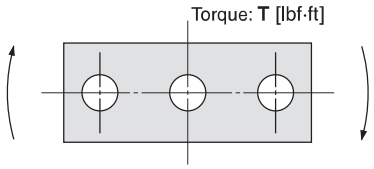
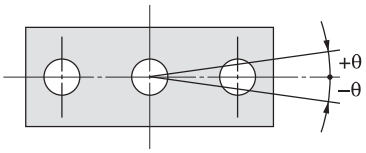
Allowable Rotational Torque of Plate



T [lbf·ft]

Model	Stroke [mm]				
	30	50	100	200	300
LEYG16M	0.52	0.42	0.77	0.41	—
LEYG16L	0.60	1.09	0.72	0.42	—
LEYG25M	1.15	0.95	2.58	1.61	1.00
LEYG25L	1.12	2.63	1.82	1.51	1.06
LEYG32M	1.88	1.54	3.98	2.40	1.39
LEYG32L	2.07	4.25	2.99	2.38	1.71

Non-rotating Accuracy of Plate



Size	Non-rotating accuracy θ	
	LEYG□M	**LEYG□L**
16	±0.06°	±0.07°
25	±0.05°	±0.06°
32		

Electric Actuator/Guide Rod Type

Step Motor (Servo/24 VDC) | Servo Motor (24 VDC)

Series LEYG

LEYG16, 25, 32

How to Order

LEYG 16 M ☐ ☐ B – 50 ☐ ☐ – S 1 6N 1 ☐

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬ ⓭

❶ Size

16
25
32

❷ Bearing type

M	Sliding bearing
L	Ball bushing bearing

❸ Motor mounting position

Nil	Top mounting type
D	In-line type

❹ Motor type

Symbol	Type	Size			Compatible controller
		LEYG16	LEYG25	LEYG32	
Nil	Step motor (Servo/24 VDC)	●	●	●	LECP6 LECP1
A	Servo motor Note 1) (24 VDC)	●	●	—	LECA6

❺ Lead [mm]

Symbol	LEYG16	LEYG25	LEYG32
A	10	12	16
B	5	6	8
C	2.5	3	4

❻ Stroke [mm]

30	30
to	to
300	300

∗ Refer to the applicable stroke table.

❼ Motor option∗1

Nil	Without option
C	With motor cover
B	With lock∗2

∗1 When [With lock] is selected, [With motor cover] cannot be selected.

∗2 For 30 stroke or less of size 16 with [Motor mounting position: Top mounting type or right/left side parallel type], when [With lock] is selected, the motor projects through the end of the body.
Select after confirming interface with such as work pieces.

❽ Guide option

Nil	Without guide
F	With grease holding function

∗ Only available for size 25 and 32 slide bearings. (Refer to "Construction" on page 29.)

❾ Actuator cable type∗1

Nil	Without cable
S	Standard cable∗2
R	Robotic cable (Flexible cable)

∗1 The standard cable should be used on fixed parts. For using on moving parts, select the robotic cable.

∗2 Only available for the motor type "Step motor."

⚠ Caution

Note 1) CE-compliant products

① EMC compliance was tested by combining the electric actuator LEYG series and the controller LEC series. The EMC depends on the configuration of the customer's control panel and the relationship with other electrical equipment and wiring. Therefore conformity to 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 conformity to the EMC directive for the machinery and equipment as a whole.

② For the servo motor (24 VDC) specification, EMC compliance was tested by installing a noise filter set (LEC-NFA). Refer to page 47 for the noise filter set. Refer to the LECA Operation Manual for installation.

∗ **Applicable stroke table**

Model \ Stroke [mm]	30	50	100	150	200	250	300	Manufacturable stroke range [mm]
LEYG16	●	●	●	●	●	—	—	10 to 200
LEYG25	●	●	●	●	●	●	●	15 to 300
LEYG32	●	●	●	●	●	●	●	20 to 300

∗ Consult with SMC for the manufacture of intermediate strokes other than those specified on the above.

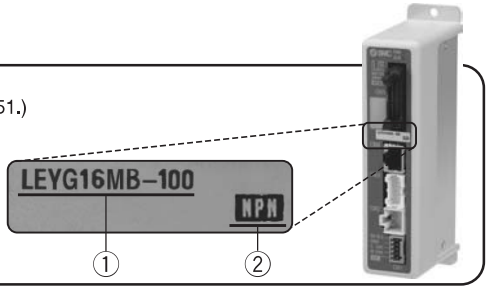
The actuator and controller are sold as a package. (Controller → Pages 39 and 51.)

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

<Check the following before use.>

① Check that actuator label for model number. This matches the controller.

② Check Parallel I/O configuration matches (NPN or PNP).



∗ Refer to the operation manual for using the products. Please download it via our website. http://www.smcworld.com

Specifications

Step Motor (Servo/24 VDC)

Model				LEYG16 M/L			LEYG25 M/L			LEYG32 M/L		
Actuator specifications	Stroke [mm] Note 1)			30, 50, 100, 150, 200			30, 50, 100, 150, 200, 250, 300			30, 50, 100, 150, 200, 250, 300		
	Note 2) Work load [lb]	Horizontal	Acceleration/Deceleration at 3000 [mm/s²]	8.8	24.3	44.0	26.5	66.1	66.1	44.0	88.2	88.2
			Acceleration/Deceleration at 2000 [mm/s²]	13.2	37.5	66.1	39.7	110	110	66.1	132.2	132
		Vertical	Acceleration/Deceleration at 3000 [mm/s²]	3.3	7.7	16.5	15.4	33.0	63.9	19.8	44.0	90.4
	Pushing force [lbf] Note 3) 4) 5)			3.15 to 8.54	6.07 to 16.6	11.5 to 31.7	14.2 to 27.4	28.3 to 53.5	52.2 to 101.6	18 to 42.5	35.1 to 83.2	66.5 to 158.9
	Speed [mm/s] Note 5)			15 to 500	8 to 250	4 to 125	18 to 500	9 to 250	5 to 125	24 to 500	12 to 250	6 to 125
	Max. acceleration/deceleration [mm/s²]			3000								
	Pushing speed [mm/s] Note 6)			50 or less			35 or less					
	Positioning repeatability [mm]			±0.02						30 or less		
	Screw lead [mm]			10	5	2.5	12	6	3	16	8	4
	Impact/Vibration resistance [m/s²] Note 7)			50/20								
	Actuation type			Ball screw + Belt (Motor parallel)								
	Guide type			Sliding bearing (LEYG□M), Ball bushing bearing (LEYG□L)								
	Operating temp. range			41 to 104°F (5 to 40°C)								
	Operating humidity range [%RH]			90 or less (No condensation)								
Electric specifications	Motor size			□28			□42			□56.4		
	Motor type			Step motor (Servo/24 VDC)								
	Encoder			Incremental A/B phase (800 pulse/rotation)								
	Rated voltage [V]			24 VDC ±10%								
	Power consumption [W] Note 8)			23			40			50		
	Standby power consumption when operating [W] Note 9)			16			15			48		
	Momentary max. power consumption [W] Note 10)			43			48			104		
	Controller weight lb [kg]			0.33 (0.15) (Screw mounting), 0.37 (0.17) (DIN rail mounting)								
Lock unit specifications	Type Note 11)			Non-magnetizing operation type								
	Holding force [lbf]			4.5	8.77	17.5	17.5	35.3	66.1	24.3	48.6	94.6
	Power consumption [W] Note 12)			3.6			5			5		
	Rated voltage [V]			24 VDC ±10%								

Note 1) The intermediate strokes are produced upon receipt of order.

Note 2) Horizontal: The maximum value of the work load for the positioning operation. For the pushing operation, the maximum work load is equal to the "Vertical work load". An external guide is necessary to support the load. The actual work load and transfer speed will depend on the condition of the external guide.
Vertical: Speed is dependent on the work load. Check "Model Selection" on page 1.

Set acceleration/deceleration values to be 3000 [mm/s²] or less.

Note 3) Pushing force accuracy is ±20% (F.S.).

Note 4) Setting range of "Pushing force" for LEYG16 is from 35% to 85%, for LEYG25 is from 35% to 65%, and for LEYG32 is from 35% to 85%. It is possible that "Pushing force" and "Duty ratio" changes dependent on the set value. Check "Model Selection" on page 2.

Note 5) The speed and force may change depending on the cable length, load and mounting conditions. Furthermore, if the cable length exceeds 5 m then it will decrease by up to 10% for each 5 m. (At 15 m: Reduced by up to 20%)

Note 6) Pushing speed is the allowable speed for the pushing operation.

Note 7) Impact resistance: No malfunction occurred when it was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. Test was performed in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the actuator in the initial state.)

Note 8) Power consumption (including the controller) is for when the actuator is operating.

Note 9) Standby power consumption when operating (including the controller) is for when the actuator is stopped in the set position during operation, except during pushing operation.

Note 10) Momentary max. power consumption (including the controller) is for when the actuator is operating. This value can be used for the selection of the power supply.

Note 11) With lock only

Note 12) For an actuator with lock, add the power consumption for the lock.

Specifications

Servo Motor (24 VDC)

Model				LEYG16$^{M}_{L}$A			LEYG25$^{M}_{L}$A		
Actuator specifications	Stroke [mm] Note 1)			30, 50, 100, 150, 200			30, 50, 100, 150 200, 250, 300		
	Work load [lb] Note 2)	Horizontal	Acceleration/Deceleration at 3000 [mm/s²]	6.6	13.2	26.5	15.4	33.0	66.1
		Vertical	Acceleration/Deceleration at 3000 [mm/s²]	3.3	7.7	16.5	4.4	11.0	24.3
	Pushing force [lbf] Note 3) 4)			3.6 to 6.74	6.74 to 13.0	12.8 to 25.0	4.04 to 7.87	8.32 to 16.2	14.8 to 29.2
	Speed [mm/s]			15 to 500	8 to 250	4 to 125	18 to 500	9 to 250	5 to 125
	Max. acceleration/deceleration [mm/s²]			3000					
	Pushing speed [mm/s] Note 5)								
	Positioning repeatability [mm]			50 or less		±0.02	35 or less		
	Screw lead [mm]			10	5	2.5	12	6	3
	Impact/Vibration resistance [m/s²] Note 6)			50/20					
	Actuation type			Ball screw + Belt (Motor parallel)					
	Guide type			Sliding bearing (LEYG□M), Ball bushing bearing (LEYG□L)					
	Operating temp. range			41 to 104°F (5 to 40°C)					
	Operating humidity range [%]			90 RH or less (No condenstation)					
Electric specifications	Motor size			□28			□42		
	Motor output [W]			30			36		
	Motor type			Servo motor (24 VDC)					
	Encoder			Incremental A/B (800 pulse/rotation)/Z phase					
	Rated voltage [V]			24 VDC ±10%					
	Power consumption [W] Note 7)			40			86		
	Standby power consumption when operating [W] Note 8)			4 (Horizontal)/6 (Vertical)			4 (Horizontal)/12 (Vertical)		
	Momentary max. power consumption [W] Note 9)			59			96		
	Controller weight lb [kg]			0.33 (0.15) (Screw mounting), 0.37 (0.17) (DIN rail mounting)					
Lock unit specifications	Type Note 10)			Non-magnetizing operation type					
	Holding force [lbf]			4.5	8.77	17.5	17.5	35.3	66.1
	Power consumption [W] Note 11)			3.6			5		
	Rated voltage [V]			24 VDC ±10%					

Note 1) Strokes shown in ( ) and the intermediate strokes are produced upon receipt of order.
Note 2) Horizontal: The maximum value of the work load for the positioning operation. For the pushing operation, the maximum work load is equal to the "Vertical work load". The external guide is necessary to support the load. The actual work load and transfer speed will depend on the condition of the external guide.
Vertical: Check "Model Selection" on page 1.
Set acceleration/deceleration values to be 3000 [mm/s²] or less.
Note 3) Pushing force accuracy is ±20% (F.S.).
Note 4) Setting range of "Pushing force" for LEYG16A is from 50% to 95% and for LEYG25A is from 50% to 95%. It is possible that "Pushing force" and "Duty ratio" changes dependent on the set value. Check "Model Selection" on page 2.
Note 5) Pushing speed is the allowable speed for the pushing operation.
Note 6) Impact resistance: No malfunction occurred when it was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the actuator in the initial state.)
Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. Test was performed in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the actuator in the initial state.)
Note 7) Power consumption (including the controller) is for when the actuator is operating.
Note 8) Standby power consumption when operating (including the controller) is for when the actuator is stopped in the set position during operation, except during pushing operation.
Note 9) Momentary max. power consumption (including the controller) is for when the actuator is operating. This value can be used for the selection of the power supply.
Note 10) With lock only
Note 11) For an actuator with lock, add the power consump- tion for the lock.

Weight

Weight/Motor parallel

Model		LEYG16M					LEYG25M							LEYG32M						
Stroke [mm]		30	50	100	150	200	30	50	100	150	200	250	300	30	50	100	150	200	250	300
Product weight [lb]	Step motor	1.83	2.14	2.65	3.28	3.66	3.68	4.10	4.80	5.73	6.48	7.23	7.80	6.42	6.99	8.20	9.44	10.9	12.0	13.0
	Servo motor	1.83	2.14	2.65	3.28	3.66	3.59	4.01	4.72	5.64	6.39	7.14	7.72	—	—	—	—	—	—	—

Model		LEYG16L					LEYG25L							LEYG32L						
Stroke [mm]		30	50	100	150	200	30	50	100	150	200	250	300	30	50	100	150	200	250	300
Product weight [lb]	Step motor	1.85	2.14	2.51	3.15	3.48	3.70	4.17	4.63	5.64	6.22	6.92	7.45	6.42	7.01	7.87	9.08	10.3	11.4	12.3
	Servo motor	1.85	2.14	2.51	3.15	3.48	3.62	4.08	4.61	5.55	6.13	6.83	7.36	—	—	—	—	—	—	—

Weight/In-line motor

Model		LEYG16M					LEYG25M							LEYG32M						
Stroke [mm]		30	50	100	150	200	30	50	100	150	200	250	300	30	50	100	150	200	250	300
Product weight [lb]	Step motor	1.83	2.14	2.65	3.28	3.66	3.66	4.08	4.78	5.71	6.46	7.21	7.80	6.39	6.97	8.18	9.41	10.9	11.8	12.9
	Servo motor	1.83	2.14	2.65	3.28	3.66	3.57	3.99	4.70	5.62	6.37	7.12	7.69	—	—	—	—	—	—	—

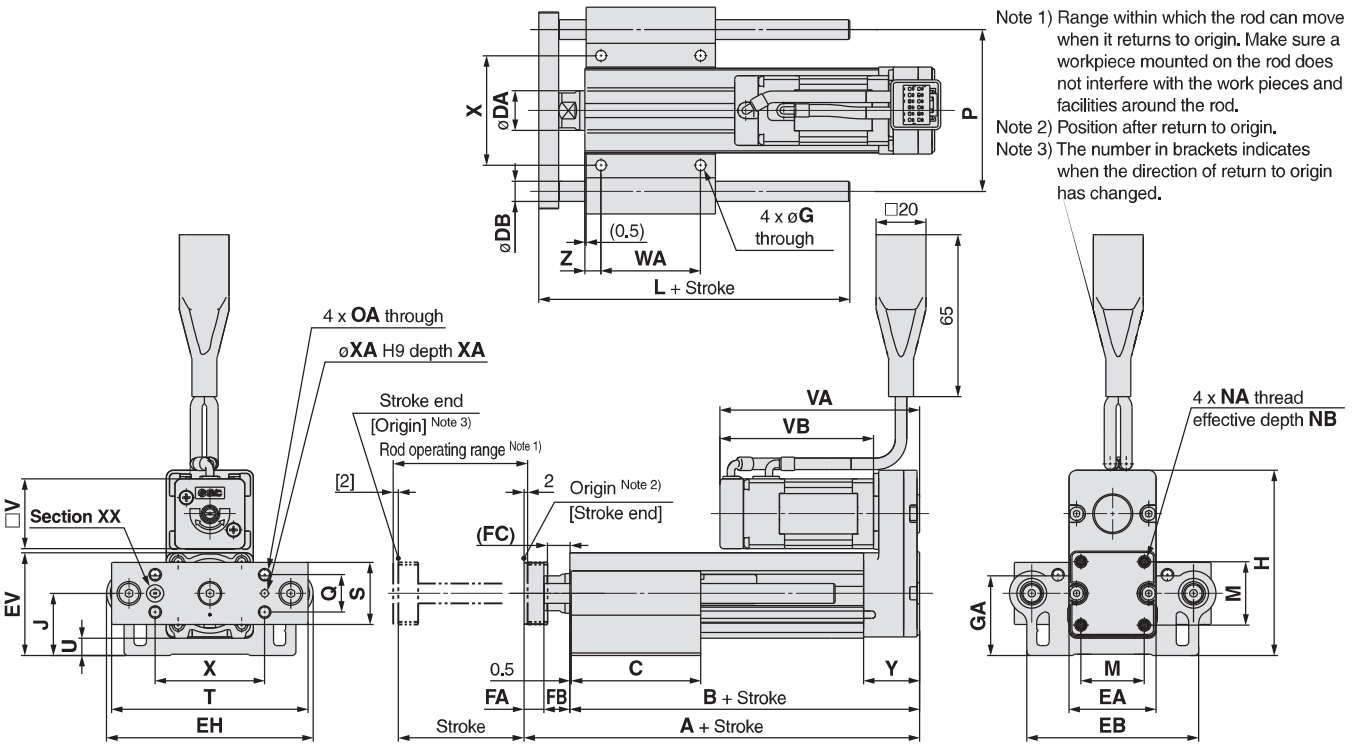
Model		LEYG16L					LEYG25L							LEYG32L						
Stroke [mm]		30	50	100	150	200	30	50	100	150	200	250	300	30	50	100	150	200	250	300
Product weight [lb]	Step motor	1.85	2.14	2.65	3.15	3.48	3.68	4.14	4.67	5.62	6.19	6.90	7.43	6.39	6.99	7.85	9.06	10.3	11.4	12.2
	Servo motor	1.85	2.14	2.65	3.15	3.48	3.59	4.06	4.59	5.53	6.11	6.81	7.34	—	—	—	—	—	—	—

Additional Weight

(lb)

Size	16	25	32
Lock	0.12	0.26	0.53
Motor cover	0.02	0.03	0.04

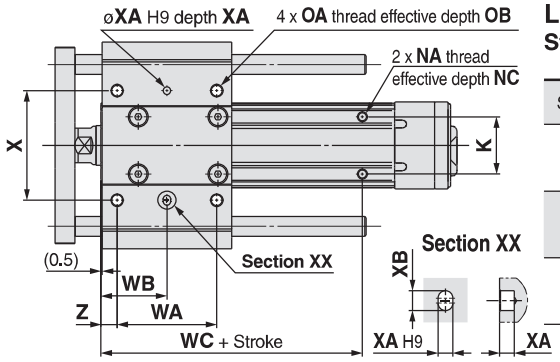
Dimensions: Motor Parallel



LEYG□L (Ball Bushing Bearing)
Standard Stroke: 50, 100, 200

[mm]

Size	Stroke range	L	DB
16	90st or less	75	8
	91st or more, 200st or less	105	
25	114st or less	91	10
	115st or more, 190st or less	115	
	191st or more, 300st or less	133	
32	114st or less	97.5	13
	115st or more, 190st or less	116.5	
	191st or more, 300st or less	134	



LEYG□M (Sliding Bearing)
Standard Stroke: 30, 50, 100

[mm]

Size	Stroke range	L	DB
16	64st or less	51.5	10
	65st or more, 90st or less	74.5	
	91st or more, 200st or less	105	
25	59st or less	67.5	12
	60st or more, 185st or less	100.5	
	186st or more, 300st or less	138	
32	54st or less	74	16
	55st or more, 180st or less	107	
	181st or more, 300st or less	144	

LEYG□M, LEYG□L Common

[mm]

Size	Stroke range	A	B	C	DA	EA	EB	EH	EV	FA	FB	FC	G	GA	H	J	K	M	NA	NB	NC
16	39st or less	109	90.5	37	16	35	69	83	41.3	8	10.5	8.5	4.3	32	74.5	25	23	25.5	M4 x 0.7	7	5.5
	40st or more, 100st or less			52																	
	101st or more, 200st or less	129	110.5	82																	
25	39st or less	141.5	116	50	20	46	85	103	52.5	11	14.5	12.5	5.4	40.5	99	31	29	34	M5 x 0.8	8	6.5
	40st or more, 100st or less			67.5																	
	101st or more, 124st or less	166.5	141																		
	125st or more, 200st or less			84.5																	
	201st or more, 300st or less			102																	
32	39st or less	160.5	130	55	25	60	101	123	64	12	18.5	16.5	5.4	50.5	125.5	38.5	30	40	M6 x 1.0	10	8.5
	40st or more, 100st or less			68																	
	101st or more, 124st or less	190.5	160																		
	125st or more, 200st or less			85																	
	201st or more, 300st or less			102																	

Size	Stroke range	OA	OB	P	Q	S	T	U	V	Step motor VA	Step motor VB	Servo motor VA	Servo motor VB	WA	WB	WC	X	XA	XB	Y	Z
16	39st or less	M5 x 0.8	10	65	15	25	79	7	28	80.3	61.8	81	62.5	25	19	55	44	3	4	22.5	6.5
	40st or more, 100st or less													40	26.5						
	101st or more, 200st or less													70	41.5	75					
25	39st or less	M6 x 1.0	12	80	18	30	95	7	42	85.4	63.4	81.6	59.6	35	26	70	54	4	5	26.5	8.5
	40st or more, 100st or less													50	33.5						
	101st or more, 124st or less															95					
	125st or more, 200st or less													70	43.5						
	201st or more, 300st or less													85	51						
32	39st or less	M6 x 1.0	12	95	28	40	117	7.5	56.4	95.4	68.4	—	—	40	28.5	75	64	5	6	34	8.5
	40st or more, 100st or less													50	33.5						
	101st or more, 124st or less															105					
	125st or more, 200st or less													70	43.5						
	201st or more, 300st or less													85	51						