

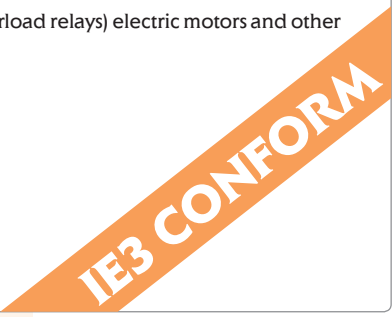
## Motor contactor CEM

### Application

Contactors are used to remotely control and protect (in combination with overload relays) electric motors and other electric loads with nominal power up to 160kW (at 400V AC3 duty).

### Advantages

- Mounting on DIN rail and mounting plates
- High technical performance
- Low power loss (current heat loss)
- Protection against direct contact from front (IEC 536) IP20
- Wide range of accessories
- Surge suppressor (as option)
- Control voltage 24VAC, 48VAC, 110VAC, 230VAC, 400VAC



**Ordering:**

CEM9.01-230V-50/60Hz

I(AC3)[A]      Coil voltage

Nr. of NO    Nr. of NC - Number and type of auxiliary contacts

Advantages



→ The possibility of replacing the coil to other rated voltage. (AC coil compatible only with AC contactor. DC coil compatible only with DC contactor)



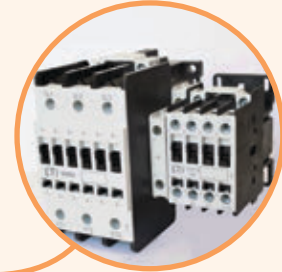
→ Surge suppressors can be mounted as close as possible to source (coil).



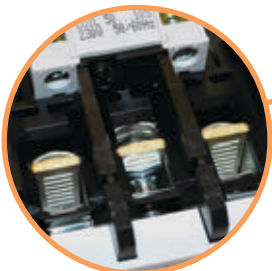
→ Lateral (side mounting) of auxiliary contacts.



→ Front mounted auxiliary contacts



→ Mechanical interlock can lock two different size contactors



→ Special designed terminals provide reliable contact with cables.



→ Up to CEM105 possible to mount on DIN rail TH35 or directly on panel.



→ Overload relay (bimetal) can be mounted directly on contactor or on DIN rail TH35 by using an adapter

Motor contactor CEM9.10; 25A(AC1); 9A; 4kW(AC3)*				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM9.10-24V-50/60Hz	004642120		295	1
CEM9.10-48V-50/60Hz	004642121		295	1
CEM9.10-110V-50/60Hz	004642122		295	1
CEM9.10-230V-50/60Hz	004642123		295	1
CEM9.10-400V-50/60Hz	004642124		295	1
CEM9.10-24V DC	004642220		510	1
CEM9.10-220V DC	004642221		510	1

\* Auxiliary contact 1NO integrated

Motor contactor CEM9.01; 25A(AC1); 9A; 4kW(AC3)*				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM9.01-24V-50/60Hz	004642110		295	1
CEM9.01-48V-50/60Hz	004642111		295	1
CEM9.01-110V-50/60Hz	004642112		295	1
CEM9.01-230V-50/60Hz	004642113		295	1
CEM9.01-400V-50/60Hz	004642114		295	1
CEM9.01-24V DC	004642210		510	1
CEM9.01-220V DC	004642211		510	1

\* Auxiliary contact 1NC integrated

Motor contactor CEM12.10; 25A(AC1); 12A; 5.5kW(AC3)*				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM12.10-24V-50/60Hz	004643120		295	1
CEM12.10-48V-50/60Hz	004643121		295	1
CEM12.10-110V-50/60Hz	004643122		295	1
CEM12.10-230V-50/60Hz	004643123		295	1
CEM12.10-400V-50/60Hz	004643124		295	1
CEM12.10-24V DC	004643220		510	1
CEM12.10-220V DC	004643221		510	1

\* Auxiliary contact 1NO integrated

Motor contactor CEM12.01; 25A(AC1); 12A; 5.5kW(AC3)*				
Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM12.01-24V-50/60Hz	004643110		295	1
CEM12.01-48V-50/60Hz	004643111		295	1
CEM12.01-110V-50/60Hz	004643112		295	1
CEM12.01-230V-50/60Hz	004643113		295	1
CEM12.01-400V-50/60Hz	004643114		295	1
CEM12.01-24V DC	004643210		510	1
CEM12.01-220V DC	004643211		510	1

\* Auxiliary contact 1NC integrated



For auxiliary contact blocks, see page 230



Accessories



**Auxiliary contact block - front mounted**

Type	Code No.	Description	For use with	Wiring diagram	Weight [g]	Packaging [pcs]
BCXMF10	004641510	1 NO	CEM9-CEM105		15	1
BCXMF01	004641501	1 NC	CEM9-CEM105		15	1
BCXMF10	004642510	1 NO - early-make	CEM9-CEM105		15	1
BCXMF01	004643510	1 NC - late-break	CEM9-CEM105		15	1

not for CEM7,5CN and CEM10CN!

available free aux. contact blocks places:

CEM 9 .... CEM 40: 4 contact blocks

CEM 50 .... CEM 105: 6 contact blocks

CEM 112 .... CEM 300: mounting not available - only lateral, see below



**Auxiliary contact block - lateral**

Type	Code No.	Description	For use with	Wiring diagram	Weight [g]	Packaging [pcs]
BCXMLE11	004644511	1 NO - 1 NC (main)	CAEM4, CEM9-CEM250		15	1
BCXMLE20	004644520	2 NO (main)	CAEM4, CEM9-CEM250		15	1
BCXMRLE11	004645511	1 NO - 1 NC side mounted (upgraded)	CAEM4, CEM9-CEM250		15	1
BCXMRLE20	004645520	2 NO side mounted (upgraded)	CAEM4, CEM9-CEM250		15	1

not for CEM7,5CN and CEM10CN!

Main" lateral auxiliary contact block can be mounted on the front side of the contactor, it can be upgraded max. with one additional auxiliary contact block.

Max. number of auxiliary contacts together (top and side mounted):  
 max. 4: CEM9-CEM25, CAEM 4  
 max. 6: CEM32-CEM40  
 max. 8: CEM50-CEM105  
 max. 8: CEM112-CEM300

**Contactors CEM up to 132 kW Technical Data**

Type	CEM 9 to CEM 18	CEM25	CEM32 and CEM40	CEM50 and CEM80	CEM95 and CEM105	CEM112E and CEM 150E	CEM180E	CEM250E and CEM300E
<b>Main terminal capacity (mm<sup>2</sup>)</b>								
Solid, stranded and finely stranded without end sleeve		2x (1...2,5) 2x (2,5...6) 2x (0,25...2,5)	2x (1...2,5) 2x (2,5... 10) 2x (1...2,5)					
Finely stranded with end sleeve		2x (2,5...6) 2x (13...16)	2x (2,5...10) 2x (13...17)					
<b>One conductor on top</b>								
Stranded			0,75...16	1...35	1,5...50			
Stranded with end sleeve			0,75...16	1...35	1,5...50			
Stranded without end sleeve				1...16	1,5...35	2,5...50		
Finely stranded				1...16	1,5...35	2,5...50		
<b>One conductor on bottom</b>								
Solid			1...16	2,5...35	4...35			
Stranded with end sleeve			1... 16	2,5...35	4...35			
Stranded without end sleeve				1,5...16	6...35	6...35		
Finely stranded				1,5...16	6...35	6...35		
<b>Two conductors on top</b>								
Solid			0,75...16	1...35	1,5...50			
Stranded with end sleeve				0,75...16	1...35	1,5...50		
Stranded without end sleeve				1...16	1,5...35	2,5...50		
Finely stranded				1...16	1,5...35	2,5...50		
<b>Two conductors on bottom</b>								
Solid			1...16	2,5...35	4...35			
Stranded with end sleeve				1...16	2,5...35	4...35		
Stranded without end sleeve				1,5...16	6...35	6...35		
Finely stranded				1,5...16	6...35	6...35		
Solid and stranded with end sleeve Bar						2 x (25...70) 2 x (15x3)	2 x (50...120) 2 x (20x3)	2 x (50...150) 2 x (30x5)
<b>Tightening torque (N.m)</b>		1...1,9	1,6...3	2,5...4	4...6	5...6,5	10	13

**Auxiliary contacts**

Type	CEM9	CEM12	CEM18	BCXMF...	BCXMLE ...
<b>Rated insulation voltage Ui</b>					
acc. IEC/EN 60 947 (V)		1000			1000
<b>Rated operational voltage Ue (V)</b>					
		690			690
<b>Conv. thermal current Ith (A)</b>					
		20			10
<b>Rated operational current Ie</b>					
AC-15	220 - 240 V (A)	10			6
	380 - 400 V (A)	6			4
	415 V (A)	5			3,5
	500 V (A)	4			2,5
DC-13	24 V (A)	6			6
	48 V (A)	4			4
	110 V (A)	2			2
	220 V (A)	0,7			0,7
<b>Making capacity Im</b>					
AC-15/AC-11	Ue ≤ 400 V 50/60 Hz (A)	250			90
DC-13/DC-11	Ue ≤ 220 V DC (A)	250			90
<b>Breaking capacity Ic</b>					
AC-15/AC-11	Ue ≤ 400 V 50/60 Hz (A)	250			60
DC-13/DC-11	Ue ≤ 220 V DC (A)	2			0,95
<b>Short circuit protection</b>					
max. fuse gG (A)		16			10
<b>Control circuit reliability</b>					
		Ie min = 5 mA, Ue min = 17 V			
Electrical life span	Ops	10 <sup>6</sup>			
Mechanical life span	Ops	15 x 10 <sup>6</sup>			
<b>Impedance /pole</b>	mR	2,5			