modular contactors LENOIR-ELEC · F 54730 GORCY

CB 71 1250 to 2000 A

2 types for each calibre:

AC poles CBA 71 1250, CBA 71 1600, CBA 71 2000.

DC poles CBC 71 1250, CBC 71 1600, CBC 71 2000.



CBA 71 2000 4.0

Standard versions

- 1 to 4 single pin main poles with copper contacts for calibre 1250 A (silver pad contact on request) and silver contacts for calibres 1600 and 2000 A. Arc-blowout coil operates only during opening.
- Closing electromagnet mounted on the right side of the poles (on request, it can be mounted on the left), solid iron magnetic circuit with 2 coils.
- control circuit supplied from an AC source via a rectifier and power-saved coils (device mounted and cabled on the contactor).
- control circuit supplied from a DC source with powersaved coils (device mounted and cabled on the contactor).
- Auxiliary contacts
- two M type contact blocks with 3 contacts
- 3 NO + 3 NC, instant contacts or form to be specified when you order.
- number of M type contact blocks can be increased to reach 6 blocks.
- Mechanical locking
- vertical type.

Options

- Silver pad contact pins for calibre 1250 A.
- NO or NC delayed block TP 86 type (this one also includes 4 free instant contacts, i.e. 3 NO + 1 NF).
- More than 6 M type contact blocks can be mounted on the contactor by mounting them below the contactor to reduce its total dimensions.
- 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 (does not change the total dimensions of the contactor).
- 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.
- Poles without magnetic blowout.
- Reinforced insulation.
- Double insulation for specific applications.
- Tropical treatment n° 2.



CB 71 1250 to 2000 A Technical features CBA 71 1250 to 2000 A

AC contactors Ue up to 1000 V 50/60 Hz

Alternating current		СВА Т	ype 71									
			1250 10					2000				
			1250			1600			2000 1600			
connecting section Nominal insulating voltage		1000 1000			1400	1400						
Nominal insulating voltage		660	1000		660	1000		1000 660	1000			
Maximum controlled powe	ers	000	1000		000	1000		000	1000			
voltage		220	380	500	220	380	500	220	380	500		
		370	630	630	470	700	700	600	1000	1000		
		490	840	000	620	930	100	800	1330	1000		
Maximum operating curre												
continuous duty		1250			1600			2000				
Short-time current t ≤ 40°0	-											
		41			30			65				
		20			15			30				
		13.5			10.9			21				
		11.8			8.7			17.9				
		7.9			6			12				
		5.5			4.5			8.5				
	<u>3 min kA</u> 10 min kA	3.3			3 2.2			5 3.2				
hermal nominal current u	inder 400 Hz Δ	2 938			1200			1500				
Allowable overcurrent / tir		25/3			25/1.6			25/7				
Current switch-off rating		220/38	0/440	1100	220/380)/440	1100	220/38	0/440	1100		
	$\cos \varphi = 0.3$ kA eff			12	25		12	25		12		
Current-switch-on rating	$\cos \varphi = 0.3$ kA eff			12	23		12	23		12		
CBA poles inductance	. Н	2.94 10		-	2.38 10-1	1		2.82 10	-7			
CBA poles resistance	cold Ω	5.25 ¹⁰	-5		7.19 ¹⁰⁻			4.01 ¹⁰				
•	hot Ω	5.96 ¹⁰	-5		7.55 ¹⁰⁻			4.72 ¹⁰				
Number of openings on lo	ad at nominal current	50000			100000			50000				
Number of openings on load un	der <u>for I = 1250 A</u>	50000			150000			15000	-			
380 V before contact	for <i>I</i> = 1600 A	35000			100000			10000	0			
eplacement: Mechanical endurance	for I = 2000 A millions of operations				50000			50000				
	V			<u>27 - 220 - 380</u> 27 - 220 - 380				•				
Nominal voltage <u>AC 50 I</u> DC Maximum consumptions	V inrush/hold	24 - 48	- 110 - 12		- 500(4)							
Nominal voltage AC 50 I DC	V inrush/hold 1P VA	24 - 48 180/14	- 110 - 12		- 500 ⁽⁴⁾ 180/14			180/14				
Nominal voltage <u>AC 50 DC</u> DC Maximum consumptions	V inrush/hold 1P VA 2P VA	24 - 48 180/14 380/24	- 110 - 12		- 500 ⁽⁴⁾ 180/14 380/24			380/24				
Nominal voltage <u>AC 50 DC</u> DC Maximum consumptions	V inrush/hold 1P VA 2P VA 3P VA	24 - 48 180/14 380/24 860/50	- 110 - 12		- 500 ⁽⁴⁾ 180/14 380/24 860/50			380/24 860/50)			
Nominal voltage <u>AC 50 </u> DC Maximum consumptions AC*	V inrush/hold 1P VA 2P VA 3P VA 4P VA	24 - 48 180/14 380/24 860/50 1700/8	- 110 - 12		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88			380/24 860/50 1700/8) 			
Nominal voltage <u>AC 50 DC</u> DC Maximum consumptions	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W	24 - 48 180/14 380/24 860/50 1700/8 165/17	<u>- 110 - 1</u> 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17.			380/24 860/50 1700/8 165/17))8 (.5			
Iominal voltage <u>AC 50 </u> DC Maximum consumptions AC*	V inrush/hold 1P VA 2P VA 3P VA 4P VA 4P VA 1P VA 2P VA 2P VA 4P VA 2P VA 4P VA 4P VA 4P VA 4P VA 4P VA 4P 4P 4P 4P 4P 4P 4P 4P 4P 4P	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35	- 110 - 12 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17.3 360/35			380/24 860/50 1700/8 165/17 360/35	8 1.5			
Nominal voltage <u>AC 50 </u> DC Maximum consumptions AC*	V inrush/hold 1P VA 2P VA 3P VA 4P VA 4P VA 1P W 2P W 3P W	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17.3 360/35 836/55	5		380/24 860/50 1700/8 165/17 360/35 836/55	8 8 .5			
Nominal voltage <u>AC 50 I</u> DC Maximum consumptions AC*	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P VA 2P W 2P W 2P W 4P W 4P VA	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17.3 360/35	5		380/24 860/50 1700/8 165/17 360/35	8 8 .5			
Nominal voltage <u>AC 50 I</u> DC Maximum consumptions AC* DC DC	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 3P W 4P W magnet open/closed ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11	5		380/24 860/50 1700/8 165/17 360/35 836/55 1600/1	8 8 .5			
Nominal voltage <u>AC 50 </u> DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time ⁽⁶⁾	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 3P W 4P W 3P W 4P W magnet open/closed ms at Un ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41	5		380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41	8 8 .5			
Nominal voltage <u>AC 50 </u> DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time ⁽⁶⁾	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 3P W 4P W 3P W 4P W magnet open/closed ms at Un ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/35 1600/11 118/41 180	5		380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180	8 8 .5			
Nominal voltage <u>AC 50 I</u> DC Maximum consumptions AC * DC Constant L/R rate of electron Closing time ⁽⁶⁾ Dpening time ⁽⁶⁾ between command a	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 3P W 3P W 4P W magnet open/closed ms at Un ms at 0.85 Un ms at Un ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/35 1600/11 118/41 180 215	5		380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215	8 8 .5			
Nominal voltage AC 50 I DC DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time ⁽⁶⁾ Opening time ⁽⁶⁾ Etween command a between command a - separation of contact	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 3P W 4P W magnet open/closed ms at Un ms at 0.85 Un ms at Un ms at Un ms at Un ms at Un ms at Un ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60	5		380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 	8 8 .5			
Nominal voltage AC 50 I DC DC Maximum consumptions AC* DC DC Dc Dc <t< td=""><td>V inrush/hold IP VA 2P VA 3P VA 4P VA 1P W 2P W 2P W 3P W 4P W magnet open/closed ms at 0.85 Un ms at Un ms nd ts ms</td><td>24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82</td><td>- 110 - 1: 8 .5</td><td></td><td>- 500⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60 82</td><td>5</td><td></td><td>380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 </td><td>8 8 .5</td><td></td></t<>	V inrush/hold IP VA 2P VA 3P VA 4P VA 1P W 2P W 2P W 3P W 4P W magnet open/closed ms at 0.85 Un ms at Un ms nd ts ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60 82	5		380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 	8 8 .5			
Nominal voltage AC 50 I DC DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time ⁽⁶⁾ Opening time ⁽⁶⁾ Etween command a between command a - separation of contact	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 3P W 4P W Magnet open/closed ms at Un ms at 0.85 Un ms at Un ms at Un ms ts ms tromagnet ms	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60	- 110 - 1: 8 .5		- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60	0	Factor to be applied	380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300	8 .5 .5 10	connected in parallel,		
Nominal voltage AC 50 I DC DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time(6) Opening time(6) Detween command a	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 2P W 3P W 4P W 2P W 3P W 4P W magnet open/closed ms at Un ms at 0.85 Un ms at 0.85 Un ms at 0.85 Un ms (1) in open air. (2) arcing time (3) diodes are v (4) for other vd (5) if nominal of (6) closing time of main pol coil until th * control circu Equipments power-savec • Temperature	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 < 15 ms. varranted u bitages, ple pperation v is measures. Openir e separation v is measures. Openir is measures. Open	- 110 - 1: 8 5 10 10 10 10 10 10 10 10 10 10	erload of 3 Un effic use of 3 Un effic t us. Oo V, please cons e supply of the dc neasured from the poles. ernating current a	- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60 82 300 ent. ult us. sing coil until cont supply of the tripp e rectified ⁽³⁾ and current controlled	0 act -	factor already inclu	380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 d to the contactor des a safety marg 2 poles in 1.th 1 pole x 2 coff rating of poles	for poles c n: parallel 2 x 0.7	3 poles in parall I.th 1 pole x 3 x 0.6		
Nominal voltage AC 50 I DC DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time(6) Opening time(6) Detween command a	V inrush/hold 1P VA 2P VA 3P VA 4P VA 4P VA 1P W 2P W 2P W 3P VA 4P VA 1P W 2P W appet open/closed ms at 0.85 Un ms at 0.85 Un ms at 0.85 Un ms at 0.85 Un ms ctromagnet ms (1) in open air. (2) arcing time (3) diodes are (4) for other vd (5) if nominal (6) closing tim of main pol coil until th * control circu Equipments power-saved •Temperature according to	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 < 15 ms. varranted u bitages, ple pperation v is measures. Openir e separation v is measures. Openir is measures. Open	- 110 - 1: 8 5 10 10 10 10 10 10 10 10 10 10	erload of 3 Un effic voltation of 3 Un effic t us. 200 V, please cons e supply of the do heasured from the poles. ernating current a o the poles or the ture (around the c	- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60 82 300 ent. ult us. sing coil until cont supply of the tripp e rectified ⁽³⁾ and current controlled ontactor):	0 act -	factor already inclu AC The current switch-	380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 d to the contactor des a safety marg 2 poles in 1.th 1 pole x 2 coff rating of poles	for poles c n: parallel 2 x 0.7	connected in parallel, t 3 poles in parall 1/th 1 pole x 3 x 0.64 d in parallel remains th		
DC Maximum consumptions AC* DC Constant L/R rate of electroe Closing time ⁽⁶⁾ Opening time ⁽⁶⁾ esparation of contac - separation of contac - total opening of elect	V inrush/hold 1P VA 2P VA 3P VA 4P VA 1P W 2P W 2P W 3P W 4P W 2P W 3P W 4P W magnet open/closed ms at Un ms at 0.85 Un ms at 0.85 Un ms at 0.85 Un ms (1) in open air. (2) arcing time (3) diodes are v (4) for other vd (5) if nominal of (6) closing time of main pol coil until th * control circu Equipments power-savec • Temperature	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 < 15 ms. varranted u bitages, ple pperation v is measures. Openir e separation v is measures. Openir is measures. Open	- 110 - 1: 8 5 10 10 10 10 10 10 10 10 10 10	27 - 220 - 380 rload of 3 Un effic t us. 000 V, please cons e supply of the clo heasured from the poles. ernating current a o the poles or the	- 500 ⁽⁴⁾	0 act -	factor already inclu AC The current switch-	380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 d to the contactor des a safety marg 2 poles in 1.th 1 pole x 2 coff rating of poles	for poles c n: parallel 2 x 0.7	3 poles in parall I.th 1 pole x 3 x 0.6		
Nominal voltage AC 50 I DC DC Maximum consumptions AC* DC DC Constant L/R rate of electron Closing time(%) Opening time(%) Detween command a	V inrush/hold 1P VA 2P VA 3P VA 4P VA 2P VA 3P VA 4P VA 2P W 2P W 3P VA 4P VX 4P VX 3P VX 4P VX 3P VX 4P VX 4P VX 3P VX 4P VX	24 - 48 180/14 380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 < 15 ms. varranted u bitages, ple pperation v is measures. Openir e separation v is measures. Openir is measures. Open	- 110 - 1: 8 5 10 10 10 10 10 10 10 10 10 10	27 - 220 - 380 rload of 3 Un effici- t us. 200 V please consider 200 V please consid	- 500 ⁽⁴⁾ 180/14 380/24 860/50 1700/88 165/17. 360/35 836/55 1600/11 118/41 180 215 60 82 300 ent. ult us.	0 act -	factor already inclu AC The current switch-	380/24 860/50 1700/8 165/17 360/35 836/55 1600/1 118/41 180 215 60 82 300 d to the contactor des a safety marg 2 poles in 1.th 1 pole x 2 coff rating of poles	for poles c n: parallel 2 x 0.7	3 poles in paral <i>I</i> .th 1 pole x 3 x 0.6		



CB 71 1250 to 2000 A Technical features CBC 71 1250 to 2000 A

DC contactors Ue: 600 and up to 2000 V----

Direct current				СВС Ту	pe 71								
				1250			1600			2000			
Thermal nominal cu				1250			1600			2000			
connecting se				1000			1400			1600			
Nominal insulating	voltage ⁽⁷)		1000			1000			1000			
Nominal operating			V	600	700 ⁽²⁾	1000 ⁽²⁾	600	700 ⁽²⁾	1000 ⁽²⁾	600	700 ⁽²⁾	1000 ⁽²⁾	
Maximum operatin													
permanent d	uty			1250			1600			2000			
8 hours duty				1250			1600			2000			
		10 minutes	Α	2000			2400			3500			
temporary duty withou openings on load		30 minutes	А	1400			1700			2500			
	1090	60 minutes	Α	1250			1600			2000			
		10 minutes	Α	2400			2400			3500			
temporary duty with openings on load		30 minutes		1700			1700			2500			
		60 minutes		1500			1600			2000			
continuous d	utv	00111110105		1250			1600			2000			
Short-time current			Α	1230			1000			2000			
Short-time current	l ≈ 40 C	1.0	- ^	/1			30			65			
			kA kA				<u> </u>			65			
										30			
				13.5			10.9			21			
				11.8			8.7			17.9			
				7.9			6			12			
				5.5			4.5			8.5			
				3.3			3			5			
			kΑ				2.2			3.2			
Allowable overcurr	ent / time	kA k	۱/s	25/3			25/1.6			25/7			
Current switch-off	rating	voltage	V	550	700	1000	550	700	1000	550	700	1000	
	U	one-pole I	kΑ	23	18	•	23	18	•	23	18	•	
			kΑ		23	19		23	19		23	19	
		voltage		1500		2000	1500		2000	1500		2000	
				19		8	19		8	19		8	
			kA	17		19	17		19	17		19	
Current switch-on	ating	L/R = 15 ms		25/550 \	1	17	25/550	V	17	25/550) \/	17	
Poles inductance	ating			2.94 10-7	v ,		2.38 10-			2.82 10			
Poles resistance		cold		5.25 ¹⁰⁻⁵			7.19 ¹⁰⁻			4.01 10			
Poles resistance		hot	<u>Ω</u>	5.25 ¹⁰⁻⁵	,		7.1910	5		4.01)-5		
Number of energing				5.90 10 5	,		100000			50000			
Number of opening	js on load												
Number of openings or	n load under	$\frac{\text{for } I = 1250 \text{ A}}{5 \text{ A}}$		50000			150000			15000			
440 V before contact re	placement	101I = 1000 A		35000			100000)		10000			
	•	for <i>I</i> = 2000 A		-			50000	50000			50000		
Mechanical endura	nce	millions of operatio	ns	1			1			1			
Control circuit													
Nominal voltage	AC 50 Hz					27 - 220 - 380							
	DC		V	24 - 48 -	110 - 12	27 - 220 - 440	- 500(4)						
Maximu <u>m consum</u> p	otions	inrush/hold											
AC*				180/14			180/14			180/14			
			٧A	380/24			380/24			380/24	ŀ		
		3P V	٧A	860/50			860/50			860/50)		
		4P \	VA	1700/88			1700/8	3		1700/8	38		
DC				165/17.5			165/17			165/17			
				360/35			360/35			360/35			
				836/55			836/55			836/55			
				1600/11	0		1600/1	10		1600/1	10		
Constant I /P rate of	electroma			118/41	<u> </u>		118/41	10		118/41			
				180			110/41				180		
Closing time ⁽⁶⁾		at 0.85 Un r	113 mc	215			215			215			
				210			215			215			
On a min m time (4)		at Un r	ms					_					
between con				(0			1.0			1.0			
between com - separation c	of contacts		ms				60			60			
	of contacts g of electroi	magnet r	ms				60 82 300			60 82 300			

- (1) in open air.
 (2) for applications under voltages > 600 Vdc, please consult our technical department.
 (3) diodes are warranted up to an overload of 3 Un efficient.
 (4) for other voltages, please consult us.
 (5) if nominal operating voltage > 1000 V, please consult us.
 (6) closing time is measured from the supply of the closing until the contact of main poles. Opening time is measured from the supply of the tripping coil until the separation of main poles.
 (7) dielectric testing voltage related to a given insulation voltage can reach 8 kV for specific applications.
 * control circuit: Equipments commanded with alternating current are rectified⁽³⁾ and power-saved.
 The current switch-off rating of poles connected in parallel remains the same as for a single pole.

•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					
For technical features of opening poles, see n. 70							

For technical features of opening poles, see p. 70.

