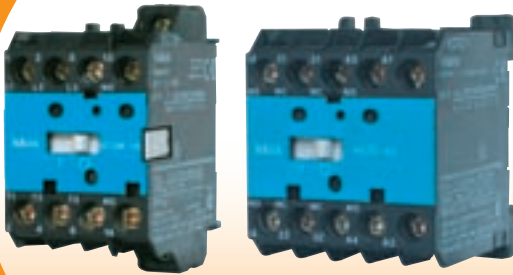


Contactors

MINI CONTACTORS

K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX (DC), K07MX, K07MGX (DC)



- Contactors are used for switching electric motors and other resistive, inductive and capacitive loads
- A wide variety of snap-on auxiliary switch blocks and accessories
- Uniform marking of terminals in accordance with the EN 50005 and EN 50011 European standards
- Quick assembly to a 35 mm wide mounting rail in accordance with EN 60715 or fixing with two screws
- Open and funnel-shaped connection terminals - fast and simple connection
- High contact reliability at low voltages
- Possibility of individual marking on a special plate - easy identification of a contactor in the circuit
- Two contactor widths: 35 and 45 mm
- Optional operating position
- AC or real DC drive with low consumption
- Possibility of direct connection of the BR6 bimetal relay for protection against overload and in case of phase failure
- Version with all four main contacts (Sp4)
- Degree of protection IP20
- High electrical and mechanical endurance, and high switching capacity
- K07CF and K07MF are contactors for fast-on connection
- K07CX, K07CGX, K07MX and K07MGX are contactors with soldering pins
- Technical data for K07MF and K07MX are identical to K07M
- Technical data for K07MGX are identical to K07MG
- Technical data for K07CX are identical to K07C
- Technical data for K07CGX are identical to K07CG

TECHNICAL DATA				MOTOR CONTACTORS			
GENERAL	Type			K03M	K07M	K07MG	
	Standards			IEC/EN 60947-5-1, IEC/EN 60947-4-1, UL 508			
	Approvals (K07CX, K07CGX, K07MX, K07MGX are without approvals)			UL, CSA, GOST			
	Climatic class			constant damp heat (IEC 60068-2-78) cyclic damp heat (IEC 60068-2-30)			
	Ambient temperature	open closed	°C	-20 ... +60 -20 ... +45			
	Storage temperature		°C	-30 ... +80			
	Contact reliability			17 V; ≥ 50 mA			
	Mechanical endurance		op. c.	10 ⁷			
	Power dissipation per pole		W	1.2			
	Max. mechanical operating frequency with no load		op. c./h	3000			
	Max. electrical operating frequency AC-1/AC-3/AC-15/DC-13		op. c./h	600/600/1200/1200			
	Weight		kg	0.16	0.18	0.22	
	MAIN CIRCUIT	Rated insulation voltage		U_i	V	690	
Thermal current			I_{th}	A	20		
Rated frequency			f	Hz	50/60		
Rated power		230 V 400 V 500 V 690 V		P_e	kW	7.5 13 17.5 22	
Rated operational current		up to 50°C AC-1 up to 60°C open		I_e	A	20	
Rated motor power		single-phase 230 V		P_e	kW	0.75	1.1
		230 V				1.5	3
		400 V				2.2	5.5
		500 V				3	5.5
		690 V				4	5.5
		three-phase					

Contactors

MINI CONTACTORS

K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX (DC), K07MX, K07MGX (DC)

TECHNICAL DATA					MOTOR CONTACTORS				
MAIN CIRCUIT	Type				K03M	K07M	K07MG		
	Rated operational motor current	single-phase	230 V	I_e	A	8	10	10	
			230 V			6.3	11.5	11.5	
		three-phase	400 V			5	11.3	11.3	
			500 V			5.3	9	9	
			690 V			4.9	6.5	6.5	
	Rated motor power acc. to UL	single-phase	115 V	P_e	HP	1/3	1/2	1/2	
			230 V			3/4	1 1/2	1 1/2	
		three-phase	230 V			2	3	3	
			460 V			3	5	5	
			575 V			5	7 1/2	7 1/2	
	Electrical endurance of contacts AC-1 / AC-3			op. c.	0.2 x 10 ⁶ / diagram 2				
Max. back-up fuse for short-circuit protection gL Coordination type 2			I_v	A	25				
Terminal capacity	rigid		S	mm ²	0.75 ... 2.5				
	flexible				0.5 ... 2.5				
Screw					M3.5				
Screw head					PZ2				
Tightening torque				Nm	1.2				
AUXILIARY CIRCUIT	Rated insulation voltage			U_i	V	690			
	Thermal current			I_{th}	A	20			
	Rated operational current	AC-15	230 V	I_e	A	6			
			400 V			4			
			500 V			2			
			690 V			1			
	Rated operational current	DC-13	24 V	I_e	A	4			
			110 V			0.25			
	Max. back-up fuse for short-circuit protection gL Coordination type 2			I_v	A	20			
	Terminal capacity	rigid		S	mm ²	0.75 ... 2.5			
		flexible				0.5 ... 2.5			
	Screw					M3,5			
Screw head					PZ2				
Tightening torque				Nm	1.2				
MAGNETIC SYSTEM	Coil consumption	switch-on	P_c		VA	39	-		
					W	34	3		
		operation			VA	8.1	-		
					W	4	3		
	Make / Break delay	make	NO	ms		10 - 15	10 - 10	25 - 30	
			NC			10 - 15	10 - 15	8 - 10	
		break	NO			6 - 15	5 - 10	7 - 10	
			NC			6 - 15	6 - 15	10 - 25	
	Range of control voltage			U_c	%	85 ... 110			
	Control voltages			U_c	V	6 - 415	6 - 690	6 - 250	
	Terminal capacity	rigid		S	mm ²	0.75 ... 2.5			
		flexible				0.5 ... 2.5			
	Screw					M3.5			
	Screw head					PZ2			
Tightening torque				Nm	1.2				

Contactors

MINI CONTACTORS

K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX (DC), K07MX, K07MGX (DC)

TECHNICAL DATA				CONTACTOR RELAYS			
GENERAL	Type			K03C	K07C	K07CG	
	Standards			IEC/EN 60947-5-1, UL 508			
	Approvals			UL, CSA, GOST			
	Climatic class			constant damp heat acc. to IEC 60068-2-78 cyclic damp heat acc. to IEC 60068-2-30			
	Ambient temperature		open	°C	-20 ... +60		
			closed		-20 ... +45		
	Storage temperature			°C	-30 ... +80		
	Mechanical endurance			op. c.	10 ⁷		
	Max. mechanical operating frequency with no load			op. c./h	3000		
	Max. electrical operating frequency AC-15/DC-13			op. c./h	1200/1200		
Weight			kg	0.16	0.18	0.22	
MAIN CIRCUIT	Rated insulation voltage	U_i	V	690			
	Thermal current	I_{th}	A	20			
	Rated operational current AC-15		I_e	A	6		
					4		
					2		
					1		
	Rated operational current DC-13		I_e	A	4		
					0.25		
Electrical endurance AC-15			op. c.	diagram 1			
Max. back-up fuse for short-circuit protection gL Coordination type 2		I_v	A	20			
MAIN CIRCUIT	Coil consumption		P_c	VA	39		-
				W	34		3
				VA	8.1		-
				W	4		3
	Range of control voltage		U_c	%	85 ... 110		
	Control voltages		U_c	V	6 - 415	6 - 690	6 - 250
	Terminal capacity	rigid	S	mm ²	0.75 ... 2.5		
		flexible			0.5 ... 2.5		
Screw				M3.5			
Screw head				PZ2			
Tightening torque			Nm	1.2			

Standard control voltages and designations (AC)

V	24	42	48	110/125	220/240	380/415	440	500
50/60 Hz	B7	D7	E7	F7	M7	Q7	R7	S7

Standard control voltages and designations (DC)

V	12	24	48	60	72	110	125	220
	SD	BD	ED	ND	SD	FD	GD	MD

Contactors

MINI CONTACTORS

K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX (DC), K07MX, K07MGX (DC)

ELECTRICAL ENDURANCE

Diagram 1

Electrical endurance of contactor relays and auxiliary contacts of motor contactors

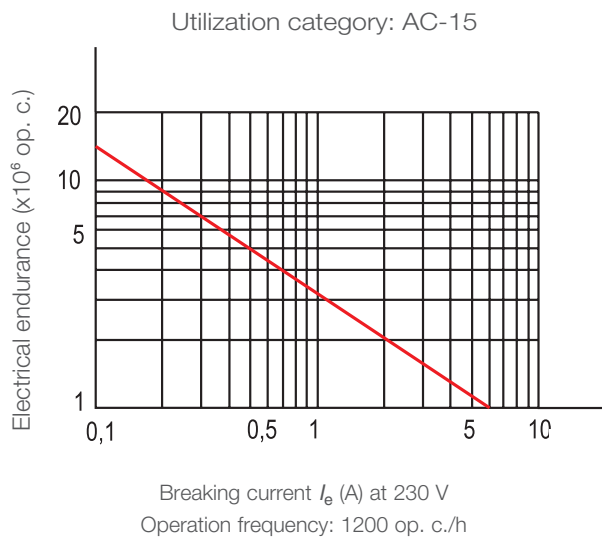
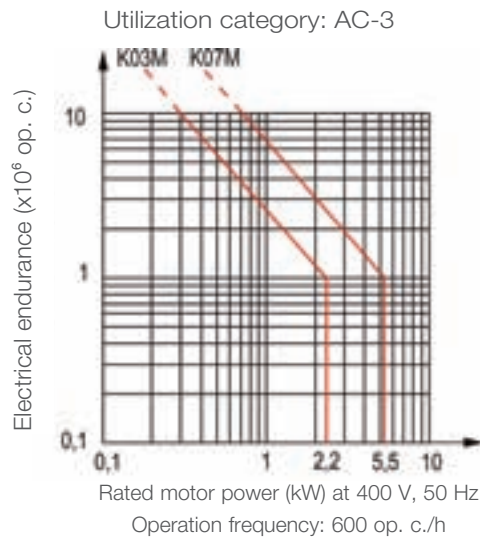


Diagram 2

Electrical endurance of main contacts of motor contactors



CONTACT ARRANGEMENTS

CONTACTOR RELAYS

Type	Arrangement of contacts and terminal designation
K03C -22 K07C -22 K07CG -22 K07CF -22 K07CX -22 K07CGX -22	
K03C -31 K07C -31 K07CG -31 K07CF -31 K07CX -31 K07CGX -31	
K03C -40 K07C -40 K07CG -40 K07CF -40 K07CX -40 K07CGX -40	

MOTOR CONTACTORS

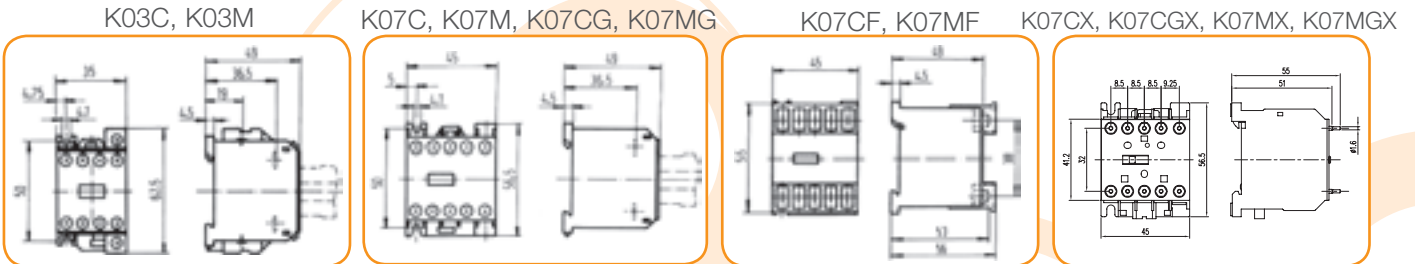
Type	Arrangement of contacts and terminal designation
K03M -01 K07M -01 K07MG -01 K07MF -01 K07MX -01 K07MGX -01	
K03M -10 K07M -10 K07MG -10 K07MF -10 K07MX -10 K07MGX -10	
K03M -10 Sp4 K07M -10 Sp4 K07MG -10 Sp4	
K07M -22 Sp4 K07MG -22 Sp4	
K07M -04 Sp4 K07MG -04 Sp4	
K07M -01 Sp4 K07MG -01 Sp4	

Contactors

MINI CONTACTORS

K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX(DC), K07MX, K07MGX(DC)

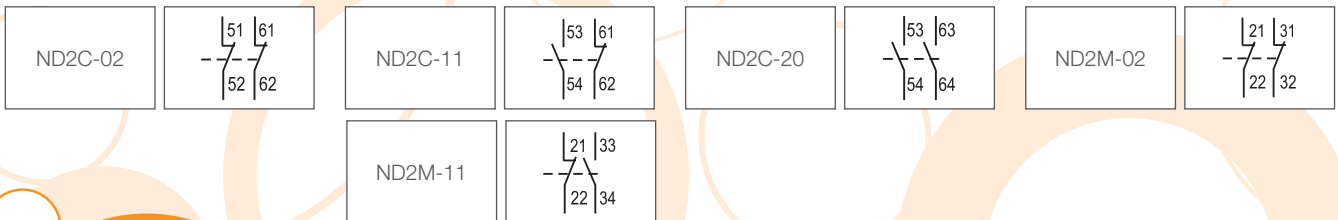
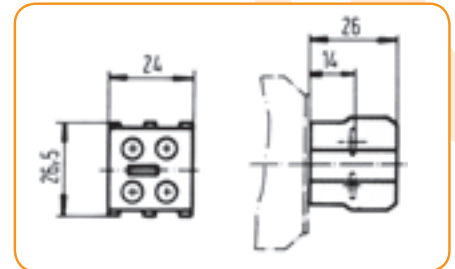
DIMENSIONS



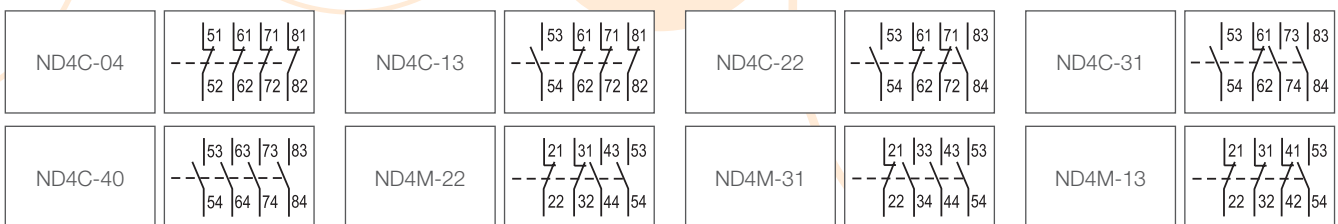
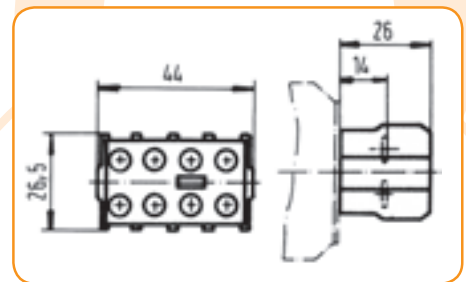
ACCESSORIES



ND2 - Two-pole snap-on auxiliary switch blocks



ND4 - Four-pole snap-on auxiliary switch blocks



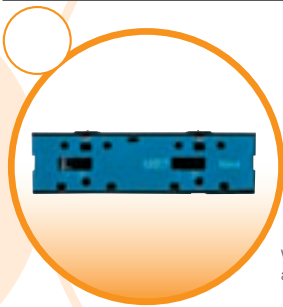
Contactors

MINI CONTACTORS

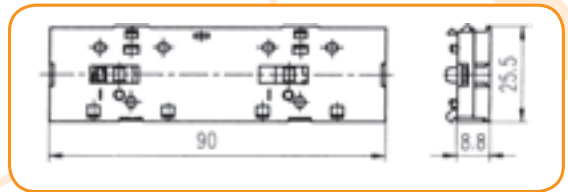
K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX (DC), K07MX, K07MGX (DC)

ACCESSORIES

Type	Version	Rated operational current I_e (A) at AC-15			
		230 V	400 V	500 V	690 V
ND2	-20, -02, -11	6	4	2	1
ND4	-40, -04, -13, -31, -22	6	4	2	1

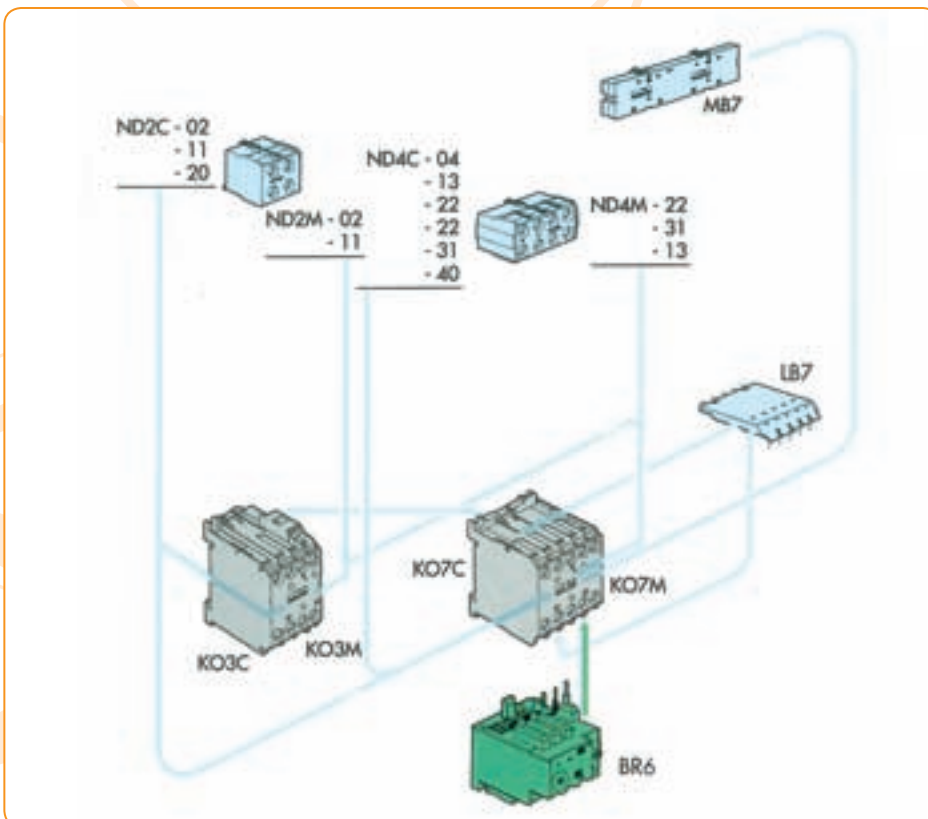


MB7 - Mechanical interlock



When a mechanical interlock is used, the minimum time of 50 ms is required from switching off the first contactor to switching on the second contactor and vice versa.

MOUNTING POSITIONS OF ACCESSORIES



ORDERING DATA

The type designation and control voltage are stated when ordering the contactors. When ordering snap-on auxiliary switch blocks, only the type is stated.

Example: ND2M-22

K07M - 01 - M7

