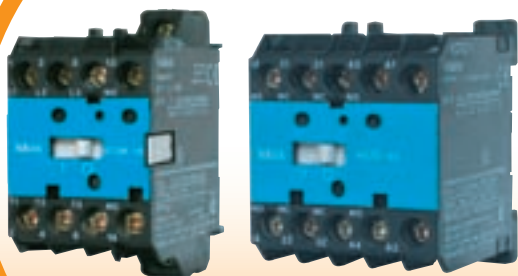


# Contactors

## 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 <sup>7</sup>			
	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 16	
Rated motor power		single-phase 230 V 230 V 400 V 500 V 690 V		$P_e$	kW	0.75 1.5 2.2 3 4	1.1 3 5.5 5.5 5.5

# 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 <sup>6</sup> / diagram 2			
Max. back-up fuse for short-circuit protection gL Coordination type 2			$I_v$	A	25			
Terminal capacity	rigid		S	mm <sup>2</sup>	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		24 V	$I_e$	A	4		
	DC-13		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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>7</sup>		
	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 <sup>2</sup>	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

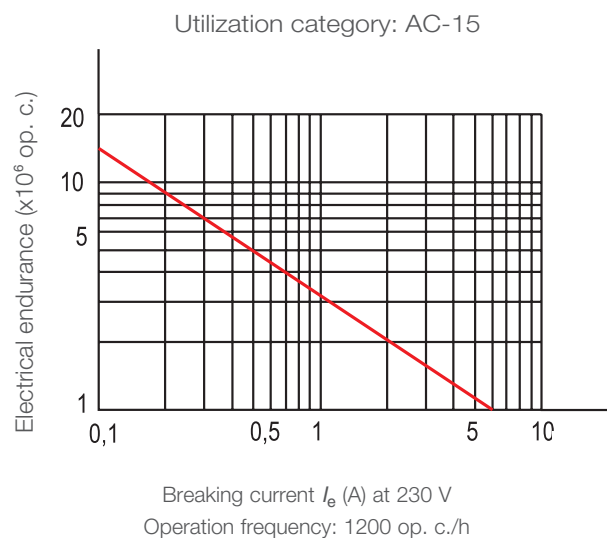
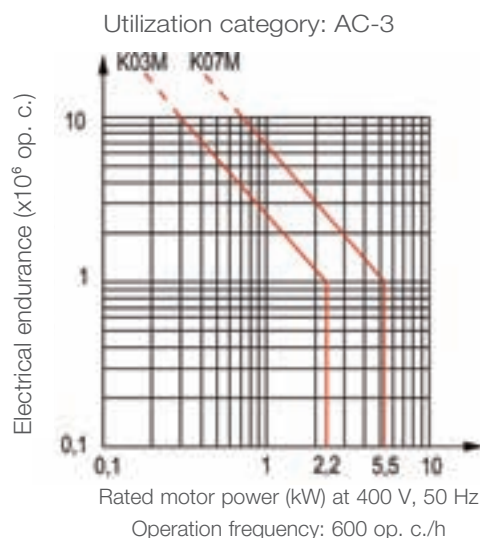


Diagram 2

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

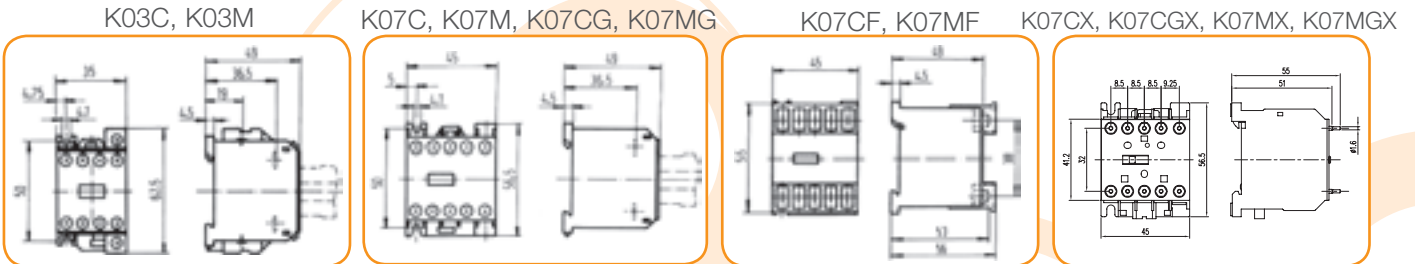
Type	Arrangement of contacts and terminal designation
K03M -01 K07M -01 K07MG -01 K07MF -01 K07MX -01 K07MGX -01	
K03M -10 K07M -10 K07MG -10 K07MF -10 K07MX -10 K07MGX -10	
K03M -10 Sp4 K07M -10 Sp4 K07MG -10 Sp4	
K07M -22 Sp4 K07MG -22 Sp4	
K07M -04 Sp4 K07MG -04 Sp4	
K07M -01 Sp4 K07MG -01 Sp4	

# Contactors

## MINI CONTACTORS

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

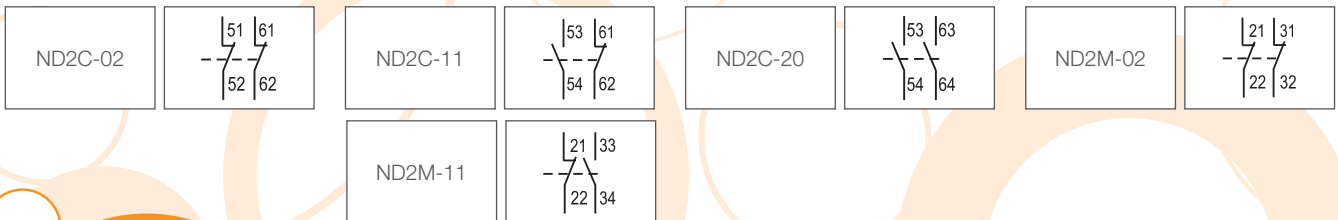
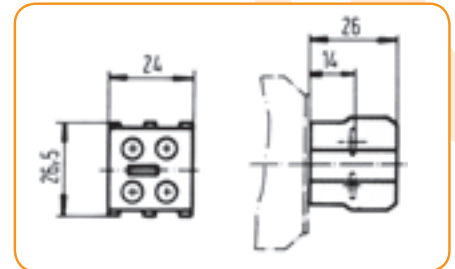
### DIMENSIONS



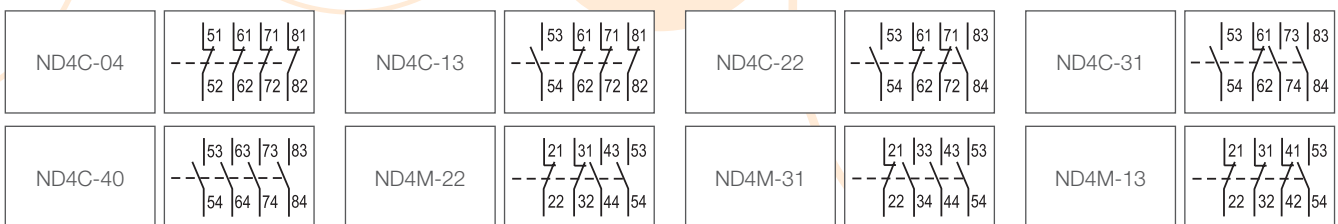
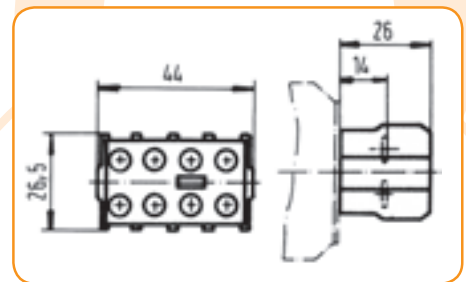
### ACCESSORIES



**ND2** - Two-pole snap-on auxiliary switch blocks



**ND4** - Four-pole snap-on auxiliary switch blocks



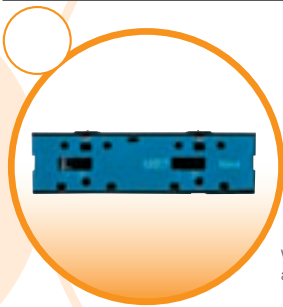
# Contactors

## MINI CONTACTORS

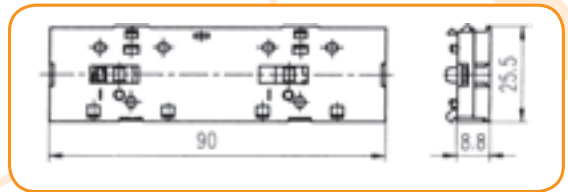
**K03C, K07C, K07CG (DC), K07CF, K03M, K07M, K07MG (DC), K07MF, K07CX, K0CGX (DC), K07MX, K07MGX (DC)**

### 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

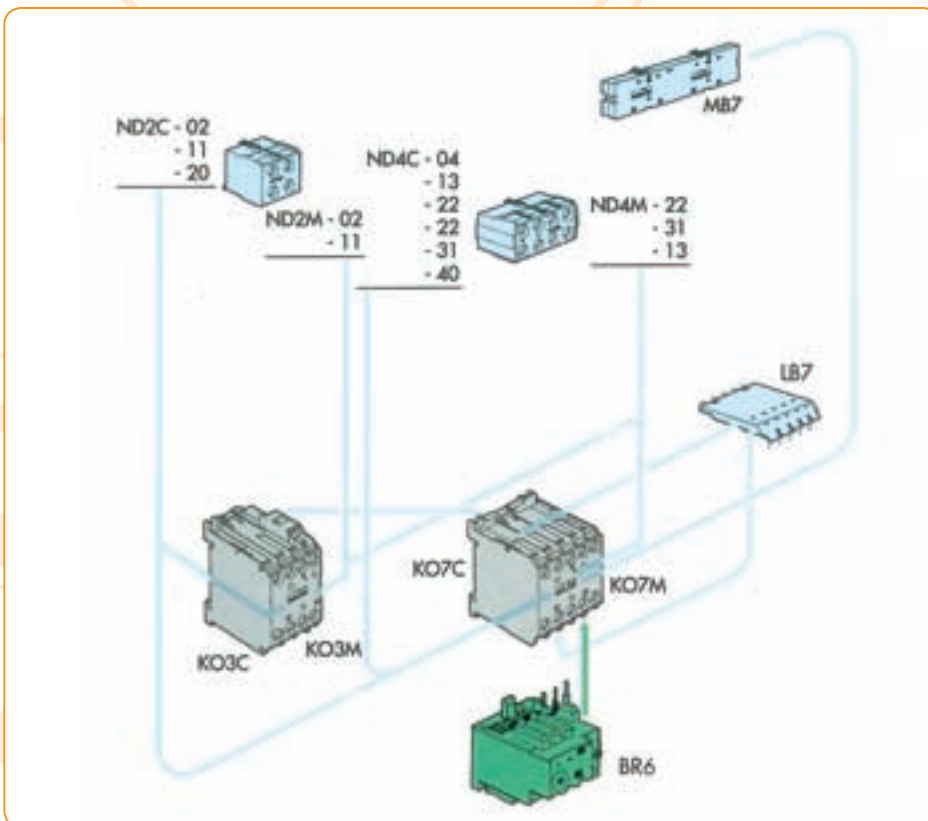


**MB7** - Mechanical interlock



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

