Slider Type
LEF Series

∗ For details, refer to page 1343 and onward.

RoHS

Size: 16, 25, 32, 40

Battery-less Absolute (Step Motor 24 VDC) **Incremental** (Step Motor 24 VDC)

Incremental (Servo Motor 24 VDC)

Ball Screw Drive *LEFS Series*

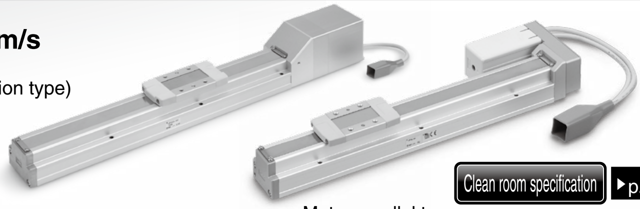
Size: 16, 25, 32, 40 ▸p. 105, 113

Max. work load: 65 kg   Max. speed: 1200 mm/s

Positioning repeatability: ±0.015 mm (High-precision type)

Clean room specification also available∗1

∗1 For the incremental type



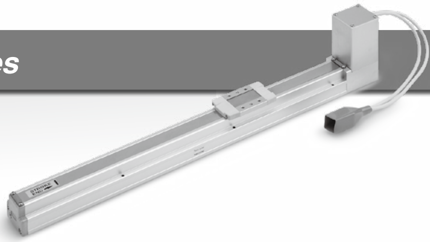
Motor parallel type

Clean room specification ▸p. 113

11-LEFS

Belt Drive *LEFB Series*

Size: 16, 25, 32 ▸p. 105, 113



Max. stroke: 2000 mm

Max. speed: 2000∗1 **mm/s**

∗1 For the incremental type

AC Servo Motor

Ball Screw Drive *LEFS Series*

Size: 25, 32, 40 ▸p. 121, 129

Positioning repeatability: ±0.01 mm (High-precision type)

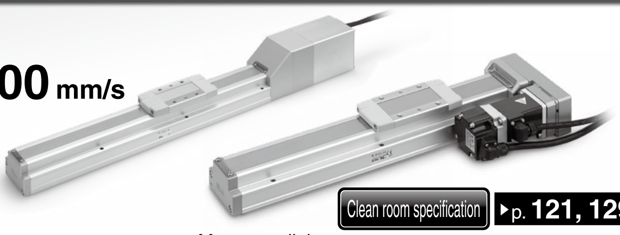
Improved high-speed transfer ability   Max. speed: 1500 mm/s

High acceleration/deceleration: 20000 mm/s²

Pulse input type

With internal absolute encoder (For the LECSB-T/C-T/S-T/N□-T and LECY)

Clean room specification also available



Motor parallel type

Clean room specification ▸p. 121, 129

11-LEFS

Belt Drive *LEFB Series*

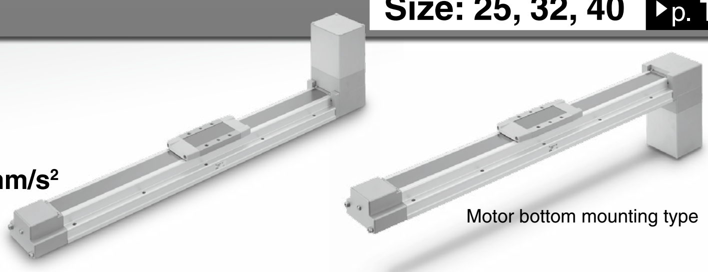
Size: 25, 32, 40 ▸p. 131

Max. speed: 2000 mm/s

Max. stroke: 3000 mm

Max. acceleration/deceleration: 20000 mm/s²

Motor bottom mounting type also available



Motor bottom mounting type

Incremental (Step Motor 24 VDC)

Incremental (Servo Motor 24 VDC)

Controllers/Drivers ▸p. 997

- ▶ **Step data input type**
  JXC51/61/LECA6 Series (64 positioning points)
- ▶ **EtherCAT/EtherNet/IP™/PROFINET/DeviceNet®/IO-Link/CC-Link direct input type**
  JXC□1/91/P1/D1/L□/M1 Series
- ▶ **Programless type**
  LECP1 Series (14 positioning points)
- ▶ **Pulse input type**
  LECPA Series

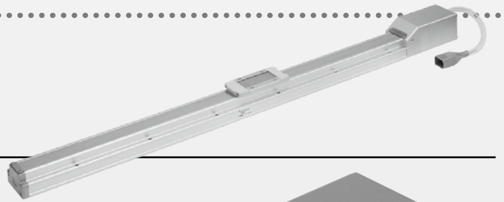
AC Servo Motor **Drivers** ▸p. 1100

▶ **For absolute encoders**

- **Pulse input type/Positioning type**
  LECSB-T Series
- **CC-Link direct input type**
  LECSC-T Series
- **SSCNETⅢ/H type**
  LECSS-T Series
- **Network card type**
  LECSN□-T Series
- **MECHATROLINK type**
  LECY□ Series

▶ **For incremental encoders**

- **Pulse input type/Positioning type**
  LECSA Series



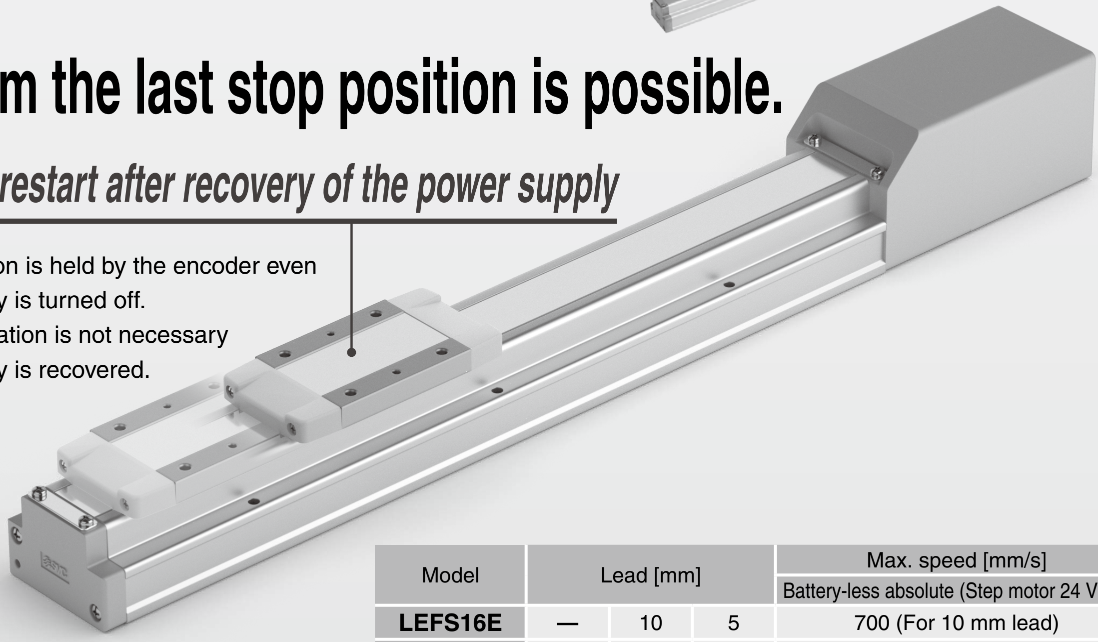
Battery-less Absolute (Step Motor 24 VDC)

Ball Screw Drive/*LEFS□E* Series Size: 16, 25, 32, 40

Restart from the last stop position is possible.

Easy operation restart after recovery of the power supply

The position information is held by the encoder even when the power supply is turned off.
A return to origin operation is not necessary when the power supply is recovered.



Model	Lead [mm]			Max. speed [mm/s]
				Battery-less absolute (Step motor 24 VDC)
LEFS16E	—	10	5	700 (For 10 mm lead)
LEFS25E	**20**	12	6	1100 (For 20 mm lead)
LEFS32E	**24**	16	8	1200 (For 24 mm lead)
LEFS40E	**30**	20	10	1200 (For 30 mm lead)

Max. work load: **65** kg
Positioning repeatability: ±**0.02** mm
(±0.015 mm for the LEFSH□E)

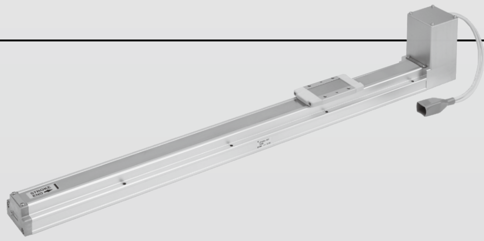
Does not require the use of batteries.

Reduced maintenance

Batteries are not used to store the position information. Therefore, there is no need to store spare batteries or replace dead batteries.

Belt Drive/*LEFB□E* Series Size: 16, 25, 32

Max. stroke: **2000** mm
Max. speed: **1500** mm/s



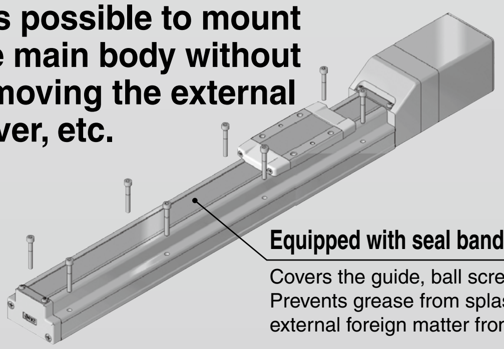
Model	Equivalent lead [mm]	Max. speed [mm/s]
		Battery-less absolute (Step motor 24 VDC)
LEFB16E	**48**	1100
LEFB25E		1400
LEFB32E		1500

Battery-less Absolute (Step Motor 24 VDC)

Incremental (Step Motor 24 VDC) **Incremental** (Servo Motor 24 VDC)

●Easy mounting of the body/Reduction in installation labor

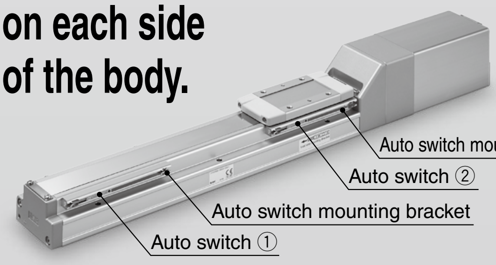
It is possible to mount the main body without removing the external cover, etc.



Equipped with seal bands as standard
Covers the guide, ball screw, and belt
Prevents grease from splashing and external foreign matter from entering

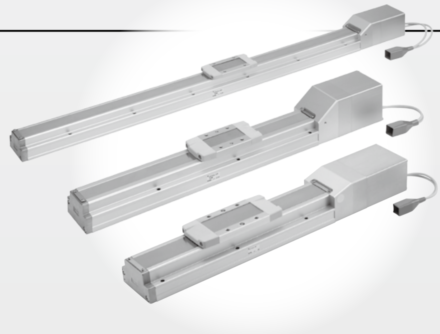
●The auto switch can be used to detect the position of the table.*
* Excludes size 16

●Up to 2 auto switches can be mounted on each side of the body.



Incremental (Step Motor 24 VDC) **Incremental** (Servo Motor 24 VDC)

Ball Screw Drive/*LEFS* Series Size: 16, 25, 32, 40



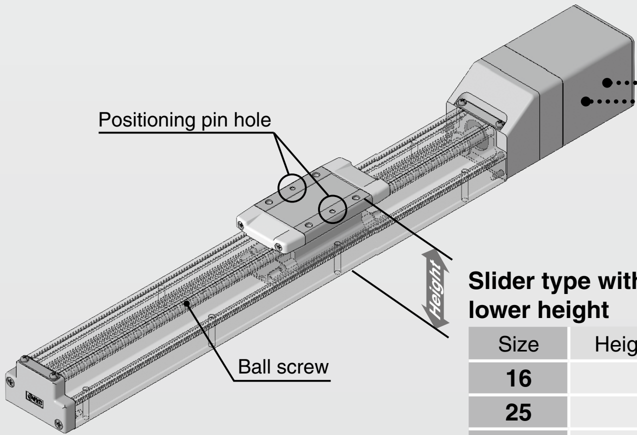
Model	Lead [mm]			Max. speed [mm/s]*1 Incremental (Step motor 24 VDC)
LEFS16	—	10	5	700 (For 10 mm lead)
LEFS25	20	12	6	1100 (For 20 mm lead)
LEFS32	24	16	8	1200 (For 24 mm lead)
LEFS40	30	20	10	1200 (For 30 mm lead)

*1 Excludes the LECPA

Max. work load: 65 kg

Positioning repeatability: ±0.02 mm

(±0.015 mm for the LEFSH)



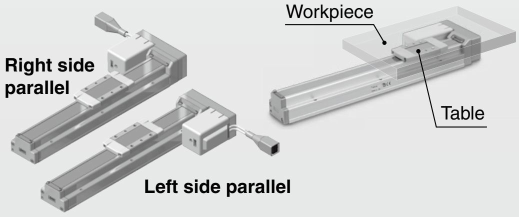
Slider type with lower height

Size	Height [mm]
16	40
25	48
32	60
40	68

Motor parallel type available!

◎Motor mounting position can be selected from two directions (Right or Left).

◎The top surface of the table and motor are level.



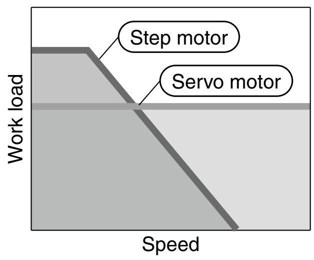
Compatible motors

●Step motor (Servo/24 VDC)

Ideal for the low-speed transfer of heavy loads

●Servo motor (24 VDC)

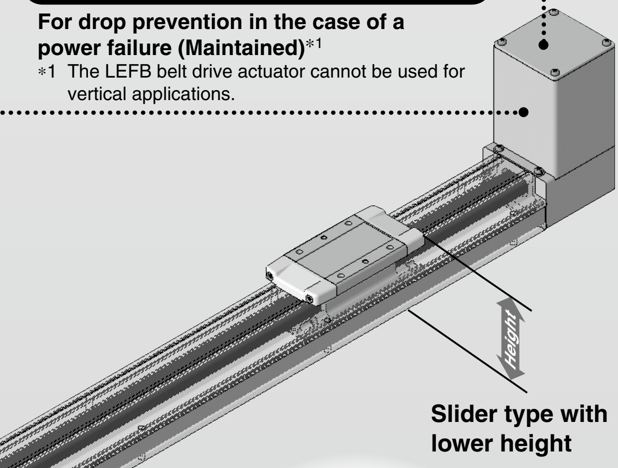
Stable at high speeds Silent operation

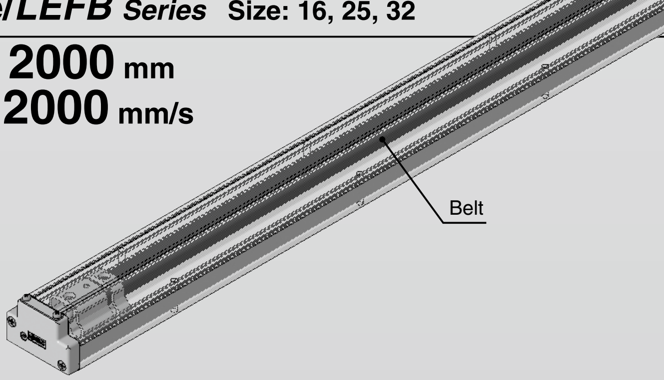


Non-magnetizing lock mechanism
(Option)

For drop prevention in the case of a power failure (Maintained)*1

*1 The LEFB belt drive actuator cannot be used for vertical applications.



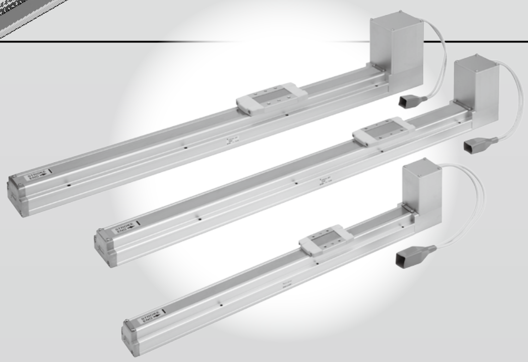


Slider type with lower height

Belt Drive/*LEFB* Series Size: 16, 25, 32

Max. stroke: 2000 mm

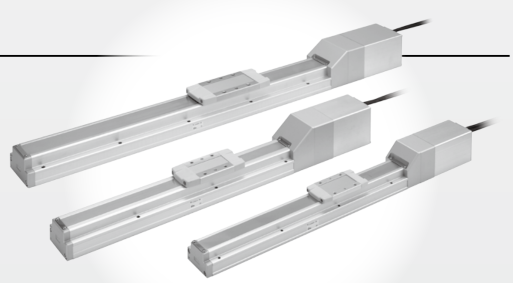
Max. speed: 2000 mm/s



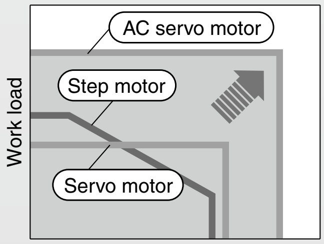
AC Servo Motor

Ball Screw Drive/*LEFS* Series Size: 25, 32, 40

Model	Lead [mm]			Max. speed [mm/s]
				AC servo motor
LEFS25	**20**	12	6	1500
LEFS32	**24**	16	8	1500
LEFS40	**30**	20	10	1500

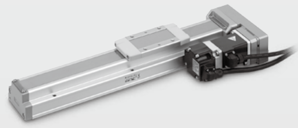


High-output motor (100/200/400 W)
Improved high-speed transfer ability
High acceleration/deceleration compatible: 20000 mm/s²
Pulse input type
With internal absolute encoder (For the LECSB-T/C-T/S-T and LECY)



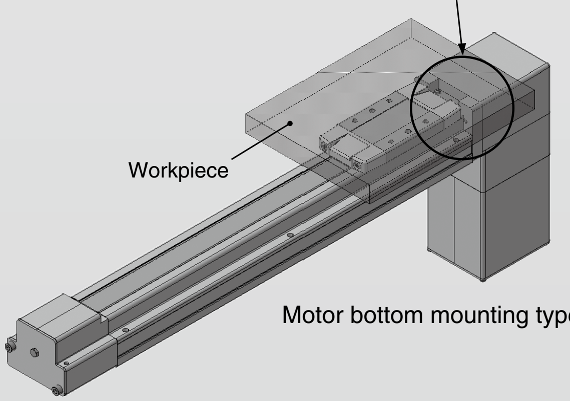
Motor parallel type available!

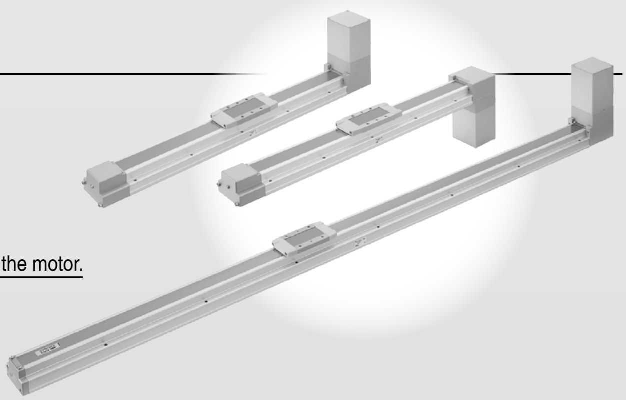
◎Motor mounting position can be selected from two directions (Right or Left).



Belt Drive/*LEFB* Series Size: 25, 32, 40

Max. speed: 2000 mm/s
Max. stroke: 3000 mm
Max. acceleration/deceleration: 20000 mm/s²





Incremental (Step Motor 24 VDC)

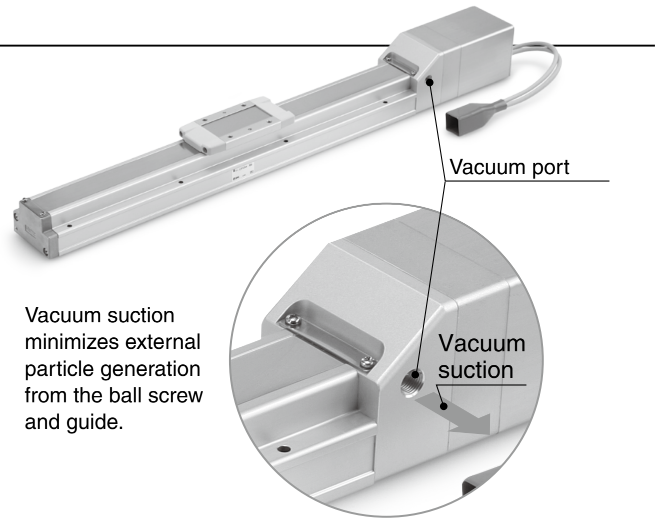
Clean Room Specification

Ball Screw Drive/*11-LEFS* Series

ISO Class 4*1 (ISO 14644-1)

· Built-in vacuum piping
· It is possible to mount the main body without removing the external cover, etc.
· Body-integrated linear guide specification

*1 Changes depending on the suction flow rate
Refer to pages 940 and 941 for details.



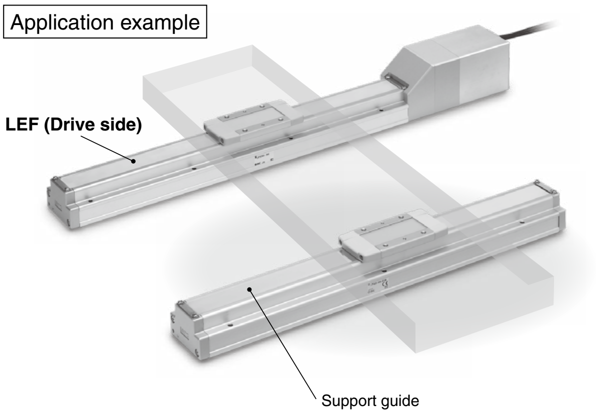
Vacuum suction minimizes external particle generation from the ball screw and guide.

Support Guide/*LEFG* Series

The support guide was designed to support workpieces with significant overhang.

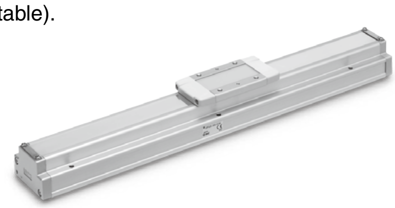
- As the dimensions are the same as the LEF series body, installation is simple and contributes to a reduction in installation and assembly labor.
- The standard-equipped seal bands prevent grease from splashing and external foreign matter from entering.

Application example



⚠Caution

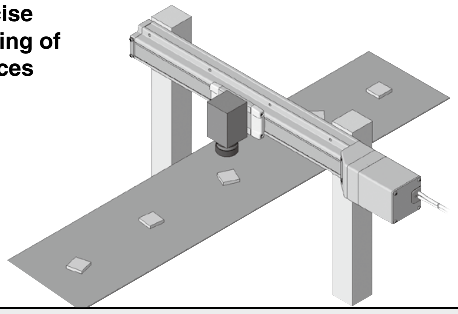
After installing the actuator on the drive side, align it with the support guide. If the mounting flatness exceeds 0.1, install a floating mechanism separately on the workpiece installation surface (table).



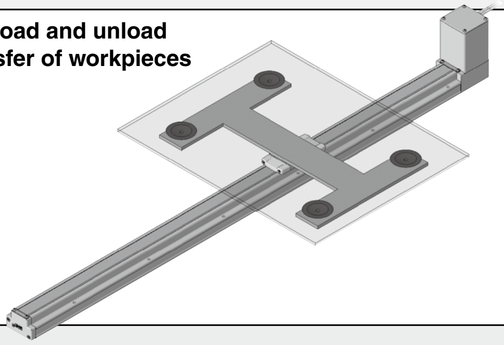
For details, refer to page 136.

Application Examples

For precise positioning of workpieces



For load and unload transfer of workpieces



Series Variations

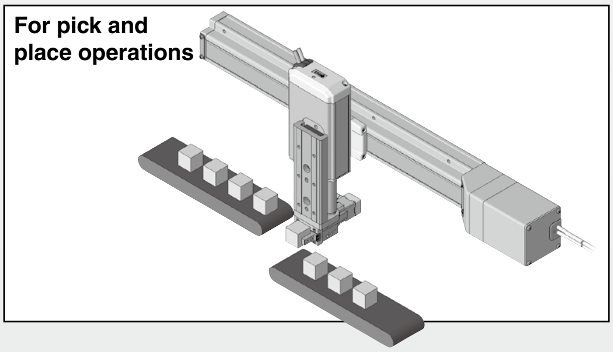
Ball Screw Drive/*LEFS* Series

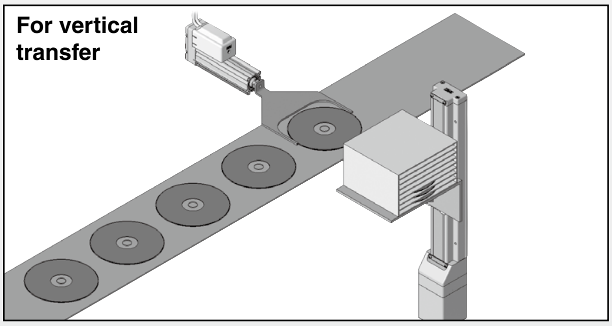
Type	Size*1	Lead [mm]	Stroke [mm]*2
Battery-less absolute (Step motor 24 VDC) Incremental (Step motor 24 VDC) *3 Clean room compatible	16	5	50, 100, 150, 200, 250, 300, 350, 400, 450, 500
		10	
	25	6	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800
		12	
		20	
	32	8	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000
		16	
		24	
	40	10	150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1100, 1200
		20	
		30	
Incremental (Servo motor 24 VDC) *3 Clean room compatible	16	5	50, 100, 150, 200, 250, 300, 350, 400, 450, 500
		10	
	25	6	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800
		12	
		20	
AC servo motor *3 Clean room compatible	25	6	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800
		12	
		20	
	32	8	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000
		16	
		24	
	40	10	150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1100, 1200
		20	
		30	

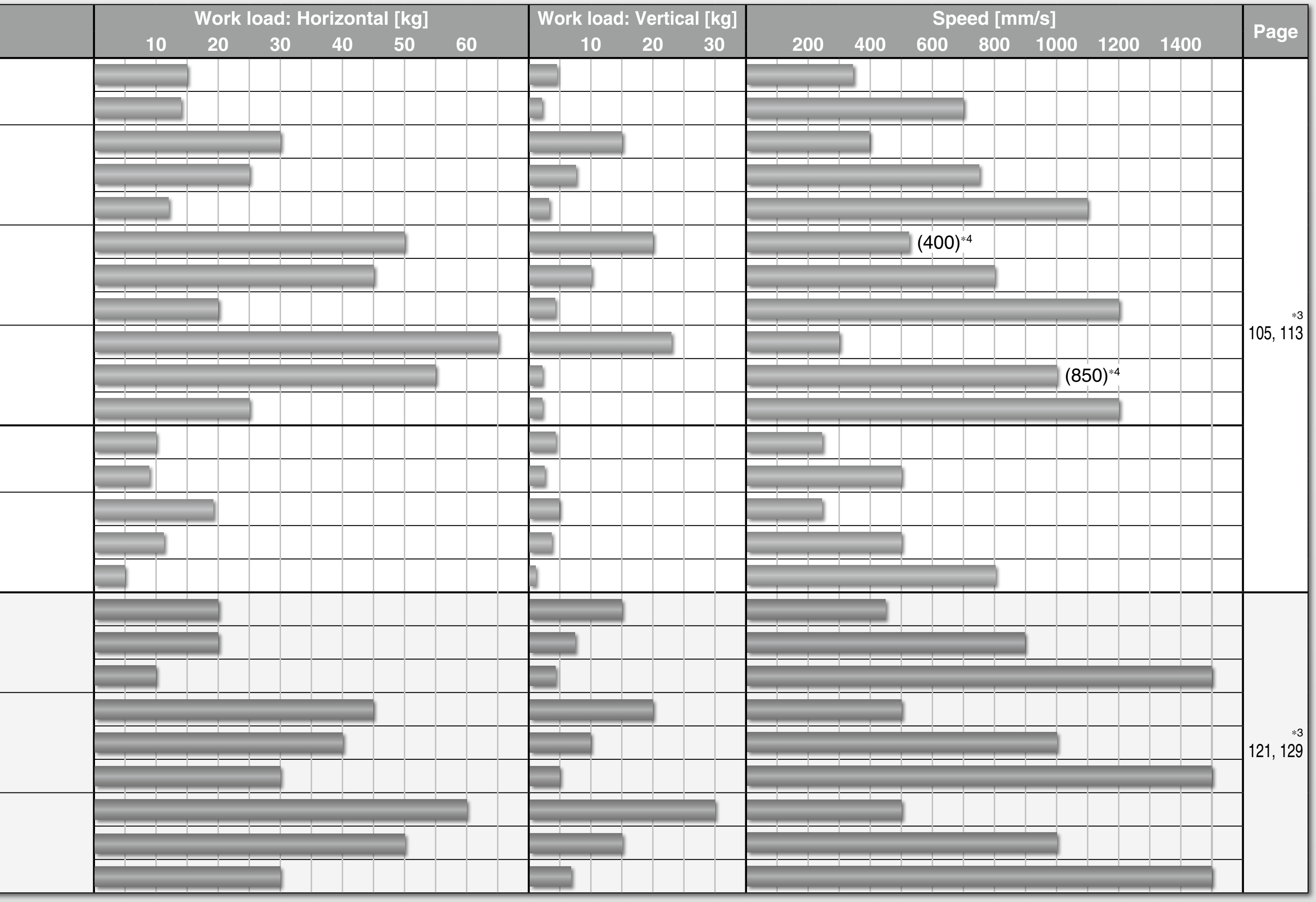
*1 The size corresponds to the bore of the air cylinder with an equivalent force. (For the ball screw drive)
*2 Please contact SMC for non-standard strokes as they are produced as special orders.
*3 For the clean room specification, refer to page 939. Not applicable depending on the lead and stroke. Excludes the battery-less absolute type *4 The speed in parentheses is for the battery-less absolute type.

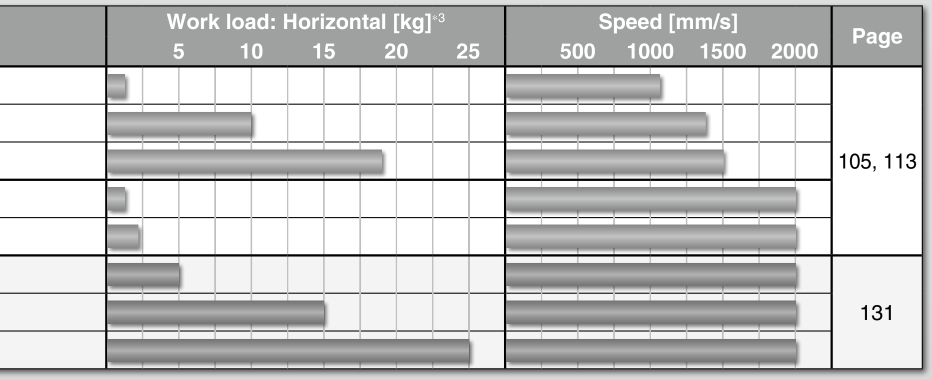
Belt Drive/*LEFB* Series

Type	Size*1	Equivalent lead [mm]	Stroke [mm]*2
Battery-less absolute (Step motor 24 VDC) Incremental (Step motor 24 VDC)	16	48	300, 500, 600, 700, 800, 900, 1000
	25	48	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000
	32	48	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000
Incremental (Servo motor 24 VDC)	16	48	300, 500, 600, 700, 800, 900, 1000
	25	48	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000
AC servo motor	25	54	300, 400, 500, 600, 700, 800, 900, 1000, (1100), 1200, (1300), (1400), 1500, (1600), (1700), (1800), (1900), 2000
	32	54	300, 400, 500, 600, 700, 800, 900, 1000, (1100), 1200, (1300), (1400), 1500, (1600), (1700), (1800), (1900), 2000, 2500
	40	54	300, 400, 500, 600, 700, 800, 900, 1000, (1100), 1200, (1300), (1400), 1500, (1600), (1700), (1800), (1900), 2000, 2500, 3000









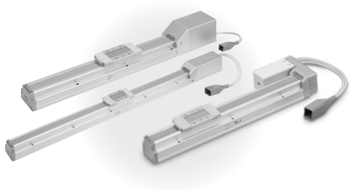
*1 The nominal size based on force (equivalent to the air cylinder) during operation with ball screws

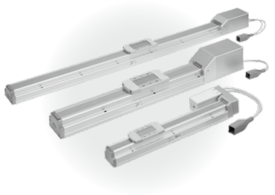
*2 Please contact SMC for non-standard strokes as they are produced as special orders.

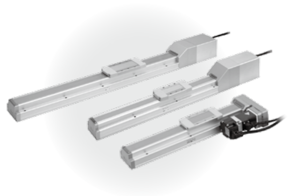
*3 The belt drive actuator cannot be used for vertical applications.

CONTENTS

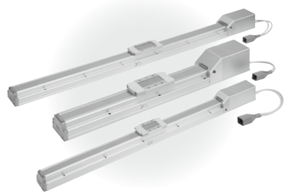
Slider Type Ball Screw Drive *LEFS* Series

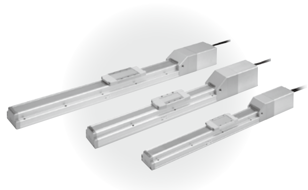


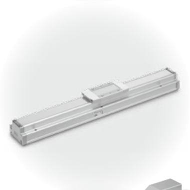


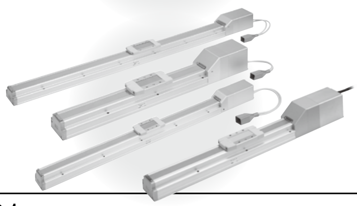


Environment

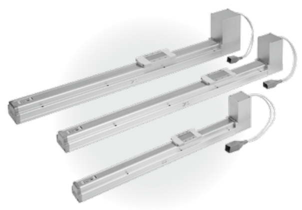


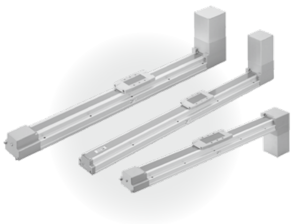






Slider Type Belt Drive *LEFB* Series





Battery-less Absolute (Step Motor 24 VDC)

◎Belt Drive *LEFB□E* Series

Incremental (Step Motor 24 VDC) **Incremental** (Servo Motor 24 VDC)

◎Belt Drive *LEFB* Series

◎Support Guide for Belt Drive Actuator/*LEFG* Series

AC Servo Motor

LECS□ *Series*

◎Belt Drive *LEFB* Series

LECY□ *Series*

◎Belt Drive *LEFB* Series

◎Incremental (Step Motor 24 VDC)/ Incremental (Servo Motor 24 VDC) Controllers/Drivers

◎3-Axis Step Motor Controller

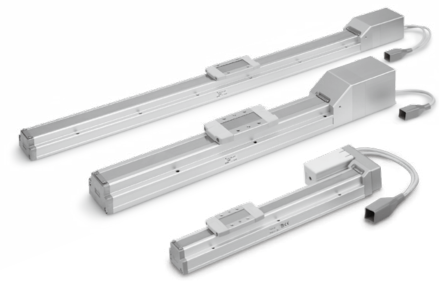
◎4-Axis Step Motor (Servo/24 VDC) Controller

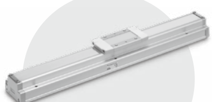
◎AC Servo Motor Drivers

Slider Type

Ball Screw Drive *LEFS* Series

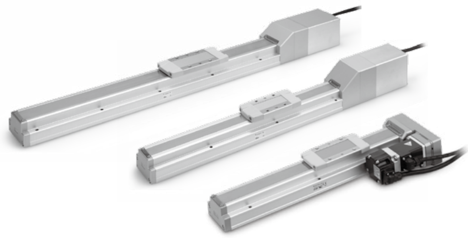
Battery-less Absolute (Step Motor 24 VDC) p. 139
Incremental (Step Motor 24 VDC) p. 161
Incremental (Servo Motor 24 VDC) p. 161





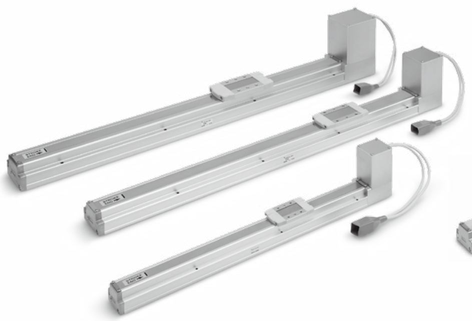
Support Guide
LEFG

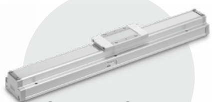
AC Servo Motor p. 182, 198



Belt Drive *LEFB* Series

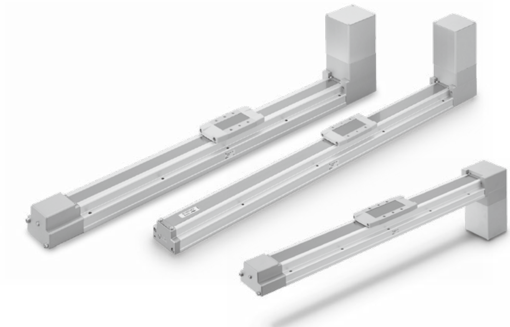
Battery-less Absolute (Step Motor 24 VDC) p. 217
Incremental (Step Motor 24 VDC) p. 227
Incremental (Servo Motor 24 VDC) p. 227





Support Guide
LEFG

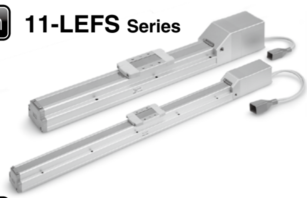
AC Servo Motor p. 238, 254

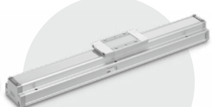


Environment

Incremental (Step Motor 24 VDC)
Incremental (Servo Motor 24 VDC)

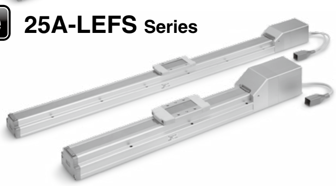
Clean Room Specification **11-LEFS** Series
p. 943





Support Guide
LEFG

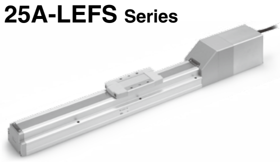
Secondary Battery Compatible **25A-LEFS** Series
p. 975



AC Servo Motor

Clean Room Specification **11-LEFS** Series
p. 953, 955

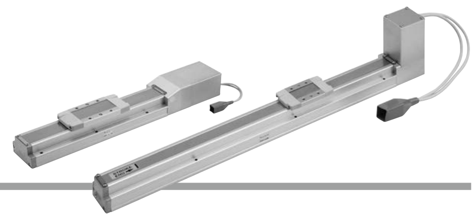
Secondary Battery Compatible **25A-LEFS** Series
p. 979, 980



Controllers/Drivers p. 994
AC Servo Motor Drivers p. 1100

Model Selection

LEFS□E Series▸p. 139 LEFB□E Series▸p. 217



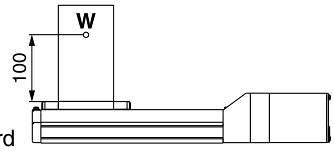
Selection Procedure

Step 1 Check the work load–speed. → **Step 2** Check the cycle time. → **Step 3** Check the allowable moment.

Selection Example

Operating conditions

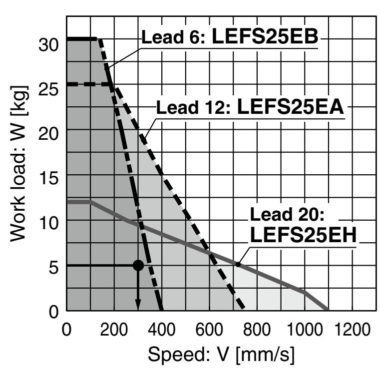
- Workpiece mass: 5 [kg]
- Speed: 300 [mm/s]
- Acceleration/Deceleration: 3000 [mm/s^2]
- Stroke: 200 [mm]
- Mounting orientation: Horizontal upward
- Workpiece mounting condition:



Step 1 Check the work load–speed. <Speed–Work load graph> (pages 106 to 108)

Select a model based on the workpiece mass and speed while referencing the speed–work load graph.

Selection example) The **LEFS25EA-200** can be temporarily selected as a possible candidate based on the graph shown on the right side.



<Speed–Work load graph> (LEFS25)

Step 2 Check the cycle time.

Calculate **the cycle time** using the following calculation method.

Cycle time:

T can be found from the following equation.

$$\boxed{T = T1 + T2 + T3 + T4 \text{ [s]}}$$

- T1: Acceleration time and T3: Deceleration time can be found by the following equation.

$$\boxed{T1 = V/a1 \text{ [s]}} \quad \boxed{T3 = V/a2 \text{ [s]}}$$

- T2: Constant speed time can be found from the following equation.

$$\boxed{T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V} \text{ [s]}}$$

- T4: Settling time varies depending on the conditions such as motor types, load and in position of the step data. Therefore, calculate the settling time while referencing the following value.

$$\boxed{T4 = 0.2 \text{ [s]}}$$

Calculation example)
T1 to T4 can be calculated as follows.

$T1 = V/a1 = 300/3000 = 0.1$ [s],

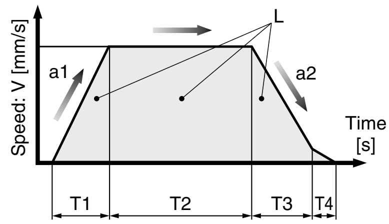
$T3 = V/a2 = 300/3000 = 0.1$ [s]

$$T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V} = \frac{200 - 0.5 \cdot 300 \cdot (0.1 + 0.1)}{300} = 0.57 \text{ [s]}$$

$T4 = 0.2$ [s]

The cycle time can be found as follows.

$T = T1 + T2 + T3 + T4$
$= 0.1 + 0.57 + 0.1 + 0.2$
$= \mathbf{0.97}$ **[s]**

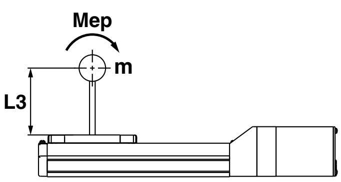


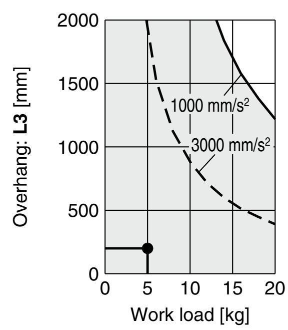
L : Stroke [mm] ··· (Operating condition)
V : Speed [mm/s] ··· (Operating condition)
a1: Acceleration [mm/s^2] ··· (Operating condition)
a2: Deceleration [mm/s^2] ··· (Operating condition)

T1: Acceleration time [s]
Time until reaching the set speed
T2: Constant speed time [s]
Time while the actuator is operating at a constant speed
T3: Deceleration time [s]
Time from the beginning of the constant speed operation to stop
T4: Settling time [s]
Time until positioning is completed

Step 3 Check the allowable moment. <Static allowable moment> (page 108) <Dynamic allowable moment> (page 109)

Confirm the moment that applies to the actuator is within the allowable range for both static and dynamic conditions.





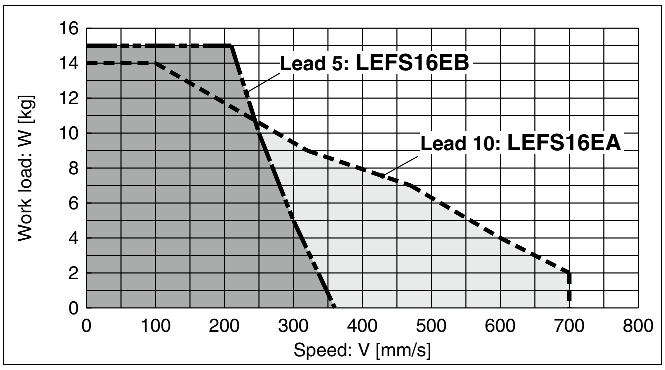
Based on the above calculation result, the LEFS25EA-200 should be selected.

Speed–Work Load Graph (Guide)
For Battery-less Absolute (Step Motor 24 VDC), In-line Motor Type

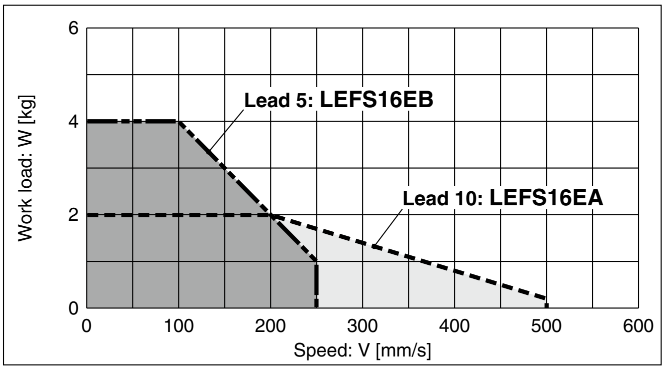
∗ The following graphs show the values when the moving force is 100%.

LEFS16/Ball Screw Drive

Horizontal

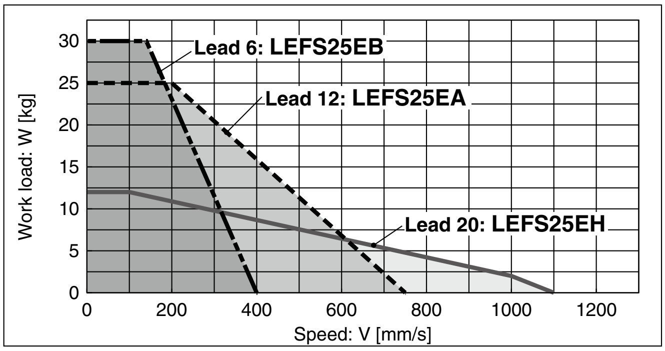


Vertical

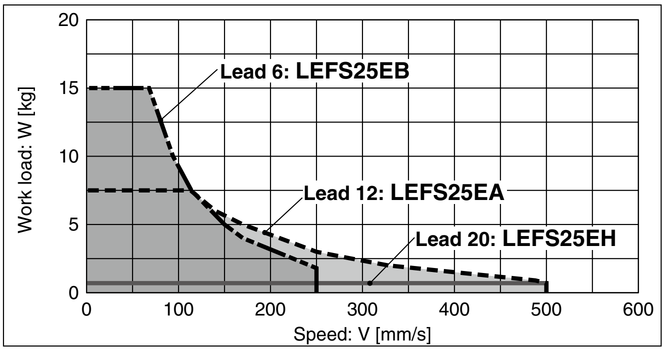


LEFS25/Ball Screw Drive

Horizontal

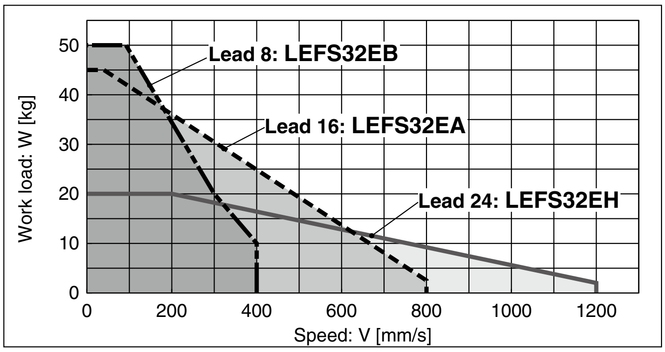


Vertical

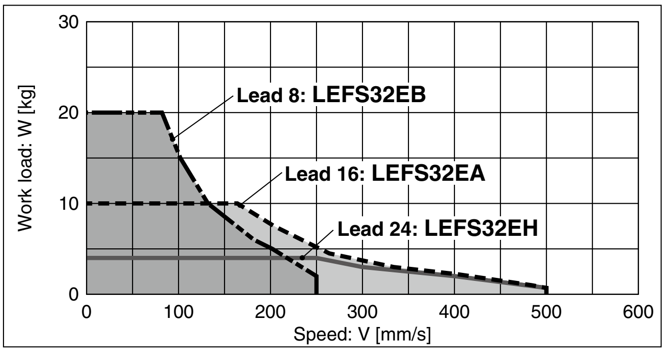


LEFS32/Ball Screw Drive

Horizontal

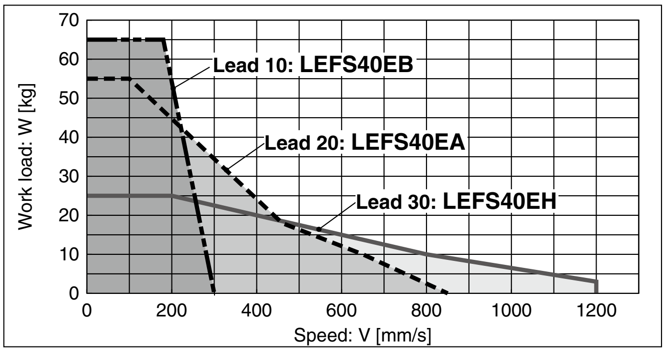


Vertical

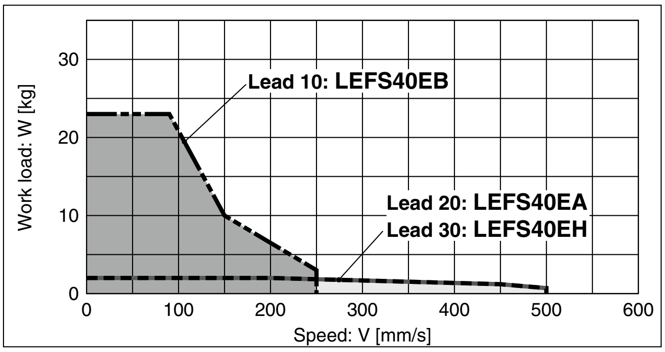


LEFS40/Ball Screw Drive

Horizontal



Vertical

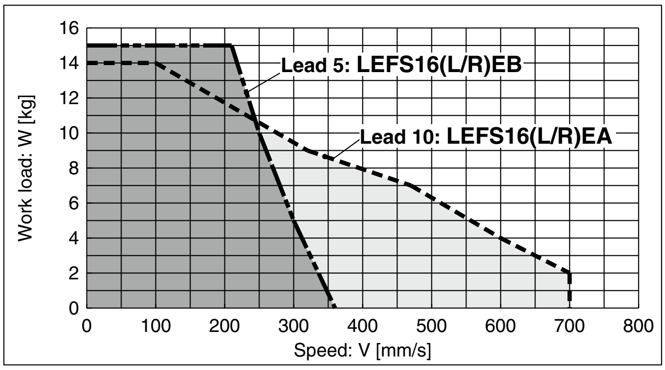


Speed–Work Load Graph (Guide)
For Battery-less Absolute (Step Motor 24 VDC), Motor Parallel Type

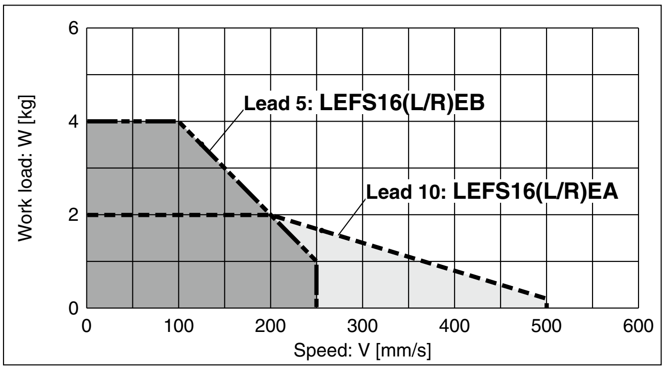
∗ The following graphs show the values when the moving force is 100%.

LEFS16(L/R)/Ball Screw Drive

Horizontal

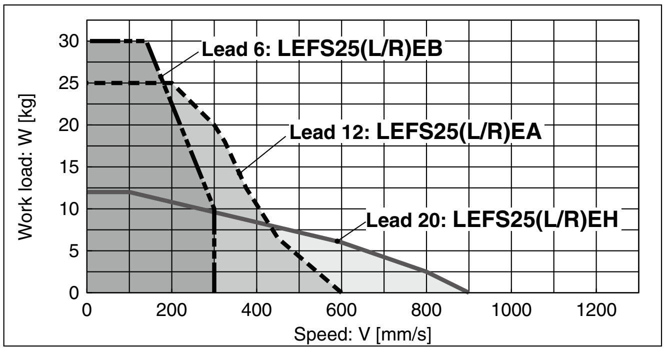


Vertical

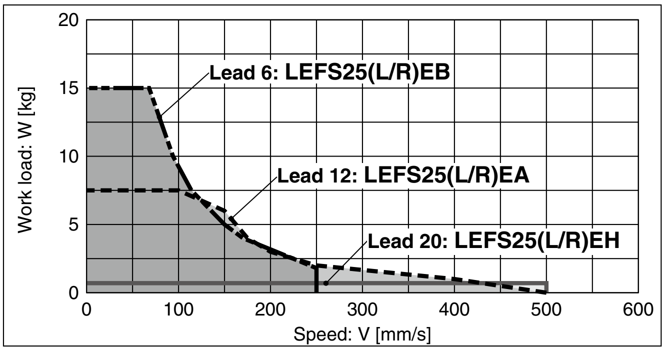


LEFS25(L/R)/Ball Screw Drive

Horizontal

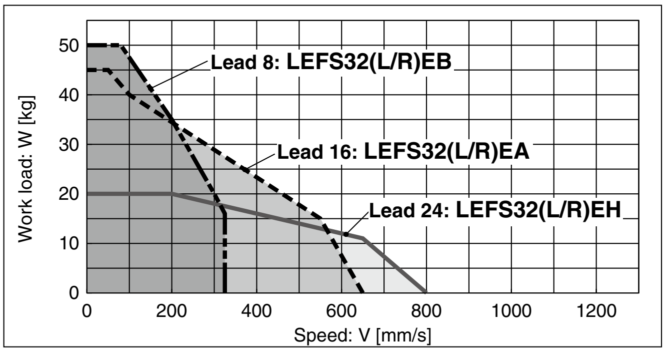


Vertical

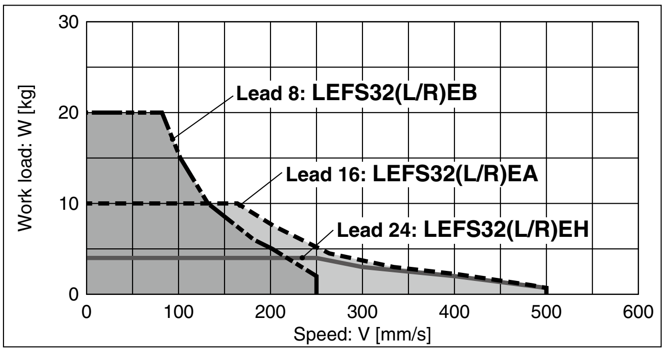


LEFS32(L/R)/Ball Screw Drive

Horizontal

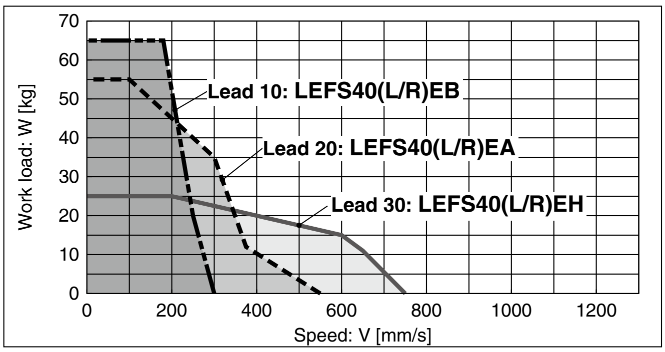


Vertical

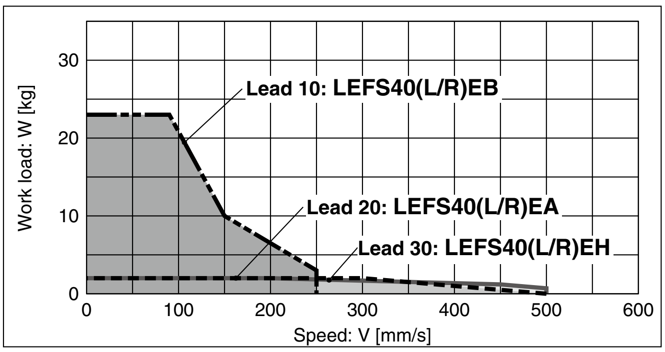


LEFS40(L/R)/Ball Screw Drive

Horizontal



Vertical

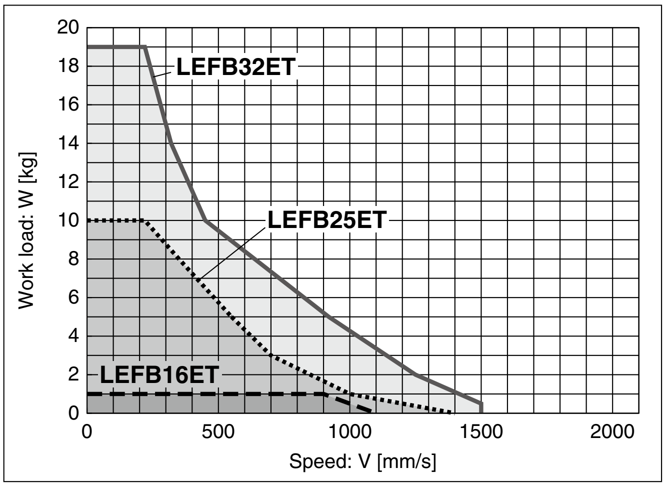


Speed–Work Load Graph (Guide)
For Battery-less Absolute (Step Motor 24 VDC)

* The following graph shows the values when the moving force is 100%.

LEFB/Belt Drive

Horizontal



Static Allowable Moment*1

[N·m]

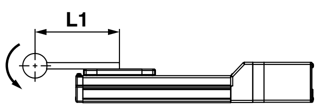
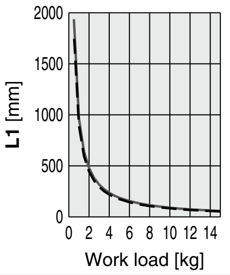
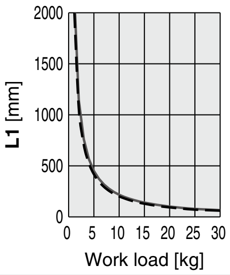
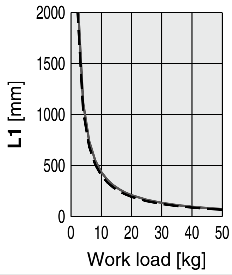
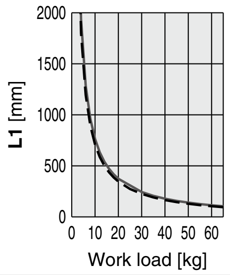
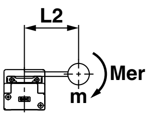
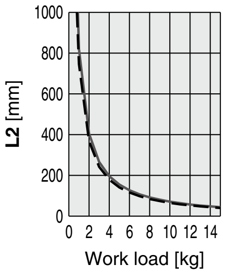
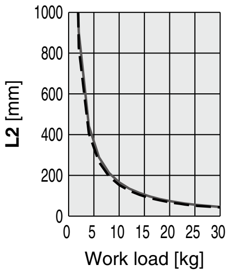
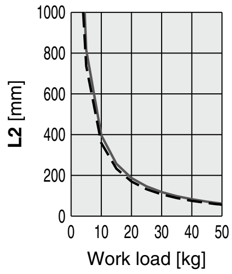
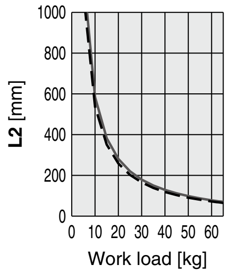
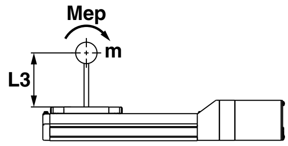
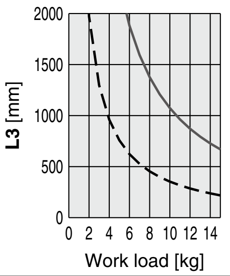
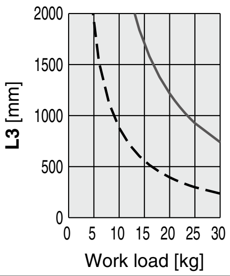
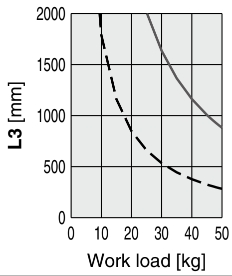
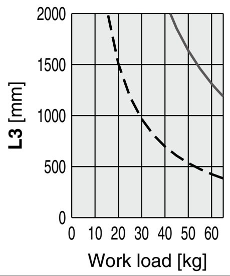
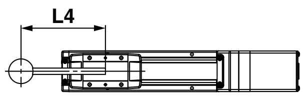
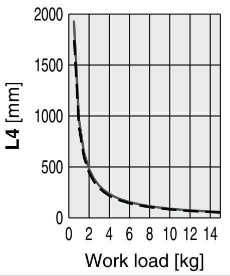
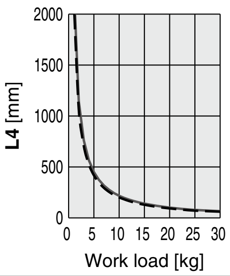
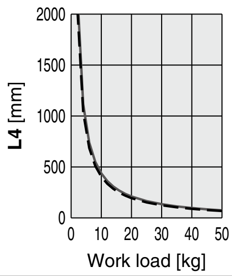
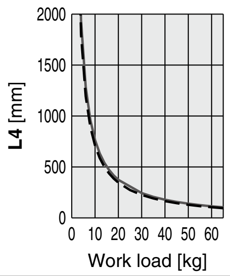
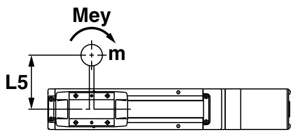
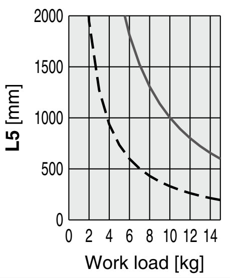
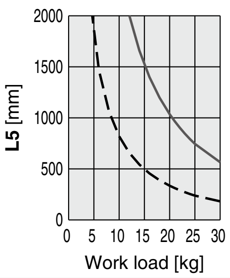
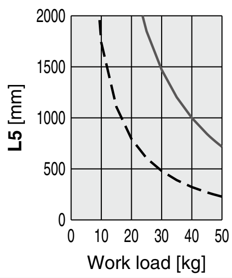
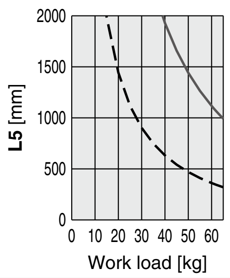
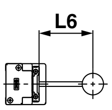
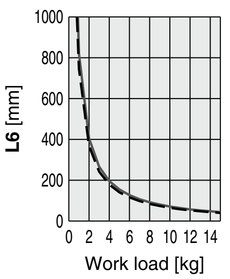
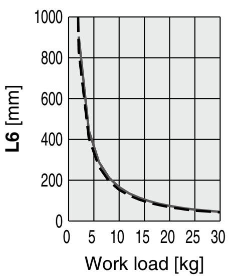
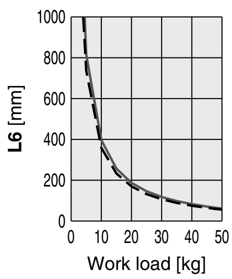
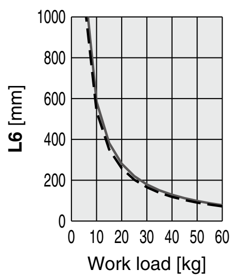
Model	Size	Pitching	Yawing	Rolling
LEF□	**16**	10.0	10.0	20.0
	25	27.0	27.0	52.0
	32	46.0	46.0	101.0
	40	110.0	110.0	207.0

*1 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.

Dynamic Allowable Moment

∗ These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the “Calculation of Guide Load Factor” or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

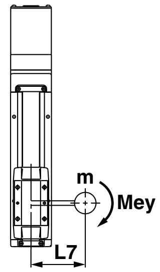
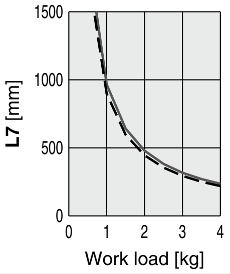
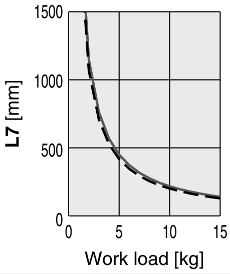
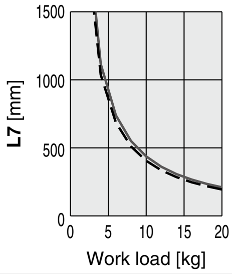
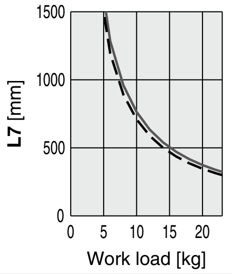
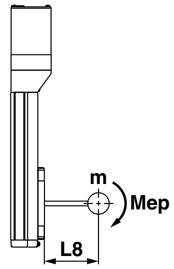
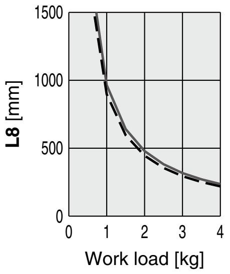
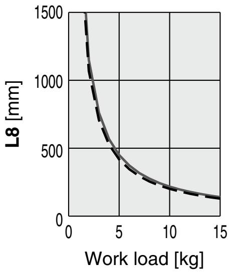
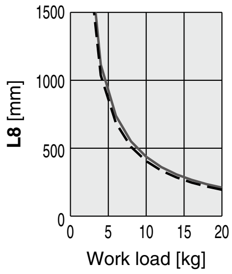
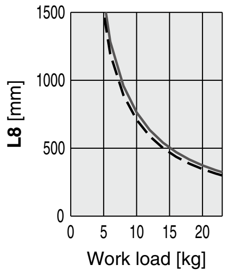
Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s²

<table>
<tr><th rowspan="2">Orientation</th><th rowspan="2" colspan="2">Load overhanging direction
m : Work load [kg]
Me: Allowable moment [N·m]
L : Overhang to the work load center of gravity [mm]</th><th colspan="4">Model</th></tr>
<tr><th>LEF16</th><th>LEF25</th><th>LEF32</th><th>LEF40</th></tr>
<tr><td rowspan="3">Horizontal/Bottom</td><td></td><td>X</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Y</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Z</td><td></td><td></td><td></td><td></td></tr>
<tr><td rowspan="3">Wall</td><td></td><td>X</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Y</td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td>Z</td><td></td><td></td><td></td><td></td></tr>
</table>

Dynamic Allowable Moment

※ These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the “Calculation of Guide Load Factor” or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

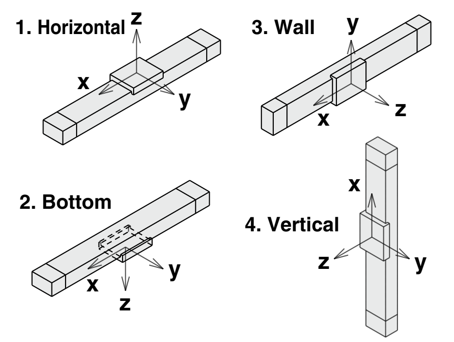
Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s²

Orientation	Load overhanging direction **m** : Work load [kg] **Me**: Allowable moment [N·m] **L** : Overhang to the work load center of gravity [mm]		Model LEF16	LEF25	LEF32	LEF40
Vertical		**Y**				
		**Z**				

Calculation of Guide Load Factor

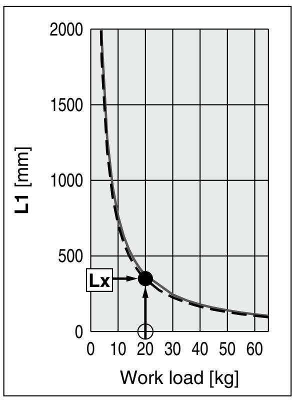
1. Decide operating conditions.
   Model: LEFS/LEFB
   Size: 16/25/32/40
   Mounting orientation: Horizontal/Bottom/Wall/Vertical
   Acceleration [mm/s²]: **a**
   Work load [kg]: **m**
   Work load center position [mm]: **Xc/Yc/Zc**
2. Select the target graph while referencing the model, size, and mounting orientation.
3. Based on the acceleration and work load, find the overhang [mm]: **Lx/Ly/Lz** from the graph.
4. Calculate the load factor for each direction.
   $\alpha x = Xc/Lx$, $\alpha y = Yc/Ly$, $\alpha z = Zc/Lz$
5. Confirm the total of αx, αy, and αz is 1 or less.
   $\alpha x + \alpha y + \alpha z \leq 1$
   When 1 is exceeded, please consider a reduction of acceleration and work load, or a change of the work load center position and series.

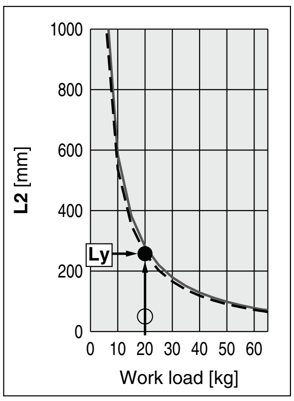
Mounting orientation



Example

1. Operating conditions
   Model: LEFS40
   Size: 40
   Mounting orientation: Horizontal
   Acceleration [mm/s²]: 3000
   Work load [kg]: 20
   Work load center position [mm]: **Xc = 0**, **Yc = 50**, **Zc = 200**
2. Select the graphs for horizontal of the LEF40 on page 109.
3. **Lx = 400 mm**, **Ly = 250 mm**, **Lz = 1500 mm**
4. The load factor for each direction can be found as follows.
   $\alpha x = 0/400 = 0$
   $\alpha y = 50/250 = 0.2$
   $\alpha z = 200/1500 = 0.13$
5. $\alpha x + \alpha y + \alpha z = 0.33 \leq 1$





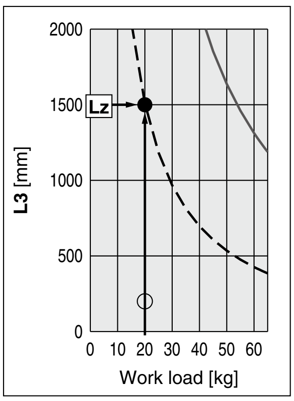
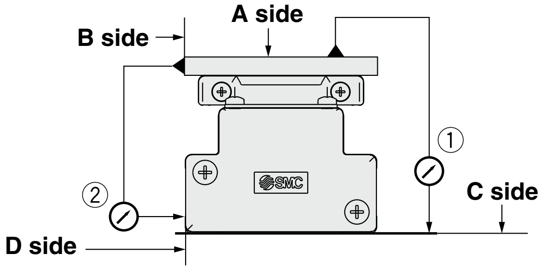


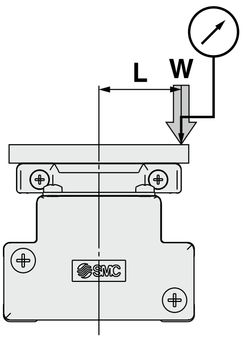
Table Accuracy (Reference Value)

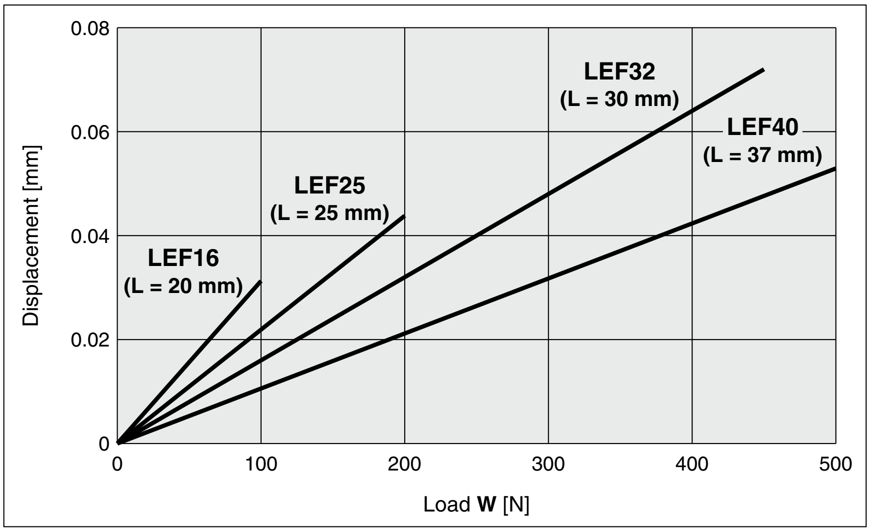


Model	Traveling parallelism [mm] (Every 300 mm)	
	① C side traveling parallelism to A side	② D side traveling parallelism to B side
LEF16	0.05	0.03
LEF25	0.05	0.03
LEF32	0.05	0.03
LEF40	0.05	0.03

* Traveling parallelism does not include the mounting surface accuracy. (Excludes when the stroke exceeds 2000 mm)

Table Displacement (Reference Value)

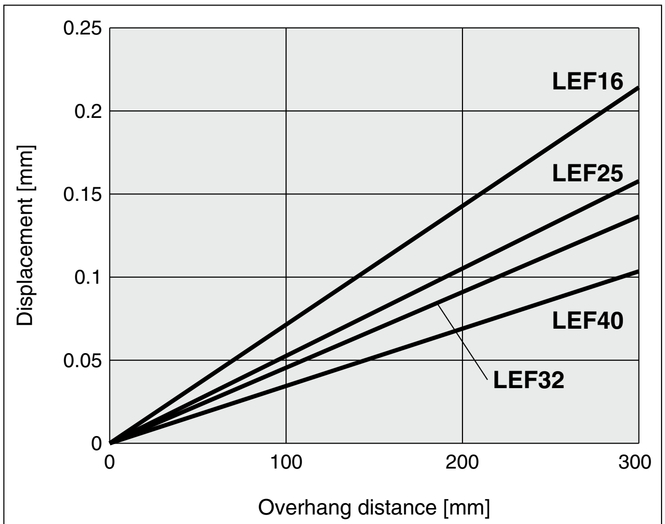




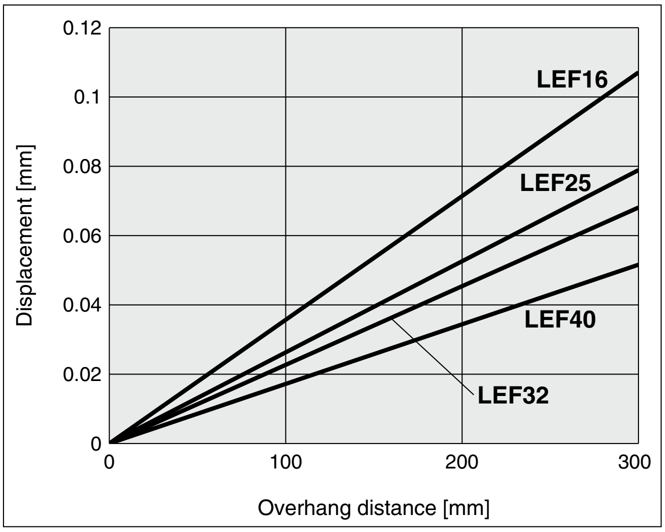
* This displacement is measured when a 15 mm aluminum plate is mounted and fixed on the table.
* Check the clearance and play of the guide separately.

Overhang Displacement Due to Table Clearance (Initial Reference Value)

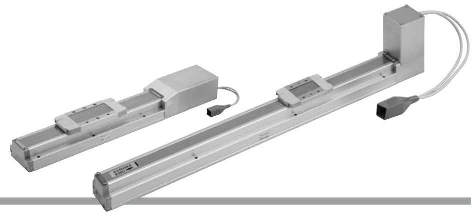
Basic type



High-precision type



Model Selection



LEFS Series ▶p. 116 LEFB Series ▶p. 227 11-LEFS Series ▶p. 943
25A-LEFS Series ▶p. 975

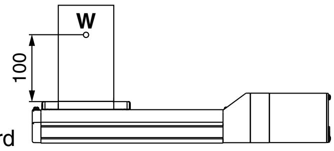
Selection Procedure

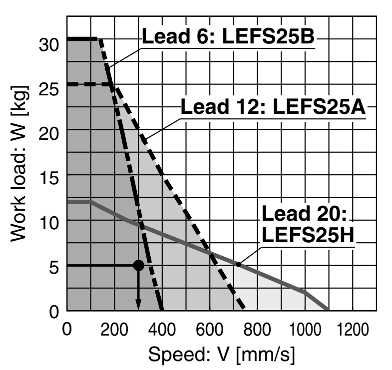
Step 1 Check the work load–speed. → **Step 2** Check the cycle time. → **Step 3** Check the allowable moment.

Selection Example

Operating conditions

- Workpiece mass: 5 [kg]
- Speed: 300 [mm/s]
- Acceleration/Deceleration: 3000 [mm/s^2]
- Stroke: 200 [mm]
- Mounting orientation: Horizontal upward
- Workpiece mounting condition:





<Speed–Work load graph>
(LEFS25)

Step 1 Check the work load–speed. <Speed–Work load graph> (pages 114 to 117)

Select a model based on the workpiece mass and speed while referencing the speed–work load graph.

Selection example) The **LEFS25A-200** can be temporarily selected as a possible candidate based on the graph shown on the right side.

Step 2 Check the cycle time.

Calculate **the cycle time** using the following calculation method.

Cycle time:

T can be found from the following equation.

$$\boxed{T = T1 + T2 + T3 + T4 \text{ [s]}}$$

- T1: Acceleration time and T3: Deceleration time can be found by the following equation.

$$\boxed{T1 = V/a1 \text{ [s]}} \quad \boxed{T3 = V/a2 \text{ [s]}}$$

- T2: Constant speed time can be found from the following equation.

$$\boxed{T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V} \text{ [s]}}$$

- T4: Settling time varies depending on the conditions such as motor types, load and in position of the step data. Therefore, calculate the settling time while referencing to the following value.

$$\boxed{T4 = 0.2 \text{ [s]}}$$

Calculation example)
T1 to T4 can be calculated as follows.

$T1 = V/a1 = 300/3000 = 0.1$ [s],

$T3 = V/a2 = 300/3000 = 0.1$ [s]

$$T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V}$$

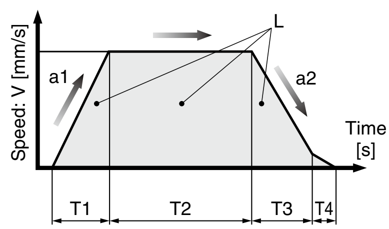
$$= \frac{200 - 0.5 \cdot 300 \cdot (0.1 + 0.1)}{300}$$

$= 0.57$ [s]

$T4 = 0.2$ [s]

The cycle time can be found as follows.

$T = T1 + T2 + T3 + T4$
$= 0.1 + 0.57 + 0.1 + 0.2$
$=$ **0.97 [s]**

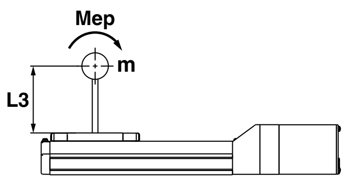


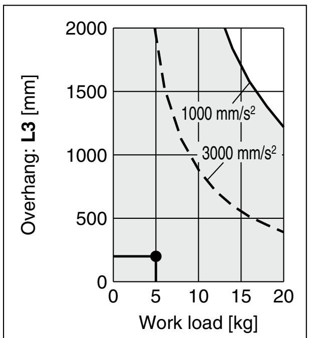
L : Stroke [mm] ··· (Operating condition)
V : Speed [mm/s] ··· (Operating condition)
a1: Acceleration [mm/s^2] ··· (Operating condition)
a2: Deceleration [mm/s^2] ··· (Operating condition)

T1: Acceleration time [s]
Time until reaching the set speed
T2: Constant speed time [s]
Time while the actuator is operating at a constant speed
T3: Deceleration time [s]
Time from the beginning of the constant speed operation to stop
T4: Settling time [s]
Time until positioning is completed

Step 3 Check the allowable moment. <Static allowable moment> (page 117) <Dynamic allowable moment> (page 118)

Confirm the moment that applies to the actuator is within the allowable range for both static and dynamic conditions.





Based on the above calculation result, the LEFS25A-200 should be selected.

∗ If the step motor and servo motors do not meet your specifications, also consider the AC servo specification on page 121.

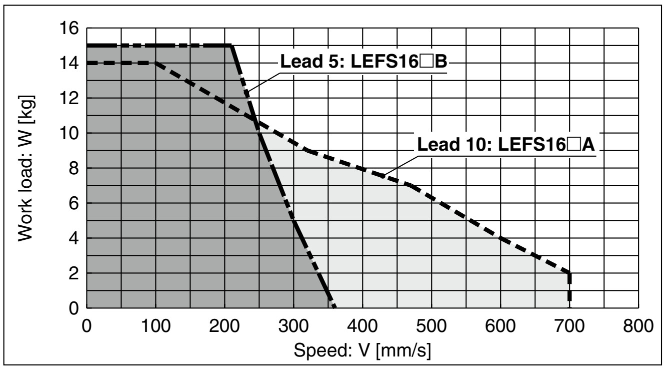
For the LECPA and JXC□$^2_3$, refer to page 115.

Speed–Work Load Graph (Guide)
For Step Motor (Servo/24 VDC) JXC□1, LECP1

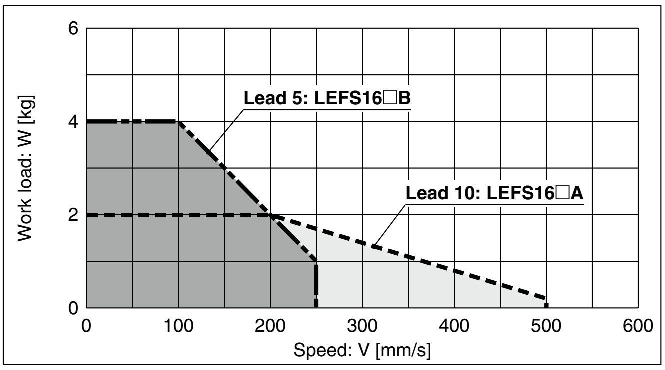
∗ The following graphs show the values when the moving force is 100%.

LEFS16/Ball Screw Drive

Horizontal

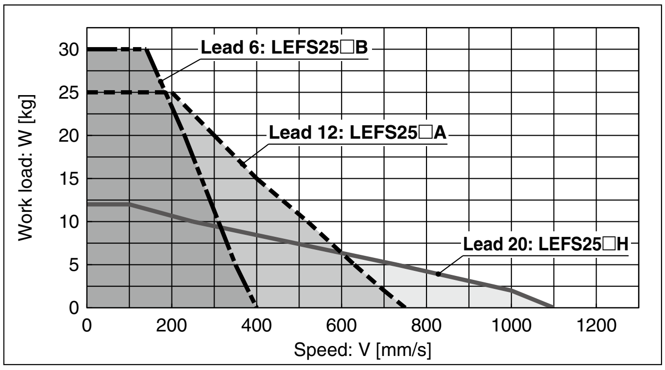


Vertical

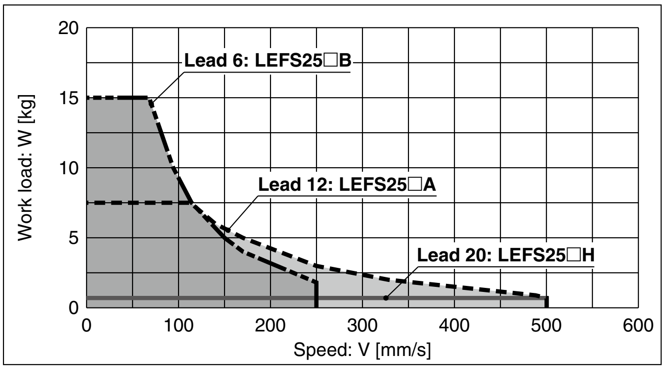


LEFS25/Ball Screw Drive

Horizontal

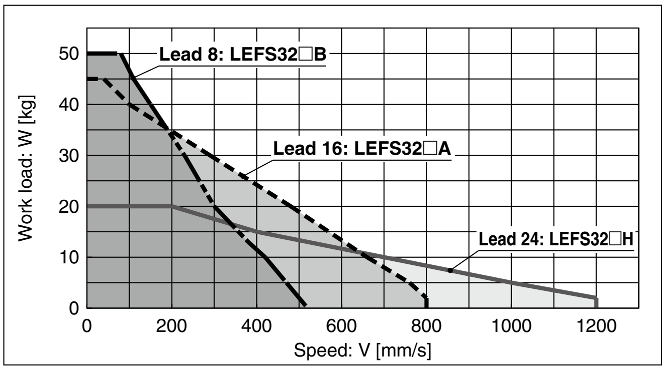


Vertical

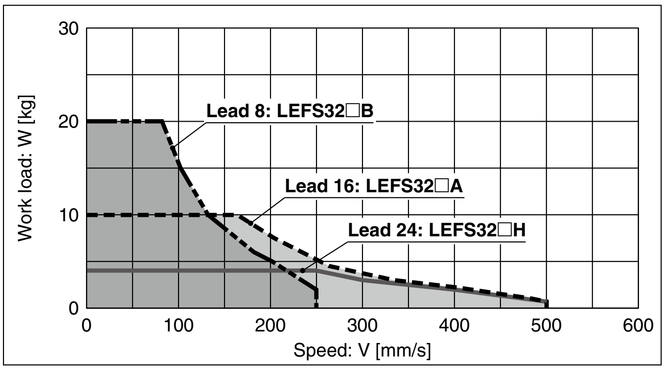


LEFS32/Ball Screw Drive

Horizontal

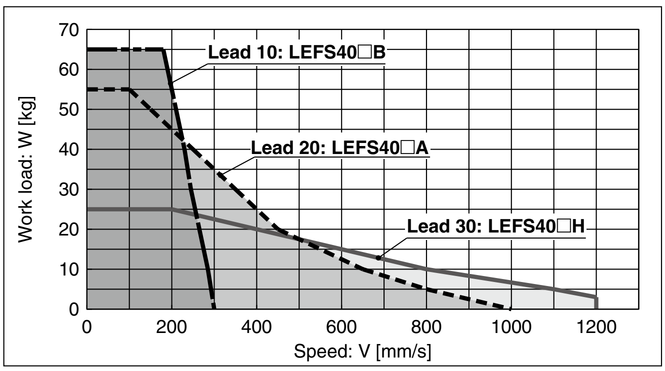


Vertical

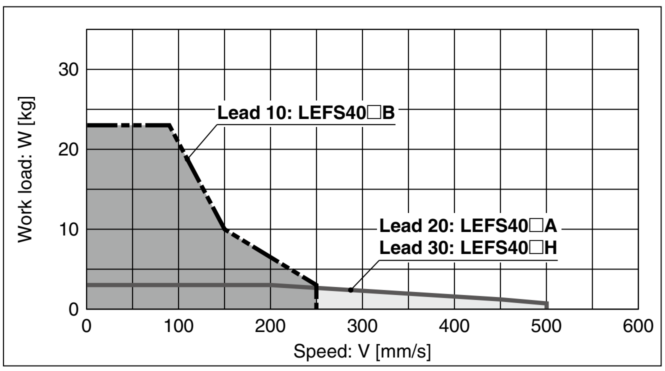


LEFS40/Ball Screw Drive

Horizontal



Vertical



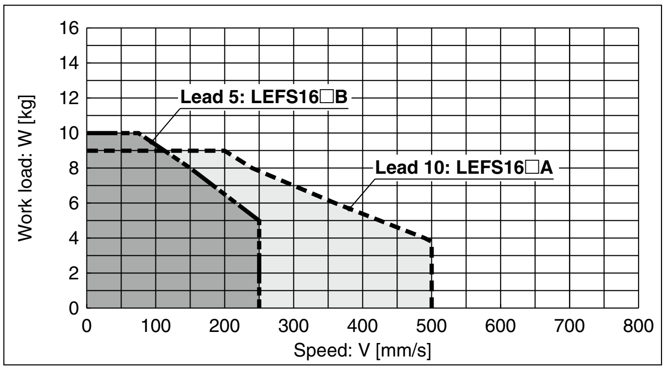
For the JXC□1 and LECP1, refer to page 114.

Speed–Work Load Graph (Guide)
For Step Motor (Servo/24 VDC) LECPA, JXC□$^{2}_{3}$

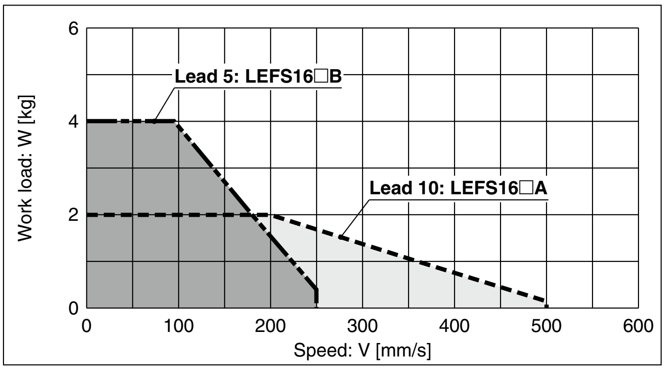
∗ The following graphs show the values when the moving force is 100%.

LEFS16/Ball Screw Drive

Horizontal

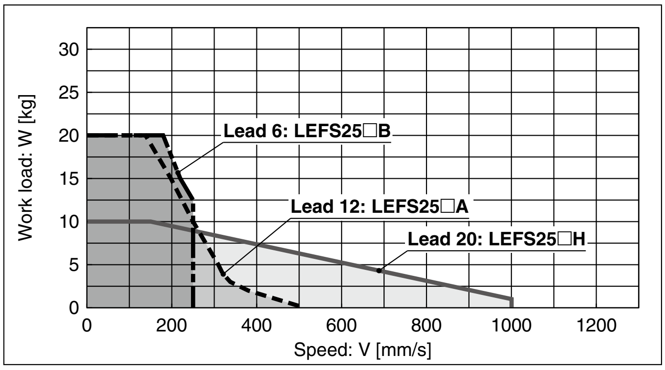


Vertical

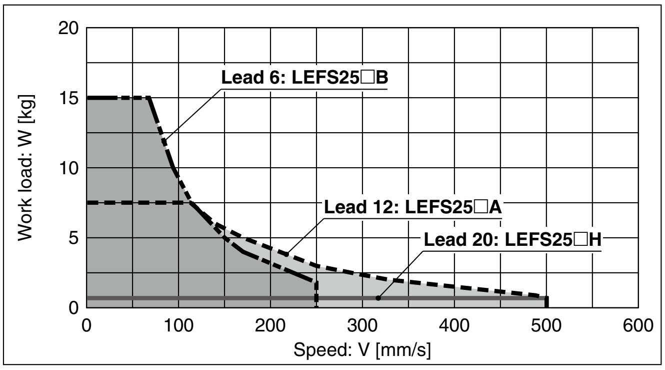


LEFS25/Ball Screw Drive

Horizontal

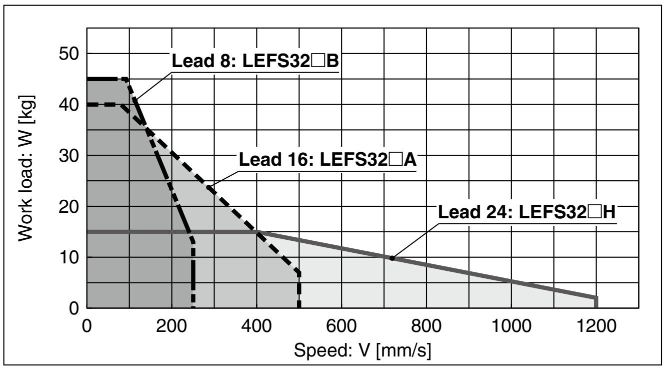


Vertical

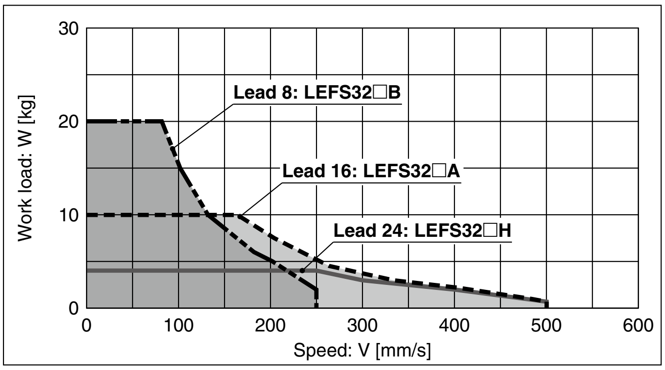


LEFS32/Ball Screw Drive

Horizontal

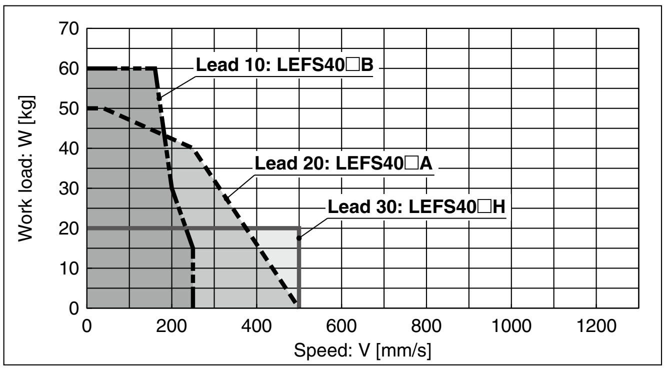


Vertical

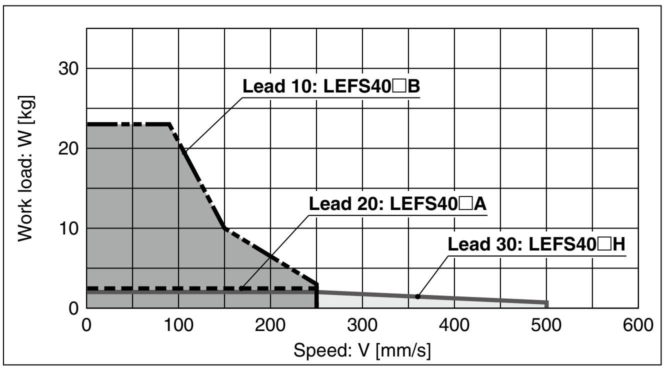


LEFS40/Ball Screw Drive

Horizontal



Vertical

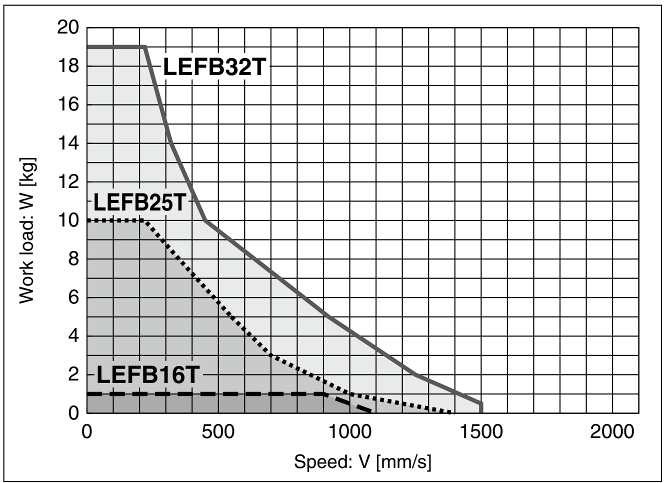


Speed–Work Load Graph (Guide)
For Step Motor (Servo/24 VDC) JXC□1, LECP1

∗ The following graph shows the values when the moving force is 100%.

LEFB/Belt Drive

Horizontal

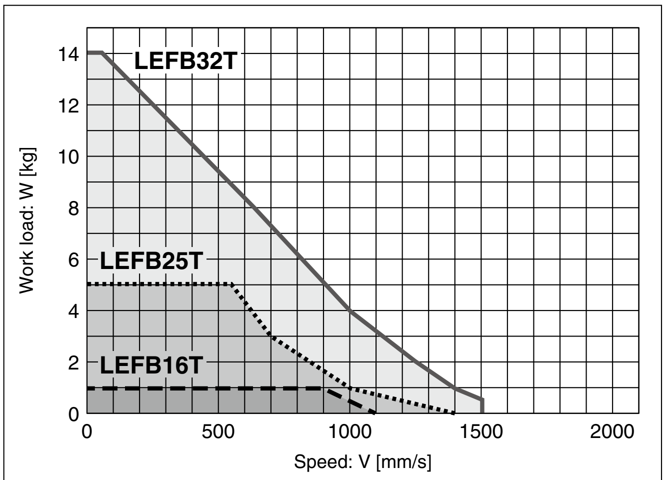


For Step Motor (Servo/24 VDC) LECPA, JXC□$^{2}_{3}$

∗ The following graph shows the values when the moving force is 100%.

LEFB/Belt Drive

Horizontal

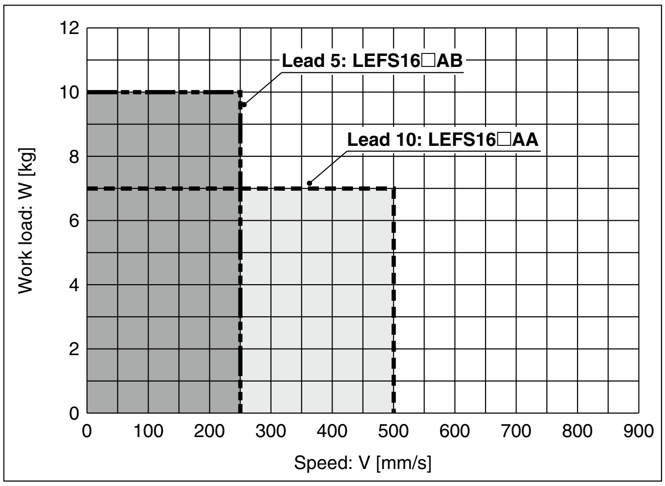


Speed–Work Load Graph (Guide)
Servo Motor (24 VDC)

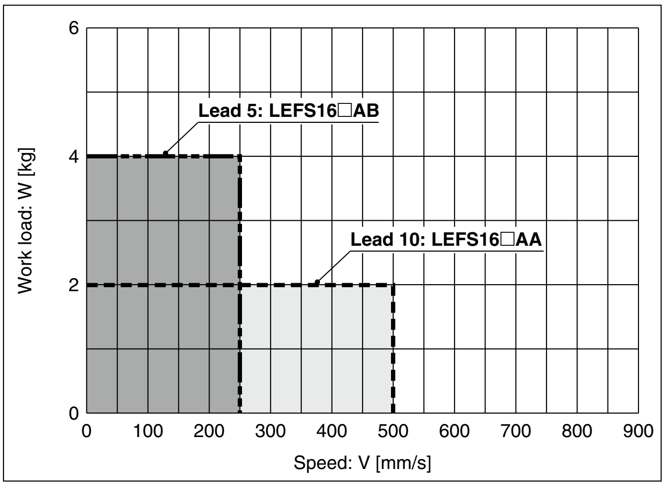
∗ The following graphs show the values when the moving force is 250%.

LEFS16A/Ball Screw Drive

Horizontal

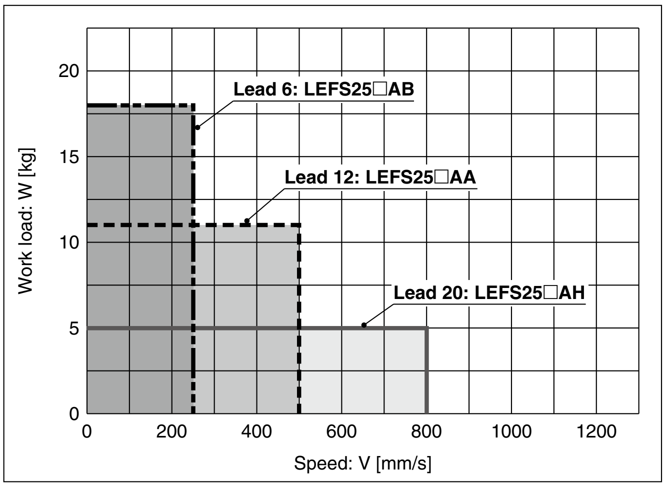


Vertical

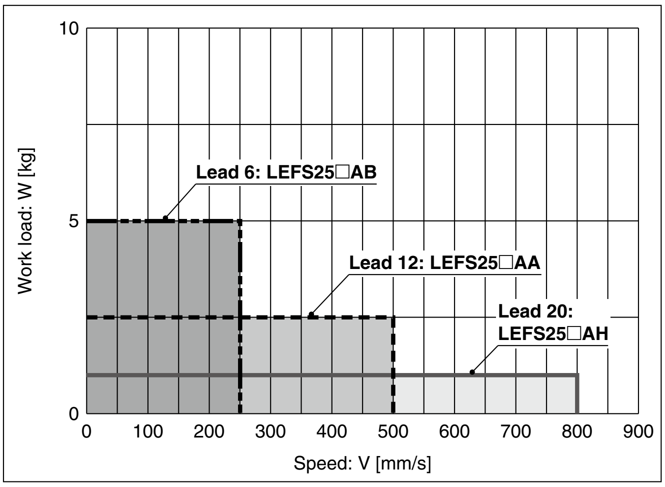


LEFS25A/Ball Screw Drive

Horizontal



Vertical

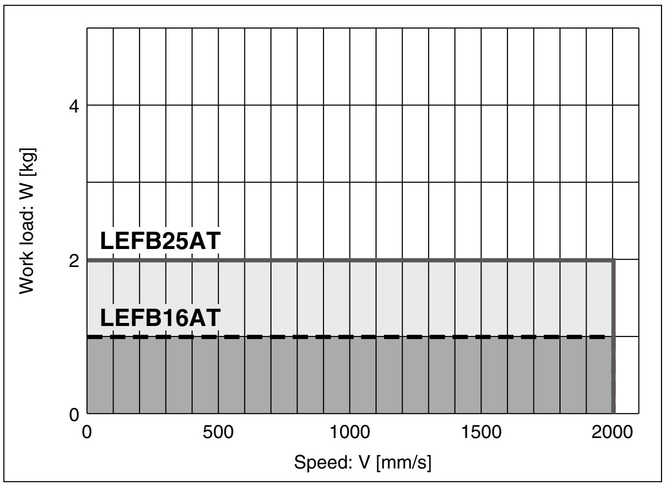


Servo Motor (24 VDC)

LEFB/Belt Drive

∗ The following graph shows the values when the moving force is 250%.

Horizontal



Static Allowable Moment[*1]

[N·m]

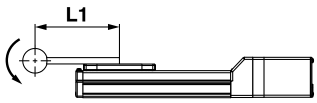
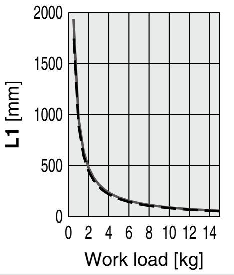
Model	Size	Pitching	Yawing	Rolling
LEF□	**16**	10	10	20
	25	27	27	52
	32	46	46	101
	40	110	110	207

∗1 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.

Dynamic Allowable Moment

∗ These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the “Calculation of Guide Load Factor” or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s²

<table>
<tr><th rowspan="2">Orientation</th><th rowspan="2" colspan="2">Load overhanging direction
m : Work load [kg]
Me: Allowable moment [N·m]
L : Overhang to the work load center of gravity [mm]</th><th colspan="4">Model</th></tr>
<tr><th>LEF16</th><th>LEF25</th><th>LEF32</th><th>LEF40</th></tr>
<tr><td rowspan="3">Horizontal/Bottom</td><td>
</td><td>X</td>
<td>
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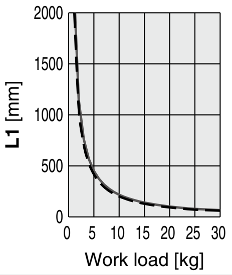
<td>
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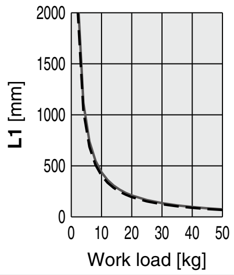
<td>
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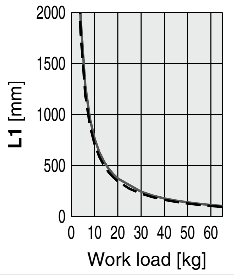
<td>
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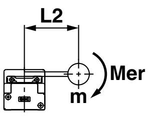
<tr><td>
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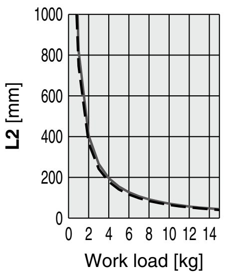
<td>
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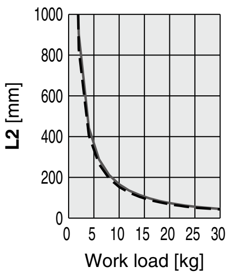
<td>
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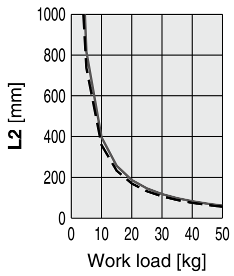
<td>
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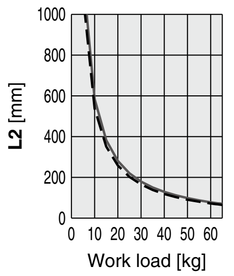
<td>
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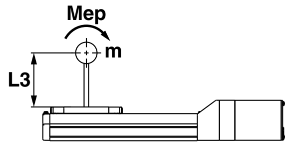
<tr><td>
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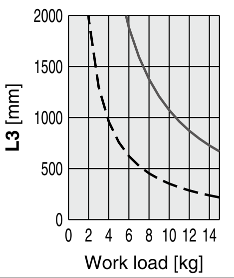
<td>
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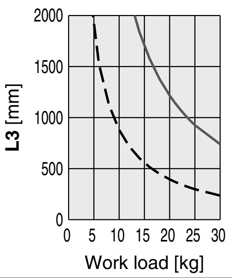
<td>
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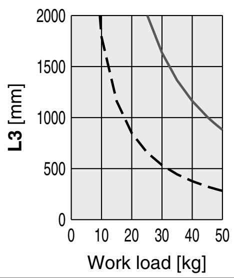
<td>
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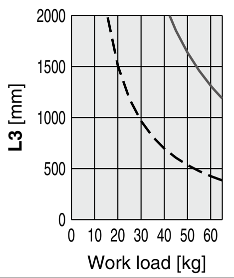
<td>
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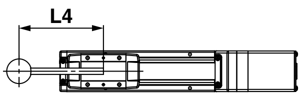
<tr><td rowspan="3">Wall</td><td>
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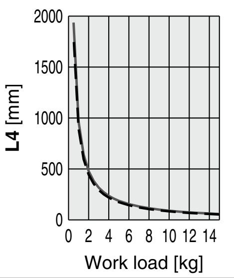
<td>
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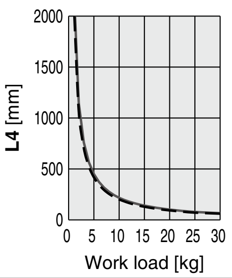
<td>
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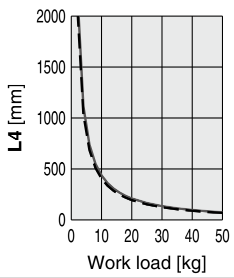
<td>
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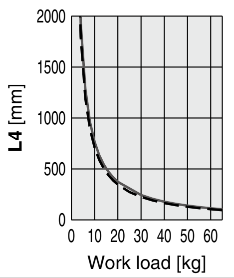
<td>
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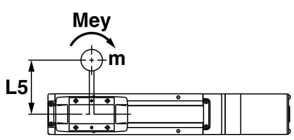
<tr><td>
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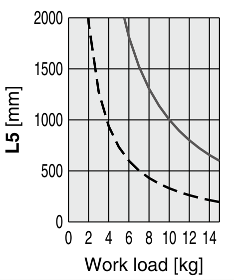
<td>
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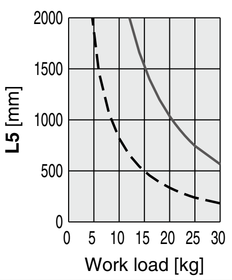
<td>
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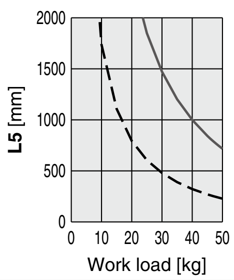
<td>
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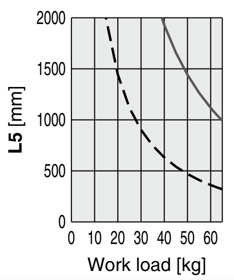
<td>
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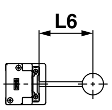
<tr><td>
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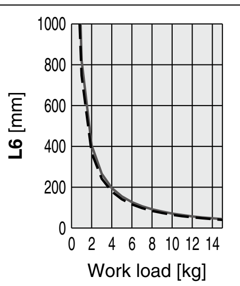
<td>
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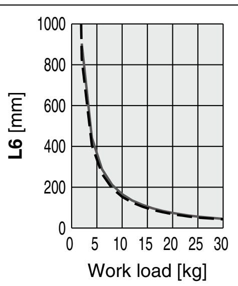
<td>
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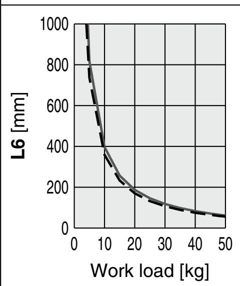
<td>
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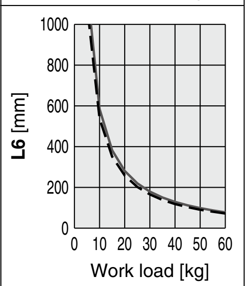
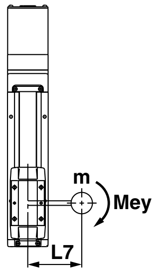
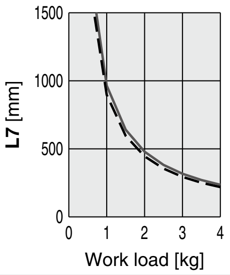
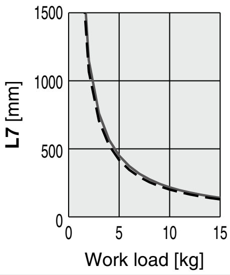
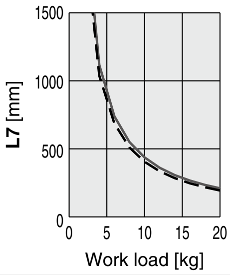
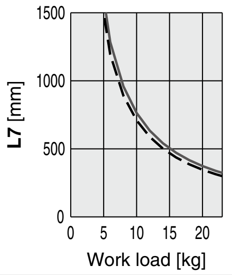
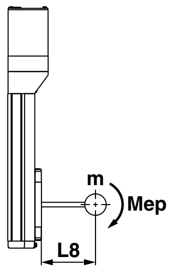
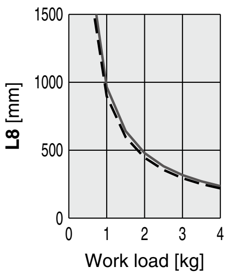
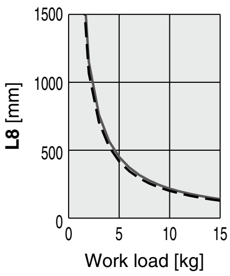
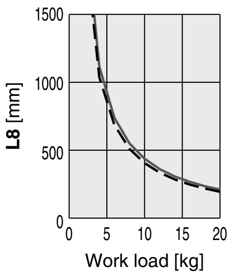
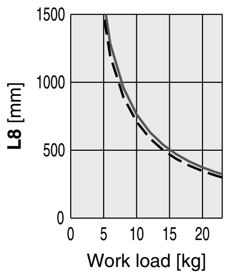
<td>
</td></tr>
</table>

Dynamic Allowable Moment

* These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the “Calculation of Guide Load Factor” or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

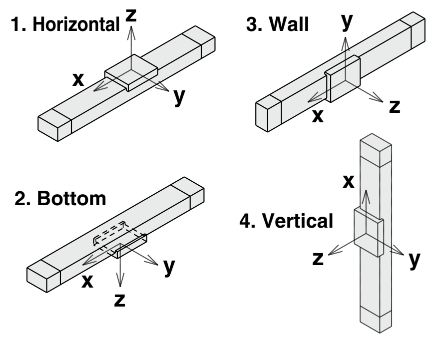
Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s²

Orientation	Load overhanging direction m : Work load [kg] Me: Allowable moment [N·m] L : Overhang to the work load center of gravity [mm]		Model: LEF16	LEF25	LEF32	LEF40
Vertical		Y				
Vertical		Z				

Calculation of Guide Load Factor

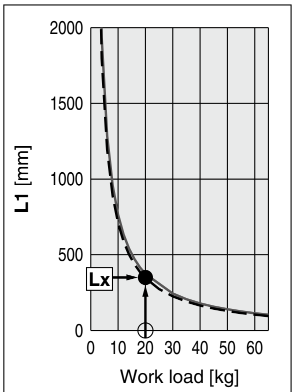
1. Decide operating conditions.
   Model: LEFS/LEFB
   Size: 16/25/32/40
   Mounting orientation: Horizontal/Bottom/Wall/Vertical
   Acceleration [mm/s²]: **a**
   Work load [kg]: **m**
   Work load center position [mm]: **Xc/Yc/Zc**
2. Select the target graph while referencing the model, size, and mounting orientation.
3. Based on the acceleration and work load, find the overhang [mm]: **Lx/Ly/Lz** from the graph.
4. Calculate the load factor for each direction.
   α**x = Xc/Lx**, α**y = Yc/Ly**, α**z = Zc/Lz**
5. Confirm the total of α**x**, α**y**, and α**z** is 1 or less.
   $\alpha x + \alpha y + \alpha z \leq 1$
   When 1 is exceeded, please consider a reduction of acceleration and work load, or a change of the work load center position and series.

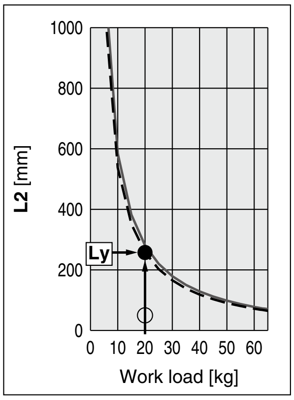
Mounting orientation



Example

1. Operating conditions
   Model: LEFS40
   Size: 40
   Mounting orientation: Horizontal
   Acceleration [mm/s²]: 3000
   Work load [kg]: 20
   Work load center position [mm]: **Xc = 0**, **Yc = 50**, **Zc = 200**
2. Select the graphs for horizontal of the LEF40 on page 118.
3. **Lx = 400 mm**, **Ly = 250 mm**, **Lz = 1500 mm**
4. The load factor for each direction can be found as follows.
   α**x = 0/400 = 0**
   α**y = 50/250 = 0.2**
   α**z = 200/1500 = 0.13**
5. $\alpha x + \alpha y + \alpha z = 0.33 \leq 1$





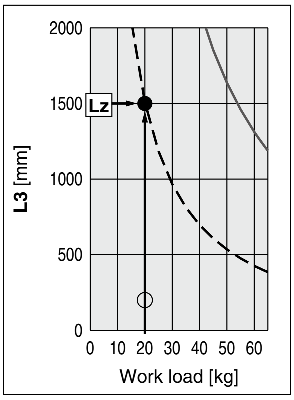
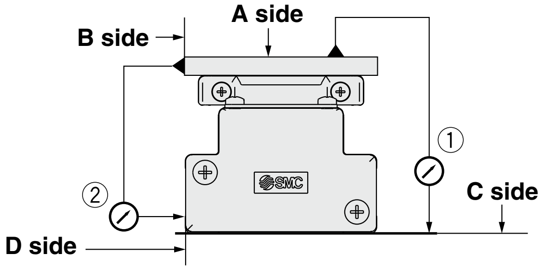


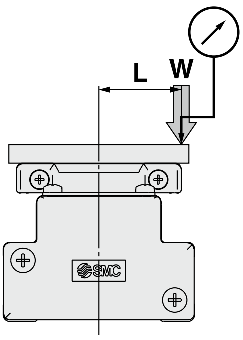
Table Accuracy (Reference Value)

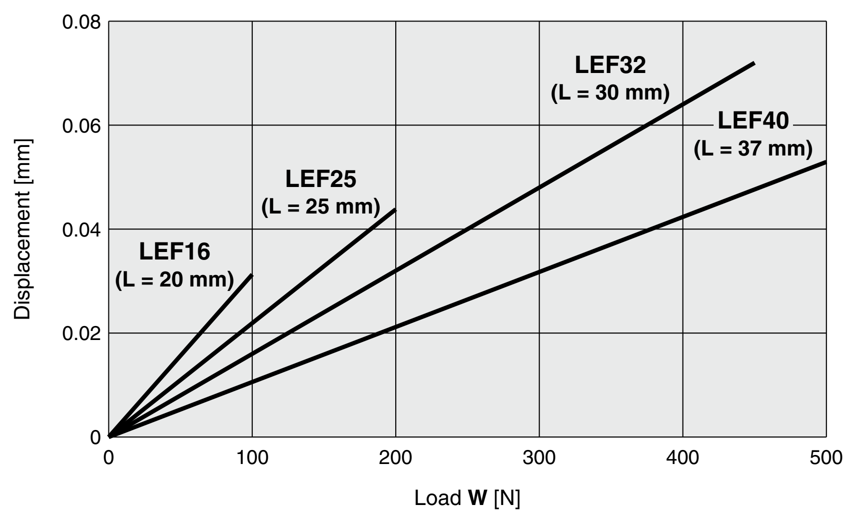


Model	Traveling parallelism [mm] (Every 300 mm)	
	① C side traveling parallelism to A side	② D side traveling parallelism to B side
LEF16	0.05	0.03
LEF25	0.05	0.03
LEF32	0.05	0.03
LEF40	0.05	0.03

* Traveling parallelism does not include the mounting surface accuracy. (Excludes when the stroke exceeds 2000 mm)

Table Displacement (Reference Value)

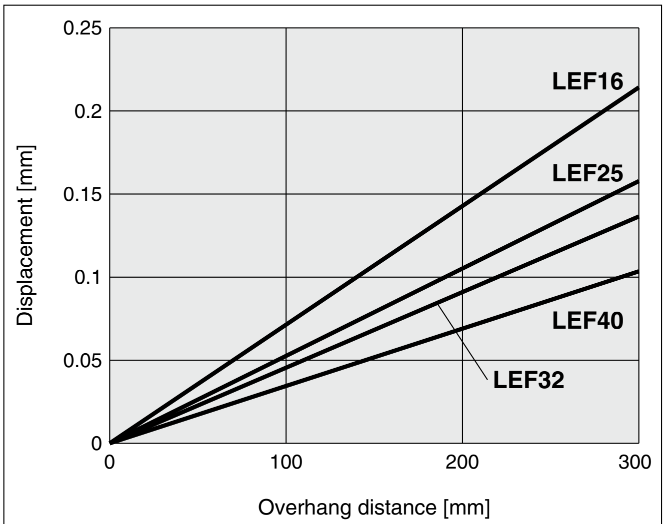




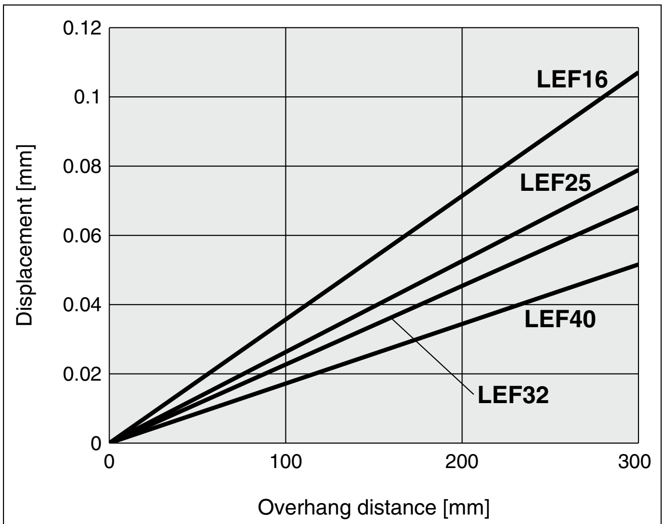
* This displacement is measured when a 15 mm aluminum plate is mounted and fixed on the table.
* Check the clearance and play of the guide separately.

Overhang Displacement Due to Table Clearance (Initial Reference Value)

Basic type

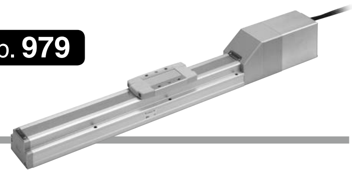


High-precision type



Slider Type AC Servo Motor *LECS□ Series*
Ball Screw Drive/*LEFS Series*
Ball Screw Drive/*11-LEFS Series* Clean Room Specification *25A-LEFS Series* Secondary Battery Compatible
Model Selection

LEFS Series▶p. 182 LECY□ Series▶p. 198 11-LEFS Series▶p. 953 25A-LEFS Series▶p. 979



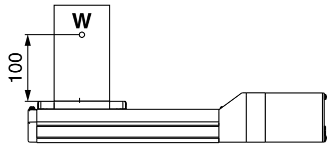
Selection Procedure

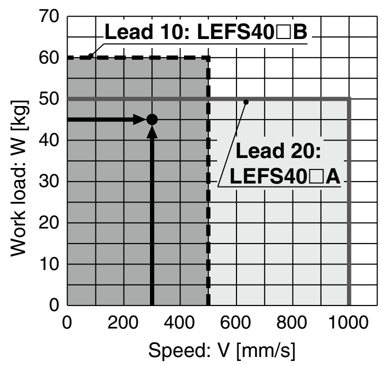
Step 1 Check the work load–speed. → **Step 2** Check the cycle time. → **Step 3** Check the allowable moment.

Selection Example

Operating conditions

- Workpiece mass: 45 [kg]
- Speed: 300 [mm/s]
- Acceleration/Deceleration: 3000 [mm/s²]
- Stroke: 200 [mm]
- Mounting position: Horizontal upward
- Workpiece mounting condition:





<Speed–Work load graph>
(LEFS40)

Step 1 Check the work load–speed. <Speed–Work load graph> (page 122)

Select a model based on the workpiece mass and speed while referencing the speed–work load graph.

Selection example) The **LEFS40S4B-200** can be temporarily selected as a possible candidate based on the graph shown on the right side.

Step 2 Check the cycle time.

Calculate **the cycle time** using the following calculation method.

Cycle time:

T can be found from the following equation.

$$\boxed{T = T1 + T2 + T3 + T4\ [s]}$$

- T1: Acceleration time and T3: Deceleration time can be found by the following equation.

$$\boxed{T1 = V/a1\ [s]} \quad \boxed{T3 = V/a2\ [s]}$$

- T2: Constant speed time can be found from the following equation.

$$\boxed{T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V}\ [s]}$$

- T4: Settling time varies depending on the motor type and load. The value below is recommended.

$$\boxed{T4 = 0.05\ [s]}$$

Calculation example)
T1 to T4 can be calculated as follows.

$T1 = V/a1 = 300/3000 = 0.1$ [s],

$T3 = V/a2 = 300/3000 = 0.1$ [s]

$$T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V}$$

$$= \frac{200 - 0.5 \cdot 300 \cdot (0.1 + 0.1)}{300}$$

$= 0.57$ [s]

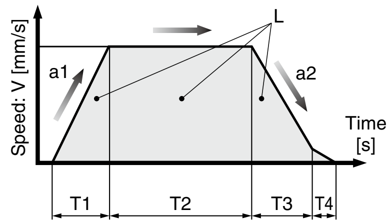
$T4 = 0.05$ [s]

The cycle time can be found as follows.

$T = T1 + T2 + T3 + T4$

$= 0.1 + 0.57 + 0.1 + 0.05$

$= \mathbf{0.82\ [s]}$

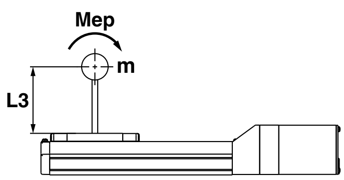


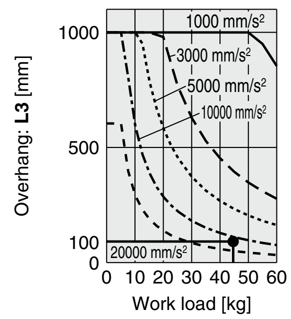
L : Stroke [mm] ··· (Operating condition)
V : Speed [mm/s] ··· (Operating condition)
a1: Acceleration [mm/s²] ··· (Operating condition)
a2: Deceleration [mm/s²] ··· (Operating condition)

T1: Acceleration time [s]
Time until reaching the set speed
T2: Constant speed time [s]
Time while the actuator is operating at a constant speed
T3: Deceleration time [s]
Time from the beginning of the constant speed operation to stop
T4: Settling time [s]
Time until positioning is completed

Step 3 Check the allowable moment. <Static allowable moment> (page 117) <Dynamic allowable moment> (page 126)

Confirm the moment that applies to the actuator is within the allowable range for both static and dynamic conditions.





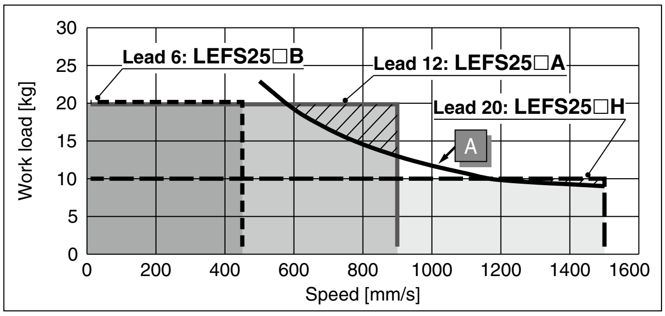
Based on the above calculation result, the LEFS40S4B-200 should be selected.

Speed–Work Load Graph/Required Conditions for the Regeneration Option (Guide)

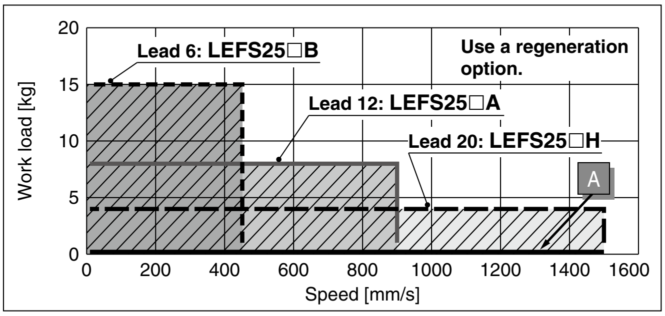
* The allowable speed is restricted depending on the stroke. Select it by referring to the "Allowable Stroke Speed" below.

LEFS25/Ball Screw Drive

Horizontal

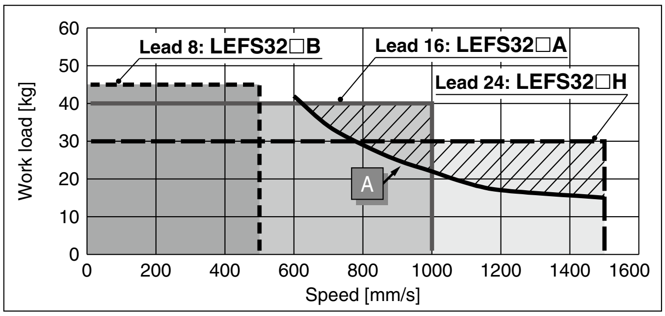


Vertical

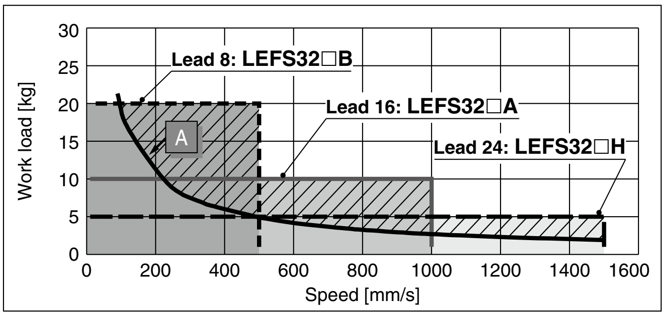


LEFS32/Ball Screw Drive

Horizontal

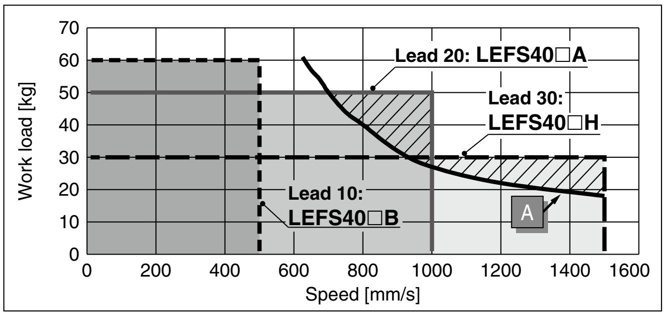


Vertical

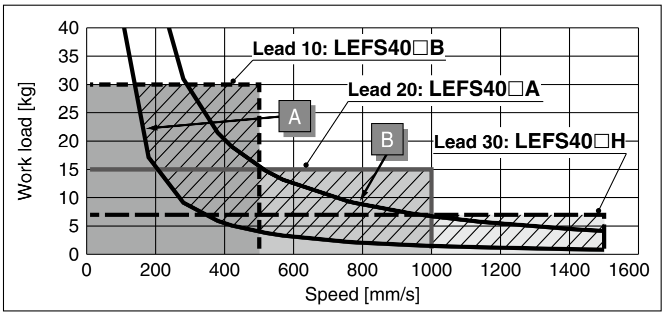


LEFS40/Ball Screw Drive

Horizontal



Vertical



Required conditions for the regeneration option

* The regeneration option is required when using the product above the regeneration line in the graph. (It must be ordered separately.)

Regeneration Option Models

Operating condition	Model
A	LEC-MR-RB-032
B	LEC-MR-RB-12

Allowable Stroke Speed

[mm/s]

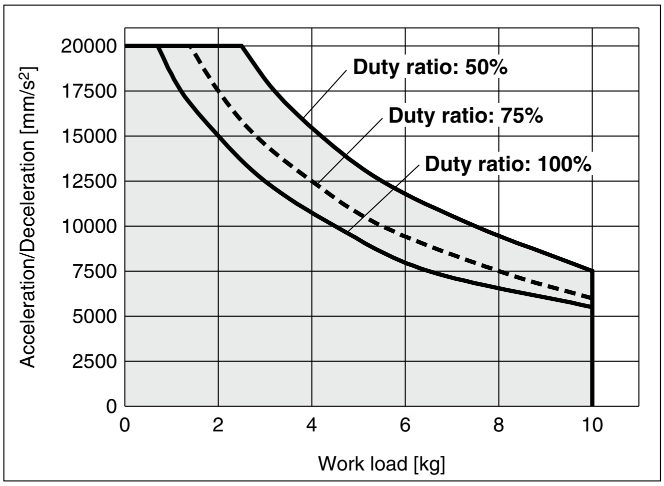
Model	AC servo motor	Lead		Stroke [mm]											
		Symbol	[mm]	Up to 100	Up to 200	Up to 300	Up to 400	Up to 500	Up to 600	Up to 700	Up to 800	Up to 900	Up to 1000	Up to 1100	Up to 1200
LEFS25	100 W /□40	H	20	1500				1200	900	700	550	—	—	—	—
		A	12	900				720	540	420	330	—	—	—	—
		B	6	450				360	270	210	160	—	—	—	—
		(Motor rotation speed)		(4500 rpm)				(3650 rpm)	(2700 rpm)	(2100 rpm)	(1650 rpm)	—	—	—	—
LEFS32	200 W /□60	H	24	1500					1200	930	750	610	510	—	—
		A	16	1000					800	620	500	410	340	—	—
		B	8	500					400	310	250	200	170	—	—
		(Motor rotation speed)		(3750 rpm)					(3000 rpm)	(2325 rpm)	(1875 rpm)	(1537 rpm)	(1275 rpm)	—	—
LEFS40	400 W /□60	H	30	—	1500					1410	1140	930	780	500*1	500*1
		A	20	—	1000					940	760	620	520	440	380
		B	10	—	500					470	380	310	260	220	190
		(Motor rotation speed)		—	(3000 rpm)					(2820 rpm)	(2280 rpm)	(1860 rpm)	(1560 rpm)	(1320 rpm)	(1140 rpm)

*1 The motor rotation speed is 1000 rpm.

Work Load–Acceleration/Deceleration Graph (Guide)

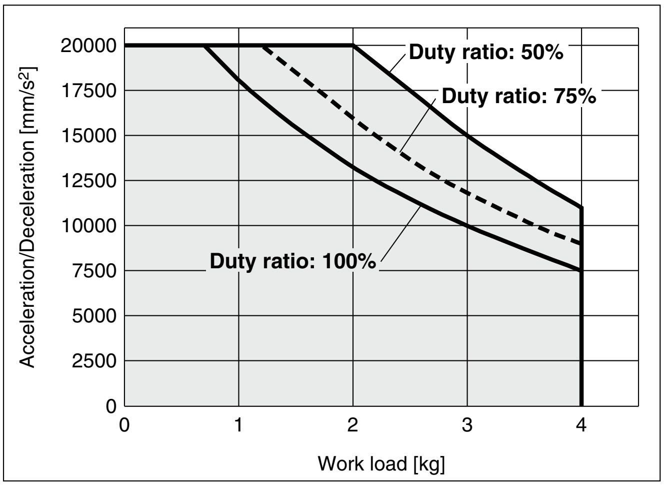
LEFS25□□H/Ball Screw Drive

Horizontal



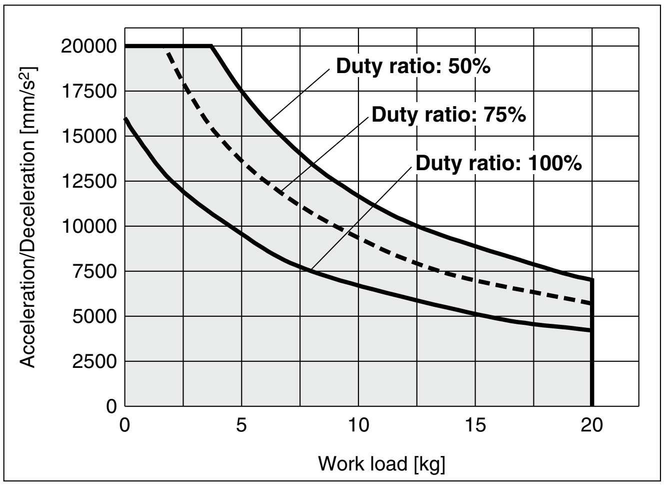
LEFS25□□H/Ball Screw Drive

Vertical



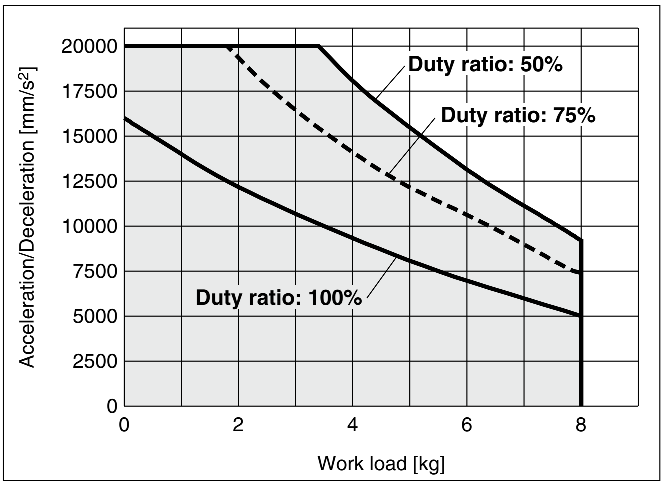
LEFS25□□A/Ball Screw Drive

Horizontal



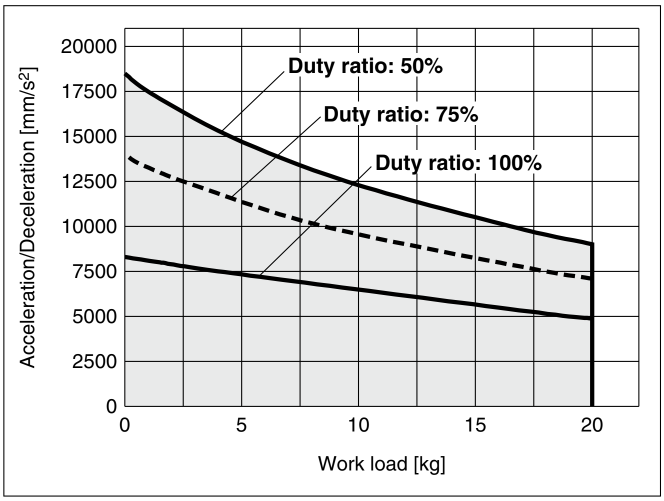
LEFS25□□A/Ball Screw Drive

Vertical



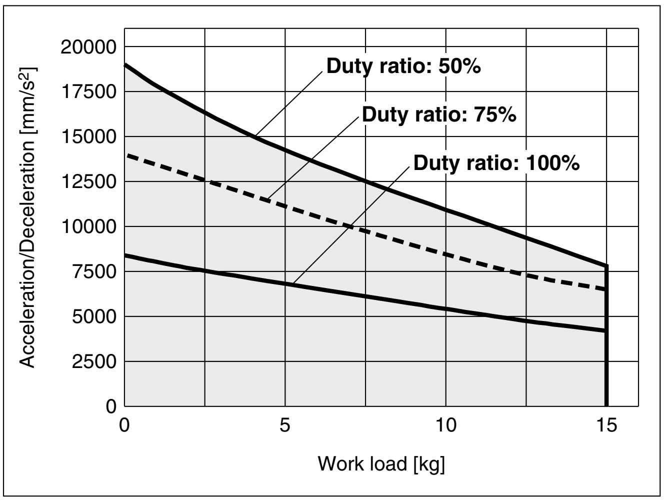
LEFS25□□B/Ball Screw Drive

Horizontal



LEFS25□□B/Ball Screw Drive

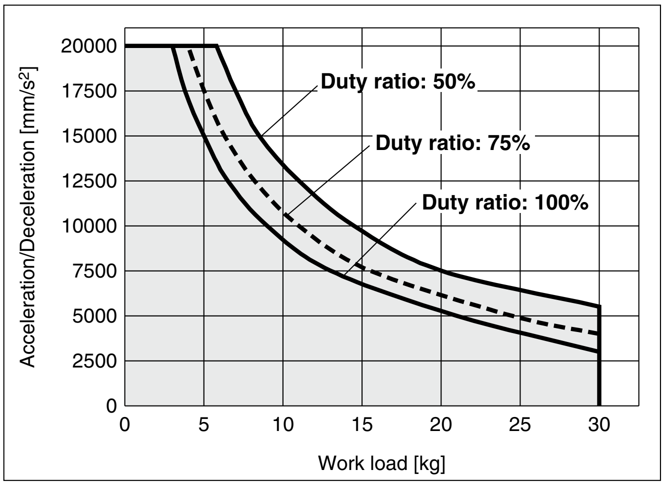
Vertical



Work Load–Acceleration/Deceleration Graph (Guide)

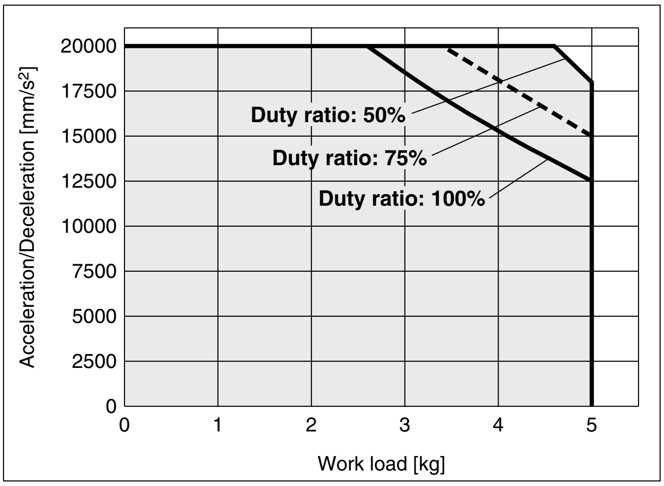
LEFS32□□H/Ball Screw Drive

Horizontal



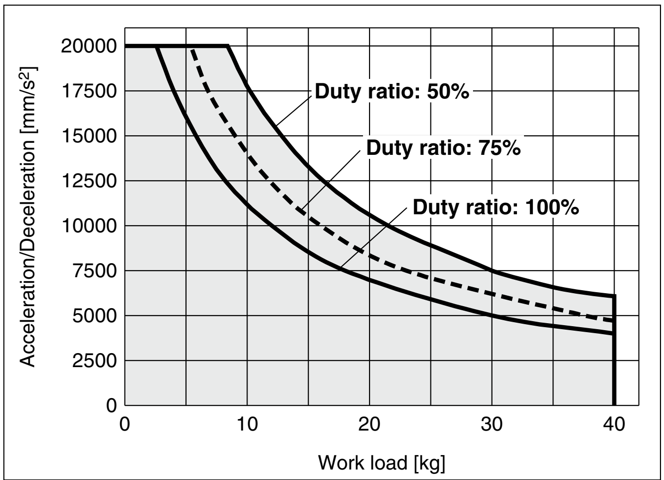
LEFS32□□H/Ball Screw Drive

Vertical



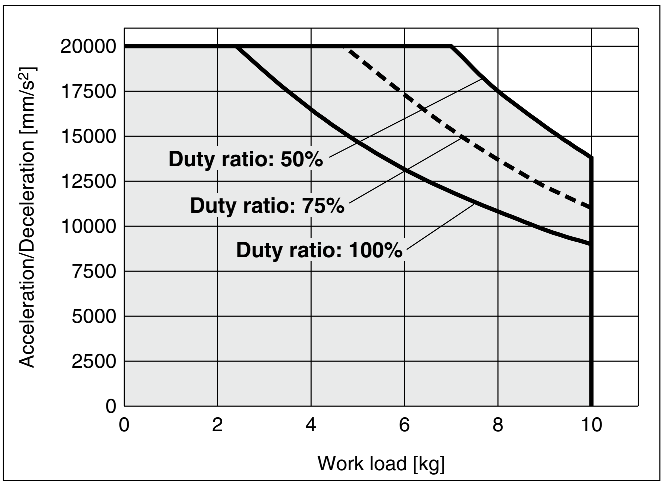
LEFS32□□A/Ball Screw Drive

Horizontal



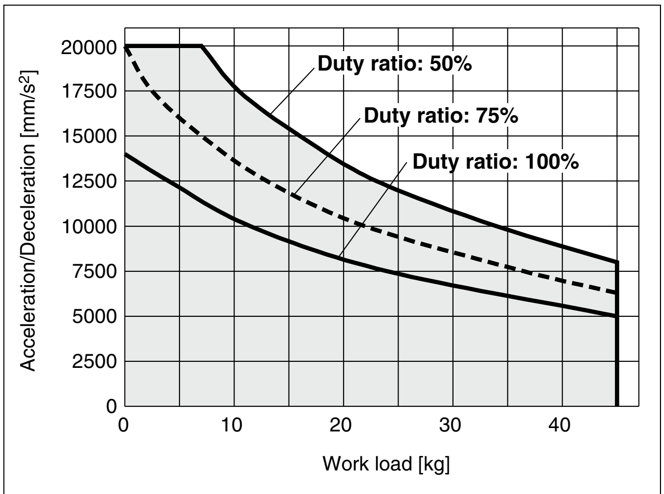
LEFS32□□A/Ball Screw Drive

Vertical



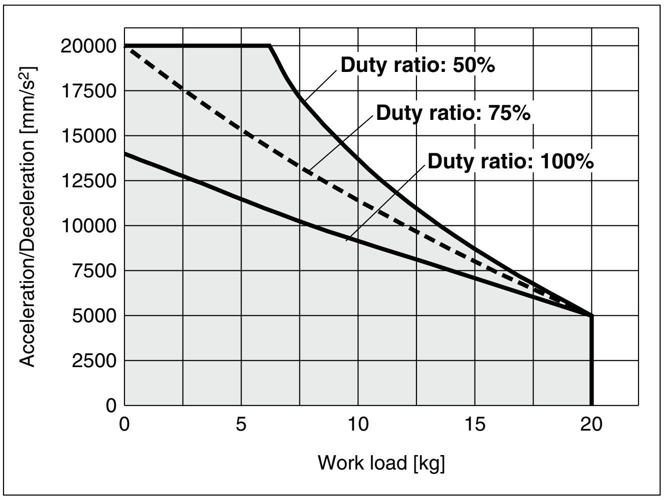
LEFS32□□B/Ball Screw Drive

Horizontal



LEFS32□□B/Ball Screw Drive

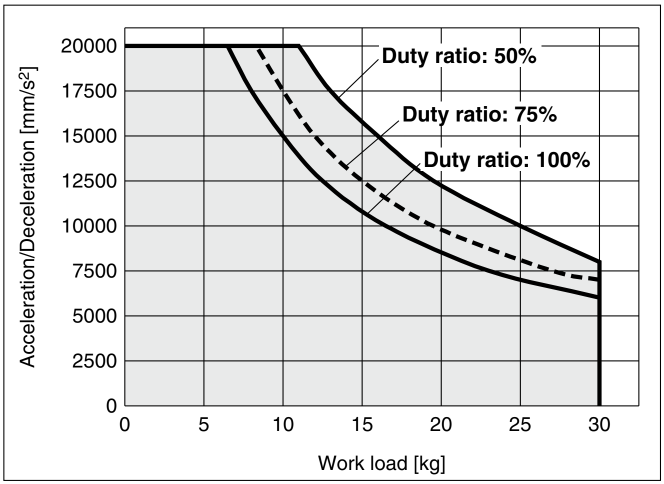
Vertical



Work Load–Acceleration/Deceleration Graph (Guide)

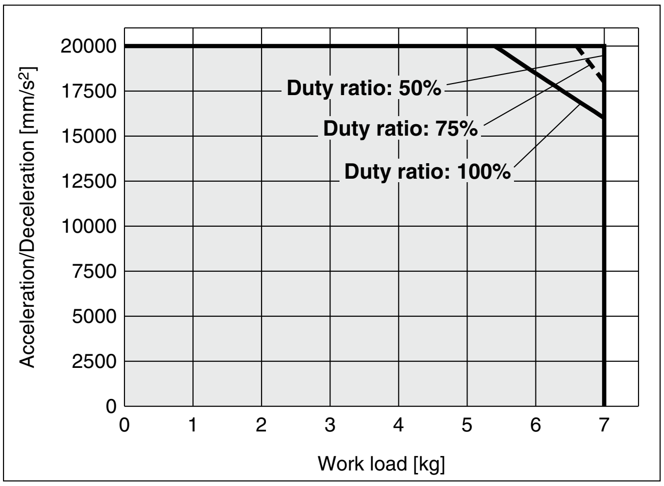
LEFS40□□H/Ball Screw Drive

Horizontal



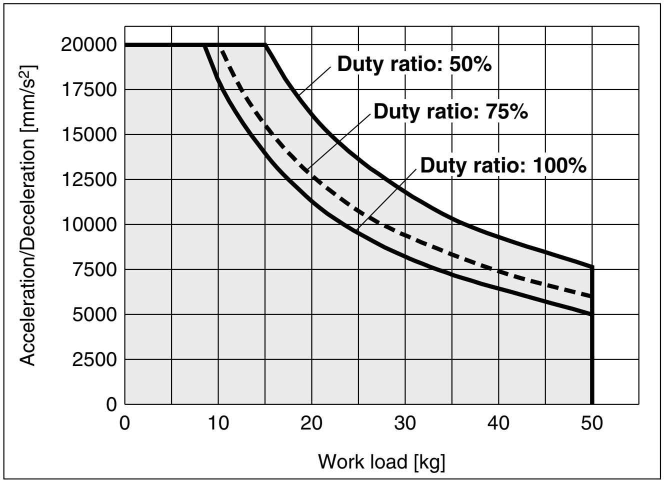
LEFS40□□H/Ball Screw Drive

Vertical



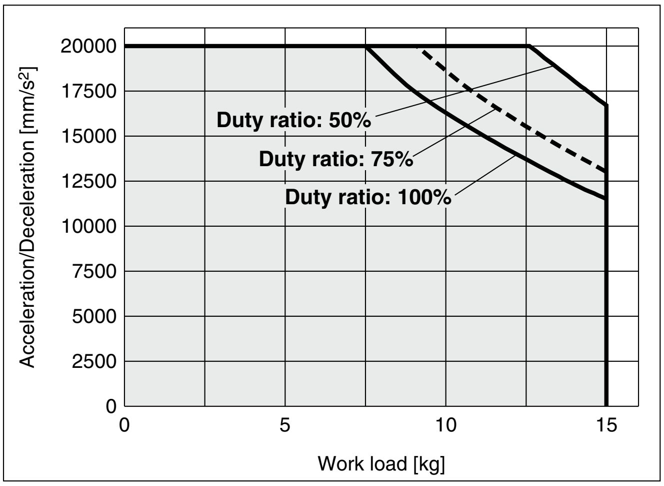
LEFS40□□A/Ball Screw Drive

Horizontal



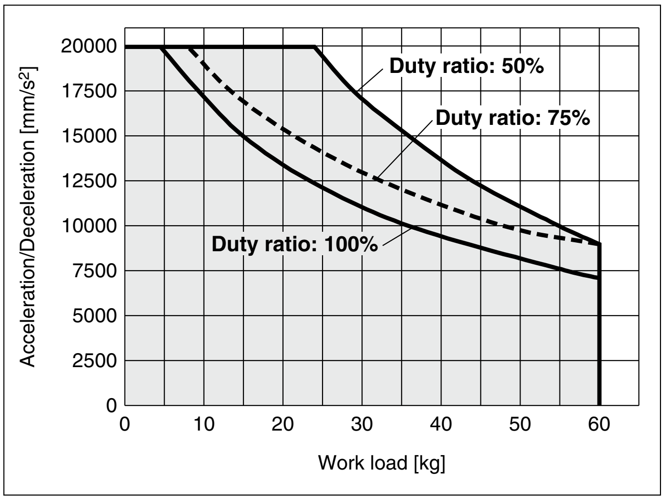
LEFS40□□A/Ball Screw Drive

Vertical



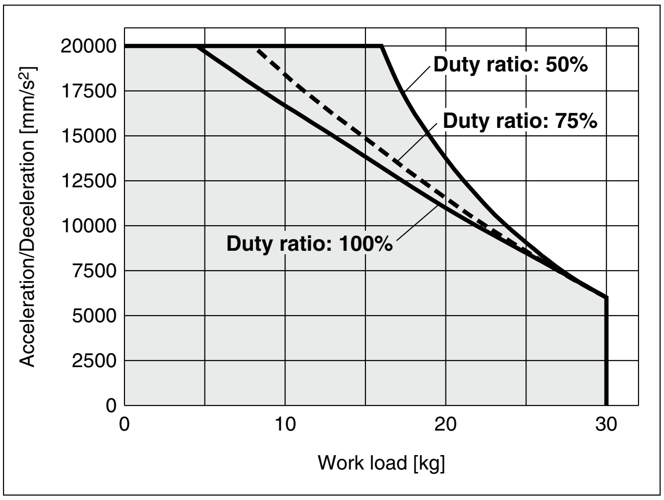
LEFS40□□B/Ball Screw Drive

Horizontal



LEFS40□□B/Ball Screw Drive

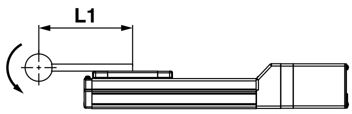
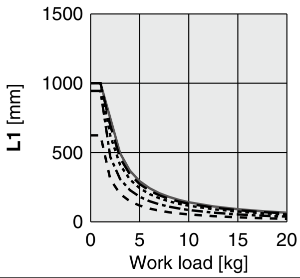
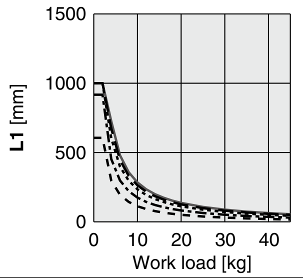
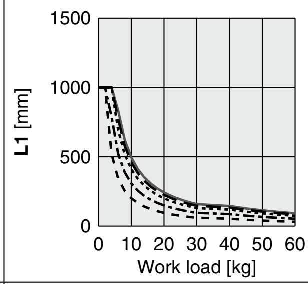
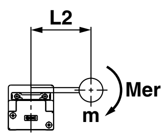
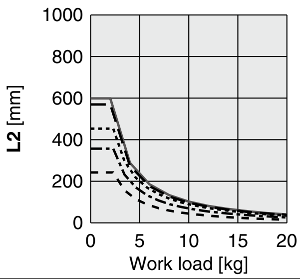
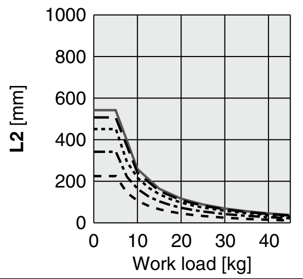
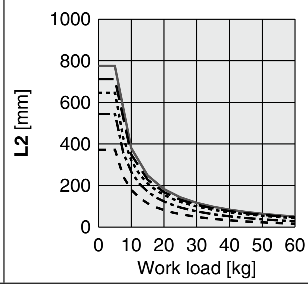
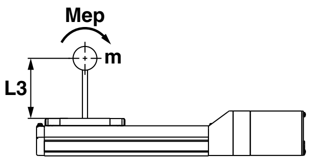
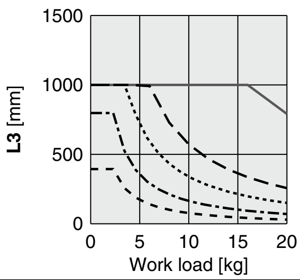
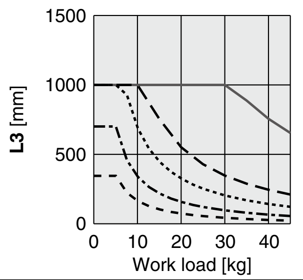
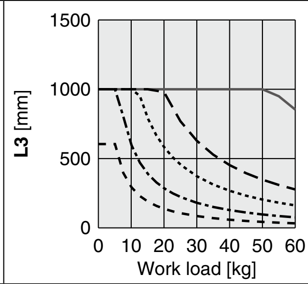
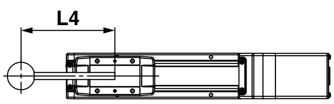
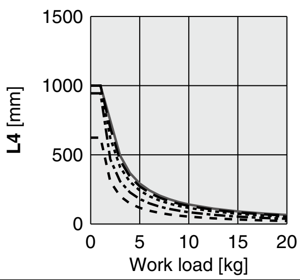
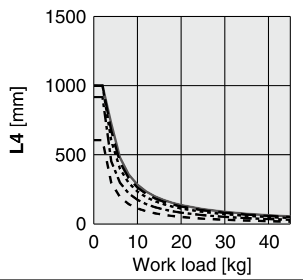
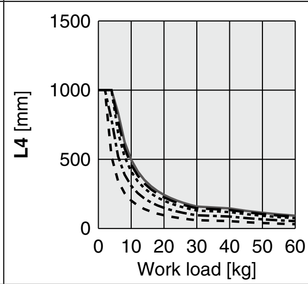
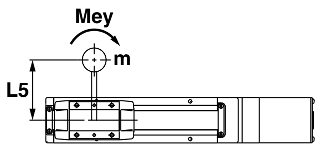
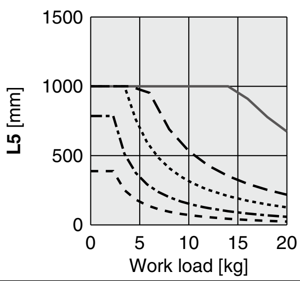
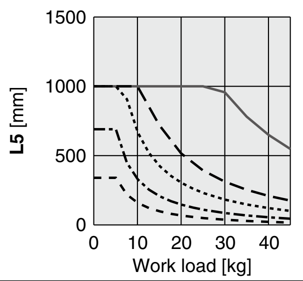
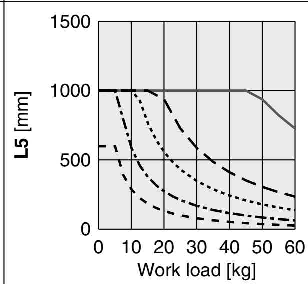
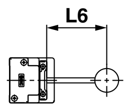
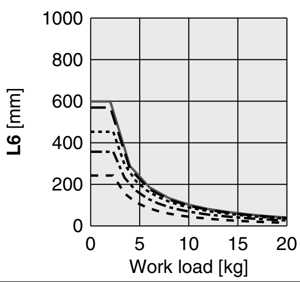
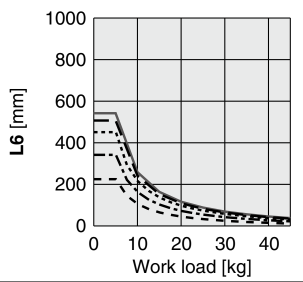
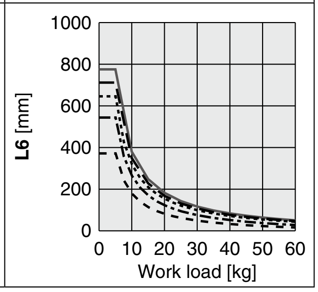
Vertical



Dynamic Allowable Moment

∗ These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the "Calculation of Guide Load Factor" or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

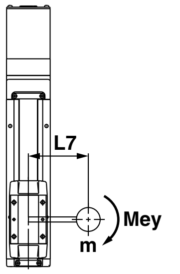
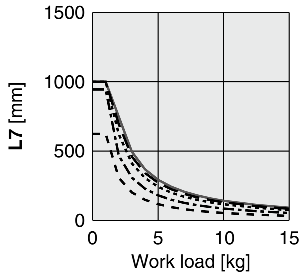
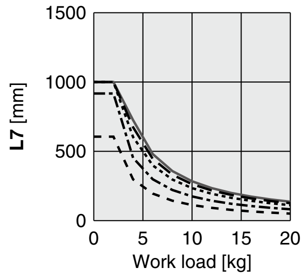
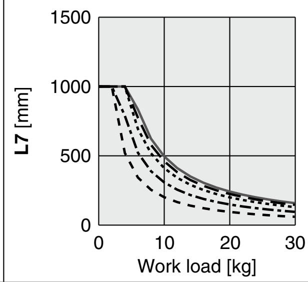
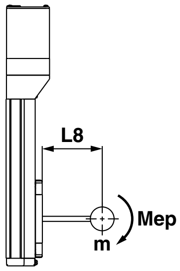
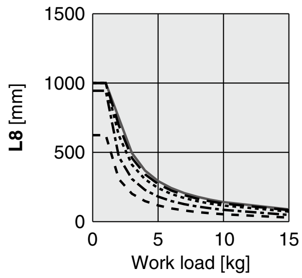
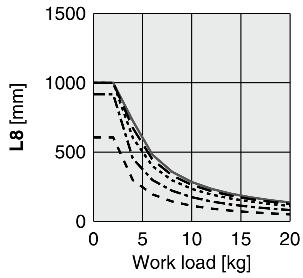
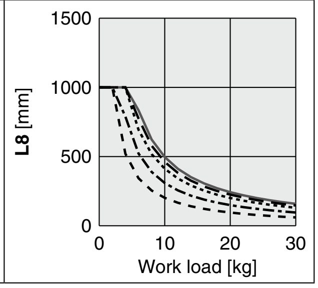
Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s² ········ 5000 mm/s² –·–·– 10000 mm/s² - - - - 20000 mm/s²

Orientation	Load overhanging direction **m** : Work load [kg] **Me**: Allowable moment [N·m] **L** : Overhang to the work load center of gravity [mm]		Model: LEFS25	LEFS32	LEFS40
Horizontal/Bottom		X			
		Y			
		Z			
Wall		X			
		Y			
		Z			

Dynamic Allowable Moment

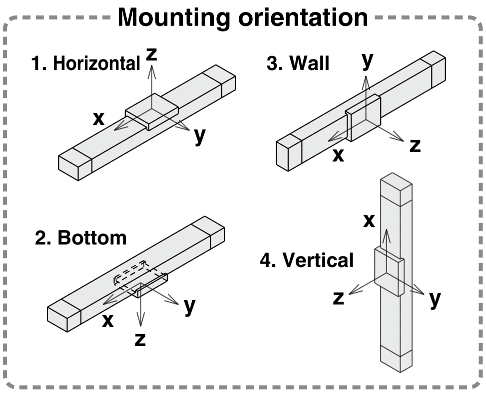
* These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the "Calculation of Guide Load Factor" or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

Acceleration/Deceleration —— 1000 mm/s² — — — 3000 mm/s² ········ 5000 mm/s² —·—·— 10000 mm/s² - - - - 20000 mm/s²

Orientation	Load overhanging direction **m** : Work load [kg] **Me**: Allowable moment [N·m] **L** : Overhang to the work load center of gravity [mm]		Model: LEFS25	Model: LEFS32	Model: LEFS40
Vertical		**Y**			
		**Z**			

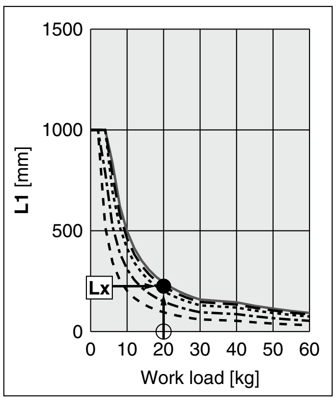
Calculation of Guide Load Factor

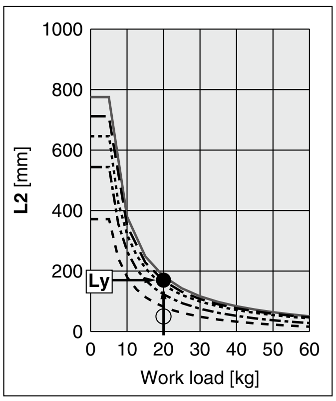
1. Decide operating conditions.
   Model: LEFS
   Size: 25/32/40
   Mounting orientation: Horizontal/Bottom/Wall/Vertical
   Acceleration [mm/s²]: **a**
   Work load [kg]: **m**
   Work load center position [mm]: **Xc/Yc/Zc**
2. Select the target graph while referencing the model, size, and mounting orientation.
3. Based on the acceleration and work load, find the overhang [mm]: **Lx/Ly/Lz** from the graph.
4. Calculate the load factor for each direction.
   α**x = Xc/Lx**, α**y = Yc/Ly**, α**z = Zc/Lz**
5. Confirm the total of α**x**, α**y**, and α**z** is 1 or less.
   $\alpha x + \alpha y + \alpha z \leq 1$
   When 1 is exceeded, please consider a reduction of acceleration and work load, or a change of the work load center position and series.



Example

1. Operating conditions
   Model: LEFS40
   Size: 40
   Mounting orientation: Horizontal
   Acceleration [mm/s²]: 3000
   Work load [kg]: 20
   Work load center position [mm]: **Xc = 0**, **Yc = 50**, **Zc = 200**
2. Select the graphs for horizontal of the LEFS40 on page 126.
3. **Lx = 250 mm**, **Ly = 180 mm**, **Lz = 1000 mm**
4. The load factor for each direction can be found as follows.
   $\alpha x = 0/250 = 0$
   $\alpha y = 50/180 = 0.27$
   $\alpha z = 200/1000 = 0.2$
5. $\alpha x + \alpha y + \alpha z = 0.47 \leq 1$





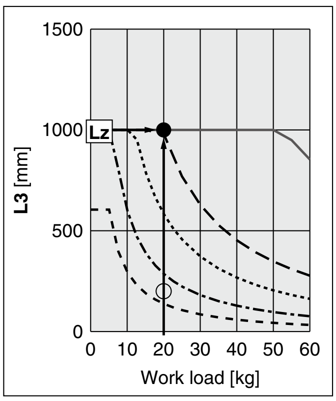
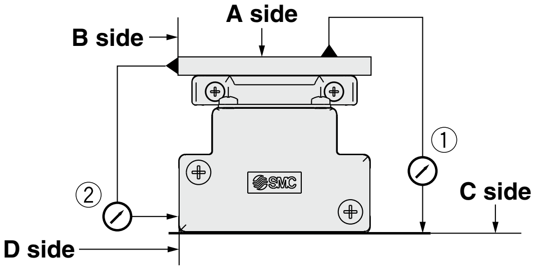


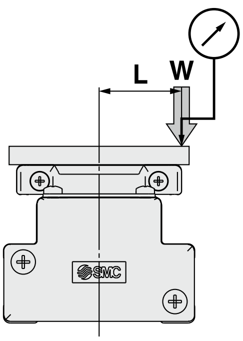
Table Accuracy (Reference Value)

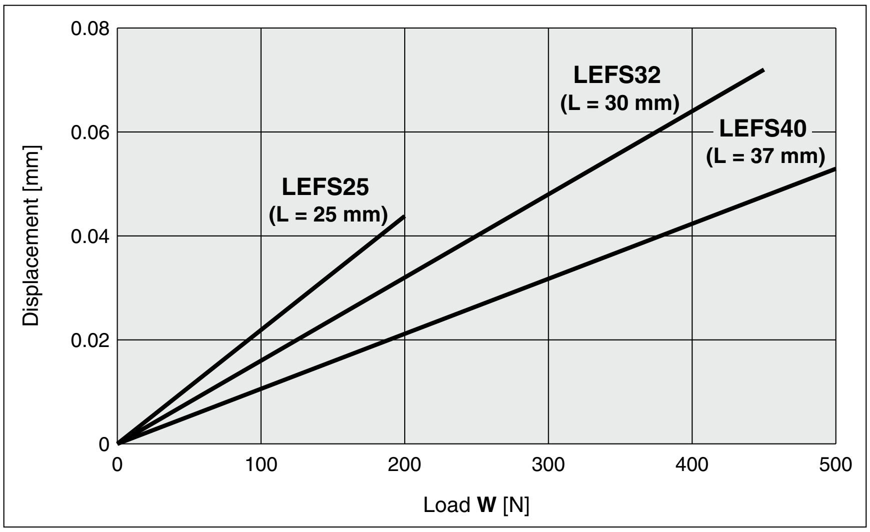


Model	Traveling parallelism [mm] (Every 300 mm)	
	① C side traveling parallelism to A side	② D side traveling parallelism to B side
LEFS25	0.05	0.03
LEFS32	0.05	0.03
LEFS40	0.05	0.03

∗ Traveling parallelism does not include the mounting surface accuracy.

Table Displacement (Reference Value)

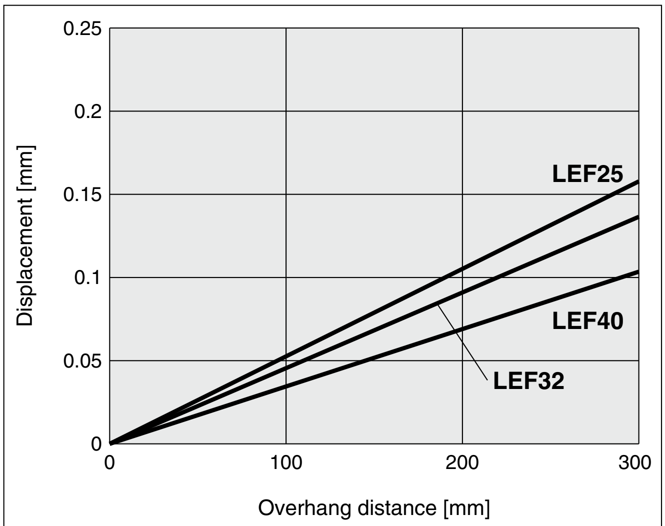




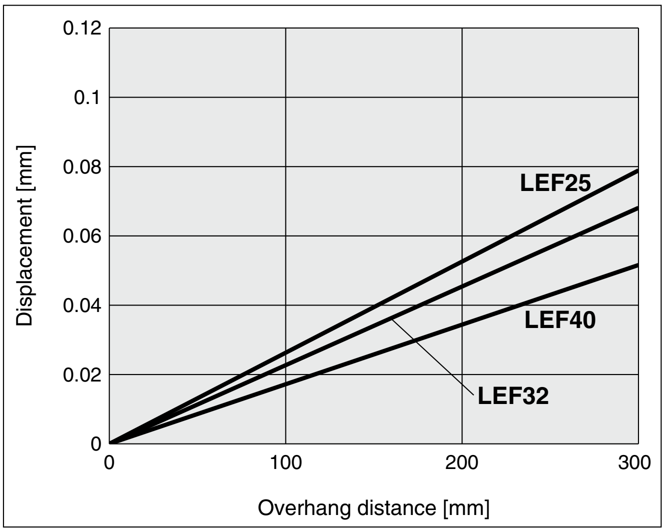
∗ This displacement is measured when a 15 mm aluminum plate is mounted and fixed on the table.
∗ Check the clearance and play of the guide separately.

Overhang Displacement Due to Table Clearance (Initial Reference Value)

Basic type

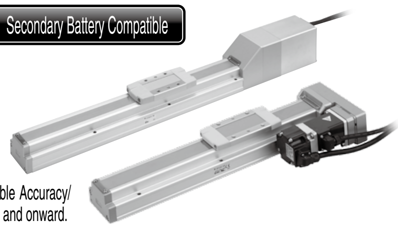


High-precision type



Model Selection

LECS□ Series▶p. 182 LEFS Series▶p. 198 11-LEFS Series▶p. 955 25A-LEFS Series▶p. 980



Selection Procedure

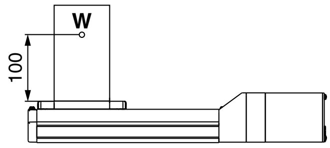
* The Work Load-Acceleration/Deceleration Graph, Dynamic Allowable Moment, Calculation of Guide Load Factor, and Table Accuracy/Displacement/Overhang Displacement are the same as those of the LECS□ AC servo motor. For details, refer to page 123 and onward.

Step 1 Check the work load–speed. → **Step 2** Check the cycle time. → **Step 3** Check the allowable moment.

Selection Example

Operating conditions

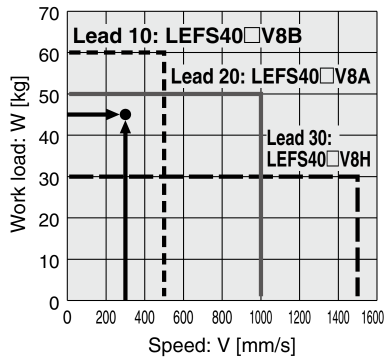
- Workpiece mass: 45 [kg]
- Speed: 300 [mm/s]
- Acceleration/Deceleration: 3000 [mm/s²]
- Stroke: 200 [mm]
- Mounting position: Horizontal upward
- Workpiece mounting condition:



Step 1 Check the work load–speed. <Speed–Work load graph> (page 130)

Select a model based on the workpiece mass and speed while referencing the speed–work load graph.

Selection example) The **LEFS40V8B-200** can be temporarily selected as a possible candidate based on the graph shown on the right side.



<Speed–Work load graph> (LEFS40)

Step 2 Check the cycle time.

Calculate **the cycle time** using the following calculation method.

Cycle time:

T can be found from the following equation.

$$\boxed{T = T1 + T2 + T3 + T4\ [s]}$$

- T1: Acceleration time and T3: Deceleration time can be found by the following equation.

$$\boxed{T1 = V/a1\ [s]} \quad \boxed{T3 = V/a2\ [s]}$$

- T2: Constant speed time can be found from the following equation.

$$\boxed{T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V}\ [s]}$$

- T4: Settling time varies depending on the motor type and load. The value below is recommended.

$$\boxed{T4 = 0.05\ [s]}$$

Calculation example)
T1 to T4 can be calculated as follows.

$T1 = V/a1 = 300/3000 = 0.1$ [s],

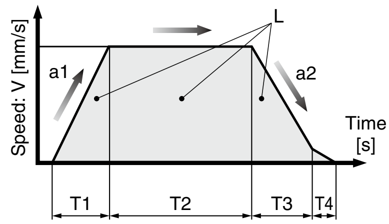
$T3 = V/a2 = 300/3000 = 0.1$ [s]

$$T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V} = \frac{200 - 0.5 \cdot 300 \cdot (0.1 + 0.1)}{300} = 0.57\ [s]$$

$T4 = 0.05$ [s]

The cycle time can be found as follows.

$T = T1 + T2 + T3 + T4$
$= 0.1 + 0.57 + 0.1 + 0.05$
$= \mathbf{0.82\ [s]}$

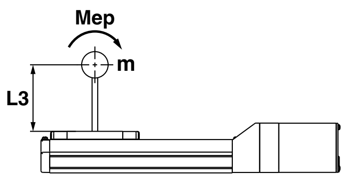


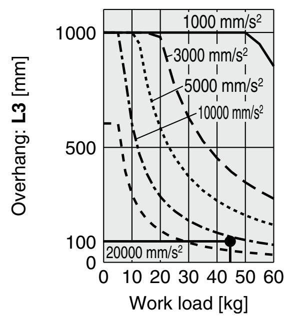
L : Stroke [mm] ··· (Operating condition)
V : Speed [mm/s] ··· (Operating condition)
a1: Acceleration [mm/s²] ··· (Operating condition)
a2: Deceleration [mm/s²] ··· (Operating condition)

T1: Acceleration time [s]
Time until reaching the set speed
T2: Constant speed time [s]
Time while the actuator is operating at a constant speed
T3: Deceleration time [s]
Time from the beginning of the constant speed operation to stop
T4: Settling time [s]
Time until positioning is completed

Step 3 Check the allowable moment. <Static allowable moment> (page 117) <Dynamic allowable moment> (page 126)

Confirm the moment that applies to the actuator is within the allowable range for both static and dynamic conditions.





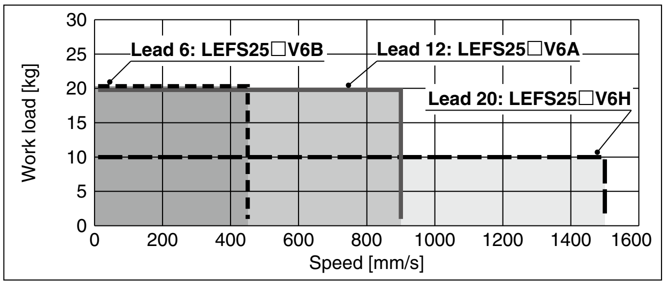
Based on the above calculation result, the LEFS40V8B-200 should be selected.

Speed–Work Load Graph/Required Conditions for the Regenerative Resistor (Guide)

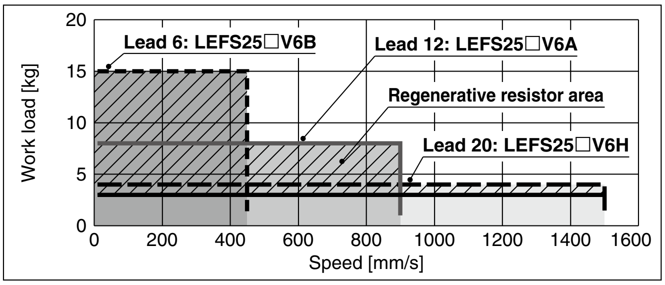
* The allowable speed is restricted depending on the stroke. Select it by referring to the "Allowable Stroke Speed" below.

LEFS25/Ball Screw Drive

Horizontal

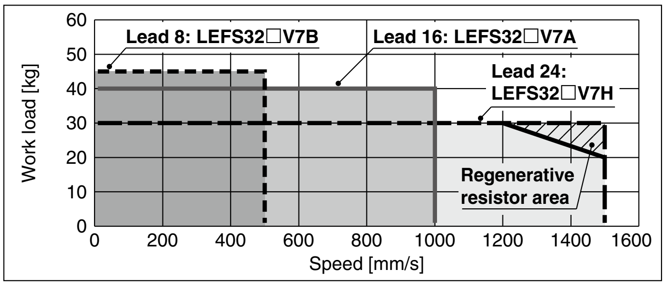


Vertical

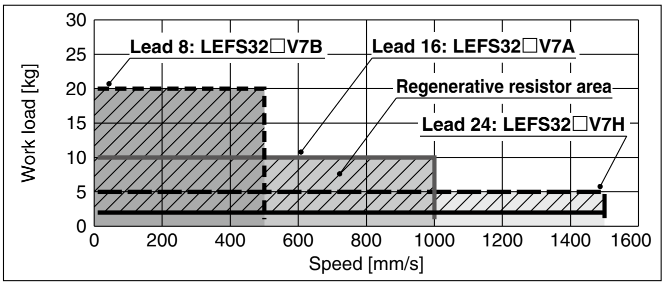


LEFS32/Ball Screw Drive

Horizontal

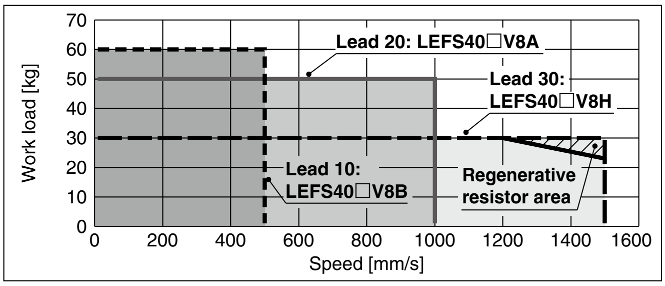


Vertical

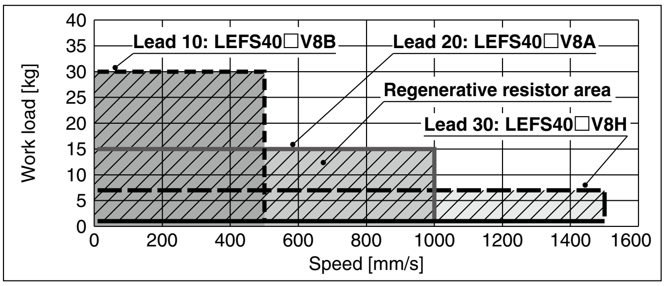


LEFS40/Ball Screw Drive

Horizontal



Vertical



Regenerative resistor area

* When using the actuator in the regenerative resistor area, download the "AC servo drive capacity selection program/SigmaJunmaSize+" from the SMC website. Then, calculate the necessary regenerative resistor capacity to prepare an appropriate external regenerative resistor.
* The regenerative resistor should be provided by the customer.

Applicable Motors/Drivers

Model	Applicable model	
	Motor	Servopack (SMC driver)
LEFS25□	SGMJV-01A3A	SGDV-R90A11□ (LECYM2-V5) SGDV-R90A21□ (LECYU2-V5)
LEFS32□	SGMJV-02A3A	SGDV-1R6A11□ (LECYM2-V7) SGDV-1R6A21□ (LECYU2-V7)
LEFS40□	SGMJV-04A3A	SGDV-2R8A11□ (LECYM2-V8) SGDV-2R8A21□ (LECYU2-V8)

Allowable Stroke Speed

[mm/s]

Model	AC servo motor	Lead		Stroke [mm]											
		Symbol	[mm]	Up to 100	Up to 200	Up to 300	Up to 400	Up to 500	Up to 600	Up to 700	Up to 800	Up to 900	Up to 1000	Up to 1100	Up to 1200
LEFS25	100 W /□40	H	20	1500				1200	900	700	550	—	—	—	—
		A	12	900				720	540	420	330	—	—	—	—
		B	6	450				360	270	210	160	—	—	—	—
		(Motor rotation speed)		(4500 rpm)				(3650 rpm)	(2700 rpm)	(2100 rpm)	(1650 rpm)	—	—	—	—
LEFS32	200 W /□60	H	24	1500					1200	930	750	610	510	—	—
		A	16	1000					800	620	500	410	340	—	—
		B	8	500					400	310	250	200	170	—	—
		(Motor rotation speed)		(3750 rpm)					(3000 rpm)	(2325 rpm)	(1875 rpm)	(1537 rpm)	(1275 rpm)	—	—
LEFS40	400 W /□60	H	30	—	1500					1410	1140	930	780	500*1	500*1
		A	20	—	1000					940	760	620	520	440	380
		B	10	—	500					470	380	310	260	220	190
		(Motor rotation speed)		—	(3000 rpm)					(2820 rpm)	(2280 rpm)	(1860 rpm)	(1560 rpm)	(1320 rpm)	(1140 rpm)

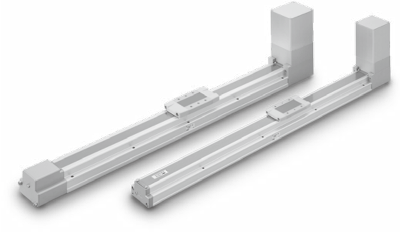
*1 The motor rotation speed is 1000 rpm.

AC Servo Motor

Slider Type

Belt Drive/*LEFB* Series

Model Selection



LECS□ Series▶p. 238 LECY□ Series▶p. 254

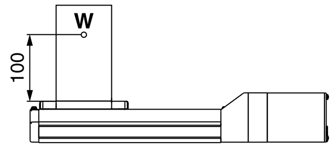
Selection Procedure

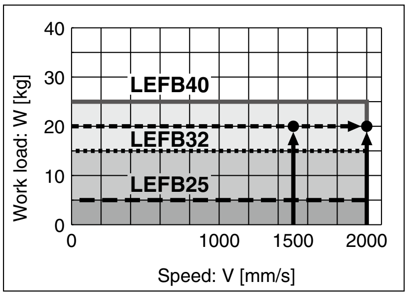
Step 1 Check the work load–speed. → **Step 2** Check the cycle time. → **Step 3** Check the allowable moment.

Selection Example

Operating conditions

- Workpiece mass: 20 [kg]
- Speed: 1500 [mm/s]
- Acceleration/Deceleration: 3000 [mm/s²]
- Stroke: 2000 [mm]
- Mounting position: Horizontal upward
- Workpiece mounting condition:





<Speed–Work load graph>
(LEFB□)

Step 1 **Check the work load–speed. <Speed–Work load graph>** (page 132)

Select a model based on the workpiece mass and speed while referencing the speed–work load graph.

Selection example) The **LEFB40S4S-2000** can be temporarily selected as a possible candidate based on the graph shown on the right side.

Step 2 **Check the cycle time.**

Calculate **the cycle time** using the following calculation method.

Cycle time:

T can be found from the following equation.

$$\boxed{T = T1 + T2 + T3 + T4 \text{ [s]}}$$

- T1: Acceleration time and T3: Deceleration time can be found by the following equation.

$$\boxed{T1 = V/a1 \text{ [s]}} \quad \boxed{T3 = V/a2 \text{ [s]}}$$

- T2: Constant speed time can be found from the following equation.

$$\boxed{T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V} \text{ [s]}}$$

- T4: Settling time varies depending on the motor type and load. The value below is recommended.

$$\boxed{T4 = 0.05 \text{ [s]}}$$

Calculation example)
T1 to T4 can be calculated as follows.

$T1 = V/a1 = 1500/3000 = 0.5$ [s],

$T3 = V/a2 = 1500/3000 = 0.5$ [s]

$$T2 = \frac{L - 0.5 \cdot V \cdot (T1 + T3)}{V} = \frac{2000 - 0.5 \cdot 1500 \cdot (0.5 + 0.5)}{1500} = 0.83 \text{ [s]}$$

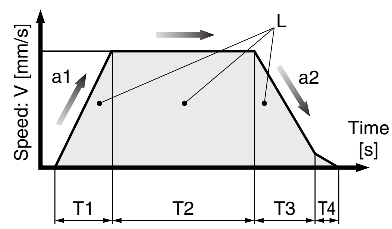
$T4 = 0.05$ [s]

The cycle time can be found as follows.

$T = T1 + T2 + T3 + T4$

$= 0.5 + 0.83 + 0.5 + 0.05$

$=$ **1.88 [s]**

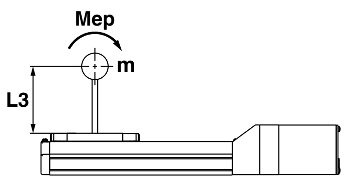


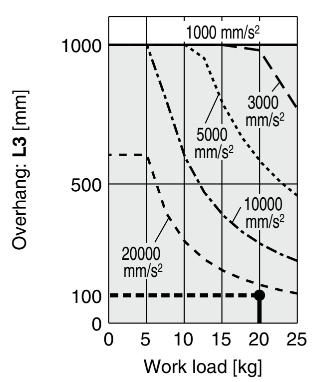
L : Stroke [mm] ··· (Operating condition)
V : Speed [mm/s] ··· (Operating condition)
a1: Acceleration [mm/s²] ··· (Operating condition)
a2: Deceleration [mm/s²] ··· (Operating condition)

T1: Acceleration time [s]
Time until reaching the set speed
T2: Constant speed time [s]
Time while the actuator is operating at a constant speed
T3: Deceleration time [s]
Time from the beginning of the constant speed operation to stop
T4: Settling time [s]
Time until positioning is completed

Step 3 **Check the allowable moment. <Static allowable moment>** (page 117) **<Dynamic allowable moment>** (page 133)

Confirm the moment that applies to the actuator is within the allowable range for both static and dynamic conditions.

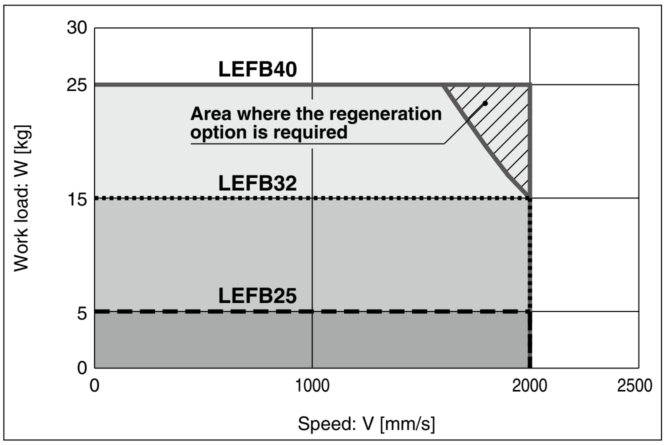




Based on the above calculation result, the LEFB40S4S-2000 should be selected.

Speed–Work Load Graph/Required Conditions for the Regeneration Option (Guide)

LEFB□/Belt Drive

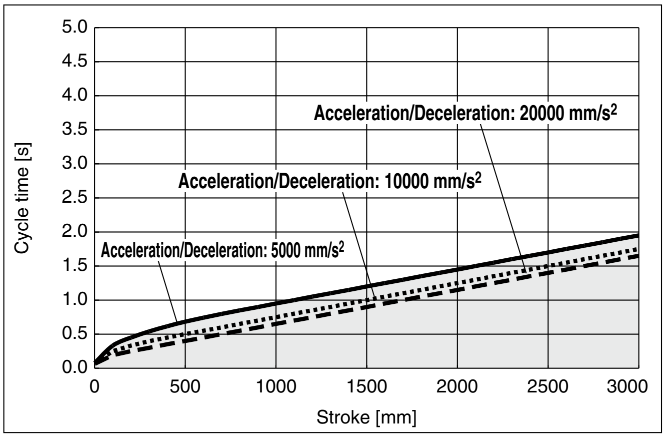


∗ The shaded area in the graph requires the regeneration option (LEC-MR-RB-032).

Cycle Time Graph (Guide)

LEFB□/Belt Drive

LEFB25/32/40



∗ Cycle time is for when maximum speed.
∗ Maximum stroke: LEFB25: 2000 mm
LEFB32: 2500 mm
LEFB40: 3000 mm

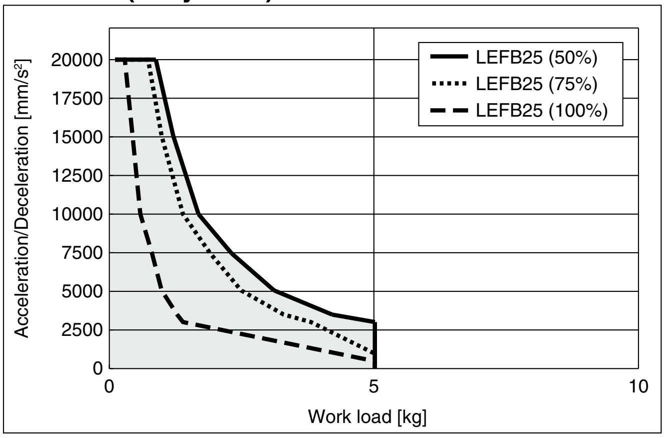
Regenerative resistor area

∗ When using the actuator in the regenerative resistor area, download the "AC servo drive capacity selection program/SigmaJunmaSize+" from the SMC website. Then, calculate the necessary regenerative resistor capacity to prepare an appropriate external regenerative resistor.
∗ The regenerative resistor should be provided by the customer.

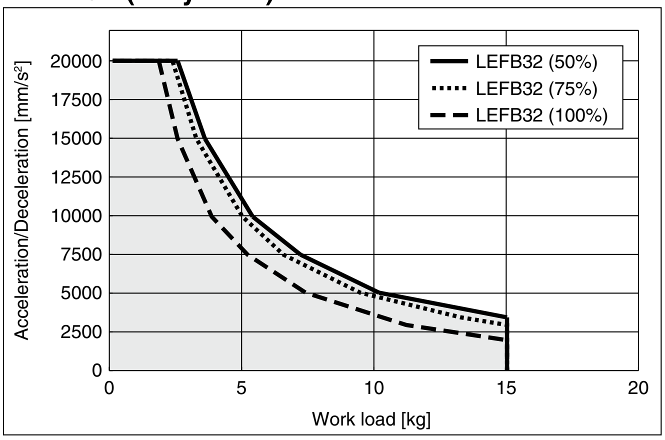
Work Load–Acceleration/Deceleration Graph (Guide)

LEFB□/Belt Drive

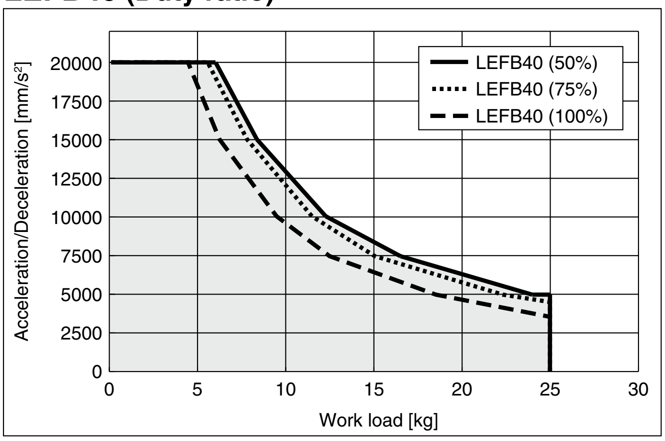
LEFB25 (Duty ratio)



LEFB32 (Duty ratio)



LEFB40 (Duty ratio)



Dynamic Allowable Moment

* These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the “Calculation of Guide Load Factor” or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s² ········ 5000 mm/s² –·–·– 10000 mm/s² - - - - 20000 mm/s²

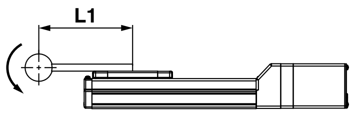
Orientation

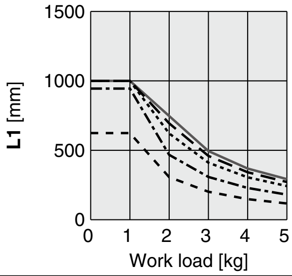
Load overhanging direction
m : Work load [kg]
Me: Allowable moment [N·m]
L : Overhang to the work load center of gravity [mm]

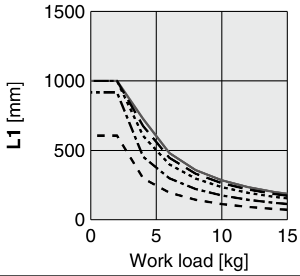
Model: LEFB25 / LEFB32 / LEFB40

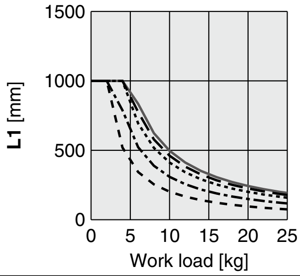
Horizontal/Bottom

X

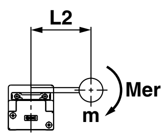


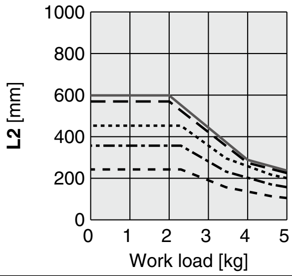
LEFB25:


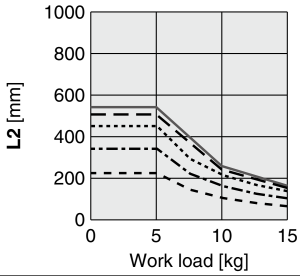
LEFB32:


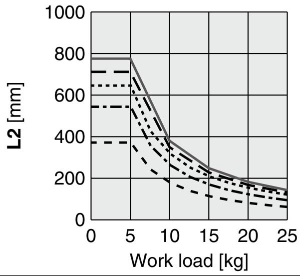
LEFB40:


Y

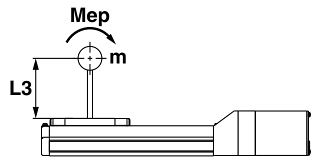


LEFB25:


LEFB32:


LEFB40:


Z



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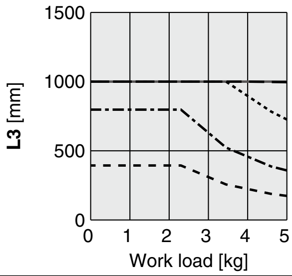

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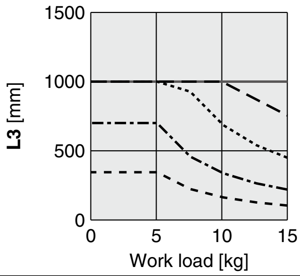
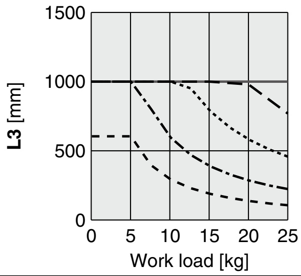
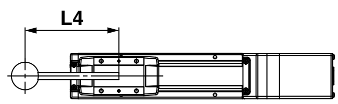
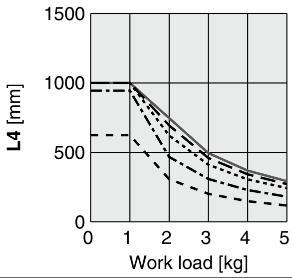


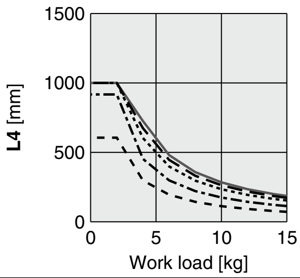
LEFB40:


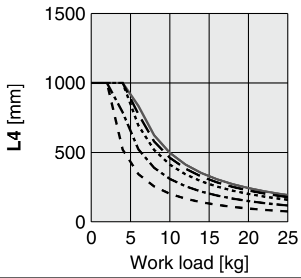
Wall

X

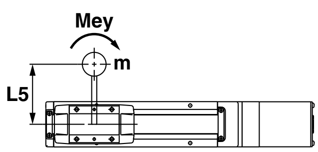


LEFB25:


LEFB32:


LEFB40:


Y



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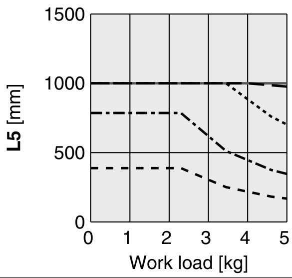

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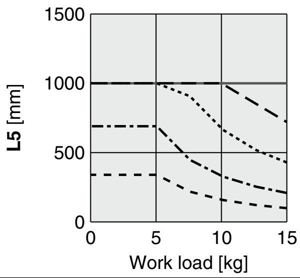
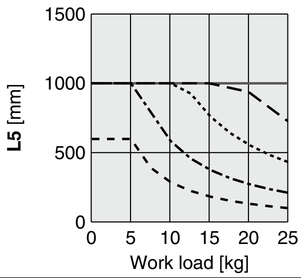
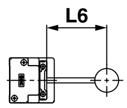
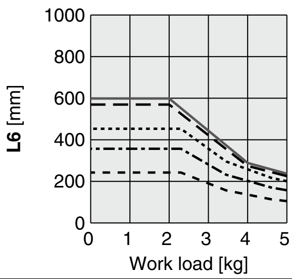
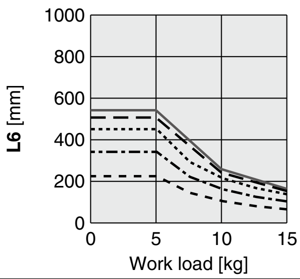


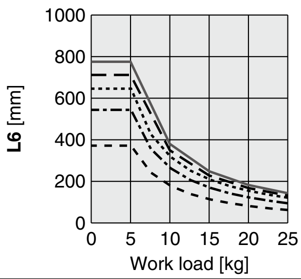
LEFB40:


Z



LEFB25:


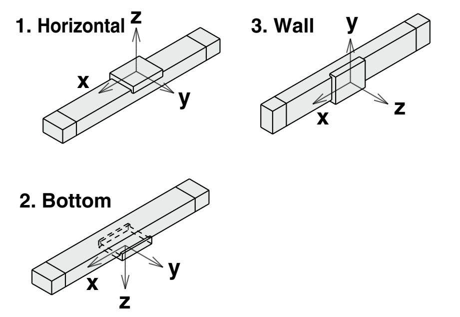
LEFB32:


LEFB40:


Calculation of Guide Load Factor

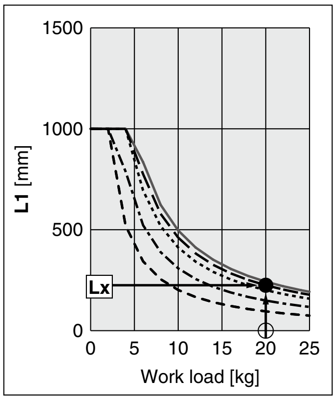
1. Decide operating conditions.
   Model: LEFB
   Size: 25/32/40
   Mounting orientation: Horizontal/Bottom/Wall
   Acceleration [mm/s²]: **a**
   Work load [kg]: **m**
   Work load center position [mm]: **Xc/Yc/Zc**
2. Select the target graph while referencing the model, size, and mounting orientation.
3. Based on the acceleration and work load, find the overhang [mm]: **Lx/Ly/Lz** from the graph.
4. Calculate the load factor for each direction.
   α**x = Xc/Lx**, α**y = Yc/Ly**, α**z = Zc/Lz**
5. Confirm the total of α**x**, α**y**, and α**z** is 1 or less.
   α**x +** α**y +** α**z ≤ 1**
   When 1 is exceeded, please consider a reduction of acceleration and work load, or a change of the work load center position and series.

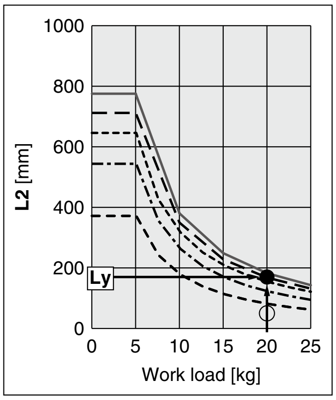
Mounting orientation



Example

1. Operating conditions
   Model: LEFB40
   Size: 40
   Mounting orientation: Horizontal
   Acceleration [mm/s²]: 3000
   Work load [kg]: 20
   Work load center position [mm]: **Xc = 0**, **Yc = 50**, **Zc = 200**
2. Select the graphs for horizontal of the LEFB40 on page 133.
3. **Lx = 250 mm**, **Ly = 180 mm**, **Lz = 1000 mm**
4. The load factor for each direction can be found as follows.
   α**x = 0/250 = 0**
   α**y = 50/180 = 0.27**
   α**z = 200/1000 = 0.2**
5. α**x +** α**y +** α**z = 0.47 ≤ 1**





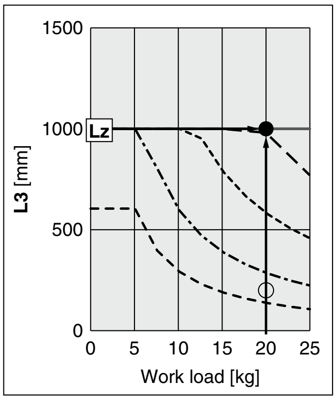
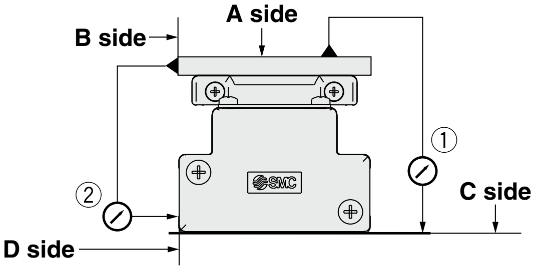


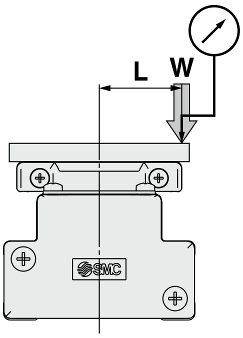
Table Accuracy (Reference Value)

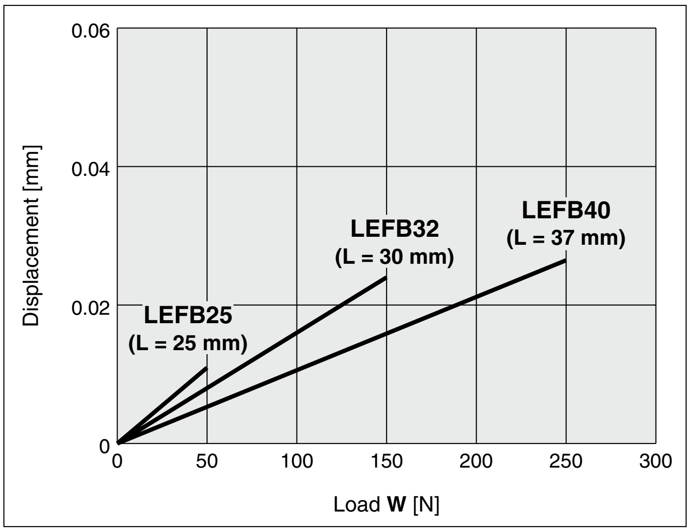


Model	Traveling parallelism [mm] (Every 300 mm)	
	① C side traveling parallelism to A side	② D side traveling parallelism to B side
LEFB25	0.05	0.03
LEFB32	0.05	0.03
LEFB40	0.05	0.03

∗ Traveling parallelism does not include the mounting surface accuracy. (Excludes when the stroke exceeds 2000 mm)

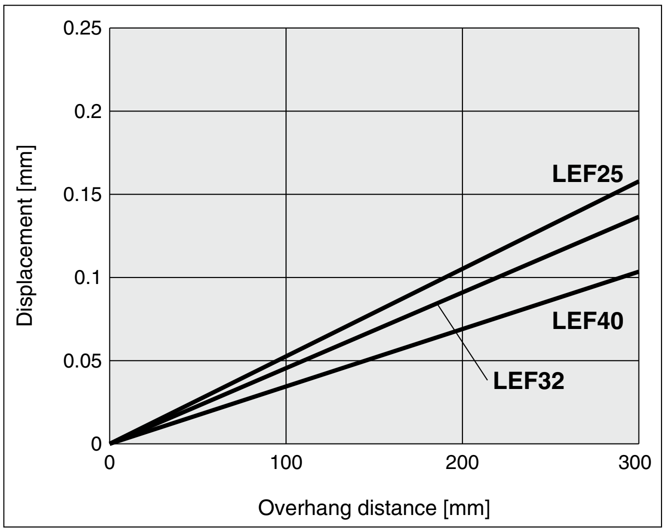
Table Displacement (Reference Value)





∗ This displacement is measured when a 15 mm aluminum plate is mounted and fixed on the table.
∗ Check the clearance and play of the guide separately.

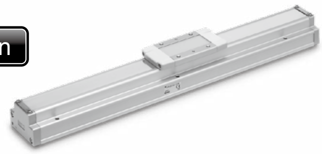
Overhang Displacement Due to Table Clearance (Initial Reference Value)



Slider Type

Support Guide/(11-)LEFG Series Clean Room Specification

Model Selection



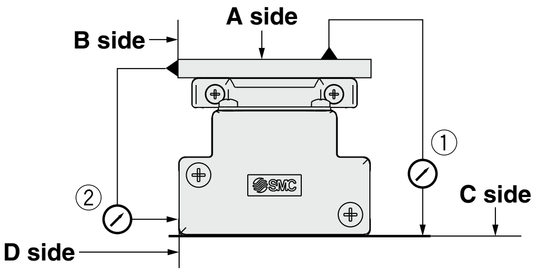
LEFG Series ▶p. 213, 270 11-LEFG Series ▶p. 961

Rated Load

Unit: N

Rated load	LEFG16	LEFG25	LEFG32	LEFG40
Basic dynamic rated load	6250	8950	16500	22700
Basic static rated load	8350	13900	22000	34500

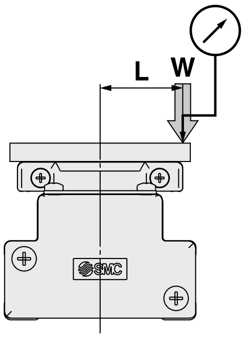
Table Accuracy (Reference Value)

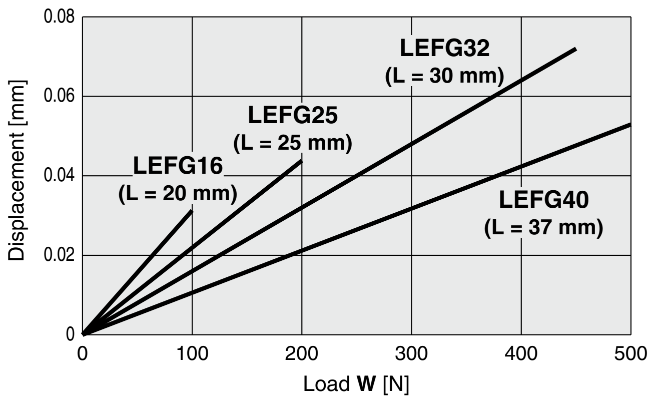


Model	Traveling parallelism [mm] (Every 300 mm)	
	① C side traveling parallelism to A side	② D side traveling parallelism to B side
LEFG16	0.05	0.03
LEFG25	0.05	0.03
LEFG32	0.05	0.03
LEFG40	0.05	0.03

∗ Traveling parallelism does not include the mounting surface accuracy. (Excludes when the stroke exceeds 2000 mm)

Table Displacement (Reference Value)



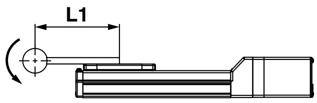
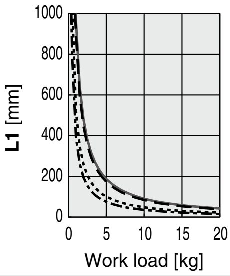
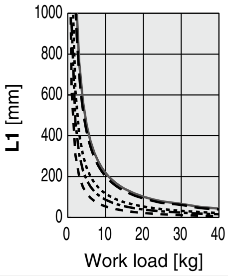
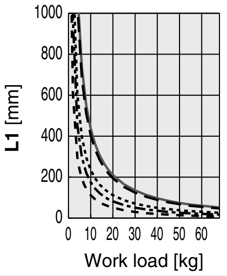
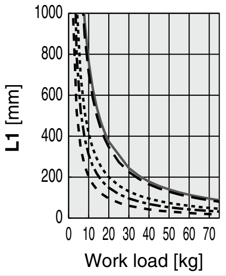
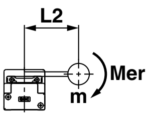
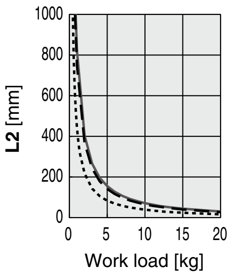
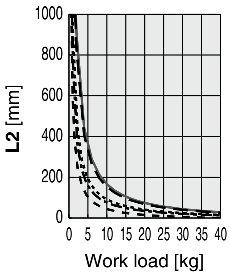
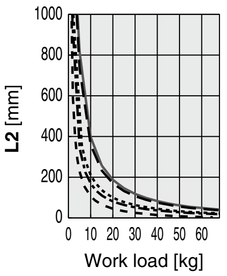
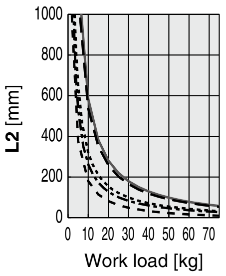
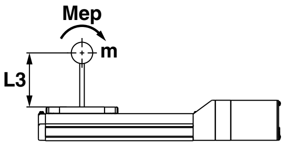
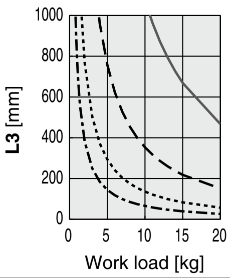
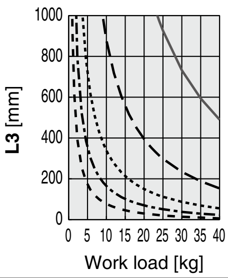
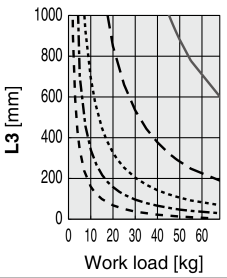
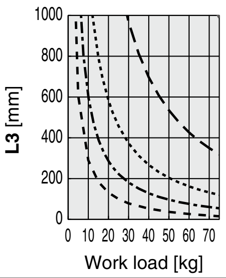
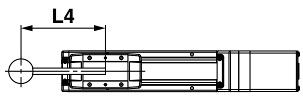
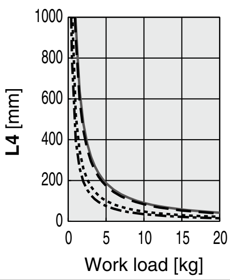
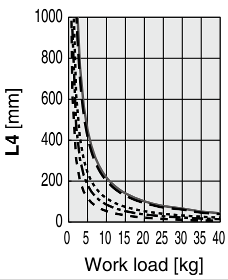
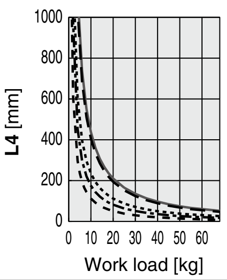
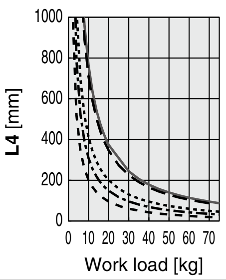
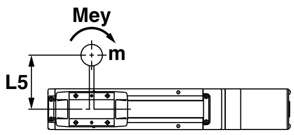
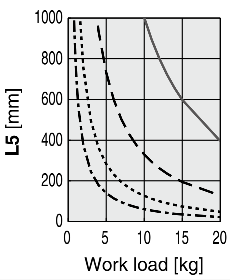
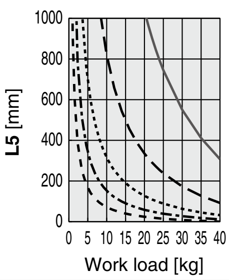
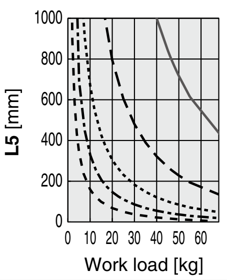
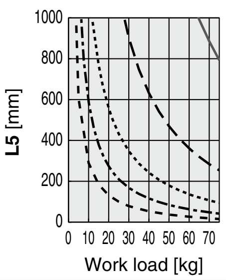
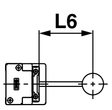
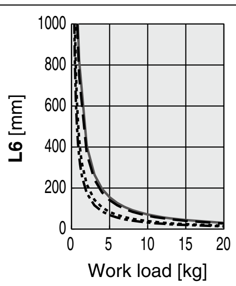
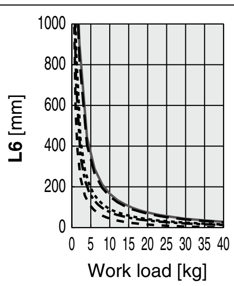
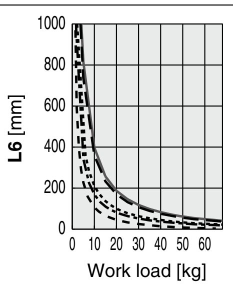
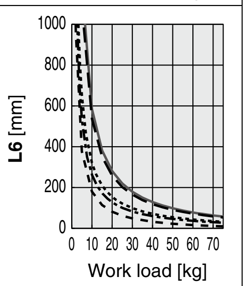


∗ This displacement is measured when a 15 mm aluminum plate is mounted and fixed on the table.
∗ Check the clearance and play of the guide separately.

Dynamic Allowable Moment

∗ These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the "Calculation of Guide Load Factor" or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

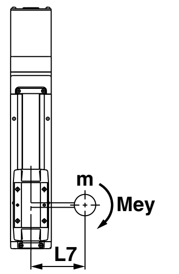
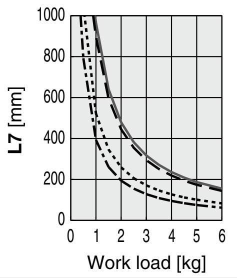
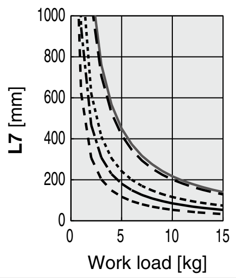
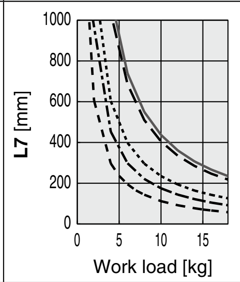
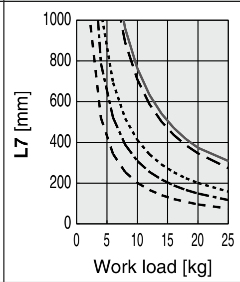
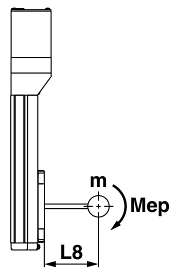
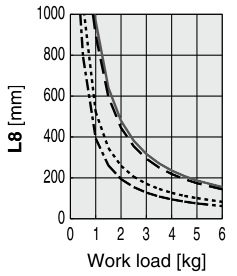
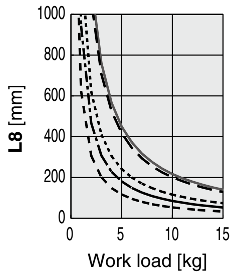
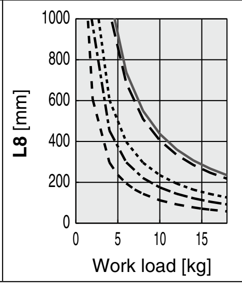
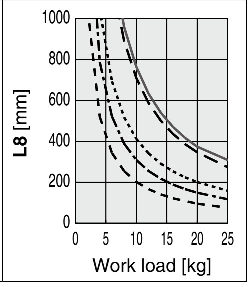
Acceleration/Deceleration —— 1000 mm/s² – – – 3000 mm/s² ········ 5000 mm/s² –·–·– 10000 mm/s² - - - - 20000 mm/s²

Orientation	Load overhanging direction m : Work load [kg] Me: Allowable moment [N·m] L : Overhang to the work load center of gravity [mm]		Model (11-)LEFG16	(11-)LEFG25	(11-)LEFG32	(11-)LEFG40
Horizontal/Bottom		X				
Horizontal/Bottom		Y				
Horizontal/Bottom		Z				
Wall		X				
Wall		Y				
Wall		Z				

Dynamic Allowable Moment

* These graphs show the amount of allowable overhang (guide unit) when the center of gravity of the workpiece overhangs in one direction. When selecting the overhang, refer to the “Calculation of Guide Load Factor” or the Electric Actuator Model Selection Software for confirmation: https://www.smcworld.com

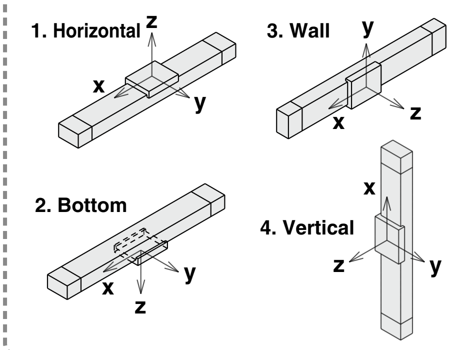
Acceleration/Deceleration —— 1000 mm/s² — — — 3000 mm/s² ········ 5000 mm/s² –·–·– 10000 mm/s² - - - - 20000 mm/s²

Orientation	Load overhanging direction **m** : Work load [kg] **Me**: Allowable moment [N·m] **L** : Overhang to the work load center of gravity [mm]		Model (11-)LEFG16	(11-)LEFG25	(11-)LEFG32	(11-)LEFG40
Vertical		Y				
		Z				

Calculation of Guide Load Factor

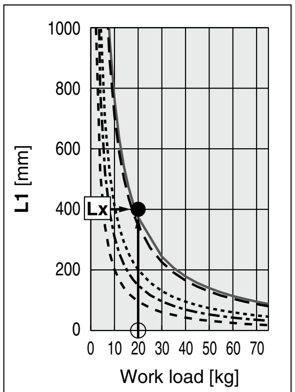
1. Decide operating conditions.
   Model: LEFG
   Size: 16/25/32/40
   Mounting orientation: Horizontal/Bottom/Wall/Vertical
   Acceleration [mm/s²]: **a**
   Work load [kg]: **m**
   Work load center position [mm]: **Xc/Yc/Zc**
2. Select the target graph while referencing the model, size, and mounting orientation.
3. Based on the acceleration and work load, find the overhang [mm]: **Lx/Ly/Lz** from the graph.
4. Calculate the load factor for each direction.
   α**x = Xc/Lx**, α**y = Yc/Ly**, α**z = Zc/Lz**
5. Confirm the total of α**x**, α**y**, and α**z** is 1 or less.
   $\alpha x + \alpha y + \alpha z \leq 1$
   When 1 is exceeded, please consider a reduction of acceleration and work load, or a change of the work load center position and series.

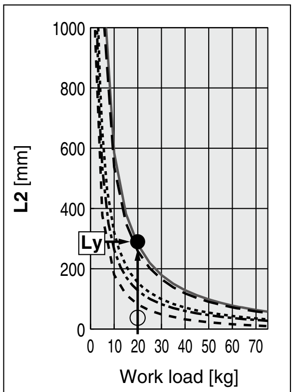
Mounting orientation

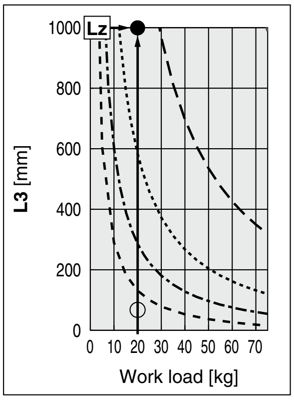


Example

1. Operating conditions
   Model: LEFG40
   Size: 40
   Mounting orientation: Horizontal
   Acceleration [mm/s²]: 3000
   Work load [kg]: 20
   Work load center position [mm]: **Xc = 0**, **Yc = 50**, **Zc = 200**
2. Select the graphs for horizontal of the (11-)LEFG40 on page 137.
3. **Lx = 400 mm**, **Ly = 250 mm**, **Lz = 1500 mm**
4. The load factor for each direction can be found as follows.
   α**x = 0/400 = 0**
   α**y = 50/250 = 0.2**
   α**z = 200/1500 = 0.13**
5. $\alpha x + \alpha y + \alpha z = 0.33 \leq 1$







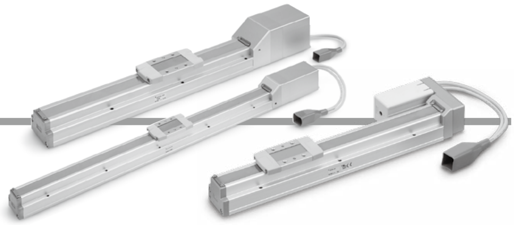
Battery-less Absolute (Step Motor 24 VDC)

Slider Type/Ball Screw Drive

LEFS Series LEFS16, 25, 32, 40

RoHS

* For details, refer to page 1343 and onward.



How to Order

LEFS H 25 R E B – 200 ☐ C N K – R1 CD17T

❶ H ❷ 25 ❸ R ❹ E ❺ B ❻ 200 ❼ ☐ ❽ C ❾ N ❿ K ⓫ R1 ⓬ CD17T

For details on controllers, refer to the next page.

❶ Accuracy

Nil	Basic type
H	High-precision type

❷ Size

16
25
32
40

❸ Motor mounting position

Nil	In-line
R	Right side parallel
L	Left side parallel

❹ Motor type

E	Battery-less absolute (Step motor 24 VDC)

❺ Lead [mm]

Symbol	LEFS16	LEFS25	LEFS32	LEFS40
H	—	20	24	30
A	10	12	16	20
B	5	6	8	10

❻ Stroke*1 [mm]

Stroke	Note	
	Size	Applicable stroke
50 to 500	**16**	50, 100, 150, 200, 250, 300, 350, 400, 450, 500
50 to 800	**25**	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800
50 to 1000	**32**	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000
150 to 1200	**40**	150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1100, 1200

❼ Motor option

Nil	Without option
B	With lock

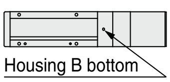
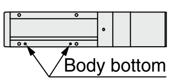
❽ Auto switch compatibility (In-line only)*2 *3 *4 *5

Nil	None
C	With (Includes 1 mounting bracket)

❾ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

❿ Positioning pin hole

Nil	Housing B bottom*6	
K	Body bottom 2 locations	

⓫ Actuator cable type/length

Robotic cable [m]

Nil	None	**R8**	8*7
R1	1.5	**RA**	10*7
R3	3	**RB**	15*7
R5	5	**RC**	20*7

For details on auto switches, refer to pages 275 to 278.

⑫ Controller

Nil	Without controller
C□1□□	With controller

C D 1 7 T

Interface (Communication protocol/Input/Output)

Symbol	Type	Number of axes, Special specification: Standard	Number of axes, Special specification: With STO sub-function
5	Parallel input (NPN)	●	
6	Parallel input (PNP)	●	
E	EtherCAT	●	●
9	EtherNet/IP™	●	●
P	PROFINET	●	●
D	DeviceNet®	●	
L	IO-Link	●	●
M	CC-Link	●	

Mounting

7	Screw mounting
8*8	DIN rail

Number of axes, Special specification

Symbol	Number of axes	Specification
1	Single axis	Standard
F	Single axis	With STO sub-function

Communication plug connector, I/O cable*9

Symbol	Type	Applicable interface
Nil	Without accessory	—
S	Straight type communication plug connector	DeviceNe® CC-Link Ver. 1.10
T	T-branch type communication plug connector	DeviceNe® CC-Link Ver. 1.10
1	I/O cable (1.5 m)	Parallel input (NPN) Parallel input (PNP)
3	I/O cable (3 m)	Parallel input (NPN) Parallel input (PNP)
5	I/O cable (5 m)	Parallel input (NPN) Parallel input (PNP)

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Excludes the LEF16
*3 If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
*4 Order auto switches separately. (For details, refer to pages 276 to 278.)
*5 When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.
*6 Refer to the body mounting example on page 280 for the mounting method.
*7 Produced upon receipt of order
*8 The DIN rail is not included. It must be ordered separately.
*9 Select "Nil" for anything other than DeviceNet®, CC-Link, or parallel input.
Select "Nil," "S," or "T" for DeviceNet® or CC-Link.
Select "Nil," "1," "3," or "5" for parallel input.

⚠Caution

[CE/UKCA-compliant products]
EMC compliance was tested by combining the electric actuator LEF series and the controller JXC series.
The EMC depends on the configuration of the customer's control panel and the relationship with other electrical equipment and wiring. Therefore, compliance with the EMC directive cannot be certified for SMC components incorporated into the customer's equipment under actual operating conditions. As a result, it is necessary for the customer to verify compliance with the EMC directive for the machinery and equipment as a whole.

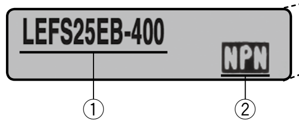
[Precautions relating to differences in controller versions]
When the JXC series is to be used in combination with the battery-less absolute encoder, use a controller that is version V3.4 or S3.4 or higher. For details, refer to pages 1077 and 1078.

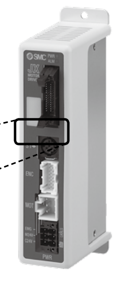
[UL certification]
The JXC series controllers used in combination with electric actuators are UL certified.

The actuator and controller are sold as a package.

Confirm that the combination of the controller and actuator is correct.

<Check the following before use.>
① Check the actuator label for the model number. This number should match that of the controller.
② Check that the Parallel I/O configuration matches (NPN or PNP).





* Refer to the Operation Manual for using the products.
Please download it via our website: https://www.smcworld.com

Type	Step data input type	EtherCAT direct input type	EtherCAT direct input type with STO sub-function	EtherNet/IP™ direct input type	EtherNet/IP™ direct input type with STO sub-function	PROFINET direct input type	PROFINET direct input type with STO sub-function	DeviceNet® direct input type	IO-Link direct input type	IO-Link direct input type with STO sub-function	CC-Link direct input type
											
Series	JXC51 JXC61	JXCE1	JXCEF	JXC91	JXC9F	JXCP1	JXCPF	JXCD1	JXCL1	JXCLF	JXCM1
Features	Parallel I/O	EtherCAT direct input	EtherCAT direct input with STO sub-function	EtherNet/IP™ direct input	EtherNet/IP™ direct input with STO sub-function	PROFINET direct input	PROFINET direct input with STO sub-function	DeviceNet® direct input	IO-Link direct input	IO-Link direct input with STO sub-function	CC-Link direct input
Compatible motor	Battery-less absolute (Step motor 24 VDC)										
Max. number of step data	64 points										
Power supply voltage	24 VDC										
Reference page	1017	1063									

Specifications

Battery-less Absolute (Step Motor 24 VDC)

Model				LEFS16□E		LEFS25□E			LEFS32□E			LEFS40□E		
Actuator specifications	Stroke [mm]*1			50 to 500		50 to 800			50 to 1000			150 to 1200		
	Work load [kg]*2	Horizontal		14	15	12	25	30	20	45	50	25	55	65
		Vertical		2	4	0.5	7.5	15	4	10	20	2	2	23
	Speed*2 [mm/s]	In-line	Stroke range Up to 450	10 to 700	5 to 360	20 to 1100	12 to 750	6 to 400	24 to 1200	16 to 800	8 to 400	30 to 1200	20 to 850	10 to 300
			451 to 500	10 to 600	5 to 300	20 to 1100	12 to 750	6 to 400	24 to 1200	16 to 800	8 to 400	30 to 1200	20 to 850	10 to 300
			501 to 600	—	—	20 to 900	12 to 540	6 to 270	24 to 1200	16 to 800	8 to 400	30 to 1200	20 to 850	10 to 300
			601 to 700	—	—	20 to 630	12 to 420	6 to 230	24 to 930	16 to 620	8 to 310	30 to 1200	20 to 850	10 to 300
			701 to 800	—	—	20 to 550	12 to 330	6 to 180	24 to 750	16 to 500	8 to 250	30 to 1140	20 to 760	10 to 300
			801 to 900	—	—	—	—	—	24 to 610	16 to 410	8 to 200	30 to 930	20 to 620	10 to 300
			901 to 1000	—	—	—	—	—	24 to 500	16 to 340	8 to 170	30 to 780	20 to 520	10 to 250
			1001 to 1100	—	—	—	—	—	—	—	—	30 to 660	20 to 440	10 to 220
			1101 to 1200	—	—	—	—	—	—	—	—	30 to 570	20 to 380	10 to 190
		Parallel	Stroke range Up to 450	10 to 700	5 to 360	20 to 900	12 to 600	6 to 300	24 to 800	16 to 650	8 to 325	30 to 750	20 to 550	10 to 300
			451 to 500	10 to 600	5 to 300	20 to 900	12 to 600	6 to 300	24 to 800	16 to 650	8 to 325	30 to 750	20 to 550	10 to 300
			501 to 600	—	—	20 to 900	12 to 540	6 to 270	24 to 800	16 to 650	8 to 325	30 to 750	20 to 550	10 to 300
			601 to 700	—	—	20 to 630	12 to 420	6 to 230	24 to 800	16 to 620	8 to 310	30 to 750	20 to 550	10 to 300
			701 to 800	—	—	20 to 550	12 to 330	6 to 180	24 to 750	16 to 500	8 to 250	30 to 750	20 to 550	10 to 300
			801 to 900	—	—	—	—	—	24 to 610	16 to 410	8 to 200	30 to 750	20 to 550	10 to 300
			901 to 1000	—	—	—	—	—	24 to 500	16 to 340	8 to 170	30 to 750	20 to 520	10 to 250
			1001 to 1100	—	—	—	—	—	—	—	—	30 to 660	20 to 440	10 to 220
			1101 to 1200	—	—	—	—	—	—	—	—	30 to 570	20 to 380	10 to 190
	Max. acceleration/deceleration [mm/s²]			3000										
	Positioning repeatability [mm]	Basic type		±0.02										
		High-precision type		±0.015 (Lead H: ±0.02)										
	Lost motion [mm]*3	Basic type		0.1 or less										
		High-precision type		0.05 or less										
	Lead [mm]			10	5	20	12	6	24	16	8	30	20	10
	Impact/Vibration resistance [m/s²]*4			50/20										
	Actuation type			Ball screw (LEFS□), Ball screw + Belt (LEFS□R/L)										
	Guide type			Linear guide										
	Static allowable moment*5 [N·m]	Mep (Pitching)		10		27			46			110		
		Mey (Yawing)		10		27			46			110		
		Mer (Rolling)		20		52			101			207		
	Operating temperature range [°C]			5 to 40										
	Operating humidity range [%RH]			90 or less (No condensation)										
	Enclosure			IP30										
Electric specifications	Motor size			□28		□42			□56.4					
	Motor type			Battery-less absolute (Step motor 24 VDC)										
	Encoder			Battery-less absolute										
	Power supply voltage [V]			24 VDC ±10%										
	Power [W]*6 *8			Max. power 51		Max. power 57			Max. power 123			Max. power 141		
Lock unit specifications	Type*7			Non-magnetizing lock										
	Holding force [N]			29	59	47	78	157	72	118	216	75	113	245
	Power [W]*8			2.9		5			5			5		
	Rated voltage [V]			24 VDC ±10%										

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Speed changes according to the work load. Check the “Speed–Work Load Graph (Guide)” on pages 106 and 107.
Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m.
*3 A reference value for correcting errors in reciprocal operation
*4 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*5 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*6 Indicates the max. power during operation (including the controller). This value can be used for the selection of the power supply.
*7 With lock only
*8 For an actuator with lock, add the power for the lock.

Weight

Series	LEFS16□E									
Stroke [mm]	50	100	150	200	250	300	350	400	450	500
Product weight [kg]	0.85	0.92	1.00	1.07	1.15	1.22	1.30	1.37	1.45	1.52
Additional weight with lock [kg]	0.12									

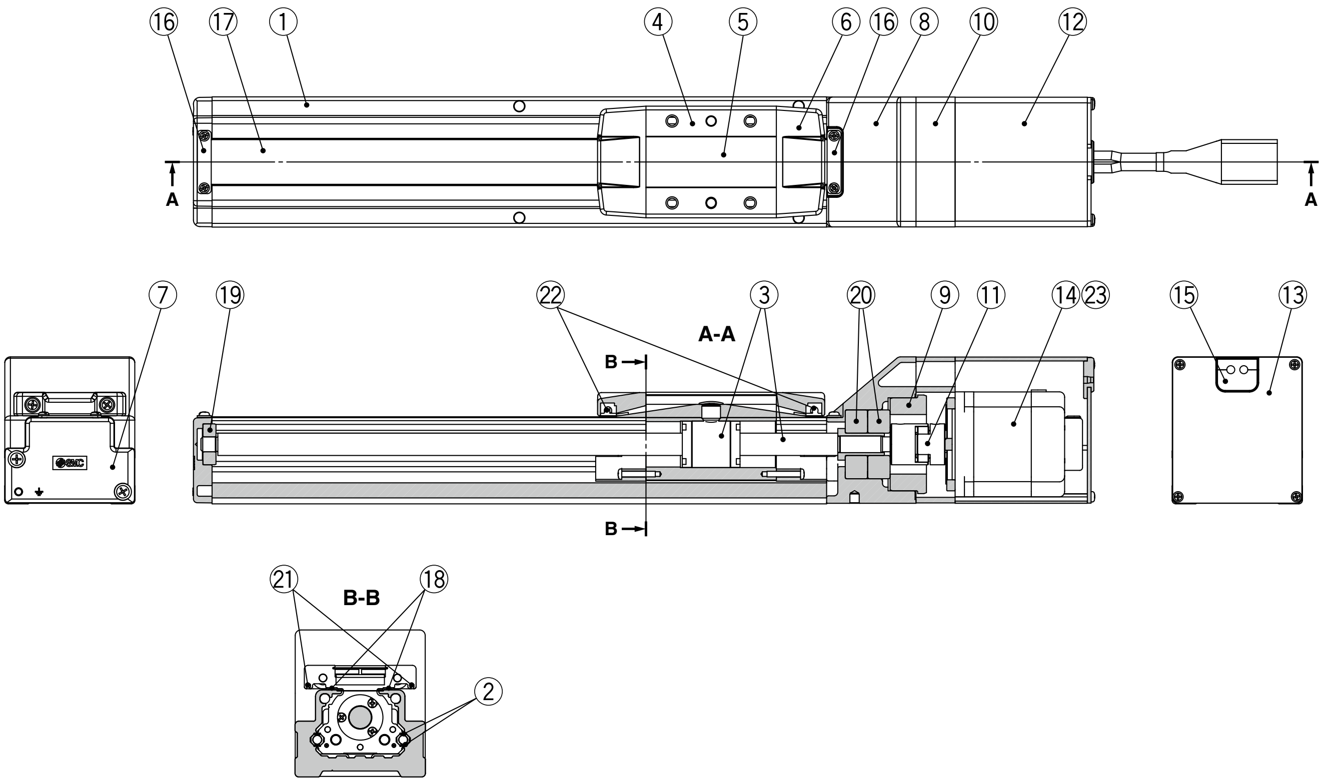
Series	LEFS25□E															
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Product weight [kg]	1.70	1.84	1.98	2.12	2.26	2.40	2.54	2.68	2.82	2.96	3.10	3.24	3.38	3.52	3.66	3.80
Additional weight with lock [kg]	0.26															

Series	LEFS32□E																			
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Product weight [kg]	3.15	3.35	3.55	3.75	3.95	4.15	4.35	4.55	4.75	4.95	5.15	5.35	5.55	5.75	5.95	6.15	6.35	6.55	6.75	6.95
Additional weight with lock [kg]	0.53																			

Series	LEFS40□E																			
Stroke [mm]	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
Product weight [kg]	5.37	5.65	5.93	6.21	6.49	6.77	7.15	7.33	7.61	7.89	8.17	8.45	8.73	9.01	9.29	9.57	9.85	10.13	10.69	11.25
Additional weight with lock [kg]	0.53																			

Construction: In-line Motor

LEFS16, 25, 32, 40



Component Parts

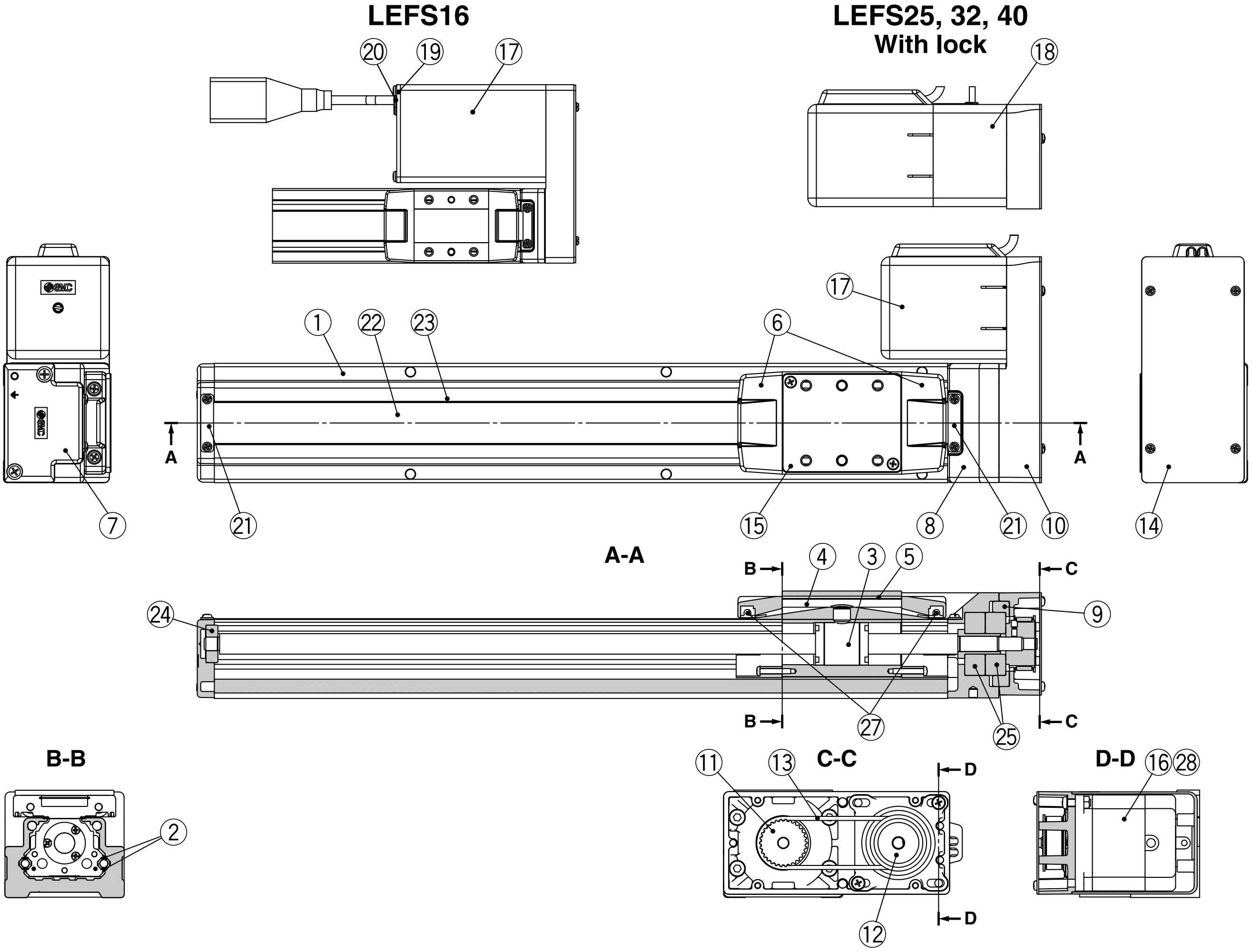
No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw assembly**	—	
4	**Table**	Aluminum alloy	Anodized
5	**Blanking plate**	Aluminum alloy	Anodized
6	**Seal band holder**	Synthetic resin	
7	**Housing A**	Aluminum die-casted	Coating
8	**Housing B**	Aluminum die-casted	Coating
9	**Bearing stopper**	Aluminum alloy	
10	**Motor mount**	Aluminum alloy	Coating/Anodized
11	**Coupling**	—	
12	**Motor cover**	Aluminum alloy	Anodized
13	**End cover**	Aluminum alloy	Anodized
14	**Motor**	—	
15	**Rubber bushing**	NBR	

No.	Description	Material	Note
16	**Band stopper**	Stainless steel	
17	**Dust seal band**	Stainless steel	
18	**Seal magnet** **LEFS40**	—	
19	**Bearing**	—	Stroke 250 mm or more
20	**Bearing**	—	
21	**Magnet**	—	With auto switch compatibility
22	**Roller assembly**	—	Without grease application
23	**Heat dissipation sheet** **LEFS16**	—	

Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When "Without" is selected for the grease application, grease is applied only on the back side.)	

Construction: Motor Parallel



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw assembly**	—	
4	**Table**	Aluminum alloy	Anodized
5	**Blanking plate**	Aluminum alloy	Anodized
6	**Seal band holder**	Synthetic resin	
7	**Housing A**	Aluminum die-casted	Coating
8	**Housing B**	Aluminum die-casted	Coating
9	**Bearing stopper**	Aluminum alloy	
10	**Return plate**	Aluminum alloy	Coating/Anodized
11	**Pulley**	Aluminum alloy	
12	**Pulley**	Aluminum alloy	
14	**Cover plate**	Aluminum alloy	Anodized
15	**Table spacer** **LEFS32**	Aluminum alloy	Anodized (LEFS32 only)
16	**Motor**	—	
17	**Motor cover** **LEFS16**	Aluminum alloy	Anodized
	Motor cover **LEFS25/32/40**	Synthetic resin	
18	**Motor cover with lock** **LEFS25/32/40**	Aluminum alloy	Anodized
19	**End cover** **LEFS16**	Aluminum alloy	Anodized
20	**Rubber bushing** **LEFS16**	NBR	
21	**Band stopper**	Stainless steel	
22	**Dust seal band**	Stainless steel	
23	**Seal magnet** **LEFS40**	—	
24	**Bearing**	—	Stroke 250 mm or more
25	**Bearing**	—	
27	**Roller assembly**	—	Without grease application
28	**Heat dissipation sheet** **LEFS16**	—	

Replacement Parts/Belt

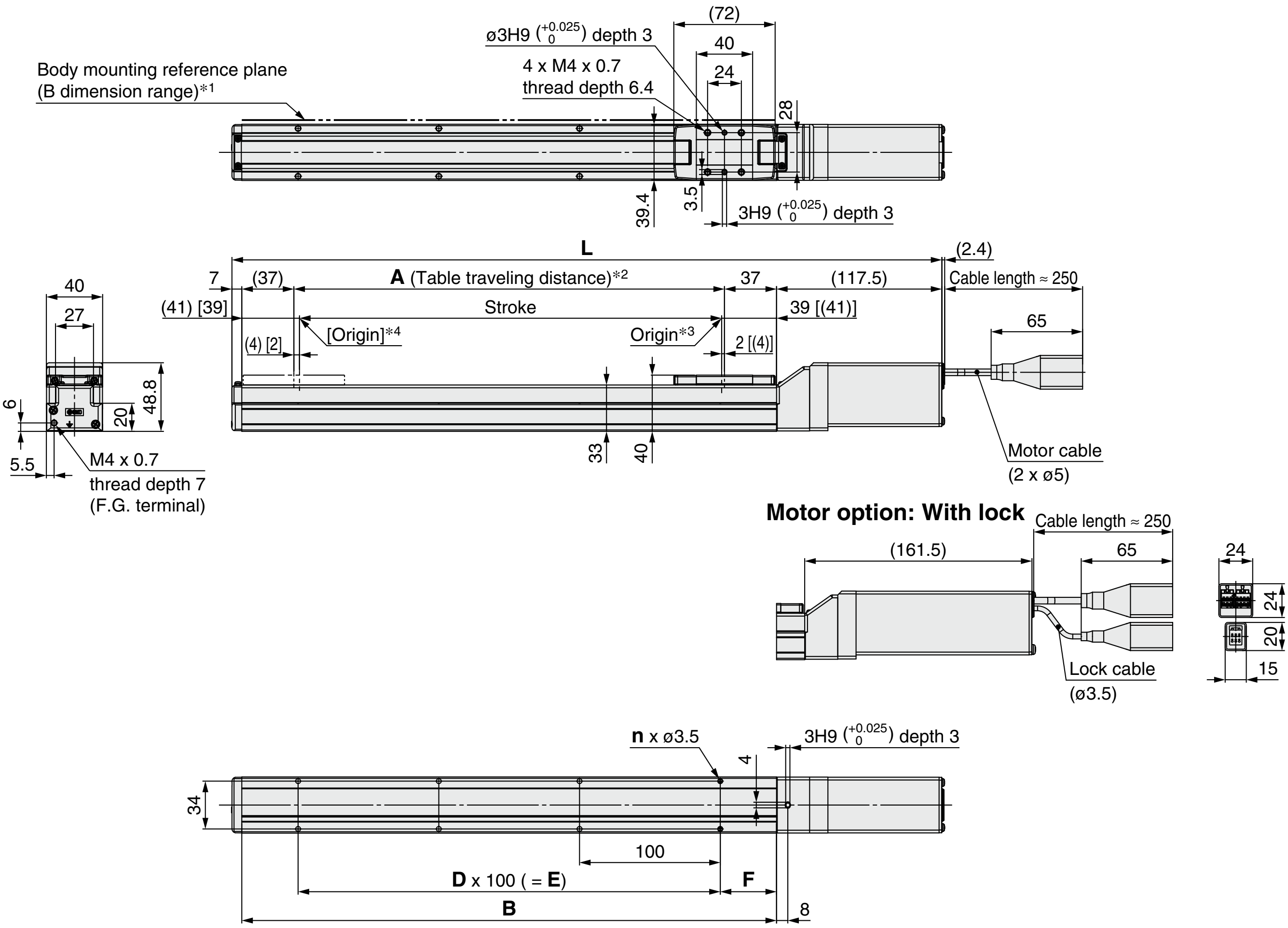
No.	Size	Order no.
13	16	LE-D-6-5
	25	LE-D-6-2
	32	LE-D-6-3
	40	LE-D-6-4

Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When “Without” is selected for the grease application, grease is applied only on the back side.)	

Dimensions: In-line Motor

LEFS16E



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions

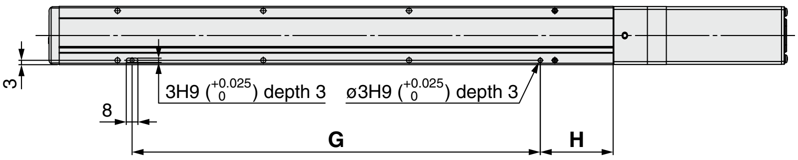
[mm]

Model	L		A	B	n	D	E	F
	Without lock	With lock						
LEFS□16E□-50□	254.5	298.5	56	130	4	—	—	15
LEFS□16E□-100□	304.5	348.5	106	180				40
LEFS□16E□-150□	354.5	398.5	156	230				
LEFS□16E□-200□	404.5	448.5	206	280	6	2	200	
LEFS□16E□-250□	454.5	498.5	256	330				
LEFS□16E□-300□	504.5	548.5	306	380	8	3	300	
LEFS□16E□-350□	554.5	598.5	356	430				
LEFS□16E□-400□	604.5	648.5	406	480	10	4	400	
LEFS□16E□-450□	654.5	698.5	456	530				
LEFS□16E□-500□	704.5	748.5	506	580	12	5	500	

Dimensions: In-line Motor

LEFS16E

Positioning pin hole*1 (Option): Body bottom



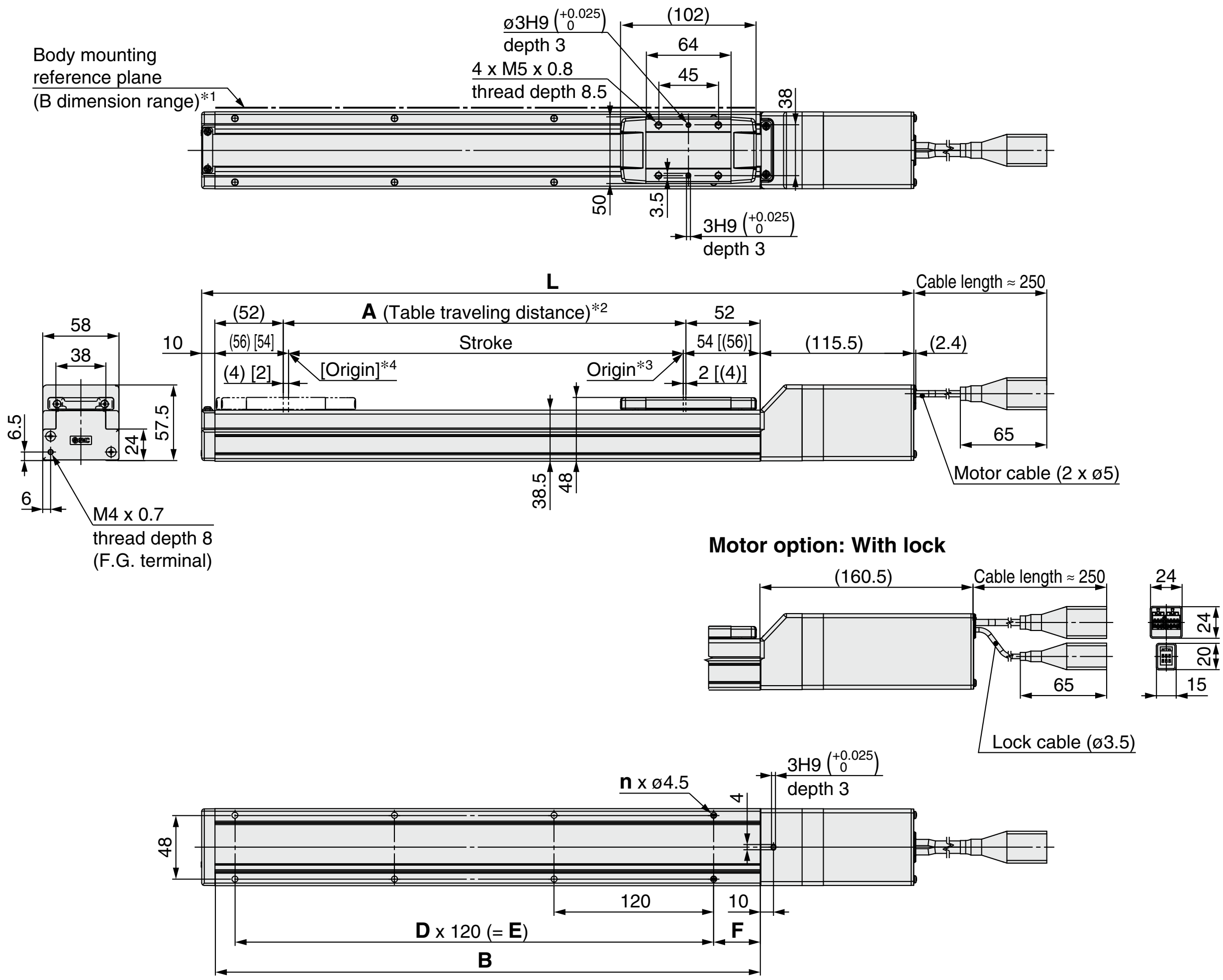
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

Dimensions [mm]

Model	Positioning pin hole: K	
	G	H
LEFS□16E□-50□	80	25
LEFS□16E□-100□		50
LEFS□16E□-150□		
LEFS□16E□-200□	180	
LEFS□16E□-250□		
LEFS□16E□-300□	280	
LEFS□16E□-350□		
LEFS□16E□-400□	380	
LEFS□16E□-450□		
LEFS□16E□-500□	480	

Dimensions: In-line Motor

LEFS25E



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions

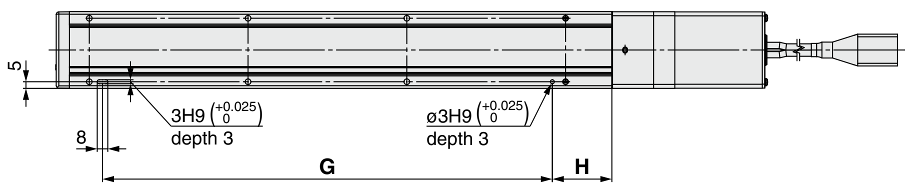
[mm]

Model	L		A	B	n	D	E	F
	Without lock	With lock						
LEFS□25E□-50□	285.5	330.5	56	160	4	—	—	20
LEFS□25E□-100□	335.5	380.5	106	210	4	—	—	
LEFS□25E□-150□	385.5	430.5	156	260	4	—	—	
LEFS□25E□-200□	435.5	480.5	206	310	6	2	240	
LEFS□25E□-250□	485.5	530.5	256	360	6	2	240	
LEFS□25E□-300□	535.5	580.5	306	410	8	3	360	
LEFS□25E□-350□	585.5	630.5	356	460	8	3	360	
LEFS□25E□-400□	635.5	680.5	406	510	8	3	360	
LEFS□25E□-450□	685.5	730.5	456	560	10	4	480	35
LEFS□25E□-500□	735.5	780.5	506	610	10	4	480	
LEFS□25E□-550□	785.5	830.5	556	660	12	5	600	
LEFS□25E□-600□	835.5	880.5	606	710	12	5	600	
LEFS□25E□-650□	885.5	930.5	656	760	12	5	600	
LEFS□25E□-700□	935.5	980.5	706	810	14	6	720	
LEFS□25E□-750□	985.5	1030.5	756	860	14	6	720	
LEFS□25E□-800□	1035.5	1080.5	806	910	16	7	840	

Dimensions: In-line Motor

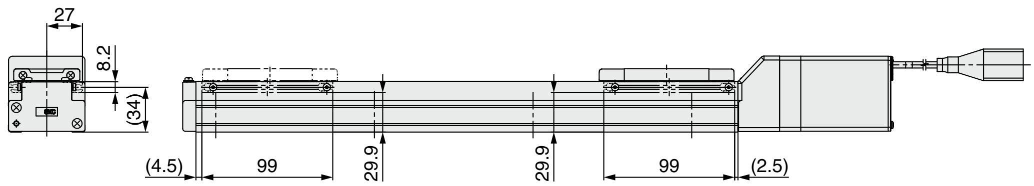
LEFS25E

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



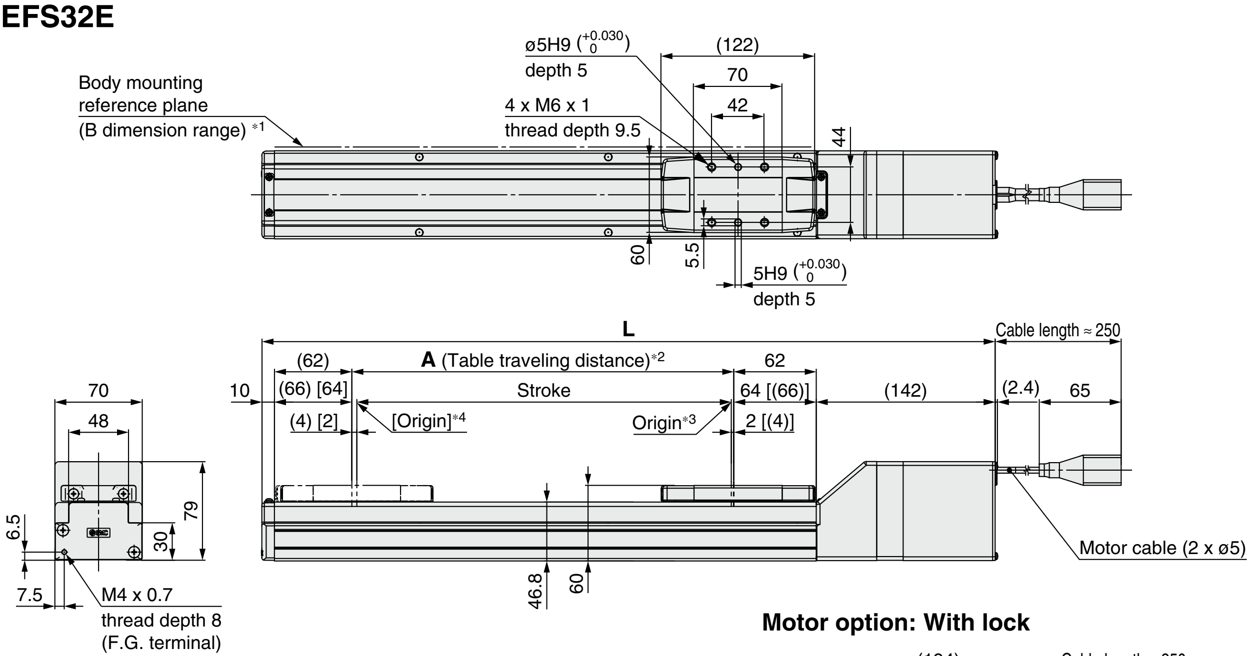
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

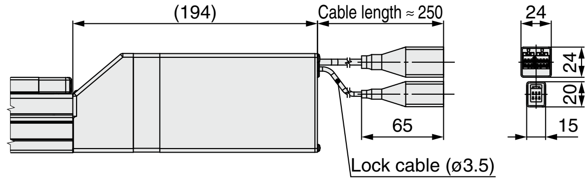
Model	G	H
LEFS□25E□-50□	100	30
LEFS□25E□-100□	100	45
LEFS□25E□-150□	100	45
LEFS□25E□-200□	220	45
LEFS□25E□-250□	220	45
LEFS□25E□-300□	340	45
LEFS□25E□-350□	340	45
LEFS□25E□-400□	340	45
LEFS□25E□-450□	460	45
LEFS□25E□-500□	460	45
LEFS□25E□-550□	580	45
LEFS□25E□-600□	580	45
LEFS□25E□-650□	580	45
LEFS□25E□-700□	700	45
LEFS□25E□-750□	700	45
LEFS□25E□-800□	820	45

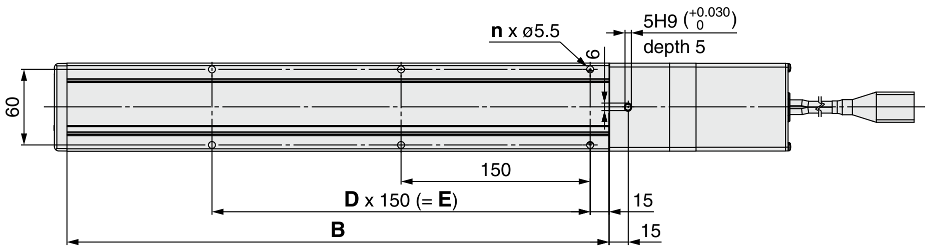
Dimensions: In-line Motor

LEFS32E



Motor option: With lock





*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

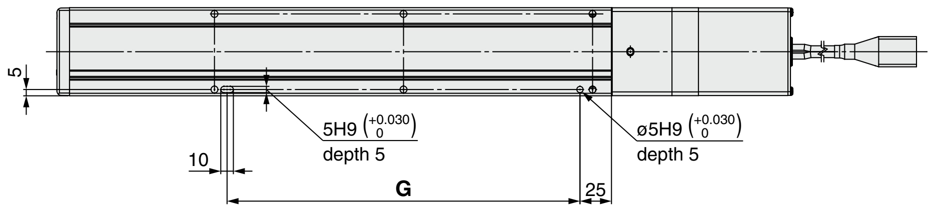
Dimensions [mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□32E□-50□	332	384	56	180	4	—	—
LEFS□32E□-100□	382	434	106	230	4	—	—
LEFS□32E□-150□	432	484	156	280	4	—	—
LEFS□32E□-200□	482	534	206	330	6	2	300
LEFS□32E□-250□	532	584	256	380	6	2	300
LEFS□32E□-300□	582	634	306	430	6	2	300
LEFS□32E□-350□	632	684	356	480	8	3	450
LEFS□32E□-400□	682	734	406	530	8	3	450
LEFS□32E□-450□	732	784	456	580	8	3	450
LEFS□32E□-500□	782	834	506	630	10	4	600
LEFS□32E□-550□	832	884	556	680	10	4	600
LEFS□32E□-600□	882	934	606	730	10	4	600
LEFS□32E□-650□	932	984	656	780	12	5	750
LEFS□32E□-700□	982	1034	706	830	12	5	750
LEFS□32E□-750□	1032	1084	756	880	12	5	750
LEFS□32E□-800□	1082	1134	806	930	14	6	900
LEFS□32E□-850□	1132	1184	856	980	14	6	900
LEFS□32E□-900□	1182	1234	906	1030	14	6	900
LEFS□32E□-950□	1232	1284	956	1080	16	7	1050
LEFS□32E□-1000□	1282	1334	1006	1130	16	7	1050

Dimensions: In-line Motor

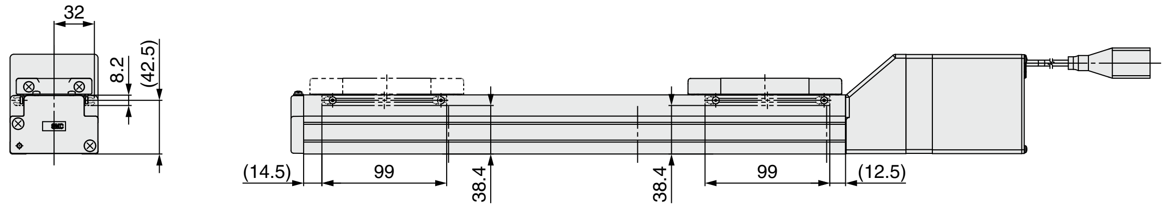
LEFS32E

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



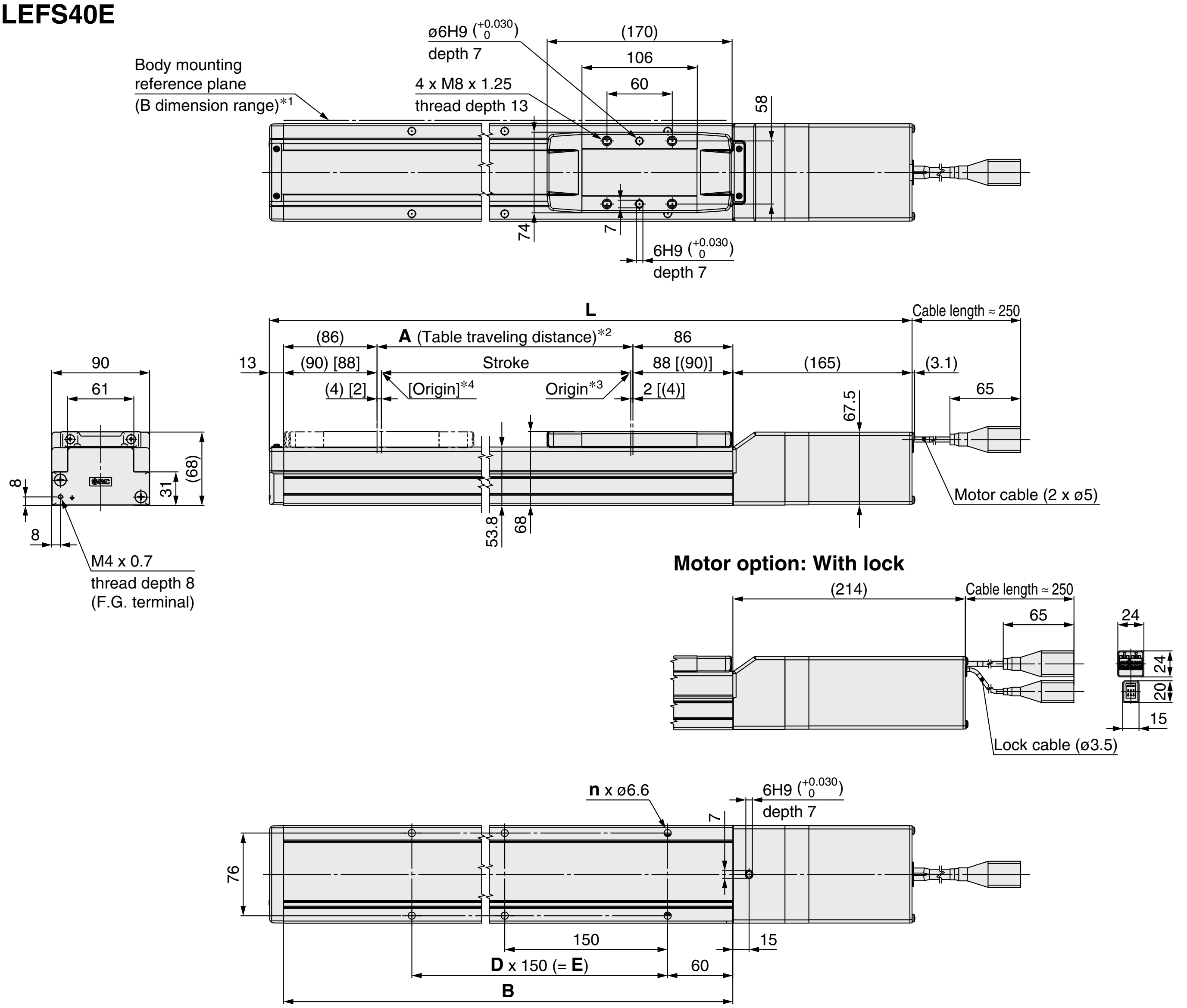
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

Model	G
LEFS□32E□-50□	130
LEFS□32E□-100□	130
LEFS□32E□-150□	130
LEFS□32E□-200□	280
LEFS□32E□-250□	280
LEFS□32E□-300□	280
LEFS□32E□-350□	430
LEFS□32E□-400□	430
LEFS□32E□-450□	430
LEFS□32E□-500□	580
LEFS□32E□-550□	580
LEFS□32E□-600□	580
LEFS□32E□-650□	730
LEFS□32E□-700□	730
LEFS□32E□-750□	730
LEFS□32E□-800□	880
LEFS□32E□-850□	880
LEFS□32E□-900□	880
LEFS□32E□-950□	1030
LEFS□32E□-1000□	1030

Dimensions: In-line Motor

LEFS40E



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

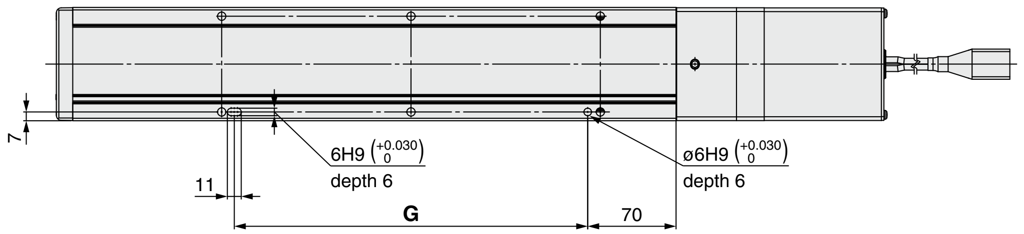
Dimensions [mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□40E□-150□	506	555	156	328	4	—	150
LEFS□40E□-200□	556	605	206	378	6	2	300
LEFS□40E□-250□	606	655	256	428	6	2	300
LEFS□40E□-300□	656	705	306	478	6	2	300
LEFS□40E□-350□	706	755	356	528	8	3	450
LEFS□40E□-400□	756	805	406	578	8	3	450
LEFS□40E□-450□	806	855	456	628	8	3	450
LEFS□40E□-500□	856	905	506	678	10	4	600
LEFS□40E□-550□	906	955	556	728	10	4	600
LEFS□40E□-600□	956	1005	606	778	10	4	600
LEFS□40E□-650□	1006	1055	656	828	12	5	750
LEFS□40E□-700□	1056	1105	706	878	12	5	750
LEFS□40E□-750□	1106	1155	756	928	12	5	750
LEFS□40E□-800□	1156	1205	806	978	14	6	900
LEFS□40E□-850□	1206	1255	856	1028	14	6	900
LEFS□40E□-900□	1256	1305	906	1078	14	6	900
LEFS□40E□-950□	1306	1355	956	1128	16	7	1050
LEFS□40E□-1000□	1356	1405	1006	1178	16	7	1050
LEFS□40E□-1100□	1456	1505	1106	1278	18	8	1200
LEFS□40E□-1200□	1556	1605	1206	1378	18	8	1200

Dimensions: In-line Motor

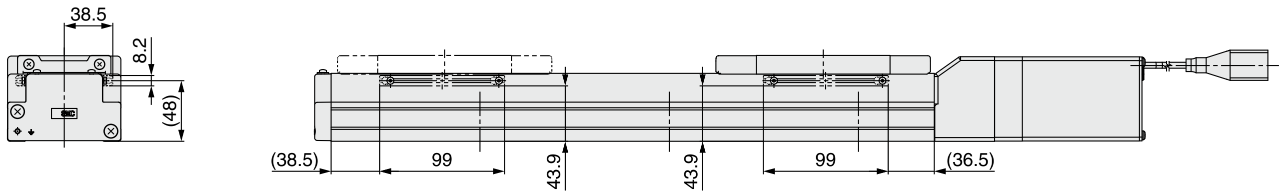
LEFS40E

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

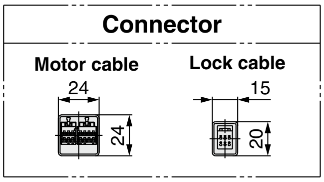


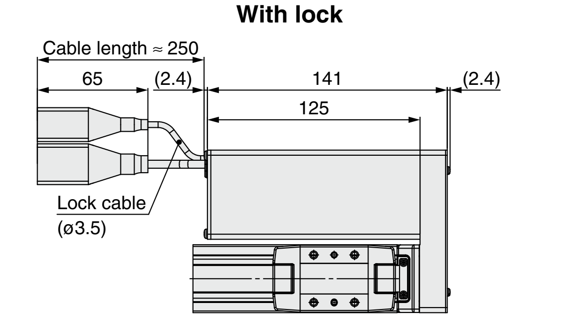
Dimensions [mm]

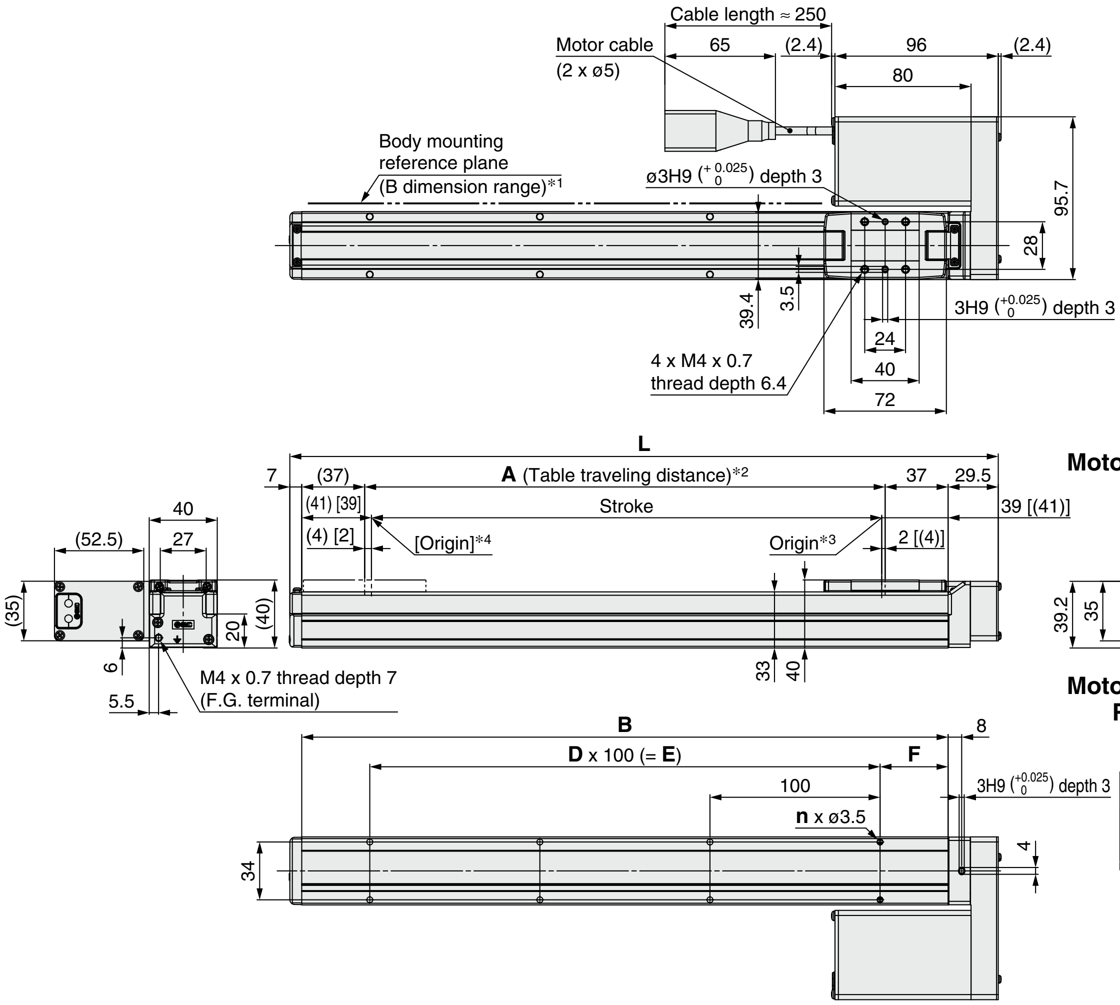
Model	G
LEFS□40E□-150□	130
LEFS□40E□-200□	280
LEFS□40E□-250□	280
LEFS□40E□-300□	280
LEFS□40E□-350□	430
LEFS□40E□-400□	430
LEFS□40E□-450□	430
LEFS□40E□-500□	580
LEFS□40E□-550□	580
LEFS□40E□-600□	580
LEFS□40E□-650□	730
LEFS□40E□-700□	730
LEFS□40E□-750□	730
LEFS□40E□-800□	880
LEFS□40E□-850□	880
LEFS□40E□-900□	880
LEFS□40E□-950□	1030
LEFS□40E□-1000□	1030
LEFS□40E□-1100□	1180
LEFS□40E□-1200□	1180

Dimensions: Motor Parallel

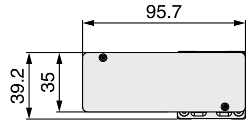
LEFS16RE



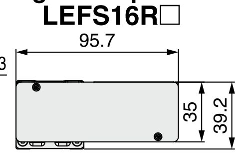




Motor mounting position: Left side parallel
LEFS16L□



Motor mounting position: Right side parallel
LEFS16R□



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 2 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

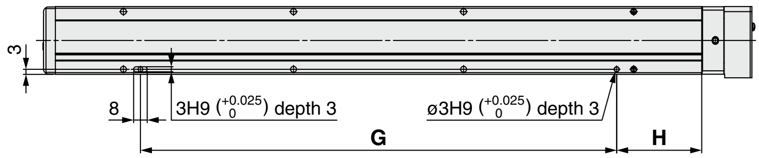
Dimensions [mm]

Model	L	A	B	n	D	E	F
LEFS□16□E□-50□	166.5	56	130	4	—	—	15
LEFS□16□E□-100□	216.5	106	180				40
LEFS□16□E□-150□	266.5	156	230				
LEFS□16□E□-200□	316.5	206	280	6	2	200	
LEFS□16□E□-250□	366.5	256	330				
LEFS□16□E□-300□	416.5	306	380	8	3	300	
LEFS□16□E□-350□	466.5	356	430				
LEFS□16□E□-400□	516.5	406	480	10	4	400	
LEFS□16□E□-450□	566.5	456	530				
LEFS□16□E□-500□	616.5	506	580	12	5	500	

Dimensions: Motor Parallel

LEFS16R

Positioning pin hole*1 (Option): Body bottom



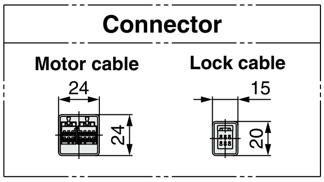
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

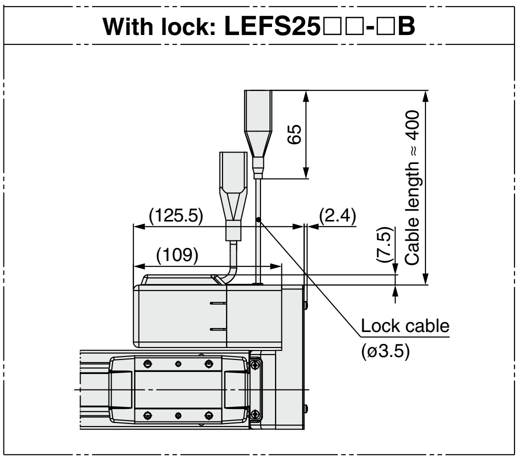
Dimensions [mm]

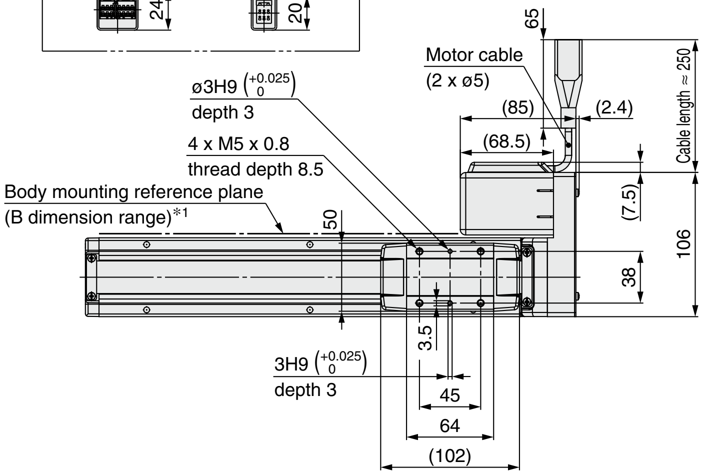
Model	Positioning pin hole: K	
	G	H
LEFS□16□E□-50□	80	25
LEFS□16□E□-100□		50
LEFS□16□E□-150□		
LEFS□16□E□-200□	180	
LEFS□16□E□-250□		
LEFS□16□E□-300□	280	
LEFS□16□E□-350□		
LEFS□16□E□-400□	380	
LEFS□16□E□-450□		
LEFS□16□E□-500□	480	

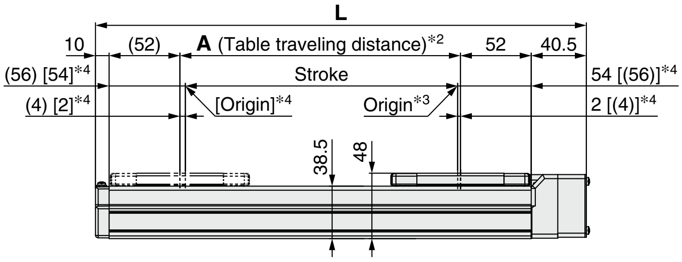
Dimensions: Motor Parallel

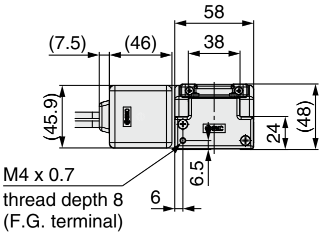
LEFS25R

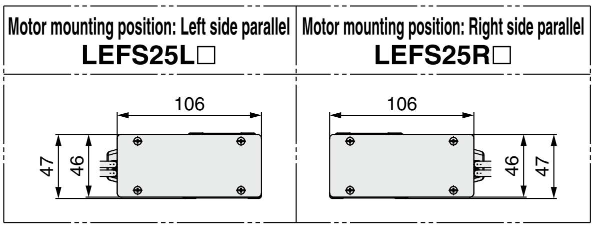


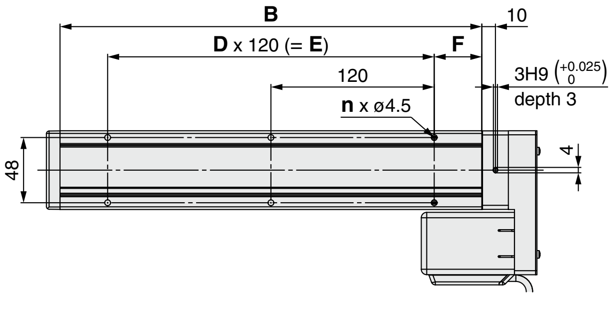












*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions

[mm]

Model	L	A	B	n	D	E	F
LEFS□25□E□-50□	210.5	56	160	4	—	—	20
LEFS□25□E□-100□	260.5	106	210	4	—	—	35
LEFS□25□E□-150□	310.5	156	260	4	—	—	
LEFS□25□E□-200□	360.5	206	310	6	2	240	
LEFS□25□E□-250□	410.5	256	360	6	2	240	
LEFS□25□E□-300□	460.5	306	410	8	3	360	
LEFS□25□E□-350□	510.5	356	460	8	3	360	
LEFS□25□E□-400□	560.5	406	510	8	3	360	

Dimensions

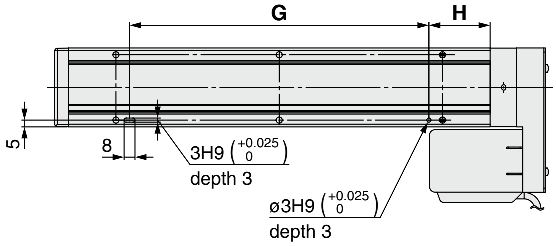
[mm]

Model	L	A	B	n	D	E	F
LEFS□25□E□-450□	610.5	456	560	10	4	480	35
LEFS□25□E□-500□	660.5	506	610	10	4	480	
LEFS□25□E□-550□	710.5	556	660	12	5	600	
LEFS□25□E□-600□	760.5	606	710	12	5	600	
LEFS□25□E□-650□	810.5	656	760	12	5	600	
LEFS□25□E□-700□	860.5	706	810	14	6	720	
LEFS□25□E□-750□	910.5	756	860	14	6	720	
LEFS□25□E□-800□	960.5	806	910	16	7	840	

Dimensions: Motor Parallel

LEFS25R

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

Dimensions [mm]

Model	G	H
LEFS□25□E□-50□	100	30
LEFS□25□E□-100□	100	45
LEFS□25□E□-150□	100	45
LEFS□25□E□-200□	220	45
LEFS□25□E□-250□	220	45
LEFS□25□E□-300□	340	45
LEFS□25□E□-350□	340	45
LEFS□25□E□-400□	340	45

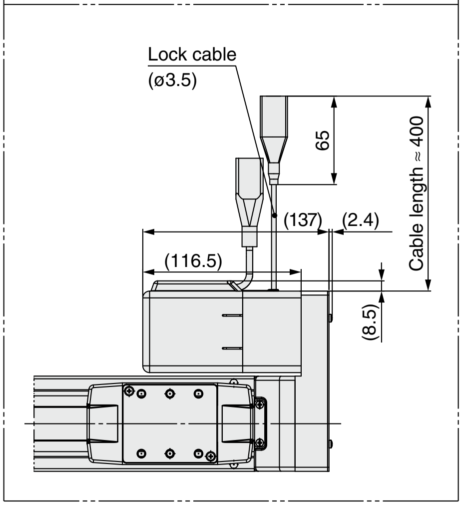
Dimensions [mm]

Model	G	H
LEFS□25□E□-450□	460	45
LEFS□25□E□-500□	460	45
LEFS□25□E□-550□	580	45
LEFS□25□E□-600□	580	45
LEFS□25□E□-650□	580	45
LEFS□25□E□-700□	700	45
LEFS□25□E□-750□	700	45
LEFS□25□E□-800□	820	45

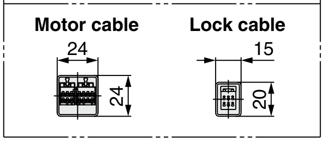
Dimensions: Motor Parallel

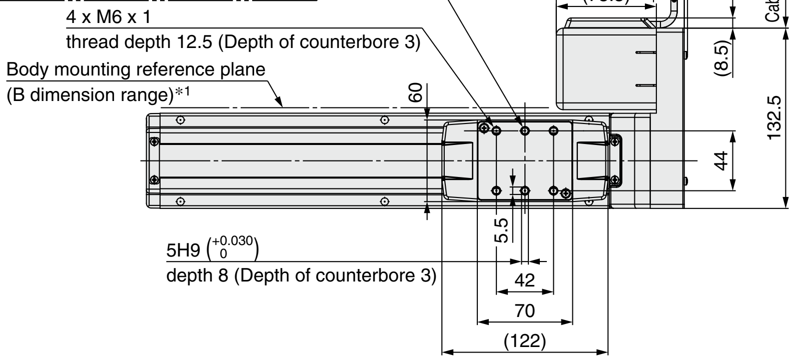
LEFS32R

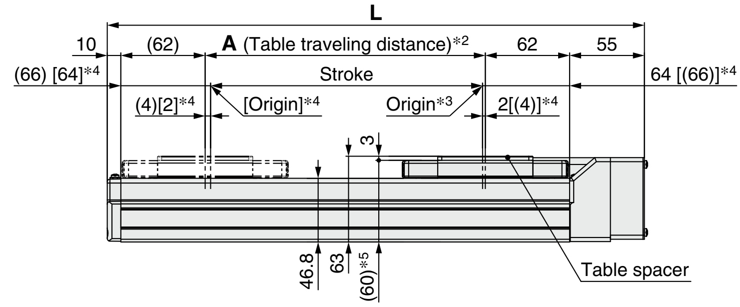
With lock: LEFS32□□-□B

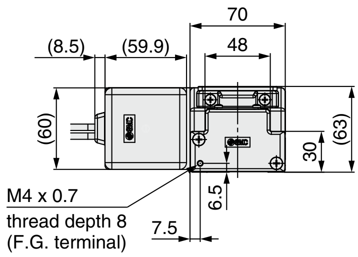


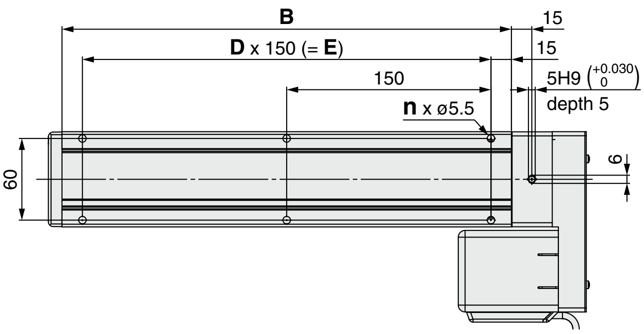
Connector



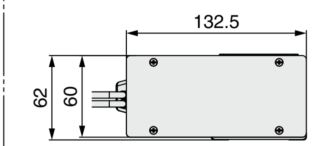




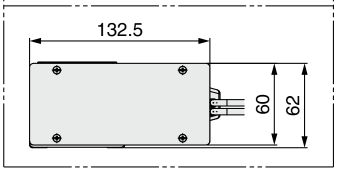




Motor mounting position: Left side parallel
LEFS32L□



Motor mounting position: Right side parallel
LEFS32R□



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm) In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed
*5 When the table spacer is removed

Dimensions [mm]

Model	L	A	B	n	D	E
LEFS□32□E□-50□	245	56	180	4	—	—
LEFS□32□E□-100□	295	106	230	4	—	—
LEFS□32□E□-150□	345	156	280	4	—	—
LEFS□32□E□-200□	395	206	330	6	2	300
LEFS□32□E□-250□	445	256	380	6	2	300
LEFS□32□E□-300□	495	306	430	6	2	300
LEFS□32□E□-350□	545	356	480	8	3	450
LEFS□32□E□-400□	595	406	530	8	3	450
LEFS□32□E□-450□	645	456	580	8	3	450
LEFS□32□E□-500□	695	506	630	10	4	600

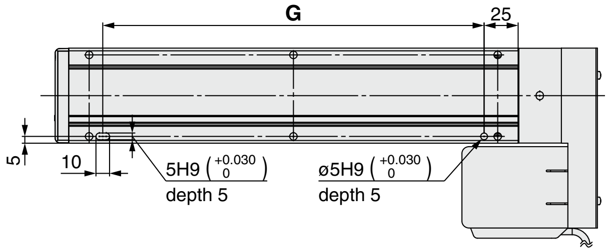
Dimensions [mm]

Model	L	A	B	n	D	E
LEFS□32□E□-550□	745	556	680	10	4	600
LEFS□32□E□-600□	795	606	730	10	4	600
LEFS□32□E□-650□	845	656	780	12	5	750
LEFS□32□E□-700□	895	706	830	12	5	750
LEFS□32□E□-750□	945	756	880	12	5	750
LEFS□32□E□-800□	995	806	930	14	6	900
LEFS□32□E□-850□	1045	856	980	14	6	900
LEFS□32□E□-900□	1095	906	1030	14	6	900
LEFS□32□E□-950□	1145	956	1080	16	7	1050
LEFS□32□E□-1000□	1195	1006	1130	16	7	1050

Dimensions: Motor Parallel

LEFS32R

Positioning pin hole＊1 **(Option): Body bottom**



＊1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

Dimensions [mm]

Model	G
LEFS□32□E□-50□	130
LEFS□32□E□-100□	130
LEFS□32□E□-150□	130
LEFS□32□E□-200□	280
LEFS□32□E□-250□	280
LEFS□32□E□-300□	280
LEFS□32□E□-350□	430
LEFS□32□E□-400□	430
LEFS□32□E□-450□	430
LEFS□32□E□-500□	580

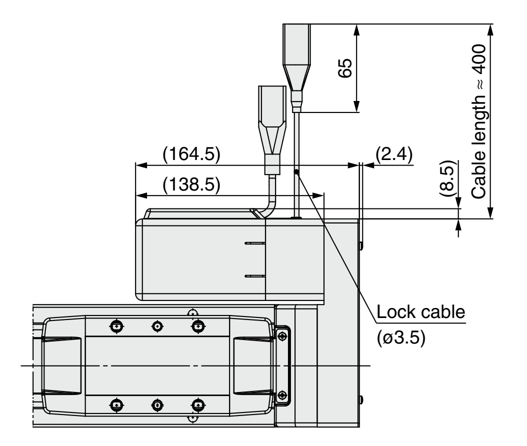
Dimensions [mm]

Model	G
LEFS□32□E□-550□	580
LEFS□32□E□-600□	580
LEFS□32□E□-650□	730
LEFS□32□E□-700□	730
LEFS□32□E□-750□	730
LEFS□32□E□-800□	880
LEFS□32□E□-850□	880
LEFS□32□E□-900□	880
LEFS□32□E□-950□	1030
LEFS□32□E□-1000□	1030

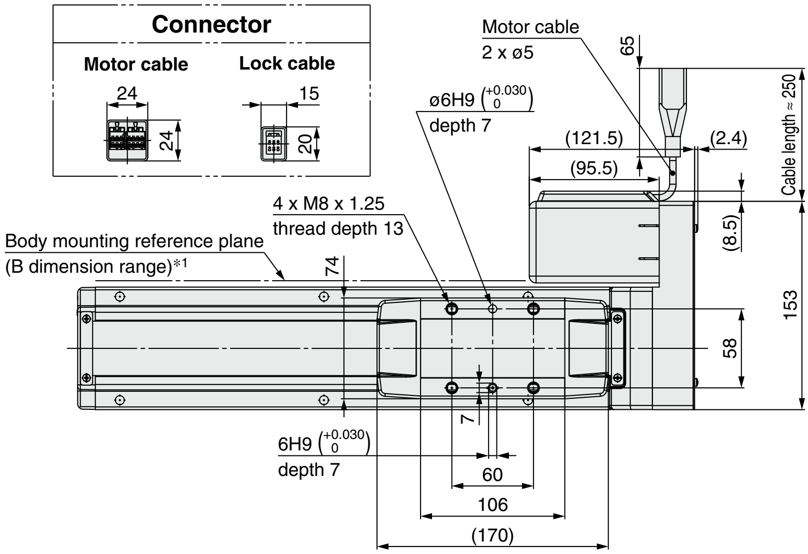
Dimensions: Motor Parallel

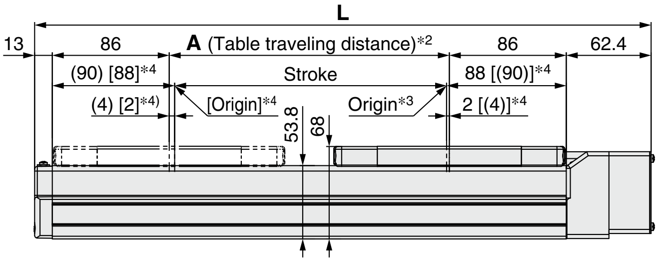
LEFS40R

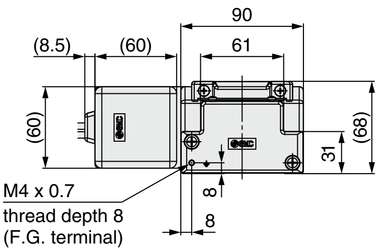
With lock: LEFS40□□-□B

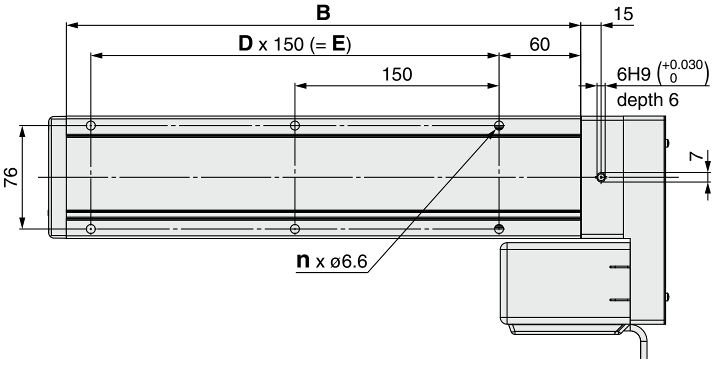


Connector

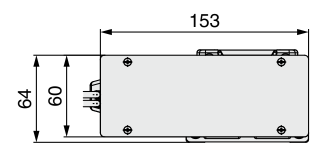




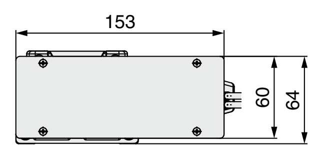




Motor mounting position: Left side parallel
LEFS40L□



Motor mounting position: Right side parallel
LEFS40R□



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane.
Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions [mm]

Model	L	A	B	n	D	E
LEFS□40□E□-150□	403.4	156	328	4	—	150
LEFS□40□E□-200□	453.4	206	378	6	2	300
LEFS□40□E□-250□	503.4	256	428	6	2	300
LEFS□40□E□-300□	553.4	306	478	6	2	300
LEFS□40□E□-350□	603.4	356	528	8	3	450
LEFS□40□E□-400□	653.4	406	578	8	3	450
LEFS□40□E□-450□	703.4	456	628	8	3	450
LEFS□40□E□-500□	753.4	506	678	10	4	600
LEFS□40□E□-550□	803.4	556	728	10	4	600
LEFS□40□E□-600□	853.4	606	778	10	4	600

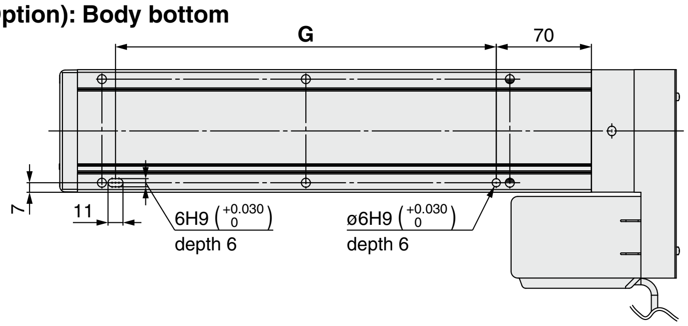
Dimensions [mm]

Model	L	A	B	n	D	E
LEFS□40□E□-650□	903.4	656	828	12	5	750
LEFS□40□E□-700□	953.4	706	878	12	5	750
LEFS□40□E□-750□	1003.4	756	928	12	5	750
LEFS□40□E□-800□	1053.4	806	978	14	6	900
LEFS□40□E□-850□	1103.4	856	1028	14	6	900
LEFS□40□E□-900□	1153.4	906	1078	14	6	900
LEFS□40□E□-950□	1203.4	956	1128	16	7	1050
LEFS□40□E□-1000□	1253.4	1006	1178	16	7	1050
LEFS□40□E□-1100□	1353.4	1106	1278	18	8	1200
LEFS□40□E□-1200□	1453.4	1206	1378	18	8	1200

Dimensions: Motor Parallel

LEFS40R

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

Dimensions [mm]

Model	G
LEFS□40□E□-150□	130
LEFS□40□E□-200□	280
LEFS□40□E□-250□	280
LEFS□40□E□-300□	280
LEFS□40□E□-350□	430
LEFS□40□E□-400□	430
LEFS□40□E□-450□	430
LEFS□40□E□-500□	580
LEFS□40□E□-550□	580
LEFS□40□E□-600□	580

Dimensions [mm]

Model	G
LEFS□40□E□-650□	730
LEFS□40□E□-700□	730
LEFS□40□E□-750□	730
LEFS□40□E□-800□	880
LEFS□40□E□-850□	880
LEFS□40□E□-900□	880
LEFS□40□E□-950□	1030
LEFS□40□E□-1000□	1030
LEFS□40□E□-1100□	1180
LEFS□40□E□-1200□	1180

Slider Type Ball Screw Drive
LEFS Series LEFS16, 25, 32, 40

∗ For details, refer to page 1343 and onward.

RoHS

Clean Room Specification▶p. 943 Secondary Battery Compatible▶p. 975

How to Order

LEFS H 25 R ☐ B – 200 ☐ C N K – S1

JXC☐ Series CD17T

LEC☐ Series AN 1 ☐

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬ ⓭ ⓮

For details on controllers, refer to page 162.

❶ Accuracy

Nil	Basic type
H	High-precision type

❷ Size

16
25
32
40

❸ Motor mounting position

Nil	In-line
R	Right side parallel
L	Left side parallel

❹ Motor type

Symbol	Type	Applicable size				Compatible controllers/drivers
		LEFS16	LEFS25	LEFS32	LEFS40	
Nil	Step motor (Servo/24 VDC)	●	●	●	●	JXC51 JXC61 JXCE1 JXC91 JXCP1 JXCD1 JXCL1 JXCM1 JXCEF JXC9F JXCPF JXCLF LECP1 LECPA
A	Servo motor (24 VDC)	●	●	—	—	LECA6

❺ Lead [mm]

Symbol	LEFS16	LEFS25	LEFS32	LEFS40
H	—	20	24	30
A	10	12	16	20
B	5	6	8	10

❻ Stroke∗1 [mm]

Stroke	Note	
	Size	Applicable stroke
50 to 500	16	50, 100, 150, 200, 250, 300, 350, 400, 450, 500
50 to 800	25	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800
50 to 1000	32	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000
150 to 1200	40	150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 950, 1000, 1100, 1200

❼ Motor option

Nil	Without option
B	With lock

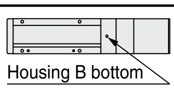
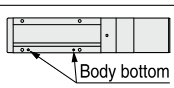
❽ Auto switch compatibility∗2 ∗3 ∗4 ∗5

Nil	None
C	With (Includes 1 mounting bracket)

❾ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

❿ Positioning pin hole

Nil	Housing B bottom∗6	
K	Body bottom 2 locations	

⓫ Actuator cable type/length∗8

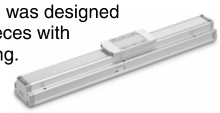
Standard cable [m]

Nil	None
S1	1.5∗10
S3	3∗10
S5	5∗10

Robotic cable [m]

R1	1.5	RA	10∗7
R3	3	RB	15∗7
R5	5	RC	20∗7
R8	8∗7		

Support Guide/*LEFG Series*
The support guide was designed to support workpieces with significant overhang.
p. 213



For auto switches, refer to pages 275 to 278.

JXC□ Series (For details, refer to page 163.)

⓬ Controller

Nil	Without controller
C□1□□	With controller

C D 1 7 T

Interface (Communication protocol/Input/Output)

Symbol	Type	Number of axes, Special specification: Standard	With STO sub-function
5	Parallel input (NPN)	●	
6	Parallel input (PNP)	●	
E	EtherCAT	●	●
9	EtherNet/IP™	●	●
P	PROFINET	●	●
D	DeviceNet®	●	
L	IO-Link	●	●
M	CC-Link	●	

Mounting

7	Screw mounting
8*14	DIN rail

Number of axes, Special specification

Symbol	Number of axes	Specification
1	Single axis	Standard
F	Single axis	With STO sub-function

Communication plug connector, I/O cable*15

Symbol	Type	Applicable interface
Nil	Without accessory	—
S	Straight type communication plug connector	DeviceNet® CC-Link Ver. 1.10
T	T-branch type communication plug connector	
1	I/O cable (1.5 m)	Parallel input (NPN) Parallel input (PNP)
3	I/O cable (3 m)	
5	I/O cable (5 m)	

LEC□ Series (For details, refer to page 163.)

AN 1 □
⓬ ⓭ ⓮

⓬ Controller/Driver type*9

Nil	Without controller/driver	
6N	**LECA6** (Step data input type)	NPN
6P		PNP
1N	**LECP1***10 (Programless type)	NPN
1P		PNP
AN	**LECPA***10 *11 (Pulse input type)	NPN
AP		PNP

⓭ I/O cable length*12

Nil	Without cable (Without communication plug connector)
1	1.5 m
3	3 m*13
5	5 m*13

⓮ Controller/Driver mounting

Nil	Screw mounting
D	DIN rail*14

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Excluding the LEF16
*3 If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
*4 Order auto switches separately. (For details, refer to pages 276 to 278.)
*5 When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.
*6 Refer to the body mounting example on page 280 for the mounting method.
*7 Produced upon receipt of order (Robotic cable only)
*8 The standard cable should only be used on fixed parts.
For use on moving parts, select the robotic cable.
Refer to the **Web Catalog** if only the actuator cable is required.
*9 For details on controllers/drivers and compatible motors, refer to the compatible controllers/drivers on the next page.
*10 Only available for the motor type "Step motor"
*11 When pulse signals are open collector, order the current limiting resistor (LEC-PA-R-□) on page 1062 separately.
*12 When "Without controllers/drivers" is selected for controller/driver types, I/O cable cannot be selected. If an I/O cable is required, refer to the cable for the LECA6 (**Web Catalog**), LECP1 (**Web Catalog**), or LECPA (**Web Catalog**).
*13 When "Pulse input type" is selected for controller/driver types, pulse input usable only with differential. Only 1.5 m cables usable with open collector
*14 The DIN rail is not included. It must be ordered separately.
*15 Select "Nil" for anything other than DeviceNet®, CC-Link, or parallel input.
Select "Nil," "S," or "T" for DeviceNet® or CC-Link.
Select "Nil," "1," "3," or "5" for parallel input.

⚠Caution

[CE/UKCA-compliant products]

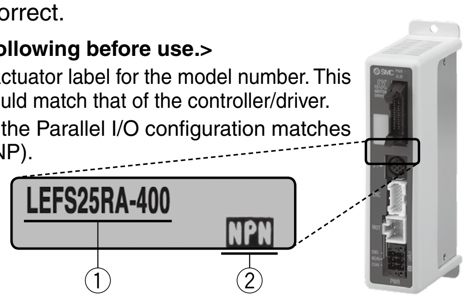
① EMC compliance was tested by combining the electric actuator LEF series and the controller LEC/JXC series.
The EMC depends on the configuration of the customer's control panel and the relationship with other electrical equipment and wiring. Therefore, compliance with the EMC directive cannot be certified for SMC components incorporated into the customer's equipment under actual operating conditions. As a result, it is necessary for the customer to verify compliance with the EMC directive for the machinery and equipment as a whole.
② For the incremental (servo motor 24 VDC) specification, EMC compliance was tested by installing a noise filter set (LEC-NFA). Refer to page 1037 for the noise filter set. Refer to the LECA series Operation Manual for installation.

[UL-compliant products (For the LEC series)]
When compliance with UL is required, the electric actuator and controller/driver should be used with a UL1310 Class 2 power supply.

The actuator and controller/driver are sold as a package.

Confirm that the combination of the controller/driver and actuator is correct.

<Check the following before use.>
① Check the actuator label for the model number. This number should match that of the controller/driver.
② Check that the Parallel I/O configuration matches (NPN or PNP).



* Refer to the Operation Manual for using the products. Please download it via our website: https://www.smcworld.com

Compatible Controllers/Drivers

Type	Step data input type 	Step data input type 	Programless type 	Pulse input type 
Series	**JXC51** **JXC61**	**LECA6**	**LECP1**	**LECPA**
Features	Parallel I/O	Parallel I/O	Capable of setting up operation (step data) without using a PC or teaching box	Operation by pulse signals
Compatible motor	Step motor (Servo/24 VDC)	Servo motor (24 VDC)	Step motor (Servo/24 VDC)	
Max. number of step data	64 points		14 points	—
Power supply voltage	24 VDC			
Reference page	1017	1031	1042	1057

Type	EtherCAT direct input type 	EtherCAT direct input type with STO sub-function 	EtherNet/IP™ direct input type 	EtherNet/IP™ direct input type with STO sub-function 	PROFINET direct input type 	PROFINET direct input type with STO sub-function 	DeviceNet® direct input type 	IO-Link direct input type 	IO-Link direct input type with STO sub-function 	CC-Link direct input type 
Series	**JXCE1**	**JXCEF**	**JXC91**	**JXC9F**	**JXCP1**	**JXCPF**	**JXCD1**	**JXCL1**	**JXCLF**	**JXCM1**
Features	EtherCAT direct input	EtherCAT direct input with STO sub-function	EtherNet/IP™ direct input	EtherNet/IP™ direct input with STO sub-function	PROFINET direct input	PROFINET direct input with STO sub-function	DeviceNet® direct input	IO-Link direct input	IO-Link direct input with STO sub-function	CC-Link direct input
Compatible motor	Step motor (Servo/24 VDC)									
Max. number of step data	64 points									
Power supply voltage	24 VDC									
Reference page	1063									

Specifications

Step Motor (Servo/24 VDC)

Model				LEFS16		LEFS25			LEFS32			LEFS40		
Actuator specifications	Stroke [mm]*1			50 to 500		50 to 800			50 to 1000			150 to 1200		
	Work load [kg]*2	Horizontal	JXC□1/LECP1	14	15	12	25	30	20	45	50	25	55	65
			LECPA/JXC□$^{2}_{3}$	9	10	10	20	20	15	40	45	20	50	60
		Vertical		2	4	0.5	7.5	15	4	10	20	2	2	23
	Controller type: JXC□1, JXC□F, LECP1	Speed*2 [mm/s] Stroke range	Up to 500	10 to 700	5 to 360	20 to 1100	12 to 750	6 to 400	24 to 1200	16 to 800	8 to 520	30 to 1200	20 to 1000	10 to 300
			501 to 600	—	—	20 to 900	12 to 540	6 to 270	24 to 1200	16 to 800	8 to 400	30 to 1200	20 to 1000	10 to 300
			601 to 700	—	—	20 to 630	12 to 420	6 to 230	24 to 930	16 to 620	8 to 310	30 to 1200	20 to 900	10 to 300
			701 to 800	—	—	20 to 550	12 to 330	6 to 180	24 to 750	16 to 500	8 to 250	30 to 1140	20 to 760	10 to 300
			801 to 900	—	—	—	—	—	24 to 610	16 to 410	8 to 200	30 to 930	20 to 620	10 to 300
			901 to 1000	—	—	—	—	—	24 to 500	16 to 340	8 to 170	30 to 780	20 to 520	10 to 250
			1001 to 1100	—	—	—	—	—	—	—	—	30 to 660	20 to 440	10 to 220
			1101 to 1200	—	—	—	—	—	—	—	—	30 to 570	20 to 380	10 to 190
	Driver type: LECPA, JXC□$^{2}_{3}$	Speed*2 [mm/s] Stroke range	Up to 500	10 to 500	5 to 250	20 to 1000	12 to 500	6 to 250	24 to 1200	16 to 500	8 to 250	30 to 500	20 to 500	10 to 250
			501 to 600	—	—	20 to 900	12 to 500	6 to 250	24 to 1200	16 to 500	8 to 250	30 to 500	20 to 500	10 to 250
			601 to 700	—	—	20 to 630	12 to 420	6 to 230	24 to 930	16 to 500	8 to 250	30 to 500	20 to 500	10 to 250
			701 to 800	—	—	20 to 550	12 to 330	6 to 180	24 to 750	16 to 500	8 to 250	30 to 500	20 to 500	10 to 250
			801 to 900	—	—	—	—	—	24 to 610	16 to 410	8 to 200	30 to 500	20 to 500	10 to 250
			901 to 1000	—	—	—	—	—	24 to 500	16 to 340	8 to 170	30 to 500	20 to 500	10 to 250
			1001 to 1100	—	—	—	—	—	—	—	—	30 to 500	20 to 440	10 to 220
			1101 to 1200	—	—	—	—	—	—	—	—	30 to 500	20 to 380	10 to 190
	Max. acceleration/deceleration [mm/s^2]			3000										
	Positioning repeatability [mm]	Basic type		±0.02										
		High-precision type		±0.015 (Lead H: ±0.02)										
	Lost motion [mm]*3	Basic type		0.1 or less										
		High-precision type		0.05 or less										
	Lead [mm]			10	5	20	12	6	24	16	8	30	20	10
	Impact/Vibration resistance [m/s^2]*4			50/20										
	Actuation type			Ball screw (LEFS□), Ball screw + Belt (LEFS□$^{R}_{L}$)										
	Guide type			Linear guide										
	Static allowable moment*5 [N·m]	Mep (Pitching)		10		27			46			110		
		Mey (Yawing)		10		27			46			110		
		Mer (Rolling)		20		52			101			207		
	Operating temperature range [°C]			5 to 40										
	Operating humidity range [%RH]			90 or less (No condensation)										
	Enclosure			IP30										
Electric specifications	Motor size			□28		□42			□56.4					
	Motor type			Step motor (Servo/24 VDC)										
	Encoder			Incremental										
	Power supply voltage [V]			24 VDC ±10%										
	Power [W]*6 *8			Max. power 51		Max. power 57			Max. power 123			Max. power 141		
Lock unit specifications	Type*7			Non-magnetizing lock										
	Holding force [N]			29	59	47	78	157	72	118	216	75	113	245
	Power [W]*8			2.9		5			5			5		
	Rated voltage [V]			24 VDC ±10%										

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Speed changes according to the controller/driver type and work load. Check the “Speed–Work Load Graph (Guide)” on pages 114 and 115.
Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m.
*3 A reference value for correcting errors in reciprocal operation
*4 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*5 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*6 Indicates the max. power during operation (including the controller)
This value can be used for the selection of the power supply.
*7 With lock only
*8 For an actuator with lock, add the power for the lock.

Specifications

Servo Motor (24 VDC)

	Model			LEFS16A		LEFS25A		
Actuator specifications	Stroke [mm]*1			50 to 500		50 to 800		
	Work load*2 [kg]	Horizontal		7	10	5	11	18
		Vertical		2	4	1	2.5	5
	Speed*2 [mm/s]	Stroke range	Up to 500	1 to 500	1 to 250	2 to 800	2 to 500	1 to 250
			501 to 600	—	—			
			601 to 700	—	—	2 to 630	2 to 420	1 to 230
			701 to 800	—	—	2 to 550	2 to 330	1 to 180
	Max. acceleration/deceleration [mm/s²]			3000				
	Positioning repeatability [mm]	Basic type		±0.02				
		High-precision type		±0.015 (Lead H: ±0.02)				
	Lost motion*3 [mm]	Basic type		0.1 or less				
		High-precision type		0.05 or less				
	Lead [mm]			10	5	20	12	6
	Impact/Vibration resistance [m/s²]*4			50/20				
	Actuation type			Ball screw (LEFS□), Ball screw + Belt (LEFS□$^{R}_{L}$)				
	Guide type			Linear guide				
	Static allowable moment*5 [N·m]	Mep (Pitching)		10		27		
		Mey (Yawing)		10		27		
		Mer (Rolling)		20		52		
	Operating temperature range [°C]			5 to 40				
	Operating humidity range [%RH]			90 or less (No condensation)				
	Enclosure			IP30				
Electric specifications	Motor size			□28		□42		
	Motor output [W]			30		36		
	Motor type			Servo motor (24 VDC)				
	Encoder			Incremental				
	Power supply voltage [V]			24 VDC ±10%				
	Power [W]*6 *8			Max. power 70		Max. power 113		
Lock unit specifications	Type*7			Non-magnetizing lock				
	Holding force [N]			29	59	47	78	157
	Power [W]*8			2.9		5		
	Rated voltage [V]			24 VDC ±10%				

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Check the “Speed–Work Load Graph (Guide)” on page 117 for details.
Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m.
*3 A reference value for correcting errors in reciprocal operation
*4 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*5 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*6 Indicates the max. power during operation (including the controller)
This value can be used for the selection of the power supply.
*7 With lock only
*8 For an actuator with lock, add the power for the lock.

Weight

Series	LEFS16									
Stroke [mm]	50	100	150	200	250	300	350	400	450	500
Product weight [kg]	0.83	0.90	0.98	1.05	1.13	1.20	1.28	1.35	1.43	1.50
Additional weight with lock [kg]	0.12									

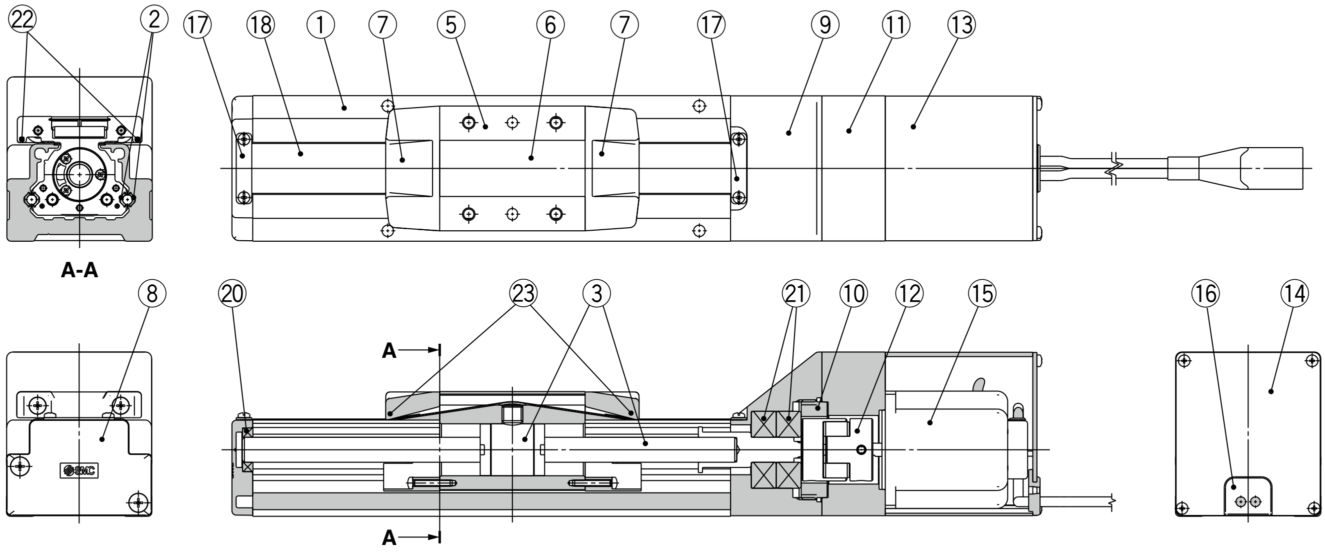
Series	LEFS25															
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Product weight [kg]	1.70	1.84	1.98	2.12	2.26	2.40	2.54	2.68	2.82	2.96	3.10	3.24	3.38	3.52	3.66	3.80
Additional weight with lock [kg]	0.26															

Series	LEFS32																			
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Product weight [kg]	3.15	3.35	3.55	3.75	3.95	4.15	4.35	4.55	4.75	4.95	5.15	5.35	5.55	5.75	5.95	6.15	6.35	6.55	6.75	6.95
Additional weight with lock [kg]	0.53																			

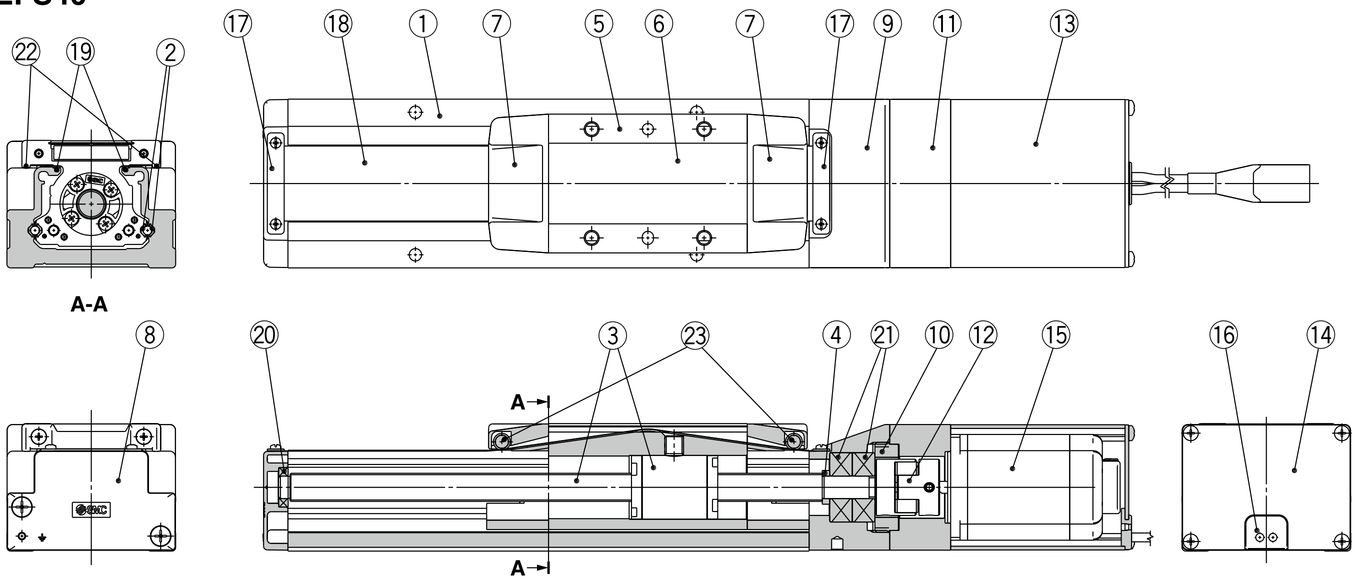
Series	LEFS40																			
Stroke [mm]	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
Product weight [kg]	5.37	5.65	5.93	6.21	6.49	6.77	7.15	7.33	7.61	7.89	8.17	8.45	8.73	9.01	9.29	9.57	9.85	10.13	10.69	11.25
Additional weight with lock [kg]	0.53																			

Construction: In-line Motor

LEFS16, 25, 32



LEFS40



Component Parts

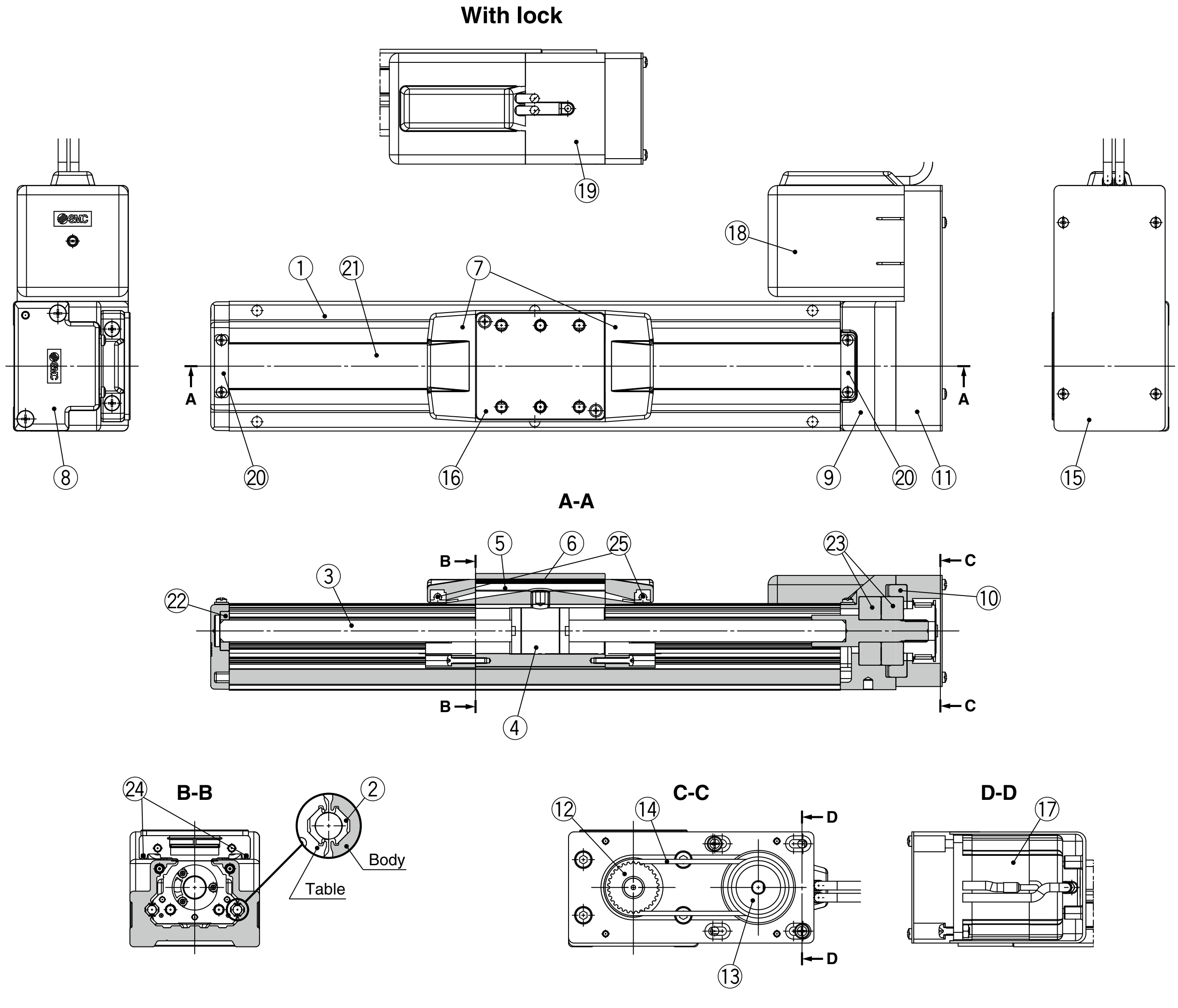
No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw assembly**	—	
4	**Spacer** **LEFS40**	—	
5	**Table**	Aluminum alloy	Anodized
6	**Blanking plate**	Aluminum alloy	Anodized
7	**Seal band holder**	Synthetic resin	
8	**Housing A**	Aluminum die-casted	Coating
9	**Housing B**	Aluminum die-casted	Coating
10	**Bearing stopper**	Aluminum alloy	
11	**Motor mount**	Aluminum alloy	Coating
12	**Coupling**	—	
13	**Motor cover**	Aluminum alloy	Anodized
14	**End cover**	Aluminum alloy	Anodized
15	**Motor**	—	

No.	Description	Material	Note
16	**Rubber bushing**	NBR	
17	**Band stopper**	Stainless steel	
18	**Dust seal band**	Stainless steel	
19	**Seal magnet**	—	
20	**Bearing**	—	Stroke 250 mm or more
21	**Bearing**	—	
22	**Magnet**	—	With auto switch compatibility
23	**Roller assembly**	—	Without grease application

Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When “Without” is selected for the grease application, grease is applied only on the back side.)	

Construction: Motor Parallel



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw shaft**	—	
4	**Ball screw nut**	—	
5	**Table**	Aluminum alloy	Anodized
6	**Blanking plate**	Aluminum alloy	Anodized
7	**Seal band holder**	Synthetic resin	
8	**Housing A**	Aluminum die-casted	Coating
9	**Housing B**	Aluminum die-casted	Coating
10	**Bearing stopper**	Aluminum alloy	
11	**Return plate**	Aluminum alloy	Coating
12	**Pulley**	Aluminum alloy	
13	**Pulley**	Aluminum alloy	
15	**Cover plate**	Aluminum alloy	Anodized
16	**Table spacer**	Aluminum alloy	Anodized (LEFS32 only)
17	**Motor**	—	
18	**Motor cover**	Synthetic resin	
19	**Motor cover with lock**	Aluminum alloy	Anodized
20	**Band stopper**	Stainless steel	
21	**Dust seal band**	Stainless steel	
22	**Bearing**	—	Stroke 250 mm or more
23	**Bearing**	—	
24	**Magnet**	—	With auto switch compatibility
25	**Roller assembly**	—	Without grease application

Replacement Parts/Belt

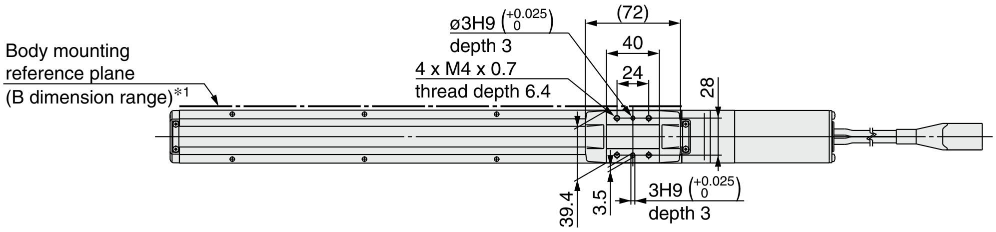
No.	Size	Order no.
14	16	LE-D-6-1
	25	LE-D-6-2
	32	LE-D-6-3
	40	LE-D-6-4

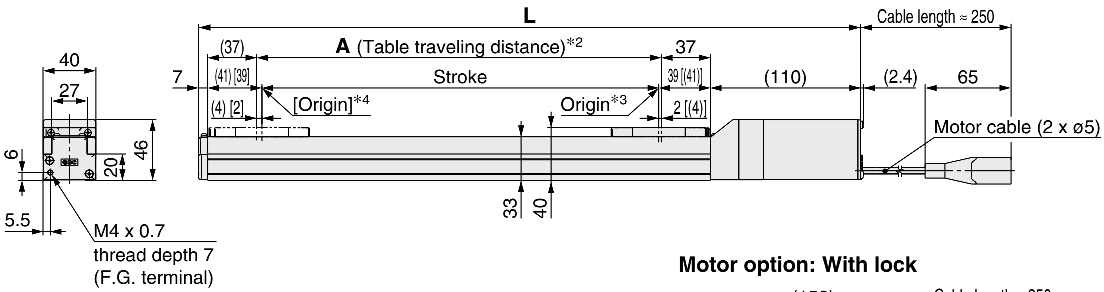
Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When “Without” is selected for the grease application, grease is applied only on the back side.)	

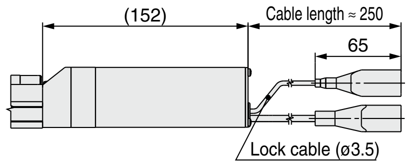
Dimensions: In-line Motor

LEFS16

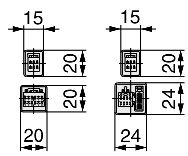


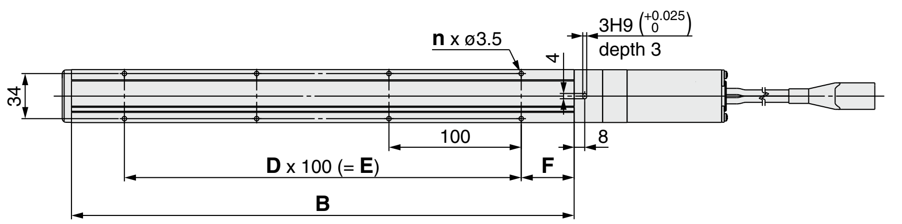


Motor option: With lock

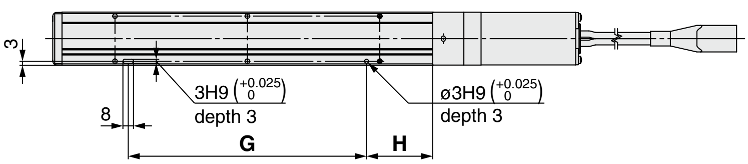


Step motor **Servo motor**





Positioning pin hole*5 (Option): Body bottom



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 2 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed
*5 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

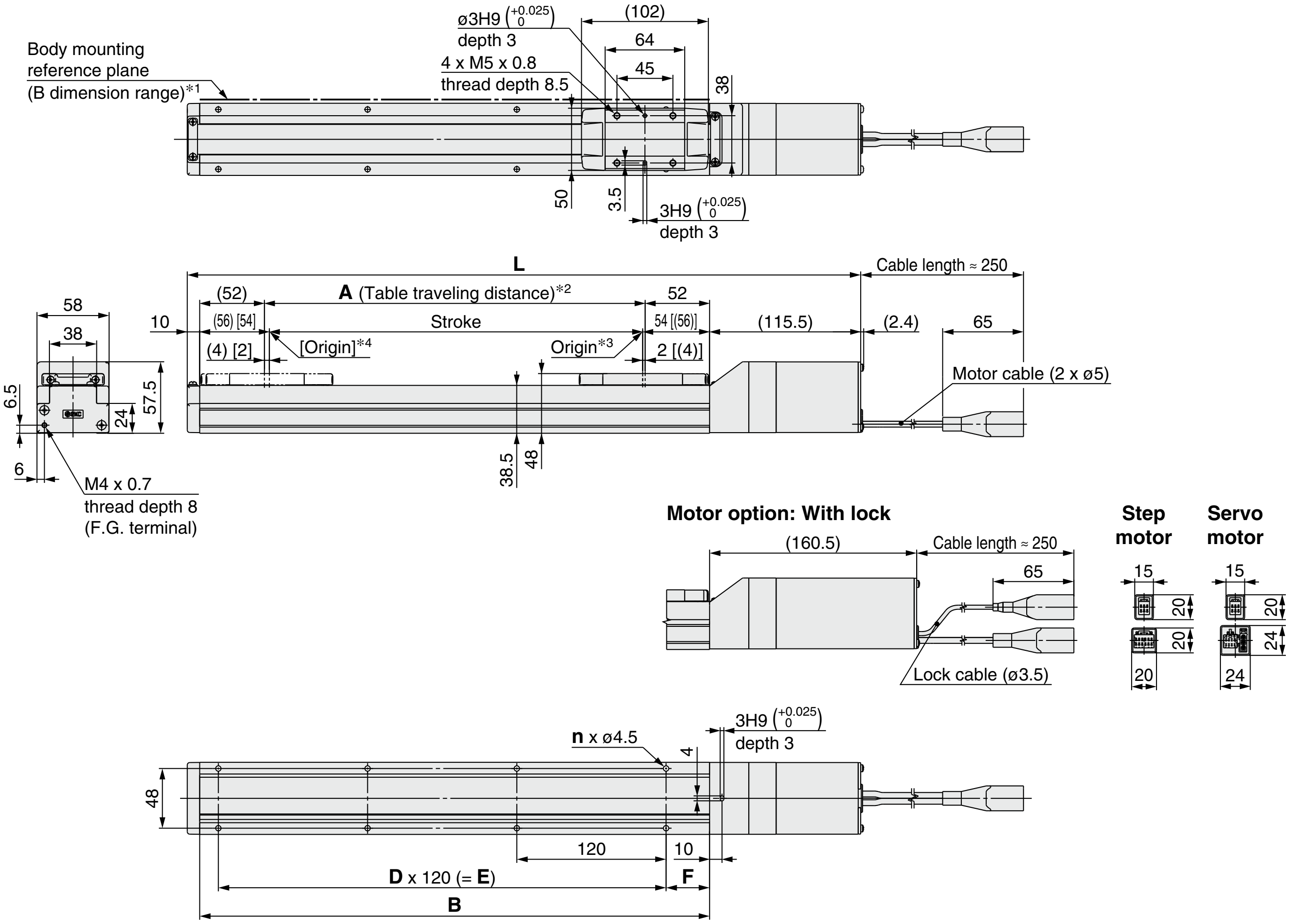
Dimensions

[mm]

Model	L		A	B	n	D	E	F	G	H
	Without lock	With lock								
LEFS□16□-50□	247	289	56	130	4	—	—	15	80	25
LEFS□16□-100□	297	339	106	180	4	—	—	40	80	50
LEFS□16□-150□	347	389	156	230	4	—	—		80	50
LEFS□16□-200□	397	439	206	280	6	2	200		180	50
LEFS□16□-250□	447	489	256	330	6	2	200		180	50
LEFS□16□-300□	497	539	306	380	8	3	300		280	50
LEFS□16□-350□	547	589	356	430	8	3	300		280	50
LEFS□16□-400□	597	639	406	480	10	4	400		380	50
LEFS□16□-450□	647	689	456	530	10	4	400		380	50
LEFS□16□-500□	697	739	506	580	12	5	500		480	50

Dimensions: In-line Motor

LEFS25



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions

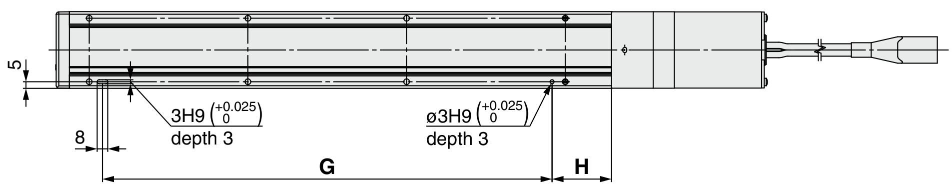
[mm]

Model	L		A	B	n	D	E	F
	Without lock	With lock						
LEFS□25□-50□	285.5	330.5	56	160	4	—	—	20
LEFS□25□-100□	335.5	380.5	106	210	4	—	—	35
LEFS□25□-150□	385.5	430.5	156	260	4	—	—	
LEFS□25□-200□	435.5	480.5	206	310	6	2	240	
LEFS□25□-250□	485.5	530.5	256	360	6	2	240	
LEFS□25□-300□	535.5	580.5	306	410	8	3	360	
LEFS□25□-350□	585.5	630.5	356	460	8	3	360	
LEFS□25□-400□	635.5	680.5	406	510	8	3	360	
LEFS□25□-450□	685.5	730.5	456	560	10	4	480	
LEFS□25□-500□	735.5	780.5	506	610	10	4	480	
LEFS□25□-550□	785.5	830.5	556	660	12	5	600	
LEFS□25□-600□	835.5	880.5	606	710	12	5	600	
LEFS□25□-650□	885.5	930.5	656	760	12	5	600	
LEFS□25□-700□	935.5	980.5	706	810	14	6	720	
LEFS□25□-750□	985.5	1030.5	756	860	14	6	720	
LEFS□25□-800□	1035.5	1080.5	806	910	16	7	840	

Dimensions: In-line Motor

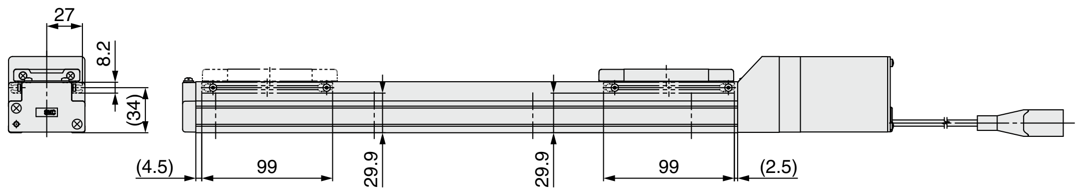
LEFS25

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



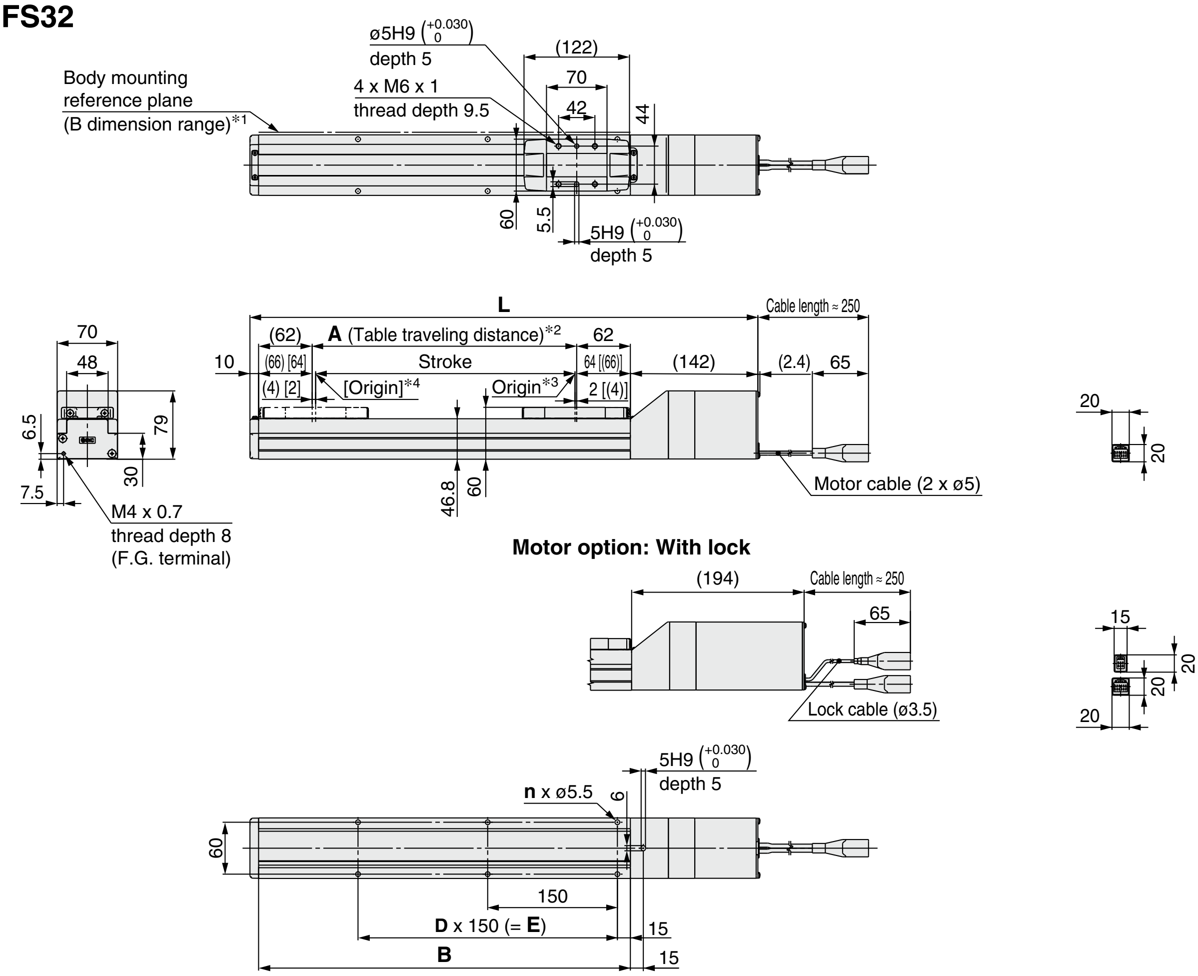
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

Model	G	H
LEFS□25□-50□	100	30
LEFS□25□-100□	100	45
LEFS□25□-150□	100	45
LEFS□25□-200□	220	45
LEFS□25□-250□	220	45
LEFS□25□-300□	340	45
LEFS□25□-350□	340	45
LEFS□25□-400□	340	45
LEFS□25□-450□	460	45
LEFS□25□-500□	460	45
LEFS□25□-550□	580	45
LEFS□25□-600□	580	45
LEFS□25□-650□	580	45
LEFS□25□-700□	700	45
LEFS□25□-750□	700	45
LEFS□25□-800□	820	45

Dimensions: In-line Motor

LEFS32



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions

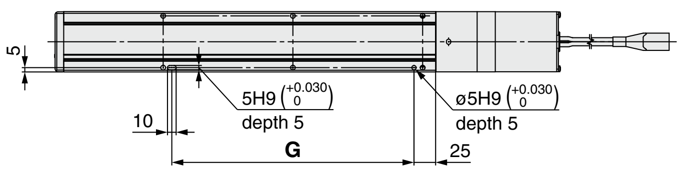
[mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□32□-50□	332	384	56	180	4	—	—
LEFS□32□-100□	382	434	106	230	4	—	—
LEFS□32□-150□	432	484	156	280	4	—	—
LEFS□32□-200□	482	534	206	330	6	2	300
LEFS□32□-250□	532	584	256	380	6	2	300
LEFS□32□-300□	582	634	306	430	6	2	300
LEFS□32□-350□	632	684	356	480	8	3	450
LEFS□32□-400□	682	734	406	530	8	3	450
LEFS□32□-450□	732	784	456	580	8	3	450
LEFS□32□-500□	782	834	506	630	10	4	600
LEFS□32□-550□	832	884	556	680	10	4	600
LEFS□32□-600□	882	934	606	730	10	4	600
LEFS□32□-650□	932	984	656	780	12	5	750
LEFS□32□-700□	982	1034	706	830	12	5	750
LEFS□32□-750□	1032	1084	756	880	12	5	750
LEFS□32□-800□	1082	1134	806	930	14	6	900
LEFS□32□-850□	1132	1184	856	980	14	6	900
LEFS□32□-900□	1182	1234	906	1030	14	6	900
LEFS□32□-950□	1232	1284	956	1080	16	7	1050
LEFS□32□-1000□	1282	1334	1006	1130	16	7	1050

Dimensions: In-line Motor

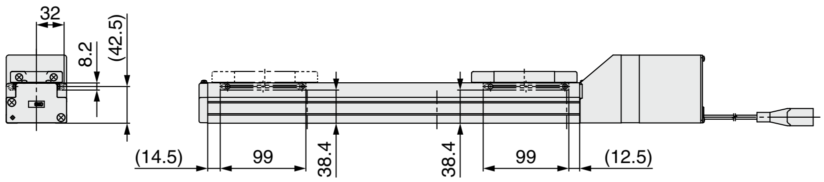
LEFS32

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



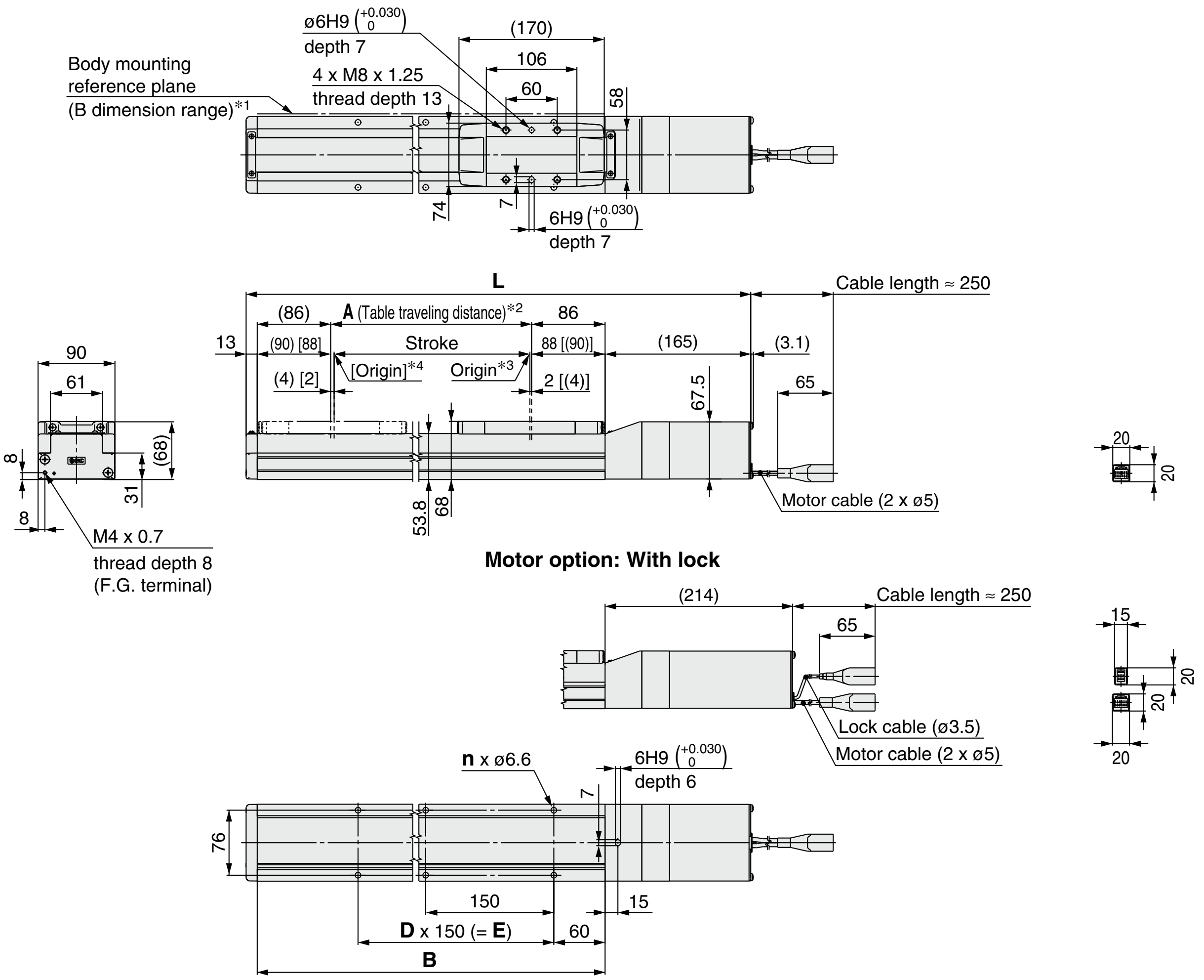
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

Model	G
LEFS□32□-50□	130
LEFS□32□-100□	130
LEFS□32□-150□	130
LEFS□32□-200□	280
LEFS□32□-250□	280
LEFS□32□-300□	280
LEFS□32□-350□	430
LEFS□32□-400□	430
LEFS□32□-450□	430
LEFS□32□-500□	580
LEFS□32□-550□	580
LEFS□32□-600□	580
LEFS□32□-650□	730
LEFS□32□-700□	730
LEFS□32□-750□	730
LEFS□32□-800□	880
LEFS□32□-850□	880
LEFS□32□-900□	880
LEFS□32□-950□	1030
LEFS□32□-1000□	1030

Dimensions: In-line Motor

LEFS40



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

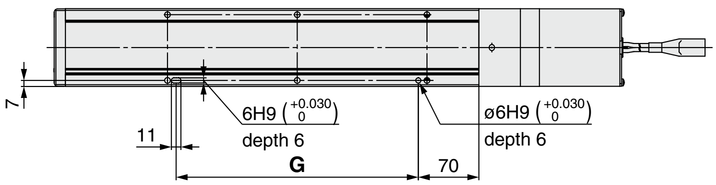
Dimensions [mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□40□-150□	506	555	156	328	4	—	150
LEFS□40□-200□	556	605	206	378	6	2	300
LEFS□40□-250□	606	655	256	428	6	2	300
LEFS□40□-300□	656	705	306	478	6	2	300
LEFS□40□-350□	706	755	356	528	8	3	450
LEFS□40□-400□	756	805	406	578	8	3	450
LEFS□40□-450□	806	855	456	628	8	3	450
LEFS□40□-500□	856	905	506	678	10	4	600
LEFS□40□-550□	906	955	556	728	10	4	600
LEFS□40□-600□	956	1005	606	778	10	4	600
LEFS□40□-650□	1006	1055	656	828	12	5	750
LEFS□40□-700□	1056	1105	706	878	12	5	750
LEFS□40□-750□	1106	1155	756	928	12	5	750
LEFS□40□-800□	1156	1205	806	978	14	6	900
LEFS□40□-850□	1206	1255	856	1028	14	6	900
LEFS□40□-900□	1256	1305	906	1078	14	6	900
LEFS□40□-950□	1306	1355	956	1128	16	7	1050
LEFS□40□-1000□	1356	1405	1006	1178	16	7	1050
LEFS□40□-1100□	1456	1505	1106	1278	18	8	1200
LEFS□40□-1200□	1556	1605	1206	1378	18	8	1200

Dimensions: In-line Motor

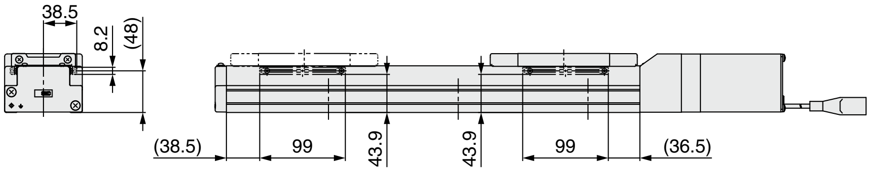
LEFS40

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

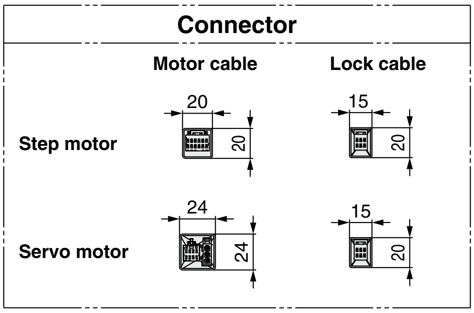


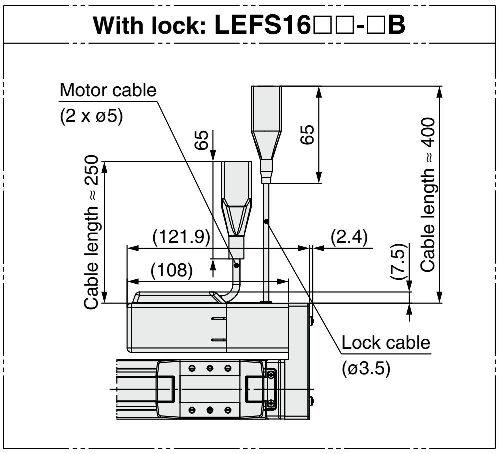
Dimensions [mm]

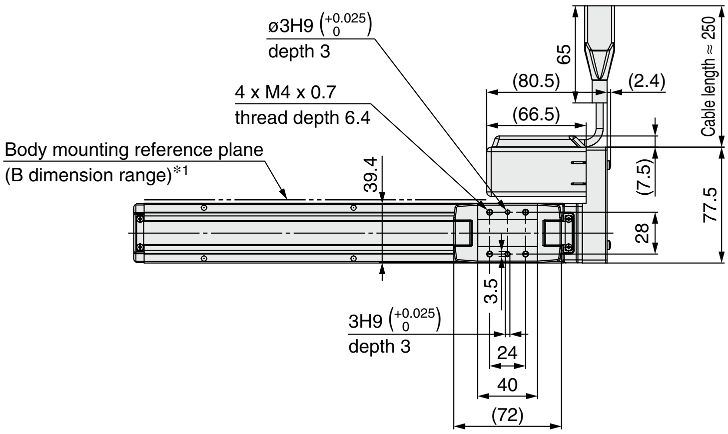
Model	G
LEFS□40□-150□	130
LEFS□40□-200□	280
LEFS□40□-250□	280
LEFS□40□-300□	280
LEFS□40□-350□	430
LEFS□40□-400□	430
LEFS□40□-450□	430
LEFS□40□-500□	580
LEFS□40□-550□	580
LEFS□40□-600□	580
LEFS□40□-650□	730
LEFS□40□-700□	730
LEFS□40□-750□	730
LEFS□40□-800□	880
LEFS□40□-850□	880
LEFS□40□-900□	880
LEFS□40□-950□	1030
LEFS□40□-1000□	1030
LEFS□40□-1100□	1180
LEFS□40□-1200□	1180

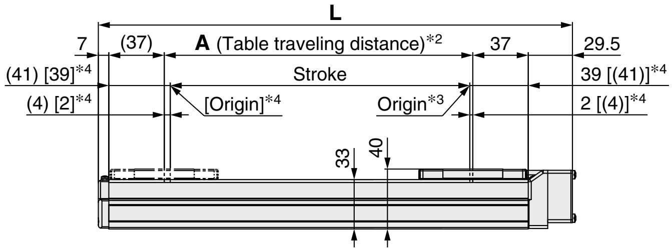
Dimensions: Motor Parallel

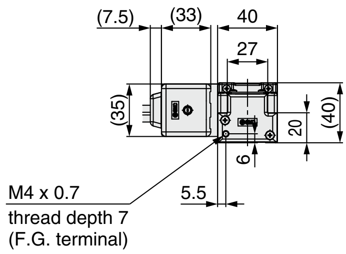
LEFS16

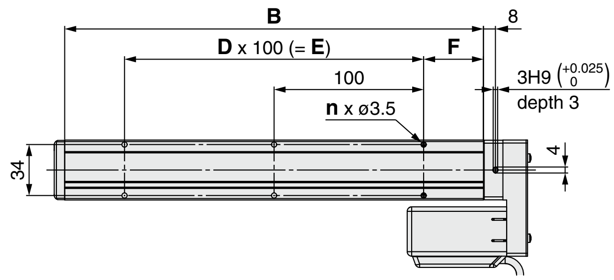


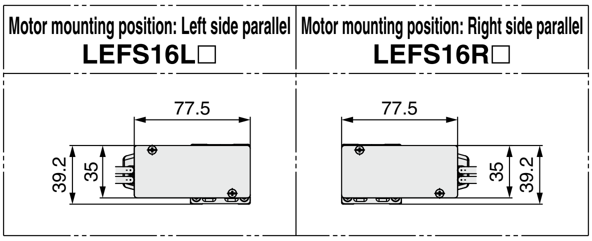




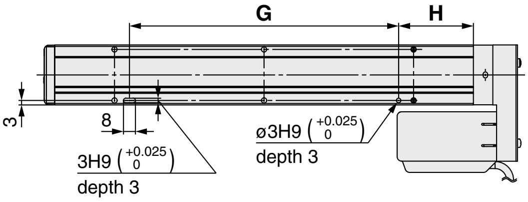








Positioning pin hole*5 (Option): Body bottom



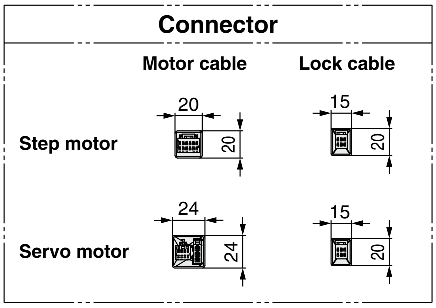
*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 2 mm or more. (Recommended height: 5 mm) In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed
*5 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

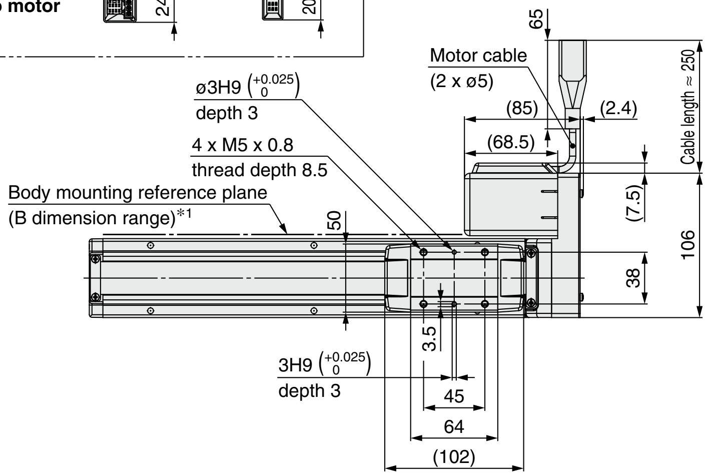
Dimensions [mm]

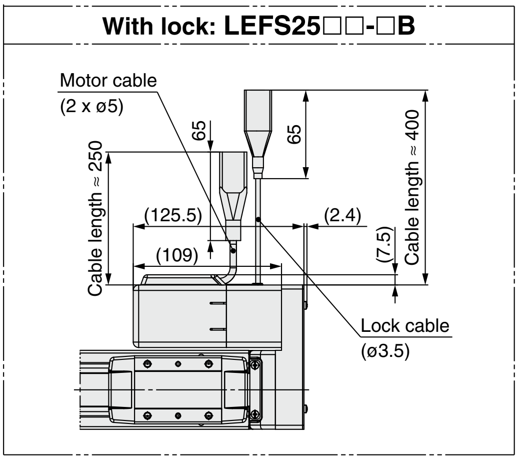
Model	L	A	B	n	D	E	F	G	H
LEFS□16□□-50□	166.5	56	130	4	—	—	15	80	25
LEFS□16□□-100□	216.5	106	180	4	—	—	40	80	50
LEFS□16□□-150□	266.5	156	230	4	—	—		80	50
LEFS□16□□-200□	316.5	206	280	6	2	200		180	50
LEFS□16□□-250□	366.5	256	330	6	2	200		180	50
LEFS□16□□-300□	416.5	306	380	8	3	300		280	50
LEFS□16□□-350□	466.5	356	430	8	3	300		280	50
LEFS□16□□-400□	516.5	406	480	10	4	400		380	50
LEFS□16□□-450□	566.5	456	530	10	4	400		380	50
LEFS□16□□-500□	616.5	506	580	12	5	500		480	50

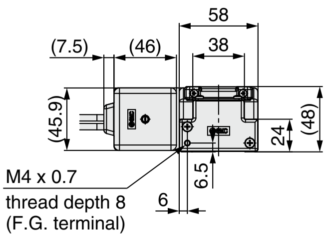
Dimensions: Motor Parallel

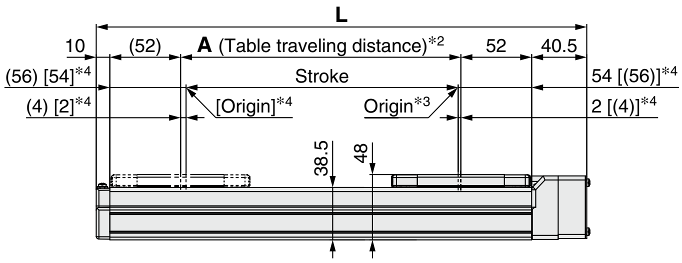
LEFS25R

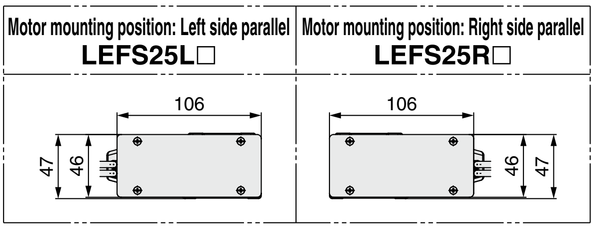


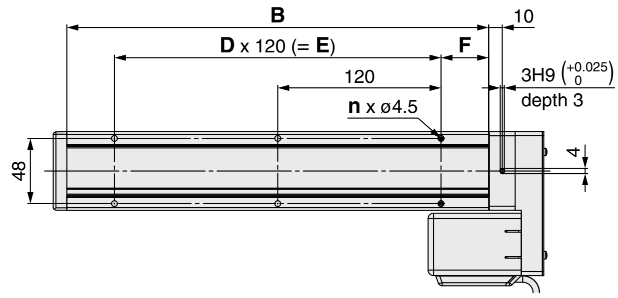












*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm) In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions

[mm]

Model	L	A	B	n	D	E	F
LEFS□25□□-50□	210.5	56	160	4	—	—	20
LEFS□25□□-100□	260.5	106	210	4	—	—	35
LEFS□25□□-150□	310.5	156	260	4	—	—	
LEFS□25□□-200□	360.5	206	310	6	2	240	
LEFS□25□□-250□	410.5	256	360	6	2	240	
LEFS□25□□-300□	460.5	306	410	8	3	360	
LEFS□25□□-350□	510.5	356	460	8	3	360	
LEFS□25□□-400□	560.5	406	510	8	3	360	

Dimensions

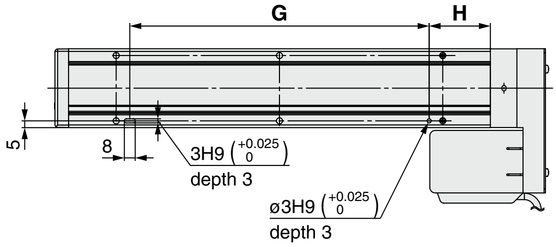
[mm]

Model	L	A	B	n	D	E	F
LEFS□25□□-450□	610.5	456	560	10	4	480	35
LEFS□25□□-500□	660.5	506	610	10	4	480	
LEFS□25□□-550□	710.5	556	660	12	5	600	
LEFS□25□□-600□	760.5	606	710	12	5	600	
LEFS□25□□-650□	810.5	656	760	12	5	600	
LEFS□25□□-700□	860.5	706	810	14	6	720	
LEFS□25□□-750□	910.5	756	860	14	6	720	
LEFS□25□□-800□	960.5	806	910	16	7	840	

Dimensions: Motor Parallel

LEFS25R

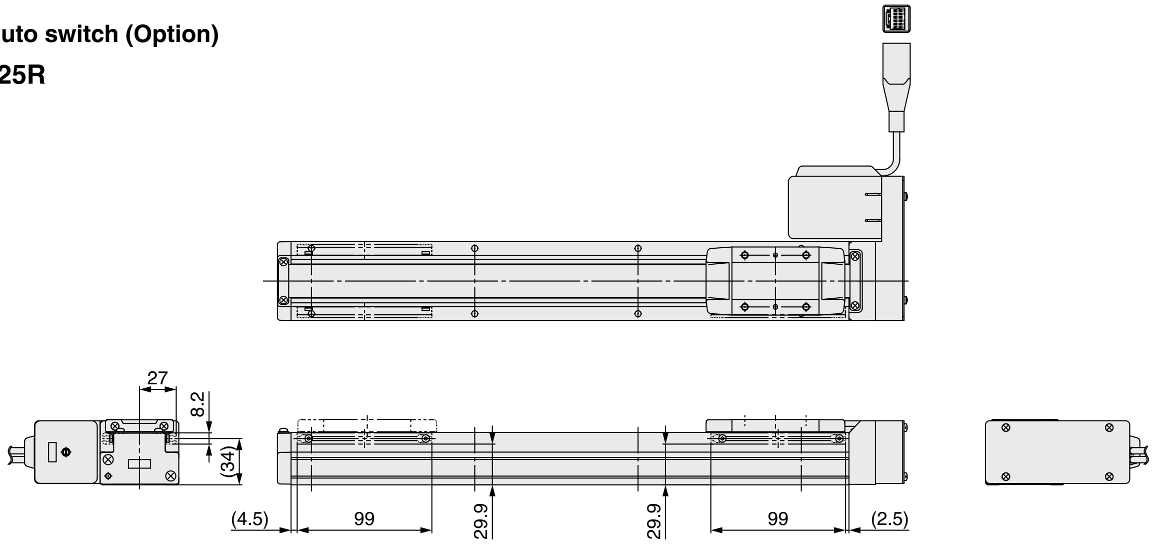
Positioning pin hole*1 (Option): Body bottom



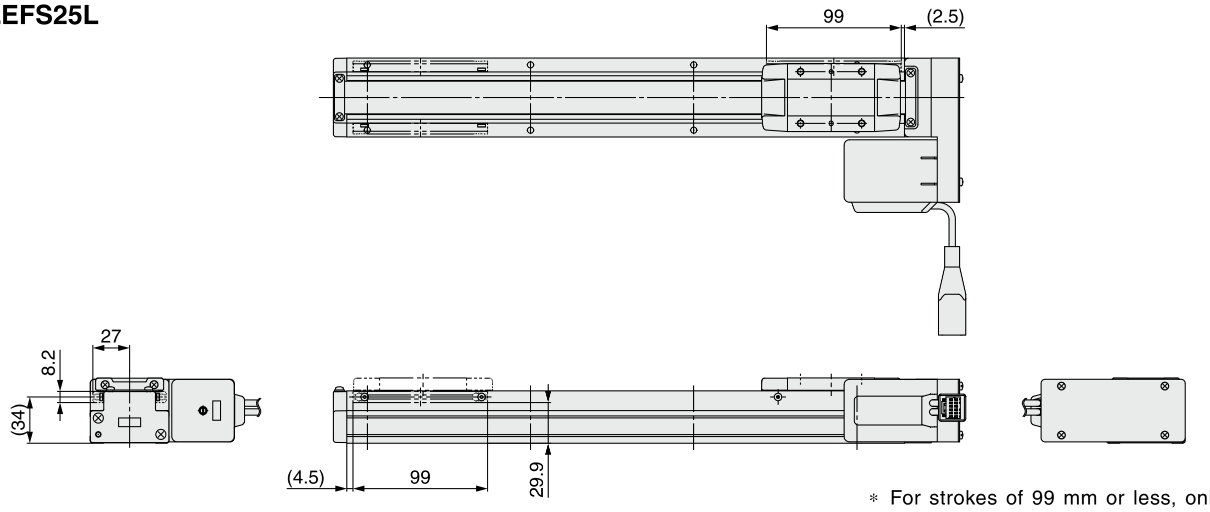
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS25R



LEFS25L



* For strokes of 99 mm or less, only 1 auto switch mounting bracket can be installed on the motor side.

Dimensions [mm]

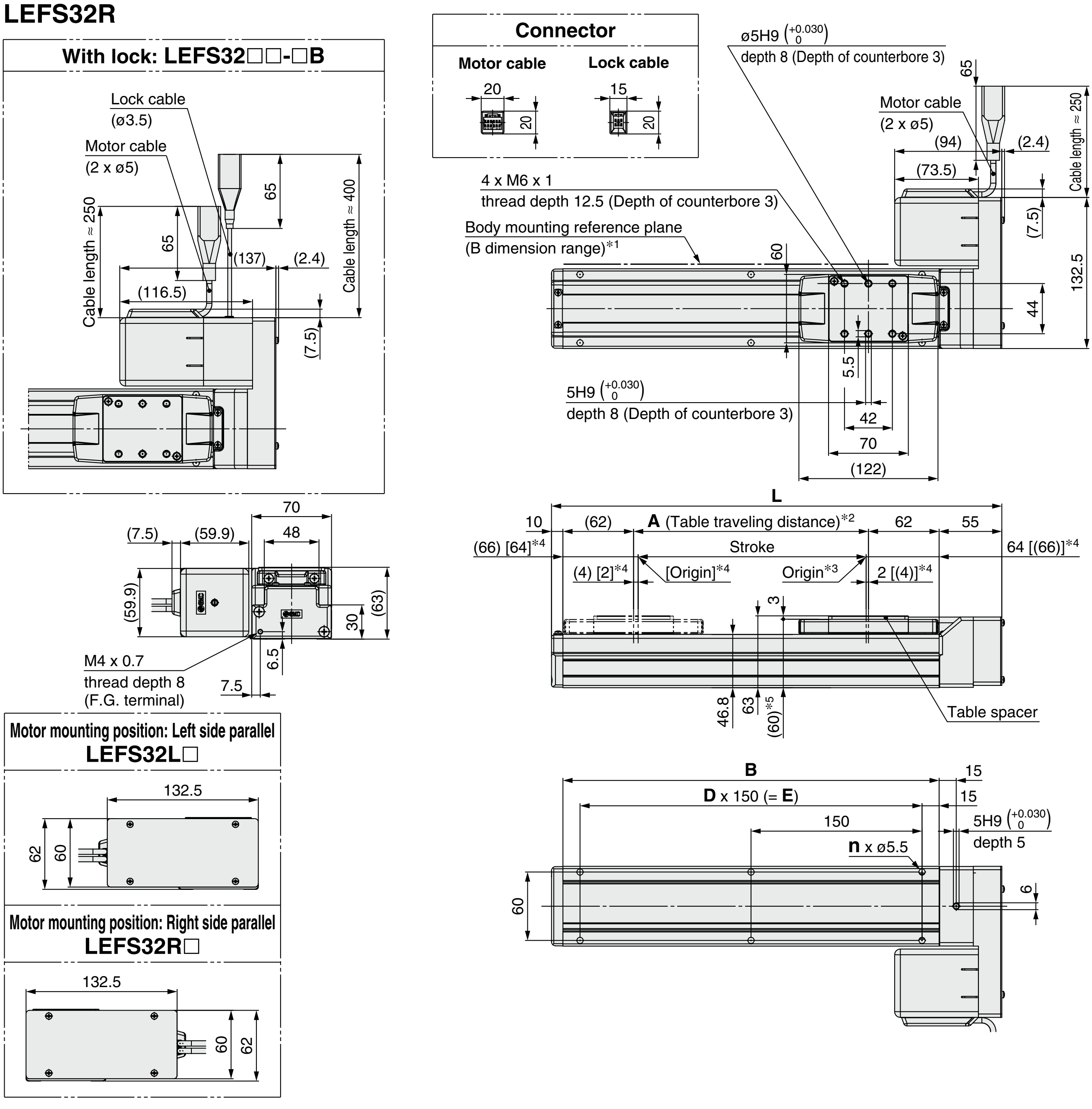
Model	G	H
LEFS□25□□-50□	100	30
LEFS□25□□-100□	100	45
LEFS□25□□-150□	100	45
LEFS□25□□-200□	220	45
LEFS□25□□-250□	220	45
LEFS□25□□-300□	340	45
LEFS□25□□-350□	340	45
LEFS□25□□-400□	340	45

Dimensions [mm]

Model	G	H
LEFS□25□□-450□	460	45
LEFS□25□□-500□	460	45
LEFS□25□□-550□	580	45
LEFS□25□□-600□	580	45
LEFS□25□□-650□	580	45
LEFS□25□□-700□	700	45
LEFS□25□□-750□	700	45
LEFS□25□□-800□	820	45

Dimensions: Motor Parallel

LEFS32R



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane.
Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed
*5 When the table spacer is removed

Dimensions

[mm]

Model	L	A	B	n	D	E
LEFS□32□□-50□	245	56	180	4	—	—
LEFS□32□□-100□	295	106	230	4	—	—
LEFS□32□□-150□	345	156	280	4	—	—
LEFS□32□□-200□	395	206	330	6	2	300
LEFS□32□□-250□	445	256	380	6	2	300
LEFS□32□□-300□	495	306	430	6	2	300
LEFS□32□□-350□	545	356	480	8	3	450
LEFS□32□□-400□	595	406	530	8	3	450
LEFS□32□□-450□	645	456	580	8	3	450
LEFS□32□□-500□	695	506	630	10	4	600

Dimensions

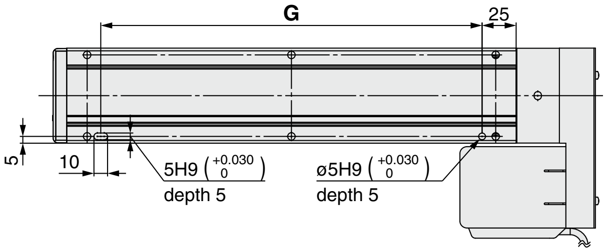
[mm]

Model	L	A	B	n	D	E
LEFS□32□□-550□	745	556	680	10	4	600
LEFS□32□□-600□	795	606	730	10	4	600
LEFS□32□□-650□	845	656	780	12	5	750
LEFS□32□□-700□	895	706	830	12	5	750
LEFS□32□□-750□	945	756	880	12	5	750
LEFS□32□□-800□	995	806	930	14	6	900
LEFS□32□□-850□	1045	856	980	14	6	900
LEFS□32□□-900□	1095	906	1030	14	6	900
LEFS□32□□-950□	1145	956	1080	16	7	1050
LEFS□32□□-1000□	1195	1006	1130	16	7	1050

Dimensions: Motor Parallel

LEFS32R

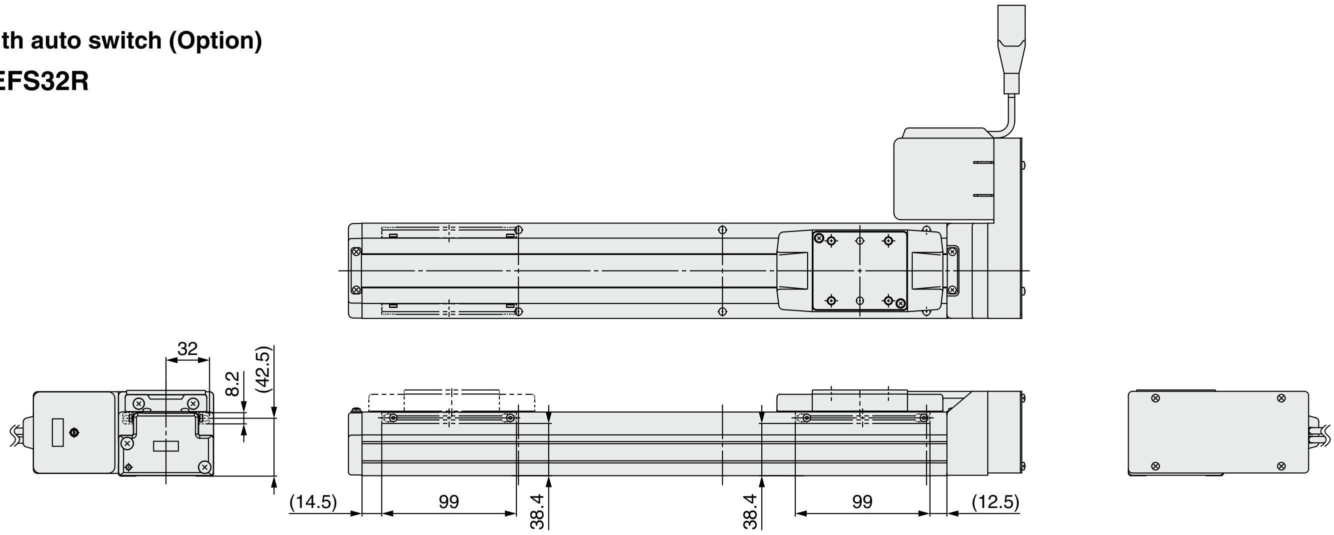
Positioning pin hole*1 (Option): Body bottom



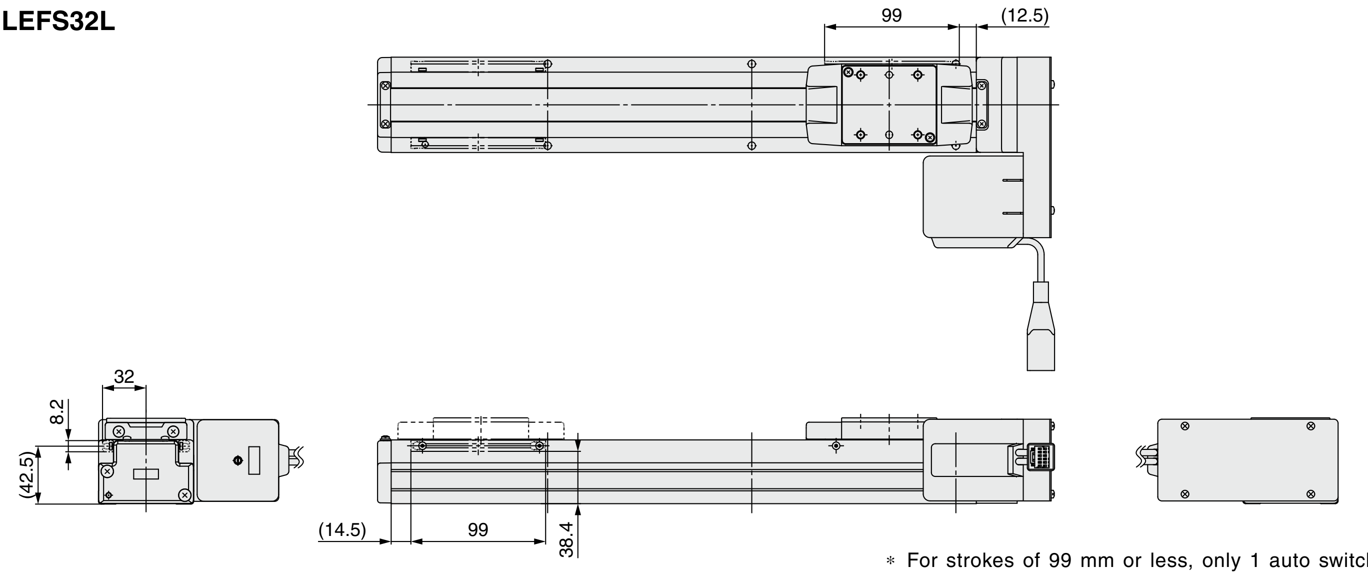
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS32R



LEFS32L



* For strokes of 99 mm or less, only 1 auto switch mounting bracket can be installed on the motor side.

Dimensions [mm]

Model	G
LEFS□32□□-50□	130
LEFS□32□□-100□	130
LEFS□32□□-150□	130
LEFS□32□□-200□	280
LEFS□32□□-250□	280
LEFS□32□□-300□	280
LEFS□32□□-350□	430
LEFS□32□□-400□	430
LEFS□32□□-450□	430
LEFS□32□□-500□	580

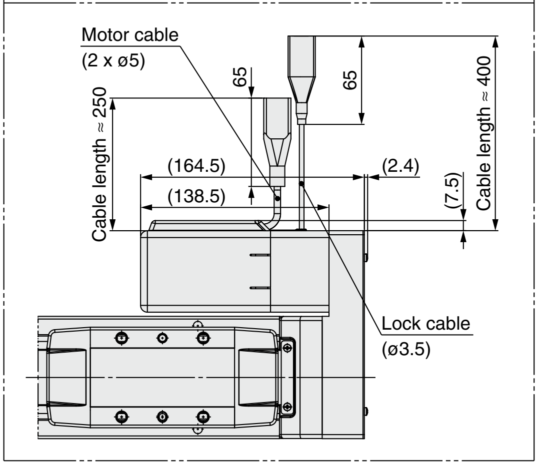
Dimensions [mm]

Model	G
LEFS□32□□-550□	580
LEFS□32□□-600□	580
LEFS□32□□-650□	730
LEFS□32□□-700□	730
LEFS□32□□-750□	730
LEFS□32□□-800□	880
LEFS□32□□-850□	880
LEFS□32□□-900□	880
LEFS□32□□-950□	1030
LEFS□32□□-1000□	1030

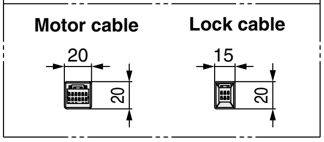
Dimensions: Motor Parallel

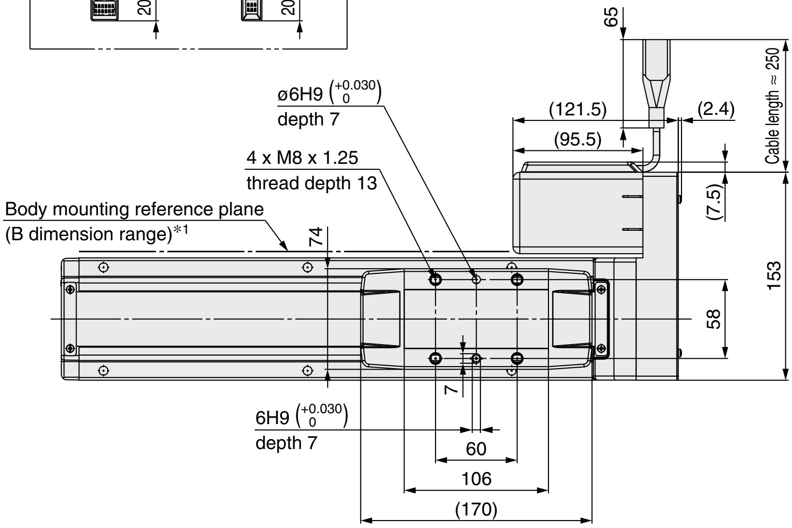
LEFS40R

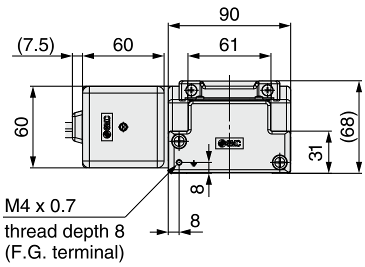
With lock: LEFS40□□-□B

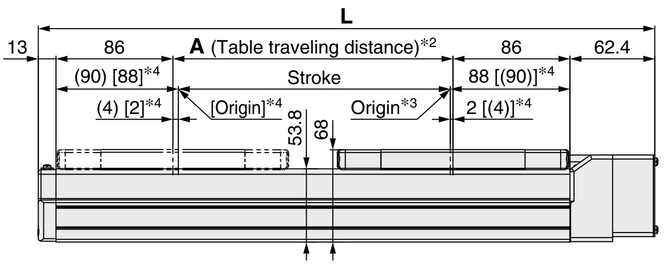


Connector

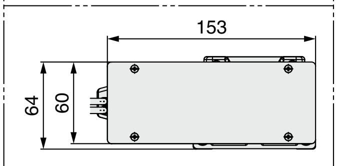




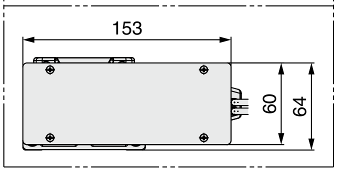


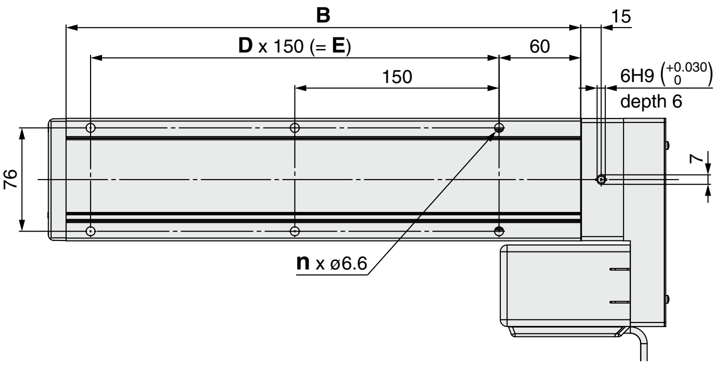


Motor mounting position: Left side parallel
LEFS40L□



Motor mounting position: Right side parallel
LEFS40R□





*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm) In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

Dimensions [mm]

Model	L	A	B	n	D	E
LEFS□40□□-150□	403.4	156	328	4	—	150
LEFS□40□□-200□	453.4	206	378	6	2	300
LEFS□40□□-250□	503.4	256	428	6	2	300
LEFS□40□□-300□	553.4	306	478	6	2	300
LEFS□40□□-350□	603.4	356	528	8	3	450
LEFS□40□□-400□	653.4	406	578	8	3	450
LEFS□40□□-450□	703.4	456	628	8	3	450
LEFS□40□□-500□	753.4	506	678	10	4	600
LEFS□40□□-550□	803.4	556	728	10	4	600
LEFS□40□□-600□	853.4	606	778	10	4	600

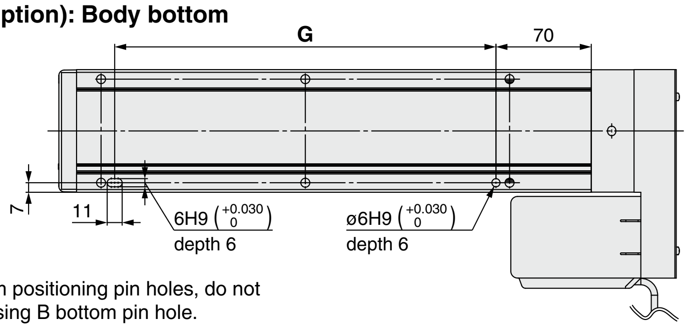
Dimensions [mm]

Model	L	A	B	n	D	E
LEFS□40□□-650□	903.4	656	828	12	5	750
LEFS□40□□-700□	953.4	706	878	12	5	750
LEFS□40□□-750□	1003.4	756	928	12	5	750
LEFS□40□□-800□	1053.4	806	978	14	6	900
LEFS□40□□-850□	1103.4	856	1028	14	6	900
LEFS□40□□-900□	1153.4	906	1078	14	6	900
LEFS□40□□-950□	1203.4	956	1128	16	7	1050
LEFS□40□□-1000□	1253.4	1006	1178	16	7	1050
LEFS□40□□-1100□	1353.4	1106	1278	18	8	1200
LEFS□40□□-1200□	1453.4	1206	1378	18	8	1200

Dimensions: Motor Parallel

LEFS40R

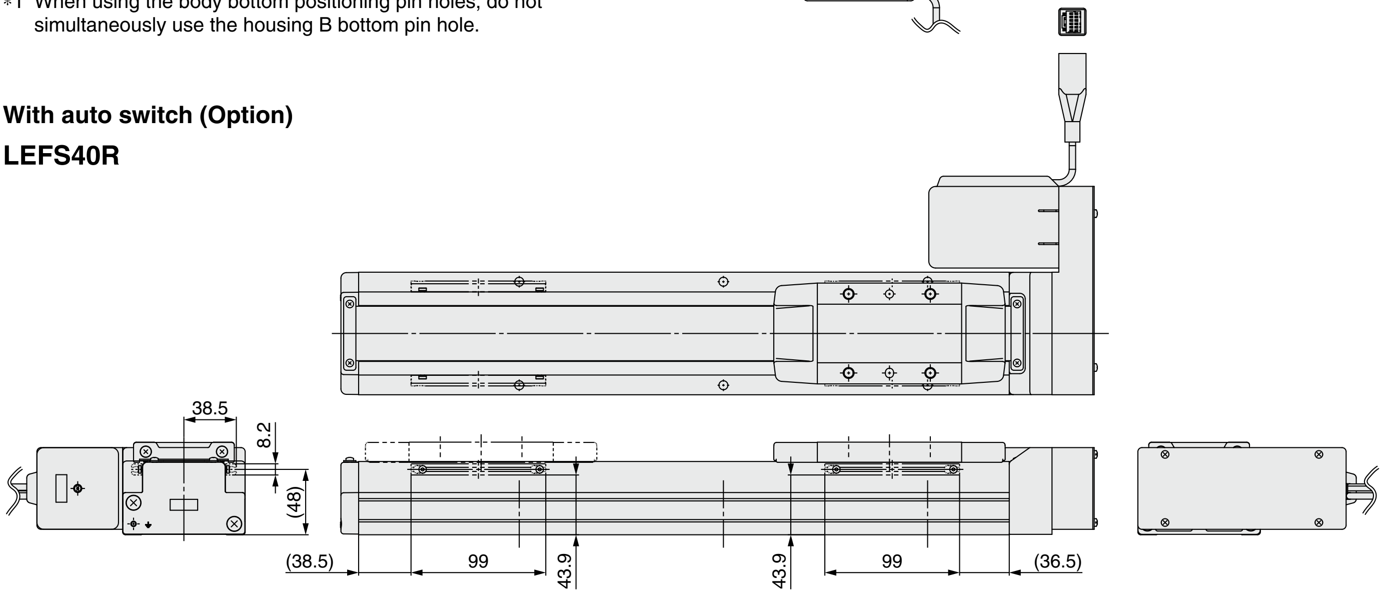
Positioning pin hole*1 (Option): Body bottom



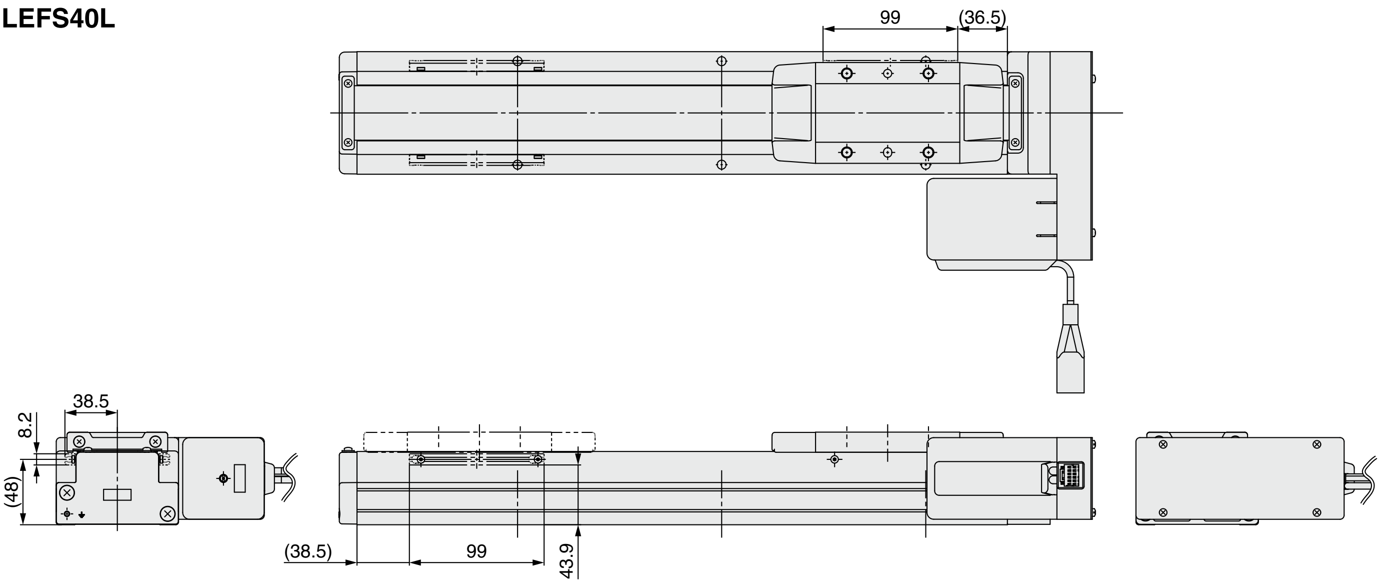
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS40R



LEFS40L



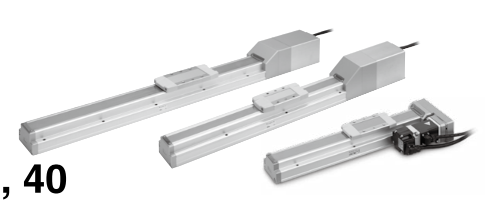
Dimensions [mm]

Model	G
LEFS□40□□-150□	130
LEFS□40□□-200□	280
LEFS□40□□-250□	280
LEFS□40□□-300□	280
LEFS□40□□-350□	430
LEFS□40□□-400□	430
LEFS□40□□-450□	430
LEFS□40□□-500□	580
LEFS□40□□-550□	580
LEFS□40□□-600□	580

Dimensions [mm]

Model	G
LEFS□40□□-650□	730
LEFS□40□□-700□	730
LEFS□40□□-750□	730
LEFS□40□□-800□	880
LEFS□40□□-850□	880
LEFS□40□□-900□	880
LEFS□40□□-950□	1030
LEFS□40□□-1000□	1030
LEFS□40□□-1100□	1180
LEFS□40□□-1200□	1180

Slider Type Ball Screw Drive
LEFS Series LEFS25, 32, 40



LECY□ Series ▶p. 198 | Clean Room Specification ▶p. 953 | Secondary Battery Compatible ▶p. 979
Motorless Type ▶p. 1153

CE UKCA c UL US RoHS
∗ For details, refer to page 1343 and onward.

How to Order

LEFS H 32 R S3 B - 200 □ C N K - S 2 A2 □

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬ ⓭ ⓮

❶ Accuracy

Nil	Basic type
H	High-precision type

❷ Size

25
32
40

❸ Motor mounting position

Nil	In-line
R	Right side parallel
L	Left side parallel

❹ Motor type

Symbol	Type	Output [W]	Actuator size	Compatible drivers
S2∗1	AC servo motor (Incremental encoder)	100	25	LECSA□-S1
S3		200	32	LECSA□-S3
S4		400	40	LECSA2-S4
T6∗2	AC servo motor (Absolute encoder)	100	25	LECSB2-T5 LECSC2-T5 LECSN2-T5-□ LECSS2-T5
T7		200	32	LECSB2-T7 LECSC2-T7 LECSND2-T7-□ LECSS2-T7
T8		400	40	LECSB2-T8 LECSC2-T8 LECSND2-T8-□ LECSS2-T8

∗1 For motor type S2, the compatible driver part number suffix is S1.
∗2 For motor type T6, the compatible driver part number is LECS□2-T5.

❺ Lead [mm]

Symbol	LEFS25	LEFS32	LEFS40
H	20	24	30
A	12	16	20
B	6	8	10

❻ Stroke [mm]

50	50
to	to
1200	1200

∗ For details, refer to the applicable stroke table below.

❼ Motor option

Nil	Without option
B	With lock

❽ Auto switch compatibility

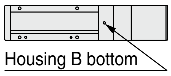
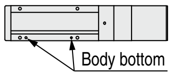
Nil	None
C	With (Includes 1 mounting bracket)

∗ If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
∗ Order auto switches separately. (For details, refer to pages 276 to 278.)
∗ When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.

❾ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

❿ Positioning pin hole

Nil	Housing B bottom∗1	 Housing B bottom
K	Body bottom 2 locations	 Body bottom

∗1 Refer to the body mounting example on page 280 for the mounting method.

⓫ Cable type∗1 ∗2

Nil	Without cable
S	Standard cable
R	Robotic cable

∗1 A motor cable and encoder cable are included with the product. (A lock cable is also included if motor option "B: With lock" is selected.)
∗2 Standard cable entry direction is "(B) Counter axis side." For motor parallel type of the ball screw drive, the cable entry direction is "(A) Axis side." (For details, refer to page 1123.)

⓬ Cable length∗1 [m]

Nil	Without cable
2	2
5	5
A	10

∗1 The length of the motor, encoder, and lock cables are the same.

⓭ Driver type

	Compatible drivers	Power supply voltage [V]	Size 25	32	40
Nil	Without driver	—	●	●	●
A1	LECSA1-S□	100 to 120	●	●	—
A2	LECSA2-S□	200 to 230	●	●	●
B2	LECSB2-T□	200 to 240	●	●	●
C2	LECSC2-T□	200 to 230	●	●	●
S2	LECSS2-T□	200 to 240	●	●	●
N2	LECSN2-T5	200 to 240	●	●	●
E2	LECSN2-T5-E	200 to 240	●	●	●
92	LECSN2-T5-9	200 to 240	●	●	●
P2	LECSN2-T5-P	200 to 240	●	●	●
ND2	LECSND2-T□	200 to 240	●	●	●
ED2	LECSND2-T□-E	200 to 240	●	●	●
9D2	LECSND2-T□-9	200 to 240	●	●	●
PD2	LECSND2-T□-P	200 to 240	●	●	●

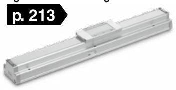
∗ When a driver type is selected, a cable is included. Select the cable type and cable length.
Example) S2S2: Standard cable (2 m) + Driver (LECSS2)
S2: Standard cable (2 m)
Nil: Without cable and driver
∗ When selecting "T6" for the motor type, select one of the following LECSN□-T series drivers: "N2," "E2," "92," or "P2."

⓮ I/O cable length [m]∗1

Nil	Without cable
H	Without cable (Connector only)
1	1.5

∗1 When "Nil: Without driver" is selected for the driver type, only "Nil: Without cable" can be selected. Refer to page 1124 if an I/O cable is required. (Options are shown on page 1124.)

Support Guide/ *LEFG Series*
The support guide was designed to support workpieces with significant overhang.
p. 213



Applicable Stroke Table

●: Standard

Model \ Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
LEFS25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—
LEFS32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—
LEFS40	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

∗ Please contact SMC for non-standard strokes as they are produced as special orders.

Compatible Drivers

For auto switches, refer to pages 275 to 278.

Driver type	Pulse input type/ Positioning type 	Pulse input type 	CC-Link direct input type 	SSCNET III/H type 	Network card type 
Series	LECSA	LECSB-T	LECSC-T	LECSS-T	LECSN□-T
Number of point tables∗1	Up to 7	Up to 255	Up to 255 (2 stations occupied)	—	Up to 255
Pulse input	○	○	—	—	—
Applicable network	—	—	CC-Link	SSCNET Ⅲ/H	PROFINET EtherCAT EtherNet/IP™
Control encoder	Incremental 17-bit encoder	Absolute 22-bit encoder	Absolute 18-bit encoder	Absolute 22-bit encoder	Absolute 22-bit encoder
Communication function	USB communication	USB communication, RS422 communication	USB communication, RS422 communication	USB communication	USB communication
Power supply voltage [V]	100 to 120 VAC (50/60 Hz) 200 to 230 VAC (50/60 Hz)	200 to 240 VAC (50/60 Hz)	200 to 230 VAC (50/60 Hz)	200 to 240 VAC (50/60 Hz)	200 to 240 VAC (50/60 Hz)
Reference page	1109				

∗1 The LECSN□-T point table mode is only available for PROFINET and EtherCAT.

Specifications

AC Servo Motor

Model				LEFS25S2/T6			LEFS32S3/T7			LEFS40S4/T8		
Actuator specifications	Stroke [mm]*1			50 to 800			50 to 1000			150 to 1200		
	Work load [kg]*2	Horizontal		10	20	20	30	40	45	30	50	60
		Vertical		4	8	15	5	10	20	7	15	30
	Max. speed*3 [mm/s]	Stroke range	Up to 400	1500	900	450	1500	1000	500	1500	1000	500
			401 to 500	1200	720	360	1500	1000	500	1500	1000	500
			501 to 600	900	540	270	1200	800	400	1500	1000	500
			601 to 700	700	420	210	930	620	310	1410	940	470
			701 to 800	550	330	160	750	500	250	1140	760	380
			801 to 900	—	—	—	610	410	200	930	620	310
			901 to 1000	—	—	—	510	340	170	780	520	260
			1001 to 1100	—	—	—	—	—	—	500	440	220
			1101 to 1200	—	—	—	—	—	—	500	380	190
	Max. acceleration/deceleration [mm/s²]			20000 (Refer to pages 123 to 125 for limit according to work load and duty ratio.)								
	Positioning repeatability [mm]	Basic type		±0.02								
		High-precision type		±0.01								
	Lost motion [mm]*4	Basic type		0.1 or less								
		High-precision type		0.05 or less								
	Lead [mm]			20	12	6	24	16	8	30	20	10
	Impact/Vibration resistance [m/s²]*5			50/20								
	Actuation type			Ball screw (LEFS□), Ball screw + Belt (LEFS□$^{R}_{L}$)								
	Guide type			Linear guide								
	Static allowable moment*6 [N·m]	Mep (Pitching)		27			46			110		
		Mey (Yawing)		27			46			110		
		Mer (Rolling)		52			101			207		
	Operating temperature range [°C]			5 to 40								
	Operating humidity range [%RH]			90 or less (No condensation)								
	Enclosure			IP30								
Electric specifications	Motor output/Size			100 W/□40			200 W/□60			400 W/□60		
	Motor type			AC servo motor (100/200 VAC)								
	Encoder*9			Motor type S2, S3, S4: Incremental 17-bit encoder (Resolution: 131072 p/rev) Motor type T6, T7, T8: Absolute 22-bit encoder (Resolution: 4194304 p/rev) (For LECSB2-T□, LECSS2-T□) Motor type T6, T7, T8: Absolute 18-bit encoder (Resolution: 262144 p/rev) (For LECSC2-T□)								
	Power [W]*7			Max. power 445			Max. power 725			Max. power 1275		
Lock unit specifications	Type*8			Non-magnetizing lock								
	Holding force [N]			78	131	255	131	197	385	220	330	660
	Power [W] at 20°C			6.3			7.9			7.9		
	Rated voltage [V]			24 VDC $^{0}_{-10\%}$								

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 For details, refer to the "Speed–Work Load Graph (Guide)" on page 122.
*3 The allowable speed changes according to the stroke.
*4 A reference value for correcting errors in reciprocal operation
*5 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*6 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*7 Indicates the max. power during operation (including the driver)
When selecting the power supply capacity, refer to the power supply capacity in the operation manual of each driver.
*8 Only when motor option "With lock" is selected
*9 For motor type T6, T7, and T8, the resolution will change depending on the driver type.

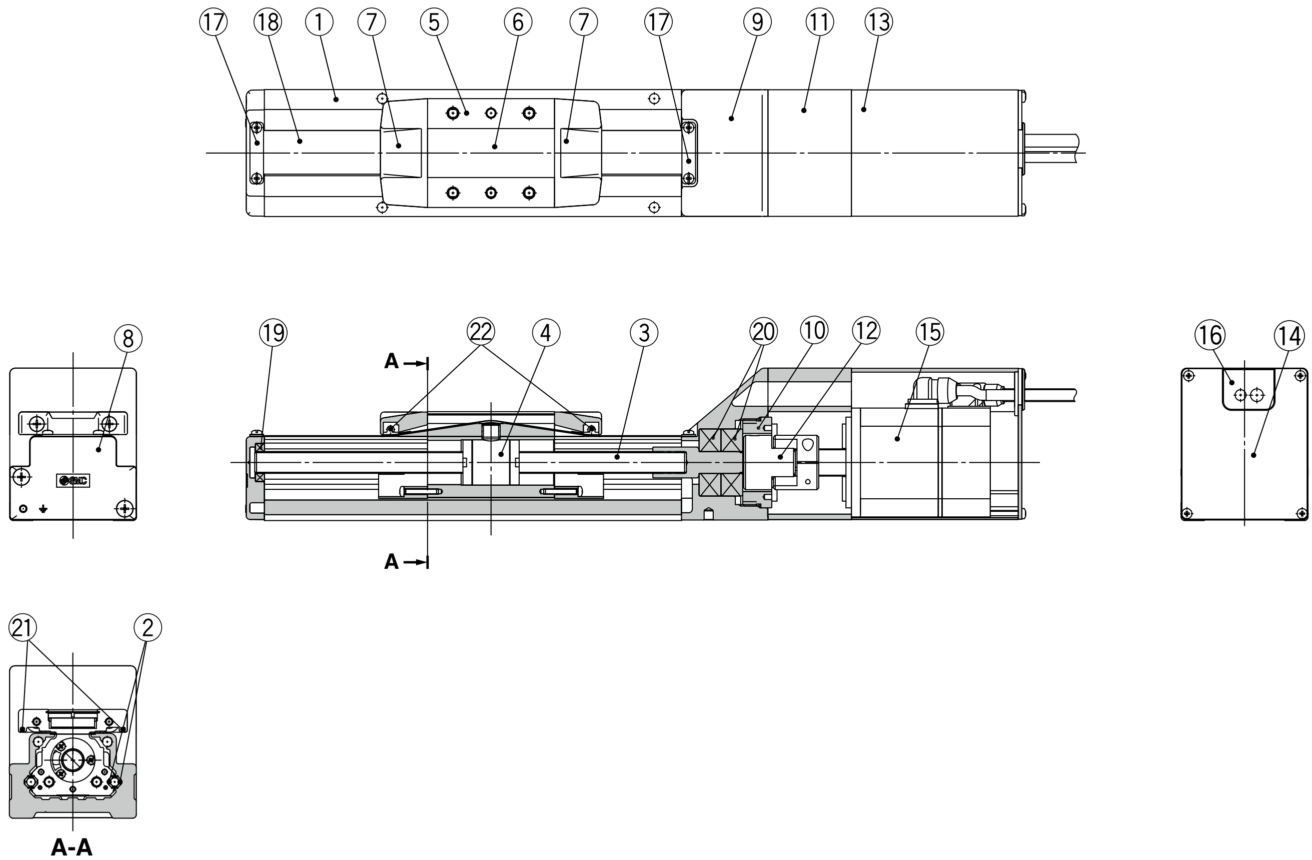
Weight

Series		LEFS25□□															
Stroke [mm]		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Motor type	S2	2.00	2.14	2.28	2.44	2.56	2.69	2.84	2.99	3.12	3.24	3.40	3.54	3.68	3.82	3.96	4.14
	T6	2.04	2.18	2.32	2.48	2.60	2.73	2.88	3.03	3.16	3.28	3.44	3.58	3.72	3.86	4.00	4.18
Additional weight with lock [kg]		S2: 0.2/T6: 0.3															

Series		LEFS32□□																			
Stroke [mm]		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Motor type	S3	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00	7.20
	T7	3.31	3.51	3.71	3.91	4.11	4.31	4.51	4.71	4.91	5.11	5.31	5.51	5.71	5.91	6.11	6.31	6.51	6.71	6.91	7.11
Additional weight with lock [kg]		S3: 0.4/T7: 0.5																			

Series		LEFS40□□																			
Stroke [mm]		150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
Motor type	S4	5.82	6.10	6.38	6.65	6.95	7.25	7.51	7.80	8.07	8.25	8.63	8.90	9.20	9.45	9.76	10.05	10.32	10.60	11.16	11.72
	T8	5.91	6.19	6.47	6.74	7.04	7.34	7.60	7.89	8.16	8.34	8.72	8.99	9.29	9.54	9.85	10.14	10.41	10.69	11.25	11.81
Additional weight with lock [kg]		S4: 0.5/T8: 0.5																			

Construction: In-line Motor



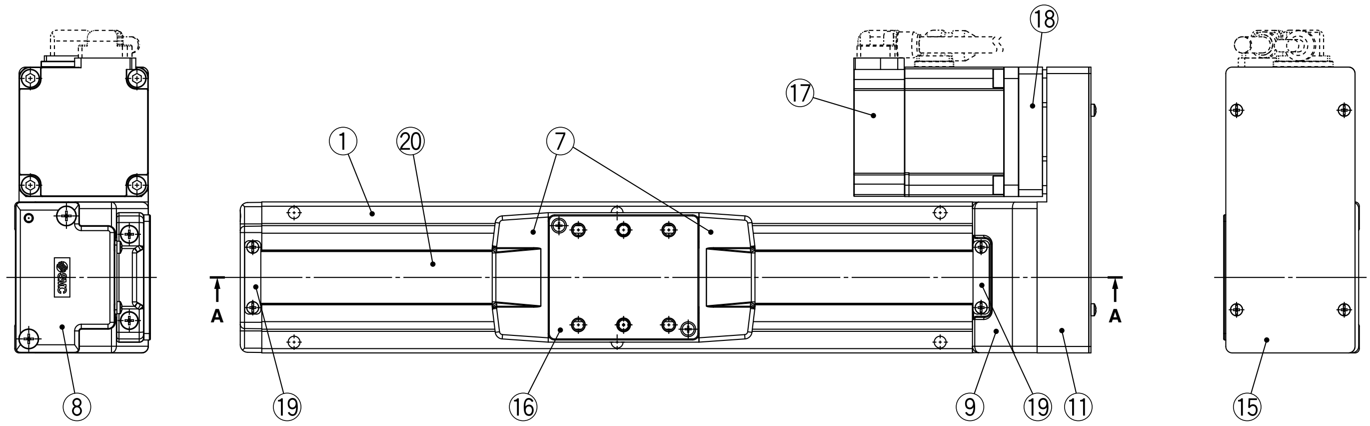
Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw shaft**	—	
4	**Ball screw nut**	—	
5	**Table**	Aluminum alloy	Anodized
6	**Blanking plate**	Aluminum alloy	Anodized
7	**Seal band holder**	Synthetic resin	
8	**Housing A**	Aluminum die-cast	Coating
9	**Housing B**	Aluminum die-cast	Coating
10	**Bearing stopper**	Aluminum alloy	
11	**Motor mount**	Aluminum alloy	Coating
12	**Coupling**	—	
13	**Motor cover**	Aluminum alloy	Anodized
14	**Motor end cover**	Aluminum alloy	Anodized
15	**Motor**	—	
16	**Grommet**	NBR	
17	**Band stopper**	Stainless steel	
18	**Dust seal band**	Stainless steel	
19	**Bearing**	—	Stroke 250 mm or more
20	**Bearing**	—	
21	**Magnet**	—	With auto switch compatibility
22	**Roller assembly**	—	Without grease application

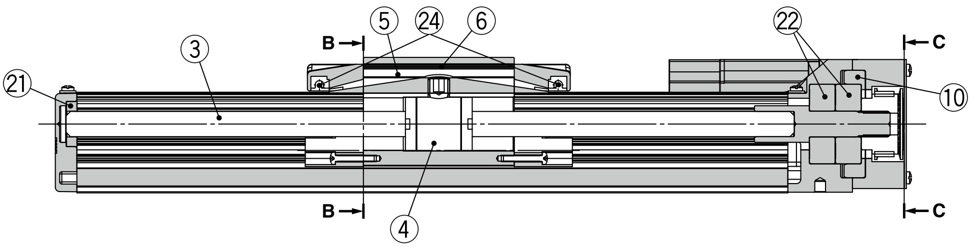
Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When "Without" is selected for the grease application, grease is applied only on the back side.)	

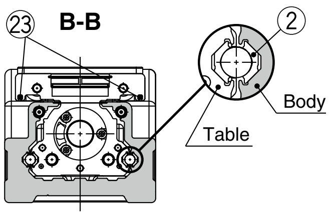
Construction: Motor Parallel



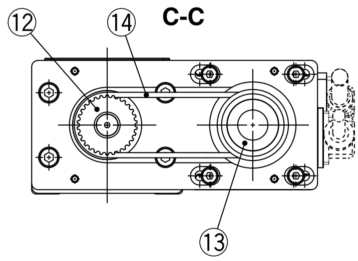
A-A



B-B



C-C



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw shaft**	—	
4	**Ball screw nut**	—	
5	**Table**	Aluminum alloy	Anodized
6	**Blanking plate**	Aluminum alloy	Anodized
7	**Seal band holder**	Synthetic resin	
8	**Housing A**	Aluminum die-casted	Coating
9	**Housing B**	Aluminum die-casted	Coating
10	**Bearing stopper**	Aluminum alloy	
11	**Return plate**	Aluminum alloy	Coating
12	**Pulley**	Aluminum alloy	
13	**Pulley**	Aluminum alloy	
15	**Cover plate**	Aluminum alloy	Anodized
16	**Table spacer**	Aluminum alloy	Anodized (LEFS32 only)
17	**Motor**	—	
18	**Motor adapter**	Aluminum alloy	Coating
19	**Band stopper**	Stainless steel	
20	**Dust seal band**	Stainless steel	
21	**Bearing**	—	Stroke 250 mm or more
22	**Bearing**	—	
23	**Magnet**	—	With auto switch compatibility
24	**Roller assembly**	—	Without grease application

Replacement Parts/Belt

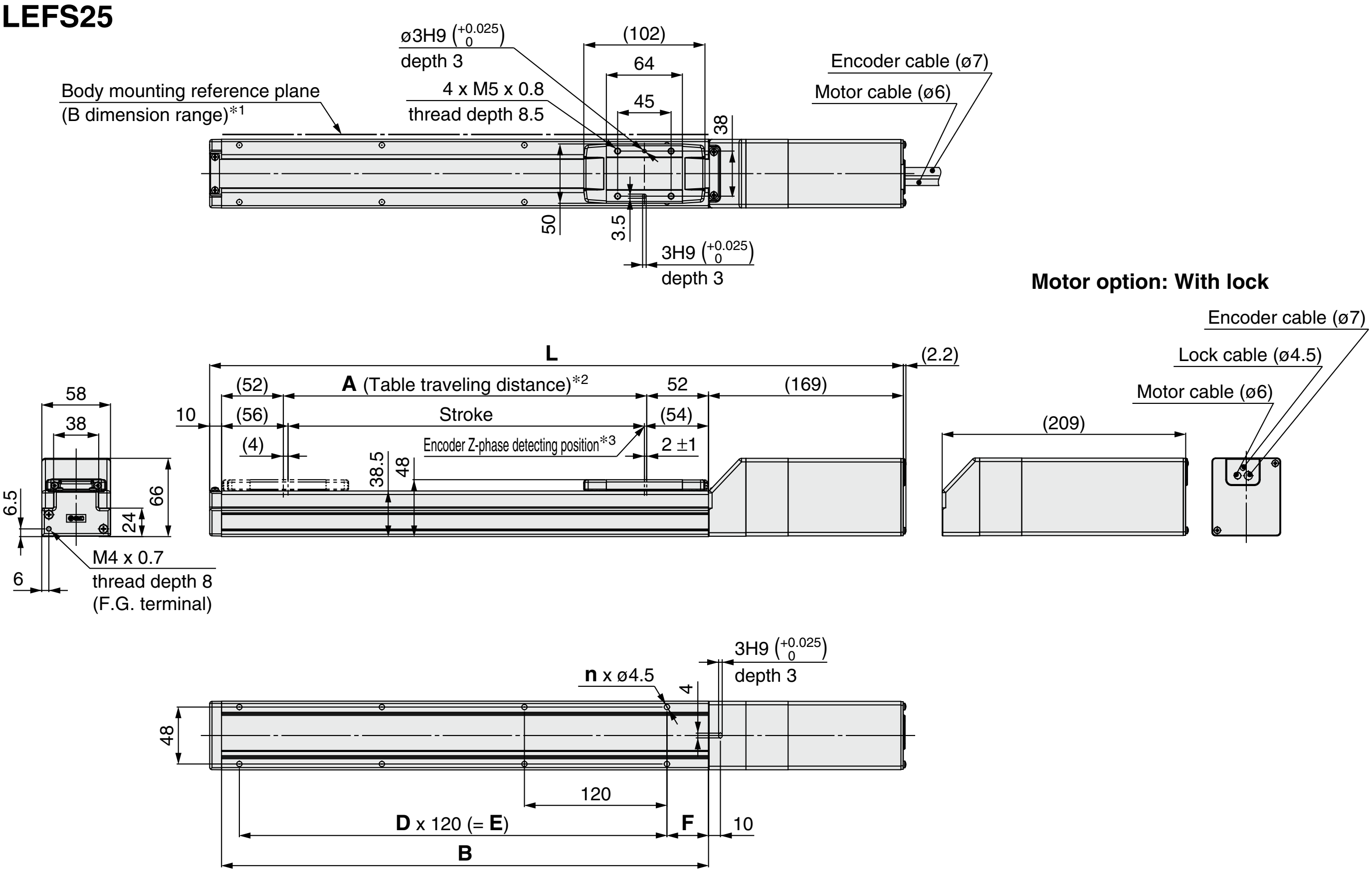
No.	Size	Order no.
14	25	LE-D-6-2
	32	LE-D-6-3
	40	LE-D-6-4

Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When “Without” is selected for the grease application, grease is applied only on the back side.)	

Dimensions: In-line Motor

LEFS25



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.

*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.

*3 The Z-phase first detecting position from the stroke end of the motor side

Dimensions

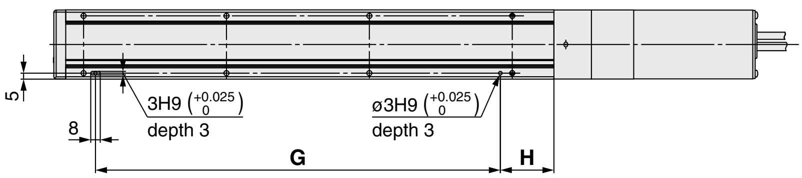
[mm]

Model	L		A	B	n	D	E	F
	Without lock	With lock						
LEFS□25□□-50□	339	379	56	160	4	—	—	20
LEFS□25□□-100□	389	429	106	210	4	—	—	
LEFS□25□□-150□	439	479	156	260	4	—	—	
LEFS□25□□-200□	489	529	206	310	6	2	240	
LEFS□25□□-250□	539	579	256	360	6	2	240	
LEFS□25□□-300□	589	629	306	410	8	3	360	
LEFS□25□□-350□	639	679	356	460	8	3	360	
LEFS□25□□-400□	689	729	406	510	8	3	360	
LEFS□25□□-450□	739	779	456	560	10	4	480	35
LEFS□25□□-500□	789	829	506	610	10	4	480	
LEFS□25□□-550□	839	879	556	660	12	5	600	
LEFS□25□□-600□	889	929	606	710	12	5	600	
LEFS□25□□-650□	939	979	656	760	12	5	600	
LEFS□25□□-700□	989	1029	706	810	14	6	720	
LEFS□25□□-750□	1039	1079	756	860	14	6	720	
LEFS□25□□-800□	1089	1129	806	910	16	7	840	

Dimensions: In-line Motor

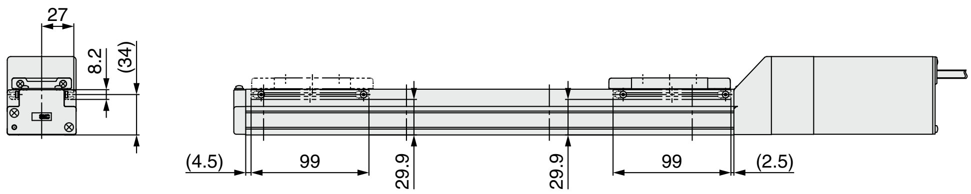
LEFS25

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



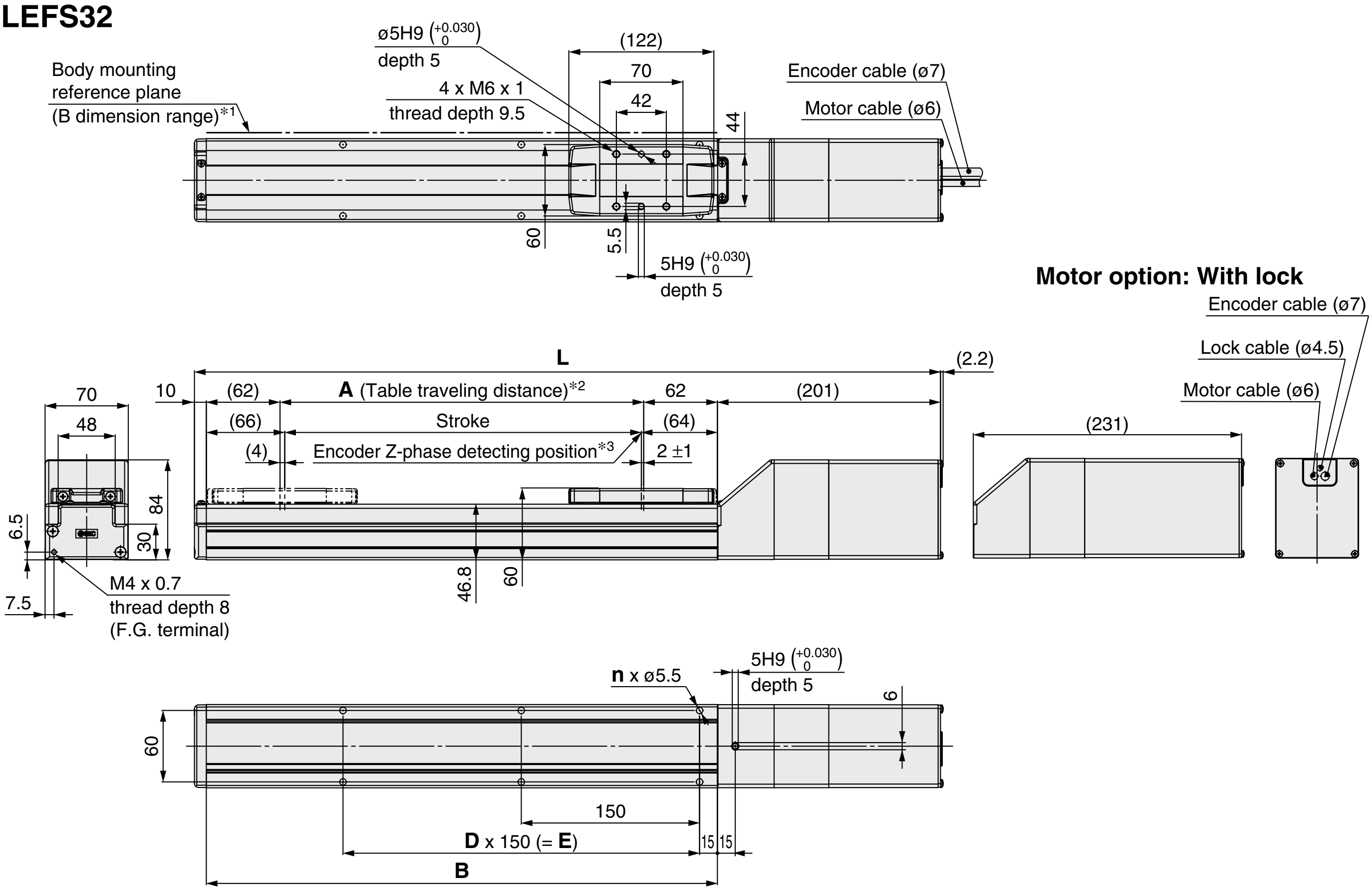
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

Model	G	H
LEFS□25□□-50□	100	30
LEFS□25□□-100□	100	45
LEFS□25□□-150□	100	45
LEFS□25□□-200□	220	45
LEFS□25□□-250□	220	45
LEFS□25□□-300□	340	45
LEFS□25□□-350□	340	45
LEFS□25□□-400□	340	45
LEFS□25□□-450□	460	45
LEFS□25□□-500□	460	45
LEFS□25□□-550□	580	45
LEFS□25□□-600□	580	45
LEFS□25□□-650□	580	45
LEFS□25□□-700□	700	45
LEFS□25□□-750□	700	45
LEFS□25□□-800□	820	45

Dimensions: In-line Motor

LEFS32



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Dimensions

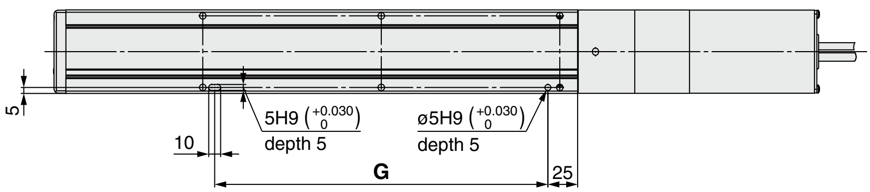
[mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□32□□-50□	391	421	56	180	4	—	—
LEFS□32□□-100□	441	471	106	230	4	—	—
LEFS□32□□-150□	491	521	156	280	4	—	—
LEFS□32□□-200□	541	571	206	330	6	2	300
LEFS□32□□-250□	591	621	256	380	6	2	300
LEFS□32□□-300□	641	671	306	430	6	2	300
LEFS□32□□-350□	691	721	356	480	8	3	450
LEFS□32□□-400□	741	771	406	530	8	3	450
LEFS□32□□-450□	791	821	456	580	8	3	450
LEFS□32□□-500□	841	871	506	630	10	4	600
LEFS□32□□-550□	891	921	556	680	10	4	600
LEFS□32□□-600□	941	971	606	730	10	4	600
LEFS□32□□-650□	991	1021	656	780	12	5	750
LEFS□32□□-700□	1041	1071	706	830	12	5	750
LEFS□32□□-750□	1091	1121	756	880	12	5	750
LEFS□32□□-800□	1141	1171	806	930	14	6	900
LEFS□32□□-850□	1191	1221	856	980	14	6	900
LEFS□32□□-900□	1241	1271	906	1030	14	6	900
LEFS□32□□-950□	1291	1321	956	1080	16	7	1050
LEFS□32□□-1000□	1341	1371	1006	1130	16	7	1050

Dimensions: In-line Motor

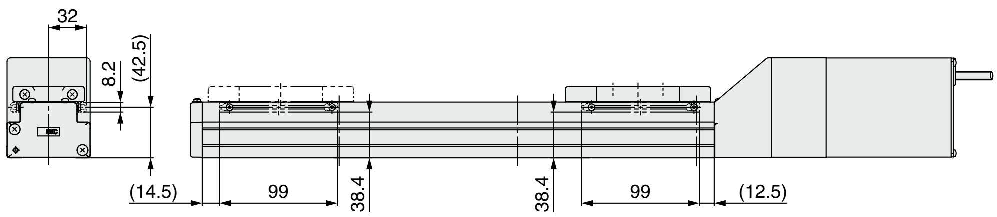
LEFS32

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



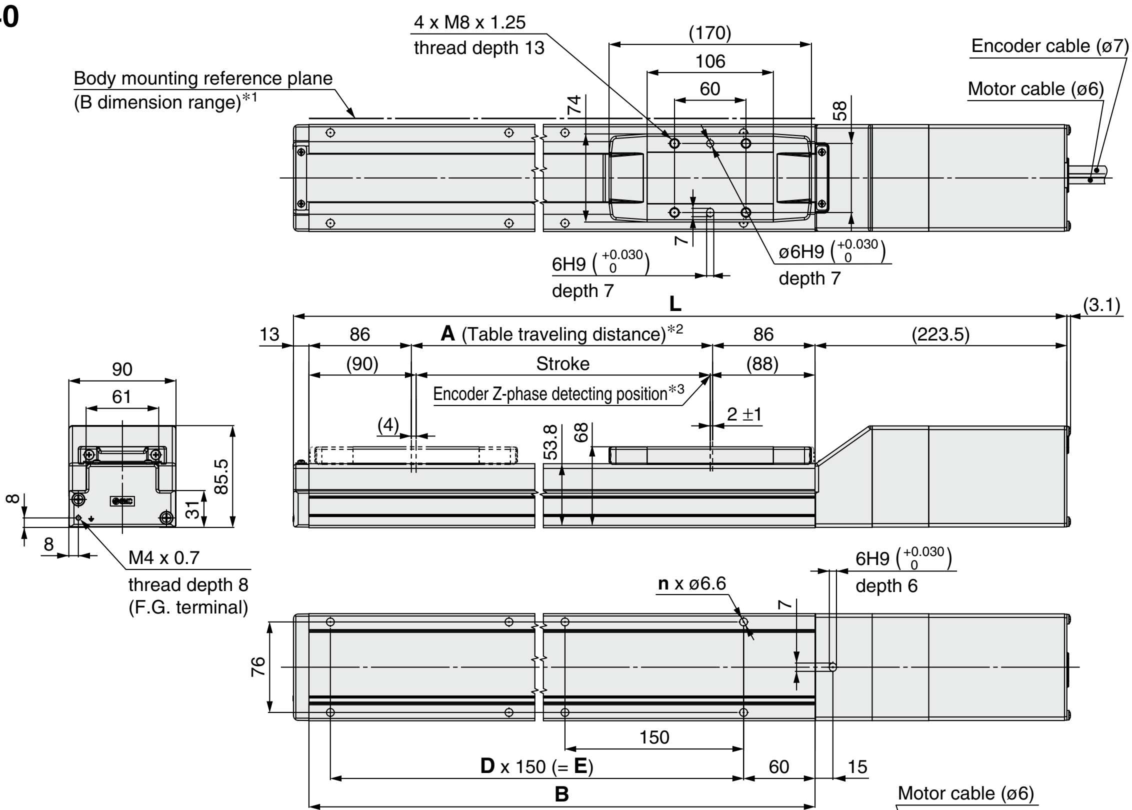
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

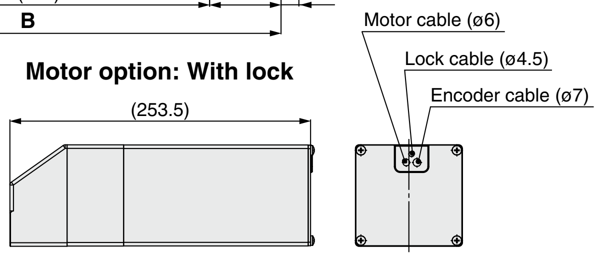
Model	G
LEFS□32□□-50□	130
LEFS□32□□-100□	130
LEFS□32□□-150□	130
LEFS□32□□-200□	280
LEFS□32□□-250□	280
LEFS□32□□-300□	280
LEFS□32□□-350□	430
LEFS□32□□-400□	430
LEFS□32□□-450□	430
LEFS□32□□-500□	580
LEFS□32□□-550□	580
LEFS□32□□-600□	580
LEFS□32□□-650□	730
LEFS□32□□-700□	730
LEFS□32□□-750□	730
LEFS□32□□-800□	880
LEFS□32□□-850□	880
LEFS□32□□-900□	880
LEFS□32□□-950□	1030
LEFS□32□□-1000□	1030

Dimensions: In-line Motor

LEFS40



Motor option: With lock



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Dimensions

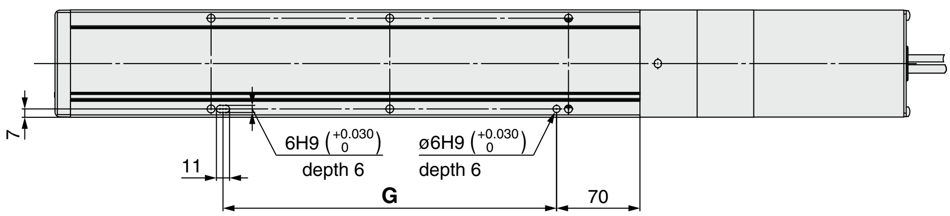
[mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□40□□-150□	564.5	594.5	156	328	4	—	150
LEFS□40□□-200□	614.5	644.5	206	378	6	2	300
LEFS□40□□-250□	664.5	694.5	256	428	6	2	300
LEFS□40□□-300□	714.5	744.5	306	478	6	2	300
LEFS□40□□-350□	764.5	794.5	356	528	8	3	450
LEFS□40□□-400□	814.5	844.5	406	578	8	3	450
LEFS□40□□-450□	864.5	894.5	456	628	8	3	450
LEFS□40□□-500□	914.5	944.5	506	678	10	4	600
LEFS□40□□-550□	964.5	994.5	556	728	10	4	600
LEFS□40□□-600□	1014.5	1044.5	606	778	10	4	600
LEFS□40□□-650□	1064.5	1094.5	656	828	12	5	750
LEFS□40□□-700□	1114.5	1144.5	706	878	12	5	750
LEFS□40□□-750□	1164.5	1194.5	756	928	12	5	750
LEFS□40□□-800□	1214.5	1244.5	806	978	14	6	900
LEFS□40□□-850□	1264.5	1294.5	856	1028	14	6	900
LEFS□40□□-900□	1314.5	1344.5	906	1078	14	6	900
LEFS□40□□-950□	1364.5	1394.5	956	1128	16	7	1050
LEFS□40□□-1000□	1414.5	1444.5	1006	1178	16	7	1050
LEFS□40□□-1100□	1514.5	1544.5	1106	1278	18	8	1200
LEFS□40□□-1200□	1614.5	1644.5	1206	1378	18	8	1200

Dimensions: In-line Motor

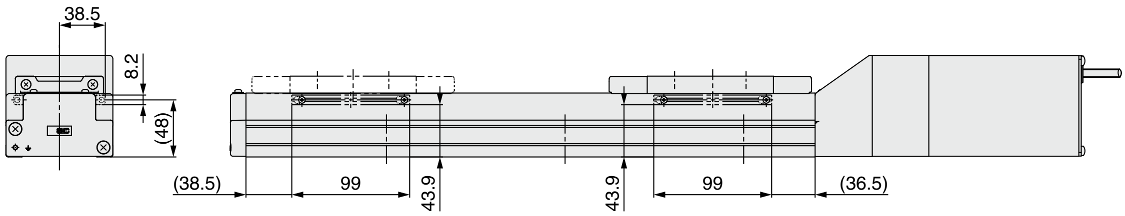
LEFS40

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

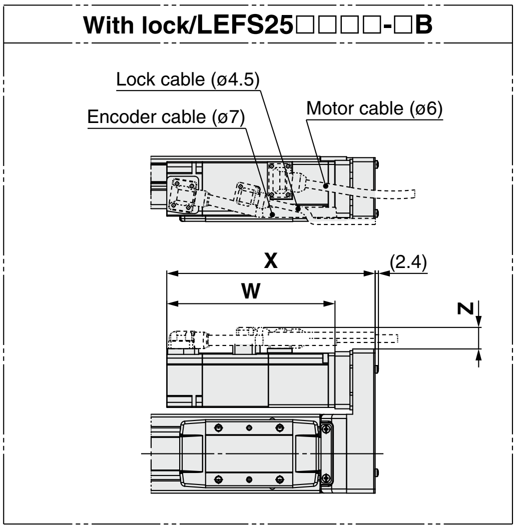


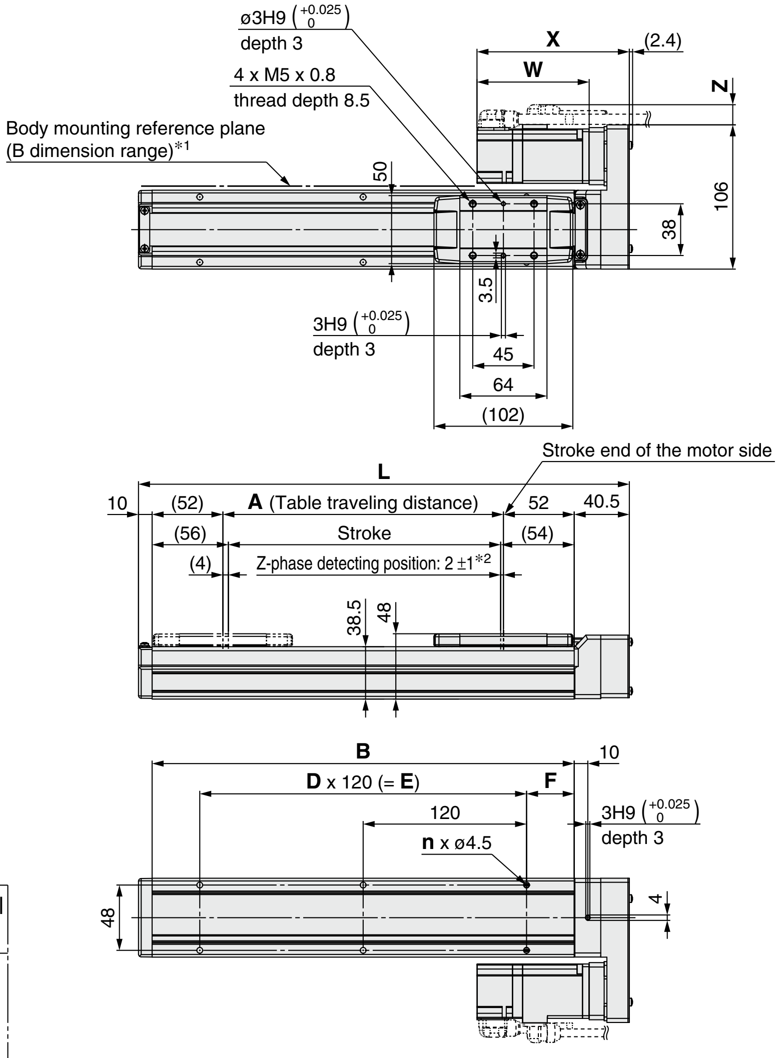
Dimensions [mm]

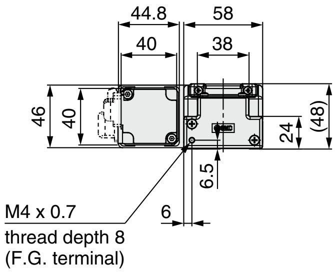
Model	G
LEFS□40□□-150□	130
LEFS□40□□-200□	280
LEFS□40□□-250□	280
LEFS□40□□-300□	280
LEFS□40□□-350□	430
LEFS□40□□-400□	430
LEFS□40□□-450□	430
LEFS□40□□-500□	580
LEFS□40□□-550□	580
LEFS□40□□-600□	580
LEFS□40□□-650□	730
LEFS□40□□-700□	730
LEFS□40□□-750□	730
LEFS□40□□-800□	880
LEFS□40□□-850□	880
LEFS□40□□-900□	880
LEFS□40□□-950□	1030
LEFS□40□□-1000□	1030
LEFS□40□□-1100□	1180
LEFS□40□□-1200□	1180

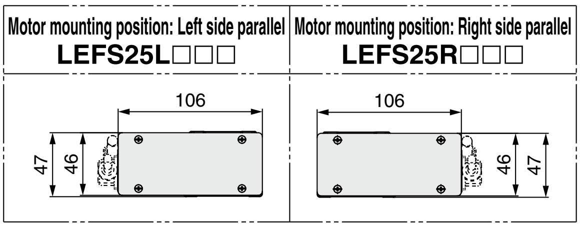
Dimensions: Motor Parallel

LEFS25R









*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.

*2 The Z-phase first detecting position from the stroke end of the motor side
Please contact SMC for adjusting the Z-phase detecting position at the stroke end of the end side.

Motor Dimensions

[mm]

Motor type	X		W		Z	
	Without lock	With lock	Without lock	With lock	Without lock	With lock
S2	116.5	153.4	87	123.9	14.1	15.8
T6	111.9	152.5	82.4	123	14.1	15.8

Dimensions

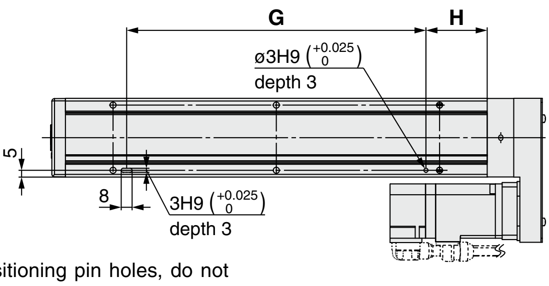
[mm]

Model	L	A	B	n	D	E	F
LEFS□25□□□-50□	210.5	56	160	4	—	—	20
LEFS□25□□□-100□	260.5	106	210	4	—	—	
LEFS□25□□□-150□	310.5	156	260	4	—	—	
LEFS□25□□□-200□	360.5	206	310	6	2	240	
LEFS□25□□□-250□	410.5	256	360	6	2	240	
LEFS□25□□□-300□	460.5	306	410	8	3	360	
LEFS□25□□□-350□	510.5	356	460	8	3	360	
LEFS□25□□□-400□	560.5	406	510	8	3	360	
LEFS□25□□□-450□	610.5	456	560	10	4	480	35
LEFS□25□□□-500□	660.5	506	610	10	4	480	
LEFS□25□□□-550□	710.5	556	660	12	5	600	
LEFS□25□□□-600□	760.5	606	710	12	5	600	
LEFS□25□□□-650□	810.5	656	760	12	5	600	
LEFS□25□□□-700□	860.5	706	810	14	6	720	
LEFS□25□□□-750□	910.5	756	860	14	6	720	
LEFS□25□□□-800□	960.5	806	910	16	7	840	

Dimensions: Motor Parallel

LEFS25R

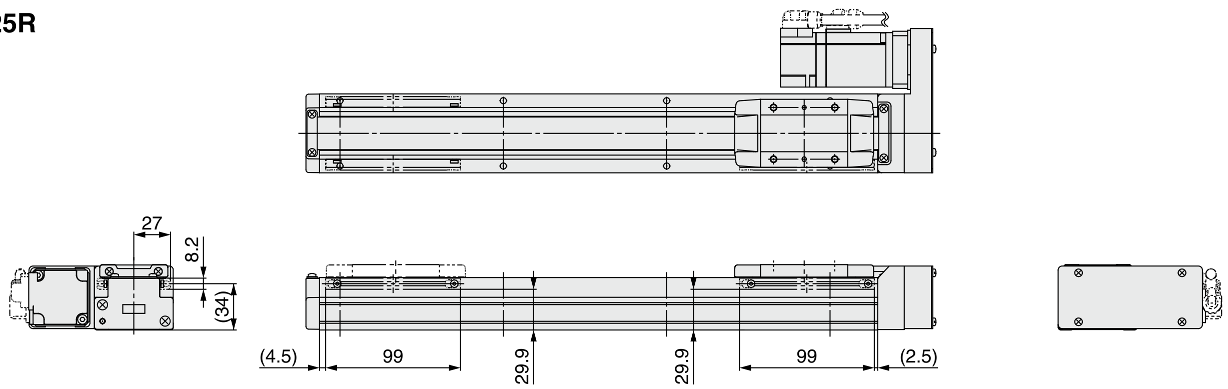
Positioning pin hole*1 (Option): Body bottom



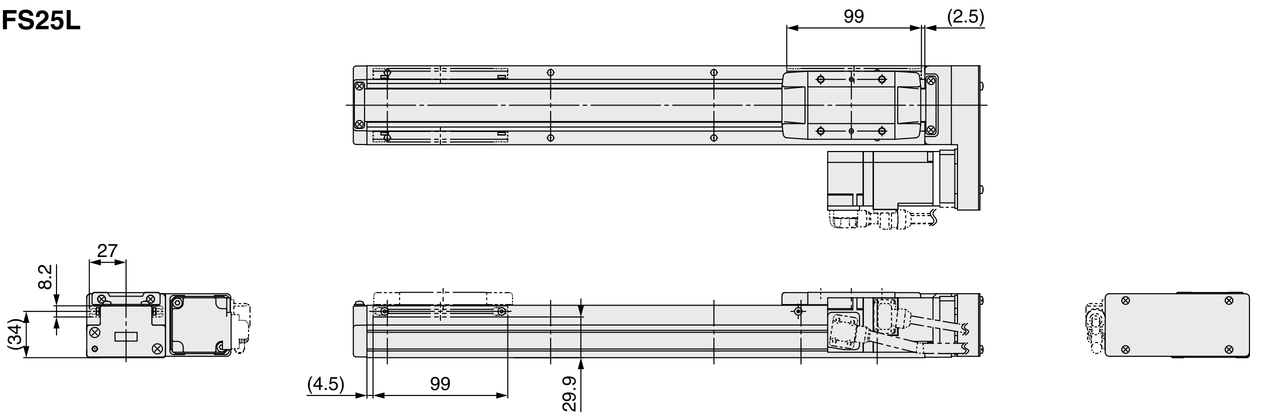
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS25R



LEFS25L



Dimensions

[mm]

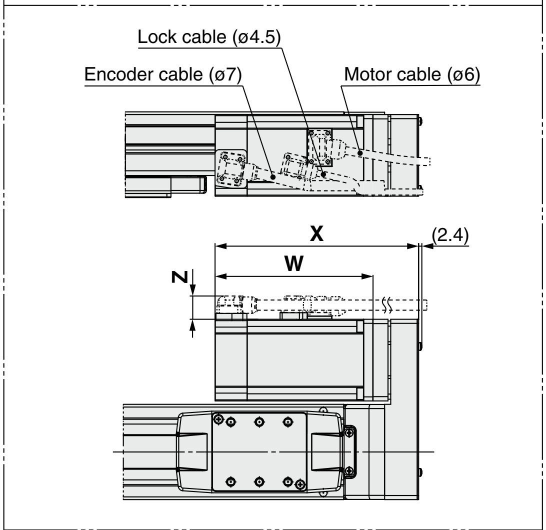
Model	G	H
LEFS□25□□□-50□	100	30
LEFS□25□□□-100□	100	45
LEFS□25□□□-150□	100	45
LEFS□25□□□-200□	220	45
LEFS□25□□□-250□	220	45
LEFS□25□□□-300□	340	45
LEFS□25□□□-350□	340	45
LEFS□25□□□-400□	340	45
LEFS□25□□□-450□	460	45
LEFS□25□□□-500□	460	45
LEFS□25□□□-550□	580	45
LEFS□25□□□-600□	580	45
LEFS□25□□□-650□	580	45
LEFS□25□□□-700□	700	45
LEFS□25□□□-750□	700	45
LEFS□25□□□-800□	820	45

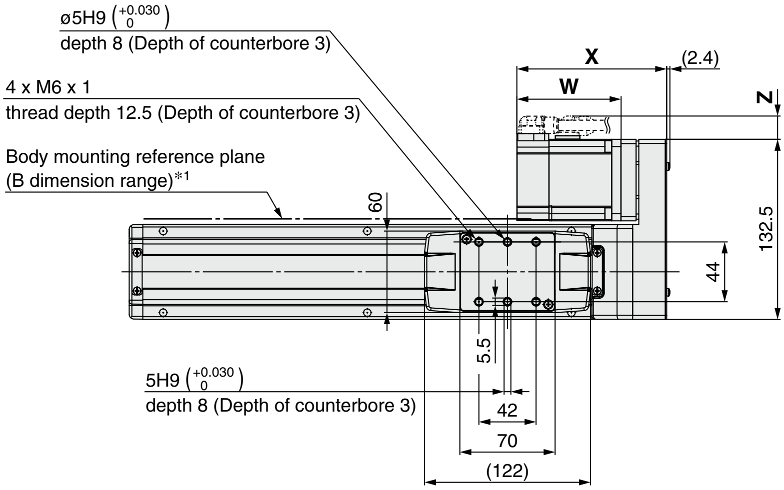
* For strokes of 99 mm or less, only 1 auto switch mounting bracket can be installed on the motor side.

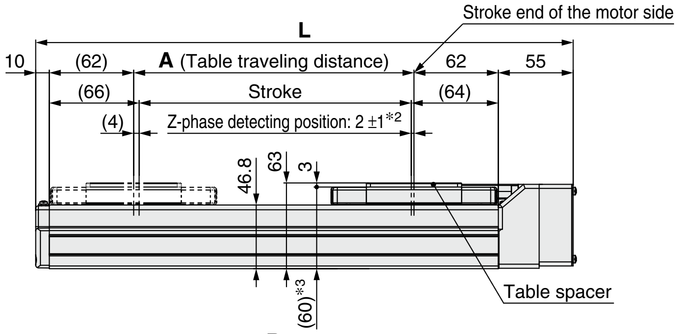
Dimensions: Motor Parallel

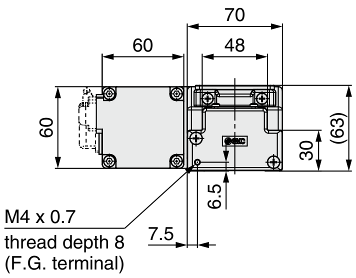
LEFS32R

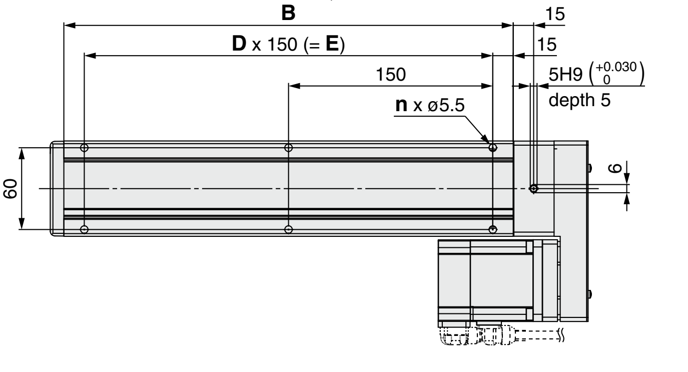
With lock/LEFS32□□□□-□B

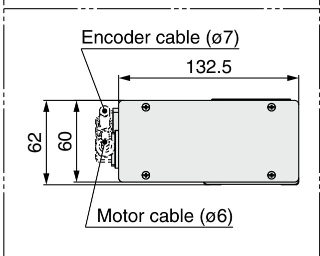
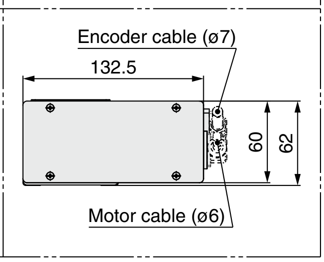










Motor mounting position: Left side parallel **LEFS32L□□□**	Motor mounting position: Right side parallel **LEFS32R□□□**
	

*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm) In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 The Z-phase first detecting position from the stroke end of the motor side Please contact SMC for adjusting the Z-phase detecting position at the stroke end of the end side.
*3 When the table spacer is removed

Motor Dimensions

[mm]

Motor type	X		W		Z	
	Without lock	With lock	Without lock	With lock	Without lock	With lock
S3	121.7	150.3	88.2	116.8	17.1	17.1
T7	110.1	146.9	76.6	113.4	17.1	17.1

Dimensions

[mm]

Model	L	A	B	n	D	E
LEFS□32□□□-50□	245	56	180	4	—	—
LEFS□32□□□-100□	295	106	230	4	—	—
LEFS□32□□□-150□	345	156	280	4	—	—
LEFS□32□□□-200□	395	206	330	6	2	300
LEFS□32□□□-250□	445	256	380	6	2	300
LEFS□32□□□-300□	495	306	430	6	2	300
LEFS□32□□□-350□	545	356	480	8	3	450
LEFS□32□□□-400□	595	406	530	8	3	450
LEFS□32□□□-450□	645	456	580	8	3	450
LEFS□32□□□-500□	695	506	630	10	4	600

Dimensions

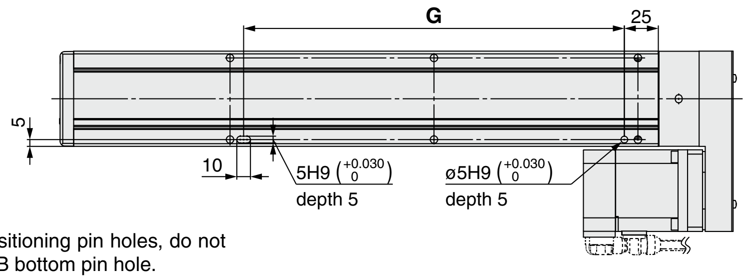
[mm]

Model	L	A	B	n	D	E
LEFS□32□□□-550□	745	556	680	10	4	600
LEFS□32□□□-600□	795	606	730	10	4	600
LEFS□32□□□-650□	845	656	780	12	5	750
LEFS□32□□□-700□	895	706	830	12	5	750
LEFS□32□□□-750□	945	756	880	12	5	750
LEFS□32□□□-800□	995	806	930	14	6	900
LEFS□32□□□-850□	1045	856	980	14	6	900
LEFS□32□□□-900□	1095	906	1030	14	6	900
LEFS□32□□□-950□	1145	956	1080	16	7	1050
LEFS□32□□□-1000□	1195	1006	1130	16	7	1050

Dimensions: Motor Parallel

LEFS32R

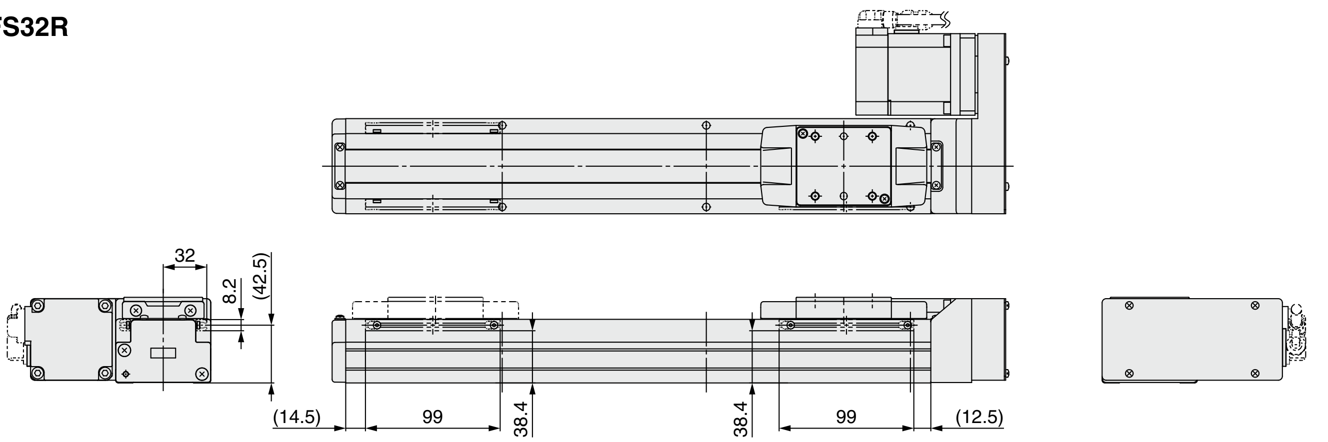
Positioning pin hole*1 (Option): Body bottom



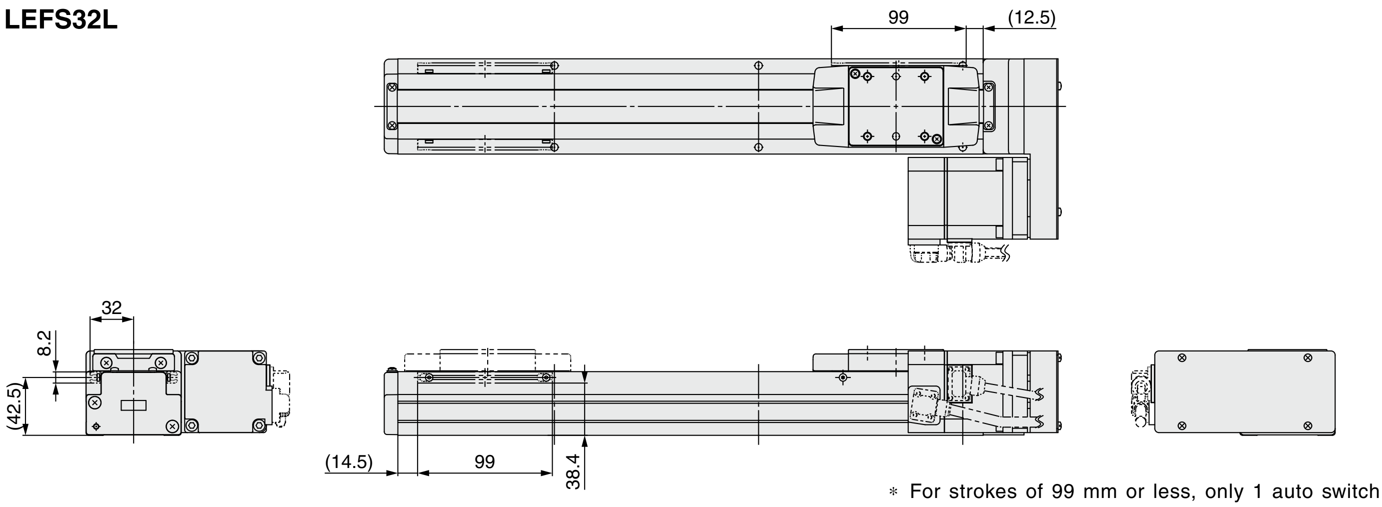
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS32R



LEFS32L



* For strokes of 99 mm or less, only 1 auto switch mounting bracket can be installed on the motor side.

Dimensions [mm]

Model	G
LEFS□32□□□-50□	130
LEFS□32□□□-100□	130
LEFS□32□□□-150□	130
LEFS□32□□□-200□	280
LEFS□32□□□-250□	280
LEFS□32□□□-300□	280
LEFS□32□□□-350□	430
LEFS□32□□□-400□	430
LEFS□32□□□-450□	430
LEFS□32□□□-500□	580

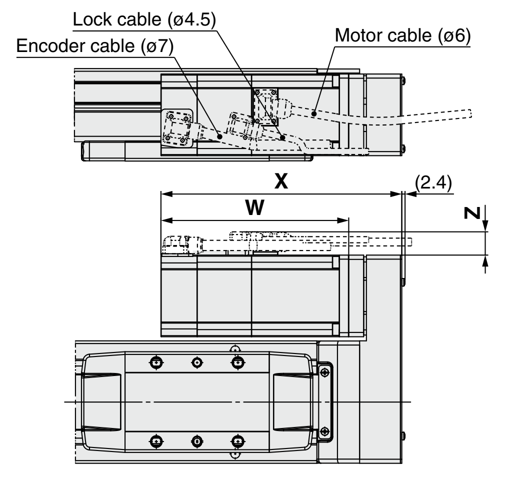
Dimensions [mm]

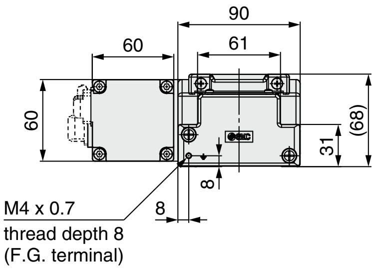
Model	G
LEFS□32□□□-550□	580
LEFS□32□□□-600□	580
LEFS□32□□□-650□	730
LEFS□32□□□-700□	730
LEFS□32□□□-750□	730
LEFS□32□□□-800□	880
LEFS□32□□□-850□	880
LEFS□32□□□-900□	880
LEFS□32□□□-950□	1030
LEFS□32□□□-1000□	1030

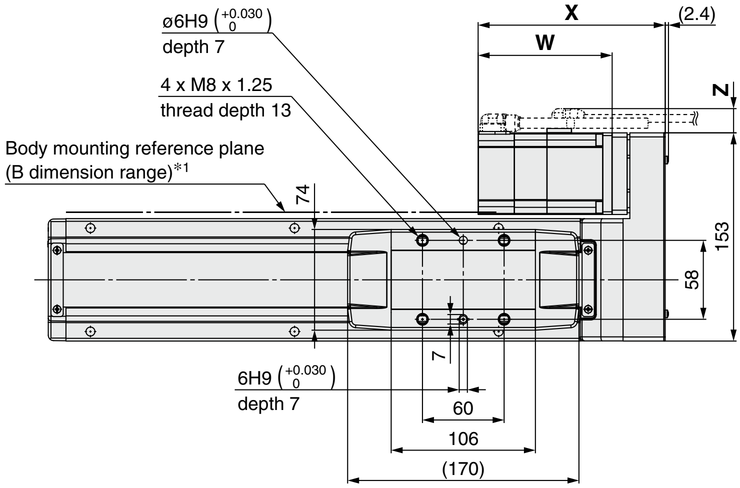
Dimensions: Motor Parallel

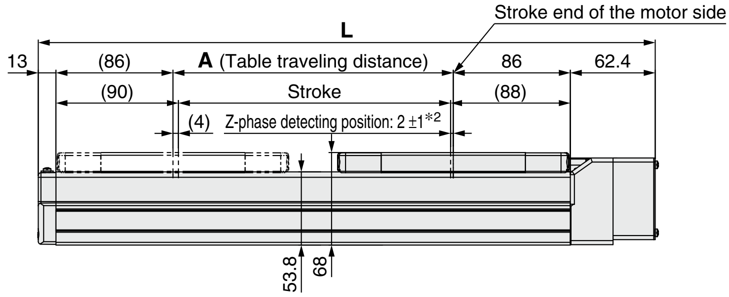
LEFS40R

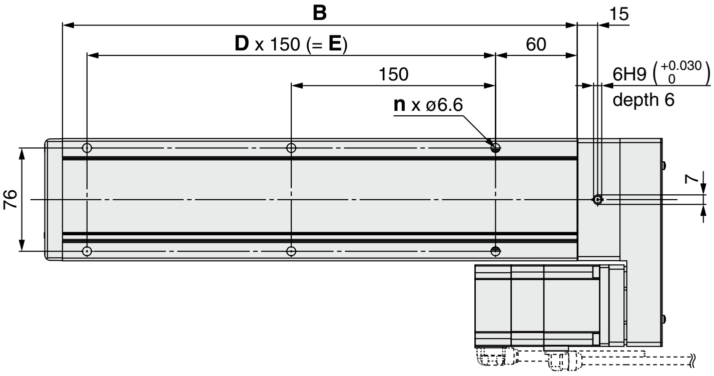
With lock/LEFS40□□□□-□B







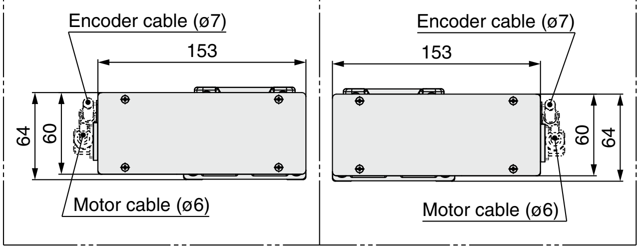




*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm) In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.

*2 The Z-phase first detecting position from the stroke end of the motor side
Please contact SMC for adjusting the Z-phase detecting position at the stroke end of the end side.

Motor mounting position: Left side parallel	Motor mounting position: Right side parallel
LEFS40L□□□	**LEFS40R□□□**



Dimensions

[mm]

Model	L	A	B	n	D	E
LEFS□40□□□-150□	403.4	156	328	4	—	150
LEFS□40□□□-200□	453.4	206	378	6	2	300
LEFS□40□□□-250□	503.4	256	428	6	2	300
LEFS□40□□□-300□	553.4	306	478	6	2	300
LEFS□40□□□-350□	603.4	356	528	8	3	450
LEFS□40□□□-400□	653.4	406	578	8	3	450
LEFS□40□□□-450□	703.4	456	628	8	3	450
LEFS□40□□□-500□	753.4	506	678	10	4	600
LEFS□40□□□-550□	803.4	556	728	10	4	600
LEFS□40□□□-600□	853.4	606	778	10	4	600
LEFS□40□□□-650□	903.4	656	828	12	5	750
LEFS□40□□□-700□	953.4	706	878	12	5	750
LEFS□40□□□-750□	1003.4	756	928	12	5	750
LEFS□40□□□-800□	1053.4	806	978	14	6	900
LEFS□40□□□-850□	1103.4	856	1028	14	6	900
LEFS□40□□□-900□	1153.4	906	1078	14	6	900
LEFS□40□□□-950□	1203.4	956	1128	16	7	1050
LEFS□40□□□-1000□	1253.4	1006	1178	16	7	1050
LEFS□40□□□-1100□	1353.4	1106	1278	18	8	1200
LEFS□40□□□-1200□	1453.4	1206	1378	18	8	1200

Motor Dimensions

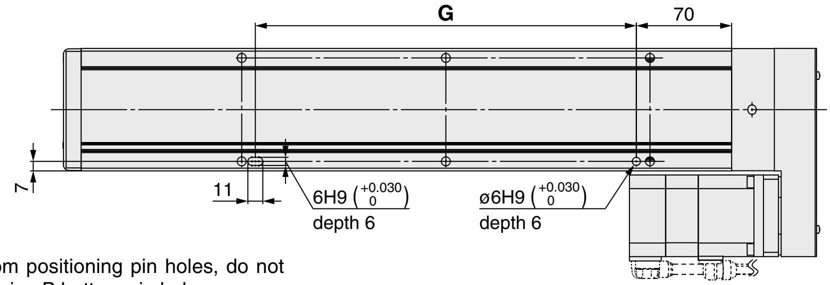
[mm]

Motor type	X		W		Z	
	Without lock	With lock	Without lock	With lock	Without lock	With lock
S4	149.2	177.8	110.2	138.8	17.1	17.1
T8	137.3	174.1	98.3	135.1	17.1	17.1

Dimensions: Motor Parallel

LEFS40R

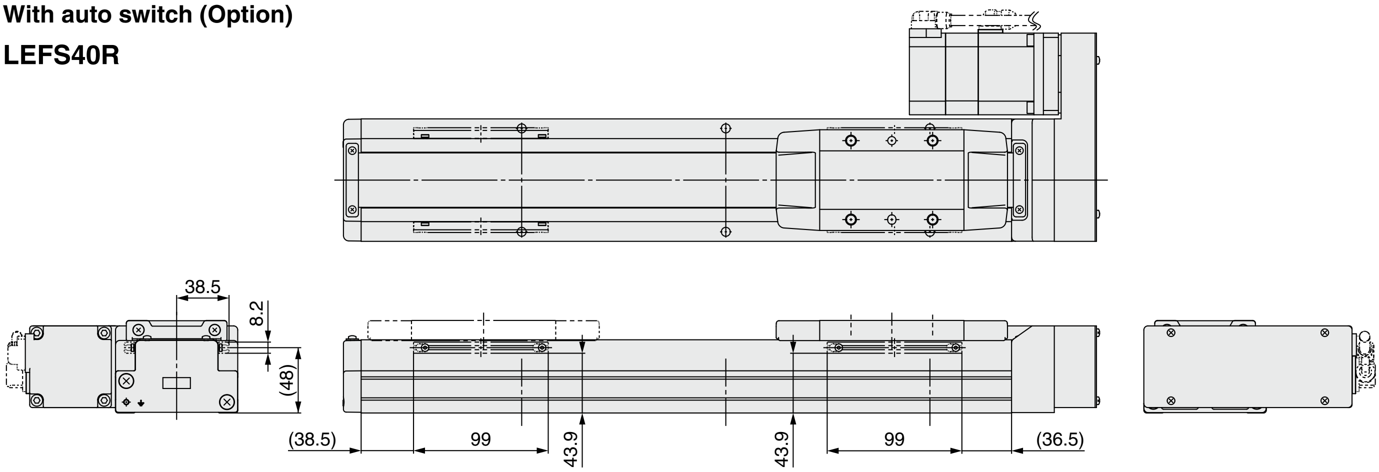
Positioning pin hole*1 (Option): Body bottom



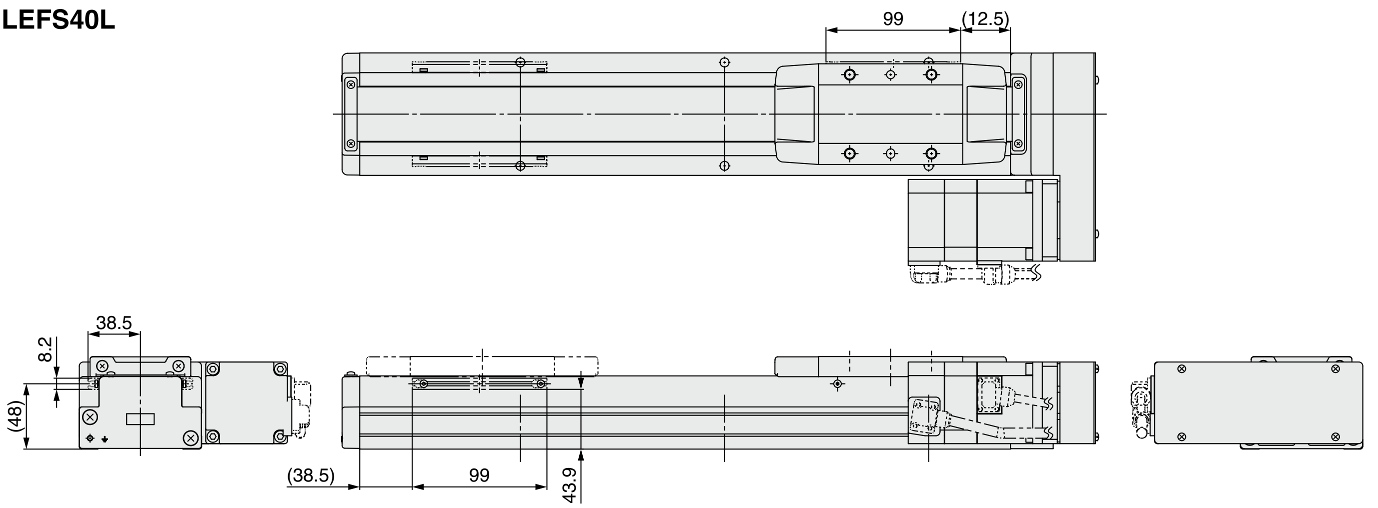
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS40R



LEFS40L



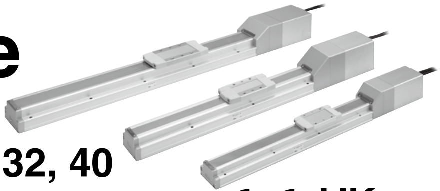
Dimensions [mm]

Model	G
LEFS□40□□□-150□	130
LEFS□40□□□-200□	280
LEFS□40□□□-250□	280
LEFS□40□□□-300□	280
LEFS□40□□□-350□	430
LEFS□40□□□-400□	430
LEFS□40□□□-450□	430
LEFS□40□□□-500□	580
LEFS□40□□□-550□	580
LEFS□40□□□-600□	580

Dimensions [mm]

Model	G
LEFS□40□□□-650□	730
LEFS□40□□□-700□	730
LEFS□40□□□-750□	730
LEFS□40□□□-800□	880
LEFS□40□□□-850□	880
LEFS□40□□□-900□	880
LEFS□40□□□-950□	1030
LEFS□40□□□-1000□	1030
LEFS□40□□□-1100□	1180
LEFS□40□□□-1200□	1180

Slider Type Ball Screw Drive



LEFS Series LEFS25, 32, 40

LECS□ Series ▶p. 182 Clean Room Specification ▶p. 955 Secondary Battery Compatible ▶p. 980
Motorless Type ▶p. 1153

CE UKCA RoHS
* For details, refer to page 1343 and onward.

How to Order

LEFS H 32 R V7 B – 200 B C N K – S 3 M2 □

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬ ⓭ ⓮

❶ Accuracy

Nil	Basic type
H	High-precision type

❷ Size

25
32
40

❸ Motor mounting position

Nil	In-line
R	Right side parallel
L	Left side parallel

❹ Motor type

Symbol	Type	Output [W]	❷Size	⓭Driver type	Compatible drivers
V6 *1	AC servo motor (Absolute encoder)	100	25	M2	LECYM2-V5
				U2	LECYU2-V5
V7		200	32	M2	LECYM2-V7
				U2	LECYU2-V7
V8		400	40	M2	LECYM2-V8
				U2	LECYU2-V8

*1 For motor type V6, the compatible driver part number suffix is V5.

❺ Lead [mm]

Symbol	LEFS25	LEFS32	LEFS40
H	20	24	30
A	12	16	20
B	6	8	10

❻ Stroke [mm]

50	50
to	to
1200	1200

❼ Motor option

Nil	Without option
B	With lock

❽ Auto switch compatibility

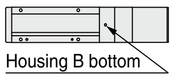
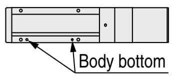
Nil	None
C	With (Includes 1 mounting bracket)

* If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
* Order auto switches separately. (For details, refer to pages 276 to 278.)
* When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.

❾ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

❿ Positioning pin hole

Nil	Housing B bottom*1	
K	Body bottom 2 locations	

*1 Refer to the body mounting example on page 280 for the mounting method.

⓫ Cable type

Nil	Without cable
S	Standard cable
R	Robotic cable

⓬ Actuator cable length [m]

Nil	Without cable
3	3
5	5
A	10
C	20

⓭ Driver type

	Compatible drivers	Power supply voltage [V]
Nil	Without driver	—
M2	LECYM2-V□	200 to 230
U2	LECYU2-V□	200 to 230

* When a driver type is selected, a cable is included. Select the cable type and cable length.

⓮ I/O cable length [m]*1

Nil	Without cable
H	Without cable (Connector only)
1	1.5

*1 When "Nil: Without driver" is selected for the driver type, only "Nil: Without cable" can be selected.
Refer to page 1135 if an I/O cable is required. (Options are shown on page 1135.)

Applicable Stroke Table

●: Standard

Model \ Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
LEFS25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—
LEFS32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—
LEFS40	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

* Please contact SMC for non-standard strokes as they are produced as special orders.

For auto switches, refer to pages 275 to 278.

Compatible Drivers

Driver type	MECHATROLINK-Ⅱ type 	MECHATROLINK-Ⅲ type 
Series	**LECYM**	**LECYU**
Applicable network	MECHATROLINK-Ⅱ	MECHATROLINK-Ⅲ
Control encoder	Absolute 20-bit encoder	
Communication device	USB communication, RS-422 communication	
Power supply voltage [V]	200 to 230 VAC (50/60 Hz)	
Reference page	1128	

Specifications

AC Servo Motor

Model			LEFS25□V6			LEFS32□V7			LEFS40□V8		
Actuator specifications	Stroke [mm]*1		50 to 800			50 to 1000			150 to 1200		
	Work load [kg]*2	Horizontal	10	20	20	30	40	45	30	50	60
		Vertical	4	8	15	5	10	20	7	15	30
	Max. speed*3 [mm/s] Stroke range	Up to 400	1500	900	450	1500	1000	500	1500	1000	500
		401 to 500	1200	720	360	1500	1000	500	1500	1000	500
		501 to 600	900	540	270	1200	800	400	1500	1000	500
		601 to 700	700	420	210	930	620	310	1410	940	470
		701 to 800	550	330	160	750	500	250	1140	760	380
		801 to 900	—	—	—	610	410	200	930	620	310
		901 to 1000	—	—	—	510	340	170	780	520	260
		1001 to 1100	—	—	—	—	—	—	500	440	220
		1101 to 1200	—	—	—	—	—	—	500	380	190
	Max. acceleration/deceleration [mm/s²]		20000 (Refer to pages 123 to 125 for limit according to work load and duty ratio.)								
	Positioning repeatability [mm]	Basic type	±0.02								
		High-precision type	±0.01								
	Lost motion [mm]*4	Basic type	0.1 or less								
		High-precision type	0.05 or less								
	Lead [mm]		20	12	6	24	16	8	30	20	10
	Impact/Vibration resistance [m/s²]*5		50/20								
	Actuation type		Ball screw (LEFS□), Ball screw + Belt (LEFS□$^{R}_{L}$)								
	Guide type		Linear guide								
	Static allowable moment*6 [N·m]	Mep (Pitching)	27			46			110		
		Mey (Yawing)	27			46			110		
		Mer (Rolling)	52			101			207		
	Operating temperature range [°C]		5 to 40								
	Operating humidity range [%RH]		90 or less (No condensation)								
	Enclosure		IP30								
Electric specifications	Motor output/Size		100 W/□40			200 W/□60			400 W/□60		
	Motor type		AC servo motor (200 VAC)								
	Encoder		Absolute 20-bit encoder (Resolution: 1048576 p/rev)								
	Power [W]*7		Max. power 445			Max. power 725			Max. power 1275		
Lock unit specifications	Type*8		Non-magnetizing lock								
	Holding force [N]		78	131	255	131	197	385	220	330	660
	Power [W] at 20°C		5.5			6			6		
	Rated voltage [V]		24 VDC $^{+10\%}_{0}$								

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 For details, refer to the "Speed–Work Load Graph (Guide)" on page 130.
*3 The allowable speed changes according to the stroke.
*4 A reference value for correcting errors in reciprocal operation
*5 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*6 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*7 Indicates the max. power during operation (including the driver)
When selecting the power supply capacity, refer to the power supply capacity in the operation manual of each driver.
*8 Only when motor option "With lock" is selected

Weight

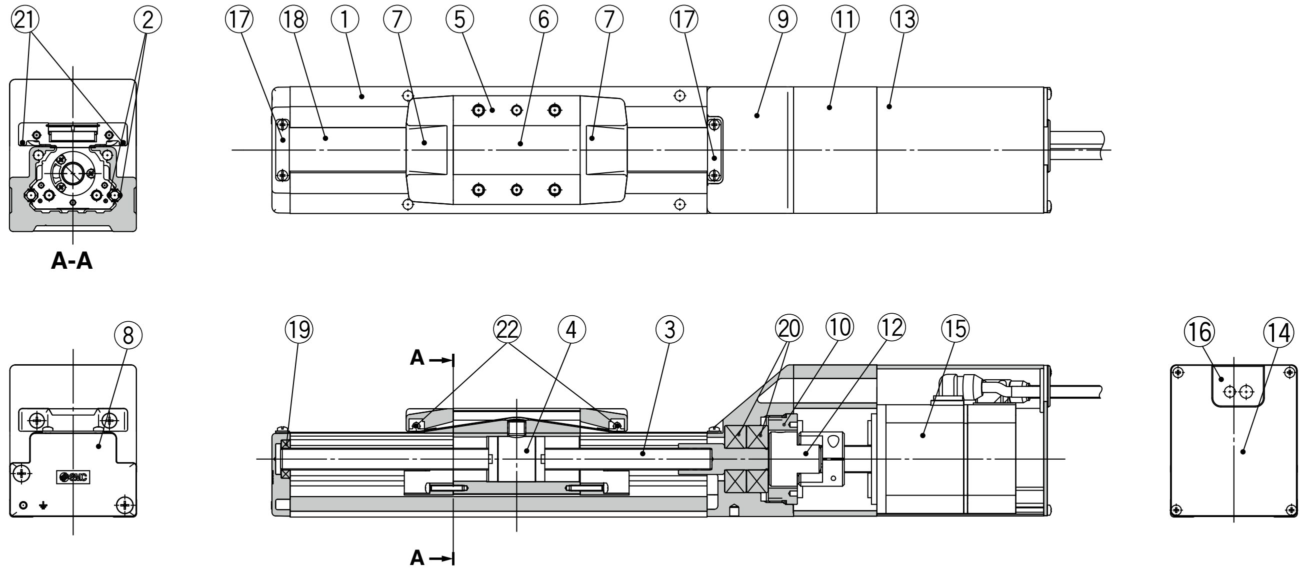
Series	LEFS25□V6															
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Product weight [kg]	2.06	2.20	2.34	2.50	2.62	2.75	2.90	3.05	3.18	3.30	3.46	3.60	3.74	3.88	4.02	4.20
Additional weight with lock [kg]	0.3															

Series	LEFS32□V7																			
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Product weight [kg]	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80	7.00	7.20
Additional weight with lock [kg]	0.7																			

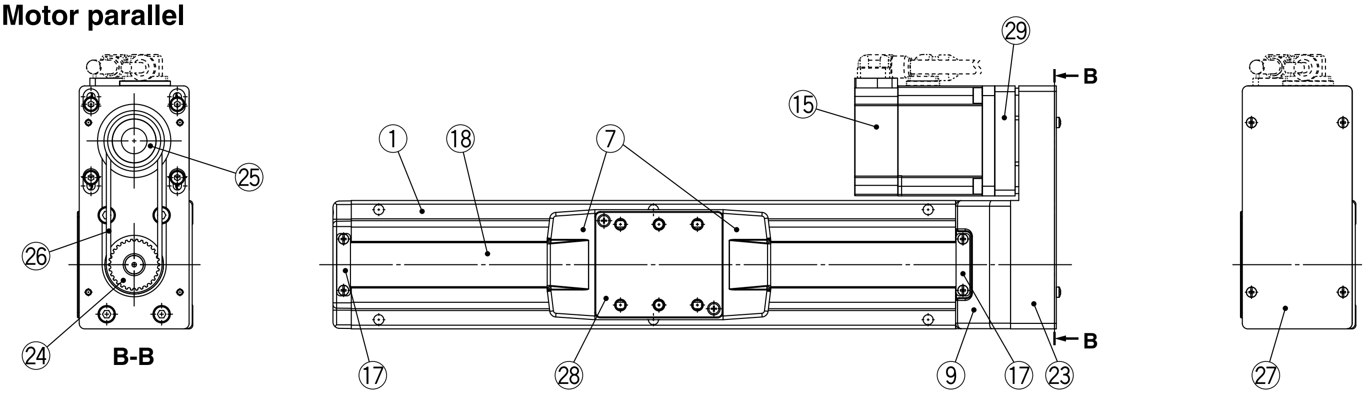
Series	LEFS40□V8																			
Stroke [mm]	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
Product weight [kg]	5.92	6.20	6.48	6.75	7.05	7.35	7.61	7.90	8.17	8.35	8.73	9.00	9.30	9.55	9.86	10.15	10.42	10.70	11.26	11.82
Additional weight with lock [kg]	0.7																			

Construction

In-line motor



Motor parallel



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Ball screw shaft**	—	
4	**Ball screw nut**	—	
5	**Table**	Aluminum alloy	Anodized
6	**Blanking plate**	Aluminum alloy	Anodized
7	**Seal band holder**	Synthetic resin	
8	**Housing A**	Aluminum die-cast	Coating
9	**Housing B**	Aluminum die-cast	Coating
10	**Bearing stopper**	Aluminum alloy	
11	**Motor mount**	Aluminum alloy	Coating
12	**Coupling**	—	
13	**Motor cover**	Aluminum alloy	Anodized
14	**Motor end cover**	Aluminum alloy	Anodized
15	**Motor**	—	
16	**Grommet**	NBR	
17	**Band stopper**	Stainless steel	
18	**Dust seal band**	Stainless steel	
19	**Bearing**	—	Stroke 250 mm or more
20	**Bearing**	—	

No.	Description	Material	Note
21	**Magnet**	—	With auto switch compatibility
22	**Roller assembly**	—	Without grease application
23	**Return plate**	Aluminum die-casted	Coating
24	**Pulley**	Aluminum alloy	Anodized
25	**Pulley**	Aluminum alloy	Anodized
27	**Cover plate**	Aluminum alloy	Anodized
28	**Table spacer**	Aluminum alloy	Anodized (LEFS32 only)
29	**Motor adapter**	Aluminum alloy	Coating

Replacement Parts/Belt

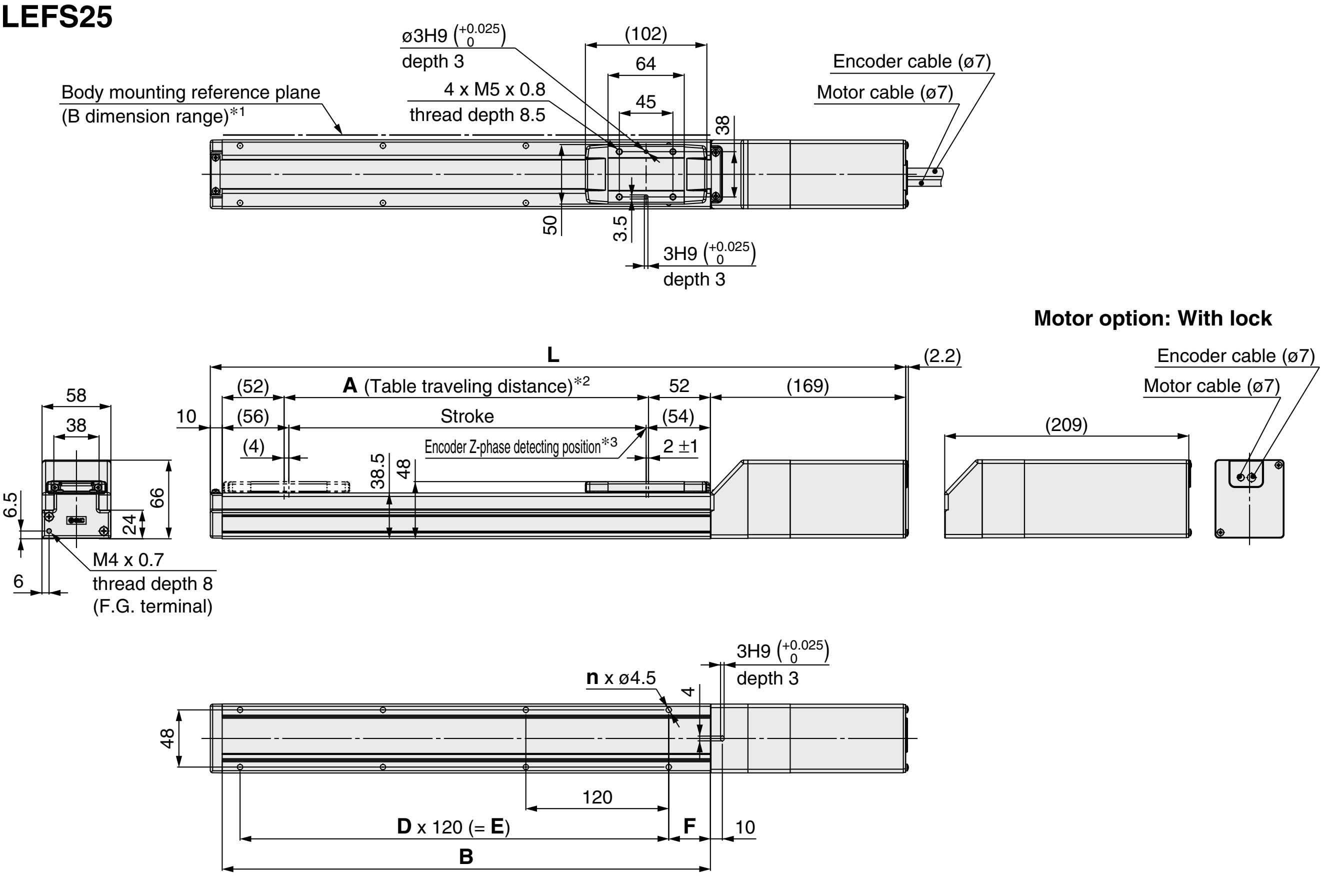
No.	Size	Order no.
26	25	LE-D-6-2
	32	LE-D-6-3
	40	LE-D-6-4

Replacement Parts/Grease Pack

Applied portion	Order no.
Ball screw	GR-S-010 (10 g) GR-S-020 (20 g)
Rail guide	
Dust seal band (When "Without" is selected for the grease application, grease is applied only on the back side.)	

Dimensions: In-line Motor

LEFS25



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

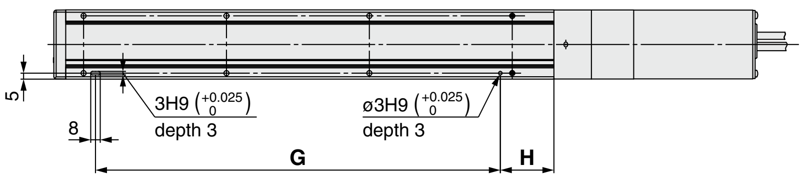
Dimensions [mm]

Model	L		A	B	n	D	E	F
	Without lock	With lock						
LEFS□25□□-50□	339	379	56	160	4	—	—	20
LEFS□25□□-100□	389	429	106	210	4	—	—	
LEFS□25□□-150□	439	479	156	260	4	—	—	
LEFS□25□□-200□	489	529	206	310	6	2	240	
LEFS□25□□-250□	539	579	256	360	6	2	240	
LEFS□25□□-300□	589	629	306	410	8	3	360	
LEFS□25□□-350□	639	679	356	460	8	3	360	
LEFS□25□□-400□	689	729	406	510	8	3	360	
LEFS□25□□-450□	739	779	456	560	10	4	480	35
LEFS□25□□-500□	789	829	506	610	10	4	480	
LEFS□25□□-550□	839	879	556	660	12	5	600	
LEFS□25□□-600□	889	929	606	710	12	5	600	
LEFS□25□□-650□	939	979	656	760	12	5	600	
LEFS□25□□-700□	989	1029	706	810	14	6	720	
LEFS□25□□-750□	1039	1079	756	860	14	6	720	
LEFS□25□□-800□	1089	1129	806	910	16	7	840	

Dimensions: In-line Motor

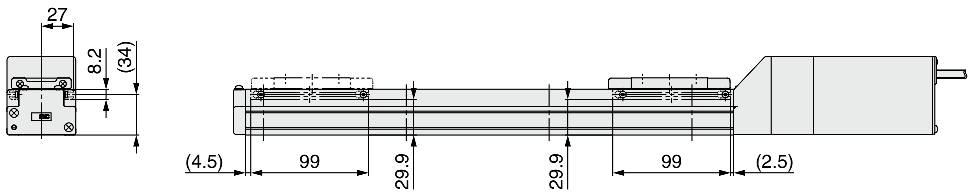
LEFS25

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



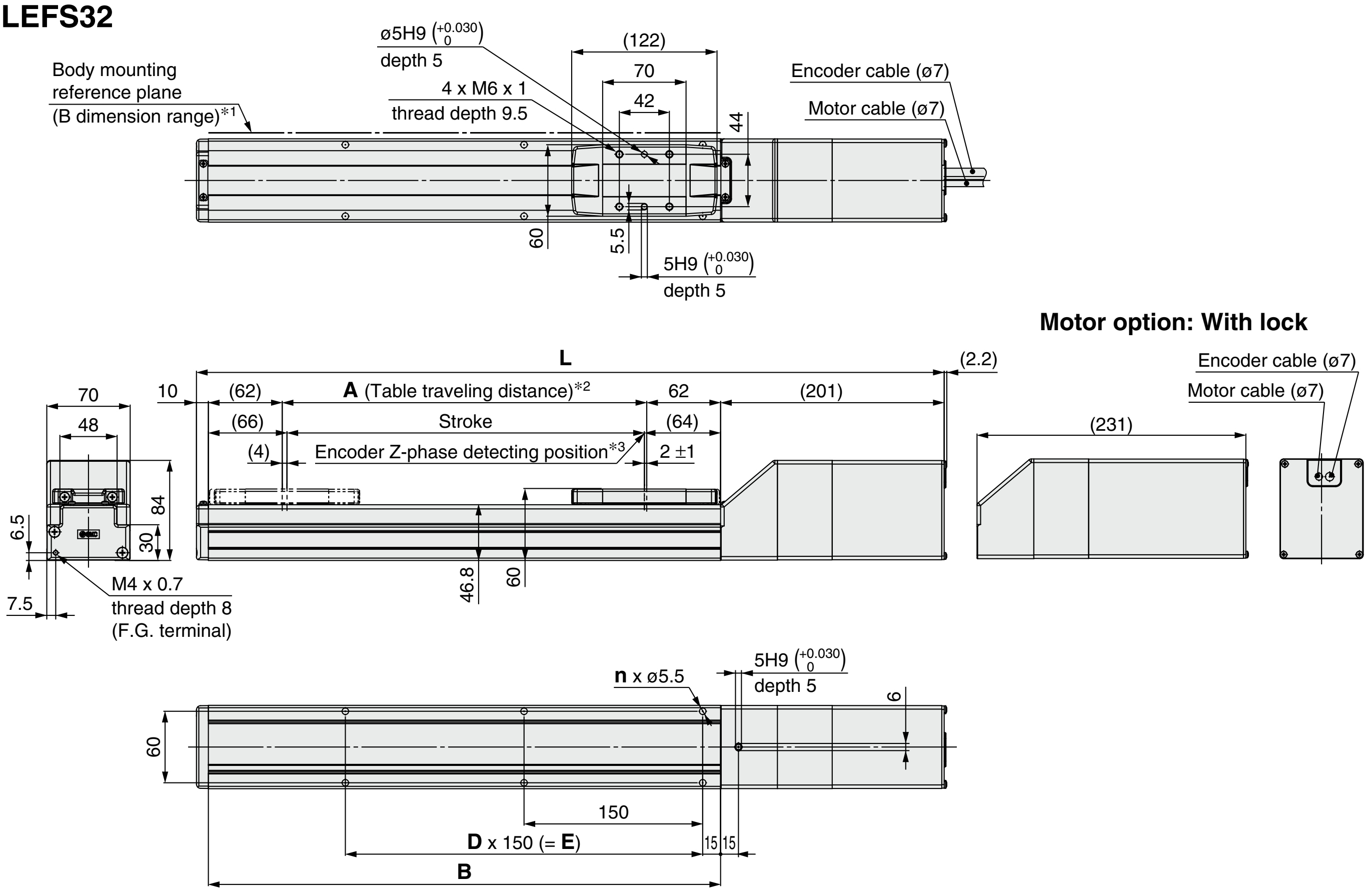
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

Model	G	H
LEFS□25□□-50□	100	30
LEFS□25□□-100□	100	45
LEFS□25□□-150□	100	45
LEFS□25□□-200□	220	45
LEFS□25□□-250□	220	45
LEFS□25□□-300□	340	45
LEFS□25□□-350□	340	45
LEFS□25□□-400□	340	45
LEFS□25□□-450□	460	45
LEFS□25□□-500□	460	45
LEFS□25□□-550□	580	45
LEFS□25□□-600□	580	45
LEFS□25□□-650□	580	45
LEFS□25□□-700□	700	45
LEFS□25□□-750□	700	45
LEFS□25□□-800□	820	45

Dimensions: In-line Motor

LEFS32



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

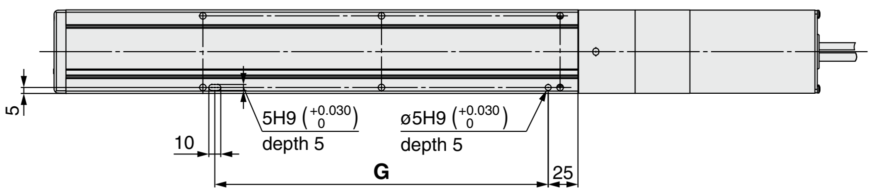
Dimensions [mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□32□□-50□	391	421	56	180	4	—	—
LEFS□32□□-100□	441	471	106	230	4	—	—
LEFS□32□□-150□	491	521	156	280	4	—	—
LEFS□32□□-200□	541	571	206	330	6	2	300
LEFS□32□□-250□	591	621	256	380	6	2	300
LEFS□32□□-300□	641	671	306	430	6	2	300
LEFS□32□□-350□	691	721	356	480	8	3	450
LEFS□32□□-400□	741	771	406	530	8	3	450
LEFS□32□□-450□	791	821	456	580	8	3	450
LEFS□32□□-500□	841	871	506	630	10	4	600
LEFS□32□□-550□	891	921	556	680	10	4	600
LEFS□32□□-600□	941	971	606	730	10	4	600
LEFS□32□□-650□	991	1021	656	780	12	5	750
LEFS□32□□-700□	1041	1071	706	830	12	5	750
LEFS□32□□-750□	1091	1121	756	880	12	5	750
LEFS□32□□-800□	1141	1171	806	930	14	6	900
LEFS□32□□-850□	1191	1221	856	980	14	6	900
LEFS□32□□-900□	1241	1271	906	1030	14	6	900
LEFS□32□□-950□	1291	1321	956	1080	16	7	1050
LEFS□32□□-1000□	1341	1371	1006	1130	16	7	1050

Dimensions: In-line Motor

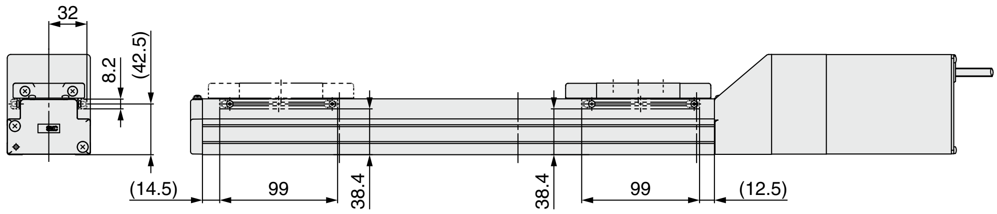
LEFS32

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



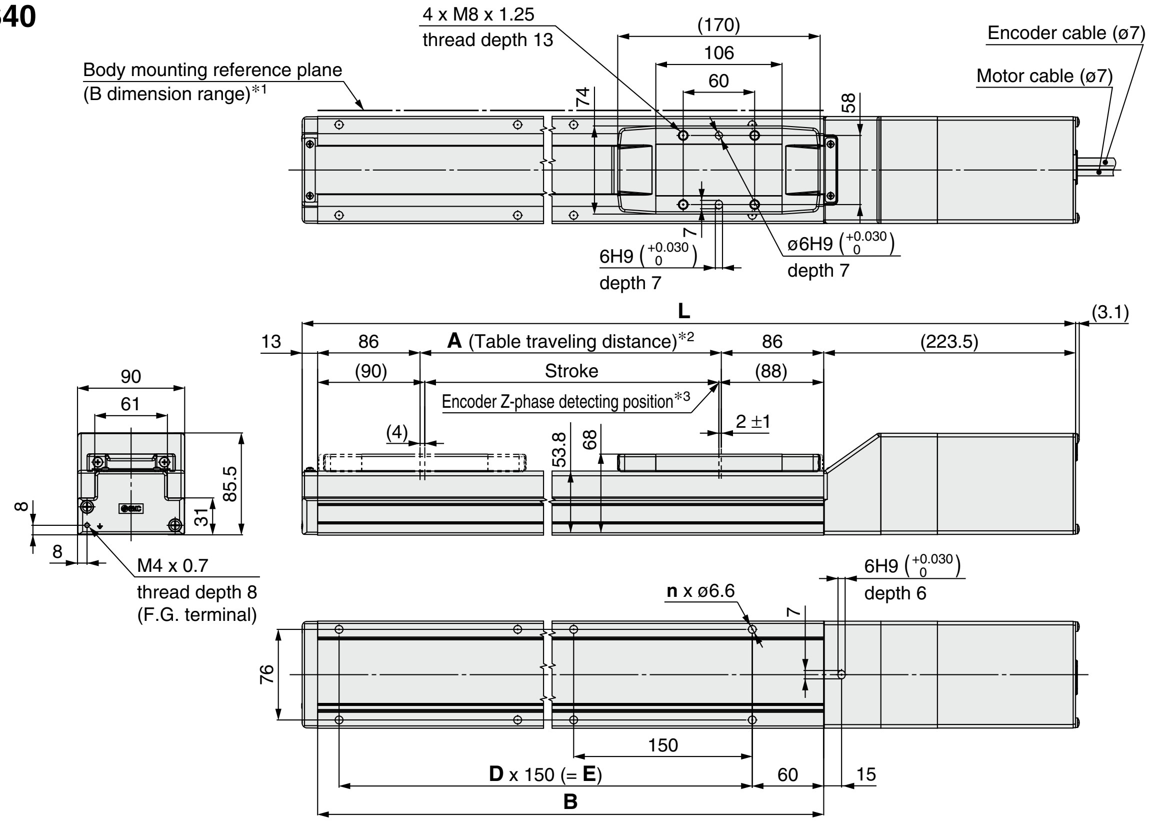
* For strokes of 99 mm or less, only 2 auto switch mounting brackets can be installed on the motor side.

Dimensions [mm]

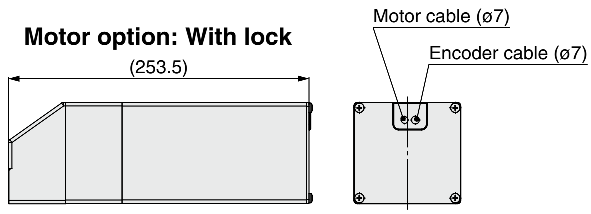
Model	G
LEFS□32□□-50□	130
LEFS□32□□-100□	130
LEFS□32□□-150□	130
LEFS□32□□-200□	280
LEFS□32□□-250□	280
LEFS□32□□-300□	280
LEFS□32□□-350□	430
LEFS□32□□-400□	430
LEFS□32□□-450□	430
LEFS□32□□-500□	580
LEFS□32□□-550□	580
LEFS□32□□-600□	580
LEFS□32□□-650□	730
LEFS□32□□-700□	730
LEFS□32□□-750□	730
LEFS□32□□-800□	880
LEFS□32□□-850□	880
LEFS□32□□-900□	880
LEFS□32□□-950□	1030
LEFS□32□□-1000□	1030

Dimensions: In-line Motor

LEFS40



Motor option: With lock



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

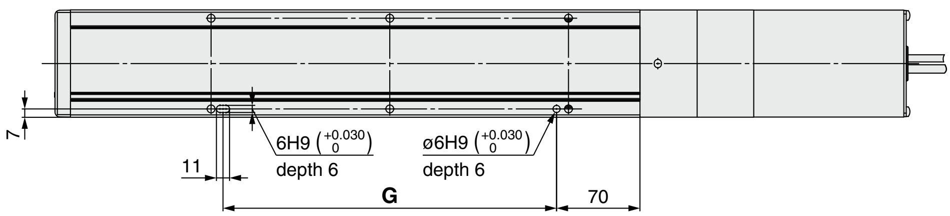
Dimensions [mm]

Model	L		A	B	n	D	E
	Without lock	With lock					
LEFS□40□□-150□	564.5	594.5	156	328	4	—	150
LEFS□40□□-200□	614.5	644.5	206	378	6	2	300
LEFS□40□□-250□	664.5	694.5	256	428	6	2	300
LEFS□40□□-300□	714.5	744.5	306	478	6	2	300
LEFS□40□□-350□	764.5	794.5	356	528	8	3	450
LEFS□40□□-400□	814.5	844.5	406	578	8	3	450
LEFS□40□□-450□	864.5	894.5	456	628	8	3	450
LEFS□40□□-500□	914.5	944.5	506	678	10	4	600
LEFS□40□□-550□	964.5	994.5	556	728	10	4	600
LEFS□40□□-600□	1014.5	1044.5	606	778	10	4	600
LEFS□40□□-650□	1064.5	1094.5	656	828	12	5	750
LEFS□40□□-700□	1114.5	1144.5	706	878	12	5	750
LEFS□40□□-750□	1164.5	1194.5	756	928	12	5	750
LEFS□40□□-800□	1214.5	1244.5	806	978	14	6	900
LEFS□40□□-850□	1264.5	1294.5	856	1028	14	6	900
LEFS□40□□-900□	1314.5	1344.5	906	1078	14	6	900
LEFS□40□□-950□	1364.5	1394.5	956	1128	16	7	1050
LEFS□40□□-1000□	1414.5	1444.5	1006	1178	16	7	1050
LEFS□40□□-1100□	1514.5	1544.5	1106	1278	18	8	1200
LEFS□40□□-1200□	1614.5	1644.5	1206	1378	18	8	1200

Dimensions: In-line Motor

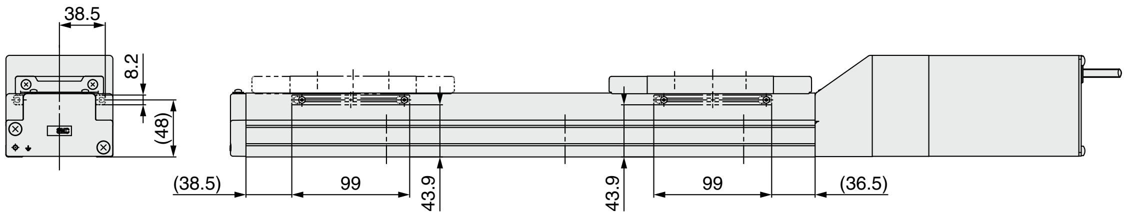
LEFS40

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

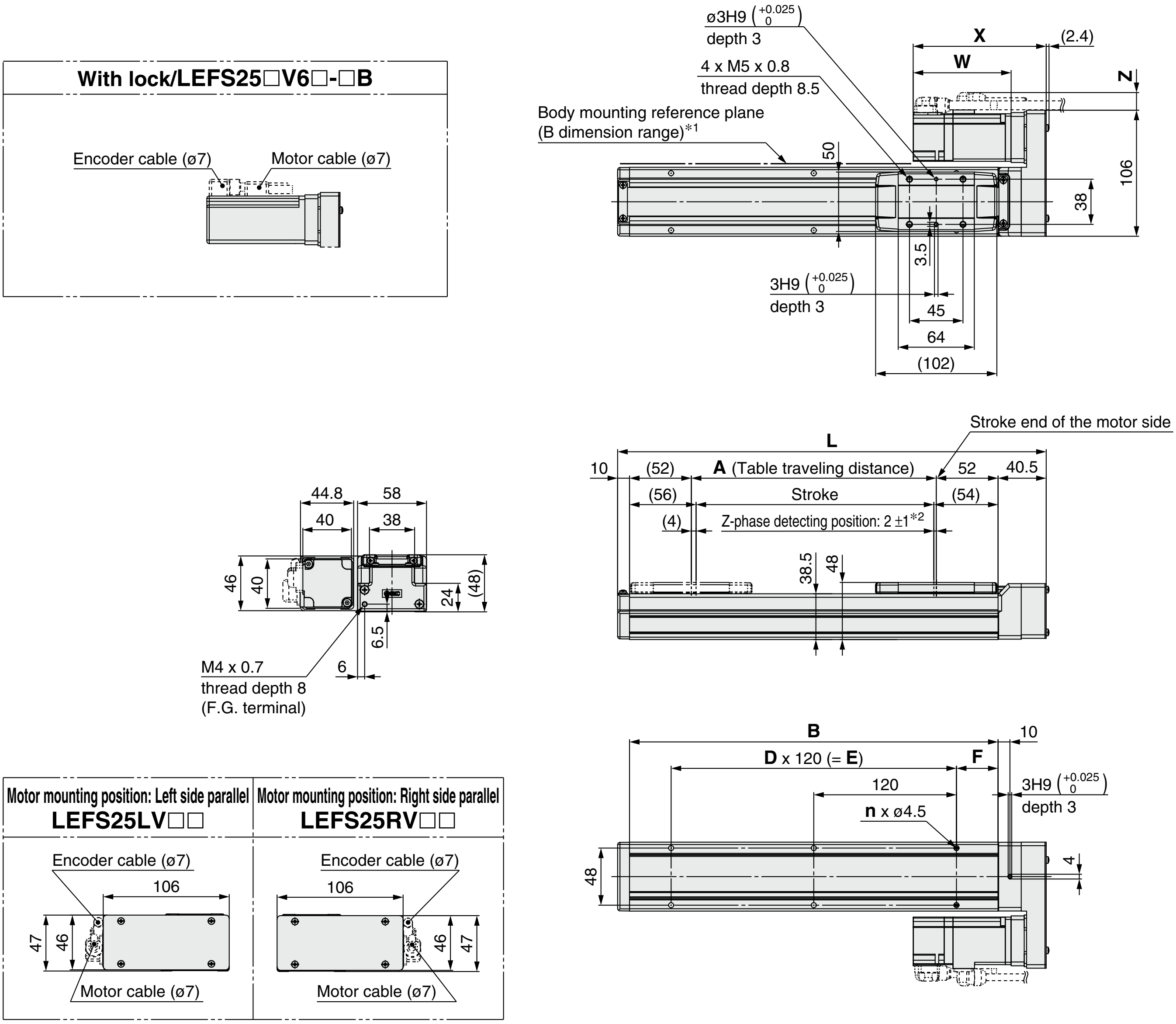


Dimensions [mm]

Model	G
LEFS□40□□-150□	130
LEFS□40□□-200□	280
LEFS□40□□-250□	280
LEFS□40□□-300□	280
LEFS□40□□-350□	430
LEFS□40□□-400□	430
LEFS□40□□-450□	430
LEFS□40□□-500□	580
LEFS□40□□-550□	580
LEFS□40□□-600□	580
LEFS□40□□-650□	730
LEFS□40□□-700□	730
LEFS□40□□-750□	730
LEFS□40□□-800□	880
LEFS□40□□-850□	880
LEFS□40□□-900□	880
LEFS□40□□-950□	1030
LEFS□40□□-1000□	1030
LEFS□40□□-1100□	1180
LEFS□40□□-1200□	1180

Dimensions: Motor Parallel

LEFS25R



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.

*2 The Z-phase first detecting position from the stroke end of the motor side
Please contact SMC for adjusting the Z-phase detecting position at the stroke end of the end side.

Motor Dimensions

[mm]

Motor type	X		W		Z	
	Without lock	With lock	Without lock	With lock	Without lock	With lock
V6	112	157	82.5	127.5	11	

Dimensions

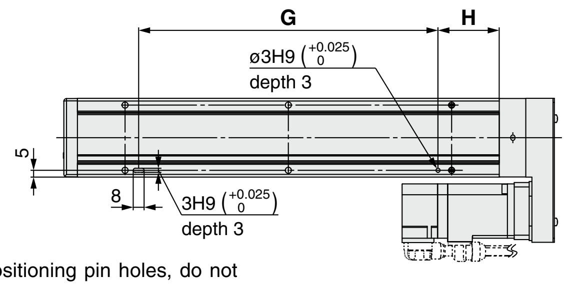
[mm]

Model	L	A	B	n	D	E	F
LEFS□25□□□-50□	210.5	56	160	4	—	—	20
LEFS□25□□□-100□	260.5	106	210	4	—	—	35
LEFS□25□□□-150□	310.5	156	260	4	—	—	
LEFS□25□□□-200□	360.5	206	310	6	2	240	
LEFS□25□□□-250□	410.5	256	360	6	2	240	
LEFS□25□□□-300□	460.5	306	410	8	3	360	
LEFS□25□□□-350□	510.5	356	460	8	3	360	
LEFS□25□□□-400□	560.5	406	510	8	3	360	
LEFS□25□□□-450□	610.5	456	560	10	4	480	
LEFS□25□□□-500□	660.5	506	610	10	4	480	
LEFS□25□□□-550□	710.5	556	660	12	5	600	
LEFS□25□□□-600□	760.5	606	710	12	5	600	
LEFS□25□□□-650□	810.5	656	760	12	5	600	
LEFS□25□□□-700□	860.5	706	810	14	6	720	
LEFS□25□□□-750□	910.5	756	860	14	6	720	
LEFS□25□□□-800□	960.5	806	910	16	7	840	

Dimensions: Motor Parallel

LEFS25R

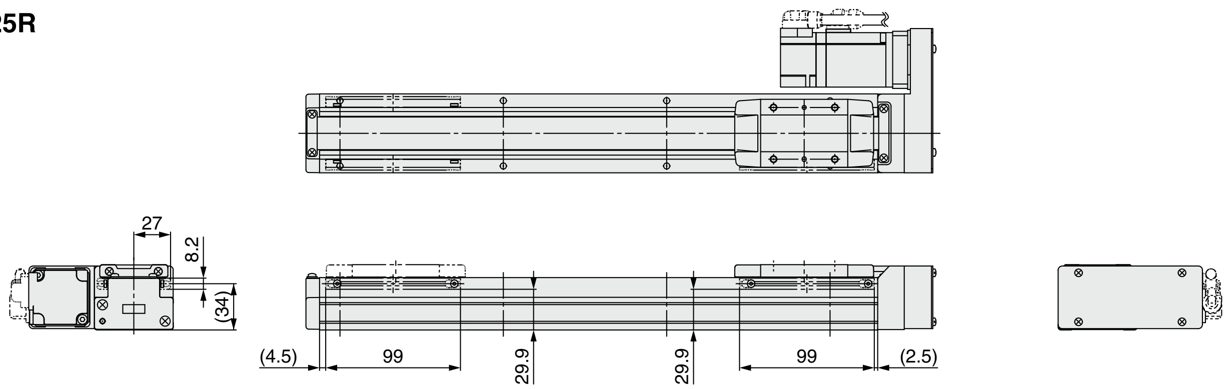
Positioning pin hole*1 (Option): Body bottom



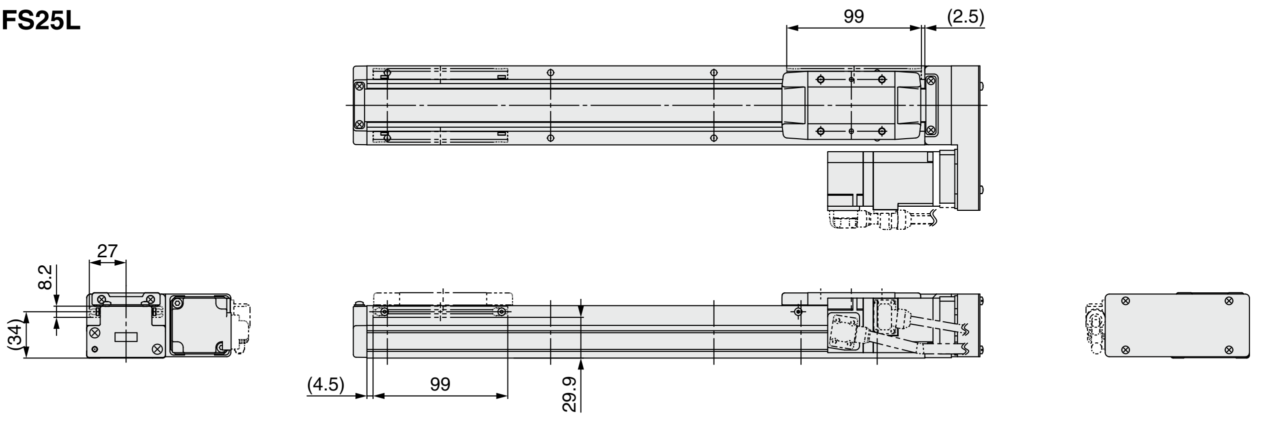
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS25R



LEFS25L



Dimensions

[mm]

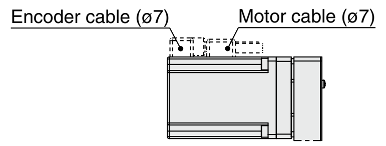
Model	G	H
LEFS□25□□□-50□	100	30
LEFS□25□□□-100□	100	45
LEFS□25□□□-150□	100	45
LEFS□25□□□-200□	220	45
LEFS□25□□□-250□	220	45
LEFS□25□□□-300□	340	45
LEFS□25□□□-350□	340	45
LEFS□25□□□-400□	340	45
LEFS□25□□□-450□	460	45
LEFS□25□□□-500□	460	45
LEFS□25□□□-550□	580	45
LEFS□25□□□-600□	580	45
LEFS□25□□□-650□	580	45
LEFS□25□□□-700□	700	45
LEFS□25□□□-750□	700	45
LEFS□25□□□-800□	820	45

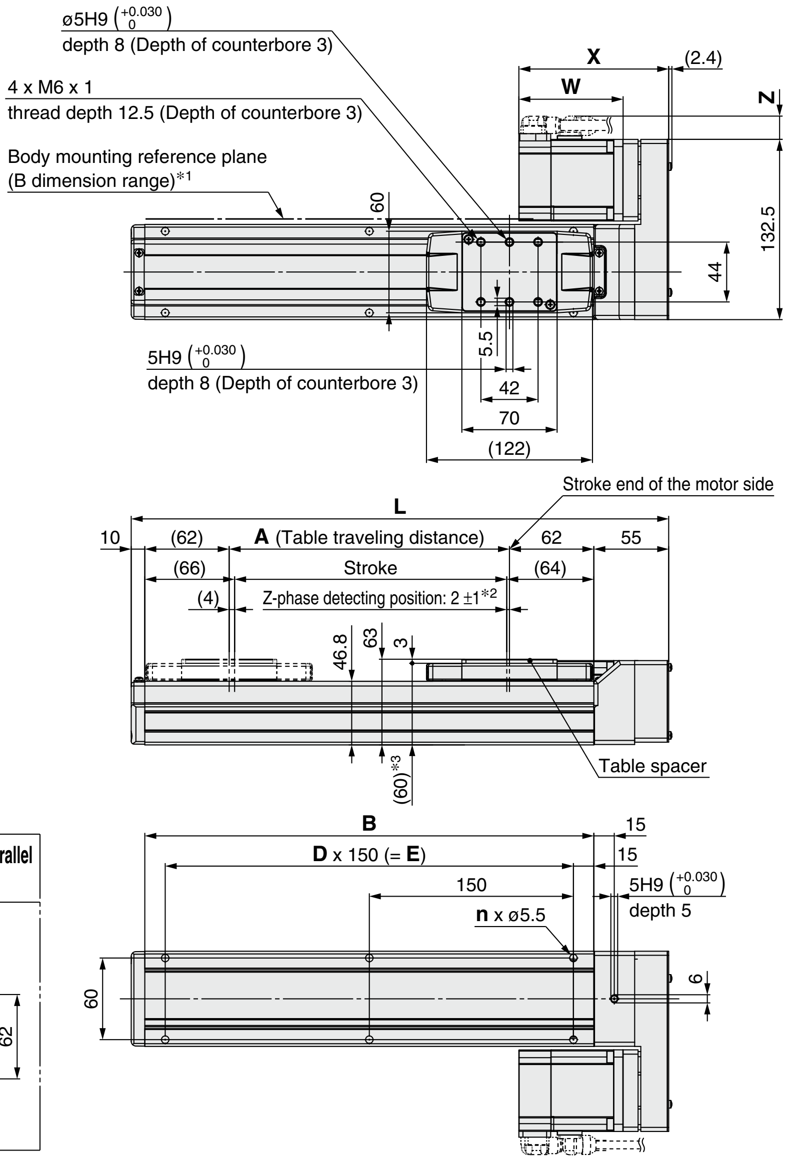
* For strokes of 99 mm or less, only 1 auto switch mounting bracket can be installed on the motor side.

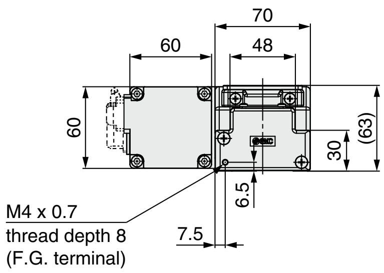
Dimensions: Motor Parallel

LEFS32R

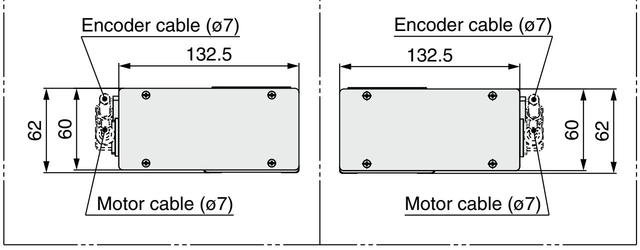
With lock/LEFS32□V7□-□B







Motor mounting position: Left side parallel LEFS32LV□□	Motor mounting position: Right side parallel LEFS32RV□□



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.
*2 The Z-phase first detecting position from the stroke end of the motor side
Please contact SMC for adjusting the Z-phase detecting position at the stroke end of the end side.
*3 When the table spacer is removed

Motor Dimensions

[mm]

Motor type	X		W		Z	
	Without lock	With lock	Without lock	With lock	Without lock	With lock
V7	113.5	153.5	80	120	14	14

Dimensions

[mm]

Model	L	A	B	n	D	E
LEFS□32□□□-50□	245	56	180	4	—	—
LEFS□32□□□-100□	295	106	230	4	—	—
LEFS□32□□□-150□	345	156	280	4	—	—
LEFS□32□□□-200□	395	206	330	6	2	300
LEFS□32□□□-250□	445	256	380	6	2	300
LEFS□32□□□-300□	495	306	430	6	2	300
LEFS□32□□□-350□	545	356	480	8	3	450
LEFS□32□□□-400□	595	406	530	8	3	450
LEFS□32□□□-450□	645	456	580	8	3	450
LEFS□32□□□-500□	695	506	630	10	4	600

Dimensions

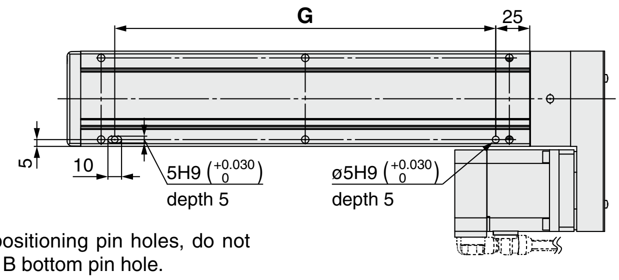
[mm]

Model	L	A	B	n	D	E
LEFS□32□□□-550□	745	556	680	10	4	600
LEFS□32□□□-600□	795	606	730	10	4	600
LEFS□32□□□-650□	845	656	780	12	5	750
LEFS□32□□□-700□	895	706	830	12	5	750
LEFS□32□□□-750□	945	756	880	12	5	750
LEFS□32□□□-800□	995	806	930	14	6	900
LEFS□32□□□-850□	1045	856	980	14	6	900
LEFS□32□□□-900□	1095	906	1030	14	6	900
LEFS□32□□□-950□	1145	956	1080	16	7	1050
LEFS□32□□□-1000□	1195	1006	1130	16	7	1050

Dimensions: Motor Parallel

LEFS32R

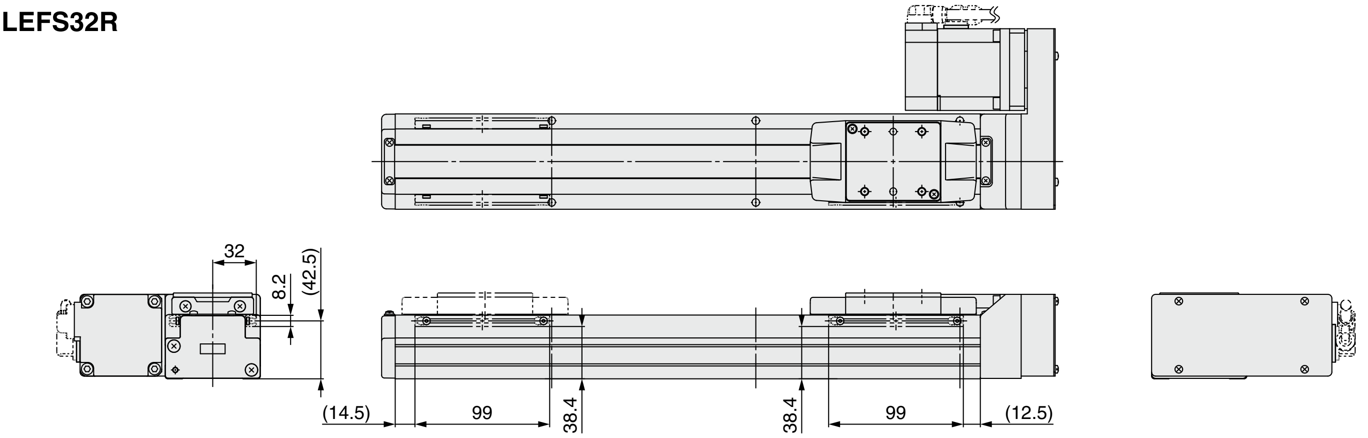
Positioning pin hole*1 (Option): Body bottom



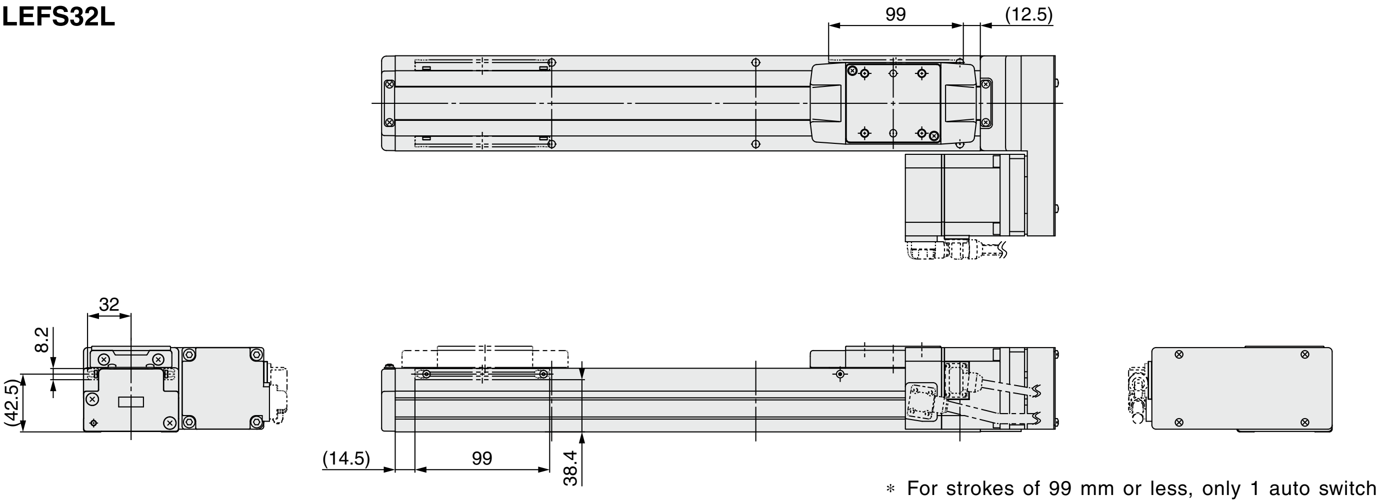
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS32R



LEFS32L



* For strokes of 99 mm or less, only 1 auto switch mounting bracket can be installed on the motor side.

Dimensions [mm]

Model	G
LEFS□32□□□-50□	130
LEFS□32□□□-100□	130
LEFS□32□□□-150□	130
LEFS□32□□□-200□	280
LEFS□32□□□-250□	280
LEFS□32□□□-300□	280
LEFS□32□□□-350□	430
LEFS□32□□□-400□	430
LEFS□32□□□-450□	430
LEFS□32□□□-500□	580

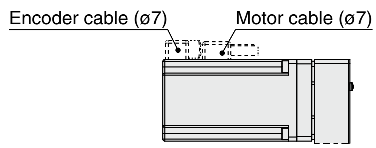
Dimensions [mm]

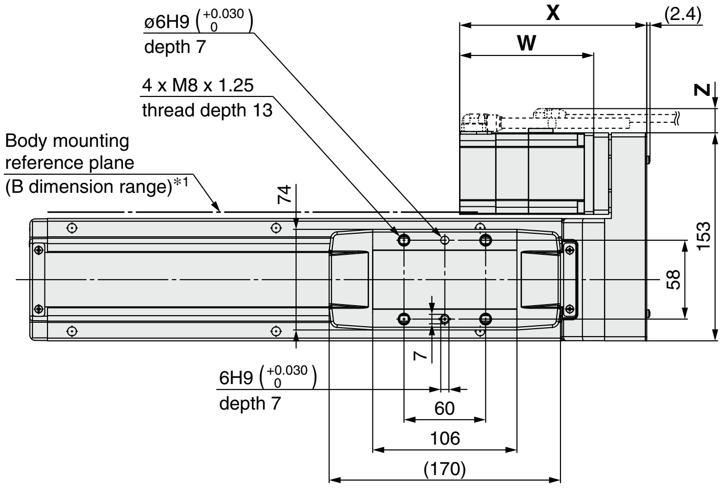
Model	G
LEFS□32□□□-550□	580
LEFS□32□□□-600□	580
LEFS□32□□□-650□	730
LEFS□32□□□-700□	730
LEFS□32□□□-750□	730
LEFS□32□□□-800□	880
LEFS□32□□□-850□	880
LEFS□32□□□-900□	880
LEFS□32□□□-950□	1030
LEFS□32□□□-1000□	1030

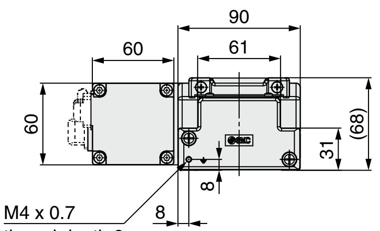
Dimensions: Motor Parallel

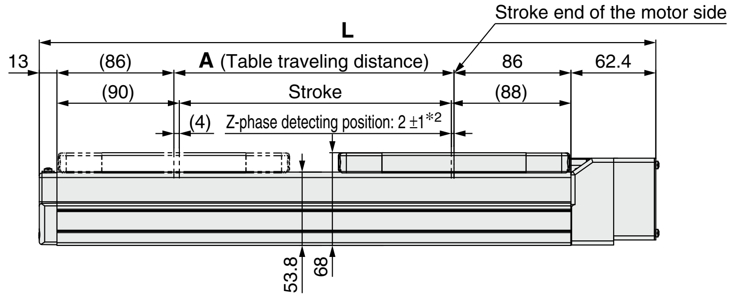
LEFS40R

With lock/LEFS40□V8□-□B



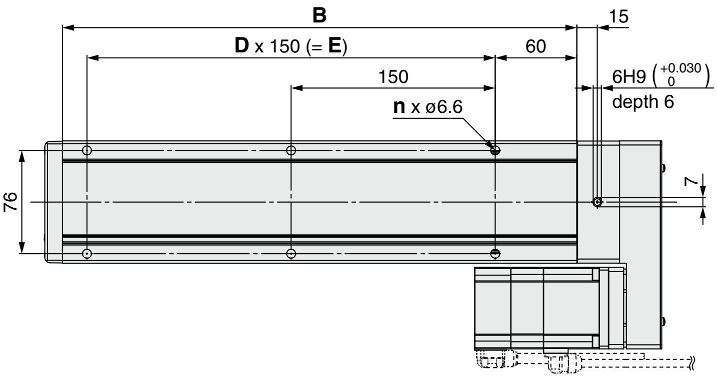






*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height: 5 mm)
In addition, be aware that surfaces other than the body mounting reference plane (B dimension range) may slightly protrude from the body mounting reference plane. Be sure to provide a clearance of 1 mm or more to avoid interference with workpieces, facilities, etc.

*2 The Z-phase first detecting position from the stroke end of the motor side
Please contact SMC for adjusting the Z-phase detecting position at the stroke end of the end side.



Motor Dimensions

[mm]

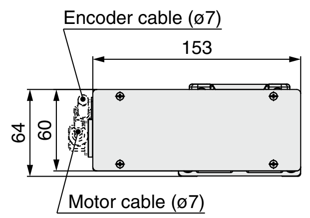
Motor type	X		W		Z	
	Without lock	With lock	Without lock	With lock	Without lock	With lock
V8	137.5	177.5	98.5	138.5	14	14

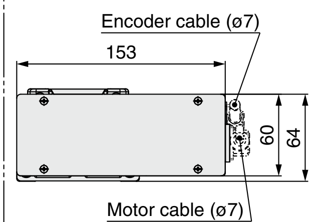
Dimensions

[mm]

Model	L	A	B	n	D	E
LEFS□40□□□-150□	403.4	156	328	4	—	150
LEFS□40□□□-200□	453.4	206	378	6	2	300
LEFS□40□□□-250□	503.4	256	428	6	2	300
LEFS□40□□□-300□	553.4	306	478	6	2	300
LEFS□40□□□-350□	603.4	356	528	8	3	450
LEFS□40□□□-400□	653.4	406	578	8	3	450
LEFS□40□□□-450□	703.4	456	628	8	3	450
LEFS□40□□□-500□	753.4	506	678	10	4	600
LEFS□40□□□-550□	803.4	556	728	10	4	600
LEFS□40□□□-600□	853.4	606	778	10	4	600
LEFS□40□□□-650□	903.4	656	828	12	5	750
LEFS□40□□□-700□	953.4	706	878	12	5	750
LEFS□40□□□-750□	1003.4	756	928	12	5	750
LEFS□40□□□-800□	1053.4	806	978	14	6	900
LEFS□40□□□-850□	1103.4	856	1028	14	6	900
LEFS□40□□□-900□	1153.4	906	1078	14	6	900
LEFS□40□□□-950□	1203.4	956	1128	16	7	1050
LEFS□40□□□-1000□	1253.4	1006	1178	16	7	1050
LEFS□40□□□-1100□	1353.4	1106	1278	18	8	1200
LEFS□40□□□-1200□	1453.4	1206	1378	18	8	1200

Motor mounting position: Left side parallel LEFS40LV□□	Motor mounting position: Right side parallel LEFS40RV□□

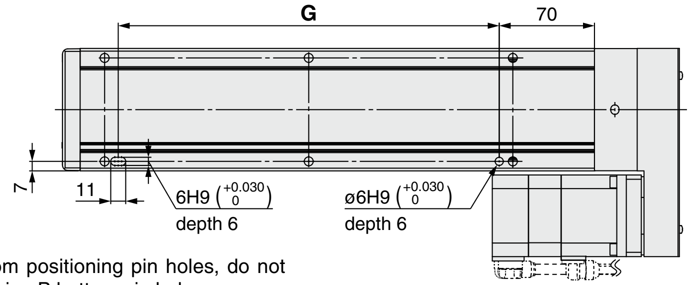




Dimensions: Motor Parallel

LEFS40R

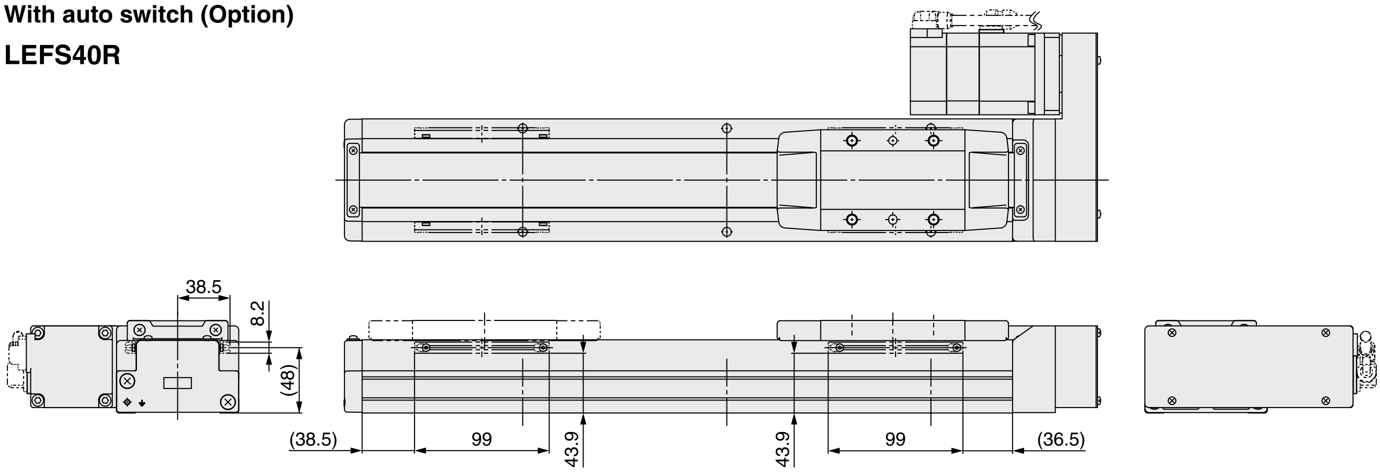
Positioning pin hole*1 (Option): Body bottom



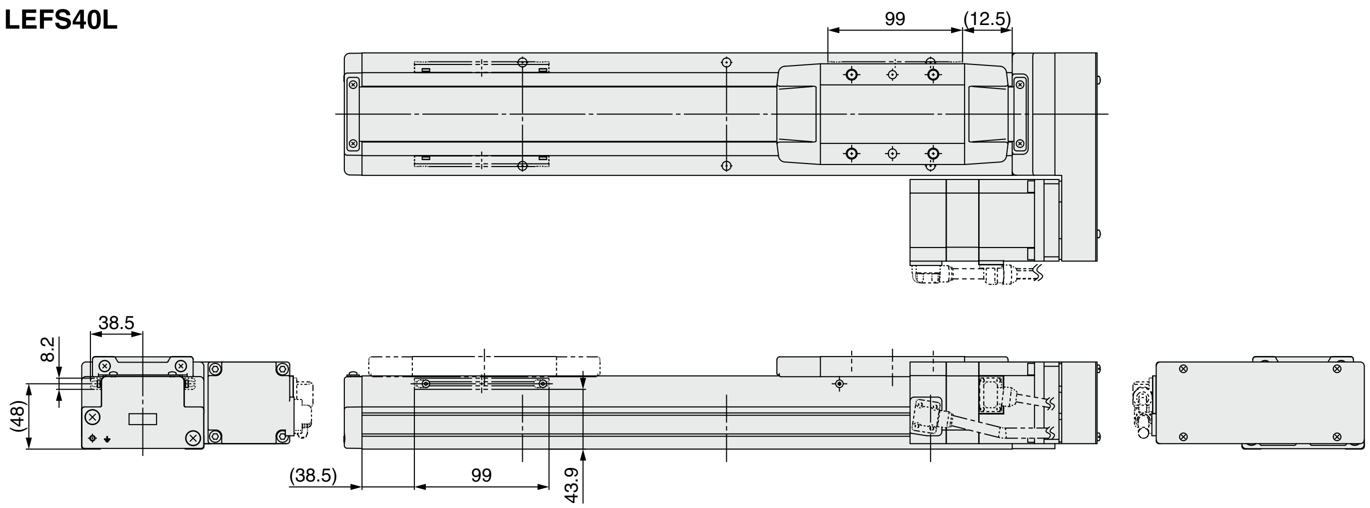
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

LEFS40R



LEFS40L



Dimensions [mm]

Model	G
LEFS□40□□□-150□	130
LEFS□40□□□-200□	280
LEFS□40□□□-250□	280
LEFS□40□□□-300□	280
LEFS□40□□□-350□	430
LEFS□40□□□-400□	430
LEFS□40□□□-450□	430
LEFS□40□□□-500□	580
LEFS□40□□□-550□	580
LEFS□40□□□-600□	580

Dimensions [mm]

Model	G
LEFS□40□□□-650□	730
LEFS□40□□□-700□	730
LEFS□40□□□-750□	730
LEFS□40□□□-800□	880
LEFS□40□□□-850□	880
LEFS□40□□□-900□	880
LEFS□40□□□-950□	1030
LEFS□40□□□-1000□	1030
LEFS□40□□□-1100□	1180
LEFS□40□□□-1200□	1180

Support Guide for Ball Screw Drive Actuator

LEFG Series LEFG16, 25, 32, 40

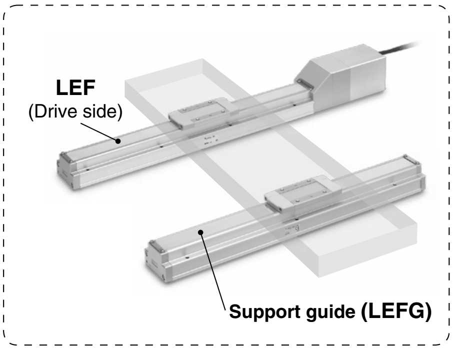
RoHS

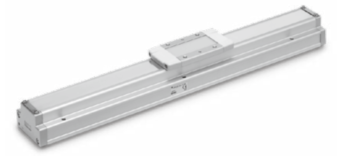
Clean Room Specification ▸ p. 961

The support guide was designed to support workpieces with significant overhang.

- As the dimensions are the same as the LEF series body, installation is simple and contributes to a reduction in installation and assembly labor.
- The standard-equipped seal bands prevent grease from splashing and external foreign matter from entering.

Application example





How to Order

LEF G 32 - S - 200 N

Support guide (G) · ❶ 32 · ❷ S · ❸ 200 · ❹ N

❶ Size

16
25
32
40

❷ Type of mounting pitch

Symbol	LEFG16	LEFG25	LEFG32	LEFG40	Applicable model	
S	●	●	●	●	For ball screw drive	Step motor 24 VDC (Incremental, Battery-less absolute), Servo motor 24 VDC, AC servo motor, Motorless

❸ Stroke [mm]

50	50
to	to
1200	1200

❹ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

Applicable Stroke Table

For Ball Screw Drive/S

Model \ Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
LEFG16-S	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	—	—	—
LEFG25-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—
LEFG32-S	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—
LEFG40-S	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

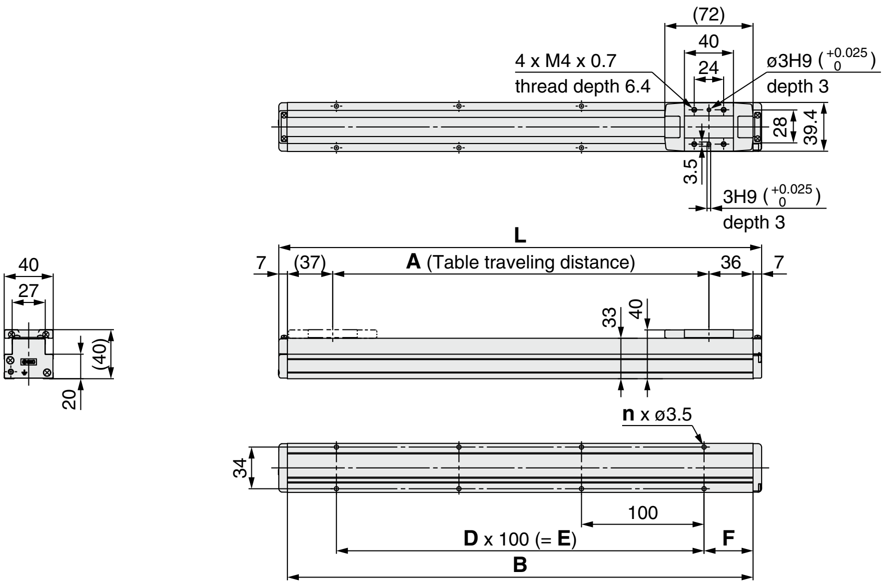
Weight

For Ball Screw Drive/S

Model \ Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
LEFG16-S	0.25	0.31	0.37	0.43	0.49	0.55	0.61	0.67	0.73	0.79	—	—	—	—	—	—	—	—	—	—	—	—
LEFG25-S	0.56	0.67	0.78	0.89	1.00	1.11	1.22	1.33	1.44	1.55	1.66	1.77	1.88	1.99	2.10	2.21	—	—	—	—	—	—
LEFG32-S	0.92	1.08	1.23	1.4	1.56	1.72	1.88	2.04	2.20	2.36	2.52	2.68	2.84	3.00	3.16	3.32	3.48	3.64	3.80	3.96	—	—
LEFG40-S	—	—	2.07	2.29	2.51	2.72	2.94	3.15	3.37	3.58	3.80	4.01	4.23	4.44	4.66	4.87	5.09	5.30	5.52	5.73	6.16	6.59

Dimensions: For Ball Screw Drive

LEFG16-S



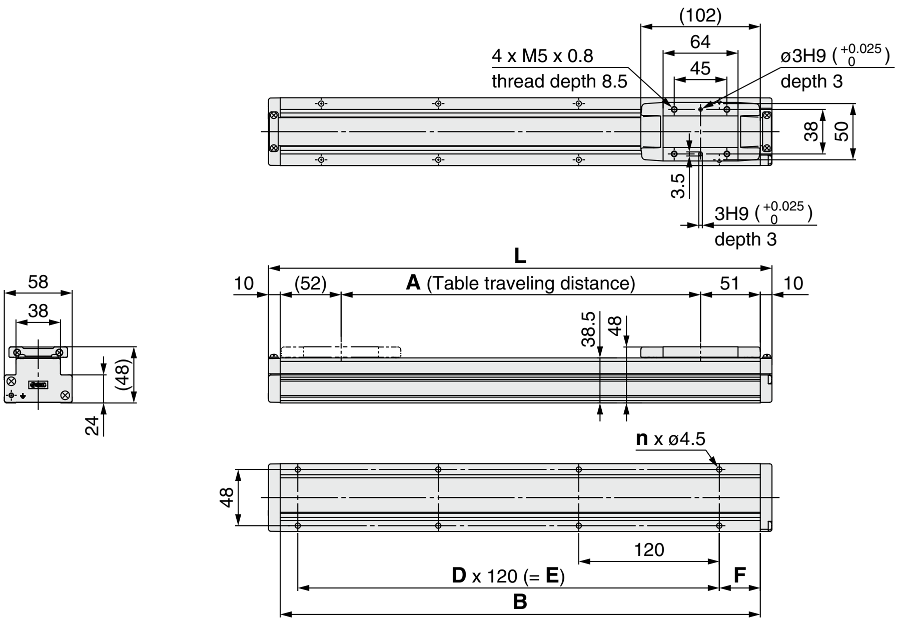
Dimensions [mm]

Model	L	A	B	n	D	E	F
LEFG16-S-50	144	57	130	4	—	—	15
LEFG16-S-100	194	107	180				40
LEFG16-S-150	244	157	230				
LEFG16-S-200	294	207	280	6	2	200	
LEFG16-S-250	344	257	330				

Dimensions [mm]

Model	L	A	B	n	D	E	F
LEFG16-S-300	394	307	380	8	3	300	40
LEFG16-S-350	444	357	430				
LEFG16-S-400	494	407	480	10	4	400	
LEFG16-S-450	544	457	530				
LEFG16-S-500	594	507	580	12	5	500	

LEFG25-S



Dimensions [mm]

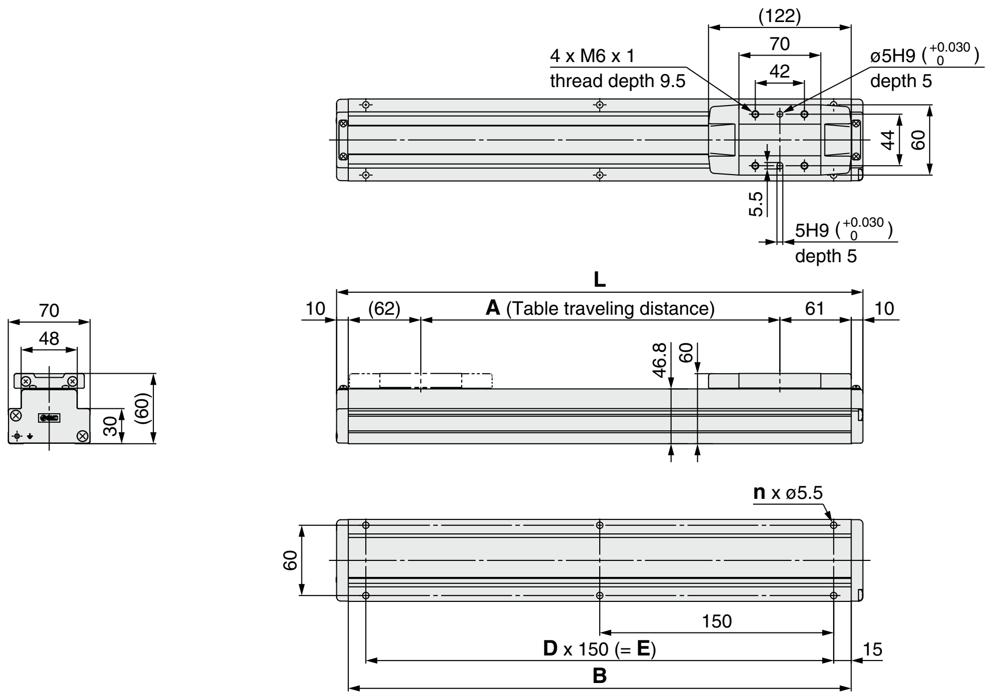
Model	L	A	B	n	D	E	F
LEFG25-S-50	180	57	160	4	—	—	20
LEFG25-S-100	230	107	210				35
LEFG25-S-150	280	157	260				
LEFG25-S-200	330	207	310	6	2	240	
LEFG25-S-250	380	257	360				
LEFG25-S-300	430	307	410	8	3	360	
LEFG25-S-350	480	357	460				
LEFG25-S-400	530	407	510				

Dimensions [mm]

Model	L	A	B	n	D	E	F
LEFG25-S-450	580	457	560	10	4	480	35
LEFG25-S-500	630	507	610				
LEFG25-S-550	680	557	660	12	5	600	
LEFG25-S-600	730	607	710				
LEFG25-S-650	780	657	760				
LEFG25-S-700	830	707	810	14	6	720	
LEFG25-S-750	880	757	860				
LEFG25-S-800	930	807	910	16	7	840	

Dimensions: For Ball Screw Drive

LEFG32-S



Dimensions [mm]

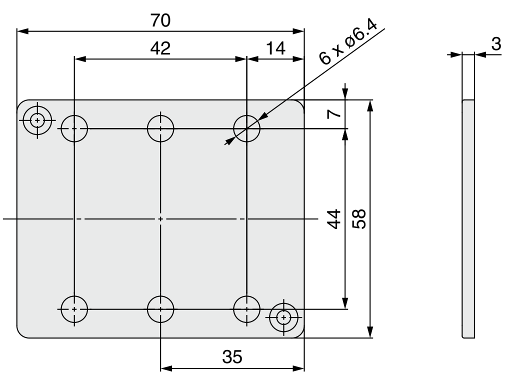
Model	L	A	B	n	D	E
LEFG32-S-50	200	57	180	4	—	—
LEFG32-S-100	250	107	230			
LEFG32-S-150	300	157	280			
LEFG32-S-200	350	207	330	6	2	300
LEFG32-S-250	400	257	380			
LEFG32-S-300	450	307	430			
LEFG32-S-350	500	357	480	8	3	450
LEFG32-S-400	550	407	530			
LEFG32-S-450	600	457	580			
LEFG32-S-500	650	507	630	10	4	600
LEFG32-S-550	700	557	680			
LEFG32-S-600	750	607	730			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG32-S-650	800	657	780	12	5	750
LEFG32-S-700	850	707	830			
LEFG32-S-750	900	757	880			
LEFG32-S-800	950	807	930	14	6	900
LEFG32-S-850	1000	857	980			
LEFG32-S-900	1050	907	1030			
LEFG32-S-950	1100	957	1080	16	7	1050
LEFG32-S-1000	1150	1007	1130			

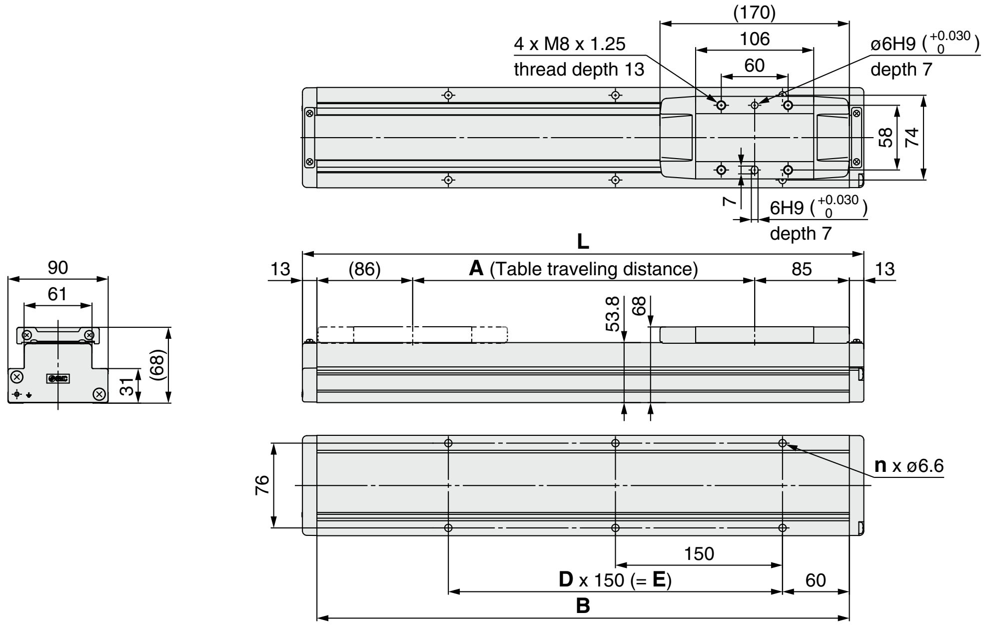
* When a support guide is used for the LEFS32$^{R}_{L}$□□□ (Motor parallel type), order a table spacer separately since the table height differs depending on the motor type.
Table spacer part number: LEF-TS32

Table spacer
LEF-TS32



Dimensions: For Ball Screw Drive

LEFG40-S



Dimensions [mm]

Model	L	A	B	n	D	E
LEFG40-S-150	354	157	328	4	—	150
LEFG40-S-200	404	207	378			
LEFG40-S-250	454	257	428	6	2	300
LEFG40-S-300	504	307	478			
LEFG40-S-350	554	357	528			
LEFG40-S-400	604	407	578	8	3	450
LEFG40-S-450	654	457	628			
LEFG40-S-500	704	507	678			
LEFG40-S-550	754	557	728	10	4	600
LEFG40-S-600	804	607	778			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG40-S-650	854	657	828			
LEFG40-S-700	904	707	878	12	5	750
LEFG40-S-750	954	757	928			
LEFG40-S-800	1004	807	978			
LEFG40-S-850	1054	857	1028	14	6	900
LEFG40-S-900	1104	907	1078			
LEFG40-S-950	1154	957	1128	16	7	1050
LEFG40-S-1000	1204	1007	1178			
LEFG40-S-1100	1304	1107	1278	18	8	1200
LEFG40-S-1200	1404	1207	1378			

Battery-less Absolute (Step Motor 24 VDC)

Slider Type/Belt Drive

LEFB Series LEFB16, 25, 32

* For details, refer to page 1343 and onward.

RoHS

How to Order

LEFB 25 E T – 500 ☐ C N K – R1 CD17T

❶ 25 ❷ E ❸ T ❹ 500 ❺ ☐ ❻ C ❼ N ❽ K ❾ R1 ❿ CD17T

For details on controllers, refer to the next page.

❶ Size

16
25
32

❷ Motor type

E	Battery-less absolute (Step motor 24 VDC)

❸ Equivalent lead [mm]

T	48

❹ Stroke*1 [mm]

Stroke	Note	
	Size	Applicable stroke
300 to 1000	**16**	300, 500, 600, 700, 800, 900, 1000
300 to 2000	**25**	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000
300 to 2000	**32**	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000

❺ Motor option

Nil	Without option
B	With lock

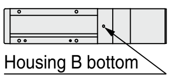
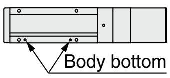
❻ Auto switch compatibility*2 *3 *4 *5

Nil	None
C	With (Includes 1 mounting bracket)

❼ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

❽ Positioning pin hole

Nil	Housing B bottom*6	
K	Body bottom 2 locations	

❾ Actuator cable type/length

Robotic cable [m]

Nil	None	**R8**	8*7
R1	1.5	**RA**	10*7
R3	3	**RB**	15*7
R5	5	**RC**	20*7

The belt drive actuator cannot be used for vertical applications.

For auto switches, refer to pages 275 to 278.

⑩ Controller

Nil	Without controller
C□1□□	With controller

C D 1 7 T

Interface (Communication protocol/Input/Output)

Symbol	Type	Number of axes, Special specification: Standard	Number of axes, Special specification: With STO sub-function
5	Parallel input (NPN)	●	
6	Parallel input (PNP)	●	
E	EtherCAT	●	●
9	EtherNet/IP™	●	●
P	PROFINET	●	●
D	DeviceNet®	●	
L	IO-Link	●	●
M	CC-Link	●	

Mounting

7	Screw mounting
8*8	DIN rail

Number of axes, Special specification

Symbol	Number of axes	Specification
1	Single axis	Standard
F	Single axis	With STO sub-function

Communication plug connector, I/O cable*9

Symbol	Type	Applicable interface
Nil	Without accessory	—
S	Straight type communication plug connector	DeviceNet® CC-Link Ver. 1.10
T	T-branch type communication plug connector	
1	I/O cable (1.5 m)	Parallel input (NPN) Parallel input (PNP)
3	I/O cable (3 m)	
5	I/O cable (5 m)	

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Excludes the LEF16
*3 If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
*4 Order auto switches separately. (For details, refer to pages 276 to 278.)
*5 When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.
*6 Refer to the body mounting example on page 280 for the mounting method.
*7 Produced upon receipt of order
*8 The DIN rail is not included. It must be ordered separately.
*9 Select "Nil" for anything other than DeviceNet®, CC-Link, or parallel input.
Select "Nil," "S," or "T" for DeviceNet® or CC-Link.
Select "Nil," "1," "3," or "5" for parallel input.

⚠Caution

[CE/UKCA-compliant products]
EMC compliance was tested by combining the electric actuator LEF series and the controller JXC series.
The EMC depends on the configuration of the customer's control panel and the relationship with other electrical equipment and wiring. Therefore, compliance with the EMC directive cannot be certified for SMC components incorporated into the customer's equipment under actual operating conditions. As a result, it is necessary for the customer to verify compliance with the EMC directive for the machinery and equipment as a whole.

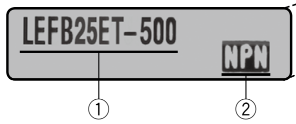
[Precautions relating to differences in controller versions]
When the JXC series is to be used in combination with the battery-less absolute encoder, use a controller that is version V3.4 or S3.4 or higher. For details, refer to pages 1077 and 1078.

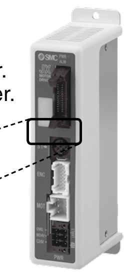
[UL certification]
The JXC series controllers used in combination with electric actuators are UL certified.

The actuator and controller are sold as a package.

Confirm that the combination of the controller and actuator is correct.

<Check the following before use.>
① Check the actuator label for the model number. This number should match that of the controller.
② Check that the Parallel I/O configuration matches (NPN or PNP).





* Refer to the Operation Manual for using the products.
Please download it via our website: https://www.smcworld.com

Type	Step data input type	EtherCAT direct input type	EtherCAT direct input type with STO sub-function	EtherNet/IP™ direct input type	EtherNet/IP™ direct input type with STO sub-function	PROFINET direct input type	PROFINET direct input type with STO sub-function	DeviceNet® direct input type	IO-Link direct input type	IO-Link direct input type with STO sub-function	CC-Link direct input type
											
Series	JXC51 JXC61	JXCE1	JXCEF	JXC91	JXC9F	JXCP1	JXCPF	JXCD1	JXCL1	JXCLF	JXCM1
Features	Parallel I/O	EtherCAT direct input	EtherCAT direct input with STO sub-function	EtherNet/IP™ direct input	EtherNet/IP™ direct input with STO sub-function	PROFINET direct input	PROFINET direct input with STO sub-function	DeviceNet® direct input	IO-Link direct input	IO-Link direct input with STO sub-function	CC-Link direct input
Compatible motor	Battery-less absolute (Step motor 24 VDC)										
Max. number of step data	64 points										
Power supply voltage	24 VDC										
Reference page	1017	1063									

Specifications

Battery-less Absolute (Step Motor 24 VDC)

Model			LEFB16E	LEFB25E	LEFB32E
Actuator specifications	**Stroke [mm]***1		300, 500, 600, 700 800, 900, 1000	300, 500, 600, 700, 800, 900 1000, 1200, 1500, 1800, 2000	300, 500, 600, 700, 800, 900 1000, 1200, 1500, 1800, 2000
	Work load [kg]*2	**Horizontal**	1	10	19
	Speed [mm/s]*2		48 to 1100	48 to 1400	48 to 1500
	Max. acceleration/deceleration [mm/s²]		3000		
	Positioning repeatability [mm]		±0.08		
	Lost motion [mm]*3		0.1 or less		
	Equivalent lead [mm]		48	48	48
	Impact/Vibration resistance [m/s²]*4		50/20		
	Actuation type		Belt		
	Guide type		Linear guide		
	Static allowable moment*5 **[N·m]**	**Mep (Pitching)**	10	27	46
		Mey (Yawing)	10	27	46
		Mer (Rolling)	20	52	101
	Operating temperature range [°C]		5 to 40		
	Operating humidity range [%RH]		90 or less (No condensation)		
	Enclosure		IP30		
Electric specifications	**Motor size**		□28	□42	□56.4
	Motor type		Battery-less absolute (Step motor 24 VDC)		
	Encoder		Battery-less absolute		
	Power supply voltage [V]		24 VDC ±10%		
	Power [W]*6 *8		Max. power 51	Max. power 60	Max. power 127
Lock unit specifications	**Type***7		Non-magnetizing lock		
	Holding force [N]		4	19	36
	Power [W]*8		2.9	5	5
	Rated voltage [V]		24 VDC ±10%		

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Speed changes according to the controller/driver type and work load. Check the "Speed–Work Load Graph (Guide)" on page 108.
Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m. Cannot be used for vertical applications
*3 A reference value for correcting errors in reciprocal operation
*4 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*5 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*6 Indicates the max. power during operation (including the controller). This value can be used for the selection of the power supply.
*7 With lock only
*8 For an actuator with lock, add the power for the lock.

Weight

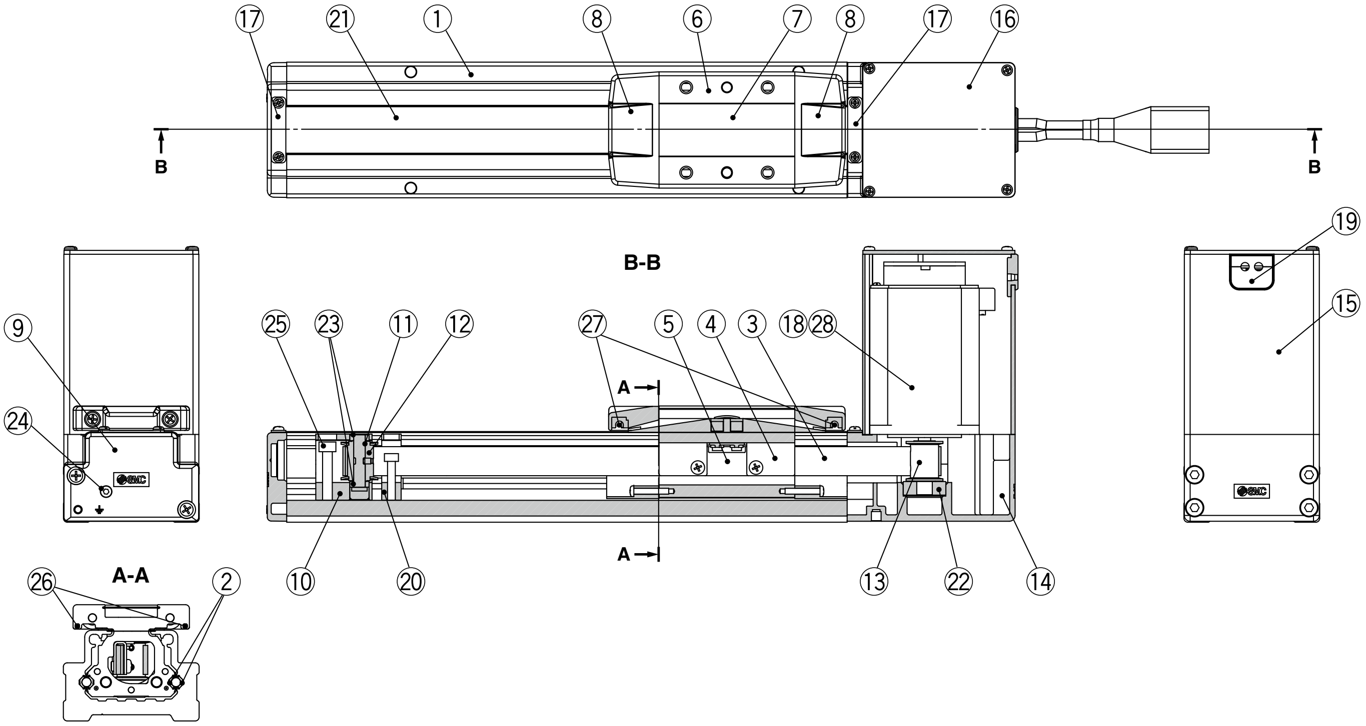
Series	LEFB16E						
Stroke [mm]	300	500	600	700	800	900	1000
Product weight [kg]	1.19	1.45	1.58	1.71	1.84	1.97	2.10
Additional weight with lock [kg]	0.12						

Series	LEFB25E										
Stroke [mm]	300	500	600	700	800	900	1000	1200	1500	1800	2000
Product weight [kg]	2.39	2.85	3.08	3.31	3.54	3.77	4.00	4.46	5.15	5.84	6.30
Additional weight with lock [kg]	0.26										

Series	LEFB32E										
Stroke [mm]	300	500	600	700	800	900	1000	1200	1500	1800	2000
Product weight [kg]	4.12	4.80	5.14	5.48	5.82	6.16	6.50	7.18	8.20	9.22	9.90
Additional weight with lock [kg]	0.53										

Construction

LEFB Series



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Belt**	—	
4	**Belt holder**	Carbon steel	Chromating
5	**Belt stopper**	Aluminum alloy	Anodized
6	**Table**	Aluminum alloy	Anodized
7	**Blanking plate**	Aluminum alloy	Anodized
8	**Seal band holder**	Synthetic resin	
9	**Housing A**	Aluminum die-cast	Coating
10	**Pulley holder**	Aluminum alloy	
11	**Pulley shaft**	Stainless steel	
12	**End pulley**	Aluminum alloy	Anodized
13	**Motor pulley**	Aluminum alloy	Anodized
14	**Motor mount**	Aluminum alloy	Coating/Anodized
15	**Motor cover**	Aluminum alloy	Anodized
16	**End cover**	Aluminum alloy	Anodized
17	**Band stopper**	Stainless steel	

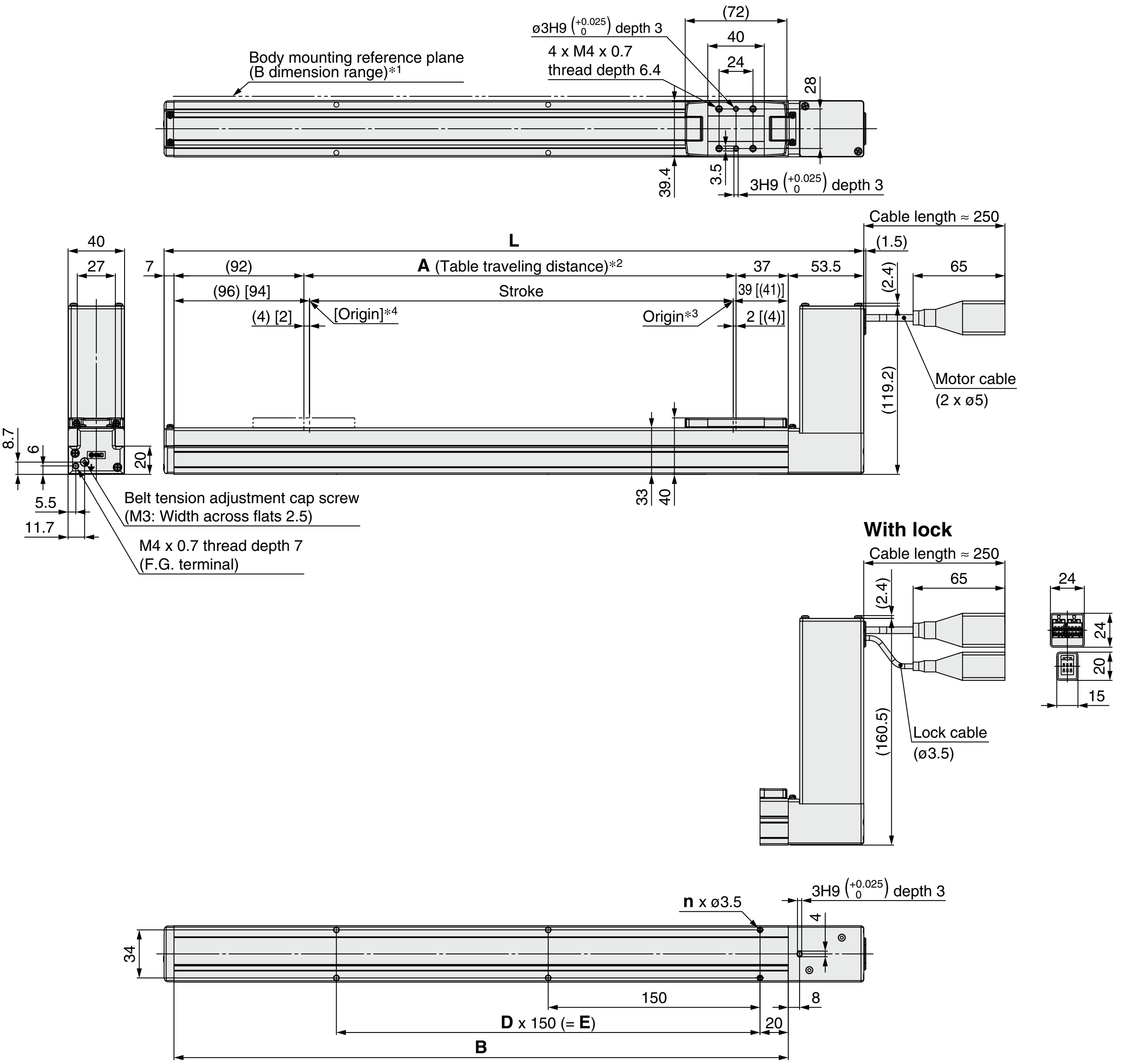
No.	Description		Material	Note
18	**Motor**		—	
19	**Rubber bushing**		NBR	
20	**Stopper**		Aluminum alloy	
21	**Dust seal band**		Stainless steel	
22	**Bearing**		—	
23	**Bearing**		—	
24	**Tension adjustment cap screw**		Chromium molybdenum steel	Chromating
25	**Pulley retaining screw**		Chromium molybdenum steel	Chromating
26	**Magnet**		—	With auto switch compatibility
27	**Roller assembly**		—	Without grease application
28	**Heat dissipation sheet**	**LEFB16**	—	

Replacement Parts/Grease Pack

Applied portion	Order no.
Rail guide	GR-S-010 (10 g) GR-S-020 (20 g)
Dust seal band (When "Without" is selected for the grease application, grease is applied only on the back side.)	

Dimensions: Belt Drive

LEFB16E



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 2 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

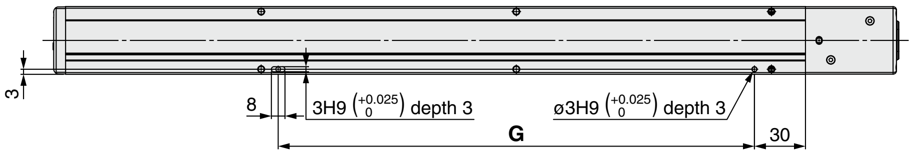
Dimensions [mm]

Model	L	A	B	n	D	E
LEFB16ET-300□	495.5	306	435	6	2	300
LEFB16ET-500□	695.5	506	635	10	4	600
LEFB16ET-600□	795.5	606	735			
LEFB16ET-700□	895.5	706	835	12	5	750
LEFB16ET-800□	995.5	806	935	14	6	900
LEFB16ET-900□	1095.5	906	1035			
LEFB16ET-1000□	1195.5	1006	1135	16	7	1050

Dimensions: Belt Drive

LEFB16E

Positioning pin hole*1 (Option): Body bottom



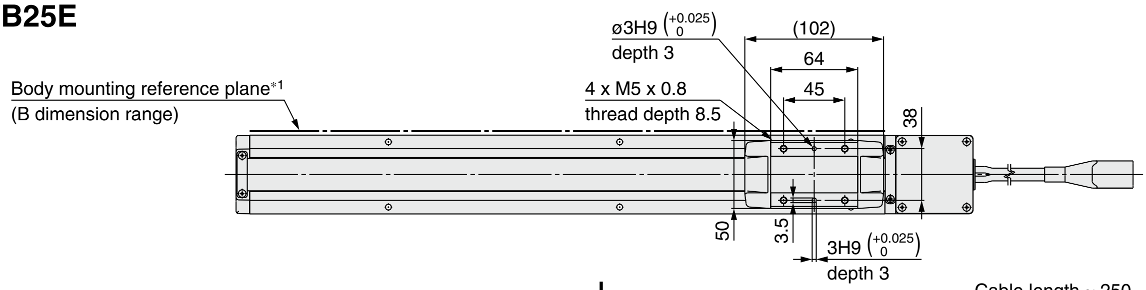
*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

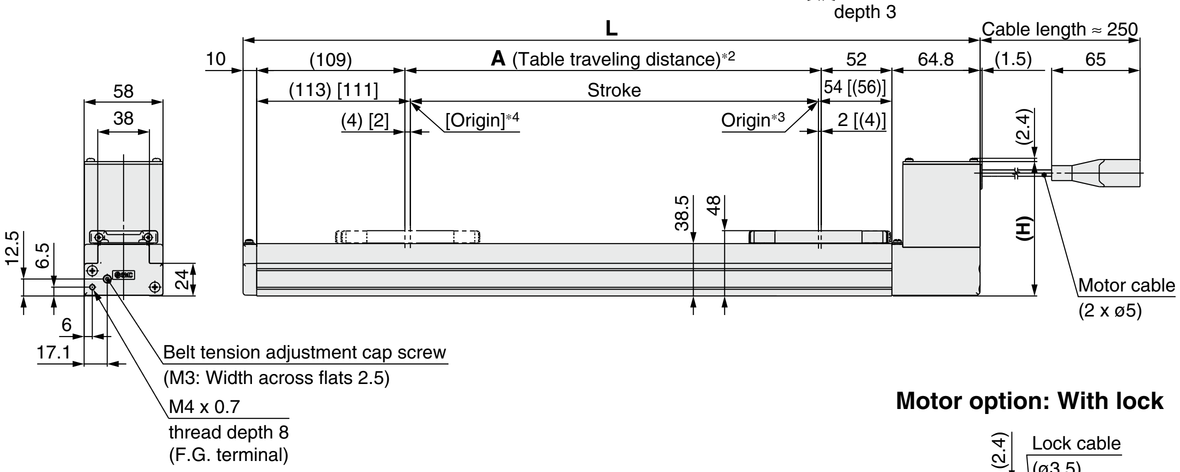
Dimensions [mm]

Model	Positioning pin hole: K G
LEFB16ET-300□	280
LEFB16ET-500□	580
LEFB16ET-600□	
LEFB16ET-700□	730
LEFB16ET-800□	880
LEFB16ET-900□	
LEFB16ET-1000□	1030

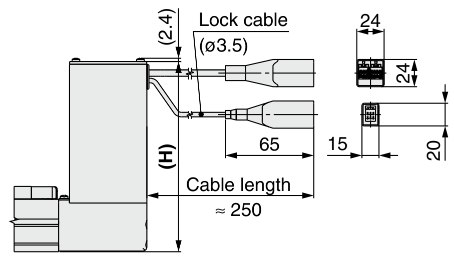
Dimensions: Belt Drive

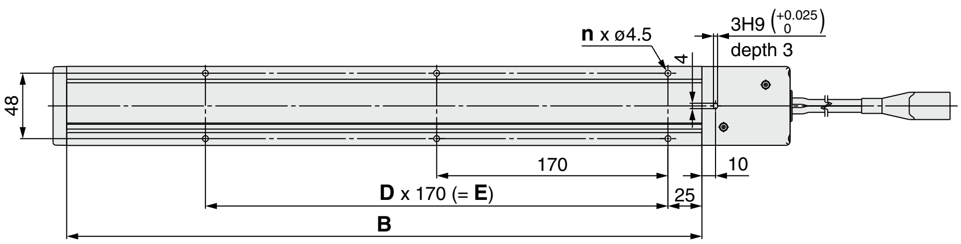
LEFB25E





Motor option: With lock





*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

[mm]

Model	H
LEFB25ET-ST	115.8
LEFB25ET-STB	158.8

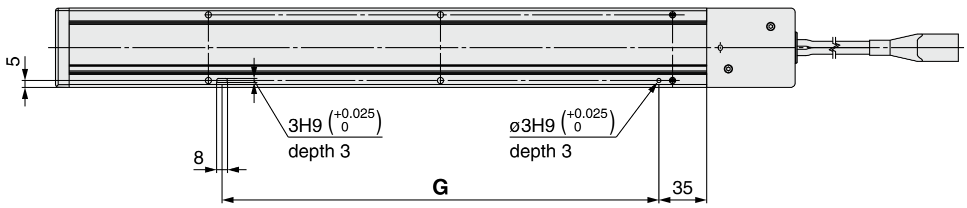
Dimensions

Model	L	A	B	n	D	E
LEFB25ET-300□	541.8	306	467	6	2	340
LEFB25ET-500□	741.8	506	667	8	3	510
LEFB25ET-600□	841.8	606	767	10	4	680
LEFB25ET-700□	941.8	706	867	10	4	680
LEFB25ET-800□	1041.8	806	967	12	5	850
LEFB25ET-900□	1141.8	906	1067	14	6	1020
LEFB25ET-1000□	1241.8	1006	1167	14	6	1020
LEFB25ET-1200□	1441.8	1206	1367	16	7	1190
LEFB25ET-1500□	1741.8	1506	1667	20	9	1530
LEFB25ET-1800□	2041.8	1806	1967	24	11	1870
LEFB25ET-2000□	2241.8	2006	2167	26	12	2040

Dimensions: Belt Drive

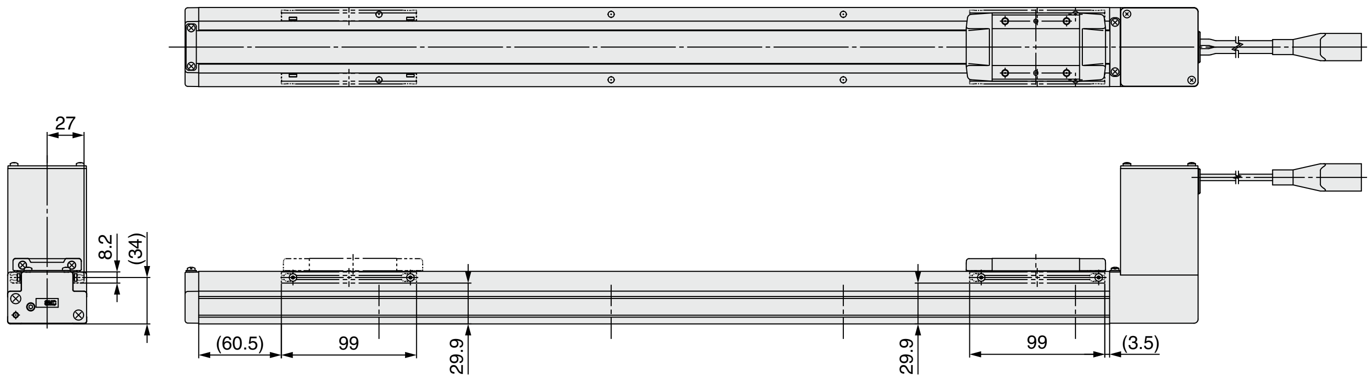
LEFB25E

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

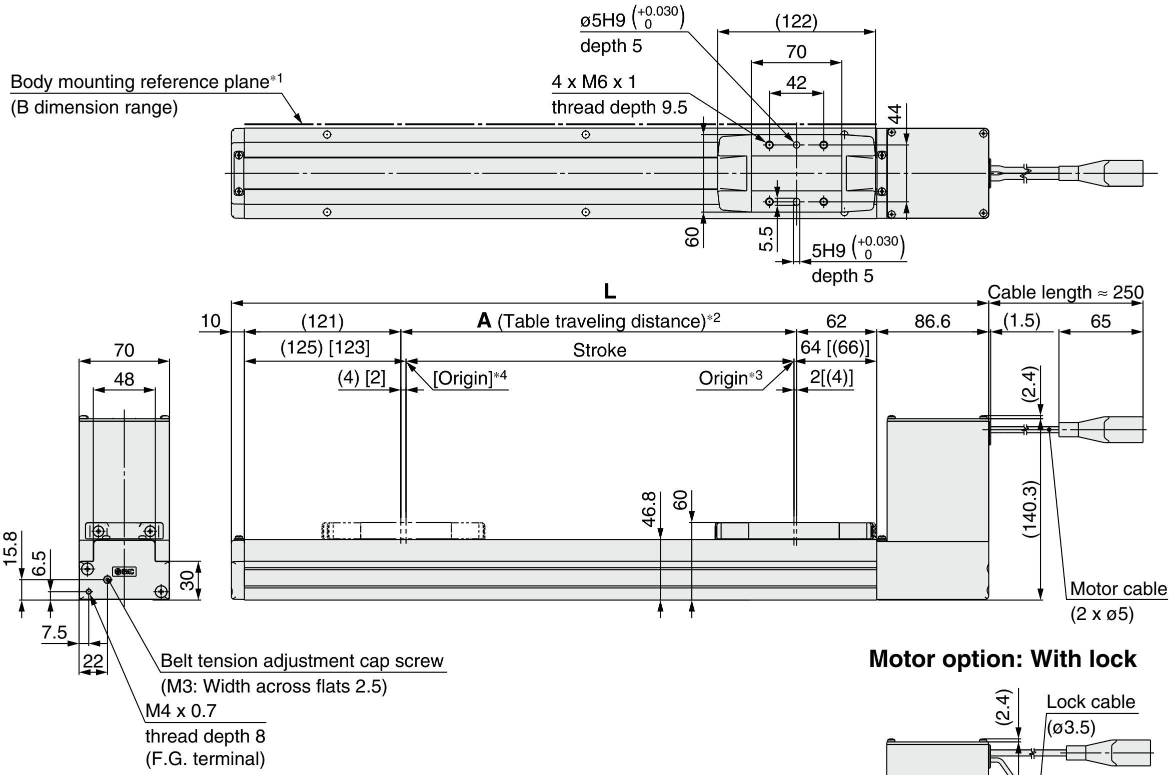


Dimensions [mm]

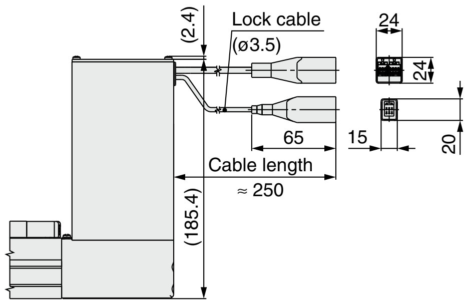
Model	G
LEFB25ET-300□	320
LEFB25ET-500□	490
LEFB25ET-600□	660
LEFB25ET-700□	660
LEFB25ET-800□	830
LEFB25ET-900□	1000
LEFB25ET-1000□	1000
LEFB25ET-1200□	1170
LEFB25ET-1500□	1510
LEFB25ET-1800□	1850
LEFB25ET-2000□	2020

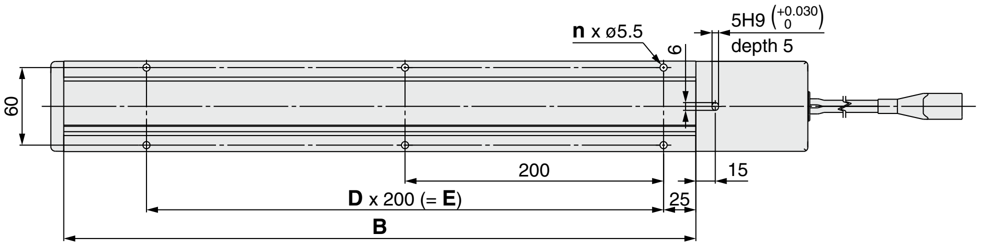
Dimensions: Belt Drive

LEFB32E



Motor option: With lock





*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

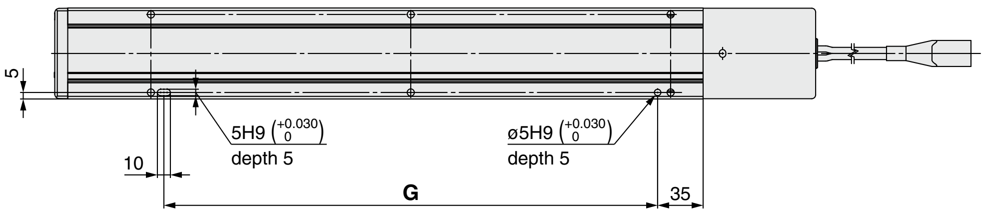
Dimensions [mm]

Model	L	A	B	n	D	E
LEFB32ET-300□	585.6	306	489	6	2	400
LEFB32ET-500□	785.6	506	689	8	3	600
LEFB32ET-600□	885.6	606	789	8	3	600
LEFB32ET-700□	985.6	706	889	10	4	800
LEFB32ET-800□	1085.6	806	989	10	4	800
LEFB32ET-900□	1185.6	906	1089	12	5	1000
LEFB32ET-1000□	1285.6	1006	1189	12	5	1000
LEFB32ET-1200□	1485.6	1206	1389	14	6	1200
LEFB32ET-1500□	1785.6	1506	1689	18	8	1600
LEFB32ET-1800□	2085.6	1806	1989	20	9	1800
LEFB32ET-2000□	2285.6	2006	2189	22	10	2000

Dimensions: Belt Drive

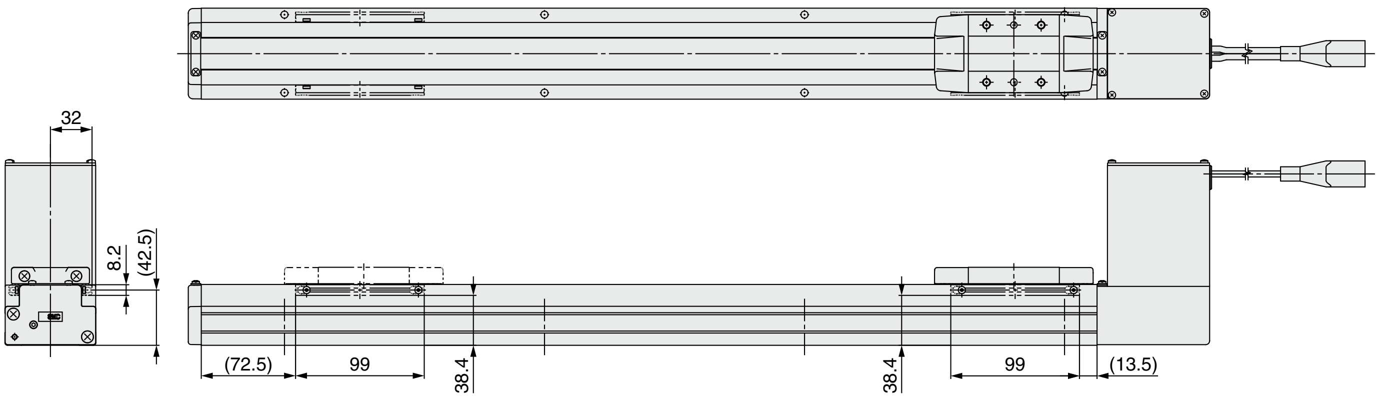
LEFB32E

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



Dimensions [mm]

Model	G
LEFB32ET-300□	380
LEFB32ET-500□	580
LEFB32ET-600□	580
LEFB32ET-700□	780
LEFB32ET-800□	780
LEFB32ET-900□	980
LEFB32ET-1000□	980
LEFB32ET-1200□	1180
LEFB32ET-1500□	1580
LEFB32ET-1800□	1780
LEFB32ET-2000□	1980

Incremental (Step Motor 24 VDC) Incremental (Servo Motor 24 VDC)

Slider Type Belt Drive

LEFB Series LEFB16, 25, 32

* For details, refer to page 1343 and onward.

RoHS

The belt drive actuator cannot be used for vertical applications.

How to Order

LEFB [16] [ ] T – [500] [ ] [C] [N] [K] – [R1]

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

JXC□ Series CD17T

LEC□ Series AN 1 □

❿ ⓫ ⓬

For details on controllers, refer to page 228.

❶ Size

16
25
32

❷ Motor type

Symbol	Type	Applicable size			Compatible controllers/drivers
		LEFB16	LEFB25	LEFB32	
Nil	Step motor (Servo/24 VDC)	●	●	●	JXC51 JXCEF JXC61 JXC9F JXCE1 JXCPF JXC91 JXCLF JXCP1 JXCD1 LECP1 JXCL1 LECPA JXCM1
A	Servo motor (24 VDC)	●	●	—	LECA6

❸ Equivalent lead [mm]

T	48

❹ Stroke*1 [mm]

Stroke	Note	
	Size	Applicable stroke
300 to 1000	16	300, 500, 600, 700, 800, 900, 1000
300 to 2000	25	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000
300 to 2000	32	300, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000

❺ Motor option

Nil	Without option
B	With lock

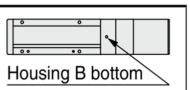
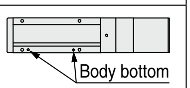
❻ Auto switch compatibility*2 *3 *4 *5

Nil	None
C	With (Includes 1 mounting bracket)

❼ Grease application (Seal band part)

Nil	With
N	Without (Roller specification)

❽ Positioning pin hole

Nil	Housing B bottom*6	
K	Body bottom 2 locations	

❾ Actuator cable type/length*8

Standard cable [m]

Nil	None
S1	1.5*10
S3	3*10
S5	5*10

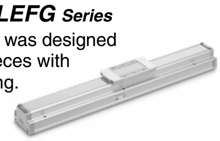
Robotic cable [m]

R1	1.5	RA	10*7
R3	3	RB	15*7
R5	5	RC	20*7
R8	8*7		

Support Guide/*LEFG* Series

The support guide was designed to support workpieces with significant overhang.

p. 270



For auto switches, refer to pages 275 to 278.

SMC

JXC□ Series (For details, refer to page 229.)

⑩ Controller

Nil	Without controller
C□1□□	With controller

C D 1 7 T

Interface (Communication protocol/Input/Output)

Symbol	Type	Number of axes, Special specification	
		Standard	With STO sub-function
5	Parallel input (NPN)	●	
6	Parallel input (PNP)	●	
E	EtherCAT	●	●
9	EtherNet/IP™	●	●
P	PROFINET	●	●
D	DeviceNet®	●	
L	IO-Link	●	●
M	CC-Link	●	

Mounting

7	Screw mounting
8*14	DIN rail

Number of axes, Special specification

Symbol	Number of axes	Specification
1	Single axis	Standard
F	Single axis	With STO sub-function

Communication plug connector, I/O cable*15

Symbol	Type	Applicable interface
Nil	Without accessory	—
S	Straight type communication plug connector	DeviceNet® CC-Link Ver. 1.10
T	T-branch type communication plug connector	
1	I/O cable (1.5 m)	Parallel input (NPN) Parallel input (PNP)
3	I/O cable (3 m)	
5	I/O cable (5 m)	

LEC□ Series (For details, refer to page 229.)

AN 1 □

⑩ ⑪ ⑫

⑩ Controller/Driver type*9

Nil	Without controller/driver	
6N	**LECA6** (Step data input type)	NPN
6P		PNP
1N	**LECP1***10 (Programless type)	NPN
1P		PNP
AN	**LECPA***10 *11 (Pulse input type)	NPN
AP		PNP

⑪ I/O cable length*12

Nil	Without cable (Without communication plug connector)
1	1.5 m
3	3 m*13
5	5 m*13

⑫ Controller/Driver mounting

Nil	Screw mounting
D	DIN rail*14

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Excluding the LEF16
*3 If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
*4 Order auto switches separately. (For details, refer to pages 276 to 278.)
*5 When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.
*6 Refer to the body mounting example on page 280 for the mounting method.
*7 Produced upon receipt of order (Robotic cable only)
*8 The standard cable should only be used on fixed parts.
For use on moving parts, select the robotic cable.
Refer to the **Web Catalog** if only the actuator cable is required.
*9 For details on controllers/drivers and compatible motors, refer to the compatible controllers/drivers on the next page.
*10 Only available for the motor type "Step motor"
*11 When pulse signals are open collector, order the current limiting resistor (LEC-PA-R-□) on page 1062 separately.
*12 When "Without controllers/drivers" is selected for controller/driver types, I/O cable cannot be selected. If an I/O cable is required, refer to the cable for the LECA6 (**Web Catalog**), LECP1 (**Web Catalog**), or LECPA (**Web Catalog**).
*13 When "Pulse input type" is selected for controller/driver types, pulse input usable only with differential. Only 1.5 m cables usable with open collector
*14 The DIN rail is not included. It must be ordered separately.
*15 Select "Nil" for anything other than DeviceNet®, CC-Link, or parallel input.
Select "Nil," "S," or "T" for DeviceNet® or CC-Link.
Select "Nil," "1," "3," or "5" for parallel input.

⚠Caution

[CE/UKCA-compliant products]

① EMC compliance was tested by combining the electric actuator LEF series and the controller LEC/JXC series.
The EMC depends on the configuration of the customer's control panel and the relationship with other electrical equipment and wiring. Therefore, compliance with the EMC directive cannot be certified for SMC components incorporated into the customer's equipment under actual operating conditions. As a result, it is necessary for the customer to verify compliance with the EMC directive for the machinery and equipment as a whole.
② For the incremental (servo motor 24 VDC) specification, EMC compliance was tested by installing a noise filter set (LEC-NFA). Refer to page 1037 for the noise filter set. Refer to the LECA series Operation Manual for installation.

[UL-compliant products (For the LEC series)]

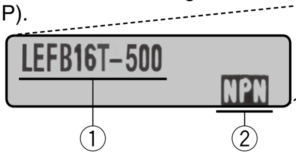
When compliance with UL is required, the electric actuator and controller/driver should be used with a UL1310 Class 2 power supply.

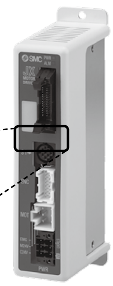
The actuator and controller/driver are sold as a package.

Confirm that the combination of the controller/driver and actuator is correct.

<Check the following before use.>

① Check the actuator label for the model number. This number should match that of the controller/driver.
② Check that the Parallel I/O configuration matches (NPN or PNP).





* Refer to the Operation Manual for using the products. Please download it via our website: https://www.smcworld.com

Compatible Controllers/Drivers

Type	Step data input type 	Step data input type 	Programless type 	Pulse input type 
Series	**JXC51 JXC61**	**LECA6**	**LECP1**	**LECPA**
Features	Parallel I/O	Parallel I/O	Capable of setting up operation (step data) without using a PC or teaching box	Operation by pulse signals
Compatible motor	Step motor (Servo/24 VDC)	Servo motor (24 VDC)	Step motor (Servo/24 VDC)	
Max. number of step data	64 points		14 points	—
Power supply voltage	24 VDC			
Reference page	1017	1031	1042	1057

Type	EtherCAT direct input type 	EtherCAT direct input type with STO sub-function 	EtherNet/IP™ direct input type 	EtherNet/IP™ direct input type with STO sub-function 	PROFINET direct input type 	PROFINET direct input type with STO sub-function 	DeviceNet® direct input type 	IO-Link direct input type 	IO-Link direct input type with STO sub-function 	CC-Link direct input type 
Series	**JXCE1**	**JXCEF**	**JXC91**	**JXC9F**	**JXCP1**	**JXCPF**	**JXCD1**	**JXCL1**	**JXCLF**	**JXCM1**
Features	EtherCAT direct input	EtherCAT direct input with STO sub-function	EtherNet/IP™ direct input	EtherNet/IP™ direct input with STO sub-function	PROFINET direct input	PROFINET direct input with STO sub-function	DeviceNet® direct input	IO-Link direct input	IO-Link direct input with STO sub-function	CC-Link direct input
Compatible motor	Step motor (Servo/24 VDC)									
Max. number of step data	64 points									
Power supply voltage	24 VDC									
Reference page	1063									

Specifications

Step Motor (Servo/24 VDC)

	Model			LEFB16	LEFB25	LEFB32
Actuator specifications	Stroke [mm]*1			300, 500, 600, 700 800, 900, 1000	300, 500, 600, 700, 800, 900 1000, 1200, 1500, 1800, 2000	300, 500, 600, 700, 800, 900 1000, 1200, 1500, 1800, 2000
	Work load [kg]*2	Horizontal	JXC□1/JXC□F/LECP1	1	10	19
			LECPA/JXC□$^{2}_{3}$	1	5	14
	Speed [mm/s]*2			48 to 1100	48 to 1400	48 to 1500
	Max. acceleration/deceleration [mm/s²]			3000		
	Positioning repeatability [mm]			±0.08		
	Lost motion [mm]*3			0.1 or less		
	Equivalent lead [mm]			48	48	48
	Impact/Vibration resistance [m/s²]*4			50/20		
	Actuation type			Belt		
	Guide type			Linear guide		
	Static allowable moment*5 [N·m]	Mep (Pitching)		10	27	46
		Mey (Yawing)		10	27	46
		Mer (Rolling)		20	52	101
	Operating temperature range [°C]			5 to 40		
	Operating humidity range [%RH]			90 or less (No condensation)		
	Enclosure			IP30		
Electric specifications	Motor size			□28	□42	□56.4
	Motor type			Step motor (Servo/24 VDC)		
	Encoder			Incremental		
	Power supply voltage [V]			24 VDC ±10%		
	Power [W]*6 *8			Max. power 51	Max. power 60	Max. power 127
Lock unit specifications	Type*7			Non-magnetizing lock		
	Holding force [N]			4	19	36
	Power [W]*8			2.9	5	5
	Rated voltage [V]			24 VDC ±10%		

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Speed changes according to the controller/driver type and work load. Check the “Speed–Work Load Graph (Guide)” on page 116.
Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m. Cannot be used for vertical applications
*3 A reference value for correcting errors in reciprocal operation
*4 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*5 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*6 Indicates the max. power during operation (including the controller)
This value can be used for the selection of the power supply.
*7 With lock only
*8 For an actuator with lock, add the power for the lock.

Specifications

Servo Motor (24 VDC)

Model			LEFB16A	LEFB25A
Actuator specifications	Stroke [mm]*1		300, 500, 600, 700 800, 900, 1000	300, 500, 600, 700, 800, 900 1000, 1200, 1500, 1800, 2000
	Work load [kg]*2	Horizontal	1	2
	Speed [mm/s]*2		5 to 2000	5 to 2000
	Max. acceleration/deceleration [mm/s²]		3000	
	Positioning repeatability [mm]		±0.08	
	Lost motion [mm]*3		0.1 or less	
	Equivalent lead [mm]		48	48
	Impact/Vibration resistance [m/s²]*4		50/20	
	Actuation type		Belt	
	Guide type		Linear guide	
	Static allowable moment*5 [N·m]	Mep (Pitching)	10	27
		Mey (Yawing)	10	27
		Mer (Rolling)	20	52
	Operating temperature range [°C]		5 to 40	
	Operating humidity range [%RH]		90 or less (No condensation)	
	Enclosure		IP30	
Electric specifications	Motor size		□28	□42
	Motor output [W]		30	36
	Motor type		Servo motor (24 VDC)	
	Encoder		Incremental	
	Power supply voltage [V]		24 VDC ±10%	
	Power [W]*6 *8		Max. power 87	Max. power 120
Lock unit specifications	Type*7		Non-magnetizing lock	
	Holding force [N]		4	19
	Power [W]*8		2.9	5
	Rated voltage [V]		24 VDC ±10%	

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 Check the "Speed–Work Load Graph (Guide)" on page 117 for details. Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m.
*3 A reference value for correcting errors in reciprocal operation
*4 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*5 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*6 Indicates the max. power during operation (including the controller)
This value can be used for the selection of the power supply.
*7 With lock only
*8 For an actuator with lock, add the power for the lock.

Weight

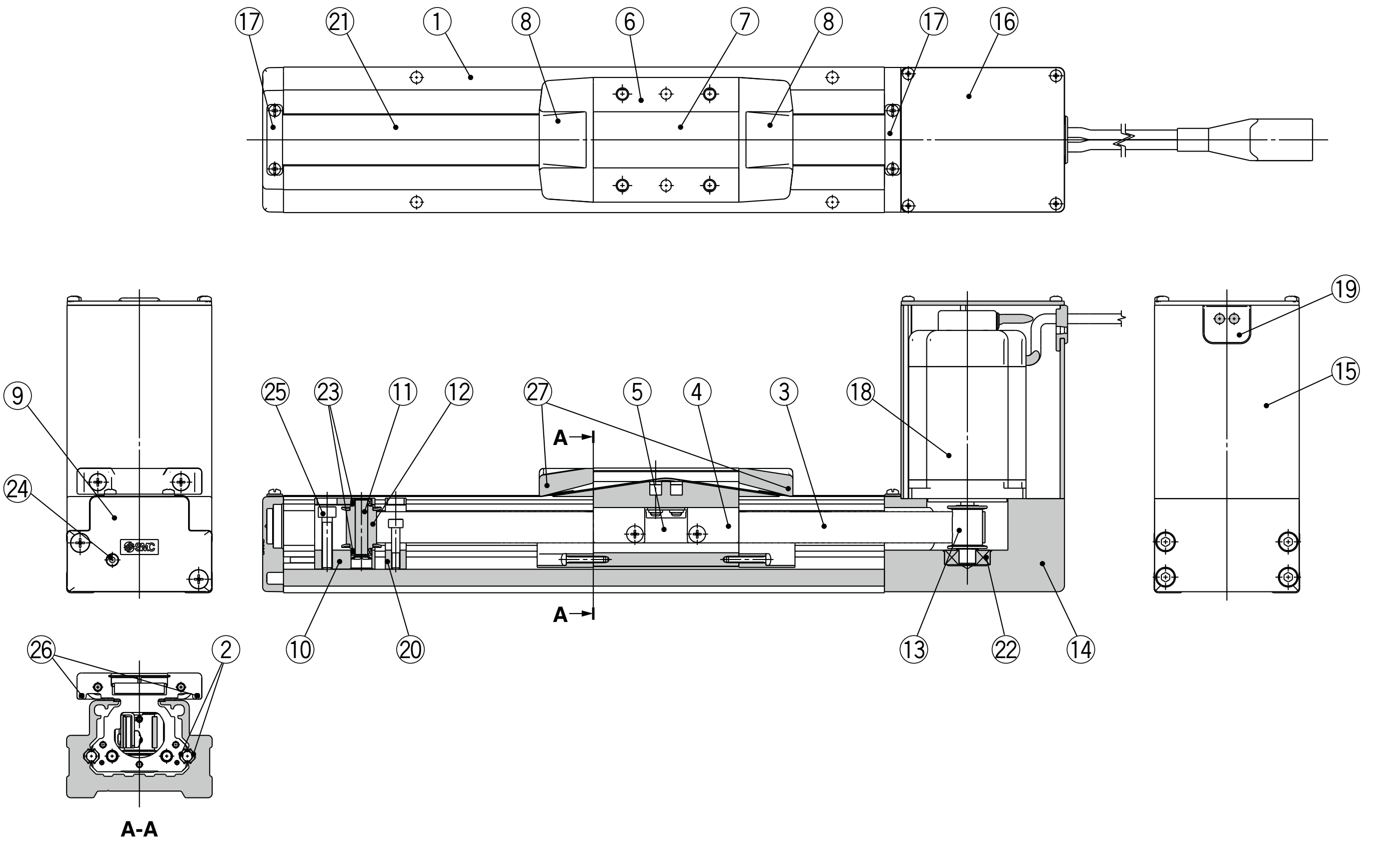
Series	LEFB16						
Stroke [mm]	300	500	600	700	800	900	1000
Product weight [kg]	1.19	1.45	1.58	1.71	1.84	1.97	2.10
Additional weight with lock [kg]	0.12						

Series	LEFB25										
Stroke [mm]	300	500	600	700	800	900	1000	1200	1500	1800	2000
Product weight [kg]	2.39	2.85	3.08	3.31	3.54	3.77	4.00	4.46	5.15	5.84	6.30
Additional weight with lock [kg]	0.26										

Series	LEFB32										
Stroke [mm]	300	500	600	700	800	900	1000	1200	1500	1800	2000
Product weight [kg]	4.12	4.80	5.14	5.48	5.82	6.16	6.50	7.18	8.20	9.22	9.90
Additional weight with lock [kg]	0.53										

Construction

LEFB Series



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**	—	
3	**Belt**	—	
4	**Belt holder**	Carbon steel	Chromating
5	**Belt stopper**	Aluminum alloy	
6	**Table**	Aluminum alloy	Anodized
7	**Blanking plate**	Aluminum alloy	Anodized
8	**Seal band holder**	Synthetic resin	
9	**Housing A**	Aluminum die-cast	Coating
10	**Pulley holder**	Aluminum alloy	
11	**Pulley shaft**	Stainless steel	
12	**End pulley**	Aluminum alloy	Anodized
13	**Motor pulley**	Aluminum alloy	Anodized
14	**Motor mount**	Aluminum alloy	Coating
15	**Motor cover**	Aluminum alloy	Anodized
16	**End cover**	Aluminum alloy	Anodized
17	**Band stopper**	Stainless steel	

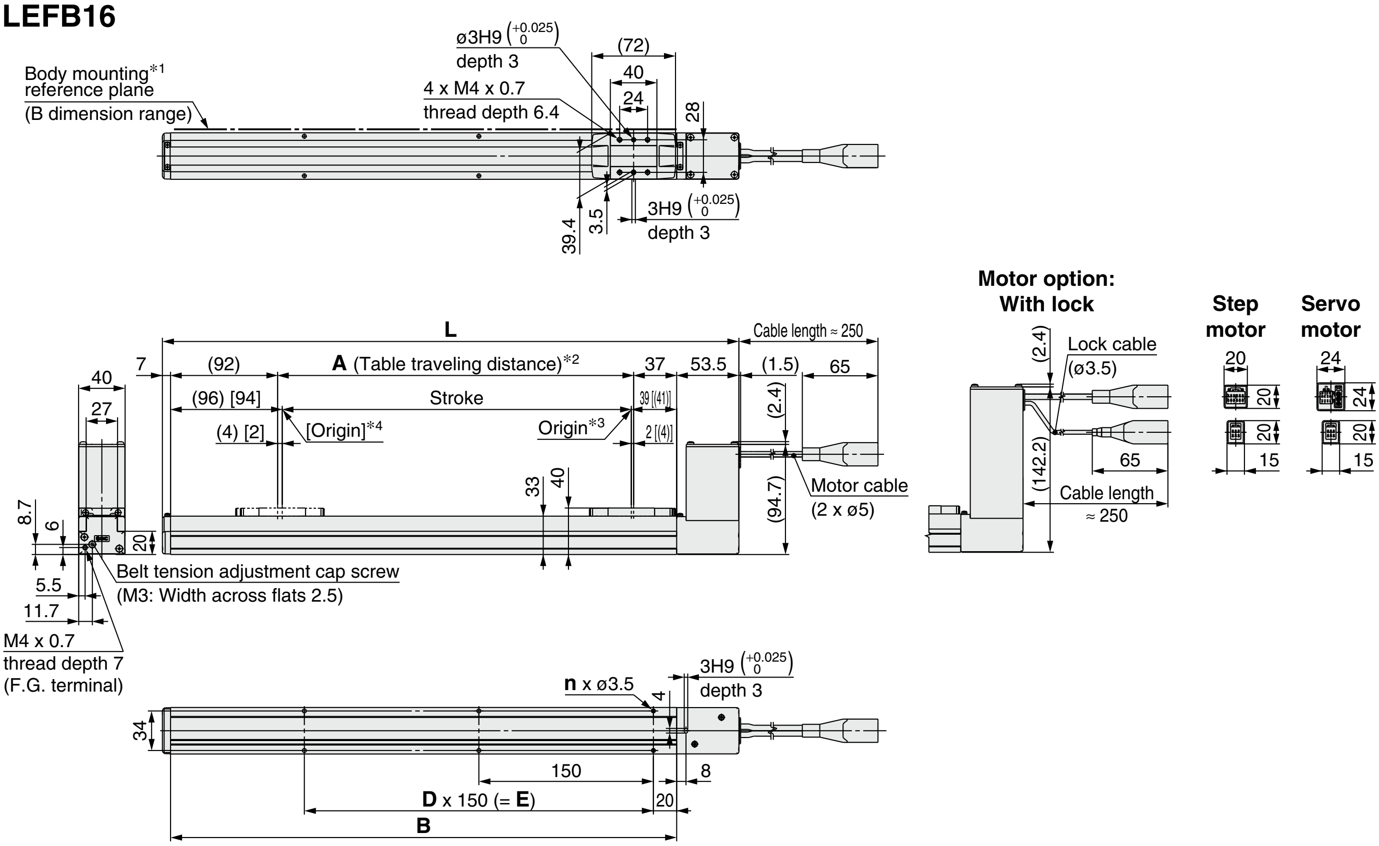
No.	Description	Material	Note
18	**Motor**	—	
19	**Rubber bushing**	NBR	
20	**Stopper**	Aluminum alloy	
21	**Dust seal band**	Stainless steel	
22	**Bearing**	—	
23	**Bearing**	—	
24	**Tension adjustment cap screw**	Chromium molybdenum steel	Chromating
25	**Pulley retaining screw**	Chromium molybdenum steel	Chromating
26	**Magnet**	—	With auto switch compatibility
27	**Roller assembly**	—	Without grease application

Replacement Parts/Grease Pack

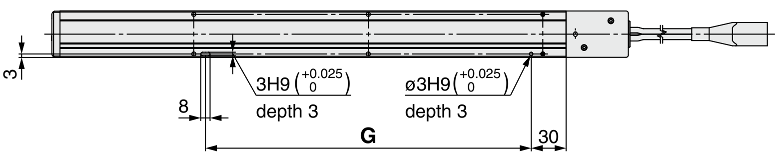
Applied portion	Order no.
Rail guide	GR-S-010 (10 g) GR-S-020 (20 g)
Dust seal band (When "Without" is selected for the grease application, grease is applied only on the back side.)	

Dimensions: Belt Drive

LEFB16



Positioning pin hole*5 **(Option): Body bottom**



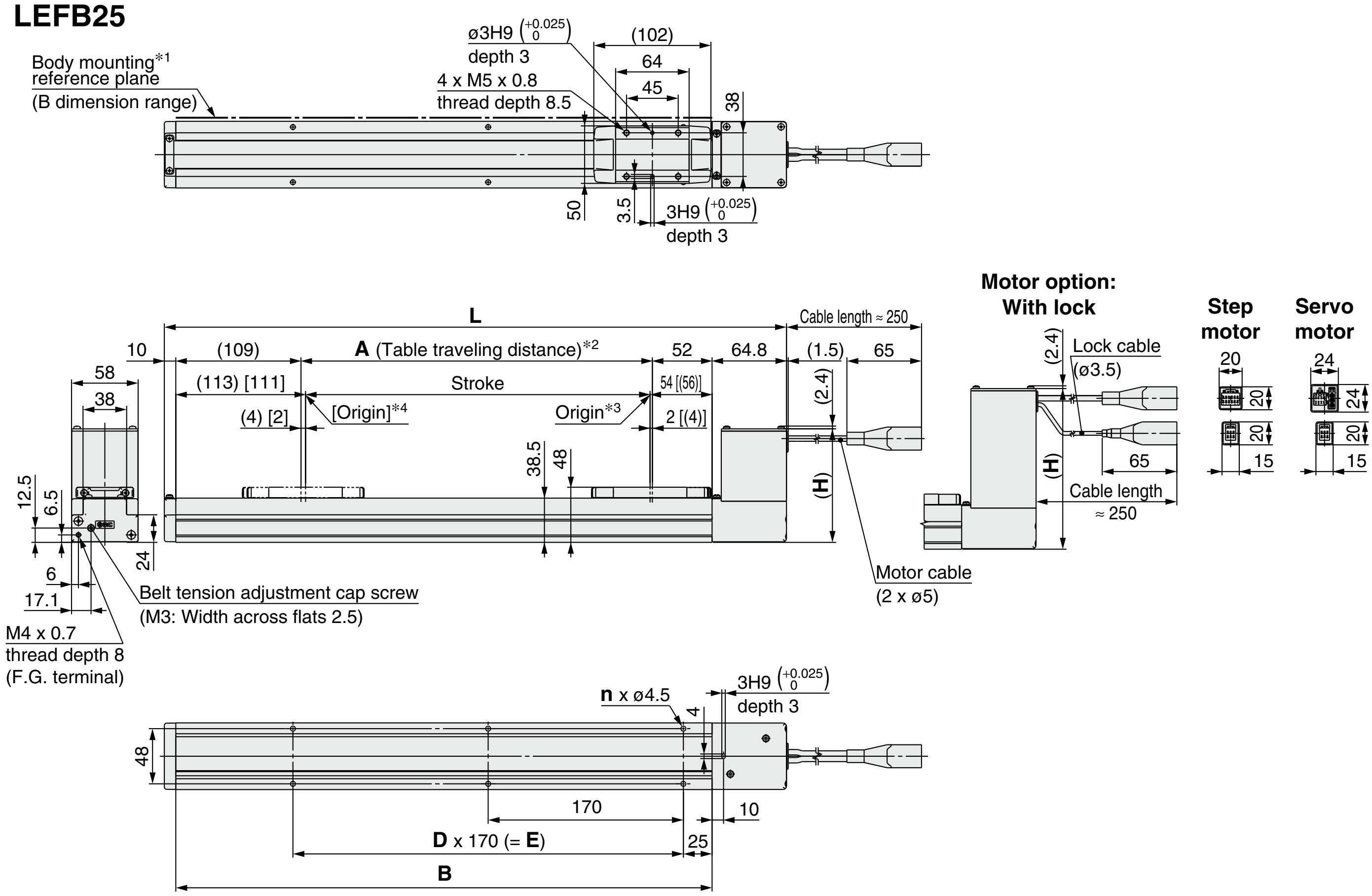
*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 2 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed
*5 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

Dimensions [mm]

Model	L	A	B	n	D	E	G
LEFB16□T-300□	495.5	306	435	6	2	300	280
LEFB16□T-500□	695.5	506	635	10	4	600	580
LEFB16□T-600□	795.5	606	735	10	4	600	580
LEFB16□T-700□	895.5	706	835	12	5	750	730
LEFB16□T-800□	995.5	806	935	14	6	900	880
LEFB16□T-900□	1095.5	906	1035	14	6	900	880
LEFB16□T-1000□	1195.5	1006	1135	16	7	1050	1030

Dimensions: Belt Drive

LEFB25



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

[mm]

Model	H
LEFB25T-ST	115.8
LEFB25T-STB	158.8
LEFB25AT-ST	98.8
LEFB25AT-STB	139.8

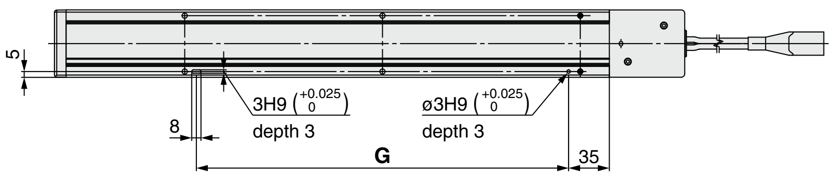
Dimensions

Model	L	A	B	n	D	E
LEFB25□T-300□	541.8	306	467	6	2	340
LEFB25□T-500□	741.8	506	667	8	3	510
LEFB25□T-600□	841.8	606	767	10	4	680
LEFB25□T-700□	941.8	706	867	10	4	680
LEFB25□T-800□	1041.8	806	967	12	5	850
LEFB25□T-900□	1141.8	906	1067	14	6	1020
LEFB25□T-1000□	1241.8	1006	1167	14	6	1020
LEFB25□T-1200□	1441.8	1206	1367	16	7	1190
LEFB25□T-1500□	1741.8	1506	1667	20	9	1530
LEFB25□T-1800□	2041.8	1806	1967	24	11	1870
LEFB25□T-2000□	2241.8	2006	2167	26	12	2040

Dimensions: Belt Drive

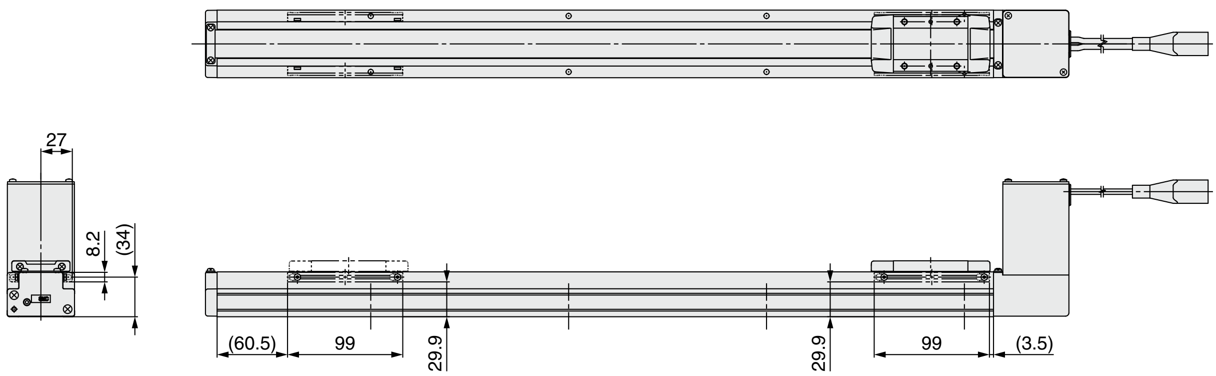
LEFB25

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

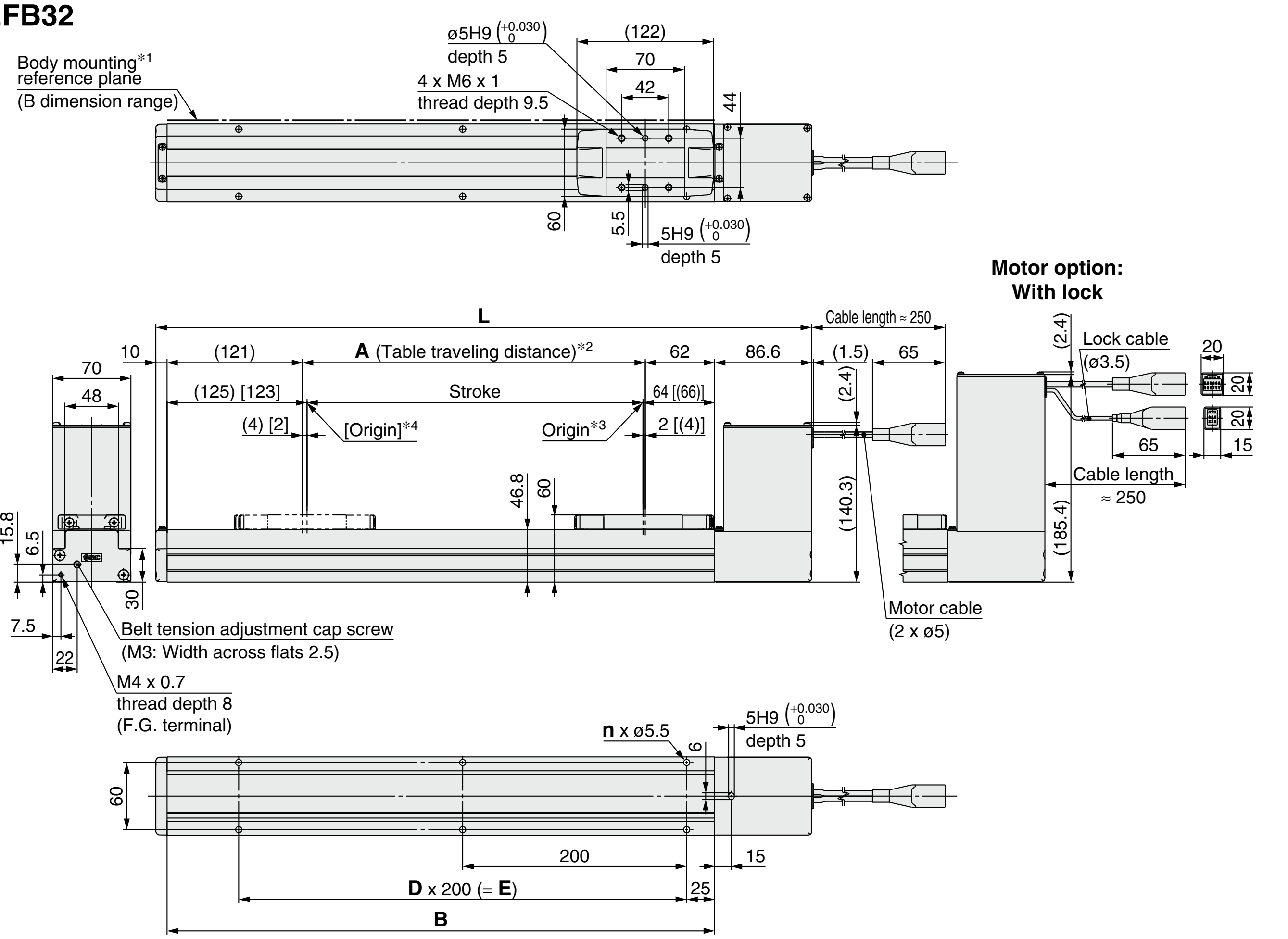


Dimensions [mm]

Model	G
LEFB25□T-300□	320
LEFB25□T-500□	490
LEFB25□T-600□	660
LEFB25□T-700□	660
LEFB25□T-800□	830
LEFB25□T-900□	1000
LEFB25□T-1000□	1000
LEFB25□T-1200□	1170
LEFB25□T-1500□	1510
LEFB25□T-1800□	1850
LEFB25□T-2000□	2020

Dimensions: Belt Drive

LEFB32



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 Position after returning to origin
*4 [ ] for when the direction of return to origin has changed

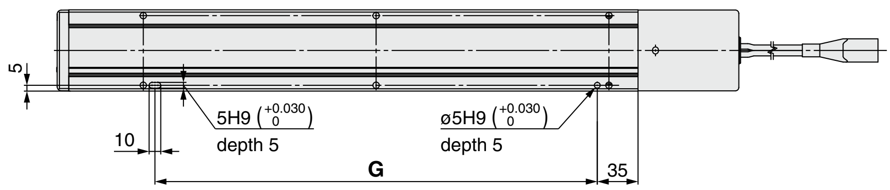
Dimensions [mm]

Model	L	A	B	n	D	E
LEFB32□T-300□	585.6	306	489	6	2	400
LEFB32□T-500□	785.6	506	689	8	3	600
LEFB32□T-600□	885.6	606	789	8	3	600
LEFB32□T-700□	985.6	706	889	10	4	800
LEFB32□T-800□	1085.6	806	989	10	4	800
LEFB32□T-900□	1185.6	906	1089	12	5	1000
LEFB32□T-1000□	1285.6	1006	1189	12	5	1000
LEFB32□T-1200□	1485.6	1206	1389	14	6	1200
LEFB32□T-1500□	1785.6	1506	1689	18	8	1600
LEFB32□T-1800□	2085.6	1806	1989	20	9	1800
LEFB32□T-2000□	2285.6	2006	2189	22	10	2000

Dimensions: Belt Drive

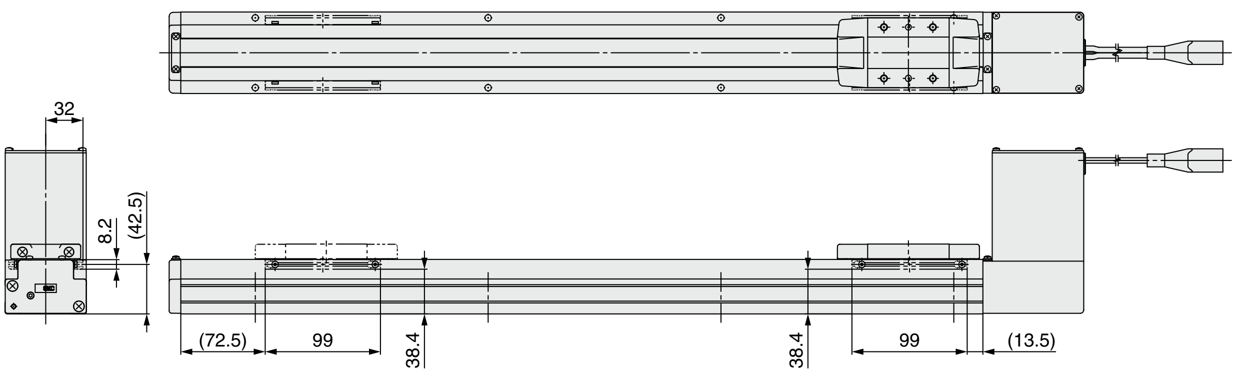
LEFB32

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

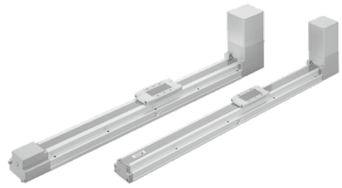


Dimensions [mm]

Model	G
LEFB32□T-300□	380
LEFB32□T-500□	580
LEFB32□T-600□	580
LEFB32□T-700□	780
LEFB32□T-800□	780
LEFB32□T-900□	980
LEFB32□T-1000□	980
LEFB32□T-1200□	1180
LEFB32□T-1500□	1580
LEFB32□T-1800□	1780
LEFB32□T-2000□	1980

Slider Type Belt Drive

LEFB Series LEFB25, 32, 40



LECY□ Series ▶p. 254 Motorless Type ▶p. 1177

CE UKCA c UL us RoHS

∗ For details, refer to page 1343 and onward.

How to Order

LEFB 40 [ ] S4 S – 300 [ ] C K – S 2 A1 [ ]

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬

❶ Size

25
32
40

❷ Motor mounting position

Nil	Top mounting
U	Bottom mounting

❹ Equivalent lead

S	54 mm

❺ Stroke

300	300 mm
to	to
3000	3000 mm

∗ For details, refer to the applicable stroke table below.

❻ Motor option

Nil	Without option
B	With lock

❸ Motor type

Symbol	Type	Output [W]	Actuator size	Compatible drivers
S2∗1	AC servo motor (Incremental encoder)	100	25	LECSA□-S1
S3		200	32	LECSA□-S3
S4		400	40	LECSA2-S4
T6∗2	AC servo motor (Absolute encoder)	100	25	LECSB2-T5 LECSC2-T5 LECSN2-T5-□ LECSS2-T5
T7		200	32	LECSB2-T7 LECSC2-T7 LECSND2-T7-□ LECSS2-T7
T8		400	40	LECSB2-T8 LECSC2-T8 LECSND2-T8-□ LECSS2-T8

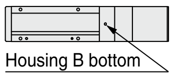
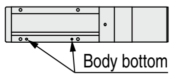
∗1 For motor type S2, the compatible driver part number suffix is S1.
∗2 For motor type T6, the compatible driver part number is LECS□2-T5.

❼ Auto switch compatibility

Nil	None
C	With (Includes 1 mounting bracket)

∗ If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)
∗ Order auto switches separately. (For details, refer to pages 276 to 278.)
∗ When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.

❽ Positioning pin hole

Nil	Housing B bottom∗1	 Housing B bottom
K	Body bottom 2 locations	 Body bottom

∗1 Refer to the body mounting example on page 280 for the mounting method.

⓫ Driver type

	Compatible drivers	Power supply voltage	Size 25	Size 32	Size 40
Nil	Without driver	—	●	●	●
A1	LECSA1-S□	100 to 120	●	●	—
A2	LECSA2-S□	200 to 230	●	●	●
B2	LECSB2-T□	200 to 240	●	●	●
C2	LECSC2-T□	200 to 230	●	●	●
S2	LECSS2-T□	200 to 240	●	●	●
N2	LECSN2-T5	200 to 240	●	●	●
E2	LECSN2-T5-E	200 to 240	●	●	●
92	LECSN2-T5-9	200 to 240	●	●	●
P2	LECSN2-T5-P	200 to 240	●	●	●
ND2	LECSND2-T□	200 to 240	●	●	●
ED2	LECSND2-T□-E	200 to 240	●	●	●
9D2	LECSND2-T□-9	200 to 240	●	●	●
PD2	LECSND2-T□-P	200 to 240	●	●	●

∗ When a driver type is selected, a cable is included. Select the cable type and cable length.
Example) S2S2: Standard cable (2 m) + Driver (LECSS2)
S2: Standard cable (2 m)
Nil: Without cable and driver
∗ When selecting "T6" for the motor type, select one of the following LECSN□-T series drivers: "N2," "E2," "92," or "P2."

❾ Cable type∗1 ∗2

Nil	Without cable
S	Standard cable
R	Robotic cable

∗1 A motor cable and encoder cable are included with the product. (A lock cable is also included if motor option "B: With lock" is selected.)
∗2 Standard cable entry direction is "(A) Axis side." (Refer to page 1123 for details.)

❿ Cable length [m]

Nil	Without cable
2	2
5	5
A	10

∗ The length of the motor, encoder, and lock cables are the same.

⓬ I/O cable length [m]∗1

Nil	Without cable
H	Without cable (Connector only)
1	1.5

∗1 When "Nil: Without driver" is selected for the driver type, only "Nil: Without cable" can be selected. Refer to page 1124 if an I/O cable is required. (Options are shown on page 1124.)

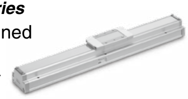
Applicable Stroke Table

●: Standard/○: Produced upon receipt of order

	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000
LEFB25	●	●	●	●	●	●	●	●	○	●	○	○	●	○	○	○	○	●	—	—
LEFB32	●	●	●	●	●	●	●	●	○	●	○	○	●	○	○	○	○	●	●	—
LEFB40	●	●	●	●	●	●	●	●	○	●	○	○	●	○	○	○	○	●	●	●

∗ Please contact SMC for non-standard strokes as they are produced as special orders.

Support Guide/*LEFG Series*
The support guide was designed to support workpieces with significant overhang. p.270



For auto switches, refer to pages 275 to 278.

Compatible Drivers

Driver type	Pulse input type/ Positioning type 	Pulse input type 	CC-Link direct input type 	SSCNETIII/H type 	Network card type 
Series	LECSA	LECSB-T	LECSC-T	LECSS-T	LECSN□-T
Number of point tables∗1	Up to 7	Up to 255	Up to 255 (2 stations occupied)	—	Up to 255
Pulse input	○	○	—	—	—
Applicable network	—	—	CC-Link	SSCNETIII/H	PROFINET EtherCAT EtherNet/IP™
Control encoder	Incremental 17-bit encoder	Absolute 22-bit encoder	Absolute 18-bit encoder	Absolute 22-bit encoder	Absolute 22-bit encoder
Communication function	USB communication	USB communication, RS422 communication	USB communication, RS422 communication	USB communication	USB communication
Power supply voltage [V]	100 to 120 VAC (50/60 Hz) 200 to 230 VAC (50/60 Hz)	200 to 240 VAC (50/60 Hz)	200 to 230 VAC (50/60 Hz)	200 to 240 VAC (50/60 Hz)	200 to 240 VAC (50/60 Hz)
Reference page	1109				

∗1 The LECSN□-T point table mode is only available for PROFINET and EtherCAT.

Specifications

AC Servo Motor

	Model		LEFB25S2/T6	LEFB32S3/T7	LEFB40S4/T8
Actuator specifications	Stroke [mm]*1		300, 400, 500 600, 700, 800 900, 1000, (1100) 1200, (1300, 1400) 1500, (1600, 1700) (1800, 1900), 2000	300, 400, 500 600, 700, 800 900, 1000, (1100) 1200, (1300, 1400) 1500, (1600, 1700) (1800, 1900), 2000 2500	300, 400, 500 600, 700, 800 900, 1000, (1100) 1200, (1300, 1400) 1500, (1600, 1700) (1800, 1900), 2000 2500, 3000
	Work load [kg]*2	Horizontal	5	15	25
	Max. speed [mm/s]		2000	2000	2000
	Max. acceleration/deceleration [mm/s²]		20000 (Refer to page 132 for limit according to work load and duty ratio.)*3		
	Positioning repeatability [mm]		±0.06		
	Lost motion [mm]*4		0.1 or less		
	Equivalent lead [mm]		54		
	Impact/Vibration resistance [m/s²]*5		50/20		
	Actuation type		Belt		
	Guide type		Linear guide		
	Static allowable moment*6 [N·m]	Mep (Pitching)	27	46	110
		Mey (Yawing)	27	46	110
		Mer (Rolling)	52	101	207
	Operating temperature range [°C]		5 to 40		
	Operating humidity range [%RH]		90 or less (No condensation)		
	Enclosure		IP30		
Electric specifications	Motor output/Size		100 W/□40	200 W/□60	400 W/□60
	Motor type		AC servo motor (100/200 VAC)		
	Encoder*9		Motor type S2, S3, S4: Incremental 17-bit encoder (Resolution: 131072 p/rev) Motor type T6, T7, T8: Absolute 22-bit encoder (Resolution: 4194304 p/rev) (For LECSB2-T□, LECSS2-T□) Motor type T6, T7, T8: Absolute 18-bit encoder (Resolution: 262144 p/rev) (For LECSC2-T□)		
	Power [W]*7		Max. power 445	Max. power 725	Max. power 1275
Lock unit specifications	Type*8		Non-magnetizing lock		
	Holding force [N]		27	54	110
	Power [W] at 20°C		6.3	7.9	7.9
	Rated voltage [V]		$24\ ^{0}_{-10\%}$		

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 For details, refer to the "Speed–Work Load Graph (Guide)" on page 132.
*3 Maximum acceleration/deceleration changes according to the work load. Check the "Work Load–Acceleration/Deceleration Graph" of the catalog.
*4 A reference value for correcting errors in reciprocal operation
*5 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*6 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*7 Indicates the max. power during operation (including the driver)
When selecting the power supply capacity, refer to the power supply capacity in the operation manual of each driver.
*8 Only when motor option "With lock" is selected
*9 For motor type T6, T7, and T8, the resolution will change depending on the driver type.

Weight

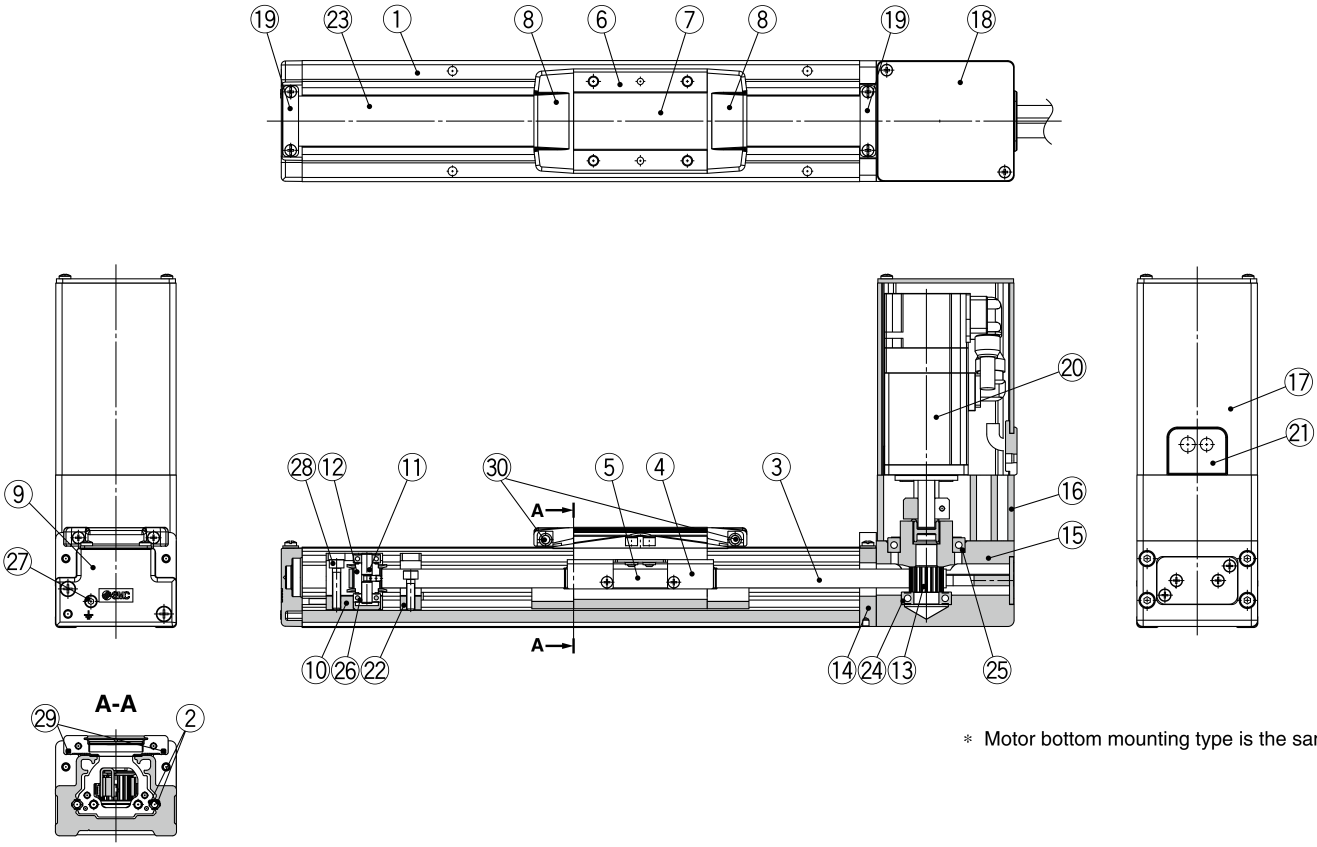
Series		LEFB25□□																	
Stroke [mm]		300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Motor type	S2	3.00	3.25	3.50	3.75	4.00	4.25	4.50	4.75	5.00	5.25	5.50	5.75	6.00	6.25	6.50	6.75	7.00	7.25
	T6	3.04	3.29	3.54	3.79	4.04	4.29	4.54	4.79	5.04	5.29	5.54	5.79	6.04	6.29	6.54	6.79	7.04	7.29
Additional weight with lock [kg]		S2: 0.2/T6: 0.3																	

Series		LEFB32□□																		
Stroke [mm]		300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500
Motor type	S3	4.90	5.25	5.60	5.95	6.30	6.65	7.00	7.35	7.70	8.05	8.40	8.75	9.10	9.45	9.80	10.15	10.50	10.85	12.60
	T7	4.81	5.16	5.51	5.78	6.21	6.56	6.91	7.26	7.61	7.96	8.31	8.66	9.01	9.36	9.71	10.06	10.41	10.76	12.51
Additional weight with lock [kg]		S3: 0.4/T7: 0.5																		

Series		LEFB40□□																			
Stroke [mm]		300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000
Motor type	S4	7.12	7.57	8.02	8.47	8.92	9.37	9.82	10.27	10.72	11.17	11.62	12.07	12.52	12.97	13.42	13.87	14.32	14.72	17.02	19.27
	T8	7.21	7.66	8.11	8.56	9.01	9.46	9.91	10.36	10.81	11.26	11.71	12.16	12.61	13.06	13.51	13.96	14.41	14.81	17.11	19.36
Additional weight with lock [kg]		S4: 0.5/T8: 0.5																			

Construction

LEFB25S□S



∗ Motor bottom mounting type is the same.

Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**		
3	**Belt**		
4	**Belt holder**	Carbon steel	Chromating
5	**Belt stopper**	Aluminum alloy	
6	**Table**	Aluminum alloy	Anodized
7	**Blanking plate**	Aluminum alloy	Anodized
8	**Seal band holder**	Synthetic resin	
9	**Housing A**	Aluminum die-cast	Coating
10	**Pulley holder**	Aluminum alloy	
11	**Pulley shaft**	Stainless steel	
12	**End pulley**	Aluminum alloy	Anodized
13	**Motor pulley**	Aluminum alloy	Anodized
14	**Return flange**	Aluminum alloy	Coating
15	**Housing**	Aluminum alloy	Coating
16	**Motor mount**	Aluminum alloy	Coating
17	**Motor cover**	Aluminum alloy	Anodized
18	**Motor end cover**	Aluminum alloy	Anodized

Component Parts

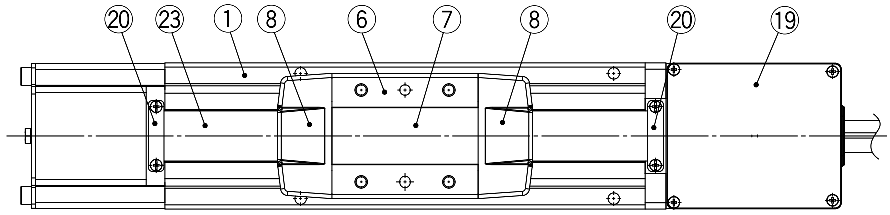
No.	Description	Material	Note
19	**Band stopper**	Stainless steel	
20	**Motor**		
21	**Rubber bushing**	NBR	
22	**Stopper**	Aluminum alloy	
23	**Dust seal band**	Stainless steel	
24	**Bearing**		
25	**Bearing**		
26	**Spacer**	Aluminum alloy	
27	**Tension adjustment cap screw**	Chromium molybdenum steel	Chromating
28	**Pulley retaining screw**	Chromium molybdenum steel	Chromating
29	**Magnet**	—	With auto switch compatibility
30	**Roller assembly**	—	

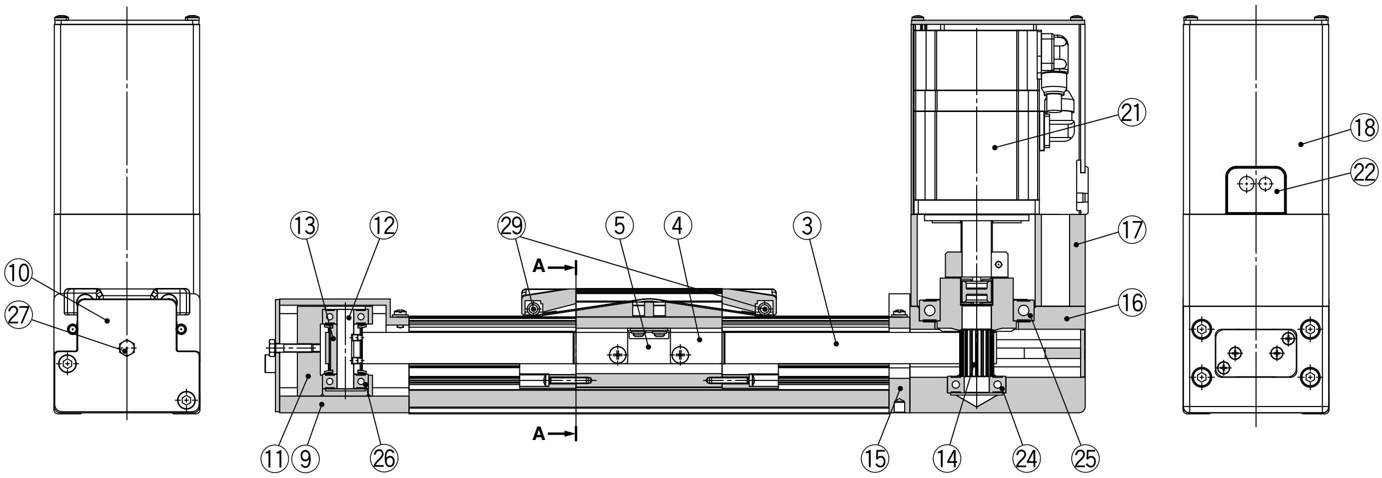
Replacement Parts/Grease Pack

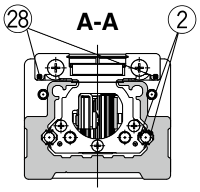
Applied portion	Order no.
Rail guide	GR-S-010 (10 g) GR-S-020 (20 g)
Dust seal band (Back side)	

Construction

LEFB32/40S□S







* Motor bottom mounting type is the same.

Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**		
3	**Belt**		
4	**Belt holder**	Carbon steel	Chromating
5	**Belt stopper**	Aluminum alloy	
6	**Table**	Aluminum alloy	Anodized
7	**Blanking plate**	Aluminum alloy	Anodized
8	**Seal band holder**	Synthetic resin	
9	**End block**	Aluminum alloy	Coating
10	**End block cover**		
11	**Pulley holder**	Aluminum alloy	
12	**Pulley shaft**	Stainless steel	
13	**End pulley**	Aluminum alloy	Anodized
14	**Motor pulley**	Aluminum alloy	Anodized
15	**Return flange**	Aluminum alloy	Coating
16	**Housing**	Aluminum alloy	Coating
17	**Motor mount**	Aluminum alloy	Coating

Component Parts

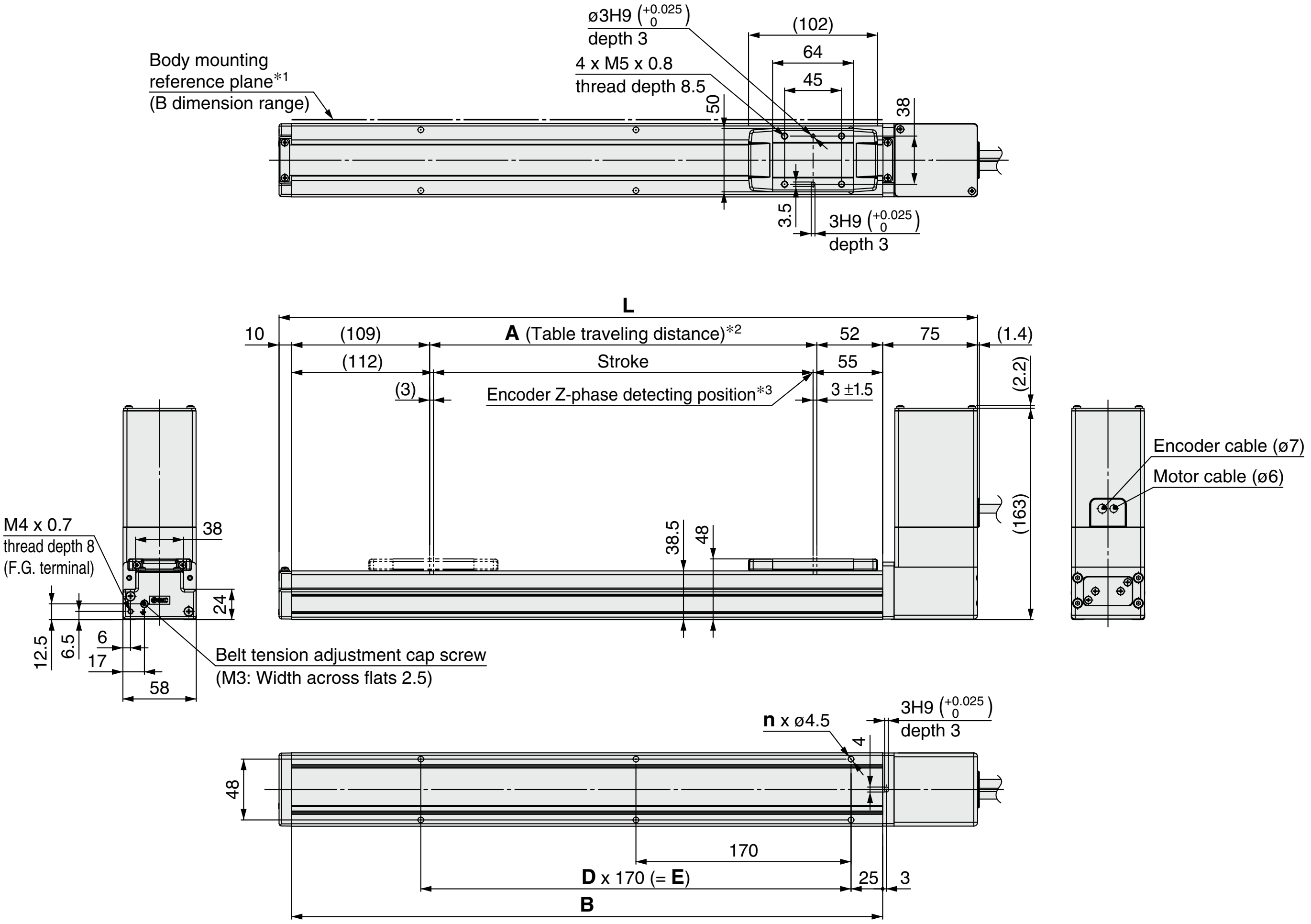
No.	Description	Material	Note
18	**Motor cover**	Aluminum alloy	Anodized
19	**Motor end cover**	Aluminum alloy	Anodized
20	**Band stopper**	Stainless steel	
21	**Motor**		
22	**Rubber bushing**	NBR	
23	**Dust seal band**	Stainless steel	
24	**Bearing**		
25	**Bearing**		
26	**Bearing**		
27	**Tension adjustment bolt**	Chromium molybdenum steel	Chromating
28	**Magnet**	—	With auto switch compatibility
29	**Roller assembly**	—	

Replacement Parts/Grease Pack

Applied portion	Order no.
Rail guide	GR-S-010 (10 g) GR-S-020 (20 g)
Dust seal band (Back side)	

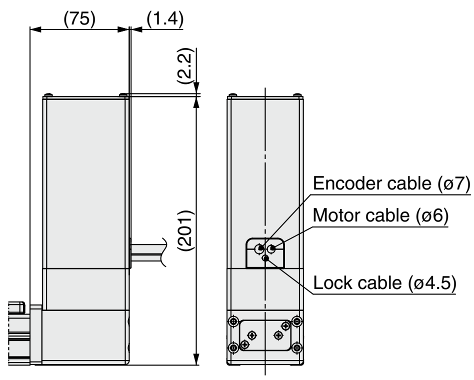
Dimensions: Belt Drive

LEFB25/Motor top mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

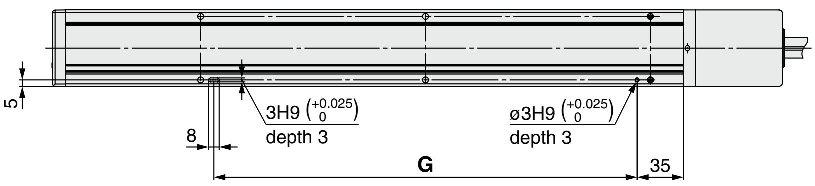
[mm]

Model	L	A	B	n	D	E
LEFB25□S-300□	552	306	467	6	2	340
LEFB25□S-400□	652	406	567	8	3	510
LEFB25□S-500□	752	506	667	8	3	510
LEFB25□S-600□	852	606	767	10	4	680
LEFB25□S-700□	952	706	867	10	4	680
LEFB25□S-800□	1052	806	967	12	5	850
LEFB25□S-900□	1152	906	1067	14	6	1020
LEFB25□S-1000□	1252	1006	1167	14	6	1020
LEFB25□S-1100□	1352	1106	1267	16	7	1190
LEFB25□S-1200□	1452	1206	1367	16	7	1190
LEFB25□S-1300□	1552	1306	1467	18	8	1360
LEFB25□S-1400□	1652	1406	1567	20	9	1530
LEFB25□S-1500□	1752	1506	1667	20	9	1530
LEFB25□S-1600□	1852	1606	1767	22	10	1700
LEFB25□S-1700□	1952	1706	1867	22	10	1700
LEFB25□S-1800□	2052	1806	1967	24	11	1870
LEFB25□S-1900□	2152	1906	2067	24	11	1870
LEFB25□S-2000□	2252	2006	2167	26	12	2040

Dimensions: Belt Drive

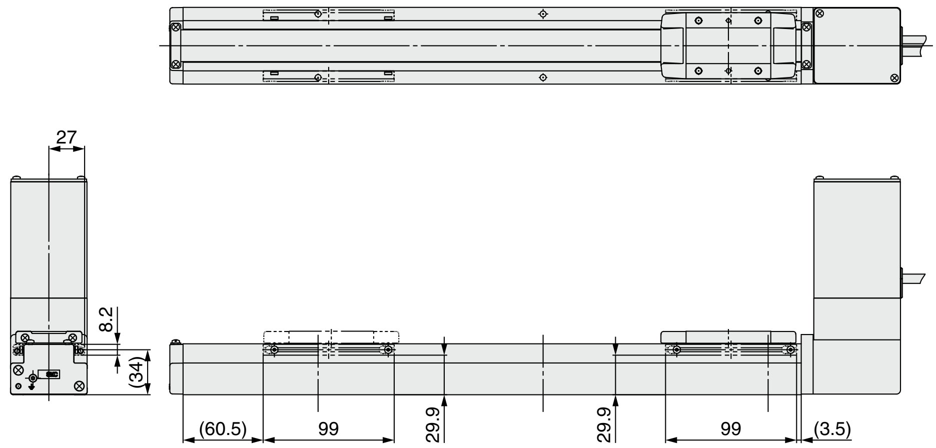
LEFB25/Motor top mounting type

Positioning pin hole*1 **(Option): Body bottom**



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

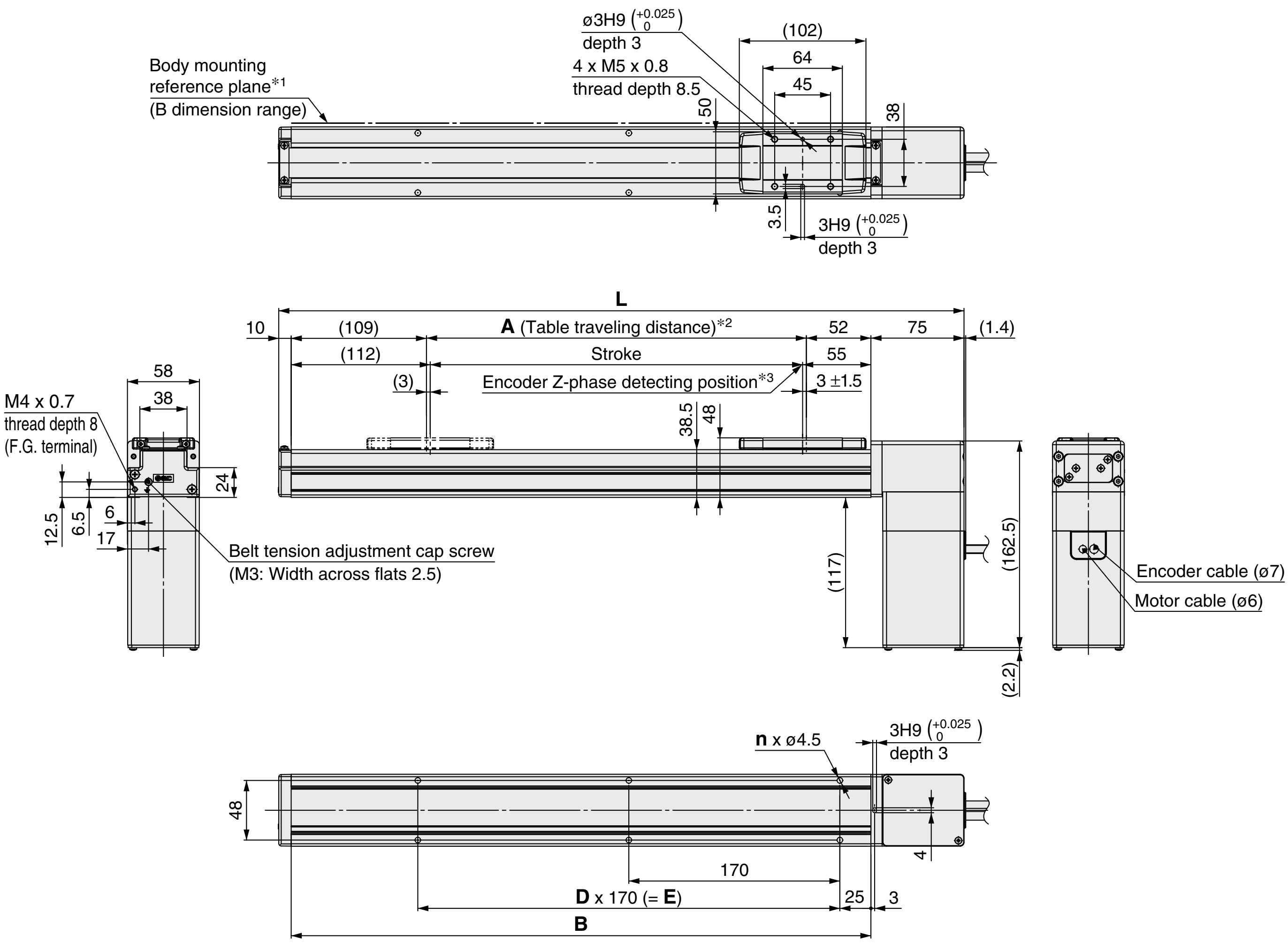


Dimensions [mm]

Model	G
LEFB25□S-300□	320
LEFB25□S-400□	490
LEFB25□S-500□	490
LEFB25□S-600□	660
LEFB25□S-700□	660
LEFB25□S-800□	830
LEFB25□S-900□	1000
LEFB25□S-1000□	1000
LEFB25□S-1100□	1170
LEFB25□S-1200□	1170
LEFB25□S-1300□	1340
LEFB25□S-1400□	1510
LEFB25□S-1500□	1510
LEFB25□S-1600□	1680
LEFB25□S-1700□	1680
LEFB25□S-1800□	1850
LEFB25□S-1900□	1850
LEFB25□S-2000□	2020

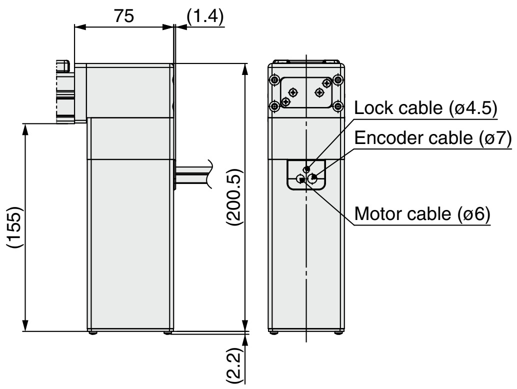
Dimensions: Belt Drive

LEFB25U/Motor bottom mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

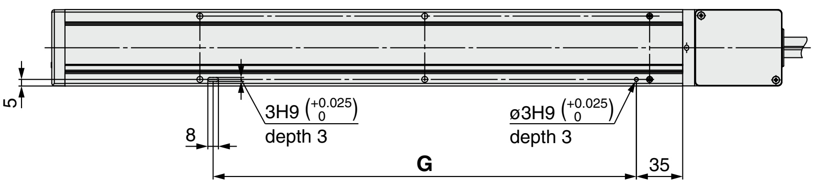
[mm]

Model	L	A	B	n	D	E
LEFB25U□S-300□	552	306	467	6	2	340
LEFB25U□S-400□	652	406	567	8	3	510
LEFB25U□S-500□	752	506	667	8	3	510
LEFB25U□S-600□	852	606	767	10	4	680
LEFB25U□S-700□	952	706	867	10	4	680
LEFB25U□S-800□	1052	806	967	12	5	850
LEFB25U□S-900□	1152	906	1067	14	6	1020
LEFB25U□S-1000□	1252	1006	1167	14	6	1020
LEFB25U□S-1100□	1352	1106	1267	16	7	1190
LEFB25U□S-1200□	1452	1206	1367	16	7	1190
LEFB25U□S-1300□	1552	1306	1467	18	8	1360
LEFB25U□S-1400□	1652	1406	1567	20	9	1530
LEFB25U□S-1500□	1752	1506	1667	20	9	1530
LEFB25U□S-1600□	1852	1606	1767	22	10	1700
LEFB25U□S-1700□	1952	1706	1867	22	10	1700
LEFB25U□S-1800□	2052	1806	1967	24	11	1870
LEFB25U□S-1900□	2152	1906	2067	24	11	1870
LEFB25U□S-2000□	2252	2006	2167	26	12	2040

Dimensions: Belt Drive

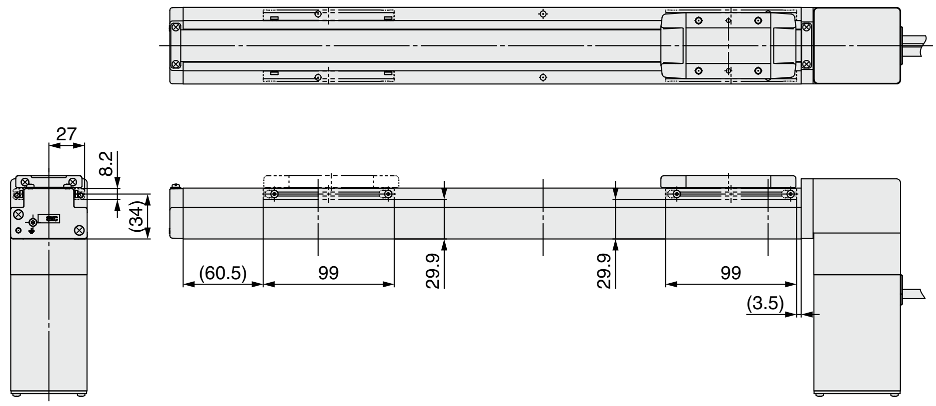
LEFB25U/Motor bottom mounting type

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)

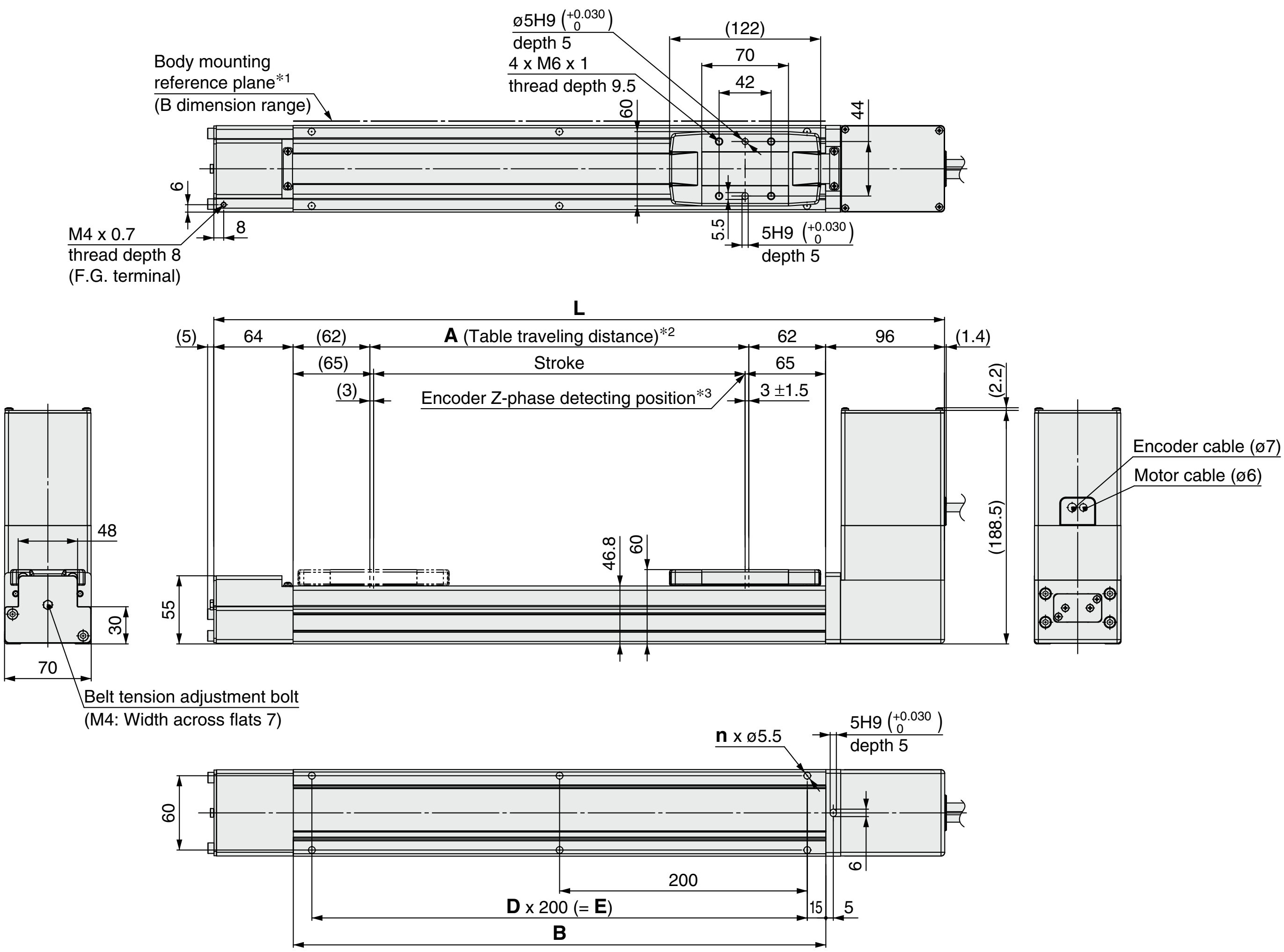


Dimensions [mm]

Model	G
LEFS25U□S-300□	320
LEFS25U□S-400□	490
LEFS25U□S-500□	490
LEFS25U□S-600□	660
LEFS25U□S-700□	660
LEFS25U□S-800□	830
LEFS25U□S-900□	1000
LEFS25U□S-1000□	1000
LEFS25U□S-1100□	1170
LEFS25U□S-1200□	1170
LEFS25U□S-1300□	1340
LEFS25U□S-1400□	1510
LEFS25U□S-1500□	1510
LEFS25U□S-1600□	1680
LEFS25U□S-1700□	1680
LEFS25U□S-1800□	1850
LEFS25U□S-1900□	1850
LEFS25U□S-2000□	2020

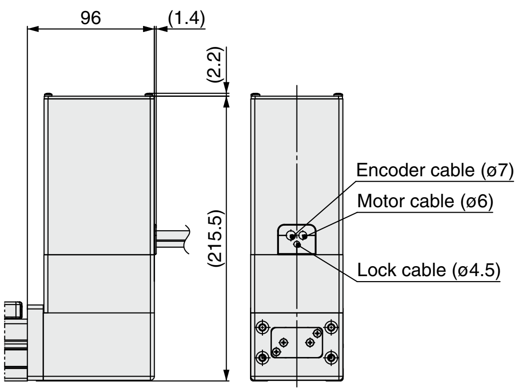
Dimensions: Belt Drive

LEFB32/Motor top mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

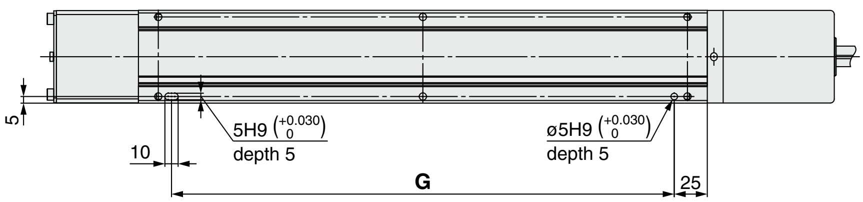
[mm]

Model	L	A	B	n	D	E
LEFB32□S-300□	590	306	430	6	2	400
LEFB32□S-400□	690	406	530	6	2	400
LEFB32□S-500□	790	506	630	8	3	600
LEFB32□S-600□	890	606	730	8	3	600
LEFB32□S-700□	990	706	830	10	4	800
LEFB32□S-800□	1090	806	930	10	4	800
LEFB32□S-900□	1190	906	1030	12	5	1000
LEFB32□S-1000□	1290	1006	1130	12	5	1000
LEFB32□S-1100□	1390	1106	1230	14	6	1200
LEFB32□S-1200□	1490	1206	1330	14	6	1200
LEFB32□S-1300□	1590	1306	1430	16	7	1400
LEFB32□S-1400□	1690	1406	1530	16	7	1400
LEFB32□S-1500□	1790	1506	1630	18	8	1600
LEFB32□S-1600□	1890	1606	1730	18	8	1600
LEFB32□S-1700□	1990	1706	1830	20	9	1800
LEFB32□S-1800□	2090	1806	1930	20	9	1800
LEFB32□S-1900□	2190	1906	2030	22	10	2000
LEFB32□S-2000□	2290	2006	2130	22	10	2000
LEFB32□S-2500□	2790	2506	2630	28	13	2600

Dimensions: Belt Drive

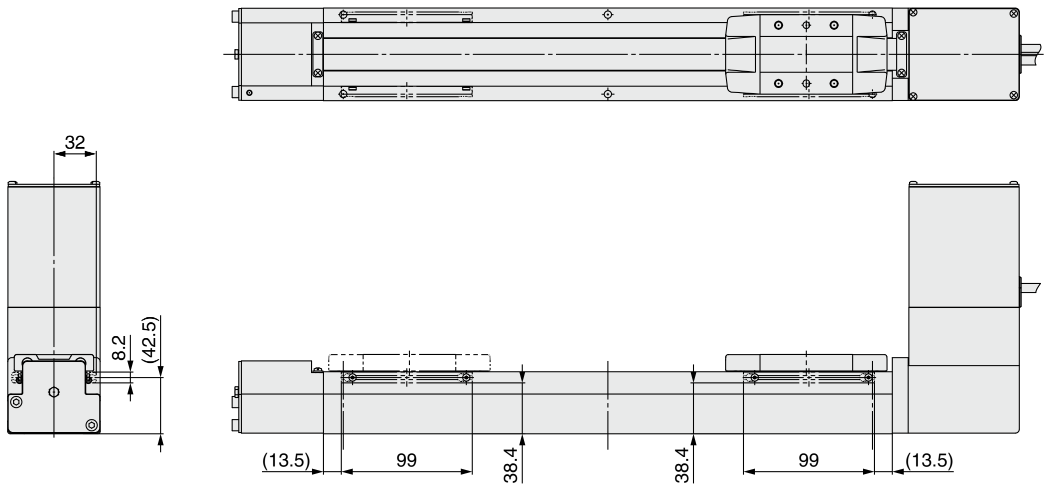
LEFB32/Motor top mounting type

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



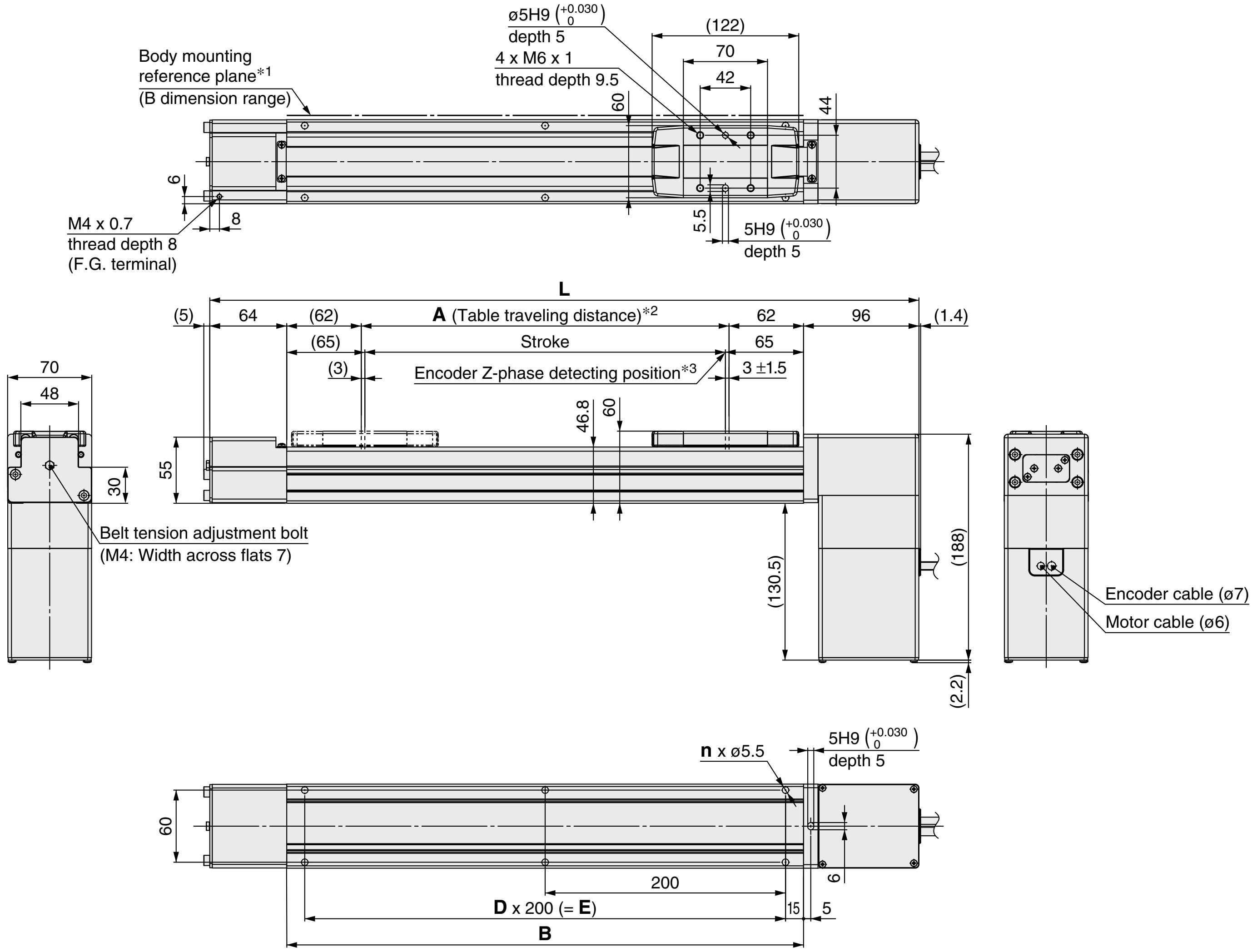
Dimensions

[mm]

Model	G
LEFB32□S-300□	380
LEFB32□S-400□	380
LEFB32□S-500□	580
LEFB32□S-600□	580
LEFB32□S-700□	780
LEFB32□S-800□	780
LEFB32□S-900□	980
LEFB32□S-1000□	980
LEFB32□S-1100□	1180
LEFB32□S-1200□	1180
LEFB32□S-1300□	1380
LEFB32□S-1400□	1380
LEFB32□S-1500□	1580
LEFB32□S-1600□	1580
LEFB32□S-1700□	1780
LEFB32□S-1800□	1780
LEFB32□S-1900□	1980
LEFB32□S-2000□	1980
LEFB32□S-2500□	2580

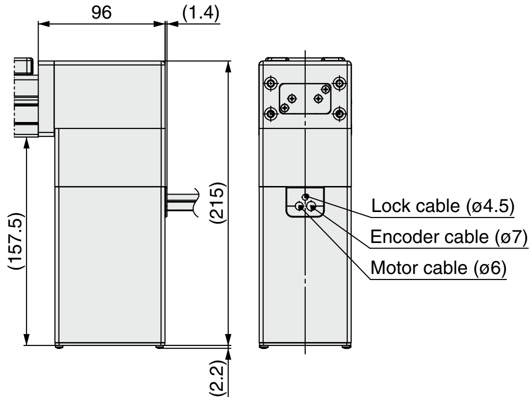
Dimensions: Belt Drive

LEFB32U/Motor bottom mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

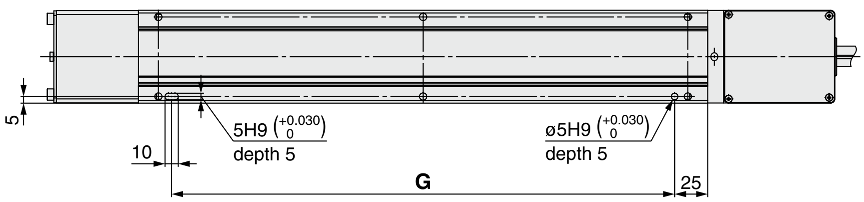
[mm]

Model	L	A	B	n	D	E
LEFB32U□S-300□	590	306	430	6	2	400
LEFB32U□S-400□	690	406	530	6	2	400
LEFB32U□S-500□	790	506	630	8	3	600
LEFB32U□S-600□	890	606	730	8	3	600
LEFB32U□S-700□	990	706	830	10	4	800
LEFB32U□S-800□	1090	806	930	10	4	800
LEFB32U□S-900□	1190	906	1030	12	5	1000
LEFB32U□S-1000□	1290	1006	1130	12	5	1000
LEFB32U□S-1100□	1390	1106	1230	14	6	1200
LEFB32U□S-1200□	1490	1206	1330	14	6	1200
LEFB32U□S-1300□	1590	1306	1430	16	7	1400
LEFB32U□S-1400□	1690	1406	1530	16	7	1400
LEFB32U□S-1500□	1790	1506	1630	18	8	1600
LEFB32U□S-1600□	1890	1606	1730	18	8	1600
LEFB32U□S-1700□	1990	1706	1830	20	9	1800
LEFB32U□S-1800□	2090	1806	1930	20	9	1800
LEFB32U□S-1900□	2190	1906	2030	22	10	2000
LEFB32U□S-2000□	2290	2006	2130	22	10	2000
LEFB32U□S-2500□	2790	2506	2630	28	13	2600

Dimensions: Belt Drive

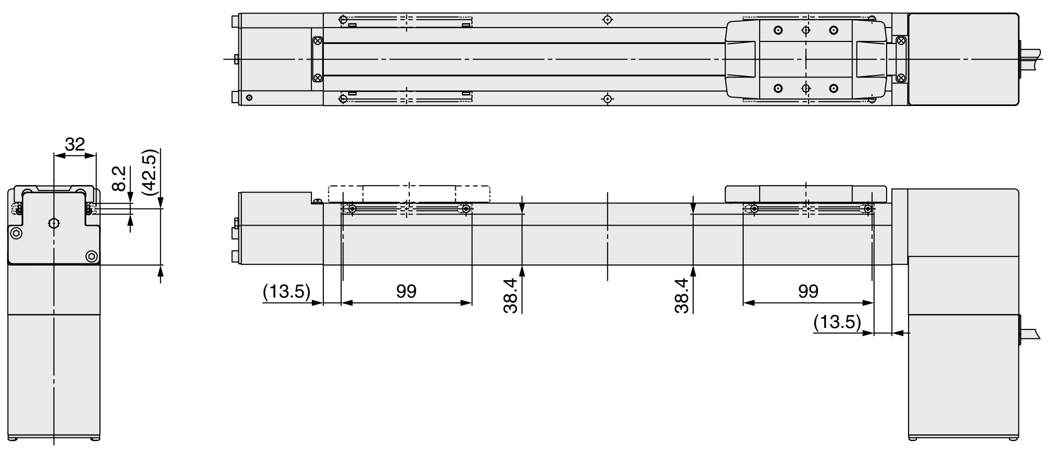
LEFB32U/Motor bottom mounting type

Positioning pin hole[*1] **(Option): Body bottom**



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



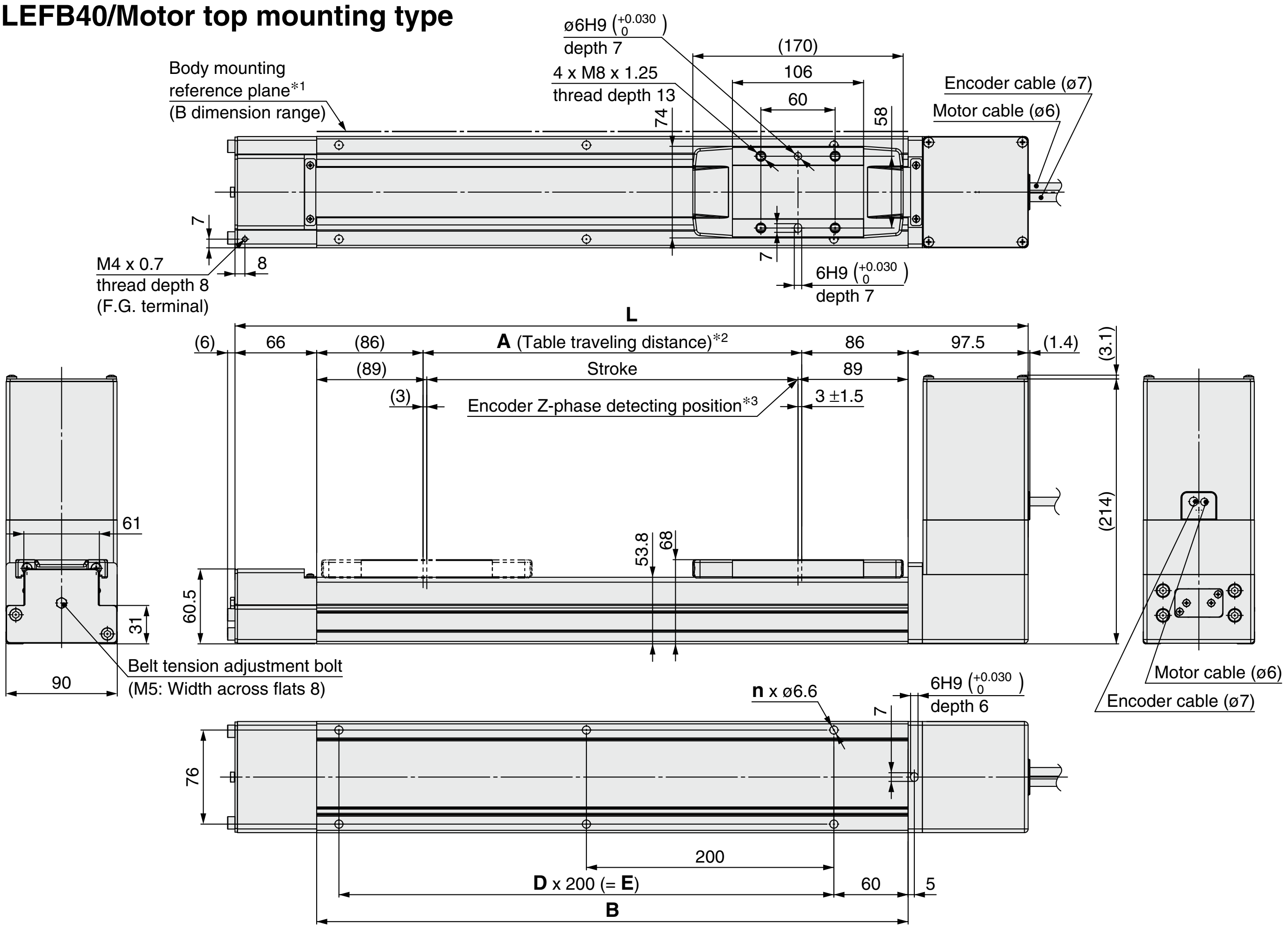
Dimensions

[mm]

Model	G
LEFB32U□S-300□	380
LEFB32U□S-400□	380
LEFB32U□S-500□	580
LEFB32U□S-600□	580
LEFB32U□S-700□	780
LEFB32U□S-800□	780
LEFB32U□S-900□	980
LEFB32U□S-1000□	980
LEFB32U□S-1100□	1180
LEFB32U□S-1200□	1180
LEFB32U□S-1300□	1380
LEFB32U□S-1400□	1380
LEFB32U□S-1500□	1580
LEFB32U□S-1600□	1580
LEFB32U□S-1700□	1780
LEFB32U□S-1800□	1780
LEFB32U□S-1900□	1980
LEFB32U□S-2000□	1980
LEFB32U□S-2500□	2580

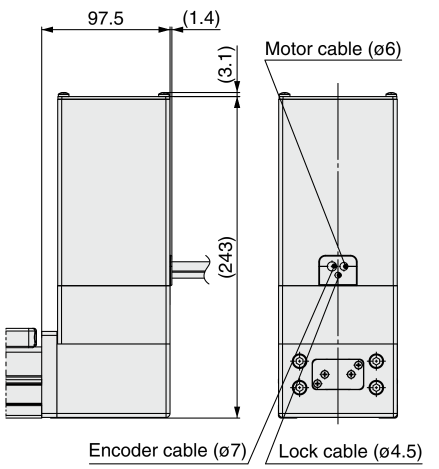
Dimensions: Belt Drive

LEFB40/Motor top mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

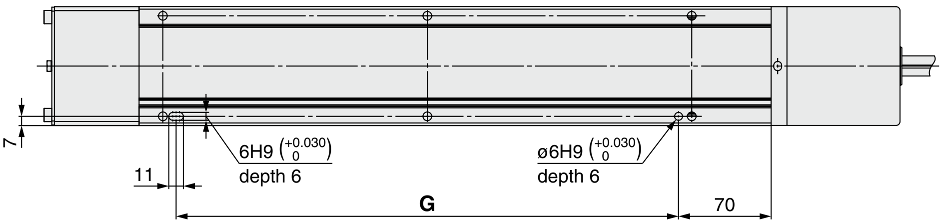
[mm]

Model	L	A	B	n	D	E
LEFB40□S-300□	641.5	306	478	6	2	400
LEFB40□S-400□	741.5	406	578	6	2	400
LEFB40□S-500□	841.5	506	678	8	3	600
LEFB40□S-600□	941.5	606	778	8	3	600
LEFB40□S-700□	1041.5	706	878	10	4	800
LEFB40□S-800□	1141.5	806	978	10	4	800
LEFB40□S-900□	1241.5	906	1078	12	5	1000
LEFB40□S-1000□	1341.5	1006	1178	12	5	1000
LEFB40□S-1100□	1441.5	1106	1278	14	6	1200
LEFB40□S-1200□	1541.5	1206	1378	14	6	1200
LEFB40□S-1300□	1641.5	1306	1478	16	7	1400
LEFB40□S-1400□	1741.5	1406	1578	16	7	1400
LEFB40□S-1500□	1841.5	1506	1678	18	8	1600
LEFB40□S-1600□	1941.5	1606	1778	18	8	1600
LEFB40□S-1700□	2041.5	1706	1878	20	9	1800
LEFB40□S-1800□	2141.5	1806	1978	20	9	1800
LEFB40□S-1900□	2241.5	1906	2078	22	10	2000
LEFB40□S-2000□	2341.5	2006	2178	22	10	2000
LEFB40□S-2500□	2841.5	2506	2678	28	13	2600
LEFB40□S-3000□	3341.5	3006	3178	32	15	3000

Dimensions: Belt Drive

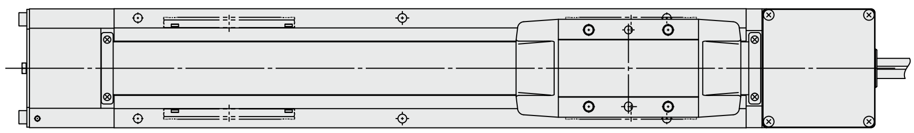
LEFB40/Motor top mounting type

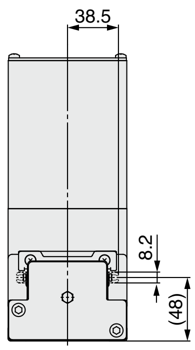
Positioning pin hole*1 (Option): Body bottom

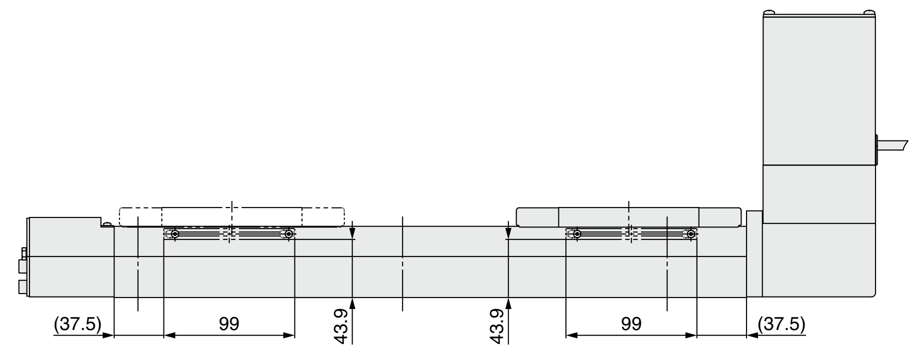


*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)







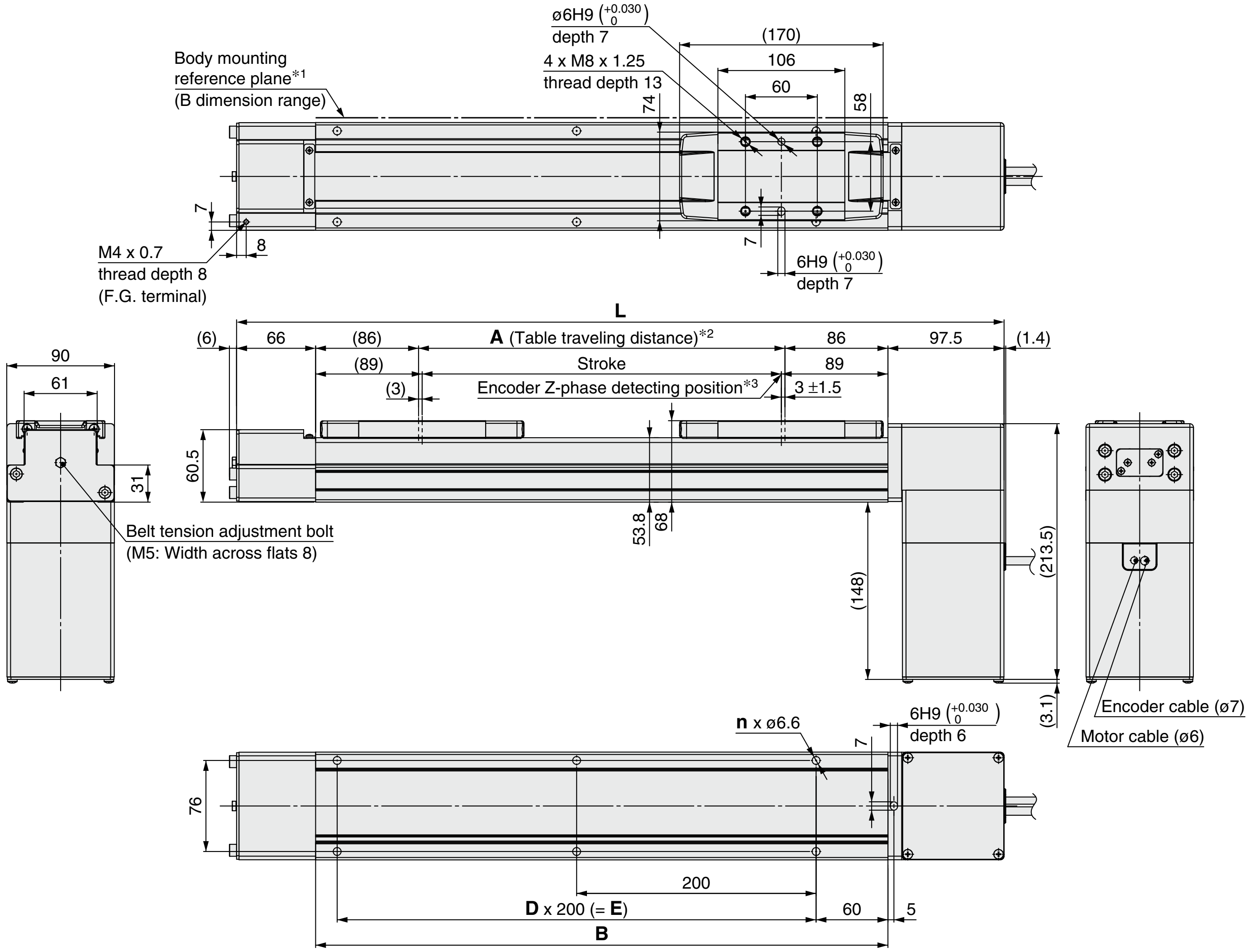
Dimensions

[mm]

Model	G
LEFB40□S-300□	380
LEFB40□S-400□	380
LEFB40□S-500□	580
LEFB40□S-600□	580
LEFB40□S-700□	780
LEFB40□S-800□	780
LEFB40□S-900□	980
LEFB40□S-1000□	980
LEFB40□S-1100□	1180
LEFB40□S-1200□	1180
LEFB40□S-1300□	1380
LEFB40□S-1400□	1380
LEFB40□S-1500□	1580
LEFB40□S-1600□	1580
LEFB40□S-1700□	1780
LEFB40□S-1800□	1780
LEFB40□S-1900□	1980
LEFB40□S-2000□	1980
LEFB40□S-2500□	2580
LEFB40□S-3000□	2980

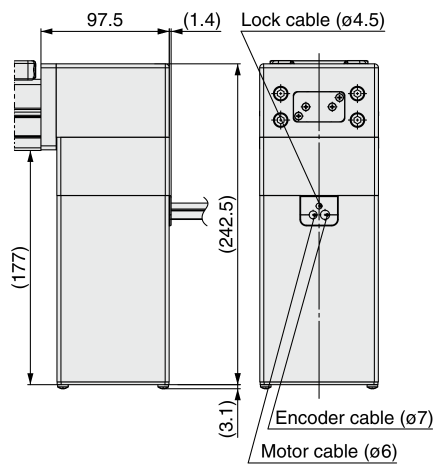
Dimensions: Belt Drive

LEFB40U/Motor bottom mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

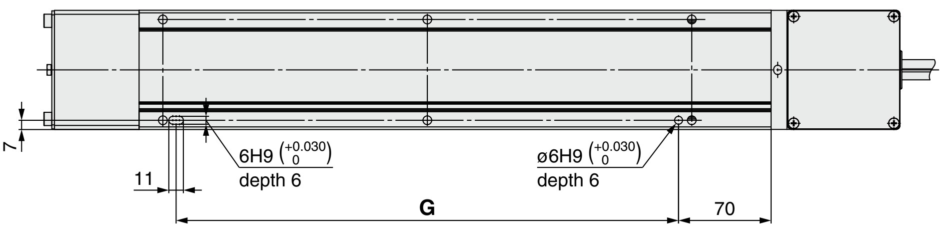
[mm]

Model	L	A	B	n	D	E
LEFB40U□S-300□	641.5	306	478	6	2	400
LEFB40U□S-400□	741.5	406	578	6	2	400
LEFB40U□S-500□	841.5	506	678	8	3	600
LEFB40U□S-600□	941.5	606	778	8	3	600
LEFB40U□S-700□	1041.5	706	878	10	4	800
LEFB40U□S-800□	1141.5	806	978	10	4	800
LEFB40U□S-900□	1241.5	906	1078	12	5	1000
LEFB40U□S-1000□	1341.5	1006	1178	12	5	1000
LEFB40U□S-1100□	1441.5	1106	1278	14	6	1200
LEFB40U□S-1200□	1541.5	1206	1378	14	6	1200
LEFB40U□S-1300□	1641.5	1306	1478	16	7	1400
LEFB40U□S-1400□	1741.5	1406	1578	16	7	1400
LEFB40U□S-1500□	1841.5	1506	1678	18	8	1600
LEFB40U□S-1600□	1941.5	1606	1778	18	8	1600
LEFB40U□S-1700□	2041.5	1706	1878	20	9	1800
LEFB40U□S-1800□	2141.5	1806	1978	20	9	1800
LEFB40U□S-1900□	2241.5	1906	2078	22	10	2000
LEFB40U□S-2000□	2341.5	2006	2178	22	10	2000
LEFB40U□S-2500□	2841.5	2506	2678	28	13	2600
LEFB40U□S-3000□	3341.5	3006	3178	32	15	3000

Dimensions: Belt Drive

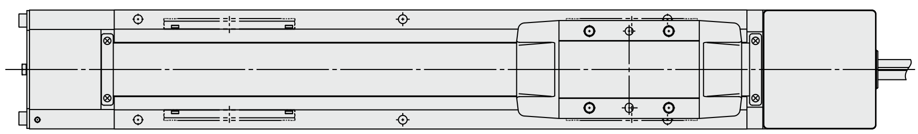
LEFB40U/Motor bottom mounting type

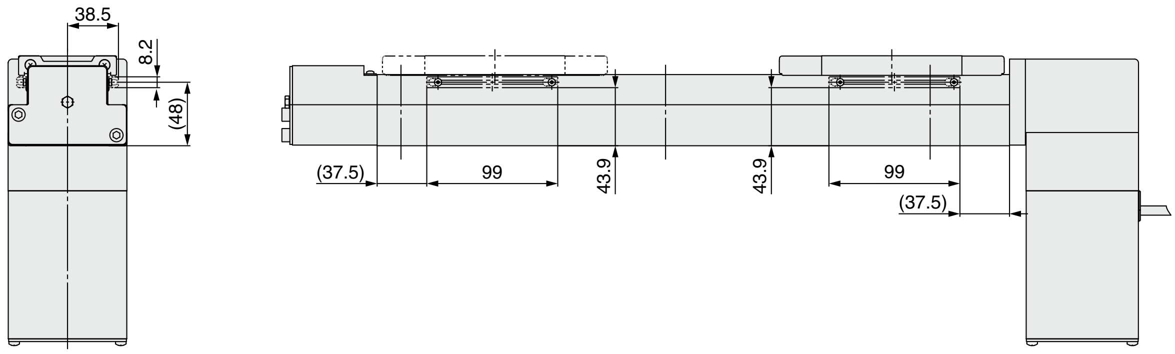
Positioning pin hole[*1] **(Option): Body bottom**



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)





Dimensions

[mm]

Model	G
LEFB40U□S-300□	380
LEFB40U□S-400□	380
LEFB40U□S-500□	580
LEFB40U□S-600□	580
LEFB40U□S-700□	780
LEFB40U□S-800□	780
LEFB40U□S-900□	980
LEFB40U□S-1000□	980
LEFB40U□S-1100□	1180
LEFB40U□S-1200□	1180
LEFB40U□S-1300□	1380
LEFB40U□S-1400□	1380
LEFB40U□S-1500□	1580
LEFB40U□S-1600□	1580
LEFB40U□S-1700□	1780
LEFB40U□S-1800□	1780
LEFB40U□S-1900□	1980
LEFB40U□S-2000□	1980
LEFB40U□S-2500□	2580
LEFB40U□S-3000□	2980

Slider Type Belt Drive

LEFB Series LEFB25, 32, 40

CE UK CA RoHS

∗ For details, refer to page 1343 and onward.

LECS□ Series ▶ p. 238 Motorless Type ▶ p. 1177

How to Order

LEFB 32 □ V7 S – 300 B C K – S 3 M2 □

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬

❶ Size

25
32
40

❷ Motor mounting position

Nil	Top mounting
U	Bottom mounting

❸ Motor type

Symbol	Type	Output [W]	❶Size	⓫Driver type	Compatible drivers
V6 *1	AC servo motor (Absolute encoder)	100	25	M2	LECYM2-V5
				U2	LECYU2-V5
V7		200	32	M2	LECYM2-V7
				U2	LECYU2-V7
V8		400	40	M2	LECYM2-V8
				U2	LECYU2-V8

∗1 For motor type V6, the compatible driver part number suffix is V5.

❹ Equivalent lead [mm]

S	54

❺ Stroke [mm]

300	300
to	to
3000	3000

❻ Motor option

Nil	Without option
B	With lock

❼ Auto switch compatibility

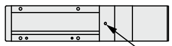
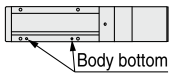
Nil	None
C	With (Includes 1 mounting bracket)

∗ If 2 or more are required, please order them separately. (Part no.: LEF-D-2-1 For details, refer to page 275.)

∗ Order auto switches separately. (For details, refer to pages 276 to 278.)

∗ When "Nil" is selected, the product will not come with a built-in magnet for an auto switch, and so a mounting bracket cannot be secured. Be sure to select an appropriate model initially as the product cannot be changed to have auto switch compatibility after purchase.

❽ Positioning pin hole

Nil	Housing B bottom*1	
K	Body bottom 2 locations	

∗1 Refer to the body mounting example on page 280 for the mounting method.

❾ Cable type

Nil	Without cable
S	Standard cable
R	Robotic cable

❿ Actuator cable length [m]

Nil	Without cable
3	3
5	5
A	10
C	20

⓫ Driver type

	Compatible drivers	Power supply voltage [V]
Nil	Without driver	—
M2	LECYM2-V□	200 to 230
U2	LECYU2-V□	200 to 230

∗ When a driver type is selected, a cable is included. Select the cable type and cable length.

⓬ I/O cable length [m]*1

Nil	Without cable
H	Without cable (Connector only)
1	1.5

∗1 When "Nil: Without driver" is selected for the driver type, only "Nil: Without cable" can be selected.
Refer to page 1135 if an I/O cable is required. (Options are shown on page 1135.)

Applicable Stroke Table

●: Standard/○: Produced upon receipt of order

	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000	Manufacturable stroke range [mm]
LEFB25	●	●	●	●	●	●	●	●	○	●	○	○	●	○	○	○	○	●	—	—	300 to 2000
LEFB32	●	●	●	●	●	●	●	●	○	●	○	○	●	○	○	○	○	●	●	—	300 to 2500
LEFB40	●	●	●	●	●	●	●	●	○	●	○	○	●	○	○	○	○	●	●	●	300 to 3000

∗ Please contact SMC for non-standard strokes as they are produced as special orders.

For auto switches, refer to pages 275 to 278.

Compatible Drivers

Driver type	MECHATROLINK-Ⅱ type 	MECHATROLINK-Ⅲ type 
Series	**LECYM**	**LECYU**
Applicable network	MECHATROLINK-Ⅱ	MECHATROLINK-Ⅲ
Control encoder	Absolute 20-bit encoder	
Communication device	USB communication, RS-422 communication	
Power supply voltage [V]	200 to 230 VAC (50/60 Hz)	
Reference page	1128	

Specifications

AC Servo Motor

Model			LEFB25V6	LEFB32V7	LEFB40V8
Actuator specifications	Stroke [mm]*1		300, 400, 500 600, 700, 800 900, 1000, (1100) 1200, (1300, 1400) 1500, (1600, 1700) (1800, 1900), 2000	300, 400, 500 600, 700, 800 900, 1000, (1100) 1200, (1300, 1400) 1500, (1600, 1700) (1800, 1900), 2000 2500	300, 400, 500 600, 700, 800 900, 1000, (1100) 1200, (1300, 1400) 1500, (1600, 1700) (1800, 1900), 2000 2500, 3000
	Work load [kg]*2	Horizontal	5	15	25
	Max. speed [mm/s]		2000	2000	2000
	Max. acceleration/deceleration [mm/s²]		20000 (Refer to page 132 for limit according to work load and duty ratio.)*3		
	Positioning repeatability [mm]		±0.06		
	Lost motion [mm]*4		0.1 or less		
	Equivalent lead [mm]		54		
	Impact/Vibration resistance [m/s²]*5		50/20		
	Actuation type		Belt		
	Guide type		Linear guide		
	Static allowable moment*6 [N·m]	Mep (Pitching)	27	46	110
		Mey (Yawing)	27	46	110
		Mer (Rolling)	52	101	207
	Operating temperature range [°C]		5 to 40		
	Operating humidity range [%RH]		90 or less (No condensation)		
	Enclosure		IP30		
Electric specifications	Motor output/Size		100 W/□40	200 W/□60	400 W/□60
	Motor type		AC servo motor (200 VAC)		
	Encoder		Absolute 20-bit encoder (Resolution: 1048576 p/rev)		
	Power [W]*7		Max. power 445	Max. power 725	Max. power 1275
Lock unit specifications	Type*8		Non-magnetizing lock		
	Holding force [N]		27	54	110
	Power consumption [W] at 20°C		5.5	6.0	6.0
	Rated voltage [V]		24 VDC $^{+10\%}_{0}$		

*1 Please contact SMC for non-standard strokes as they are produced as special orders.
*2 For details, refer to the “Speed–Work Load Graph (Guide)” on page 132.
*3 Maximum acceleration/deceleration changes according to the work load. Check the “Work Load–Acceleration/Deceleration Graph (Guide)” of the catalog.
*4 A reference value for correcting errors in reciprocal operation
*5 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)
*6 The static allowable moment is the amount of static moment which can be applied to the actuator when it is stopped.
If the product is exposed to impact or repeated load, be sure to take adequate safety measures when using the product.
*7 Indicates the max. power during operation (including the driver)
When selecting the power supply capacity, refer to the power supply capacity in the operation manual of each driver.
*8 Only when motor option “With lock” is selected

Weight

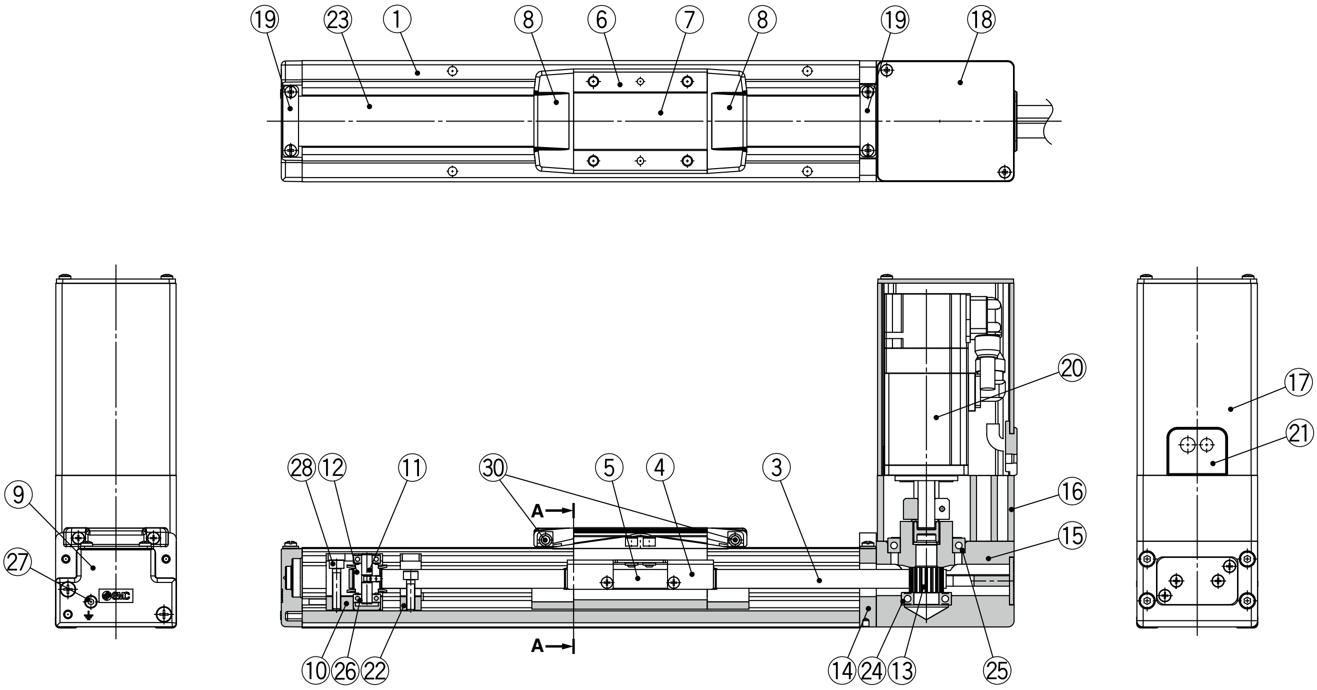
Series	LEFB25																	
Stroke [mm]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Product weight [kg]	3.06	3.31	3.56	3.81	4.06	4.31	4.56	4.81	5.06	5.31	5.56	5.81	6.06	6.31	6.56	6.81	7.06	7.31
Additional weight with lock [kg]	0.3																	

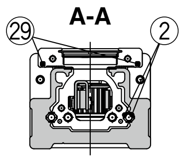
Series	LEFB32																		
Stroke [mm]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500
Product weight [kg]	4.90	5.25	5.60	5.95	6.30	6.65	7.00	7.35	7.70	8.05	8.40	8.75	9.10	9.45	9.80	10.15	10.50	10.85	12.60
Additional weight with lock [kg]	0.7																		

Series	LEFB40																			
Stroke [mm]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000
Product weight [kg]	7.22	7.67	8.12	8.57	9.02	9.47	9.92	10.37	10.82	11.27	11.72	12.17	12.62	13.07	13.52	13.97	14.42	14.82	17.12	19.37
Additional weight with lock [kg]	0.7																			

Construction

LEFB25V6S





＊ Motor bottom mounting type is the same.

Component Parts

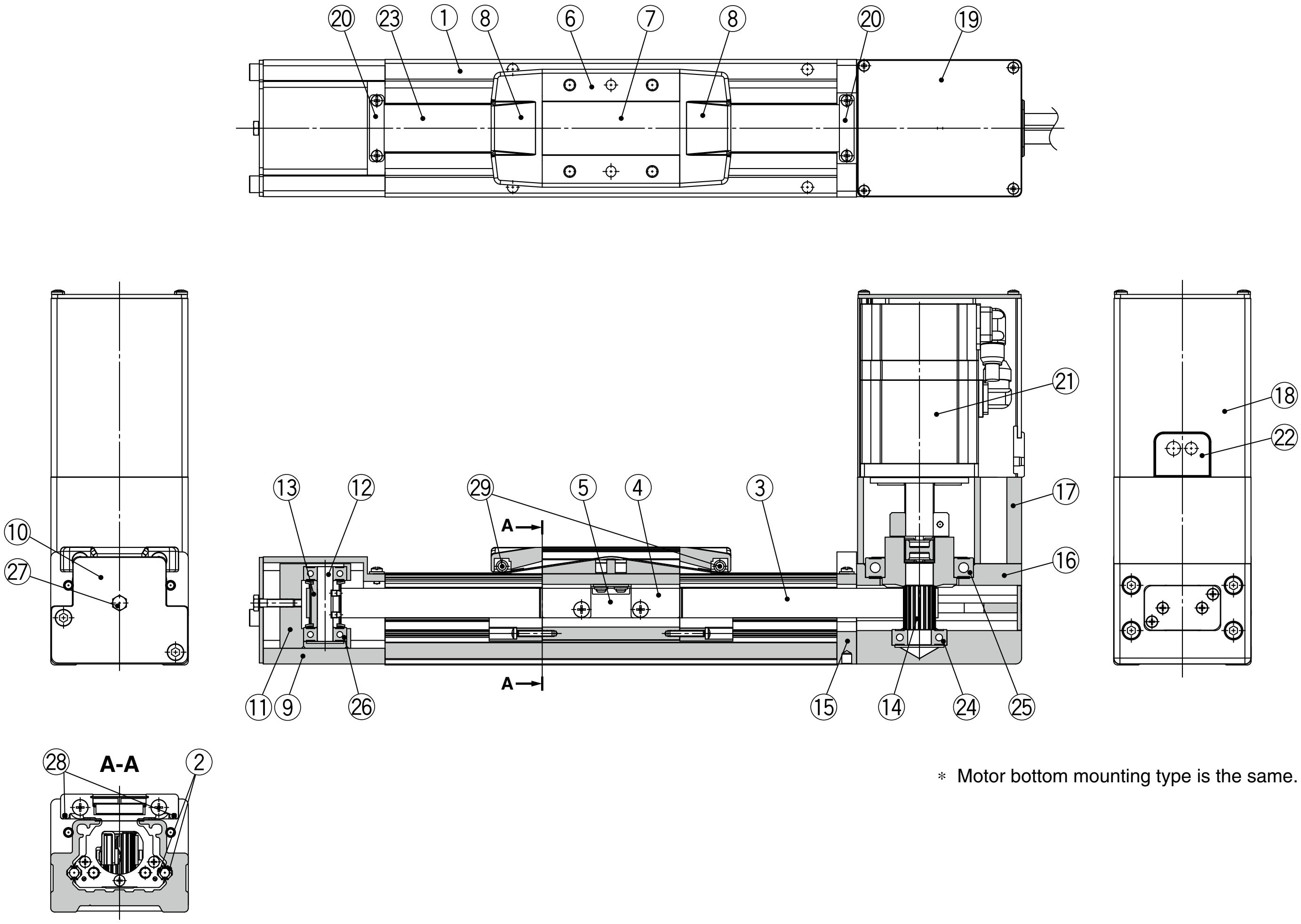
No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**		
3	**Belt**		
4	**Belt holder**	Carbon steel	Chromating
5	**Belt stopper**	Aluminum alloy	
6	**Table**	Aluminum alloy	Anodized
7	**Blanking plate**	Aluminum alloy	Anodized
8	**Seal band holder**	Synthetic resin	
9	**Housing A**	Aluminum die-cast	Coating
10	**Pulley holder**	Aluminum alloy	
11	**Pulley shaft**	Stainless steel	
12	**End pulley**	Aluminum alloy	Anodized
13	**Motor pulley**	Aluminum alloy	Anodized
14	**Return flange**	Aluminum alloy	Coating
15	**Housing**	Aluminum alloy	Coating
16	**Motor mount**	Aluminum alloy	Coating
17	**Motor cover**	Aluminum alloy	Anodized
18	**Motor end cover**	Aluminum alloy	Anodized
19	**Band stopper**	Stainless steel	
20	**Motor**		
21	**Rubber bushing**	NBR	
22	**Stopper**	Aluminum alloy	
23	**Dust seal band**	Stainless steel	
24	**Bearing**		
25	**Bearing**		
26	**Spacer**	Aluminum alloy	
27	**Tension adjustment cap screw**	Chromium molybdenum steel	Chromating
28	**Pulley retaining screw**	Chromium molybdenum steel	Chromating
29	**Magnet**	—	With auto switch compatibility
30	**Roller assembly**	—	

Replacement Parts/Grease Pack

Applied portion	Order no.
Rail guide	GR-S-010 (10 g) GR-S-020 (20 g)
Dust seal band (Back side)	

Construction

LEFB32/40V□S



* Motor bottom mounting type is the same.

Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Anodized
2	**Rail guide**		
3	**Belt**		
4	**Belt holder**	Carbon steel	Chromating
5	**Belt stopper**	Aluminum alloy	
6	**Table**	Aluminum alloy	Anodized
7	**Blanking plate**	Aluminum alloy	Anodized
8	**Seal band stopper**	Synthetic resin	
9	**End block**	Aluminum alloy	Coating
10	**End block cover**		
11	**Pulley holder**	Aluminum alloy	
12	**Pulley shaft**	Stainless steel	
13	**End pulley**	Aluminum alloy	Anodized
14	**Motor pulley**	Aluminum alloy	Anodized
15	**Return flange**	Aluminum alloy	Coating
16	**Housing**	Aluminum alloy	Coating
17	**Motor mount**	Aluminum alloy	Coating

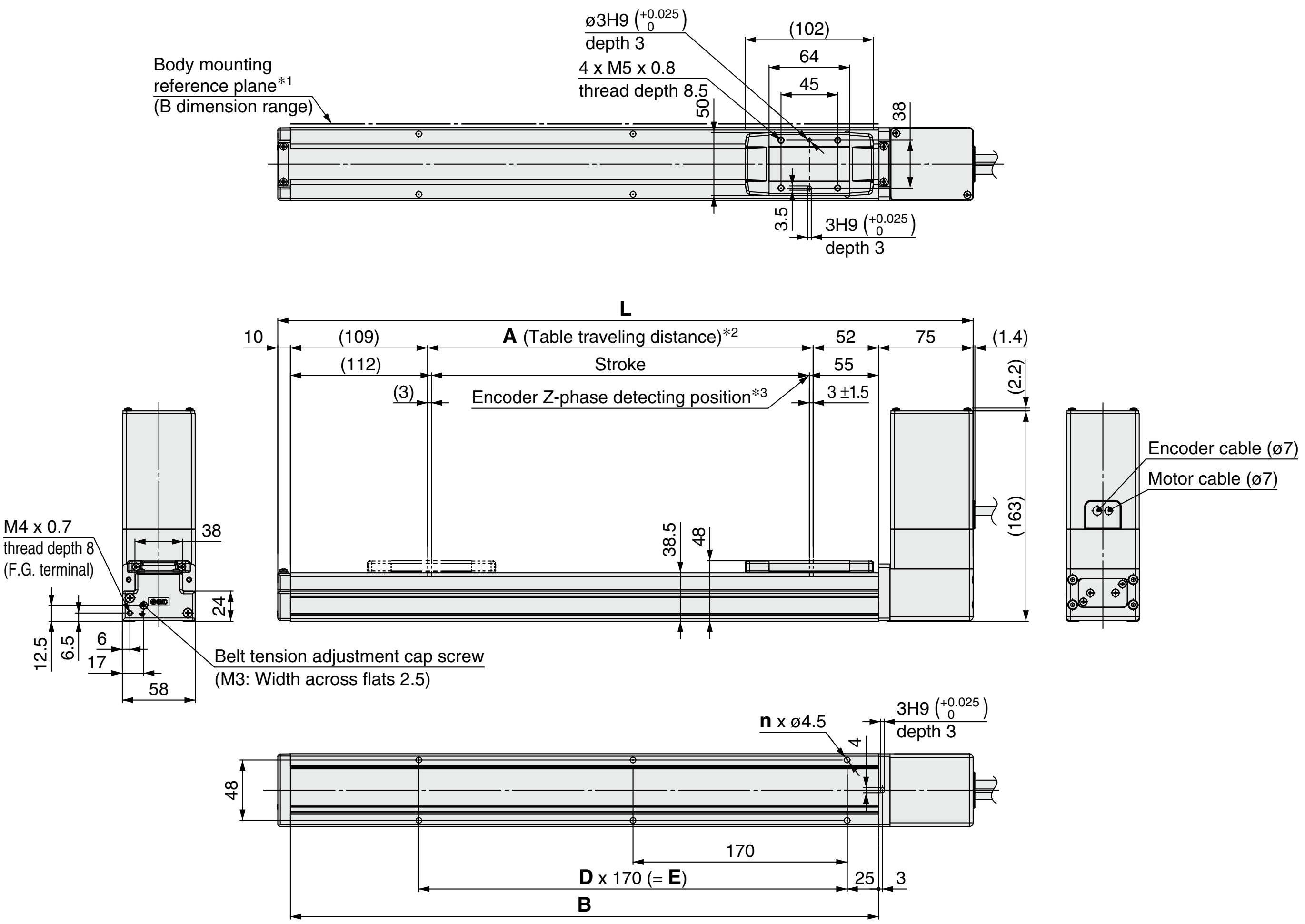
No.	Description	Material	Note
18	**Motor cover**	Aluminum alloy	Anodized
19	**Motor end cover**	Aluminum alloy	Anodized
20	**Band stopper**	Stainless steel	
21	**Motor**		
22	**Rubber bushing**	NBR	
23	**Dust seal band**	Stainless steel	
24	**Bearing**		
25	**Bearing**		
26	**Bearing**		
27	**Tension adjustment bolt**	Chromium molybdenum steel	Chromating
28	**Magnet**	—	With auto switch compatibility
29	**Roller assembly**	—	

Replacement Parts/Grease Pack

Applied portion	Order no.
Rail guide	GR-S-010 (10 g) GR-S-020 (20 g)
Dust seal band (Back side)	

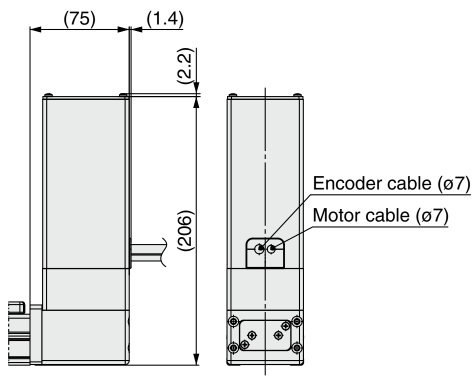
Dimensions: Belt Drive

LEFB25/Motor top mounting type



∗1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
∗2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
∗3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

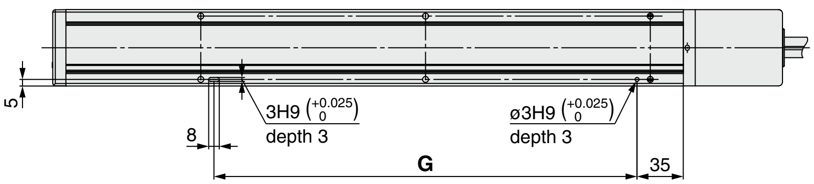
[mm]

Model	L	A	B	n	D	E
LEFB25□S-300□	552	306	467	6	2	340
LEFB25□S-400□	652	406	567	8	3	510
LEFB25□S-500□	752	506	667	8	3	510
LEFB25□S-600□	852	606	767	10	4	680
LEFB25□S-700□	952	706	867	10	4	680
LEFB25□S-800□	1052	806	967	12	5	850
LEFB25□S-900□	1152	906	1067	14	6	1020
LEFB25□S-1000□	1252	1006	1167	14	6	1020
LEFB25□S-1100□	1352	1106	1267	16	7	1190
LEFB25□S-1200□	1452	1206	1367	16	7	1190
LEFB25□S-1300□	1552	1306	1467	18	8	1360
LEFB25□S-1400□	1652	1406	1567	20	9	1530
LEFB25□S-1500□	1752	1506	1667	20	9	1530
LEFB25□S-1600□	1852	1606	1767	22	10	1700
LEFB25□S-1700□	1952	1706	1867	22	10	1700
LEFB25□S-1800□	2052	1806	1967	24	11	1870
LEFB25□S-1900□	2152	1906	2067	24	11	1870
LEFB25□S-2000□	2252	2006	2167	26	12	2040

Dimensions: Belt Drive

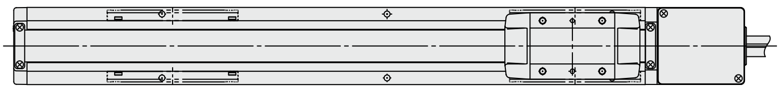
LEFB25/Motor top mounting type

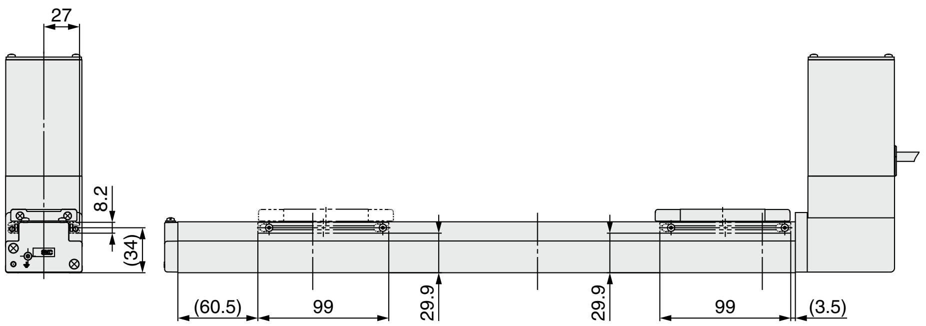
Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



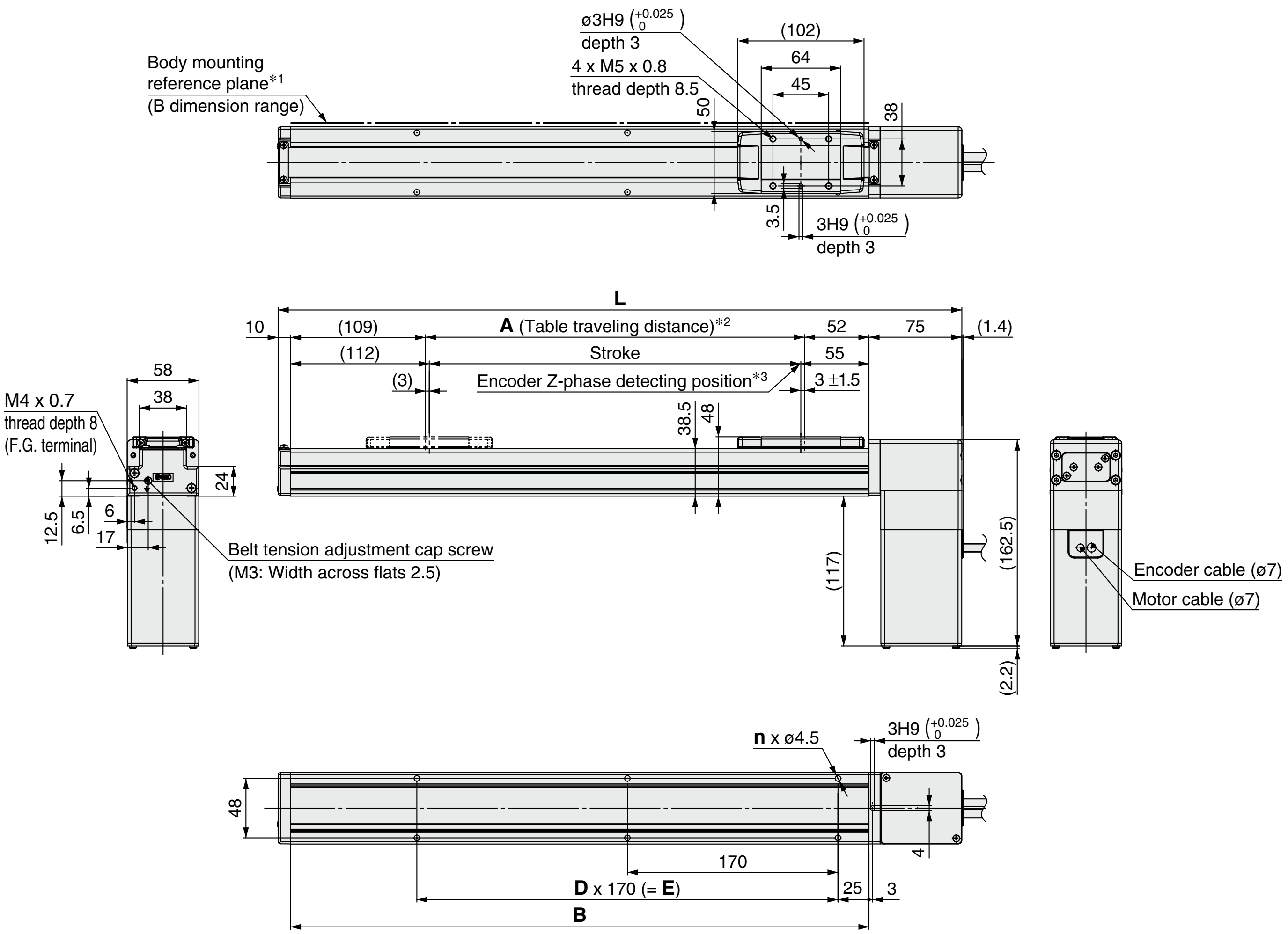


Dimensions [mm]

Model	G
LEFB25□S-300□	320
LEFB25□S-400□	490
LEFB25□S-500□	490
LEFB25□S-600□	660
LEFB25□S-700□	660
LEFB25□S-800□	830
LEFB25□S-900□	1000
LEFB25□S-1000□	1000
LEFB25□S-1100□	1170
LEFB25□S-1200□	1170
LEFB25□S-1300□	1340
LEFB25□S-1400□	1510
LEFB25□S-1500□	1510
LEFB25□S-1600□	1680
LEFB25□S-1700□	1680
LEFB25□S-1800□	1850
LEFB25□S-1900□	1850
LEFB25□S-2000□	2020

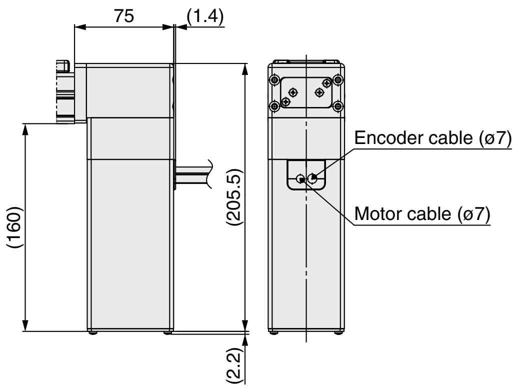
Dimensions: Belt Drive

LEFB25U/Motor bottom mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

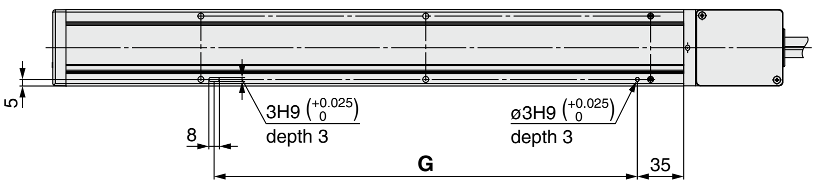
[mm]

Model	L	A	B	n	D	E
LEFB25U□S-300□	552	306	467	6	2	340
LEFB25U□S-400□	652	406	567	8	3	510
LEFB25U□S-500□	752	506	667	8	3	510
LEFB25U□S-600□	852	606	767	10	4	680
LEFB25U□S-700□	952	706	867	10	4	680
LEFB25U□S-800□	1052	806	967	12	5	850
LEFB25U□S-900□	1152	906	1067	14	6	1020
LEFB25U□S-1000□	1252	1006	1167	14	6	1020
LEFB25U□S-1100□	1352	1106	1267	16	7	1190
LEFB25U□S-1200□	1452	1206	1367	16	7	1190
LEFB25U□S-1300□	1552	1306	1467	18	8	1360
LEFB25U□S-1400□	1652	1406	1567	20	9	1530
LEFB25U□S-1500□	1752	1506	1667	20	9	1530
LEFB25U□S-1600□	1852	1606	1767	22	10	1700
LEFB25U□S-1700□	1952	1706	1867	22	10	1700
LEFB25U□S-1800□	2052	1806	1967	24	11	1870
LEFB25U□S-1900□	2152	1906	2067	24	11	1870
LEFB25U□S-2000□	2252	2006	2167	26	12	2040

Dimensions: Belt Drive

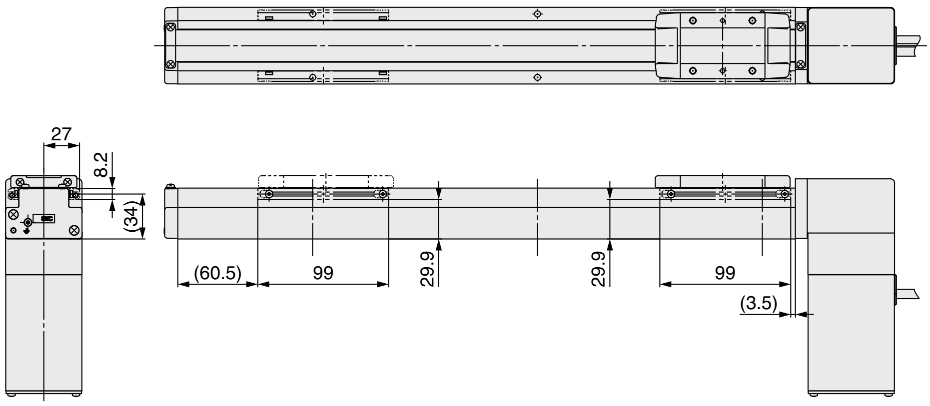
LEFB25U/Motor bottom mounting type

Positioning pin hole*1 **(Option): Body bottom**



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



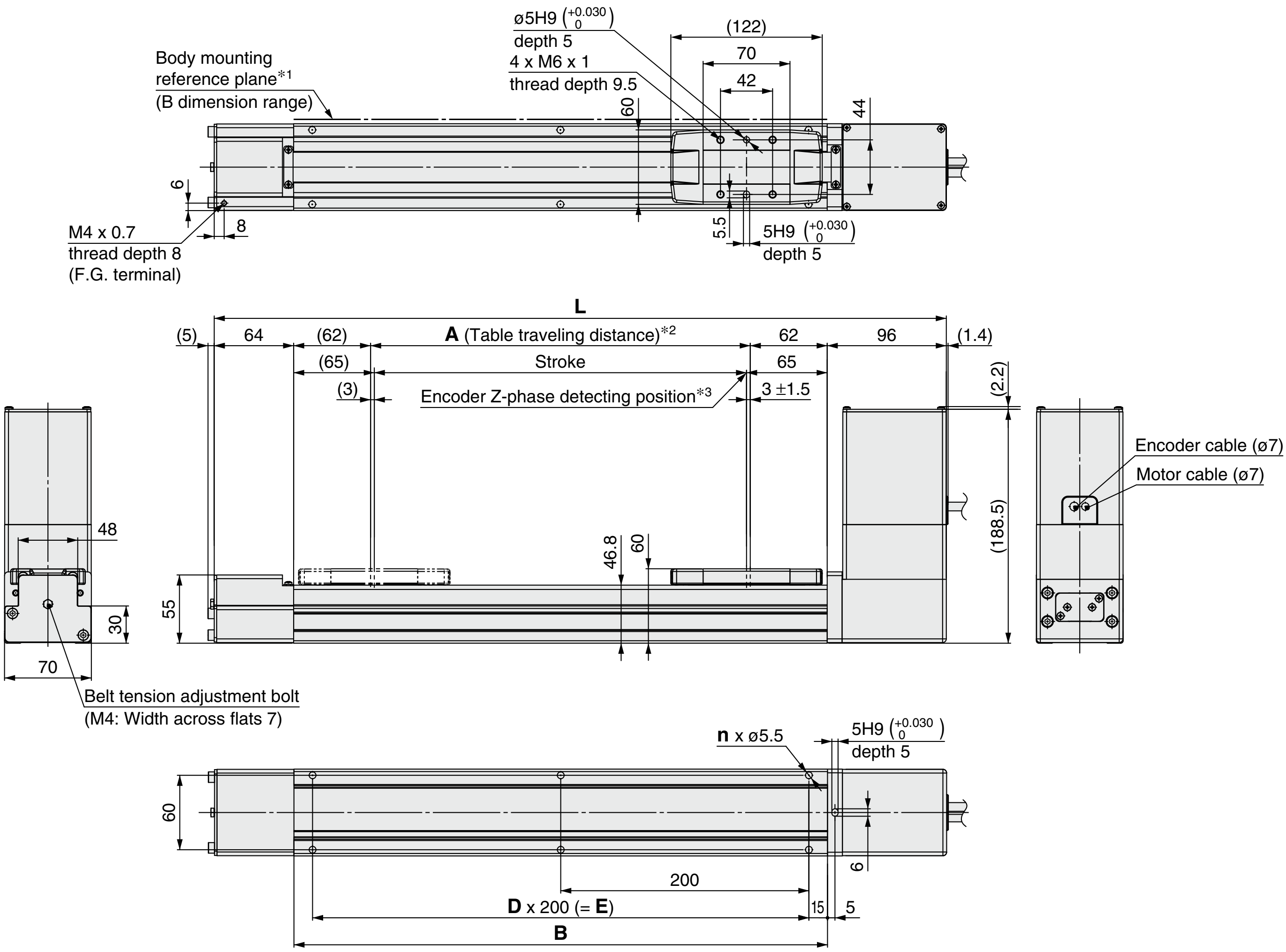
Dimensions

[mm]

Model	G
LEFB25U□S-300□	320
LEFB25U□S-400□	490
LEFB25U□S-500□	490
LEFB25U□S-600□	660
LEFB25U□S-700□	660
LEFB25U□S-800□	830
LEFB25U□S-900□	1000
LEFB25U□S-1000□	1000
LEFB25U□S-1100□	1170
LEFB25U□S-1200□	1170
LEFB25U□S-1300□	1340
LEFB25U□S-1400□	1510
LEFB25U□S-1500□	1510
LEFB25U□S-1600□	1680
LEFB25U□S-1700□	1680
LEFB25U□S-1800□	1850
LEFB25U□S-1900□	1850
LEFB25U□S-2000□	2020

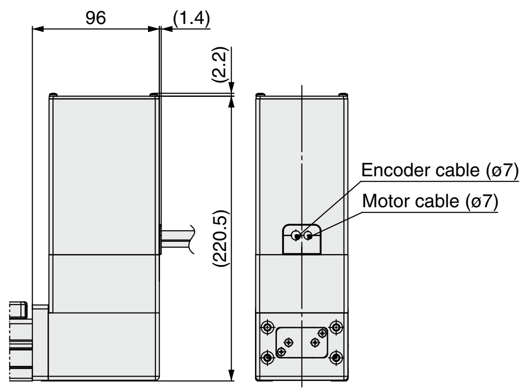
Dimensions: Belt Drive

LEFB32/Motor top mounting type



∗1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
∗2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
∗3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

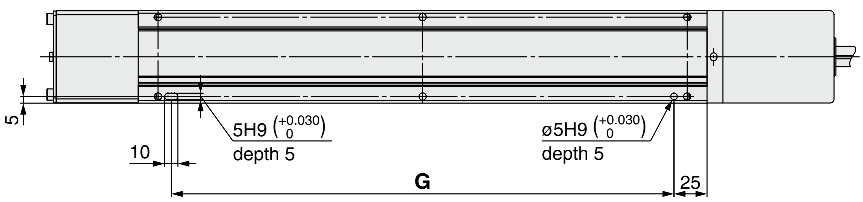
[mm]

Model	L	A	B	n	D	E
LEFB32□S-300□	590	306	430	6	2	400
LEFB32□S-400□	690	406	530	6	2	400
LEFB32□S-500□	790	506	630	8	3	600
LEFB32□S-600□	890	606	730	8	3	600
LEFB32□S-700□	990	706	830	10	4	800
LEFB32□S-800□	1090	806	930	10	4	800
LEFB32□S-900□	1190	906	1030	12	5	1000
LEFB32□S-1000□	1290	1006	1130	12	5	1000
LEFB32□S-1100□	1390	1106	1230	14	6	1200
LEFB32□S-1200□	1490	1206	1330	14	6	1200
LEFB32□S-1300□	1590	1306	1430	16	7	1400
LEFB32□S-1400□	1690	1406	1530	16	7	1400
LEFB32□S-1500□	1790	1506	1630	18	8	1600
LEFB32□S-1600□	1890	1606	1730	18	8	1600
LEFB32□S-1700□	1990	1706	1830	20	9	1800
LEFB32□S-1800□	2090	1806	1930	20	9	1800
LEFB32□S-1900□	2190	1906	2030	22	10	2000
LEFB32□S-2000□	2290	2006	2130	22	10	2000
LEFB32□S-2500□	2790	2506	2630	28	13	2600

Dimensions: Belt Drive

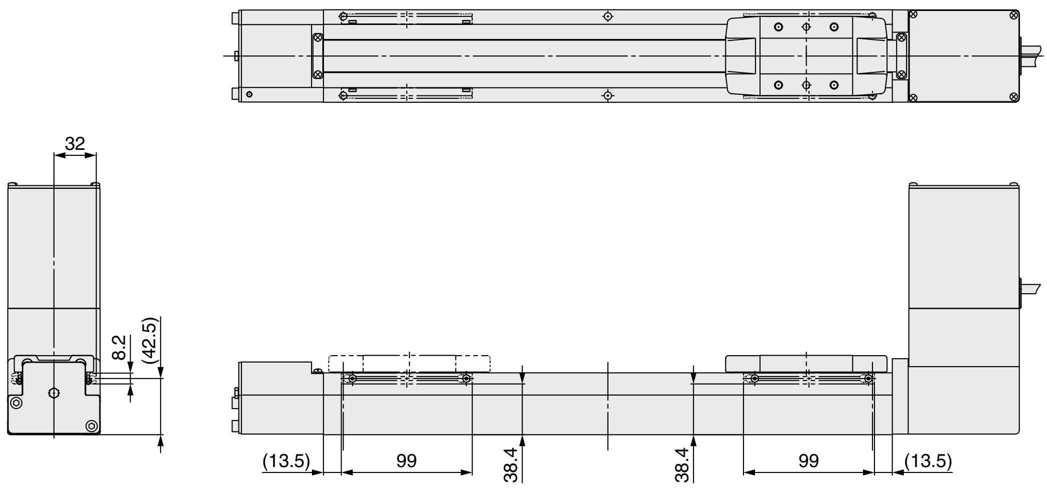
LEFB32/Motor top mounting type

Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



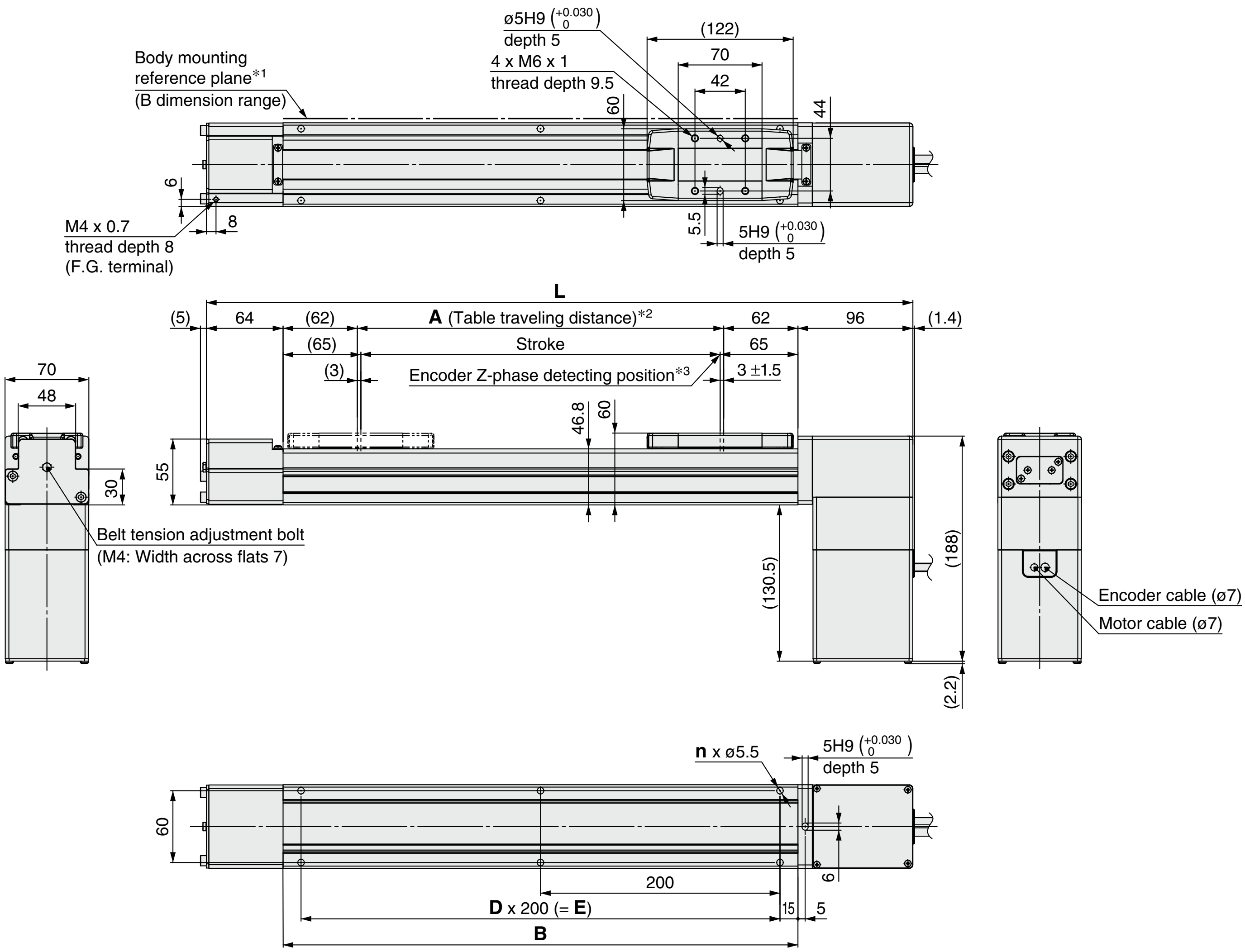
Dimensions

[mm]

Model	G
LEFB32□S-300□	380
LEFB32□S-400□	380
LEFB32□S-500□	580
LEFB32□S-600□	580
LEFB32□S-700□	780
LEFB32□S-800□	780
LEFB32□S-900□	980
LEFB32□S-1000□	980
LEFB32□S-1100□	1180
LEFB32□S-1200□	1180
LEFB32□S-1300□	1380
LEFB32□S-1400□	1380
LEFB32□S-1500□	1580
LEFB32□S-1600□	1580
LEFB32□S-1700□	1780
LEFB32□S-1800□	1780
LEFB32□S-1900□	1980
LEFB32□S-2000□	1980
LEFB32□S-2500□	2580

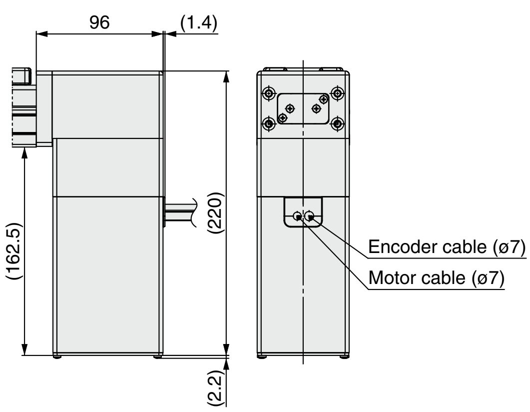
Dimensions: Belt Drive

LEFB32U/Motor bottom mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin. Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

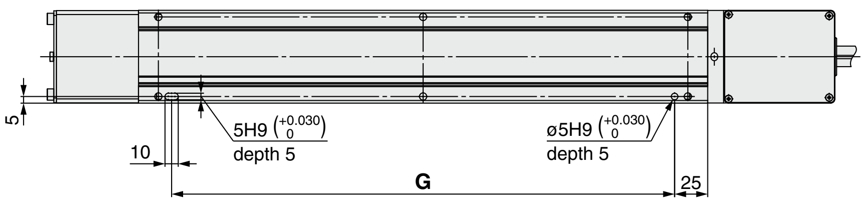
[mm]

Model	L	A	B	n	D	E
LEFB32U□S-300□	590	306	430	6	2	400
LEFB32U□S-400□	690	406	530	6	2	400
LEFB32U□S-500□	790	506	630	8	3	600
LEFB32U□S-600□	890	606	730	8	3	600
LEFB32U□S-700□	990	706	830	10	4	800
LEFB32U□S-800□	1090	806	930	10	4	800
LEFB32U□S-900□	1190	906	1030	12	5	1000
LEFB32U□S-1000□	1290	1006	1130	12	5	1000
LEFB32U□S-1100□	1390	1106	1230	14	6	1200
LEFB32U□S-1200□	1490	1206	1330	14	6	1200
LEFB32U□S-1300□	1590	1306	1430	16	7	1400
LEFB32U□S-1400□	1690	1406	1530	16	7	1400
LEFB32U□S-1500□	1790	1506	1630	18	8	1600
LEFB32U□S-1600□	1890	1606	1730	18	8	1600
LEFB32U□S-1700□	1990	1706	1830	20	9	1800
LEFB32U□S-1800□	2090	1806	1930	20	9	1800
LEFB32U□S-1900□	2190	1906	2030	22	10	2000
LEFB32U□S-2000□	2290	2006	2130	22	10	2000
LEFB32U□S-2500□	2790	2506	2630	28	13	2600

Dimensions: Belt Drive

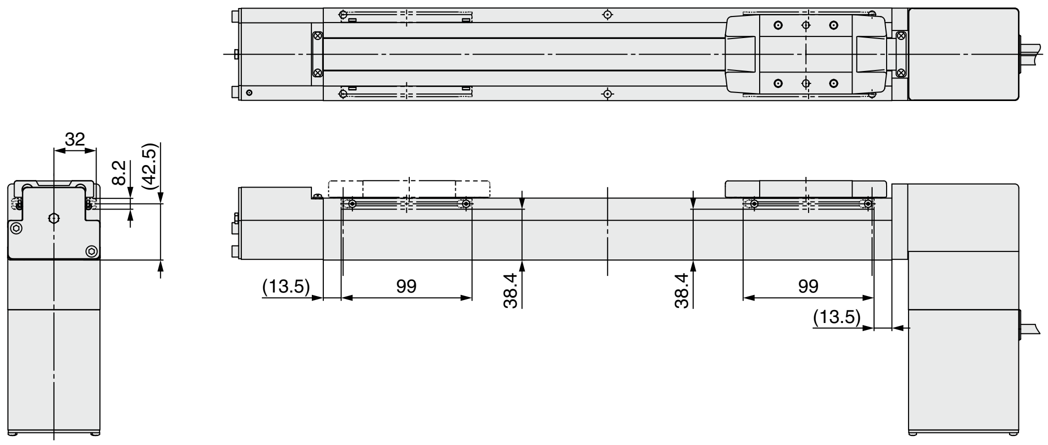
LEFB32U/Motor bottom mounting type

Positioning pin hole *1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



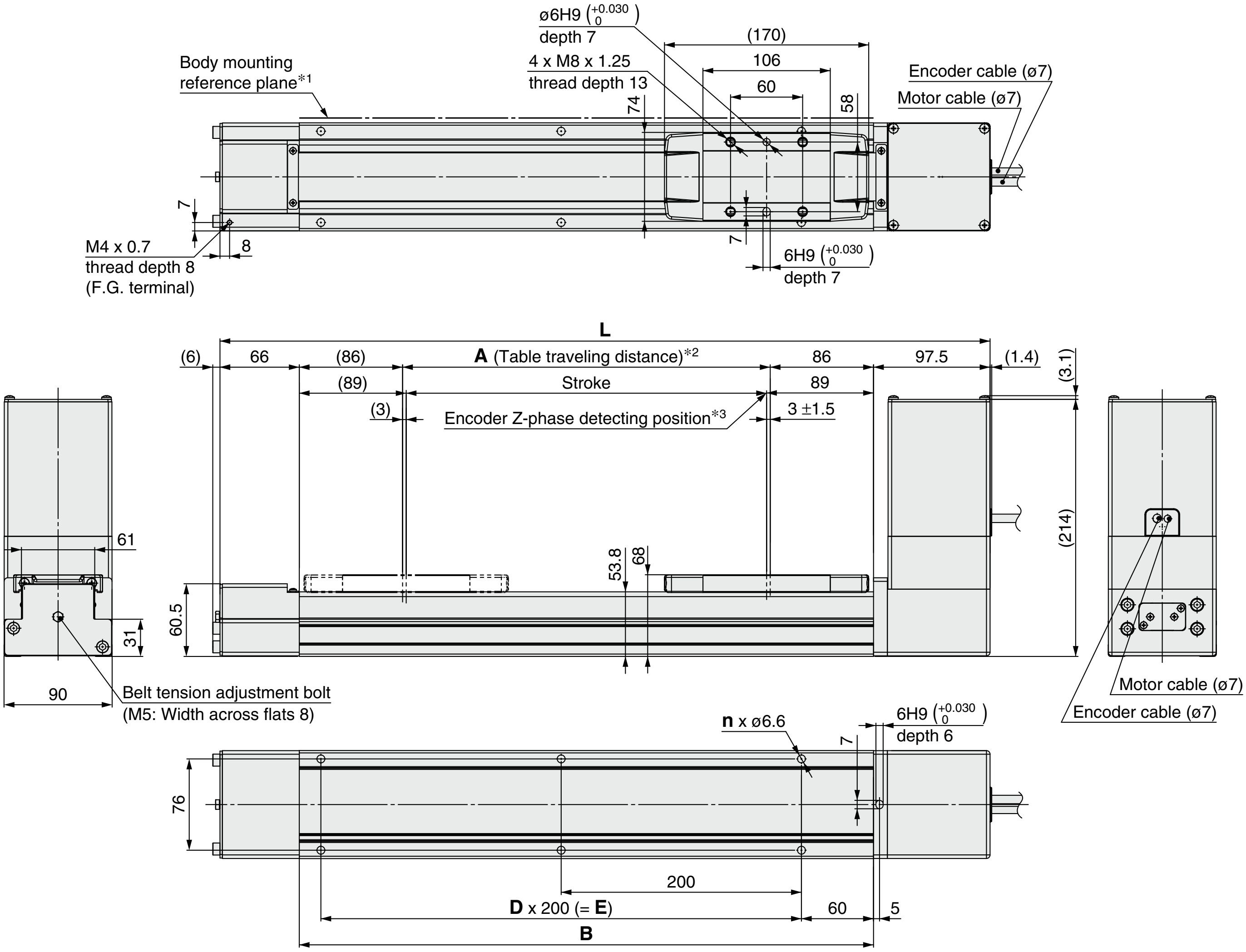
Dimensions

[mm]

Model	G
LEFB32U□S-300□	380
LEFB32U□S-400□	380
LEFB32U□S-500□	580
LEFB32U□S-600□	580
LEFB32U□S-700□	780
LEFB32U□S-800□	780
LEFB32U□S-900□	980
LEFB32U□S-1000□	980
LEFB32U□S-1100□	1180
LEFB32U□S-1200□	1180
LEFB32U□S-1300□	1380
LEFB32U□S-1400□	1380
LEFB32U□S-1500□	1580
LEFB32U□S-1600□	1580
LEFB32U□S-1700□	1780
LEFB32U□S-1800□	1780
LEFB32U□S-1900□	1980
LEFB32U□S-2000□	1980
LEFB32U□S-2500□	2580

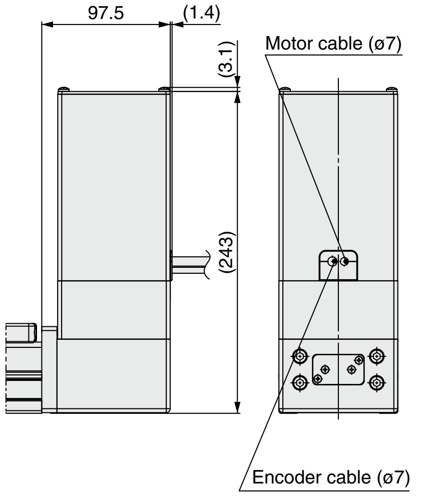
Dimensions: Belt Drive

LEFB40/Motor top mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

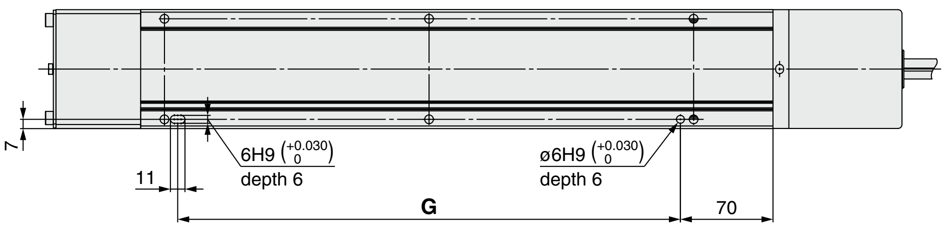
[mm]

Model	L	A	B	n	D	E
LEFB40□S-300□	641.5	306	478	6	2	400
LEFB40□S-400□	741.5	406	578	6	2	400
LEFB40□S-500□	841.5	506	678	8	3	600
LEFB40□S-600□	941.5	606	778	8	3	600
LEFB40□S-700□	1041.5	706	878	10	4	800
LEFB40□S-800□	1141.5	806	978	10	4	800
LEFB40□S-900□	1241.5	906	1078	12	5	1000
LEFB40□S-1000□	1341.5	1006	1178	12	5	1000
LEFB40□S-1100□	1441.5	1106	1278	14	6	1200
LEFB40□S-1200□	1541.5	1206	1378	14	6	1200
LEFB40□S-1300□	1641.5	1306	1478	16	7	1400
LEFB40□S-1400□	1741.5	1406	1578	16	7	1400
LEFB40□S-1500□	1841.5	1506	1678	18	8	1600
LEFB40□S-1600□	1941.5	1606	1778	18	8	1600
LEFB40□S-1700□	2041.5	1706	1878	20	9	1800
LEFB40□S-1800□	2141.5	1806	1978	20	9	1800
LEFB40□S-1900□	2241.5	1906	2078	22	10	2000
LEFB40□S-2000□	2341.5	2006	2178	22	10	2000
LEFB40□S-2500□	2841.5	2506	2678	28	13	2600
LEFB40□S-3000□	3341.5	3006	3178	32	15	3000

Dimensions: Belt Drive

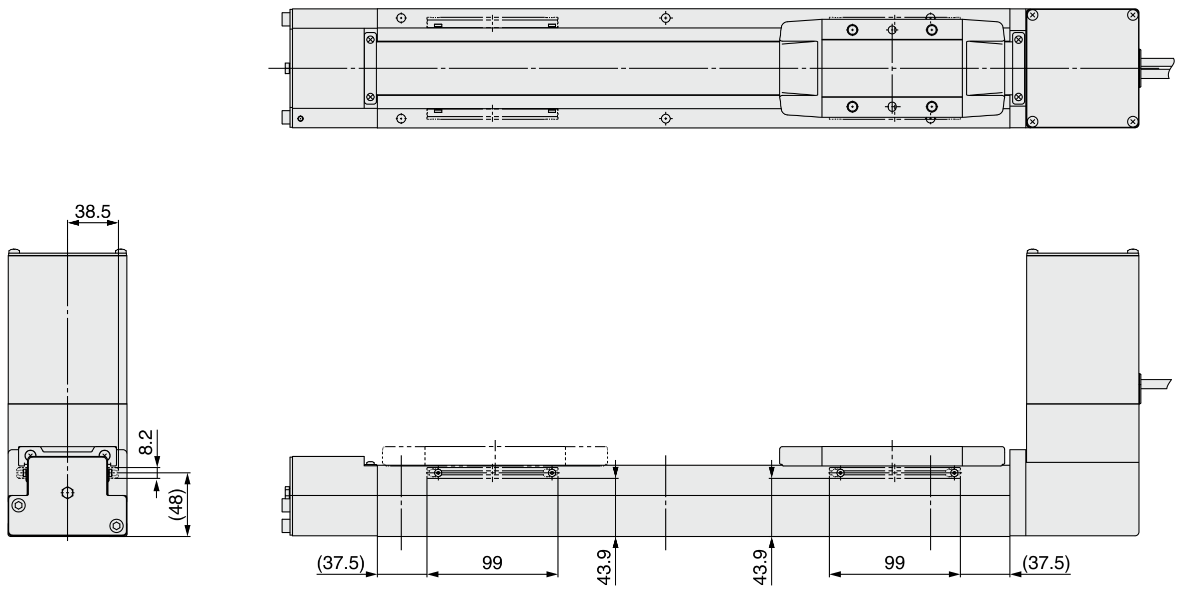
LEFB40/Motor top mounting type

Positioning pin hole[*1] **(Option): Body bottom**



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)



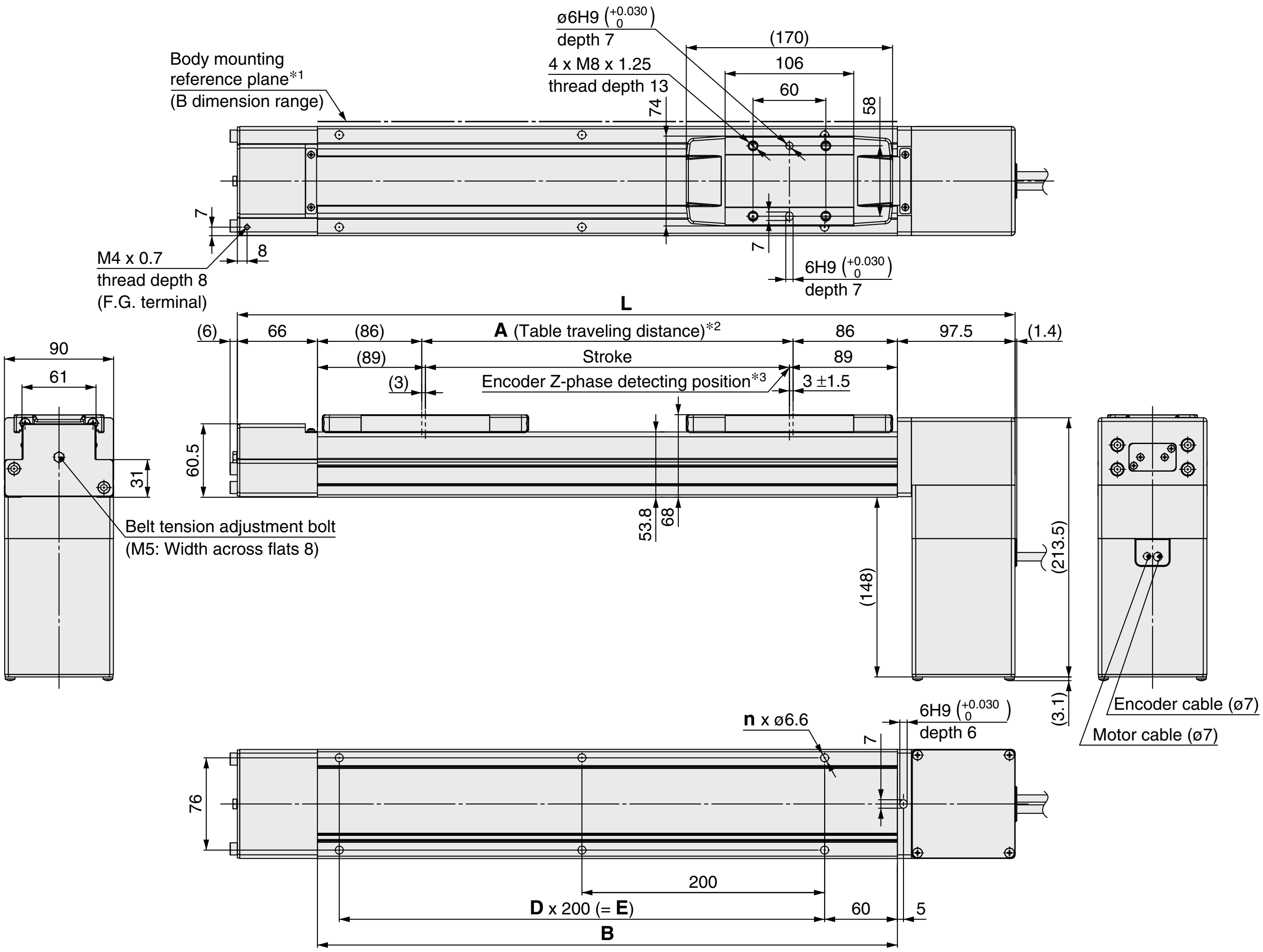
Dimensions

[mm]

Model	G
LEFB40□S-300□	380
LEFB40□S-400□	380
LEFB40□S-500□	580
LEFB40□S-600□	580
LEFB40□S-700□	780
LEFB40□S-800□	780
LEFB40□S-900□	980
LEFB40□S-1000□	980
LEFB40□S-1100□	1180
LEFB40□S-1200□	1180
LEFB40□S-1300□	1380
LEFB40□S-1400□	1380
LEFB40□S-1500□	1580
LEFB40□S-1600□	1580
LEFB40□S-1700□	1780
LEFB40□S-1800□	1780
LEFB40□S-1900□	1980
LEFB40□S-2000□	1980
LEFB40□S-2500□	2580
LEFB40□S-3000□	2980

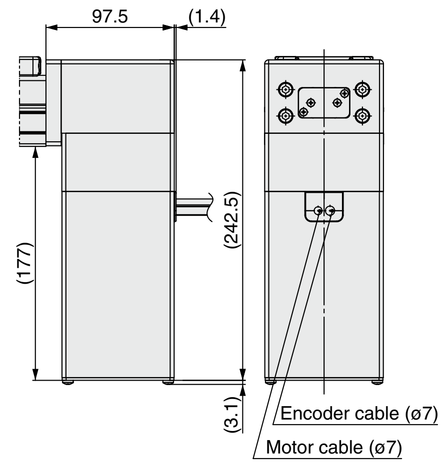
Dimensions: Belt Drive

LEFB40U/Motor bottom mounting type



*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more because of round chamfering. (Recommended height: 5 mm)
*2 This is the distance within which the table can move when it returns to origin.
Make sure that workpieces mounted on the table do not interfere with other workpieces or the facilities around the table.
*3 The Z-phase first detecting position from the stroke end of the motor side

Motor option: With lock



Dimensions

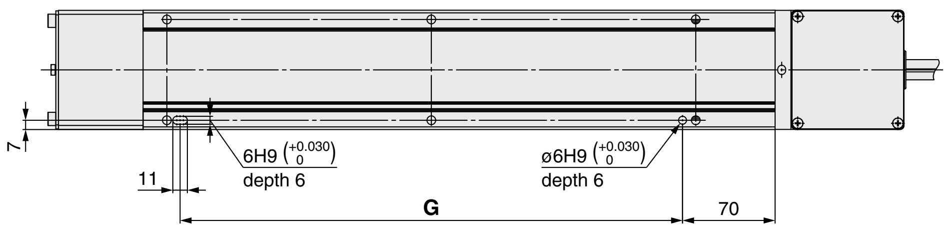
[mm]

Model	L	A	B	n	D	E
LEFB40U□S-300□	641.5	306	478	6	2	400
LEFB40U□S-400□	741.5	406	578	6	2	400
LEFB40U□S-500□	841.5	506	678	8	3	600
LEFB40U□S-600□	941.5	606	778	8	3	600
LEFB40U□S-700□	1041.5	706	878	10	4	800
LEFB40U□S-800□	1141.5	806	978	10	4	800
LEFB40U□S-900□	1241.5	906	1078	12	5	1000
LEFB40U□S-1000□	1341.5	1006	1178	12	5	1000
LEFB40U□S-1100□	1441.5	1106	1278	14	6	1200
LEFB40U□S-1200□	1541.5	1206	1378	14	6	1200
LEFB40U□S-1300□	1641.5	1306	1478	16	7	1400
LEFB40U□S-1400□	1741.5	1406	1578	16	7	1400
LEFB40U□S-1500□	1841.5	1506	1678	18	8	1600
LEFB40U□S-1600□	1941.5	1606	1778	18	8	1600
LEFB40U□S-1700□	2041.5	1706	1878	20	9	1800
LEFB40U□S-1800□	2141.5	1806	1978	20	9	1800
LEFB40U□S-1900□	2241.5	1906	2078	22	10	2000
LEFB40U□S-2000□	2341.5	2006	2178	22	10	2000
LEFB40U□S-2500□	2841.5	2506	2678	28	13	2600
LEFB40U□S-3000□	3341.5	3006	3178	32	15	3000

Dimensions: Belt Drive

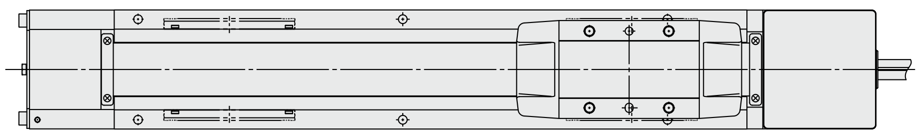
LEFB40U/Motor bottom mounting type

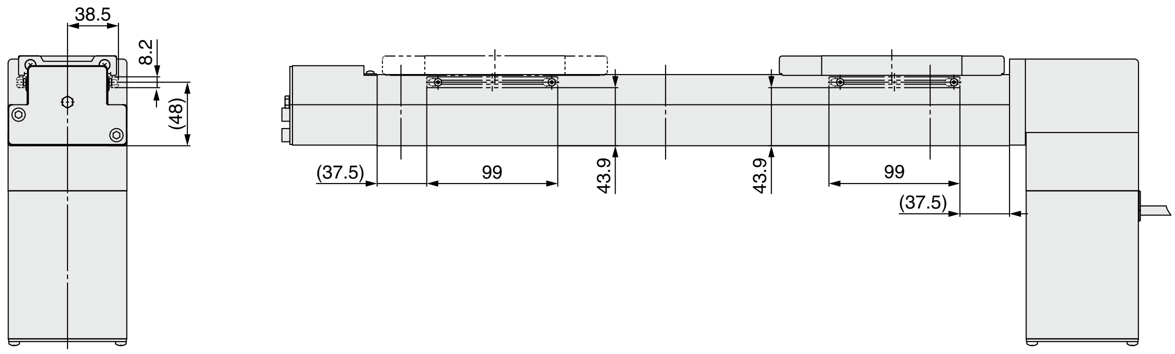
Positioning pin hole*1 (Option): Body bottom



*1 When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

With auto switch (Option)





Dimensions [mm]

Model	G
LEFB40U□S-300□	380
LEFB40U□S-400□	380
LEFB40U□S-500□	580
LEFB40U□S-600□	580
LEFB40U□S-700□	780
LEFB40U□S-800□	780
LEFB40U□S-900□	980
LEFB40U□S-1000□	980
LEFB40U□S-1100□	1180
LEFB40U□S-1200□	1180
LEFB40U□S-1300□	1380
LEFB40U□S-1400□	1380
LEFB40U□S-1500□	1580
LEFB40U□S-1600□	1580
LEFB40U□S-1700□	1780
LEFB40U□S-1800□	1780
LEFB40U□S-1900□	1980
LEFB40U□S-2000□	1980
LEFB40U□S-2500□	2580
LEFB40U□S-3000□	2980

Support Guide for Belt Drive Actuator

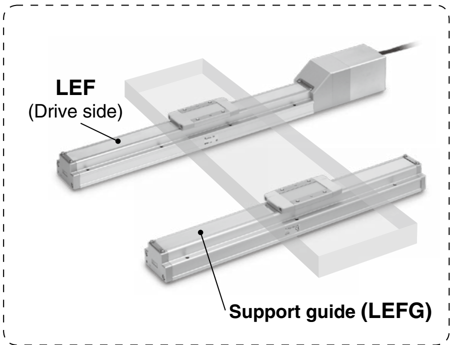
LEFG Series LEFG16, 25, 32, 40

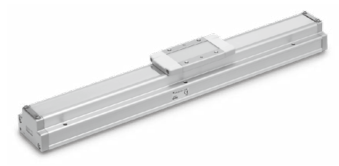
RoHS

The support guide was designed to support workpieces with significant overhang.

- As the dimensions are the same as the LEF series body, installation is simple and contributes to a reduction in installation and assembly labor.
- The standard-equipped seal bands prevent grease from splashing and external foreign matter from entering.

Application example





How to Order

LEF G 32 – BT – 300 N

G: Support guide; 32: ❶; BT: ❷; 300: ❸; N: ❹

❶ Size

16
25
32
40

❷ Type of mounting pitch

Symbol	LEFG16	LEFG25	LEFG32	LEFG40	Applicable model	
BT	●	●	●	—	For belt drive	Step motor 24 VDC (Incremental, Battery-less absolute), Servo motor 24 VDC
BS	—	●	●	●		AC servo motor, Motorless

❸ Stroke [mm]

300	300
to	to
3000	3000

❹ Grease application (Seal band part)

Nil	With
N*1	Without (Roller specification)

*1 Only the mounting pitch type “BT” is applicable. All “BS” are roller specifications.

Applicable Stroke Table

For Belt Drive/BT

Model \ Stroke [mm]	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
LEFG16-BT	●	—	—	—	●	—	●	—	●	—	●	—	●	—	●
LEFG25-BT	●	—	—	—	●	—	●	—	●	—	●	—	●	—	●
LEFG32-BT	●	—	—	—	●	—	●	—	●	—	●	—	●	—	●

Model \ Stroke [mm]	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
LEFG16-BT	—	—	—	—	—	—	—	—	—	—
LEFG25-BT	—	●	—	—	●	—	—	●	—	●
LEFG32-BT	—	●	—	—	●	—	—	●	—	●

For Belt Drive/BS

Model \ Stroke [mm]	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
LEFG25-BS	●	—	●	—	●	—	●	—	●	—	●	—	●	—	●
LEFG32-BS	●	—	●	—	●	—	●	—	●	—	●	—	●	—	●
LEFG40-BS	●	—	●	—	●	—	●	—	●	—	●	—	●	—	●

Model \ Stroke [mm]	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000
LEFG25-BS	●	●	●	●	●	●	●	●	●	●	—	—
LEFG32-BS	●	●	●	●	●	●	●	●	●	●	●	—
LEFG40-BS	●	●	●	●	●	●	●	●	●	●	●	●

Weight

For Belt Drive/BT

Model \ Stroke [mm]	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
LEFG16-BT	0.62	—	—	—	0.86	—	0.98	—	1.1	—	1.22	—	1.34	—	1.46
LEFG25-BT	1.25	—	—	—	1.69	—	1.91	—	2.13	—	2.35	—	2.57	—	2.79
LEFG32-BT	1.92	—	—	—	2.56	—	2.88	—	3.20	—	3.52	—	3.84	—	4.16

Model \ Stroke [mm]	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
LEFG16-BT	—	—	—	—	—	—	—	—	—	—
LEFG25-BT	—	3.23	—	—	3.89	—	—	4.55	—	4.99
LEFG32-BT	—	4.80	—	—	5.76	—	—	6.72	—	7.36

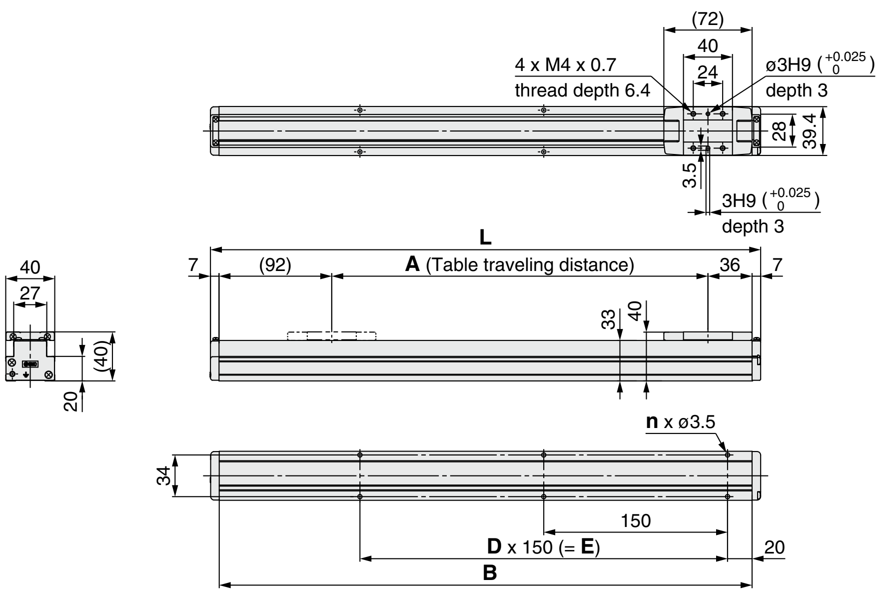
For Belt Drive/BS

Model \ Stroke [mm]	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
LEFG25-BS	1.25	—	—	—	1.69	—	1.91	—	2.13	—	2.35	—	2.57	—	2.79
LEFG32-BS	1.72	—	2.04	—	2.36	—	2.68	—	3.00	—	3.32	—	3.64	—	3.96
LEFG40-BS	2.72	—	3.15	—	3.58	—	4.01	—	4.44	—	4.87	—	5.30	—	5.73

Model \ Stroke [mm]	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2500	3000
LEFG25-BS	3.01	3.23	3.45	3.67	3.89	4.11	4.33	4.55	4.77	4.99	—	—
LEFG32-BS	4.28	4.60	4.92	5.24	5.56	5.88	6.20	6.52	6.84	7.16	8.76	—
LEFG40-BS	6.16	6.59	7.02	7.45	7.88	8.31	8.74	9.17	9.60	10.03	12.18	14.33

Dimensions: For Belt Drive

LEFG16-BT



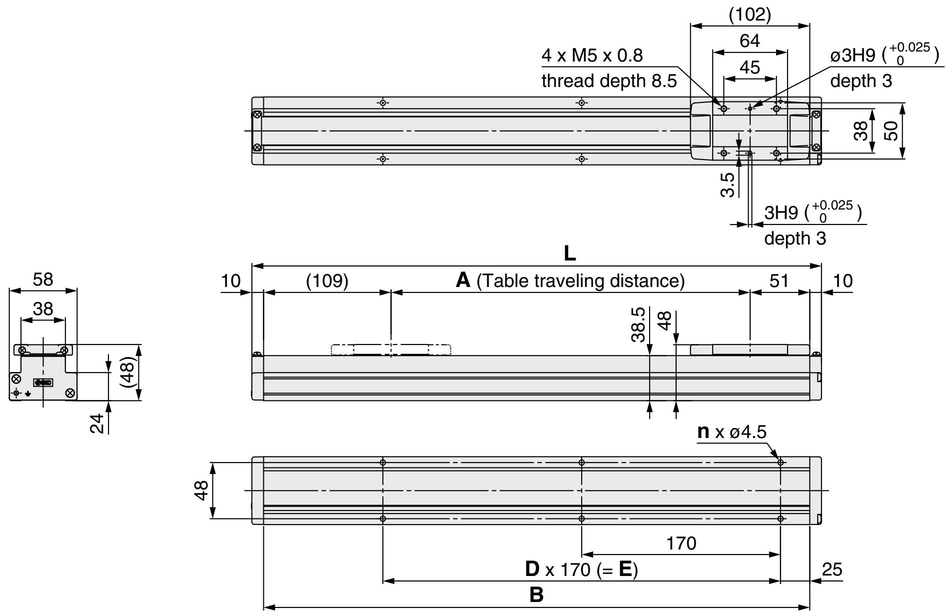
Dimensions

[mm]

Model	L	A	B	n	D	E
LEFG16-BT-300	449	307	435	6	2	300
LEFG16-BT-500	649	507	635	10	4	600
LEFG16-BT-600	749	607	735			
LEFG16-BT-700	849	707	835	12	5	750
LEFG16-BT-800	949	807	935	14	6	900
LEFG16-BT-900	1049	907	1035			
LEFG16-BT-1000	1149	1007	1135	16	7	1050

Dimensions: For Belt Drive

LEFG25-BT



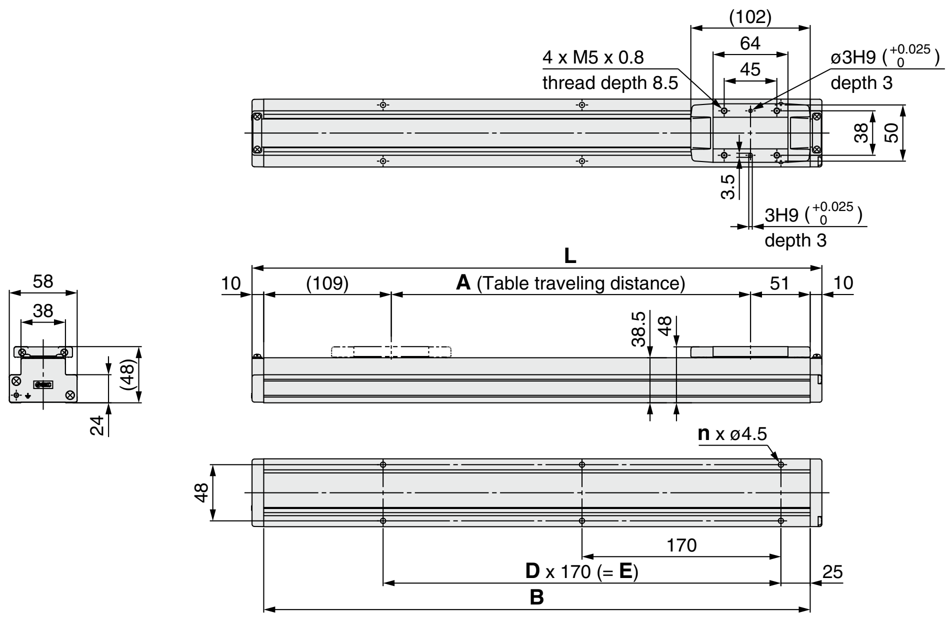
Dimensions [mm]

Model	L	A	B	n	D	E
LEFG25-BT-300	487	307	467	6	2	340
LEFG25-BT-500	687	507	667	8	3	510
LEFG25-BT-600	787	607	767	10	4	680
LEFG25-BT-700	887	707	867			
LEFG25-BT-800	987	807	967	12	5	850
LEFG25-BT-900	1087	907	1067	14	6	1020
LEFG25-BT-1000	1187	1007	1167			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG25-BT-1200	1387	1207	1367	16	7	1190
LEFG25-BT-1500	1687	1507	1667	20	9	1530
LEFG25-BT-1800	1987	1807	1967	24	11	1870
LEFG25-BT-2000	2187	2007	2167	26	12	2040

LEFG25-BS



Dimensions [mm]

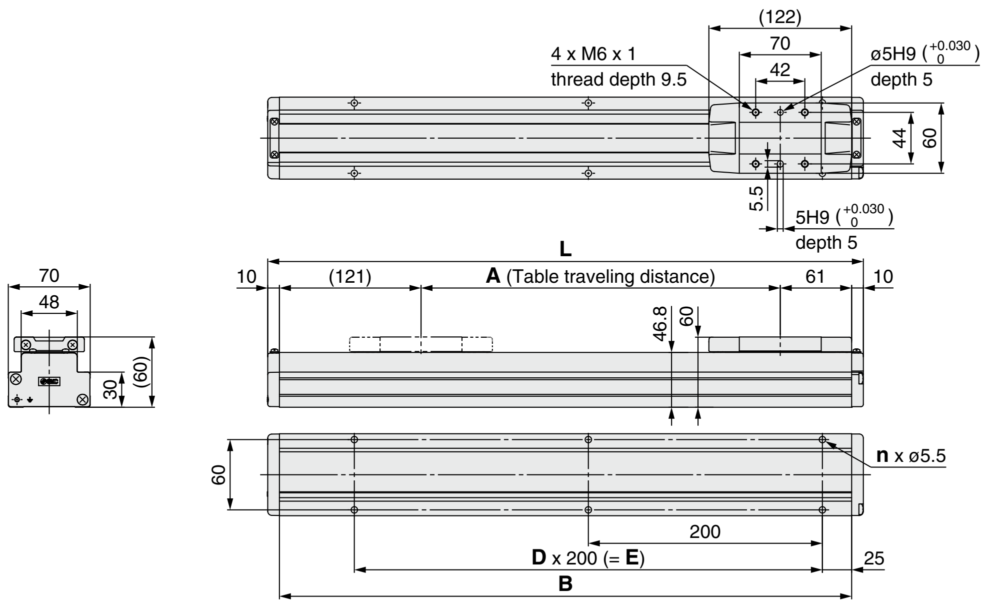
Model	L	A	B	n	D	E
LEFG25-BS-300	487	307	467	6	2	340
LEFG25-BS-400	587	407	567	8	3	510
LEFG25-BS-500	687	507	667			
LEFG25-BS-600	787	607	767	10	4	680
LEFG25-BS-700	887	707	867			
LEFG25-BS-800	987	807	967	12	5	850
LEFG25-BS-900	1087	907	1067	14	6	1020
LEFG25-BS-1000	1187	1007	1167			
LEFG25-BS-1100	1287	1107	1267	16	7	1190
LEFG25-BS-1200	1387	1207	1367			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG25-BS-1300	1487	1307	1467	18	8	1360
LEFG25-BS-1400	1587	1407	1567	20	9	1530
LEFG25-BS-1500	1687	1507	1667			
LEFG25-BS-1600	1787	1607	1767	22	10	1700
LEFG25-BS-1700	1887	1707	1867			
LEFG25-BS-1800	1987	1807	1967	24	11	1870
LEFG25-BS-1900	2087	1907	2067			
LEFG25-BS-2000	2187	2007	2167	26	12	2040

Dimensions: For Belt Drive

LEFG32-BT



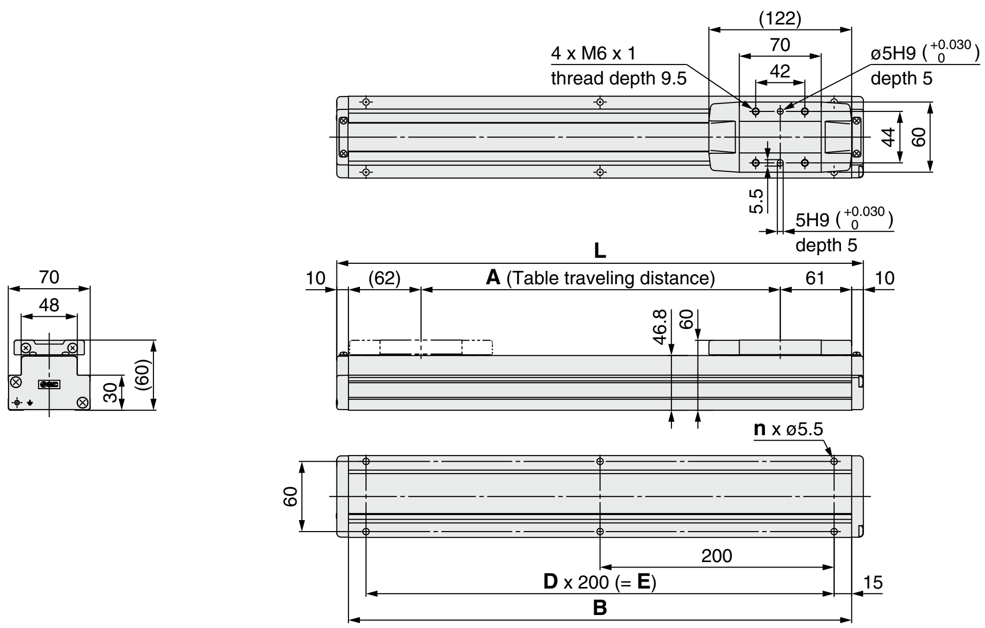
Dimensions [mm]

Model	L	A	B	n	D	E
LEFG32-BT-300	509	307	489	6	2	400
LEFG32-BT-500	709	507	689	8	3	600
LEFG32-BT-600	809	607	789			
LEFG32-BT-700	909	707	889	10	4	800
LEFG32-BT-800	1009	807	989			
LEFG32-BT-900	1109	907	1089	12	5	1000
LEFG32-BT-1000	1209	1007	1189			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG32-BT-1200	1409	1207	1389	14	6	1200
LEFG32-BT-1500	1709	1507	1689	18	8	1600
LEFG32-BT-1800	2009	1807	1989	20	9	1800
LEFG32-BT-2000	2209	2007	2189	22	10	2000

LEFG32-BS



Dimensions [mm]

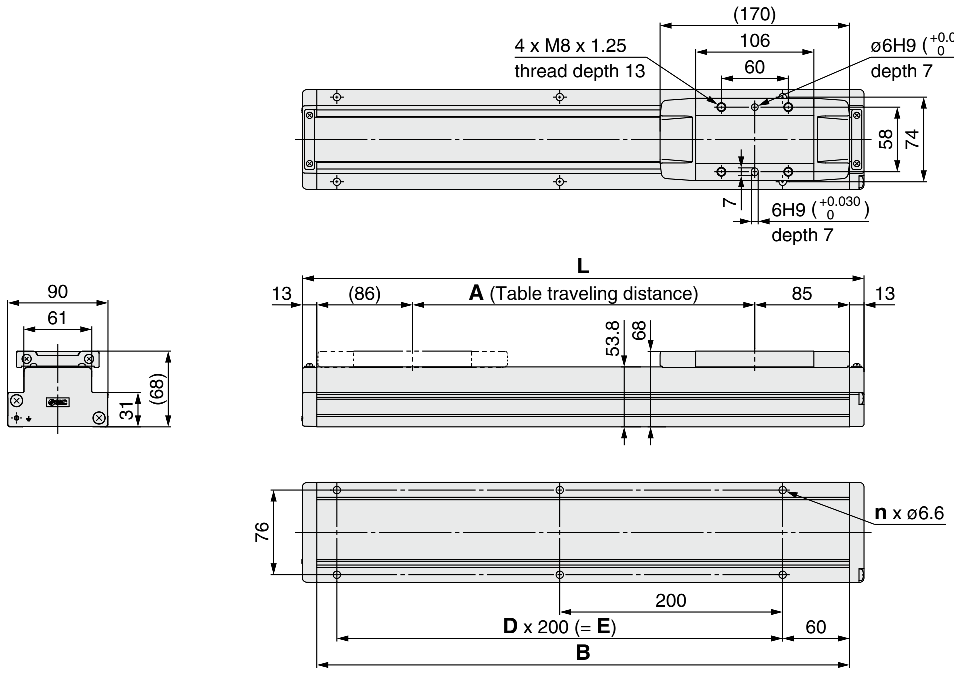
Model	L	A	B	n	D	E
LEFG32-BS-300	450	307	430	6	2	400
LEFG32-BS-400	550	407	530			
LEFG32-BS-500	650	507	630	8	3	600
LEFG32-BS-600	750	607	730			
LEFG32-BS-700	850	707	830	10	4	800
LEFG32-BS-800	950	807	930			
LEFG32-BS-900	1050	907	1030	12	5	1000
LEFG32-BS-1000	1150	1007	1130			
LEFG32-BS-1100	1250	1107	1230	14	6	1200
LEFG32-BS-1200	1350	1207	1330			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG32-BS-1300	1450	1307	1430	16	7	1400
LEFG32-BS-1400	1550	1407	1530			
LEFG32-BS-1500	1650	1507	1630	18	8	1600
LEFG32-BS-1600	1750	1607	1730			
LEFG32-BS-1700	1850	1707	1830	20	9	1800
LEFG32-BS-1800	1950	1807	1930			
LEFG32-BS-1900	2050	1907	2030	22	10	2000
LEFG32-BS-2000	2150	2007	2130			
LEFG32-BS-2500	2650	2507	2630	28	13	2600

Dimensions: For Belt Drive

LEFG40-BS



Dimensions [mm]

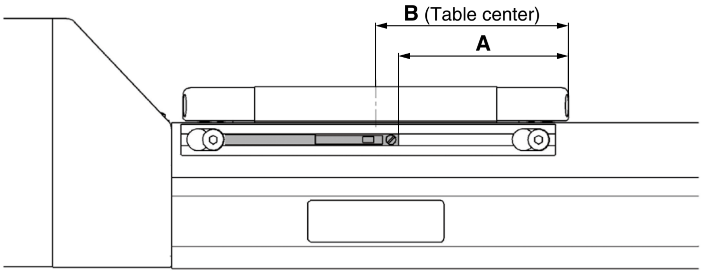
Model	L	A	B	n	D	E
LEFG40-BS-300	504	307	478	6	2	400
LEFG40-BS-400	604	407	578			
LEFG40-BS-500	704	507	678	8	3	600
LEFG40-BS-600	804	607	778			
LEFG40-BS-700	904	707	878	10	4	800
LEFG40-BS-800	1004	807	978			
LEFG40-BS-900	1104	907	1078	12	5	1000
LEFG40-BS-1000	1204	1007	1178			
LEFG40-BS-1100	1304	1107	1278	14	6	1200
LEFG40-BS-1200	1404	1207	1378			

Dimensions [mm]

Model	L	A	B	n	D	E
LEFG40-BS-1300	1504	1307	1478	16	7	1400
LEFG40-BS-1400	1604	1407	1578			
LEFG40-BS-1500	1704	1507	1678	18	8	1600
LEFG40-BS-1600	1804	1607	1778			
LEFG40-BS-1700	1904	1707	1878	20	9	1800
LEFG40-BS-1800	2004	1807	1978			
LEFG40-BS-1900	2104	1907	2078	22	10	2000
LEFG40-BS-2000	2204	2007	2178			
LEFG40-BS-2500	2704	2507	2678	28	13	2600
LEFG40-BS-3000	3204	3007	3178	32	15	3000

Auto Switch Mounting

Auto Switch Mounting Position



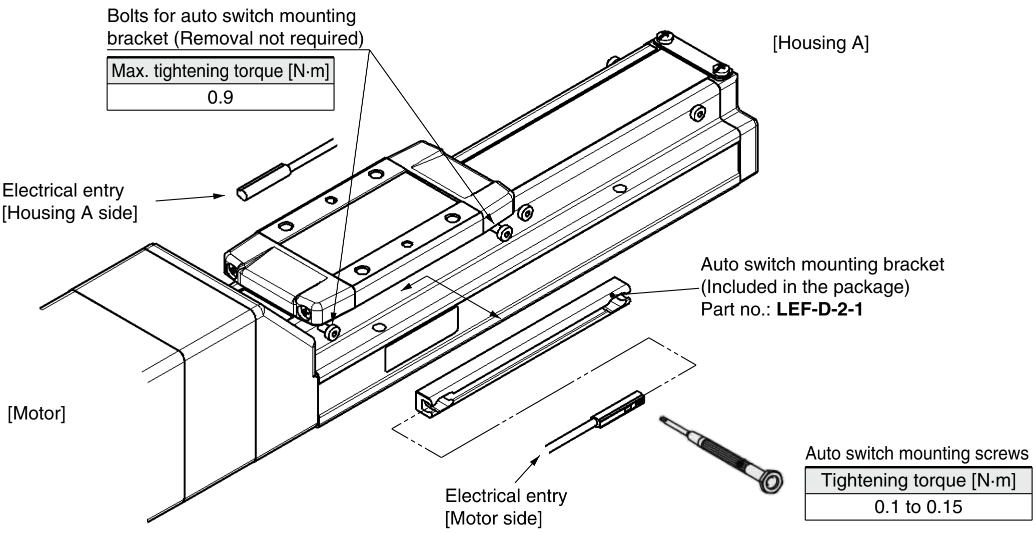
[mm]

Model	Size	A	B	Operating range
LEFS LEFB	25	45	51	4.9
	32	55	61	3.9
	40	79	85	5.3

* The applicable auto switch is D-M9 (N/P/B) (W) (M/L/Z).
* The operating range is a guideline including hysteresis, not meant to be guaranteed. There may be large variations depending on the ambient environment.
* Adjust the auto switch after confirming the operating conditions in the actual setting.

Auto Switch Mounting

Rotate the bolts for auto switch mounting bracket three to four times to loosen them (Removing them is not required), and slide and remove the auto switch mounting bracket. Then, insert a switch into the groove on the mounting bracket.
As the mounting bolts for installing the product body interfere with the auto switch mounting bracket, mount the auto switch mounting bracket after installing the product body. After installing product body, tighten the bolts for the auto switch mounting bracket.



* The applicable auto switch is D-M9 (N/P/B) (W) (M/L/Z).
* The direction of the lead wire entry is specified. If it is mounted in the opposite direction, the auto switch may malfunction.
* Tighten the auto switch mounting screws (provided together with the auto switch), using a precision screwdriver with a handle diameter of approximately 5 to 6 mm.
* If more than two auto switch mounting brackets are required, please order them separately. All eight bolts for attaching the auto switch mounting bracket at the stroke end are tightened into the body when the product is shipped.
  For 50-mm stroke type, only four bolts are tightened on the motor side.

Solid State Auto Switch Direct Mounting Type
D-M9N/D-M9P/D-M9B

CE UKCA RoHS

Refer to the SMC website for details on products that are compliant with international standards.

Grommet

- 2-wire load current is reduced (2.5 to 40 mA).
- Using flexible cable as standard spec.

Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□ (With indicator light)			
Auto switch model	D-M9N	D-M9P	D-M9B
Electrical entry direction	In-line		
Wiring type	3-wire		2-wire
Output type	NPN	PNP	—
Applicable load	IC circuit, Relay, PLC		24 VDC relay, PLC
Power supply voltage	5, 12, 24 VDC (4.5 to 28 V)		—
Current consumption	10 mA or less		—
Load voltage	28 VDC or less	—	24 VDC (10 to 28 VDC)
Load current	40 mA or less		2.5 to 40 mA
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)		4 V or less
Leakage current	100 µA or less at 24 VDC		0.8 mA or less
Indicator light	Red LED illuminates when turned ON.		
Standard	CE/UKCA marking		

⚠Caution

Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-M9N	D-M9P	D-M9B
Sheath	Outside diameter [mm]	ø2.6		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
	Outside diameter [mm]	ø0.88		
Conductor	Effective area [mm²]	0.15		
	Strand diameter [mm]	ø0.05		
Min. bending radius [mm] (Reference values)		17		

∗ Refer to page 1363 for solid state auto switch common specifications.
∗ Refer to page 1363 for lead wire lengths.

Weight

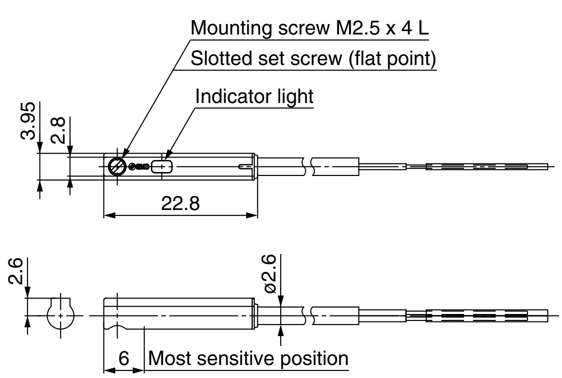
[g]

Auto switch model		D-M9N	D-M9P	D-M9B
Lead wire length	0.5 m (**Nil**)	8		7
	1 m (**M**)	14		13
	3 m (**L**)	41		38
	5 m (**Z**)	68		63

Dimensions

[mm]

D-M9□

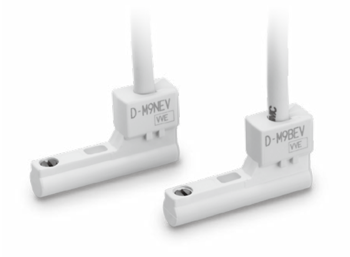


Normally Closed Solid State Auto Switch Direct Mounting Type
D-M9NE(V)/D-M9PE(V)/D-M9BE(V)

RoHS

Grommet

- **Output signal turns on when no magnetic force is detected.**
- **Can be used for the actuator adopted by the solid state auto switch D-M9 series (excluding special order products)**



⚠Caution

Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Auto Switch Specifications

Refer to the SMC website for details on products that are compliant with international standards.

PLC: Programmable Logic Controller

D-M9□E, D-M9□EV (With indicator light)						
Auto switch model	D-M9NE	D-M9NEV	D-M9PE	D-M9PEV	D-M9BE	D-M9BEV
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring type	3-wire				2-wire	
Output type	NPN		PNP		—	
Applicable load	IC circuit, Relay, PLC				24 VDC relay, PLC	
Power supply voltage	5, 12, 24 VDC (4.5 to 28 V)				—	
Current consumption	10 mA or less				—	
Load voltage	28 VDC or less		—		24 VDC (10 to 28 VDC)	
Load current	40 mA or less				2.5 to 40 mA	
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)				4 V or less	
Leakage current	100 µA or less at 24 VDC				0.8 mA or less	
Indicator light	Red LED illuminates when turned ON.					
Standard	CE/UKCA marking					

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-M9NE(V)	D-M9PE(V)	D-M9BE(V)
Sheath	Outside diameter [mm]	ø2.6		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
	Outside diameter [mm]	ø0.88		
Conductor	Effective area [mm²]	0.15		
	Strand diameter [mm]	ø0.05		
Min. bending radius [mm] (Reference values)		17		

∗ Refer to page 1363 for solid state auto switch common specifications.
∗ Refer to page 1363 for lead wire lengths.

Weight

[g]

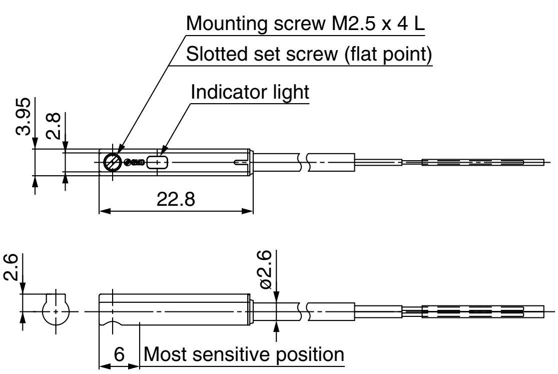
Auto switch model		D-M9NE(V)	D-M9PE(V)	D-M9BE(V)
Lead wire length	0.5 m (**Nil**)	8		7
	1 m (**M**)∗1	14		13
	3 m (**L**)	41		38
	5 m (**Z**)∗1	68		63

∗1 The 1 m and 5 m options are produced upon receipt of order.

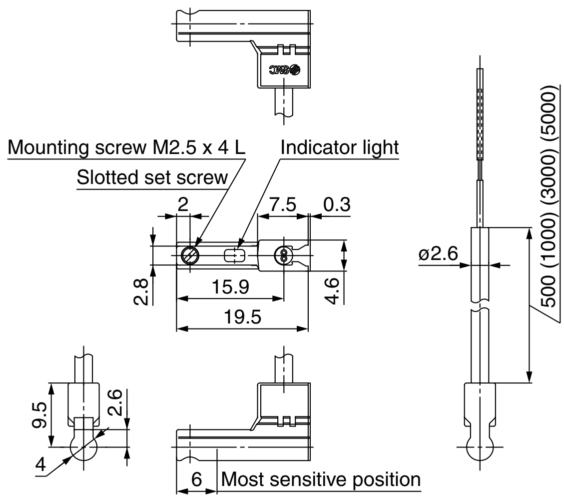
Dimensions

[mm]

D-M9□E



D-M9□EV



2-Color Indicator Solid State Auto Switch Direct Mounting Type
D-M9NW/D-M9PW/D-M9BW

CE UKCA RoHS

Refer to the SMC website for details on products that are compliant with international standards.

Grommet

- 2-wire load current is reduced (2.5 to 40 mA).
- Using flexible cable as standard spec.
- The proper operating range can be determined by the color of the light. (Red → Green ← Red)

⚠Caution

Precautions

Fix the auto switch with the existing screw installed on the auto switch body. The auto switch may be damaged if a screw other than the one supplied is used.

Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□W (With indicator light)			
Auto switch model	**D-M9NW**	**D-M9PW**	**D-M9BW**
Electrical entry direction	In-line		
Wiring type	3-wire		2-wire
Output type	NPN	PNP	—
Applicable load	IC circuit, Relay, PLC		24 VDC relay, PLC
Power supply voltage	5, 12, 24 VDC (4.5 to 28 V)		—
Current consumption	10 mA or less		—
Load voltage	28 VDC or less	—	24 VDC (10 to 28 VDC)
Load current	40 mA or less		2.5 to 40 mA
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)		4 V or less
Leakage current	100 μA or less at 24 VDC		0.8 mA or less
Indicator light	Operating range ·········· Red LED illuminates. Proper operating range ·········· Green LED illuminates.		
Standard	CE/UKCA marking		

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		**D-M9NW**	**D-M9PW**	**D-M9BW**
Sheath	Outside diameter [mm]	ø2.6		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
	Outside diameter [mm]	ø0.88		
Conductor	Effective area [mm²]	0.15		
	Strand diameter [mm]	ø0.05		
Min. bending radius [mm] (Reference values)		17		

* Refer to page 1363 for solid state auto switch common specifications.
* Refer to page 1363 for lead wire lengths.

Weight

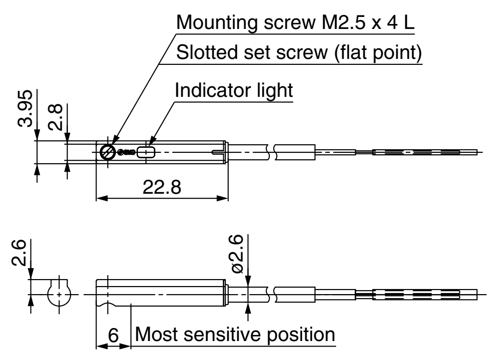
[g]

Auto switch model		**D-M9NW**	**D-M9PW**	**D-M9BW**
Lead wire length	0.5 m (**Nil**)	8		7
	1 m (**M**)	14		13
	3 m (**L**)	41		38
	5 m (**Z**)	68		63

Dimensions

[mm]

D-M9□W



Specific Product Precautions 1

Be sure to read this before handling the products. Refer to page 1351 for safety instructions, pages 1352 to 1357 for electric actuator precautions, and pages 1358 to 1367 for auto switch precautions.

Design

⚠Caution

1. Do not apply a load in excess of the specification limits.
Select a suitable actuator by work load and allowable moment. If a load in excess of the specification limits is applied to the guide, adverse effects such as the generation of play in the guide, reduced accuracy, or reduced service life of the product may occur.

2. Do not use the product in applications where excessive external force or impact force is applied to it.
This can cause a malfunction.

Selection

⚠Warning

1. Do not increase the speed in excess of the specification limits.
Select a suitable actuator by the relationship between the allowable work load and speed, and the allowable speed of each stroke. If the product is used outside of the specification limits, adverse effects such as the generation of noise, reduced accuracy, or reduced service life of the product may occur.

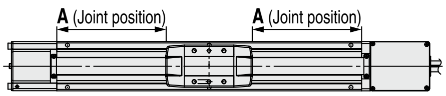
2. Do not use the product in applications where excessive external force or impact force is applied to it.
This can cause a malfunction.

3. When the product repeatedly cycles with partial strokes (see the table below), operate it at a full stroke at least once every few dozen cycles.
Failure to do so may result in the product running out of lubrication.

Model	Partial stroke
LEF□16	40 mm or less
LEF□25	65 mm or less
LEF□32	70 mm or less
LEF□40	105 mm or less

4. When external force is to be applied to the table, it is necessary to add the external force to the work load as the total carried load when selecting a size.
When a cable duct or flexible moving tube is attached to the actuator, the sliding resistance of the table will increase, which may lead to the malfunction of the product.

5. When the stroke exceeds 2000 mm, a joint needs to be added to the guide rail for extension. When passing over the joint, slight vibration may occur.



Size	Stroke	A
32	2500	370
40	2500	320
	3000	820

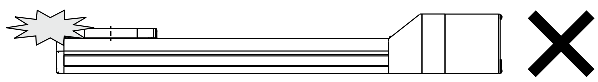
Handling

⚠Caution

1. Set the [In position] in the step data to at least 0.5 (at least 1 for the belt type).
If it is set any lower, the completion signal of the [In position] may not be properly output.

2. INP output signal
1) Positioning operation
When the product comes within the set range of the step data [In position], the INP output signal will turn ON.
Initial value: Set to [0.50] or higher.

3. Never allow the table to collide with the stroke end except during return to origin.
When incorrect instructions are inputted, such as those which cause the product to operate outside of the specification limits or outside of the actual stroke through changes in the controller/driver settings and/or origin position, the table may collide with the stroke end of the actuator. Be sure to check these points before use.
If the table collides with the stroke end of the actuator, the guide, belt, or internal stopper may break. This can result in abnormal operation.



Handle the actuator with care when it is used in the vertical direction as the workpiece will fall freely from its own weight.

4. The moving force should be the initial value.
If the moving force is set below the initial value, it may cause the generation of an alarm.

5. The actual speed of this actuator is affected by the work load and stroke.
Check the model selection section of the catalog.

6. Do not apply a load, impact, or resistance in addition to the transferred load during return to origin.
Additional force will cause the displacement of the origin position since it is based on the detected motor torque.

7. Do not dent, scratch, or cause other damage to the body or table mounting surfaces.
Doing so may cause unevenness in the mounting surface, play in the guide, or an increase in the sliding resistance.

8. Do not apply strong impact or an excessive moment while mounting a workpiece.
If an external force over the allowable moment is applied, it may cause play in the guide or an increase in the sliding resistance.

9. Keep the flatness of the mounting surface within 0.1 mm/500 mm.
If a workpiece or base does not sit evenly on the body of the product, play in the guide or an increase in the sliding resistance may occur.

10. When mounting the product, secure a bending diameter of 40 mm or longer for the cable.

11. Do not allow a workpiece to collide with the table during the positioning operation or within the positioning range.

12. For the model where grease is applied to the dust seal band for sliding, when wiping off the grease to remove foreign matter, etc., be sure to reapply grease afterward.

13. When bottom mounted, the dust seal band may become warped.

Specific Product Precautions 2

Be sure to read this before handling the products. Refer to page 1351 for safety instructions, pages 1352 to 1357 for electric actuator precautions, and pages 1358 to 1367 for auto switch precautions.

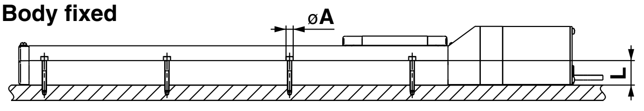
Handling

⚠Caution

14. When mounting the product, use screws of adequate length and tighten them with adequate torque.

Tightening the screws with a higher torque than recommended may result in a malfunction and/or decrease in guide accuracy, while tightening with a lower torque can result in the displacement of the mounting position or, in extreme conditions, the actuator could become detached from its mounting position.

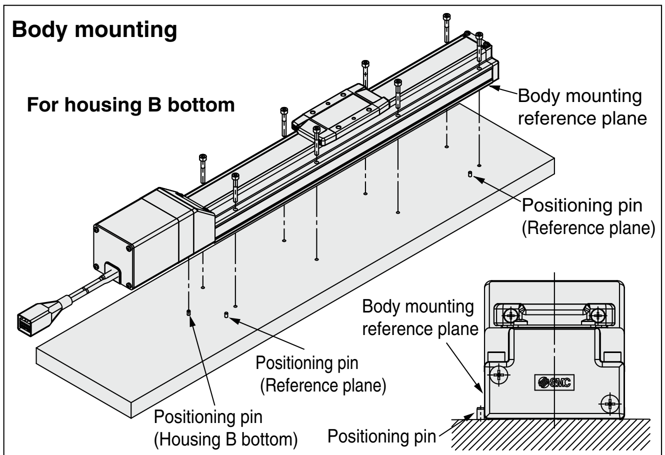
Body fixed



Model	Screw size	Max. tightening torque [N·m]	øA [mm]	L [mm]
LEF□16	M3	0.6	3.5	20
LEF□25	M4	1.5	4.5	24
LEF□32	M5	3.0	5.5	30
LEF□40	M6	5.2	6.6	31

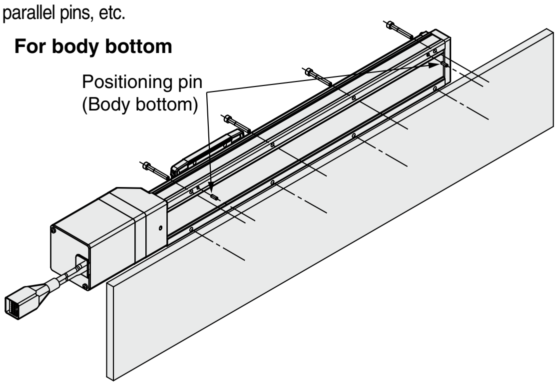
Body mounting

For housing B bottom

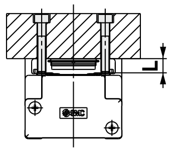


The traveling parallelism is the reference plane for the body mounting reference plane. If the traveling parallelism for a table is required, set the reference plane against parallel pins, etc.

For body bottom



Workpiece fixed



Model	Screw size	Max. tightening torque [N·m]	L (Max. screw-in depth) [mm]
LEF□16	M4 x 0.7	1.5	6
LEF□25	M5 x 0.8	3.0	8
LEF□32	M6 x 1	5.2	9
LEFS40	M8 x 1.25	12.5	13

To prevent the workpiece retaining screws from touching the body, use screws that are 0.5 mm or shorter than the maximum screw-in depth. If long screws are used, they may touch the body and cause a malfunction.

15. Do not operate by fixing the table and moving the actuator body.

16. The belt drive actuator cannot be used for vertical applications.

17. Check the specifications for the minimum speed of each actuator.

Failure to do so may result in unexpected malfunctions such as knocking.

18. In the case of the belt drive actuator, vibration may occur during operation at speeds within the actuator specifications due to the operating conditions. Change the speed setting to a speed that does not cause vibration.

19. When fluctuations in the load are caused during operation, malfunction, noise, or alarm generation may occur. (In the case of the AC servo motor)

The gain tuning may not be suitable for fluctuating loads. Adjust the gain properly by following the instructions in the driver manual.

Maintenance

⚠Warning

Maintenance frequency

Perform maintenance according to the table below.

Frequency	Appearance check	Internal check	Belt check
Inspection before daily operation	○	—	—
Inspection every 6 months/1000 km/ 5 million cycles*1	○	○	○

*1 Select whichever comes first.

- **Items for visual appearance check**
  1. Loose set screws, Abnormal amount of dirt, etc.
  2. Check for visible damage, Check of cable joint
  3. Vibration, Noise
- **Items for internal check**
  1. Lubricant condition on moving parts
  2. Loose or mechanical play in fixed parts or fixing screws
- **Items for belt check**

  Stop operation immediately and replace the belt when any of the following occur. In addition, ensure your operating environment and conditions satisfy the requirements specified for the product.

  a. Tooth shape canvas is worn out

  Canvas fiber becomes fuzzy, Rubber is coming off and the fiber has become whitish, Lines of fibers have become unclear

  b. Peeling off or wearing of the side of the belt

  Belt corner has become rounded and frayed threads stick out

  c. Belt is partially cut

  Belt is partially cut, Foreign matter caught in the teeth of other parts is causing damage

  d. A vertical line on belt teeth is visible

  Damage which is made when the belt runs on the flange

  e. Rubber back of the belt is softened and sticky

  f . Cracks on the back of the belt are visible

Battery-less Absolute Encoder Type Specific Product Precautions

Be sure to read this before handling the products. Refer to page 1351 for safety instructions and pages 1352 to 1357 for electric actuator precautions.

Handling

⚠Caution

1. Absolute encoder ID mismatch error at the first connection

In the following cases, an "ID mismatch error" alarm occurs after the power is turned ON. Perform a return to origin operation after resetting the alarm before use.

· When an electric actuator is connected and the power is turned ON for the first time after purchase*1

· When the actuator or motor is replaced

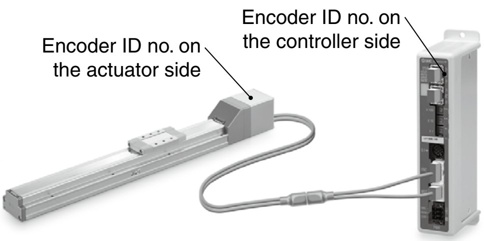
· When the controller is replaced

*1 If you have purchased an electric actuator and controller with the set part number, the pairing may have already been completed and the alarm may not be generated.

"ID mismatch error"

Operation is enabled by matching the encoder ID on the electric actuator side with the ID registered in the controller. This alarm occurs when the encoder ID is different from the registered contents of the controller. By resetting this alarm, the encoder ID is registered (paired) to the controller again.

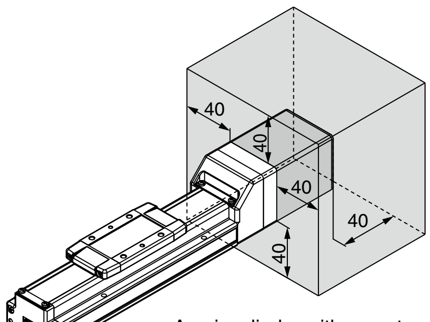
When a controller is changed after pairing is completed				
	Encoder ID no. (* Numbers below are examples.)			
Actuator	17623	17623	17623	17623
Controller	17623	17699	17699	17623
ID mismatch error occurred?	No	Yes	Error reset ⇒ No	



The ID number is automatically checked when the control power supply is turned ON.
An error is output if the ID number does not match.

2. In environments where strong magnetic fields are present, use may be limited.

A magnetic sensor is used in the encoder. Therefore, if the actuator motor is used in an environment where strong magnetic fields are present, malfunction or failure may occur.
Do not expose the actuator motor to magnetic fields with a magnetic flux density of 1 mT or more.
When installing an electric actuator and an air cylinder with an auto switch (ex. CDQ2 series) or multiple electric actuators side by side, maintain a space of 40 mm or more around the motor. Refer to the construction drawing of the actuator motor.

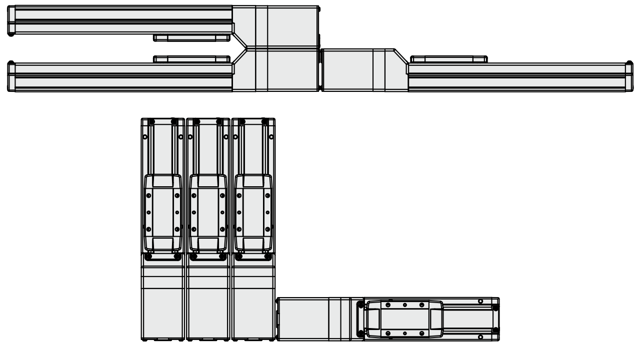


An air cylinder with an auto switch cannot be installed in the shaded area.

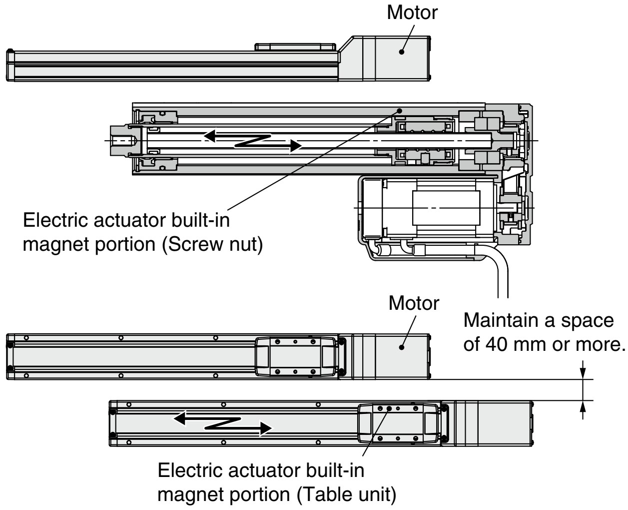
● **When lining up actuators**

SMC actuators can be used with their motors adjacent to each other. However, maintain a space of 40 mm or more between the motors and the position where the magnet passes.
The magnet is in the middle of the table.

○ Can be used with their motors adjacent to each other

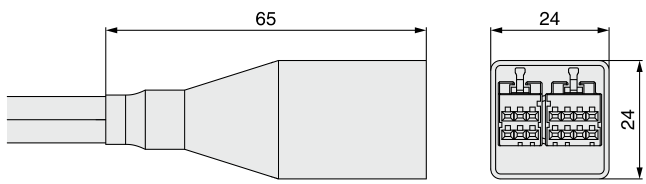


✕ Do not allow the motors to be in close proximity to the position where the magnet passes.



3. The connector size of the motor cable is different from that of the electric actuator with an incremental encoder.

The motor cable connector of an electric actuator with a battery-less absolute encoder is different from that of an electric actuator with an incremental encoder. As the connector cover dimensions are different, take the dimensions below into consideration during the design process.



Battery-less absolute encoder connector cover dimensions