

# CB 75 400 to 1000 A



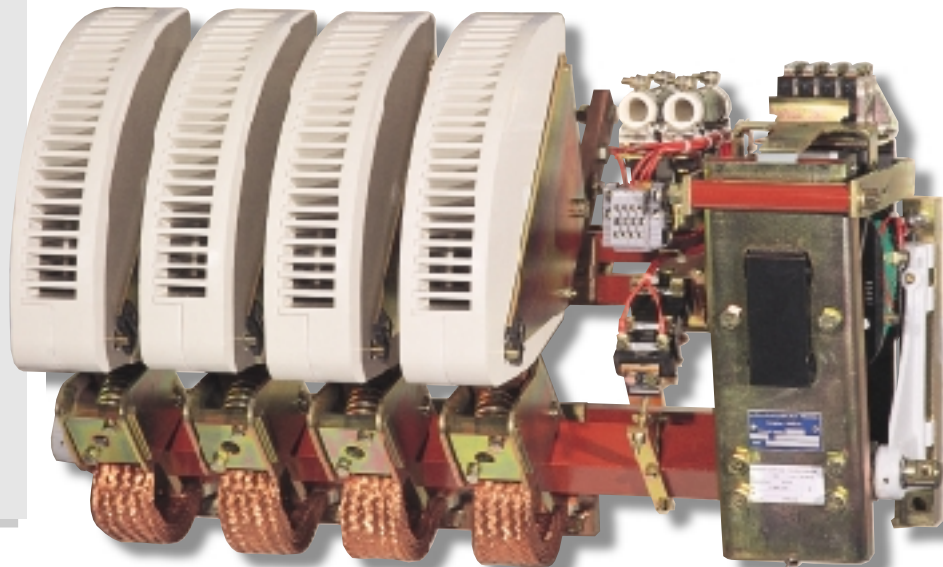
## 2 types for each calibre:

### 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 <sup>(1)</sup> 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 <sup>2</sup>	240			300			400			500			600			
Nominal operating voltage, 40 to 60 Hz <sup>(4)</sup>	V	660	<b>1000<sup>(6)</sup></b>		660	<b>1000<sup>(6)</sup></b>		660	<b>1000<sup>(6)</sup></b>		660	<b>1000<sup>(6)</sup></b>		660	<b>1000<sup>(6)</sup></b>		
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	<b>1000</b>		500	660	<b>1000</b>		500	660	<b>1000</b>		500	660	<b>1000</b>	
cos φ = 0.3	kA eff	6.5	6	<b>2.5</b>		8.5	8	<b>3.3</b>		8.5	8	<b>3.3</b>		12	12	<b>7.5</b>	
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 <sup>(2)</sup>	1P	VA	2000/175			2000/175			2000/175			<b>500/30</b>			<b>500/30</b>		
	2P	VA	2000/175			2000/225			2500/225			<b>500/30</b>			<b>500/30</b>		
	3P	VA	2000/175			<b>525/30</b>			<b>525/30</b>			<b>750/66</b>			<b>750/66</b>		
	4P	VA	2000/175			<b>525/30</b>			<b>525/30</b>			<b>750/66</b>			<b>750/66</b>		
DC	1P	W	<b>400/26</b>			<b>400/26</b>			<b>400/26</b>			<b>500/30</b>			<b>500/30</b>		
	2P	W	<b>400/26</b>			<b>525/30</b>			<b>525/30</b>			<b>500/30</b>			<b>500/30</b>		
	3P	W	<b>400/26</b>			<b>525/30</b>			<b>525/30</b>			<b>750/66</b>			<b>750/66</b>		
	4P	W	<b>525/30</b>			<b>525/30</b>			<b>525/30</b>			<b>750/66</b>			<b>750/66</b>		

Average time of operation at nominal voltage<sup>(5)</sup>

Constant L/R rate of electromagnet open/closed															
Closing time at Un	AC	ms	40			40			40						
	DC	ms	90			90			90			120			
Opening time at Un	between command and separation of contacts														
	AC	ms	20			20			20						
DC	ms	25			25			25			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<sup>(3)</sup>.

- DC: control circuit is power-saved.

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



DC contactors  
U<sub>e</sub> up to 2000 V<sub>DC</sub>

Standards: IEC 947-4-1

Direct current		CBFC Type 75														
		400			500			630			800			1000		
Thermal nominal current <sup>(1)</sup> DC_1	A	500/500			500/500			630/630			800/800			1000/1000		
Nominal insulating voltage	V	1000														
connecting section	mm <sup>2</sup>	240			300			400			500			600		
Nominal operating voltage	V	500	1000 <sup>(6)</sup>		500	1000 <sup>(6)</sup>		500	1000 <sup>(6)</sup>		500	1000 <sup>(6)</sup>		500	1000 <sup>(6)</sup>	
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 <sup>2</sup> - 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 <sub>eff</sub> /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 <sup>(6)</sup>	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 <sup>(6)</sup>	kA	5	2	1.5	7	2.5	2.5	7	2.5	2.5	10	8	6	10	8	6
four-pole <sup>(6)</sup>	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															
		DC															
Maximum consumptions	inrush/hold																
AC <sup>(2)</sup>	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<sup>(4)</sup>

Constant L/R rate of electromagnet open/closed																	
Closing time at U <sub>n</sub>	AC	ms	40			40			40								
	DC	ms	90			90			90			120			120		
Opening time at U <sub>n</sub> 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<sub>n</sub> 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<sub>e</sub> > 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	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.

• Maximum consumptions:  
Bold type ratings:  
- AC: control circuit is supplied with rectified and power-saved current via a rectifier mounted on the contactor<sup>(3)</sup>.  
- DC: control circuit is power-saved.

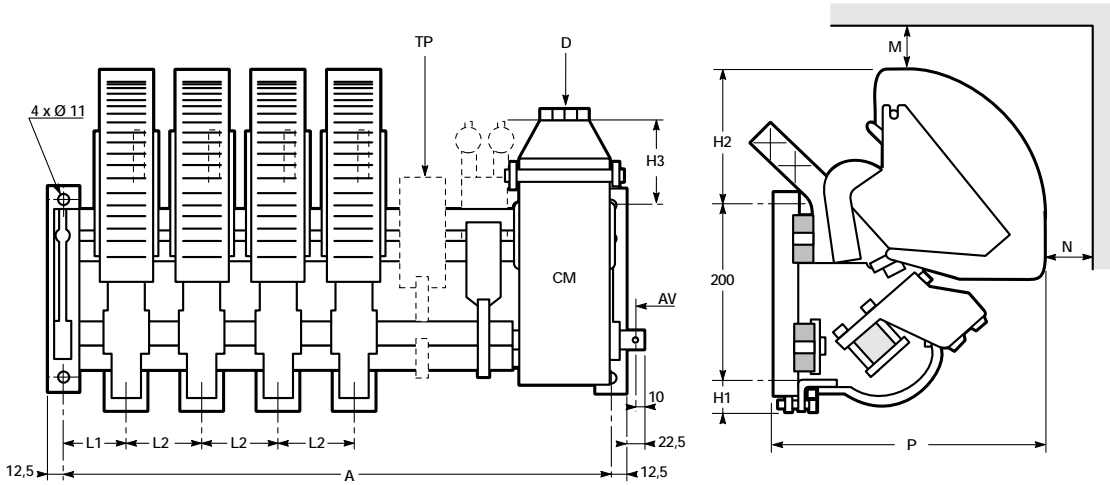
For technical features of opening poles, see p. 70.



Standard AC & DC contactors

CBA: Ue up to 1000 V, 50-60 Hz - CBFC: Ue 500 V $\overline{\text{---}}$

14. CBA - CBFC 75 400 to 1000



**AV:** mechanical locking axis, attachment center-to-center distance between 2 superimposed contactors:  
- 400 mm with below contactor of 400, 500 and 600 A calibre,  
- 575 mm with below contactor of 800 or 1000 A calibre.

**CM:** magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.

**D:** D type auxiliary contact blocks.

**TP:** delayed auxiliary contact block.

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
Without information, the contactor will be delivered without it

Dimensions

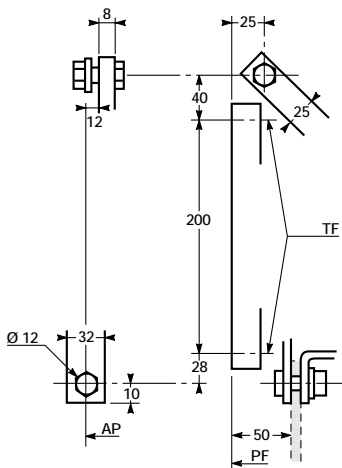
Calibres	H1	H2	H3 <sup>(1)</sup>	A								L1	L2	P	Safety perimeter <sup>(2)</sup>	
				without delayed contact				with delayed contact							M	N
				1 P	2 P	3 P	4 P	1 P	2 P	3 P	4 P					
400	38	75	105	250	325	400	450	325	400	475	525	43.5	68	278	45	45
500/630	38	75	105	250	350	425	500	325	425	500	575	45	80	278	75	60
800/1000	33	149	112	325	400	500	600	400	475	575	675	66	92	315	185	85

(1) for equipment with DC supplied or rectified AC supplied coil.

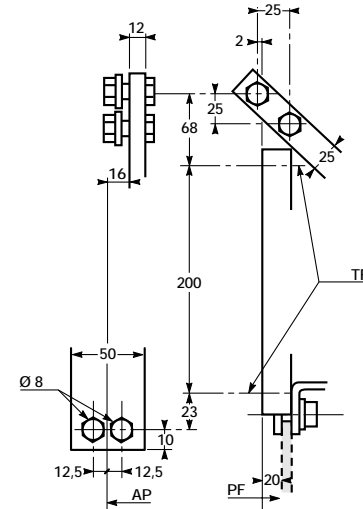
(2) with metallic walls.

Connecting sections

■ Calibres 400 and 500/630



■ Calibres 800/1000



**AP:** pole axis.  
**PF:** attachment plane.  
**TF:** fixation holes.

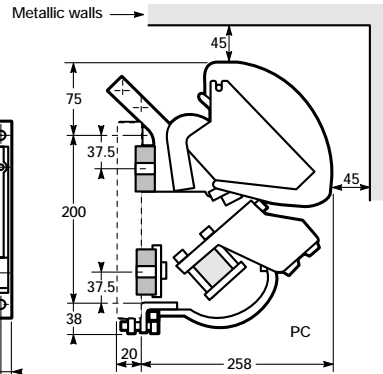
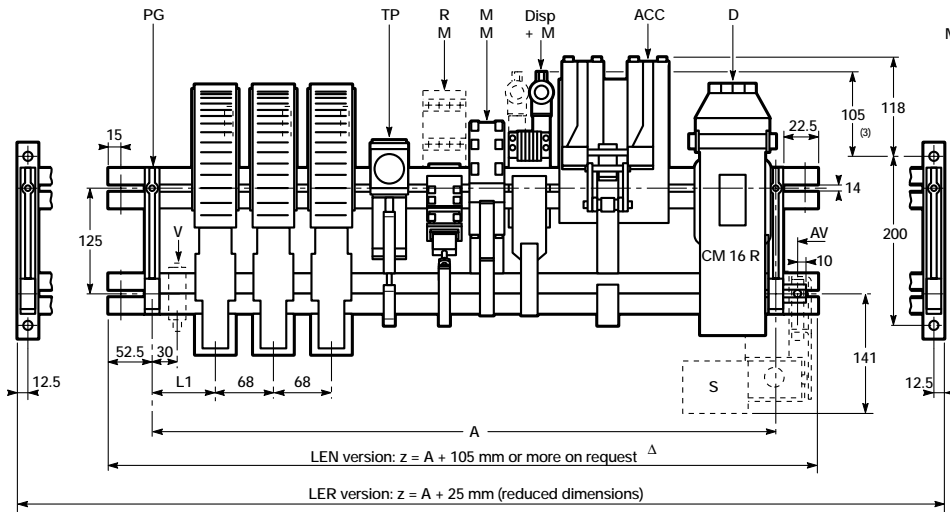
For control circuit, see P. 144



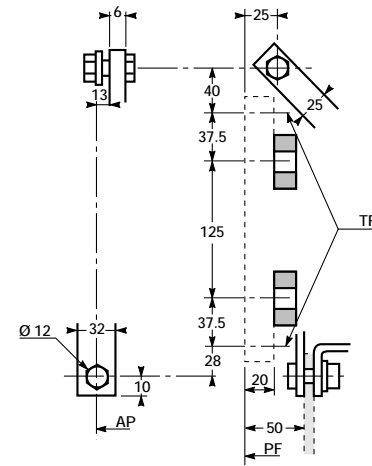
15. CBA - CBFC 75 400 X.0(2)

Modular AC & DC contactors

CBA: Ue up to 1000 V, 50/60 Hz - CBFC: Ue 500 V---



PC connecting sections



Contactor without «mechanical latching with electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)												locking possibility on the left extremity (V)																																																																																							
	without delayed contact						with delayed contact						without delayed contact						with delayed contact																																																																																	
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6																																																																						
Number of poles	1	250	300	300	350	350	400	325	375	375	425	425	475	300	350	350	400	400	450	375	425	425	475	475	525	2	325	375	375	425	425	475	400	450	450	500	500	550	375	425	425	475	475	525	450	500	500	550	550	600	3	400	450	450	500	500	550	475	525	525	575	575	625	450	475	475	525	525	575	500	550	550	600	600	650	4	450	500	500	550	550	600	525	575	575	625	625	675	500	550	550	600	600	650	575	625	625	675	675	725

Contacteur avec accrochage mécanique à simple déverrouillage électrique et manuel

A dimension (mm)	locking possibility on the right extremity (AV)												locking possibility on the left extremity (V)																																																														
	without delayed contact						with delayed contact						without delayed contact						with delayed contact																																																								
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6																																													
Number of poles	1	350	375	375	425	425	475	400	450	450	500	500	550	375	425	425	475	475	525	450	500	500	550	550	600	2	400	450	450	500	500	550	475	525	525	575	575	625	450	500	500	550	550	600	525	575	575	625	625	675	3	475	525	525	575	575	625	550	600	600	650	650	700	525	575	575	625	625	675	600	650	650	700	700	750

Contactor with «mechanical latching with double electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)												locking possibility on the left extremity (V)																																																																																							
	without delayed contact						with delayed contact						without delayed contact						with delayed contact																																																																																	
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6																																																																						
Number of poles	1	425	450	450	500	500	550	475	525	525	575	575	625	450	500	500	550	550	600	525	575	575	625	625	675	2	475	525	525	575	575	625	550	600	600	650	650	700	525	575	575	575	575	675	600	650	650	700	700	750	3	550	600	600	650	650	700	625	675	675	725	725	775	600	650	650	700	700	750	675	725	725	775	775	825	4	625	675	675	725	725	775	700	750	750	800	800	850	675	700	700	750	750	800	725	775	775	825	825	875

(1) form to be specified.  
 (2) X is the number of closing poles.  
 (3) for contactor equipped with DC or rectified AC supplied coil.  
 Δ for LEN version, please advise the position of the contactor on the bar.  
**Control circuit: for connection drawings, see p. 144**

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
 Without information, the contactor will be delivered without it.

ACC: mechanical latching with single or double release.  
 AP: pole axis.

AV: mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:

- 400 mm with below contactor of calibre 400, 500 and 630 A,
- 575 mm with below contactor of calibre 800 or 1000 A.

CM 16 R: magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.

D: D type auxiliary contact blocks.  
 Disp + M: device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.

L1: - without locking possibility on the left extremity: 45 mm,  
 - with locking possibility on the left extremity: 90 mm.

M: M type auxiliary contact blocks<sup>(1)</sup>.

PC: closing pole.

PF: attachment plane, LER version.

PG: left bearing.

R: possible auxiliary relays.

S: metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).

TF: attachment holes.

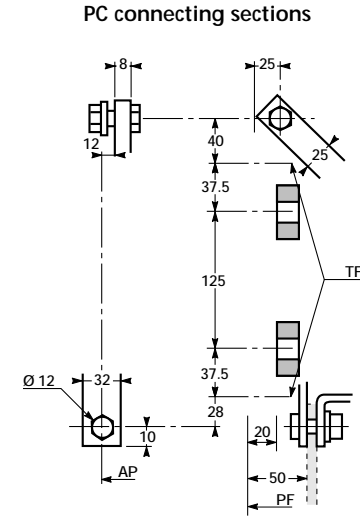
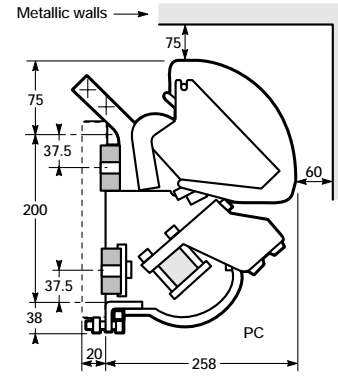
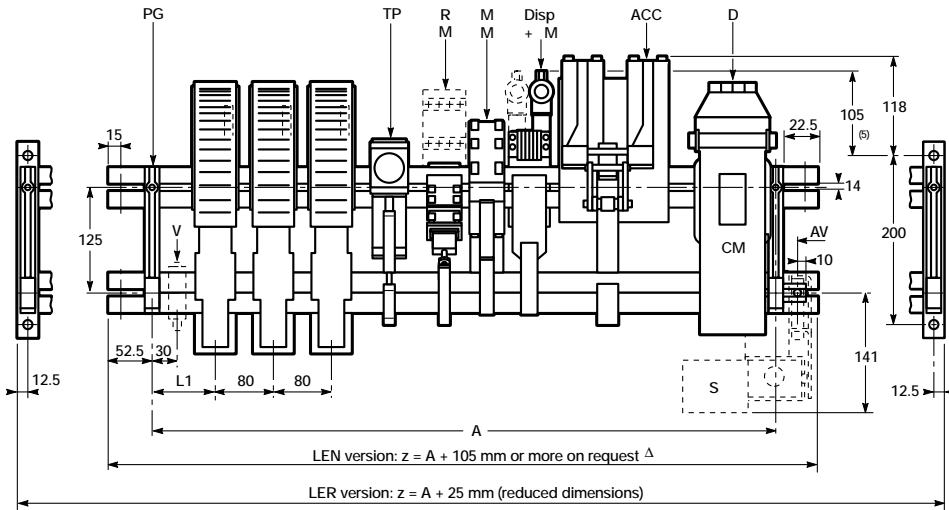
TP: delayed auxiliary contact block.

V: possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.



Modular AC & DC contactors  
CBA: Up to 1000 V, 50/60 Hz - CBFC: Up to 500 V

16. CBA - CBFC 75 500 and 630 x.0(4)



Contactor without «mechanical latching with electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)						locking possibility on the left extremity (V)											
	without delayed contact			with delayed contact			without delayed contact			with delayed contact								
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Number of poles	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	275 <sup>(2)</sup>	300 <sup>(2)</sup>	300 <sup>(2)</sup>	350 <sup>(2)</sup>	350 <sup>(2)</sup>	400 <sup>(2)</sup>	325 <sup>(2)</sup>	375 <sup>(2)</sup>	375 <sup>(2)</sup>	425 <sup>(2)</sup>	425 <sup>(2)</sup>	475 <sup>(2)</sup>	300 <sup>(2)</sup>	350 <sup>(2)</sup>	350 <sup>(2)</sup>	400 <sup>(2)</sup>	400 <sup>(2)</sup>	450 <sup>(2)</sup>
2	350 <sup>(2)</sup>	400 <sup>(2)</sup>	400 <sup>(2)</sup>	450 <sup>(2)</sup>	450 <sup>(2)</sup>	500 <sup>(2)</sup>	400 <sup>(2)</sup>	450 <sup>(2)</sup>	450 <sup>(2)</sup>	500 <sup>(2)</sup>	500 <sup>(2)</sup>	550 <sup>(2)</sup>	400 <sup>(2)</sup>	425 <sup>(2)</sup>	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>
3	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>	575 <sup>(2)</sup>	500 <sup>(2)</sup>	550 <sup>(2)</sup>	550 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>	650 <sup>(2)</sup>	425 <sup>(2)</sup>	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>
4	500 <sup>(2)</sup>	550 <sup>(2)</sup>	575 <sup>(3)</sup>	625 <sup>(3)</sup>	625 <sup>(3)</sup>	675 <sup>(3)</sup>	600 <sup>(3)</sup>	650 <sup>(3)</sup>	650 <sup>(3)</sup>	700 <sup>(3)</sup>	700 <sup>(3)</sup>	750 <sup>(3)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>	575 <sup>(2)</sup>	575 <sup>(2)</sup>	625 <sup>(2)</sup>	625 <sup>(2)</sup>
													675 <sup>(2)</sup>	675 <sup>(2)</sup>	725 <sup>(3)</sup>	725 <sup>(3)</sup>	775 <sup>(3)</sup>	775 <sup>(3)</sup>

Contactor with «mechanical latching with single electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)						locking possibility on the left extremity (V)											
	without delayed contact			with delayed contact			without delayed contact			with delayed contact								
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Number of poles	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	350 <sup>(2)</sup>	400 <sup>(2)</sup>	400 <sup>(2)</sup>	450 <sup>(2)</sup>	450 <sup>(2)</sup>	500 <sup>(2)</sup>	400 <sup>(2)</sup>	450 <sup>(2)</sup>	450 <sup>(2)</sup>	500 <sup>(2)</sup>	500 <sup>(2)</sup>	550 <sup>(2)</sup>	400 <sup>(2)</sup>	425 <sup>(2)</sup>	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>
2	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>	575 <sup>(2)</sup>	500 <sup>(2)</sup>	550 <sup>(2)</sup>	550 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>	650 <sup>(2)</sup>	425 <sup>(2)</sup>	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>
3	500 <sup>(2)</sup>	550 <sup>(2)</sup>	550 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>	650 <sup>(2)</sup>	575 <sup>(2)</sup>	625 <sup>(2)</sup>	625 <sup>(2)</sup>	675 <sup>(2)</sup>	675 <sup>(2)</sup>	725 <sup>(2)</sup>	500 <sup>(2)</sup>	500 <sup>(2)</sup>	550 <sup>(2)</sup>	550 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>
4	575 <sup>(2)</sup>	650 <sup>(3)</sup>	650 <sup>(3)</sup>	700 <sup>(3)</sup>	700 <sup>(3)</sup>	750 <sup>(3)</sup>	625 <sup>(2)</sup>	625 <sup>(2)</sup>	675 <sup>(2)</sup>	675 <sup>(2)</sup>	725 <sup>(2)</sup>	725 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>	650 <sup>(2)</sup>	650 <sup>(2)</sup>	700 <sup>(2)</sup>	700 <sup>(2)</sup>
													775 <sup>(2)</sup>	775 <sup>(2)</sup>	825 <sup>(3)</sup>	825 <sup>(3)</sup>	875 <sup>(3)</sup>	875 <sup>(3)</sup>

Contactor with «mechanical latching with double electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)						locking possibility on the left extremity (V)											
	without delayed contact			with delayed contact			without delayed contact			with delayed contact								
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
Number of poles	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	425 <sup>(2)</sup>	475 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>	575 <sup>(2)</sup>	475 <sup>(2)</sup>	525 <sup>(2)</sup>	525 <sup>(2)</sup>	575 <sup>(2)</sup>	575 <sup>(2)</sup>	625 <sup>(2)</sup>	475 <sup>(2)</sup>	500 <sup>(2)</sup>	500 <sup>(2)</sup>	550 <sup>(2)</sup>	550 <sup>(2)</sup>	600 <sup>(2)</sup>
2	500 <sup>(2)</sup>	550 <sup>(2)</sup>	550 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>	650 <sup>(2)</sup>	575 <sup>(2)</sup>	625 <sup>(2)</sup>	625 <sup>(2)</sup>	675 <sup>(2)</sup>	675 <sup>(2)</sup>	725 <sup>(2)</sup>	500 <sup>(2)</sup>	600 <sup>(2)</sup>	600 <sup>(2)</sup>	650 <sup>(2)</sup>	650 <sup>(2)</sup>	700 <sup>(2)</sup>
3	575 <sup>(2)</sup>	625 <sup>(2)</sup>	625 <sup>(2)</sup>	675 <sup>(2)</sup>	675 <sup>(2)</sup>	725 <sup>(2)</sup>	650 <sup>(2)</sup>	700 <sup>(2)</sup>	700 <sup>(2)</sup>	750 <sup>(2)</sup>	750 <sup>(2)</sup>	800 <sup>(2)</sup>	600 <sup>(2)</sup>	675 <sup>(2)</sup>	675 <sup>(2)</sup>	725 <sup>(2)</sup>	725 <sup>(2)</sup>	775 <sup>(2)</sup>
4	650 <sup>(2)</sup>	725 <sup>(3)</sup>	725 <sup>(3)</sup>	775 <sup>(3)</sup>	775 <sup>(3)</sup>	825 <sup>(3)</sup>	750 <sup>(3)</sup>	800 <sup>(3)</sup>	800 <sup>(3)</sup>	850 <sup>(3)</sup>	850 <sup>(3)</sup>	900 <sup>(3)</sup>	700 <sup>(2)</sup>	775 <sup>(3)</sup>	775 <sup>(3)</sup>	825 <sup>(3)</sup>	825 <sup>(3)</sup>	875 <sup>(3)</sup>
													875 <sup>(3)</sup>	875 <sup>(3)</sup>	925 <sup>(3)</sup>	925 <sup>(3)</sup>	975 <sup>(3)</sup>	975 <sup>(3)</sup>

(1) form to be specified.  
 (2) magnetic circuit n° 16 R.  
 (3) magnetic circuit n° 18.  
 (4) X is the number of closing poles.  
 (5) for contactor equipped with DC or rectified AC supplied coil.  
 Δ for LEN version, please advise the position of the contactor on the bar.  
**Control circuit: for connection drawings, see p. 144.**

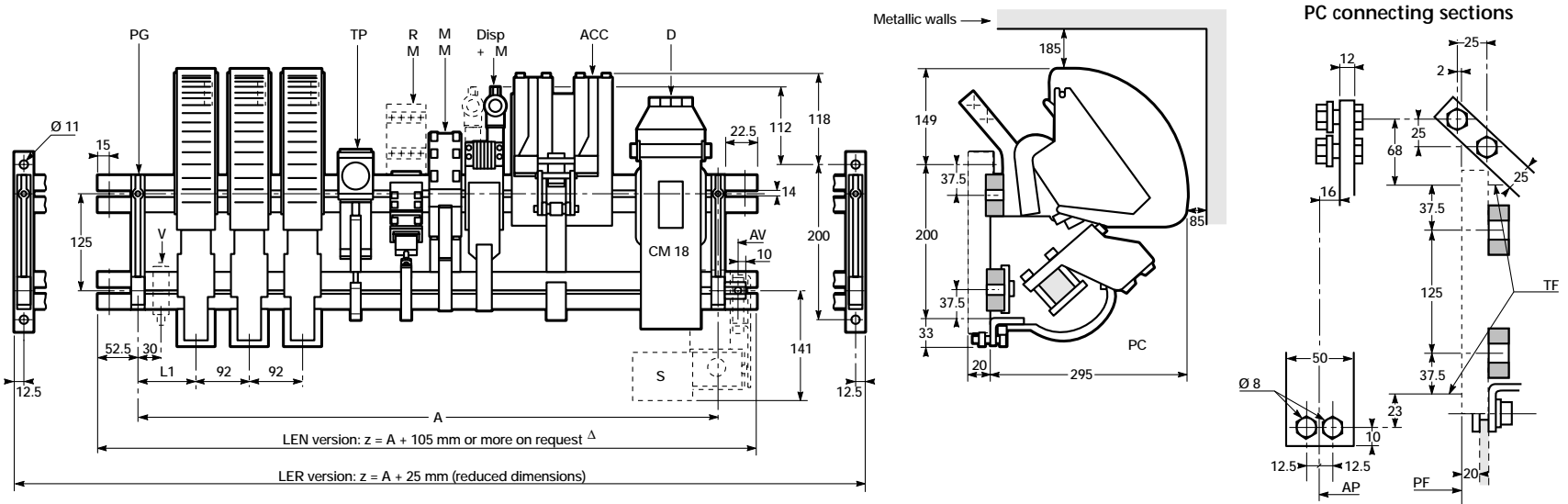
Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
 Without information, the contactor will be delivered without it.

ACC: mechanical latching with single or double release.  
 AP: pole axis.  
 AV: mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:  
 - 400 mm with below contactor of calibre 400, 500 and 630 A,  
 - 575 mm with below contactor of calibre 800 or 1000 A.  
 CM: magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.  
 D: D type auxiliary contact blocks.  
 Disp + M: device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.  
 L1: - without locking possibility on the left extremity: 45 mm,  
 - with locking possibility on the left extremity: 90 mm.  
 M: M type auxiliary contact blocks<sup>(1)</sup>.  
 PC: closing pole.  
 PF: attachment plane, LER version.  
 PG: left bearing.  
 R: possible auxiliary relays.  
 S: metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).  
 TF: attachment holes.  
 TP: delayed auxiliary contact block.  
 V: possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.



Modular AC & DC contactors  
CBA: Ue up to 1000 V, 50/60 Hz - CBFC: Ue up to 500 V=

17. CBA - CBFC 75 800 and 1000 x.0(2)



Contactor without «mechanical latching with electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)												locking possibility on the left extremity (V)												
	without delayed contact						with delayed contact						without delayed contact						with delayed contact						
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	
Number of poles	1	325	375	375	425	425	475	375	425	425	475	475	525	350	400	400	450	450	500	425	475	475	525	525	575
	2	400	450	450	500	500	550	475	525	525	575	575	625	450	475	475	525	525	575	500	550	550	600	600	650
	3	500	550	550	600	600	650	575	625	625	675	675	725	525	575	575	625	625	675	600	650	650	700	700	750
	4	600	650	•	•	•	•	650	•	•	•	•	•	625	675	•	•	•	•	700	•	•	•	•	•

Contactor with «mechanical latching with single electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)												locking possibility on the left extremity (V)												
	without delayed contact						with delayed contact						without delayed contact						with delayed contact						
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	
Number of poles	1	400	425	425	475	475	525	450	500	500	550	550	600	425	475	475	525	525	575	475	525	525	575	575	625
	2	475	525	525	575	575	625	550	600	600	650	650	700	525	550	550	600	600	650	575	625	625	675	675	725
	3	575	625	625	675	675	725	650	700	700	750	750	800	600	650	650	700	700	750	675	725	725	775	775	825
	4	675	725	•	•	•	•	725	•	•	•	•	•	700	750	•	•	•	•	750	•	•	•	•	•

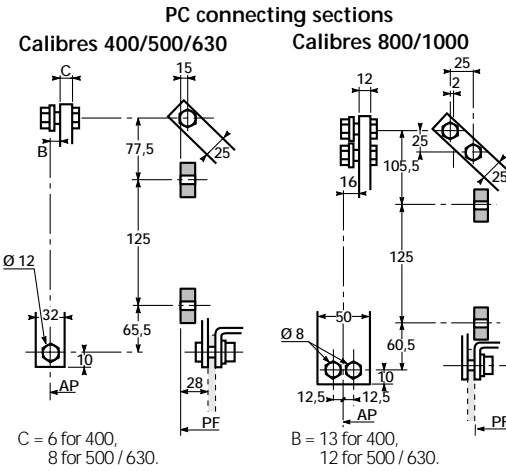
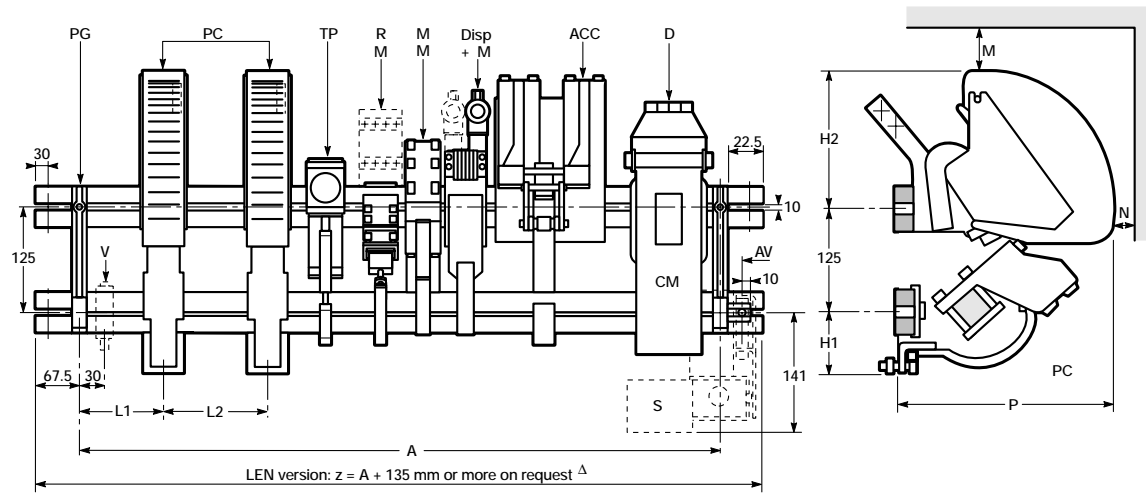
Contactor with «mechanical latching with double electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)												locking possibility on the left extremity (V)												
	without delayed contact						with delayed contact						without delayed contact						with delayed contact						
Number of M type blocks	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6	
Number of poles	1	475	525	525	575	575	625	525	575	575	625	625	675	500	550	550	600	600	650	550	600	600	650	650	700
	2	550	600	600	650	650	700	625	675	675	725	725	775	600	625	625	675	675	725	650	700	700	750	750	800
	3	650	700	700	750	750	800	725	775	775	825	825	875	675	725	725	775	775	825	750	800	800	850	850	900
	4	750	800	•	•	•	•	800	•	•	•	•	•	775	825	•	•	•	•	825	•	•	•	•	•

• consult us.  
(1) form to be specified.  
(2) X is the number of closing poles.  
Δ for LEN version, please advise the position of the contactor on the bar.  
Control circuit: for connection drawings, see p. 144.

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
Without information, the contactor will be delivered without it.

ACC: mechanical latching with single or double release.  
AP: pole axis.  
AV: mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:  
- 400 mm with below contactor of calibre 400, 500 and 630 A,  
- 575 mm with below contactor of calibre 800 or 1000 A.  
CM 18: magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.  
D: D type auxiliary contact blocks.  
Disp + M: device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.  
L1: - without locking possibility on the left extremity: 45 mm,  
- with locking possibility on the left extremity: 90 mm.  
M: M type auxiliary contact blocks<sup>(1)</sup>.  
PC: closing pole.  
PF: attachment plane, LER version.  
PG: left bearing.  
R: possible auxiliary relays.  
S: metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).  
TF: attachment holes.  
TP: delayed auxiliary contact block.  
V: possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.



**Contactor without «mechanical latching with electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)										locking possibility on the left extremity (V)									
	without delayed contact					with delayed contact					without delayed contact					with delayed contact				
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Number of poles	2 closing poles to be connected in series																			
Calibre 400 A	400	450	450	500	500	475	525	525	575	575	450	475	475	525	525	500	550	550	600	600
Calibres 500 & 630 A	425	475	475	525	525	500	550	550	600	600	475	525	525	575	575	525	575	575	625	625
Calibres 800 & 1000 A	500*	550*	550*	600*	600*	575*	625*	625*	675*	675*	525*	575*	575*	625*	625*	600*	650*	650*	700*	700*

ACC: mechanical latching with single or double release.

AP: pole axis.

AV: mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:

- 400 mm with below contactor of calibre 400, 500, and 630 A.

- 575 mm with below contactor of calibre 800 or 1000 A.

CM: magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.

D: D type auxiliary contact blocks.

Disp + M: device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.

M: M type auxiliary contact blocks<sup>(1)</sup>.

PC: closing pole.

PF: attachment plane, LER version.

PG: left bearing.

R: possible auxiliary relays.

S: metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).

TP: delayed auxiliary contact block.

V: possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.

**Contactor with «mechanical latching with single electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)										locking possibility on the left extremity (V)									
	without delayed contact					with delayed contact					without delayed contact					with delayed contact				
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Number of poles	2 closing poles to be connected in series																			
Calibre 400 A	475	525	525	575	575	550	600	600	650	650	525	575	575	625	625	600	650	650	700	700
Calibres 500 & 630 A	500	550	550	600	600	575	625	625	675	675	550	600	600	650	650	625	675	675	725	725
Calibres 800 & 1000 A	575*	625*	625*	675*	675*	650*	700*	700*	750*	750*	600*	650*	650*	700*	700*	675*	725*	725*	775*	775*

**Contactor with «mechanical latching with double electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)										locking possibility on the left extremity (V)									
	without delayed contact					with delayed contact					without delayed contact					with delayed contact				
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Number of poles	2 closing poles to be connected in series																			
Calibre 400 A	550	600	600	650	650	625	675	675	725	725	600	650	650	700	700	675	725	725	775	775
Calibres 500 & 630 A	575	625	625	675	675	650	700	700	750	750	625	675	675	725	725	700	750	750	800	800
Calibres 800 & 1000 A	650*	700*	700*	750*	750*	725*	775*	775*	825*	825*	675*	725*	725*	775*	775*	750*	800*	800*	850*	850*

Calibre	L1 mechanical locking possibility V		L2	Safety perimeter <sup>(2)</sup>	
	with-out	with		M	N
400	62	107	102	45	45
500/630	65	110	120	75	60
800/1000	89	118	138	185	85

Calibre	H1	H2	P
400	75.5	112.5	258
500/630	75.5	112.5	258
800/1000	70.5	186.5	295

Δ for LEN version, please advise the position of the contactor on the bar.

\* magnetic circuit n° 18.

(1) form to be specified.

(2) with metallic walls.

Control circuit: for connection drawings, see p. 144.

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.

Without information, the contactor will be delivered without it.

Modular DC contactors, 2 poles, double insulation  
Ue: 1000 V ~

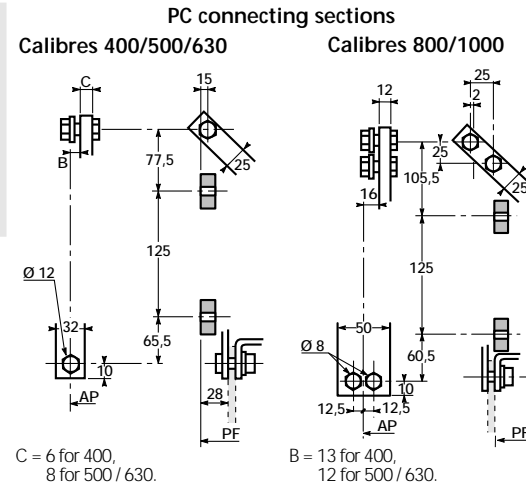
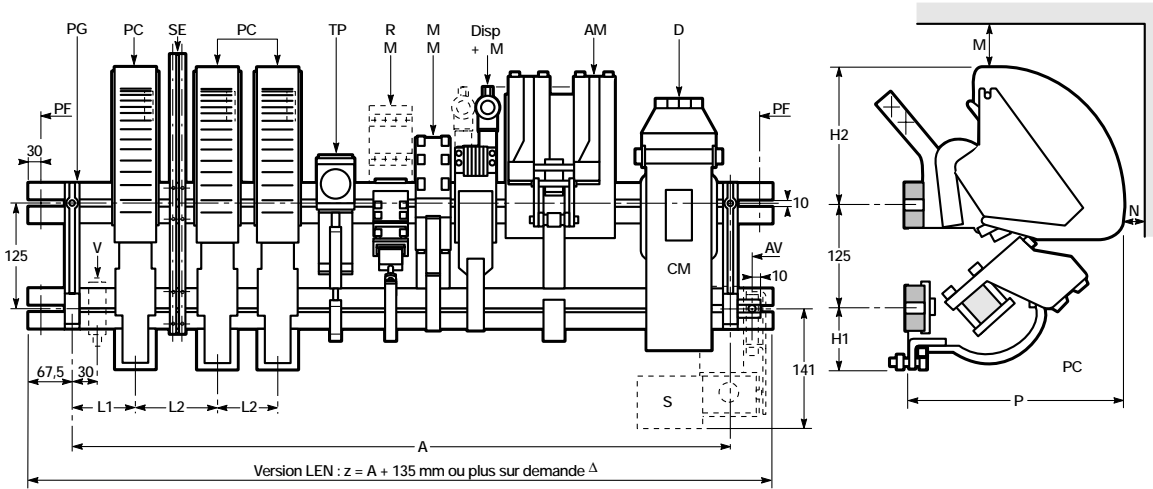
CB 75 400 to 1000 A  
Overall dimensions CBFC 75 400 to 1000 A







Modular DC contactors, 3 poles, double insulation.  
Ue : 1000 V



**Contactor without «mechanical latching with electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact					with delayed contact														
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Number of poles	2 closing poles on the positive polarity to be connected in series and 1 closing pole on the negative polarity																			
Calibre 400 A	500	550	550	600	600						550	575	575	625	625	600	650	650	700	700
Calibres 500 & 630 A	550	600	600	650	650	600	650	650	700	700	600	625	625	675	675	650	700	700	750	750
Calibres 800 & 1000 A	650*	675*	675*	725*	725*	700*	750*	750*	800*	800*	675*	725*	725*	775*	775	725*	775*	775*	825*	825*

**Contactor with «mechanical latching with single electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact					with delayed contact														
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Number of poles	2 closing poles on the positive polarity to be connected in series and 1 closing pole on the negative polarity																			
Calibre 400 A	575	625	625	675	675	650	700	700	750	750	625	675	675	725	725	700	750	750	800	800
Calibres 500 & 630 A	625	675	675	725	725	700	750	750	800	800	675	725	725	775	775	725	775	775	825	825
Calibres 800 & 1000 A	725*	750*	750*	800*	800*	775*	825*	825*	875*	875*	750*	800	800	850	850	800*	850*	850*	900*	900*

**Contactor with «mechanical latching with double electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact					with delayed contact														
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Number of poles	2 closing poles on the positive polarity to be connected in series and 1 closing pole on the negative polarity																			
Calibre 400 A	650	700	700	750	750	725	775	775	825	825	700	750	750	800	800	775	825	825	875	875
Calibres 500 & 630 A	700	750	750	800	800	775	825	825	875	875	750	800	800	850	850	800	850	850	900	900
Calibres 800 & 1000 A	800*	825*	825*	875*	875*	850*	900*	900*			825*	875*	875*			875*				

**ACC:** mechanical latching with single or double release.  
**AP:** pole axis.  
**AV:** mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:  
 - 400 mm with below contactor of calibre 400, 500, and 630 A.  
 - 575 mm with below contactor of calibre 800 or 1000 A.  
**CM:** magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.  
**D:** D type auxiliary contact blocks.  
**Disp + M:** device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.  
**M:** M type auxiliary contact blocks<sup>(1)</sup>.  
**PC:** closing pole.  
**PF:** attachment plane, LER version.  
**PG:** left bearing.  
**R:** possible auxiliary relays.  
**S:** metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).  
**SE:** separator.  
**TP:** delayed auxiliary contact block.  
**V:** possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.

Calibre	L1 mechanical locking possibility V		L2	Safety perimeter <sup>(2)</sup>	
	without	with		M	N
400	62	107	102	45	45
500/630	65	110	120	75	60
800/1000	89	118	138	185	85

Calibre	H1	H2	P
400	75.5	112.5	258
500/630	75.5	112.5	258
800/1000	70.5	186.5	295

Δ for LEN version, please advise the position of the contactor on the bar.

\* magnetic circuit n° 18.

(1) form to be specified.

(2) with metallic walls.

Control circuit: for connection drawings, see p. 144.

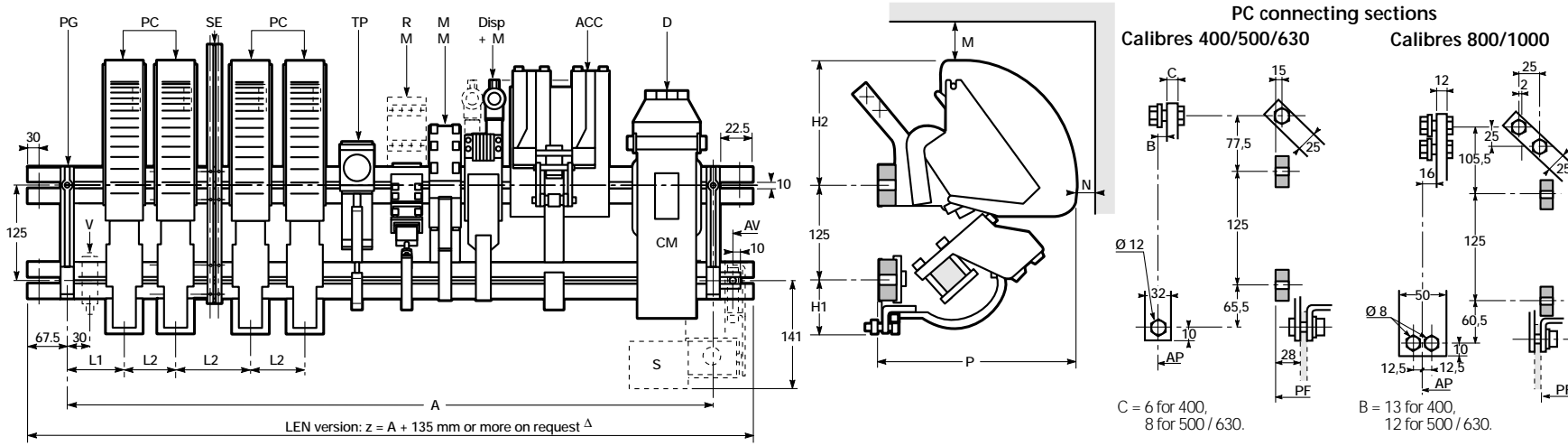
Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.

Without information, the contactor will be delivered without it.



20. CBFC 75 400 to 1000 4.0

Modular 1000 V DC contactors, 4 pole, double insulation,  
Ue : 1000 V



**Contactor without «mechanical latching with electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact					with delayed contact														
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Number of poles	2 poles to be connected in series on the positive polarity and 2 poles to be connected in series on the negative polarity																			
Calibre 400 A	600	650	650	700	700	675	725	725	775	775	650	700	700	750	750	725	775	775	825	825
Calibres 500 & 630 A	675	700	725*	775*	775*	750*	800*	800*	850*	850*	700	750	775*	825	825	800	850	850	900	900
Calibres 800 & 1000 A	775*	825*									800*	850*								

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact					with delayed contact														
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Number of poles	2 poles to be connected in series on the positive polarity and 2 poles to be connected in series on the negative polarity																			
Calibre 400 A	675	725	725	775	775	750	800	800	850	850	725	775	775	825	825	800	850	850	900	900
Calibres 500 & 630 A	750	800*	800*	850*	850*	825*	875*	875*			800	850*	850*	900*	900*	875*				
Calibres 800 & 1000 A	850*	900*									875*									

**Contactor with «mechanical latching with double electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact					with delayed contact														
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5					
Number of poles	2 poles to be connected in series on the positive polarity and 2 poles to be connected in series on the negative polarity																			
Calibre 400 A	750	800	800	850	850	825	875	875	925	925	800	850	850	800	900	875	925	925		
Calibres 500 & 630 A	825	875*	875*			900*					875*	925*	925*							
Calibres 800 & 1000 A	925*																			

**ACC:** mechanical latching with single or double release.  
**AP:** pole axis.  
**AV:** mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors.  
 - 400 mm with below contactor of calibre 400, 500, and 630 A.  
 - 575 mm with below contactor of calibre 800 or 1000 A.  
**CM:** magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.  
**D:** D type auxiliary contact blocks.  
**Disp + M:** device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.  
**M:** M type auxiliary contact blocks<sup>(1)</sup>.  
**PC:** closing pole.  
**PF:** attachment plane, LER version.  
**PG:** left bearing.  
**R:** possible auxiliary relays.  
**S:** metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).  
**SE:** separator.  
**TP:** delayed auxiliary contact block.  
**V:** possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.

Calibre	L1 mechanical locking possibility V		L2	Safety perimeter <sup>(2)</sup>	
	with	without		M	N
400	62	67	102	45	45
500/630	65	110	120	75	60
800/1000	89	118	138	185	85

Calibre	H1	H2	P
400	75.5	112.5	258
500/630	75.5	112.5	258
800/1000	70.5	186.5	295

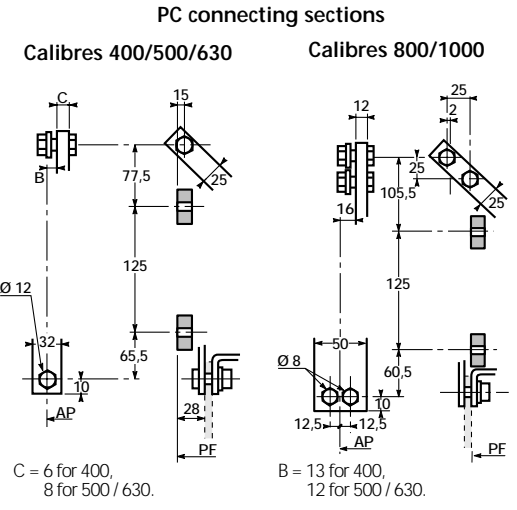
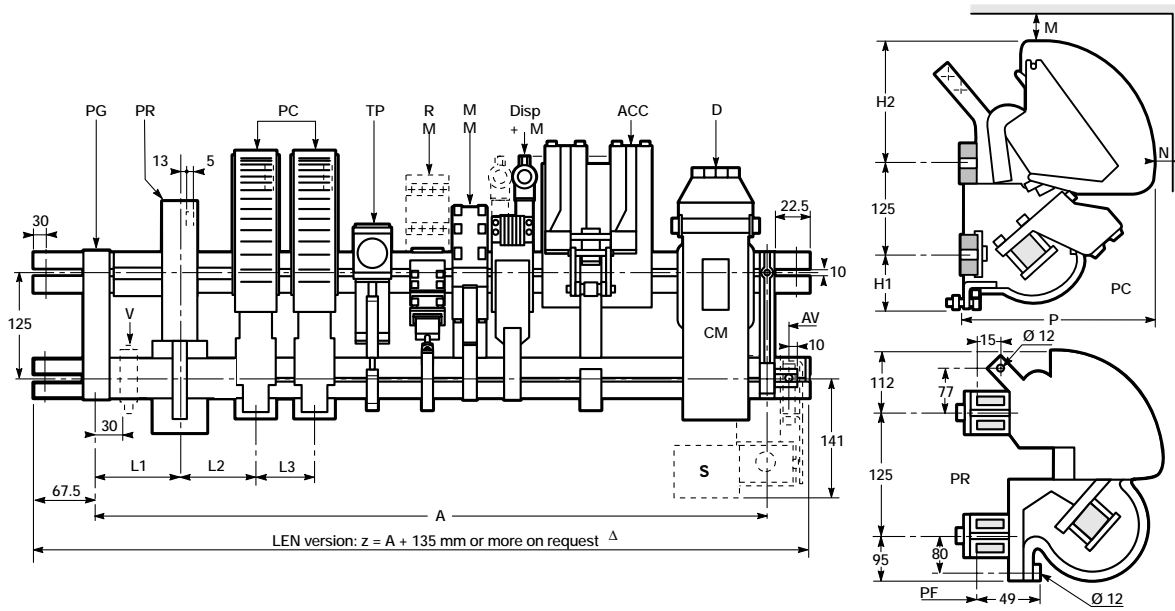
Δ for LEN version, please advise the position of the contactor on the bar.  
 \* magnetic circuit n° 18.  
 (1) form to be specified.  
 (2) with metallic walls.  
**Control circuit:** for connection drawings, see p. 144.

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
 Without information, the contactor will be delivered without it.



Modular DC contactors, 2 main poles and 1 opening pole,  
double insulation. Ue: 1000 V

21. CBFC 75 400 to 1000 2.1



Contactor without «mechanical latching with electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact		with delayed contact			without delayed contact		with delayed contact												
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Number of poles	2 closing poles to be connected in series and one opening pole 400 A without mechanical overlapping																			
Calibre 400 A	525	550	550	600	600	575	625	625	675	675	550	600	600	650	650	625	675	675	725	725
Calibre 500 & 630 A	550	600	600	650	650	625	675	700*	750*	750*	575	625	675	675	650	700	725*	775*	775*	775*
Calibre 800 & 1000 A	625*	675*	675*	725*	725*	700*	750*	750*	800*	800*	650*	700*	700*	750*	750*	725*	775*	775*	825*	825*

Contactor with «mechanical latching with single electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact		with delayed contact			without delayed contact		with delayed contact												
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Number of poles	2 closing poles to be connected in series and one opening pole 400 A without mechanical overlapping																			
Calibre 400 A	600	650	650	700	700	675	725	725	775	775	625	675	675	725	725	700	750	750	800	800
Calibre 500 & 630 A	625	675	675	725	725	700	750	750*	800*	800*	650	700	700	750	750	725	775	800*	850*	850*
Calibre 800 & 1000 A	700*	750*	750*	800*	800*	775*	825*	825*	875*	875*	725*	775*	775*	825*	825*	800*	850*	850*	900*	900*

Contactor with «mechanical latching with double electrical and manual release»

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)														
	without delayed contact		with delayed contact			without delayed contact		with delayed contact												
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Number of poles	2 closing poles to be connected in series and one opening pole 400 A without mechanical overlapping																			
Calibre 400 A	675	725	725	775	775	750	800	800	850	850	700	750	750	800	800	775	825	825	875	875
Calibre 500 & 630 A	700	750	750	800	800	775	825	825*	875*	875*	725	775	775	825	825	800	850	875*	925*	925*
Calibre 800 & 1000 A	775*	825*	825*	875*	875*	850*	900*	900*			800*	850*	850*	900*	900*	875*	925*	925*		

**ACC**: mechanical latching with single or double release.  
**AP**: pole axis.  
**AV**: mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:  
 - 400 mm with below contactor of calibre 400, 500, and 630 A.  
 - 575 mm with below contactor of calibre 800 or 1000 A.  
**CM**: magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.  
**D**: D type auxiliary contact blocks.  
**Disp + M**: device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.  
**M**: M type auxiliary contact blocks<sup>(1)</sup>.  
**PC**: closing pole.  
**PF**: attachment plane, LER version.  
**PG**: left bearing.  
**R**: possible auxiliary relays.  
**S**: metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).  
**SE**: separator.  
**TP**: delayed auxiliary contact block.  
**V**: possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.

Calibre	L1 mechanical locking possibility V		L2	L3	Safety perimeter <sup>(2)</sup>	
	without	with			M	N
400	77.5	107.5	105	102	45	45
500/630	77.5	107.5	112.5	120	75	60
800/1000	77.5	107.5	135	138	185	85

Calibre	H1	H2	P
400	75.5	112.5	258
500/630	75.5	112.5	258
800/1000	70.5	186.5	295

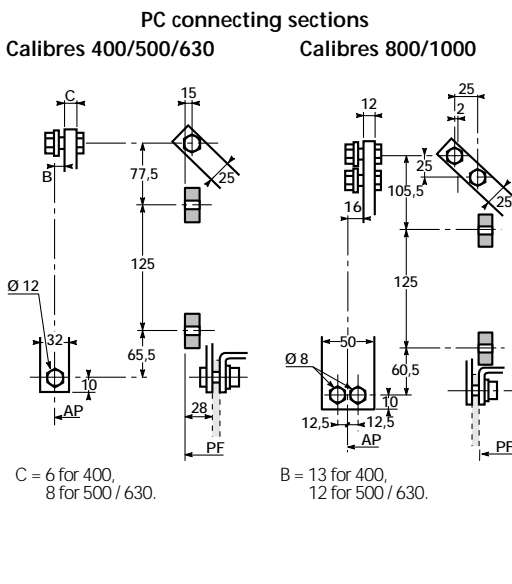
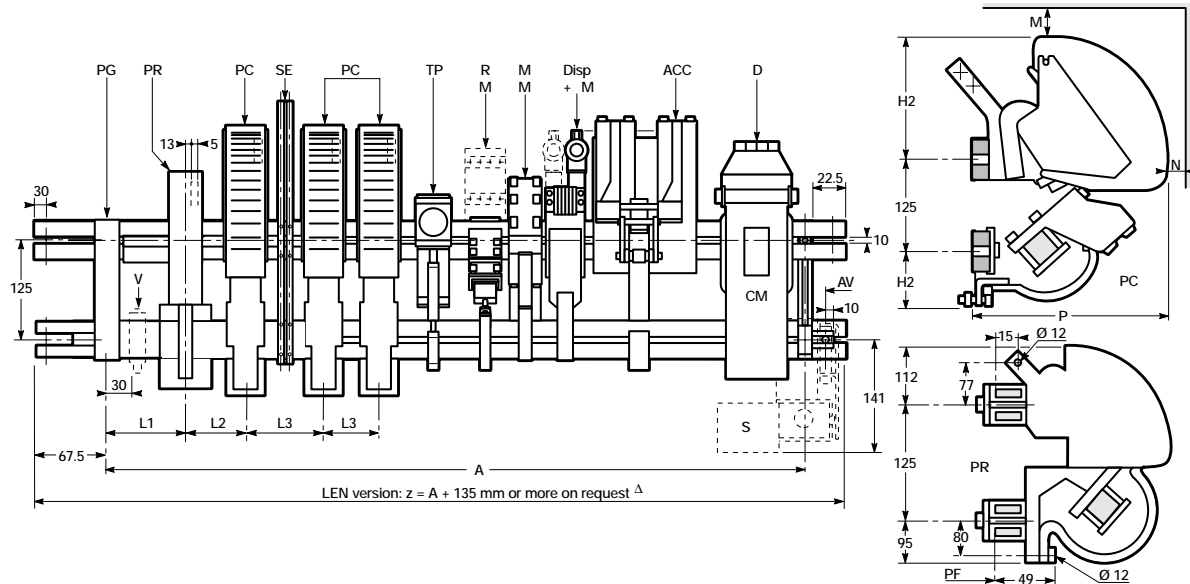
Δ for LEN version, please advise the position of the contactor on the bar.  
 \* magnetic circuit n° 18.  
 (1) form to be specified.  
 (2) with metallic walls.  
**Control circuit: for connection drawings, see p. 144.**

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
 Without information, the contactor will be delivered without it.



22. CBFC 75 400 à 1000 3.1

Modular DC contactors, 3 main poles and 1 opening pole, double insulation. Ue: 1000 V



**Contactor without «mechanical latching with electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)												
	without delayed contact					with delayed contact												
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5			
Number of poles	2 closing poles to be connected in series on the positive polarity 1 pole on the negative polarity and 1 opening pole 400 A without mechanical overlapping for connection to earth																	
Calibre 400 A	625	650	700	700	700	675	725	725	775	775	650	700	750	725	775	775	825	825
Calibre 500 & 630 A	700*	750*	750*	800*	800*	750*	800*	800*	850*	850*	725*	775*	775*	825*	825*	800*	850*	850*
Calibre 800 & 1000 A	750*	800*	800*	850*	850*	825*	875*	875*	925*	925*	800*	850*	850*	900*	900*	850*	900*	900*

**Contactor with «mechanical latching with single electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)												
	without delayed contact					with delayed contact												
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5			
Number of poles	2 closing poles to be connected in series on the positive polarity 1 pole on the negative polarity and 1 opening pole 400 A without mechanical overlapping for connection to earth																	
Calibre 400 A	700	750	750	800	800	775	825	825	875	875	725	775	775	825	825	800	850	850
Calibre 500 & 630 A	775*	800*	800*	850*	850*	825*	875*	875*	925*	925*	800*	850*	850*	900*	900*	850*	900*	900*
Calibre 800 & 1000 A	850*	875*	875*			900*					875*	925*	925*					

**Contactor with «mechanical latching with double electrical and manual release»**

A dimension (mm)	locking possibility on the right extremity (AV)					locking possibility on the left extremity (V)												
	without delayed contact					with delayed contact												
Number of M type blocks	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5			
Number of poles	2 closing poles to be connected in series on the positive polarity 1 pole on the negative polarity and 1 opening pole 400 A without mechanical overlapping for connection to earth																	
Calibre 400 A	775	825	825	875	875	850	900	900			800	850	850	900	900	875	925	925
Calibre 500 & 630 A	850*	875*	875*			900*					875*	925*	925*					
Calibre 800 & 1000 A	925*																	

Δ for LEN version, please advise the position of the contactor on the bar.  
 \* magnetic circuit n° 18.  
 (1) form to be specified.  
 (2) with metallic walls.

Control circuit: for connection drawings, see p. 144.

Please advise when you order whether the contactor has to be equipped with the «shaft end» - necessary to adapt a possible mechanical locking device.  
 Without information, the contactor will be delivered without it.

**ACC:** mechanical latching with single or double release.  
**AP:** pole axis.  
**AV:** mechanical locking axis, attachment centre-to-centre distance between two superimposed contactors:  
 - 400 mm with below contactor of calibre 400, 500, and 630 A.  
 - 575 mm with below contactor of calibre 800 or 1000 A.  
**CM:** magnetic circuit can be mounted on the left side of the contactor. Without any information, it will always be mounted on the right.  
**D:** D type auxiliary contact blocks.  
**Disp + M:** device used for DC or rectified AC control circuit. Standard contents: one support with terminal box, economy resistor(s), rectifier for alternating current and one M type auxiliary contact block.  
**M:** M type auxiliary contact blocks<sup>(1)</sup>.  
**PC:** closing pole.  
**PF:** attachment plane, LER version.  
**PG:** left bearing.  
**R:** possible auxiliary relays.  
**S:** metallic support for «Ronis type» lock for locking the contactor at rest (lock not supplied).  
**SE:** separator.  
**TP:** delayed auxiliary contact block.  
**V:** possible mechanical locking facility with a 80, 150, 200 and 1250 to 5000 A contactor or with CBA-CBFC 55 400 to 1000 A old generation contactors.

Calibre	L1 mechanical locking possibility V		L2	L3	Safety perimeter <sup>(2)</sup>	
	without	with			M	N
400	77.5	107.5	105	102	45	45
500/630	77.5	107.5	112.5	120	75	60
800/1000	77.5	107.5	135	138	185	85

Calibre	H1	H2	P
400	75.5	112.5	258
500/630	75.5	112.5	258
800/1000	70.5	186.5	295

# Auxiliary contacts

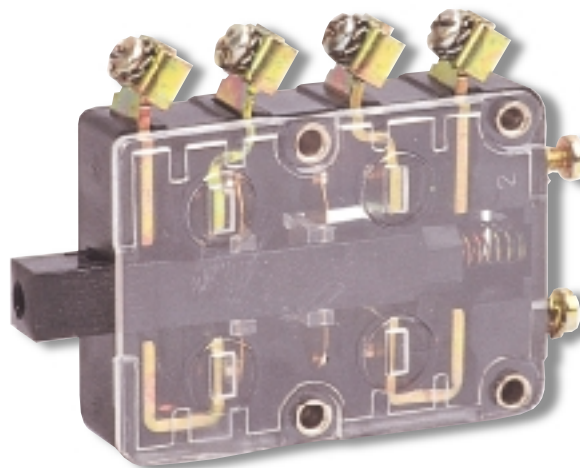


*As for the main poles, the number of auxiliary contacts can vary in a significant way. 3 types of auxiliary contacts blocks exist:*

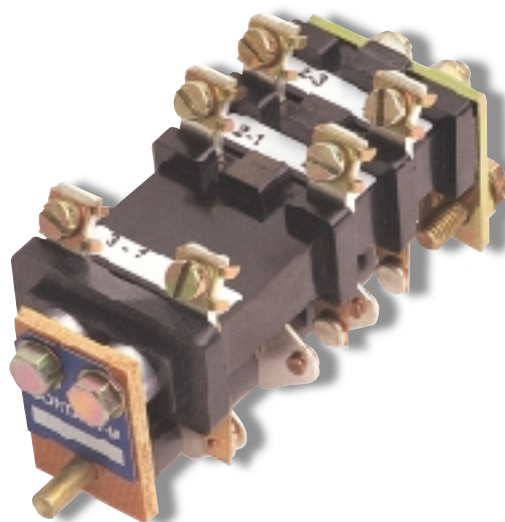
**D type**  
Available only on the 80 to 1000 A range.

**M type**  
Available on all our range of contactors; several configurations are possible to meet all the requirements.

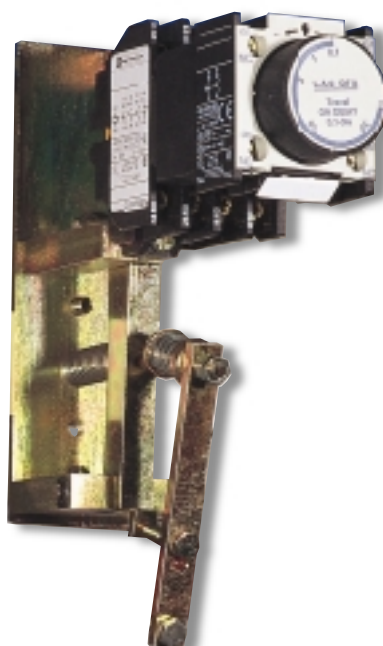
**TP 86 type**  
Delayed blocks available on all our range of contactors:  
-A: delayed at rest,  
-C: delayed at work.



D type block



M type block

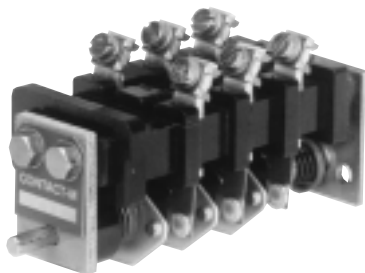


Delayed block



## M type blocks

### 1. Instantanés Type M



Block of 5 (M5) silver pad contacts with double break on closing or opening for 1250 to 5000 A range, on request.

#### Use

On all modular contactors from 80 to 6200 A.

#### Description

- Block of 2 (M2) or 3 (M3) silver pad contacts with double break on closing or opening.
- The flexibility of the fixed support causes a self-cleaning action on the contacts allowing use for low control voltages (24 and 48 V) without risk of failure.

#### Technical features

##### Maximum operating voltage

AC	V	500
DC	V	600

##### Thermal nominal current

A	15
---	----

##### Current switch-on rating 500 VAC or 600 VDC

A	60
---	----

##### Current switch-off rating under a voltage of

V	110	220	440	500	600
AC	A	15	15	15	15
DC					

on resistive circuit

1 contact	A	15	5	1	0.75	0.6
2 contacts in series	A		15	3.25	3	
3 contacts in series	A			5	4.5	

on inductive circuit

L/R = 15 ms

1 contact	A	7	1	0.5	0.4	0.3
2 contacts in series	A	15	1.5	0.75	0.7	
3 contacts in series	A		8	2	1.2	

on inductive circuit

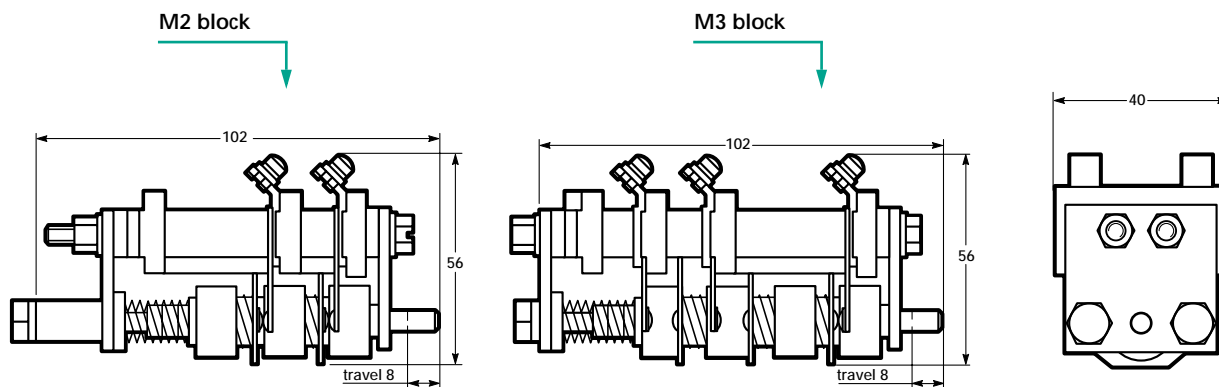
L/R = 40 ms

1 contact	A	3	0.4	0.15	0.14	
2 contacts in series	A	15	0.7	0.6	0.4	
3 contacts in series	A		2.5	0.7	0.6	

##### Weight

M2	kg	0.210
M3	kg	0.260

### Dimensions



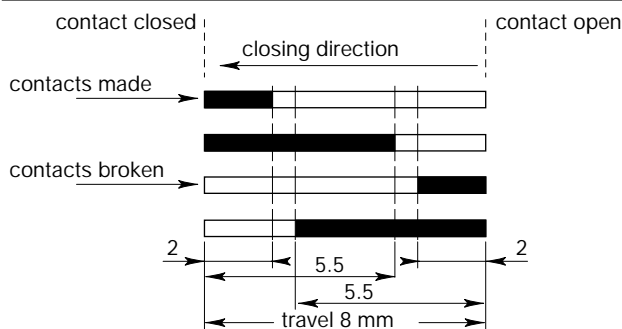


## M type blocks

### Operating diagrams (instant M type)

Items	Diagrams	Schematics	Items	Diagrams	Schematics
<b>M type with 2 contacts</b>					
O2 - Z	NO  1 NO  2		O2 - Y	NO  1 NO  2	
F2 - Z	NC  1 NC  2		F2 - Y	NC  1 NC  2	
F101 - Z	NC  1 NO  2		F101 - Y	NC  1 NO  2	
F101 - X	NC  1 NO  2		F101 - W	NC  1 NO  2	
<b>M type with 3 contacts</b>					
O3 - Z	NO  1 NO  2 NO  3		O3 - Y	NO  1 NO  2 NO  3	
F3 - Z	NC  1 NC  2 NC  3		F3 - Y	NC  1 NC  2 NC  3	
F102 - Z	NC  1 NO  2 NO  3		F102 - Y	NC  1 NO  2 NO  3	
F201 - Z	NC  1 NC  2 NO  3		F201 - Y	NC  1 NC  2 NO  3	
F201 - X	NC  1 NC  2 NO  3		F201 - W	NC  1 NC  2 NO  3	
F102 - X	NC  1 NO  2 NO  3		F102 - W	NC  1 NO  2 NO  3	

### Contact representation:

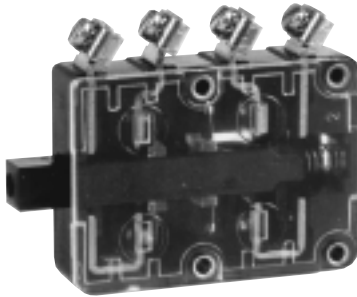


Use		Marks
instant NC		1
instant NO		2
delayed NC		3
delayed NO		4



## D type blocks and delayed blocks

### 2. D type instant contacts



#### Use

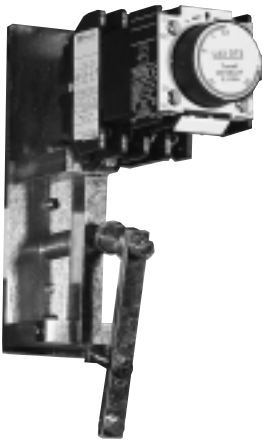
On 80 to 1000 A bar contactors.

#### Description

Block of 2 contacts (NO + NC).

Thermal nominal current		A	10					
Under								
AC voltage of	V	24	48	127	220	380	500	
DC voltage of	V	24	48	110	220			
Operating current								
AC	A	10	10	7	5	3	2.5	
DC resistive circuit	A	5	3	1	0.5			
DC inductive circuit L/R = 15 ms	A	5	2	0.8	0.3			
Occasional current switch-on and switch-off rating								
AC	A	20	20	15	12	8	5	
DC resistive circuit	A	20	15	4	0.8			
DC inductive circuit L/R = 15 ms	A	20	15	3	0.6			

### 3. TP 86 type delayed contacts



#### Use

On 80 to 6200 A modular contactors

#### Description

Block includes:

- 4 instantaneous auxiliary contacts 3 NO + 1 NC.
- 2 auxiliary contacts, 1 NO + 1 NC delayed; delay adjustable from 0 to 30 seconds.

#### 2 different blocks:

**TP 86 A:** delayed block counting from contactor closing.

**TP 86 C:** delayed block counting from contactor opening.

#### Technical features

Thermal nominal current		A	10					
Nominal voltage		V	660					
Insulating voltage		V	750					
Under								
AC voltage of	V		48	110/127	220	380	440	660
DC voltage of	V	24	48	110	220		440	600
Operating power								
1 million operations								
AC	VA		300	500	600	520	500	390
DC	W	120	90	75	68		61	58
3 million operations								
AC	VA		160	300	330	300	280	190
DC	W	70	50	38	33		28	27
10 million operations								
AC	VA		70	100	110	100	100	80
DC	W	25	18	14	12		10	9
Occasional current switch-on and switch-off rating								
AC	VA		3000	7000	12000	15000	14000	13000
DC	W	1000	700	400	260		220	170

On request, TP 86 type blocks can be delivered with adjustable delay:

- from 0.1 to 3 seconds,

- from 0.1 to 180 seconds

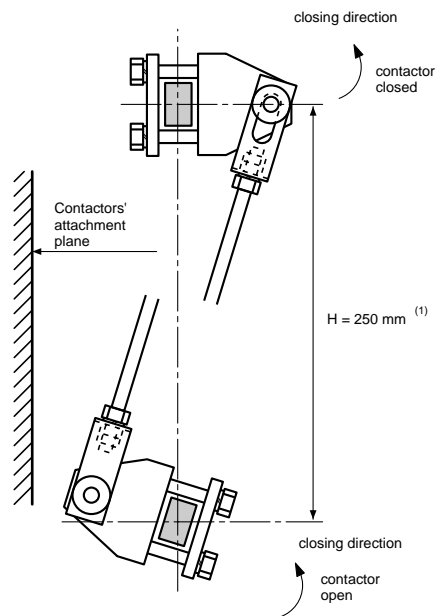


# Vertical mechanical locking

## 80 to 200 A range

- CBA 55,
- CBPA 57,
- CBFC 55,
- CBC 57B 80 - 150 - 200.

Horizontal or «vis-à-vis» mechanical locking available on request.

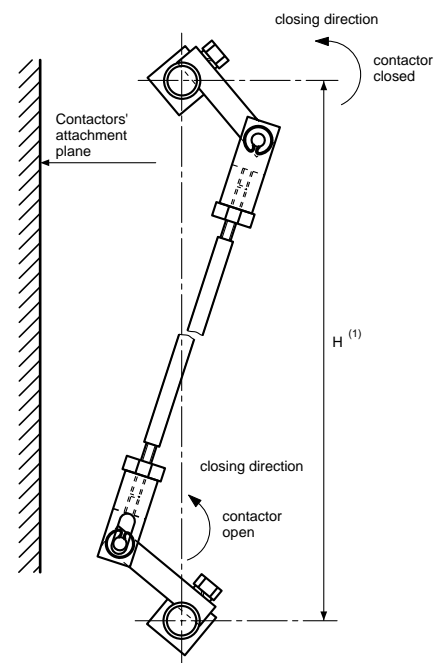
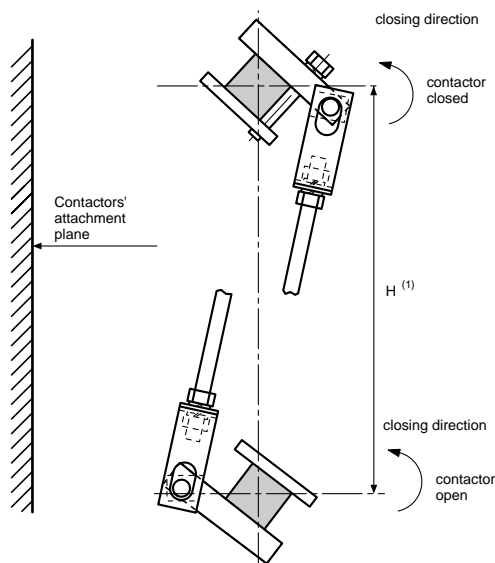


## 400 to 1000 A range

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

Locking on the hold generation moving shaft or

Standard locking at the end of the moving shaft.



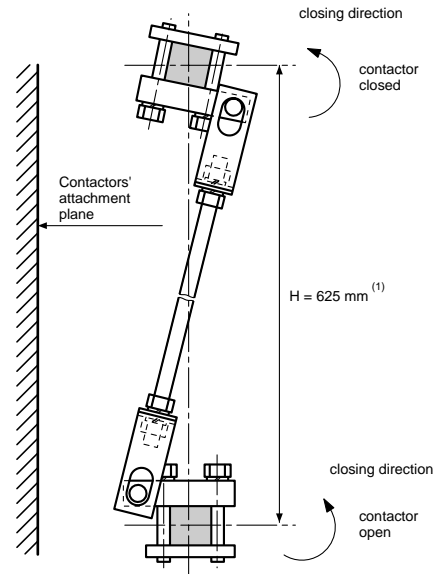
Calibre (A)	H (mm)
400	400
500	400
630	400
800	575
1000	575

(1) for other length, consult us  
Horizontal or «vis à vis» mechanical locking available and request.

# Vertical mechanical locking

## 1250 to 5000 A range

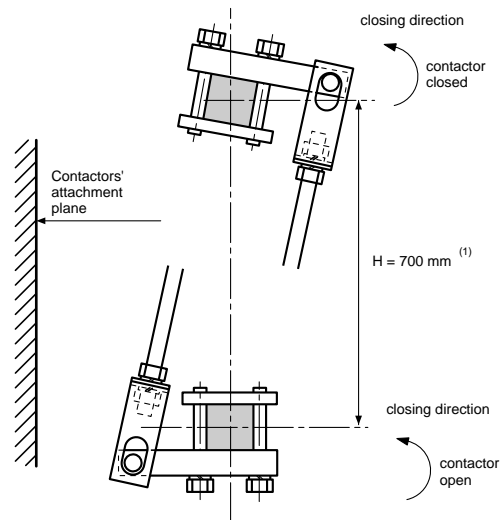
- CBA 75, CBFC 75
  - CBA - CBC 71 1250 - 1600 - 2000.
- Horizontal or «vis à vis» mechanical locking available on request.
- CBA - CBC 98 2560 à 5000.



## 2500 to 5000 A range

- CBA 54 2500,
- CBC 54 3000,

- CBA 60 4000,
- CBC 60 5000.



(1) for other length, consult us.  
Horizontal or «vis à vis» mechanical locking available on request.