

SIMOTICS servomotors

SIMOTICS S synchronous motors for SINAMICS S120

SIMOTICS S-1FK7 geared servomotors

Order No. supplements – Order codes

When ordering a geared servomotor with options, **-Z** should be added to the order number.
The order code should also be specified for each additional required option.
The description of the option must not be repeated in plain text in the order.

1st order code: Gearbox type

- Bevel gearbox K102 to K813
- Parallel shaft gearbox F202 to F602
- Helical gearbox C002 to C812
- Worm gearbox S002 to S402

B..
C..
D..
E..

[Complete order code for gearbox type, refer to selection and ordering data](#)

2nd order code, 1st and 2nd positions: Type

- Foot-mounted
- Tapped hole group
- Flange (round)
- Foot-mounted and flange (round)
- Foot-mounted and tapped hole group

G 1 ■
G 2 ■
G 3 ■
G 5 ■
G 6 ■

2nd order code, 3rd position: Gear shaft extension

Helical gearbox:

- Solid shaft with feather key

Parallel shaft gearbox:

- Solid shaft with feather key, gearbox side 5
- Hollow shaft with keyway, insertion side 5
- Hollow shaft with clamping element, shrink disk side 6, insertion side 5

Bevel and worm gearboxes:

- Solid shaft with feather key, gearbox side 4
- Hollow shaft with keyway, insertion side 4
- Hollow shaft with clamping element, shrink disk side 4, insertion side 3
- Solid shaft with feather key, gearbox side 3
- Hollow shaft with keyway, insertion side 3
- Hollow shaft with clamping element, shrink disk side 3, insertion side 4

1
3
4
5
7
8

3rd order code, 1st and 2nd positions: Type of construction/mounting position

Type of construction for helical gearboxes:

- IM B3 / IM B5 / IM B14 / IM B34 / IM B35
- IM B7
- IM B8
- IM B6
- IM V1
- IM V3 / IM V6 / IM V19
- IM V5
- IM V18

Mounting position for parallel shaft, bevel and worm gearboxes:

- EL 1
- EL 2
- EL 3
- EL 4
- EL 5
- EL 6
-
-

H 1 ■
H 2 ■
H 3 ■
H 4 ■
H 5 ■
H 6 ■
H 7 ■
H 8 ■

3rd order code, 3rd position: Connector mounting position

- Connector position on gearbox side 2, top
- Connector position on gearbox side 4, right
- Connector position on gearbox side 1, below
- Connector position on gearbox side 3, left

1
2
3
4

[See page 4/94 for a diagram of the connector mounting position.](#)

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Permissible combinations for option Q.. with G2.

4th order code: Torque bracket for bevel and worm gearboxes

<u>Torque bracket position</u>	<u>Gearbox type and size</u>				
Side 1, eye side 4	K102/S102	Q12	and	G23	or G28
Side 1, eye side 3	K102/S102	Q13		G27	G24
Side 5, eye side 4	K102/S102	Q14		G23	G28
Side 5, eye side 3	K102/S102	Q15		G27	G24
Side 2, eye side 4	K102	Q16		G23	G28
Side 2, eye side 3	K102	Q17		G27	G24
Side 1, eye side 4	K202/S202	Q22		G23	G28
Side 1, eye side 3	K202/S202	Q23		G27	G24
Side 5, eye side 4	K202/S202	Q24		G23	G28
Side 5, eye side 3	K202/S202	Q25		G27	G24
Side 1, eye side 4	K302/S302	Q32		G23	G28
Side 1, eye side 3	K302/S302	Q33		G27	G24
Side 5, eye side 4	K302/S302	Q34		G23	G28
Side 5, eye side 3	K302/S302	Q35		G27	G24
Side 1, eye side 4	K402/S402	Q42		G23	G28
Side 1, eye side 3	K402/S402	Q43		G27	G24
Side 5, eye side 4	K402/S402	Q44		G23	G28
Side 5, eye side 3	K402/S402	Q45		G27	G24
Side 1, eye side 4	K513	Q52		G23	G28
Side 1, eye side 3	K513	Q53		G27	G24
Side 5, eye side 4	K513	Q54		G23	G28
Side 5, eye side 3	K513	Q55		G27	G24
Side 1, eye side 4	K613	Q62		G23	G28
Side 1, eye side 3	K613	Q63		G27	G24
Side 5, eye side 4	K613	Q64		G23	G28
Side 5, eye side 3	K613	Q65		G27	G24
Side 1, eye side 4	K713	Q72		G23	G28
Side 1, eye side 3	K713	Q73		G27	G24
Side 5, eye side 4	K713	Q74		G23	G28
Side 5, eye side 3	K713	Q75		G27	G24
Side 1, eye side 4	K813	Q82		G23	G28
Side 1, eye side 3	K813	Q83		G27	G24
Side 5, eye side 4	K813	Q84		G23	G28
Side 5, eye side 3	K813	Q85		G27	G24

See page 4/94 for diagram showing position of the torque arm and position of the mounting bracket.

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5th order code, other options

Paint finish: Jet black, matt RAL 9005

Paint finish: Cream white RAL 9001

Paint finish: Reseda green RAL 6011

Paint finish: Pebble gray RAL 7032

Paint finish: Sky blue RAL 5015

Paint finish: Light ivory RAL 1015

Paint finish: Squirrel gray RAL 7000

Paint finish: White aluminum RAL 9006

Paint finish: Gentian blue RAL 5010

Paint finish: Pure orange RAL 2004

Food-grade gear oil

X01

X02

X03

X04

X05

X06

X07

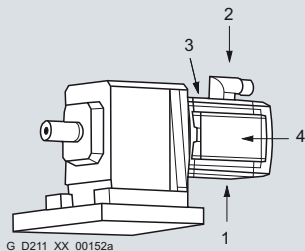
X08

X12

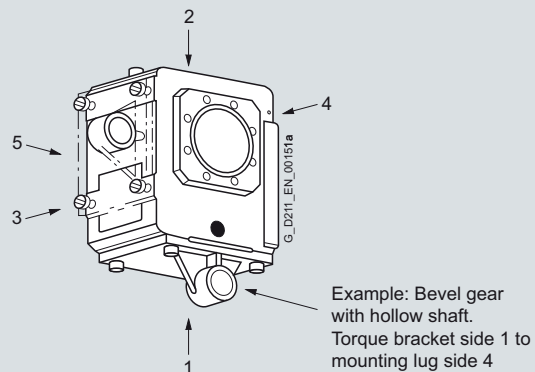
X19

Q90

For option Q90, the Order No. for the geared servomotor must also be changed in the 16th position from 5 to 7: 1FK7...-5A.71-1..7-Z



Connector mounting position



Gearbox sides shown with position of the torque bracket and position of the fixing eye

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Order No. supplements – Order codes

Permissible combinations for option G.. with H.. and Q..

Order code	Description	Permissible G options for gearbox type			Permissible H-Q options for gearbox type		
		Helical gear	Parallel shaft	Bevel gear/worm	Helical gear	Parallel shaft	Bevel gear/worm
G11	Foot-mounted, solid shaft with feather key	✓			H1. to H4. H6./H7.		
G13	Footed-mounted, hollow shaft with keyway (insertion gearbox side 4)						
G14	Footed-mounted, hollow shaft with shrink disk (insertion gearbox side 4)						
G15	Foot-mounted, solid shaft with feather key (gearbox side 3)						
G17	Footed-mounted, hollow shaft with keyway (insertion gearbox side 3)						
G18	Footed-mounted, hollow shaft with shrink disk (gearbox side 3)						
G21	Tapped hole group, solid shaft with keyway (gearbox side 4 for bevel and worm)	✓		✓ 1)	H1./H6./H8.		H1. to H6.
G23	Tapped hole group, solid shaft with keyway (insertion gearbox side 5 for parallel shaft gearbox, insertion gearbox side 4 for bevel and worm)		✓	✓ 1)		H1. to H6.	H1. to H6. Q..
G24	Tapped hole group, hollow shaft with shrink disk (shrink disk on gearbox side 6 and insertion side 5 for parallel shaft gearbox; shrink disk on gearbox side 4 and insertion side 3 for bevel and worm)		✓	✓ 1)			
G25	Tapped hole group, solid shaft with feather key (gearbox side 3)			✓ 1)			H1. to H6.
G27	Tapped hole group, hollow shaft with feather key (insertion gearbox side 3)			✓ 1)			H1. to H6. Q..
G28	Tapped hole group, hollow shaft with shrink disk (shrink disk on gearbox side 3 and insertion side 4 for bevel and worm)			✓ 1)			
G31	Flange (round), solid shaft with feather key (gearbox side 5 for parallel shaft gearbox; side 4 for bevel and worm)	✓	✓	✓ 1)	H1./H5./H6.	H1. to H6.	H1. to H6.
G33	Flange (round), hollow shaft with keyway (insertion gearbox side 4)		✓	✓ 1)			
G34	Flange (round), hollow shaft with shrink disk, shrink disk on gearbox side 6 and insertion side 5 for parallel shaft gearbox; shrink disk on gearbox side 4 and insertion side 3 for bevel and worm)		✓	✓ 1)			
G35	Flange (round), solid shaft with feather key (gearbox side 3)			✓ 1)			
G37	Flange (round), hollow shaft with keyway (insertion gearbox side 3)			✓ 1)			
G38	Flange (round), hollow shaft with shrink disk (shrink disk on gearbox side 3 and insertion side 4 for bevel and worm)			✓			

¹⁾ Not for worm gear of gearbox size S002 (gearbox type E0.).

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Order No. supplements – Order codes

Permissible combinations for option G.. with H..

Order code	Description	Permissible G options for gearbox type		Permissible H options for gearbox type	
		Helical gear	Bevel gear/worm	Helical gear	Bevel gear/worm
G51	Foot-mounted and flange (round), solid shaft with feather key (gearbox side 4 for bevel and worm)	✓ 1)	✓ 2)	H1./H2.	H1. to H6.
G53	Foot-mounted and flange (round), hollow shaft with keyway (insertion gearbox side 4)		✓ 2)		
G54	Foot-mounted and flange (round), hollow shaft with shrink disk (shrink disk on gearbox side 4 and insertion side 4 for bevel and worm)		✓ 2)		
G55	Foot-mounted and flange (round), solid shaft with feather key (gearbox side 3)		✓ 2)		
G57	Foot-mounted and flange (round), hollow shaft with keyway (insertion gearbox side 3)		✓ 2)		
G58	Foot-mounted and flange (round), hollow shaft with shrink disk (shrink disk on gearbox side 3 and insertion side 4 for bevel and worm)		✓ 2)		
G61	Foot-mounted and tapped hole group, solid shaft with feather key (gearbox side 4 for bevel and worm)	✓	✓	H1./H2.	H1. to H6.
G63	Foot-mounted and tapped hole group, hollow shaft with keyway (insertion gearbox side 4)		✓		
G64	Foot-mounted and tapped hole group, hollow shaft with shrink disk (shrink disk on gearbox side 4 and insertion side 4 for bevel and worm)		✓		
G65	Foot-mounted and tapped hole group, solid shaft with feather key (gearbox side 3)		✓		
G67	Foot-mounted and tapped hole group, hollow shaft with keyway (insertion gearbox side 3)		✓		
G68	Foot-mounted and tapped hole group, hollow shaft with shrink disk (shrink disk on gearbox side 3 and insertion side 4 for bevel and worm)		✓		

¹⁾ The flange diameter for helical gearboxes with foot mounting and flange is one diameter grade smaller in each case than the diameter for helical gearboxes with flange only (without foot mounting).

²⁾ Only for 1FK706 to 1FK710 with gearbox sizes K513 to K813 (gearbox types B5. to B8.).

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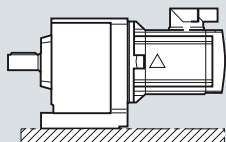
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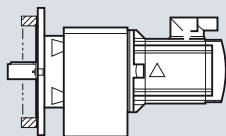
Selection guides

Helical geared motors – Types of construction

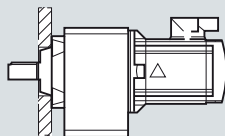
IM B3



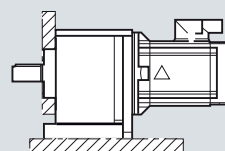
IM B5



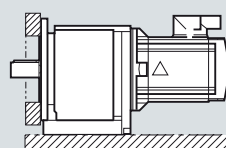
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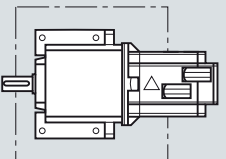
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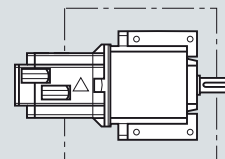
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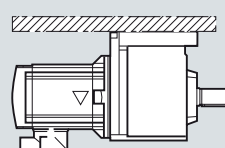
IM B6



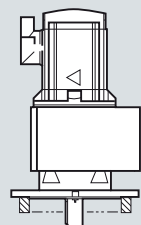
IM B7



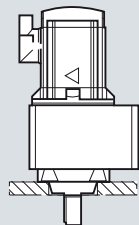
IM B8



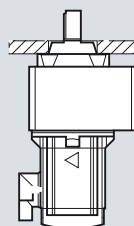
IM V1



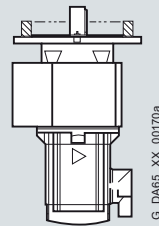
IM V18



IM V19

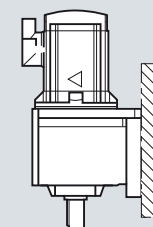


IM V3

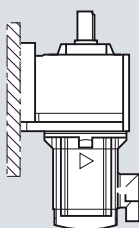


G_DA65_XX_00170a

IM V5



IM V6



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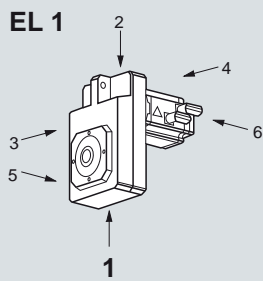
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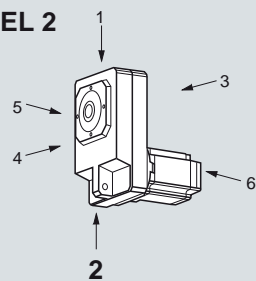
Selection guides

Parallel shaft geared motors – Mounting positions EL 1 to EL 6

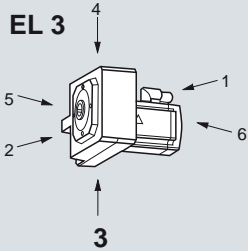
EL 1



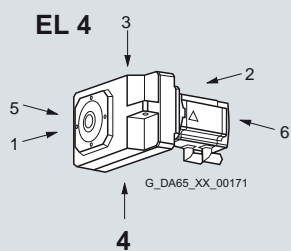
EL 2



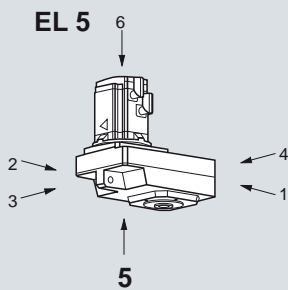
EL 3



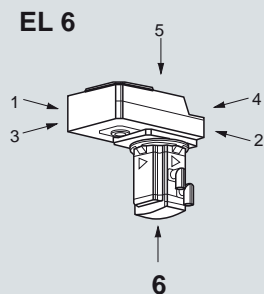
EL 4



EL 5



EL 6



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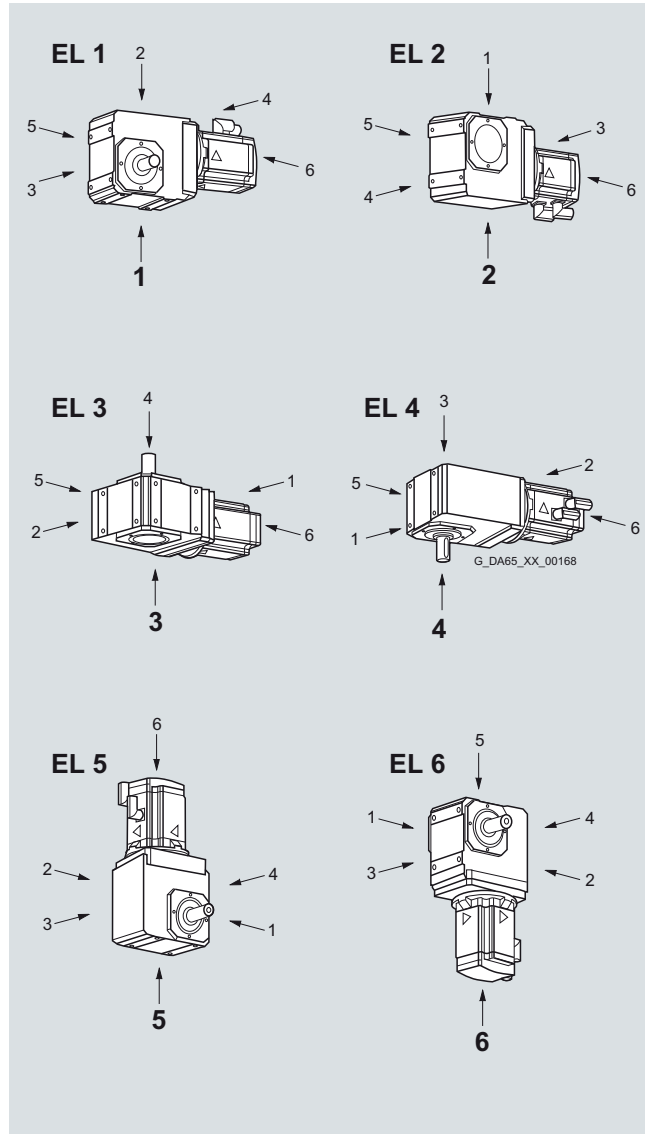
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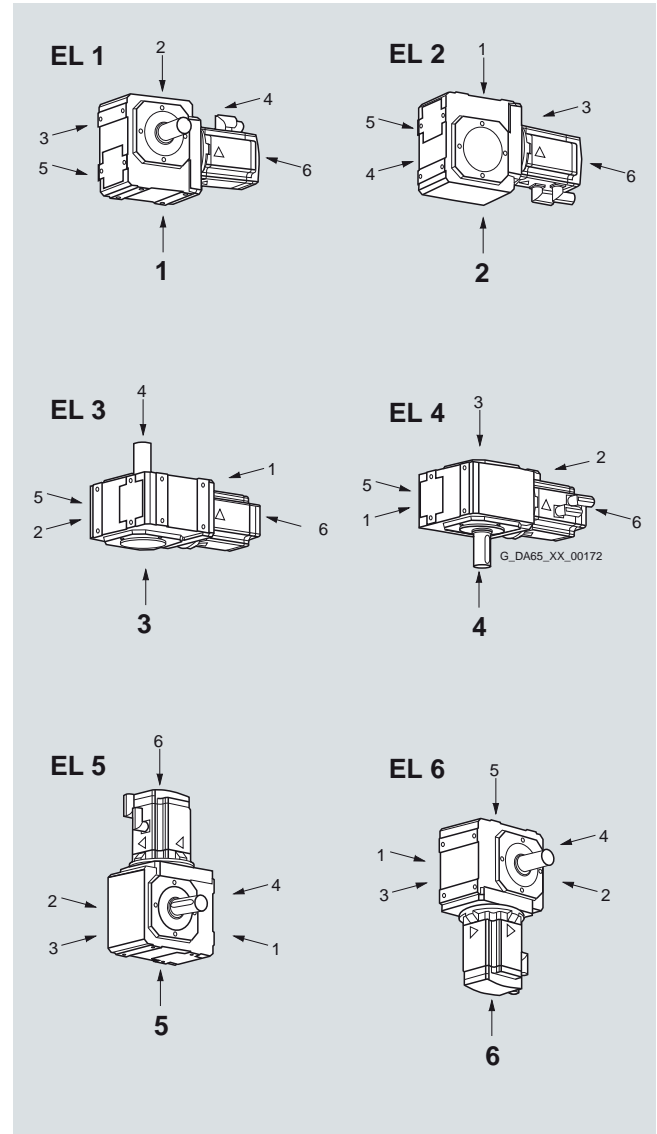
Selection guides

Bevel geared motors – Mounting positions EL 1 to EL 6

Gearbox sizes K102 to K402



Gearbox sizes K513 to K813



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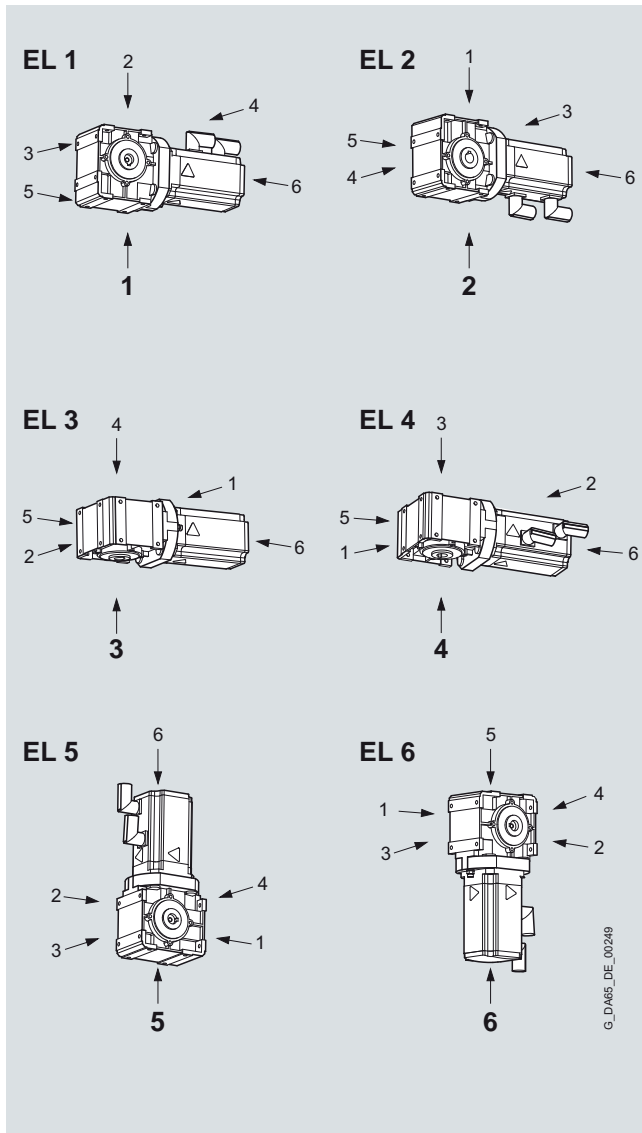
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Selection guides

Worm geared motors – Mounting positions EL 1 to EL 6

Gearbox size S002



Gearbox sizes S102 to S402

