30			750/66			750/66		

Average time of operation at nominal voltage⁽⁴⁾

Constant L/R rate of electromagnet open/closed																	
Closing time at U_n	AC	ms	40			40			40								
	DC	ms	90			90			90			120			120		
Opening time at U_n	between command and separation of contacts																
	AC	ms	20			20			20								
	DC	ms	25			25			25			38			38		

(1) in open air.

(2) bold type ratings: rectified and power-saved control circuit voltage.

(3) diodes are warranted up to a network overload of 3 U_n efficient.

(4) closing time is measured from the time of supply of the closing coil until the time of contact of the main poles. Opening time is measured from the time of supply of the tripping coil until the time of separation of the main poles.

(5) dielectric testing voltage according to insulation voltage can reach 8 kV for specific applications.

(6) for applications with U_e > 500 V, please consult our technical department to select the contactor (specific dimensions and insulation).

• 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	I _{th} 1 pole x 2 x 0.8	I _{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.

• Maximum consumptions:

Bold type ratings:

- AC: control circuit is supplied with rectified and power-saved current via a rectifier mounted on the contactor⁽³⁾.

- DC: control circuit is power-saved.

For technical features of opening poles, see CEX.