

INDUCTION ELECTRIC MOTORS TYPE A4



Induction three-phase squirrel-cage rotor motors series A4 are designed for driving mechanisms without speed regulation (pumps, fans, smoke exhausters and so on). Motors are designed for operation at a voltage of 3000 V, 6000V and 10000 V from the 50 Hz AC mains.

The motors of the 3000 V will have dimensions of the 6000 V motors and the same power. The 3000 V motors have a current twice that of the 6000 V motors.

Climatic versions of motors voltage of 3000 V and 6000V - U3, T3.

Climatic versions of motors voltage of 10000 V - U3.

The rated duty - continuous S1.

Type of construction - IM1001.

Cooling method - ICA01.

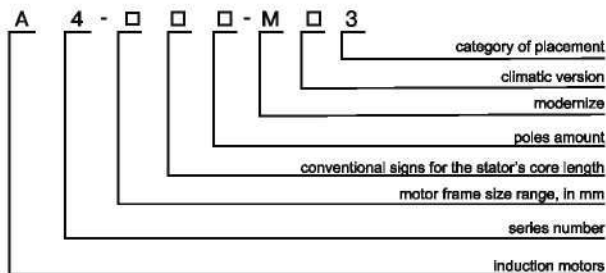
Degree of motor protection - IP23, terminal boxes IP55.

Motors are designed for direct-on-line starting. Motors allow two successive startings when cold or one starting when heated. Subsequent startings should be made with at least three hours intervals, number of startings not less than 2000 for service life, but not more than 250 startings during a year.

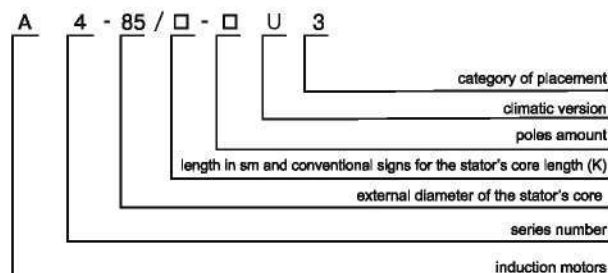
Motors are equipped with grease lubricated rolling-contact bearings. Motors are coupled with the driven mechanism with a help of flexible coupling. The stator winding insulation is of thermosetting type "Monolit-2". Type of heat resistance is not lower than "B". Stator winding has six leads brought out to four insulators in the terminal box. Stator windings are star-connected.

Motors allow both clockwise and counterclockwise rotation. The reversal is from a stand-still.

Conventional signs structure for motors series A4 of voltage 6 kV



Conventional signs structure for motors series A4 of voltage 10 kV



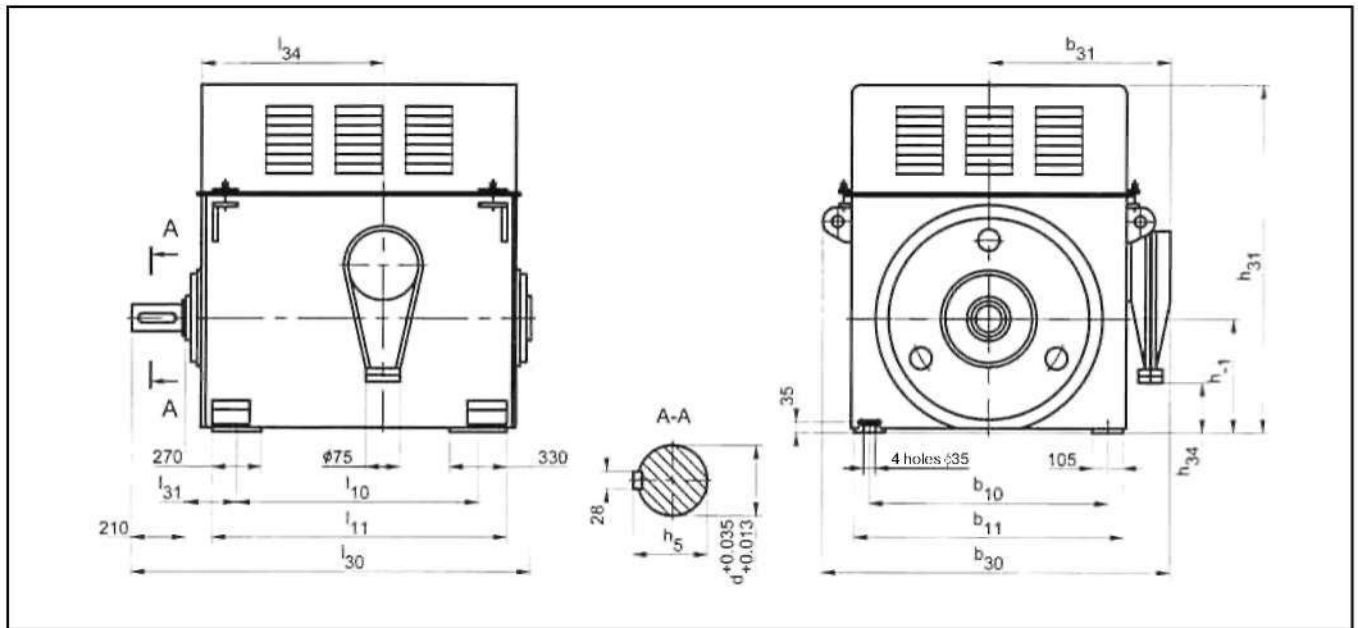
INDUCTION ELECTRIC MOTORS TYPE A4

Specifications for electric motors series A4 of voltage 6 kV

Type	Power, kW	Synchronous speed of rotation, rpm	U, V	Efficiency, %	cosφ, o.e.	Stator current, A	$\frac{M_{max}}{M_{nom}}$	$\frac{M_s}{M_{nom}}$	$\frac{I_{kl}}{I_{nom}}$	Mass moment of inertia, kgm ²	
										of rotor	of mechanism, admissible
A4-400XK-4MU3	400	1500	6000	94.3	0.87	47	2.3	1	5.7	40	680
A4-400X-4MU3	500	1500	6000	94.7	0.88	58	2.3	1	5.7	44	920
A4-400Y-4MU3	630	1500	6000	95.2	0.88	72.5	2.3	1.2	5.7	52	1120
A4-450X-4MU3	800	1500	6000	95.2	0.88	92	2	1	5.5	84	1200
A4-450Y-4MU3	1000	1500	6000	95.5	0.89	113	2.1	1	5.7	100	1400
A4-400XK-6MU3	315	1000	6000	93.6	0.85	38	2	1	5.3	60	1200
A4-400X-6MU3	400	1000	6000	94	0.86	47.5	2	1	5.3	72	1400
A4-400Y-6MU3	500	1000	6000	94.4	0.86	59.5	2	1	5.3	84	2400
A4-450X-6MU3	630	1000	6000	94.7	0.86	74.5	1.9	1	5.3	128	2800
A4-450Y-6MU3	800	1000	6000	95	0.86	94.5	1.9	1	5.3	152	3400
A4-400X-8MU3	250	750	6000	93	0.81	32	1.9	1	5.2	76	2000
A4-400Y-8MU3	315	750	6000	93.4	0.82	39.5	1.9	1	5	88	2400
A4-450X-8MU3	400	750	6000	93.8	0.82	50	1.9	1.2	5	144	3200
A4-450YK-8MU3	500	750	6000	94.2	0.83	61.5	1.8	1	5	168	5200
A4-450Y-8MU3	630	750	6000	94.5	0.83	75	1.9	1	5	196	6000
A4-400X-10MU3	200	600	6000	92	0.76	27.5	1.9	1	4.8	76	2000
A4-400Y-10MU3	250	600	6000	92.2	0.77	34	1.9	1	4.8	88	3200
A4-450X-10MU3	315	600	6000	93	0.82	40	1.9	1	5	148	4800
A4-450Y-10MU3	400	600	6000	93.4	0.82	50	1.8	1	4.8	168	6000
A4-450YD-10MU3	500	600	6000	93.8	0.82	62.5	2.1	1.2	5.8	188	7200
A4-450X-12MU3	250	500	6000	92	0.76	34.5	1.8	1	4.8	160	7600
A4-450Y-12MU3	315	500	6000	92.2	0.77	42.5	1.8	1	4.8	180	10000
A4-400XK-4MT3	315	1500	6000	93.9	0.885	36.5	2	0.8	5.8	40	580
A4-400X-4MT3	400	1500	6000	94.2	0.89	46	2	0.8	5.5	44	680
A4-400Y-4MT3	500	1500	6000	94.6	0.895	57	1.9	0.8	5.5	52	920
A4-450X-4MT3	630	1500	6000	95	0.89	72	1.9	0.8	5.7	84	1000
A4-450Y-4MT3	800	1500	6000	95	0.89	91	1.8	0.8	4.8	100	1120
A4-400XK-6MT3	250	1000	6000	93.3	0.86	30	2	1	5.6	60	1120
A4-400X-6MT3	315	1000	6000	93.6	0.87	37.5	1.8	0.9	5	72	1200
A4-400Y-6MT3	400	1000	6000	94	0.865	47.5	2	1	5.6	84	1400
A4-450X-6MT3	500	1000	6000	94.3	0.86	59.5	1.8	0.8	4.9	128	2400
A4-450Y-6MT3	630	1000	6000	94.7	0.86	74.5	1.8	1	5.5	152	2800
A4-400X-8MT3	200	750	6000	92.3	0.8	26.1	2	1	6	76	1700
A4-400Y-8MT3	250	750	6000	93	0.82	31.5	2	1	5.5	88	2000
A4-450X-8MT3	315	750	6000	93.3	0.835	39	1.8	1	4.8	144	3200
A4-450YK-8MT3	400	750	6000	93.7	0.83	49.5	1.8	1	5	168	3200
A4-450Y-8MT3	500	750	6000	94.2	0.83	61.5	1.8	1	5.1	196	5200
A4-450X-10MT3	250	600	6000	92	0.82	31.9	1.8	0.8	4.8	148	3800
A4-450Y-10MT3	315	600	6000	93	0.83	39.5	1.9	1	5	168	4800

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Overall, mounting, connecting dimensions and mass of the motors series A4 of voltage 6 kV



Type	b_{10}	b_{11}	b_{30}	b_{31}	d	h_{10}	h_{11}	l_{30}	l_{31}	l_{34}	h	h_5	h_{31}	h_{34}	Mass, kg
A4-400XK-4M	800	940	1320	710	100	900	1140	1550	200	740	400	106	1300	100	1930
A4-400X-4M	800	940	1320	710	100	900	1140	1550	200	740	400	106	1300	100	2070
A4-400Y-4M	800	940	1320	710	100	1000	1240	1650	200	840	400	106	1300	100	2290
A4-400XK-6M	800	940	1320	710	100	900	1140	1550	200	740	400	106	1300	100	1960
A4-400X-6M	800	940	1320	710	100	900	1140	1550	200	740	400	106	1300	100	2110
A4-400Y-6M	800	940	1320	710	100	1000	1240	1650	200	840	400	106	1300	100	2320
A4-400X-8M	800	940	1320	710	100	900	1140	1550	200	740	400	106	1300	100	2080
A4-400Y-8M	800	940	1320	710	100	1000	1240	1650	200	840	400	106	1300	100	2280
A4-400X-10M	800	940	1320	710	100	900	1140	1550	200	740	400	106	1300	100	2050
A4-400Y-10M	800	940	1320	710	100	1000	1240	1650	200	840	400	106	1300	100	2250
A4-450X-4M	900	1040	1420	760	110	900	1190	1600	224	790	450	116	1410	205	2580
A4-450Y-4M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	2890
A4-450X-6M	900	1040	1420	760	110	900	1190	1600	224	790	450	116	1410	205	2620
A4-450Y-6M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	2940
A4-450X-8M	900	1040	1420	760	110	900	1190	1600	224	790	450	116	1410	205	2540
A4-450YK-8M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	2790
A4-450Y-8M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	3070
A4-450X-10M	900	1040	1420	760	110	900	1190	1600	224	790	450	116	1410	205	2450
A4-450Y-10M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	2690
A4-450YD-10M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	3240
A4-450X-12M	900	1040	1420	760	110	900	1190	1600	224	790	450	116	1410	205	2570
A4-450Y-12M	900	1040	1420	760	110	1000	1290	1700	224	890	450	116	1410	205	2790

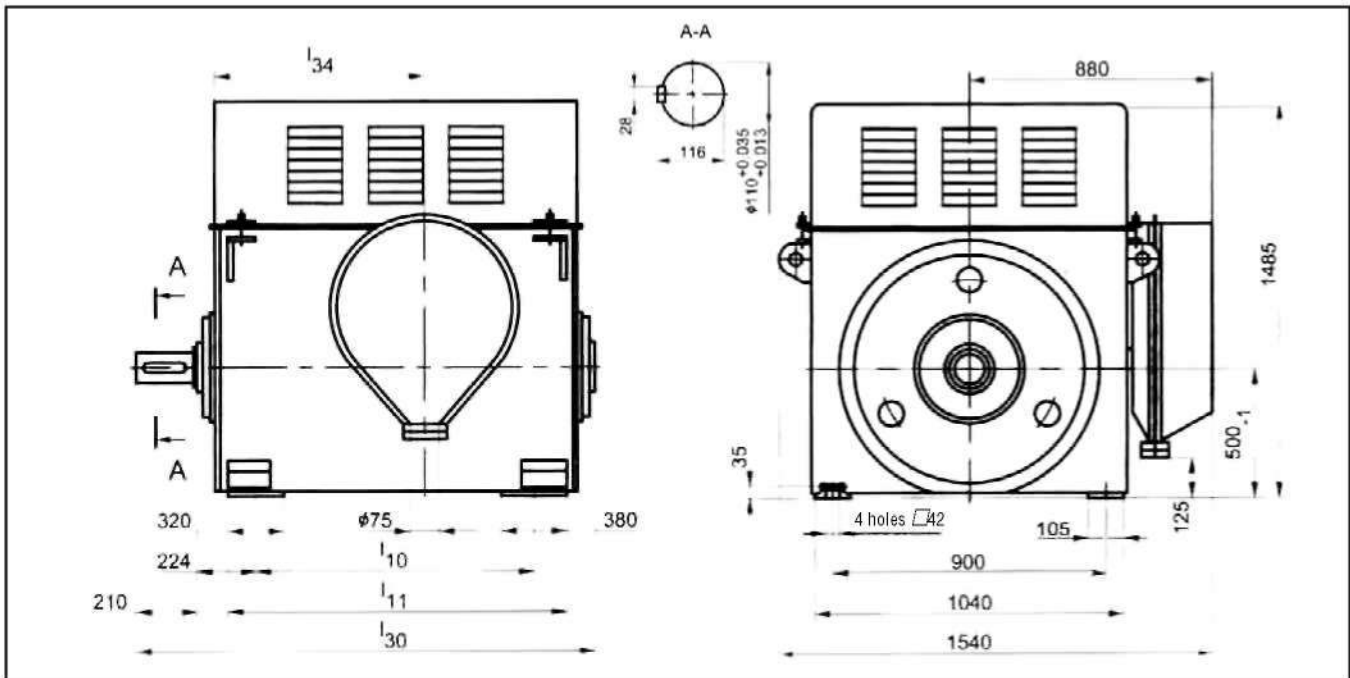
Dimensions in mm

INDUCTION ELECTRIC MOTORS TYPE A4

Specifications for electric motors series A4 of voltage 10 kV

Type	Power, kW	Synchronous speed of rotation, rpm	U, V	Efficiency, %	cosφ, o.e.	Stator current, A	Mmax / Mnom	Ms / Mnom	Iki / Inom	Mass moment of inertia, kgm ²	
										of rotor	of mechanism, admissible
A4-85/37K-4U3	400	1500	10000	93.1	0.86	29	2	1	6	82	680
A4-85/37-4U3	500	1500	10000	93.2	0.86	36	2	1	6	82	920
A4-85/43-4U3	630	1500	10000	93.9	0.86	45	2	1	6	92	1120
A4-85/49-4U3	800	1500	10000	94.2	0.86	57	2	1	6	103	1200
A4-85/55-4U3	1000	1500	10000	94.5	0.86	71	2	1	6	114	1400
A4-85/40-6U3	400	1000	10000	93.5	0.82	30	2	1	5.7	140	2300
A4-85/51-6U3	500	1000	10000	94.1	0.82	37.4	2.1	1.1	6.0	176	3000
A4-85/54-6U3	630	1000	10000	94.3	0.84	43.7	1.8	1	5.4	188	3200
A4-85/59-6U3	800	1000	10000	94.5	0.84	58.2	1.8	1	5.5	204	3450
A4-85/51-8U3	400	750	10000	93.5	0.78	31.7	1.8	1	5.2	140	4900
A4-85/62-8U3	500	750	10000	94	0.78	39.4	1.8	1	5.2	212	6000

Overall, mounting, connecting dimensions and mass of the motors series A4 of voltage 10 kV



Type	l ₁₀	l ₁₁	l ₃₀	l ₃₄	Mass, kg
A4-85/37K-4U3	1000	1340	1750	870	2600
A4-85/37-4U3	1000	1340	1750	870	2600
A4-85/43-4U3	1000	1340	1750	870	2800
A4-85/49-4U3	1120	1460	1870	990	3000
A4-85/55-4U3	1120	1460	1870	990	3100
A4-85/40-6U3	1000	1340	1750	870	2740

Type	l ₁₀	l ₁₁	l ₃₀	l ₃₄	Mass, kg
A4-85/51-6U3	1120	1460	1870	990	3090
A4-85/54-6U3	1120	1460	1870	990	3230
A4-85/59-6U3	1120	1460	1870	990	3450
A4-85/51-8U3	1000	1340	1750	870	3160
A4-85/62-8U3	1120	1460	1870	990	3420