

Rated output at 50 Hz	Frame size	Operating characteristics at rated output							Order No.	Price	Weight	
		Rated speed at 50 Hz	Rated torque at 50 Hz	Relevant for IE changeover								IM B3 type of construction approx.
				Efficiency Class according to IEC 60034-30 standard	Efficiency at 50 Hz 100 %-load	Efficiency at 50 Hz 75 %-load	Power factor at 50 Hz 100 %-load	Rated current at 400 V, 50 Hz				
P_{rated} kW	FS	n_{rated} rpm	M_{rated} Nm		η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A	► Phase-out model	m kg		
2-pole, 3000 rpm at 50 Hz, temperature class 155 (F), IP55 degree of protection, for use according to IEC 60034-30												
0.09	56 M	2830	0.3		70	70	0.76	0.24	► 1LA9 050-2KAQQ	3		
0.12	56 M	2830	0.4		70	70	0.81	0.31	► 1LA9 053-2KAQQ	3.8		
0.18	63 M	2840	0.61		70	70	0.78	0.48	1LA9 060-2KAQQ	4.1		
0.25	63 M	2840	0.84		72	72	0.8	0.63	1LA9 063-2KAQQ	5.1		
0.37	71 M	2840	1.2		74	74	0.77	0.94	1LA9 070-2KAQQ	6		
0.55	71 M	2835	1.9		75	75	0.75	1.42	1LA9 073-2KAQQ	7.2		
0.75	80 M	2870	2.5	IE2	77.4	77.4	0.82	1.71	1LA9 080-2KAQQ	9.8		
1.1	80 M	2860	3.7	IE2	79.6	79.6	0.89	2.25	1LA9 083-2KAQQ	12.3		
1.5	90 S	2890	5	IE2	81.3	81.3	0.87	3.05	1LA9 090-2KAQQ	15		
2.2	90 L	2890	7.3	IE2	83.2	83.2	0.87	4.40	1LA9 096-2KAQQ	18.6		
3	100 L	2890	9.9	IE2	84.6	84.6	0.88	5.8	1LA9 106-2KAQQ	24		
4	112 M	2905	13	IE2	85.8	85.8	0.89	7.6	1LA9 113-2KAQQ	35		
5.5	132 S	2930	18	IE2	87.0	87.0	0.9	10.1	1LA9 130-2KAQQ	43		
7.5	132 S	2930	24	IE2	88.1	88.1	0.92	13.4	1LA9 131-2KAQQ	56		
11	160 M	2945	36	IE2	89.4	89.4	0.9	19.7	1LA9 163-2KAQQ	73		
15	160 M	2945	49	IE2	90.3	90.3	0.9	26.5	1LA9 164-2KAQQ	82		
18.5	160 L	2940	60	IE2	90.9	91.0	0.92	32.0	1LA9 166-2KAQQ	102		
22	180 M	2945	71	IE2	91.3	91.5	0.89	39.0 ¹⁾	1LA9 183-2WAQQ	131		
30	200 L	2950	97	IE2	92.0	92.0	0.89	53	1LA9 206-2WAQQ	185		
37	200 L	2950	120	IE2	92.5	92.5	0.89	65 ¹⁾	1LA9 207-2WAQQ	214		

Order No. supplements

Motor type	Penultimate position: Voltage code				Final position: Type of construction code						
	50 Hz				Without flange	With flange			With standard flange	With special flange	
	230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ	IM B3/6/7/8, IM V6, IM V5 without protective cover	IM B5, IM V1 without protective cover IM V3	IM V1 with protective cover ²⁾	IM B35	IM B14, IM V19, IM V18 without protective cover	IM B34	IM B14, IM V19, IM V18 without protective cover
	1	6	3	5	0	1	4	6	2	7	3
1LA9 05 QQ	○	○	○	–	□	✓	–	–	✓	✓	✓
1LA9 06 QQ	○	○	○	–	□	✓	✓	✓	✓	✓	✓
1LA9 07 QQ	○	○	○	–	□	✓	✓	✓	✓	✓	✓
1LA9 08 QQ	○	○	○	–	□	✓	✓	✓	✓	✓	✓
1LA9 09 QQ	○	○	○	–	□	✓	✓	✓	✓	✓	✓
1LA9 10 QQ	○	○	○	○	□	✓	✓	✓	✓	✓	✓
1LA9 11 QQ	○	○	○	○	□	✓	✓	✓	✓	✓	✓
1LA9 13 QQ	○	○	○	○	□	✓	✓	✓	✓	✓	✓
1LA9 16 QQ	○	○	○	○	□	✓	✓	✓	✓	✓	✓
1LA9 18 QQ	○	○	○	○	□	✓ ³⁾	✓	✓	–	–	–
1LA9 20 QQ	○	○	○	○	□	✓ ³⁾	✓	✓	–	–	–

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible

Order other voltages with voltage code **9** in the penultimate position and the corresponding order code (see “Special versions” in the “Options” under “Voltages”).

Order other types of construction with type of construction code **9** in the final position and the corresponding order code (see “Special versions” in the “Options” under “Types of construction”).

¹⁾ For connection to 230 V, parallel supply cables are necessary (see Catalog D 81.1 part 0 “Introduction”, “Connection, circuit and connection box”).

²⁾ The “Second shaft extension” option, order code **K16** is not possible.

³⁾ Type of construction IM V3 is only possible using type of construction code **9** and order code **M1G**.

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
► Phase-out model							
2-pole, 3000 rpm at 50 Hz, temperature class 155 (F), IP55 degree of protection, for use according to IEC 60034-30							
►1LA9 050-2KA□□	3.6	4.5	3	16	0.00015	41	52
►1LA9 053-2KA□□	3.2	4.3	2.8	16	0.0002	41	52
1LA9 060-2KA□□	2.8	4.8	3.1	16	0.00022	49	60
1LA9 063-2KA□□	2.5	4.9	2.5	16	0.00026	49	60
1LA9 070-2KA□□	3.3	6.5	3.1	16	0.00041	52	63
1LA9 073-2KA□□	3.6	6.3	2.9	16	0.0005	52	63
1LA9 080-2KA□□	4.4	8.3	3.2	16	0.001	56	67
1LA9 083-2KA□□	3.8	7	3.2	16	0.0013	56	67
1LA9 090-2KA□□	4.1	7	3.5	16	0.0018	60	72
1LA9 096-2KA□□	4.1	7	3.5	16	0.0022	60	72
1LA9 106-2KA□□	3.4	7	3.2	16	0.0044	62	74
1LA9 113-2KA□□	2.8	7	3.2	16	0.0077	63	75
1LA9 130-2KA□□	2.7	7	3.2	16	0.019	68	80
1LA9 131-2KA□□	2.8	7	3.1	16	0.024	68	80
1LA9 163-2KA□□	2.5	7	3.1	16	0.044	70	82
1LA9 164-2KA□□	2.5	7	3.1	16	0.051	70	82
1LA9 166-2KA□□	2.4	7	3.1	16	0.065	70	82
1LA9 183-2WA□□	2.6	7.2	3.3	16	0.09	70	83
1LA9 206-2WA□□	2.5	7	3.2	16	0.16	71	84
1LA9 207-2WA□□	2.7	7	3.3	16	0.2	71	84

- The order numbers that are marked with this symbol are phased-out types.
A successor is not planned for frame size 56.

The motors can also be used for 60 Hz according to EPACT.

Rated output at 50 Hz	Frame size	Operating characteristics at rated output							Order No.	Price	Weight
		Rated speed at 50 Hz	Rated torque at 50 Hz	Relevant for IE changeover				Rated current at 400 V, 50 Hz			
P_{rated} kW	FS	n_{rated} rpm	M_{rated} Nm	Efficiency Class according to IEC 60034-30 standard	Efficiency at 50 Hz 100 %-load	Efficiency at 50 Hz 75 %-load	Power factor at 50 Hz 100 %-load		For Order No. supplements for voltage and type of construction, see table below		IM B3 type of construction approx.
					η_{rated} %	η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A	► Phase-out model		m kg
4-pole, 1500 rpm at 50 Hz, temperature class 155 (F), IP55 degree of protection, for use according to IEC 60034-30											
0.06	56 M	1380	0.42		61	61	0.66	0.22	► 1LA9 050-4KA□□		3
0.09	56 M	1390	0.62		62	62	0.68	0.31	► 1LA9 053-4KA□□		3.8
0.12	63 M	1395	0.82		66	66	0.65	0.41	1LA9 060-4KA□□		4.1
0.18	63 M	1395	1.3		65	65	0.68	0.59	1LA9 063-4KA□□		5.1
0.25	71 M	1410	1.7		70	70	0.64	0.81	1LA9 070-4KA□□		6
0.37	71 M	1385	2.6		71	71	0.73	1.04	1LA9 073-4KA□□		7.2
0.55	80 M	1410	3.7		77	77	0.78	1.32	1LA9 080-4KA□□		9.8
0.75	80 M	1400	5.1	IE2	79.6	79.6	0.75	1.81	1LA9 083-4KA□□		12.3
1.1	90 S	1440	7.3	IE2	81.4	81.4	0.77	2.55	1LA9 090-4KA□□		15
1.5	90 L	1440	9.9	IE2	82.8	82.8	0.77	3.40	1LA9 096-4KA□□		18
2.2	100 L	1435	15	IE2	84.3	84.3	0.82	4.60	1LA9 106-4KA□□		25
3	100 L	1435	20	IE2	85.5	85.7	0.81	6.3	1LA9 107-4KA□□		30
4	112 M	1440	27	IE2	86.6	87.0	0.81	8.2	1LA9 113-4KA□□		37
5.5	132 S	1455	36	IE2	87.7	87.7	0.84	10.8	1LA9 130-4KA□□		45
7.5	132 M	1455	49	IE2	88.7	88.9	0.84	14.5	1LA9 133-4KA□□		60
11	160 M	1460	72	IE2	89.8	90.2	0.85	21.0	1LA9 163-4KA□□		81
15	160 L	1460	98	IE2	90.6	90.8	0.86	28.0	1LA9 166-4KA□□		107
18.5	180 M	1465	121	IE2	91.2	91.6	0.84	35 ¹⁾	1LA9 183-4WA□□		126
22	180 L	1465	143	IE2	91.6	92.0	0.84	41.5 ¹⁾	1LA9 186-4WA□□		146
30	200 L	1465	196	IE2	92.3	92.7	0.87	54	1LA9 207-4WA□□		199

Order No. supplements

Motor type	Penultimate position: Voltage code					Final position: Type of construction code						
	50 Hz					Without flange	With flange			With standard flange		With special flange
	230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ		IM B3/6/7/8, IM V6, IM V5 without protective cover	IM B5, IM V1 without protective cover	IM V1 with protective cover ²⁾	IM B35	IM B14, IM V19, IM V18 without protective cover	IM B34	IM B14, IM V19, IM V18 without protective cover
	1	6	3	5	0	1	4	6	2	7	3	
1LA9 05 □□	○	○	○	–	□	✓	–	–	✓	✓	✓	✓
1LA9 06 □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	✓
1LA9 07 □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	✓
1LA9 08 □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	✓
1LA9 09 □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	✓
1LA9 10 □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	✓
1LA9 11 □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	✓
1LA9 13 □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	✓
1LA9 16 □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	✓
1LA9 18 □□	○	○	○	○	□	✓ ³⁾	✓	✓	–	–	–	–
1LA9 20 □□	○	○	○	○	□	✓ ³⁾	✓	✓	–	–	–	–

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible

Order other voltages with voltage code **9** in the penultimate position and the corresponding order code (see “Special versions” in the “Options” under “Voltages”).

Order other types of construction with type of construction code **9** in the final position and the corresponding order code (see “Special versions” in the “Options” under “Types of construction”).

1) For connection to 230 V, parallel supply cables are necessary (see Catalog D 81.1 part 0 “Introduction”, “Connection, circuit and connection box”).

2) The “Second shaft extension” option, order code **K16** is not possible.

3) Type of construction IM V3 is only possible using type of construction code **9** and order code **M1G**.

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
► Phase-out model							
4-pole, 1500 rpm at 50 Hz, temperature class 155 (F), IP55 degree of protection, for use according to IEC 60034-30							
► 1LA9 050-4KAQQ	2.7	3.1	2.8	16	0.00027	42	53
► 1LA9 053-4KAQQ	2.8	3.2	2.8	16	0.00035	42	53
1LA9 060-4KAQQ	2.7	3.5	2.6	16	0.00037	42	53
1LA9 063-4KAQQ	3	3.6	2.5	16	0.00045	42	53
1LA9 070-4KAQQ	3.6	4.3	3.1	16	0.00076	44	55
1LA9 073-4KAQQ	3.3	4.2	3	16	0.00095	44	55
1LA9 080-4KAQQ	3.4	5.6	2.9	16	0.0017	47	58
1LA9 083-4KAQQ	4	5.8	3.5	16	0.0024	47	58
1LA9 090-4KAQQ	3.1	6.4	3.2	16	0.0033	48	60
1LA9 096-4KAQQ	3.6	6.7	3.4	16	0.004	48	60
1LA9 106-4KAQQ	3.4	7	3.6	16	0.0062	53	65
1LA9 107-4KAQQ	3.8	7	3.9	16	0.0077	53	65
1LA9 113-4KAQQ	3.2	6.9	3.2	16	0.014	53	65
1LA9 130-4KAQQ	3.2	7	3.6	16	0.023	62	74
1LA9 133-4KAQQ	3.4	7	3.6	16	0.029	62	74
1LA9 163-4KAQQ	2.6	6.9	3.2	16	0.055	66	78
1LA9 166-4KAQQ	2.8	7	3.3	16	0.072	66	78
1LA9 183-4WAQQ	2.8	7	3.2	16	0.15	63	76
1LA9 186-4WAQQ	3.1	7.3	3.4	16	0.19	63	76
1LA9 207-4WAQQ	3	7	3.2	16	0.32	65	78

- The order numbers that are marked with this symbol are phased-out types.
A successor is not planned for frame size 56.

The motors can also be used for 60 Hz according to EPACT

Rated output at 50 Hz	Frame size	Operating characteristics at rated output							Order No.	Price	Weight
		Rated speed at 50 Hz	Rated torque at 50 Hz	Relevant for IE changeover			Power factor at 50 Hz 100 %-load	Rated current at 400 V, 50 Hz			
P_{rated} kW	FS	n_{rated} rpm	M_{rated} Nm	Efficiency Class according to IEC 60034-30 standard	Efficiency at 50 Hz 100 %-load η_{rated} %	Efficiency at 50 Hz 75 %-load η_{rated} %	$\cos\varphi_{\text{rated}}$	I_{rated} A		m kg	
6-pole, 1000 rpm at 50 Hz, temperature class 155 (F), IP55 degree of protection, for use according to IEC 60034-30											
0.75	90 S	925	7.7	IE2	75.9	75.9	0.72	1.98	1LA9 090-6KA00	15.7	
1.1	90 L	940	11	IE2	78.1	78.1	0.7	2.9	1LA9 096-6KA00	19	
1.5	100 L	935	15	IE2	79.8	79.8	0.73	3.7	1LA9 106-6KA00	25	
2.2	112 M	955	22	IE2	81.8	81.8	0.7	5.6	1LA9 113-6KA00	37	
4	132 M	950	40	IE2	84.6	84.6	0.81	8.4	1LA9 133-6KA00	49	
5.5	132 M	960	55	IE2	86.0	86.0	0.77	12.0	1LA9 134-6KA00	64	
7.5	160 M	965	74	IE2	87.2	87.2	0.72	17.2	1LA9 163-6KA00	98	
11	160 L	960	109	IE2	88.7	88.7	0.78	23.0	1LA9 166-6KA00	105	
15	180 L	970	148	IE2	89.7	89.7	0.75	32.0	1LA9 186-6WA00	144	
18.5	200 L	975	181	IE2	90.4	90.4	0.77	38.5	1LA9 206-6WA00	186	
22	200 L	975	215	IE2	90.9	90.9	0.77	45.5	1LA9 207-6WA00	217	

Order No. supplements

Motor type	Penultimate position: Voltage code					Final position: Type of construction code						
	50 Hz					Without flange	With flange			With standard flange		With special flange
	230 VΔ/400 VY	400 VΔ/690 VY	500 VY	500 VΔ		IM B3/6/7/8, IM V6, IM V5 without protective cover	IM B5, IM V1 without protective cover IM V3	IM V1 with protective cover ¹⁾	IM B35	IM B14, IM V19, IM V18 without protective cover	IM B34	IM B14, IM V19, IM V18 without protective cover
	1	6	3	5	0	1	4	6	2	7	3	
1LA9 05 . - . . . □□	○	○	○	–	□	✓	–	–	✓	✓	✓	
1LA9 06 . - . . . □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	
1LA9 07 . - . . . □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	
1LA9 08 . - . . . □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	
1LA9 09 . - . . . □□	○	○	○	–	□	✓	✓	✓	✓	✓	✓	
1LA9 10 . - . . . □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	
1LA9 11 . - . . . □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	
1LA9 13 . - . . . □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	
1LA9 16 . - . . . □□	○	○	○	○	□	✓	✓	✓	✓	✓	✓	
1LA9 18 . - . . . □□	○	○	○	○	□	✓ ²⁾	✓	✓	–	–	–	
1LA9 20 . - . . . □□	○	○	○	○	□	✓ ²⁾	✓	✓	–	–	–	

- Standard version
- Without additional charge
- ✓ With additional charge
- Not possible

Order other voltages with voltage code **9** in the penultimate position and the corresponding order code (see “Special versions” in the “Options” under “Voltages”).

Order other types of construction with type of construction code **9** in the final position and the corresponding order code (see “Special versions” in the “Options” under “Types of construction”).

1) The “Second shaft extension” option, order code **K16** is not possible.

2) Type of construction IM V3 is only possible using type of construction code **9** and order code **M1G**.

Order No.	Locked-rotor torque with direct starting torque	Locked-rotor current as multiple of rated current	Breakdown torque	Torque class	Moment of inertia	Noise at rated output	
	T_{LR}/T_{rated}	I_{LR}/I_{rated}	T_B/T_{rated}	CL	J kgm ²	Measuring surface sound pressure level at 50 Hz L_{pA} dB(A)	Sound pressure level at 50 Hz L_{WA} dB(A)
6-pole, 1000 rpm at 50 Hz, temperature class 155 (F), IP55 degree of protection, for use according to IEC 60034-30							
1LA9 090-6KA□□	3	4.4	2.5	16	0.0033	43	55
1LA9 096-6KA□□	3.7	5.7	3.2	16	0.005	43	55
1LA9 106-6KA□□	3.5	6.2	3.4	16	0.0065	47	59
1LA9 113-6KA□□	2.9	6.2	3	16	0.014	52	64
1LA9 133-6KA□□	3	6.3	2.7	16	0.025	63	75
1LA9 134-6KA□□	3.7	7.3	3.6	16	0.03	63	75
1LA9 163-6KA□□	2.4	5.5	2.5	16	0.063	66	78
1LA9 166-6KA□□	3.1	6.9	3.2	16	0.072	66	78
1LA9 186-6WA□□	2.2	6.5	2.5	16	0.19	66	78
1LA9 206-6WA□□	2.8	6.2	2.5	16	0.28	66	78
1LA9 207-6WA□□	2.8	6.2	2.5	16	0.36	66	78

The motors can also be used for 60 Hz according to EPACT.