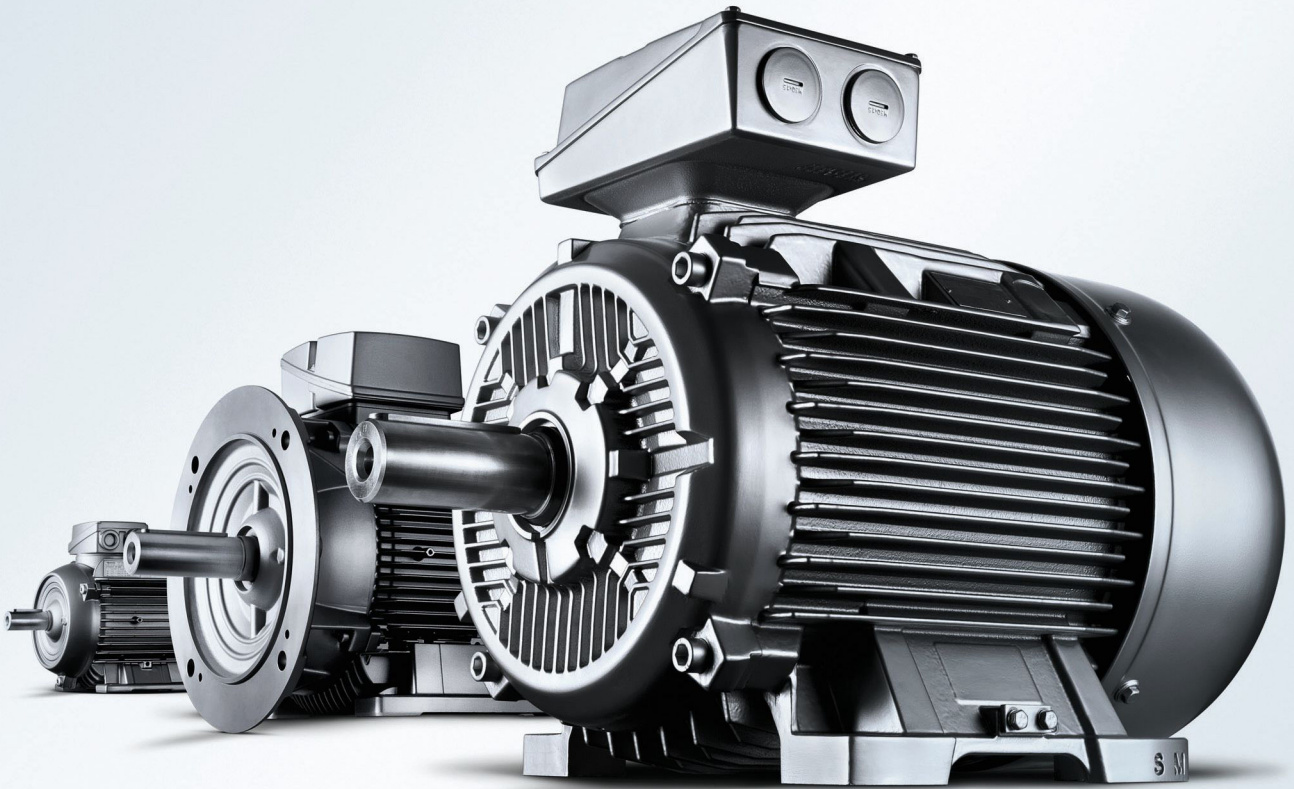


**SIEMENS**



# PT. GENTA JAYA ABADI

## SIMOTICS Low-Voltage Motors

Distribution offering

This technical brochure focuses on a selected motor spectrum specifically defined for the distribution business covering all main standard applications and industries

# Motor selection and order number structure · 16 digits

## Overview

The order number consists of a combination of figures and letters and is divided into three blocks linked with hyphens for a better overview.

The first block (Position 1 to 7) identifies the motor type and efficiency level; the second block (Position 8 to 12)

defines the motor frame size and length, the number of poles and in some cases the frequency/output; and in the third block (Position 13 to 16) the frequency/output, type of construction and other design features are encoded.

## Structure of Order No. (1LE0 and 1LE10 series)

Structure	Position:	1	2	3	4	5	6	7	-	8	9	10	11	12	-	13	14	15	16	-	Z	
<u>Position 1 to 6:</u>	<b>Low-voltage motor series</b>																					
	• Cast Iron / made in China	1	L	E	0	1	0															
	• Aluminum	1	L	E	1	0	0															
<u>Position 7:</u>	<b>Motor efficiency</b>																					
	• Motor with high efficiency - IE2							1														
	• Motor with improved efficiency - IE1							2														
<u>Position 8 and 9:</u>	<b>Frame size</b>																					
	• OD = 080; 0E = 090																					
	• 1A = 100; 1B = 112; 1C = 132; 1D = 160; 1E = 180																					
	• 2A = 200; 2B = 225; 2C = 250; 2D = 280																					
	• 3A = 315; 3B = 355																					
<u>Position 10:</u>	<b>Number of poles</b>																					
	• A = 2; B = 4; C = 6																					
<u>Position 11:</u>	<b>Frame length</b>																					
	• 0 or 1 = S (short)																					
	• 2 or 3 = M (medium)																					
	• 4, 5, 6 or 7 = L (long) <sup>(a)</sup>																					
<u>Position 12 and 13:</u>	<b>Voltage, circuit and frequency</b>																					
	• 34 = 400 VΔ 50 Hz																					
	• 33 = 380 VΔ 50 Hz																					
	• 35 = 415 VΔ 50 Hz																					
	• 41 = 525 VΔ 50 Hz																					
	• 90 <sup>(b)</sup> = special voltage & frequency																					
<u>Position 14:</u>	<b>Type of construction</b>																					
	• A = IM B3																					
	• J = IM B35																					
	• F = IM B5																					
	• G = IM V1																					
	• K = IM B14																					
<u>Position 15:</u>	<b>Motor protection</b>																					
	• A = without winding protection																					
	• B = 3 PTC thermistors for tripping																					
<u>Position 16:</u>	<b>Terminal box location (view from drive end)</b>																					
	• 4 = terminal box on top																					
	<b>Special order version</b>																					
	Coded - Order (option) code also required <sup>(b)</sup>																					

<sup>(a)</sup> For 1LE0 FS315 and 355 motors, digit 4 still stands for Medium (M).

<sup>(b)</sup> For deviations in the second and third block from the catalog codes, either -Z or 90 should be used as appropriate, e.g. 1LE0101-1DB23-4AB4-Z Z=B02; or 1LE0101-1DB29-0AB4-Z Z=L1R.

## Ordering example

Selection criteria	Requirement	Structure of the Order No.
Motor type	Cast Iron motor with IP55 degree of protection	1LE010- - - - - - - - - - -
Efficiency	High efficiency IE2	1LE0101- - - - - - - - - - -
Motor frame size / No. of poles / Speed	160 / 4-pole / 1500 rpm	1LE0101-1DB2- - - - - - - - - - -
Rated output	11 kW	1LE0101-1DB23-4- - - - - - - - - - -
Voltage and frequency	400 V, 50 Hz	1LE0101-1DB23-4- - - - - - - - - - -
Type of construction	IM B3	1LE0101-1DB23-4A- - - - - - - - - - -
Motor protection	3 PTC thermistors	1LE0101-1DB23-4AB- - - - - - - - - - -
Mechanical design	Terminal box on top	1LE0101-1DB23-4AB4- - - - - - - - - - -
Special versions	Anti-condensation heating for 230 V	1LE0101-1DB23-4AB4-Z Q02- - - - - - - - - - -

# Motor selection and order number structure · 12 digits

## Overview

The order number consists of a combination of figures and letters and is divided into two blocks linked with hyphens for a better overview.

The first block (Position 1 to 7) identifies motor type and motor frame size; and the second block defines number of poles, frequency/output and type of construction.

## Structure of Order No. (1LA7 series)

Structure	Position: 1 2 3 4 5 6 7 - 8 9 10 11 12 - Z
<u>Position 1 to 4:</u>	<b>Low-voltage motor series</b> • IE1 Aluminum motor <b>1 L A 7</b>
<u>Position 5 to 7:</u>	<b>Frame size</b> (frame size comprising shaft height and construction length) • 060 • 063 • 070 • 073 • 080 • 083 • 090 • 096
<u>Position 8:</u>	<b>Number of poles</b> • 2 • 4 • 6
<u>Position 9 to 10:</u>	<b>Version</b> • AA • AB
<u>Position 11:</u>	<b>Voltage, circuit and frequency</b> • 6 = 400 VΔ 50 Hz • 9 <sup>(a)</sup> = special voltage & frequency <sup>(b)</sup>
<u>Position 12:</u>	<b>Type of construction</b> • 0 = IM B3 • 6 = IM B35 • 1 = IM B5 • 1 = IM V1 • 2 = IM B14
	<b>Special order version</b> Coded - Order (option) code also required <sup>(a)</sup>

<sup>(a)</sup> For deviations in the second and third block from the catalog codes, either **-Z** or **9** should be used as appropriate, e.g. 1LA7080-2AA60-Z Z=B02; or 1LA7080-2AA90 Z=L1C.

<sup>(b)</sup> L1L for 380 V, 50 Hz; L1C for 415 V, 50 Hz.

## Ordering example

Selection criteria	Requirement	Structure of the Order No.
Motor type	Aluminum motor IE1 efficiency	1LA7 ■■■■ - ■■■■■■
Motor frame size / No. of poles / Speed	4-pole / 1500 rpm	1LA7080-4AA ■■
Rated output	0.55 kW	1LA7080-4AA6 ■
Voltage and frequency	400 V, 50 Hz	1LA7080-4AA60
Type of construction	IM B3	1LA7080-4AA60
Special versions	Anti-condensation heating for 230 V	1LA7080-4AA60-Z K45



The nominal torque of the motor is easy to calculate;  
 Torque (Nm) =  
 Power (kW) x 9550 / Speed (rpm).

## SIMOTICS General Purpose (Aluminum Series) – IE1

Aluminum Series									
Efficiency class	IE1						IE2		
Series	1LA7			1LE1002			1LE1001		
No. of poles	2	4	6	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)			Thermal class 130(B)		
Frame size	63 ... 90			100 ... 160			80 ... 160		
Rated output at 50 Hz	0.09 ... 2.2 kW			1.5 ... 18.5 kW			0.37 ... 18.5 kW		
Rated torque at 50 Hz	0.61 ... 11 Nm			10 ... 109 Nm			2.6 ... 108 Nm		

Electrical data - 1LA7 & 1LE10 - IE1 - 2-pole (IE1 Aluminum) 3000 rpm 2-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated		No load current	Rated current	Rated power factor	Efficiency at			Starting		Break-down torque	Moment of inertia	Torque class	Net weight (IMB3) kg
				speed	torque				100% load %	75% load %	50% load %	current	torque				
kW				rpm	Nm	A	A		%	%	%	A	Nm	kgm <sup>2</sup>			
0.18	63M	1LA7060-2AA..	-	2820	0.61	0.43	0.51	0.82	62.0	60.5	56.0	3.7	2.0	2.2	0.00018	16	3.6
0.25	63M	1LA7063-2AA..	-	2830	0.84	0.60	0.70	0.82	63.0	62.0	57.0	4.0	2.3	2.2	0.00022	16	4.0
0.37	71M	1LA7070-2AA..	-	2740	1.3	0.86	0.99	0.82	66.0	65.0	61.0	3.5	2.5	2.3	0.00029	16	5.0
0.55	71M	1LA7073-2AA..	-	2800	1.9	1.12	1.36	0.82	71.0	71.0	67.0	4.3	2.3	2.6	0.00041	16	6.0
0.75	80M	1LA7080-2AA..	IE 1	2855	2.5	1.34	1.75	0.86	72.1	72.1	68.1	5.6	2.6	2.4	0.00079	16	9.0
1.1	80M	1LA7083-2AA..	IE 1	2845	3.7	1.47	2.45	0.87	75.0	75.0	72.0	6.1	2.4	2.7	0.0010	16	10.7
1.5	90S	1LA7090-2AA..	IE 1	2860	5.0	2.10	3.3	0.85	77.2	77.7	74.2	5.5	2.8	2.7	0.0014	16	13.0
2.2	90L	1LA7096-2AA..	IE 1	2880	7.3	2.30	4.7	0.85	79.7	79.7	78.7	6.3	2.8	3.1	0.0018	16	15.7
3	100L	1LE1002-1AA4-...4	IE 1	2835	10	2.77	6.1	0.87	81.5	82.8	82.1	6.2	3.2	2.9	0.0034	16	20
4	112M	1LE1002-1BA2-...4	IE 1	2930	13	4.15	8.1	0.86	83.1	83.8	82.2	7.3	2.7	3.7	0.0067	16	25
5.5	132S	1LE1002-1CA0-...4	IE 1	2905	18	4.37	10.5	0.89	84.7	85.7	85.0	5.6	1.9	2.5	0.013	16	35
7.5	132S	1LE1002-1CA1-...4	IE 1	2925	24	6.1	14.5	0.87	86.0	86.9	85.8	6.3	2.1	3.2	0.016	16	40
11	160M	1LE1002-1DA2-...4	IE 1	2925	36	9.13	21.5	0.85	87.6	87.6	86.1	5.8	2.0	2.6	0.030	16	60
15	160M	1LE1002-1DA3-...4	IE 1	2930	49	12.4	29	0.84	88.7	89.0	88.0	6.1	2.5	3.1	0.036	16	68
18.5	160L	1LE1002-1DA4-...4	IE 1	2935	60	13.38	35	0.86	89.3	90.0	89.7	7.0	2.5	3.2	0.044	16	78

Electrical data - 1LA7 & 1LE10 - IE1 - 4-pole (IE1 Aluminum) 1500 rpm 4-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated		No load current	Rated current	Rated power factor	Efficiency at			Starting		Break-down torque	Moment of inertia	Torque class	Net weight (IMB3) kg
				speed	torque				100% load %	75% load %	50% load %	current	torque				
kW				rpm	Nm	A	A		%	%	%	A	Nm	kgm <sup>2</sup>			
0.12	63M	1LA7060-4AB..	-	1350	0.85	0.40	0.43	0.75	53.6	52.1	47.6	2.8	1.9	2.0	0.00029	13	3.6
0.18	63M	1LA7063-4AB..	-	1350	1.3	0.52	0.58	0.77	58.3	56.8	52.3	3.0	1.9	1.9	0.00037	13	4.0
0.25	71M	1LA7070-4AB..	-	1350	1.8	0.72	0.75	0.78	61.9	60.4	55.9	3.0	1.9	1.9	0.00052	13	4.8
0.37	71M	1LA7073-4AB..	-	1370	2.6	0.93	1.04	0.78	65.8	64.8	60.8	3.3	1.9	2.1	0.00077	13	6.3
0.55	80M	1LA7080-4AA..	-	1395	3.8	1.30	1.41	0.81	69.4	69.4	65.4	3.9	2.2	2.2	0.0014	16	8.8
0.75	80M	1LA7083-4AA..	IE 1	1395	5.1	1.57	1.88	0.80	72.1	72.1	68.1	4.2	2.3	2.3	0.0017	16	10.0
1.1	90S	1LA7090-4AA..	IE 1	1415	7.4	2.00	2.6	0.81	75.0	75.0	72.0	4.6	2.3	2.4	0.0024	16	12.9
1.5	90L	1LA7096-4AA..	IE 1	1420	10	2.65	3.45	0.81	77.2	77.7	74.2	5.3	2.4	2.6	0.0033	16	15.5
2.2	100L	1LE1002-1AB4-...4	IE 1	1425	15	2.36	4.9	0.81	79.7	80.5	78.5	5.1	2.2	2.3	0.0059	16	18
3	100L	1LE1002-1AB5-...4	IE 1	1425	20	3.11	6.3	0.85	81.5	83	82.3	5.4	2.4	2.6	0.0078	16	22
4	112M	1LE1002-1BB2-...4	IE 1	1435	27	4.04	8.2	0.85	83.1	84.5	84	5.3	2.2	2.6	0.01	16	27
5.5	132S	1LE1002-1CB0-...4	IE 1	1450	36	6.04	11.2	0.82	84.7	85.7	84.9	5.7	2.3	2.7	0.019	16	38
7.5	132M	1LE1002-1CB2-...4	IE 1	1450	49	7.94	15.2	0.82	86	86.9	86.3	6.6	2.6	3.1	0.024	16	44
11	160M	1LE1002-1DB2-...4	IE 1	1460	72	12.40	22	0.82	87.6	88	86.6	6.4	2.3	3.1	0.044	16	62
15	160L	1LE1002-1DB4-...4	IE 1	1460	98	15.90	30	0.82	88.7	89.3	88.3	7	2.5	3.4	0.056	16	73

Electrical data - 1LA7 & 1LE10 - IE1 - 6-pole (IE1 Aluminum) 1000 rpm 6-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated		No load current	Rated current	Rated power factor	Efficiency at			Starting		Break-down torque	Moment of inertia	Torque class	Net weight (IMB3) kg
				speed	torque				100% load %	75% load %	50% load %	current	torque				
kW				rpm	Nm	A	A		%	%	%	A	Nm	kgm <sup>2</sup>			
0.09	63M	1LA7063-6AB..	-	850	1.0	0.46	0.39	0.66	50.2	48.7	44.2	2.0	1.8	1.9	0.00037	13	4.0
0.18	71M	1LA7070-6AA..	-	850	2.0	0.65	0.67	0.68	57.3	55.8	51.3	2.3	2.1	1.9	0.00055	16	4.8
0.25	71M	1LA7073-6AA..	-	860	2.8	0.71	0.77	0.76	61.9	60.4	55.9	2.7	2.2	2.0	0.00080	16	5.8
0.37	80M	1LA7080-6AA..	-	920	3.8	1.18	1.16	0.72	64.1	63.1	59.1	3.1	1.9	2.1	0.0014	16	8.6
0.55	80M	1LA7083-6AA..	-	910	5.8	1.45	1.59	0.74	67.5	67.0	63.5	3.4	2.1	2.2	0.0017	16	9.8
0.75	90S	1LA7090-6AA..	IE 1	915	7.8	1.63	2.05	0.76	70.0	70.0	66.0	3.7	2.2	2.2	0.0024	16	12.6
1.1	90L	1LA7096-6AA..	IE 1	915	11.0	2.15	2.85	0.77	72.9	72.9	69.9	3.8	2.3	2.3	0.0033	16	15.7
1.5	100L	1LE1002-1AC4-...4	IE 1	940	15	2.66	3.9	0.74	75.2	76	72.4	4	2	2.2	0.0065	16	19
2.2	112M	1LE1002-1BC2-...4	IE 1	930	23	3.43	5.4	0.75	77.7	78.8	76.9	4.1	2.3	2.5	0.0092	16	25
3	132S	1LE1002-1CC0-...4	IE 1	955	30	4.86	7.3	0.74	79.7	80.2	77.7	4.6	2	2.6	0.017	16	34
4	132M	1LE1002-1CC2-...4	IE 1	950	40	5.47	9.3	0.76	81.4	82.9	82.1	4.7	2.1	2.5	0.021	16	39
5.5	132M	1LE1002-1CC3-...4	IE 1	950	55	7.59	12.7	0.75	83.1	84.6	84	5.2	2.5	2.8	0.027	16	48
7.5	160M	1LE1002-1DC2-...4	IE 1	970	74	10.73	17.5	0.73	84.7	85.4	85	5.5	2.1	2.9	0.056	16	72
11	160L	1LE1002-1DC4-...4	IE 1	965	109	13.10	24	0.77	86.4	86.4	85.4	5.9	1.9	2.7	0.078	16	92

# SIMOTICS General Purpose (Aluminum Series) – IE2

Aluminum Series									
Efficiency class	IE1						IE2		
Series	1LA7			1LE1002			1LE1001		
No. of poles	2	4	6	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)			Thermal class 130(B)		
Frame size	63 ... 90			100 ... 160			80 ... 160		
Rated output at 50 Hz	0.09 ... 2.2 kW			1.5 ... 18.5 kW			0.37 ... 18.5 kW		
Rated torque at 50 Hz	0.61 ... 11 Nm			10 ... 109 Nm			2.6 ... 108 Nm		

Electrical data - 1LE10 - IE2 - 2-pole (IE2 Aluminum) 3000 rpm 2-pole, 400 V 50 Hz																	
Rated output kW	Frame size	Order number	IE class	Rated speed torque		No load current A	Rated current A	Rated power factor	Efficiency at			Starting current torque		Break-down torque	Moment of inertia kgm <sup>2</sup>	Torque class	Net weight (IMB3) kg
				rpm	Nm				100% load %	75% load %	50% load %	current A	Nm				
0.75	80M	1LE1001-0DA2-...4	IE 2	2805	2.6	0.89	1.67	0.84	77.4	79.5	78.8	4.9	1.9	2.3	0.0008	16	9
1.1	80M	1LE1001-0DA3-...4	IE 2	2835	3.7	1.22	2.4	0.83	79.6	81.3	80.8	6	2.7	3.1	0.0011	16	11
1.5	90S	1LE1001-0EA0-...4	IE 2	2885	5	1.91	3.15	0.84	81.3	82.3	80.8	6.9	2.7	3.6	0.0017	16	13
2.2	90L	1LE1001-0EA4-...4	IE 2	2890	7.3	2.45	4.5	0.85	83.2	83.9	82.3	7.1	2.5	3.7	0.0021	16	15
3	100L	1LE1001-1AA4-...4	IE 2	2905	9.9	3.3	6.1	0.84	84.6	85.2	84.7	7	2.3	3.3	0.0044	16	21
4	112M	1LE1001-1BA2-...4	IE 2	2950	13	3.7	7.8	0.86	85.8	86.7	86.1	7.4	2.4	3.3	0.0092	16	27
5.5	132S	1LE1001-1CA0-...4	IE 2	2950	18	4.3	10.5	0.87	87	88	87.4	6.6	1.8	2.9	0.02	16	39
7.5	132S	1LE1001-1CA1-...4	IE 2	2950	24	5.7	14.1	0.87	88.1	88.7	88.6	7.5	2.2	3.1	0.024	16	43
11	160M	1LE1001-1DA2-...4	IE 2	2955	36	8.4	20.5	0.87	89.4	90	89.1	7.4	2.1	3.2	0.045	16	67
15	160M	1LE1001-1DA3-...4	IE 2	2955	48	10.6	27	0.88	90.3	90.9	90.3	7.6	2.4	3.4	0.053	16	75
18.5	160L	1LE1001-1DA4-...4	IE 2	2955	60	13	33.5	0.88	90.9	91.2	90.4	7.9	2.9	3.6	0.061	16	84

Electrical data - 1LE10 - IE2 - 4-pole (IE2 Aluminum) 1500 rpm 4-pole, 400 V 50 Hz																	
Rated output kW	Frame size	Order number	IE class	Rated speed torque		No load current A	Rated current A	Rated power factor	Efficiency at			Starting current torque		Break-down torque	Moment of inertia kgm <sup>2</sup>	Torque class	Net weight (IMB3) kg
				rpm	Nm				100% load %	75% load %	50% load %	current A	Nm				
0.55	80M	1LE1001-0DB2-...4	-	1440	3.7	0.99	1.37	0.74	78.1	78.9	76.1	5.3	2.2	3.1	0.0017	16	10
0.75	80M	1LE1001-0DB3-...4	IE 2	1440	5	1.21	1.79	0.76	79.6	80.2	78	5.6	2.2	3.1	0.0021	16	11
1.1	90S	1LE1001-0EB0-...4	IE 2	1425	7.4	1.7	2.5	0.78	81.4	81.7	79.9	5.6	2.3	2.9	0.0028	16	13
1.5	90L	1LE1001-0EB4-...4	IE 2	1435	10	2.1	3.3	0.79	82.8	83.5	82	6.4	2.6	3.4	0.0036	16	16
2.2	100L	1LE1001-1AB4-...4	IE 2	1455	14	2.6	4.65	0.81	84.3	85.1	84.3	6.9	2.1	3.3	0.0086	16	21
3	100L	1LE1001-1AB5-...4	IE 2	1455	20	3.35	6.2	0.82	85.5	86.7	86	6.9	2	3.1	0.011	16	25
4	112M	1LE1001-1BB2-...4	IE 2	1460	26	4.3	8.2	0.81	86.6	87.3	86.5	7.1	2.5	3.2	0.014	16	29
5.5	132S	1LE1001-1CB0-...4	IE 2	1465	36	5.7	11.3	0.8	87.7	89	87.7	6.9	2.3	2.9	0.027	16	42
7.5	132M	1LE1001-1CB2-...4	IE 2	1465	49	6.5	14.7	0.83	88.7	90.3	88.8	6.9	2.3	2.9	0.034	16	49
11	160M	1LE1001-1DB2-...4	IE 2	1470	71	8.7	21	0.85	89.8	90.9	90.8	6.7	2.1	2.8	0.065	16	71
15	160L	1LE1001-1DB4-...4	IE 2	1475	97	11.3	28	0.85	90.6	91.3	91	7.3	2.3	3	0.083	16	83

Electrical data - 1LE10 - IE2 - 6-pole (IE2 Aluminum) 1000 rpm 6-pole, 400 V 50 Hz																	
Rated output kW	Frame size	Order number	IE class	Rated speed torque		No load current A	Rated current A	Rated power factor	Efficiency at			Starting current torque		Break-down torque	Moment of inertia kgm <sup>2</sup>	Torque class	Net weight (IMB3) kg
				rpm	Nm				100% load %	75% load %	50% load %	current A	Nm				
0.37	80M	1LE1001-0DC2-...4	-	925	3.85	0.81	1.08	0.69	71.4	71.5	66.5	4	2.1	2.4	0.001716	16	9
0.55	80M	1LE1001-0DC3-...4	-	935	5.6	1.07	1.63	0.66	74	74	70.5	4.4	2.5	2.9	0.0025	16	12
0.75	90S	1LE1001-0EC0-...4	IE2	925	7.7	1.2	2.05	0.7	75.9	76	73	4.1	2	2.5	0.003	16	13
1.1	90L	1LE1001-0EC4-...4	IE2	935	11.2	1.93	2.9	0.7	78.1	78.5	75	4.4	2.2	2.6	0.004	16	16
1.5	100L	1LE1001-1AC4-...4	IE2	970	15	2.2	3.7	0.73	79.8	80.2	79	6.2	2	2.9	0.011	16	25
2.2	112M	1LE1001-1BC2-...4	IE2	965	22	2.9	5.2	0.75	81.8	82.5	81.3	6	2.1	3.1	0.014	16	29
3	132S	1LE1001-1CC0-...4	IE2	970	30	4.2	7	0.74	83.3	84	82.8	5.6	1.6	2.6	0.024	13	38
4	132M	1LE1001-1CC2-...4	IE2	970	39	4.5	8.7	0.78	84.6	85.8	85	5.6	1.6	2.5	0.029	13	43
5.5	132M	1LE1001-1CC3-...4	IE2	970	54	6.3	12	0.77	86	87.4	87	6.1	1.9	2.8	0.037	16	52
7.5	160M	1LE1001-1DC2-...4	IE2	975	73	8.25	16.1	0.77	87.2	87.7	86.9	6.3	1.8	2.8	0.075	16	77
11	160L	1LE1001-1DC4-...4	IE2	975	108	10.1	22.5	0.8	88.7	89.5	89.4	6.2	1.7	2.7	0.098	16	93



The nominal torque of the motor is easy to calculate;  
 Torque (Nm) =  
 Power (kW) x 9550 / Speed (rpm).

## SIMOTICS General Purpose (Cast Iron) – IE1

	Cast Iron Series					
Efficiency class	IE1			IE2		
Series	1LE0102			1LE0101		
No. of poles	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)		
Frame size	80 ... 355			80 ... 355		
Rated output at 50 Hz	0.55 ... 315 kW			0.55 ... 315 kW		
Rated torque at 50 Hz	2.6 ... 2412 Nm			2.6 ... 2412 Nm		

Electrical data - 1LE0 - IE1 - 2-pole (IE1 Cast Iron) 3000 rpm 2-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated speed	Rated torque	No load current	Rated current	Rated power factor	Efficiency at			Starting current	Starting torque	Break-down torque	Moment of inertia	Torque class	Net weight (IMB3)
kW				rpm	Nm	A	A		100% load %	75% load %	50% load %	A	Nm		kgm <sup>2</sup>		kg
<b>230 V Δ / 400 VY</b>																	
0.75	80M	1LE0102-ODA22-2..4	IE 1	2800	2.6	0.95	1.76	0.72	73.0	71.1	0.86	5.1	2.3	2.7	0.0008	D	15.0
1.1	80M	1LE0102-ODA32-2..4	IE 1	2830	3.7	1.16	2.50	0.75	77.3	74.4	0.86	6	2.6	3.1	0.001	E	17.5
1.5	90S	1LE0102-0EA02-2..4	IE 1	2885	5	1.82	3.30	0.77	76.9	73.5	0.85	6.9	2.5	3.2	0.0017	F	22
2.2	90L	1LE0102-0EA42-2..4	IE 1	2885	7.3	2.15	4.50	0.80	80.5	78.1	0.87	7.5	2.7	3.4	0.0022	F	26
3	100L	1LE0102-1AA42-2..4	IE 1	2850	10	2.80	6.3	0.82	82.1	79.9	0.85	6.9	3	3.7	0.0033	F	33
4	112M	1LE0102-1BA22-2..4	IE 1	2910	13.1	6.5	14.3	0.83	83.7	81.5	0.85	7.8	2.9	4.2	0.0064	L	39
5.5	132S	1LE0102-1CA02-2..4	IE 1	2915	18	8.0	19.0	0.85	85.3	83.7	0.86	6.9	2	3.1	0.013	K	55
7.5	132S	1LE0102-1CA12-2..4	IE 1	2920	24.5	11.3	25.0	0.86	87.2	86.2	0.88	7.1	2	2.9	0.015	K	60
<b>400 V Δ / 690 VY</b>																	
3	100L	1LE0102-1AA43-4..4	IE 1	2850	10	2.75	3.60	0.82	82.1	79.9	0.85	6.9	3	3.7	0.0033	F	33
4	112M	1LE0102-1BA23-4..4	IE 1	2910	13.1	3.80	8.2	0.83	83.67	81.5	0.85	7.8	2.9	4.2	0.0064	L	39
5.5	132S	1LE0102-1CA03-4..4	IE 1	2915	18	5.0	10.9	0.85	85.33	83.7	0.86	6.9	2	3.1	0.013	K	55
7.5	132S	1LE0102-1CA13-4..4	IE 1	2920	24.5	5.9	14.3	0.86	87.19	86.2	0.88	7.1	2	2.9	0.015	K	60
11	160M	1LE0102-1DA23-4..4	IE 1	2925	35.9	9.3	21.5	0.88	88.22	87.1	0.84	6.3	2	3.1	0.028	J	93
15	160M	1LE0102-1DA33-4..4	IE 1	2930	48.9	12.1	28.5	0.89	89.32	87.4	0.85	7	2.2	3.2	0.034	K	101
18.5	160L	1LE0102-1DA43-4..4	IE 1	2935	60	14.1	34.5	0.89	89.89	89.1	0.86	7.6	2.5	3.4	0.041	K	120
22	180M	1LE0102-1EA23-4..4	IE 1	2925	72	13.3	40.5	0.90	90.63	90.0	0.87	7.6	2.7	3.5	0.072	K	151
30	200L	1LE0102-2AA43-4..4	IE 1	2950	97	18.7	55	0.91	90.82	89.0	0.87	7.5	2.5	3.2	0.12	K	224
37	200L	1LE0102-2AA53-4..4	IE 1	2950	120	19.5	67	0.91	91.59	90.4	0.88	7.4	2.6	3.2	0.15	K	242
45	225M	1LE0102-2BA23-4..4	IE 1	2960	145	24.0	81	0.92	91.94	90.5	0.88	7.6	2.8	3.3	0.23	K	304
55	250M	1LE0102-2CA23-4..4	IE 1	2970	177	32.0	98	0.92	92.36	90.7	0.88	7.7	2.5	3.1	0.4	K	374
75	280S	1LE0102-2DA03-4..4	IE 1	2970	241	42.5	134	0.93	92.63	91.1	0.87	6.7	2.7	3	0.7	J	540
90	280M	1LE0102-2DA23-4..4	IE 1	2975	289	47.5	159	0.93	93.16	91.3	0.88	7.2	2.8	3	0.82	J	560
110	315S	1LE0102-3AA03-4..4	IE 1	2982	353	49.5	189	0.93	93.11	91.2	0.9	7.5	2.2	3.1	1.4	K	735
132	315M	1LE0102-3AA23-4..4	IE 1	2980	423	46.0	225	0.94	93.1	91.7	0.92	7.5	2.3	2.9	1.7	J	850
160	315L	1LE0102-3AA53-4..4	IE 1	2982	513	56	265	0.94	93.6	92.5	0.92	7.6	2.5	2.8	1.9	J	960
185	315L	1LE0102-3AA63-4..4	IE 1	2978	594	50	310	0.94	93.9	93.1	0.92	7.5	2.4	2.8	2.3	J	1070
200	315L	1LE0102-3AA73-4..4	IE 1	2980	641	65	330	0.94	94.27	93.2	0.92	7.9	2.5	2.6	2.3	K	1080
220	355M	1LE0102-3BA23-4..4	IE 1	2985	704	43.0	370	0.95	95	92.8	0.9	6.5	2	2.1	2.9	H	1590
250	355M	1LE0102-3BA33-4..4	IE 1	2985	800	54	420	0.95	95.2	93.0	0.9	6.5	2	2.1	3	H	1620
280	355L	1LE0102-3BA53-4..4	IE 1	2985	896	57	470	0.95	95.2	92.9	0.9	6.5	2	2.1	3.5	H	1820
315	355L	1LE0102-3BA63-4..4	IE 1	2985	1008	61	530	0.95	95.4	93.2	0.9	6.5	2	2.1	3.5	H	1830

# SIMOTICS General Purpose (Cast Iron) – IE1

Cast Iron Series						
Efficiency class	IE1			IE2		
Series	1LE0102			1LE0101		
No. of poles	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)		
Frame size	80 ... 355			80 ... 355		
Rated output at 50 Hz	0.55 ... 315 kW			0.55 ... 315 kW		
Rated torque at 50 Hz	2.6 ... 2412 Nm			2.6 ... 2412 Nm		

Electrical data - 1LE0 - IE1 - 4-pole (IE1 Cast Iron) 1500 rpm 4-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated speed	Rated torque	No load current	Rated current	Rated power factor	Efficiency at			Starting current	Break-down torque	Moment of inertia	Torque class	Net weight (IMB3)	
kW				rpm	Nm	A	A		100% load %	75% load %	50% load %	A	Nm	kgm <sup>2</sup>		kg	
<b>230 V Δ / 400 VY</b>																	
0.55	80M	1LE0102-0DB22-2..4	-	1415	3.7	0.76	1.43	0.69	69.9	66.8	0.81	4.5	2	2.6	0.0016	D	17.0
0.75	80M	1LE0102-0DB32-2..4	IE 1	1405	5.1	0.99	1.87	0.72	73.7	71.8	0.81	4.8	2	2.6	0.0019	D	18.5
1.1	90S	1LE0102-0EB02-2..4	IE 1	1420	7.4	1.58	2.65	0.75	77.34	74.3	0.8	5.4	2	2.6	0.0027	E	23
1.5	90L	1LE0102-0EB42-2..4	IE 1	1425	10	2.1	3.50	0.77	77.28	75.1	0.81	5.6	2	2.5	0.0034	E	26
2.2	100L	1LE0102-1AB42-2..4	IE 1	1425	14.8	2.80	4.95	0.80	80.7	78.7	0.81	5.8	2.4	2.9	0.0063	E	30
3	100L	1LE0102-1AB52-2..4	IE 1	1420	20.2	3.15	6.4	0.82	83.07	81.5	0.83	6.5	2.8	3.1	0.0081	E	33
4	112M	1LE0102-1BB22-2..4	IE 1	1445	26.4	9.2	15.3	0.83	83.26	81.5	0.79	7.4	2.8	3.3	0.011	M	44
5.5	132S	1LE0102-1CB02-2..4	IE 1	1450	36.2	9.7	19.8	0.85	85.47	84.3	0.82	6.5	2	3.1	0.019	K	59
7.5	132M	1LE0102-1CB22-2..4	IE 1	1435	50	12.0	27.0	0.86	87.24	87.2	0.82	6.4	2.3	3.1	0.025	K	70
<b>400 V Δ / 690 VY</b>																	
2.2	100L	1LE0102-1AB43-4..4	IE 1	1425	14.8	2.70	2.85	0.80	80.7	78.7	0.81	5.8	2.4	2.9	0.0063	E	30
3	100L	1LE0102-1AB53-4..4	IE 1	1420	20.2	3.15	3.70	0.82	83.07	81.5	0.83	6.5	2.8	3.1	0.0081	E	33
4	112M	1LE0102-1BB23-4..4	IE 1	1445	26.4	5.1	8.8	0.83	83.26	81.5	0.79	7.4	2.8	3.3	0.011	M	44
5.5	132S	1LE0102-1CB03-4..4	IE 1	1450	36.2	5.5	11.4	0.85	85.47	84.3	0.82	6.5	2	3.1	0.019	K	59
7.5	132M	1LE0102-1CB23-4..4	IE 1	1435	50	6.5	15.4	0.86	87.24	87.2	0.82	6.4	2.3	3.1	0.025	K	70
11	160M	1LE0102-1DB23-4..4	IE 1	1455	72	9.3	21.5	0.88	88.49	87.8	0.84	6.9	2.2	3.3	0.045	K	99
15	160L	1LE0102-1DB43-4..4	IE 1	1460	98	13.3	29.0	0.89	89.36	88.6	0.84	7.8	2.7	3.8	0.06	L	125
18.5	180M	1LE0102-1EB23-4..4	IE 1	1470	120	13.8	35.0	0.89	90.31	89.9	0.85	7.8	2.7	3.5	0.13	L	163
22	180L	1LE0102-1EB43-4..4	IE 1	1465	143	15.9	41.5	0.90	90.92	89.9	0.85	7.8	2.4	3.2	0.14	L	179
30	200L	1LE0102-2AB43-4..4	IE 1	1470	195	23.0	56	0.91	91.55	90.5	0.85	7.4	2.4	3.1	0.22	K	235
37	225S	1LE0102-2BB03-4..4	IE 1	1470	240	23.5	68	0.91	91.78	91	0.86	7.3	2.3	2.8	0.44	K	295
45	225M	1LE0102-2BB23-4..4	IE 1	1475	292	28.5	82	0.92	92.41	92	0.87	7.8	2.9	3.3	0.5	K	322
55	250M	1LE0102-2CB23-4..4	IE 1	1478	356	32.5	101	0.92	92.79	92	0.86	7.6	3	2.8	0.8	K	410
75	280S	1LE0102-2DB03-4..4	IE 1	1480	484	42.0	133	0.93	93.3	92.2	0.88	7.2	2.6	2.8	1.3	J	540
90	280M	1LE0102-2DB23-4..4	IE 1	1485	579	58	159	0.93	93.49	92.2	0.88	7.8	2.7	2.8	1.4	K	600
110	315S	1LE0102-3AB03-4..4	IE 1	1490	706	70	200	0.93	93.43	92.5	0.85	8.6	2.8	3.1	2.2	L	745
132	315M	1LE0102-3AB23-4..4	IE 1	1488	848	60	230	0.94	93.8	93.4	0.87	7.3	2.5	2.7	2.5	J	875
160	315L	1LE0102-3AB53-4..4	IE 1	1488	1030	83	285	0.94	94.0	93.6	0.87	7.4	3	2.9	3	K	950
185	315L	1LE0102-3AB63-4..4	IE 1	1490	1185	92	325	0.94	94.1	93.6	0.88	7.6	3	2.9	3.6	K	1060
200	315L	1LE0102-3AB73-4..4	IE 1	1488	1285	84	345	0.94	94.3	94.1	0.88	7.4	3	3	3.7	J	1070
220	355M	1LE0102-3BB23-4..4	IE 1	1490	1410	59	380	0.95	95.1	93.1	0.87	6.5	2.1	2.2	6.6	H	1630
250	355M	1LE0102-3BB33-4..4	IE 1	1490	1602	59	420	0.95	95.2	93.6	0.87	6.5	2.1	2.2	6.9	H	1650
280	355L	1LE0102-3BB53-4..4	IE 1	1490	1795	71	485	0.95	95.2	93.4	0.87	6.5	2.1	2.2	7.7	H	1820
315	355L	1LE0102-3BB63-4..4	IE 1	1490	2019	72	530	0.95	95.3	93.6	0.87	6.5	2.1	2.2	8.5	H	1890



The nominal torque of the motor is easy to calculate;  
 Torque (Nm) =  
 Power (kW) x 9550 / Speed (rpm).

## SIMOTICS General Purpose (Cast Iron) – IE1

	Cast Iron Series					
Efficiency class	IE1			IE2		
Series	1LE0102			1LE0101		
No. of poles	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)		
Frame size	80 ... 355			80 ... 355		
Rated output at 50 Hz	0.55 ... 315 kW			0.55 ... 315 kW		
Rated torque at 50 Hz	2.6 ... 2412 Nm			2.6 ... 2412 Nm		

Electrical data - 1LE0 - IE1 - 6-pole (IE1 Cast Iron) 1000 rpm 6-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated speed	Rated torque	No load current	Rated current	Rated power factor	Efficiency at			Starting current	Break-down torque	Moment of inertia	Torque class	Net weight (IMB3)	
kW				rpm	Nm	A	A		100% load %	75% load %	50% load %	A	Nm	kgm <sup>2</sup>		kg	
<b>230 V Δ / 400 VY</b>																	
0.55	80M	1LE0102-ODC32-2..4	-	910	5.8	1.04	1.60	0.68	68.7	65.6	0.74	3.8	2.1	2.4	0.0024	C	18.0
0.75	90S	1LE0102-OEC02-2..4	IE 1	925	7.7	1.27	2.10	0.70	71.5	68.9	0.74	3.9	2	2.5	0.0028	C	25
1.1	90L	1LE0102-OEC42-2..4	IE 1	935	11.3	1.89	3.00	0.73	74.01	71.8	0.73	4.4	2.2	2.7	0.0038	D	26
1.5	100L	1LE0102-1AC42-2..4	IE 1	940	15.4	2.30	3.80	0.75	77.21	74.7	0.76	4.6	2.1	2.6	0.0074	D	32
2.2	112M	1LE0102-1BC22-2..4	IE 1	940	22.3	3.00	5.5	0.78	79.21	78.1	0.75	5.2	2.4	3	0.01	E	42
3	132S	1LE0102-1CC02-2..4	IE 1	955	30	4.15	7.5	0.80	80.93	79.3	0.73	5.2	2	2.8	0.018	E	55
4	132M	1LE0102-1CC22-2..4	IE 1	955	40	10.8	16.9	0.81	82.18	79.4	0.73	5.6	2.1	2.9	0.023	K	65
5.5	132M	1LE0102-1CC32-2..4	IE 1	955	55	12.1	22.5	0.83	84.24	83.0	0.74	6	2.3	3.2	0.029	K	73
<b>400 V Δ / 690 VY</b>																	
1.5	100L	1LE0102-1AC43-4..4	IE 1	940	15.4	2.30	2.20	0.75	77.21	74.7	0.76	4.6	2.1	2.6	0.0074	D	32
2.2	112M	1LE0102-1BC23-4..4	IE 1	940	22.3	3.05	3.15	0.78	79.21	78.1	0.75	5.2	2.4	3	0.01	E	42
3	132S	1LE0102-1CC03-4..4	IE 1	955	30	4.15	4.30	0.80	80.93	79.3	0.73	5.2	2	2.8	0.018	E	55
4	132M	1LE0102-1CC23-4..4	IE 1	955	40	6.2	9.7	0.81	82.18	79.4	0.73	5.6	2.1	2.9	0.023	K	65
5.5	132M	1LE0102-1CC33-4..4	IE 1	955	55	7.3	12.9	0.83	84.24	83.0	0.74	6	2.3	3.2	0.029	K	73
7.5	160M	1LE0102-1DC23-4..4	IE 1	965	74	9.2	16.8	0.85	85.37	84.5	0.76	5.8	2	2.9	0.052	K	101
11	160L	1LE0102-1DC43-4..4	IE 1	965	109	13.3	24	0.86	87.01	86.0	0.76	6.6	2.2	3.1	0.072	K	128
15	180L	1LE0102-1EC43-4..4	IE 1	970	148	14.2	32.0	0.88	88.73	88.4	0.78	6.5	2.3	3	0.18	K	169
18.5	200L	1LE0102-2AC43-4..4	IE 1	975	182.1	13.1	36.5	0.89	90.01	90.1	0.82	5.8	2.2	2.8	0.26	J	218
22	200L	1LE0102-2AC53-4..4	IE 1	975	215	15.0	43.0	0.89	90.53	90.5	0.82	6.5	2.3	2.8	0.31	J	237
30	225M	1LE0102-2BC23-4..4	IE 1	978	293	23.0	58	0.90	91.38	90.5	0.83	6.7	2.4	2.8	0.6	K	290
37	250M	1LE0102-2CC23-4..4	IE 1	982	360	26.0	71	0.91	91.5	91.2	0.83	7.5	3	2.8	0.89	K	389
45	280S	1LE0102-2DC03-4..4	IE 1	985	437	28.0	84	0.91	92.4	92.3	0.85	7.1	2.5	2.8	1.1	K	500
55	280M	1LE0102-2DC23-4..4	IE 1	988	532	35.0	102	0.92	92.62	92.4	0.85	7.5	2.4	2.7	1.4	K	525
75	315S	1LE0102-3AC03-4..4	IE 1	988	725	55	141	0.93	93.04	92.4	0.83	7.5	2.4	3	2.3	K	675
90	315M	1LE0102-3AC23-4..4	IE 1	986	872	54	166	0.93	93.4	93.2	0.84	7	2.3	2.8	2.8	K	830
110	315L	1LE0102-3AC53-4..4	IE 1	986	1066	57	200	0.93	93.9	93.8	0.86	6.5	2.2	2.7	3.4	J	915
132	315L	1LE0102-3AC63-4..4	IE 1	988	1278	78	235	0.94	94.16	93.6	0.86	7.8	2.2	2.4	3.9	K	1010
160	355M	1LE0102-3BC23-4..4	IE 1	989	1545	53	275	0.95	94.6	92.4	0.88	6.5	2	2.1	7.7	H	1640
185	355M	1LE0102-3BC33-4..4	IE 1	989	1786	55	320	0.95	94.6	92.6	0.88	6.5	2	2.1	8.4	H	1680
200	355M	1LE0102-3BC43-4..4	IE 1	989	1931	60	340	0.95	94.7	93.4	0.88	6.5	2	2.1	9.1	H	1720
220	355L	1LE0102-3BC53-4..4	IE 1	989	2124	68	380	0.95	94.7	92.6	0.88	6.5	2	2.1	10.1	H	1840
250	355L	1LE0102-3BC63-4..4	IE 1	989	2414	80	430	0.95	94.7	93.4	0.88	6.5	2	2.1	11.4	H	1920



# SIMOTICS General Purpose (Cast Iron) – IE2

Cast Iron Series						
Efficiency class	IE1			IE2		
Series	1LE0102			1LE0101		
No. of poles	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)		
Frame size	80 ... 355			80 ... 355		
Rated output at 50 Hz	0.55 ... 315 kW			0.55 ... 315 kW		
Rated torque at 50 Hz	2.6 ... 2412 Nm			2.6 ... 2412 Nm		

Electrical data - 1LE0 - IE2 - 2-pole															(IE2 Cast Iron) 3000 rpm 2-pole, 400 V 50 Hz		
Rated output	Frame size	Order number	IE class	Rated speed	Rated torque	No load current	Rated current	Rated power factor	Efficiency at			Starting current	Break-down torque	Moment of inertia	Torque class	Net weight (IMB3)	
kW				rpm	Nm	A	A		100% load %	75% load %	50% load %	A	Nm	kgm <sup>2</sup>		kg	
<b>230 VΔ / 400 VY</b>																	
0.75	80M	1LE0101-ODA22-2..4	IE 2	2795	2.6	0.70	1.67	0.77	78.5	78.5	0.84	5.6	2.4	2.4	0.00080	D	15.5
1.1	80M	1LE0101-ODA32-2..4	IE 2	2835	3.7	1.13	2.40	0.80	80.6	77.4	0.84	6.0	2.8	3.2	0.0012	E	17.5
1.5	90S	1LE0101-OEA02-2..4	IE 2	2890	5.0	1.52	3.20	0.81	81.7	78.0	0.84	6.5	2.4	3.1	0.0021	E	23
2.2	90L	1LE0101-OEA42-2..4	IE 2	2890	7.3	2.30	4.55	0.83	83.7	80.8	0.85	7.2	2.6	3.5	0.0026	F	26
3	100L	1LE0101-1AA42-2..4	IE 2	2885	9.9	2.85	6.1	0.85	85.1	84.1	0.84	7.5	4.0	4.5	0.0036	F	34
4	112M	1LE0101-1BA22-2..4	IE 2	2930	13.0	5.9	13.6	0.86	86.6	84.7	0.86	7.5	2.2	2.9	0.0064	L	40
5.5	132S	1LE0101-1CA02-2..B4	IE 2	2930	17.9	6.9	18.3	0.87	87.6	86.9	0.87	7.5	2.2	2.9	0.014	K	56
7.5	132S	1LE0101-1CA12-2..B4	IE 2	2930	24.4	8.4	24.0	0.88	88.8	88.5	0.89	7.5	2.3	2.9	0.017	K	62
<b>400 VΔ / 690 VY</b>																	
3	100L	1LE0101-1AA43-4..4	IE 2	2885	9.9	2.85	3.5	0.85	85.1	84.1	0.84	7.5	4	4.5	0.0036	F	34
4	112M	1LE0101-1BA23-4..4	IE 2	2930	13.0	3.70	7.8	0.86	86.6	84.7	0.86	7.5	2.2	2.9	0.0064	L	40
5.5	132S	1LE0101-1CA03-4..B4	IE 2	2930	17.9	4.30	10.5	0.87	87.6	86.9	0.87	7.5	2.2	2.9	0.014	K	56
7.5	132S	1LE0101-1CA13-4..B4	IE 2	2930	24.4	4.65	13.8	0.88	88.8	88.5	0.89	7.5	2.3	2.9	0.017	K	62
11	160M	1LE0101-1DA23-4..B4	IE 2	2935	35.8	8.1	20.5	0.89	90.1	89.3	0.86	7.5	2.2	2.9	0.031	K	96
15	160M	1LE0101-1DA33-4..B4	IE 2	2935	48.8	10.4	28	0.90	91.0	90.5	0.86	7.5	2.4	3.2	0.038	K	106
18.5	160L	1LE0101-1DA43-4..B4	IE 2	2935	60.2	10.3	33	0.91	91.7	91.5	0.89	7.5	2.4	3.2	0.046	K	125
22	180M	1LE0101-1EA23-4..B4	IE 2	2935	71.6	13.5	40	0.91	91.8	91.1	0.87	7.6	2.5	3.2	0.072	K	152
30	200L	1LE0101-2AA43-4..B4	IE 2	2955	97.0	18.0	55	0.92	92.3	91.5	0.86	7.5	2.5	3.2	0.13	K	229
37	200L	1LE0101-2AA53-4..B4	IE 2	2955	120	19.0	66	0.93	92.8	92.3	0.88	7.5	2.5	3.2	0.15	K	245
45	225M	1LE0101-2BA23-4..B4	IE 2	2965	145	23.0	80	0.93	93.1	92.5	0.88	7.9	2.5	3.1	0.24	K	307
55	250M	1LE0101-2CA23-4..B4	IE 2	2970	177	28.5	97	0.93	93.2	91.8	0.88	7.5	2.5	3	0.42	K	378
75	280S	1LE0101-2DA03-4..B4	IE 2	2975	241	41.0	133	0.94	93.8	92.7	0.87	7.5	2.8	3	0.75	K	550
90	280M	1LE0101-2DA23-4..B4	IE 2	2978	289	49.5	159	0.94	94.1	92.9	0.87	7.5	3	3.1	0.88	K	570
110	315S	1LE0101-3AA03-4..B4	IE 2	2982	352	47.5	187	0.94	94.3	93.3	0.9	7.5	2.2	2.6	1.4	J	740
132	315M	1LE0101-3AA23-4..B4	IE 2	2982	423	46.5	225	0.95	94.6	93.9	0.91	7.5	2.3	2.9	1.7	J	855
160	315L	1LE0101-3AA53-4..B4	IE 2	2982	512	52	265	0.95	95.1	94.1	0.92	7.5	2.5	2.8	1.9	J	970
185	315L	1LE0101-3AA63-4..B4	IE 2	2982	592	64	305	0.95	95.3	94.2	0.92	7.5	2.5	2.8	2.3	J	1080
200	315L	1LE0101-3AA73-4..B4	IE 2	2982	641	64	330	0.95	95.3	94.4	0.92	7.5	2.5	2.8	2.3	J	1090
220	355M	1LE0101-3BA23-4..B4	IE 2	2980	705	50	370	0.95	95.0	92.8	0.9	7.1	2	2.2	2.9	J	1600
250	355M	1LE0101-3BA33-4..B4	IE 2	2980	801	46	420	0.95	95.0	93.0	0.9	7.1	2	2.2	3	J	1650
280	355L	1LE0101-3BA53-4..B4	IE 2	2980	897	56	475	0.95	95.1	93.0	0.9	7.1	2	2.2	3.5	J	1830
315	355L	1LE0101-3BA63-4..B4	IE 2	2980	1009	57	530	0.95	95.1	93.1	0.9	7.1	2	2.3	3.5	J	1840



The nominal torque of the motor is easy to calculate;  
 Torque (Nm) =  
 Power (kW) x 9550 / Speed (rpm).

## SIMOTICS General Purpose (Cast Iron) – IE2

	Cast Iron Series					
Efficiency class	IE1			IE2		
Series	1LE0102			1LE0101		
No. of poles	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)		
Frame size	80 ... 355			80 ... 355		
Rated output at 50 Hz	0.55 ... 315 kW			0.55 ... 315 kW		
Rated torque at 50 Hz	2.6 ... 2412 Nm			2.6 ... 2412 Nm		

Electrical data - 1LE0 - IE2 - 4-pole (IE2 Cast Iron) 1500 rpm 4-pole, 400 V 50 Hz																	
Rated output	Frame size	Order number	IE class	Rated speed	Rated torque	No load current	Rated current	Rated power factor	Efficiency at			Starting current	Break-down torque	Moment of inertia	Torque class	Net weight (IMB3)	
kW				rpm	Nm	A	A		100% load %	75% load %	50% load %	A	Nm	kgm <sup>2</sup>		kg	
<b>230 V Δ / 400 VY</b>																	
0.55	80M	1LE0101-0DB22-2.4	-	1425	3.7	0.80	1.34	0.74	74.7	70.1	0.80	6.0	2.0	2.7	0.0021	F	17.5
0.75	80M	1LE0101-0DB32-2.4	IE 2	1440	5.0	1.00	1.82	0.80	79.6	76.8	0.75	6.5	2.8	3.5	0.0027	F	19
1.1	90S	1LE0101-0EB02-2.4	IE 2	1440	7.3	1.60	2.65	0.81	81.4	77.6	0.75	7.0	2.8	3.5	0.0041	G	24
1.5	90L	1LE0101-0EB42-2.4	IE 2	1440	9.9	2.05	3.45	0.83	82.8	80.2	0.76	7.0	3.0	3.8	0.0047	G	27
2.2	100L	1LE0101-1AB42-2.4	IE 2	1435	14.6	2.65	4.8	0.84	85.0	83.1	0.79	7.0	3.0	3.2	0.0081	F	33
3	100L	1LE0101-1AB52-2.4	IE 2	1435	20.0	3.50	6.4	0.86	86.3	84.2	0.79	7.0	3.0	3.2	0.01	F	37
4	112M	1LE0101-1BB22-2.4	IE 2	1445	26.4	7.6	14.8	0.87	87.1	85.8	0.79	7.1	2.7	3.1	0.011	L	45
5.5	132S	1LE0101-1CB02-2.B4	IE 2	1460	36.0	10.6	20.0	0.88	88.2	86.9	0.79	7.5	2.5	3.1	0.021	L	61
7.5	132M	1LE0101-1CB22-2.B4	IE 2	1460	49.1	11.5	26.0	0.89	89.4	88.8	0.82	7.7	2.7	3.2	0.029	L	73
<b>400 V Δ / 690 VY</b>																	
2.2	100L	1LE0101-1AB43-4.4	IE 2	1435	14.6	2.6	2.75	0.84	85.0	83.1	0.79	7.0	3.0	3.2	0.0081	F	33
3	100L	1LE0101-1AB53-4.4	IE 2	1435	20.0	3.55	3.7	0.86	86.3	84.2	0.79	7.0	3.0	3.2	0.010	F	37
4	112M	1LE0101-1BB23-4.4	IE 2	1445	26.4	4.45	8.455	0.87	87.1	85.8	0.79	7.1	2.7	3.1	0.011	L	45
5.5	132S	1LE0101-1CB03-4.B4	IE 2	1460	36.0	6.1	11.495	0.88	88.2	86.9	0.79	7.5	2.5	3.1	0.021	L	61
7.5	132M	1LE0101-1CB23-4.B4	IE 2	1460	49.1	6.7	14.915	0.89	89.4	88.8	0.82	7.7	2.7	3.2	0.029	L	73
11	160M	1LE0101-1DB23-4.B4	IE 2	1465	71.7	6.7	21	0.90	90.4	90.1	0.84	7.5	2.5	3.1	0.051	K	103
15	160L	1LE0101-1DB43-4.B4	IE 2	1465	97.8	11.8	28.025	0.91	91.3	90.6	0.85	7.8	2.7	3.2	0.066	K	130
18.5	180M	1LE0101-1EB23-4.B4	IE 2	1465	121	12.3	34.5	0.91	91.8	91.8	0.85	7.3	2.5	3.2	0.13	K	165
22	180L	1LE0101-1EB43-4.B4	IE 2	1465	143	15.4	41	0.92	92.3	92.7	0.85	7.3	2.4	3.2	0.14	K	180
30	200L	1LE0101-2AB43-4.B4	IE 2	1470	195	19.0	55	0.92	92.9	92.9	0.85	7.3	2.7	3.2	0.22	K	238
37	225S	1LE0101-2BB03-4.B4	IE 2	1475	240	23.0	67	0.93	93.2	92.9	0.86	7.3	2.7	3.2	0.45	K	298
45	225M	1LE0101-2BB23-4.B4	IE 2	1475	291	26.0	80	0.93	93.5	93.9	0.87	7.3	2.7	3.2	0.51	K	322
55	250M	1LE0101-2CB23-4.B4	IE 2	1480	355	32.0	99	0.94	93.9	93.3	0.86	7.5	3.1	3.5	0.8	K	410
75	280S	1LE0101-2DB03-4.B4	IE 2	1485	482	45.0	132	0.94	94.3	93.9	0.87	7.5	2.7	3.1	1.4	K	555
90	280M	1LE0101-2DB23-4.B4	IE 2	1485	579	57	159	0.94	94.3	94.2	0.87	7.5	2.7	3.1	1.5	K	610
110	315S	1LE0101-3AB03-4.B4	IE 2	1488	706	67	195	0.95	94.5	93.9	0.86	7.3	2.8	2.9	2.2	K	750
132	315M	1LE0101-3AB23-4.B4	IE 2	1486	848	56	230	0.95	94.7	95.0	0.88	7.3	2.5	2.7	2.5	J	875
160	315L	1LE0101-3AB53-4.B4	IE 2	1488	1027	77	275	0.95	94.9	95.1	0.88	7.4	3.0	2.9	3.0	J	960
185	315L	1LE0101-3AB63-4.B4	IE 2	1488	1187	86	320	0.95	95.1	95.0	0.88	7.4	3.0	3.0	3.6	J	1070
200	315L	1LE0101-3AB73-4.B4	IE 2	1488	1284	86	345	0.95	95.1	95.1	0.88	7.4	3.0	3.0	3.7	J	1080
220	355M	1LE0101-3BB23-4.B4	IE 2	1490	1410	69	370	0.95	95.2	93.3	0.9	6.9	2.0	2.2	6.6	J	1640
250	355M	1LE0101-3BB33-4.B4	IE 2	1490	1602	61	420	0.95	95.2	93.8	0.9	6.9	2.0	2.2	6.9	J	1680
280	355L	1LE0101-3BB53-4.B4	IE 2	1490	1795	66	470	0.95	95.2	93.8	0.9	6.9	2.0	2.2	7.7	J	1830
315	355L	1LE0101-3BB63-4.B4	IE 2	1490	2019	75	530	0.95	95.2	93.8	0.9	6.9	2.0	2.2	8.5	J	1900

## SIMOTICS General Purpose (Cast Iron) – IE2

Cast Iron Series						
Efficiency class	IE1			IE2		
Series	1LE0102			1LE0101		
No. of poles	2	4	6	2	4	6
Cooling	Self-ventilated (IC 411)			Self-ventilated (IC 411)		
Degree of protection	IP55			IP55		
Insulation	Thermal class 155(F)			Thermal class 155(F)		
Utilization	Thermal class 130(B)			Thermal class 130(B)		
Frame size	80 ... 355			80 ... 355		
Rated output at 50 Hz	0.55 ... 315 kW			0.55 ... 315 kW		
Rated torque at 50 Hz	2.6 ... 2412 Nm			2.6 ... 2412 Nm		

Electrical data - 1LE0 - IE2 - 6-pole															(IE2 Cast Iron) 1000 rpm 6-pole, 400 V 50 Hz		
Rated output	Frame size	Order number	IE class	Rated speed	Rated torque	No load current	Rated current	Rated power factor	Efficiency at			Starting current	Break-down torque	Moment of inertia	Torque class	Net weight (IMB3)	
kW				rpm	Nm	A	A		100% load %	75% load %	50% load %	A	Nm	kgm <sup>2</sup>		kg	
<b>230 VΔ / 400 VY</b>																	
0.55	80M	1LE0101-ODC32-2.4	-	895	5.9	1.08	1.48	0.7	72.0	68.5	0.76	3.8	2.1	2.4	0.0028	C	18.5
0.75	90S	1LE0101-OEC02-2.4	IE 2	935	7.7	1.27	2.00	0.8	76.5	72.7	0.71	3.9	2.0	2.5	0.0038	C	26
1.1	90L	1LE0101-OEC42-2.4	IE 2	945	11.1	2.00	2.85	0.8	78.1	75.7	0.71	4.4	2.2	2.7	0.0046	D	27
1.5	100L	1LE0101-1AC42-2.4	IE 2	945	15.2	2.45	3.70	0.8	80.1	78.2	0.74	4.6	2.1	2.6	0.0086	D	34
2.2	112M	1LE0101-1BC22-2.4	IE 2	950	22.1	2.90	5.4	0.8	82.5	81.0	0.73	5.2	2.4	3.0	0.012	E	44
3	132S	1LE0101-1CC02-2.4	IE 2	960	29.8	3.70	7.2	0.8	84.3	83.4	0.73	5.2	2.0	2.8	0.019	E	56
4	132M	1LE0101-1CC22-2.4	IE 2	960	39.8	8.7	16.2	0.8	85.4	84.5	0.73	5.6	2.1	2.9	0.024	K	66
5.5	132M	1LE0101-1CC32-2.B4	IE 2	960	54.7	12.6	21.5	0.9	86.6	85.7	0.75	6.0	2.3	3.2	0.031	K	75
<b>400 VΔ / 690 VY</b>																	
1.5	100L	1LE0101-1AC43-4.4	IE 2	945	15.2	2.40	2.15	0.80	80.1	78.2	0.74	4.6	2.1	2.6	0.0086	D	34
2.2	112M	1LE0101-1BC23-4.4	IE 2	950	22.1	2.90	3.10	0.82	82.5	81.0	0.73	5.2	2.4	3.0	0.012	E	44
3	132S	1LE0101-1CC03-4.4	IE 2	960	29.8	3.70	4.15	0.83	84.3	83.4	0.73	5.2	2.0	2.8	0.019	D	56
4	132M	1LE0101-1CC23-4.4	IE 2	960	39.8	5.0	9.3	0.85	85.4	84.5	0.73	5.6	2.1	2.9	0.024	K	66
5.5	132M	1LE0101-1CC33-4.B4	IE 2	960	54.7	6.8	12.4	0.86	86.6	85.7	0.75	6.0	2.3	3.2	0.031	K	75
7.5	160M	1LE0101-1DC23-4.B4	IE 2	965	74.2	7.9	16.2	0.87	87.9	87.2	0.77	5.8	2.0	2.9	0.056	J	104
11	160L	1LE0101-1DC43-4.B4	IE 2	965	109	10.7	23.0	0.89	89.4	89.5	0.78	6.6	2.2	3.1	0.077	K	132
15	180L	1LE0101-1EC43-4.B4	IE 2	975	147	14.8	31.0	0.90	90.4	89.9	0.78	6.5	2.3	3.0	0.18	K	170
18.5	200L	1LE0101-2AC43-4.B4	IE 2	975	181	13.8	36.5	0.90	91.0	91.8	0.81	5.8	2.2	2.8	0.27	J	220
22	200L	1LE0101-2AC53-4.B4	IE 2	975	215	16.4	43.0	0.91	91.4	91.9	0.82	6.5	2.3	2.8	0.32	J	240
30	225M	1LE0101-2BC23-4.B4	IE 2	980	292	19.5	57	0.92	92.3	92.7	0.83	6.7	2.4	2.8	0.62	J	294
37	250M	1LE0101-2CC23-4.B4	IE 2	982	360	23.0	69	0.92	92.8	92.3	0.83	7.5	3.0	2.8	0.91	K	394
45	280S	1LE0101-2DC03-4.B4	IE 2	985	436	28.0	83	0.93	93.3	93.5	0.85	7.1	2.5	2.8	1.2	K	510
55	280M	1LE0101-2DC23-4.B4	IE 2	986	533	34.5	101	0.93	93.7	93.6	0.85	7.5	2.4	2.7	1.5	K	535
75	315S	1LE0101-3AC03-4.B4	IE 2	986	726	53	136	0.94	94.3	93.8	0.85	7.5	2.4	3.0	2.3	K	680
90	315M	1LE0101-3AC23-4.B4	IE 2	986	872	51	163	0.94	94.5	94.4	0.85	7.0	2.3	2.8	2.8	J	835
110	315L	1LE0101-3AC53-4.B4	IE 2	988	1063	57	195	0.94	94.7	94.6	0.86	6.5	2.2	2.7	3.9	J	975
132	315L	1LE0101-3AC63-4.B4	IE 2	988	1276	69	230	0.95	95.0	94.9	0.86	7.8	2.2	2.4	4.3	K	1030
160	355M	1LE0101-3BC23-4.B4	IE 2	990	1543	50	280	0.95	95.1	93.5	0.87	6.5	2.0	2.1	7.7	J	1650
185	355M	1LE0101-3BC33-4.B4	IE 2	990	1785	57	325	0.95	95.3	93.5	0.87	6.5	2.0	2.1	8.4	J	1690
200	355M	1LE0101-3BC43-4.B4	IE 2	990	1929	56	350	0.95	95.3	93.6	0.87	6.5	2.0	2.1	9.1	J	1730
220	355L	1LE0101-3BC53-4.B4	IE 2	990	2122	64	385	0.95	95.3	93.5	0.87	6.5	2.0	2.1	10.1	J	1850
250	355L	1LE0101-3BC63-4.B4	IE 2	990	2412	73	435	0.95	95.3	93.5	0.87	6.5	2.0	2.1	11.4	J	1930

Siemens AG  
Industry Sector  
Drive Technologies Division  
Large Drives  
Postfach 48 48  
90026 NÜRNBERG  
GERMANY

[www.siemens.com/motors](http://www.siemens.com/motors)

Subject to change without prior notice  
MP.R2.AA.DIST.RI.2.01  
BR 0812 64 En  
© Siemens AG 2012

The information provided in this brochure contains descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. Availability and technical specifications are subject to change without notice.

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.