

### ●ISO Class 4\*1 (ISO14644-1)

- Built-in vacuum piping
- Possible to mount the main body without removing the external cover etc.
- Body-integrated linear guide specification

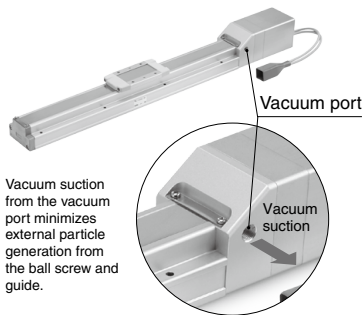
\*1 Changes depending on the suction flow rate.

#### Slider Type Ball Screw Drive/11-LEFS Series

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

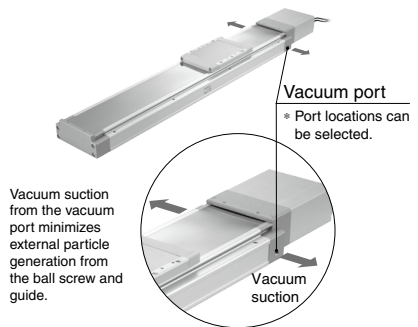
Pages 514, 515-1

AC Servo Motor Type Page 522



#### High Rigidity Slider Type Ball Screw Drive/11-LEJS Series

AC Servo Motor Type Page 533

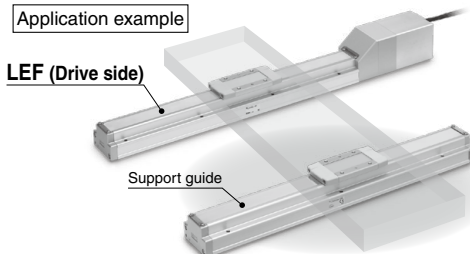


#### Support Guide/11-LEFG Series Page 527

A support guide is designed to support workpieces with significant overhang.

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

Application example



#### ⚠ Caution

After installing the actuator on the drive side, perform the alignment of the support guide. However, when the mounting flatness exceeds 0.1, install a floating mechanism separately on the workpiece installation surface (table).

# Particle Generation Characteristics

11-LEFS Series ▶ Pages 514, 515-1, 522

## Particle Generation Measuring Method

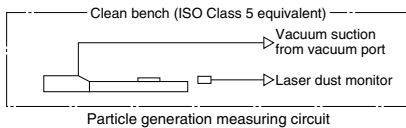
The particle generation data for SMC Clean Series are measured in the following test method.

### ■ Test Method (Example)

Operate the specimen that is placed in an ISO Class 5 equivalent clean bench, and measure the changes of the particle concentration over time until the number of cycles reaches the specified point.

### ■ Measuring Conditions

Measuring instrument	Description	Laser dust monitor (Automatic particle counter by lightscattering method)
	Minimum measurable particle diameter	0.1 μm
	Suction flow rate	28.3 L/min (ANR)
Setting conditions	Sampling time	5 min
	Interval time	55 min
	Sampling air flow	141.5 L (ANR)



### ■ Evaluation Method

To obtain the measured values of particle concentration, the accumulated value <sup>Note 1)</sup> of particles captured every 5 minutes, by the laser dust monitor, is converted into the particle concentration in every 1 m<sup>3</sup>.

When determining particle generation grades, the 95% upper confidence limit of the average particle concentration (average value), when each specimen is operated at a specified number of cycles <sup>Note 2)</sup> is considered.

The plots in the graphs indicate the 95% upper confidence limit of the average particle concentration of particles with a diameter within the horizontal axis range.

Note 1) Sampling air flow rate: Number of particles contained in 141.5 L (ANR) of air

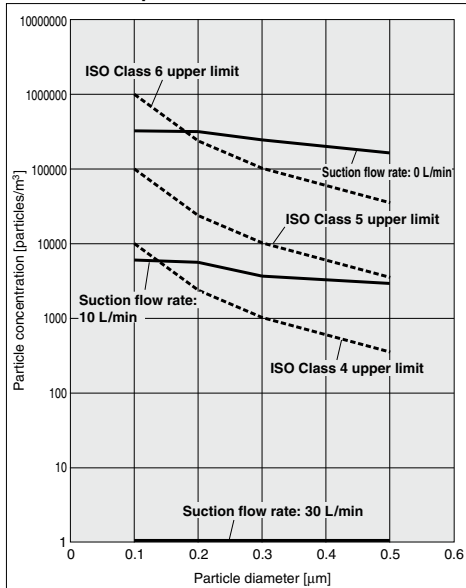
Note 2) Actuator: 1 million cycles

Note 3) The particle generation characteristics (Page 532) provide a guide for selection but is not guaranteed.

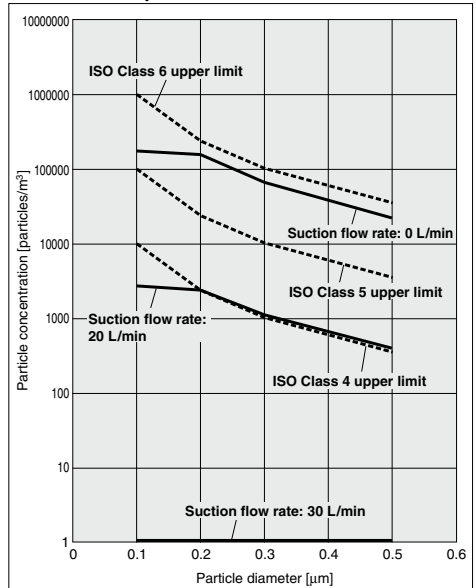
Note 4) When the suction flow rate is 0 L/min, the particle concentration is measured during operation without suction.

**Particle Generation Characteristics**  
**Step Motor (Servo/24 VDC), Servo Motor (24 VDC)**

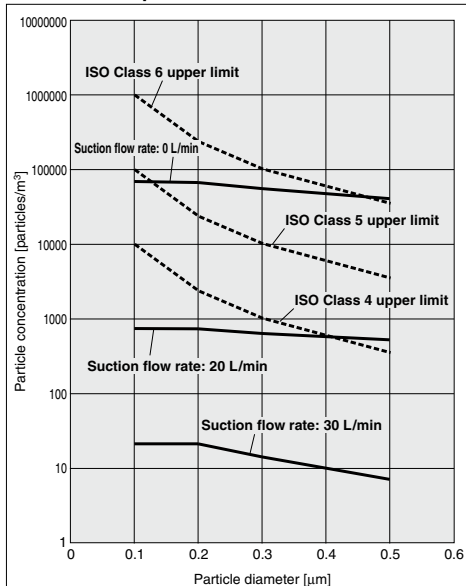
**11-LEFS16 Speed 500 mm/s**



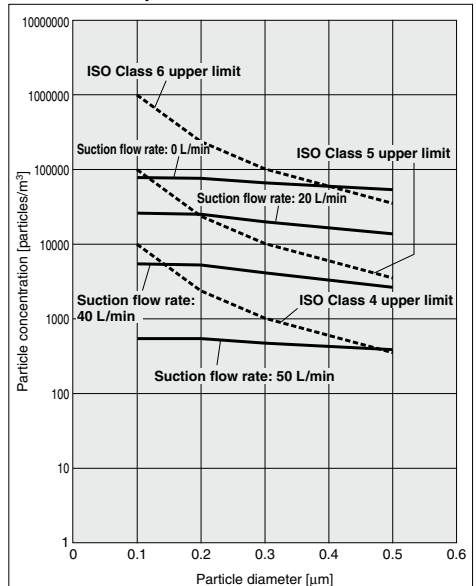
**11-LEFS25 Speed 500 mm/s**



**11-LEFS32 Speed 500 mm/s**



**11-LEFS40 Speed 500 mm/s**



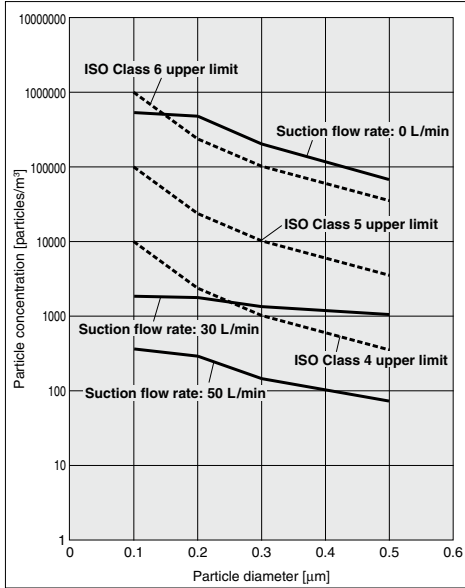
# 11-LEFS Series

AC Servo Motor

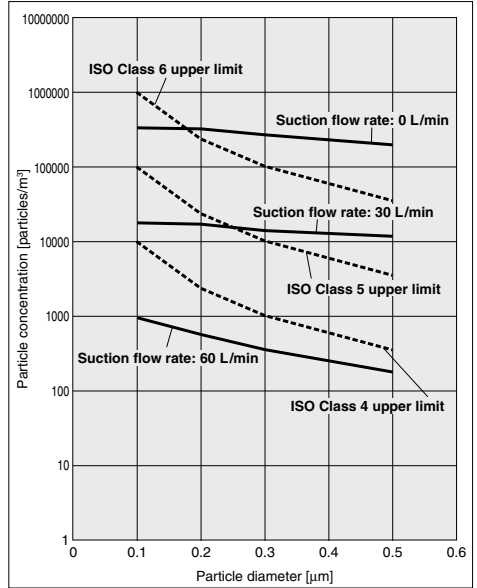
Clean Room Specification

## Particle Generation Characteristics AC Servo Motor (100/200/400 W)

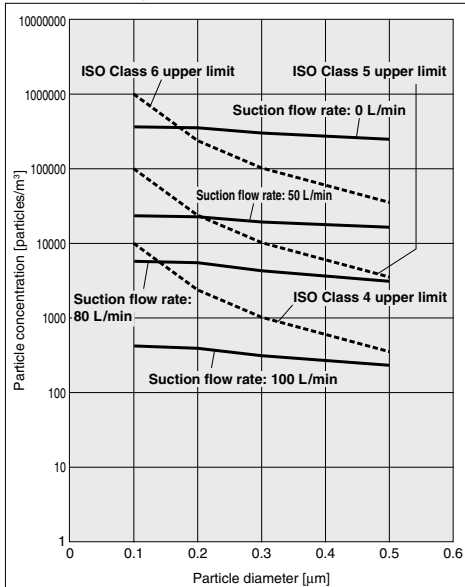
### 11-LEFS25 Speed 900 mm/s



### 11-LEFS32 Speed 1000 mm/s



### 11-LEFS40 Speed 1000 mm/s



# Electric Actuator/Slider Type Ball Screw Drive

Clean Room Specification



## 11-LEFS Series LEFS16, 25, 32, 40

Refer to page 38 for model selection and page 510 for particle generation characteristics.

Refer to page 603-5 for the communication protocols EtherCAT<sup>®</sup>, EtherNet/IP<sup>™</sup>, PROFINET, and DeviceNet<sup>™</sup>.

### How to Order

11 - LEFS H 16 B - 100 K - S 1 6N 1

Clean Series

11 Vacuum type

#### 1 Accuracy

NII	Basic type
H	High precision type

#### 2 Size

16
25
32
40

#### 3 Motor type

Symbol	Type	Applicable size				Compatible controller/ driver
		11-LEFS16	11-LEFS25	11-LEFS32	11-LEFS40	
NII	Step motor (Servo/24 VDC)	●	●	●	●	LECP6 LECP1 LECPA LECPMJ
A	Servo motor (24 VDC)	●	●	—	—	LECA6

#### 4 Lead [mm]

Symbol	11-LEFS16	11-LEFS25	11-LEFS32	11-LEFS40
A	10	12	16	20
B	5	6	8	10

#### 5 Stroke [mm]

50	50
to	to
1000	1000

\* Refer to the applicable stroke table.

#### 6 Motor option

NII	Without option
B	With lock

### Caution

#### [CE-compliant products]

① EMC compliance was tested by combining the electric actuator LEF 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 568 for the noise filter set. Refer to the LECA series Operation Manual for installation.

③ CC-Link direct input type (LECPMJ) is not CE-compliant.

#### [UL-compliant products]

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

### Applicable Stroke Table

Model	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	Manufacturable stroke range [mm]
11-LEFS16	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	—	50 to 500
11-LEFS25	●	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—	—	—	50 to 600
11-LEFS32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—	—	—	50 to 800
11-LEFS40	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	150 to 1000

\* Please consult with SMC for non-standard strokes as they are produced as special orders.

### Support Guide/LEFG Series

A support guide is designed to support workpieces with significant overhang.

Page S27

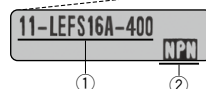


### The actuator and controller/driver are sold as a package.

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

#### <Check the following before use.>

- Check the actuator label for model number. This matches the controller/driver.
- Check Parallel I/O configuration matches (NPN or PNP).



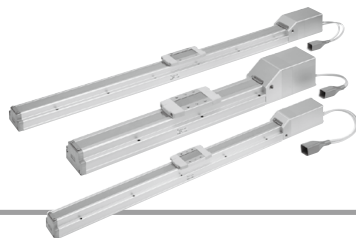
\* Refer to the Operation Manual for using the products. Please download it via our website, <http://www.smcworld.com>

# Electric Actuator/Slider Type Ball Screw Drive **11-LEFS Series**

Step Motor (Servo/24 VDC)

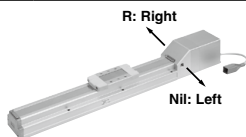
Servo Motor (24 VDC)

Clean Room Specification



## 7 Vacuum port

NII	Left
R	Right



## 8 Positioning pin hole

NII	Housing B bottom*	
K	Body bottom 2 locations	

\* Refer to the body mounting example on page 114 for the mounting method.

## 9 Actuator cable type<sup>\*1</sup>

NII	Without cable
S	Standard cable <sup>*2</sup>
R	Robotic cable (Flexible cable) <sup>*3</sup>

<sup>\*1</sup> The standard cable should be used on fixed parts. For using on moving parts, select the robotic cable.

<sup>\*2</sup> Only available for the motor type "Step motor."

<sup>\*3</sup> Fix the motor cable protruding from the actuator to keep it unmovable. For details about fixing method, refer to Wiring/Cables in the Electric Actuators Precautions.

## 10 Actuator cable length

NII	Without cable
1	1.5 m
3	3 m
5	5 m
8	8 m*
A	10 m*
B	15 m*
C	20 m*

\* Produced upon receipt of order (Robotic cable only)  
Refer to the specifications Note 2) on pages 516 and 517.

## 13 Controller/Driver mounting

NII	Screw mounting
D	DIN rail mounting*

\* DIN rail is not included. Order it separately.

## 11 Controller/Driver type<sup>\*1</sup>

NII	Without controller/driver	
6N	LECP6/LECA6	NPN
6P	(Step data input type)	PNP
1N	LECP1 <sup>*2</sup>	NPN
1P	(Programless type)	PNP
MJ	LECPMJ <sup>*2 *3</sup>	—
	(CC-Link direct input type)	
AN	LECPA <sup>*2 *4</sup>	NPN
AP	(Pulse input type)	PNP

<sup>\*1</sup> For details about controller/driver and compatible motor, refer to the compatible controller/driver below.

<sup>\*2</sup> Only available for the motor type "Step motor."

<sup>\*3</sup> Not applicable to CE.

<sup>\*4</sup> When pulse signals are open collector, order the current limiting resistor (LEC-PA-R-□) on page 596 separately.

## 12 I/O cable length<sup>\*1</sup>, Communication plug






NII	Without cable (Without communication plug connector) <sup>*3</sup>
1	1.5 m
3	3 m <sup>*2</sup>
5	5 m <sup>*2</sup>
S	Straight type communication plug connector <sup>*3</sup>
T	T-branch type communication plug connector <sup>*3</sup>

<sup>\*1</sup> When "Without controller/driver" is selected for controller/driver types, I/O cable cannot be selected. Refer to page 568 (For LECP6/LECA6), page 582 (For LECP1) or page 596 (For LECPA) if I/O cable is required.

<sup>\*2</sup> When "Pulse input type" is selected for controller/driver types, pulse input usable only with differential. Only 1.5 m cables usable with open collector.

<sup>\*3</sup> For the LECPMJ, only "NII", "S" and "T" are selectable since I/O cable is not included.

## Compatible Controller/Driver

Type	Step data input type	Step data input type	CC-Link direct input type	Programless type	Pulse input type
					
Series	LECP6	LECA6	LECPMJ	LECP1	LECPA
Features	Value (Step data) input Standard controller		CC-Link direct input	Capable of setting up operation (step data) without using a PC or teaching box	Operation by pulse signals
Compatible motor	Step motor (Servo/24 VDC)	Servo motor (24 VDC)	Step motor (Servo/24 VDC)		
Max. number of step data	64 points		14 points		—
Power supply voltage	24 VDC				
Reference page	Page 560	Page 560	Page 600	Page 576	Page 590



Applicable to the  
JXC□ series

# Electric Actuator/Slider Type Ball Screw Drive

Clean Room Specification



## 11-LEFS Series LEFS16, 25, 32, 40

Refer to page 38 for model selection and page 510 for particle generation characteristics.

### How to Order

Refer to page 600 for the communication protocol CC-Link.

11 - LEFS H 16 □ B - 100 □ □ K - R1 CD17T

Clean Series

11	Vacuum type
----	-------------

1 2 3 4 5 6 7 8 9 10

#### 1 Accuracy

NII	Basic type
H	High precision type

#### 2 Size

16
25
32
40

#### 3 Motor type

Symbol	Type	Applicable size				Compatible controller
		11-LEFS16	11-LEFS25	11-LEFS32	11-LEFS40	
NII	Step motor (Servo/24 VDC)	●	●	●	●	JXCE1 JXC91 JXCP1 JXCD1

#### 4 Lead [mm]

Symbol	11-LEFS16	11-LEFS25	11-LEFS32	11-LEFS40
A	10	12	16	20
B	5	6	8	10

#### 5 Stroke [mm]

50	50
to	to
1000	1000

\* Refer to the applicable stroke table.

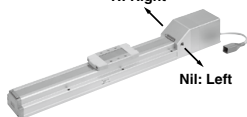
#### 6 Motor option

NII	Without option
B	With lock

#### 7 Vacuum port

NII	Left
R	Right

R: Right



#### 8 Positioning pin hole

NII	Housing B bottom	
K	Body bottom 2 locations	

\* Refer to the body mounting example on page 114 for the mounting method.

#### Caution

##### [CE-compliant products]

EMC compliance was tested by combining the electric actuator LE series and the JXCE1/91/P1/D1 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.

#### Applicable Stroke Table

Model	Stroke [mm]																Manufacturable stroke range [mm]
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	
11-LEFS16	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	50 to 500
11-LEFS25	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	—	50 to 600
11-LEFS32	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	—	50 to 800
11-LEFS40	—	—	●	●	●	●	●	●	●	●	●	●	●	●	●	●	150 to 1000

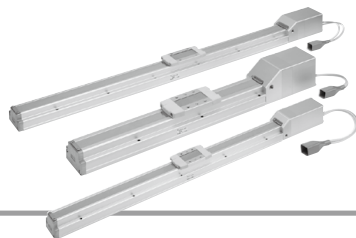
\* Please consult with SMC for non-standard strokes as they are produced as special orders.

#### Support Guide/LEFG Series

A support guide is designed to support workpieces with significant overhang.

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## 9 Actuator cable type/length

<b>NII</b>	Without cable
<b>S1</b>	Standard cable 1.5 m
<b>S3</b>	Standard cable 3 m
<b>S5</b>	Standard cable 5 m
<b>R1</b>	Robotic cable 1.5 m
<b>R3</b>	Robotic cable 3 m
<b>R5</b>	Robotic cable 5 m
<b>R8</b>	Robotic cable 8 m <sup>*1</sup>
<b>RA</b>	Robotic cable 10 m <sup>*1</sup>
<b>RB</b>	Robotic cable 15 m <sup>*1</sup>
<b>RC</b>	Robotic cable 20 m <sup>*1</sup>

\*1 Produced upon receipt of order (Robotic cable only)

\*2 The standard cable should only be used on fixed parts.  
For use on moving parts, select the robotic cable.

## 10 Controller

<b>NII</b>	Without controller
<b>C□1□□</b>	With controller



### Communication protocol

<b>E</b>	EtherCAT®
<b>9</b>	EtherNet/IP™
<b>P</b>	PROFINET
<b>D</b>	DeviceNet™

For single axis

### Communication plug connector for DeviceNet™

<b>NII</b>	Without plug connector
<b>S</b>	Straight type
<b>T</b>	T-branch type





\* Select "Nil" for anything other than DeviceNet™.

### Mounting

<b>7</b>	Screw mounting
<b>8*</b>	DIN rail

\* DIN rail is not included. It must be ordered separately. (Page 603-8)

## Compatible Controller

Type	EtherCAT® direct input type	EtherNet/IP™ direct input type	PROFINET direct input type	DeviceNet™ direct input type
				
<b>Series</b>	<b>JXCE1</b>	<b>JXC91</b>	<b>JXCP1</b>	<b>JXCD1</b>
<b>Features</b>	EtherCAT® direct input	EtherNet/IP™ direct input	PROFINET direct input	DeviceNet™ direct input
<b>Compatible motor</b>	Step motor (Servo/24 VDC)			
<b>Maximum number of step data</b>	64 points			
<b>Power supply voltage</b>	24 VDC			
<b>Reference page</b>	Page 603-5			



# 11-LEFS Series

Step Motor (Servo/24 VDC)

Servo Motor (24 VDC)

Clean Room Specification

## Specifications

### Step Motor (Servo/24 VDC)

Model		11-LEFS16		11-LEFS25		11-LEFS32		11-LEFS40	
Stroke [mm]	Note 1)	50 to 500		50 to 600		50 to 800		150 to 1000	
Work load [kg]	Horizontal	LECP6/LECP1/LECPM/JXCE1/91/P1/D1		14		15		25	
	Vertical	LECPA		9		10		20	
	Vertical	2		4		7.5		15	
Speed [mm/s]	Note 2)	10 to 500		5 to 250		12 to 500		6 to 250	
Max. acceleration/deceleration [mm/s <sup>2</sup> ]						3000			
Positioning repeatability [mm]						±0.02			
Lost motion [mm]	Basic type					±0.015			
	High precision type					0.1 or less			
Lead [mm]	Basic type					0.05 or less			
	High precision type								
Impact/Vibration resistance [m/s <sup>2</sup> ]	Note 4)	10		5		12		6	
Actuation type						Ball screw			
Guide type						Linear guide			
Operating temperature range [°C]						5 to 40			
Operating humidity range [%RH]						90 or less (No condensation)			
Cleanliness class	Note 5)					ISO Class 4 (ISO 14644-1)			
Grease	Ball screw/Linear guide portion					Low particle generation grease			
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 6)	22		38		50		100	
Standby power consumption when operating [W]	Note 7)	18		16		44		43	
Max. instantaneous power consumption [W]	Note 8)	51		57		123		141	
Type	Note 9)					Non-magnetizing lock			
Holding force [N]		20		39		78		157	
Power consumption [W]	Note 10)	2.9		5		108		216	
Rated voltage [V]						5		113	
						24 VDC ±10%		225	

Note 1) Please consult with SMC for non-standard strokes as they are produced as special orders.

Note 2) Speed changes according to the controller/driver type and work load. Check "Speed-Work Load Graph (Guide)" on pages 39 and 40. Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m.

Note 3) A reference value for correcting an error in reciprocal operation.

Note 4) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (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 5) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 6) The power consumption (including the controller) is for when the actuator is operating.

Note 7) The standby power consumption when operating (including the controller) is for when the actuator is stopped in the set position during the operation.

Note 8) The maximum instantaneous 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 9) With lock only

Note 10) For an actuator with lock, add the power consumption for the lock.

## Specifications

### Servo Motor (24 VDC)

Model		11-LEFS16A		11-LEFS25A		
Actuator specifications	Stroke [mm] <sup>Note 1)</sup>	50 to 500		50 to 600		
	Work load [kg] <sup>Note 2)</sup>	Horizontal		7	10	
		Vertical		2	4	
	Speed [mm/s] <sup>Note 2)</sup>		1 to 500	1 to 250	2 to 500	1 to 250
	Max. acceleration/deceleration [mm/s <sup>2</sup> ]		3000			
	Positioning repeatability [mm]	Basic type	±0.02			
		High precision type	±0.015			
	Lost motion [mm] <sup>Note 3)</sup>	Basic type	0.1 or less			
		High precision type	0.05 or less			
	Lead [mm]		10	5	12	6
Electric specifications	Impact/Vibration resistance [m/s <sup>2</sup> ] <sup>Note 4)</sup>		50/20			
	Actuation type		Ball screw			
	Guide type		Linear guide			
	Operating temperature range [°C]		5 to 40			
	Operating humidity range [%RH]		90 or less (No condensation)			
	Cleanliness class <sup>Note 5)</sup>		ISO Class 4 (ISO 14644-1)			
	Grease/ Ball screw/Linear guide portion		Low particle generation grease			
	Motor size		□28		□42	
	Motor output [W]		30		36	
	Motor type		Servo motor (24 VDC)			
Load unit specifications	Encoder	Incremental A/B (800 pulse/rotation)/Z phase				
	Rated voltage [V]	24 VDC ±10%				
	Power consumption [W] <sup>Note 6)</sup>	63		102		
	Standby power consumption when operating [W] <sup>Note 7)</sup>	Horizontal 4/Vertical 9		Horizontal 4/Vertical 9		
	Max. instantaneous power consumption [W] <sup>Note 8)</sup>	70		113		
	Type <sup>Note 9)</sup>	Non-magnetizing lock				
	Holding force [N]	20	39	78	157	
Lock unit specifications	Power consumption [W] <sup>Note 10)</sup>	2.9			5	
	Rated voltage [V]	24 VDC ±10%				

Note 1) Please consult with SMC for non-standard strokes as they are produced as special orders.

Note 2) Check "Speed-Work Load Graph (Guide)" on page 42 for details. Furthermore, if the cable length exceeds 5 m, then it will decrease by up to 10% for each 5 m.

Note 3) A reference value for correcting an error in reciprocal operation.

Note 4) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw.

(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 5) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 6) The power consumption (including the controller) is for when the actuator is operating.

Note 7) The standby power consumption when operating (including the controller) is for when the actuator is stopped in the set position during operation.

Note 8) The maximum instantaneous 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 9) With lock only

Note 10) For an actuator with lock, add the power consumption for the lock.

## Weight

Series	11-LEFS16									
Stroke [mm]	50	100	150	200	250	300	350	400	450	500
Product weight [kg]	0.83	0.90	0.98	1.05	1.13	1.20	1.28	1.35	1.43	1.50
Additional weight with lock [kg]	0.12									

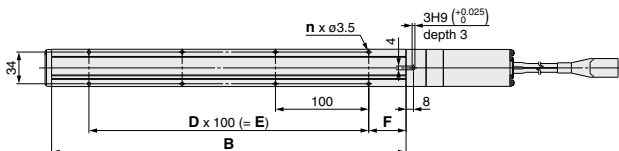
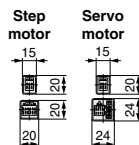
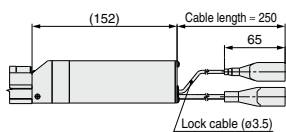
Series	11-LEFS25											
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600
Product weight [kg]	1.70	1.84	1.98	2.12	2.26	2.40	2.54	2.68	2.82	2.96	3.10	3.24
Additional weight with lock [kg]	0.26											

Series	11-LEFS32															
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Product weight [kg]	3.15	3.35	3.55	3.75	3.95	4.15	4.35	4.55	4.75	4.95	5.15	5.35	5.55	5.75	5.95	6.15
Additional weight with lock [kg]	0.53															

Series	11-LEFS40																	
Stroke [mm]	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Product weight [kg]	5.37	5.65	5.93	6.21	6.49	6.77	7.15	7.33	7.61	7.89	8.17	8.45	8.75	9.01	9.29	9.57	9.85	10.13
Additional weight with lock [kg]	0.53																	

Step Motor (Servo/24 VDC)    Servo Motor (24 VDC)    Clean Room Specification

## 11-LEFS16

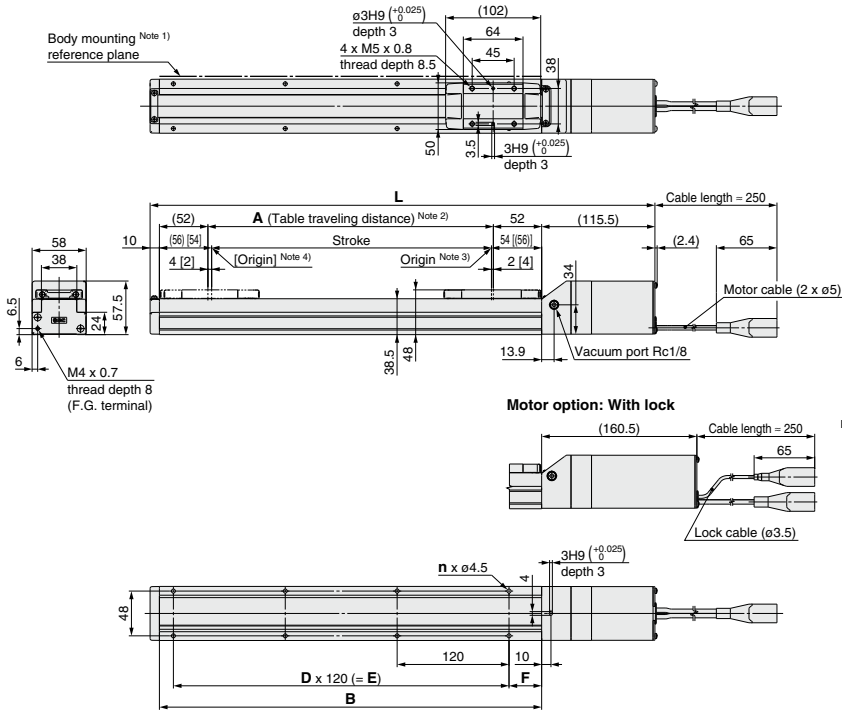


Note 5) When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

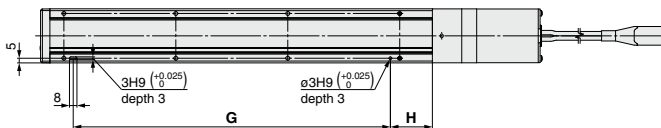
Dimensions										(mm)
Model	L		A	B	n	D	E	F	G	H
	Without lock	With lock								
11-LEFS16□-50□	247	289	56	130	4	—	—	15	80	25
11-LEFS16□-100□	297	339	106	180	4	—	—	40	80	50
11-LEFS16□-150□	347	389	156	230	4	—	—		80	50
11-LEFS16□-200□	397	439	206	280	6	2	200		180	50
11-LEFS16□-250□	447	489	256	330	6	2	200		180	50
11-LEFS16□-300□	497	539	306	380	8	3	300		280	50
11-LEFS16□-350□	547	589	356	430	8	3	300		280	50
11-LEFS16□-400□	597	639	406	480	10	4	400	380	50	
11-LEFS16□-450□	647	689	456	530	10	4	400	380	50	
11-LEFS16□-500□	697	739	506	580	12	5	500	480	50	

## Dimensions: Ball Screw Drive

### 11-LEFS25



### Positioning pin hole (Option): Body bottom



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

Note 2) Distance within which the table can move when it returns to origin. Make sure a workpiece mounted on the table does not interfere with the workpieces and facilities around the table.

Note 3) Position after return to origin

Note 4) [ ] for when the direction of return to origin has changed.

Note 5) When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

### Dimensions

Model	L		A	B	n	D	E	F	G	H
	Without lock	With lock								
11-LEFS25□-50□	285.5	330.5	56	160	4	—	—	20	100	30
11-LEFS25□-100□	335.5	380.5	106	210	4	—	—		100	45
11-LEFS25□-150□	385.5	430.5	156	260	4	—	—		100	45
11-LEFS25□-200□	435.5	480.5	206	310	6	2	240		220	45
11-LEFS25□-250□	485.5	530.5	256	360	6	2	240	35	220	45
11-LEFS25□-300□	535.5	580.5	306	410	8	3	360		340	45
11-LEFS25□-350□	585.5	630.5	356	460	8	3	360		340	45
11-LEFS25□-400□	635.5	680.5	406	510	8	3	360		340	45
11-LEFS25□-450□	685.5	730.5	456	560	10	4	480		460	45
11-LEFS25□-500□	735.5	780.5	506	610	10	4	480		460	45
11-LEFS25□-550□	785.5	830.5	556	660	12	5	600		580	45
11-LEFS25□-600□	835.5	880.5	606	710	12	5	600		580	45

# 11-LEFS Series

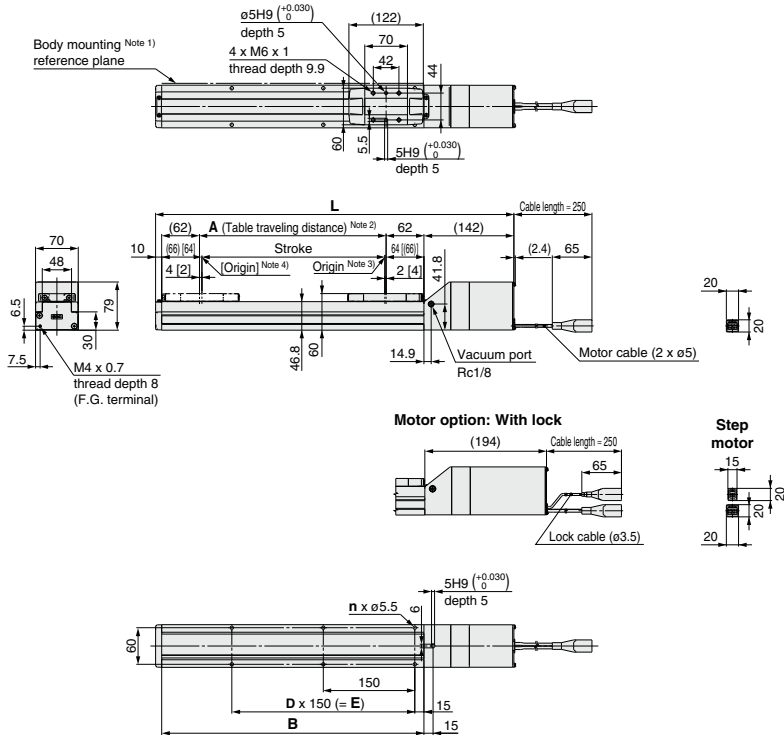
Step Motor (Servo/24 VDC)

Servo Motor (24 VDC)

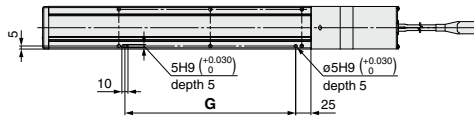
Clean Room Specification

## Dimensions: Ball Screw Drive

### 11-LEFS32



### Positioning pin hole <sup>Note 5)</sup> (Option): Body bottom



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

Note 2) Distance within which the table can move when it returns to origin. Make sure a workpiece mounted on the table does not interfere with the workpieces and facilities around the table.

Note 3) Position after return to origin

Note 4) [ ] for when the direction of return to origin has changed.

Note 5) When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

### Dimensions

Model	L		A	B	n	D	E	G
	Without lock	With lock						
11-LEFS32□-50□	332	384	56	180	4	—	—	130
11-LEFS32□-100□	382	434	106	230	4	—	—	130
11-LEFS32□-150□	432	484	156	280	4	—	—	130
11-LEFS32□-200□	482	534	206	330	6	2	300	280
11-LEFS32□-250□	532	584	256	380	6	2	300	280
11-LEFS32□-300□	582	634	306	430	6	2	300	280
11-LEFS32□-350□	632	684	356	480	8	3	450	430
11-LEFS32□-400□	682	734	406	530	8	3	450	430
11-LEFS32□-450□	732	784	456	580	8	3	450	430
11-LEFS32□-500□	782	834	506	630	10	4	600	580
11-LEFS32□-550□	832	884	556	680	10	4	600	580
11-LEFS32□-600□	882	934	606	730	10	4	600	580
11-LEFS32□-650□	932	984	656	780	12	5	750	730
11-LEFS32□-700□	982	1034	706	830	12	5	750	730
11-LEFS32□-750□	1032	1084	756	880	12	5	750	730
11-LEFS32□-800□	1082	1134	806	930	14	6	900	880



# Electric Actuator/Slider Type

## Ball Screw Drive

Clean Room Specification

### 11-LEFS Series LEFS25, 32, 40

Refer to page 46 for model selection and page 510 for particle generation characteristics.



See the table below

LECY Series Page 523-1

#### How to Order

**11 - LEFS H 25 S2 B - 100 K - S 2 A1**

Clean Series

11 Vacuum type

#### 1 Accuracy

<b>Nil</b>	Basic type
<b>H</b>	High precision type

#### 2 Size

<b>25</b>
<b>32</b>
<b>40</b>

#### 4 Lead [mm]

Symbol	11-LEFS25	11-LEFS32	11-LEFS40
<b>A</b>	12	16	20
<b>B</b>	6	8	10

#### 5 Stroke [mm]

<b>50</b>	50
<b>to</b>	to
<b>1000</b>	1000

\* Refer to the applicable stroke table.

#### 6 Motor option

<b>Nil</b>	Without option
<b>B</b>	With lock

#### 3 Motor type

Symbol	Type	Output [W]	Actuator size	Compatible driver	UL-compliant
<b>S2*1</b>	AC servo motor (Incremental encoder)	100	25	LECSA-S1	—
<b>S3</b>		200	32	LECSA-S3	—
<b>S4</b>		400	40	LECSA2-S4	—
<b>S6*1</b>		100	25	LECSB-S5	—
				LECSB-S5	—
<b>S7</b>	AC servo motor (Absolute encoder)	200	32	LECSB-S7	—
				LECSB-S7	—
<b>S8</b>		400	40	LECSB2-S8	—
				LECSB2-S8	—
<b>T6*2</b>	AC servo motor	100	25	LECSS2-T5	●
<b>T7</b>	(Absolute encoder)	200	32	LECSS2-T7	—
<b>T8</b>		400	40	LECSS2-T8	—

\*1 For motor type S2 and S6, the compatible driver part number suffixes are S1 and S5 respectively.

\*2 For motor type T6, the compatible driver part number suffix is T5.

#### 9 Cable type

<b>Nil</b>	Without cable
<b>S</b>	Standard cable
<b>R</b>	Robotic cable (Flexible cable)

Note 1) The motor and encoder cables are included. (The lock cable is also included when the motor with lock option is selected.)

Note 2) Standard cable entry direction is "B" (Counter axis side). (Refer to page 623 for details.)

#### 10 Cable length

<b>Nil</b>	Without cable
<b>2</b>	2 m
<b>5</b>	5 m
<b>A</b>	10 m

Note 3) The length of the encoder, motor and lock cables are the same.

#### 8 Positioning pin hole

<b>Nil</b>	Housing B bottom*	
<b>K</b>	Body bottom 2 locations	

\* Refer to the body mounting example on page 114 for the mounting method.

#### 12 I/O cable length [m]

<b>Nil</b>	Without cable
<b>H</b>	Without cable (Connector only)
<b>1</b>	1.5

Note 4) When "Without driver" is selected for driver type, only "Nil: Without cable" can be selected. Refer to page 624 if I/O cable is required. (Options are shown on page 624.)

#### 11 Driver type

	Compatible driver	Power supply voltage [V]	Size	UL-compliant
<b>Nil</b>	Without driver	—	<b>25</b> <b>32</b> <b>40</b>	—
<b>A1</b>	LECSA1-S1	100 to 120	●	—
<b>A2</b>	LECSA2-S1	200 to 230	●	—
<b>B1</b>	LECSB1-S1	100 to 120	●	—
<b>B2</b>	LECSB2-S1	200 to 230	●	—
<b>C1</b>	LECSB1-S1	100 to 120	●	—
<b>C2</b>	LECSB2-S1	200 to 230	●	—
<b>S1</b>	LECSB1-S1	100 to 120	●	—
<b>S2</b>	LECSB2-S1	200 to 230	●	—
	LECSS2-T1	200 to 240	●	●

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

Example) S2S2: Standard cable (2 m) + Driver (LECSB2)

S2 : Standard cable (2 m)

Nil : Without cable and driver

#### Applicable Stroke Table

Model	Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
<b>11-LEFS25</b>		●	●	●	●	●	●	●	●	●	●	●	●	●	—	—	—	—	—	—	—
<b>11-LEFS32</b>		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>11-LEFS40</b>		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

\* Please consult with SMC for non-standard strokes as they are produced as special orders.

#### Compatible Driver

Driver type	Pulse input type/ Positioning type	Pulse input type	CC-Link direct input type	SSCNET III type	SSCNET III/H type
<b>Series</b>	<b>LECSA</b>	<b>LECSB</b>	<b>LECSB</b>	<b>LECSB</b>	<b>LECSB-T</b>
<b>Number of point tables</b>	Up to 7	—	Up to 255 (2 stations occupied)	—	—
<b>Pulse input</b>	○	○	—	—	—
<b>Applicable network</b>	—	—	CC-Link	SSCNET III	SSCNET III/H
<b>Control encoder</b>	Incremental 17-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 22-bit encoder
<b>Communication function</b>	USB communication	USB communication, RS422 communication	USB communication, RS422 communication	—	—
<b>Power supply voltage [V]</b>	100 to 120 VAC (50/60 Hz)	100 to 120 VAC (50/60 Hz)	200 to 230 VAC (50/60 Hz)	—	200 to 240 VAC (50/60 Hz)
<b>Reference page</b>	—	—	Page 613	—	Page 607

## Specifications

### 11-LEFS25, 32, 40 AC Servo Motor

Model			11-LEFS25S <sup>1</sup> /T6		11-LEFS32S <sup>1</sup> /T7		11-LEFS40S <sup>1</sup> /T8			
Actuator specifications	Stroke [mm] <sup>Note 1)</sup>		50 to 600		50 to 800		150 to 1000			
	Work load [kg] <sup>Note 2)</sup>		Horizontal		20	20	40	45	50	60
			Vertical		8	15	10	20	15	30
			Up to 400		900	450	1000	500	1000	500
			401 to 500		720	360	1000	500	1000	500
			501 to 600		540	270	800	400	1000	500
			601 to 700		—	—	620	310	940	470
			701 to 800		—	—	500	250	760	380
			801 to 900		—	—	—	—	620	310
	901 to 1000		—	—	—	—	520	260		
	Max. acceleration/deceleration [mm/s <sup>2</sup> ]		5000 (Refer to pages 48 to 50 for limit according to work load and duty ratio.)							
	Positioning repeatability [mm]		Basic type		±0.02					
			High precision type		±0.01					
	Lost motion [mm] <sup>Note 4)</sup>		Basic type		0.1 or less					
			High precision type		0.05 or less					
	Lead [mm]		12	6	16	8	20	10		
Impact/Vibration resistance [m/s <sup>2</sup> ] <sup>Note 5)</sup>		50/20								
Actuation type		Ball screw								
Guide type		Linear guide								
Operating temperature range [°C]		5 to 40								
Operating humidity range [%RH]		90 or less (No condensation)								
Cleanliness class <sup>Note 6)</sup>		ISO Class 4 (ISO 14644-1) Class 10 (Fed.Std.209E)								
Grease		Ball screw /Linear guide portion								
Motor output/Size		100 W/□40		200 W/□60		400 W/□60				
Motor type		AC servo motor (100/200 VAC)								
Encoder		Motor type S2, S3, S4: Incremental 17-bit encoder (Resolution: 131072 p/rev) Motor type S6, S7, S8: Absolute 18-bit encoder (Resolution: 262144 p/rev) Motor type T6, T7, T8: Absolute encoder (Resolution: 4194304 p/rev)								
Electric specifications		Power consumption [W] <sup>Note 7)</sup>		Horizontal		45	65	210		
				Vertical		145	175	230		
		Standby power consumption when operating [W] <sup>Note 8)</sup>		Horizontal		2	2	2		
				Vertical		8	8	18		
		Max. instantaneous power consumption [W] <sup>Note 9)</sup>		445		725		1275		
Lock unit specifications		Type <sup>Note 10)</sup>		Non-magnetizing lock						
		Holding force [N]		131	255	197	385	330	660	
		Power consumption at 20°C [W] <sup>Note 11)</sup>		6.3	7.9	7.9	7.9			
		Rated voltage [V]		24 VDC <sup>10%</sup>						

Note 1) Please consult with SMC for non-standard strokes as they are produced as special orders.

Note 2) For details, refer to "Speed-Work Load Graph (Guide)" on page 47.

Note 3) The allowable speed changes according to the stroke.

Note 4) A reference value for correcting an error in reciprocal operation.

Note 5) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (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 6) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 7) The power consumption (including the driver) is for when the actuator is operating.

Note 8) The standby power consumption when operating (including the driver) is for when the actuator is stopped in the set position during the operation.

Note 9) The maximum instantaneous power consumption (including the driver) is for when the actuator is operating.

Note 10) Only when motor option "With lock" is selected.

Note 11) For an actuator with lock, add the power consumption for the lock.

## Weight

Series		11-LEFS25S□											
Motor type	Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600
	S2	2.00	2.14	2.28	2.44	2.56	2.69	2.84	2.99	3.12	3.24	3.40	3.54
	S6	2.06	2.20	2.34	2.50	2.62	2.75	2.90	3.05	3.18	3.30	3.46	3.60
	T6	2.04	2.18	2.32	2.48	2.60	2.73	2.88	3.03	3.16	3.28	3.44	3.58
Additional weight with lock [kg]		S2: 0.2/S6: 0.3/T6: 0.3											

Series		11-LEFS32S□															
Stroke [mm]		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Motor type	S3	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40
	S7	3.34	3.54	3.74	3.94	4.14	4.34	4.54	4.74	4.94	5.14	5.34	5.54	5.74	5.94	6.14	6.34
	T7	3.31	3.51	3.71	3.91	4.11	4.31	4.51	4.71	4.91	5.11	5.31	5.51	5.71	5.91	6.11	6.31
Additional weight with lock [kg]		S3: 0.4/S7: 0.7/T7: 0.5															

Series		11-LEFS40S□																	
Stroke [mm]		150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Motor type	S4	5.82	6.10	6.38	6.65	6.95	7.25	7.51	7.80	8.07	8.25	8.63	8.90	9.20	9.45	9.76	10.05	10.32	10.60
	S8	5.92	6.20	6.48	6.75	7.05	7.35	7.61	7.90	8.17	8.35	8.73	9.00	9.30	9.55	9.86	10.15	10.42	10.70
	T8	5.91	6.19	6.47	6.74	7.04	7.34	7.60	7.89	8.16	8.34	8.72	8.99	9.29	9.54	9.85	10.14	10.41	10.69
Additional weight with lock [kg]		S4: 0.5/S8: 0.7/T8: 0.5																	



# Electric Actuator/Slider Type

## Ball Screw Drive

Clean Room Specification

### 11-LEFS Series LEFS25, 32, 40

Refer to page 46 for model selection and page 510 for particle generation characteristics.



LECY Series ▶ Page 522

## How to Order

Dimensions are the same as those of the LECY Series. For details, refer to page 524 and onwards.

**11 - LEFS H 25 V7 B - 100 [ ] [ ] K - S 3 M2 [ ]**

Clean Series ●

11 Vacuum type

## 1 Accuracy

<b>Nil</b>	Basic type
<b>H</b>	High precision type

## 2 Size

<b>25</b>
<b>32</b>
<b>40</b>

## 4 Lead [mm]

Symbol	11-LEFS25	11-LEFS32	11-LEFS40
<b>A</b>	12	16	20
<b>B</b>	6	8	10

## 5 Stroke [mm]

<b>50</b>	50
<b>to</b>	to
<b>1000</b>	1000

\* Refer to the applicable stroke table.

## 6 Motor option

<b>Nil</b>	Without option
<b>B</b>	With lock

## 3 Motor type

Symbol	Type	Output [W]	Size	Compatible driver
<b>V6*</b>	AC servo motor (Absolute encoder)	100	25	LECYM2-V5/LECYU2-V5
<b>V7</b>		200	32	LECYM2-V7/LECYU2-V7
<b>V8</b>		400	40	LECYM2-V8/LECYU2-V8

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

## 9 Cable type Note 1) Note 2)

<b>Nil</b>	Without cable
<b>S</b>	Standard cable
<b>R</b>	Robotic cable (Flexible cable)

Note 1) The motor and encoder cables are included. (The lock cable is also included when the motor with lock option is selected.)

Note 2) Standard cable entry direction is "(B) Counter axis side". (Refer to page 623 for details.)

## 10 Actuator cable length [m]

<b>Nil</b>	Without cable
<b>3</b>	3
<b>5</b>	5
<b>A</b>	10
<b>C</b>	20

## 8 Positioning pin hole

<b>Nil</b>	Housing B bottom*	
<b>K</b>	Body bottom 2 locations	

\* Refer to the body mounting example on page 114 for the mounting method.

## 12 I/O cable length [m] Note 4)

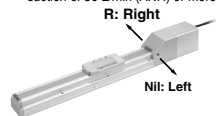
<b>Nil</b>	Without cable
<b>H</b>	Without cable (Connector only)
<b>1</b>	1.5

Note 4) When "Without driver" is selected for driver type, only "Nil: Without cable" can be selected.  
Refer to page 624 if I/O cable is required.  
(Options are shown on page 624.)

## 7 Vacuum port\*

<b>Nil</b>	Left
<b>R</b>	Right
<b>D</b>	Both left and right

\* Select "D" for the vacuum port for suction of 50 L/min (ANR) or more.



## 11 Driver type

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

## Applicable Stroke Table

●: Standard

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

\* Please consult with SMC for non-standard strokes as they are produced as special orders.

## Support Guide/LEFG Series

A support guide is designed to support workpieces with significant overhang. **Page 527**



For auto switches, refer to pages 112-1 to 112-3.

## Compatible Driver

Driver type	MECHATROLINK-II type	MECHATROLINK-III type
Series	LECYM	LECYU
Applicable network	MECHATROLINK-II	MECHATROLINK-III
Control encoder	Absolute 20-bit encoder	
Communication device	USB communication, RS-422 communication	
Power supply voltage [V]	200 to 230 VAC (50/60 Hz)	
Reference page	Page 628-1	

## Specifications

### AC Servo Motor

Model			11-LEFS25□V6				11-LEFS32□V7				11-LEFS40□V8			
Stroke [mm] <sup>Note 1)</sup>			50 to 800				50 to 1000				150 to 1200			
Work load [kg] <sup>Note 2)</sup>			Horizontal		10	20	20	30	40	45	30	50	60	
			Vertical		4	8	15	5	10	20	7	15	30	
Max. speed [mm/s] <sup>Note 3)</sup>			Up to 400		1500	900	450	1500	1000	500	1500	1000	500	
			401 to 500		1200	720	360	1500	1000	500	1500	1000	500	
			501 to 600		900	540	270	1200	800	400	1500	1000	500	
			601 to 700		700	420	210	930	620	310	1410	940	470	
			701 to 800		550	330	160	750	500	250	1140	760	380	
			801 to 900		—	—	—	610	410	200	930	620	310	
			901 to 1000		—	—	—	510	340	170	780	520	260	
			1001 to 1100		—	—	—	—	—	—	500	440	220	
1101 to 1200			—	—	—	—	—	—	—	500	380	190		
Max. acceleration/deceleration [mm/s <sup>2</sup> ]			20000 (Refer to pages 48 to 50 for limit according to work load and duty ratio.)											
Positioning repeatability [mm]			Basic type		±0.02									
			High precision type		±0.01									
Lost motion [mm] <sup>Note 4)</sup>			Basic type		0.1 or less									
			High precision type		0.05 or less									
Lead [mm]			20	12	6	24	16	8	30	20	10			
Impact/Vibration resistance [m/s <sup>2</sup> ] <sup>Note 5)</sup>			50/20											
Actuation type			Ball screw (LEFS□), Ball screw + Belt (LEFS□ <sup>h</sup> )											
Guide type			Linear guide											
Operating temperature range [°C]			5 to 40											
Operating humidity range [%RH]			90 or less (No condensation)											
Cleanliness class <sup>Note 6)</sup>			ISO Class 4 (ISO 14644-1)											
			Class 10 (Fed.Std.209E)											
Grease   Ball screw /Linear guide portion			Low particle generation grease											
Motor output/Size			100 W/□40				200 W/□60				400 W/□60			
Motor type			AC servo motor (200 VAC)											
Encoder			Absolute 20-bit encoder (Resolution: 1048576 p/rev)											
Power consumption [W] <sup>Note 7)</sup>			Horizontal		45				65				210	
			Vertical		145				175				230	
Standby power consumption when operating [W] <sup>Note 8)</sup>			Horizontal		2				2				2	
			Vertical		8				8				18	
Max. instantaneous power consumption [W] <sup>Note 9)</sup>			445				725				1275			
Type <sup>Note 10)</sup>			Non-magnetizing lock											
Holding force [N]			78	131	255	131	197	385	220	330	660			
Power consumption at 20°C [W] <sup>Note 11)</sup>			5.5				6				6			
Rated voltage [V]			24 VDC <sup>+10%</sup> <sub>-0</sub>											

Note 1) Please consult with SMC for non-standard strokes as they are produced as special orders.

Note 2) For details, refer to "Speed-Work Load Graph (Guide)" on page 47.

Note 3) The allowable speed changes according to the stroke.

Note 4) A reference value for correcting an error in reciprocal operation.

Note 5) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (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 6) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 7) The power consumption (including the driver) is for when the actuator is operating.

Note 8) The standby power consumption when operating (including the driver) is for when the actuator is stopped in the set position during the operation.

Note 9) The maximum instantaneous power consumption (including the driver) is for when the actuator is operating.

Note 10) Only when motor option "With lock" is selected.

Note 11) For an actuator with lock, add the power consumption for the lock.

## Weight

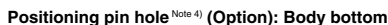
Series	11-LEFS25□V6															
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Product weight [kg]	2.06	2.20	2.34	2.50	2.62	2.75	2.90	3.05	3.18	3.30	3.46	3.60	3.74	3.88	4.02	4.20
Additional weight with lock [kg]	0.3															

Series	11-LEFS32□V7																	
Stroke [mm]	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
Product weight [kg]	3.40	3.60	3.80	4.00	4.20	4.40	4.60	4.80	5.00	5.20	5.40	5.60	5.80	6.00	6.20	6.40	6.60	6.80
Additional weight with lock [kg]	0.7																	

Series	11-LEFS40□V8																			
Stroke [mm]	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1100	1200
Product weight [kg]	5.92	6.20	6.48	6.75	7.05	7.35	7.61	7.90	8.17	8.35	8.73	9.00	9.30	9.55	9.86	10.15	10.42	10.70	11.26	11.82
Additional weight with lock [kg]	0.7																			

AC Servo Motor      Clean Room Specification

## 11-LEFS25



Note 4) When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

## Dimensions

Dimensions										(mm)
Model	L		A	B	n	D	E	F	G	H
	Without lock	With lock								
11-LEFS25□□-50□	339	379	56	160	4	—	—	20	100	30
11-LEFS25□□-100□	389	429	106	210	4	—	—	35	100	45
11-LEFS25□□-150□	439	479	156	260	4	—	—		100	45
11-LEFS25□□-200□	489	529	206	310	6	2	240		220	45
11-LEFS25□□-250□	539	579	256	360	6	2	240		220	45
11-LEFS25□□-300□	589	629	306	410	8	3	360		340	45
11-LEFS25□□-350□	639	679	356	460	8	3	360		340	45
11-LEFS25□□-400□	689	729	406	510	8	3	360		340	45
11-LEFS25□□-450□	739	779	456	560	10	4	480		460	45
11-LEFS25□□-500□	789	829	506	610	10	4	480	460	45	
11-LEFS25□□-550□	839	879	556	660	12	5	600	580	45	
11-LEFS25□□-600□	889	929	606	710	12	5	600	580	45	



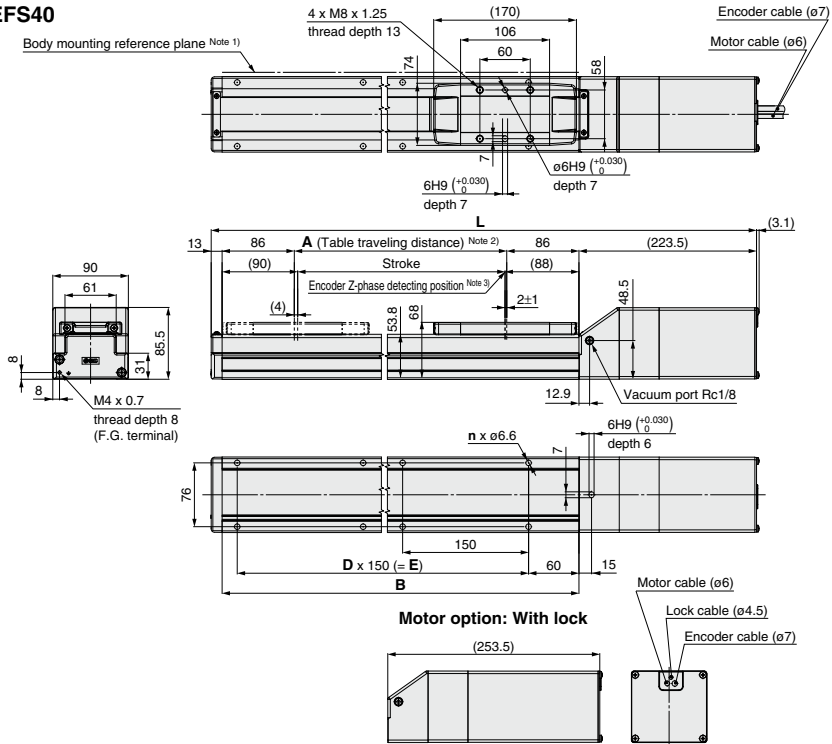
# 11-LEFS Series

AC Servo Motor

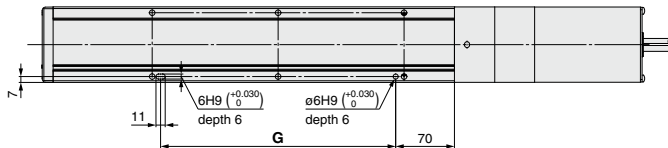
Clean Room Specification

## Dimensions: Ball Screw Drive

### 11-LEFS40



### Positioning pin hole (Note 4) (Option): Body bottom



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

Note 2) Distance within which the table can move when it returns to origin. Make sure a workpiece mounted on the table does not interfere with the workpieces and facilities around the table.

Note 3) The Z-phase first detecting position from the stroke end of the motor side.

Note 4) When using the body bottom positioning pin holes, do not simultaneously use the housing B bottom pin hole.

### Dimensions

Model	L		A	B	n	D	E	G
	Without lock	With lock						
11-LEFS40□□-150□	564.5	594.5	156	328	4	—	150	130
11-LEFS40□□-200□	614.5	644.5	206	378	6	2	300	280
11-LEFS40□□-250□	664.5	694.5	256	428	6	2	300	280
11-LEFS40□□-300□	714.5	744.5	306	478	6	2	300	280
11-LEFS40□□-350□	764.5	794.5	356	528	8	3	450	430
11-LEFS40□□-400□	814.5	844.5	406	578	8	3	450	430
11-LEFS40□□-450□	864.5	894.5	456	628	8	3	450	430
11-LEFS40□□-500□	914.5	944.5	506	678	10	4	600	580
11-LEFS40□□-550□	964.5	994.5	556	728	10	4	600	580
11-LEFS40□□-600□	1014.5	1044.5	606	778	10	4	600	580
11-LEFS40□□-650□	1064.5	1094.5	656	828	12	5	750	730
11-LEFS40□□-700□	1114.5	1144.5	706	878	12	5	750	730
11-LEFS40□□-750□	1164.5	1194.5	756	928	12	5	750	730
11-LEFS40□□-800□	1214.5	1244.5	806	978	14	6	900	880
11-LEFS40□□-850□	1264.5	1294.5	856	1028	14	6	900	880
11-LEFS40□□-900□	1314.5	1344.5	906	1078	14	6	900	880
11-LEFS40□□-950□	1364.5	1394.5	956	1128	16	7	1050	1030
11-LEFS40□□-1000□	1414.5	1444.5	1006	1178	16	7	1050	1030

# Support Guide

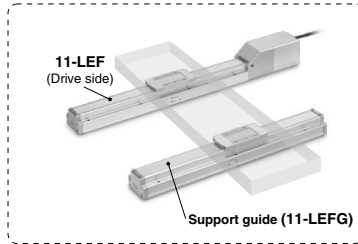
## 11-LEFG Series 11-LEFG16, 25, 32, 40

RoHS

A support guide is designed to support workpieces with significant overhang.

- As the dimensions are the same as the 11-LEF series body, installation is simple and contributes to a reduction in installation and assembly labor.
- The standard equipped seal bands prevent grease from splashing and external foreign matter from entering.

### Application example



### How to Order

11-LEFG 32-S-200

Clean series

Support guide

1

2

3

#### 1 Size

16
25
32
40

#### 2 Type of mounting pitch

Symbol	11-LEFG16	11-LEFG25	11-LEFG32	11-LEFG40	Note
S	●	●	●	●	Ball screw drive Step motor/Servo motor (24 VDC)/AC servo motor

#### 3 Stroke [mm]

50	50
to	to
1000	1000

### Applicable Stroke Table

#### Ball Screw Drive: S

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

### Weight

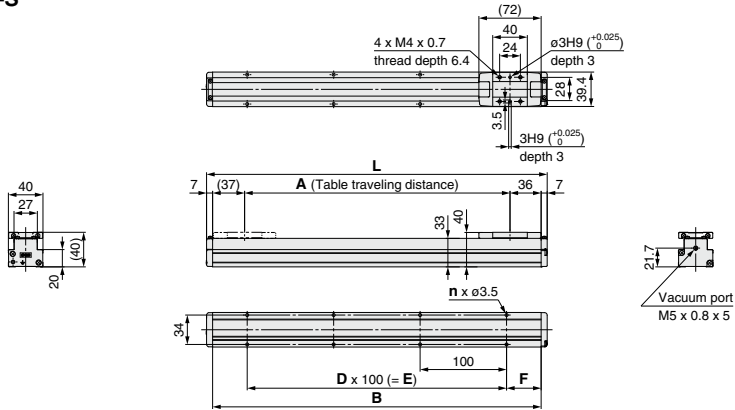
#### Ball Screw Drive: S

Model	Stroke																				
	(mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
11-LEFG16-S	0.25	0.31	0.37	0.43	0.49	0.55	0.61	0.67	0.73	0.79	—	—	—	—	—	—	—	—	—	—	—
11-LEFG25-S	0.56	0.67	0.78	0.89	1.00	1.11	1.22	1.33	1.44	1.55	1.66	1.77	—	—	—	—	—	—	—	—	—
11-LEFG32-S	0.92	1.08	1.23	1.4	1.56	1.72	1.88	2.04	2.20	2.36	2.52	2.68	2.84	3.00	3.16	3.22	—	—	—	—	—
11-LEFG40-S	—	—	2.07	2.29	2.51	2.72	2.94	3.15	3.37	3.58	3.80	4.01	4.23	4.44	4.66	4.87	5.09	5.30	5.52	5.73	—

# 11-LEFG Series

## Dimensions: Ball Screw Drive

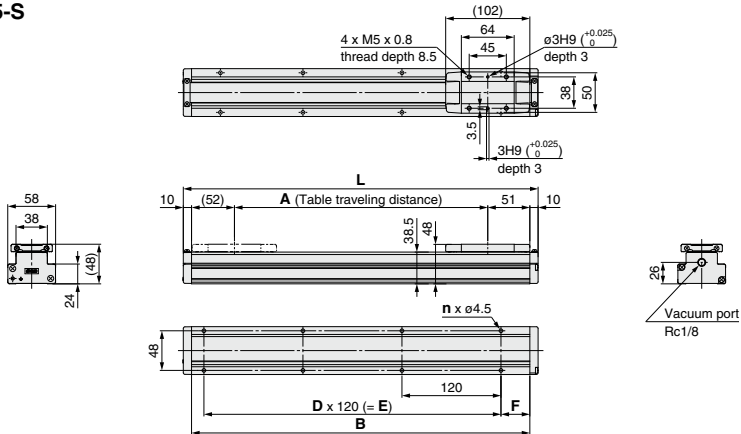
### 11-LEFG16-S



#### Dimensions

Model	L	A	B	n	D	E	F
11-LEFG16-S-50	144	57	130				15
11-LEFG16-S-100	194	107	180	4	—	—	
11-LEFG16-S-150	244	157	230				
11-LEFG16-S-200	294	207	280	6	2	200	
11-LEFG16-S-250	344	257	330				
11-LEFG16-S-300	394	307	380	8	3	300	
11-LEFG16-S-350	444	357	430				
11-LEFG16-S-400	494	407	480	10	4	400	
11-LEFG16-S-450	544	457	530				
11-LEFG16-S-500	594	507	580	12	5	500	

### 11-LEFG25-S



#### Dimensions

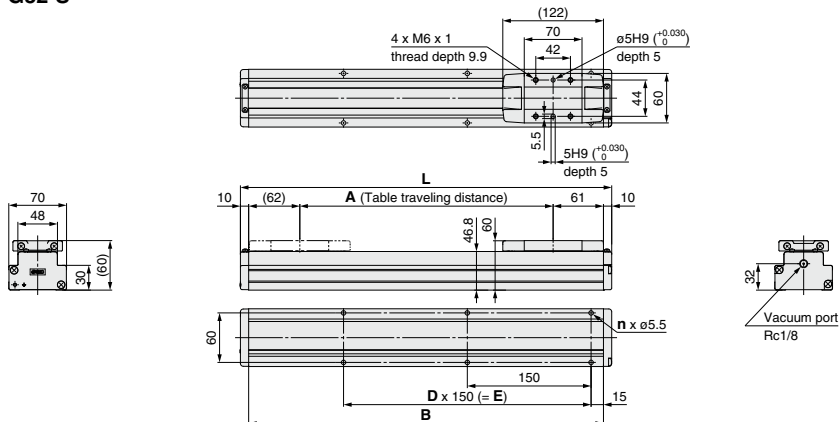
Model	L	A	B	n	D	E	F
11-LEFG25-S-50	180	57	160				20
11-LEFG25-S-100	230	107	210	4	—	—	
11-LEFG25-S-150	280	157	260				
11-LEFG25-S-200	330	207	310	6	2	240	
11-LEFG25-S-250	380	257	360				
11-LEFG25-S-300	430	307	410	8	3	360	
11-LEFG25-S-350	480	357	460				
11-LEFG25-S-400	530	407	510				

#### Dimensions

Model	L	A	B	n	D	E	F
11-LEFG25-S-450	580	457	560				
11-LEFG25-S-500	630	507	610	10	4	480	
11-LEFG25-S-550	680	557	660				
11-LEFG25-S-600	730	607	710	12	5	600	

### Dimensions: Ball Screw Drive

**11-LEFG32-S**



## Dimensions

Dimensions <span style="float: right;">[mm]</span>						
Model	L	A	B	n	D	E
11-LEFG32-S-50	200	57	180	4	—	—
11-LEFG32-S-100	250	107	230			
11-LEFG32-S-150	300	157	280			
11-LEFG32-S-200	350	207	330	6	2	300
11-LEFG32-S-250	400	257	380			
11-LEFG32-S-300	450	307	430			
11-LEFG32-S-350	500	357	480	8	3	450
11-LEFG32-S-400	550	407	530			
11-LEFG32-S-450	600	457	580			

## Dimensions

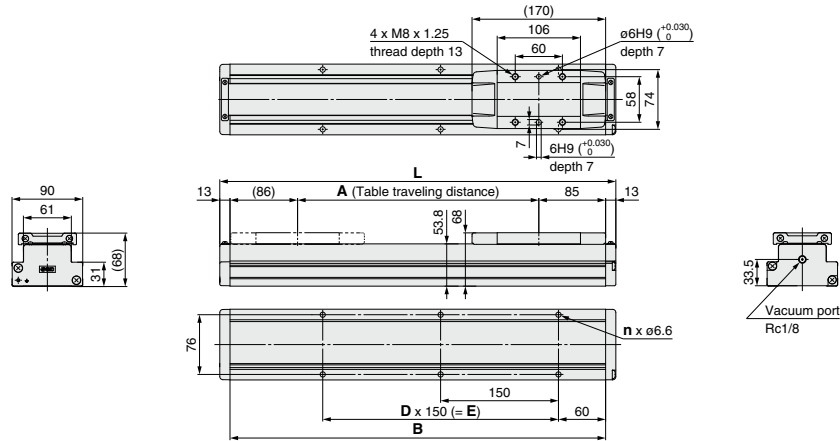
Dimensions [mm]						
Model	L	A	B	n	D	E
11-LFPG32-S-500	650	507	630	10	4	600
11-LFPG32-S-550	700	557	680			
11-LFPG32-S-600	750	607	730			
11-LFPG32-S-650	800	657	780	12	5	750
11-LFPG32-S-700	850	707	830			
11-LFPG32-S-750	900	757	880			
11-LFPG32-S-800	950	807	930			
				14	6	900



# 11-LEFG Series

## Dimensions: Ball Screw Drive

### 11-LEFG40-S



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

Dimensions [mm]						
Model	L	A	B	n	D	E
11-LEFG40-S-650	854	657	828	12	5	750
11-LEFG40-S-700	904	707	878			
11-LEFG40-S-750	954	757	928			
11-LEFG40-S-800	1004	807	978	14	6	900
11-LEFG40-S-850	1054	857	1028			
11-LEFG40-S-900	1104	907	1078			
11-LEFG40-S-950	1154	957	1128	16	7	1050
11-LEFG40-S-1000	1204	1007	1178			

# Particle Generation Characteristics

11-LEJS Series ▶ Page 533

## Particle Generation Measuring Method

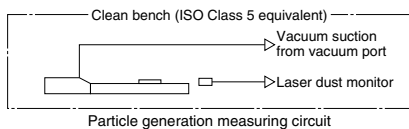
The particle generation data for 11-LEJS series are measured in the following test method.

### ■ Test Method (Example)

Operate the specimen that is placed in an ISO Class 5 equivalent clean bench, and measure the changes of the particle concentration over time until the number of cycles reaches the specified point.

### ■ Measuring Conditions

Measuring instrument	Description	Laser dust monitor (Automatic particle counter by lightscattering method)
	Minimum measurable particle diameter	0.1 μm
	Suction flow rate	28.3 L/min (ANR)
Setting conditions	Sampling time	5 min
	Interval time	55 min
	Sampling air flow	141.5 L (ANR)



### ■ Test Conditions

Size	Speed [mm/s]	Model	Workpiece mass [kg]	Acceleration [mm/s <sup>2</sup> ]	Duty ratio [%]
40	1200	11-LEJS40□A-200	4	13000	100
	600	11-LEJS40□B-200		10000	
63	1200	11-LEJS63□A-300		13000	
	600	11-LEJS63□B-300		10000	

\* Mounting position: Horizontal

### ■ Evaluation Method

To obtain the measured values of particle concentration, the accumulated value <sup>Note 1)</sup> of particles captured every 5 minutes, by the laser dust monitor, is converted into the particle concentration in every 1 m<sup>3</sup>.

When determining particle generation grades, the 95% upper confidence limit of the average particle concentration (average value), when each specimen is operated at a specified number of cycles <sup>Note 2)</sup> is considered.

The plots in the graphs indicate the 95% upper confidence limit of the average particle concentration of particles with a diameter within the horizontal axis range.

Note 1) Sampling air flow rate: Number of particles contained in 141.5 L (ANR) of air

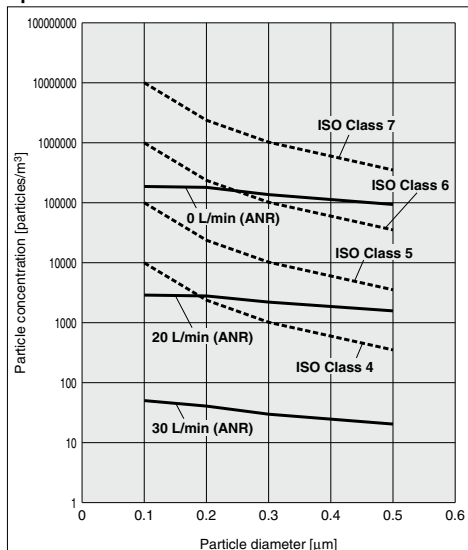
Note 2) Actuator: 1 million cycles

Note 3) The particle generation characteristics (Page 532) provide a guide for selection but is not guaranteed.

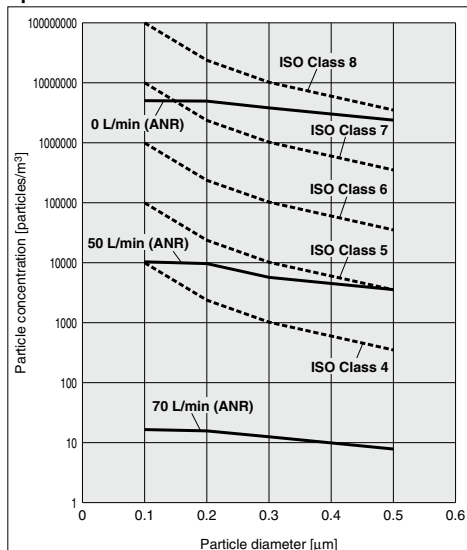
## Particle Generation Characteristics

### 11-LEJS40/Ball Screw Drive

Speed 600 mm/s

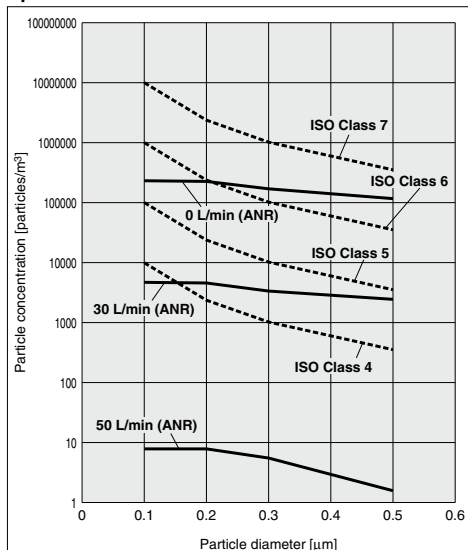


Speed 1200 mm/s

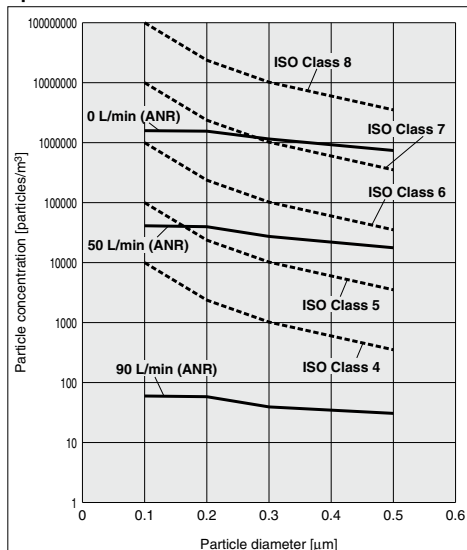


### 11-LEJS63/Ball Screw Drive

Speed 600 mm/s



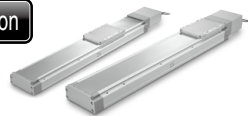
Speed 1200 mm/s



# Electric Actuator/High Rigidity Slider Type Ball Screw Drive

Clean Room Specification

## 11-LEJS Series LEJS40, 63



Refer to page 120 for model selection and page 531 for particle generation characteristics.



LECS Series Page 534-1

### How to Order

11-LEJS **H** **40** **S2** **A** - **500** - - - - -

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

Clean series

11 Vacuum type

#### 1 Accuracy

Nil	Basic type
H	High precision type

#### 2 Size

40
63

#### 3 Motor type

Symbol	Type	Output [W]	Actuator size	Compatible driver	UL-compliant
S2 <sup>*1</sup>	AC servo motor (Incremental encoder)	100	40	LECSA□-S1	—
S3	AC servo motor (Incremental encoder)	200	63	LECSA□-S3	—
S6 <sup>*1</sup>	AC servo motor (Absolute encoder)	100	40	LECSB□-S5 LECSS□-S5 LECSS□-S5	—
S7	AC servo motor (Absolute encoder)	200	63	LECSB□-S7 LECSS□-S7 LECSS□-S7	—
T6 <sup>*2</sup>	AC servo motor (Absolute encoder)	100	40	LECSS2-T5	●
T7	AC servo motor (Absolute encoder)	200	63	LECSS2-T7	●

\*1 For motor type S2 and S6, the compatible driver part number suffixes are S1 and S5 respectively.

\*2 For motor type T6, the compatible driver part number suffix is T5.

#### 6 Motor option

Nil	Without option
B	With lock

#### 7 Vacuum port<sup>\*5</sup>

Nil	Left
R	Right
D	Both left and right

\*5 Select "D" for the vacuum port for suction of 50 L/min (ANR) or more.



#### 8 Cable type<sup>\*6, \*7</sup>

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

\*6 The motor and encoder cables are included. (The lock cable is also included when the motor with lock option is selected.)

\*7 Standard cable entry direction is "A" Axis side.

#### 9 Cable length [m]<sup>\*9</sup>

Nil	Without cable
2	2 m
5	5 m
A	10 m

\*9 The length of the encoder, motor and lock cables are the same.

#### 4 Lead [mm]

Symbol	LEJS40	LEJS63
A	16	20
B	8	10

#### 5 Stroke [mm]<sup>\*3</sup>

200
to
1500

\*3 Refer to the applicable stroke table for details.

#### 10 Driver type<sup>\*5</sup>

	Compatible driver	Power supply voltage [V]	UL-compliant
Nil	Without driver	—	—
A1	LECSA1-S□	100 to 120	—
A2	LECSA2-S□	200 to 230	—
B1	LECSB1-S□	100 to 120	—
B2	LECSB2-S□	200 to 230	—
C1	LECS1-S□	100 to 120	—
C2	LECS2-S□	200 to 230	—
S1	LECSS1-S□	100 to 120	—
S2	LECSS2-S□	200 to 230	—
	LECSS2-T□	200 to 240	●

\*5 When the driver type is selected, the cable is included. Select cable type and cable length. Example) S2S: Standard cable (2 m) + Driver (LECSS2)

S2 : Standard cable (2 m)

Nil : Without cable and driver

#### 11 I/O cable length [m]<sup>\*10</sup>

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

\*10 When "Without driver" is selected for driver type, only "Nil: Without cable" can be selected. Refer to page 624 if I/O cable is required. (Options are shown on page 624.)

#### Applicable Stroke Table<sup>\*4</sup>

	Stroke [mm]	200	300	400	500	600	700	800	900	1000	1200	1500
Model												
11-LEJS40		●	●	●	●	●	●	●	●	●	●	—
11-LEJS63		—	●	●	●	●	●	●	●	●	●	●

\*4 Please consult with SMC for non-standard strokes as they are produced as special orders.

#### Compatible Driver

Driver type	Pulse input type/ Positioning type	Pulse input type	CC-Link direct input type	SSCNET III type	SSCNET III/H type
Series	LECSA	LECSB	LECS	LECS	LECS-T
Number of point tables	Up to 7	—	Up to 255	—	—
Pulse input	○	○	—	—	—
Applicable network	—	—	CC-Link	SSCNET III	SSCNET III/H
Control encoder	Incremental 17-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 22-bit encoder
Communication function	USB communication	USB communication, RS422 communication	USB communication, RS422 communication	USB communication	USB communication
Power supply voltage [V]	100 to 120 VAC (50/60 Hz), 200 to 230 VAC (50/60 Hz)				200 to 240 VAC (50/60 Hz)
Reference page	Page 613				Page 607

For auto switches, refer to pages 142 to 144.

# 11-LEJS Series

AC Servo Motor

Clean Room Specification

## Specifications

### 11-LEJS40, 63 AC Servo Motor

Model			11-LEJS40S <sub>i</sub> /T6			11-LEJS63S <sub>i</sub> /T7		
Actuator specifications	Stroke [mm] <sup>Note 1)</sup>		200, 300, 400, 500, 600, 700, 800 900, 1000, 1200			300, 400, 500, 600, 700, 800, 900 1000, 1200, 1500		
	Work load [kg] <sup>Note 2)</sup>	Horizontal	30	55	45	85		
		Vertical	5	10	10	20		
	Speed <sup>Note 3)</sup> [mm/s]	Stroke range	Up to 500	1200	600	1200	600	
			501 to 600	1050	520	1200	600	
			601 to 700	780	390	1200	600	
			701 to 800	600	300	930	460	
			801 to 900	480	240	740	370	
			901 to 1000	390	190	600	300	
			1001 to 1100	320	160	500	250	
			1101 to 1200	270	130	420	210	
			1201 to 1300	—	—	360	180	
			1301 to 1400	—	—	310	150	
	1401 to 1500	—	—	270	130			
	Max. acceleration/deceleration [mm/s <sup>2</sup> ]		20000 (Refer to pages 124 and 125 for limit according to work load and duty ratio.)					
Positioning repeatability [mm]	Basic type	±0.02						
	High precision type	±0.01						
Lost motion [mm] <sup>Note 4)</sup>	Basic type	0.1 or less						
	High precision type	0.05 or less						
Electric specifications	Lead [mm]		16	8	20	10		
	Impact/Vibration resistance [m/s <sup>2</sup> ] <sup>Note 5)</sup>		50/20					
	Actuation type		Ball screw					
	Guide type		Linear guide					
	Grease		Ball screw/Linear guide portion					
	Cleanliness class <sup>Note 6)</sup>		Low particle generation grease					
	Allowable external force [N]		ISO Class 4 (ISO14644-1)					
	Operating temperature range [°C]		20					
	Operating humidity range [%RH]		5 to 40					
	Regeneration option		90 or less (No condensation)					
	Motor output [W]/Size [mm]		May be required depending on speed and work load. (Refer to page 121.)					
	Motor type		100□40	200□60				
	Encoder		AC servo motor (100/200 VAC)					
	Power consumption [W] <sup>Note 7)</sup>		Horizontal	65	80			
	Standby power consumption when operating [W] <sup>Note 8)</sup>		Vertical	165	235			
Max. instantaneous power consumption [W] <sup>Note 9)</sup>		Horizontal	2	2				
Type <sup>Note 10)</sup>		Vertical	10	12				
Holding force [N]		445	725					
Lock unit specifications	Type <sup>Note 10)</sup>		Non-magnetizing lock					
	Holding force [N]		101	203	330	660		
	Power consumption [W] at 20°C <sup>Note 11)</sup>		6.3	7.9				
Rated voltage [V]		24 VDC <sup>0 -10%</sup>						

Note 1) Please consult with SMC for non-standard strokes as they are produced as special orders.

Note 2) Refer to "Speed-Work Load Graph (Guide)" on page 121 for details.

Note 3) The allowable speed changes according to the stroke.

Note 4) A reference value for correcting an error in reciprocal operation.

Note 5) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (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 6) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 7) The power consumption (including the driver) is for when the actuator is operating.

Note 8) The standby power consumption when operating (including the driver) is for when the actuator is stopped in the set position during the operation.

Note 9) The maximum instantaneous power consumption (including the driver) is for when the actuator is operating. This value can be used for the selection of the power supply.

Note 10) Only when motor option "With lock" is selected.

Note 11) For an actuator with lock, add the power consumption for the lock.

Note 12) Sensor magnet position is located in the table center.

For detailed dimensions, refer to "Auto Switch Mounting Position" on page 142.

Note 13) Do not allow collisions at either end of the table traveling distance. Additionally, when running the positioning operation, do not set within 2 mm of both ends.

Note 14) For the manufacture of intermediate strokes, please contact SMC. (11-LEJS40/Manufacturable stroke range: 200 to 1200 mm, 11-LEJS63/Manufacturable stroke range: 300 to 1500 mm)

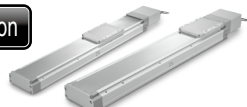
## Weight

Model			11-LEJS40							
Stroke [mm]			200	300	400	500	600	700	800	900
Product weight [kg]			5.6	6.4	7.1	7.9	8.7	9.4	10.2	11.0
Additional weight with lock [kg]			S2: 0.2/S6: 0.3/T6: 0.2							
Model			11-LEJS63							
Stroke [mm]			300	400	500	600	700	800	900	1000
Product weight [kg]			11.4	12.7	13.9	15.2	16.4	17.7	18.9	20.1
Additional weight with lock [kg]			S3: 0.4/S7: 0.7/T7: 0.4							

# Electric Actuator/High Rigidity Slider Type Ball Screw Drive

Clean Room Specification

## 11-LEJS Series LEJS40, 63



Refer to page 120 for model selection and page 531 for particle generation characteristics.

LECS Series ▶ Page 533

## How to Order

Dimensions are the same as those of the LECS Series. For details, refer to page 535 and onwards.

**11-LEJS H 40 V6 A - 500**

1 2 3 4 5 6 7 8 9 10 11

Clean series

11 Vacuum type

## 1 Accuracy

Nil	Basic type
H	High precision type

## 2 Size

40
63

## 6 Motor option

Nil	Without option
B	With lock

## 7 Vacuum port\*

Nil	Left
R	Right
D	Both left and right

\*5 Select "D" for the vacuum port for suction of 50 L/min (ANR) or more.



## 3 Motor type\*

Symbol	Type	Output [W]	Actuator size	Compatible*2 driver
V6	AC servo motor (Absolute encoder)	100	40	LECYM2-V5 LECYU2-V5
V7	AC servo motor (Absolute encoder)	200	63	LECYM2-V7 LECYU2-V7

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

\*2 For details of the driver, refer to page 607.

## 8 Cable type\*6, \*7, \*8

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

\*6 When the driver type is selected, the cable is included. Select cable type and cable length.

Example)

S2S2: Standard cable (2 m) + Driver (LECS2)

S2: Standard cable (2 m)

Nil: Without cable and driver

\*7 The motor and encoder cables are included. (The lock cable is also included when the motor with lock option is selected.)

\*8 Standard cable entry direction is "(A) Axis side".

## 9 Cable length [m]\*6, \*9

Nil	Without cable
3	3
5	5
A	10
C	20

\*9 The length of the encoder, motor and lock cables are the same.

## 4 Lead [mm]

Symbol	LEJS40	LEJS63
A	16	20
B	8	10

## 5 Stroke [mm]\*3

200
to
1500

\*3 Refer to the applicable stroke table for details.

## 10 Driver type\*

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

## 11 I/O cable length [m]\*10

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

\*10 When "Without driver" is selected for driver type, only "Nil: Without cable" can be selected.

Refer to page 624 if I/O cable is required.

(Options are shown on page 624.)

## Applicable Stroke Table\*4

●: Standard

Model	Stroke [mm]	200	300	400	500	600	700	800	900	1000	1200	1500
11-LEJS40		●	●	●	●	●	●	●	●	●	●	—
11-LEJS63		—	●	●	●	●	●	●	●	●	●	●

\*4 Please consult with SMC for non-standard strokes as they are produced as special orders.

## Compatible Driver

For auto switches, refer to pages 142 to 144.

Driver type	MECHATROLINK-II type	MECHATROLINK-III type
Series	LECYM	LECYU
Applicable network	MECHATROLINK-II	MECHATROLINK-III
Control encoder	Absolute 20-bit encoder	
Communication device	USB communication, RS-422 communication	
Power supply voltage [V]	200 to 230 VAC (50/60 Hz)	
Reference page	Page 628-1	



# 11-LEJS Series

AC Servo Motor

## Specifications

### AC Servo Motor (100/200 W)

Model			11-LEJS40V6		11-LEJS63V7		
Actuator specifications	Stroke [mm] <sup>Note 1)</sup>		200, 300, 400, 500, 600, 700, 800 900, 1000, 1200		300, 400, 500, 600, 700, 800, 900 1000, 1200, 1500		
	Work load [kg] <sup>Note 2)</sup>	Horizontal	30	55	45	85	
		Vertical	5	10	10	20	
	Speed <sup>Note 3)</sup> [mm/s]	Stroke range	Up to 500	1200	600	1200	600
			501 to 600	1050	520	1200	600
			601 to 700	780	390	1200	600
			701 to 800	600	300	930	460
			801 to 900	480	240	740	370
			901 to 1000	390	190	600	300
			1001 to 1100	320	160	500	250
			1101 to 1200	270	130	420	210
			1201 to 1300	—	—	360	180
			1301 to 1400	—	—	310	150
	1401 to 1500	—	—	270	130		
	Max. acceleration/deceleration [mm/s <sup>2</sup> ]		20000 (Refer to pages 124 and 125 for limit according to work load and duty ratio.)				
	Positioning repeatability [mm]	Basic type	±0.02				
		High precision type	±0.01				
Lost motion [mm] <sup>Note 4)</sup>	Basic type	0.1 or less					
	High precision type	0.05 or less					
Lead [mm]		16	8	20	10		
Impact/Vibration resistance [m/s <sup>2</sup> ] <sup>Note 5)</sup>		50/20					
Actuation type		Ball screw					
Guide type		Linear guide					
Grease	Ball screw/Linear guide portion	Low particle generation grease					
Cleanliness class <sup>Note 6)</sup>		ISO Class 4 (ISO14644-1)					
Operating temperature range [°C]		5 to 40					
Operating humidity range [%RH]		90 or less (No condensation)					
Regenerative resistor		May be required depending on speed and work load. (Refer to page 131-2.)					
Motor output [W]/Size [mm]		100□40		200□60			
Electric specifications	Motor type		AC servo motor (200 VAC)				
	Encoder		Absolute 20-bit encoder (Resolution: 1048576 p/rev)				
	Power consumption [W] <sup>Note 7)</sup>	Horizontal	65		80		
		Vertical	165		235		
	Standby power consumption when operating [W] <sup>Note 8)</sup>	Horizontal	2		2		
		Vertical	10		12		
	Max. instantaneous power consumption [W] <sup>Note 9)</sup>		445		725		
	Type <sup>Note 10)</sup>		Non-magnetizing lock				
	Holding force [N]		101	202	162	324	
	Power consumption at 20°C [W] <sup>Note 11)</sup>		5.5		6		
Lock unit specifications	Rated voltage [V]		24 VDC <sup>+10%</sup> <sub>0</sub>				

Note 1) Please consult with SMC for non-standard strokes as they are produced as special orders.  
 Note 2) Refer to "Speed-Work Load Graph (Guide)" on page 131-2 for details.  
 Note 3) The allowable speed changes according to the stroke.

Note 4) A reference value for correcting an error in reciprocal operation.

Note 5) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (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 6) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 7) The power consumption (including the driver) is for when the actuator is operating.  
 Note 8) The standby power consumption when operating (including the driver) is for when the actuator is stopped in the set position during the operation.

Note 9) The maximum instantaneous power consumption (including the driver) is for when the actuator is operating. This value can be used for the selection of the power supply.

Note 10) Only when motor option "With lock" is selected.

Note 11) For an actuator with lock, add the power consumption for the lock.

Note 12) Sensor magnet position is located in the table center.

For detailed dimensions, refer to "Auto Switch Mounting Position".

Note 13) Do not allow collisions at either end of the table traveling distance. Additionally, when running the positioning operation, do not set within 2 mm of both ends.

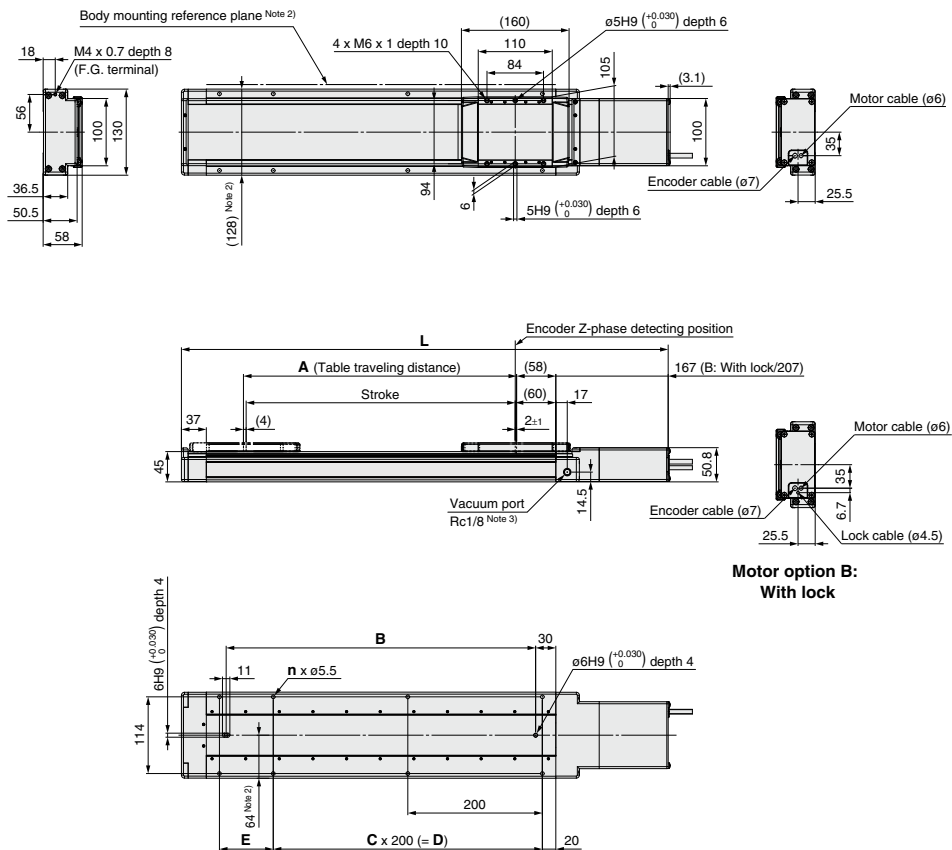
Note 14) For the manufacture of intermediate strokes, please contact SMC. (11-LEJS40/Manufacturable stroke range: 200 to 1200 mm, 11-LEJS63/Manufacturable stroke range: 300 to 1500 mm)

## Weight

Model		11-LEJS40									
Stroke [mm]		200	300	400	500	600	700	800	900	1000	1200
Product weight [kg]		5.6	6.4	7.1	7.9	8.7	9.4	10.2	11.0	11.7	13.3
Additional weight with lock [kg]		0.3 (Absolute encoder)									
Model		11-LEJS63									
Stroke [mm]		300	400	500	600	700	800	900	1000	1200	1500
Product weight [kg]		11.4	12.7	13.9	15.2	16.4	17.7	18.9	20.1	22.6	26.4
Additional weight with lock [kg]		0.7 (Absolute encoder)									

## Dimensions: Ball Screw Drive

### 11-LEJS40



Note 1) Please consult with SMC for adjusting the Z-phase detecting position at the stroke end of the end side.

Note 2) When mounting the actuator using the body mounting reference plane, use a pin. Set the height of the pin to be 5 mm or more because of round chamfering. (Recommended height 6 mm)

Note 3) This drawing shows the left type.

Note 4) The amount of particle generation changes according to the operating conditions and suction flow rate.

Model	L		A	B	n	C	D	E
	Without lock	With lock						
11-LEJS40□□-200□□-□□□□	523.5	563.5	206	260	6	1	200	80
11-LEJS40□□-300□□-□□□□	623.5	663.5	306	360	6	1	200	180
11-LEJS40□□-400□□-□□□□	723.5	763.5	406	460	8	2	400	80
11-LEJS40□□-500□□-□□□□	823.5	863.5	506	560	8	2	400	180
11-LEJS40□□-600□□-□□□□	923.5	963.5	606	660	10	3	600	80
11-LEJS40□□-700□□-□□□□	1023.5	1063.5	706	760	10	3	600	180
11-LEJS40□□-800□□-□□□□	1123.5	1163.5	806	860	12	4	800	80
11-LEJS40□□-900□□-□□□□	1223.5	1263.5	906	960	12	4	800	180
11-LEJS40□□-1000□□-□□□□	1323.5	1363.5	1006	1060	14	5	1000	80
11-LEJS40□□-1200□□-□□□□	1523.5	1563.5	1206	1260	16	6	1200	80

[mm]



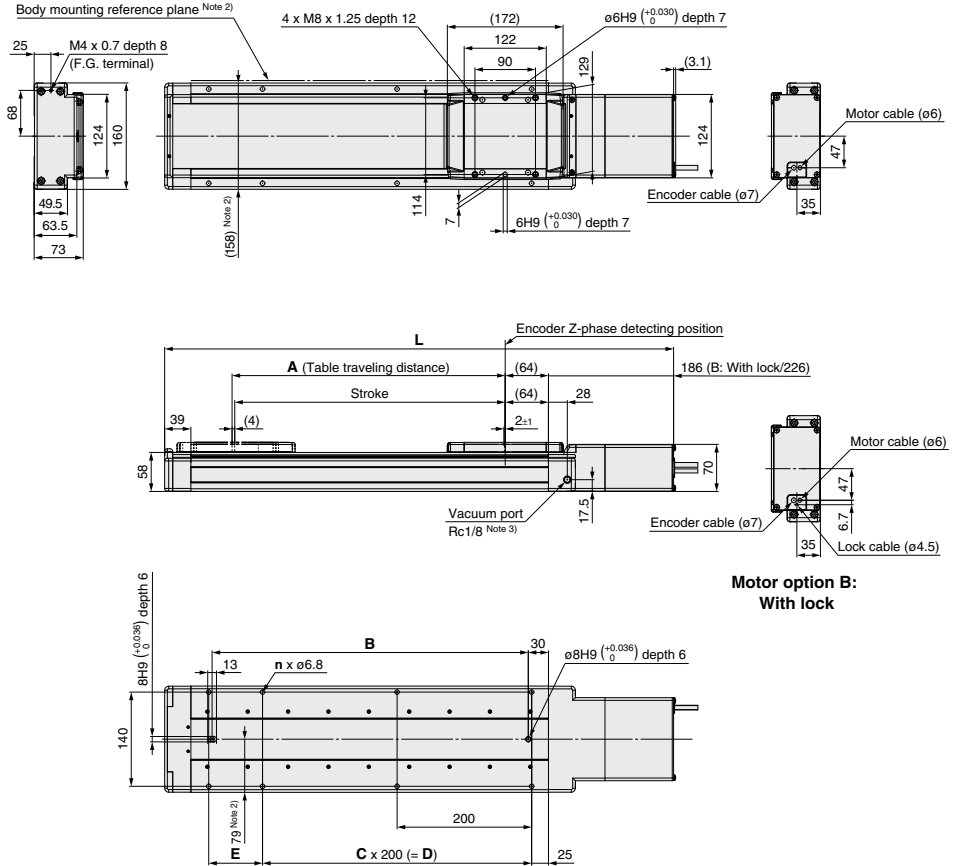
# 11-LEJS Series

AC Servo Motor

Clean Room Specification

## Dimensions: Ball Screw Drive

### 11-LEJS63



Note 1) Please consult with SMC for adjusting the Z-phase detecting position at the stroke end of the end side.

Note 2) When mounting the actuator using the body mounting reference plane, use a pin. Set the height of the pin to be 5 mm or more because of round chamfering. (Recommended height 6 mm)

Note 3) This drawing shows the left type.

Note 4) The amount of particle generation changes according to the operating conditions and suction flow rate.

Model	L		A	B	n	C	D	E
	Without lock	With lock						
11-LEJS63-300-□-□-□-□-□-□	656.5	696.5	306	370	6	1	200	180
11-LEJS63-400-□-□-□-□-□-□	756.5	796.5	406	470	8	2	400	80
11-LEJS63-500-□-□-□-□-□-□	856.5	896.5	506	570	8	2	400	180
11-LEJS63-600-□-□-□-□-□-□	956.5	996.5	606	670	10	3	600	80
11-LEJS63-700-□-□-□-□-□-□	1056.5	1096.5	706	770	10	3	600	180
11-LEJS63-800-□-□-□-□-□-□	1156.5	1196.5	806	870	12	4	800	80
11-LEJS63-900-□-□-□-□-□-□	1256.5	1296.5	906	970	12	4	800	180
11-LEJS63-1000-□-□-□-□-□-□	1356.5	1396.5	1006	1070	14	5	1000	80
11-LEJS63-1200-□-□-□-□-□-□	1556.5	1596.5	1206	1270	16	6	1200	80
11-LEJS63-1500-□-□-□-□-□-□	1856.5	1896.5	1506	1570	18	7	1400	180