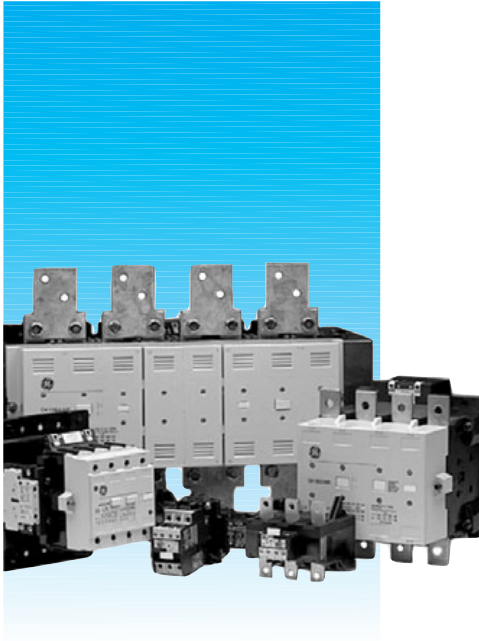


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# DATA SHEET



# CK TYPE CONTACTORS



## Three and four pole contactors 150 to 825A (AC-3) 200 to 1250A (AC-1)

- Control circuit: Alternating current up to 690V  
Direct current up to 500V
- Degree of protection IP00 (IPxxB with accessories)
- CK07...CK13: auxiliary and coil terminals originally protected against accidental contacts.  
Protection for power contacts on request (see accessories)
- Terminals protected against accidental contacts according to VDE 0106 T.100, VBG4.
- CK\_\_E\_with electronic module suitable for DC and AC. (50/60Hz)
- CK contactors always provided with one auxiliary contact block BCLL11 (1NO+1NC)

### Standards

IEC/EN 60947-1	CSA 22.2/14
IEC/EN 60947-4-1	CENELEC HD 419
IEC/EN 60947-5-1	NFC 63-110
EN 50005	ASE 1025
UL 508	UNE 20109
NEMA ICS 1	VDE 0660/102
BS 5424 & 775	

### Approvals



cULus



Lloyd's Register



Bureau Veritas



RINA

### Standard voltages

To complete the catalogue number, replace the symbol  $\blacklozenge$  by the code corresponding to the voltage and frequency of the control circuit.

#### Alternating current (V)

Three-pole contactors: CK75CA3..., CK08CA3..., CK85BA3...

Four-pole contactors: CK07BA4..., CK08BA4...

$\blacklozenge$	C	D	F	G	H	I	J	K	M	N	R	S	T	U	V	W	X	Y	Z
50Hz		24	42	48			110	127		220	240			380		415	440	500	660
										230				400					690
60Hz	24		48		110	120			220	277	240	380	480	440					600

#### Alternating current (V). Dual-frequency coil

Three-pole contactors: CK75CA3..., CK08CA3..., CK85BA3...

Four-pole contactors: CK07BA4..., CK08BA4...

$\blacklozenge$	1	2	3	6	13
50/60Hz	24	48	110	230	400

#### Alternating current(V)

Three-pole contactors: CK13BA3...

Four-pole contactors: CK13BA4...

$\blacklozenge$	J	N	U	Y	Z
50/60Hz	110	220	380	480	600
		240	440	500	660

#### Control circuit with rectifier bridge

$\blacklozenge$	J	N	U
50Hz	110	220	380
		230	400
60Hz	120	240	480

#### Direct current (V). With electronic module (0.7 ... 1.3 x Us)

Three-pole contactors: CK75CE3..., CK08CE3.....

$\blacklozenge$	WD	WE	WF	WH	WJ	WN
Voltage	24	33	48	72	110	220

#### Alternating c. / Direct c. (V). With electronic module (0.8 ... 1.10 x Us)

Three-pole and four-pole contactors: CK ..... E.....

$\blacklozenge$	D	F	J	N	U	Y
Voltage	24	42	110	220	380	440
		28	48	127	250	415
					500	

- Order codes ● pg. 2
- Aux. contact blocks ● pg. 3
- Accessories & Spares ● pg. 4
- Technical data ● pg. 5
- Dimensional drawings ● pg. 12

## Three pole contactors



Max.operat.current Non- inductive load	Motors <440V, 3 ~ 50/60Hz	Admissible power AC-3					Electrical endurance	Control circuit: Alternating current		Control circuit: A.C. / D.C.		
		220V 230V	380V 400V	415V 440V	440V 440V	500V		Cat. AC-3 Operations	Cat. no. <sup>(1)</sup>	Pack	Cat. no. <sup>(1)</sup>	Pack
AC-1 A	AC-3 A	kW HP	kW HP	kW HP	kW HP	kW HP		Ref. no. see bottom	Ref. no. see bottom			
250	150	45 60	75 100	80 108	80 108	100 135	1.7x10 <sup>6</sup>	CK75CA311 ♦ 1	CK75CE311 ♦ 1			
250	185	55 75	90 125	100 135	100 135	110 150	1.2x10 <sup>6</sup>	CK08CA311 ♦ 1	CK08CE311 ♦ 1			
315	205	65 88	110 150	125 170	125 170	132 180	1.7x10 <sup>6</sup>	CK85BA311 ♦ 1	CK85BE311 ♦ 1			
315	250	75 100	132 180	132 180	132 180	160 220	1.5x10 <sup>6</sup>		CK09BE311 ♦ 1			
450	309	90 125	160 220	160 220	185 250	200 270	1,1x10 <sup>6</sup>		CK95BE311 ♦ 1			
600	420	125 170	220 300	230 312	230 312	300 405	1x10 <sup>6</sup>		CK10CE311 ♦ 1			
700	550	160 220	280 380	315 425	315 425	400 540	0.8x10 <sup>6</sup>		CK11CE311 ♦ 1			
1000	700	220 300	375 510	400 540	425 580	480 650	0.7x10 <sup>6</sup>		CK12BE311 ♦ 1			
1250	825	250 340	450 610	450 610	450 610	500 680	0.7x10 <sup>6</sup>	CK13BA311 ♦ 1				
Spare coil		CK75CA3 ... CK08CA3					C12168 ♦	1				
		CK85BA3					C04255 ♦	1				
		CK13BA3					C08998 ♦	1				
		Control circuit with incorporated rectifier bridge CK13BA3					C09120 ♦	1				
Coil		CK75CE3 ... CK08CE3							KB4E ♦	1		
		CK85BE3 ... CK95BE3							KB5E ♦	1		
		CK12BE3							KB6E ♦	1		
		CK10CE3 ... CK11CE3							KB7E ♦	1		
Electronic module		CK75CE3 ... CK08CE3							KM4E ♦	1		
		CK85BE3 ... CK95BE3							KM5E ♦	1		
		CK12BE3							KM6E ♦	1		
		CK10CE3 ... CK11CE3							KM7E ♦	1		

(1)To complete the catalogue number, replace the symbol ♦ by the code corresponding to the voltage and frequency of the control circuit. (see pg.1)

For reference numbers,  
see index in chapter X.



**Four pole contactors**

Max.oper. current Non-inductive loads AC-1 A	Admissible power						Electrical endurance Cat. AC-3 Operations	Control circuit: Alternating current		Control circuit: A.C. / D.C.		
	AC-3		AC-1					Cat. no. (1)	Pack	Cat. no. (1)	Pack	
	380V	400V	220V	380V	415V	440V						500V
	kW	A	kW	kW	kW	kW	kW	Ref. no. see bottom	Ref. no. see bottom			
200	55	105	76	131	143	151	173	1x10 <sup>6</sup>	CK07BA411	1	CK07BE411	1
325	100	185	123	214	233	247	281	0.6x10 <sup>6</sup>	CK08BA411	1	CK08BE411	1
400	132	250	152	263	287	304	346	0.6x10 <sup>6</sup>			CK09BE411	1
500	160	309	191	329	359	380	415	0.6x10 <sup>6</sup>			CK95BE411	1
600	220	408	228	395	431	456	519	0.5x10 <sup>6</sup>			CK10CE411	1
700	280	530	266	460	503	533	606	0.4x10 <sup>6</sup>			CK11CE411	1
1000	375	680	381	658	719	762	866	0.4x10 <sup>6</sup>			CK12BE411	1
1250	450	800	476	822	898	952	1082	0.6x10 <sup>6</sup>	CK13BA411	1		

**Spare coil**

	CK07BA4	C04255	1
	CK08BA4	C04787	1
	CK13BA4	C08998	1
	Control circuit with incorporated rectifier bridge CK13BA4	C09120	1
Coil	CK07BE4	KB5E	1
	CK08BE4 ... CK95BE4, CK12BE4	KB6E	1
	CK10CE4 ... CK11CE4	KB7E	1
Electronic module	CK07BE4	KM5E	1
	CK08BE4 ... CK95BE4, CK12BE4	KM6E	1
	CK10CE4 ... CK11CE4	KM7E	1

(1)To complete the catalogue number, replace the symbol ♦ by the code corresponding to the voltage and frequency of the control circuit. (see pg. 1)

**Auxiliary instantaneous contact block**

**Side mounting**



Number of contacts	Contacts				Cat. no.	Ref. no.	Pack
	.3   .4	.1   .2	.7   .8	.5   .6			
2	2	0	0	0	BCLL20	104706	10
2	1	1	0	0	BCLL11	104707	10
combinations of more than 2 blocks							
2	2	0	0	0	BRL20	104704	10
2	1	1	0	0	BRL11	104705	10
2	0	2	0	0	BRL02	106622	10

For reference numbers, see index in chapter X.

### Accessories

#### Transient voltage suppressor



For use with:	Mounting	Voltage	Ue	Cat. no.	Ref. no.	Pack
Fixation to the coil terminals, that allows simultaneous use with the auxiliary contact blocks.						
CK75 ... CK08		AC	24V - 48V	<b>BSLR3G</b>	104716	10
CK75 ... CK08		AC	50V - 127V	<b>BSLR3K</b>	104717	10
CK75 ... CK08		AC	130V - 240V	<b>BSLR3R</b>	104718	10
CK75 ... CK08		AC	227V - 500V	<b>BSLV3U</b>	110836	10
CK85 ... CK13		AC	24V	<b>KRC24</b>	104760	10
CK85 ... CK13		AC	260V	<b>KRC48/260</b>	104761	10
CK85 ... CK13		AC	415V	<b>KRC380/415</b>	104762	10

#### Mechanical interlock



CK07B ... CK12	Horizontal			<b>BEKH</b>	104763	1
CK07B ... CK95	Vertical			<b>BEKVS 1</b>	104786	1
CK10C ... CK12B	Vertical			<b>BEKVA 1</b>	104785	1
CK13	Vertical			<b>BEKV</b>	104764	1

#### Pole terminal protection

CK75C ... CK08C	1 pole. VDE0106			<b>CM1CA5F</b>	105200	1
CK85B ... CK12B	1 pole. VDE0106	Contactors 3P		<b>C09476</b>	104766	6
CK08B ... CK12B	1 pole. VDE0106	Contactors 4P		<b>C09479</b>	204800	8
CK75C ... CK08C	1 pole IPXXB			<b>PTPCK75</b>	103747	1
CK85B ... CK95B	1 pole IPXXB			<b>PTPCK95</b>	103748	3
CK10C ... CK12B	1 pole IPXXB			<b>PTPCK11</b>	103749	1

### Spares

#### Contact kits



For use with:	Type			Cat. no.	Ref. no.	Pack
One set consists of two fixed contacts, one moving contact and accessory parts. When contact replacement is needed, it is recommended to replace all the contacts at the same time.						
CK07B	NA			<b>V1107BA</b>	113612	1
CK75C	NA			<b>V1175CA</b>	113613	1
CK08C	NA			<b>V1108CA</b>	113614	1
CK08B	NA	Contactors 4P		<b>V1108B4</b>	113505	1
CK85B	NA			<b>V1185BA</b>	113615	1
CK09B	NA			<b>V1109BA</b>	113616	1
CK09B	NA	Contactors 4P		<b>V1109B4</b>	113899	1
CK95B	NA			<b>V1195BA</b>	113617	1
CK10C	NA			<b>V1110CE</b>	113618	1
CK11C	NA			<b>V1111CE</b>	113619	1
CK12B	NA			<b>V1112BA</b>	113620	1
CK13B	NA			<b>V1113BA</b>	113621	1

### Conformity to standards

IEC/EN 60947-1	NF C 63-110	BS 5424 & 775
IEC/EN 60947-4-1	ASE 1025	NEMA ICS 1
CENELEC HD 419	CSA 22.2/14	VDE 0660/102
UL 508	UNE 20109	
EN 50005		

### Approvals

cULus	RINA
NOM	FI
Lloyd's Register	Bureau Veritas

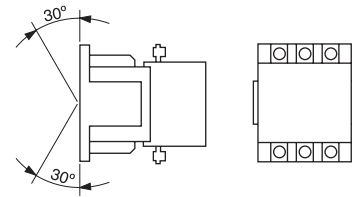
### Ambient conditions

Storage temperature	-55°C to +80°C	
Operation temperature	-40°C to +60°C	
Altitude	up to 3000m	Nominal values
	from 3000 up to 4000m	90%Ie 80%Ue
	from 4000 up to 5000m	80%Ie 75%Ue

### Climatic resistance (IEC 68-2)

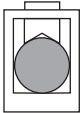

Continuous tests 40 / 125 / 56		
Cold (72h)	Temperature	-40°C
	Dry heat (96h)	
	Temperature	+125°C
	Relative humidity	< 50%
Humid heat (56h)	Temperature	+40°C
	Relative humidity	95%
Cyclical test		
First half-cycle (12h)	Low temperature	+25°C
	Relative humidity	93%
Second half-cycle (12h)	Low temperature	+55°C
	Relative humidity	95%
Number of consecutive cycles		6

### Mounting positions



With the same pick-up and drop-out voltage  
With the same rated power

### Terminal capacity and tightening torque

		CK07B	CK75C CK08C	CK08B CK95B	CK10C	CK11C	CK12B	CK13B
	Solid (mm <sup>2</sup> )	1.5...95						
	Finely stranded w/end sleeve (mm <sup>2</sup> )	2...35						
	Finely stranded w/o end sleeve (mm <sup>2</sup> )	2...50						
	Stranded (mm <sup>2</sup> )	1.5...95						
	AWG wires (mm <sup>2</sup> )	16...00						
	Tightening torque (Nm)	8						
	(Lb x in)	70						
	Finely stranded w/end sleeve (mm <sup>2</sup> )		1 x 120 2 x 95	1 x 240 2 x 150	2 x 185	2 x 240	-	-
	AWG wires with end sleeve (mm <sup>2</sup> )		1 x 300 2 x 107	1 x 500 2 x 300	2 x 350	2 x 500	-	-
	Busbars		2 (25 x 5)	2 (25 x 5)	2 (35 x 10)	2 (35 x 10)	2 (35 x 10)	2 (60 x 10)
	Tightening torque (Nm)		8	23	31.5	31.5	31.5	31.5
		(Lb x in)		70	200	275	275	275

**Power circuit**

<b>Three pole contactors</b>		<b>CK75C</b>	<b>CK08C</b>	<b>CK85B</b>	<b>CK09B</b>	<b>CK95B</b>	<b>CK10C</b>	<b>CK11C</b>	<b>CK12B</b>	<b>CK13B</b>
Rated thermal current I <sub>th</sub> at $\theta \leq 40^\circ\text{C}$	(A)	250	250	315	315	450	600	700	1000	1250
Rated operational current I <sub>e</sub> AC-3	(A)	150	185	205	250	309	420	550	700	825
Rated operational voltage U <sub>e</sub>	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Rated insulation voltage U <sub>i</sub>	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Maximum continuous current AC-1	(A)	250	250	315	315	450	600	700	1000	1250
Frequency limits	(Hz)	25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400	25...400
Making capacity (RMS) (IEC 947)	(A)	1850	2200	2500	2500	3700	6500	6500	8400	8250
Breaking capacity (RMS) (IEC 947)										
U <sub>e</sub> ≤ 400V	(A)	1600	1850	2000	3500	3500	5600	5600	7300	6600
U <sub>e</sub> = 500V	(A)	1600	1850	2000	3500	3500	5600	5600	7000	6600
U <sub>e</sub> = 690V	(A)	1000	1200	1660	2200	2200	5000	5000	6700	6000
U <sub>e</sub> = 1000V	(A)	350	350	850	1100	1100	3000	3000	3500	3500
Short-time current	1 sec. (A)	2500	2500	4000	5500	5500	7500	7500	9700	11600
	5 sec. (A)	2500	2500	3200	3500	3500	5200	5200	7700	8800
	10 sec. (A)	2300	2300	2400	2500	2500	4000	4000	6100	7350
	30 sec. (A)	1250	1250	1400	1600	1600	2800	2800	4400	5300
	1 min. (A)	900	900	1000	1200	1200	1800	1800	3500	4500
	3 min. (A)	600	600	750	900	900	1200	1200	2300	2800
Short-time current(min.)		10	10	10	10	10	10	10	10	10
Protec. against short-circuits with fuses.										
Without TOR										
Coord. type "1"	gL/gG (A)	355	355	500	500	630	1250	1250	1250	2x800
Coord. type "2"	gL/gG (A)	250	250	315	400	500	630	800	1000	1250
Without welding	gL/gG (A)	200	200	250	315	425	500	630	800	1000
Impedance per pole	(mΩ)	0.30	0.30	0.28	0.28	0.28	0.15	0.13	0.14	0.11
Power dissipation per pole	AC-1 (W)	19	19	27.7	27.7	56.7	54.3	63.7	140	171.8
	AC-3 (W)	6.8	10.3	11.7	17.5	26.7	26.5	45.3	68.6	74.8
Insulation resistance										
Between adjacent poles	(MΩ)	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10
Between poles and earth	(MΩ)	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10
Between input and output	(MΩ)	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10	> 10
<b>Four pole contactors</b>		<b>CK07B</b>	<b>CK08B</b>		<b>CK09B</b>	<b>CK95B</b>	<b>CK10C</b>	<b>CK11C</b>	<b>CK12B</b>	<b>CK13B</b>
Rated thermal current I <sub>th</sub> at $\theta \leq 40^\circ\text{C}$	(A)	200	325		400	500	600	700	1000	1250
Rated operational voltage U <sub>e</sub>	(V)	690	1000		1000	1000	1000	1000	1000	1000
Rated insulation voltage U <sub>i</sub>	(V)	1000	1000		1000	1000	1000	1000	1000	1000
Maximum continuous current AC-1	(A)	200	325		400	500	600	700	1000	1250
Frequency limits	(Hz)	25...400	25...4000		25...400	25...400	25...400	25...400	25...400	25...400
Making capacity (RMS) (IEC 947)	(A)	1150	1850		2500	3700	6500	6500	6700	8250
Breaking capacity (RMS) (IEC 947)										
U <sub>e</sub> ≤ 400V	(A)	950	1600		3500	3500	5600	5600	6700	6600
U <sub>e</sub> = 500V	(A)	950	1600		3500	3500	5600	5600	6700	6600
U <sub>e</sub> = 690V	(A)	800	1000		2200	2200	3500	3500	6000	6000
U <sub>e</sub> = 1000V	(A)	–	350		1100	1100	2000	2000	3500	3500
Short-time current	1 sec. (A)	2100	2500		5500	5500	7500	7500	9700	11600
	5 sec. (A)	1500	2500		3500	3500	5200	5200	7700	8800
	10 sec. (A)	1150	2300		2500	2500	4000	4000	6100	7350
	30 sec. (A)	750	1250		1600	1600	2800	2800	4400	5300
	1 min. (A)	550	900		1200	1200	1800	1800	3500	4500
	3 min. (A)	350	600		900	900	1200	1200	2300	2800
Recovery time (min.)		10	10		10	10	10	10	10	10
Short-circuit protection with fuse										
Without TOR										
Coord. type "1"	gL/gG (A)	315	500		500	630	1250	1250	1250	2x800
Coord. type "2"	gL/gG (A)	250	400		400	500	630	800	1000	1250
Without welding	gL/gG (A)	0.45	0.32		0.28	0.28	0.15	0.13	0.14	0.11
Impedance per pole	(mΩ)	200	315		315	425	500	630	800	1000
Power dissipation per pole	AC-1 (W)	18	33.8		44.8	56.7	61.2	68.6	140	171.8
Insulation resistance										
Between adjacent poles	(MΩ)	> 10	> 10		> 10	> 10	> 10	> 10	> 10	> 10
Between poles and earth	(MΩ)	> 10	> 10		> 10	> 10	> 10	> 10	> 10	> 10
Between input and output	(MΩ)	> 10	> 10		> 10	> 10	> 10	> 10	> 10	> 10

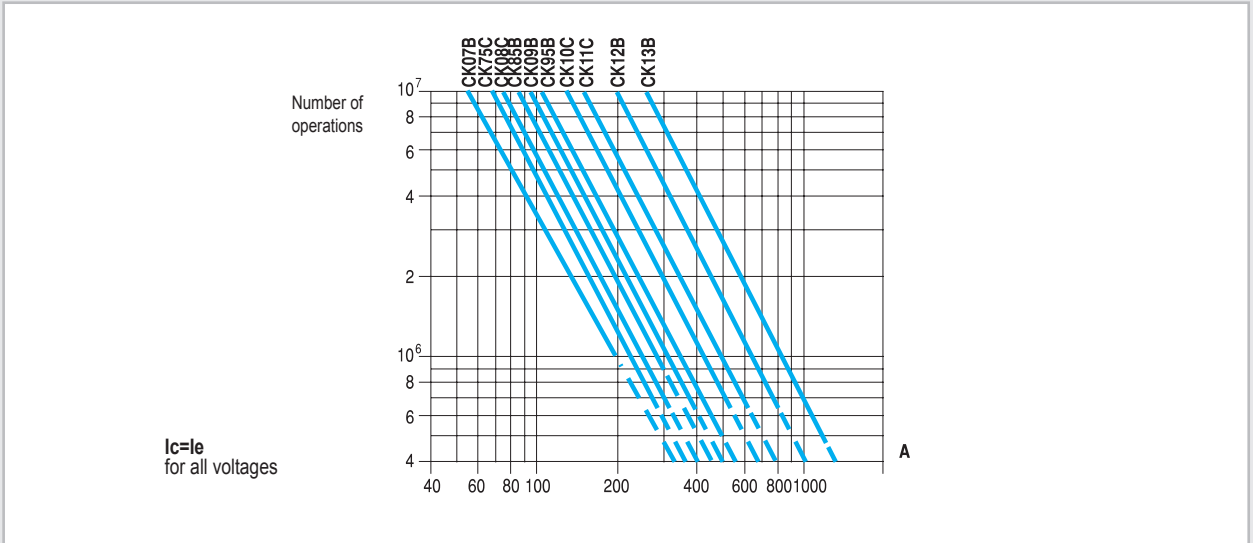
Electrical endurance

Mixed category AC4 / AC3

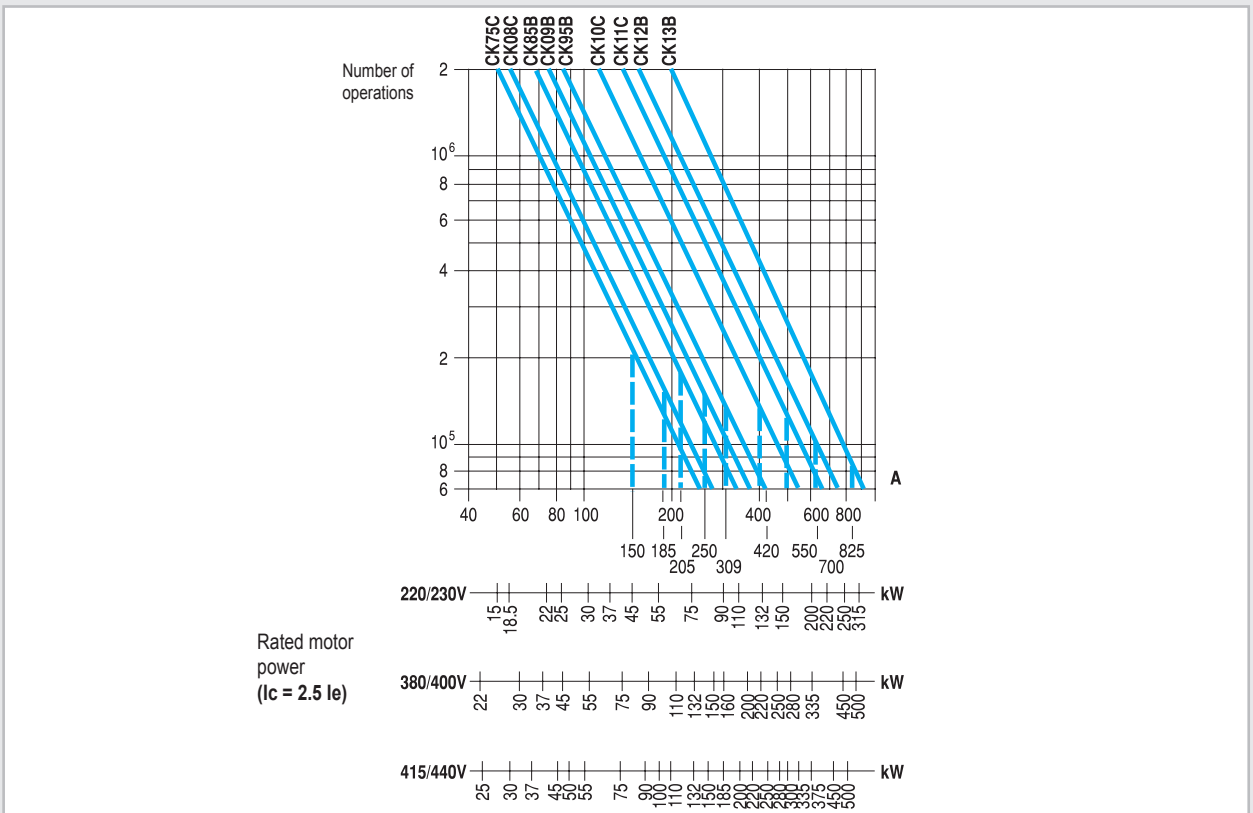
Electrical endurance for mixed category (AC-3/AC-4) is calculated with the following formula:

$$\text{Electrical endurance (AC-3/AC-4)} = \frac{\text{Electrical endurance (AC-3)}}{1 + \frac{\% \text{ ops AC-4}}{100} \times \left( \frac{\text{Elec.endur. (AC-3)}}{\text{Elec.endur. (AC-4)}} - 1 \right)}$$

Category AC1



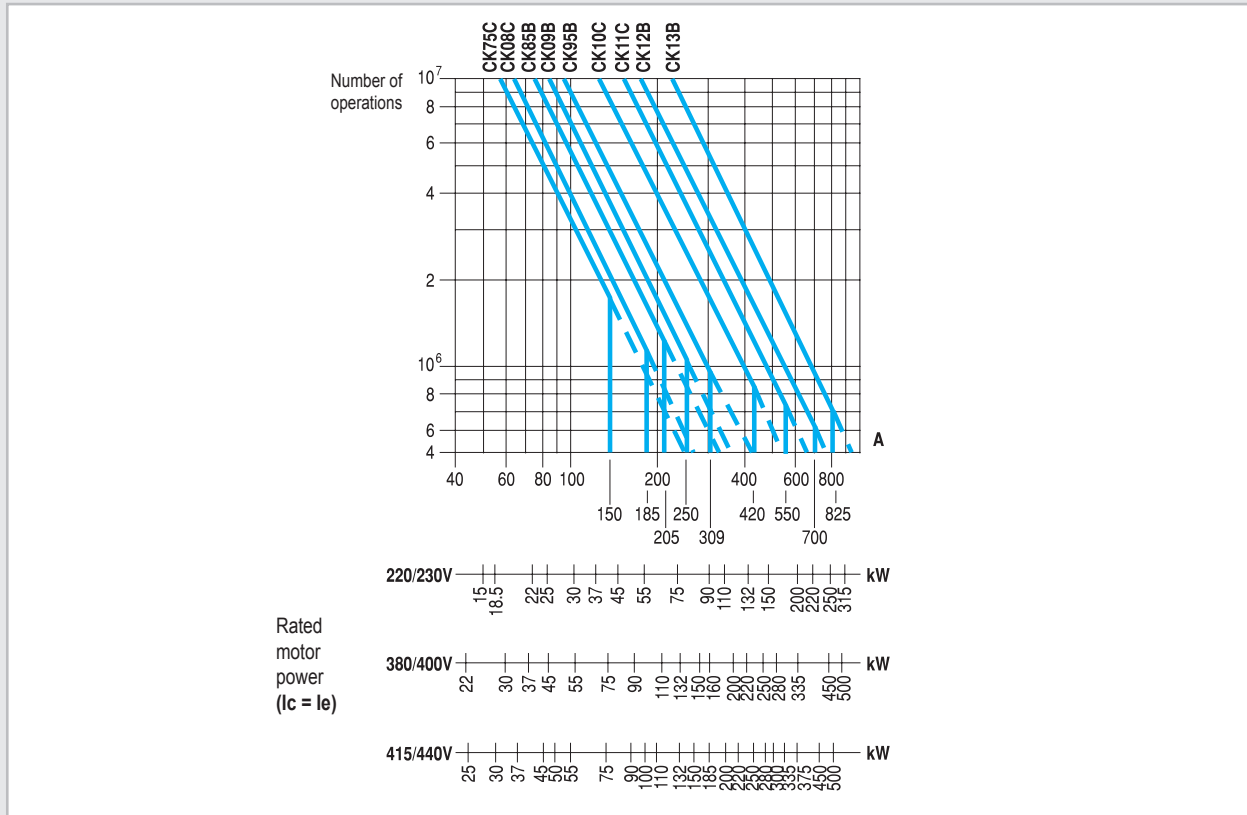
Category AC2



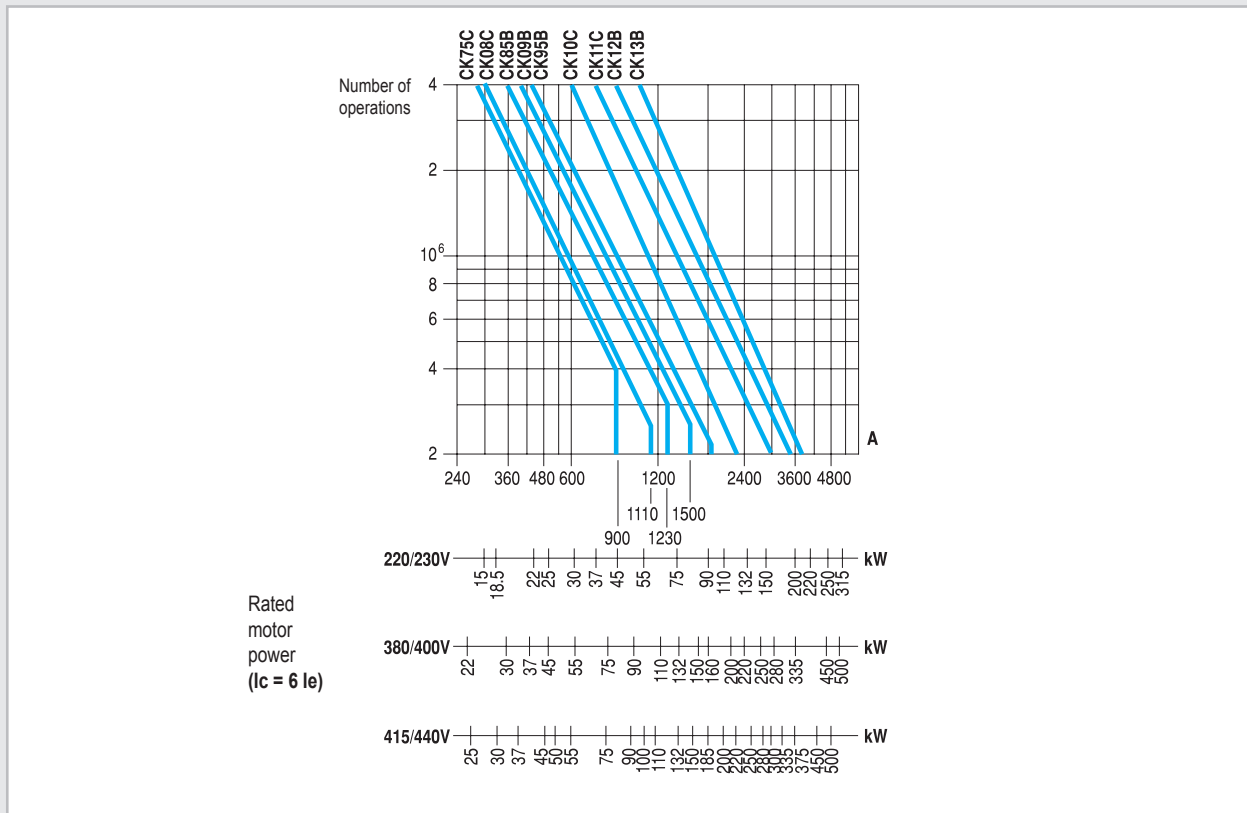


### Electrical endurance (continued)

#### Category AC3



#### Category AC4



**Three pole contactors. Control circuit**

*Alternating current*

		CK75CA	CK08CA	CK85BA CK85BE	CK09BE	CK95BE	CK10CE	CK11CE	CK12BE	CK13BA
Rated insulation voltage $U_i$	(V)	1000	1000	1000	1000	1000	1000	1000	1000	1000
Standard voltages $U_s$ (50/60 Hz)	(V)	24...690	24...690	24...690	24...690	24...690	24...690	24...690	24...690	24...440
Operating limits										
Switch-on	xUs	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1
Switch-off	xUs	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0,25...0.55
Consumption. Monofrequency coils										
Magnetic circuit	CK...A (VA)	42	42	46	-	-	-	-	-	6
closed	CK...E (VA)	-	-	20	20	20	23	23	25	-
Magnetic circuit	CK...A (VA)	500	500	830	-	-	-	-	-	2760
open CK...E	(VA)	-	-	425	425	425	680	680	750	-
Power	CK...A (W)	21	21	17	-	-	-	-	-	5
dissipation	CK...E (W)	-	-	3.5	3.5	3.5	4	4	4.5	-
Consumption. Bifrequency coils										
Magnetic circuit	50Hz (VA)	46	46	60	-	-	-	-	-	-
closed (CK...A)	60Hz (VA)	38.3	38.3	50	-	-	-	-	-	-
Magnetic circuit	50Hz (VA)	568	568	1082	-	-	-	-	-	-
open (CK...A)	60Hz (VA)	473	473	901	-	-	-	-	-	-
Power	50Hz (W)	23	23	22.2	-	-	-	-	-	-
dissipation (CK...A)	60Hz (W)	19.1	19.1	18.5	-	-	-	-	-	-
Power factor										
Magnetic circuit	CK...A (cos $\phi$ )	0.4	0.4	0.37	-	-	-	-	-	approx. 1
closed	CK...E (cos $\phi$ )	-	-	-	-	-	-	-	-	-
Magnetic circuit	CK...A (cos $\phi$ )	0.6	0.6	0.6	-	-	-	-	-	approx. 1
open	CK...E (cos $\phi$ )	-	-	-	-	-	-	-	-	-
Opening and closing times at Us										
Making time	(ms)	20...25	20...25	36...40	60...70	60...70	80...90	80...90	70...80	50...55
at excitation (NO)										
Breaking time	(ms)	10...13	10...13	10...15	13...17	13...17	40...50	40...50	70...80	115...130
at de-energisation (NO)										
Mechanical endurance	10 <sup>6</sup> ops	10	10	10	10	10	10	10	10	3
Maximum rate										
No load	ops./h	2400	2400	2400	1200	1200	900	900	900	600
AC-1/AC-3 at rated power.	ops./h	600	600	600	600	600	300	300	300	120
AC-2 at rated power	ops./h	250	250	250	250	250	200	200	200	120
AC-4 at rated power	ops./h	150	150	150	150	150	120	120	120	120

*Direct current*

		CK75CE	CK08CE	CK85BE	CK09BE	CK95BE	CK10CE	CK11CE	CK12BE
Rated insulation voltage $U_i$	(V)	1000	1000	1000	1000	1000	1000	1000	1000
Standard voltages $U_s$ (50/60 Hz)	(V)	24...500	24...500	24...500	24...500	24...500	24...500	24...500	24...500
Operating limits									
Switch-on	xUs	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1
Switch-off	xUs	0.4...0.6	0.4...0.6	0.35...0.5	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6
Consumption.									
Magnetic circuit closed	(W)	2	2	3.5	3.5	3.5	4	4	4.5
Magnetic circuit open	(W)	135	135	350	350	350	405	405	650
Opening and closing times at Us									
Making time	(ms)	60...70	60...70	60...70	60...70	60...70	80...90	80...90	70...80
at excitation (NO contacts)									
Breaking time	(ms)	13...17	13...17	13...17	13...17	13...17	40...50	40...50	40...50
at de-energisation (NO contacts)									
Mechanical endurance	10 <sup>6</sup> ops.	10	10	10	10	10	10	10	10
Maximum rate									
No load	ops./h	1200	1200	1200	1200	1200	900	900	900
AC-3 at rated power	ops./h	600	600	600	600	600	300	300	300
AC-4 at rated power	ops./h	150	150	150	150	150	120	120	120

## Four pole contactors. Control circuit

### Alternating current

		CK07BA CK07BE	CK08BA CK08BE	CK09BE	CK95BE	CK10CE	CK11CE	CK12BE	CK13BA
Rated insulation voltage $U_i$	(V)	1000	1000	1000	1000	1000	1000	1000	1000
Standard voltages $U_s$ (50/60 Hz)	(V)	24...690	24...690	24...690	24...690	24...690	24...690	24...690	110...440
Operating limits									
Switch-on	xUs	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1
Switch-off	xUs	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.25...0.55
Consumption. Monofrequency coils									
Magnetic circuit	CK...A (VA)	46	130	-	-	-	-	-	6
closed	CK...E (VA)	20	25	25	25	23	23	25	-
Magnetic circuit	CK...A (VA)	830	2860	-	-	-	-	-	2760
open	CK...E (VA)	425	750	750	750	680	680	750	-
Power	CK...A (W)	17	53	-	-	-	-	-	5
dissipation	CK...E (W)	3.5	4.5	4.5	4.5	4	4	4.5	-
Consumption. Bifrequency coils									
Magnetic circuit	50Hz (VA)	60	159.3	-	-	-	-	-	-
closed (CK...A)	60Hz (VA)	50	132.7	-	-	-	-	-	-
Magnetic circuit	50Hz (VA)	1082	3509	-	-	-	-	-	-
open (CK...A)	60Hz (VA)	901	2924	-	-	-	-	-	-
Power	50Hz (W)	22.2	65.3	-	-	-	-	-	-
dissipation (CK...A)	60Hz (W)	18.5	54.4	-	-	-	-	-	-
Power factor									
Magnetic circuit	CK...A (cos $\phi$ )	0.37	0.37	-	-	-	-	-	approx. 1
closed	CK...E (cos $\phi$ )	-	-	-	-	-	-	-	-
Magnetic circuit	CK...A (cos $\phi$ )	0.6	0.6	-	-	-	-	-	approx. 1
open	CK...E (cos $\phi$ )	-	-	-	-	-	-	-	-
Opening and closing times at $U_s$									
Making time	(ms)	36...40	60...70	70...80	70...80	110...115	80...90	110...115	50...55
at excitation (NO)									
Breaking time	(ms)	10...15	13...17	70...80	70...80	70...80	40...50	70...80	70...80
at de-energisation (NO)									
Mechanical endurance	$10^6$ ops.	10	10	10	10	10	10	10	3
Maximum rate									
No load	ops./h	2400	900	900	900	900	900	900	600
AC-1/AC-3 at rated power	ops./h	600	600	600	600	300	300	300	120

### Direct current

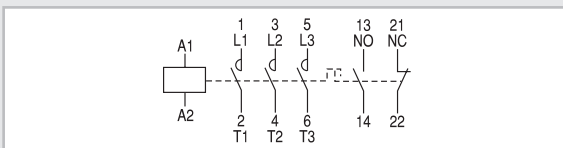
		CK07BE	CK08BE	CK08BE	CK95BE	CK10CE	CK11CE	CK12BE
Rated insulation voltage $U_i$	(V)	1000	1000	1000	1000	1000	1000	1000
Standard voltages $U_s$	(V)	24...500	24...500	24...500	24...500	24...500	24...500	24...500
Operating limits								
Switch-on	xUs	0.75...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1	0.8...1.1
Switch-off	xUs	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6	0.4...0.6
Consumption.								
Magnetic circuit closed	(W)	3.5	4.5	4.5	4.5	4.5	4.5	4.5
Magnetic circuit open	(W)	350	650	650	650	650	650	650
Opening and closing times at $U_s$								
Making time	(ms)	60...70	70...80	70...80	70...80	80...90	80...90	110...115
at excitation (NO contacts)								
Breaking time	(ms)	13...17	70...80	70...80	70...80	40...50	40...50	70...80
at de-energisation (NO contacts)								
Mechanical endurance	$10^6$ ops.	10	10	10	10	10	10	10
Maximum rate								
No load	ops./h	1200	900	900	900	900	900	900
AC-3 at rated power	ops./h	600	600	600	600	600	300	300

		Basic contactor		Auxiliary contact blocks Lateral mounted	
				BCLL 20 BRLL 20	BCLL 11 BRLL 11
Three-pole contactors 3 NO	CK75C... CK08C...	0 7.3 10.4	0 3.5 10.4	0 3.5 10.4	
	CK85B... CK09B... CK95B...	0 10.4 14	0 3.5 14	0 3.5 14 1.8	
	CK10C... CK11C...	0 12 17	0 3.5 17	0 3.5 17 1.8	
	CK12B... CK13B...	0 12.6 17.5	0 3.5 17.5	0 3.5 17.5 1.8	
	CK07B...	0 7.7 10.7	0 3.5 10.7	0 3.5 10.7 1.8	
	CK08B... CK09B... CK95B...	0 10.4 14	0 3.5 14	0 3.5 14 1.8	
	CK10C... CK11C...	0 12 17	0 3.5 17	0 3.5 17 1.8	
	CK12B... CK13B...	0 12.6 17.5	0 3.5 17.5	0 3.5 17.5 1.8	

**Numbering of the terminals**

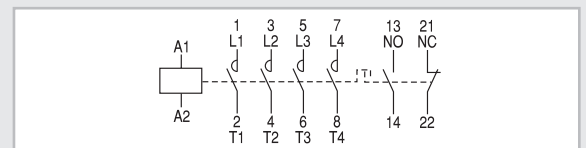
*Three pole contactors*

CK75C\_\_3\_\_... CK13B\_\_3\_\_



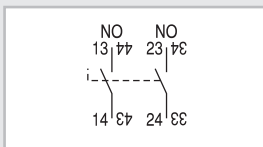
*Four pole contactors*

CK07B\_\_4\_\_... CK13B\_\_4\_\_

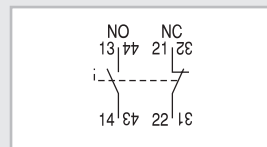


*Auxiliary contact blocks. Lateral mounting*

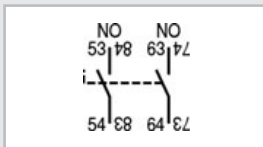
BCLL20



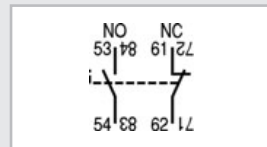
BCLL11



BRLL20

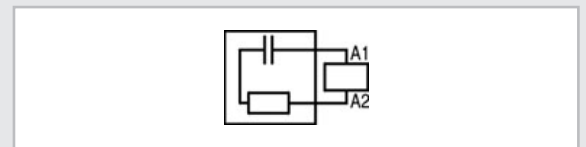


BRLL11



*Voltage suppressor block*

K/RC...



*Mechanical interlock*

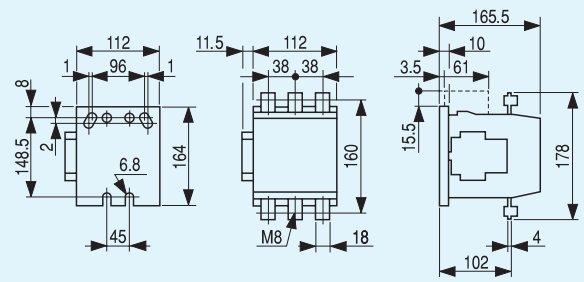
BEKV, BEKVA1, BEKVS1, BEKVH



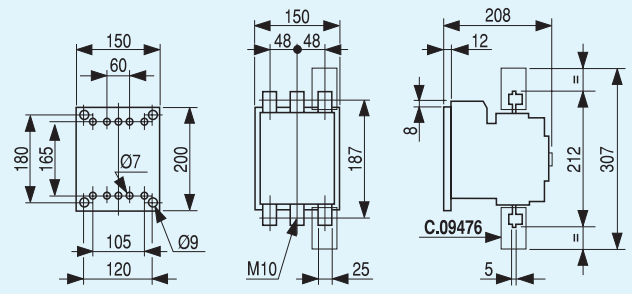
Dimensional drawings

Three pole contactors

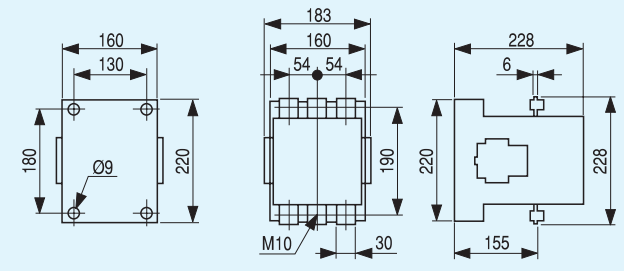
CK75C 3.500 kg  
CK08C 3.500 kg



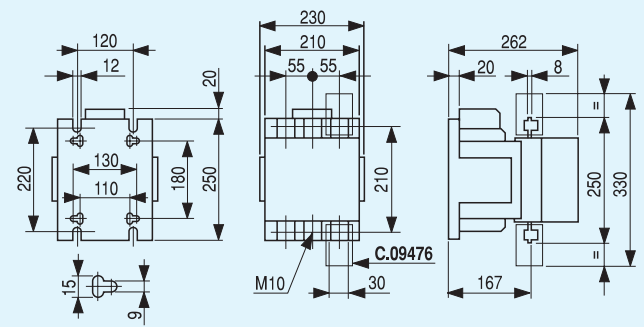
CK85B 6.100 kg  
CK09B 6.200 kg  
CK95B 6.300 kg



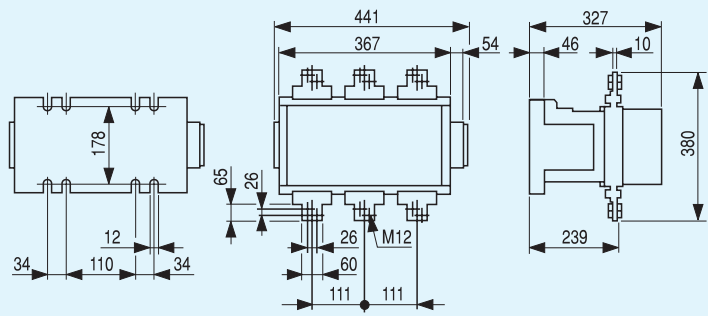
CK10C 11.00 kg  
CK11C 11.00 kg



CK12B 18.00 kg

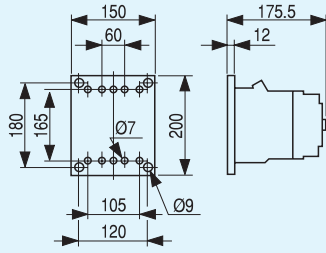


CK13B 35.00 kg

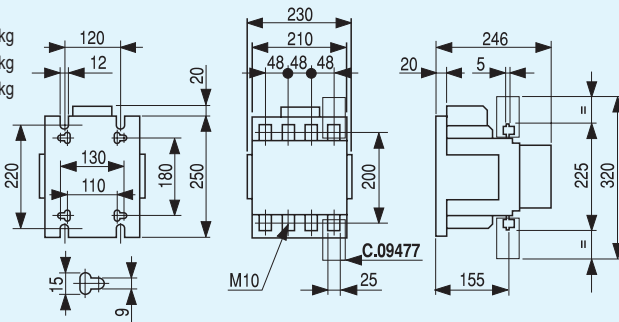


**Four pole contactors**

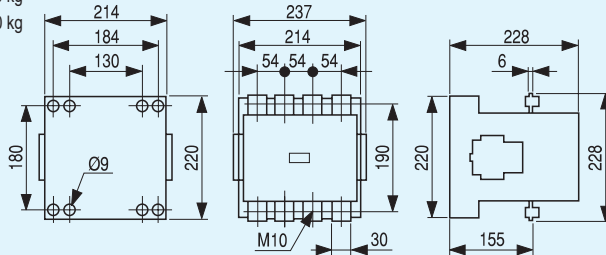
**CK07B** 4.700 kg



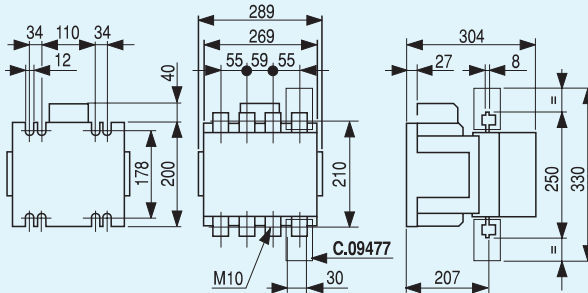
**CK08B** 14.90 kg  
**CK09B** 15.10 kg  
**CK95B** 15.30 kg



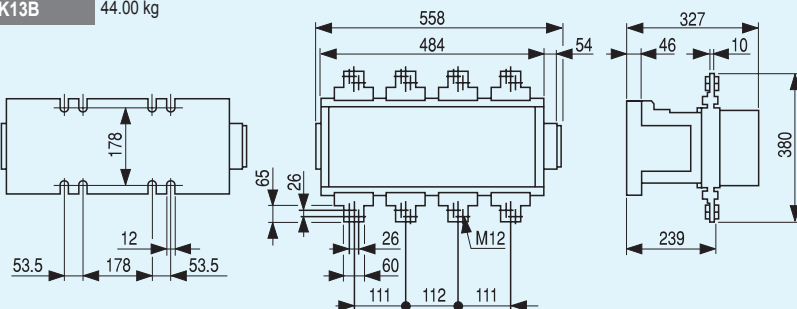
**CK10C** 22.30 kg  
**CK11C** 22.80 kg



**CK12B** 23.30 kg



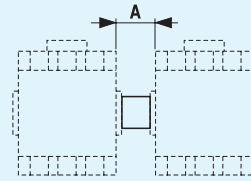
**CK13B** 44.00 kg



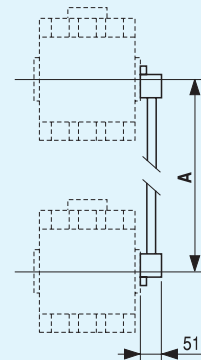
**Mechanical interlock**

**BEKH** 0.350 kg

	A
CK75C3... - CK08C3...	55
CK85B3... - CK95B3...	55
CK10C3... - CK11C3...	33
CK12B3...	75



	A	
BEKVA1	550	0.900 kg
BEKVS1	350	0.800 kg



**BEKV** 1.200 kg

