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

Electric Actuator/Slider Type
Ball Screw Drive Clean Room Specification

Applicable to the LEC□ series

11-LEFS Series LEFS16, 25, 32, 40

RoHS

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

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

How to Order

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

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬ ⓭

Clean Series

11	Vacuum type

❶ Accuracy

Nil	Basic type
H	High precision type

❷ Size

16
25
32
40

❸ Motor type

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

❹ Lead [mm]

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

❺ Stroke [mm]

50	50
to	to
1000	1000

∗ Refer to the applicable stroke table.

❻ Motor option

Nil	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

●: Standard

Model \ Stroke [mm]	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 527

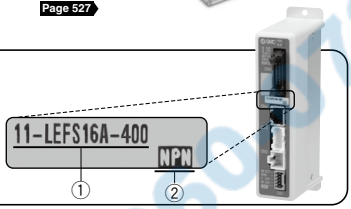
The actuator and controller/driver are sold as a package.

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

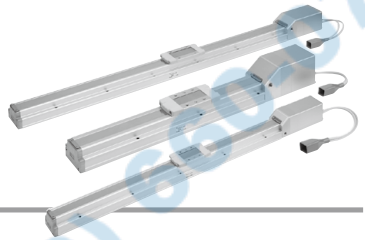
<Check the following before use.>

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

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

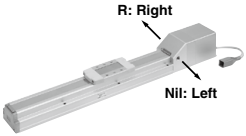


∗ Refer to the Operation Manual for using the products. Please download it via our website, http://www.smcworld.com

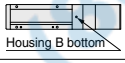
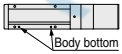


❼ Vacuum port

Nil	Left
R	Right



❽ Positioning pin hole

Nil	Housing B bottom*	 Housing B bottom
K	Body bottom 2 locations	 Body bottom

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

❾ Actuator cable type*1

Nil	Without cable
S	Standard cable*2
R	Robotic cable (Flexible cable)*3

*1 The standard cable should be used on fixed parts. For using on moving parts, select the robotic cable.
*2 Only available for the motor type "Step motor."
*3 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.

❿ Actuator cable length

Nil	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.

⓫ Controller/Driver type*1

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

*1 For details about controller/driver and compatible motor, refer to the compatible controller/driver below.
*2 Only available for the motor type "Step motor."
*3 Not applicable to CE.
*4 When pulse signals are open collector, order the current limiting resistor (LEC-PA-R-□) on page 596 separately.

⓬ I/O cable length*1, Communication plug

Nil	Without cable (Without communication plug connector)*3
1	1.5 m
3	3 m*2
5	5 m*2
S	Straight type communication plug connector*3
T	T-branch type communication plug connector*3

*1 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.
*2 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.
*3 For the LECPMJ, only "Nil", "S" and "T" are selectable since I/O cable is not included.

⓭ Controller/Driver mounting

Nil	Screw mounting
D	DIN rail mounting*

* DIN rail is not included. Order it separately.

Compatible Controller/Driver

Type	Step data input type	Step data input type	CC-Link direct input	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