

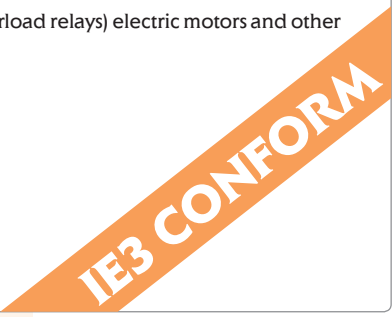
Motor contactor CEM

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)



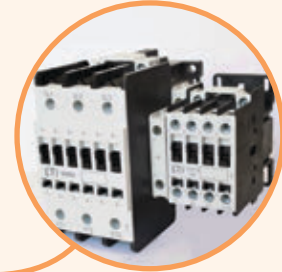
→ Surge suppressors can be mounted as close as possible to source (coil).



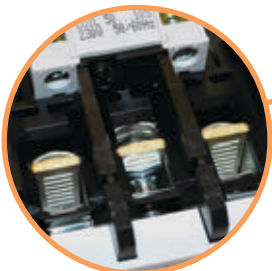
→ Lateral (side mounting) of auxiliary contacts.



→ 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



Motor contactor CEM40.00; 60A(AC1); 40A; 18.5kW(AC3)

Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM40.00-24V-50/60Hz	004647100		540	1
CEM40.00-48V-50/60Hz	004647101		540	1
CEM40.00-110V-50/60Hz	004647102		540	1
CEM40.00-230V-50/60Hz	004647103		540	1
CEM40.00-400V-50/60Hz	004647104		540	1
CEM40.00-24V DC	004647200		850	1
CEM40.00-220V DC	004647201		850	1

For different configurations of auxiliary contacts up to 4 auxiliary contacts can be added to contactor and must be ordered separately

** 24V DC (24...28 V DC), 220V DC (208...240V DC).


Motor contactor CEM50.00; 80A(AC1); 50A; 22kW(AC3)

Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM50.00-24V-50/60Hz	004648100		1105	1
CEM50.00-48V-50/60Hz	004648101		1105	1
CEM50.00-110V-50/60Hz	004648102		1105	1
CEM50.00-230V-50/60Hz	004648103		1105	1
CEM50.00-400V-50/60Hz	004648104		1105	1
CEM50.00-24V DC **	004648200		1240	1
CEM50.00-220V DC **	004648201		1240	1

For different configurations of auxiliary contacts up to 6 auxiliary contacts can be added to contactor and must be ordered separately.

** 24V DC (24...28 V DC), 220V DC (208...240V DC)


Motor contactor CEM65.00; 110A(AC1); 65A; 30kW(AC3)

Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM65.00-24V-50/60Hz	004649100		1120	1
CEM65.00-48V-50/60Hz	004649101		1120	1
CEM65.00-110V-50/60Hz	004649102		1120	1
CEM65.00-230V-50/60Hz	004649103		1120	1
CEM65.00-400V-50/60Hz	004649104		1120	1
CEM65.00-24V DC **	004649200		1240	1
CEM65.00-220V DC **	004649201		1240	1

For different configurations of auxiliary contacts up to 6 auxiliary contacts can be added to contactor and must be ordered separately.

** 24V DC (24...28 V DC), 220V DC (208...240V DC)

For auxiliary contact blocks, see page 230


Motor contactor CEM80.00; 110A(AC1); 80A; 37kW(AC3)

Type	Code No.	Wiring diagram	Weight [g]	Packaging [pcs]
CEM80.00-24V-50/60Hz	004650100		1130	1
CEM80.00-48V-50/60Hz	004650101		1130	1
CEM80.00-110V-50/60Hz	004650102		1130	1
CEM80.00-230V-50/60Hz	004650103		1130	1
CEM80.00-400V-50/60Hz	004650104		1130	1
CEM80.00-24V DC **	004650200		1240	1
CEM80.00-220V DC **	004650201		1240	1

For different configurations of auxiliary contacts up to 6 auxiliary contacts can be added to contactor and must be ordered separately.

** 24V DC (24...28 V DC), 220V DC (208...240V DC)

** Range of operating voltages is shown in technical part of catalogue

Motor contactor CEM

Contactors CEM up to 132 kW Technical Data

type	CEM 9	CEM 12	CEM 18	CEM 25	CEM 32	CEM 40	CEM 50	CEM 65	CEM 80	CEM 95	CEM 105	CEM 112E	CEM 150E	CEM 180E	CEM 250E	CEM 300E
Standards	IEC/EN 60 947, DIN VDE 0660															
Rated insulation voltage U_i (V) to IEC/EN 60 947, DIN VDE 0660	1000 V															
Rated impulse withstand voltage U_{imp}	6 kV						8 kV									
Rated operational frequency	25 - 400 Hz															
Degree of protection	Protection against direct contact from the front when actuated by a perpendicular test finger (IEC 536)															
Main circuits	IP20				IP10						IP00					
Control circuits and auxiliary contacts	IP20															
Ambient temperature	-25 ... +55 °C															
Operating temperature																
Storage temperature	-55 ... +80 °C															
Altitude																
Normal values	≤ 3000 m															
90 % I_e /80 % U_e	3000 ... 4000 m															
80 % I_e /75 % U_e	4000 ... 5000 m															
Overvoltage category/Pollution degree	III/3															
Climatic proofing	IEC 68-2															
Main circuits																
Number of poles	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Rated operation voltage U_e	690 V						1000 V									
Conv. thermal current I_{th} at ≤ 55 °C																
Rated operational current I_e /AC-1	25 A	25 A	32 A	45 A	60 A	60 A	90 A	110 A	110 A	140 A	140 A	180 A	225 A	225 A	350 A	410 A
AC-3 Duty																
Rated operational power																
230 V kW	2,2	3	4	6,5	9	11	15	18,5	22	25	30	30	45	55	75	90
400 V kW	4	5,5	7,5	11	15	18,5	22	30	37	45	55	55	75	90	132	160
415-440 V kW	4,5	5,5	9	12,5	15	22	30	37	45	55	55	90	110	150	185	
500 V kW	5,5	7,5	10	15	18,5	25	30	40	45	55	65	75	90	110	160	200
690 V kW	5,5	7,5	10	15	18,5	30	33	45	45	55	65	80	80	132	200	200
Short circuit rating max. fuse gG (A)	25	35	35	50	63	80	100	125	125	160	200	224	250	250	400	500
max. electrical operating frequency																
AC-1 Ops/h	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	600	600	600	600	600
AC-3 Ops/h	1200	1200	1200	1200	1200	1200	1200	1200	1200	600	600	600	600	600	600	600
AC-4 Ops/h	360	360	360	360	360	360	200	200	200	200	200	150	150	150	150	150
no load Ops/h	9000	9000	9000	9000	9000	9000	5000	5000	5000	5000	5000	4000	4000	4000	4000	4000
Mechanical life span Ops x 10 ⁶	10															
Electrical life span Ops x 10 ⁶	1,6	1,8		1,2				1,1						1,0		
Control circuit																
Rated insulation voltage U_i (V)	1000 V															
Nominal voltages U_s 50 Hz (V)	24 - 690 V															
Nominal voltages U_s 60 Hz (V)	24 - 690 V															
Nominal voltages U_s DC (V)	12 - 440 V															
Pick-up and drop-out values																
Pick-up x U_s (V)	0,8 - 1,1			0,8 - 1,1			0,8 - 1,1			0,8 - 1,1			0,8 - 1,1			
Drop-out x U_s (V)	0,35 - 0,55			0,4 - 0,6			0,4 - 0,6			0,3 - 0,5						
Power consumption of the coil 50/60 Hz																
Pick-up (VA)	70			98			255			213			214		229	
(cos φ)	0,85			0,69			0,32			0,71			0,68		0,73	
Sealing (VA)	4...7,2			6,6...12,3			13,1...19,1			14,8			14,5		14,1	
(cos φ)	0,28			0,34			0,54			0,26			0,27		0,26	
Power consumption of the coil, DC coils																
Pick-up (W)	3,8...7,5			240			340			166			154		171	
Sealing (W)	3,8...7,5			6			6,5			2,4			2,4		2,5	
Power dissipations																
PD per pole @ I_e AC-3 (W)	0,2	0,3	0,8	1	1,3	1,5	2,1	3,6	5,5	6,9	8,4	6,2	11,1	13,8	17,9	25,7
PD of coils, AC coils (W)	2,0	2,0	2,0	2,0	4,2	4,2	10,3	10,3	10,3	10,3	10,3	3,9	3,9	3,9	3,7	3,7
PD of coils, DC coils (W)	7,5	7,5	7,5	7,5	6	6	6,5	6,5	6,5	6,5	6,5	2,4	2,4	2,4	2,5	2,5