

# Overview of released motors for SINAMICS G110M for operation with SIMOGEAR

SINAMICS G110M

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G110M: released motors for SINAMICS G110M for operation with SIMOGEAR 109738533

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## 1 Overview of released motors for SINAMICS G110M for operation with SIMOGEAR

SIMOGEAR with SINAMICS G110M is an integrated drive system where geared motor and inverter are coupled mechanically but also thermally.

Extending the range of motors for SINAMICS G110M requires thermal tests to prove proper operation of both components.

The following tables show the basic motor types which can be operated with SINAMICS G110M in combination with SIMOGEAR. For further information on possible SIMOGEAR geared motors in combination with SINAMICS G110M see catalogue MD50.1 SIMOGEAR geared motors and DT configurator

### NOTE

#### Color coding:

Green: released for IE and UL applications

Yellow: released for IE application only

### 1.1 IE1 / IE2 motors

#### 1.1.1 IE 1/2 400V / 460V - P<sub>50Hz</sub>

IE 1/2 400V / 460V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
MLFB						
1LA7070-4AB1x-Z+ M64	0,25	0,85	230 Δ / 400 - Y	0,25	0,75	460 - Y
1LA7073-4AB1x-Z+ M64	0,37	1,05	230 Δ / 400 - Y	0,37	0,97	460 - Y
1LE1001-0DB22-2xyw-Z+ H08	0,55	1,39	230 Δ / 400 - Y	0,55	1,29	460 - Y
1LE1001-0DB32-2xyw-Z+ H08	0,75	1,79	230 Δ / 400 - Y	0,75	1,68	460 - Y
1LE1001-0EB02-2xyw-Z+ H08	1,1	2,5	230 Δ / 400 - Y	1,1	2,20	460 - Y
1LE1001-0EB42-2xyw-Z+ H08	1,5	3,3	230 Δ / 400 - Y	1,5	3,00	460 - Y
1LE1001-1AB42-2xyw-Z+ H08	2,2	4,65	230 Δ / 400 - Y	2,2	4,05	460 - Y
1LE1001-1AB52-2xyw-Z+ H08	3	6,2	230 Δ / 400 - Y	3	5,4	460 - Y
1LE1001-1BB22-2xyw-Z+ H08	4	8,2	230 Δ / 400 - Y	4	7,3	460 - Y

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## 1.1.2 IE 1/2 380V / 440V - P<sub>50Hz</sub>

IE 1/2 380V / 440V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LA7070-4AB9x-Z+ M64 + L1R	0,25	0,89	220 Δ / 380 - Y	0,25	0,79	440 - Y
1LA7073-4AB9x-Z+ M64 + L1R	0,37	1,1	220 Δ / 380 - Y	0,37	1,03	440 - Y
1LE1001-0DB22-1xyw-Z+ H08	0,55	1,46	220 Δ / 380 - Y	0,55	1,35	440 - Y
1LE1001-0DB32-1xyw-Z+ H08	0,75	1,88	220 Δ / 380 - Y	0,75	1,76	440 - Y
1LE1001-0EB02-1xyw-Z+ H08	1,1	2,65	220 Δ / 380 - Y	1,1	2,3	440 - Y
1LE1001-0EB42-1xyw-Z+ H08	1,5	3,5	220 Δ / 380 - Y	1,5	3,14	440 - Y
1LE1001-1AB42-1xyw-Z+ H08	2,2	4,9	220 Δ / 380 - Y	2,2	4,25	440 - Y
1LE1001-1AB52-1xyw-Z+ H08	3	6,5	220 Δ / 380 - Y	3	5,7	440 - Y
1LE1001-1BB22-1xyw-Z+ H08	4	8,7	220 Δ / 380 - Y	4	7,6	440 - Y

## 1.1.3 IE 1/2 415V / 480V- P<sub>50Hz</sub>

IE 1/2 415V / 480V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LA7070-4AB9x-Z+ M64 + L1C	0,25	0,82	415 -Y	0,25	0,72	480 -Y
1LA7073-4AB9x-Z+ M64 + L1C	0,37	1	415 -Y	0,37	0,93	480 -Y
1LE1001-0DB22-3xyw-Z+ H08	0,55	1,34	415 -Y	0,55	1,24	480 -Y
1LE1001-0DB32-3xyw-Z+ H08	0,75	1,73	415 -Y	0,75	1,61	480 -Y
1LE1001-0EB02-3xyw-Z+ H08	1,1	2,41	415 -Y	1,1	2,11	480 -Y
1LE1001-0EB42-3xyw-Z+ H08	1,5	3,2	415 -Y	1,5	2,88	480 -Y
1LE1001-1AB42-3xyw-Z+ H08	2,2	4,5	415 -Y	2,2	3,88	480 -Y
1LE1001-1AB52-3xyw-Z+ H08	3	6	415 -Y	3	5,2	480 -Y
1LE1001-1BB22-3xyw-Z+ H08	4	7,9	415 -Y	4	6,6	480 -Y

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## 1.2 IE3 motors

### 1.2.1 IE 3 400V / 460V - P<sub>50Hz</sub>

IE 3 400V / 460V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1003-0DB22-2xyw-Z+ H08	0,55	1,26	230 Δ / 400 - Y	0,55	1,15	460 - Y
1LE1003-0DB32-2xyw-Z+ H08	0,75	1,75	230 Δ / 400 - Y	0,75	1,59	460 - Y
1LE1003-0EB02-2xyw-Z+ H08	1,1	2,4	230 Δ / 400 - Y	1,1	2,15	460 - Y
1LE1003-0EB42-2xyw-Z+ H08	1,5	3,15	230 Δ / 400 - Y	1,5	2,85	460 - Y
1LE1003-1AB42-2xyw-Z+ H08	2,2	4,4	230 Δ / 400 - Y	2,2	3,8	460 - Y
1LE1003-1AB52-2xyw-Z+ H08	3	6	230 Δ / 400 - Y	3	5,1	460 - Y
1LE1003-1BB22-2xyw-Z+ H08	4	7,9	230 Δ / 400 - Y	4	6,9	460 - Y

### 1.2.2 IE 3 380V / 440V - P<sub>50Hz</sub>

IE 3 380V / 440V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1003-0DB22-1xyw-Z+ H08	0,55	1,33	220 Δ / 380 - Y	0,55	1,2	440 - Y
1LE1003-0DB32-1xyw-Z+ H08	0,75	1,84	220 Δ / 380 - Y	0,75	1,66	440 - Y
1LE1003-0EB02-1xyw-Z+ H08	1,1	2,55	220 Δ / 380 - Y	1,1	2,25	440 - Y
1LE1003-0EB42-1xyw-Z+ H08	1,5	3,35	220 Δ / 380 - Y	1,5	3	440 - Y
1LE1003-1AB42-1xyw-Z+ H08	2,2	4,65	220 Δ / 380 - Y	2,2	4	440 - Y
1LE1003-1AB52-1xyw-Z+ H08	3	6,3	220 Δ / 380 - Y	3	5,4	440 - Y
1LE1003-1BB22-1xyw-Z+ H08	4	8,4	220 Δ / 380 - Y	4	7,2	440 - Y

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### 1.2.3 IE 3 415V / 480V - P<sub>50Hz</sub>

IE 3 415V / 480V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power [kW] P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1003-0DB22-3xyw-Z+ H08	0,55	1,21	415 -Y	0,55	1,1	480 -Y
1LE1003-0DB32-3xyw-Z+ H08	0,75	1,69	415 -Y	0,75	1,52	480 -Y
1LE1003-0EB02-3xyw-Z+ H08	1,1	2,35	415 -Y	1,1	2,06	480 -Y
1LE1003-0EB42-3xyw-Z+ H08	1,5	3,05	415 -Y	1,5	2,73	480 -Y
1LE1003-1AB42-3xyw-Z+ H08	2,2	4,25	415 -Y	2,2	3,74	480 -Y
1LE1003-1AB52-3xyw-Z+ H08	3	5,7	415 -Y	3	4,98	480 -Y
1LE1003-1BB22-3xyw-Z+ H08	4	7,7	415 -Y	4	6,2	480 -Y

### 1.2.4 IE3 460V – P<sub>50Hz/60Hz</sub>

IE3 460V – P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1003-0DB26-1xyw-Z+ H08	0,55	1,15	460 - Y
1LE1003-0DB36-1xyw-Z+ H08	0,75	1,59	460 - Y
1LE1003-0EB06-1xyw-Z+ H08	1,1	2,15	460 - Y
1LE1003-0EB46-1xyw-Z+ H08	1,5	2,85	460 - Y
1LE1003-1AB46-1xyw-Z+ H08	2,2	3,9	460 - Y
1LE1003-1AB56-1xyw-Z+ H08	3	5,2	460 - Y
1LE1003-1BB26-1xyw-Z+ H08	3,7	6,5	460 - Y

IE3 460V - P <sub>60Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power [kW] P <sub>60Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1003-0DB26-1xyw-Z+ H08	0,63	1,25	460 - Y
1LE1003-0DB36-1xyw-Z+ H08	0,86	1,72	460 - Y
1LE1003-0EB06-1xyw-Z+ H08	1,27	2,35	460 - Y
1LE1003-0EB46-1xyw-Z+ H08	1,75	3,15	460 - Y
1LE1003-1AB46-1xyw-Z+ H08	2,55	4,35	460 - Y
1LE1003-1AB56-1xyw-Z+ H08	3,45	5,8	460 - Y
1LE1003-1BB26-1xyw-Z+ H08	4,55	7,7	460 - Y

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## 1.3 Eagle Line motors NPE:

### 1.3.1 NPE - Eagle Line 400V / 460V - P<sub>50Hz</sub>

NPE - Eagle Line 400V / 460V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 50 Hz			Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]	Power P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1023-0DB22-2xyw-Z+ H08	0,55	1,26	230 Δ / 400 - Y	0,55	1,15	460 - Y
1LE1023-0DB32-2xyw-Z+ H08	0,75	1,75	230 Δ / 400 - Y	0,75	1,59	460 - Y
1LE1023-0EB02-2xyw-Z+ H08	1,1	2,4	230 Δ / 400 - Y	1,1	2,15	460 - Y
1LE1023-0EB42-2xyw-Z+ H08	1,5	3,15	230 Δ / 400 - Y	1,5	2,85	460 - Y
1LE1023-1AB42-2xyw-Z+ H08	2,2	4,4	230 Δ / 400 - Y	2,2	3,9	460 - Y
1LE1023-1AB52-2xyw-Z+ H08	3	5,9	230 Δ / 400 - Y	3	5,2	460 - Y
1LE1023-1BB22-2xyw-Z+ H08	4	7,9	230 Δ / 400 - Y	3,7	6,9	460 - Y

### 1.3.2 NPE - Eagle Line 460V – P<sub>50Hz/60Hz</sub>

#### NOTE

A 9 pole terminal block cannot be used in combination with SINAMICS G110M. Instead SIMOGEAR geared motors will be delivered with a 6 pole terminal block in combination with SINAMICS G110M.

NPE - Eagle Line 460V - P <sub>50Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 60 Hz		
MLFB	Power P <sub>50Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
1LE1023-0DB26-1xyw-Z+ H08	0,55	1,15	460 - Y
1LE1023-0DB36-1xyw-Z+ H08	0,75	1,59	460 - Y
1LE1023-0EB06-1xyw-Z+ H08	1,1	2,15	460 - Y
1LE1023-0EB46-1xyw-Z+ H08	1,5	2,85	460 - Y
1LE1023-1AB46-1xyw-Z+ H08	2,2	3,8	460 - Y
1LE1023-1AB56-1xyw-Z+ H08	3	5,1	460 - Y
1LE1023-1BB26-1xyw-Z+ H08	3,7	6,5	460 - Y

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**NOTE**

**A 9 pole terminal block cannot be used in combination with SINAMICS G110M. Instead SIMOGEAR geared motors will be delivered with a 6 pole terminal block in combination with SINAMICS G110M.**

NPE - Eagle Line 460V – P <sub>60Hz</sub>	Nominal motor frequency f <sub>nom</sub> = 60 Hz		
	Power P <sub>60Hz</sub>	I <sub>nom</sub> [A]	Voltage [V]
MLFB			
1LE1023-0DB26-1xyw-Z+ H08	0,63	1,25	460 - Y
1LE1023-0DB36-1xyw-Z+ H08	0,86	1,72	460 - Y
1LE1023-0EB06-1xyw-Z+ H08	1,27	2,35	460 - Y
1LE1023-0EB46-1xyw-Z+ H08	1,75	3,15	460 - Y
1LE1023-1AB46-1xyw-Z+ H08	2,55	4,35	460 - Y
1LE1023-1AB56-1xyw-Z+ H08	3,45	5,8	460 - Y
1LE1023-1BB26-1xyw-Z+ H08	4,55	7,7	460 - Y

## 1.4 Current derating at lower speed (output current in % of rated current)

### 1.4.1 For motors with P<sub>50Hz</sub> power rating

0 Hz	10 Hz	20 Hz	30 Hz	40 Hz	50 Hz	≥60 Hz
40%	70%	80%	90%	95%	100%	100%

### 1.4.2 For motors with P<sub>60Hz</sub> power rating

0 Hz	10 Hz	20 Hz	30 Hz	40 Hz	50 Hz	≥60 Hz
35%	61%	70%	78%	83%	87%	100%

## 1.5 Power derating for temperature

No derating for -10°C to +40°C.

Derating 3% per Kelvin above 40°C up to 55°C for 1LE1 motor types.

Motor type 1LA7070 and 1LA7073 is limited to maximum ambient of 40°C.



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## 1.6 Characteristics of the SINAMICS G110M

Due to the unique nature of the SINAMICS G110M system, there are a number of restrictions regarding type of options and devices used with the motors. These are listed below:

- Note mounting position of encoders when used
- The brake lever cannot be used in the “12 o’clock” position; this is not possible because of the position of the terminal housing of the inverter
- 24VDC brake voltage is not allowed
- 230/400 VAC brake voltage is not allowed
- Stand by heating of the motor cannot be used
- An external motor fan cannot be fitted if the terminal housing is on the “12 o’clock” position

For further information see catalogue MD50.1 SIMOGEAR geared motors and DT configurator.