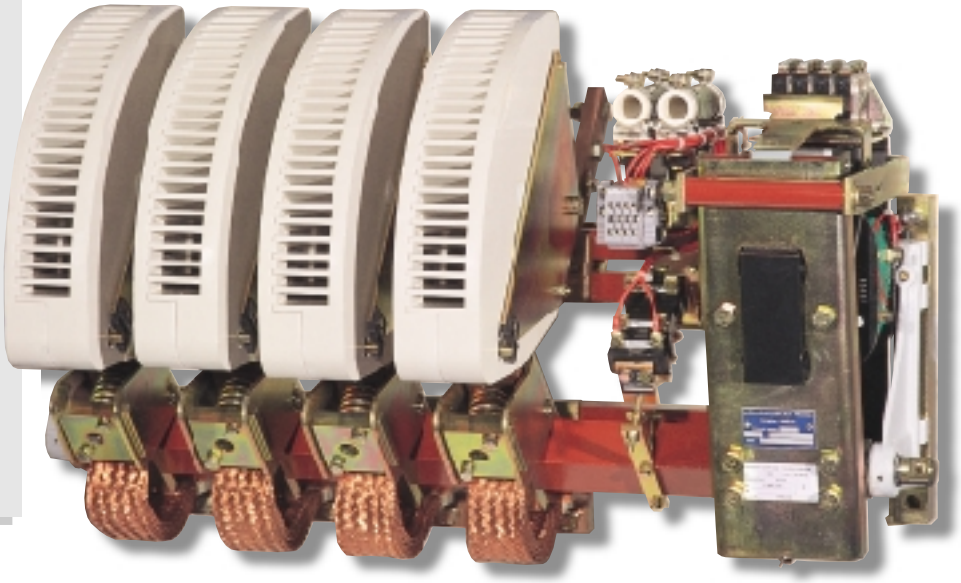
CB 75 400 to 1000 A

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.

Technical features CBA 75 400 to 1000 A

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	mm²	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	220	380	500/660
AC'2 - AC_3 duty cycle	kW	110	220	220	150	250	250	160	250	250	220	440	440	220	440	440
AC_23 duty cycle	kVA	170	290	350	170	290	350	210	360	490	275	475	620	340	590	780
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**	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**	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 temparature (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	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.

- 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.

Technical features CBFC 75 400 to 1000 A

DC contactors
Ue up to 2000 V⎓

Standards: IEC 947-4-1

Direct current			CBFC Type 75														
			400			500			630			800			1000		
Thermal nominal current(1) DC_1		A	500/500			500/500			630/630			800/800			1000/1000		
Nominal insulating voltage		V	1000			1000			1000			1000			1000		
connecting section		mm²	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		kA eff/s	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 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) 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 Ue > 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.