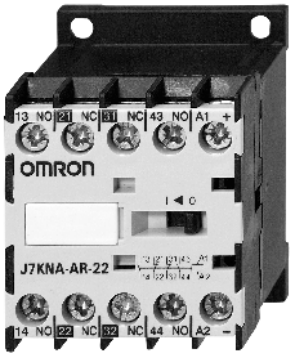
Mini Contactor Relays 4-pole
J7KNA-AR

Main contactor

- AC & DC operated
- 4-, 6- and 8-pole versions in different configurations
- Positively guided contacts
- Screw fixing and snap fitting (35 mm DIN rail)
- Rated current = 10A (I_{th})
- Suitable for electronic devices (DIN 19240)
- Finger proof (VBG 4)

Accessories

- 2- and 4-pole additional auxiliary contacts in different configurations



Approved Standards

Standard	Guide No (US,C)
UL	NKCR, NKCR7
ICE 947-5-1	
VDE 0660	
EN 60947-5-1	

Ordering Information

■ Model Number Legend

1. Mini Contactor Relays

7KNA-□□-□□-□□□□□
1 2 3 4

1) Mini Contactor
2) AR: Contactor Relay
3) Combination of NO / NC contacts
   - 22: 2 NO 2 NC
   - 31: 3 NO 1NC
   - 40: 4 NO 0NC
4) Coil voltage (AC operated)
   - 24: AC24V 50/60Hz
   - 48: AC48V 50Hz
   - 110: AC110-115V 50Hz,AC120-125V 60Hz
   - 230: AC220-230V 50Hz,AC240V 60Hz
   - 240: AC230V-240V 50Hz
   - 400: AC380-400V 50Hz,AC440V 60Hz
   - 415: AC400-415V 50Hz
   - 550: AC525-550V 50Hz,AC600V 60Hz

Coil voltage (DC operated)
- 24D: DC24V
- 48D: DC48V
- 60D: DC60V
- 110D: DC110V
- 125D: DC125V
- 24VS: DC24V with diode
- 48VS: DC48V with diode
- 110VS: DC110V with diode

2. Aux. Contact Modules for Mini Motor Contactor Relays

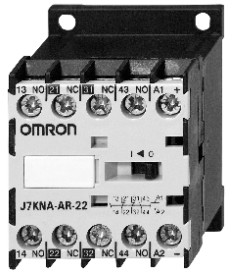
73KN-□□-□□
1 2 3

1) Auxiliary Contact Modules
2) A: for mini contactor relay
3) Combination of NO/NC contacts
   - 11: 1 NO 1 NC
   - 02: 0 NO 2 NC
   - 22: 2 NO 2 NC
   - 40: 4 NO 0 NC

■ System overview

Mini Contactor Relays 4-pole

AC Operated

	Contacts NO	Contacts NC	Distinc. Number acc. to DIN EN 50011	Ratings AC15 230V A	Ratings 400V A	Thermal Rated Current I_{th} A	Type Coil voltage [1] 24 24V 50/60Hz 230 220-230V 50Hz	Pack pcs.	Weight kg/pc.
	4-pole, With Screw Terminals								
	4	-	40E	3	2	10	**J7KNA-AR-40 24**	10	0,16
							J7KNA-AR-40 230		
	3	1	31E	3	2	10	**J7KNA-AR-31 24**	10	0,16
							J7KNA-AR-31 230		
	2	2	22E	3	2	10	**J7KNA-AR-22 24**	10	0,16
							J7KNA-AR-22 230		

1) Other coil voltages see page 10

DC Solenoid Operated

	Contacts NO	Contacts NC	Distinc. Number acc. to DIN EN 50011	Ratings AC15 230V A	Ratings 400V A	Thermal Rated Current I_{th} A	Type Coil voltage 24V DC 2,5W	Pack pcs.	Weight kg/pc.
	4-pole, With Screw Terminals								
	4	-	40E	3	2	10	**J7KNA-AR-40 24D (-VS)[1]**	10	0,19
	3	1	31E	3	2	10	**J7KNA-AR-31 24D (-VS)[1]**	10	0,19
	2	2	22E	3	2	10	**J7KNA-AR-22 24D (-VS)[1]**	10	0,19

1) VS = with diode

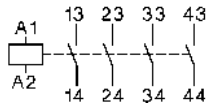
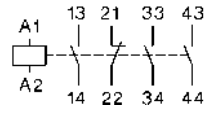
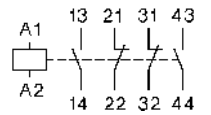
Auxiliary Contact Blocks for Contactor Relays J7KNA-AR

	Contacts NO	Contacts NC		Ratings AC15 230V A	Ratings 400V A	Thermal Rated Current I_{th} A	Type	Pack pcs.	Weight kg/pc.
	1	1		3	2	10	**J73KN-A-11**	10	0,04
	-	2		3	2	10	**J73KN-A-02**	10	0,04
	4	-		3	2	10	**J73KN-A-40**	10	0,04
	2	2		3	2	10	**J73KN-A-22**	10	0,04

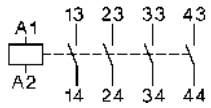
■ System overview

Mini Contactor Relays 4-pole

AC Operated

Wiring Diagrams	Distinc. Number acc. to DIN EN 50011	Auxiliary Contact Blocks Type	NO	NC	Contactor Relay with Auxiliary Contact Block Distinc. Number according to DIN EN 50011	NO	NC	Contacts suitable for Electronic Circuits according to DIN 19240 for rated voltage 24V DC (test ratings 17V DC, 5mA) Positively guided contacts
4-pole, With Screw Terminals								
	40E	**J73KN-A-11**	1	1	51E	5	1	Preferable combinations with distinctive letter „E“ according to DIN EN 50011
		J73KN-A-02	0	2	42E	4	2	
		J73KN-A-40	4	0	80E	8	0	
		J73KN-A-22	2	2	62E	6	2	
	31E	**J73KN-A-11**	1	1	42Y	4	2	
		J73KN-A-02	0	2	33Y	3	3	
		J73KN-A-40	4	0	71Y	7	1	
		J73KN-A-22	2	2	53Y	5	3	
	22E	**J73KN-A-11**	1	1	33Y	3	3	
		J73KN-A-02	0	2	24Y	2	4	
		J73KN-A-40	4	0	62Y	6	2	
		J73KN-A-22	2	2	44Y	4	4	

DC Solenoid Operated

Wiring Diagrams	Distinc. Number acc. to DIN EN 50011	Auxiliary Contact Blocks Type	NO	NC	Contactor Relay with Auxiliary Contact Block Distinc. Number according to DIN EN 50011	NO	NC	
4-pole, With Screw Terminals								
	40E	**J73KN-A-11**	1	1	51E	5	1	Preferable combinations with distinctive letter „E“ according to DIN EN 50011
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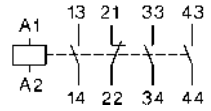
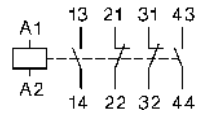
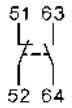
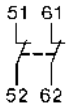
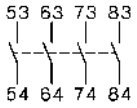
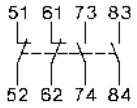
		J73KN-A-40	4	0	80E	8	0	
		J73KN-A-22	2	2	62E	6	2	
	31E	**J73KN-A-11**	1	1	42Y	4	2	
		J73KN-A-02	0	2	33Y	3	3	
		J73KN-A-40	4	0	71Y	7	1	
		J73KN-A-22	2	2	53Y	5	3	
	22E	**J73KN-A-11**	1	1	33Y	3	3	
		J73KN-A-02	0	2	24Y	2	4	
		J73KN-A-40	4	0	62Y	6	2	
		J73KN-A-22	2	2	44Y	4	4	

Auxiliary Contact Blocks for Contactor Relays J7KNA-AR

Wiring diagrams				Contacts suitable for Electronic Circuits according to DIN 19240 for rated voltage 24V DC (test ratings 17V DC, 5mA) Positively guided contacts
J73KN-A-11	**J73KN-A-02**	**J73KN-A-40**	**J73KN-A-22**	
				

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Specifications

■ Coil Voltages

Suffix to contactor type e.g.	Voltage Marking at the coil		Rated Control Voltage U_s range for 50Hz		60Hz	
J7KNA-09-10-24	for 50Hz V	for 60Hz V	min V.	max V.	min V.	max V.
12	12	12	11	12	12	12
24	**24**	**24**	**22**	**24**	**24**	**24**
42	42	42	38.5	42	42	42
48	48-50	48	48	50	48	50
60	60	60	52	66	54	60
90	90-95	100-105	90	95	100	105
95	95-100	105-110	95	100	105	110
100	100	110-115	100	105	110	115
105	105-110	115-120	105	110	115	120
110	110-115	120-125	110	115	120	125
200	200	210-220	195	205	210	220

Suffix to contactor type e.g.	Voltage Marking at the coil		Rated Control Voltage U_s range for 50Hz		60Hz	
J7KNA-09-10- 230	for 50Hz V	for 60Hz V	min V.	max V.	min V.	max V.
210	205-215	220-230	205	215	220	230
220	210-220	230-240	210	220	230	240
230	**220-230**	**240**	**220**	**230**	**240**	**250**
240	230-240		230	240	250	260
400	380-400	440	380	400	415	440
500	475-500	520-545	475	500	520	545
550	525-550	600	525	550	570	600

Standard voltages in bold type letters. Coil not exchangeable

■ Engineering data and Characteristics

Mini Contactor Relays

Data according to IEC 947-5-1, VDE 0660, EN 60947-5-1

Auxiliary Contacts		Type	J7KNA-AR...	J7KNA-AR...D	J7KNA-AR...VS	J73KN-A...
Rated insulation voltage U_i		V AC	690[*1]	690[*1]	690[*1]	690[*1]
Thermal rated current I_{th} to 690V						
Ambient temperature	40°C	A	10	10	10	10
	60°C	A	6	6	6	6
Power loss per pole	at I_{th}	W	0.5	0.5	0.5	0.5
Utilization category AC15						
Rated operational current I_e	220-240V	A	3	3	3	3
	380-415V	A	2	2	2	2
	440V	A	1.6	1.6	1.6	1.6
	500V	A	1.2	1.2	1.2	1.2
	660-690V	A	0.6	0.6	0.6	0.6
Utilization category DC13						
Rated operational current I_e	60V	A	2	2	2	2
	110V	A	0.4	0.4	0.4	0.4
	220V	A	0.1	0.1	0.1	0.1
Maximum ambient temperature						
Operation	open	°C	-40 to +60 (+90)[*2]			
	enclosed	°C	-40 to +40			
Storage		°C	-40 to +90			
Short circuit protection short-circuit current 1kA, contact welding not accepted						
max. fuse size	gL (gG)	A	20	20	20	20
Power consumption of coils						
AC operated	inrush	VA	25	-	-	-
	sealed	VA	4 - 5	-	-	-
		W	1.2	-	-	-
DC operated	inrush	W	-	2.5	2.5	-
	sealed	W	-	2.5	2.5	-
Operation range of coils in multiples of control voltage U_s			0.85 - 1.1	0.8 - 1.1	0.8 - 1.1	-
Switching time at control voltage U_s ±10%[*3,*4]						
AC operated	make time	ms	15 - 25	-	-	-
	release time	ms	8 - 25	-	-	-
	arc duration	ms	10 -15	-	-	-
DC operated	make time	ms	-	15 - 19	-	-
	release time	ms	-	8 - 25	-	-
	arc duration	ms	-	10 -15	-	-

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Mini Contactor Relays

Data according to IEC 947-5-1, VDE 0660, EN 60947-5-1

Auxiliary Contacts		Type	J7KNA-AR...	J7KNA-AR...D	J7KNA-AR...VS	J73KN-A...
Cable cross-section						
all connectors	solid	mm²	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5
	flexible	mm²	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5	0.75 - 2.5
	flexible with multicore cable end	mm²	0.5 - 1.5	0.5 - 1.5	0.5 - 1.5	0.5 - 2.5
Clamps per pole			2	2	2	2
	solid or stranded	AWG	18 - 14	18 - 14	18 - 14	18 - 14

*1) Suitable at 690V for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): U_{imp} = 8kV. Data for other conditions on request.
*2) With reduced control voltage range 0.9 up to 1.0 x U_s and with reduced thermal rated current I_{th} to I_e/AC15
*3) Summary switching time = release time + arc duration
*4) Release time of NC make time of NO increase when suppressor units for voltage peak protection are used (Varistor, RC-units, Diode units).

Mini Contactor Relays for North America

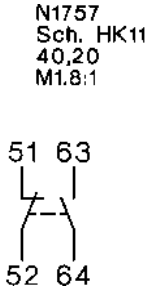
Data according to UL508

Main Contacts (cULus)		Type	J7KNA-AR...	J73KN-A...
Rated operational current "General Use"		A	10	10
Rated operational power of three-phase motors	115V	hp	-	-
at 60Hz (3ph)	200V	hp	-	-
	230V	hp	-	-
	460V	hp	-	-
	575V	hp	-	-
Rated operational power of of AC motors	115V	hp	-	-
at 60Hz (1ph)	200V	hp	-	-
	230V	hp	-	-
Fuses		A	-	-
Suitable for use on a capability of delivering not more than	rms	A	-	-
		V	-	-
Rated voltage		V AC	600	600
Auxiliary Contacts (cULus)	heavy pilot duty	AC	A600	A600
	standard pilot duty	DC	Q600	Q600

■ Dimensions

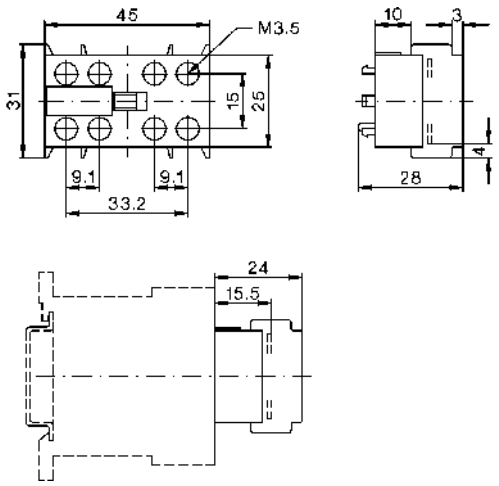
AC and DC operated
with screw terminals

J7KNA-AR...



Auxiliary Contact Blocks

J73KN-A...



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ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. J507-E2-01

In the interest of product improvement, specifications are subject to change without notice.