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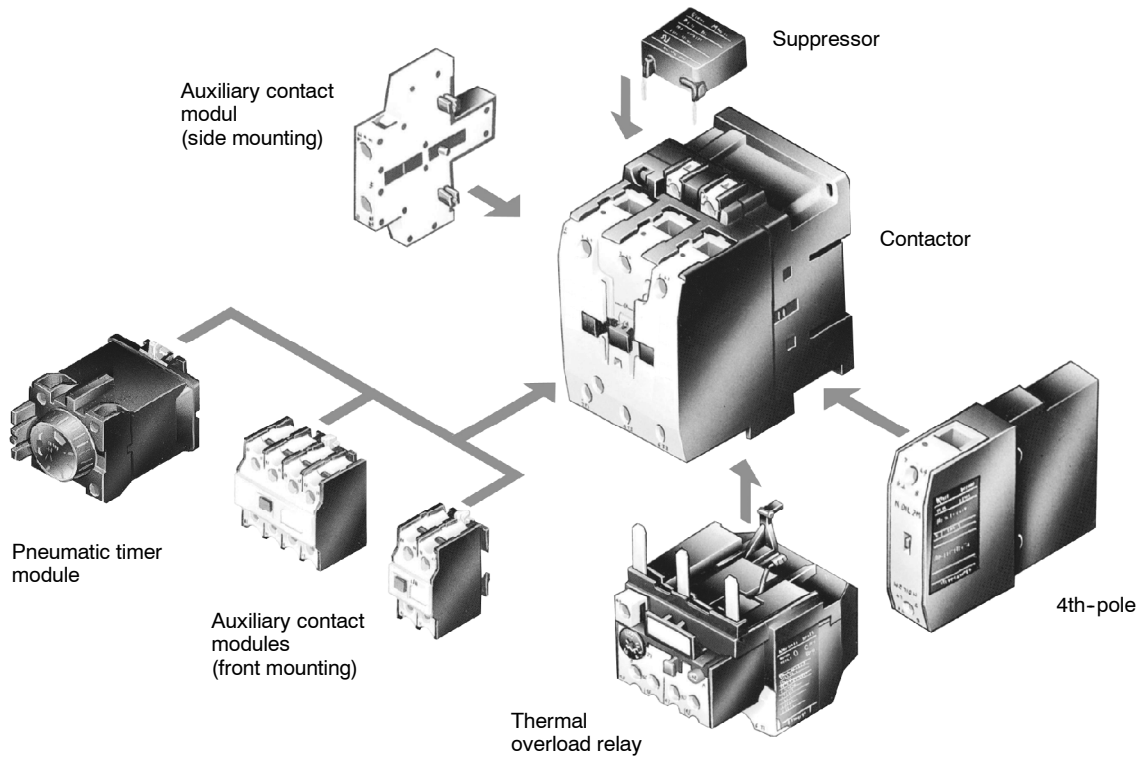
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Find the *OMRON J7K-DM* at our website: *Click HERE*

OMRON

Contactor System

J7K/J7TK



IEC 947, EN 60947

J7K Contactor

- Range from 4 to 75 kW (AC-3, 380/440 V).
- Seven contactor frame sizes, with 2 ratings each (except for J7K-AMA).
- Main contacts with 3- and 4-pole.
- Both AC- and DC-type available (Base area is same but DC is always 25 mm deeper, except for J7K-AMA, J7K-FM(A) and J7K-GM(A)).
- 45 mm width up to J7K-CMA, 11 kW (at 380/440 V AC).
- Finger proof protection.
- All terminals supplied open, ready to connect.

J7TK Overload Relays

- Three frame sizes adapting complete contactor range.
- For separate mounting.
- Can be mounted directly.
- Single phasing sensitivity according to IEC 947-4-1.

J73K Auxiliary Contact Modules

- Up to four auxiliary contact modules.
- Contacts can be fitted to the side (not J7K-BM(A)).
- Interlocked opposing contacts.
- Suitable for electronic devices (for J7K-AMA).
- Safe isolation to IEC 536 between the contacts.
- Top and side mounting (for J7K-CM(A) to J7K-EM(A))
- 2-pole/4-pole with various contact combinations.

Accessories

- Suppressors.
- Mechanical interlocks.
- Single coils

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Ordering Information

Model Number Legend:

Contactor:

J7K- □ □ □ - □ - □ □

1 2 3 4 5 6

1. **Frame size:**
   A, B, C, D, E, F, G
2. **Application:**
   M = motor load
3. **Rating:**
   Standard = none, high = A
4. **Int. auxiliary contacts:**
   -01, -10
   4-pole:
   -4
5. **Coil type:**
   DC or AC (AC = none, DC = D)
6. **Coil voltages:**

Standard voltages

AC 24V 50Hz
48V 50Hz
110V 50Hz / 120V 60Hz
230V 50Hz / 240V 60Hz
415V 50Hz / 480V 60Hz
110V 50Hz / 60Hz
230V 50Hz / 60Hz

DC 24V DC
48V DC
60V DC
220V DC

Auxiliary contact modules:

J73K- □ □ - □ □

1 2 3 4

1. **Frame size:**
   If used for more than one frame size.
   Only the lowest frame: A, B, C, F
2. **Application:**
   nothing: universal use, M: use only for M-contactor
3. **No. of contacts and configuration:**
   11, 22, 02, etc.
4. **Mounting:**
   S = side mounting
   SI, SA = side mounting, in/outside
   nothing = top mounting
   SID = side mounting inside, with early make and late break contacts

Thermal overload relays:

J7TK- □ - □ - □

1 2 3

1. **Frame size:**
   If used for more than one contactor frame size:
   Only the lowest frame: B, D, F
2. **Setting current:**
   0.4 to 150 A
3. **Optional kind of terminals:**
   FB = box terminal (for separate mounting equal to J7K-F)
   FP = (one side) pin terminal (for direct mounting on J7K-F)
   GB = boxterminal (for separate mounting equal to J7K-G)
   GP = (one side) pin terminal (for direct mounting on J7K-G)

Accessories for contactors:

J7K- □ - □

1 2

1. **Frame size of the contactor:**
   If used for more than one frame size:
   Only the lowest frame: A, B, C, D, E, F
2. **Type of accessories:**
   RC 250: RC suppressor 250V AC
   FD: Diode suppressor
   VG 250: Varistor suppressor 250V
   VG 415: Varistor suppressor 415V
   MV: Mechanical interlock
   N: 4th-pole
   PTE-11: Pneumatic timer module (ON-delayed)
   PTD-11: Pneumatic timer module (OFF-delayed)

Single coils:

J7KB-IC - □ - □

1 2

1. **Coil type:**
   AC or DC
   (AC = none, DC = D)
2. **Coil voltages**

Standard voltages:

AC 24V 50Hz
48V 50Hz
110V 50Hz / 120V 60Hz
230V 50Hz / 240V 60Hz
415V 50Hz / 480V 60Hz
110V 50Hz / 60Hz
230V 50Hz / 60Hz

DC 24V DC
48V DC
60V DC
220V DC

Accessories for overload relays:

J7TK- □ - □

1 2

1. **Frame size of overload relays:**
   B or D
2. **Type of accessory:**
   B = Base

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Available types

J7K-AMA

Type	Contactor	Voltage
AC	**J7K-AMA-01** **J7K-AMA-10** **J7K-AMA-4**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-AMA-01-D** **J7K-AMA-10-D** **J7K-AMA-4-D**	**24V DC**
		48V DC
		60V DC
		220V DC

J7K-BM(A)

Type	Contactor	Voltage
AC	**J7K-BM** **J7K-BM-01** **J7K-BM-10** **J7K-BM-4** **J7K-BMA** **J7K-BMA-01** **J7K-BMA-10**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-BM-D** **J7K-BM-01-D** **J7K-BM-10-D** **J7K-BM-4-D** **J7K-BMA-D** **J7K-BMA-01-D** **J7K-BMA-10-D**	**24V DC**
		48V DC
		60V DC
		220V DC

J7K-CM(A)

Type	Contactor	Voltage
AC	**J7K-CM** **J7K-CMA**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-CM-D** **J7K-CMA-D**	**24V DC**
		48V DC
		60V DC
		220V DC

J7K-DM(A)

Type	Contactor	Voltage
AC	**J7K-DM** **J7K-DMA**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-DM-D** **J7K-DMA-D**	**24V DC**
		48V DC
		60V DC
		220V DC

J7K-EM(A)

Type	Contactor	Voltage
AC	**J7K-EM** **J7K-EMA**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-EM-D** **J7K-EMA-D**	**24V DC**
		48V DC
		60V DC
		220V DC

J7K-FM(A)

Type	Contactor	Voltage
AC	**J7K-FM** **J7K-FMA**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-FM-D** **J7K-FMA-D**	**24V DC**
		48V DC
		60V DC
		220V DC

J7K-GM(A)

Type	Contactor	Voltage
AC	**J7K-GM** **J7K-GMA**	**230V 50Hz / 240V 60Hz**
		110V 50Hz / 120V 60Hz
		415V 50Hz / 480V 60Hz
		110V 50 / 60Hz
		230V 50 / 60Hz
		48V 50Hz
		24V 50Hz
DC	**J7K-GM-D** **J7K-GMA-D**	**24V DC**
		48V DC
		60V DC
		220V DC

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System overview

Contactor	Auxiliary contact modules	Overload relays for direct mounting	Base for separate mounting
J7K-AMA-10(-D) **J7K-AMA-01(-D)** **J7K-AMA-4(-D)** 	**Top mounting** 2-pole J73K-AM-11 J73K-A-02 J73K-A-20  4-pole J73K-AM-22 J73K-A-04 J73K-A-40 	-	-
J7K-BM(A)(-D) **J7K-BM(A)-10(-D)** **J7K-BM(A)-01(-D)** **J7K-BM-4(-D)** 	**Top mounting** 2-pole J73K-BM-11 J73K-B-02 J73K-B-20  4-pole J73K-BM-22 J73K-BM-31 J73K-B-04 **J73K-B-13** J73K-B-40 	**J7TK-B** 	**J7TKB-B** 
J7K-CM(A)(-D) 	**Pneumatic timer module** J7KB-PTE-11 J7KB-PTD-11 		
J7K-DM(A)(-D) 	**Side mounting** J73K-CM-11S Except for J7K-BM(A)(-D) and J7K-BM-4(-D) 	**J7TK-D** 	**J7TKD-B** 
J7K-EM(A)(-D) 			
J7K-FM(A)(-D) 	Side mounting 2-pole J73K-FM-02 SA J73K-FM-02 SI J73K-FM-11 SA J73K-FM-11 SID J73K-FM-11 SI J73K-FM-20 SA J73K-FM-20 SI 	**J7TK-F-.../FP** **direct mounting** **J7TK-F-.../FB** **separate mounting** 	-
J7K-GM(A)(-D) 		**J7TK-F-.../GP** **direct mounting** **J7TK-F-.../GB** **separate mounting** 	-

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Rating overview

J7K-	AMA-10(-D) AMA-01(-D) AMA-4(-D)	BM(-D) BM-10(-D) BM-01(-D) BM-4(-D)	BMA(-D) BMA-10(-D) BMA-01(-D)	CM(-D)	CMA(-D)	DM(-D)	DMA(-D)
Rated operational voltage	kW	kW	kW	kW	kW	kW	kW
AC-3, three-phase motor rating 50-60 Hz							
220-240 V	2.2	2.2	3	4	5.5	7.5	11
380-440 V	**4**	**4**	**5.5**	**7.5**	**11**	**15**	**18.5**
500 V	4	5.5	7.5	11	15	18.5	22
660/690 V	4	5.5	7.5	11	15	18.5	22
1000 V	-	-	-	-	-	-	-
AC-4, three-phase motor rating 50-60 Hz							
220-240 V	1.5	1.5	2.2	3	4	5.5	7.5
380-440 V	**3**	**3**	**4**	**5.5**	**7.5**	**11**	**15**
500 V	3	4	5.5	7.5	11	15	18.5
660/690 V	3	4	5.5	7.5	11	15	18.5
1000 V	-	-	-	-	-	-	-
AC-1, resistive rating							
220-240 V	7	7	7	12.5	12.5	20	20
380-440 V	**13**	**13**	**13**	**22**	**22**	**35**	**35**
500 V	16	16	16	28	28	45	45
660/690 V	20	20	20	35	35	60	60
1000 V	-	-	-	-	-	-	-
*****	**A**	**A**	**A**	**A**	**A**	**A**	**A**
Max. 690 V	20	20	20	35	35	55	55
1000 V	-	-	-	-	-	-	-

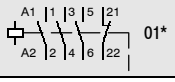
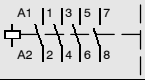
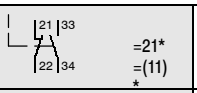
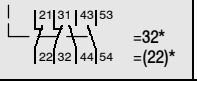
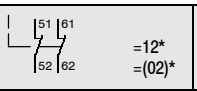
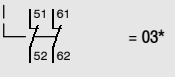
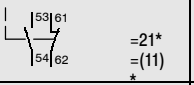
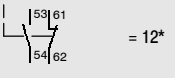
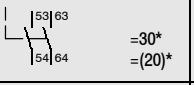
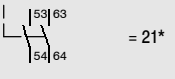
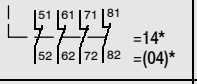
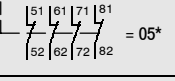
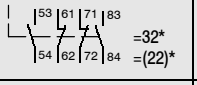
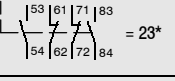
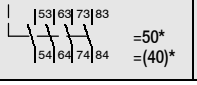
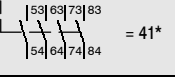
J7K-	EM(-D)	EMA(-D)	FM(-D)	FMA(-D)	GM(-D)	GMA(-D)
Rated operational voltage	kW	kW	kW	kW	kW	kW
AC-3, three-phase motor rating 50-60 Hz						
220-240 V	15	18.5	22	25	37	45
380-440 V	**22**	**30**	**37**	**45**	**55**	**75**
500 V	30	37	45	55	75	90
660/690 V	30	37	55	75	90	110
1000 V	-	-	37	45	55	65
AC-4, three-phase motor rating 50-60 Hz						
220-240 V	11	15	18.5	22	26	30
380-440 V	**18.5**	**22**	**30**	**37**	**45**	**55**
500 V	22	30	37	45	55	75
660/690 V	22	30	45	45	55	75
1000 V	-	-	30	37	45	55
AC-1, resistive rating						
220-240 V	32	32	35	35	58	58
380-440 V	**56**	**56**	**62**	**62**	**100**	**100**
500 V	73	73	80	80	132	132
660/690 V	95	95	108	108	174	174
1000 V	-	-	82	82	132	132
*****	**A**	**A**	**A**	**A**	**A**	**A**
Max. 690 V	90	90	100	100	160	160
1000 V	-	-	50	50	80	80

* Conventional free air thermal current $I_{th} = I_e$, open.

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■ Contactor with interlocked opposing contacts

Coil AC operated

Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005		Std. pack
	AC-3 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V kW	**AC-4** 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V kW				
 **Basic units, 3-pole** Voltage tolerance of the coil 0.80 to 1.1 x U_c Contacts to EN 50012												
J7K-AMA-10	2.2	**4**	4	4	1.5	**3**	3	3	20A	 10*		5
J7K-AMA-01	2.2	**4**	4	4	1.5	**3**	3	3	20A		 01*	5
 **Basic units, 4-pole** Voltage tolerance of the coil 0.80 to 1.1 x U_c Contacts to EN 50012												
J7K-AMA-4	-								20A			5
 **Auxiliary contact modules**** Contacts to EN 50012 should be given preference										+	+	
J73K-AM-11	M = Make contact B = Break contact		2-pole	1M 1B						 =21* =(11)*	-	5
J73K-AM-22			4-pole	2M 2B						 =32* =(22)*	-	5
 **Auxiliary contact modules**** Contacts to EN 50005										+	+	
J73K-A-02	M = Make contact B = Break contact		2-pole	- 2B						 =12* =(02)*	 = 03*	5
J73K-A-11				1M 1B						 =21* =(11)*	 = 12*	5
J73K-A-20				2M -						 =30* =(20)*	 = 21*	5
J73K-A-04			4-pole	- 4B						 =14* =(04)*	 = 05*	5
J73K-A-22				2M 2B						 =32* =(22)*	 = 23*	5
J73K-A-40				4M -						 =50* =(40)*	 = 41*	5

Note:

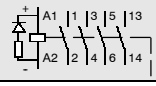
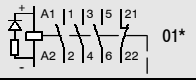
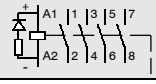
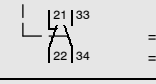
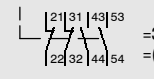
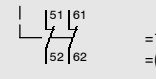
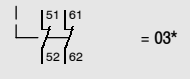
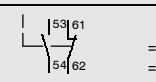
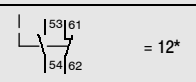
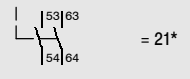
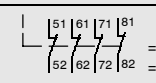
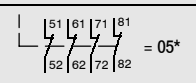
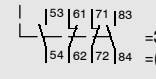
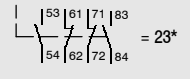
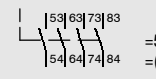
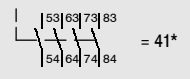
* □□

└ Distinctive number (The numbers in brackets apply to J7K-AMA-4)

** Auxiliary contact modules, conventional free air thermal current I_{th} = 10 A.

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Coil DC operated

Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ AC-1 open	Terminal markings Coil to EN 50005		Std. pack
	AC-3 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V kW	**AC-4** 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V kW				
	**Basic units, coil rating 2.6 W, 3-pole** Voltage tolerance of the coil 0.85-1.1 x Uc. Integral resistor/diode combination. Contacts to EN 50012											
J7K-AMA-10-D	2.2	**4**	4	4	1.5	**3**	3	3	20A	 10*		5
J7K-AMA-01-D	2.2	**4**	4	4	1.5	**3**	3	3	20A		 01*	5
	**Basic units, 4-pole** Voltage tolerance of the coil 0.85-1.1 x Uc. Integral resistor/diode combination. Contacts to EN 50012											
J7K-AMA-4 -D	-								20A			5
	**Auxiliary contact modules**** Contacts to EN 50012									+	+	
J73K-AM-11	M = Make contact B = Break contact		2-pole	1M 1B						 =21* =(11)*	-	5
J73K-AM-22			4-pole	2M 2B						 =32* =(22)*	-	5
	**Auxiliary contact modules**** Contacts to EN 50005									+	+	
J73K-A-02	M = Make contact B = Break contact		2-pole	- 2B						 =12* =(02)*	 = 03*	5
J73K-A-11				1M 1B						 =21* =(11)*	 = 12*	5
J73K-A-20				2M -						 =30* =(20)*	 = 21*	5
J73K-A-04			4-pole	- 4B						 =14* =(04)*	 = 05*	5
J73K-A-22				2M 2B						 =32* =(22)*	 = 23*	5
J73K-A-40				4M -						 =50* =(40)*	 = 41*	5

Note:

* □□

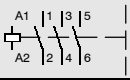
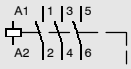
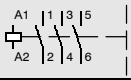
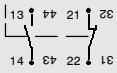
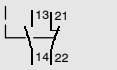
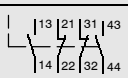
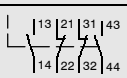
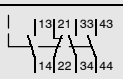
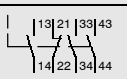
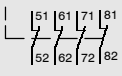
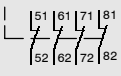
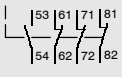
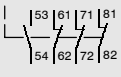
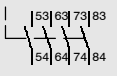
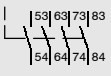
└ Distinctive numbers (The number in brackets apply to J7K-AMA-4-D)

** Auxiliary contact modules, conventional free air thermal current I_{th} = 10 A.

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■ Contactor

Coil AC operated

Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005		Std. pack
	AC-3 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW	**AC-4** 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW				
 **Basic units, 3-pole**												
J7K-BM	2.2	**4**	5.5	5.5	1.5	**3**	4	4	20A			1
J7K-BMA	3	**5.5**	7.5	7.5	2.2	**4**	5.5	5.5	20A			1
J7K-CM	4	**7.5**	11	11	3	**5.5**	7.5	7.5	35A			1
J7K-CMA	5.5	**11**	15	15	4	**7.5**	11	11	35A			1
 **Basic units, 4-pole**												
J7K-BM-4	-								20A			1
 **Auxiliary contact module, side mounting**** Can be combined with auxiliary contacts for top mounting up to a maximum of four contacts.										+	+	
J73K-CM-11S	M = Make contact B = Break contact		2-pole	1M 1B							-	5
 **Auxiliary contact modules, top mounting**										+	+	
J73K-BM-11	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.		2-pole	1M 1B								5
J73K-BM-22			4-pole	2M 2B								5
J73K-BM-31				3M 1B								5
J73K-B-02	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50005.		2-pole	- 2B								5
J73K-B-20				2M -								5
J73K-B-04			4-pole	- 4B								5
J73K-B-13				1M 3B								5
J73K-B-40				4M -								5

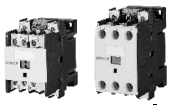
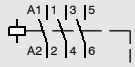
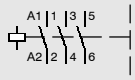
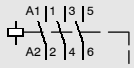
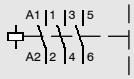
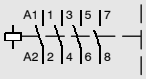
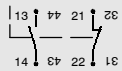
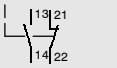
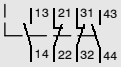
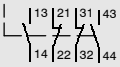
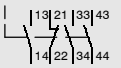
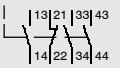
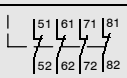
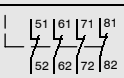
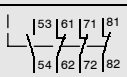
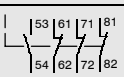
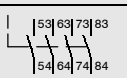
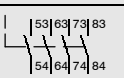
Note:

* Do not reverse directly.

** Auxiliary contact modules, conventional free air thermal current I_{th} = 16 A.

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Coil DC operated

Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005		Std. pack
	AC-3 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW	**AC-4** 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW				
 **Basic units, 3-pole**												
J7K-BM-D	2.2	**4**	5.5	5.5	1.5	**3**	4	4	20A			1
J7K-BMA-D	3	**5.5**	7.5	7.5	2.2	**4**	5.5	5.5	20A			1
J7K-CM-D	4	**7.5**	11	11	3	**5.5**	7.5	7.5	35A			1
J7K-CMA-D	5.5	**11**	15	15	4	**7.5**	11	11	35A			1
 **Basic units, 4-pole**												
J7K-BM-4-D	-								20A			1
 **Auxiliary contact module, side mounting**** Can be combined with auxiliary contacts for top mounting up to a maximum of four contacts.										+	+	
J73K-CM-11S	M = Make contact B = Break contact		2-pole		1M	1B					-	5
 **Auxiliary contact modules, top mounting**										+	+	
J73K-BM-11	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.		2-pole		1M	1B						5
J73K-BM-22			4-pole		2M	2B						5
J73K-BM-31					3M	1B						5
J73K-B-02	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50005.		2-pole		-	2B						5
J73K-B-20					2M	-						5
J73K-B-04			4-pole		-	4B						5
J73K-B-13					1M	3B						5
J73K-B-40					4M	-						5

Note:

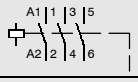
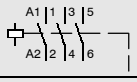
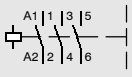
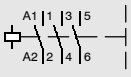
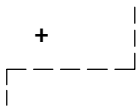
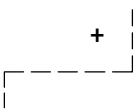
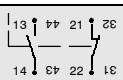
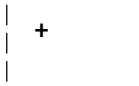
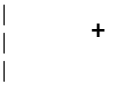
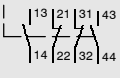
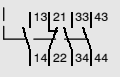
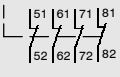
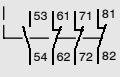
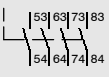
* Do not reverse directly.

** Auxiliary contact modules, conventional free air thermal current I_{th} = 16 A.

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■ Contactor

Coil AC operated

Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005		Std. pack
	AC-3 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW	**AC-4** 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW				
 **Basic units, 3-pole**												
J7K-DM	7.5	**15**	18.5	18.5	5.5	**11**	15	15	55A			1
J7K-DMA	11	**18.5**	22	22	7.5	**15**	18.5	18.5	55A			1
J7K-EM	15	**22**	30	30	11	**18.5**	22	22	90A			1
J7K-EMA	18.5	**30**	37	37	15	**22**	30	30	90A			1
 **Auxiliary contact module, side mounting**** Can be combined with auxiliary contacts for top mounting up to a maximum of four contacts.										+ 	+ 	
J73K-CM-11S	M = Make contact B = Break contact		2-pole	1M 1B							-	5
 **Auxiliary contact modules, top mounting**										+ 	+ 	
J73K-BM-11	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.		2-pole	1M 1B								5
J73K-BM-22			4-pole	2M 2B								5
J73K-BM-31				3M 1B								5
J73K-B-02	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50005.		2-pole	- 2B								5
J73K-B-20				2M -								5
J73K-B-04			4-pole	- 4B								5
J73K-B-13				1M 3B								5
J73K-B-40				4M -								5

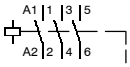
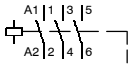
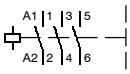
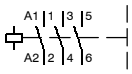
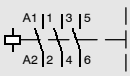
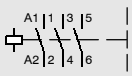
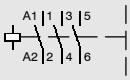
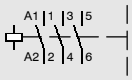
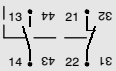
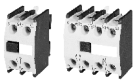
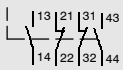
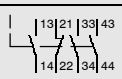
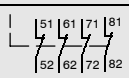
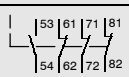
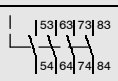
Note:

* Do not reverse directly.

** Auxiliary contact modules, conventional free air thermal current I_{th} = 16 A.

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Coil DC operated

Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005	Terminal markings Coil to EN 50005	Std. pack
	AC-3 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW	**AC-4** 220 V 230 V 240 V kW	**380 V 400 V 440 V** kW	500 V kW	660 V 690 V * kW				
 **Basic units, 3-pole**												
J7K-DM-D	7.5	**15**	18.5	18.5	5.5	**11**	15	15	55A			1
J7K-DMA-D	11	**18.5**	22	22	7.5	**15**	18.5	18.5	55A			1
J7K-EM-D	15	**22**	30	30	11	**18.5**	22	22	90A			1
J7K-EMA-D	18.5	**30**	37	37	15	**22**	30	30	90A			1
 **Auxiliary contact module, side mounting**** Can be combined with auxiliary contacts for top mounting up to a maximum of four contacts.										+	+	
J73K-CM-11S	M = Make contact B = Break contact			2-pole	1M	1B					-	5
 **Auxiliary contact modules, top mounting****										+	+	
J73K-BM-11	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.			2-pole	1M	1B						5
J73K-BM-22				4-pole	2M	2B						5
J73K-BM-31					3M	1B						5
J73K-B-02	M = Make contact B = Break contact The combination of basic unit and auxiliary contact module correspond to EN 50005.			2-pole	-	2B						5
J73K-B-20					2M	-						5
J73K-B-04				4-pole	-	4B						5
J73K-B-13					1M	3B						5
J73K-B-40					4M	-						5

Note:

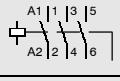
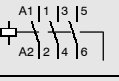
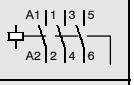
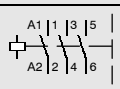
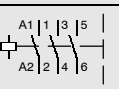
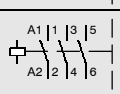
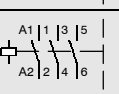
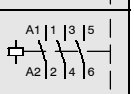
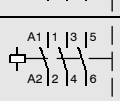
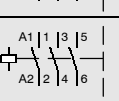
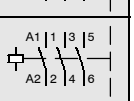
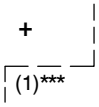
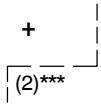
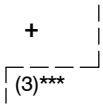
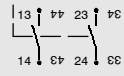
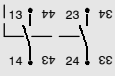
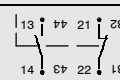
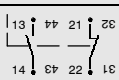
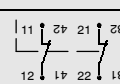
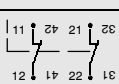
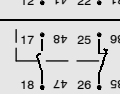
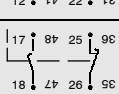
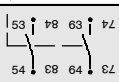
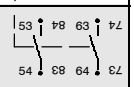
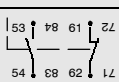
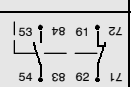
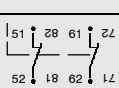
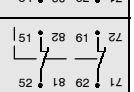
* Do not reverse directly.

** Auxiliary contact modules, conventional free air thermal current I_{th} = 16 A.

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■ Contactor

Coil AC operated

Article No.	Max. three-phase motor rating 50-60 Hz										Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005		
	AC-3 220V 230V 240V kW	**380V 400V 440V** kW	500V kW	660V 690V * kW	1000V * kW	**AC-4** 220V 230V 240V kW	**380V 400V 440V** kW	500V kW	660V 690V * kW	1000V * kW				
  **Basic units** Snap fitting onto 75 mm top-hat rail to EN 50023.														
J7K-FM	22	**37**	45	55	37	18.5	**30**	37	45	37	100A			
J7K-FMA	25	**45**	55	75	45	22	**37**	45	45	37	100A			
J7K-GM	37	**55**	75	90	55	26	**45**	55	55	45	160A			
J7K-GMA	45	**75**	90	110	65	30	**55**	75	75	55	160A			
 **Auxiliary contact modules, side mounting****												+  (1)***	+  (2)***	+  (3)***
J73K-FM-20SI	M = Make contact B = Break contact		2-pole			2M -								
J73K-FM-11SI						1M 1B								
J73K-FM-02SI						- 2B								
J73K-FM-11SID						1M early make 1B late break								
													+	+
J73K-FM-20SA	M = Make contact B = Break contact		2-pole			2M -								
J73K-FM-11SA						1M 1B								
J73K-FM-02SA						- 2B								

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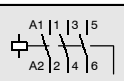
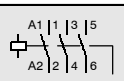
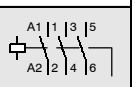
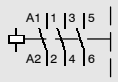
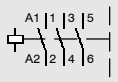
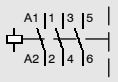
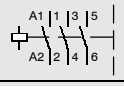
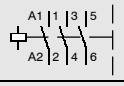
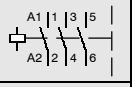
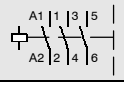
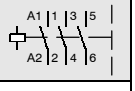
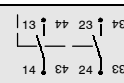
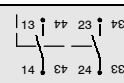
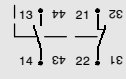
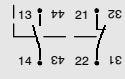
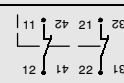
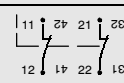
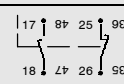
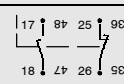
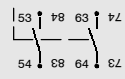
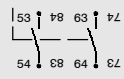
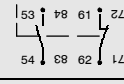
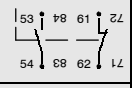
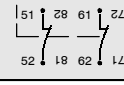
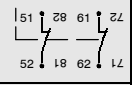
* Do not reverse directly.

** Auxiliary contact modules, conventional free air thermal current I_{th} = 16 A.

*** See layout “Note (1), (2) and (3)” of auxiliary contact modules on page 16.

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Coil DC operated

Article No.	Max. three-phase motor rating 50-60 Hz										Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005		
	AC-3 220V 230V 240V kW	**380V 400V 440V** kW	500V kW	660V 690V * kW	1000V * kW	**AC-4** 220V 230V 240V kW	**380V 400V 440V** kW	500V kW	660V 690V * kW	1000V * kW				
 **Basic units** Snap fitting onto 75 mm top-hat rail to EN 50023. Units with integral suppressor circuit (varistor).														
J7K-FM-D	22	**37**	45	55	37	18.5	**30**	37	45	37	100A			
J7K-FMA-D	25	**45**	55	75	45	22	**37**	45	45	37	100A			
J7K-GM-D	37	**55**	75	90	55	26	**45**	55	55	45	160A			
J7K-GMA-D	45	**75**	90	110	65	30	**55**	75	75	55	160A			
 **Auxiliary contact modules, side mounting****												+ (1)***	+ (2)***	+ (3)***
J73K-FM-20SI	M = Make contact B = Break contact		2-pole	2M -										
J73K-FM-11SI				1M 1B										
J73K-FM-02SI				- 2B										
J73K-FM-11SID				1M early make 1B late break										
													+	+
J73K-FM-20SA	M = Make contact B = Break contact		2-pole	2M -										
J73K-FM-11SA				1M 1B										
J73K-FM-02SA				- 2B										

Note:

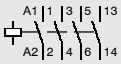
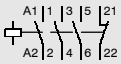
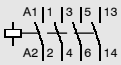
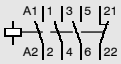
* Do not reverse directly.

** Auxiliary contact modules, conventional free air thermal current I_{th} = 16 A.

*** See layout “Note (1), (2) and (3)” of auxiliary contact modules on page 16.

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■ Contactor, complete units

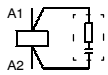
Article No. **Coil AC operated**	Article No. **Coil DC operated**	Max. three-phase motor rating 50-60 Hz **AC-3** 220V 230V 240V kW	**380V 400V 440V** kW	500V kW	660V 690V * kW	**AC-4** 220V 230V 240V kW	**380V 400V 440V** kW	500V kW	660V 690V * kW	Conv. thermal current $I_{th} = I_e$ **AC-1** open	Terminal markings Coil to EN 50005	Std. pack
	**Complete units**											
J7K-BM-10 (230V 50Hz)	**J7K-BM-10-D (24 VDC)**	2.2	**4**	5.5	5.5	1.5	**3**	4	4	20A		AC=3 DC=1
J7K-BM-01 (230V 50Hz)	**J7K-BM-01-D (24 VDC)**	2.2	**4**	5.5	5.5	1.5	**3**	4	4	20A		AC=3 DC=1
J7K-BMA-10 (230V 50Hz)	**J7K-BMA-10-D (24 VDC)**	3	**5.5**	7.5	7.5	2.2	**4**	5.5	5.5	20A		AC=3 DC=1
J7K-BMA-01 (230V 50Hz)	**J7K-BMA-01-D (24 VDC)**	3	**5.5**	7.5	7.5	2.2	**4**	5.5	5.5	20A		AC=3 DC=1

Note:
* Do not reverse directly.

■ Accessories

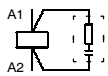


RC Suppressor

Article No.		Voltage	For use with contactor	Note	Std. pack
J7KA-RC250		110-250 V AC	J7K-AMA	For AC operated 50-60 Hz contactor. Note the drop-out time.	1

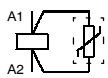


RC Suppressors

Article No.		Voltage	For use with contactor	Note	Std. pack
J7KB-RC250		110-250 V AC	J7K-BM to J7K-EMA	For AC operated 50-60 Hz contactor. Note the drop-out time.	10
J7KF-RC250			J7K-FM to J7K-GMA		10

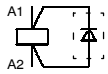


Varistor suppressor

Article No.		Voltage	For use with contactor	Note	Std. pack
J7KA-VG250		110-250 V AC	J7K-AMA(-D)	For AC operated, 50-60 Hz. (J7K-AMA-D) DC operated contactors fitted with integral suppressor circuit as standard	10



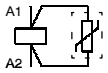
Free-wheel diode suppressor

Article No.		Voltage	For use with contactor	Note	Std. pack
J7KB-FD		12-250V DC	J7K-BM to J7K-EMA	For DC operated contactors. Note drop out time.	10

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Varistor suppressors

Article No.		Voltage	For use with contactor	Note	Std. pack
J7KB-VG250		110-250V AC/DC	J7K-BM to J7K-EMA	For AC operated 50-60 Hz contactors (J7K-BM to J7K-GM(A)) and DC operated contactors (J7K-BM(-D) to J7K-GMA(-D)). DC operated contactors fitted with integral suppressor circuit (varistor) as standard.	10
J7KB-VG415		380-415V AC/DC	J7K-FM to J7K-GMA		10

Mechanical interlocks

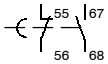
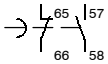
Article No.	For use with contactor	Note	Std. pack
J7KA-MV 	J7K-AMA	For contactors with the same or different magnet systems, mounted vertically or horizontally. Distance between contactors: 0 mm. Mechanical lifespan: 2.5 x 10^6 operations. Additional auxiliary contact modules can be fitted.	5
J7KB-MV 	J7K-BM to J7K-EMA	For contactors with the same or different frame size but with the same magnet system, mounted vertically or horizontally. Distance between contactors: 15 mm. Mechanical lifespan: 5 x 10^6 operations.	5
J7KF-MV* 	J7K-FM to J7K-GMA	For contactors with the same or different magnet systems, mounted vertically or horizontally. Distance between contactors: 0 mm. Mechanical lifespan: 5 x 10^6 operations. Auxiliary contact modules **cannot** be placed between the mechanical interlock and the contactor.	1

Note:

* See layout “Note 4” of auxiliary contact modules on page 16.



Pneumatic timer modules

Article No.	For use with contactor	Note	Terminal ratings	Std. pack
J7KB-PTE-11 **ON-delayed**	J7K-BM to J7K-EMA	Switching time ranges of 0.2-30 s and 20-180 s adjustable. Conventional free-air thermal current 10 A.	**ON-delayed** 	1
J7KB-PTD-11 **OFF-delayed**			**OFF-delayed** 	1



4th-pole, only for AC-1 load

Article No.	For use with contactor	I_e AC-1, open	Terminal rating	Std. pack
J7KC-N	J7K-CM	35 A		1
J7KD-N	J7K-DM	55 A		1
J7KE-N	J7K-EM	75 A		1
J7KF-N	J7K-FM	100 A (No UL/CSA approbiation!)		1

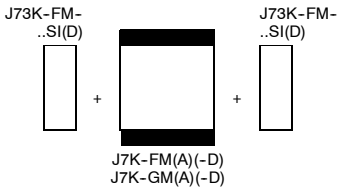
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Individual coil

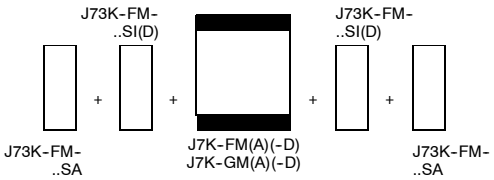
Article No.	For use with contactor	AC-voltage	DC-voltage	Std. pack
J7KB-IC(...)	J7K-BM(A)	24V 50Hz 48V 50Hz 110V 50/60Hz 230V 50/60Hz 415V 50/60Hz	-	1
J7KC-IC(...)	J7K-CM(A)			1
J7KD-IC(...)	J7K-DM(A)			1
J7KE-IC(...)	J7K-EM(A)			1
J7KF-IC(...)	J7K-FM(A)			1
J7KG-IC(...)	J7K-GM(A)			1
J7KB-IC(...)	J7K-BR			1
J7KB-IC-D(...)	J7K-BM(A)-D	-	24 VDC 48 VDC 60 VDC 110 VDC 220 VDC	1
J7KC-IC-D(...)	J7K-CM(A)-D			1
J7KD-IC-D(...)	J7K-DM(A)-D			1
J7KE-IC-D(...)	J7K-EM(A)-D			1
J7KF-IC-D(...)	J7K-FM(A)-D			1
J7KG-IC-D(...)	J7K-GM(A)-D			1
J7KB-IC-D(...)	J7KM-BR-D			1

■ Layout of auxiliary contact modules

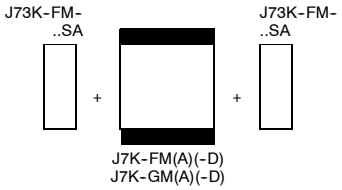
(1)



(2)

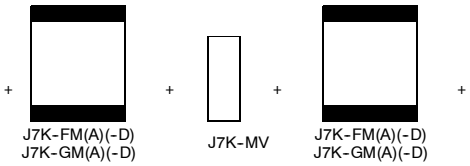


(3)



Note: 1. Up to 8 contacts possible.
2. If there are more than 4 contacts in total, up to 4 make contacts or 4 break contacts are permitted.
3. Any combination is permissible with total of 4 contacts or less.

(4)



Note: 4. Auxiliary contact modules can not be fitted between mechanical interlock and contactor.

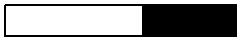
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■ Contact travel diagrams for contactor

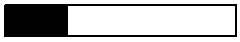
The diagrams show the closing and opening travel of the auxiliary contact modules of contactors and modules at no-load. Tolerances are not taken into consideration.

J7K-AMA-.. (AC)

Make contact

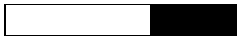


Break contact

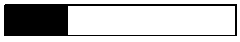


J7K-AMA-..-D (DC)

Make contact

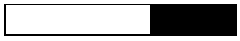


Break contact

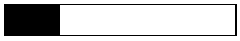


J73K-A-..

Make contact

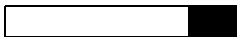


Break contact



J7K-BM(A)-..; J7K-BM(A)-.. + J73K-B(M)-..

Make contact

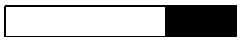


Break contact



J7K-CM(A); J7K-CM(A) + J73K-B(M)-..

Make contact

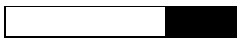


Break contact



J7K-DM(A); J7K-DM(A) + J73K-B(M)-..

Make contact

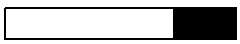


Break contact



J7K-EM(A); J7K-EM(A) + J73K-B(M)-..

Make contact

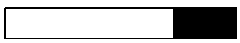


Break contact



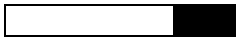
J7K-FM(A)

Make contact



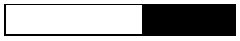
J7K-GM(A)

Make contact



J7K-FM(A)-.. + J73K-FM-..S.

Make contact

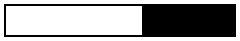


Break contact



J7K-GM(A)-.. + J73K-FM-..S.

Make contact



Break contact



J7K-FM(A)-.. + J73K-FM-..SID

Make contact



Break contact



J7K-GM(A)-.. + J73K-FM-..SID

Make contact



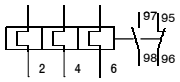
Break contact

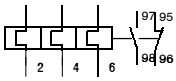


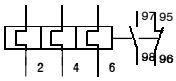
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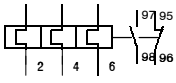
■ Overload relays with single-phasing sensitivity to IEC 947-4-1

Direct mounting

Overload relay	For use with	Terminal marking	Auxiliary contact module***	Setting range overload release** I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Std. pack
J7TK-B-0,4	J7K-BM(A)(-D) J7K-CM(A)(-D)		1M 1B	0.24 - 0.40 A	25	2	3
J7TK-B-0,6				0.40 - 0.60 A	25	4	3
J7TK-B-1,0				0.60 - 1.00 A	25	4	3
J7TK-B-1,6				1.00 - 1.60 A	25	6	3
J7TK-B-2,4				1.60 - 2.40 A	25	10	3
J7TK-B-4				2.40 - 4.00 A	25	16	3
J7TK-B-6				4.00 - 6.00 A	25	20	3
J7TK-B-10				6.00 - 10.00 A	50	25	3
J7TK-B-16				10.00 - 16.00 A	63	35	3
J7TK-B-24				16.00 - 24.00 A	63	50	3

Overload relay	For use with	Terminal marking	Auxiliary contact module***	Setting range overload release** I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Std. pack
J7TK-D-10	J7K-DM(A)(-D) J7K-EM(A)(-D)		1M 1B	6.00 - 10.00 A	50	25	2
J7TK-D-16				10.00 - 16.00 A	63	35	2
J7TK-D-24				16.00 - 24.00 A	63	50	2
J7TK-D-40				24.00 - 40.00 A	125	80	2
J7TK-D-57				40.00 - 57.00 A	160	100	2
J7TK-D-63				50.00 - 63.00 A	160	100	2

Overload relay	For use with	Terminal marking	Auxiliary contact module***	Setting range overload release** I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Max. A	Std. pack
J7TK-F-35/FP	J7K-FM(A)(-D)		1M 1B	25.00 - 35.00 A	125	100	2400	1
J7TK-F-50/FP				35.00 - 50.00 A	160	125	2400	1
J7TK-F-70/FP				50.00 - 70.00 A	250	160	2400	1
J7TK-F-100/FP				70.00- 100.00 A	250	160	2400	1

Overload relay	For use with	Terminal marking	Auxiliary contact module***	Setting range overload release** I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Max. A	Std. pack
J7TK-F-100/GP	J7K-GM(A)(-D)		1M 1B	70.00- 100.00 A	315	200	2400	1
J7TK-F-125/GP				95.00- 125.00 A	315	250	2400	1
J7TK-F-150/GP				120.00- 142.00 A	315	250	2400	1

Note:

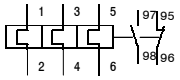
* The max. permissible fuse of the contactor must be observed when mounting overload relays directly.

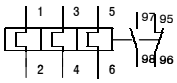
** Tripping class 10 A.

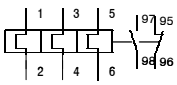
*** M = make contact, B = Break contact

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Separate mounting

Overload relay	Terminal marking	Auxiliary contact module***	Setting range overload release** I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Max. A	Std. pack
J7TK-D-75		1M 1B	63.00 - 75.00 A	250	160	-	1

Overload relay	Terminal marking	Auxiliary contact module***	Setting range** overload release I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Max. A	Std. pack
J7TK-F-35/FB		1M 1B	25.00 - 35.00 A	125	100	2400	1
J7TK-F-50/FB			35.00 - 50.00 A	160	125	2400	1
J7TK-F-70/FB			50.00 - 70.00 A	250	160	2400	1
J7TK-F-100/FB			70.00- 100.00 A	315	200	2400	1

Overload relay	Terminal marking	Auxiliary contact module***	Setting range** overload release I_r	Short-circuit protection* Type of coordination "1" max. A gL	"2" max. A gL	Max. A	Std. pack
J7TK-F-100/GB		1M 1B	70.00- 100.00 A	315	200	2400	1
J7TK-F-125/GB			95.00- 125.00 A	315	250	2400	1
J7TK-F-150/GB			120.00- 150.00 A	315	250	2400	1

Note:

* The max. permissible fuse of the contactor must be observed when mounting overload relays directly.
** Tripping class 10 A.
*** M = make contact, B = Break contact

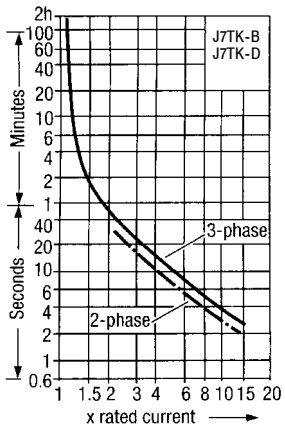
Bases for separate mounting

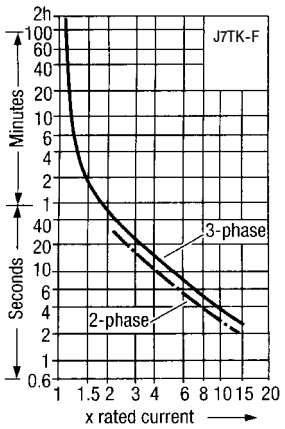
	For use with	Application note	Std. pack
 J7TKB-B	J7TK-B	Snap fitting on top-hat rail to EN 50022-35x15 or screw fixing.	5
J7TKD-B	J7TK-D		5

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Tripping characteristics

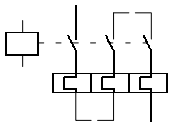
These tripping characteristics show mean values of the tolerance range at an ambient temperature of 20°C, starting from cold. They show the tripping time in relation to the response current; at operational temperature, the tripping time of the overload relay drops to approx. 1/4 of that shown. Specific characteristics for each individual setting range are available on request.



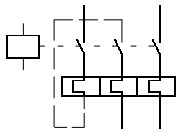


Protection of DC motors

1-pole



2-pole



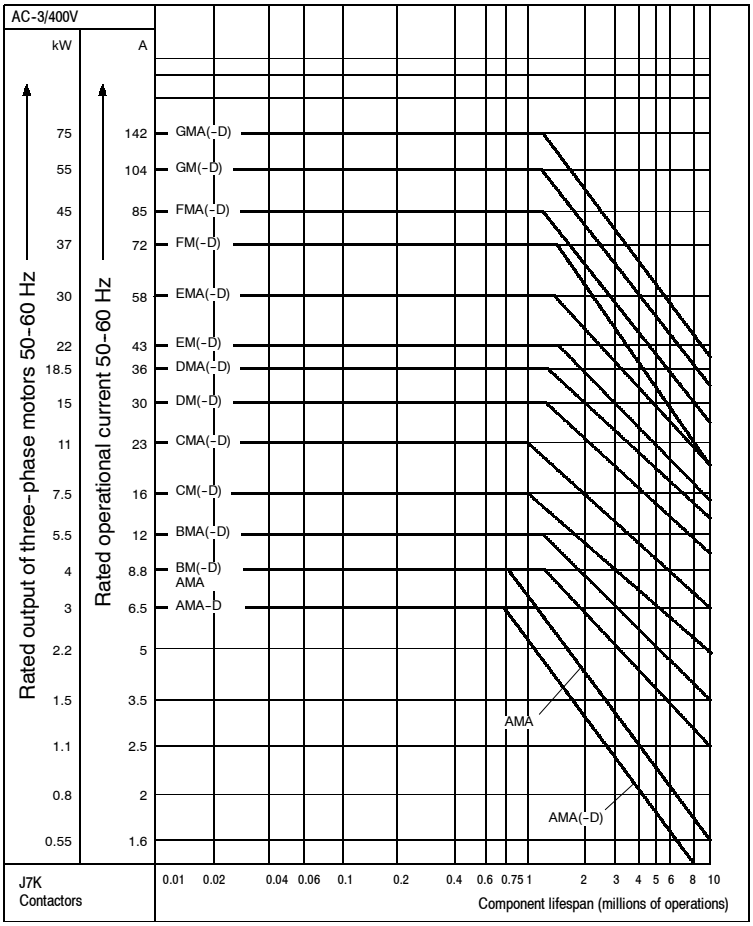
Features

	J7TK-B J7TK-D	J7TK-F
Single-phasing sensitivity	X	X
Temperature compensation	X	X
Auxiliary contacts 1M+1B	X	X
Test-/OFF button	X	X
Hand/Auto reset button	X	X
Separate mounting	X	X
Trip-free release	X	X
Trip indication	X	X

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Engineering Data

Normal switching duty (AC-3)



Squirrel-cage motors

Operating characteristics:
Starting from rest
Stopping after attaining full running speed

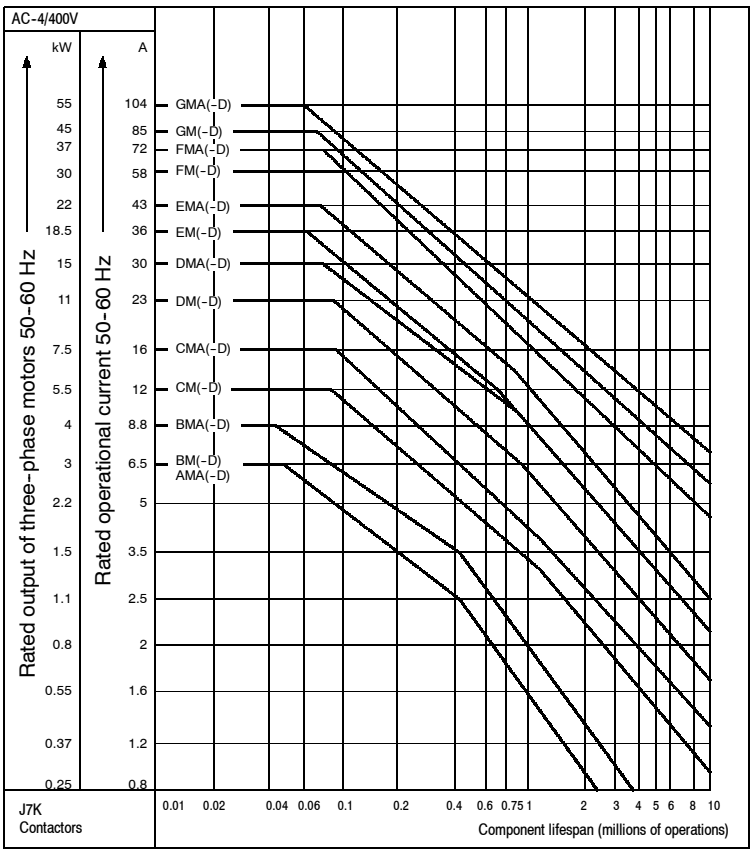
Electrical characteristics:
Make up to 6 x rated motor current
Break 1 x rated motor current

Utilization category:
100% AC-3

Typical applications:
Compressors, Pumps, Fans, Valves
Lifts, Escalators, Conveyors, Bucket elevators
Mixers, Agitators, Centrifuges, Air-conditioning systems.

Drives in general in manufacturing and processing machines.

Extreme switching duty (AC-4)



Squirrel-cage motors

Operating characteristics:
Inching, plugging, reversing

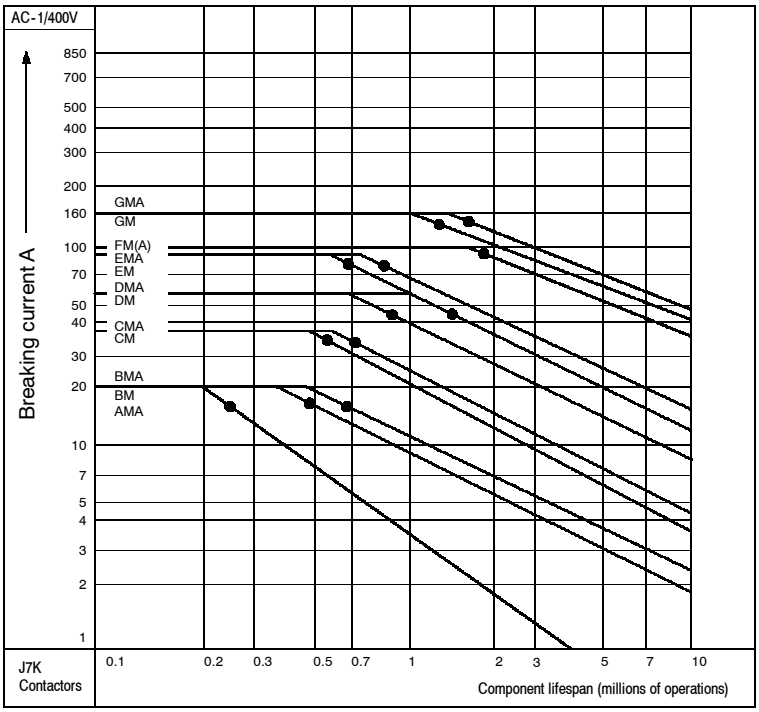
Electrical characteristics:
Make up to 6 x rated motor current
Break up to 6 x rated motor current

Utilization category:
100% AC-4

Typical applications:
Printing presses
Wire-drawing machines
Centrifuges
Special drives for manufacturing and processing machines.

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Switching duty for non-motor loads, 3-pole (AC-1)



● Max, conventional thermal current I_{th} for enclosed type

Operating characteristics:
Non-inductive or slightly inductive loads

Electrical characteristics:

Make	up to 1.5 x rated motor current
Break	1 x rated motor current

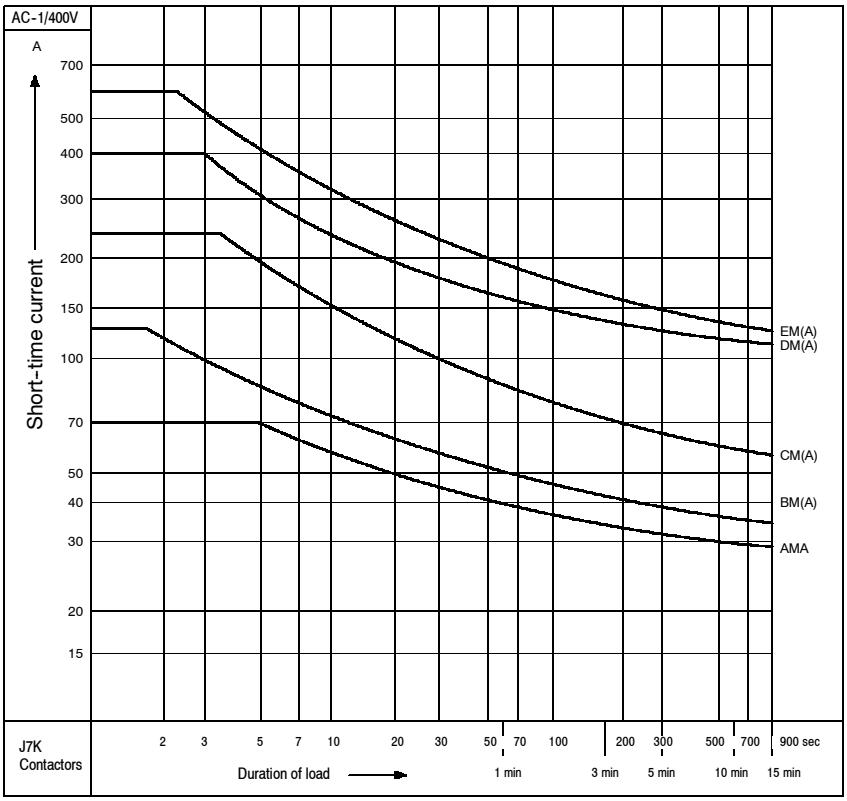
Utilization category:
100% AC-1

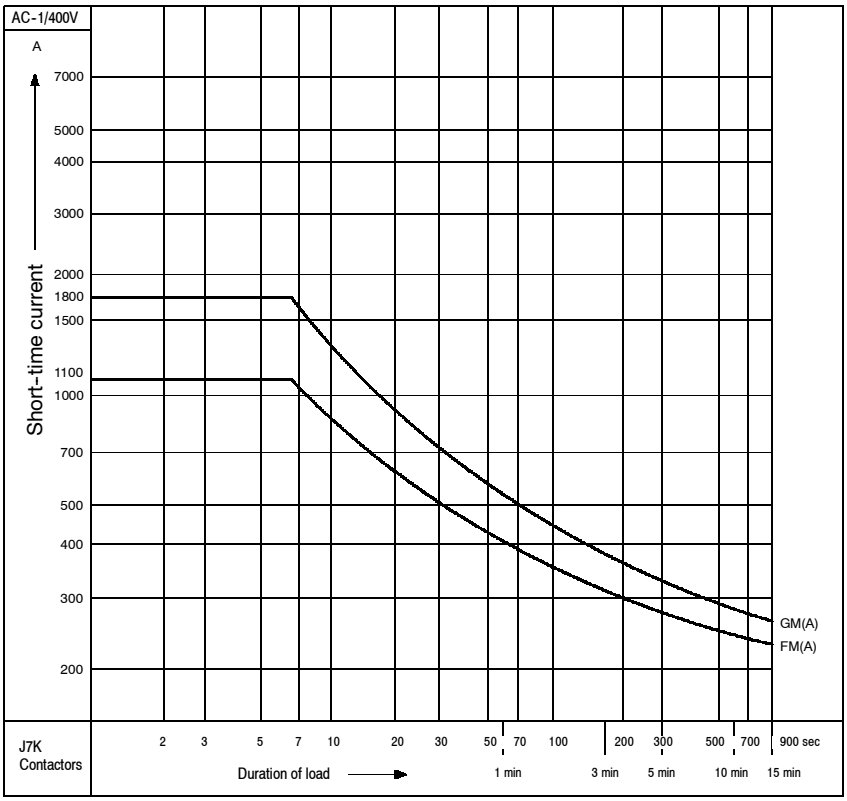
Typical applications:
Electric heater

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Short-time loading

Pause between two loads: 15 min



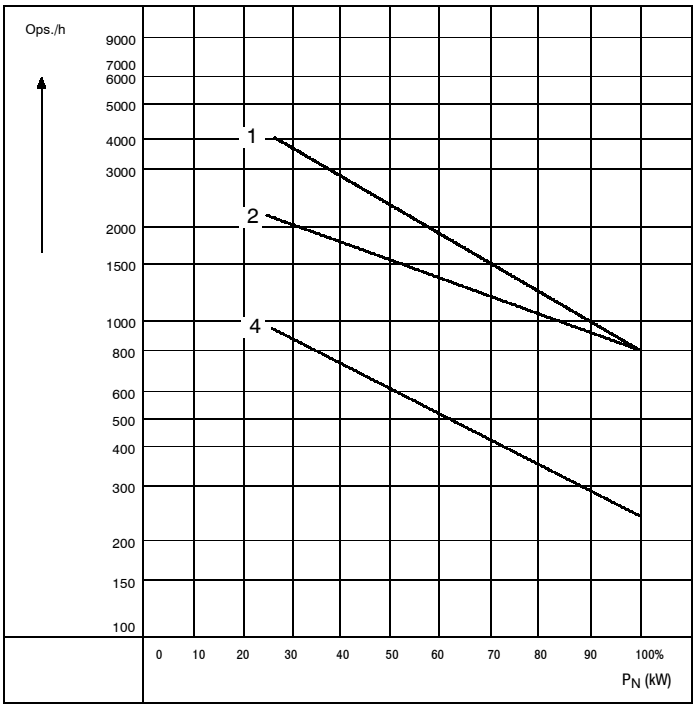


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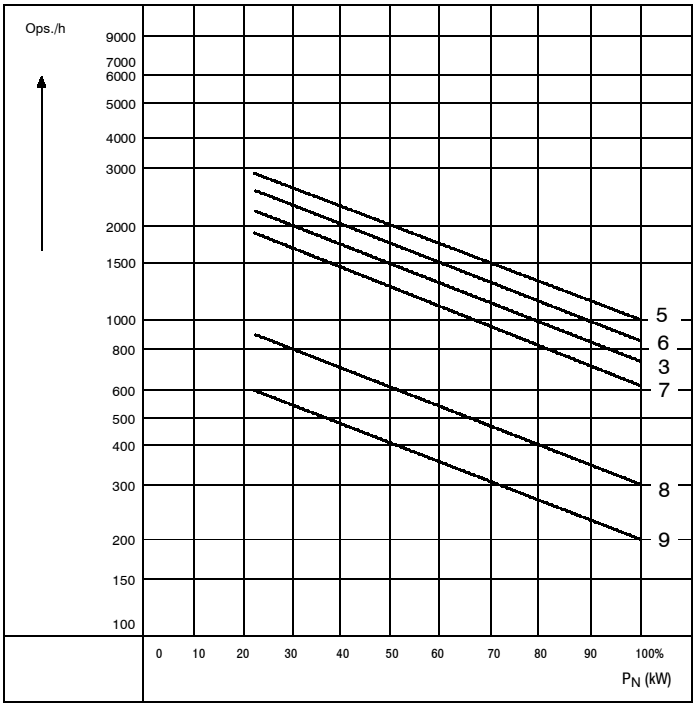
Determination of the max. number of operations per hour in relation to rating and utilization category

(Approx. value)

Ops./h = Max. number of operations per hour.



Type	Characteristics		
	AC-1	AC-3	AC-2 AC-4
J7K-AMA(-D)	2	1	4
J7K-BM(-D)	2	1	4
J7K-BMA(-D)	2	1	4
J7K-CM(-D)	2	1	4
J7K-CMA(-D)	2	1	4
J7K-DM(-D)	2	1	4
J7K-DMA(-D)	2	1	4
J7K-EM(-D)	2	1	4
J7K-EMA(-D)	2	1	4
J7K-FM(-D)	3	5	8
J7K-FMA(-D)	3	6	8
J7K-GM(-D)	3	5	8
J7K-GMA(-D)	3	7	9

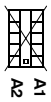


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Specifications

■ Contactors

General

Typ			J7K-AMA	J7K-AMA-D
Standards			IEC 947, EN 60947, UL, CSA	
Mechanical lifespan			10 x 10^6 Ops.	20 x 10^6 Ops.
Max. operating frequency	Mechanical		9000 Ops./h	
Climatic proofing			Damp heat, constant, to IEC 68 Part 2 - 3	
			Damp heat, cyclic, to IEC 68 Part 2 - 30	
Ambient temperature	Open	min./max.	-25/+50 °C	
Mounting position			As required, except vertical with A1/A2 at bottom 	
Mechanical shock resistance (sinusoidal shock 10 ms)				
Basic unit	Main contacts	Make contacts	10 g	
	Auxiliary contacts	Make/break contacts	10/8 g	
Basic unit with auxiliary contact module	Main contacts	Make contacts	10 g	
	Auxiliary contacts	Make/break contacts	10/8 g	
Degree of protection			IP20	
Protection against direct contact from front when actuated by a perpenticular test finger (IEC536)			Finger- and back-of-hand proof	
Weights			0.17 kg	0.2 kg
Terminal capacity Auxiliary and main contacts	Solid (min.)		2 x 0.75 mm^2	
	Solid (max.)		2 x 2.5 mm^2	
	Flexible with ferrule to DIN 46228 (max.)		2 x 1.5 mm^2	
	Solid or stranded (min.)		18 AWG	
	Solid or stranded (max.)		14 AWG	
	Terminal screw		M 3.5	
	Pozidriv screwdriver		Size 2	
	Standard screwdriver		0.8 x 5.5 mm 1 x 6 mm	
Tightening torque (max.)			1.2 N	

Main contacts

Typ		J7K-AMA	J7K-AMA-D
Rated impulse withstand voltage U_{imp}		6000 V	
Overvoltage category/pollution degree		III/3	
Rated insulation voltage U_i		690 V AC	
Rated operational voltage U_e		690 V AC	
"Safe isolation" to IEC536 between coil and contacts and between contacts		300 V AC	
Making capacity cos φ to IEC 947		200 A	110 A
Breaking capacity cos φ to IEC 947	220/230 V	90 A	
	380/400 V	90 A	
	500 V	64 A	
	660/690 V	54 A	
Short-circuit rating max fuse	Type "2" coordination	10 A gL	
	Type "1" coordination	20 A gL	

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AC

Typ		J7K-AMA(-4)	J7K-AMA-D
AC-1 duty (conventional free air thermal current I_{th} ≙ rated operational current I_e 50-60 Hz			
3-pole	Open at 40 °C	22 A	
	Open at 50 °C	20 A	
	Open at 55 °C	19 A	
1-pole Three/four main contacts in parallel	Open*	50 A (60 A for J7K-AMA-4)	
AC-3 duty (rated operational current I_e Open*			
50-60 Hz	220/230 V	8.8 A	
	380/400 V	8.8 A	
	500 V	6.4 A	
	660/690 V	4.8 A	
AC-4 duty (rated operational current I_e Open*			
50-60 Hz	220/230 V	6.6 A	
	380/400 V	6.6 A	
	500 V	5 A	
	660/690 V	3.4 A	

DC (rated operational current I_e, Open**

Typ		J7K-AMA	J7K-AMA-4	J7K-AMA-D
DC-1 duty	12 V	20 A	-	20 A
	24 V	20 A	-	20 A
	60 V	20 A	-	20 A
	110 V	20 A	-	20 A
	220 V	20 A	-	20 A
DC-3 duty	12 V	8 A	-	8 A
	24 V	8 A	-	8 A
	60 V	4 A	-	4 A
	110 V	3 A	-	3 A
	220 V	-	1 A	-
DC-5 duty	12 V	2.5 A	-	2.5 A
	24 V	2.5 A	-	2.5 A
	60 V	2.5 A	-	2.5 A
	110 V	1.5 A	2.5 A	1.5 A
	220 V	0.3 A	1 A	0.3 A
Current heat loss (3- or 4-pole)	at conventional free air thermal current I_{th}	2 W	2.7 W	3.5 W
	at I_e to AC-3/400 V	0.5 W	-	0.7 W

Note:

* At maximum permissible ambient temperature

** For switching DC configuration see Appendix, page NO TAG.

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Magnet system

Typ			J7K-AMA	J7K-AMA-D
Pick-up and drop-out values	AC operated, single voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	0.8 - 1.1 x U_c	-
	AC operated, Dual-frequency coil ...V 50/60 Hz	Pick-up	0.85 - 1.1 x U_c	-
	DC operated	Pick-up	-	0.85 - 1.1 x U_c
Power consumption of the coil	AC operated, single voltage coil 50 Hz and dual-voltage coil 50 Hz, 60 Hz	Pick-up	25 VA/22 W	-
		Sealing	4.6 VA/1.3 W	-
	AC operated, dual-frequency coil ...V 50/60 Hz at 50 Hz	Pick-up	30 VA/26 W	-
		Sealing	5.4 VA/1.6 W	-
	AC operated, dual-frequency coil ...V 50/60 Hz at 60 Hz	Pick-up	29 VA/24 W	-
		Sealing	3.9 VA/1.1 W	-
	DC operated	Pick-up = Sealing	-	2.6 W
Duty factor			100 % DF	
Switching times at 100 % U_c (Approximate values)	Make contacts	Closing delay	14 - 21 ms	26 -35 ms
		Opening delay	8 - 18 ms	15 - 25 ms
	With top mounting auxiliary contacts	Closing delay	max. 45 ms	max. 70 ms
Reversing contactors	Changeover time at 110 % U_c		16 - 21 ms	40 - 50 ms
	Arcing time at 690 V AC		12 ms	
Coil 50/60 Hz			Mechanical lifespan at 50 Hz approximately 30% less than listed under “General”	

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Contacts

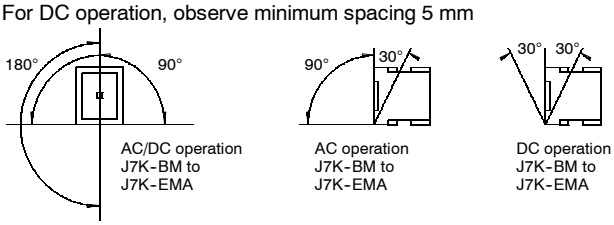
Typ			J7K-AMA	J7K-AMA-D
Interlocked opposing contacts to German specification ZH 1/457, including auxiliary contact modules			+	
Rated impulse withstand voltage U_{imp}			6000 V	
Overvoltage category/pollution degree			III/3	
Rated insulation voltage U_i			690 V AC	
Rated operational voltage U_e			600 V AC	
“Safe isolation” to IEC536 between coil and auxiliary contacts, and between auxiliary contacts			300 V AC	
Rated operational current Ie AC-15		220/240 V	6 A	
		380/415 V	3 A	
		500 V	1.5 A	
Top mounting auxiliary contacts			4 A	
Rated operational current I_e at DC-13* (Above 110 V and at L/R > 15 ms it is essential that means of arc suppression be used in parallel with the contacts): required capacitor 1 µF und resistor 0.5 Ω in series; L/R ≤15 ms, e.g. contactor coils, solenoid valves, DC motors:				
1 contact in series		at 24 V	2.5 A	
2 contacts in series		at 60 V	2.5 A	
3 contacts in series		at 110 V	1.5 A	
3 contacts in series		at 220 V	0.5 A	
Conventional free air thermal current I_{th}			10 A	
Control circuit reliability U_e = 24 V DC, 17 V, 5.4 mA			Error rate $H_F < 10^{-8}$, < 1 fault in 100 million operations	
Component lifespan (U_e = 240 V)	AC-15		0.2 x 10^6 Operations	
	DC-13*	At Ie = 0.5 A, L/R= 50 ms, 2 contacts in series	0.15 x 10^6 Operations	
Short-circuit rating with direct connection to mains or transformer > 1000 VA without welding	Maximum overcurrent protective device	220/240 V	J7M-AM-4	
		380/415 V	J7M-AM-4	
	Without welding	500 V	6 A gL	
	Maximum fuse	500 V	10 A fast	
Current heat loss at conventional free air thermal current I_{th} per contact			max. 0.2 W	max. 0.3 W

Note:

* Making and breaking currents to DC-13, time constant as stated

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General

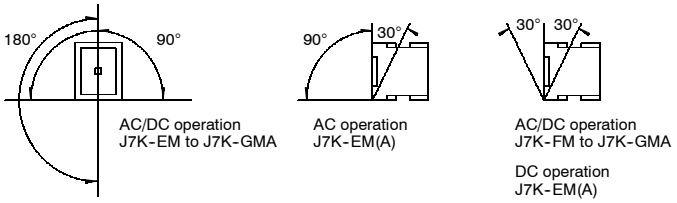
Typ			J7K-BM	J7K-BMA	J7K-CM	J7K-CMA	J7K-DM	J7K-DMA
Standards			IEC 947, EN 60947, UL, CSA					
Mechanical lifespan	AC operated		10 x 10^6 Ops.					
	DC operated		10 x 10^6 Ops.					
Max. operating frequency Mechanical	AC operated (Ops./h)		7000	7000	9000	9000	9000	5000
	DC operated (Ops./h)		9000	9000	9000	5000	5000	5000
Climatic proofing			Damp heat, constant, to IEC 68 Part 2 - 3					
			Damp heat, cyclic, to IEC 68 Part 2 - 30					
Ambient temperature	Open	min./max.	-25/+50 °C					
Mounting position			For DC operation, observe minimum spacing 5 mm  AC/DC operation J7K-BM to J7K-EMA AC operation J7K-BM to J7K-EMA DC operation J7K-BM to J7K-EMA					
Mechanical shock resistance (sinusoidal 20 ms)	Main contacts	Make contacts (AC)	10 g	10 g	8 g			
	Auxiliary contacts	Make contacts (AC)	10 g	10 g	8 g			
		Break contacts (AC)	6 g					
Degree of protection			IP20		IP00			
Protection against direct contact from the front by a perpenticular test finger (IEC536)			Finger- and back-of-hand proof					
Weights	Basic unit	AC operated	0.32 kg		0.42 kg		0.71 kg	
		DC operated	0.50 kg		0.77 kg		1.25 kg	
Terminal capacities **main cables:** Screw terminal; one or two conductors can be connected	Solid*		1 x (0.75-4) mm^2		1 x (1 - 6) mm^2		1 x (2.5-10) mm^2	
			2 x (0.75-4) mm^2		2 x (1 - 6) mm^2		2 x (2.5-10) mm^2	
	Flexible with ferrule to DIN 46228 (max.)*		1 x (0.75-4) mm^2		1 x (1 - 6) mm^2		1 x (2.5-16) mm^2	
			2 x (0.75-4) mm^2		2 x (1 - 6) mm^2		2 x (2.5-10) mm^2	
	Stranded		-		-		1 x (10-25) mm^2	
			-		-		2 x 10 mm^2	
	Solid or stranded	min.	AWG 18		AWG 16		AWG 12	
		max.	AWG 10				AWG 4	
Terminal capacities **control circuit cable:** Screw terminal; one or two conductors can be connected	Solid		1 x (0.75-4) mm^2					
			2 x (0.75-4) mm^2					
	Flexible with ferrule		1 x (0.75-2.5) mm^2					
			2 x (0.75-2.5) mm^2					
	Solid or stranded	min.	AWG 18					
		max.	AWG 12					
Terminal screw	Main cable		M 3.5		M 4		M 6	
	Control circuit cable		M 3.5					
Main cable and control circuit cable	Pozidriv screwdriver		Size 2					
	Standard screwdriver		0.8 x 5.5 mm					
			1 x 6 mm					
Tightening torque	Main cable		1.2 Nm		1.8 Nm		4 Nm	
	Control circuit cable		1.2 Nm					

Note:

* When using two conductors, maximum permissible difference in cross-section: one size.

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General

Typ			J7K-EM	J7K-EMA	J7K-FM	J7K-FMA	J7K-GM	J7K-GMA
Standards			IEC 947, EN 60947, UL, CSA					
Mechanical lifespan	AC operated		10 x 10^6 Ops.					
	DC operated		10 x 10^6 Ops.		3 x 10^6 Ops.			
Max. operating frequency Mechanical	AC operated (Ops./h)		5000					
	DC operated (Ops./h)		5000		1000			
Climatic proofing	constant		Damp heat, to IEC 68 Part 2 - 3					
	cyclic		Damp heat, to IEC 68 Part 2 - 30					
Ambient temperature	Open	min./max.	-25/+50 °C		-25/+55 °C			
Mounting position			For DC operation, observe minimum spacing 5 mm  AC/DC operation J7K-EM to J7K-GMA AC operation J7K-EM(A) AC/DC operation J7K-FM to J7K-GMA DC operation J7K-EM(A)					
Mechanical shock resistance (sinusoidal)	Main contacts	Make contacts (AC)	8 g (20 ms)		10 g (10 ms)			
	Auxiliary contacts	Make contacts (AC)	8 g (20 ms)		10 g (10 ms)			
		Break contacts (AC)	6 g (20 ms)		8 g (10 ms)			
Degree of protection			IP00					
Protection against direct contact from the front by a perpenticular test finger (IEC536)			Finger- and back-of-hand proof					
Weights	Basic unit	AC operated	0.95 kg		2 kg		2.9 kg	
		DC operated	1.85 kg		2 kg		2.9 kg	
Terminal capacity **main cables:** Screw terminal; one or two conductors can be connected	Solid*		1 x (2.5-16) mm^2		1 x (6-16) mm^2			
			2 x (2.5-16) mm^2		2 x (6-16) mm^2			
	Flexible with ferrule*		1 x (2.5-25) mm^2		1 x (4-50) mm^2		1 x (16-70) mm^2	
			2 x (2.5-10) mm^2		2 x (4-50) mm^2		2 x (16-70) mm^2	
	Stranded		1 x (10-35) mm^2		16 mm^2			
			2 x 10 mm^2		50 mm^2		70 mm^2	
	Solid or stranded	min.	AWG 12		AWG 10		AWG 6	
		max.	AWG 2				AWG 2/0	
Terminal capacity **control circuit cable:** Screw terminal; one or two conductors can be connected	Solid		1 x (0.75-4) mm^2		-			
			2 x (0.75-4) mm^2					
	Flexible with ferrule		1 x (0.75-2.5) mm^2		-			
			2 x (0.75-2.5) mm^2					
	Solid or stranded	min.	AWG 18		-			
		max.	AWG 12		2 x AWG (18-12)			
Terminal screw	Main cable		M 6		M 8 (SW4) Hexagon socket-head screw		M 10 (SW5) Hexagon socket-head screw	
	Control circuit cable		M 3.5					
Main cable and control circuit cable	Pozidriv screwdriver		Size 2					
	Standard screwdriver		0.8 x 5.5 mm					
			1 x 6					
Tightening torque	Main cable		4 Nm		6 Nm		10 Nm	
	Control circuit cable		1.2 Nm					

Note:
* When using two conductors, maximum permissible difference in cross-section: one size.

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Main contacts

Typ		J7K-BM	J7K-BMA	J7K-CM	J7K-CMA	J7K-DM	J7K-DMA
Rated impulse withstand voltage U_{imp}		8000 V					
Overvoltage category/pollution degree		III/3					
Rated insulation voltage U_i		690 V AC					
Rated operational voltage U_e		690 V AC					
"Safe isolation" to IEC 536	between coil and contacts	440 V AC					
	and between contacts	440 V AC					
Making capacity cos φ to IEC 947		200 A		270 A		730 A	
Braking capacity cos φ to IEC 947	220/230 V	130 A		230 A		380 A	
	380/400 V	120 A		230 A		380 A	
	500 V	120 A		230 A		355 A	
	660/690 V	100 A		210 A		255 A	
Short-circuit rating Maximum fuse	Type "2" coordination	20 A gL		35 A gL		63 A gL	
	Type "1" coordination	25 A gL		50 A gL		100 A gL	

Typ		J7K-EM	J7K-EMA	J7K-FM	J7K-FMA	J7K-GM	J7K-GMA
Rated impulse withstand voltage U_{imp}		8000 V					
Overvoltage category/pollution degree		III/3					
Rated insulation voltage U_i		690 V AC		1000 V AC			
Rated operational voltage U_e		690 V AC		1000 V AC			
"Safe isolation" to IEC 536	between coil and contacts	440 V AC		500 V AC			
	and between contacts	440 V AC		500 V AC		690 V AC	
Making capacity cos φ to IEC 947		950 A		1300 A		1800 A	
Breaking capacity cos φ to IEC 947	220/230 V	750 A		1100 A		1800 A	
	380/400 V	600 A		1100 A		1800 A	
	500 V	600 A		1100 A		1800 A	
	660/690 V	545 A		650 A		1200 A	
	1000 V	-		330 A		630 A	
Short-circuit rating Maximum fuse	Type "2" coordination	100 A gL		160 A gL		250 A gL	
	Type "1" coordination	125 A gL		250 A gL		315 A gL	

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AC

Typ			J7K-BM	J7K-BMA	J7K-CM	J7K-CMA	J7K-DM	J7K-DMA
AC-1 duty								
Conventional free air thermal current I_{th} ≙ rated operational current I_e 50-60 Hz up to 690 V	3-pole, open	at 40 °C	22 A		38 A		60 A	
		at 50 °C	20 A		35 A		55 A	
		at 55 °C	19 A		33 A		52 A	
	1-pole, open*		50 A		85 A		140 A	
AC-3 duty								
Rated operational current I_e 50-60 Hz	open*	220/230 V	8.8 A	12 A	15.5 A	22.5 A	30 A	38 A
		380/400 V	8.8 A	12 A	15.5 A	22.5 A	30 A	36 A
		500 V	9 A	12 A	17 A	22.5 A	28 A	32 A
		660/690 V	6.7 A	9 A	13 A	17.5 A	21 A	25 A
AC-4 duty								
Rated operational current I_e 50-60 Hz	open*	220/230 V	6.6 A	8.7 A	11.5 A	15.5 A	22.5 A	30 A
		380/400 V	6.5 A	8.5 A	11.5 A	15.5 A	22.5 A	30 A
		500 V	6.4 A	9 A	11.5 A	17 A	22.5 A	28 A
		660/690 V	4.9 A	6.7 A	9 A	13 A	17.5 A	21 A

Typ			J7K-EM	J7K-EMA	J7K-FM	J7K-FMA	J7K-GM	J7K-GMA
AC-1 duty								
Conventional free air thermal current I_{th} ≙ rated operational current I_e 50-60 Hz up to 690 V	3-pole, open	at 40 °C	98.5 A		114 A		182 A	
		at 50 °C	90 A		104 A		167 A	
		at 55 °C	85 A		100 A		160 A	
	1-pole, open*		225 A		250 A		400 A	
AC-3 duty								
Rated operational current I_e 50-60 Hz	open*	220/230 V	50 A	62 A	75 A	85 A	104 A	147 A
		380/400 V	43 A	58 A	72 A	85 A	104 A	142 A
		500 V	43 A	54 A	64 A	78 A	106 A	127 A
		660/690 V	33 A	42 A	60 A	82 A	98 A	118 A
		1000 V	-	-	28 A	33 A	40 A	47 A
AC-4 duty								
Rated operational current I_e 50-60 Hz	open*	220/230 V	37 A	49 A	64 A	75 A	86 A	106 A
		380/400 V	36 A	43 A	58 A	72 A	85 A	106 A
		500 V	32 A	43 A	54 A	64 A	78 A	106 A
		660/690 V	25 A	33 A	49 A	49 A	60 A	82 A
		1000 V	-	-	28 A	33 A	40 A	40 A

Note:

* At max. permissible ambient temperature.

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DC

Typ		J7K-BM	J7K-BMA	J7K-CM	J7K-CMA	J7K-DM	J7K-DMA
DC-1 duty Rated operational current I_e open	60 V	20 A		35 A		55 A	
	110 V	20 A		35 A		55 A	
	220 V	12 A	15 A	20 A	25 A	40 A	
	440 V	3 A		5 A		7 A	
DC-3 duty Rated operational current I_e open	60 V	15 A	20 A	20 A	28 A	28 A	
	110 V	15 A	20 A	20 A	28 A	28 A	
	220 V	5 A	8 A	10 A	12 A	15 A	
DC-5 duty Rated operational current I_e open	60 V	12 A	16 A	18 A	25 A	25 A	27 A
	110 V	12 A	16 A	18 A	25 A	25 A	27 A
Current heat loss (3-pole) at conventional free air thermal current I_{th} at I_e AC-3/400 V		2.3 W		3.7 W		12.4 W	
		0.4 W	0.8 W	0.7 W	1.5 W	3.8 W	5.5 W

Typ		J7K-EM	J7K-EMA	J7K-FM	J7K-FMA	J7K-GM	J7K-GMA
DC-1 duty Rated operational current I_e open	60 V	90 A		100 A		160 A	
	110 V	90 A		100 A		160 A	
	220 V	80 A		100 A		160 A	
	440 V	10 A		-		-	
DC-3 duty Rated operational current I_e open	60 V	70 A		100 A		160 A	
	110 V	70 A		91 A		145 A	
	220 V	45 A		91 A		145 A	
DC-5 duty Rated operational current I_e open	60 V	45 A	48 A	100 A		160 A	
	110 V	45 A	48 A	91 A		145 A	
	220 V	-	-	91A		145 A	
Current heat loss (3-pole) at conventional free air thermal current I_{th} at I_e AC-3/400 V		20 W		21 W		35 W	
		4.6 W	8.4 W	11 W	15 W	15 W	28 W

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Magnet system

Typ			J7K-BM	J7K-BMA	J7K-CM	J7K-CMA	J7K-DM	J7K-DMA
Pick-up and drop-out values	AC operated	Pick-up	0.8 - 1.1 x U_c (0.85 - 1.1 x U_c to 50/60 Hz coil)					
	DC operated[1])	Pick-up	0.85 - 1.1 x U_c					
Power consumption of the coil	AC operated	Pick-up	67 VA		100 VA		136 VA	
			52 W		72 W		88 W	
	Single-voltage coil ...V 50 Hz	Sealing	8.5 VA		10 VA		14 VA	
			2.5 W		3 W		3.5 W	
	Dual-voltage coil ...V 50 Hz ...V 60 Hz	Sealing	8.6 VA		10 VA		15 VA	
			2.5 W		3 W		4 W	
	DC operated[1])	Pick-up	9.5 W		10 W		14.5 W	
		Sealing	9.5 W		10 W		14.5 W	
Duty factor			100 % DF					
Switching times at 100 % U_c (approximate values); Main contacts	AC operated	Closing delay	14-22 ms		9-19 ms		11-19 ms	
		Opening delay	5-14 ms		5-13 ms		6-13 ms	
	DC operated[1])	Closing delay	35-40 ms		40-55 ms		68-75 ms	
		Opening delay	5-10 ms		6-10 ms		10-15 ms	
Reversing contactors, AC operated, Changeover time at 100 % U_c			13-21 ms[2])		13-19 ms[2])		12-16 ms[2])	
Arcing time when AC operated			≦10 ms		<20 ms			
Coil 50/60 Hz			Mechanical lifespan at 50 Hz approximately 30 % less than listed under "General"					

Typ			J7K-EM	J7K-EMA	J7K-FM	J7K-FMA	J7K-GM	J7K-GMA
Pick-up and drop-out values	AC operated	Pick-up	0.8 - 1.1 x U_c (0.85 - 1.1 x U_c to 50/60 Hz coil)					
	DC operated[1])	Pick-up	0.85 - 1.1 x U_c					
Power consumption of the coil	AC operated	Pick-up	185 VA		320 VA		550 VA	
			106 W		150 W		220 W	
	Single-voltage coil ...V 50 Hz	Sealing	16 VA		24 VA		38 VA	
			4.5 W		5.5 W		10 W	
	Dual-voltage coil ...V 50 Hz ...V 60 Hz	Sealing	16.5 VA		26 VA		40 VA	
			5.8 W		7 W		10 W	
	DC operated[1])	Pick-up	16 W		230 W[1])		360 W[1])	
		Sealing	16 W		5 W[1])		5.7 W[1])	
Duty factor			100 % DF					
Switching times at 100 % U_c (approximate values); Main contacts	AC operated	Closing delay	14-22 ms		20-24 ms		18-28 ms	
		Opening delay	5-15 ms		8-13 ms		7-11 ms	
	DC operated[1])	Closing delay	75-90 ms		27-29 ms		28-30 ms	
		Opening delay	12-18 ms		12-23 ms		13-16 ms	
Reversing contactors, AC operated, Changeover time at 100 % U_c			13-19 ms[2])		21-30 ms		23-30 ms[3])	
Arcing time when AC operated			<20 ms		10-20 ms		10-25 ms	
Coil 50/60 Hz			Mechanical lifespan at 50 Hz approximately 30 % less than listed under "General"					

Note:
[1]) Smoothed DC voltage of three-phase bridge rectifier.
[2]) J7K-BM(A) to J7K-EM(A) must have a current-free pause of at least 25 ms for reversing at 660/690 V.
[3]) J7K-GM(A) must have a current-free pause of at least ≧25 ms for reversing at 1000 V.

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■ Auxiliary contact modules

Typ			J7K-BM to J7K-EMA	J7K-FM to J7K-GMA
Rated impulse withstand voltage U_{imp}			6000 V	
Overvoltage category/pollution degree			III/3	
Rated insulation voltage U_i			690 V AC	
Rated operational voltage U_e			500 V AC	
"Safe isolation" to IEC 536	between coil and auxiliary contacts		440 V AC	500 V AC
	and between auxiliary contacts		440 V AC	500 V AC
Rated operational current I_e	AC-15	220/240 V	6 A	
		380/415 V	4 A	
		500 V	1.5 A	2.5 A
	DC-13*	24/60/110/220V L/R ≦ 15 ms	10/6/3/1 A	
Conventional free air thermal current I_{th}			16 A	
Control circuit reliability at U_e = 24 V DC, 17 V, 5.4 mA		Error rate H_F	$< 10^{-8}$ < 1 fault operation in 100 million operations	
Short-circuit rating without welding maximum fuse			16 A gL	

Note:

* Making and breaking currents to DC-13 time constant as stated

■ Pneumatic timer module

General

Typ			J7KB-PTE-11, J7KB-PTD-11
Standards			IEC 947, EN 60947, UL, CSA
Mechanical lifespan		AC	1 x 10^6 ops.
		DC	1 x 10^6 ops.
Maximum operating frequency, mechanical		AC	3600 ops./h
		DC	3600 ops./h
Climatic proofing			Damp heat, constant to IEC 68 Part 2-3 Damp heat, cyclic to IEC 68 Part 2-30
Ambient temperature	Open	min./max.	-25/+50 °C
Mounting position			As required, except suspended
Mechanical shock resistance (sinusoidal 20 ms) Make/Brake contacts			10/6 g
Degree of protection			IP00
Protection against direct contact			Finger- and back-of-hand proof when actuated from the front by a perpendicular test finger (IEC 536)
Terminal capacities	Solid		1 x (0.5-2.5) mm^2
			2 x (0.5-2.5) mm^2
	Flexible with ferrule		1 x (0.5-1.5) mm^2
			2 x (0.5-0.75) mm^2
	Solid or Stranded		AWG 18-14
Terminal screws	Size		M3
	Pozidriv screwdriver		Size 2
	Standard screwdriver		0.8 x 5.5 mm
			1 x 6 mm
	Tightening torque		1.2 N

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Contacts

Typ			J7KB-PTE-11, J7KB-PTD-11
Rated impulse withstand voltage U_{imp}			8000 V
Overvoltage category/pollution degree			III/3
Rated insulation voltage U_i			690 V AC
Rated operational voltage U_e			500 V AC
Rated operational current I_e AC-15		220/240 V	4 A
		380/415 V	4 A
Rated operational current I_e DC-13* Above 110 V and at L/R > 15 ms it is essential that an arc-quenching device (RC suppressor) be used in parallel with the contacts. Required capacitor 1µF and resistor o.5 Ω series.	L/R ≦15 ms e.g. contactor coils, solenoid valves, DC motors	24 V	10 A
		60 V	6 A
		110 V	3 A
		220 V	1 A
	L/R ≦50 ms e.g. magnetic clutches, solenoid brakes	24 V	4 A
		60 V	4 A
		110 V	1 A
		220 V	0.5 A
Conventional free air thermal current I_{th}			10 A
Control circuit reliability at U_e = 24 V DC, 17 V, 5,4 mA		Error rate H_F	$<10^{-8}$ <1 fault operation in 100 million operations
Short-circuit rating without welding Maximum fuse		500 V	6 A gL
Current heat loss at conventional free air thermal current I_{th}		Per contact	max. 0.3 W

Note:
* Making and breaking currents to DC-13 time constant as stated

Magnet system/control circuit

Typ	J7KB-PTE-11, J7KB-PTD-11
Duty factor	100 % DF
Repetition accuracy	<3%
Time deviation in relation to ambient temperature Based on +20°C	0.2%/K
Long-time deviation	+15%
Recovery time (after 100% time delay)	20 ms
Coil 50/60 Hz, mechanical lifespan	At 50 Hz approximately 30% less than listed under “General”

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■ J7TK Overload relay

General

Typ			J7TK-B-..	J7TK-D-..	J7TK-F-../FB J7TK-F-../FP	J7TK-F-../GB J7TK-F-../GP
Standards			IEC 947, EN 60947, UL, CSA			
Climatic proofing			Damp heat, constant to IEC 68 Part 2-3 Damp heat, cyclic to IEC 68 Part 2-30			
Ambient temperature	Open	min./max.	-25/+50 °C*			
Temperature compensation			Continuous			
Mechanical shock resistance (sinusoidal 10 ms)			10 g			
Degree of protection			IP00			
Protection against direct contact			Finger- and back-of-hand proof when actuated from the front by a perpendicular test finger (IEC 536)			

Main contacts

Typ		J7TK-B-..	J7TK-D-..	J7TK-F-../FB J7TK-F-../FP	J7TK-F-../GB J7TK-F-../GP
Rated impulse withstand voltage U_{imp}		6000 V		8000 V	
Overvoltage category/pollution degree		III/3			
Rated insulation voltage U_i		690 V AC		1000 V AC	
Rated operational voltage U_e		690 V AC		1000 V AC	
"Safe insolation" to IEC 536 between main contacts and auxiliary contacts and between main contacts		440 V AC			
Current setting		0.1-24 A	6-75 A	25-100 A	70-142 A (J7TK-F-../GP) 70-150 A (J7TK-F-../GB)
Heat losses in the 3 current paths	Minimum setting	2.5 W	3 (7) W (J7TK-D-75)	< 16 W	< 16 W
	Maximum setting	6 W	7.5 (10) W (J7TK-D-75)	< 28 W	< 28 W
Terminal capacities (max.)	Solid	2 x (1-6) mm^2	2x(1-16) mm^2 **	16 mm^2	16 mm^2
	Flexible without ferrule	-	-	50 mm^2	70 mm^2
	Flexible with ferrule	2 x (1-6) mm^2	1x25 mm^2 2x(1-10)mm^2 **	50 mm^2	70 mm^2
	Stranded	-	-	50 mm^2	70 mm^2
	Solid or stranded	AWG 14-8	AWG 14-2	AWG 2	AWG 2/0
Terminal screws	Size	M4	M6	M8	M10
	Pozidriv screwdriver	Size 2	Size 2	-	-
	Standard screwdriver	1 x 6 mm	1 x 6 mm	-	-
	Hexagon socket-head screw SW	-	-	4 mm	5 mm
	Tightening torque	1.8 Nm	3.5 Nm	6 Nm	10 Nm

Note:

* Operating range to IEC947, EN 60947

** When using two conductors, use equal cross-sections

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Auxiliary and control circuits

Typ			J7TK-B/-D/-F
Rated impulse withstand voltage U_{imp}			6000 V
Overvoltage category/pollution degree			III/3
Terminal capacities	Solid		2 x (0.75-4) mm^2
	Flexible with ferrule		2 x (0.75 -2.5) mm^2
	Solid or Stranded		2 x AWG 18-12
Terminal screws	Size		M3.5
	Pozidriv screwdriver		Size 2
	Standard screwdriver		1 x 6 mm
	Tightening torque		0.8-1.2 Nm
Rated insulation voltage U_i			500 V AC
Rated operational voltage U_e			500 V AC
"Safe insolation" to IEC 536 between auxiliary contacts			240 V AC
Conventional free air thermal current I_{th}			6 A
Rated operational current I_e	AC-15 Make/break contacts	220/240 V	1.5 A/1.5 A
		380/415 V	0.5 A/0.9 A
		500 V	0.5 A/0.8 A
	AC-13* at L/R ≤ 15 ms; Make and break contacts	24 V	0.9 A
		60 V	0.75 A
		110 V	0.4 A
		220 V	0.2 A
Short-circuit rating without welding Maximum fuse			6 A gL

Note:

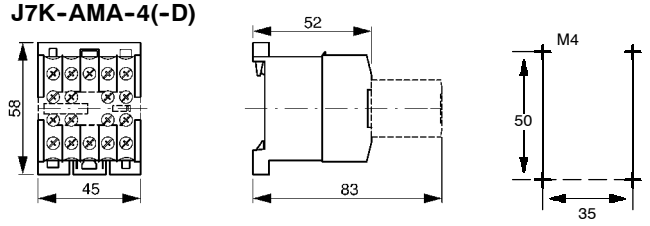
* Making and breaking currents to DC-13, time constant as stated

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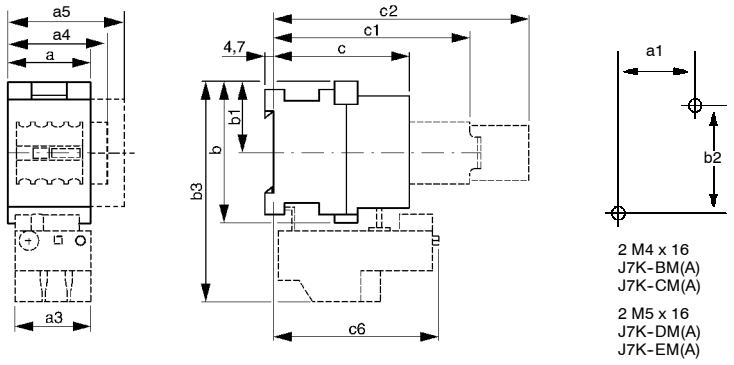
Dimensions

Contactor

J7K-AMA-..(-D)
J7K-AMA-4(-D)



J7K-BM-..(-D) to J7K-EMA-..(-D)
J7K-BM-4(-D)

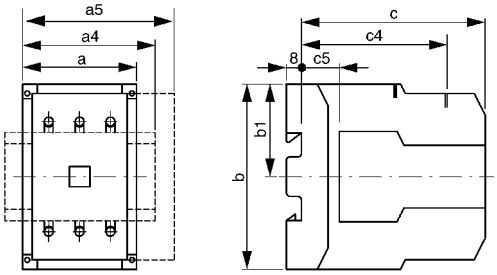


J7K	Contactor			
	BM(-D) BMA(-D) BM-4(-D)		CM(-D) CMA(-D)	
a	45	(45)	45	(45)
a1	35	(35)	35	(35)
a4	-	-	55	(55)
a5	-	-	60	(60)
b	77	(77)	91	(91)
b1	39	(39)	46	(46)
b2	60	(60)	75	(75)
c (with shroud)	76.5	(101.5)	86.3	(113.3)
c (without shroud)	74	(99)	79	(104)
c1	107	(132)	112	(137)
c2	136	(161)	141	(166)

J7TK-B	Overload relays			
	BM(-D) BMA(-D)		CM(-D) CMA(-D)	
a3	45	(45)	45	(45)
b3	120	(120)	133	(133)
c6	90	(115)	96	(121)

J7TK-D	Overload relays			
	DM(-D) DMA(-D)		EM(-D) EMA(-D)	
a3	60	(60)	60	(60)
b3	153	(153)	171	(171)
c6	91	(116)	91	(116)

J7K-FM-..(-D) to J7K-GMA-..(-D)



J7K	Contactor					
	DM(-D) DMA(-D)		EM(-D) EMA(-D)		FM(-D) FMA(-D)	GM(-D) GMA(-D)
a	60	(60)	70	(70)	100	120
a1	50	(50)	60	(60)	80	100
a4	70	(70)	80	(80)	112	130
a5	80	(80)	90	(90)	125	-
b	98	(98)	118	(118)	130	150
b1	49	(49)	59	(59)	65	75
b2	75	(75)	90	(90)	110	130
c	97	(122)	102	(127)	127	137
c1	130	(155)	135	(160)	-	-
c4	-	-	-	-	77	79
c5	-	-	-	-	20	47

a4 With side mounting auxiliary contact module on J7K-CM(-D) to J7K-EMA(-D), with second side mounting auxiliary contact module J73K-FM-..SA on J7K-FM(-D) to J7K-GMA(-D) .

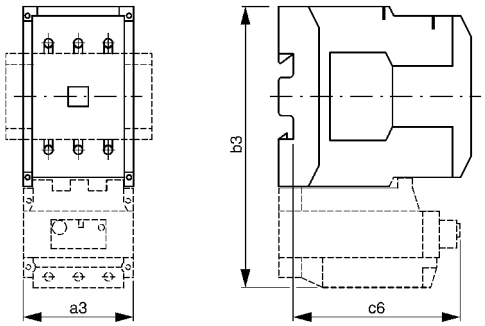
a5 With J7K-..-N 4th pole module

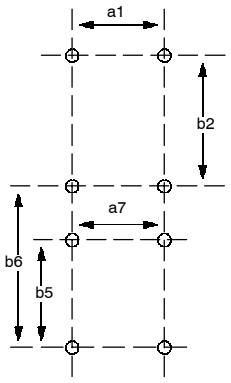
c1 With J73K-B(M)-.. auxiliary contact module

c2 With J7KB-PTE(D)-11 pneumatic timer module

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J7K-FM(A)(-D) + J7TK-F-../FP
J7K-GM(A)(-D) + J7TK-F-../GP

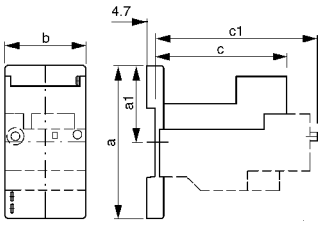


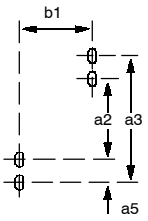


J7K-FM(A)(-D) + J7TK-F-../FP: 2 M5 x 20
J7K-GM(A)(-D) + J7TK-F-../GP: 2 M6 x 20

J7TK-F	Overload relays	
	-/FP	-/GP
a3	100	120
a7	80	80
b3	238	263
b5	74	74
b6	95	100
c6	125	125

J7TK-B + J7TKB-B
J7TK-D + J7TKD-B

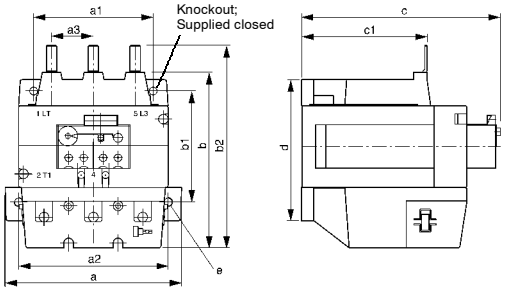




J7TKB-B = 2 M4 x 12
J7TKB-D = 2 M5 x 15

	Overload relays	
	J7TK-B + J7TKB-B	J7TK-D + J7TKD-B
a	85	86
a1	42.5	42.5
a2	60	-
a3	75	75
a5	7.5	-
b	35	60
c	73	112
c1	90	102

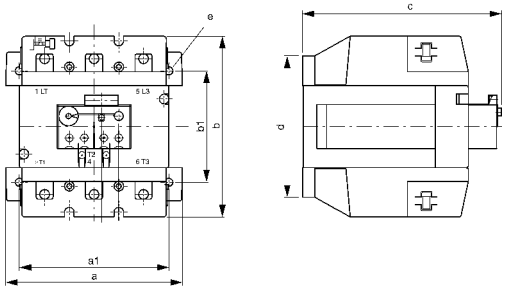
J7TK-F-../(F)(G)P



	J7K-FM(A)	J7K-GM(A)
	Overload relays	
	J7TK-F../FP	J7TK-F../GP
a	100	118
a1	80	80
a2	80	100
a3	28	28
b	117	117
b1	74	74
b2	135	135
c	133	133
c1	82.5	84
d	94	94
e	∅6	∅7

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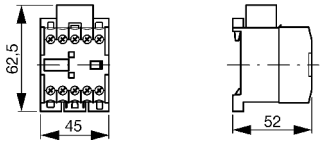
J7TK-F-../(F)(G)B



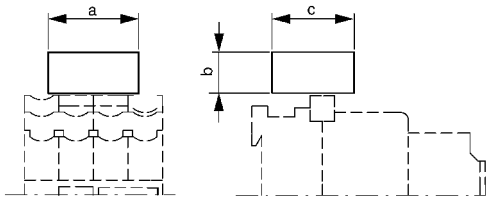
	Overload relays	
	J7TK-F-../FB	J7TK-F-../GB
a	100	118
a1	80	100
b	120	120
b1	74	74
c	133	133
d	94	94
e	∅6	∅7

Accessories

Suppressors
J7KA-RC
J7KA-VG

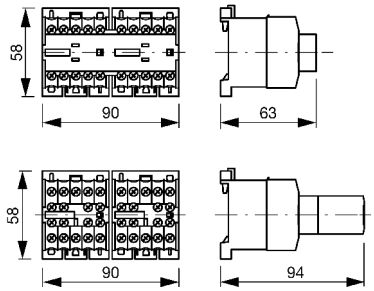


J7KB(F)-RC
J7KB-VG
J7KB-FD

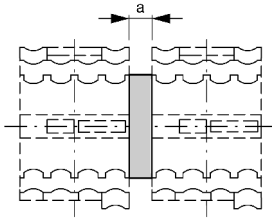


	RC/VG/FD
a	33
b	15
c	30

Mechanical interlock
J7KA-MV



J7KB-MV
J7KF-MV



J7K	Contactor + mechanical interlock	
	BM(-D) + J7KB-MV EMA(-D)+ J7KB-MV	FM(-D) + J7KF-MV GMA(-D) + J7KF-MV
a	15	0

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