

Contactors

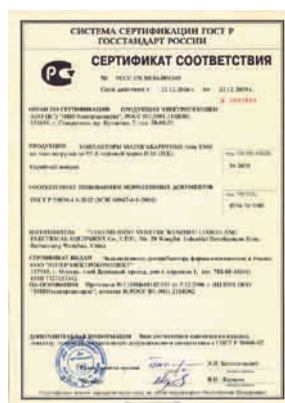
KMI AC contactors

KMI AC contactors of general industrial purpose are designed for load currents from 9 to 95 A (AC-3). They are intended for actuating, shutting down and reversing of asynchronous motors equipped with a short-circuited rotor for the applied voltage limited to 660V, remote control of lighting (AC-5a, AC-5b), heating circuits and various low-inductance loads (AC-1), switching three-phase capacitor batteries (AC-6b) and primary windings of three-phase low-voltage transformers (AC-6a).

All unit types per load currents limited to 40 A have a single group of auxiliary NO or NC contacts.

Types per load currents exceeding 40 A have two contact groups (NO and NC).

KMI AC contactors 9-95 A application includes fan, pump, thermal curtain, furnace, overhead-track hoist, unit, lighting and automated load transfer systems control.



Design and technical features of KMI compact contactors meet requirements of international and Russian standards. According to its constructive and technical features, KMI AC contactors meet the requirements of international standards EN 60947-1, EN 60947-4-1, EN 60947-5-1

Advantages

- Broadened range of KMI compact contactors as compared to the similar products from domestic manufacturers on Russian market.
- Wide range of optional devices readily available in the stock (PKI contact attachments, PVI time-delay attachments, RTI thermal relays).

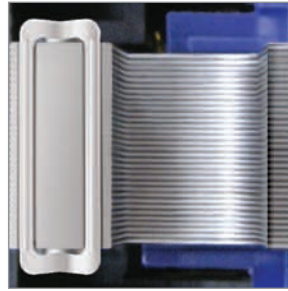
- Installation on 35 mm DIN rail is possible (other domestic manufacturers offer this fixing only as optional feature).
- Reverse version can be obtained using the interlocking mechanism.

Design Features

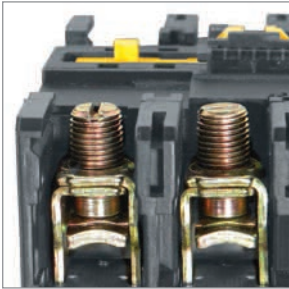


Special oval terminal contacts ensure a secure conductor fixation:

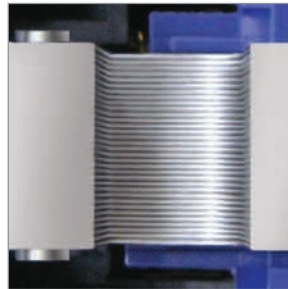
- for dimensions 1 and 2 – with tempered disk spring washers;
- for dimensions 3 and 4 – with a c-clamp allowing connecting a wider section contact.



Short-circuited aluminum rings pressed into polar tips of the magnetic system's stationary part are provided for preventing detonation.



Notches on terminal contacts provide for lowering the wire heating owing to the secure fixation in places of connection and boosting the overall contact area.



As a result of applying a unique manufacturing technology, when being in operation the magnetic system ensures an optimum exploitation (no noise and boosted contact system reliability).



Integrated auxiliary contacts. Each contactor up to 32 A is supplemented with an auxiliary contact: 1 NO or 1 NC. Contactors from 40 up to 95 A are completed with two auxiliary contacts: 1 NO+1 NC.



There are two ways to install the contactors:

1. Fast DIN-rail mounting: KMI from 9 up to 32 A (dimensions 1 and 2) – 35 mm; KMI from 40 up to 95 A (dimensions 3 and 4) – 35 and 75 mm.
2. Screw installation onto a mounting panel or profile.

Range

	Name	Rated operating current, A (AC-3)	Rated control coil voltage, V	Number and type of contacts	Qty in transport package, pcs.	Product ID
	KMI-10910 9 A 24 V/AC-3 1NO IEK	9	24	1NO	50	KKM11-009-024-10
	KMI-10910 9 A 36 V/AC-3 1NO IEK	9	36	1NO	50	KKM11-009-036-10
	KMI-10910 9 A 110 V/AC-3 1NO IEK	9	110	1NO	50	KKM11-009-110-10
	KMI-10910 9 A 230 V/AC-3 1NO IEK	9	230	1NO	50	KKM11-009-230-10
	KMI-10910 9 A 400 V/AC-3 1NO IEK	9	400	1NO	50	KKM11-009-400-10
	KMI-10911 9 A 110 V/AC-3 1NO IEK	9	110	1NC	50	KKM11-009-110-01
	KMI-10911 9 A 230 V/AC-3 1NO IEK	9	230	1NC	50	KKM11-009-230-01
	KMI-10911 9 A 400 V/AC-3 1NO IEK	9	400	1NC	50	KKM11-009-400-01
	KMI-11210 12 A 24 V/AC-3 1NO IEK	12	24	1NO	50	KKM11-012-024-10
	KMI-11210 12 A 36 V/AC-3 1NO IEK	12	36	1NO	50	KKM11-012-036-10
	KMI-11210 12 A 110 V/AC-3 1NO IEK	12	110	1NO	50	KKM11-012-110-10
	KMI-11210 12 A 230 V/AC-3 1NO IEK	12	230	1NO	50	KKM11-012-230-10
	KMI-11210 12 A 400 V/AC-3 1NO IEK	12	400	1NO	50	KKM11-012-400-10
	KMI-11211 12 A 110 V/AC-3 1NO IEK	12	110	1NC	50	KKM11-012-110-01
	KMI-11211 12 A 230 V/AC-3 1NO IEK	12	230	1NC	50	KKM11-012-230-01
	KMI-11211 12 A 400 V/AC-3 1NO IEK	12	400	1NC	50	KKM11-012-400-01
	KMI-11810 18 A 24 V/AC-3 1NO IEK	18	24	1NO	50	KKM11-018-024-10
	KMI-11810 18 A 36 V/AC-3 1NO IEK	18	36	1NO	50	KKM11-018-036-10
KMI-11810 18 A 110 V/AC-3 1NO IEK	18	110	1NO	50	KKM11-018-110-10	
KMI-11810 18 A 230 V/AC-3 1NO IEK	18	230	1NO	50	KKM11-018-230-10	
KMI-11810 18 A 400 V/AC-3 1NO IEK	18	400	1NO	50	KKM11-018-400-10	
KMI-11811 18 A 230 V/AC-3 1NO IEK	18	230	1NC	50	KKM11-018-230-01	
KMI-11811 18 A 110 V/AC-3 1NO IEK	18	110	1NC	50	KKM11-018-110-01	
KMI-11811 18 A 400 V/AC-3 1NO IEK	18	400	1NC	50	KKM11-018-400-01	
	KMI-22510 25 A 24 V/AC-3 1NO IEK	25	24	1NO	50	KKM21-025-024-10
	KMI-22510 25 A 36 V/AC-3 1NO IEK	25	36	1NO	50	KKM21-025-036-10
	KMI-22510 25 A 110 V/AC-3 1NO IEK	25	110	1NO	50	KKM21-025-110-10
	KMI-22510 25 A 230 V/AC-3 1NO IEK	25	230	1NO	50	KKM21-025-230-10
	KMI-22510 25 A 400 V/AC-3 1NO IEK	25	400	1NO	50	KKM21-025-400-10
	KMI-22511 25 A 110 V/AC-3 1NO IEK	25	110	1NC	50	KKM21-025-110-01
	KMI-22511 25 A 230 V/AC-3 1NO IEK	25	230	1NC	50	KKM21-025-230-01
	KMI-22511 25 A 400 V/AC-3 1NO IEK	25	400	1NC	50	KKM21-025-400-01
	KMI-23210 32 A 36 V/AC-3 1NO IEK	32	36	1NO	50	KKM21-032-036-10
	KMI-23210 32 A 110 V/AC-3 1NO IEK	32	110	1NO	50	KKM21-032-110-10
	KMI-23210 32 A 230 V/AC-3 1NO IEK	32	230	1NO	50	KKM21-032-230-10
	KMI-23210 32 A 400 V/AC-3 1NO IEK	32	400	1NO	50	KKM21-032-400-10
	KMI-23211 32 A 110 V/AC-3 1NO IEK	32	110	1NO	50	KKM21-032-110-01
	KMI-23211 32 A 230 V/AC-3 1NO IEK	32	230	1NC	50	KKM21-032-230-01
KMI-23211 32 A 400 V/AC-3 1NO IEK	32	400	1NC	50	KKM21-032-400-01	
	KMI-34012 40 A 36 V/AC-3 1NO 1NC IEK	40	36	1NO+1NC	20	KKM31-040-036-11
	KMI-34012 40 A 110 V/AC-3 1NO 1NC IEK	40	110	1NO+1NC	20	KKM31-040-110-11
	KMI-34012 40 A 230 V/AC-3 1NO 1NC IEK	40	230	1NO+1NC	20	KKM31-040-230-11
	KMI-34012 40 A 400 V/AC-3 1NO 1NC IEK	40	400	1NO+1NC	20	KKM31-040-400-11
	KMI-35012 50 A 110 V/AC-3 1NO 1NC IEK	50	110	1NO+1NC	20	KKM31-050-110-11
	KMI-35012 50 A 230 V/AC-3 1NO 1NC IEK	50	230	1NO+1NC	20	KKM31-050-230-11
KMI-35012 50 A 400 V/AC-3 1NO 1NC IEK	50	400	1NO+1NC	20	KKM31-050-400-11	
	KMI-46512 65 A 110 V/AC-3 1NO 1NC IEK	65	110	1NO+1NC	20	KKM41-065-110-11
	KMI-46512 65 A 230 V/AC-3 1NO 1NC IEK	65	230	1NO+1NC	20	KKM41-065-230-11
	KMI-46512 65 A 400 V/AC-3 1NO 1NC IEK	65	400	1NO+1NC	20	KKM41-065-400-11
	KMI-48012 80 A 110 V/AC-3 1NO 1NC IEK	80	110	1NO+1NC	16	KKM41-080-110-11
	KMI-48012 80 A 230 V/AC-3 1NO 1NC IEK	80	230	1NO+1NC	16	KKM41-080-230-11
	KMI-48012 80 A 400 V/AC-3 1NO 1NC IEK	80	400	1NO+1NC	16	KKM41-080-400-11
	KMI-49512 95 A 110 V/AC-3 1NO 1NC IEK	95	110	1NO+1NC	16	KKM41-095-110-11
	KMI-49512 95 A 230 V/AC-3 1NO 1NC IEK	95	230	1NO+1NC	16	KKM41-095-230-11
	KMI-49512 95 A 400 V/AC-3 1NO 1NC IEK	95	400	1NO+1NC	16	KKM41-095-400-11

Technical features of KMI AC contactors

Features	KMI-10910 KMI-10911	KMI-11210 KMI-11211	KMI-11810 KMI-11811	KMI-22510 KMI-22511	KMI-23210 KMI-23211	KMI-34012	KMI-35012	KMI-46512	KMI-48012	KMI-49512
Rated operating AC voltage U_e , V	230, 400, 660									
Rated insulation voltage U_i , V	660									
Rated impulse voltage U_{imp} , kV	8									
Rated operating current I_e , application category AC-3 ($U_e \leq 400$ V), A	9	12	18	25	32	40	50	65	80	95
Conventional thermal current I_{th} ($t^\circ \leq 40^\circ$), application category AC-1, A	25	25	32	40	50	60	80	80	125	125
Rated power for AC-3, kW										
230 V	2,2	3	4	5,5	7,5	11	15	18,5	22	25
400 V	4	5,5	7,5	11	15	18,5	22	30	37	45
660 V	5,5	7,5	10	15	18,5	30	33	37	45	45
Max. short-time load ($t \leq 1$ s), A	162	216	324	450	576	720	900	1170	1440	1710
Conditional short-circuit current I_{nc} , A	1000	1000	3000	3000	3000	3000	3000	3000	5000	5000
Overcurrent protection – fuse gG, A	10	20	25	40	50	50	63	80	100	100
Coordination type	2									
Power dissipated at I_e , W/pole										
AC-3	0,2	0,36	0,8	1,25	2	2,4	3,7	4,2	5,1	7,2
AC-1	1,56	1,56	2,5	3,2	5	5,4	9,6	6,4	12,5	12,5

Technical features of control circuit of KMI AC contactors

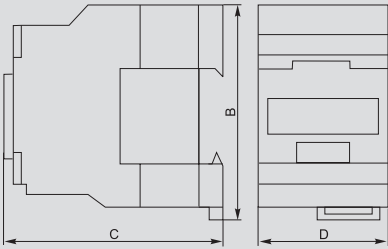
Features	KMI-10910 KMI-10911	KMI-11210 KMI-11211	KMI-11810 KMI-11811	KMI-22510 KMI-22511	KMI-23210 KMI-23211	KMI-34012	KMI-35012	KMI-46512	KMI-48012	KMI-49512
Rated control coil voltage U_c , V-	24, 36, 110, 230, 400									
Control voltage ranges										
tripping	$(0,8 \div 1,1) U_c$									
release	$(0,3 \div 0,6) U_c$									
Coil power consumption at U_c , VA										
tripping $\cos \varphi = 0,75$	60	60	60	90	90	200	200	200	200	200
hold $\cos \varphi = 0,3$	7	7	7	7,5	7,5	20	20	20	20	20
Tripping time, ms										
closure	12–22	12–22	12–22	15–24	15–24	20–26	20–26	20–26	20–35	20–35
opening	4–19	4–19	4–19	5–19	5–19	8–12	8–12	8–12	6–20	6–20
Switching wear resistance, mln. cycles										
AC-1	0,55	0,7	1,0	1,3	1,3	1,3	1,3	1,4	0,7	1,2
AC-3	1,7	1,7	1,4	1,4	1,6	1,5	1,4	1,4	1,2	0,9
AC-4	0,2	0,2	0,2	0,15	0,15	0,12	0,1	0,1	0,1	0,1
Mechanical wear resistance, mln. cycles	15	15	15	12	10	10	10	10	5	4
Dissipated power, W	2–3	2–3	2–3	2,5–3,5	2,5–3,5	6–10	6–10	6–10	6–10	6–10

Technical features of integrated auxiliary contacts

Rated voltage U_n , V	till 660
Rated insulation voltage U_i , V	660
Conventional thermal current ($t^\circ \leq 40^\circ$) I_{th} , A	10
Min. making capacity	
U_{min} , V	24
I_{min} , mA	10
Overcurrent protection – fuse gG, A	10
Max. short-time load ($t \leq 1$ s), A	100
Insulation resistance, min., mΩ	10

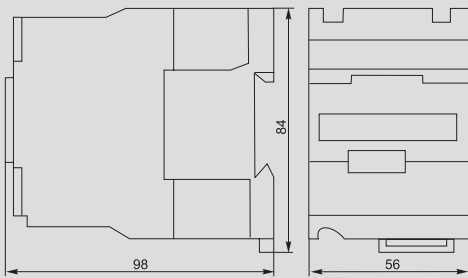
Overall dimensions and weight

KMI-10910; KMI-10911; KMI-11210; KMI-11211;
KMI-11810; KMI-11811; KMI-22510; KMI-22511



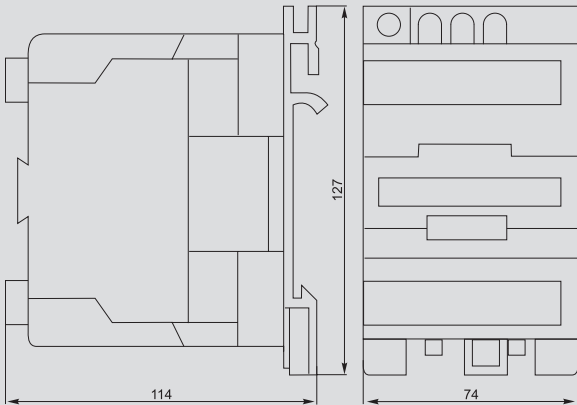
Type	Dimension, mm			Weight max, kg
	B	C	D	
KMI-10910; KMI-10911	74	80	45	0,34
KMI-11210; KMI-11211	74	80	45	0,345
KMI-11810; KMI-11811	74	85	45	0,365
KMI-22510; KMI-22511	84	93	56	0,400

KMI-23210; KMI-23211



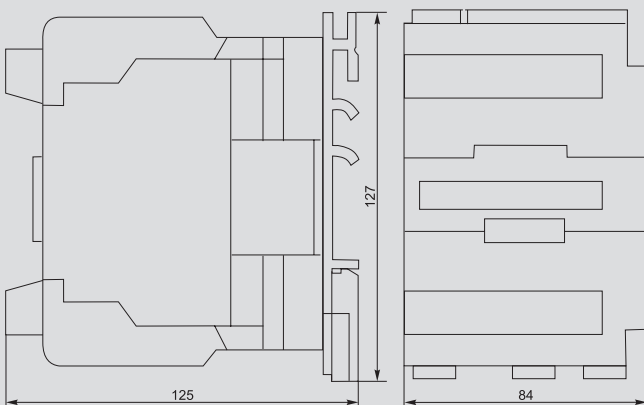
Type	Weight max, kg
KMI-23210; KMI-23211	0,545

KMI-34010; KMI-34011
KMI-35012; KMI-46512



Type	Weight max, kg
KMI-34010; KMI-34011	1,400
KMI-35012	1,400
KMI-46512	1,400

KMI-48012; KMI-49512



Type	Weight max, kg
KMI-48012	1,590
KMI-49512	1,610