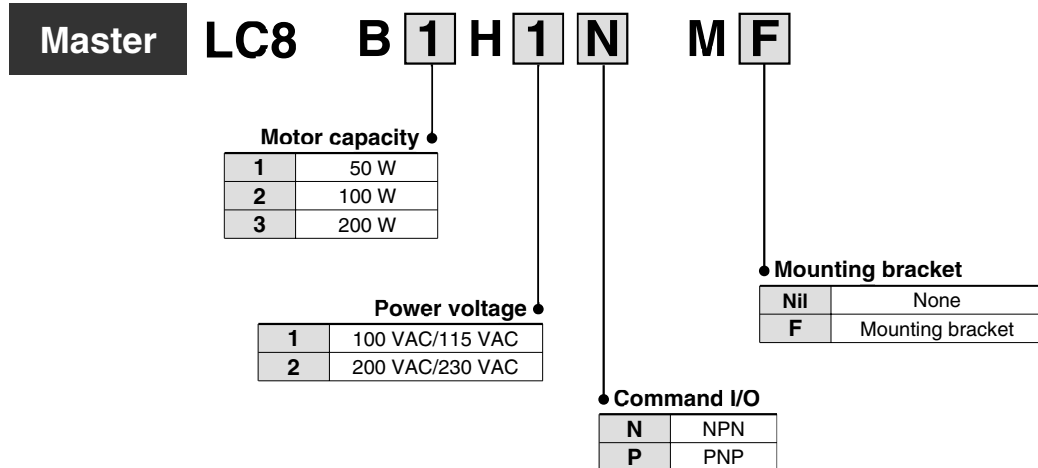


Positioning Driver/For AC Servomotor Series LC8

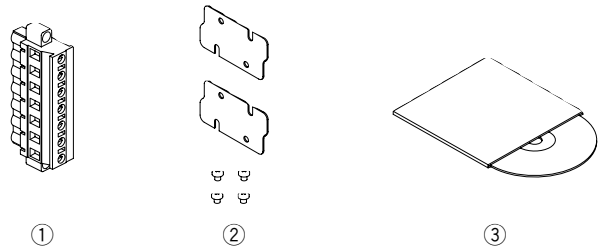
Compliant actuators/Series LJ1, Series LG1, Series LTF

How to Order



Accessory

①	LC8-1-MP	Motor/Power connector
②	LC8-1-B	Kit for mounting bracket (Designated only with mounting bracket)
③	LC8-1-W1	LC8 controller installation software

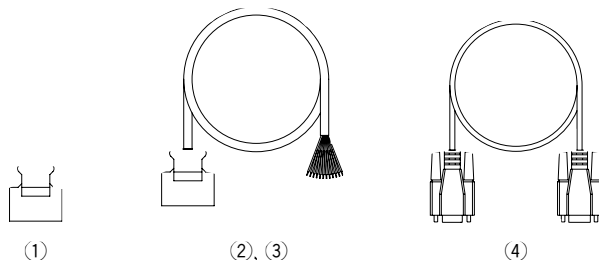


Option (Note) Purchase separately.

①	LC8-1-CN	Command I/O connector
②	LC8-1-1050	Connector with command I/O cable (0.5 m)
③	LC8-1-1050P	With connector stick terminals with command I/O cable (0.5 m)
④	LC8-1-R03C	RS-232C communications cable (3 m)

- ① Made by Sumitomo 3M Connector: 10126-3000VE
Shell: 10326-52-A0-008 (or equivalent)
- ② Cable terminal: Individual wires
- ③ Cable terminal: Stick terminals (compliant with PC wiring system) (Note 2)

Note 1) Either ① or ② or ③ will be required
Note 2) As for PC wiring system, please confirm by Electric Products (CA1-150) catalog.



Precautions on Using Master

⚠ Caution

- In case of using in 1-axis, use a master (Slave alone cannot be used.)
- Regarding the use of 3-axis or more, be sure to contact us for how-to-use and operating conditions.

How to Order

Slave LC8 B 1 H 1 V F

Motor capacity

1	50 W
2	100 W
3	200 W

Power voltage

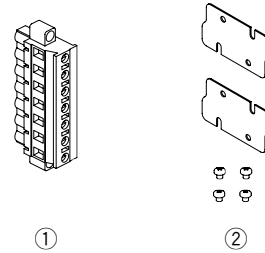
1	100 VAC/115 VAC
2	200 VAC/230 VAC

Mounting bracket

Nil	None
F	Mounting bracket

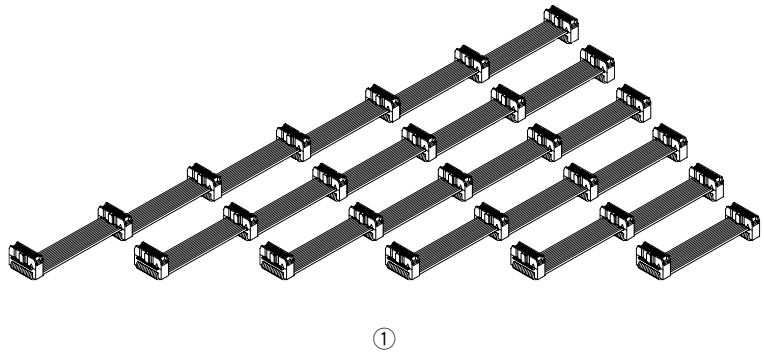
Accessory

①	LC8-1-MP	Motor/Power connector
②	LC8-1-B	Kit for mounting bracket (Designated only with mounting bracket)



Option Note) Purchase separately

①	LC8-1-C2	2-axis communications cable
	LC8-1-C3	3-axis communications cable
	LC8-1-C4	4-axis communications cable
	LC8-1-C5	5-axis communications cable
	LC8-1-C6	6-axis communications cable
	LC8-1-C7	7-axis communications cable



Precautions on Connecting Slave

⚠ Caution

- Motion for returning to the home position starts simultaneously for master and slave. Design the equipment so that it will not interfere with components in equipment when returning to the home position.
- If the START signal is input, the designated operation data for all the axes will start to the designated step number. For the operation data of the axis which should not operate, enter "Relative coordinates to the 0 mm position"
- In case of using with single axis, use a master. (Slave alone cannot be used.)
- Regarding the use of 3-axis or more, be sure to contact us for how-to-use and operating conditions.

Series LC8



Specifications

Model	LC8-B□□1□-□□	LC8-B□□2□-□□
Power supply	100 to 115 V ± 10% 50/60 Hz	200 to 230 V ± 10% 50/60 Hz
Dimensions	141 mm x 75 mm x 130 mm	
Weight	0.85 kg	

Electrical Specifications

Model	LC8-B1□1 □-□□	LC8-B2□1 □-□□	LC8-B3□1 □-□□	LC8-B1□2 □-□□	LC8-B2□2 □-□□	LC8-B3□2 □-□□
Motor capacity	50 W	100 W	200 W	50 W	100 W	200 W
Operating ambient temperature	0 to 50°C		0 to 40°C	0 to 50°C		0 to 40°C
Operating ambient humidity	35 to 85% (No condensation)					
Rated power consumption	80 VA	150 VA	320 VA	80 VA	160 VA	300 VA
Max. power consumption	230 VA	450 VA	960 VA	240 VA	460 VA	900 VA
Position detecting method	Incremental encoder					
Withstand voltage	1000 VAC (1 minute between terminal and case)					
Insulation resistance	2 MΩ (500 VDC) (Between terminal and time)					
Anti-noise	1000 Vp-p 1 μs, Start-up time 1 ns					

Data Input

Item	Performance/Specifications
Number of steps	117 steps at the maximum
Palletizing pattern	5 patterns (when using master, slave)

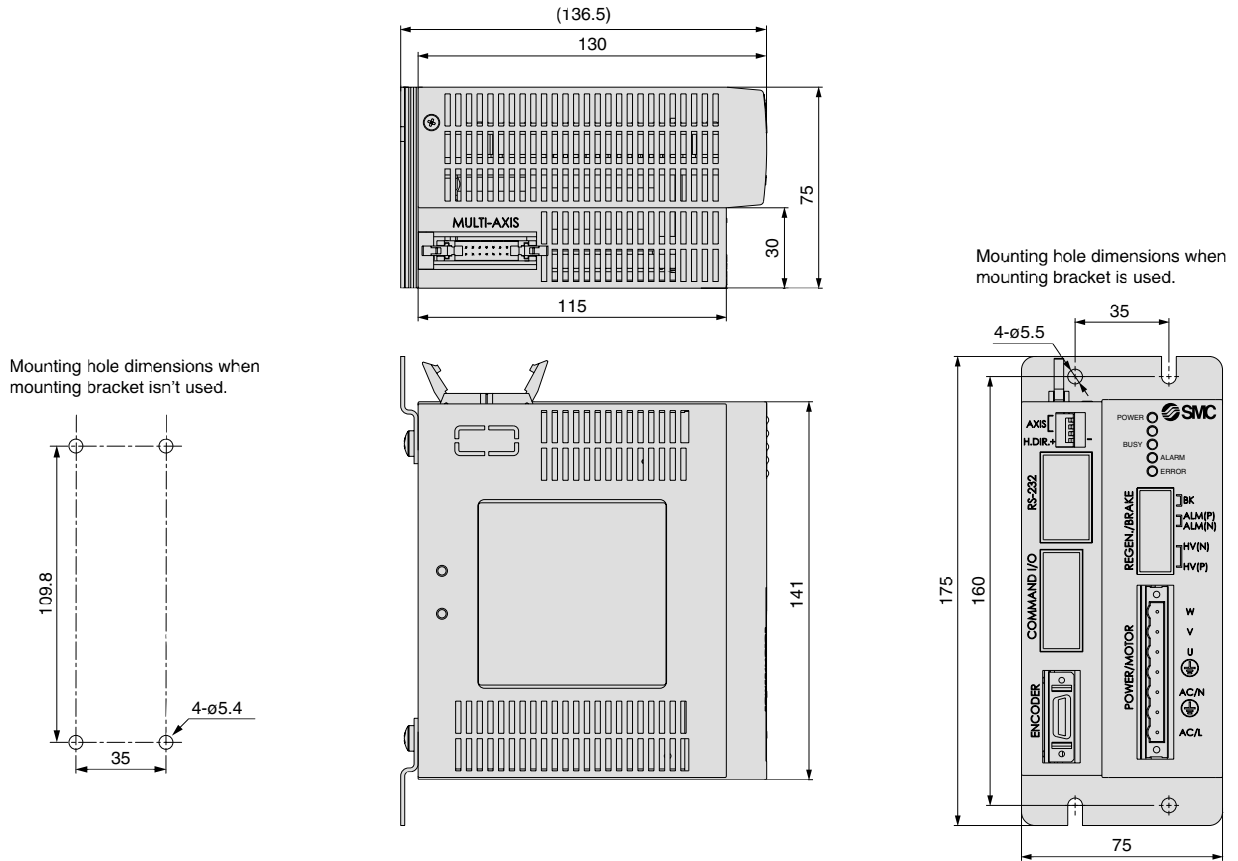
Command I/O Specifications

Model	LC8-B□□□N-□□	LC8-B□□□P-□□
Command I/O input	+24 V common, 24 VDC ± 10%, Minimum 6 mA	PLC GND common, 24 VDC ± 10%, Minimum 6 mA
Command I/O output	NPN open collector (sink type), 24 VDC ± 10%, Maximum 80 mA	PNP open collector (source type), 24 VDC ± 10%, Maximum 80 mA
Minimum input pulse width	10 ms (E. Stop is 100 ms or more.)	
Leakage current	10 μA or less	
Internal voltage drop	0.8 V or less	

Safety Items

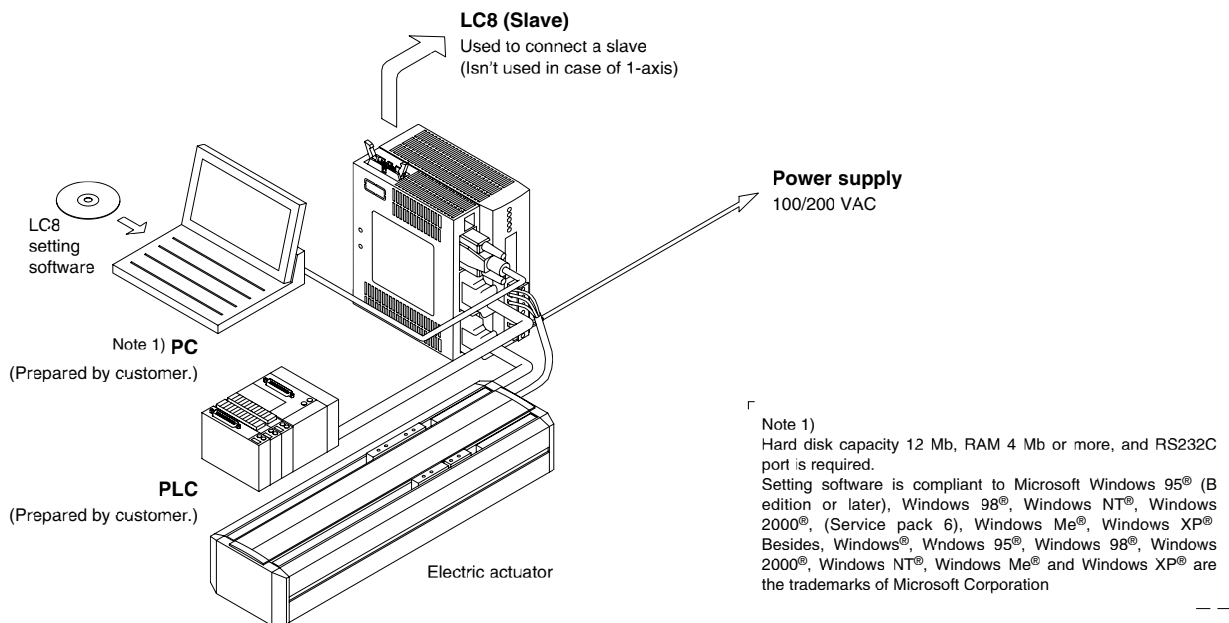
Item	Performance/Specifications
Alarming function	Over voltage/Low voltage, FWD/RVS limit switch, Overload, Motor drive circuit, Encoder connection, Forward soft stroke limit, Absolute home position stroke limit, Regenerative absorption unit, Communications, Non-returning to home position, Over current, Current limit, Initialization of palletizing data, RS-232 communications
Error function	Emergency stop, Step number

External Dimensions



System Composition

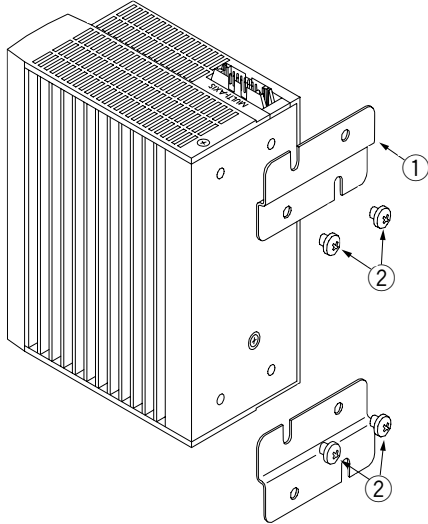
Example of using with 1-axis step operation (In case of using with X-Y a master and a slave is required.)



Series LC8

Mounting Method

LC8-B□□□□-□F (In the case of a bracket option.)



Perform by mounting the attached bracket. For mounting dimensions please refer to the external dimension on the prior page. For wall mounting, please prepare the required M5 screws (4 pcs.).

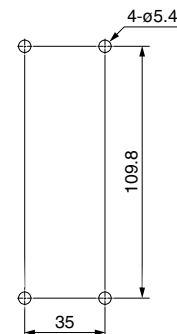
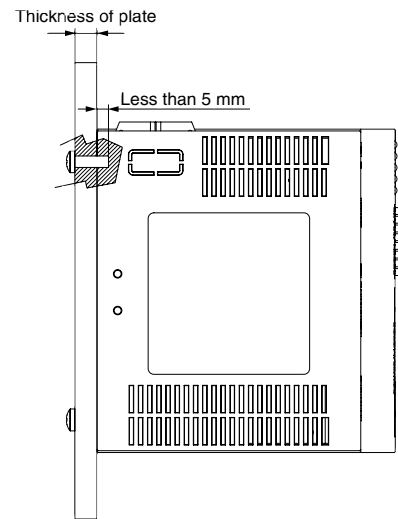
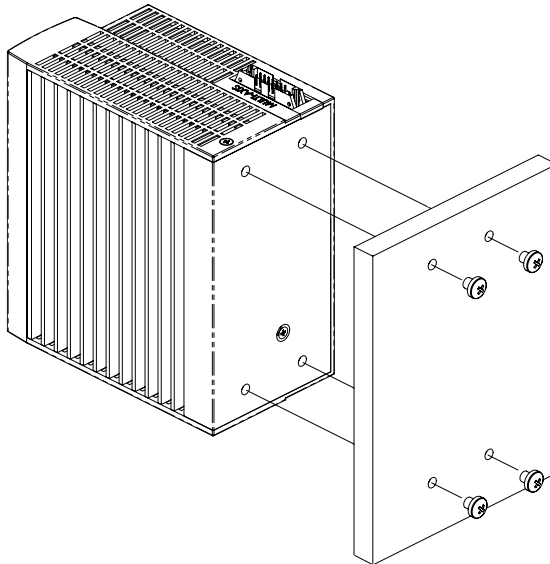
Accessory Contents

①	Mounting bracket	2 pcs.
②	Mounting screw	4 pcs.

LC8-B□□□□-□ (In case that there is not bracket option.)

Please prepare M5 screws (4 pcs.). Select a screw length that does not exceed the thickness of the plate + 5 mm. Drill holes in the plate with a distance of 35 mm between the width of the holes and 109.8 mm between the height of the hole.

Note) Do not use screws with a longer length than designated. If longer, it is likely to cause an electrical shock or a fire.



Precautions on Using Multi-axis Cable

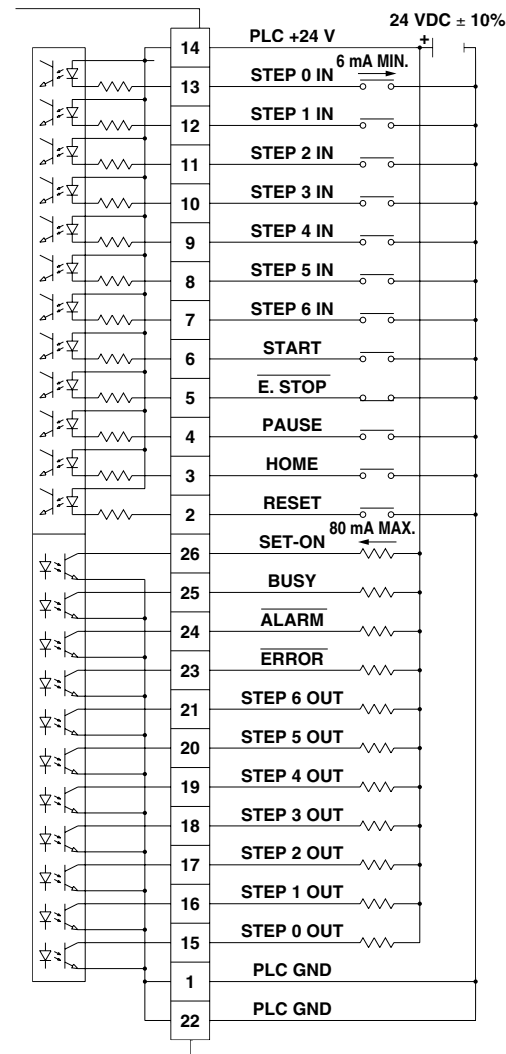
⚠ Caution

In case of connecting the LC8 with multi-axis cable, the cable should be 20 mm or longer but less than 30 mm to the driver.

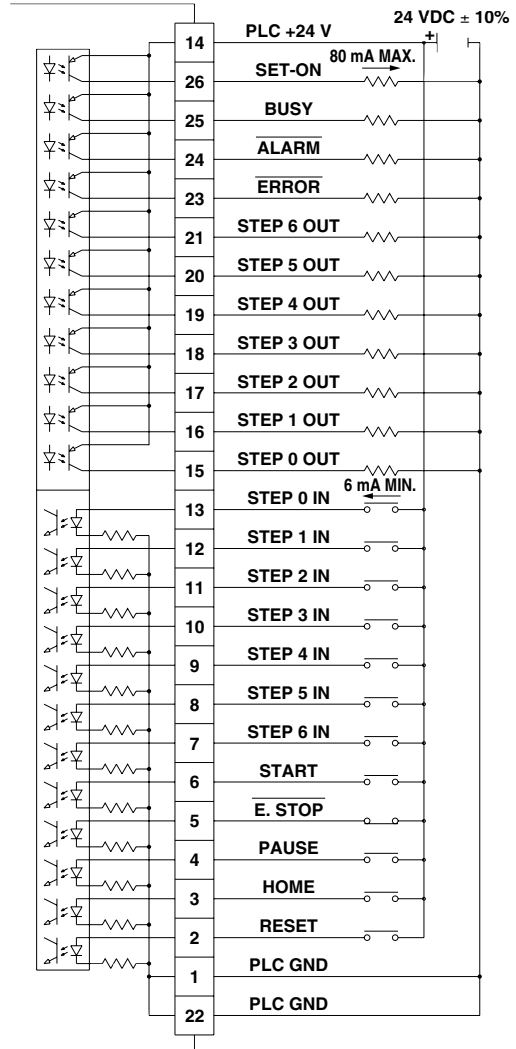
Command I/O Connector's Wiring

Wiring diagram

LC8-B□□□N-M□ (NPN specification)



LC8-B□□□P-M□ (PNP specification)




No.	Name of signals	Contents
14	PLC +24V	— Connect +24 V for power supply for signal.
1	PLC GND	— Connect 0V for power supply for signal.
22	PLC GND	—
13	STEP 0 IN	Input the step number.
12	STEP 1 IN	
11	STEP 2 IN	
10	STEP 3 IN	
9	STEP 4 IN	
8	STEP 5 IN	
7	STEP 6 IN	Operate the step number.
6	START	
5	E.STOP	Turn the emergency stop condition to OFF.
4	PAUSE	Motion stops temporarily.
3	HOME	Return to home position.
2	RESET	Reset alarm and error.


No.	Name of signals	Contents
26	SET-ON	Output Turn ON when returning to home position is completed.
25	BUSY	Output Turn ON while an actuator is traveling.
24	ALARM	Output Turn OFF when alarming
23	ERROR	Output Turn OFF when an error occurs.
21	STEP 6 OUT	Output the step number in motion
20	STEP 5 OUT	
19	STEP 4 OUT	
18	STEP 3 OUT	
17	STEP 2 OUT	
16	STEP 1 OUT	
15	STEP 0 OUT	Output


Input	Rated input voltage: 24 VDC Rated input: 6 mA/1 point
Output	Maximum load voltage: 24 VDC Maximum load current: 80 mA/1 point

Series LC8

Selection Flow for Actuators Compliant to LC8

Series	Workload (kg)	Maximum speed (mm/s)	Positioning repeatability (mm)	Lead screw	Guide type	Standard stroke (mm) and Speed (mm/s)						
						100	200	300	400	500	600	
Series LJ1 	5	300	±0.1	Slide screw	Slide guide	to 300						
						10	300	±0.1	Slide guide	to 300		
	500	±0.1	Slide guide		to 500							
					600		±0.02	Ground ball screw	High rigidity, direct acting guide	to 600		
	600	±0.05	Rolled ball screw	High rigidity, direct acting guide						to 600		
					15		500	±0.1	Slide screw	Slide guide	to 500	
	20	300	±0.1	Slide screw							Slide guide	to 500
					500	±0.02	Ground ball screw	High rigidity, direct acting guide	to 500			
		500	±0.05	Rolled ball screw					High rigidity, direct acting guide	to 500		
					500	±0.1	Slide screw	High rigidity, direct acting guide		to 500		
		1000	±0.02	Ground ball screw					High rigidity, direct acting guide	to 1000		
					1000	±0.05	Rolled ball screw	High rigidity, direct acting guide		to 1000		
	60	1000	±0.02	Ground ball screw					High rigidity, direct acting guide	to 1000		
					1000	±0.05	Rolled ball screw	High rigidity, direct acting guide		to 1000		

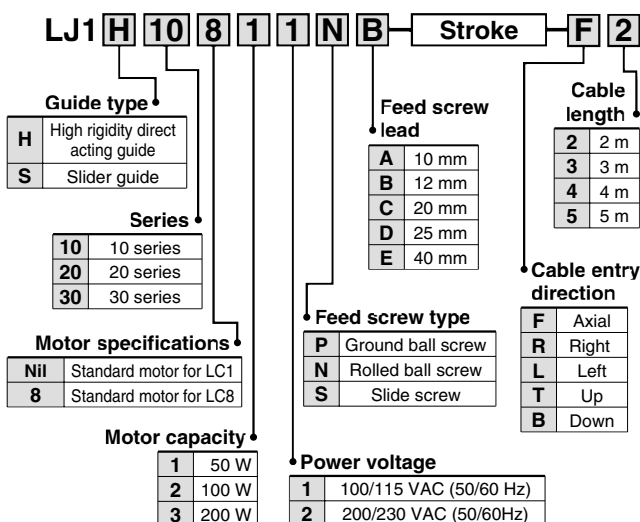
Series LG1 	15	500	±0.1	Slide screw	High rigidity, direct acting guide	to 500					
						30	500	±0.02	Ground ball screw	to 500	
	±0.05	Rolled ball screw	to 500								
			1000	±0.02			Ground ball screw	to 1000			
	±0.05	Rolled ball screw						to 1000			

Series LTF 	15	500	±0.02	Ground ball screw	Frame type linear guide	to 500						390
			±0.05	Rolled ball screw		to 500						390
	25	1000	±0.02	Ground ball screw		to 1000						
			±0.05	Rolled ball screw		to 1000						
	30	300	±0.02	Ground ball screw		to 300						230
			±0.05	Rolled ball screw		to 300						230
	50	500	±0.02	Ground ball screw		to 500						
			±0.05	Rolled ball screw		to 500						

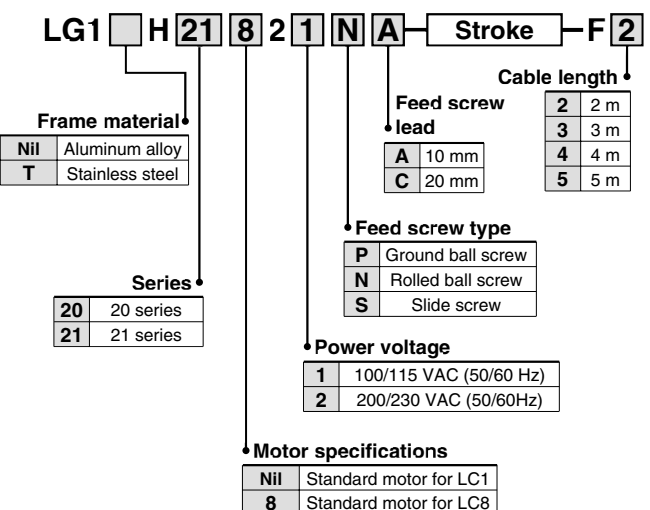
Note 1) The actuator's external dimensions and its specifications are equivalent to its corresponding partnumber's. Please confirm each actuator by referring to its corresponding catalog.

How to Order

Series LJ1



Series LG1

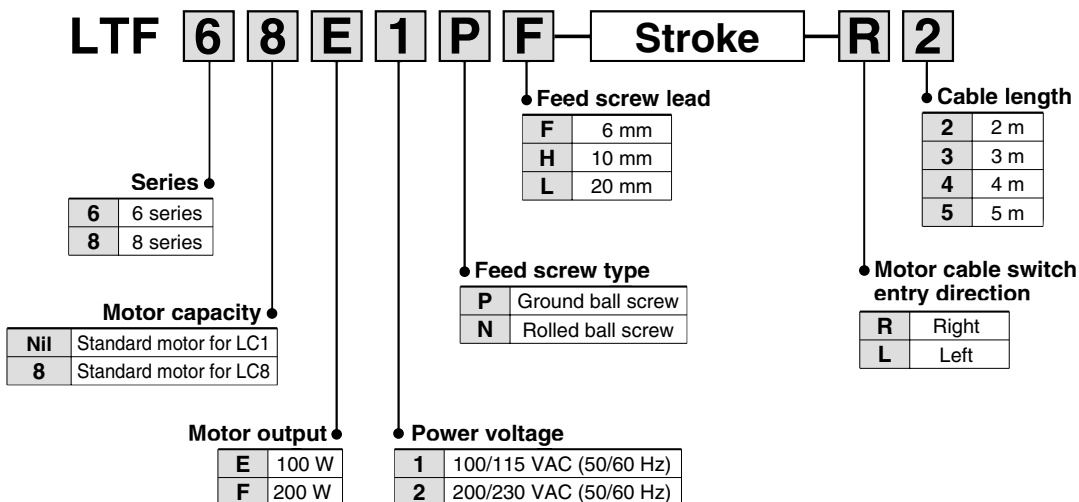


Standard stroke (mm) and Speed (mm/s)						Actuator model	Driver model	Remarks ^{Note 1)} (Equivalent actuator)
700	800	900	1000	1200	1500			
to 300						LJ1S1081□SC	LC8-B1H□□-□□	LJ1S101□SC
to 300						LJ1S2082□SC	LC8-B2H□□-□□	LJ1S202□SC
to 500						LJ1H1081□SC	LC8-B1H□□-□□	LJ1H101□SC
						LJ1H1081□PB	LC8-B1H□□-□□	LJ1H101□PB
						LJ1H1081□NB	LC8-B1H□□-□□	LJ1H101□NB
to 500						LJ1H2082□SC	LC8-B2H□□-□□	LJ1H202□SC
500						LJ1S3083□SC	LC8-B3H□□-□□	LJ1S303□SC
						LJ1H2082□PA	LC8-B2H□□-□□	LJ1H202□PA
						LJ1H2082□NA	LC8-B2H□□-□□	LJ1H202□NA
500						LJ1H3083□SE	LC8-B3H□□-□□	LJ1H303□SE
930	740	600	500			LJ1H2082□PC	LC8-B2H□□-□□	LJ1H202□PC
930	740	600	500			LJ1H2082□NC	LC8-B2H□□-□□	LJ1H202□NC
1000						LJ1H3083□PD	LC8-B3H□□-□□	LJ1H303□PD
1000						LJ1H3083□ND	LC8-B3H□□-□□	LJ1H303□ND

to 500						LG1□H2□82□SC	LC8-B2H□□-□□	LG1□H2□2□SC
						LG1□H2□82□PA	LC8-B2H□□-□□	LG1□H2□2□PA
						LG1□H2□82□NA	LC8-B2H□□-□□	LG1□H2□2□NA
930	740	600	500			LG1□H2□82□PC	LC8-B2H□□-□□	LG1□H2□2□PC
930	740	600	500			LG1□H2□82□NC	LC8-B2H□□-□□	LG1□H2□2□NC

						LTF68E□PH	LC8-B2H□□-□□	LTF6E□PH
						LTF68E□NH	LC8-B2H□□-□□	LTF6E□NH
890	710	580	480			LTF88F□PL	LC8-B3H□□-□□	LTF8F□PL
890	710	580	480			LTF88F□NL	LC8-B3H□□-□□	LTF8F□NL
						LTF68E□PF	LC8-B2H□□-□□	LTF6E□PF
						LTF68E□NF	LC8-B2H□□-□□	LTF6E□NF
440	350	290	240			LTF88F□PH	LC8-B3H□□-□□	LTF8F□PH
440	350	290	240			LTF88F□NH	LC8-B3H□□-□□	LTF8F□NH

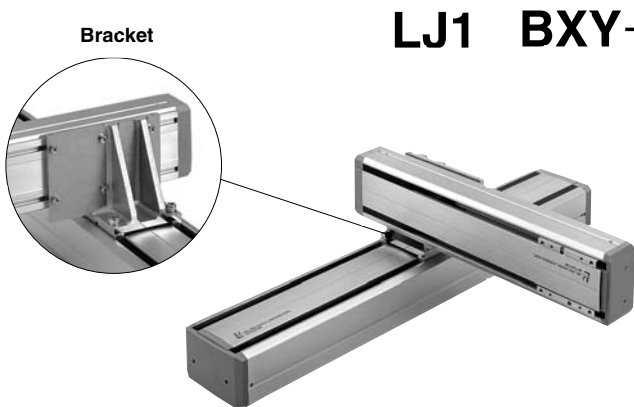
Series LTF



Series LC8

X-Y Bracket

Bracket for combining X-axis actuator and Y-axis actuator



• Direction for Y-axis installation (Refer to "Table 1".)

LS	Extended direction: Left
RS	Extended direction: Right

Note) Extended direction viewed from X-axis motor side.

• Applicable actuators

Symbol	X-axis	Y-axis
J2J1	Series L1H20	Series L1H10
J3J2	Series L1H30	Series L1H20

Y-axis, Maximum transferable weight for each stroke (kg)

Y-axis Stroke (mm)	Applicable actuator symbol	
	J2J1	J3J2
100	10	30
200	10	22
300	10	14
400	—	8

Table 1 Y-axis installation direction (Y-axis extended direction viewed from the X-axis motor side)

LS	<p>Extended direction: Left</p>
RS	<p>Extended direction: Right</p>

When selecting X-Y bracket, please contact SMC.