

# MICRO CONTACTORS KO

Technical Data acc. to IEC/EN60947-4-1, VDE 0660, IEC/EN60947-5-1

Type K0-05D.. K0-05L..

## Main Contacts <sup>1) 2) 3)</sup>

Rated insulation voltage $U_i$		V~	440 <sup>4)</sup>	440 <sup>4)</sup>
Making capacity $I_{eff}$	at $U_e = 440V\sim$	A	65	65
Breaking capacity $I_{eff}$	400V~	A	50	50
$\cos\phi = 0,65$				

## Utilization category AC1 Switching of 3ph resistive load

Rated operational current $I_e (=I_{th})$	open	at 40°C	A	12	9
Rated operational power		230V	kW	4,7	3,5
$\cos\phi = 1$		240V	kW	4,8	3,7
		400V	kW	8,3	6,2
		415V	kW	8,6	6,4
		440V	kW	9,0	6,8
Rated operational current $I_e (=I_{th})$	enclosed	at 60°C	A	12	9
Rated operational power		230V	kW	3,1	2,3
$\cos\phi = 1$		240V	kW	3,3	2,4
		400V	kW	5,5	4,1
		415V	kW	5,7	4,3
		440V	kW	6,0	4,5
Minimum cross-section of conductor at load with $I_e (=I_{th})$			mm <sup>2</sup>	1,5	-

## Utilization category AC2 and AC3 Switching of three-phase motors

Rated operational current $I_e$	open and enclosed	220V	A	6,2	6,2
		230V	A	6,2	6,2
		240V	A	5,6	5,6
		380-400V	A	5	5
		415-440V	A	5	5
Rated operational power $P_e$		220-240V	kW	1,5	1,5
50-60Hz		380-440V	kW	2,2	2,2

## Power consumption of coils

AC operated	inrush	VA	9	9
	sealed	VA	4	4
DC operated	inrush	W	2,5	2,5
	sealed	W	2,5	2,5

## Operation range of coils

in multiples of control voltage $U_c$			0,85-1,1	0,85-1,1
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## Maximum ambient temperature

Operation	open	°C	-40 to +60 (+90) <sup>5)</sup>
	enclosed	°C	-40 to +40
with thermal overload relay	open	°C	-25 to +60
	enclosed	°C	-25 to +40
Storage			-50 to +90

## Short circuit protection for contactors without thermal overload relay

Coordination-type "1" according to IEC 947-4-1	gL (gG)	A	20	20
Contact welding without hazard of persons				
max. fuse size				

## Switching time at control voltage $U_s \pm 10\%$ <sup>6) 7)</sup>

AC operated	make time	ms	13-18	13-18
	release time	ms	5-10	5-10
	arc duration	ms	10-15	10-15
DC operated	make time	ms	-	-
	release time	ms	-	-
	arc duration	ms	-	-

## Cable cross-sections for contactors

main connector	solid or stranded	mm <sup>2</sup>	0,5-1,5	solder pins
	flexible	mm <sup>2</sup>	0,5-1,5	Ø 1,15
	flexible with multicore cable end	mm <sup>2</sup>	0,5-1,5	

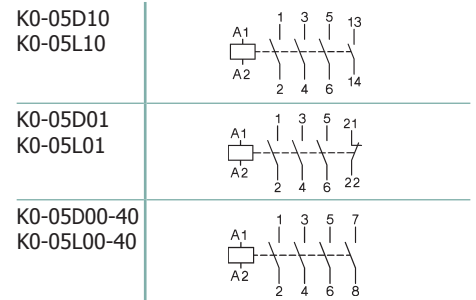
## Cable cross-section

Kind of connection		M2,5	-
Screw driver	Pozidriv	Pz1	
Tightening torque	Nm	0,6-0,8	
Clamps per pole		2	-
	solid or stranded	AWG	20-14



Symbol picture

## Wiring Diagrams



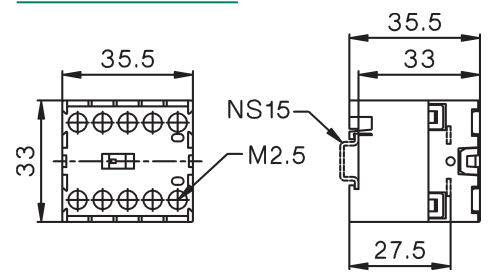
## Coil Voltages AC

K0-05... 24	24V 50/60Hz
K0-05... 230	220-230V 50Hz, 230-250V 60Hz

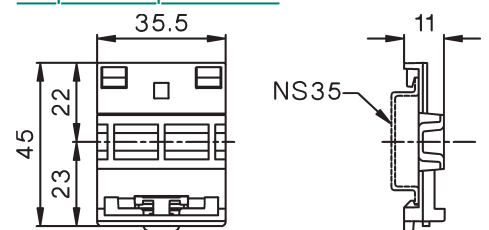
## Coil Voltages DC

K0-05... = 24	24V = DC
K0-05... = 42	42V = DC

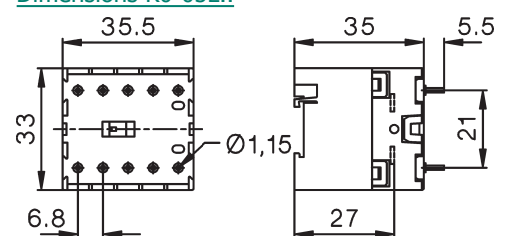
## Dimensions K0-05D..



## Snap-On Adapter P1039



## Dimensions K0-05L..



- 1) Rated frequency 50/60Hz
- 2) Max. occ switching overvoltage < 4kV
- 3) Duty cycle: 100% 4) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry):  $U_{imp} = 4kV$
- 4) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry):  $U_{imp} = 4kV$
- 5) With reduced control voltage range 0,9 up to 1,0 x  $U_s$  and with reduced rated current  $I_e$  /AC1 according to  $I_e$  /AC3.
- 6) Summary switching time = release time + arc duration.
- 7) Release time of NC make time of NO increase when suppressor units for voltage peak protection are used (Varistor, RC-units, Diode units).

D996E

Technical data are subject to change without notice

Benedict GmbH  
Lieblgasse 7, A-1220 Vienna  
Tel.: +43 1 251 51-0  
Fax: +43 1 251 51-89

e-mail: sales@benedict.at  
www.benedict.at

<u>Auxiliary Contacts</u>					
Rated insulation voltage $U_i$		V~	440 <sup>1)</sup>	440 <sup>1)</sup>	
Thermal rated current $I_{th}$ to 440V					
Ambient temperature	40°C	A	5	5	
	60°C	A	3	3	
<u>Utilization category AC15</u>					
Rated operational current $I_e$	220-240V	A	3	3	
	380-415V	A	1,5	1,5	
	440V	A	1	1	
<u>Utilization category DC13</u>					
Rated operational current $I_e$	60V	A	0,5	0,5	
<u>Short circuit protection</u> <sup>2)</sup> max. fuse size					
short circuit current 1kA, contact welding not accepted	gL (gG)	A	10	10	

### Technical Data acc. to UL508

Type K0-05D.. K0-05L..

<u>Main Contacts (cULus)</u>					
Rated operational current "General Use"		A	12	9	
Rated operational power of 3ph AC motors at 60Hz (3ph)	110-120V	hp	1/2	1/2	
	200-208V	hp	1	1	
	220-240V	hp	1	1	
	277V	hp	1 1/2	1 1/2	
Rated operational power of 1ph AC motors at 60Hz (1ph)	110-120V	hp	1/6	1/6	
	200-208V	hp	1 1/2	1 1/2	
	220-240V	hp	3/4	3/4	
Fuse / Short-circuit current		A/kA	30/5	30/5	
Rated voltage		V~	300	300	
<u>Auxillary Contacts (cULus)</u>					
	heavy pilot duty	AC	B300	B300	
	standard pilot duty	DC	R300	R300	

1) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): Uimp = 4kV

2) For contactors with thermal overload relay the device with the smaller admissible control fuse (contactor or thermal overload relay) determines the fuse size.

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