



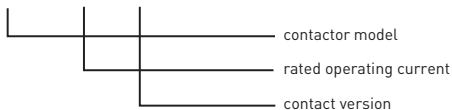
**TECHNICAL MANUAL**  
**Contactors KME EKF**

## 1 DESCRIPTION

The contactors KME EKF are designed to connect, switch and control squirrel-cage motors in 50/60 Hz electrical circuits with voltage up to 690 V AC, and non-inductive or low-inductive loads, resistance furnaces (utilization category AC-1). Contactors comply with IEC 60947-4-1.

## 2 TECHNICAL DATA

### KME XX XXX



The contactors KME shall be mounted onto 35 mm DIN rail.

Connection options with copper and aluminum wires are supported. Do not connect copper and aluminum wires to one terminal concurrently.

The degree of protection is IP20 according to IEC 60529.

For basic specifications of power and control circuits, refer to Tables 1-3.

Compatible accessories are listed in Tables 1-3.

Contactors can be complemented with one frontal auxiliary contact block PKE and auxiliary contact block KB to increase the number of auxiliary contacts.

A three-pole thermal overload relay RTE is installed onto the contactor to protect electric motors against overloads, overcurrent and phase loss.

Frontal pneumatic time delay attachments PVE are used to set on/off delay from 0,1 to 180 sec.

Accessories for contactors are not included in the supply and shall be ordered separately.

Table 1 - Main technical data of KME 9A, KME 12A, KME 18A models

Parameters		KME 9A	KME 12A	KME 18A
Rated power, kW	<+40°C, 220-240 V	2,2	3	4
	<+40°C, 380-415 V	4	5,5	7,5
	<+40°C, 660-690 V	5,5	7,5	10
Rated operating current, A	<+40°C, 380-415 V	9	12	18
		25	25	32
Number of poles		3P		
Available auxiliary contacts		1NO or 1NC	1NO or 1NC	1NO or 1NC
Maximum short-time load (t<1sec.), A		162	216	324
Rated operating voltage Ue, V AC		220-240, 380-415, 660-690		
Rated impulse voltage Uimp, kV		6		
Rated insulation voltage Ui, V		690		
Conventional short-circuit current Inc, A		1000		3000
Dissipation power at Ie, W/pole	AC-3	0,2	0,36	0,8
	AC-1	1,56	1,56	2,5
Rated voltage of control coil Uc, V		24 / 36 / 110 / 220-240 / 380-415		
Control voltage ranges	inrush	(0,8 - 1,1)*Uc		
	release	(0,3 - 0,6)*Uc		
Power consumption of control coil at Uc, VA	inrush cos f = 0,75	60	60	60
	holding cos f = 0,3	7	7	7
Response time of control coil, ms	closing	12-22	12-22	12-22
	opening	4-19	4-19	4-19
Power dissipation of control coil, W		3	3	3
Electrical endurance of control coil, mln. cycles	AC-3	1,65	1,65	1,65
	AC-1	1,43	1,43	1,43
Mechanical endurance		mln. cycles	15	15
Overall dimensions, mm	width	45	45	45
	height	74	74	74
	depth	80	80	80
Connection of power circuit, mm	stranded cable	1-4	1-4	1,5-6
	solid cable	1,5-4	1,5-4	2,5-6
	tightening torque, Nm	1,5	1,5	1,5
Connection of control circuit, mm	stranded cable	1-4		
	solid cable	1-4		
	tightening torque, Nm	1,5		
Compatible accessories	auxiliary contact block	PKE 2NC, PKE 2NO, PKE 2NO+2NC, PKE NO+NC, PKE 4NO, PKE 4NC		
	pneumatic time delay attachment	PVE on delay, 0,1-30sec; PVE on delay, 0,1-3sec; PVE on delay, 10-180sec; PVE off delay, 0,1-30sec; PVE off delay, 0,1-3sec; PVE OFF delay, 10-180sec		
	interlocking devices	Mechanical interlocking up to 32A		
	thermal overload relay	RTE-1305; RTE-1306; RTE-1307; RTE-1308; RTE-1310; RTE-1312; RTE-1314; RTE-1316; RTE-1321		

Table 2 - Main technical data of KME 25A, KME 32A models

Parameters		KME 25A	KME 32A
Rated power, kW	<+40°C, 220-240 V	5,5	7,5
	<+40°C, 380-415 V	11	15
	<+40°C, 660-690 V	15	18,5
Rated operating current, A	<+40°C, 380-415 V	AC-3	AC-3
		AC-1	AC-1
Number of poles		3P	
Available auxiliary contacts		1NO or 1NC	1NO or 1NC
Maximum short-time load [I<sub>t</sub> (t<1sec.)], A		450	576
Rated operating voltage U <sub>e</sub> , V AC		220-240, 380-415, 660-690	
Rated impulse withstand voltage U <sub>imp</sub> , kV		8	
Rated insulation voltage U <sub>i</sub> , V		690	
Conventional short-circuit current I <sub>nc</sub> , A		3000	
Dissipation power at I <sub>e</sub> , W/pole	AC-3	1,25	2
	AC-1	3,2	5
Rated voltage of control coil U <sub>c</sub> , V		24 / 36 / 110 / 220-240 / 380-415	
Control voltage ranges	inrush	[0,8 - 1,1]*U <sub>c</sub>	
	release	[0,3 - 0,6]*U <sub>c</sub>	
Power consumption of control coil at U <sub>c</sub> , VA	inrush cos φ = 0,75	90	90
	holding cos φ = 0,3	7,5	7,5
Response time of control coil, ms	closing	15-24	15-24
	opening	5-19	5-19
Power dissipation of control coil, W		3,5	3,5
Electrical endurance of control coil, mln. cycles	AC-3	1,21	1,10
	AC-1	1,43	1,43
Mechanical endurance	mln. cycles	12	10
Overall dimensions, mm	width	56	56
	height	84	84
	depth	93	98
Connection of power circuit, mm	stranded cable	1,5-6	2,5-6
	solid cable	2,5-6	4-10
	tightening torque, Nm	2,5	5
Connection of control circuit, mm	stranded cable	1-4	
	solid cable	1-4	
	tightening torque, Nm	1,5	
Compatible accessories	auxiliary contact block	PKE 2NC, PKE 2NO, PKE 2NO+2NC, PKE NO+NC, PKE 4NO, PKE 4NC	
	pneumatic time delay attachment	PVE on delay, 0,1-30sec; PVE on delay, 0,1-3sec; PVE on delay, 10-180sec; PVE off delay, 0,1-30sec; PVE off delay, 0,1-3sec; PVE OFF delay, 10-180sec	
	interlocking devices	mechanical interlocking up to 32A	
	thermal overload relay	RTE-2322; RTE-2353; RTE-2355	

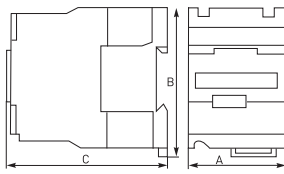
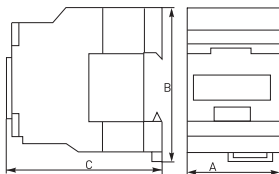
Table 3 - Main technical data of KME 40A, KME 50A, KME 65A, KME 80A, KME 95A models

Parameters			KME 40A	KME 50A	KME 65A	KME 80A	KME 95A
Rated power, kW	<+40°C, 220-240 V	AC-3	11	15	18,5	22	25
	<+40°C, 380-415 V		18,5	22	30	37	45
	<+40°C, 660-690 V		30	33	37	45	45
Rated operating current, A	<+40°C, 380-415 V	AC-3	40	50	65	80	95
		AC-1	60	80	80	125	125
Number of poles			3P				
Available auxiliary contacts			1NO + 1 NC				
Maximum short-time load (t<1sec.), A			720	900	1170	1440	1710
Rated operating voltage Ue, V AC			220-240, 380-415, 660-690				
Rated impulse withstand voltage Uimp, kV			8				
Rated insulation voltage Ui, V			690				
Conventional short-circuit current Inc, A			3000				5000
Dissipation power at Ie, W/pole	AC-3		2,4	3,7	4,2	5,1	7,2
	AC-1		5,4	6	6,4	12,5	12,5
Rated voltage of control coil Uc, V			24 / 36 / 110 / 220-240 / 380-415				
Control voltage ranges	inrush		(0,8 - 1,1)*Uc				
	release		(0,3 - 0,6)*Uc				
Power consumption of control coil at Uc, VA	inrush cos f = 0,75		200	200	200	200	200
	holding cos f = 0,3		20	20	20	20	20
Response time of control coil, ms	closing		20-26	20-26	20-26	20-26	20-26
	opening		8-12	8-12	8-12	6-20	6-20
Power dissipation of control coil, W			10	10	10	10	10
Electrical endurance of control coil, mln. cycles	AC-3		1,10	1,10	1,10	0,99	0,77
	AC-1		1,43	1,43	1,43	1,10	0,77
Mechanical endurance	mln. cycles		10	10	10	5	4
Overall dimensions, mm	width		74	74	74	84	84
	height		127	127	127	127	127
	depth		114	114	114	125	125
Connection of power circuit, mm	stranded cable		6-16	10-25	10-25	16-35	16-35
	solid cable		10-25	16-35	16-35	25-50	25-50
	tightening torque, Nm		5	5	5	9	9
Connection of control circuit, mm	stranded cable		1-4				
	solid cable		1-4				
	tightening torque, Nm		1,5				
Compatible accessories	auxiliary contact block		PKE 2NC, PKE 2NO, PKE 2NO+2NC, PKE NO+NC, PKE 4NO, PKE 4NC				
	pneumatic time delay attachment		PVE on delay, 0,1-30sec; PVE on delay, 0,1-3sec; PVE on delay, 10-180sec; PVE off delay, 0,1-30sec; PVE off delay, 0,1-3sec; PVE OFF delay, 10-180sec				
	interlocking devices		mechanical interlocking from 40A				
	thermal overload relay		RTE-3353; RTE-3355; RTE-3357; RTE-3359; RTE-3361; RTE-3361; RTE-3363; RTE-3365				

### 3 OVERALL DIMENSIONS

1NC or 1NO: KME 9A; KME 12A; KME 18A

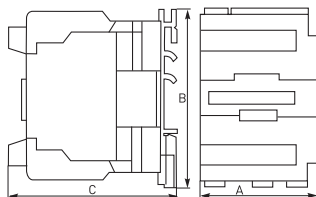
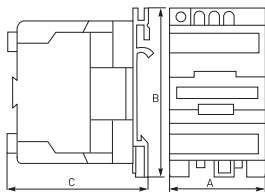
1NC or 1NO: KME 25A; KME 32A



Overall dimensions, mm	KME 9A	KME 12A	KME 18A	KME 25A	KME 32A
A	45	45	45	56	56
B	74	74	74	84	84
C	80	80	80	93	98

1NO+1NC: KME 40A; KME 50A; KME 65A

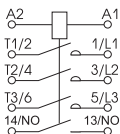
1NO+1NC: KME 80A; KME 95A



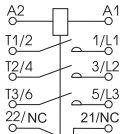
Overall dimensions, mm	KME 40A	KME 50A	KME 65A	KME 80A	KME 95A
A	74	74	74	84	84
B	127	127	127	127	127
C	114	114	114	125	125

### 4 WIRING DIAGRAMS

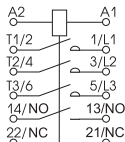
1NO: KME 9A, KME 12A,  
KME 18A, KME 25A,  
KME 32A



1NC: KME 9A, KME 12A, KME  
18A, KME 25A,  
KME 32A



1NO+1NC: KME 40A,  
KME 50A, KME 65A,  
KME 80A, KME 95A



## **5 SAFETY REQUIREMENTS**

The contactors shall be operated in accordance with national safety rules for operation of electrical installations. The contactors can only be operated with a series-connected fuse or circuit breaker of suitable rated current. Contactors KME EKF conform to IEC 61140 Class 0 for protection against electrical shock.

## **6 OPERATION CONDITIONS**

The rated operation conditions for contactors are as follows:

- ambient temperature: from -40 °C to +50 °C;
- altitude above sea level: max 3000 m without derating;
- contactors can withstand vibration loads with a frequency of up to 100 Hz.
- operation position: contactors shall be mounted with screws on vertical plane with the coil terminals upwards. Deviation from the vertical position is tolerated up to 30° in the horizontal plane.

## **7 TRANSPORTATION AND STORAGE**

The contactors can be transported by any means of enclosed transport that ensures protection of packed products against mechanical impacts and weather exposure.

The contactors shall be stored indoors in the original package at the ambient temperature from -45°C to +50°C and relative humidity of 98% at +25°C.

## **8 DISPOSAL**

Life-expired and failed products shall be disposed of in compliance with the national and local laws and regulations in force.

To dispose of the product, send it to an authorized company for recycling in compliance with the national and local laws and regulations in force.

## **9 DELIVERY SCOPE**

The contactors KME are supplied in an individual package. For all available documentation, scan the QR-code on the insert or on the inside of the package.

## **10 MANUFACTURER'S WARRANTY**

Warranty period: 7 years from the date of sale of the product specified in the sales receipt.

Shelf life: 7 years from from the date of manufacture specified on the product package or housing. Service life: 10 years.

Manufacturer: OOO Electroresheniya, Otradnaya st., 2b/9, 127273, Moscow, Russia, tel. +7 (495) 788-88-15.

Importer and EKF trademark service representative: EKF ELECTRICAL SOLUTION – FZCO, Dubai Silicon Oasis, DDP, Building A2, Dubai, United Arab Emirates.

Importer and EKF trademark service representative on the territory of the Republic of Kazakhstan: TOO «Energoresheniya Kazakhstan», Kazakhstan, Almaty, Bostandyk district, Turgut Ozal st., 247, apt 4.

## **11 CERTIFICATE OF ACCEPTANCE**

The contactor KME EKF has been approved for operation.

Date of manufacture:

for information, refer to the product package.

Quality control stamp

EAC



v3

[ekfggroup.com](http://ekfgroup.com)

