



AVERES

TECHNICAL MANUAL

Modular contactors
KM AVERES EKF



1 DESCRIPTION

The modular contactors KM AVERES EKF are designed to switch and control lighting, heating and ventilation devices, pumps and other electrical installations in control and automation systems of residential, office and industrial buildings, used in 50/60 Hz AC circuits with rated voltage up to 415 V.

The modular contactors KM comply with IEC 60947-4-1, IEC 61095.

2 TECHNICAL DATA

TYPE CODE

KM-AV-X-XXX-XX-XXv*

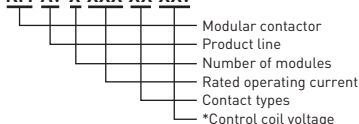


Table 1 - Modular contactors KM AVERES EKF

Wiring diagram	Type of contacts	Rated voltage of control coil U_c , V AC	Rated current I_n , A					
			20	25	40	63	80	100
	1NO+1NC	24, 48 110, 220	km-av-1	km-av-1 km-av-2	km-av-2	km-av-2	km-av-3	km-av-3
	2NO	24, 48, 110, 220	km-av-1	km-av-1 km-av-2	km-av-2	km-av-2	km-av-3	km-av-3
	2NC	24, 48, 110, 220	km-av-1	km-av-1 km-av-2	km-av-2	km-av-2	km-av-3	km-av-3
	4NO	24, 48, 110, 220		km-av-2	km-av-3	km-av-3	km-av-6	km-av-6
	4NC	24, 48, 110, 220		km-av-2	km-av-3	km-av-3	km-av-6	km-av-6
	3NO+1NC	24, 48, 110, 220		km-av-2	km-av-3	km-av-3	km-av-6	km-av-6
	2NO+2NC	24, 48, 110, 220		km-av-2	km-av-3	km-av-3	km-av-6	km-av-6

Table 2 - Modular contactors characteristics

Characteristics			Model								
			av-1	av-1/ av-2	av-2/ av-3	av-2/ av-3	av-3/ av-6	av-3	av-6	av-3	av-6
Thermal resistance current I _{th} , A			20	25	40	63	80	100		125	
Rated insulation voltage U _i , V			500								
Rated power, kW	AC-1/ AC-7a (low-inductive loads)	Rated operating current I _e , A	20	25	40	63	80	100	100	125	125
		220-240 V	4,5	5	9	11,6		25			
		380-415 V		16	27,5	40			65		65
	AC-3/AC-7b (high-inductive loads)	Rated operating current I _e , A	20	25	40	63	80	100		125	
		220-240 V	1,2	1,5	3	3,3		6			
		380-415 V		4	12,5	15			22		22
Rated operating voltage U _e , V AC			220-240, 380-415								
Rated impulse withstand voltage U _{imp} , kV			4								
Rated conventional short-circuit current, kA			3								
Max. control circuit power consumption, VA		Holding	4,4-8,4		7			14	7	14	
		Inrush	14-18		33-45						
Contact closing voltage, V			195-253								
Contact opening voltage, V			46-172								
Closing response time, ms			<30		<55						
Opening response time, ms			<20		<45						
Max. power of control coil, W			≤ 1,1	≤ 1,35	≤ 1,55						
Rated voltage of control coil U _c , V AC			24, 48, 110, 220-240								
Mechanical endurance, O-C cycles			1 000 000								
Electrical endurance, O-C cycles			250 000			300 000					

Table 2 continued

Characteristics			Model							
			av-1	av-1/ av-2	av-2/ av-3	av-2/ av-3	av-3/ av-6	av-3	av-6	av-3
Connection & wiring	Power circuit	Rigid wire, mm²	1-6	1-16						
		Flexible wire, mm²	1-10	1-25						
		Max. tightening torque, N•m	1,2	2					2,5	
	Control circuit	Cross- section of connected wire, mm²	1-2,5							
		Tightening torque, N•m	0,6							
Installation			35 mm DIN rail							
Switching frequency, cycles/day			100							
Operation environment			Non-explosive, dust-free							
Degree of protection as per IEC 60529			IP20							
Operating temperature, °C			-30 to 80							

3 OVERALL DIMENSIONS

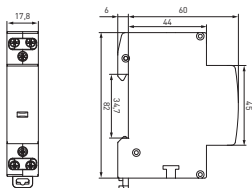


Fig. 1 - Overall dimensions of km-av-1 1P models

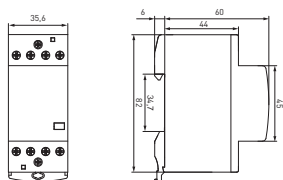


Fig. 2 - Overall dimensions of km-av-2 2P & 4P models

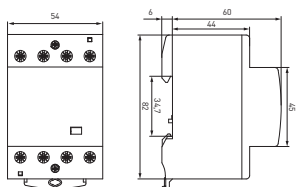


Fig. 3 - Overall dimensions of km-av-3 2P & 4P models

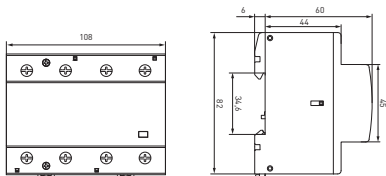


Fig. 4 - Overall dimensions of km-av-6 4P models

4 INSTALLATION AND OPERATION

Modular contactors must be installed and connected by qualified electrical personnel.

Before installation, make sure that:

The device characteristics (KM marking) meet the required values.

The device has no visible damage.

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

Power supply can be connected from any side. Tightening torque is specified on the contactor.

Operating temperature: from -30 to +80°C.

Max. altitude above sea level 2000 m.

5 DELIVERY SCOPE

The modular contactors KM are supplied in a group package. For all available documentation, scan the QR-code on the insert or on the inside of the package.

6 SAFETY REQUIREMENTS

Do not operate the devices with visible mechanical damage.

Contactors KM AVERES EKF conform to IEC 61140 Class 0 for protection against electrical shock.

7 MAINTENANCE

For maintenance, follow national safety rules for operation of electrical Installations.

Under normal operating conditions, visually inspect the contactor and tighten screw terminals every 6 months.

8 TRANSPORTATION AND STORAGE

Contactors can be transported by any means of enclosed transport that protects the packaged goods from mechanical impact and weather exposure.

Contactors shall be stored in the original package indoors at the ambient temperature from -40°C to +50°C and relative humidity of max. 85% at +25°C.

9 DISPOSAL

Life-expired and failed contactors shall be disposed of in compliance with the effective national and local laws and regulations. To dispose of the product, send it to an authorized company for recycling in compliance with the effective national and local laws and regulations.

10 MANUFACTURER'S WARRANTY

The manufacturer guarantees the contactors comply with the declared characteristics, provided that consumers follow the operation, transportation and storage conditions.

Warranty period: 10 years from the date of sale specified in the sales receipt.
Shelf life: 10 years from the date of manufacture specified on the product package or housing. Service life: 15 years

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

MEA regional headquarters: EKF ELECTRICAL SOLUTION FZCO, Techno Hub-2, DSO, P.O. box 341079, Dubai, United Arab Emirates, tel. +971-4-547-06-18.

Importer and EKF trademark service representative in 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 modular contactors KM AVERES EKF have been approved for operation.

Date of manufacture: for information, refer to the product package.

Quality control stamp

EAC



V3.2

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