

Electromagnetic contactors of KTI series

Electromagnetic contactors of KTI series are intended for use in control circuits for start and stoppage of 3-phase squirrel-cage induction motors supplied from mains with rated voltage up to 660 V, and also can be used for switching on/off other electrical units: lighting, heating devices, various inductive loads. They are used with fans, pumps, furnaces, beam cranes and automatic load transfer systems.



For the efficiency of design solutions, high performances and operating reliability, the contactor was awarded with Silver Medal of 15th International Exhibition "Electro-2006" in category "Best electrical equipment".



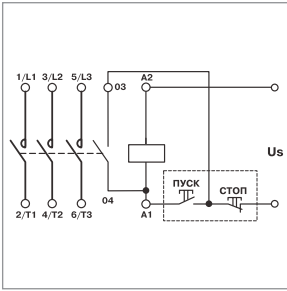
According to its constructive and technical features, KTI AC contactors meet the requirements of international standards EN 60947-1, EN 60947-4-1, EN 60947-5-1.

Advantages

- Simple design provides for easy maintenance of components.
- The base is made from aluminum shape that ensures increased robustness and lesser weight compared with similar designs.

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

Design Features



There is one NO contact group built in the control coil module in the circuit of every contactor. Owing to the push-button control station, this provides for assembling a simple control circuit.



Checking the contact system operation is performed using a standard box wrench head – 10.



Upper lid is fixed with locking screws. It excludes spontaneous unfastening. Thus, KTI AC contactors can be installed in places with continuous operational vibration.



Contact system status indicator is brought to the external panel of side cover. It provides for checking the operation group position without disassembling the contactor.



Indication (factory notches) on the terminals allows determining their wear degree.



Contactors' construction permits installation of two auxiliary add-on devices in any set at the same time.



Improved design of the control coil provides for its dismounting without using a special tool (by means of depressing the plunger).



Factory assembled reverse contactor is supplied with factory buses and mechanical blocking system. Contactors are installed onto two metal rails that ensure high structure rigidity. KTI series reverse contactors represent a separate group in the company's range.



Contact pieces are coated with silver providing for using them in continuous running duty. Welding depositions on the contact pieces are made of silver-based composite materials providing for lowering contact resistance if the temperature rises.



Range

| | Name | Rated operating current, A (AC-3) | Rated control coil voltage, V | Number and type of contacts | Package amount, pcs. | | Product ID |
|--|--|-----------------------------------|-------------------------------|-----------------------------|----------------------|-----------|------------------|
| | | | | | multiple | transport | |
| | KTI-5115 contactor 115 A 230 V/AC-3 IEK | 115 | 230 | 1NO | 1 | 4 | KKT50-115-230-10 |
| | KTI-5115 contactor 115 A 400 V/AC-3 IEK | 115 | 400 | 1NO | 1 | 4 | KKT50-115-400-10 |
| | KTI-5150 contactor 150 A 230 V/AC-3 IEK | 150 | 230 | 1NO | 1 | 4 | KKT50-150-230-10 |
| | KTI-5150 contactor 150 A 400 V/AC-3 IEK | 150 | 400 | 1NO | 1 | 4 | KKT50-150-400-10 |
| | KTI-5185 contactor 185 A 230 V/AC-3 IEK | 185 | 230 | 1NO | 1 | 4 | KKT50-185-230-10 |
| | KTI-5185 contactor 185 A 400 V/AC-3 IEK | 185 | 400 | 1NO | 1 | 4 | KKT50-185-400-10 |
| | KTI-5225 contactor 225 A 230 V/AC-3 IEK | 225 | 230 | 1NO | 1 | 2 | KKT50-225-230-10 |
| | KTI-5225 contactor 225 A 400 V/AC-3 IEK | 225 | 400 | 1NO | 1 | 2 | KKT50-225-400-10 |
| | KTI-5265 contactor 265 A 230 V/AC-3 IEK | 265 | 230 | 1NO | 1 | 2 | KKT50-265-230-10 |
| | KTI-5265 contactor 265 A 400 V/AC-3 IEK | 265 | 400 | 1NO | 1 | 2 | KKT50-265-400-10 |
| | KTI-5330 contactor 330 A 230 V/AC-3 IEK | 330 | 230 | 1NO | 1 | 2 | KKT50-330-230-10 |
| | KTI-5330 contactor 330 A 400 V/AC-3 IEK | 330 | 400 | 1NO | 1 | 2 | KKT50-330-400-10 |

| | | | | | | | |
|--|--|-----|-----|-----|---|---|------------------|
| | KTI-6400 contactor 400 A 230 V/AC-3 IEK | 400 | 230 | 1NO | 1 | 2 | KKT60-400-230-10 |
| | KTI-6400 contactor 400 A 400 V/AC-3 IEK | 400 | 400 | 1NO | 1 | 2 | KKT60-400-400-10 |
| | KTI-6500 contactor 500 A 230 V/AC-3 IEK | 500 | 230 | 1NO | 1 | 2 | KKT60-500-230-10 |
| | KTI-6500 contactor 500 A 400 V/AC-3 IEK | 500 | 400 | 1NO | 1 | 2 | KKT60-500-400-10 |

| | | | | | | | |
|--|--|-----|-----|-----|---|---|------------------|
| | KTI-7630 contactor 630 A 230 V/AC-3 IEK | 630 | 230 | 1NO | 1 | 1 | KKT70-630-230-10 |
| | KTI-7630 contactor 630 A 400 V/AC-3 IEK | 630 | 400 | 1NO | 1 | 1 | KKT70-630-400-10 |

Technical features of KTI AC contactors

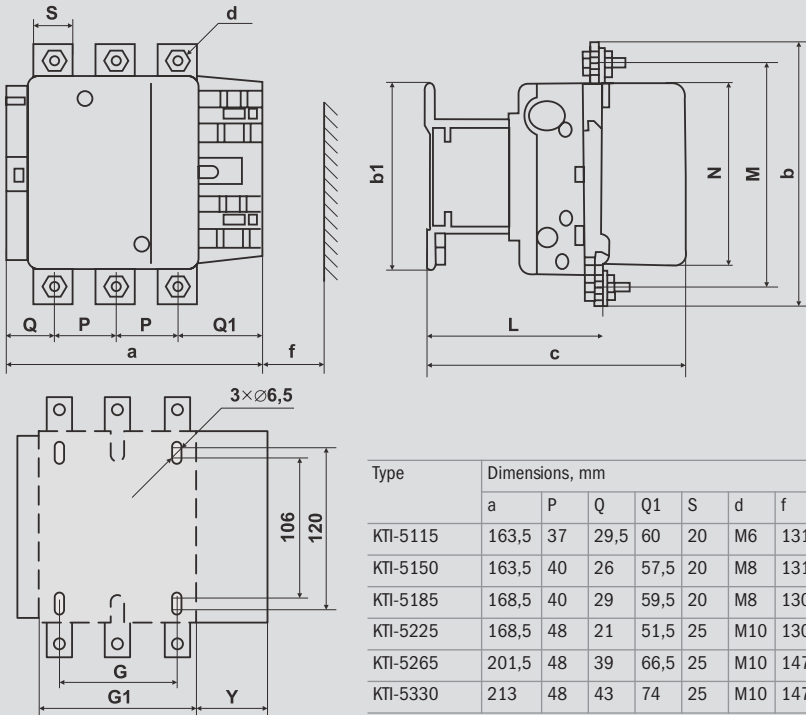
| Features | KMI-5115 | KMI-5150 | KMI-5185 | KMI-5225 | KMI-5265 | KMI-5330 | KMI-6400 | KMI-6500 | KMI-7630 | |
|---|---------------|----------|----------|----------|----------|----------|----------|----------|----------|-----|
| Rated operating AC voltage U_e , V | 230; 400; 660 | | | | | | | | | |
| Rated insulation voltage U_i , V | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | |
| Rated operating current I_e , application category AC-3 ($U_e \leq 400$ V), A | 115 | 150 | 185 | 225 | 265 | 330 | 400 | 500 | 630 | |
| Conventional thermal current I_{th} ($t^\circ \leq 40^\circ\text{C}$), application category AC-1, A | 200 | 250 | 275 | 315 | 350 | 400 | 500 | 700 | 1000 | |
| Rated power for AC-3, kW | 230 V | 30 | 40 | 55 | 63 | 75 | 100 | 110 | 147 | 200 |
| | 400 V | 55 | 75 | 90 | 110 | 132 | 160 | 200 | 250 | 335 |
| | 660 V | 80 | 100 | 110 | 129 | 160 | 220 | 280 | 335 | 450 |
| Max. short-time load ($t \leq 1$ s), A | 920 | 1200 | 1480 | 1800 | 2120 | 2640 | 3200 | 4000 | 5040 | |
| Conditional short-circuit current I_{nc} , A | 5000 | 10 000 | 10 000 | 10 000 | 10 000 | 18 000 | 18 000 | 18 000 | 18 000 | |
| Overcurrent protection – fuse gG, A | 200 | 250 | 315 | 315 | 400 | 500 | 500 | 800 | 1000 | |
| Coordination type | 2 | | | | | | | | | |
| Intermittent duty, operation cycles per hour | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | |
| Power dissipated at I_e , W/pole | AC-3 | 5 | 8 | 12 | 16 | 21 | 31 | 42 | 45 | 48 |
| | AC-1 | 15 | 22 | 25 | 32 | 37 | 44 | 65 | 88 | 120 |

Technical features of KTI control circuit

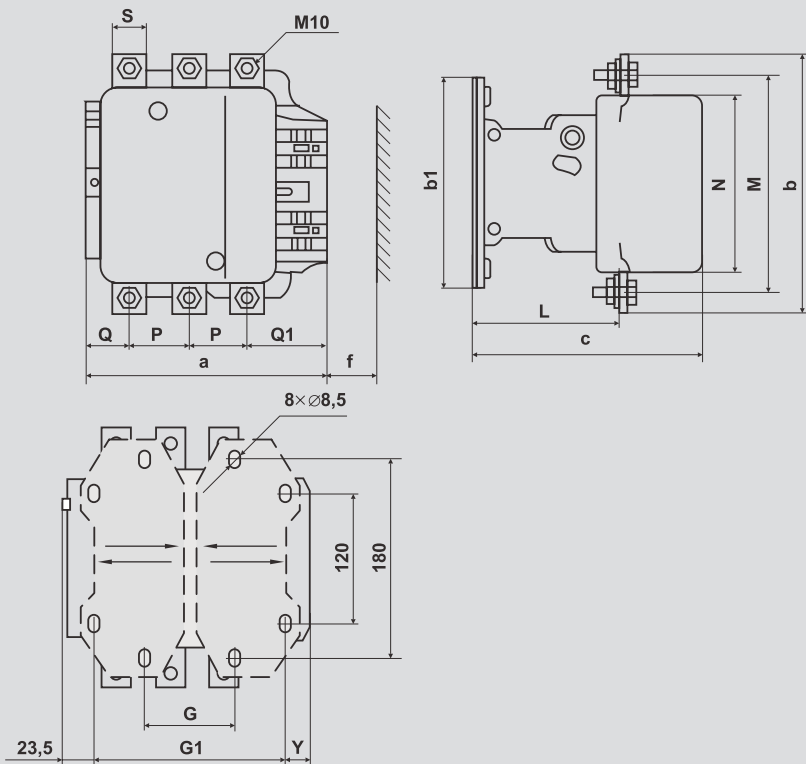
| Features | KMI-5115 | KMI-5150 | KMI-5185 | KMI-5225 | KMI-5265 | KMI-5330 | KMI-6400 | KMI-6500 | KMI-7630 | |
|---|-------------------------------|------------------------------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| Rated control coil voltage U_c , V- | 230; 400 | | | | | | | | | |
| Control voltage ranges | tripping | $(0,8 \div 1,1) \cdot U_c$ | | | | | | | | |
| | release | $(0,35 \div 0,55) \cdot U_c$ | | | | | | | | |
| Coil power consumption at U_c , VA | tripping $\cos \varphi = 0,3$ | 550 | 550 | 800 | 800 | 650 | 650 | 1075 | 1100 | 1650 |
| | hold $\cos \varphi = 0,75$ | 45 | 45 | 55 | 55 | 10 | 10 | 15 | 18 | 22 |
| Tripping time, ms | closure | 23 ÷ 35 | 23 ÷ 35 | 20 ÷ 35 | 20 ÷ 35 | 40 ÷ 65 | 40 ÷ 65 | 40 ÷ 75 | 40 ÷ 75 | 40 ÷ 80 |
| | opening | 5 ÷ 15 | 5 ÷ 15 | 7 ÷ 15 | 7 ÷ 15 | 100 ÷ 170 | 100 ÷ 170 | 100 ÷ 170 | 100 ÷ 170 | 100 ÷ 200 |
| Switching wear resistance, mln. cycles | AC-3 | 0,8 | 0,8 | 0,8 | 0,7 | 0,7 | 0,6 | 0,5 | 0,5 | 0,4 |
| | AC-1 | 0,5 | 0,5 | 0,5 | 0,4 | 0,4 | 0,3 | 0,3 | 0,3 | 0,25 |
| Mechanical wear resistance, mln. comm. cycles | 1 | 1 | 1 | 1 | 1 | 1 | 0,8 | 0,8 | 0,8 | |
| Dissipated power, W/pole | 12 ÷ 16 | 12 ÷ 16 | 18 ÷ 24 | 18 ÷ 24 | 8 | 8 | 14 | 18 | 20 | |

Overall and installation dimensions

KTI-5115...KTI-5330

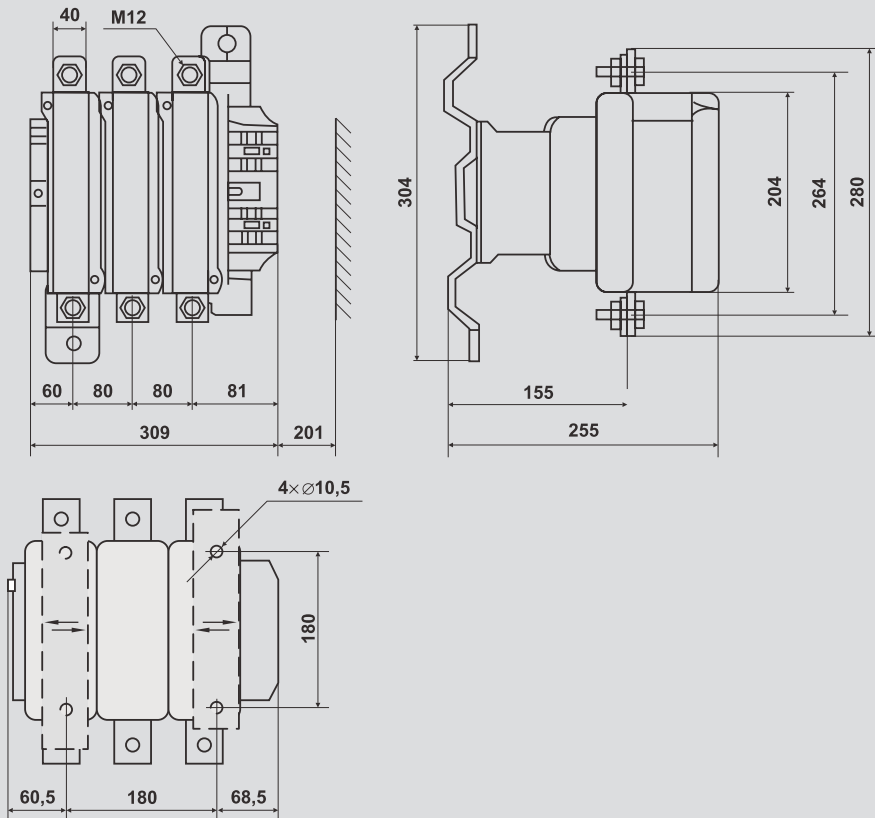


KTI-6400, KTI-6500

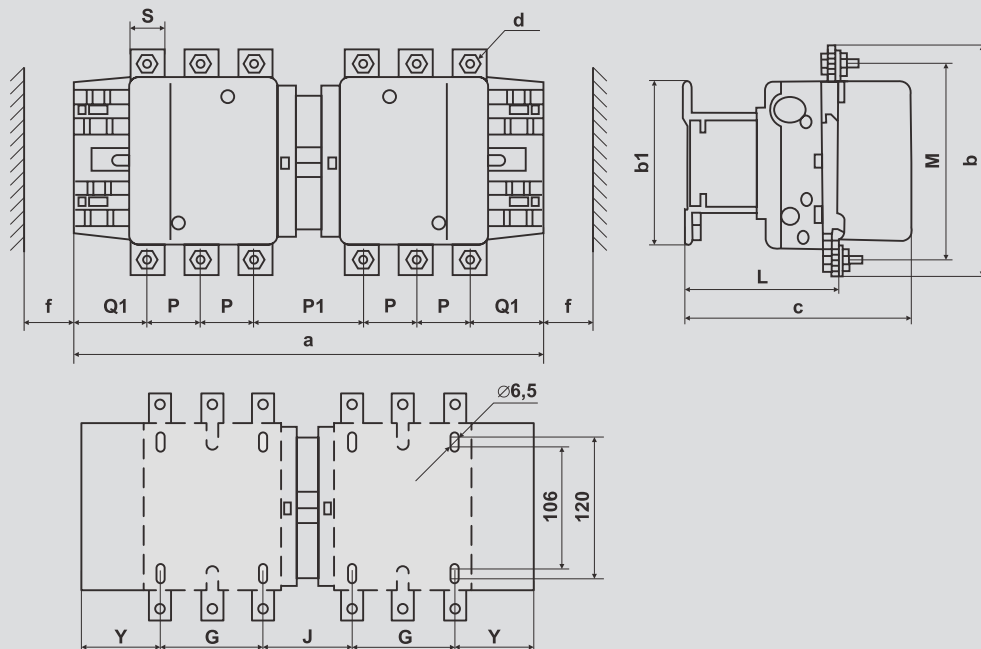




KTI-7630



KTI-51153...KTI-53303



| Type | Dimensions, mm | | | | | | | | | | | | | | |
|-----------|----------------|----|-----|------|----|-----|-----|-----|-----|-----|-----|-------|----|-----|------|
| | a | P | P1 | Q1 | S | d | f | b | b1 | M | c | L | G | J | Y |
| KTI-51153 | 346 | 37 | 78 | 60 | 20 | M6 | 131 | 162 | 137 | 147 | 171 | 107 | 80 | 72 | 57 |
| KTI-51503 | 346 | 40 | 72 | 57,5 | 20 | M8 | 131 | 170 | 137 | 150 | 171 | 107 | 80 | 72 | 57 |
| KTI-51853 | 357 | 40 | 78 | 59,5 | 20 | M8 | 130 | 174 | 137 | 154 | 181 | 113,5 | 80 | 78 | 59,5 |
| KTI-52253 | 357 | 48 | 62 | 51,5 | 25 | M10 | 130 | 197 | 137 | 172 | 181 | 113,5 | 80 | 78 | 59,5 |
| KTI-52653 | 424 | 48 | 99 | 66,5 | 25 | M10 | 147 | 203 | 145 | 178 | 213 | 141 | 96 | 109 | 61,5 |
| KTI-53303 | 445 | 48 | 105 | 74 | 25 | M10 | 147 | 206 | 145 | 181 | 219 | 145 | 96 | 122 | 65,5 |