KNL CONTACTORS

KNL6G, KNL9G, KNL12G, KNL16G, KNL18G, KNL22G, KNL30G

- KNLG contactors are used for DC control voltages
- KNL6G contactor relays are mainly used for switching control and signal circuits, and KNL9G-KNL30G motor contactors are used for switching motors and other resistive, inductive and capacitive consumers
- Assembly to a 35 mm wide mounting rail in accordance with EN 60715 or fixing with screws
- Assembly to vertical or horizontal surface with ±20° deviation
- Degree of protection IP20

TECHNICAL DATA

GENERAL	Type					KNL6G	KNL9G	KNL12G	KNL16G	KNL18G	KNL22G	KNL30G
	Standards					IEC/EN 60947-4-1, IEC/EN 60947-5-1, UL 508						
	Approvals					GOST						
	Climatic category					constant damp heat acc. to IEC 60068-2-78 cyclic damp heat acc. to IEC 60068-2-30						
	Ambient temperature		open		°C	-25 … +60						
			closed			-25 … +40						
	Storage temperature				°C	-30 … +80						
	Contact reliability					17 V; ≥ 50 mA						
	Mechanical endurance				op. c.	5×10^6						
	Max. mechanical operating frequency with no load				op. c/h	3000						
	Max. electrical operating frequency AC-3/AC-4/AC-15/DC-13/DC-1 to DC-5				op. c/h	600/300/1200/1200/300						
	Weight			NPLG/ NDLG	kg	0.335 / 0.385				0.36 / 0.41		
MAIN CIRCUIT	Rated insulation voltage			U_i	V	690						
	Thermal current			I_{th}	A	20	25	25	25	32	35	35
	Rated frequency			f	Hz	50/60						
	Rated motor power	single-phase	230 V	P_e	kW	–	1.5	1.5	2.2	2.2	2.2	3.7
	AC-3	three-phase	230 V			–	2.2	3	4	4	5.5	7.5
			400 V			–	4	5.5	7.5	9	11	15
			500 V			–	5.5	5.5	7.5	9	11	15
			690 V			–	5.5	7.5	7.5	9	11	15
	Rated operational current	single-phase	230 V	I_e	A	–	12	12	17	17	17	28
	AC-3	three-phase	230 V			–	8.7	11.5	14.8	14.8	19.6	26.4
			400 V			–	9	12	16	18	22	30
			500 V			–	9	9	12.1	14	17.4	23.4
			690 V			–	6.5	8.8	8.8	10	12.6	17
	Rated motor power	three-phase	230 V	P_e	kW	–	0.75	1.1	1.5	1.5	2.2	4
	AC-4		400 V			–	1.5	2.2	3	3	4	6.5
			500 V			–	1.5	2.2	3	3	4	6.5
			690 V			–	1.5	2.2	3	3	4	6.5
	Rated motor power acc. to UL	single-phase	115 V	P_e	HP	–	1	1	1½	1½	2	2
			230 V			–	2	2	3	3	3	5
		three-phase	230 V			–	3	3	5	5	7½	10
			460 V			–	5	5	7½	7½	15	20
			575 V			–	7½	7½	10	10	15	20

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TECHNICAL DATA — MOTOR CONTACTORS

MAIN CIRCUIT	Type					KNL6G	KNL9G	KNL12G	KNL16G	KNL18G	KNL22G	KNL30G
	Electrical endurance of contacts AC-3 / AC-4				op. c.	diagram1 (AC-15)	diagram 2 / diagram 3					
	Rated operational current at: 24/110/220 V	DC-1	1 [1]	I_e	A	–	15 / 6 / 4				28 / 7 / 4	
			2 [1]			–	18 / 12 / 8				30 / 23 / 13	
			3 [1]			–	20 / 15 / 10				32 / 25 / 20	
	[1] Number of poles in series	DC-3 – DC-5	1 [1]			–	12 / 2 / 0.75				18 / 2 / 1	
			2 [1]			–	15 / 8 / 1.5				23 / 13 / 2	
			3 [1]			–	18 / 12 / 6				28 / 18 / 9	
	Max. back-up fuse for short-circuit protection gL Coordination type 2			I_v	A	20	25	25	25	35	50	50
	Terminal capacity		rigid	S	mm^2	0.75 … 6					2.5 … 10	
			flexible			0.5 … 6					1.5 … 10	
	Screw					M3.5					M4	
	Screw head					PZ 2					PZ 2	
	Tightening torque				Nm	1.4					1.8	
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	10					–	
			60 V			4					–	
			110 V			0.9					–	
			220 V			0.4					–	
	Max. back-up fuse for short-circuit protection gL Coordination type 2			I_v	A	20					–	
	Terminal capacity		rigid	S	mm^2	0.75 … 6					–	
			flexible			0.5 … 6					–	
	Screw					M3.5					–	
	Screw head					PZ 2					–	
	Tightening torque				Nm	1.4					–	
MAGNETIC SYSTEM	Coil consumption		switch-on	P_c	W	110						
			operation			3						
	Make / Break delay		make	NO	ms	15 - 20					15 - 20	
				NC		10 - 20					–	
			break	NO		5 - 10					5 - 10	
				NC		10 - 15					–	
	Range of control voltage			U_c	%	85 … 110						
	Control voltage			U_c	V	12 … 240						
	Terminal capacity		rigid	S	mm^2	0.75 … 4						
			flexible			0.5 … 2.5						
	Screw					M3.5						
	Screw head					PZ 2						
	Tightening torque				Nm	1.4						

Standard control voltages and designations (DC)

Volts	12	24	48	60	72	110	125	220	240
	JD	BD	ED	ND	SD	FD	GD	MD	MUD

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ELECTRICAL ENDURANCE

DIAGRAM 1

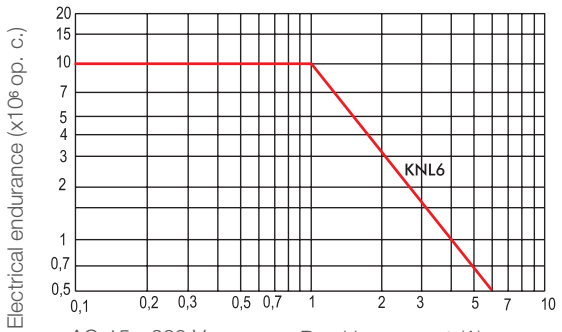


DIAGRAM 2

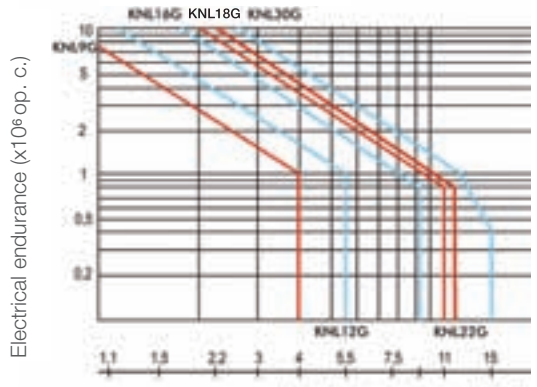
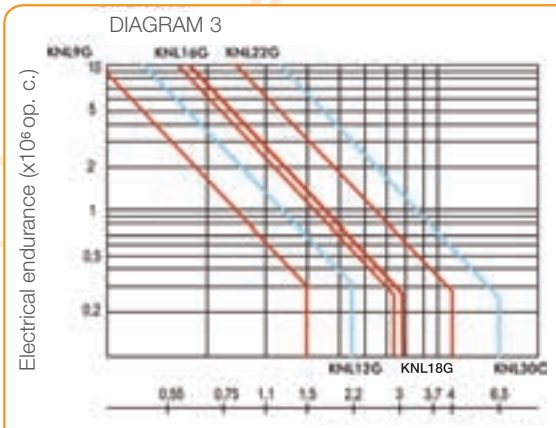
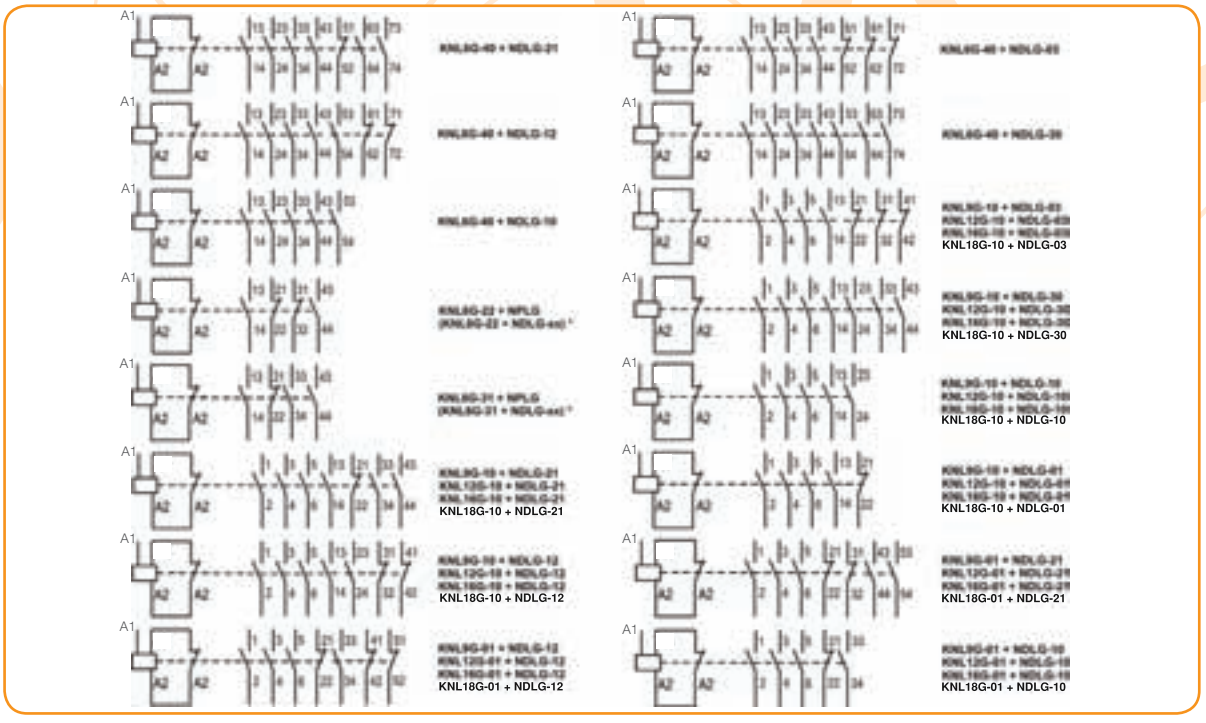


DIAGRAM 3



CONTACT ARRANGEMENTS



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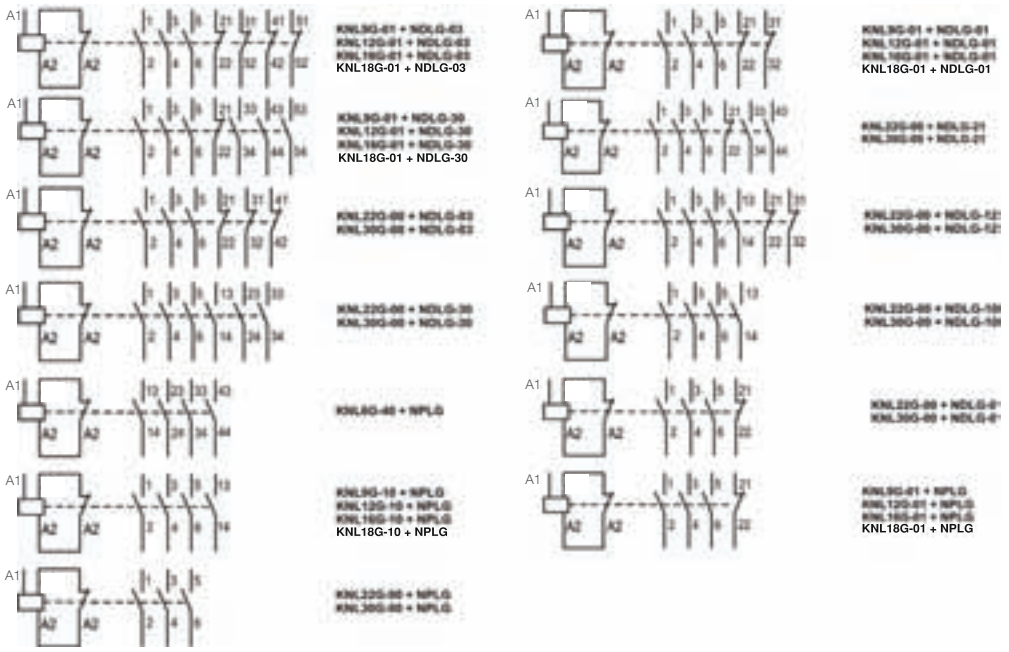
CONTACT ARRANGEMENTS

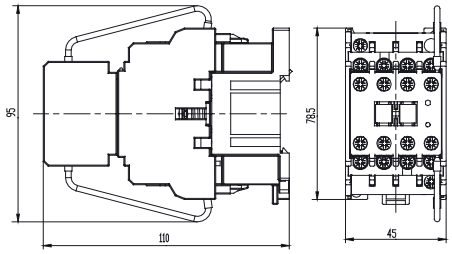


*Contactors in combination with NDLG can have the following versions of auxiliary contacts: 21, -12, -03, -30, -10, -01 -21. -12. -03, -30, -10, -01

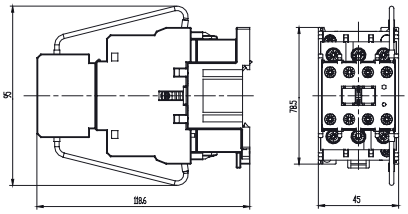
Simultaneous application of NDLG+NPL and NDL+NPLG snap-on auxiliary switch blocks is available.

DIMENSIONS

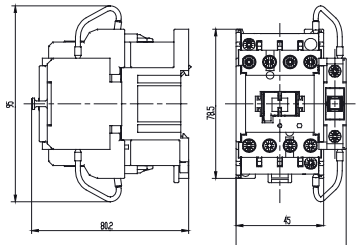
(KNL6G - KNL18G) + NDLG



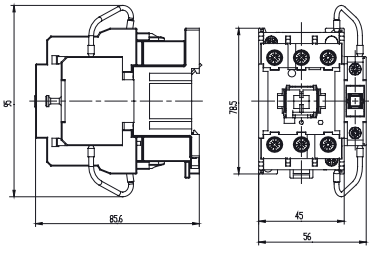
KNL22G + NDLG, KNL30G + NDLG



(KNL6G - KNL18G) + NPLG



KNL22G + NPLG, KNL30G + NPLG



ORDERING DATA

The type designation and control voltage are stated when ordering the contactors.

KNLG + NDLG

KNL16G -10 /21 - BD

- Control voltage (see page 20)
- NDLG snap-on auxiliary switch block
- Type

KNLG + NPLG

KNL16G - 10 - BD

- Control voltage (see page 20)
- Type