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Find the *OMRON J7KNA-AR-22* at our website: *Click HERE*

Mini Contactor Relays 4-pole
J7KNA-AR

Main contactor

- AC & DC operated
- 4-, 6- and 8-pole versions in different configurations
- Mirror contacts
- Screw fixing and snap fitting (35 mm DIN rail)
- Rated current = 10A (I_{th})
- Suitable for electronic devices (DIN 19240)
- Finger proof (BGV A2)



Accessories

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

Approved Standards

Standard	Guide No (US,C)
UL	NKCR, NKCR7
IEC 947-5-1	see page 95
VDE 0660	
EN 60947-5-1	

Ordering Information

■ Model Number Legend

1. Mini Contactor Relays

J7KNA-□□-□□-□□□□□□
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: AC230-240V 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
   125VS: DC125V with diode

2. Aux. Contact Modules for Mini Motor Contactor Relays

J73KN-□□-□□-□
1 2 3 4

1) Auxiliary Contact Modules
2) A: for mini contactor relays
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

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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 / 230	Pack pcs.	Weight kg/pc.
	4-pole, With Screw Terminals								
	4	-	40E	3	2	10	**J7KNA-AR-40 24** (24V 50/60Hz)	10	0,16
							J7KNA-AR-40 230 (220-230V 50Hz)		
	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) with built-in coil suppressor (diode + zener diode)

Auxiliary Contact Blocks for Contactor Relays J7KNA-AR

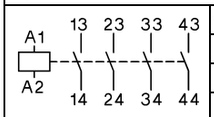
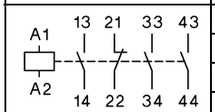
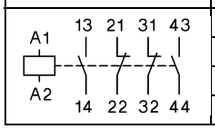
	Contacts NO	Contacts NC		Ratings AC15 230V A	Ratings 400V A	Thermal Rated Current I_{th} A	**Type**	Pack pcs.	Weight kg/pc.
	1	1		3	2	10	**J73KN-A-11**	10	0,04
	-	2		3	2	10	**J73KN-A-02**	10	0,04
	4	-		3	2	10	**J73KN-A-40**	10	0,04
	2	2		3	2	10	**J73KN-A-22**	10	0,04

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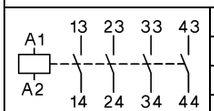
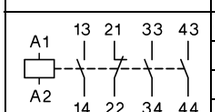
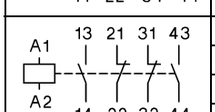
System overview

Mini Contactor Relays 4-pole

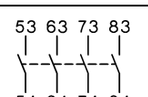
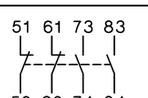
AC Operated

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) Mirror 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
		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	

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) Mirror 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. **J7KNA-AR-40-24**	Voltage Marking at the coil for 50Hz V	 for 60Hz V	Rated Control Voltage U_s range for 50Hz min V.	 max V.	 60Hz 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. **J7KNA-AR-40- 230**	Voltage Marking at the coil for 50Hz V	 for 60Hz V	Rated Control Voltage U_s range for 50Hz min V.	 max V.	 60Hz 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

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■ Engineering data and Characteristics

Mini Contactor Relays

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

Auxiliary Contacts		Type	AC J7KNA-AR...	DC J7KNA-AR...D	DC + Diode 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	15 - 19	-
	release time	ms	-	8 - 25	8 - 25	-
	arc duration	ms	-	10 -15	10 -15	-
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).

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Mini Contactor Relays for North America

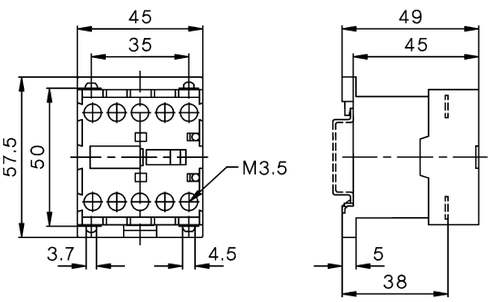
Data according to UL508

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

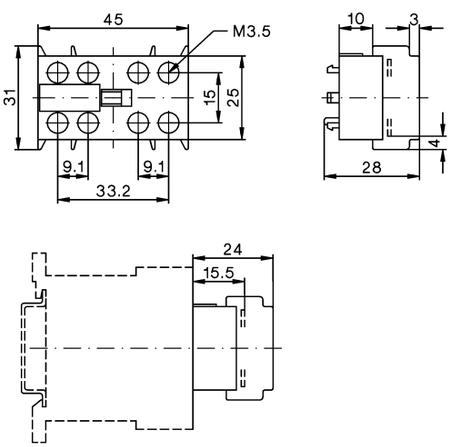
AC and DC operated
with screw terminals

J7KNA-AR...



Auxiliary Contact Blocks

J73KN-A...



Do not use/install these products before having read the applicable precautions as listed in Cat. No. J09-EN-01 available from www.europe.omron.com or on request from OMRON local sales office.

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

Cat. No. J04E-EN-01A In the interest of product improvement, specifications are subject to change without notice.

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