

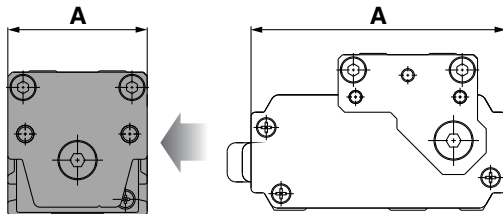
## Electric Slide Table/In-line Motor Type Series **LESH□D**

**In-line motor type newly added to electric slide table!**

Width dimension shortened by up to 45%

**In-line motor type**

**Motor parallel type**



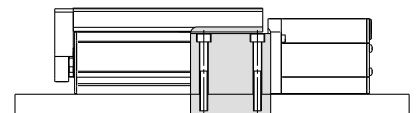
**A Dimensions** (mm)

Size	In-line motor	Motor parallel
8	32	58.5
16	45	72.5
25	61	106

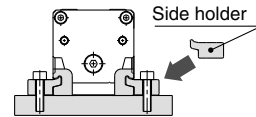


**How to mount**

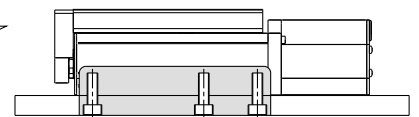
**Through-hole mounting**



**Side holder mounting**



**Body tapped mounting**



● **Reduced cycle time**

Max. acceleration and deceleration: **5,000 mm/s<sup>2</sup>**

Max. speed: **400 mm/s**

● **Positioning repeatability:  $\pm 0.05$  mm**

● **Maximum pushing force: 180 N**

● **Speed control/Positioning: Max. 64 points**

**Data can be set with only 2 items: position and speed.**

\* When a teaching box is used

Data	Axis 1
Step No.	0
Posn	50.00 mm
Speed	400 mm/s

Teaching box screen



**With dedicated controller**

Basic operation setting installed



### Series Variations

Model	Stroke (mm)	Work load (kg)				Max. speed (mm/s)	Screw lead (mm)	Positioning repeatability (mm)
		Step motor		Servo motor				
		Horizontal	Vertical	Horizontal	Vertical			
LESH8D	50, 75	2	0.5	2	0.5	200	4	±0.05
		1	0.25	1	0.25	400	8	
LESH16D	50, 100	6	2	5	2	200	5	
		4	1	2.5	1	400	10	
LESH25D	50, 100, 150	9	4	—	—	150	8	
		6	2	—	—	400	16	

# Electric Slide Table/In-line Motor Type

## Series **LESH**□**D**

### LESH8D/16D/25D



RoHS

Refer to the LES series catalog (CAT.ES100-78) for more details about model selection.

#### How to Order

**LESH** **8** **D** **J** - **50** **□** **□** **□** - **R** **1** **6N** **1** **□**

#### Size

8
16
25

#### Motor type

Nil	Step motor (Servo/24 VDC)
A	Servo motor <sup>Note 1) 2)</sup> (24 VDC)

Note 2) The LESH25D with servo motor is not available.

#### Lead (mm)

Symbol	LESH8D	LESH16D	LESH25D
K	4	5	8
J	8	10	16

#### Stroke

Model \ Stroke (mm)	50	75	100	150
LESH8D	●	●		
LESH16D	●		●	
LESH25D	●		●	●

#### Motor option

Nil	Without lock
B	With lock

#### Controller mounting

Nil	Screw mounting
D <sup>Note 7)</sup>	DIN rail mounting

Note 7) DIN rail is not included. Order it separately.

#### I/O cable length

Nil	Without cable
1	1.5 m
3	3 m
5	5 m

#### Controller type <sup>Note 6)</sup>

Nil	Without controller
6N	With controller (NPN)
6P	With controller (PNP)

Note 6) Refer to CAT.ES100-78 for the detailed specifications of the controller.

#### Actuator cable length

Nil	Without cable	8	8 m <sup>Note 5)</sup>
1	1.5 m	A	10 m <sup>Note 5)</sup>
3	3 m	B	15 m <sup>Note 5)</sup>
5	5 m	C	20 m <sup>Note 5)</sup>

Note 5) Produced upon receipt of order

#### Actuator cable type

Nil	Without cable
R	Robotic cable (Flexible cable)

#### Mounting style

Nil	Without side holder
H	With side holder (4 pcs.) <sup>Note 4)</sup>

Note 4) Refer to page 8 for details.

#### Body option

Nil	Basic
S	Dustproof specification <sup>Note 3)</sup>

Note 3) A scraper is mounted on the rod.

#### ⚠ Caution

Note 1) CE-compliant products

① EMC compliance was tested by combining the electric actuator LES 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.

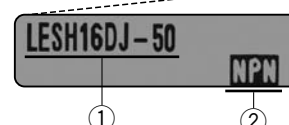
② For the servo motor (24 VDC) specification, EMC compliance was tested by installing a noise filter set (LEC-NFA). Refer to CAT.ES100-78 for the noise filter set. Refer to the LECA Operation Manual for installation.

**The actuator and controller are sold as a package.** (Controller → Refer to the LES series catalog (CAT.ES100-78).

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

**<Be sure to 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		LESH8D		LESH16D		LESH25D	
Actuator specifications	Stroke (mm)	50, 75		50, 100		50, 100, 150	
	Work load (kg)	Horizontal		2		1	
		Vertical		0.5		0.25	
	Pushing force (N) 30% to 70% <sup>Note 1)</sup>	6 to 15		4 to 10		23.5 to 55	
	Speed (mm/s)	10 to 200		20 to 400		10 to 200	
	Pushing speed (mm/s) <sup>Note 2)</sup>	10 to 20		20		10 to 20	
	Positioning repeatability (mm)			±0.05			
	Screw lead (mm)	4		8		5	
	Impact/Vibration resistance (m/sec <sup>2</sup> ) <sup>Note 3)</sup>			50/20			
	Actuation type			Slide screw			
Electric specifications	Guide type			Linear guide (Circulating type)			
	Operating temp. range (°C)			5 to 40 (No condensation and freezing)			
	Operating humidity range (%)			35 to 85 (No condensation and freezing)			
	Motor size	□20		□28		□42	
	Motor type			Step motor (Servo 24 VDC)			
	Encoder			Incremental A/B phase (800 pulse/rotation)			
	Rated voltage (V)			24 VDC ±10%			
	Power consumption (W) <sup>Note 4)</sup>	20		43		67	
	Standby power consumption when operating (W) <sup>Note 5)</sup>	7		15		13	
	Momentary max. power consumption (W) <sup>Note 6)</sup>	35		60		74	
Lock unit specifications	Controller weight (kg)			0.15 (Screw mounting), 0.17 (DIN rail mounting)			
	Type			Non-energizing operation type			
	Holding force (N)	24		2.5		300	
	Power consumption (W) <sup>Note 8)</sup>	4		3.6		5	
	Rated voltage (V)			24 VDC ±10%			

Note 1) Pushing force accuracy is ±20% (F.S.).

Note 2) Pushing operation speed is from the minimum speed to 20 mm/s.

Note 3) 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 slide table in the initial state.)  
Impact resistance: No malfunction occurred when the slide table was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the slide table in the initial state.)

Note 4) Power consumption (including the controller) is for when the actuator is operating.

Note 5) 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 6) 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 7) With lock only

Note 8) For an actuator with lock, add the power consumption for the lock.

Note 1) Pushing force range for LESH8DA is between 50 and 75%. Pushing force accuracy is ±20% (F.S.).

Note 2) Pushing operation speed is from the minimum speed to 20 mm/s.

Note 3) 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 slide table in the initial state.)  
Impact resistance: No malfunction occurred when the slide table was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the slide table in the initial state.)

Note 4) Power consumption (including the controller) is for when the actuator is operating.

Note 5) 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 6) 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 7) With lock only

Note 8) For an actuator with lock, add the power consumption for the lock.

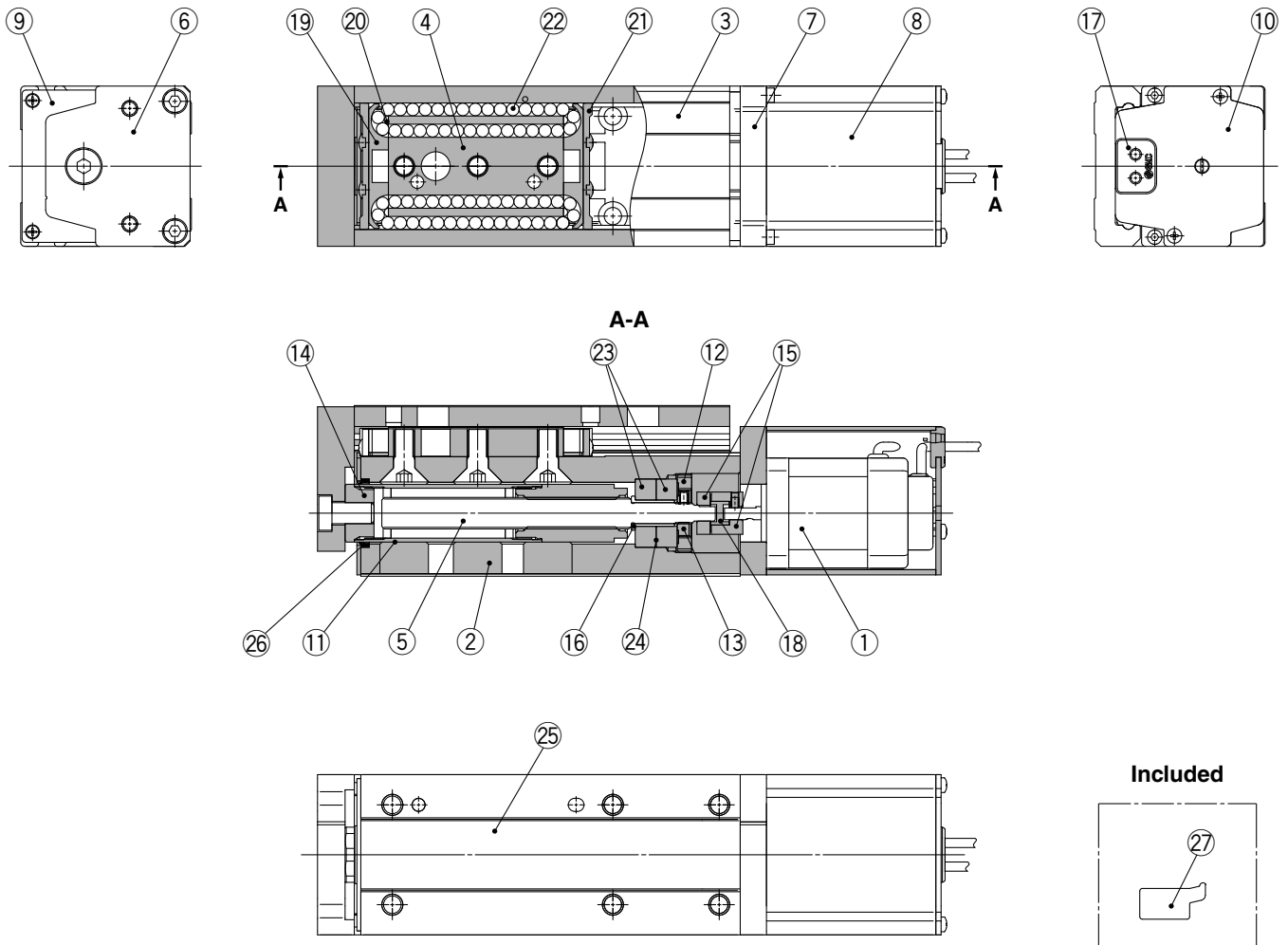
### Servo Motor (24 VDC)

Model		LESH8DA		LESH16DA	
Actuator specifications	Stroke (mm)	50, 75		50, 100	
	Work load (kg)	Horizontal		2	
		Vertical		0.5	
	Pushing force (N) 50% to 100% <sup>Note 1)</sup>	7.5 to 11		5 to 7.5	
	Speed (mm/s)	10 to 200		20 to 400	
	Pushing speed (mm/s) <sup>Note 2)</sup>	10 to 20		20	
	Positioning repeatability (mm)			±0.05	
	Screw lead (mm)	4		8	
	Impact/Vibration resistance (m/sec <sup>2</sup> ) <sup>Note 3)</sup>			50/20	
	Actuation type			Slide screw	
Electric specifications	Guide type			Linear guide (Circulating type)	
	Operating temp. range (°C)			5 to 40 (No condensation and freezing)	
	Operating humidity range (%)			35 to 85 (No condensation and freezing)	
	Motor size	□20		□28	
	Motor output (W)	10		30	
	Motor type			Servo motor (24 VDC)	
	Encoder			Incremental A/B phase (800 pulse/rotation)/Z phase	
	Rated voltage (V)			24 VDC ±10%	
	Power consumption (W) <sup>Note 4)</sup>	58		84	
	Standby power consumption when operating (W) <sup>Note 5)</sup>	4 (Horizontal)/7 (Vertical)		2 (Horizontal)/15 (Vertical)	
Lock unit specifications	Momentary max. power consumption (W) <sup>Note 6)</sup>	84		124	
	Controller weight (kg)			0.15 (Screw mounting), 0.17 (DIN rail mounting)	
	Type			Non-energizing operation type	
	Holding force (N)	24		2.5	
	Power consumption (W) <sup>Note 8)</sup>	4		3.6	
	Rated voltage (V)			24 VDC ±10%	

## Weight

Model		LESH8D(A)		LESH16D(A)		LESH25D	
Weight (kg)	Without lock	0.57	0.70	1.25	1.70	2.52	3.27
	With lock	0.66	0.79	1.36	1.81	2.82	3.90

## Construction



## Component Parts

No.	Description	Material	Note
1	Motor	—	—
2	Body	Aluminum alloy	Anodized
3	Table	Stainless steel	Heat treatment+ Electroless nickel plated
4	Guide block	Stainless steel	Heat treatment
5	Ball screw	Stainless steel	Heat treatment + Specially treated
6	End plate	Aluminum alloy	Anodized
7	Motor flange	Aluminum alloy	Anodized
8	Motor cover	Aluminum alloy	Anodized
9	End cover	Aluminum alloy	Anodized
10	Motor end cover	Aluminum alloy	Anodized
11	Rod	Stainless steel	—
12	Bearing holder	Steel	Electroless nickel plated
13	Lock nut	Steel	Chromate treated
14	Socket	Steel	Electroless nickel plated
15	Hub	Aluminum alloy	—
16	Spacer	Stainless steel	LESH25D□ only
17	Grommet	NBR	—
18	Spider	NBR	—
19	Cover	Synthetic resin	—
20	Return guide	Synthetic resin	—
21	Scraper	Stainless steel + NBR	Linear guide

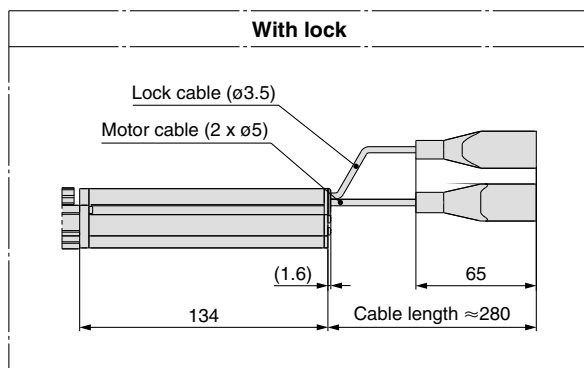
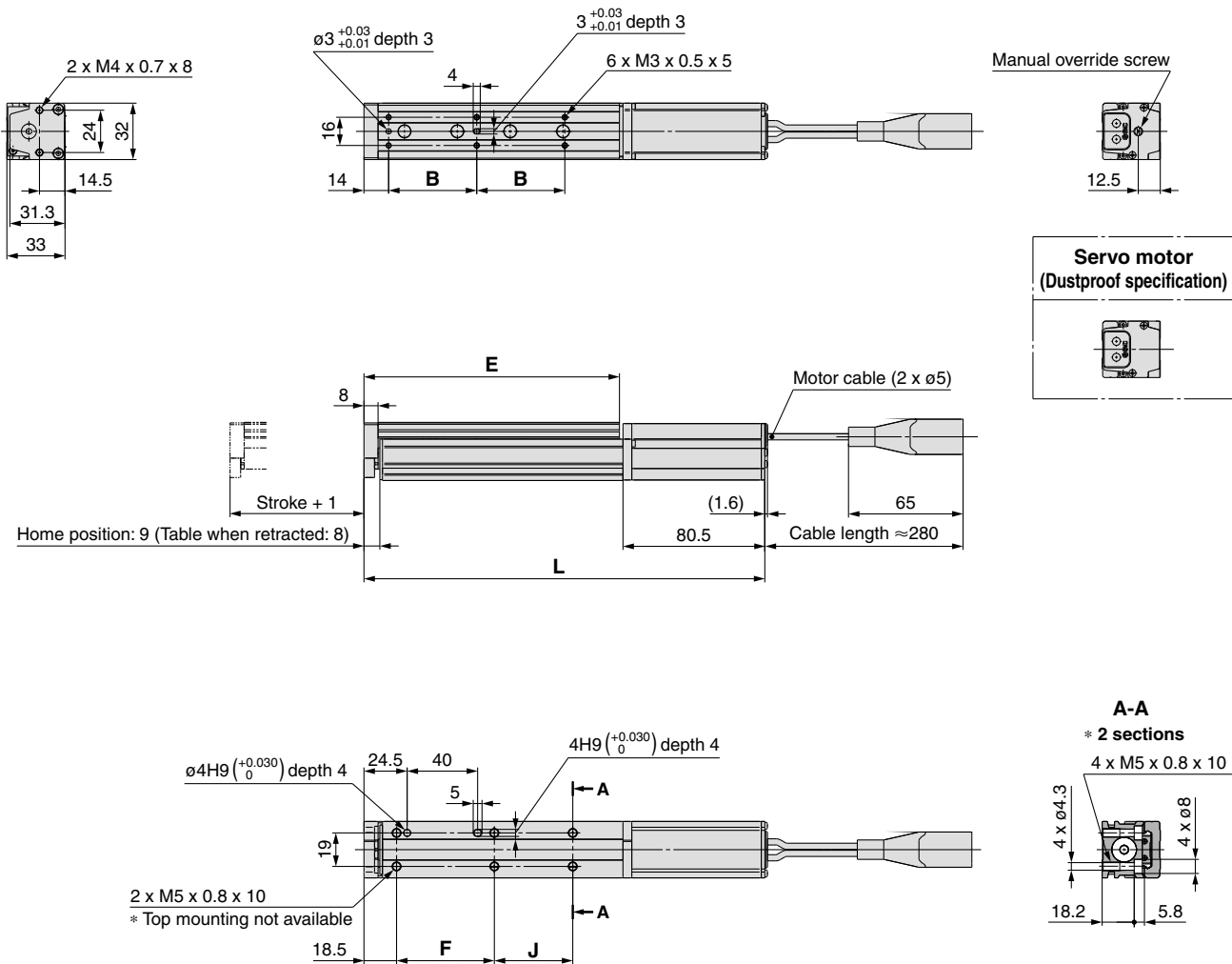
No.	Description	Material	Note
22	Steel ball	Special steel	—
23	Bearing	—	—
24	Sim ring	Steel	—
25	Masking tape	—	—
26	Scraper	NBR	Only for dustproof specification/Rod
27	Side holder	Aluminum alloy	Anodized





## Replacement Parts/Grease Pack

Applied portion	Kit no.
Guide unit	GR-S-010 (10 g) GR-S-020 (20 g)

## Dimensions

### LESH8D



	Cable	
	Step motor	Servo motor
Motor cable		
Lock cable		

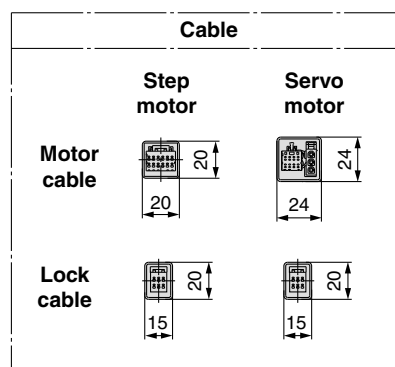
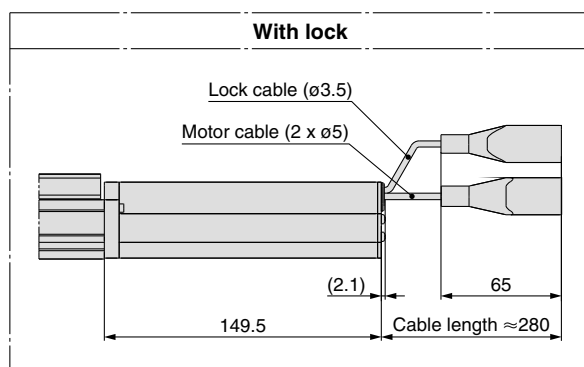
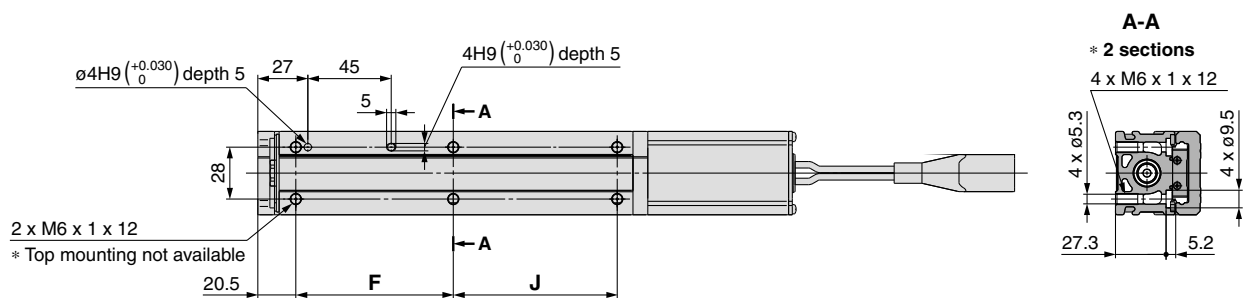
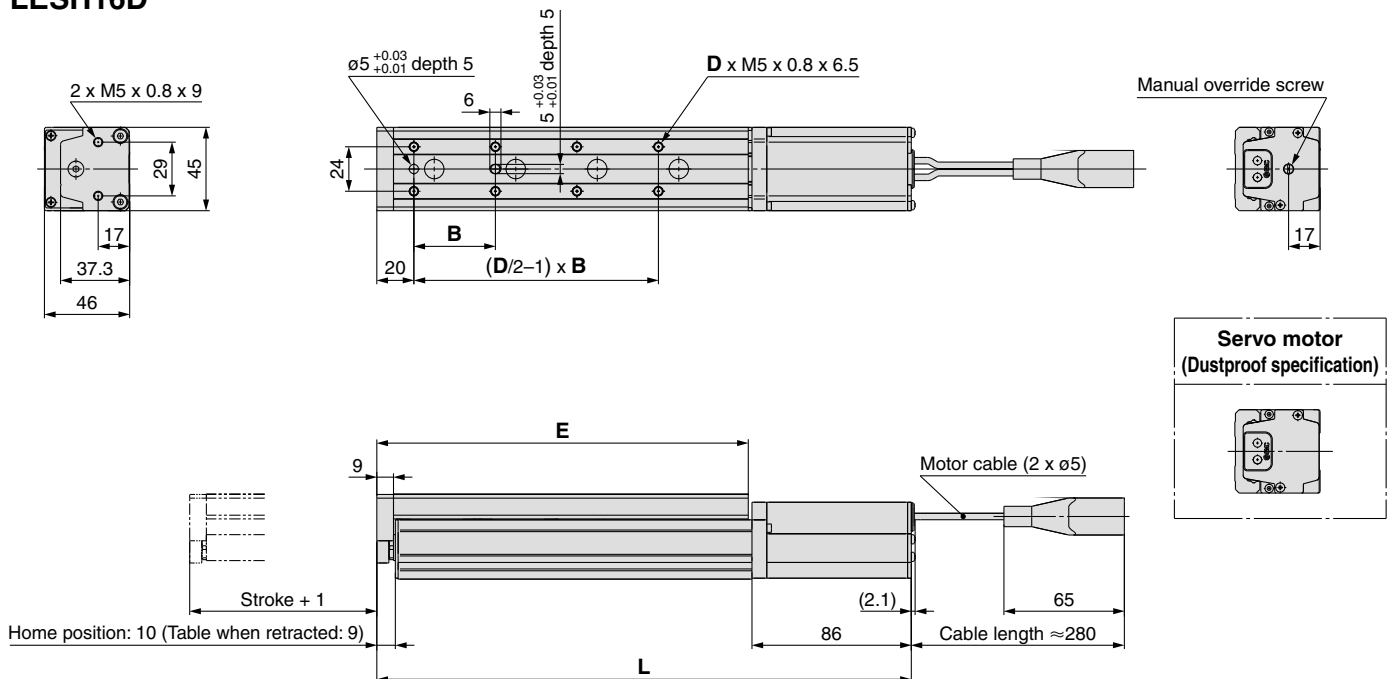
Model	L	B	E	F	J
LESH8D□□-50□□-□□□□□	201.5	46	119	54.5	19.5
LESH8D□□-50B□□-□□□□□	255				
LESH8D□□-75□□-□□□□□	227.5	50	145	55.5	44.5
LESH8D□□-75B□□-□□□□□	281				

\* L is the home position value.

# Series **LESH**□D

## Dimensions

### LESH16D



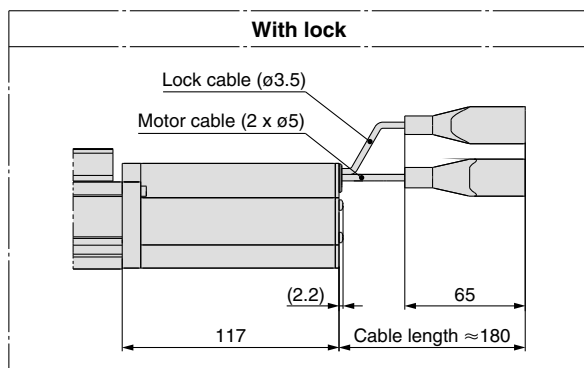
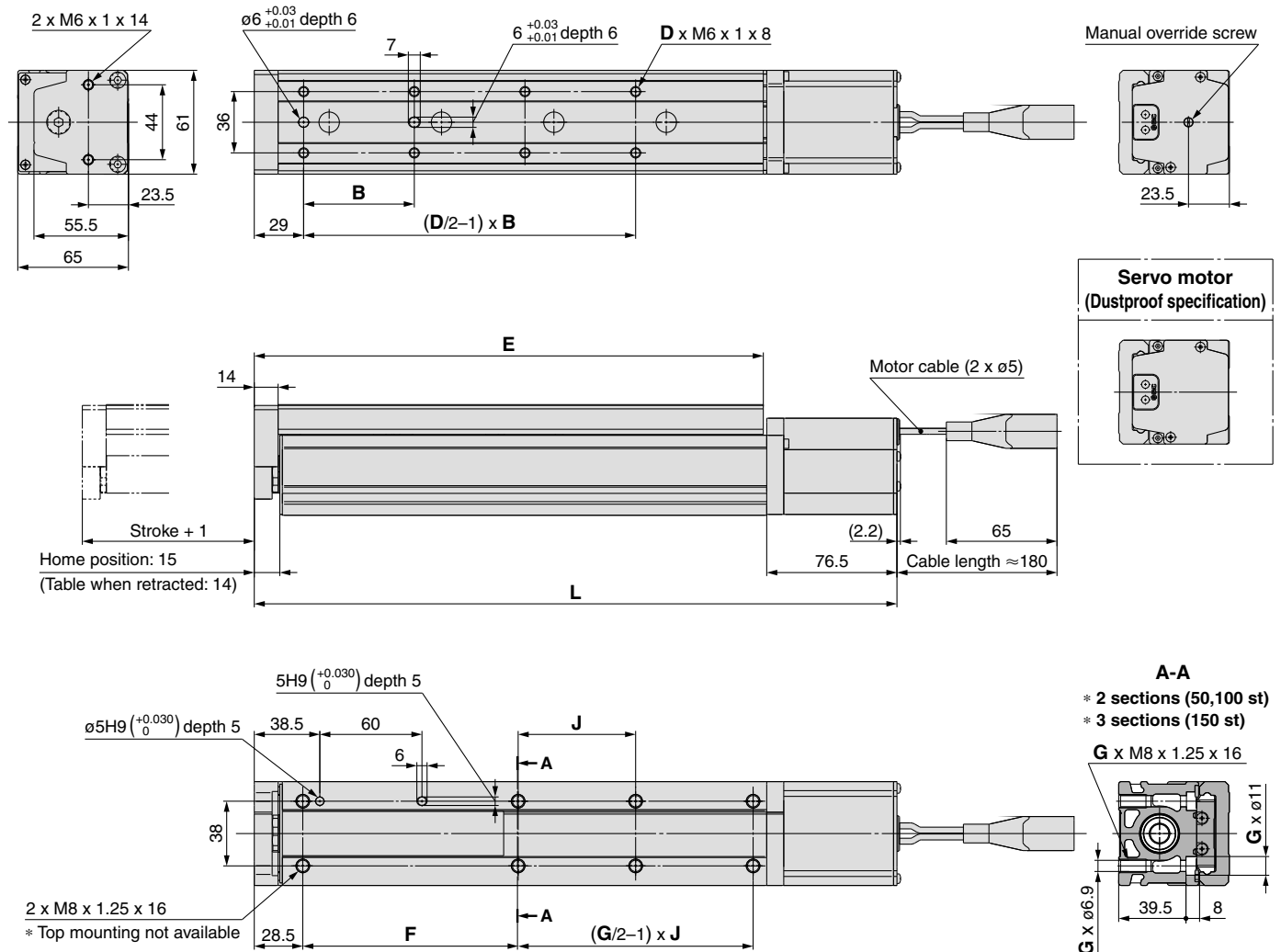
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



Model	L	B	D	E	F	J
LESH16D□□-50□□-□□□□□	219.5	40	6	125.5	65	39.5
LESH16D□□-50B□□-□□□□□	283					
LESH16D□□-100□□-□□□□□	288.5	44	8	200.5	85	88.5
LESH16D□□-100B□□-□□□□□	352					

\* L is the home position value.

## Dimensions

### LESH25D

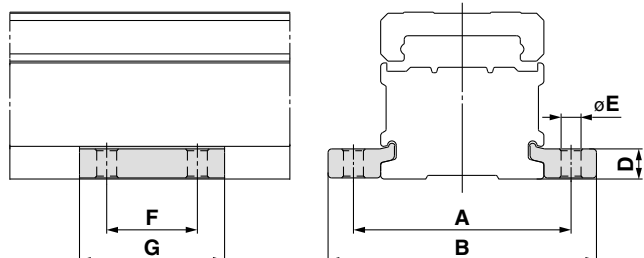


	Cable	
	Step motor	Servo motor
Motor cable	 20	 24
Lock cable	 20	 20

Model	L	B	D	E	F	G	J
LESH25D□□-50□□-□□□□□□	237.5	75	4	157	84	4	40.5
LESH25D□□-50B□□-□□□□□□	278						
LESH25D□□-100□□-□□□□□□	299.5	48	8	221	98.5	6	69
LESH25D□□-100B□□-□□□□□□	340						
LESH25D□□-150□□-□□□□□□	377.5	65	8	299	126.5	6	69
LESH25D□□-150B□□-□□□□□□	418						

\* L is the home position value.

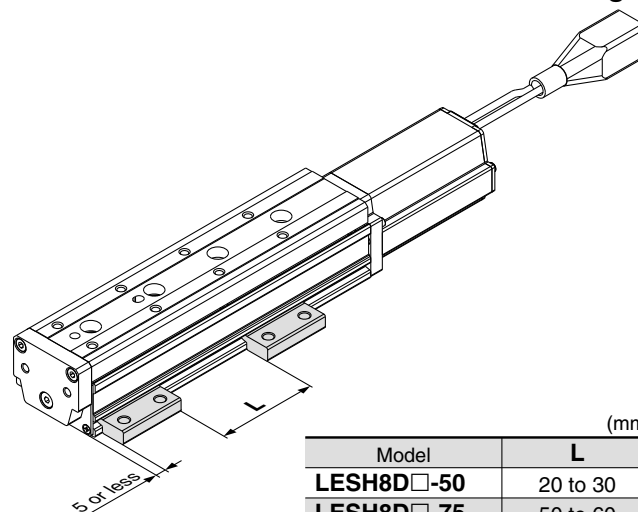
## Side Holder



Model number <sup>Note)</sup>	A	B	D	E	F	G	Applicable model
LE-D-3-1	45	57.6	6.4	4.5	20	33	LESH8D
LE-D-3-2	60	74	8.3	5.5	25	40	LESH16D
LE-D-3-3	81	99	12	6.6	30	49	LESH25D

Note) Model numbers for 1 side holder.

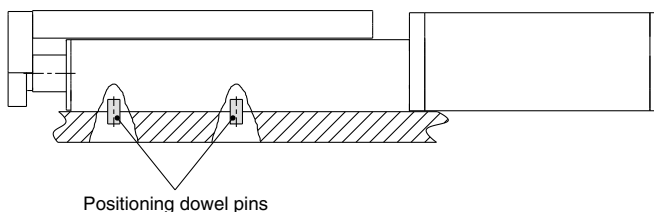
## Recommended values for side holder mounting



Model	L (mm)
LESH8D□-50	20 to 30
LESH8D□-75	50 to 60
LESH16D□-50	20 to 30
LESH16D□-100	100 to 125
LESH25D□-50	25 to 35
LESH25D□-100	70 to 100
LESH25D□-150	160 to 180

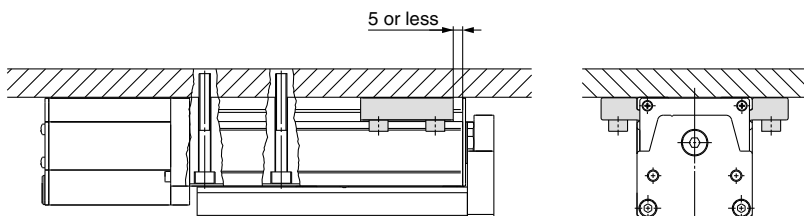
## ⚠ Caution

- Please mount using positioning dowel pins.

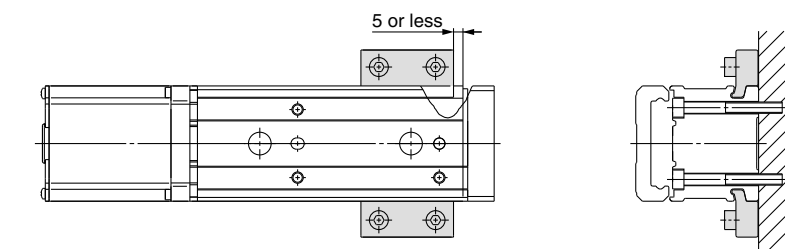


- When mounting the body with through holes in the mounting orientations below, please make sure to use two side holders as shown in the figures.

### Ceiling mounting



### Wall mounting



### Vertical mounting

