11-LEJS Series ▶ p. **657**

Particle Generation Measuring Method

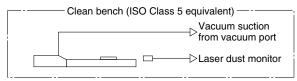
The particle generation data for the 11-LEJS series are measured in the following test method.

■ 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

	1	
Measuring instrument	Description	Laser dust monitor (Automatic particle counter using the light scattering method)
	Minimum measurable particle diameter	0.1 μm
	Suction flow rate	28.3 L/min (ANR)
	Sampling time	5 min
Setting conditions	Interval time	55 min
	Sampling air flow	141.5 L (ANR)



Particle generation measuring circuit

■ Test Conditions

Size	Speed [mm/s]	Model	Workpiece mass [kg]	Acceleration [mm/s ²]	Duty ratio [%]
40	1200	11-LEJS40□A-200		13000	
40	600	11-LEJS40□B-200	4	10000	100
60	1200	11-LEJS63□A-300	4	13000	100
63	600	11-LEJS63□B-300		10000	

^{*} Mounting position: Horizontal

■ Evaluation Method

To obtain the measured values of particle concentration, the accumulated value*1 of particles captured every 5 minutes, by the laser dust monitor, is converted into the particle concentration in every 1 m³.

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*2 is considered.

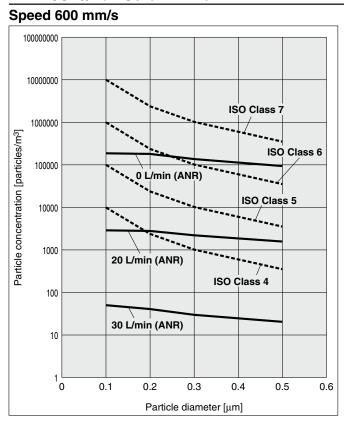
The plots in the graphs indicate the 95% upper confidence limit of the average particle concentration of particles with a diameter within the horizontal axis range.

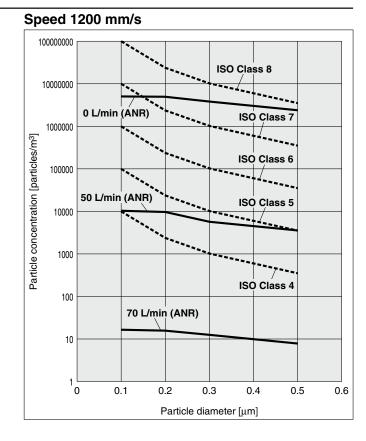
- *1 Sampling air flow rate: Number of particles contained in 141.5 L (ANR) of air
- *2 Actuator: 1 million cycles
- * The particle generation characteristics (page 656) provide a guide for selection but is not guaranteed.



Particle Generation Characteristics

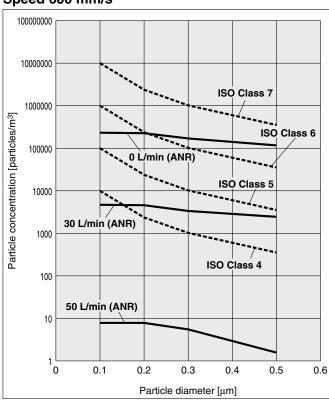
11-LEJS40/Ball Screw Drive



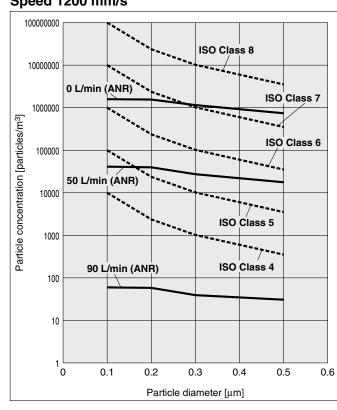


11-LEJS63/Ball Screw Drive









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LEY-X5 11-LEFS

11-LEJS 25A-

LECY Motorless

LAT3

Electric Actuator/High Rigidity Slider Type

Ball Screw Drive Clean Room Specification

actuator drivers are to be discontinued. The LECSB-T, LECSC-T, and LECSS-T drivers are available as substitutes. In the product number, select T6 instead of S6, or T7 instead of S7 for the 3 Motor type, and select B2 instead of B1, C2 instead

Refer to page 175 for model selection and page 655 for particle generation characteristics.

(RoHS)

LECY□ Series p. 659

How to Order

11-LEJS Series LEJS40, 63

Click here for details. Click here for details

11-LEJS	H	40	S2	A	-500	-	-		
eries			8		6	A A	8	0 1	_
	•	4		•					

Clean ser Vacuum type

Accuracy Nil Basic type High-precision type 2 Size

4 Lead [mm]

LEJS40	LEJS63
16	20
8	10
	16

5 Stroke [mm]*3

200	
to	
1500	

*3 Refer to the applicable stroke table for details.

Motor option

Nil	Without option
В	With lock

Vacuum port*5

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.



Applicable Stroke Table*4 Stroke [mm]

Motor type

Symbol	Туре	Output [W]	Actuator size	Compatible drivers	UL- compliant
S2*1	AC servo motor (Incremental encoder)	100	40	LECSA□-S1	•
S3	AC servo motor (Incremental encoder)	200	63	LECSA□-S3	•
S6*1	AC servo motor (Absolute encoder)	100	40	LECSB□-S5 LECSC□-S5 LECSS□-S5	_
S7	AC servo motor (Absolute encoder)	200	63	LECSB□-S7 LECSC□-S7 LECSS□-S7	_
T6*2		100	40	LECSB2-T5 LECSC2-T5 LECSN2-T5-□	_
	AC servo motor			LECSS2-T5	•
Т7	(Absolute encoder)	200	63	LECSB2-T7 LECSC2-T7 LECSN2-T7-□	_
				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 is LECS□2-T5.

Cable type*6, *7

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.)

500	600	700	800	900	1000	1200	1500		
						●: S	tandard		
*7 Standard cable entry direction is "(A) Axis side."									

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

400

Cable length [m]*6, *8

	<u> </u>
Nil	Without cable
2	2 m
5	5 m
Α	10 m

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

1 Driver type∗5

_		
	Compatible drivers	Power supply voltage [V]
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
DZ	LECSB2-T□	200 to 240
C1	LECSC1-S□	100 to 120
C2	LECSC2-S□	200 to 230
C2	LECSC2-T□	200 10 230
S1	LECSS1-S□	100 to 120
S2	LECSS2-S□	200 to 230
32	LECSS2-T□	200 to 240
N2	LECSN2-T□	200 to 240
E2	LECSN2-T□-E	200 to 240
92	LECSN2-T□-9	200 to 240
P2	LECSN2-T□-P	200 to 240

*5 When a driver type is selected, a cable is included. Select the cable type and cable length. Example) S2S2: Standard cable (2 m) +

Driver (LECSS2) S2: Standard cable (2 m)

Nil: Without cable and driver

I/O cable length [m]*9

w i/O cable length [m]					
Nil	Without cable				
Н	Without cable (Connector only)				
1	1.5				

When "Without driver" is selected for driver type, only "Nil: Without cable" can be selected. Refer to page 797 if I/O cable is required. (Options are shown on page 797.)

Compatible Drivers

11-LEJS40

11-LEJS63

For auto switches, refer to pages 210 to 213.

Driver type	Pulse input type/ Positioning type	Pulse input type	CC-Link direct input type	SSCNET III type	Pulse input type	CC-Link direct input type	type	Network card type
Series	LECSA	LECSB	LECSC	LECSS	LECSB-T	LECSC-T	LECSS-T	LECSN-T
Number of point tables*10	Up to 7	_	Up to 255	_	Up to 255	Up to 255 (2 stations occupied)	_	Up to 255
Pulse input	0	0	_	_	0	_	_	_
Applicable network	_	_	CC-Link	SSCNET III	_	CC-Link	SSCNET III/H	PROFINET EtherCAT® EtherNet/IP™
Control encoder	Incremental 17-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 22-bit encoder	Absolute 18-bit encoder	Absolute 22-bit encoder	Absolute 22-bit encoder
Communication	USB	USB comm	nunication,	USB	USB comn	nunication,	USB	USB
function	communication RS422 communication		communication	RS422 communication		communication	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				7	77			

^{*10} The LECSN-T only supports PROFINET and EtherCAT®.

Specifications

11-LEJS40, 63 AC Servo Motor

		Model		11-LEJS	40S ₆ /T6	11-LEJS	63S ³ /T7			
	Stroke [mm]	×1		200, 300, 400, 50	00, 600, 700, 800 00, 1200		00, 700, 800, 900			
			Horizontal	30	55	1000, 1200, 1500 45 85				
	Work load [kg	g] *2	Vertical	5	10	10	20			
			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			
	Speed*3	Stroke range	901 to 1000	390	190	600	300			
'	[mm/s]	ou ou o rango	1001 to 1100	320	160	500	250			
specifications			1101 to 1200	270	130	420	210			
ä			1201 to 1300	_	_	360	180			
ij			1301 to 1400	_	_	310	150			
Ğ			1401 to 1500	_	_	270	130			
g	Max. accelera	ation/deceleration	on [mm/s ²]	20000 (Refer to)	pages 179 and 180 for li	nit according to work load	d and duty ratio.)			
	Positioning repeatability Basic type			±0.02						
ă	[mm]	,	High-precision type	±0.01						
Actuator		- 3÷1	Basic type	0.1 or less						
ď	Lost motion	[mm] ^{***}	High-precision type	0.05 or less						
	Lead [mm]			16	8	20	10			
	Impact/Vibra	tion resistance	[m/s ²]* ⁵	50/20						
	Actuation type	oe		Ball screw						
	Guide type			Linear guide						
	Grease	Ball screw/Lin	ear guide portion	Low particle generation grease						
	Cleanliness			ISO Class 4 (ISO 14644-1)						
		ternal force [N]		20						
		mperature range		5 to 40						
		midity range [%	RH]	90 or less (No condensation)						
	Regeneration			May be required depending on speed and work load (Refer to page 176.)						
w		[W]/Size [mm]		100/□40 200/□60						
ë	Motor type				AC servo moto	,				
Electric specificatio				Motor type S2, S3: Incremental 17-bit encoder (Resolution: 131072 p/rev)						
ฐย	Encoder*9			Motor type S6, S7: Absolute 18-bit encoder (Resolution: 262144 p/rev)						
ᄗᄁ	2.10000			Motor type T6, T7: Absolute 22-bit encoder (Resolution: 4194304 p/rev) (For LECSB-T□, LECSS-T□) Motor type T6, T7: Absolute 18-bit encoder (Resolution: 262144 p/rev) (For LECSC-T□)						
g	7			,,		· · · · · · · · · · · · · · · · · · ·	, , ,			
	Power [W]*7			Max. po		Max. po	wer /25			
ations	Type*8	PA 17		101		etizing lock	200			
			n	101	203	330	660			
specific		mption at 20°C	[W]	6.3 7.9						
S	Rated voltage	e [v]			24 VL					

- *1 Please consult with SMC for non-standard strokes as they are produced as special orders.
- *2 For details, refer to the "Speed-Work Load Graph (Guide)" on page 176.
- *3 The allowable speed changes according to the stroke.
- *4 A reference value for correcting an error in reciprocal operation
- *5 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)

Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)

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

- *7 Indicates the max. power during operation (including the driver) When selecting the power supply capacity, refer to the power supply capacity in the operation manual of each driver.
- *8 Only when motor option "With lock" is selected
- *9 The resolution will change depending on the driver type.
- * Sensor magnet position is located in the table center.
 - For detailed dimensions, refer to the "Auto Switch Mounting Position" on page 210.
- * 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
- * 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]		S2: 0.2/S6: 0.3/T6: 0.2								

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]					S3: 0.4/S7:	0.7/T7: 0.4				

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LEY-X5 11-LEFS

11-LEJS

25A-

LECY | LECS |

Electric Actuator/High Rigidity Slider Type

Ball Screw Drive Clean Room Specification

11-LEJS Series LEJS40, 63

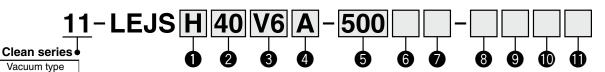
RoHS

Refer to page 186 for model selection and page 655 for particle generation characteristics.

LECS□ Series > p. 657

How to Order

Dimensions are the same as those of the LECS series. For details, refer to page 661 and onwards



Accuracy				
Nil	Basic type			
Н	High-precision type			



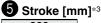
Motor type*1

Symbol	Туре	Output [W]	Actuator size	Compatible*2 drivers
V6	AC servo motor (Absolute encoder)	100	40	LECYM2-V5 LECYU2-V5
V 7	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 on the driver, refer to page 801.

4 Lead [mm]

Symbol	LEJS40	LEJS63
Α	16	20
В	8	10



200
to
1500

*3 Refer to the applicable stroke table for details.

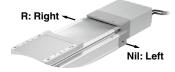
6 Motor option

Nil	Without option
В	With lock

Vacuum port*5

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*6, *7, *8

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

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

S2S2: Standard cable (2 m) + Driver (LECSS2)

S2: Standard cable (2 m)

Nil: Without cable and driver

- 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."

Driver type^{*6}

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

9 Cable length [m]*6, *9

<u> </u>	olo longui [m]
Nil	Without cable
3	3
5	5
Α	10
	20

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

I/O cable length [m]*10

Nil	Without cable
Н	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 797 if I/O cable is required.

(Options are shown on page 797.)

Applicable Stroke lable** Standard													
Stroke [mm] Model	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.

For auto switches, refer to pages 210 to 213.

Compatible Drivers

..... MECHATROLINK-Ⅲ type



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

Reference page

Specifications

AC Servo Motor (100/200 W)

Model				11-LEJ	IS40V6	11-LEJ	S63V7				
	Stroke [mm	n]* ¹		200, 300, 400, 50 900, 100		300, 400, 500, 60 1000, 120					
	Mork load		Horizontal	30	55	45	85				
	Work load	Work load [kg]*2 Vertical		5	10	10	20				
			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				
	Speed*3	Chualra	801 to 900	480	240	740	370				
	[mm/s]	Stroke	901 to 1000	390	190	600	300				
2	[miii/s]	range	1001 to 1100	320	160	500	250				
io			1101 to 1200	270	130	420	210				
ca			1201 to 1300	_	_	360	180				
ciffi			1301 to 1400	_	_	310	150				
be			1401 to 1500	_	_	270	130				
Z S	Max. accel	Max. acceleration/deceleration [mm/s ²]		20000 (Refer to pages 179 and 180 for limit according to work load and duty ratio.)							
Actuator specifications	Positioning	Positioning repeatability Basic type		±0.02							
	[mm] High-precision type			±0	.01						
⋖	Lost motion [mm]*4 Basic type		0.1 or less								
	LOST IIIOTIO	High-precision type		0.05 or less							
	Lead [mm]	Lead [mm]		16	8	20	10				
	Impact/Vib	ration resista	nce [m/s²]*5	50/20							
	Actuation t	, .		Ball screw							
	Guide type	+		Linear guide							
	Grease		near guide portion	Low particle generation grease							
	Cleanlines			ISO Class 4 (ISO 14644-1)							
		temperature r	<u> </u>	5 to 40							
		humidity rang	je [%RH]	90 or less (No condensation)							
	Regenerati				<u> </u>	d and work load (Refer to p	· .				
, suo	Motor outp	out [W]/Size [n	nm]	100/		200/[⊒60				
ᇙᇎ	Motor type	!			AC servo mo						
Electric specifications	Encoder				Absolute 20-bit encoder (F						
S	Power [W]*	k7		Max. po		Max. pov	ver 725				
i sus	Type*8					etizing lock					
턡	Holding for			101	202	162	324				
Lock unit specifications	Power con	sumption at 2	:0°C [W]	5.		6					
_ g	Rated volta	age [V]			24 VD	OC +10%					

- *1 Please consult with SMC for non-standard strokes as they are produced as special orders.
- *2 For details, refer to the "Speed-Work Load Graph (Guide)" on page 187.
- *3 The allowable speed changes according to the stroke.
- *4 A reference value for correcting an error in reciprocal operation
- *5 Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)

Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. The test was performed in both an axial direction and a perpendicular direction to the lead screw. (The test was performed with the actuator in the initial state.)

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

- *7 Indicates the max. power during operation (including the driver) When selecting the power supply capacity, refer to the power supply capacity in the operation manual of each driver.
- *8 Only when motor option "With lock" is selected
- Sensor magnet position is located in the table center. For detailed dimensions, refer to the "Auto Switch Mounting Position."
- 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.
- 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)											



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LEY-X5 11-LEFS

11-LEJS

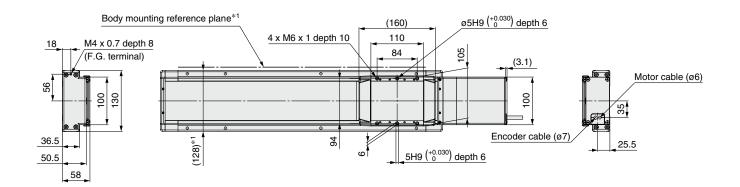
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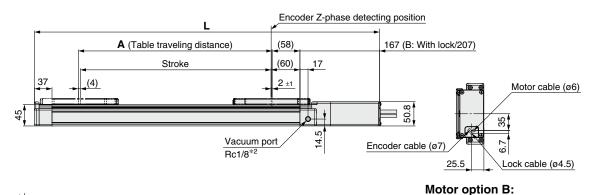
Motorless | LECY□ | LECS□



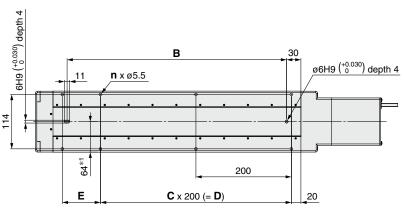
Dimensions: Ball Screw Drive

11-LEJS40





With lock



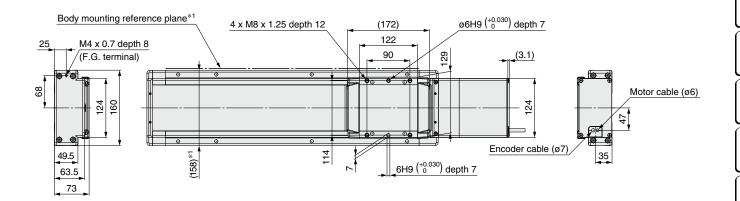
- *1 When mounting the actuator using the body mounting reference plane, use a pin. Set the height of the pin to be 5 mm or more because of round chamfering. (Recommended height 6 mm)
- *2 This drawing shows the left type.
- * Please consult with SMC for adjusting the Z-phase detecting position at the stroke end of the end side.
- * The amount of particle generation changes according to the operating conditions and suction flow rate.

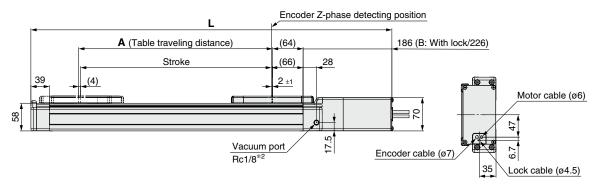
								[mm]
Model	L	L		В	n	С	D	Е
Wodel	Without lock	With lock	A	6	"			_
11-LEJS40□□-200□□-□□□□	523.5	563.5	206	260	6	1	200	80
11-LEJS40 - 300	623.5	663.5	306	360	6	1	200	180
11-LEJS40	723.5	763.5	406	460	8	2	400	80
11-LEJS40 - 500	823.5	863.5	506	560	8	2	400	180
11-LEJS40 -600	923.5	963.5	606	660	10	3	600	80
11-LEJS40 - 700	1023.5	1063.5	706	760	10	3	600	180
11-LEJS40	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

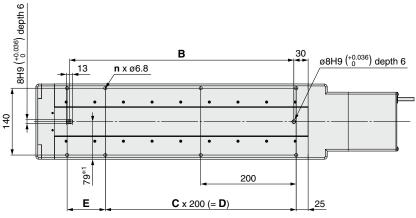


Dimensions: Ball Screw Drive

11-LEJS63







- *1 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)
- *2 This drawing shows the left type.
- * Please consult with SMC for adjusting the Z-phase detecting position at the stroke end of the end side.
- * The amount of particle generation changes according to the operating conditions and suction flow rate.

								[mmi]
Model	L	L		В	n	С	D	E
Wodel	Without lock	With lock	A			0		_
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	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

SMC

LEFS

LEJS LEJB

딤

CEM

SH LEY

LEPY LEPS

LER

LEY-X5 LEH

Motor option B:

With lock

11-LEJS 11-LEFS

LEC□ | 25A-

Motorless | LECY□ | LECS□ |

LAT3

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