

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


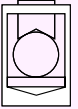
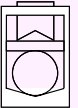
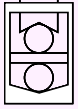


I(AC3)[A] Coil voltage

No. of NO No. of NC - Number and Type of auxiliary contacts

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 Ui (V) to IEC/EN 60 947, DIN VDE 0660	1000 V																
Rated impulse withstand voltage Uimp	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								IP00								
Control circuits and auxiliary contacts	IP20																
Ambient temperature	-25 to +55 °C																
Operating temperature																	
Storage temperature	-55 to +80 °C																
Altitude																	
Normal values	up to 3000 m																
90 % Ie/80 % Ue	3000 to 4000 m																
80 % Ie/75 % Ue	4000 to 5000 m																
Overvoltage category/Pollution degree	III/3																
Climatic proofing	acc. to IEC 60721-2																
Main circuits																	
Number of poles	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
Rated operation voltage Ue	690 V								1000 V								
Conv. thermal current Ith at ≤ 55°C																	
Rated operational current Ie/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	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	
AC-3	Ops/h	1200	1200	1200	1200	1200	1200	1200	1200	1200	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	
no load	Ops/h	9000	9000	9000	9000	9000	9000	5000	5000	5000	5000	5000	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	Ui (V)	1000 V															
Nominal voltages	Us 50 Hz (V)	24 - 690 V															
Nominal voltages	Us 60 Hz (V)	24 - 690 V															
Nominal voltages	Us DC (V)	12 - 440 V															
Pick-up and drop-out values																	
Pick-up x	Us (V)	0,8 - 1,1				0,8 - 1,1				0,8 - 1,1				0,8 - 1,1			
Drop-out x	Us (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			
	(cos φ)	0,85				0,69				0,32				0,71			
Sealing	(VA)	4...7,2				6,6...12,3				13,1...19,1				14,8			
	(cos φ)	0,28				0,34				0,54				0,26			
Power consumption of the coil, DC coils																	
Pick-up	(W)	3,8...7,5				240				340				166			
Sealing	(W)	3,8...7,5				6				6,5				2,4			

Contactors CEM up to 132 kW Technical Data

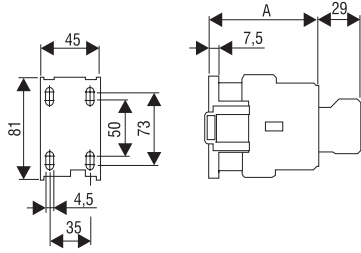
Type	CEM 9 to CEM 18	CEM25	CEM32 and CEM40	CEM50 and CEM80	CEM95 and CEM105	CEM112E and CEM 150E	CEM180E	CEM250E and CEM300E
Main terminal capacity (mm²)								
Solid, stranded and finely stranded without end sleeve		2x (1...2,5) 2x (2,5...6)	2x (1...2,5) 2x (2,5... 10)					
Finely stranded with end sleeve		2x (0,25...2,5) 2x (2,5...6) 2x (13...16)	2x (1...2,5) 2x (2,5...10) 2x (13...17)					
One conductor on top								
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		
One conductor on bottom								
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		
Two conductors on top								
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		
Two conductors on bottom								
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)
Tightening torque (N.m)								
		1...1,9	1,6...3	2,5...4	4...6	5...6,5	10	13

Auxiliary contacts

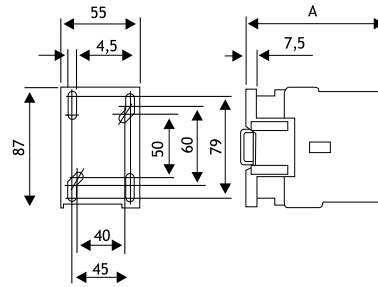
Type		CEM9	CEM12	CEM18	BCXMF...	BCXMLE ...
Rated insulation voltage Ui						
acc. IEC/EN 60 947	(V)		1000			1000
Rated operational voltage Ue						
	(V)		690			690
Conv. thermal current Ith						
	(A)		20			10
Rated operational current Ie						
AC-15	220 - 240 V	(A)	10			6
	380 - 400 V	(A)	6			4
	415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

Dimensions

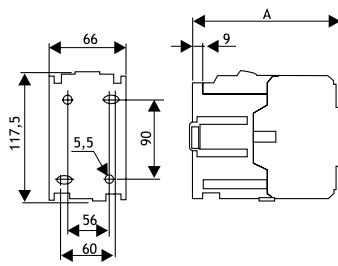
	AC	DC
CAEM4	A=85	A=115
CEM9	A=85	A=115
CEM12	A=85	A=115
CEM18	A=85	A=115
CEM25	A=87	A=117



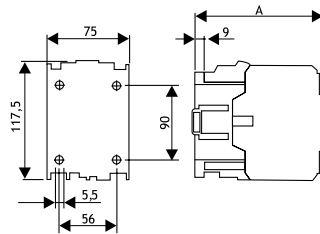
	AC	DC
CEM32	A=98	A=134
CEM40	A=98	A=134



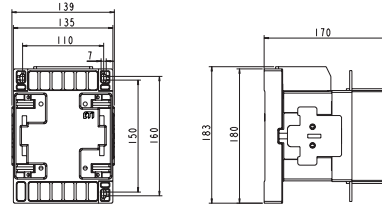
	AC	DC
CEM50	A=116	A=144
CEM65	A=116	A=144
CEM80	A=116	A=144



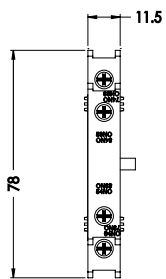
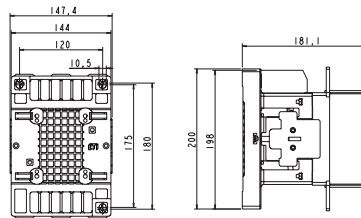
	AC	DC
CEM95	A=126	A=154
CEM105	A=126	A=154



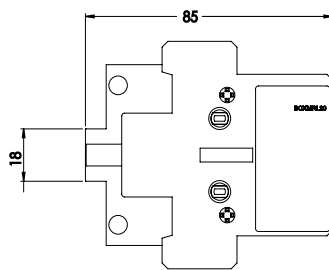
CEM180(E)



CEM250(E)
CEM300(E)



BCXMF



BCXMLE

