

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

Ordering Information

Model Number Legend:

Contactors:

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

Available types

J7K-AMA

Type	Contactora	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-DM(A)

Type	Contactora	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-BM(A)

Type	Contactora	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-EM(A)

Type	Contactora	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-CM(A)

Type	Contactora	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-FM(A)

Type	Contactora	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	Contactora	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

System overview

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

Rating overview


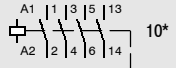
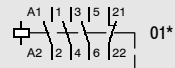

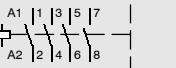

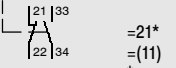
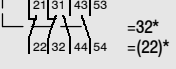

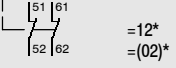
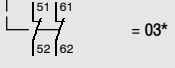
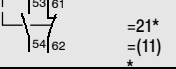
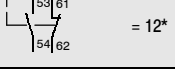
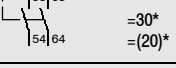
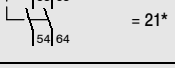
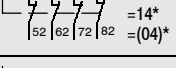
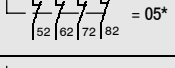
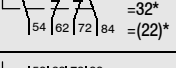
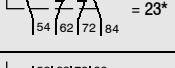
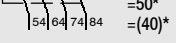
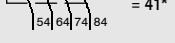
J7K-	AMA-10(-D) AMA-01(-D) AMA-4(-D)	BM(-D) BM-10(-D) BM-01(-D) BM-4(-D)	BMA(-D) BMA-10(-D) BMA-01(-D)	CM(-D)	CMA(-D)	DM(-D)	DMA(-D)
Rated operational voltage	kW	kW	kW	kW	kW	kW	kW
AC-3, three-phase motor rating 50-60 Hz							
220-240 V	2.2	2.2	3	4	5.5	7.5	11
380-440 V	4	4	5.5	7.5	11	15	18.5
500 V	4	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.

■ Contactor with interlocked opposing contacts

Coil AC operated


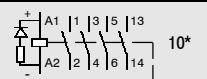
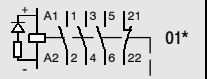



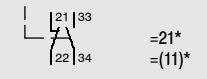
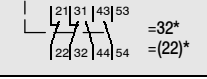

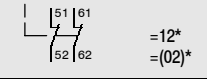
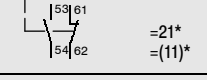
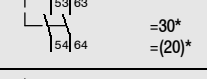
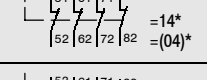
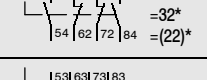
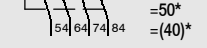
Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ AC-1 open	Terminal markings Coil to EN 50005	Std. pack	
	AC-3		500 V	AC-4		500 V	660 V	660 V				
	220 V 230 V 240 V kW	380 V 400 V 440 V kW	500 V kW	660 V 690 V kW	220 V 230 V 240 V kW	380 V 400 V 440 V kW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

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		500 V	660 V	AC-4		500 V	660 V			
	220 V 230 V 240 V kW	380 V 400 V 440 V kW	kW	kW	220 V 230 V 240 V kW	380 V 400 V 440 V kW	kW	kW			
 <p>Basic units, coil rating 2.6 W, 3-pole Voltage tolerance of the coil 0.85-1.1 x U_c. Integral resistor/diode combination. Contacts to EN 50012</p>											
J7K-AMA-10-D	2.2	4	4	4	1.5	3	3	3	20A		5
J7K-AMA-01-D	2.2	4	4	4	1.5	3	3	3	20A		5
 <p>Basic units, 4-pole Voltage tolerance of the coil 0.85-1.1 x U_c. Integral resistor/diode combination. Contacts to EN 50012</p>											
J7K-AMA-4 -D	-								20A		5
 <p>Auxiliary contact modules** Contacts to EN 50012</p>											
J73K-AM-11	M = Make contact B = Break contact			2-pole	1M	1B				-	5
J73K-AM-22				4-pole	2M	2B				-	5
 <p>Auxiliary contact modules** Contacts to EN 50005</p>											
J73K-A-02	M = Make contact B = Break contact			2-pole	-	2B				= 03*	5
J73K-A-11					1M	1B				= 12*	5
J73K-A-20					2M	-				= 21*	5
J73K-A-04				4-pole	-	4B				= 05*	5
J73K-A-22					2M	2B				= 23*	5
J73K-A-40					4M	-				= 41*	5

Note:

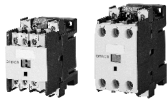
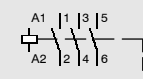
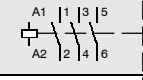
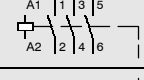
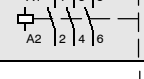

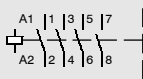

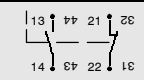

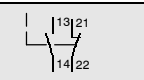
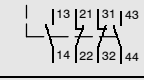
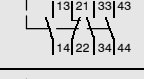
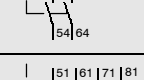
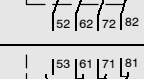
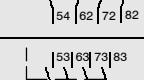
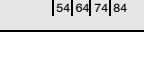
* □ □

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

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

■ Contactor

Coil AC operated

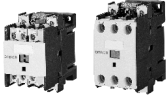
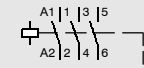
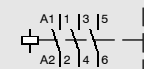
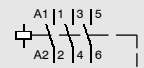
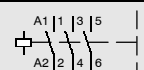



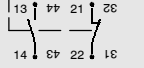

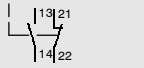
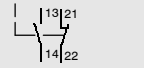
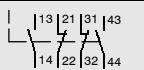
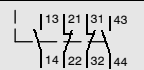
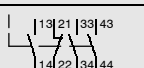
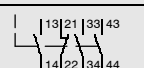
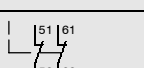
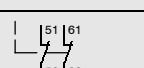
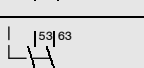
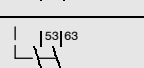
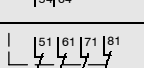
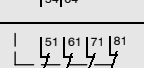
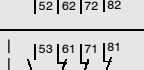
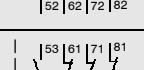
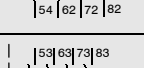
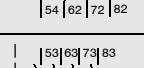

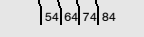
Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ AC-1 open	Terminal markings Coil to EN 50005	Std. pack
	AC-3 220 V 230 V 240 V kW	380 V 400 V 440 V kW	500 V kW	660 V 690 V * kW	AC-4 220 V 230 V 240 V kW	380 V 400 V 440 V kW	500 V kW	660 V 690 V * kW			
 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		2-pole		1M 1B					5	
J73K-BM-22	The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.		4-pole		2M 2B					5	
J73K-BM-31					3M 1B					5	
J73K-B-02					M = Make contact B = Break contact		2-pole		- 2B		
J73K-B-20	The combination of basic unit and auxiliary contact module correspond to EN 50005.		4-pole		2M -					5	
J73K-B-04					- 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.

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	2-pole		1M 1B					5		
J73K-BM-22	The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.	4-pole		2M 2B					5		
J73K-BM-31		4-pole		3M 1B					5		
J73K-B-02		M = Make contact B = Break contact	2-pole		- 2B					5	
J73K-B-20	The combination of basic unit and auxiliary contact module correspond to EN 50005.	2-pole		2M -					5		
J73K-B-04		4-pole		- 4B					5		
J73K-B-13		4-pole		1M 3B					5		
J73K-B-40		4-pole		4M -					5		
J73K-B-04		4-pole		- 4B					5		


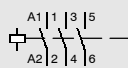
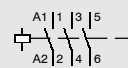
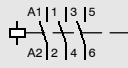
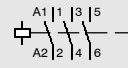
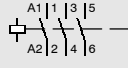
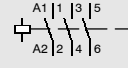
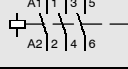
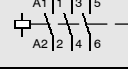

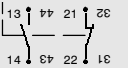

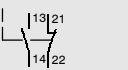
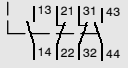
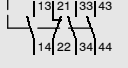
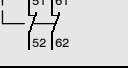
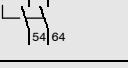
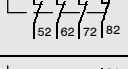
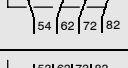
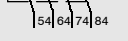
Note:

* Do not reverse directly.

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

■ Contactor

Coil AC operated

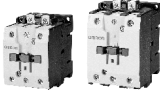
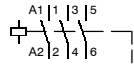
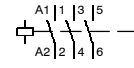
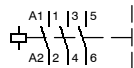
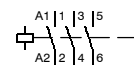
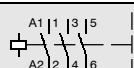
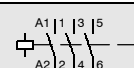
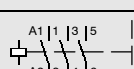
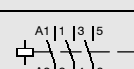

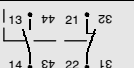

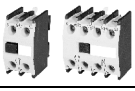
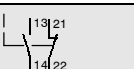
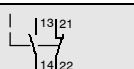

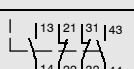
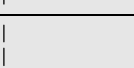
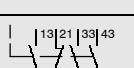
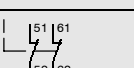
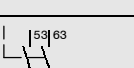

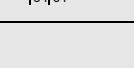
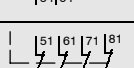
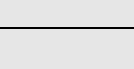
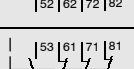
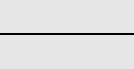
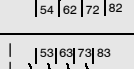
Article No.	Max. three-phase motor rating 50-60 Hz								Conv. thermal current $I_{th} = I_e$ AC-1 open	Terminal markings Coil to EN 50005	Std. pack	
	AC-3 220 V 230 V 240 V kW	380 V 400 V 440 V kW	500 V kW	660 V 690 V * kW	AC-4 220 V 230 V 240 V kW	380 V 400 V 440 V kW	500 V kW	660 V 690 V * kW				
 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		2-pole		1M 1B				5			
J73K-BM-22	The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.		4-pole		2M 2B				5			
J73K-BM-31			3M 1B				5					
J73K-B-02	M = Make contact B = Break contact		2-pole		- 2B				5			
J73K-B-20	The combination of basic unit and auxiliary contact module correspond to EN 50005.		2-pole		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.

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		2-pole		1M 1B						5	
J73K-BM-22	The combination of basic unit and auxiliary contact module correspond to EN 50012 and is to be given preference.		4-pole		2M 2B						5	
J73K-BM-31					3M 1B						5	
J73K-B-02					M = Make contact B = Break contact		2-pole		- 2B			
J73K-B-20	The combination of basic unit and auxiliary contact module correspond to EN 50005.		4-pole		2M -						5	
J73K-B-04					- 4B						5	
J73K-B-13					1M 3B						5	
J73K-B-40					4M -						5	


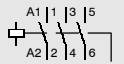
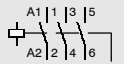
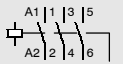
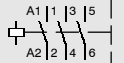
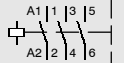
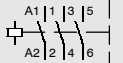
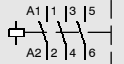
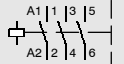
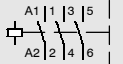
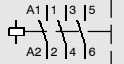
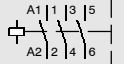
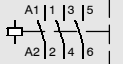

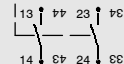
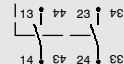

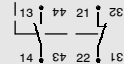
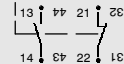

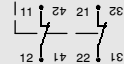
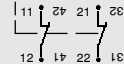

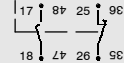
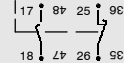

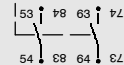
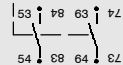
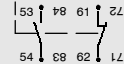
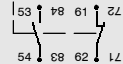
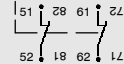
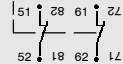
Note:

* Do not reverse directly.

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

■ 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		380V	500V	660V	1000V	AC-4		500V	660V		1000V							
	220V	400V		690V	*	220V	380V		690V	*									
	230V	400V		690V	*	230V	400V		690V	*									
	240V	440V				240V	440V												
	kW	kW	kW	kW	kW	kW	kW	kW	kW	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											

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.

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		



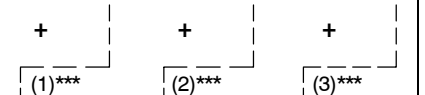
Basic units

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**



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			


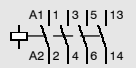
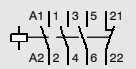
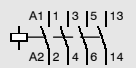
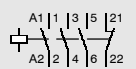


J73K-FM-20SA	M = Make contact B = Break contact	2-pole	2M -		
J73K-FM-11SA			1M 1B		
J73K-FM-02SA			- 2B		

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.

■ Contactor, complete units

Article No. Coil AC operated	Article No. Coil DC operated	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 220V 230V 240V kW		380V 400V 440V kW	500V kW	660V 690V * kW	AC-4 220V 230V 240V kW		380V 400V 440V kW			
 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

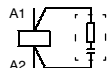
Note:

* Do not reverse directly.

■ Accessories

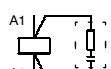


RC Suppressor

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

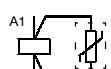


RC Suppressors

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

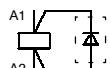


Varistor suppressor

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



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



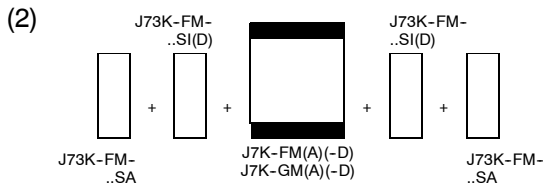
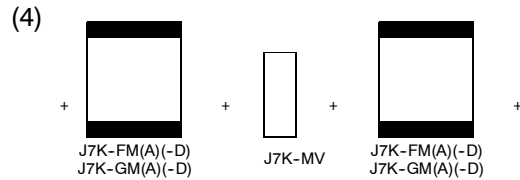
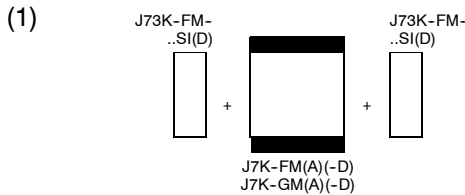
4th-pole, only for AC-1 load

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 approbation!)		1

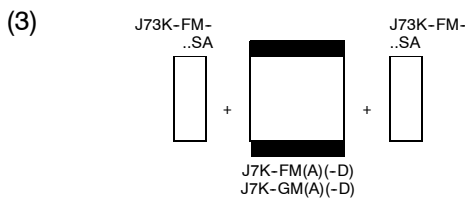
Individual coil

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



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



- 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.

■ 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.

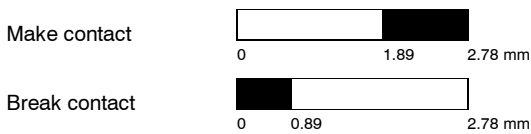
J7K-AMA-.. (AC)



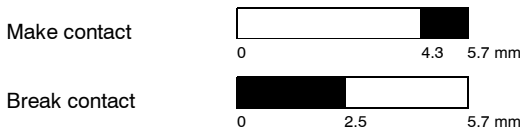
J7K-AMA-..-D (DC)



J73K-A-..



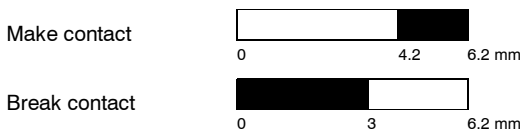
J7K-BM(A)-..; J7K-BM(A)-.. + J73K-B(M)-..



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



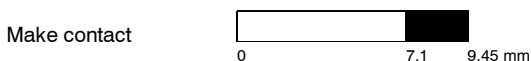
J7K-DM(A); J7K-DM(A) + J73K-B(M)-..



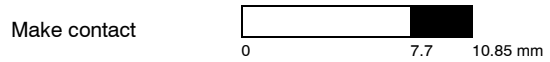
J7K-EM(A); J7K-EM(A) + J73K-B(M)-..



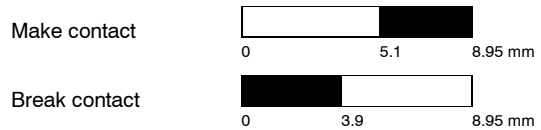
J7K-FM(A)



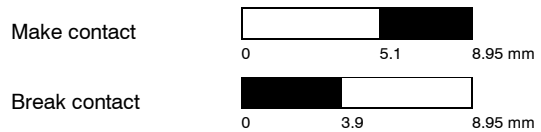
J7K-GM(A)



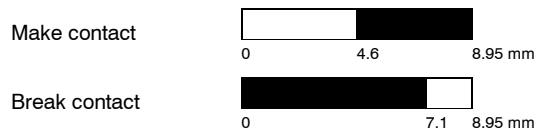
J7K-FM(A)-.. + J73K-FM-..S.



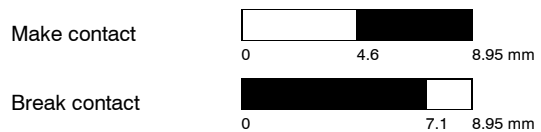
J7K-GM(A)-.. + J73K-FM-..S.



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


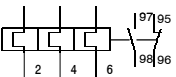



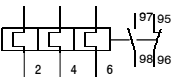



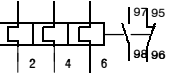



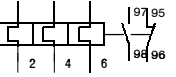
J7K-GM(A)-.. + J73K-FM-..SID

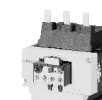
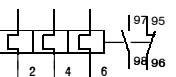




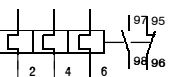


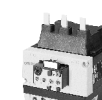
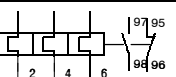




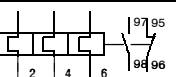
■ Overload relays with single-phasing sensitivity to IEC 947-4-1

Direct mounting

Overload relay 	For use with	Terminal marking 	Auxiliary contact module***	Setting range overload release** I_r 	Short-circuit protection* Type of coordination		Std. pack
					"1" max. A gL 	"2" max. A gL 	
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		Std. pack
					"1" max. A gL 	"2" max. A gL 	
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			Std. pack
					"1" max. A gL 	"2" max. A gL 	Max. A 	
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			Std. pack
					"1" max. A gL 	"2" max. A gL 	Max. A 	
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


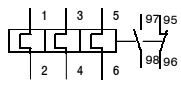


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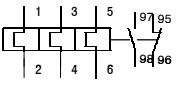


* The max. permissible fuse of the contactor must be observed when mounting overload relays directly.


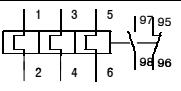


** Tripping class 10 A.

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

Separate mounting

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

Overload relay 	Terminal marking 	Auxiliary contact module*** 1M 1B	Setting range** overload release I_r 	Short-circuit protection* Type of coordination			Std. pack
				"1" max. A gL	"2" max. A gL	Max. A 	
J7TK-F-35/FB			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*** 1M 1B	Setting range** overload release I_r 	Short-circuit protection* Type of coordination			Std. pack
				"1" max. A gL	"2" max. A gL	Max. A 	
J7TK-F-100/GB			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.

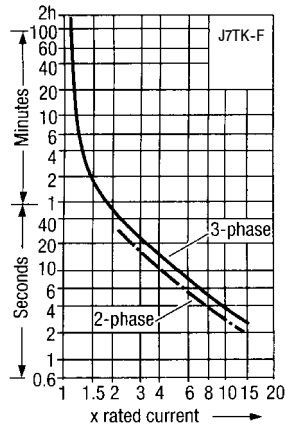
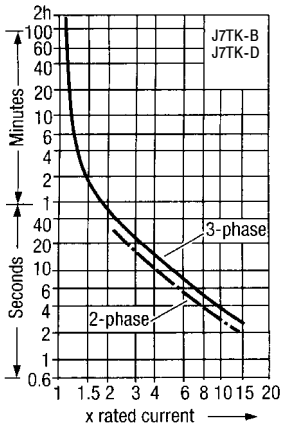
*** M = make contact, B = Break contact

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

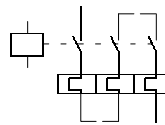
Tripping characteristics

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.

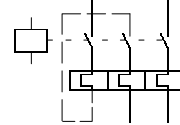


Protection of DC motors

1-pole



2-pole

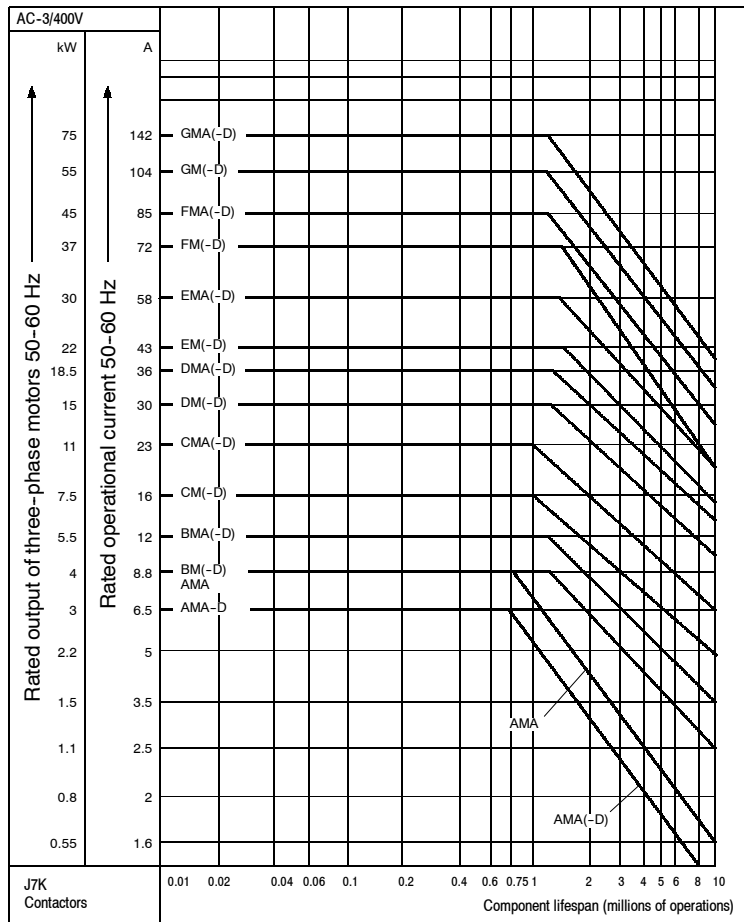


Features

	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

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:

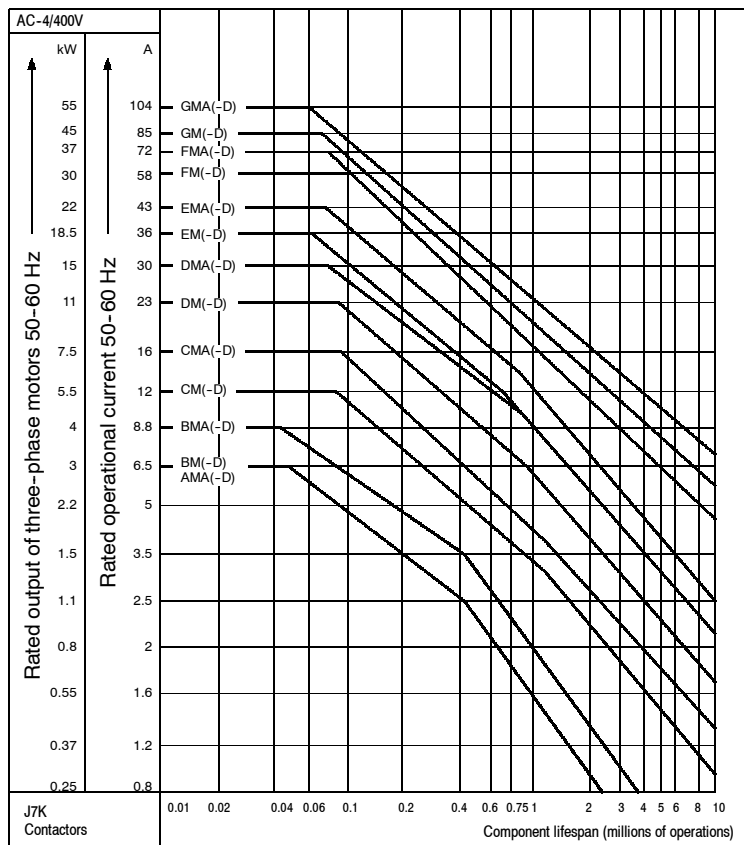
100% AC-3

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

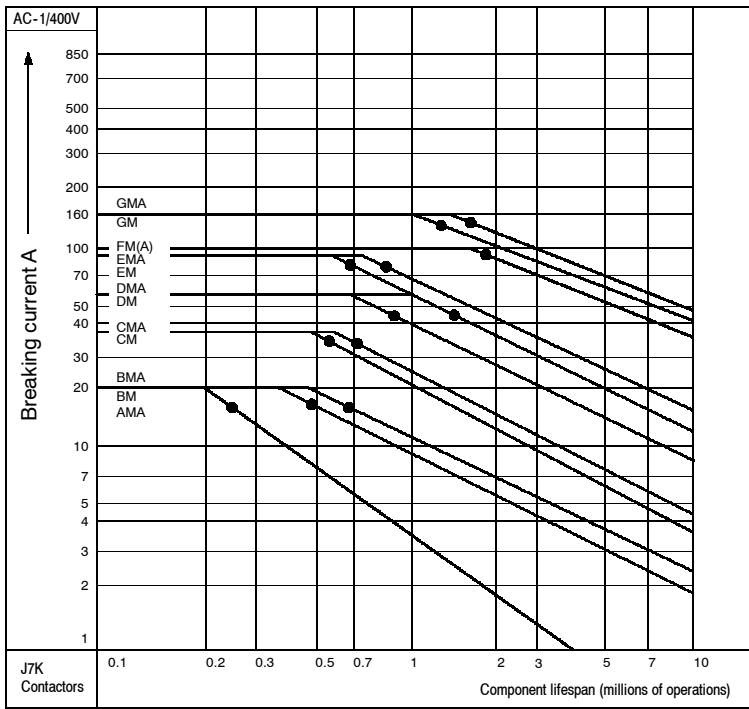
Utilization category:

100% AC-4

Typical applications:

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

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



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

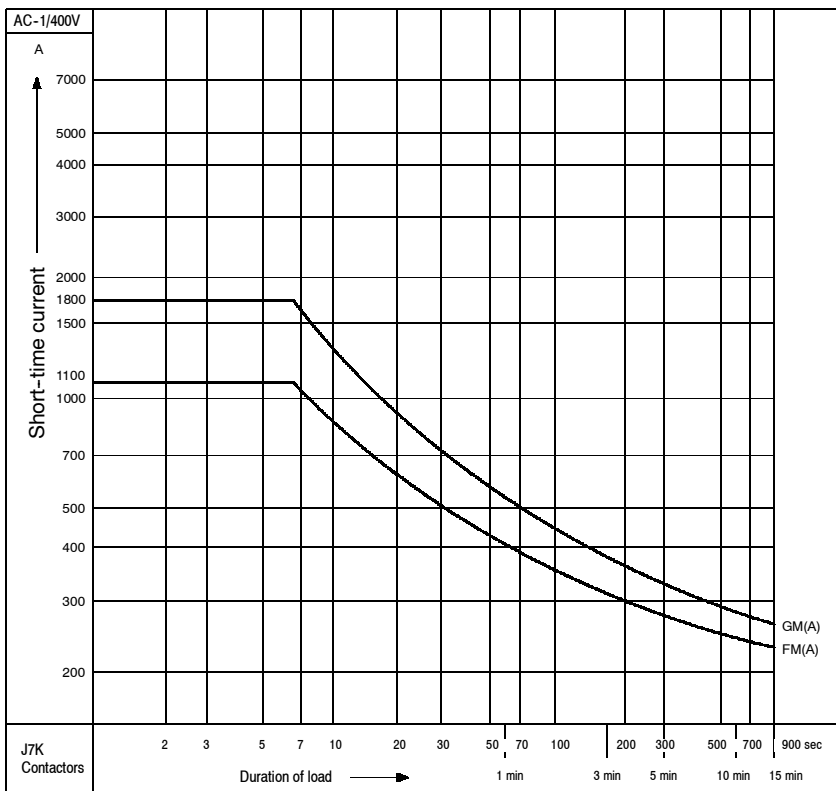
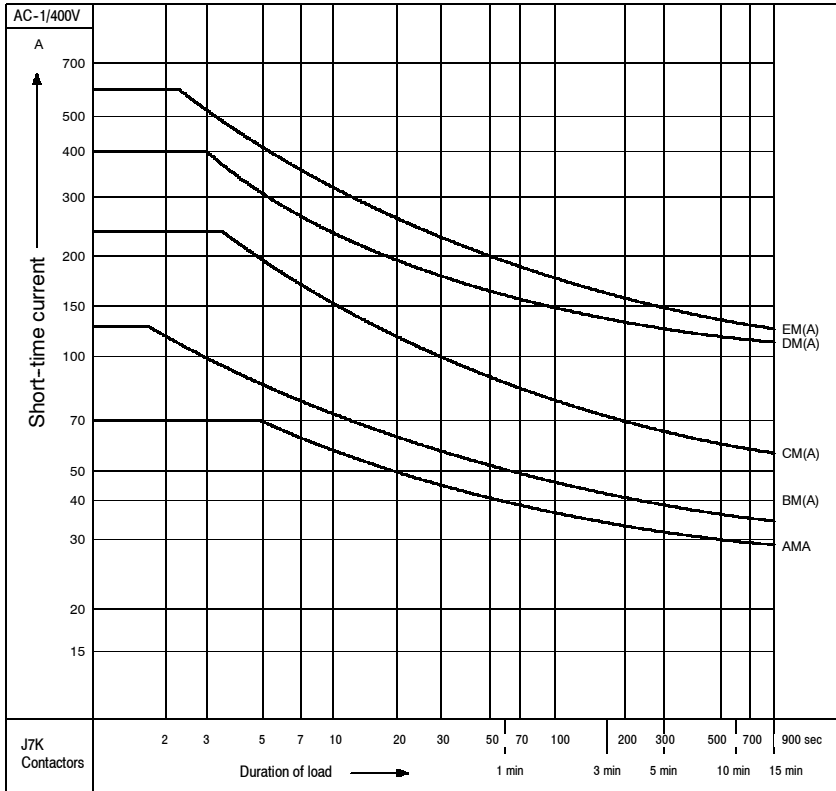
Utilization category:
100% AC-1

Typical applications:
Electric heater

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

Short-time loading

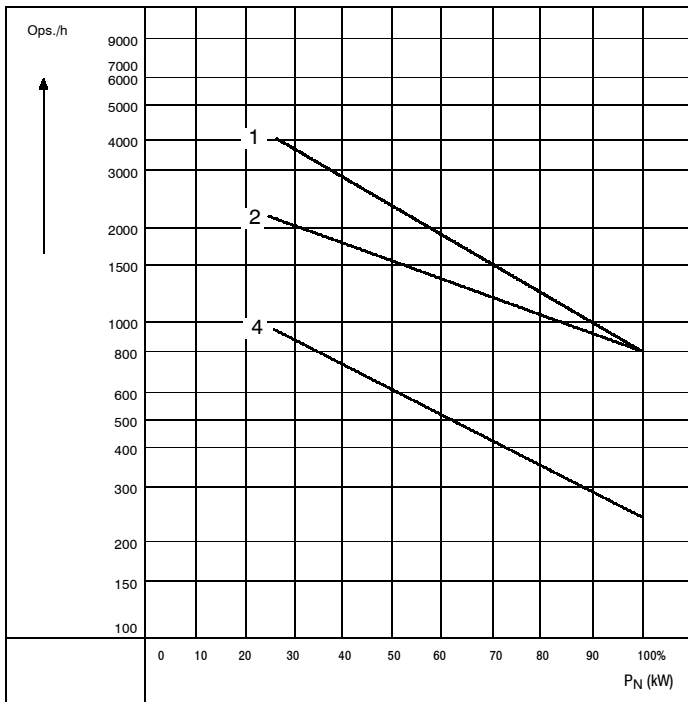
Pause between two loads: 15 min



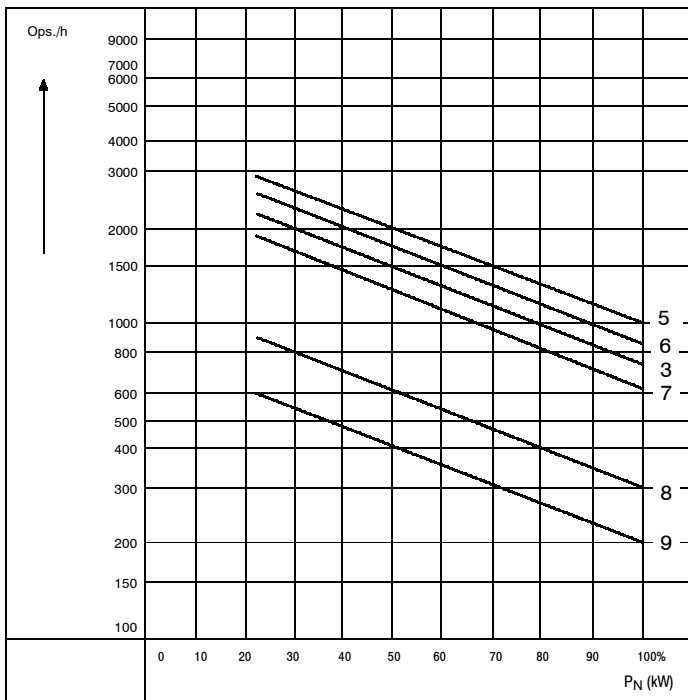
Determination of the max. number of operations per hour in relation to rating and utilization category

(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



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 perpendicular 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 $\cos \varphi$ to IEC 947			200 A	110 A
Breaking capacity $\cos \varphi$ 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	

AC

Typ		J7K-AMA(-4)	J7K-AMA-D
AC-1 duty (conventional free air thermal current $I_{th} \triangleq$ 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.

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	$0.8 - 1.1 \times U_c$	-
	AC operated, Dual-frequency coil ...V 50/60 Hz	Pick-up	$0.85 - 1.1 \times U_c$	-
	DC operated	Pick-up	-	$0.85 - 1.1 \times U_c$
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"	

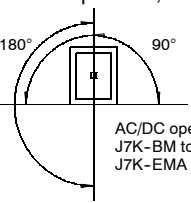
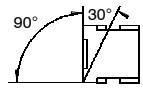
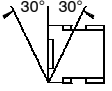
Contacts

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 I_e 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 μ F und resistor 0.5 Ω in series; $L/R \leq 15$ 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 $I_e = 0.5$ 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

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 perpendicular 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.

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					
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 perpendicular 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.

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 $\cos \varphi$ to IEC 947		200 A		270 A		730 A	
Braking capacity $\cos \varphi$ 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 $\cos \varphi$ to IEC 947		950 A		1300 A		1800 A	
Breaking capacity $\cos \varphi$ 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	

AC

Typ			J7K-BM	J7K-BMA	J7K-CM	J7K-CMA	J7K-DM	J7K-DMA
AC-1 duty								
Conventional free air thermal current $I_{th} \triangleq$ 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 $I_{th} \triangleq$ 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.

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

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.

■ 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
	DC-13*	24/60/110/220V L/R \leq 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		1×10^6 ops.
	DC		1×10^6 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		$1 \times (0.5-2.5) \text{ mm}^2$
			$2 \times (0.5-2.5) \text{ mm}^2$
	Flexible with ferrule		$1 \times (0.5-1.5) \text{ mm}^2$
			$2 \times (0.5-0.75) \text{ mm}^2$
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	

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 1 μ F and resistor 0.5 Ω series.	L/R \leq 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 \leq 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"

■ 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 insulation" 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

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 insulation" 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	

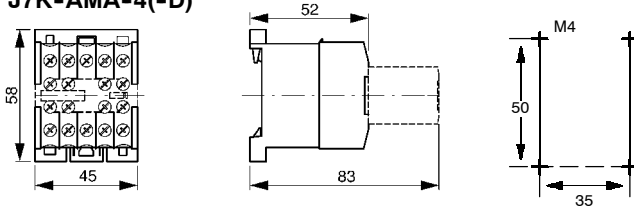
Note:

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

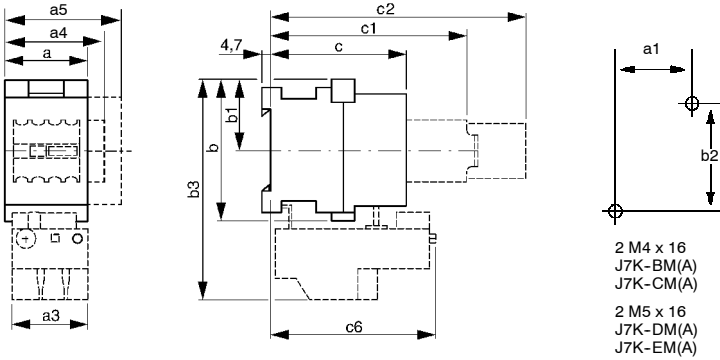
Dimensions

Contactor

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



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

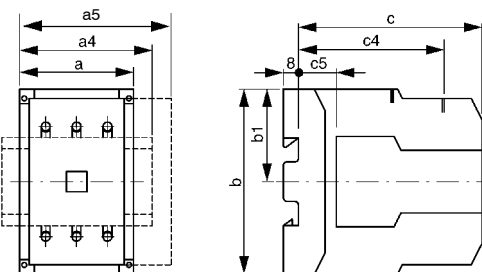


J7K	Contactor			
	BM(-D) BMA(-D) BM-4(-D)		CM(-D) CMA(-D)	
a	45	(45)	45	(45)
a1	35	(35)	35	(35)
a4	-	-	55	(55)
a5	-	-	60	(60)
b	77	(77)	91	(91)
b1	39	(39)	46	(46)
b2	60	(60)	75	(75)
c (with shroud)	76.5	(101.5)	86.3	(113.3)
c (without shroud)	74	(99)	79	(104)
c1	107	(132)	112	(137)
c2	136	(161)	141	(166)

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

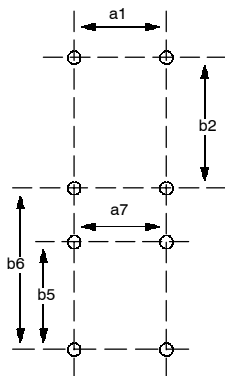
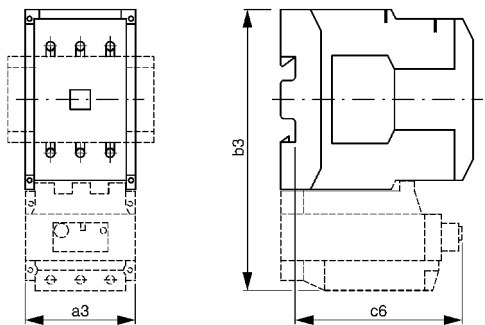
a4 With side mounting auxiliary contact module on J7K-CM(-D) to J7K-EMA(-D), with second side mounting auxiliary contact module J73K-FM-..SA on J7K-FM(-D) to J7K-GMA(-D) .

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

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

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

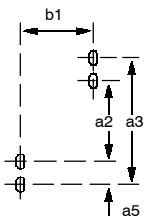
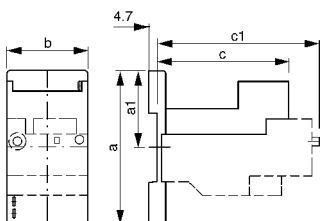
J7K-FM(A)(-D) + J7TK-F-../FP
J7K-GM(A)(-D) + J7TK-F-../GP



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

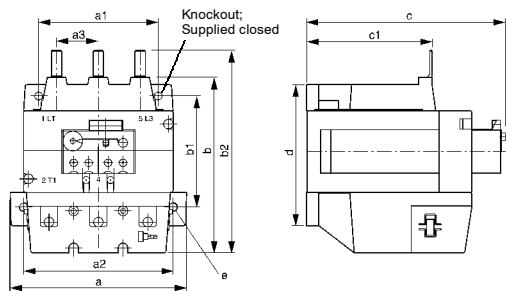
J7TK-B + J7TKB-B
J7TK-D + J7TKD-B



J7TKB-B = 2 M4 x 12
 J7TKD-D = 2 M5 x 15

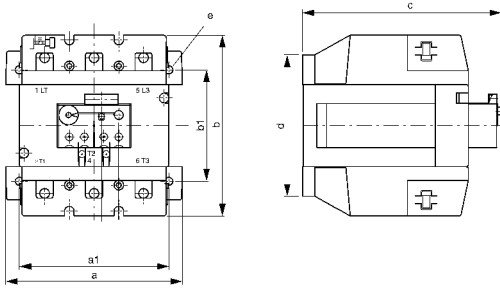
	Overload relays	
	J7TK-B + J7TKB-B	J7TK-D + J7TKD-B
a	85	86
a1	42.5	42.5
a2	60	-
a3	75	75
a5	7.5	-
b	35	60
c	73	112
c1	90	102

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

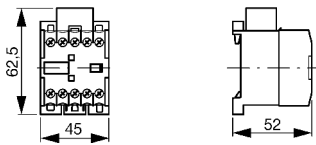
J7TK-F-../(F)(G)B



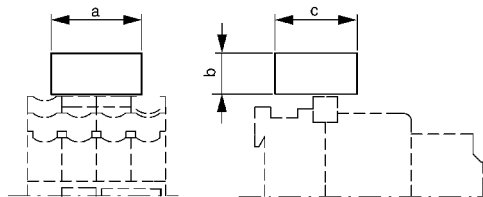
	Overload relays	
	J7TK-F-../FB	J7TK-F-../GB
a	100	118
a1	80	100
b	120	120
b1	74	74
c	133	133
d	94	94
e	∅6	∅7

Accessories

Suppressors
J7KA-RC
J7KA-VG

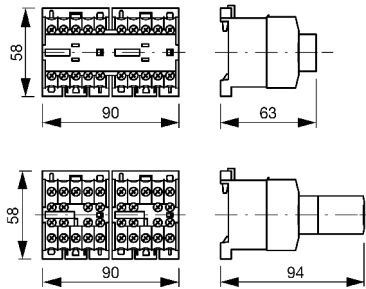


J7KB(F)-RC
J7KB-VG
J7KB-FD

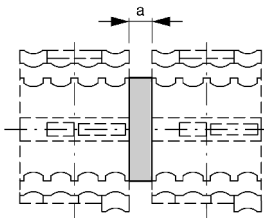


	RC/VG/FD
a	33
b	15
c	30

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

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.