

Motorless Type
Electric Actuator/Slider Type
Belt Drive/**LEFB Series**
Model Selection



LEFB Series ▶ p. 851

Selection Procedure

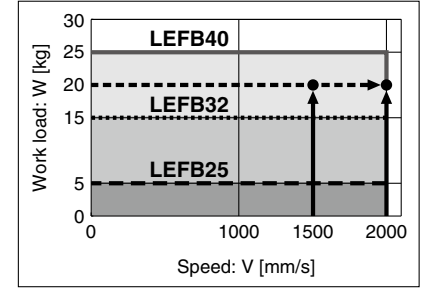
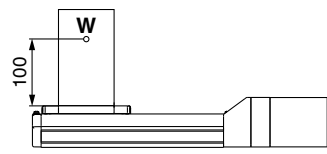


Selection Example

The model selection method shown below corresponds to SMC's standard motor. For use in combination with a motor from a different manufacturer, check the available product information of the motor to be used.

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>
(LEFB40)

Step 1 Check the work load-speed. <Speed-Work Load Graph>

Select a model based on the workpiece mass and speed which are within the range of the actuator body specifications while referencing the speed-work load graph (guide) on page 847.

Selection example) The **LEFB40□S-2000** can be temporarily selected as a possible candidate based on the graph shown on the right side.

* Refer to the selection method of motor manufacturers for regeneration resistance.

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.

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

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

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

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

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

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

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

* The conditions for the settling time vary depending on the motor or driver to be used.

Calculation example)

T1 to T4 can be calculated as follows.

$$T1 = V/a1 = 1500/3000 = 0.5 \text{ [s]}$$

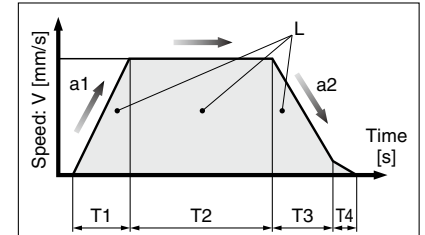
$$T3 = V/a2 = 1500/3000 = 0.5 \text{ [s]}$$

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

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

The **cycle time** can be found as follows.

$$T = T1 + T2 + T3 + T4 = 0.5 + 0.83 + 0.5 + 0.05 = 1.88 \text{ [s]}$$

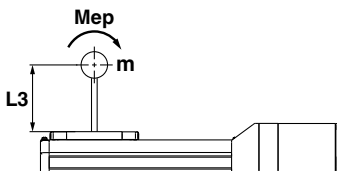


- L : Stroke [mm] ... (Operating condition)
- V : Speed [mm/s] ... (Operating condition)
- a1 : Acceleration [mm/s²] ... (Operating condition)
- a2 : Deceleration [mm/s²] ... (Operating condition)

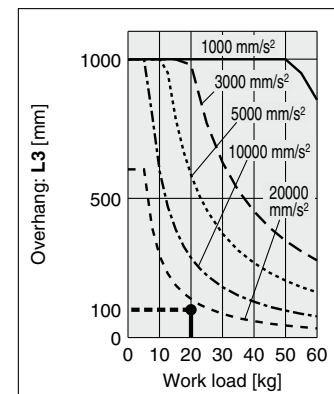
- T1: Acceleration time [s]
Time until reaching the set speed
- T2: Constant speed time [s]
Time while the actuator is operating at a constant speed
- T3: Deceleration time [s]
Time from the beginning of the constant speed operation to stop
- T4: Settling time [s]
Time until positioning is completed

Step 3 Check the allowable moment. <Static allowable moment> (page 823-1) <Dynamic allowable moment> (page 848)

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 **LEFB40□S-2000** should be selected.



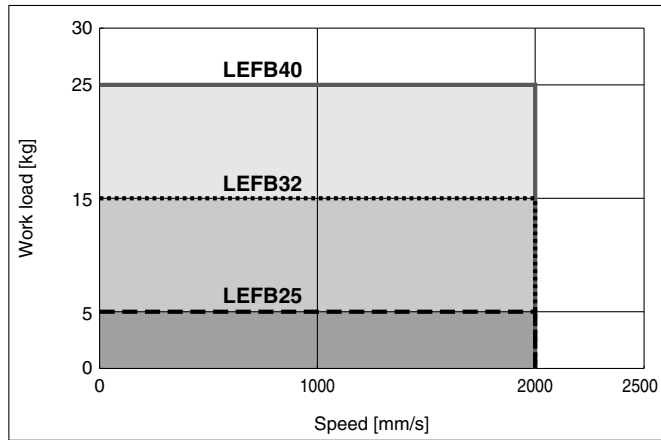
- LEFS
- LEFB
- LEJS
- LEJB
- LEL
- LEM
- LEYS
- LEYG
- LES
- LESH
- LEPY
- LEPS
- LER
- LEH
- LEH-X5
- LEYS-X5
- 11-LEFS
- 11-LEJS
- 11-LEJS
- 25A-
- LEC
- JXC
- LECS
- LECS-T
- LECY
- Motorless
- LAT3

LEFB Series

Motorless Type

Speed-Work Load Graph (Guide)

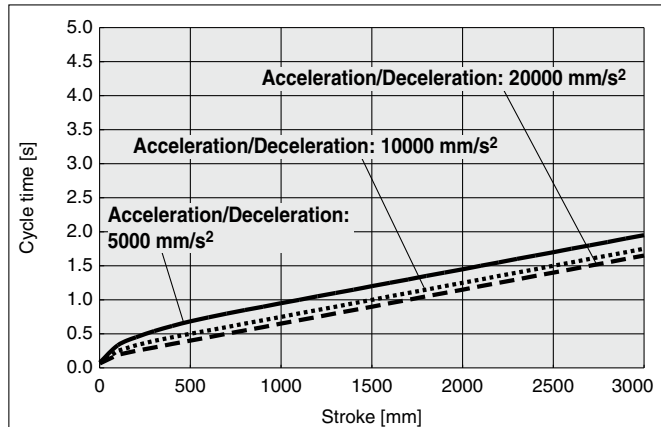
LEFB□/Belt Drive



Cycle Time Graph (Guide)

LEFB□/Belt Drive

LEFB25/32/40



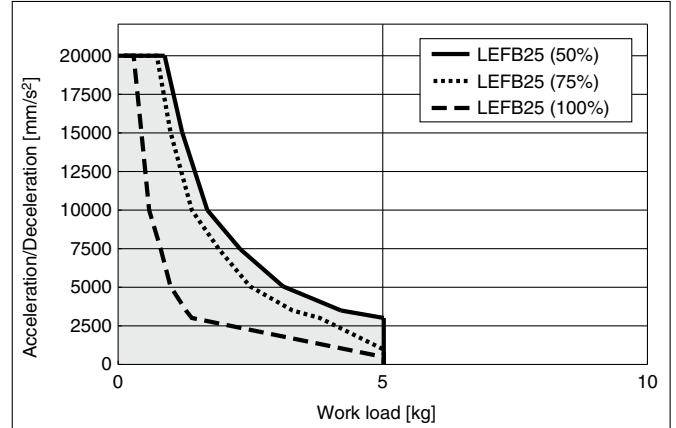
- * Cycle time is for when maximum speed.
- * Maximum stroke: LEFB25: 2000 mm
LEFB32: 2500 mm
LEFB40: 3000 mm

* The values shown below are allowable values of the actuator body.
Do not use the actuator so that it exceeds these specification ranges.

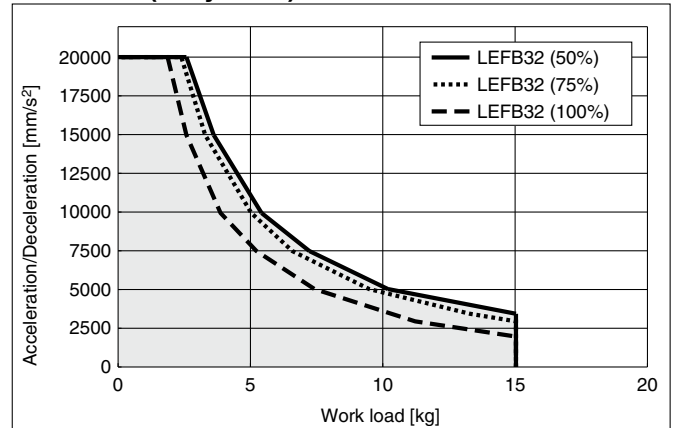
Work Load-Acceleration/Deceleration Graph (Guide)

LEFB□/Belt Drive

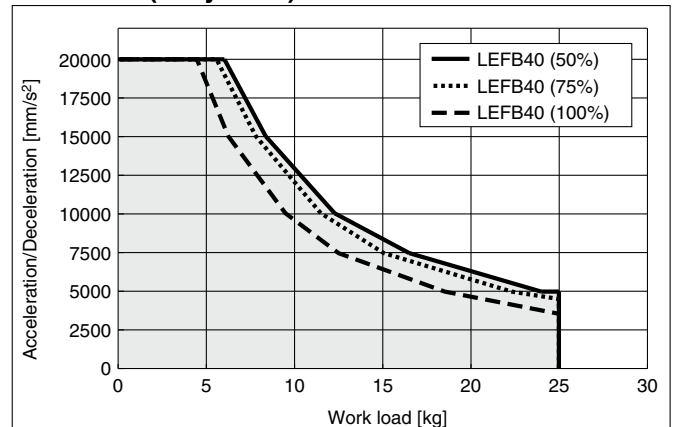
LEFB25□ (Duty ratio)



LEFB32□ (Duty ratio)



LEFB40□ (Duty ratio)

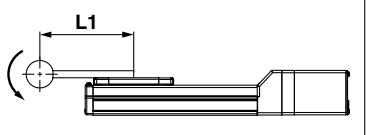
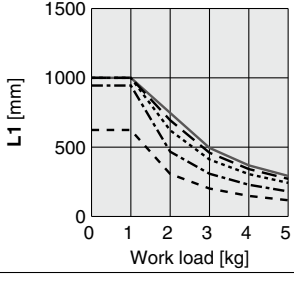
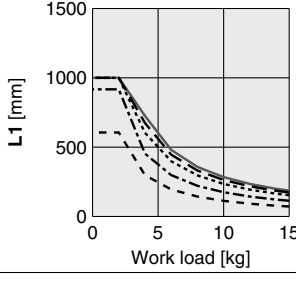
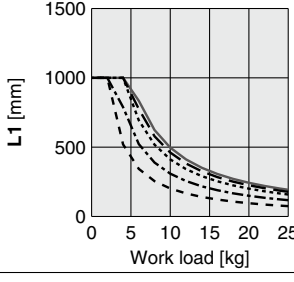
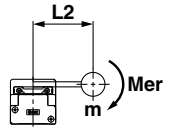
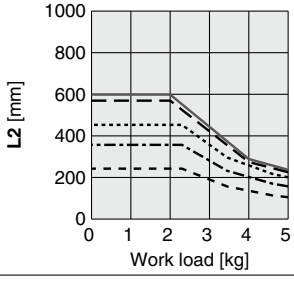
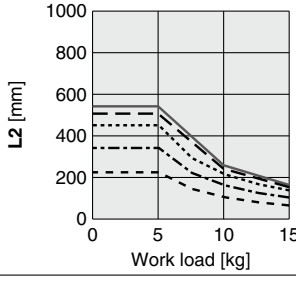
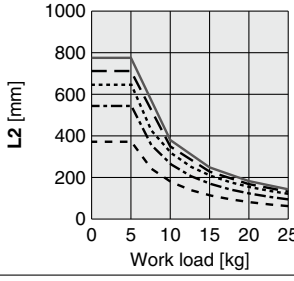
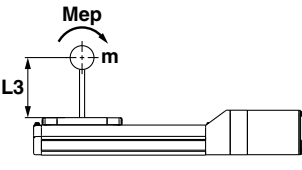
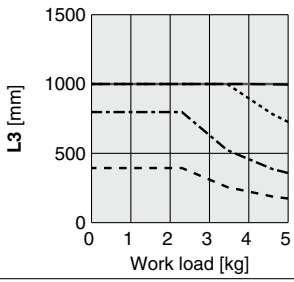
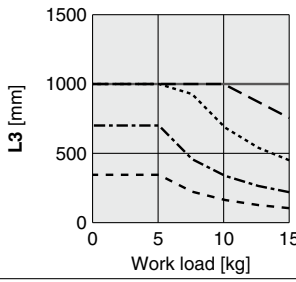
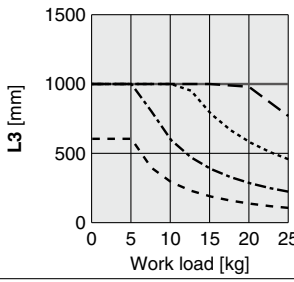
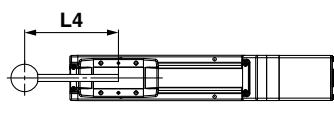
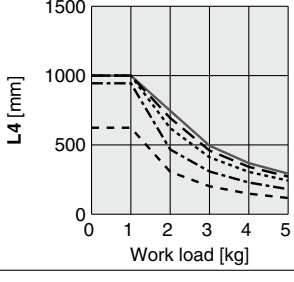
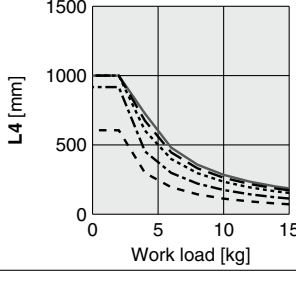
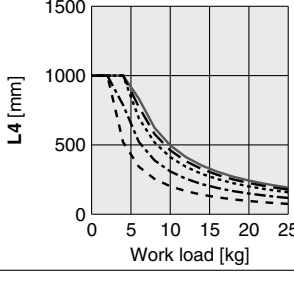
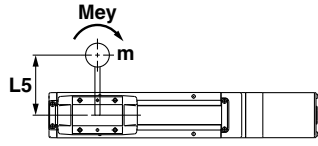
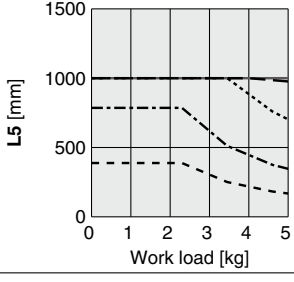
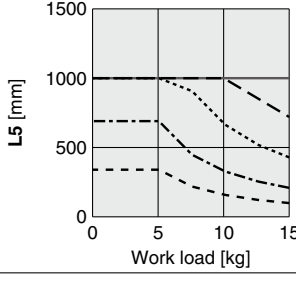
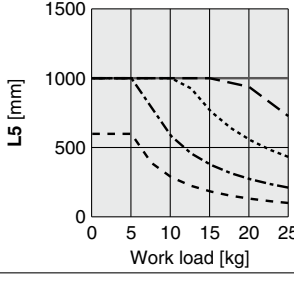
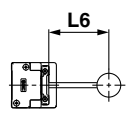
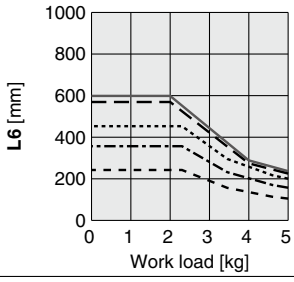
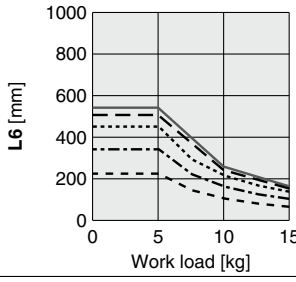
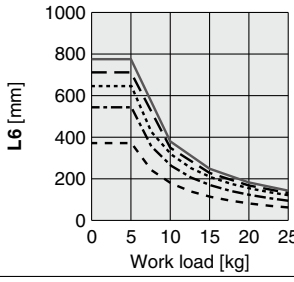


These graphs are examples of when the standard motor is mounted.
Determine the duty ratio after taking into account the load factor of the motor or driver to be used.

Dynamic Allowable Moment

* This graph shows the amount of allowable overhang (guide unit) when the center of gravity of the work-piece 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		Model		
Load overhanging direction m : Work load [kg] Me: Allowable moment [N·m] L : Overhang to the work load center of gravity [mm]		LEFB25□	LEFB32□	LEFB40□
Horizontal/Bottom	X 			
	Y 			
	Z 			
Wall	X 			
	Y 			
	Z 			

- LEFS
- LEFB
- LEJS
- LEJB
- LEL
- LEM
- LEY
- LEYG
- LES
- LESH
- LEPY
- LEPS
- LER
- LEH
- LEY-X5
- 11-LEFS
- 11-LEJS
- 25A-
- LEC□
- JXC□
- LECS□
- LECS□-T
- LECY□
- Motorless
- LAT3

Calculation of Guide Load Factor

- Decide operating conditions.

Model: LEFB

Size: 25/32/40

Mounting orientation: Horizontal/Bottom/Wall

Acceleration [mm/s^2]: a

Work load [kg]: m

Work load center position [mm]: $X_c/Y_c/Z_c$

- Select the target graph while referencing the model, size, and mounting orientation.

- Based on the acceleration and work load, find the overhang [mm]: $L_x/L_y/L_z$ from the graph.

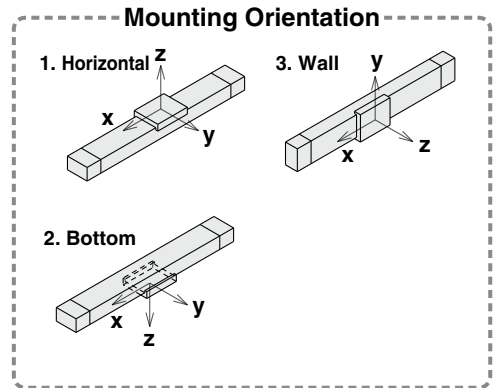
- Calculate the load factor for each direction.

$$\alpha_x = X_c/L_x, \alpha_y = Y_c/L_y, \alpha_z = Z_c/L_z$$

- 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, consider a reduction of acceleration and work load, or a change of the work load center position and series.



Example

- Operating conditions

Model: LEFB40

Size: 40

Mounting orientation: Horizontal

Acceleration [mm/s^2]: 3000

Work load [kg]: 20

Work load center position [mm]: $X_c = 0, Y_c = 50, Z_c = 200$

- Select the graphs for horizontal of the LEFB40□ on page 848.

- $L_x = 250 \text{ mm}, L_y = 180 \text{ mm}, L_z = 1000 \text{ mm}$

- The load factor for each direction can be found as follows.

$$\alpha_x = 0/250 = 0$$

$$\alpha_y = 50/180 = 0.27$$

$$\alpha_z = 200/1000 = 0.2$$

- $\alpha_x + \alpha_y + \alpha_z = 0.47 \leq 1$

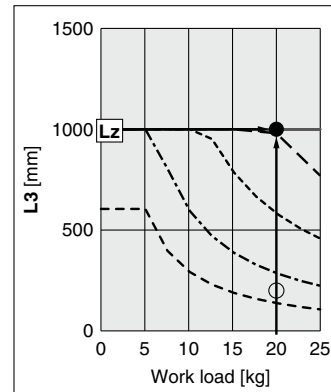
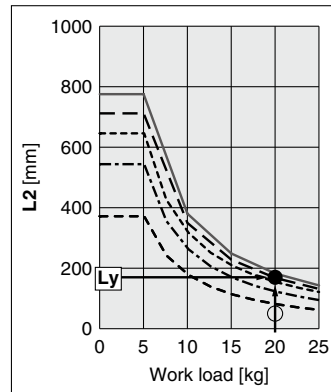
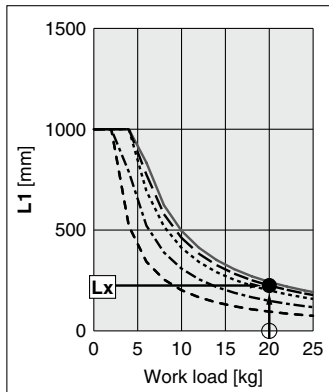
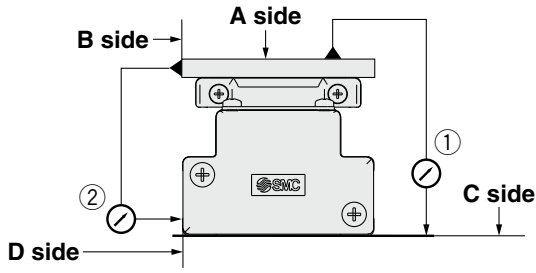


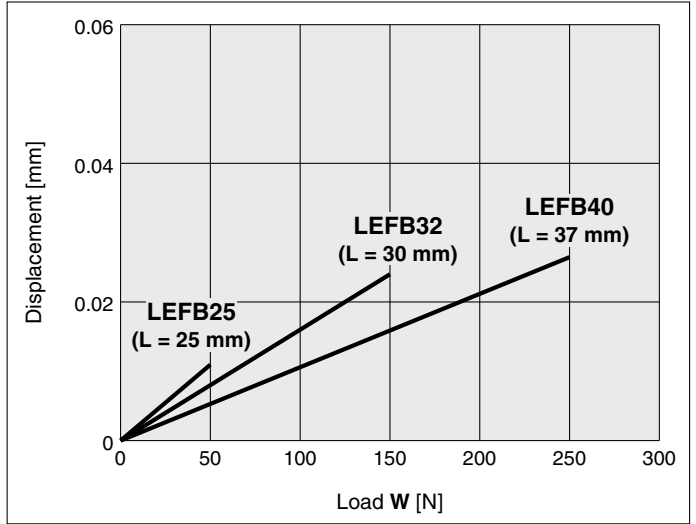
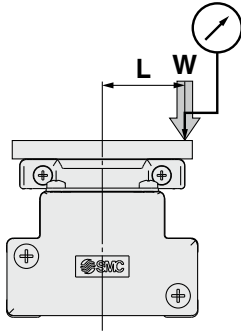
Table Accuracy (Reference Value)



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

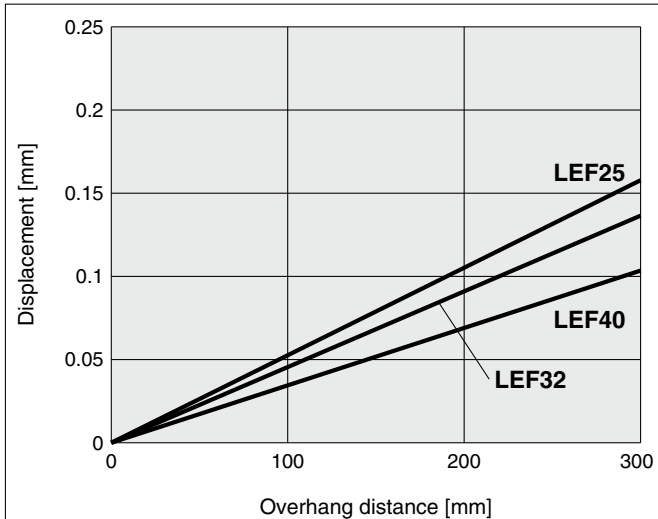
* Traveling parallelism does not include the mounting surface accuracy.

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)



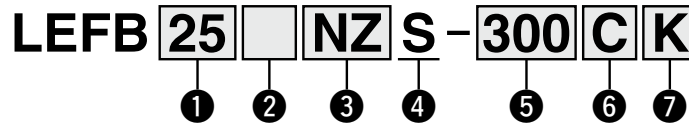
- LEFS
- LEFB
- LEJS
- LEJB
- LEL
- LEM
- LEY
- LEYG
- LES
- LESH
- LEPY
- LEPS
- LER
- LEH
- LEY-X5
- 11-LEFS
- 11-LEJS
- 25A-
- LEC
- JXC
- LECS
- LECS-T
- LECY
- Motorless
- LAT3

Electric Actuator/Slider Type Belt Drive

LEFB Series LEFB25, 32, 40



How to Order



① Size

25
32
40

② Motor mounting position

Nil	Top mounting
U	Bottom mounting

③ Mounting type

NZ	NW	NT
NY	NV	NM1
NX	NU	NM2

④ Equivalent lead [mm]

S	54
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⑤ Stroke [mm]

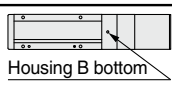
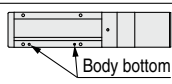
300	300
to	to
3000	3000

⑥ 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 868.)
- * Order auto switches separately. (For details, refer to pages 869 to 871.)
- * 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.

⑦ Positioning pin hole

Nil	Housing B bottom*1	
K	Body bottom 2 locations	

*1 Refer to the body mounting example on page 873 for the mounting method.

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 consult with SMC as all non-standard and non-made-to-order strokes are produced as special orders.

Compatible Motors and Mounting Types

Applicable motor model		Size/Mounting type																			
Manufacturer	Series	25					32/40														
		NZ	NY	NX	NM1	NM2	NZ	NY	NX	NW	NV	NU	NT	NM1	NM2						
Mitsubishi Electric Corporation	MELSERVO JN/J4/J5	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—
YASKAWA Electric Corporation	Σ-V/7	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—
SANYO DENKI CO., LTD.	SANMOTION R	●	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—
OMRON Corporation	OMNUC G5/1S	●	—	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—
Panasonic Corporation	MINAS A5/A6	● (MHMF only)	●	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—
FANUC CORPORATION	βis (-B)	●	—	—	—	—	—	—	● (β1 only)	—	—	●	—	—	—	—	—	—	—	—	—
NIDEC SANKYO CORPORATION	S-FLAG	●	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—
KEYENCE CORPORATION	SV/SV2	●	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—
FUJII ELECTRIC CO., LTD.	ALPHA7	●	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—
MinebeaMitsumi Inc.	Hybrid stepping motors	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	●	—
Shinano Kenshi Co., Ltd.	CSB-BZ	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ORIENTAL MOTOR Co., Ltd.	α STEP AR/AZ	—	—	—	—	—	—	—	● (46 only)	—	—	—	—	—	—	—	—	—	—	—	●
FASTECH Co., Ltd.	Ezi-SERVO	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—	—	●	—
Rockwell Automation, Inc. (Allen-Bradley)	Kinetix MP/VP/TL	● (TL only)	—	—	—	—	—	—	—	—	—	● (MP/VP only)	—	—	—	—	—	● (TL only)	—	—	—
Beckhoff Automation GmbH	AM 30/31/80/81	●	—	—	—	—	—	—	—	—	—	● (80/81 only)	—	● (30 only)	● (31 only)	—	—	—	—	—	—
Siemens AG	SIMOTICS S-1FK7	—	—	●	—	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—
Delta Electronics, Inc.	ASDA-A2	●	—	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—
ANCA Motion	AMD2000	●	—	—	—	—	—	—	—	●	—	—	—	—	—	—	—	—	—	—	—

Specifications*2

- Values in this specifications table are the allowable values of the actuator body with the standard motor mounted.
- Do not use the actuator so that it exceeds these values.

Model		LEFB25	LEFB32	LEFB40	
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]	Horizontal		5	
	Speed [mm/s]	2000			
	Pushing return to origin speed [mm/s]	30 or less			
	Positioning repeatability [mm]	±0.06			
	Lost motion [mm]*3	0.1 or less			
	Equivalent lead [mm]	54			
	Max. acceleration/deceleration [mm/s ²]	20000*4			
	Impact/Vibration resistance [m/s ²]	50/20			
	Actuation type	Belt			
	Guide type	Linear guide			
	Static allowable moment*5 [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)				
Other specifications	Actuation unit weight [kg]	0.2	0.3	0.55	
	Other inertia [kg·cm ²]	0.1	0.2	0.25	
	Friction coefficient	0.05			
	Mechanical efficiency	0.8			
Reference motor specifications	Motor type	AC servo motor (100 V/200 V)			
	Rated output capacity [W]	100	200	400	
	Rated torque [N·m]	0.32	0.64	1.3	

- *1 Please consult with SMC as all non-standard and non-made-to-order strokes are produced as special orders.
- *2 Do not allow collisions at either end of the table traveling distance at a speed exceeding "pushing return to origin speed." Additionally, when running the positioning operation, do not set within 3 mm of both ends.
- *3 A reference value for correcting an error in reciprocal operation
- *4 Maximum acceleration/deceleration changes according to the work load. Refer to the "Work Load–Acceleration/Deceleration Graph (Guide)" for belt drive on page 847.
- *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 Each value is only to be used as a guide to select a motor of the appropriate capacity.
- *7 For other specifications, refer to the specifications of the motor that is to be installed.

Weight

Model	LEFB25																	
Stroke [mm]	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
Product weight [kg]	2.5	2.75	3	3.25	3.5	3.75	4	4.25	4.5	4.75	5	5.25	5.5	5.75	6	6.25	6.5	6.75

Model	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]	4.00	4.35	4.70	5.05	5.40	5.75	6.10	6.45	6.80	7.15	7.50	7.85	8.20	8.55	8.90	9.25	9.60	9.95	11.70

Model	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]	5.72	6.17	6.62	7.07	7.52	7.97	8.42	8.87	9.32	9.77	10.22	10.67	11.12	11.57	12.02	12.47	12.92	13.32	15.62	17.87

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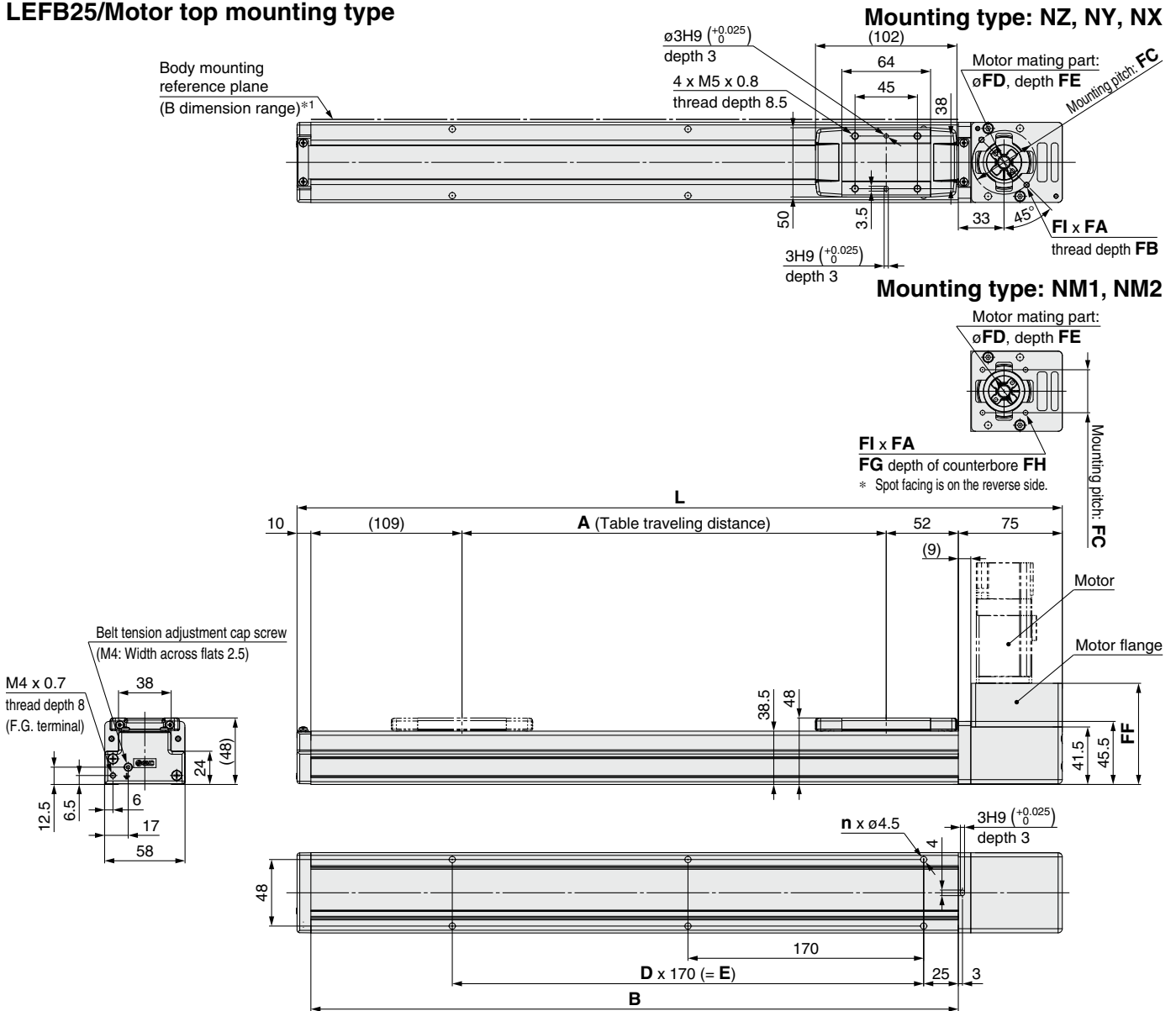
LEFB Series

Motorless Type

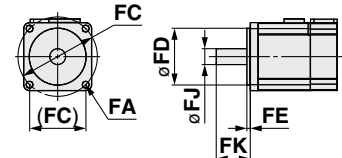
Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

LEFB25/Motor top mounting type



Applicable motor dimensions



Dimensions [mm]

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

*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)

Motor Mounting, Applicable Motor Dimensions [mm]

Mounting type	FA		FB	FC	FD	FE (Max.)	FF	FG	FH	FI	FJ	FK
	Mounting type	Applicable motor										
NZ	M4 x 0.7	$\phi 4.5$	8	$\phi 46$	30	3.5	73	—	—	2	8	25 ±1
NY	M3 x 0.5	$\phi 3.4$	8	$\phi 45$	30	3.5	73	—	—	4	8	25 ±1
NX	M4 x 0.7	$\phi 4.5$	8	$\phi 46$	30	3.5	73	—	—	2	8	18 ±1
NM1	$\phi 3.4$	M3	—	□31	22*1	2.5*1	73	6	21	4	5*2	18 to 25
NM2	$\phi 3.4$	M3	—	□31	22*1	2.5*1	73	6	21	4	6	20 ±1

*1 Dimensions after mounting a ring spacer (Refer to page 865.)

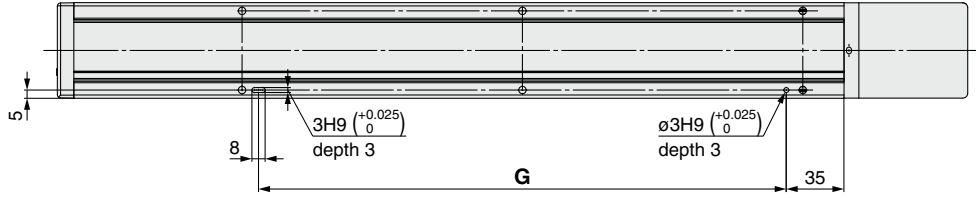
*2 Shaft type: D-cut shaft

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

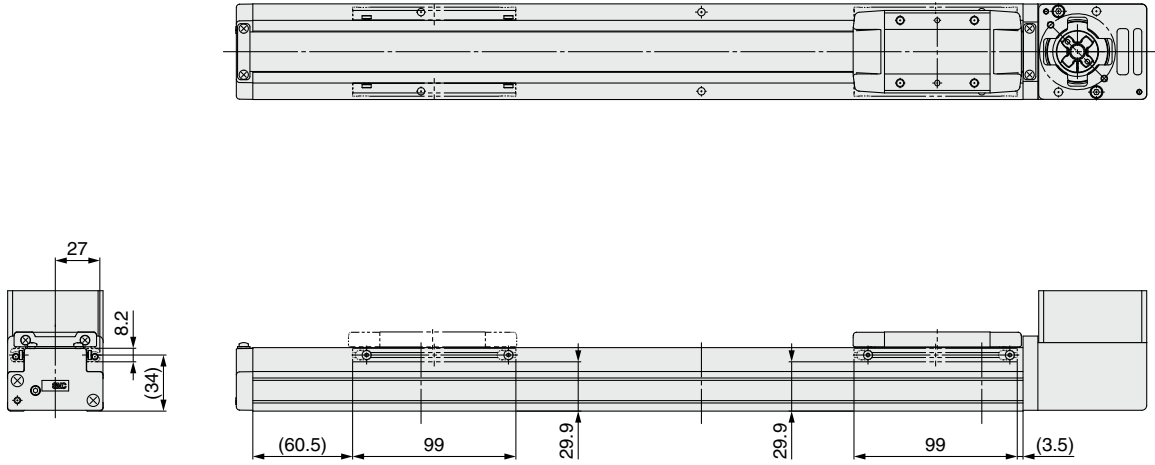
LEFB25/Motor top mounting type

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]

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

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Motorless

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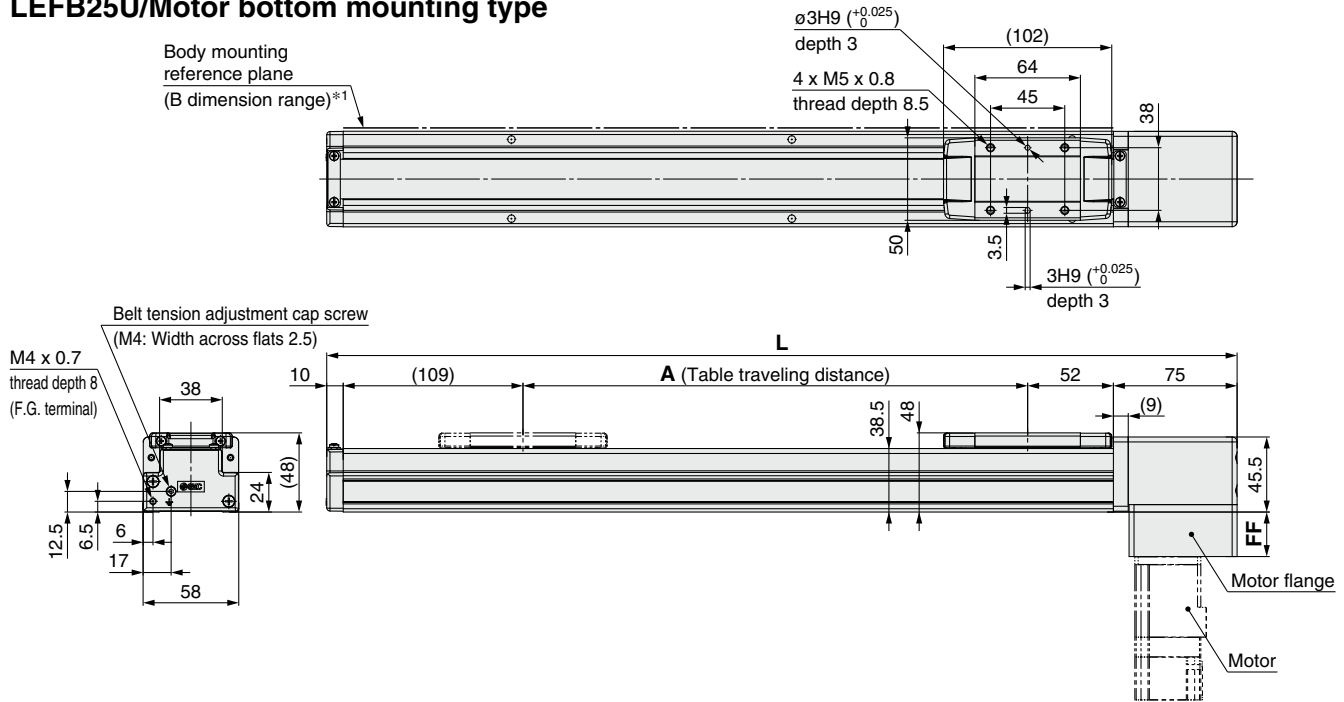
LEFB Series

Motorless Type

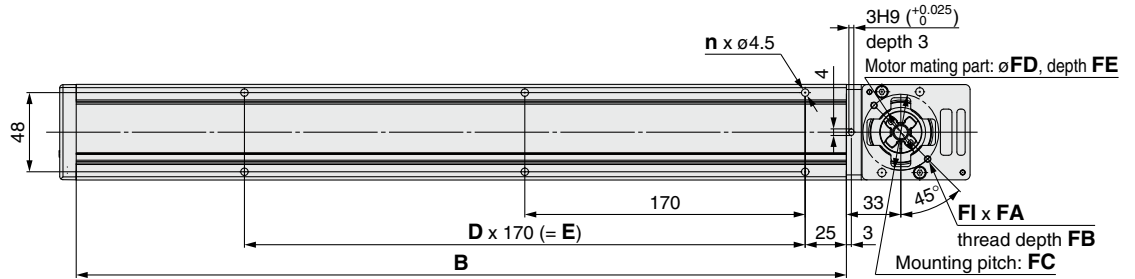
Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

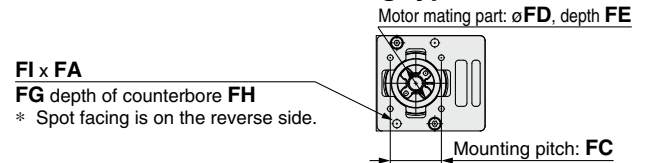
LEFB25U/Motor bottom mounting type



Mounting type: NZ, NY, NX

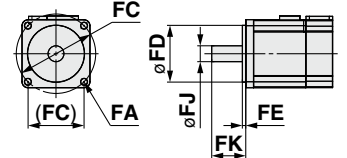


Mounting type: NM1, NM2



*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)

Applicable motor dimensions



Dimensions [mm]

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

Motor Mounting, Applicable Motor Dimensions [mm]

Mounting type	FA		FB	FC	FD	FE (Max.)	FF	FG	FH	FI	FJ	FK
	Mounting type	Applicable motor										
NZ	M4 x 0.7	̢4.5	8	̢46	30	3.5	27	—	—	2	8	25 ±1
NY	M3 x 0.5	̢3.4	8	̢45	30	3.5	27	—	—	4	8	25 ±1
NX	M4 x 0.7	̢4.5	8	̢46	30	3.5	27	—	—	2	8	18 ±1
NM1	̢3.4	M3	—	□31	22*1	2.5*1	27	6	21	4	5*2	18 to 25
NM2	̢3.4	M3	—	□31	22*1	2.5*1	27	6	21	4	6	20 ±1

*1 Dimensions after mounting a ring spacer (Refer to page 865.)

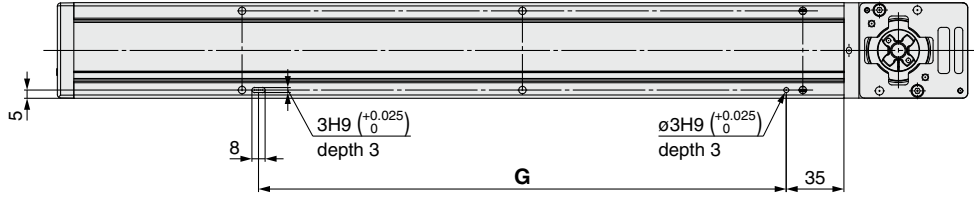
*2 Shaft type: D-cut shaft

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

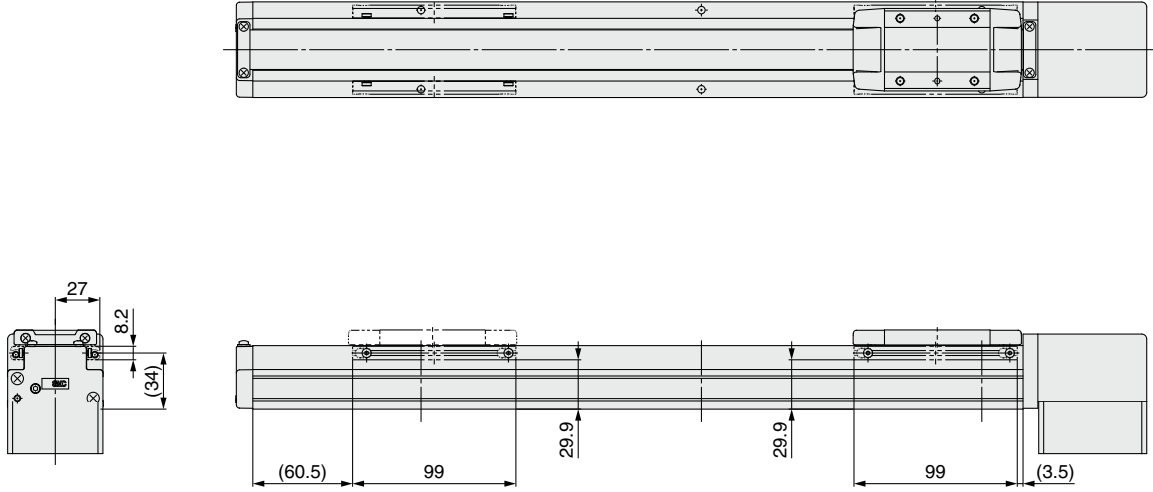
LEFB25U/Motor bottom mounting type

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]

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

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Motorless

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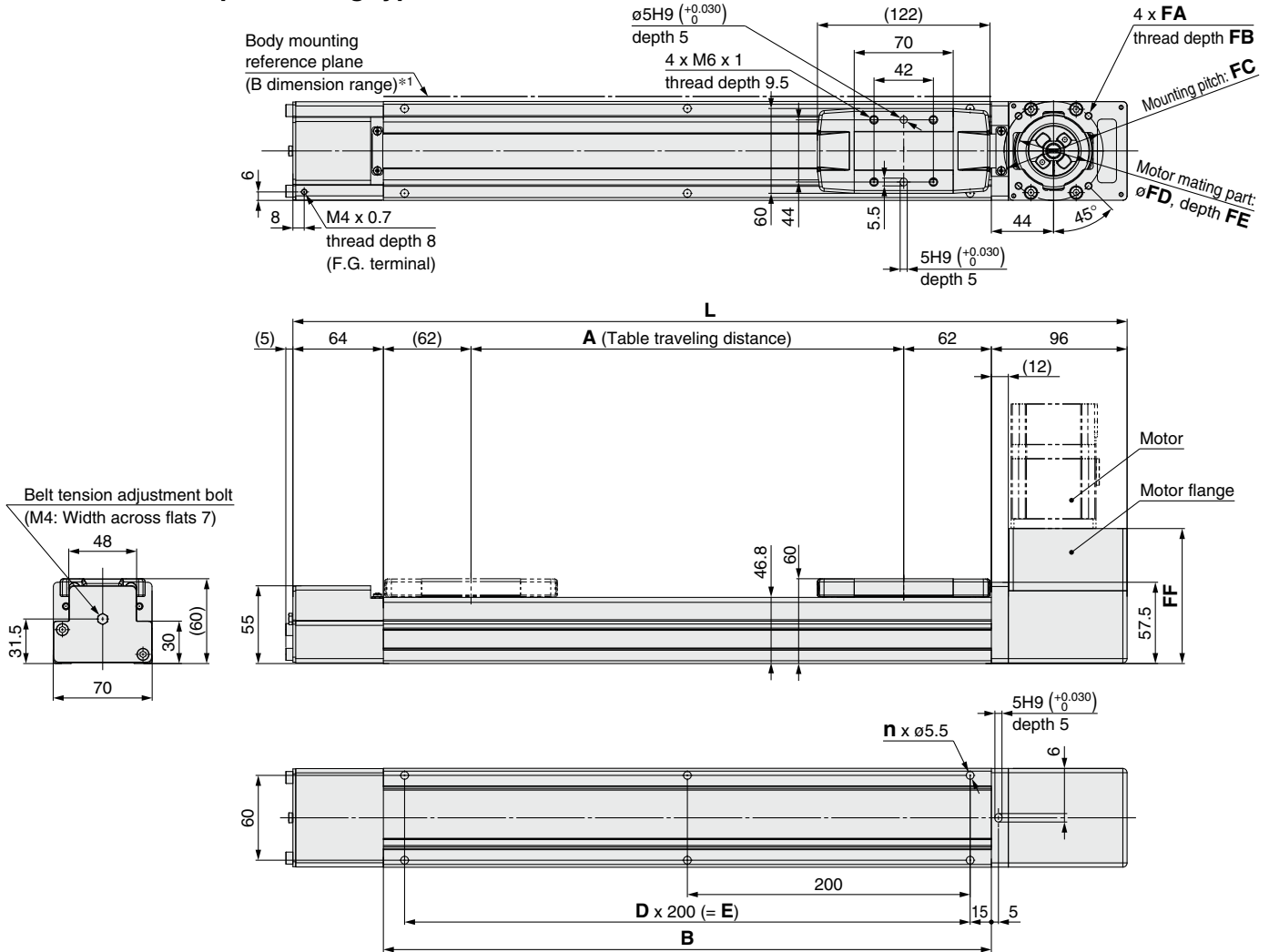
LEFB Series

Motorless Type

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

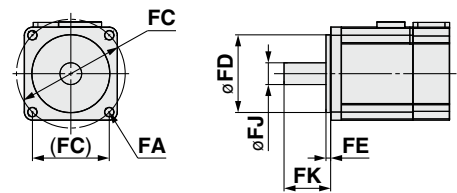
Dimensions: Belt Drive

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. (Recommended height 5 mm)

Applicable motor dimensions



Dimensions

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

Motor Mounting, Applicable Motor Dimensions [mm]

Mounting type	FA		FB	FC	FD	FE (Max.)	FF	FJ	FK
	Mounting type	Applicable motor							
NZ	M5 x 0.8	$\phi 5.8$	9	$\phi 70$	50	4	95.5	14	30 ±1
NY	M4 x 0.7	$\phi 4.5$	8	$\phi 70$	50	4	95.5	11	30 ±1
NX	M5 x 0.8	$\phi 5.8$	9	$\phi 63$	40*1	4.5*1	99.2	9	20 ±1
NW	M5 x 0.8	$\phi 5.8$	9	$\phi 70$	50	5	96.5	9	25 ±1
NV	M4 x 0.7	$\phi 4.5$	8	$\phi 63$	40*1	4.5*1	99.2	9	20 ±1
NU	M5 x 0.8	$\phi 5.8$	9	$\phi 70$	50	5	96.5	11	23 ±1
NT	M5 x 0.8	$\phi 5.8$	9	$\phi 70$	50	4	95.5	12	30 ±1
NM1	M4 x 0.7	$\phi 4.5$	8	□47.14	38.1*1	4.5*1	82.5	6.35*2	20 ±1
NM2	M4 x 0.7	$\phi 4.5$	8	□50	36*1	4.5*1	90.0	10	24 ±1

*1 Dimensions after mounting a ring spacer (Refer to page 865.)

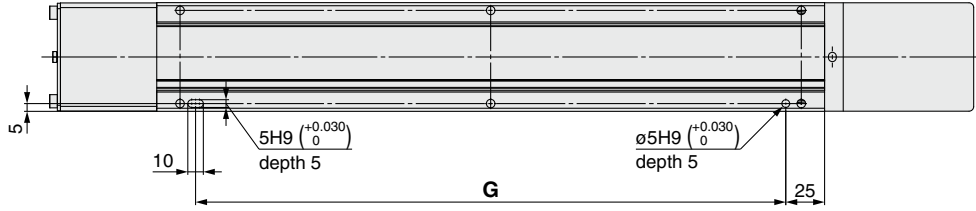
*2 Shaft type: D-cut shaft

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

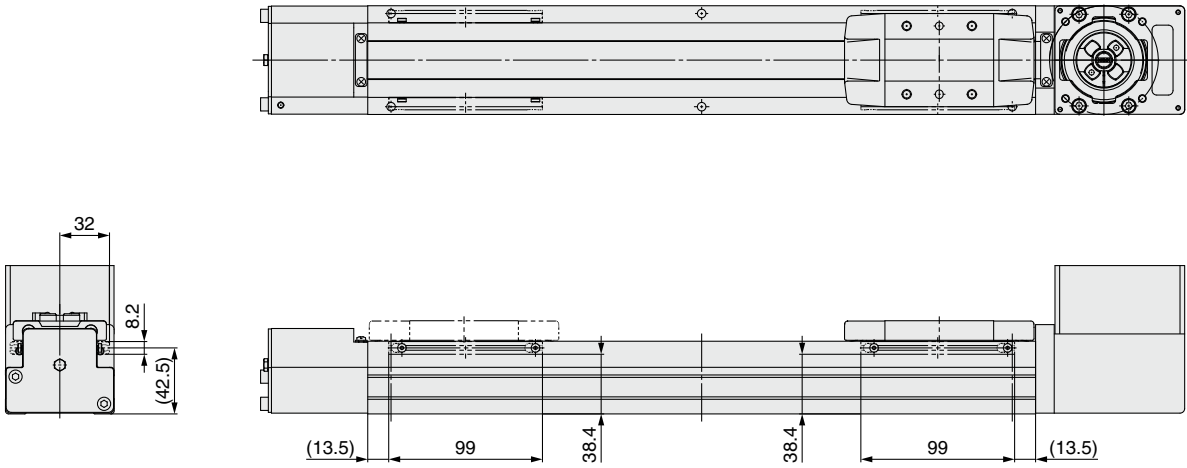
LEFB32/Motor top mounting type

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]

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

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Motorless

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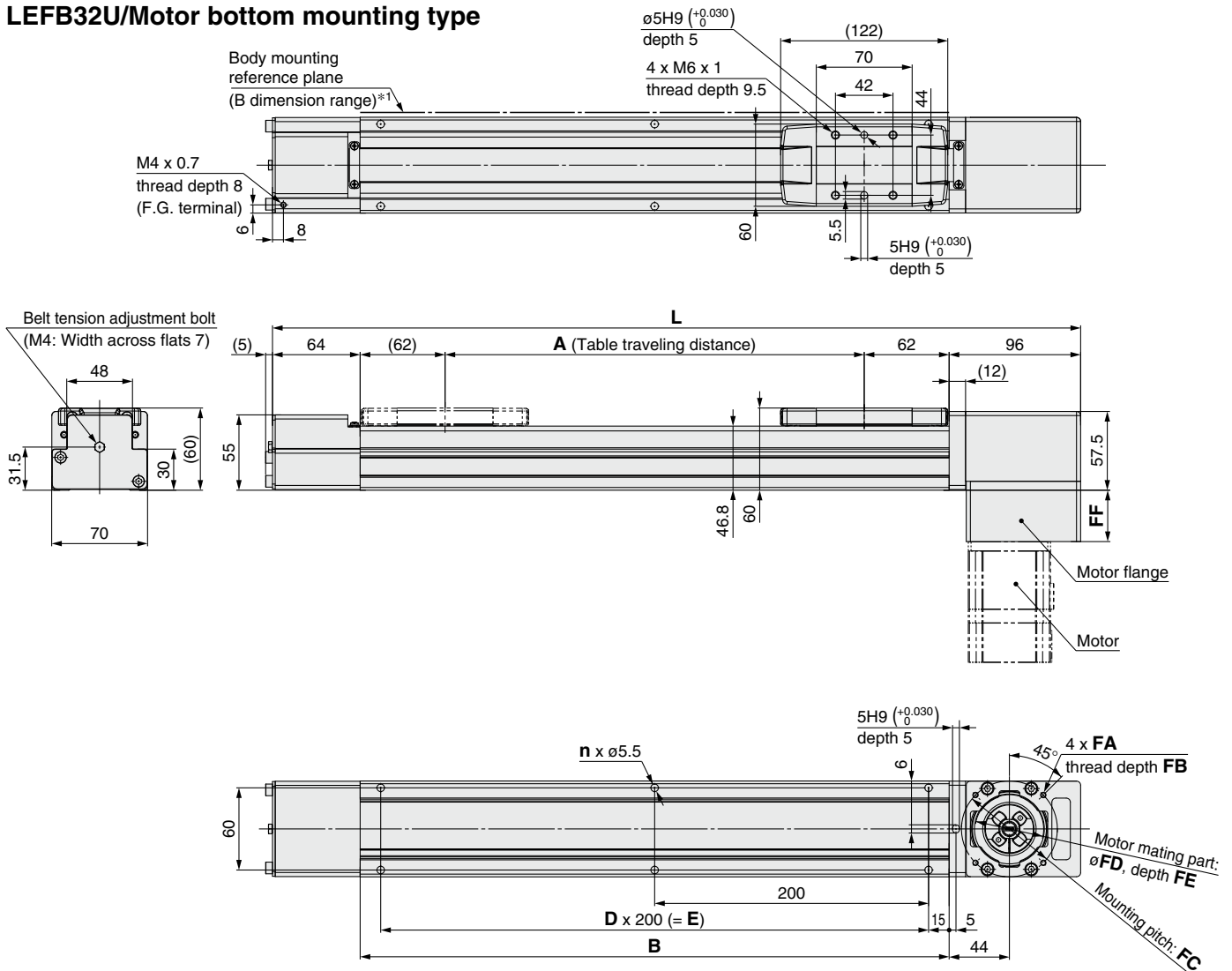
LEFB Series

Motorless Type

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

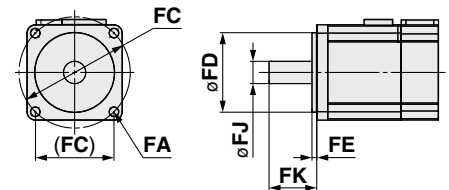
Dimensions: Belt Drive

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. (Recommended height 5 mm)

Applicable motor dimensions



Dimensions

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

Motor Mounting, Applicable Motor Dimensions [mm]

Mounting type	FA		FB	FC	FD	FE (Max.)	FF	FJ	FK
	Mounting type	Applicable motor							
NZ	M5 x 0.8	ø5.8	9	ø70	50	4	37.5	14	30 ±1
NY	M4 x 0.7	ø4.5	8	ø70	50	4	37.5	11	30 ±1
NX	M5 x 0.8	ø5.8	9	ø63	40*1	4.5*1	41.2	9	20 ±1
NW	M5 x 0.8	ø5.8	9	ø70	50	5	38.5	9	25 ±1
NV	M4 x 0.7	ø4.5	8	ø63	40*1	4.5*1	41.2	9	20 ±1
NU	M5 x 0.8	ø5.8	9	ø70	50	5	38.5	11	23 ±1
NT	M5 x 0.8	ø5.8	9	ø70	50	4	37.5	12	30 ±1
NM1	M4 x 0.7	ø4.5	8	□47.14	38.1*1	4.5*1	24.5	6.35*2	20 ±1
NM2	M4 x 0.7	ø4.5	8	□50	36*1	4.5*1	32.0	10	24 ±1

*1 Dimensions after mounting a ring spacer (Refer to page 865.)

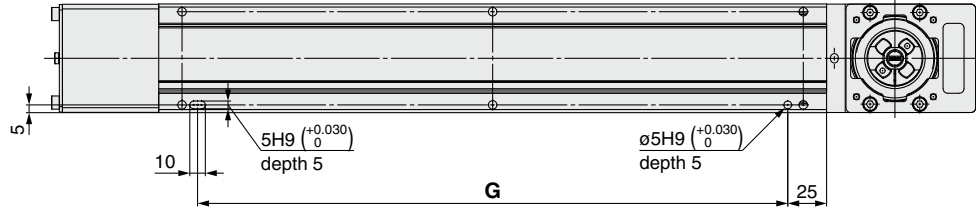
*2 Shaft type: D-cut shaft

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

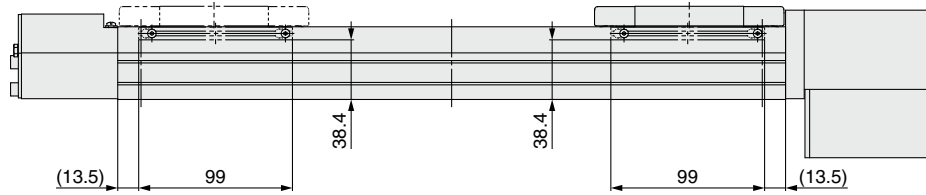
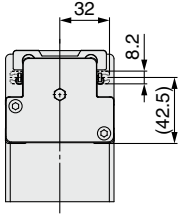
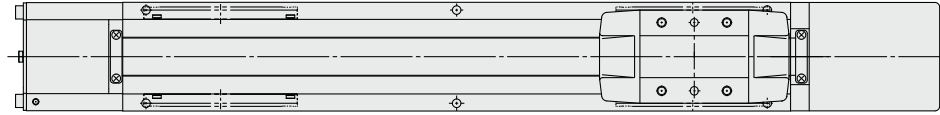
LEFB32U/Motor bottom mounting type

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]

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

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Motorless

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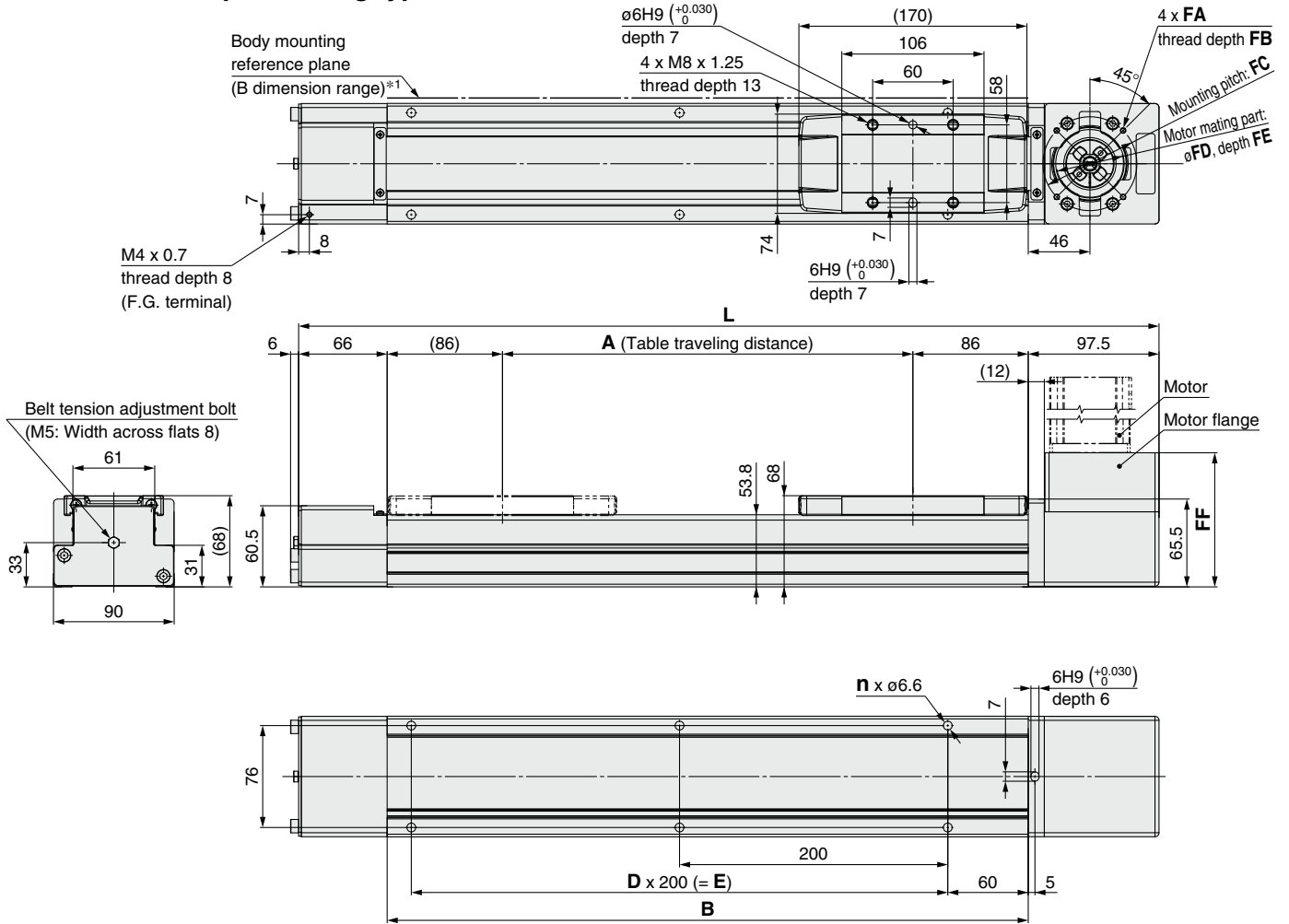
LEFB Series

Motorless Type

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

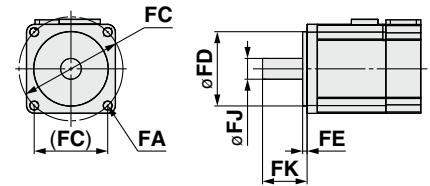
Dimensions: Belt Drive

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. (Recommended height 5 mm)

Applicable motor dimensions



Dimensions

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

Motor Mounting, Applicable Motor Dimensions [mm]

Mounting type	FA		FB	FC	FD	FE (Max.)	FF	FJ	FK
	Mounting type	Applicable motor							
NZ	M5 x 0.8	ø5.8	9	ø70	50	4	100	14	30 ±1
NY	M4 x 0.7	ø4.5	8	ø70	50	4	100	14	30 ±1
NX	M5 x 0.8	ø5.8	9	ø63	40*1	4.5*1	103.2	9	20 ±1
NW	M5 x 0.8	ø5.8	9	ø70	50	5	101	9	25 ±1
NV	M4 x 0.7	ø4.5	8	ø63	40*1	4.5*1	103.2	9	20 ±1
NU	M5 x 0.8	ø5.8	9	ø70	50	5	101	11	23 ±1
NT	M5 x 0.8	ø5.8	9	ø70	50	4	100	12	30 ±1
NM1	M4 x 0.7	ø4.5	8	□47.14	38.1*1	4.5*1	87	6.35*2	20 ±1
NM2	M4 x 0.7	ø4.5	8	□50	36*1	4.5*1	94.0	10	24 ±1

*1 Dimensions after mounting a ring spacer (Refer to page 865.)

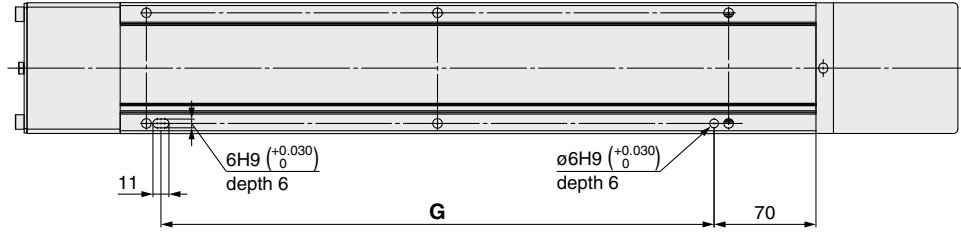
*2 Shaft type: D-cut shaft

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

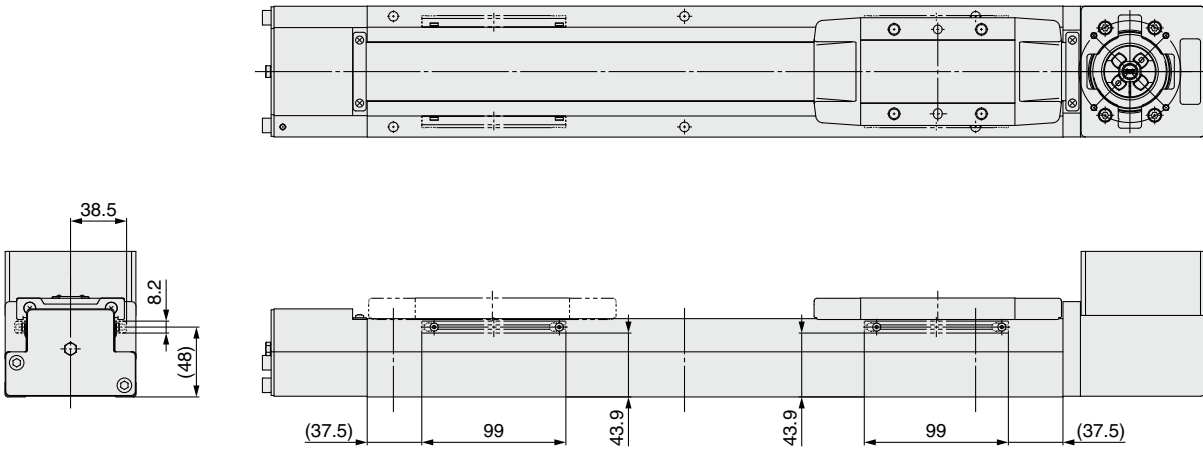
LEFB40/Motor top mounting type

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]

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

LEFS
LEFB

LEJS
LEJB

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LEY
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LES
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LER

LEH

LEY-X5

11-LEFS

11-LEJS

25A-

LEC

JXC

LECS
LECS-T

LECY

Motorless

LAT3

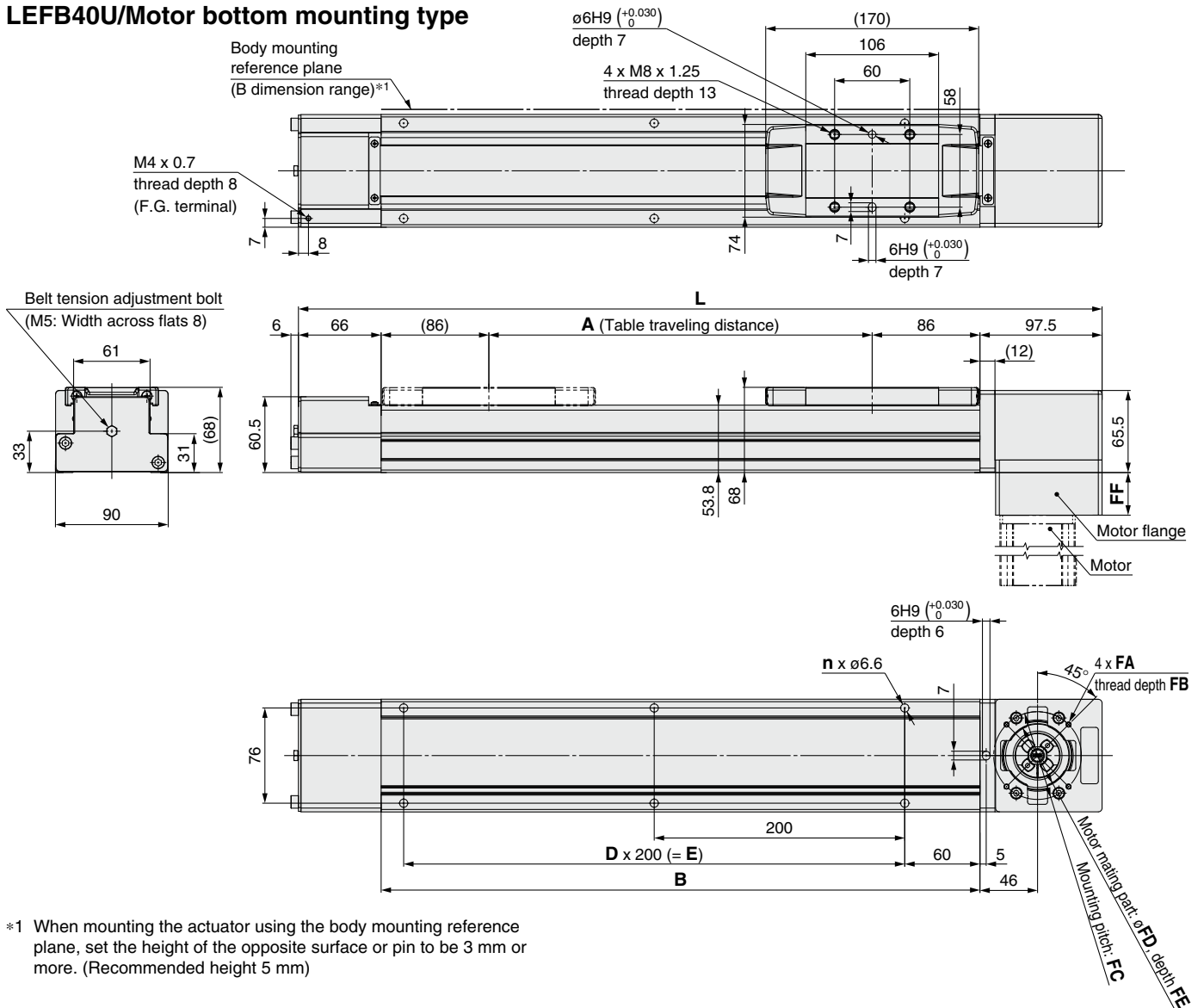
LEFB Series

Motorless Type

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

LEFB40U/Motor bottom mounting type

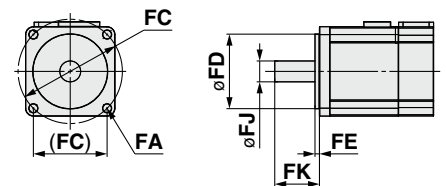


*1 When mounting the actuator using the body mounting reference plane, set the height of the opposite surface or pin to be 3 mm or more. (Recommended height 5 mm)

Dimensions [mm]

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

Applicable motor dimensions



Motor Mounting, Applicable Motor Dimensions [mm]

Mounting type	FA		FB	FC	FD	FE (Max.)	FF	FJ	FK
	Mounting type	Applicable motor							
NZ	M5 x 0.8	ø5.8	9	ø70	50	4	34	14	30 ±1
NY	M4 x 0.7	ø4.5	8	ø70	50	4	34	14	30 ±1
NX	M5 x 0.8	ø5.8	9	ø63	40*1	4.5*1	37.2	9	20 ±1
NW	M5 x 0.8	ø5.8	9	ø70	50	5	35	9	25 ±1
NV	M4 x 0.7	ø4.5	8	ø63	40*1	4.5*1	37.2	9	20 ±1
NU	M5 x 0.8	ø5.8	9	ø70	50	5	35	11	23 ±1
NT	M5 x 0.8	ø5.8	9	ø70	50	4	34	12	30 ±1
NM1	M4 x 0.7	ø4.5	8	□47.14	38.1*1	4.5*1	21	6.35*2	20 ±1
NM2	M4 x 0.7	ø4.5	8	□50	36*1	4.5*1	28.0	10	24 ±1

*1 Dimensions after mounting a ring spacer (Refer to page 865.)

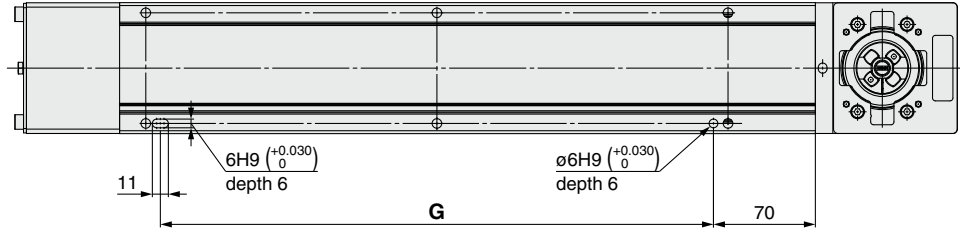
*2 Shaft type: D-cut shaft

Refer to the "Motor Mounting" on page 865 for details about motor mounting and included parts.

Dimensions: Belt Drive

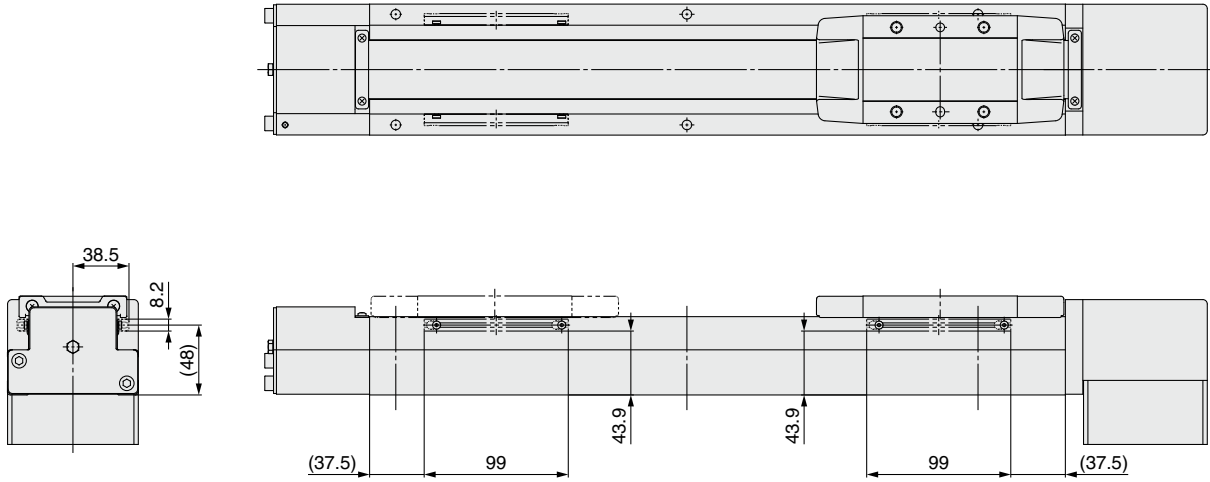
LEFB40U/Motor bottom mounting type

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]

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

LEFS
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LEY-X5

11-LEFS

11-LEJS

25A-

LEC

JXC

LECS
LECS-T

LECY

Motorless

LAT3

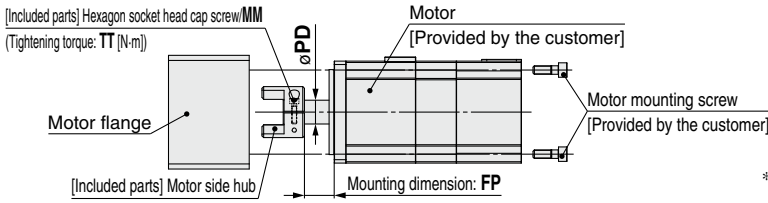
LEFB Series

Motorless Type

- When mounting a hub, remove all oil content, dust, and dirt adhered to the shaft and the inside of the hub.
- This product does not include the motor and motor mounting screws. (Provided by the customer)
- Prepare a motor with a round shaft end.
For the "NM1," prepare a D-cut shaft.
- Take measures to prevent the loosening of the motor mounting screws and hexagon socket head set screws.

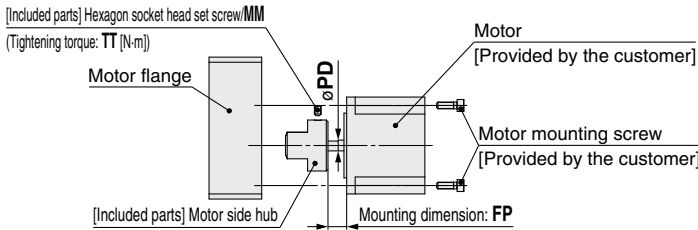
Motor Mounting

Mounting type: NZ, NY, NX, NW, NV, NU, NT, NM2



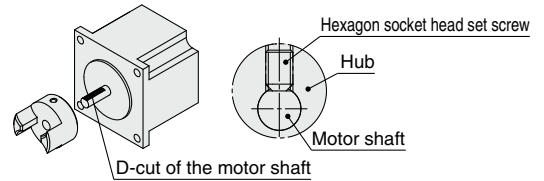
* Note for mounting a motor to the NM2 mounting type
Motor mounting screws for the LEFB25 are fixed starting from the motor flange side. (Opposite of the drawing)

Mounting type: NM1



* Note for mounting a hub to the NM1 mounting type
When mounting the hub to the motor, make sure to position the set screw vertical to the D-cut surface of the motor shaft. (Refer to the figure shown below)

* Motor mounting screws for the LEFB25 are fixed starting from the motor flange side. (Opposite of the drawing)

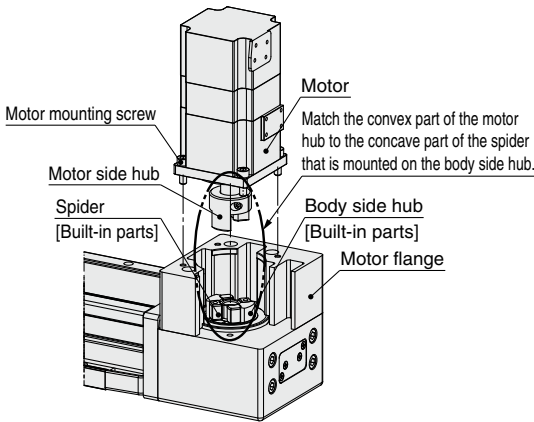


Motor Mounting Diagram

Mounting type: NZ, NY, NW, NU, NT

Mounting procedure

- 1) Secure the motor hub to the motor (provided by the customer) with the MM hexagon socket head cap screw.
- 2) Check the motor hub position, and then insert it. (Refer to the mounting diagram.)
- 3) Secure the motor to the motor flange with the motor mounting screws (provided by the customer).

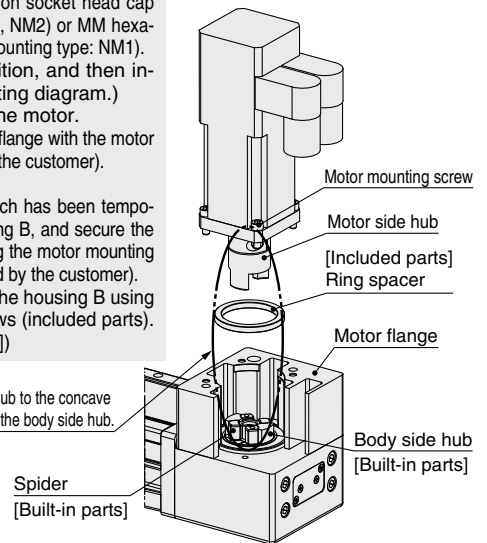


Mounting type: NX, NV, NM1, NM2

Mounting procedure

- 1) Secure the motor hub to the motor (provided by the customer) with the MM hexagon socket head cap screw (Mounting type: NX, NV, NM2) or MM hexagon socket head set screw (Mounting type: NM1).
- 2) Check the motor hub position, and then insert it. (Refer to the mounting diagram.)
- 3) Mount the ring spacer to the motor.
- 4) Secure the motor to the motor flange with the motor mounting screws (provided by the customer).
- * For the LEFB25
- 4) Remove the motor flange, which has been temporarily mounted, from the housing B, and secure the motor to the motor flange using the motor mounting screws (that are to be prepared by the customer).
- 5) Tighten the motor flange to the housing B using motor flange mounting screws (included parts). (Tightening torque: 1.5 [N·m])

Match the convex part of the motor hub to the concave part of the spider that is mounted on the body side hub.



Size: 25 Hub Mounting Dimensions [mm]

Mounting type	MM	TT	PD	FP
NZ	M2.5 x 10	1.0	8	11
NY	M2.5 x 10	1.0	8	11
NX	M2.5 x 10	1.0	8	5.5
NM1	M3 x 4	0.63	5	11
NM2	M2.5 x 10	1.0	6	11

Size: 32 Hub Mounting Dimensions [mm]

Mounting type	MM	TT	PD	FP
NZ	M3 x 12	1.5	14	17.5
NY	M4 x 12	2.5	11	17.5
NX	M4 x 12	2.5	9	5.2
NW	M4 x 12	2.5	9	12.5
NV	M4 x 12	2.5	9	5.2
NU	M4 x 12	2.5	11	12.5
NT	M3 x 12	1.5	12	17.5
NM1	M4 x 5	1.5	6.35	4.5
NM2	M4 x 12	2.5	10	12

Size: 40 Hub Mounting Dimensions [mm]

Mounting type	MM	TT	PD	FP
NZ	M3 x 12	1.5	14	17.5
NY	M3 x 12	1.5	14	17.5
NX	M4 x 12	2.5	9	5.2
NW	M4 x 12	2.5	9	13
NV	M4 x 12	2.5	9	5.2
NU	M4 x 12	2.5	11	13
NT	M3 x 12	1.5	12	17.5
NM1	M4 x 5	1.5	6.35	5
NM2	M4 x 12	2.5	10	12

Included Parts List

Size: 25

Description	Quantity				
	Mounting type				
	NZ	NY	NX	NM1	NM2
Motor side hub	1	1	1	1	1
Hexagon socket head cap screw/set screw (to secure the hub)*1	1	1	1	1	1
Hexagon socket head cap screw M4 x 30 (to secure the motor flange)	—	—	—	2	2
Ring spacer	—	—	—	1	1

*1 For screw sizes, refer to the hub mounting dimensions.

Size: 32, 40

Description	Quantity									
	Mounting type									
	NZ	NY	NX	NW	NV	NU	NT	NM1	NM2	
Motor side hub	1	1	1	1	1	1	1	1	1	
Hexagon socket head cap screw/set screw (to secure the hub)*1	1	1	1	1	1	1	1	1	1	
Ring spacer	—	—	1	—	1	—	—	1	1	

*1 For screw sizes, refer to the hub mounting dimensions.

LEFB Series Motor Mounting Parts

Motor Flange Option

After purchasing the product, the motor can be changed to the mounting types shown below by replacing with this option. (Except NM1)
Use the following part numbers to select a compatible motor flange option and place an order.

How to Order

LEFB-MF25-NZ

Belt drive

①

②

① Size

25	For LEF□25
32	For LEF□32
40	For LEF□40

② Mounting type

NZ	NV
NY	NU
NX	NT
NW	NM2

* Select only NZ, NY, NX or NM2 for the LEFB-MF25.

Compatible Motors and Mounting Types

Applicable motor model		Size/Mounting type													
Manufacturer	Series	25					32/40								
		NZ	NY	NX	NM1	NM2	NZ	NY	NX	NW	NV	NU	NT	NM1	NM2
Mitsubishi Electric Corporation	MELSERVO JN/J4/J5	●	—	—	—	—	●	—	—	—	—	—	—	—	—
YASKAWA Electric Corporation	Σ-V/7	●	—	—	—	—	●	—	—	—	—	—	—	—	
SANYO DENKI CO., LTD.	SANMOTION R	●	—	—	—	—	●	—	—	—	—	—	—	—	
OMRON Corporation	OMNUC G5/1S	●	—	—	—	—	—	●	—	—	—	—	—	—	
Panasonic Corporation	MINAS A5/A6	● (MHMF only)	●	—	—	—	—	●	—	—	—	—	—	—	
FANUC CORPORATION	βis (-B)	●	—	—	—	—	● (β1 only)	—	—	●	—	—	—	—	
NIDEC SANKYO CORPORATION	S-FLAG	●	—	—	—	—	●	—	—	—	—	—	—	—	
KEYENCE CORPORATION	SV/SV2	●	—	—	—	—	●	—	—	—	—	—	—	—	
FUJI ELECTRIC CO., LTD.	ALPHA7	●	—	—	—	—	●	—	—	—	—	—	—	—	
MinebeaMitsumi Inc.	Hybrid stepping motors	—	—	—	●	—	—	—	—	—	—	—	—	●	
Shinano Kenshi Co., Ltd.	CSB-BZ	—	—	—	●	—	—	—	—	—	—	—	—	—	
ORIENTAL MOTOR Co., Ltd.	α-STEP AR/AZ	—	—	—	—	● (46 only)	—	—	—	—	—	—	—	●	
FASTECH Co.,Ltd.	Ezi-SERVO	—	—	—	●	—	—	—	—	—	—	—	●	—	
Rockwell Automation, Inc. (Allen-Bradley)	Kinetix MP/VP/TL	● (TL only)	—	—	—	—	—	—	● (MP/VP only)	—	—	—	● (TL only)	—	
Beckhoff Automation GmbH	AM 30/31/80/81	●	—	—	—	—	—	—	● (80/81 only)	—	● (30 only)	● (31 only)	—	—	
Siemens AG	SIMOTICS S-1FK7	—	—	●	—	—	—	—	●	—	—	—	—	—	
Delta Electronics, Inc.	ASDA-A2	●	—	—	—	—	●	—	—	—	—	—	—	—	
ANCA Motion	AMD2000	●	—	—	—	—	●	—	—	—	—	—	—	—	

* When the LEF□25NM1□-□ is purchased, it is not possible to change to other mounting types.

LEFS
LEFB

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11-LEFS

11-LEJS

25A-

LEC□

JXC□

LECS□
LECS□-T

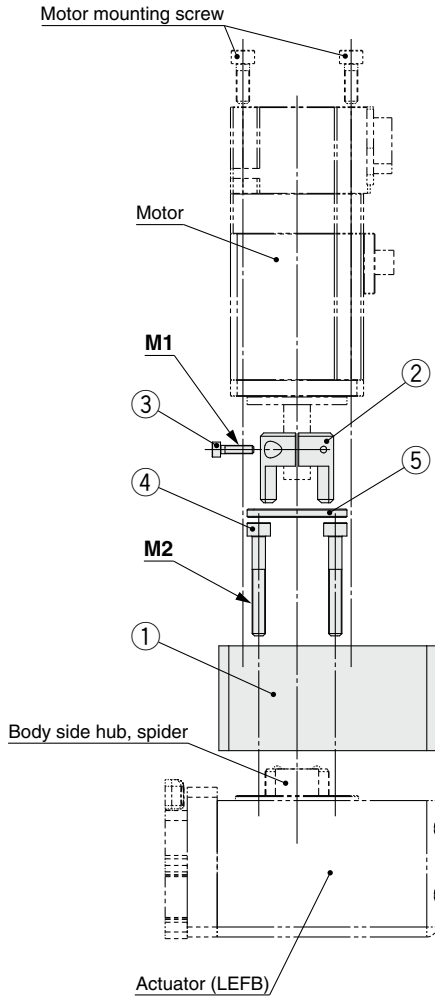
LECY□

Motor/less

LAT3

LEFB Series

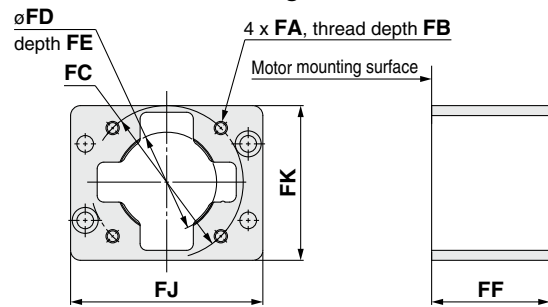
Dimensions: Motor Flange Option



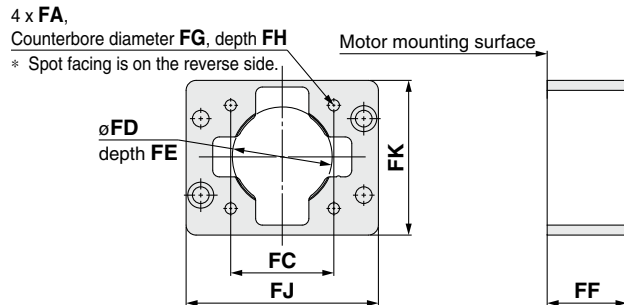
Component Parts

No.	Description	Quantity
1	Motor flange	1
2	Hub (Motor side)	1
3	Hexagon socket head cap screw (to secure the hub)	1
4	Hexagon socket head cap screw (to mount the motor flange)	2
5	Ring spacer (Only for mounting types "NM2" in size 25 and "NX," "NV," and "NM2" in sizes 32 and 40)	1

Motor flange details



For NM2



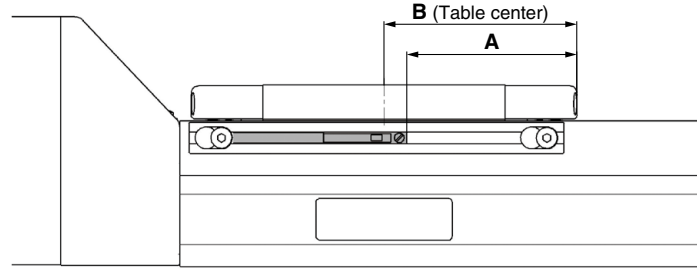
Dimensions

Size	Mounting type	FA	FB	FC	FD	FE	FF	FG	FH	FJ	FK	M1	M2	PD
25	NZ/NX	M4 x 0.7	8	ø46	30	3.5	31.5	—	—	57.8	65.5	M2.5 x 10	M4 x 30	8
	NY	M3 x 0.5	8	ø45	30	3.5	31.5	—	—	57.8	65.5	M2.5 x 10	M4 x 30	8
	NM2	ø3.4	—	□31	22*1	2.5*1	31.5	6	21	57.8	65.5	M2.5 x 10	M4 x 30	6
32	NZ	M5 x 0.8	9	ø70	50	4	44	—	—	69.8	83.5	M3 x 12	M5 x 45	14
	NY	M4 x 0.7	8	ø70	50	4	44	—	—	69.8	83.5	M4 x 12	M5 x 45	11
	NX	M5 x 0.8	9	ø63	40*1	5	47.7	—	—	69.8	83.5	M4 x 12	M5 x 45	9
	NW	M5 x 0.8	9	ø70	50	5	45	—	—	69.8	83.5	M4 x 12	M5 x 45	9
	NV	M4 x 0.7	8	ø63	40*1	5	47.7	—	—	69.8	83.5	M4 x 12	M5 x 45	9
	NU	M5 x 0.8	9	ø70	50	5	45	—	—	69.8	83.5	M4 x 12	M5 x 45	11
	NT	M5 x 0.8	9	ø70	50	4	44	—	—	69.8	83.5	M3 x 12	M5 x 45	12
NM2	M4 x 0.7	8	□50	36*1	4.5*1	38.5	—	—	69.8	83.5	M4 x 12	M5 x 25	10	
40	NZ	M5 x 0.8	9	ø70	50	4	44	—	—	89.8	85	M3 x 12	M5 x 45	14
	NY	M4 x 0.7	8	ø70	50	4	44	—	—	89.8	85	M3 x 12	M5 x 45	14
	NX	M5 x 0.8	9	ø63	40*1	5	47.2	—	—	89.8	85	M4 x 12	M5 x 45	9
	NW	M5 x 0.8	9	ø70	50	5	45	—	—	89.8	85	M4 x 12	M5 x 45	9
	NV	M4 x 0.7	8	ø63	40*1	5	47.2	—	—	89.8	85	M4 x 12	M5 x 45	9
	NU	M5 x 0.8	9	ø70	50	5	45	—	—	89.8	85	M4 x 12	M5 x 45	11
	NT	M5 x 0.8	9	ø70	50	4	44	—	—	89.8	85	M3 x 12	M5 x 45	12
NM2	M4 x 0.7	8	□50	36*1	4.5*1	38	—	—	89.8	85	M4 x 12	M5 x 25	10	

*1 Dimensions after mounting a ring spacer

LEF Series Auto Switch Mounting

Auto Switch Mounting Position



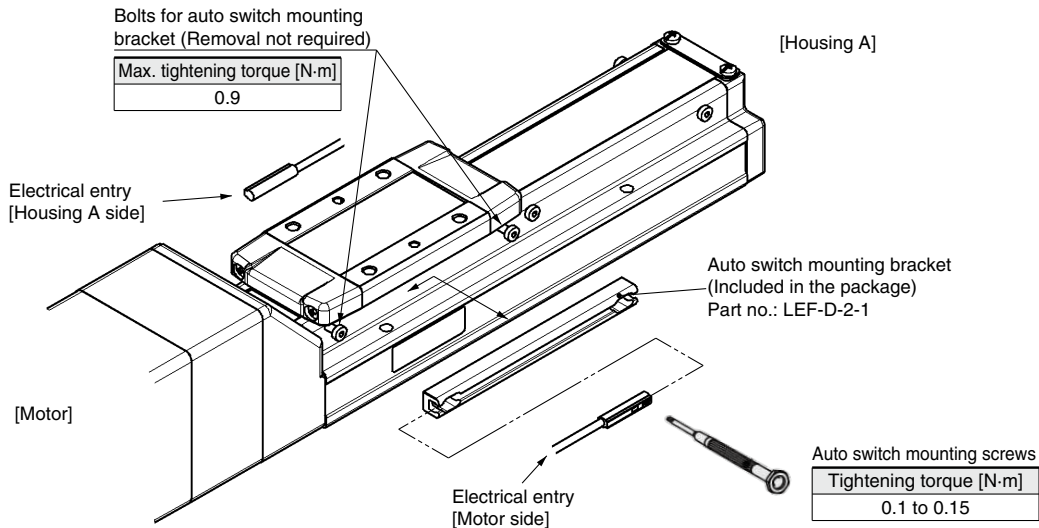
Model	Size	A	B	Operating range
LEFS LEFB	25	45	51	4.9
	32	55	61	3.9
	40	79	85	5.3

- * 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 strokes of 99 mm or less, only four bolts are tightened on the motor side.

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



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

Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□, D-M9□V (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 marking, RoHS		

Grommet

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



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 Heavy-duty Lead Wire Specifications

Auto switch model		D-M9N	D-M9P	D-M9B
Sheath	Outside diameter [mm]	2.6		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
	Outside diameter [mm]	0.88		
Conductor	Effective area [mm ²]	0.15		
	Strand diameter [mm]	0.05		
Minimum bending radius [mm] (Reference values)		17		

* Refer to page 996 for solid state auto switch common specifications.

* Refer to page 996 for lead wire lengths.

Weight

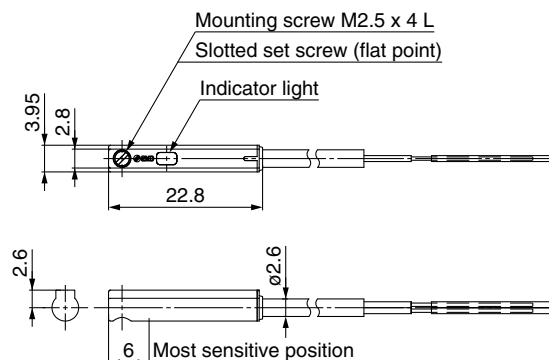
[g]

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)



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

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

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 marking, RoHS					

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model	D-M9NE(V)	D-M9PE(V)	D-M9BE(V)
Sheath	Outside diameter [mm]		
	2.6		
Insulator	Number of cores		2 cores (Brown/Blue)
	Outside diameter [mm]		0.88
Conductor	Effective area [mm ²]		0.15
	Strand diameter [mm]		0.05
Minimum bending radius [mm] (Reference values)			
17			

* Refer to page 996 for solid state auto switch common specifications.
* Refer to page 996 for lead wire lengths.

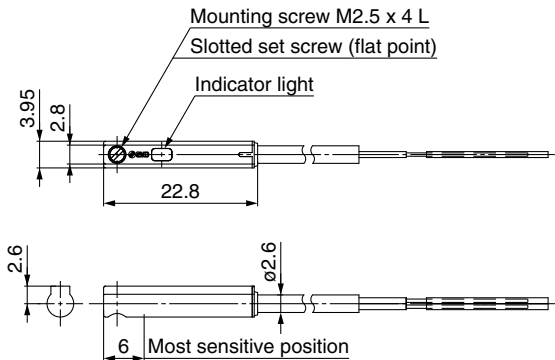
Weight

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

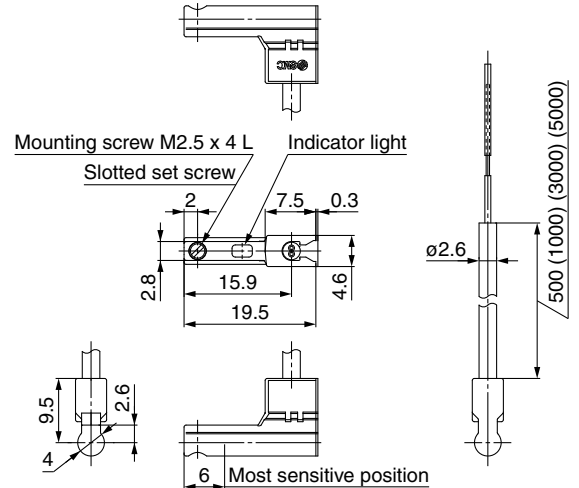
*1 The 1 m and 5 m options are produced upon receipt of order.

Dimensions

D-M9□E



D-M9□EV



- LEFS
- LEFB
- LEJS
- LEJB
- LEL
- LEM
- LEYG
- LESH
- LEPS
- LER
- LEH
- LEY-X5
- LEFS
- LEFS
- LEFS
- 25A-
- LEC
- JXC
- LECS
- LECS-T
- LECY
- Motorless
- LAT3

2-Color Indicator Solid State Auto Switch Direct Mounting Type

D-M9NW/D-M9PW/D-M9BW



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, D-M9□WV (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 marking, RoHS		

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-M9NW	D-M9PW	D-M9BW
Sheath	Outside diameter [mm]	2.6		
Insulator	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
	Outside diameter [mm]	0.88		
Conductor	Effective area [mm ²]	0.15		
	Strand diameter [mm]	0.05		
Minimum bending radius [mm] (Reference values)		17		

- * Refer to page 996 for solid state auto switch common specifications.
- * Refer to page 996 for lead wire lengths.

Weight

[g]

Auto switch model		D-M9NW	D-M9PW	D-M9BW
Lead wire length	0.5 m (Nil)	8	7	7
	1 m (M)	14	13	13
	3 m (L)	41	38	38
	5 m (Z)	68	63	63

Dimensions

[mm]

D-M9□W

