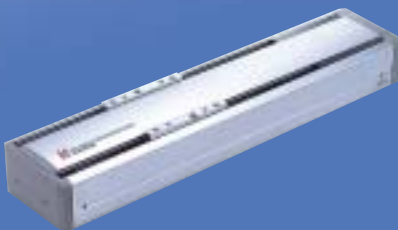


Positioning Driver (for AC servomotor) and Electric Actuators

Positioning Driver (for AC servomotor) *Series LC8*

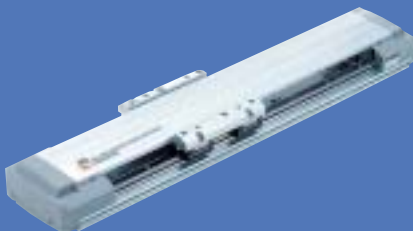


Single Axis Electric Actuator *Series LJ1*



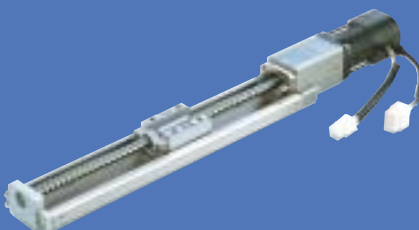
- High rigidity linear guide
- Slider guide

Low Profile Electric Actuator *Series LG1*



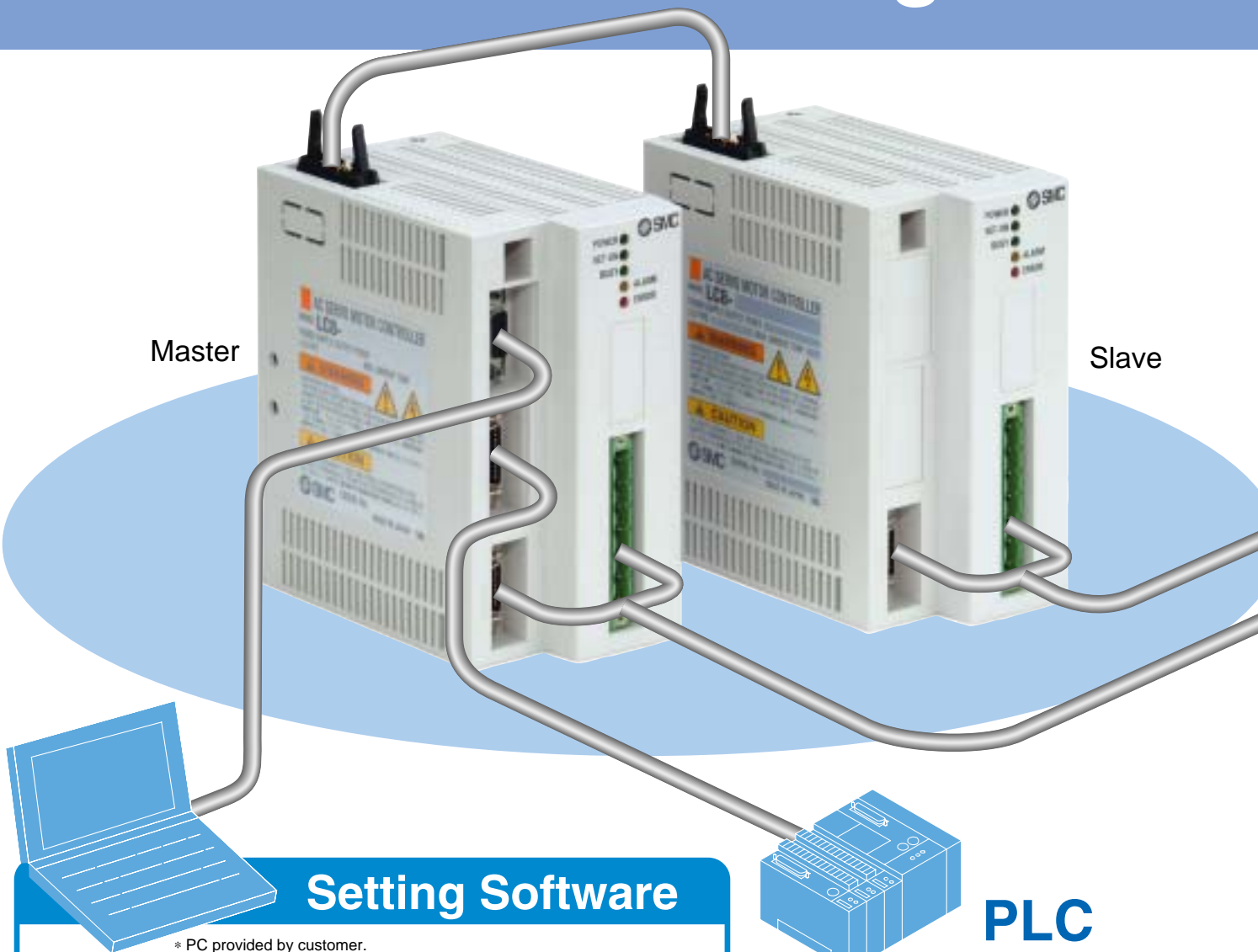
- Low profile: 55 mm

Electric Actuator with Integrated Guide *Series LTF*



- Incorporating recirculating ball frame-type linear guide

Positioning Driver /



* PC provided by customer.

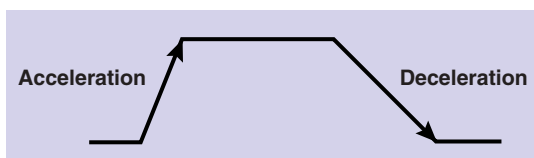
Input positioning data from controller setting software.

■ Each data is set collectively from master.

Setting data dedicated for each slave is at one time from setting software after connecting the communications cable with master.

Step	Dir.	Position	Velocity	Accel.	Decel.	Target
1	A	0.00	500	3000	3000	
2	A	100.00	500	3000	3000	
3	A	200.00	900	3000	3000	
4	A	300.00	300	3000	1500	
5	R	100.00	900	3000	3000	
6	R	400.00	900	3000	3000	

■ The acceleration and the deceleration can be set individually.



PLC

PLC

Manipulation panel

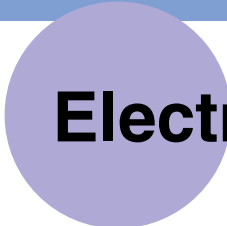
24 VDC voltage

* Provided by customer

Stepping Operation

Using I/O of a PLC, able to set the 117 patterns (steps) positioning.

For AC Servomotor *Series LC8*

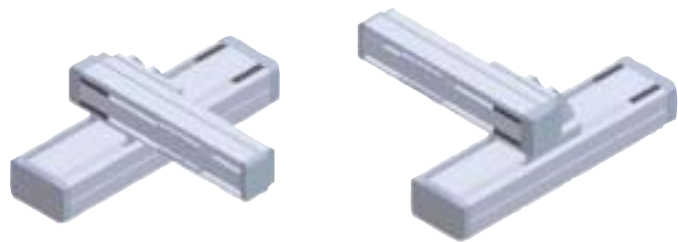


Electric Actuator



Standardized X-Y bracket

Two types are available depending on Y-axis installation direction.



Compliant Actuators



Series LJ1

Series LG1

Series LTF

Variations

Motor capacity		Series LJ1	Series LG1	Series LTF
50 W	Payload	10 kg	—	—
	Max. speed	600 mm/s	—	—
100 W	Payload	30 kg	30 kg	30 kg
	Max. speed	1000 mm/s	1000 mm/s	500 mm/s
200 W	Payload	60 kg	—	50 kg
	Max. speed	1000 mm/s	—	1000 mm/s

* For detailed information, please refer to each series.

Single Axis Electric Actuator

Series LJ1

Two Types of Guide and Three Types of Lead Screw

LJ1H/High Rigidity Direct Acting Guide LJ1S/Slider Guide



Positioning accuracy
High
Low

• Work load

Slider guide	5 to 20 kg
High rigidity direct acting guide	10 to 60 kg

LJ1H
High rigidity direct acting guide + Ground ball screw

• Positioning repeatability

Slide screw	±0.1 mm
Rolled ball screw	±0.05 mm
Ground ball screw	±0.02 mm

LJ1H
High rigidity direct acting guide + Rolled ball screw

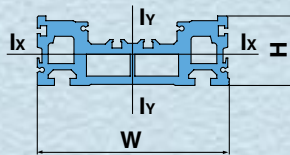
LJ1S
Slider guide + Slide screw

LJ1H
High rigidity direct acting guide + Slide screw

Low ← Work load/Allowable moment → High

High rigidity

High rigidity achieved by the use of a hollow box type aluminum construction.



Low noise (slide screw type)

Slide screw + Slider guide: 47 dB (LJ1S)

Slide screw + Linear guide: 53 dB (LJ1H)

Cable entry is possible from 5 directions

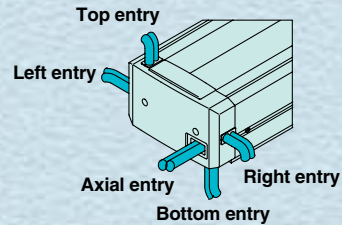
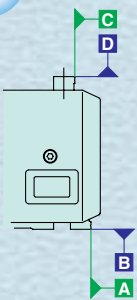


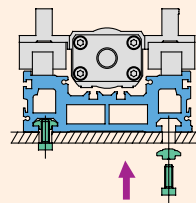
Table traveling accuracy



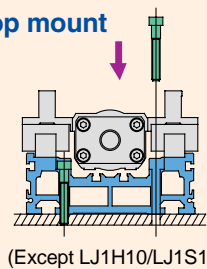
Model	Traveling accuracy / 300mm	
	C side against A side	D side against B side
LJ1H10	0.07 or less	0.07 or less
LJ1H20	0.06 or less	0.03 or less
LJ1H30	0.03 or less	0.09 or less
LJ1S10	0.015 or less	0.12 or less
LJ1S20	0.1 or less	0.1 or less
LJ1S30	0.1 or less	0.1 or less

Two mounting styles T-slots enable highly flexible mounting.

Bottom mount



Top mount



Variations

Series	Motor type	Guide type	Mounting orientation	Lead screw type	Made to order
LJ1H10	SMC Standard motor [Tamagawa Seiki Co., Ltd.]	High rigidity direct acting guide	Horizontal	Ground ball screw Rolled ball screw Slide screw	Clean room Dust cover CABLEVEYOR
LJ1H20					
LJ1H30					
LJ1S10	Non-standard motor [Matsushita Electric Industrial Co., Ltd.] [Mitsubishi Electric Corporation] [Yaskawa Electric Corporation]	Slider guide	Horizontal	Slide screw	Dust cover CABLEVEYOR
LJ1S20					
LJ1S30					

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

Low Profile Electric Actuator

Series LG1

Low Profile/Reduced Height

Low profile: **55 mm** (35 mm less than LJ1H20)



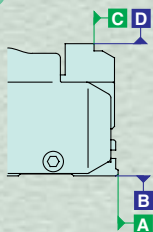
Series with coupling available

Can be used for non-standard motor mounting.

Two types of body material

In addition to aluminum frames, stainless steel frames are available for customers requiring more rigidity.

Table traveling accuracy

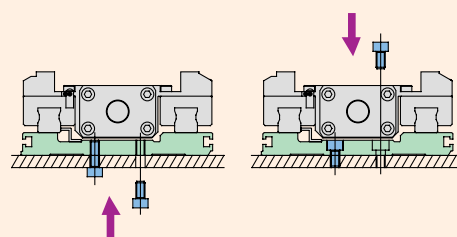


Model	Traveling accuracy / 30mm	
	C side against A side	D side against B side
LG1H	0.1 or less	0.1 or less

Two mounting styles

Bottom mount

Top mount



Variations

Series	Motor/Screw connection	Motor type	Guide type	Mounting orientation	Lead screw type
LG1□H21	With coupling	SMC Standard motor [Tamagawa Seiki Co., Ltd.] Non-standard motor [Matsushita Electric Industrial Co., Ltd.] [Mitsubishi Electric Corporation] [Yaskawa Electric Corporation]	High rigidity direct acting guide	Horizontal	Ground ball screw Rolled ball screw Slide screw

Electric Actuator with Integrated Guide

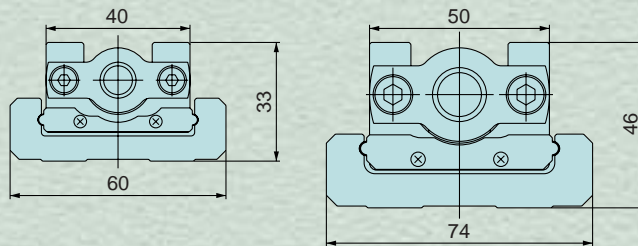
Series LTF

Space saving and lightweight design

The linear guide is built into the actuator body

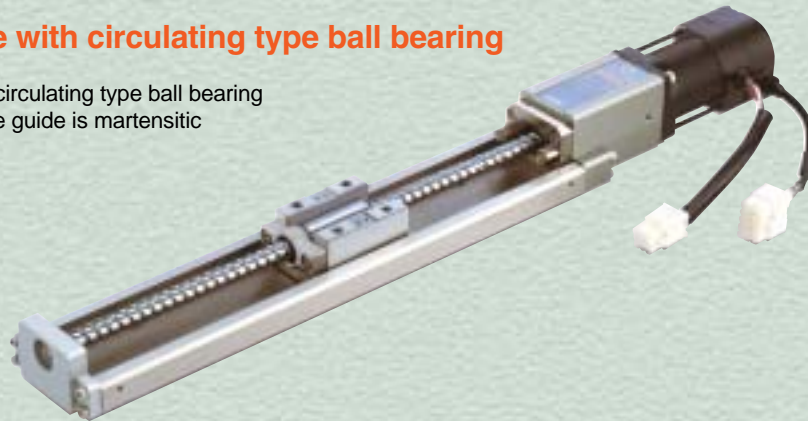
	Cross section dimensions for LTF6	Cross section dimensions for LTF8
Overall length *	357.5 mm	412 mm
Weight *	2.2 kg	4.6 kg
Max.stroke	600 mm	1000 mm

* Value in standard motor and with 100 mm stroke

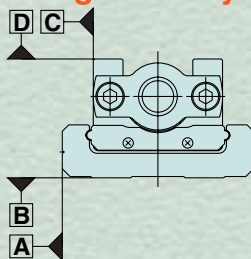


Linear guide with circulating type ball bearing

Linear guide with circulating type ball bearing
The material of the guide is martensitic stainless steel



Slide running accuracy



Model	Slide running accuracy	
	C plane to A plane	D plane to B plane
LTF6	0.02/200 or less	0.02/200 or less
LTF8	0.02/200 or less	0.02/200 or less

Variations

Series	Motor	Guide	Mounting	Feed screws
LTF6	<ul style="list-style-type: none"> SMC Standard motor Make: TAMAGAWA SEIKI CO., LTD. Non-standard motor Make: Matsushita Electric Industrial Co., LTD. 	Actuator body with built-in linear guide	Horizontal	Rolled ball screw
LTF8	<ul style="list-style-type: none"> Make: Mitsubishi Electric Corporation Make: Yaskawa Electric Corporation 			Ground ball screw

Factors supplied for simplified cell assembly

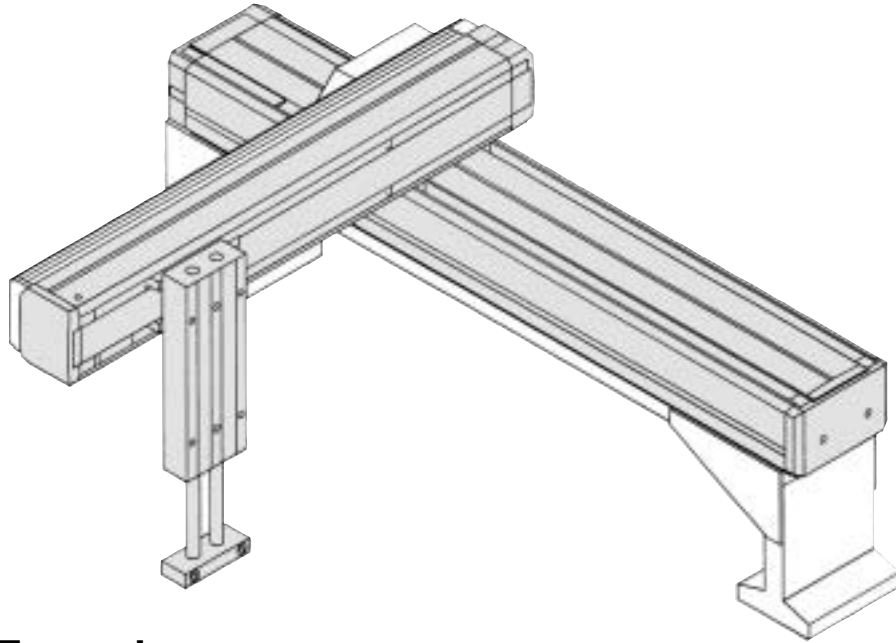
Presents the system totally optimum for the small-sized cell production method.

- 1** **Positioning conducts the horizontal (X-Y) positioning.**
- 2** **Lifting workpieces up and down, revolving and gripping those are done by actuator in each type (Cylinder, Gripper, Rotary Actuator) or vacuum adsorption.**
- 3** **Securing the position of workpieces and clamping those is done by pneumatic cylinder or electric actuator.**






Controlling everything with the conventional multi-axis robot controller was complicated. However, simplified cell assembly system makes it possible to design, control and administrate by every group and lead to shorten the start-up period of equipment and simplify.

We, SMC have numerous solutions to cover these each factor. Also, customer can select both the pneumatics and the electrics freely, so customer can build the cell production system at the lowered cost.

Hardware/Control devices that can be controlled by the ON/OFF function of a PLC.



Application Example

	Hardware	Control device	Interface
(X-Y)		LJ1 LG1 LTF	LC8
Z-axis		LX□ LTF MX□ CX□	Solenoid valve LC6D
θ-axis		CR□ MS□	Solenoid valve
End effector (Gripping)		MH□ Z□	Solenoid valve
Positioning work (Securing, Clamping)		MX□ CQ□ LX□	Solenoid valve LC6D

ON/OFF command by I/O of PLC

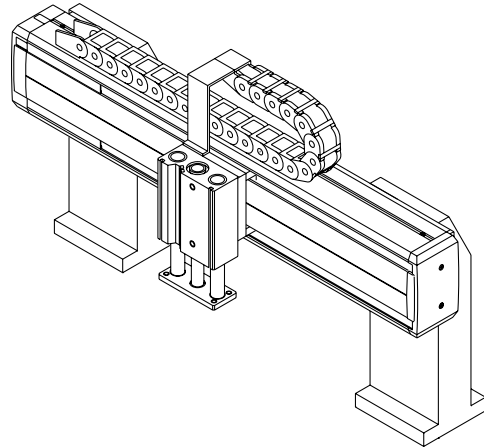
Application Example Using LC8

⚠ Caution

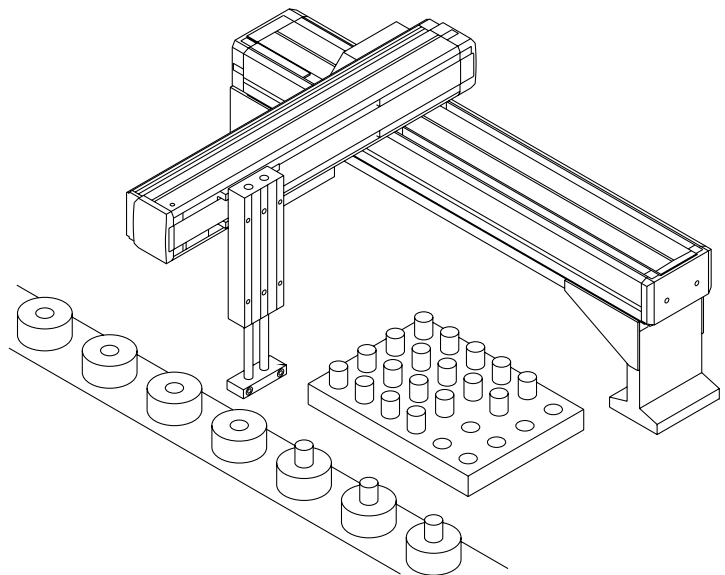
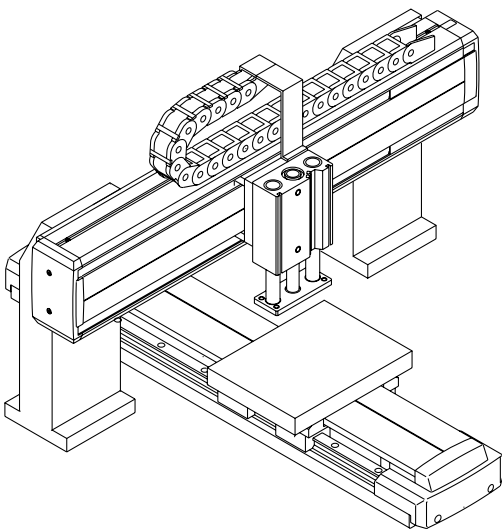
In the case of using more than 2 axis. Please consider that each axis moves independently. Take care with the programming to avoid the axis colliding and causing damage.

Pick & Place

For multi-point positioning, it can be operated in accordance with the commands from a PLC, etc. by simply programming the operation data into the LC8.



Palletizing motion



By combining to form 2-axis, a motion such as palletizing is possible.
If programming the positioning motion into LC8, it will operate in accordance with the command by PLC, etc. (Interpolating motion cannot be done)

LC8 Controller Setting Software

Principal Functions

Pallet data
Data entered for palletizing.

PIP data
Used for manually tuning the actuator gain.

Operation data
Data used during the step operation.

Step test
Used to conduct a test run with the data programmed.

Cycle test
Used to conduct 2 operations alternately with the data programmed.

Actuator data
Data for strokes, etc., which is in accordance with the actuator type.

Operation data programming screen

Explanation for operation data programming screen

No.	Description	Function
①	Inputting data	Program the transfer mode, position, speed, acceleration, deceleration, torque (in torque mode).
②	Returning to home position	Conduct motion to return to home position from software.
③	Transmitting/Receiving the data	Transmit/Receive the data to and from LC8.
④	Exit	Close the program.
⑤	Emergency stop	Emergency stop function, as well as displaying the status of emergency stop.
⑥	Axis programming	Select the axis number.
⑦	Monitor mode	Switch to the monitor mode.
⑧	Reading file/Save	Write/Read the data in/out of the file.
⑨	Selecting step number	Display the step number for operation data.

Pallet data programming screen

Explanation of pallet data programming screen

No.	Description	Function
⑩	Programming the X-axis	Program the data for the actuator in the X-axis.
⑪	Programming the Y-axis	Program the data for the actuator in the Y-axis.
⑫	Step number	Switches the display between 5 different pallet data.
⑬	Jog	Program the position by jog operation.

Programming the Step Data and Executing It (For details, please refer to the "Instruction Manual".)

How to Input the Step Data

Able to input the step data by using controller setting software.

The screenshot shows the 'Step Data' tab in the software. A table lists step parameters:

Step No.	Pos./Rel.	Pos. (mm)	Vel. (mm/s)	Accel. (mm/s ²)	Decel. (mm/s ²)	Torque
1	A	0.00	500	3000	3000	
2	A	100.00	500	3000	3000	
3	A	200.00	500	3000	3000	
4	A	300.00	500	3000	3000	
5	R	100.00	100	3000	3000	
6	R	100.00	100	3000	3000	

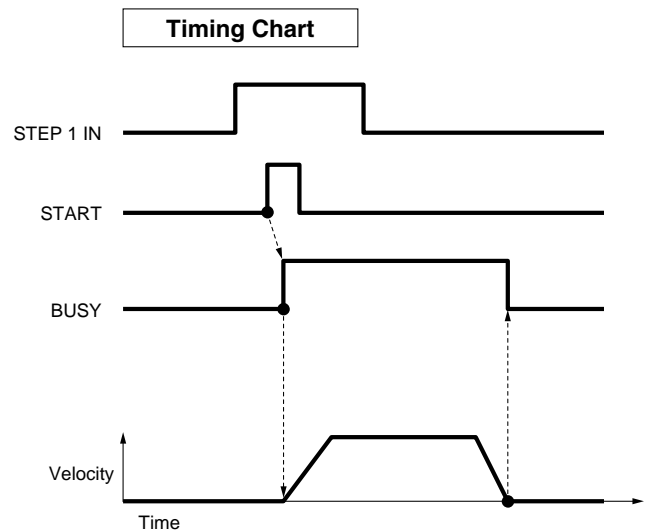
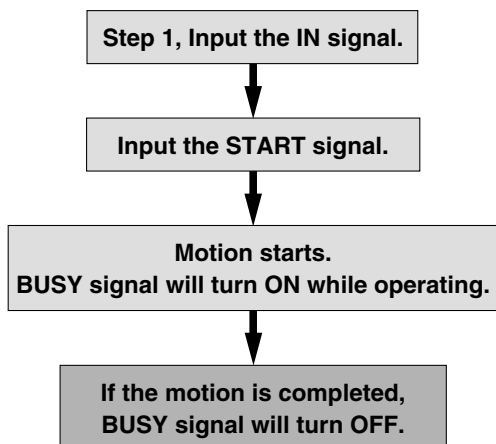
Callouts from the image:

- ① Select the step number.
- ② Select between the absolute position and relative position.
- ③ Input the position to travel.
- ④ Input the traveling velocity.
- ⑤ Input the acceleration/ deceleration speed when traveling.
- ⑥ Write to the LC8 after inputting is completed.

How to Operate the Step Data

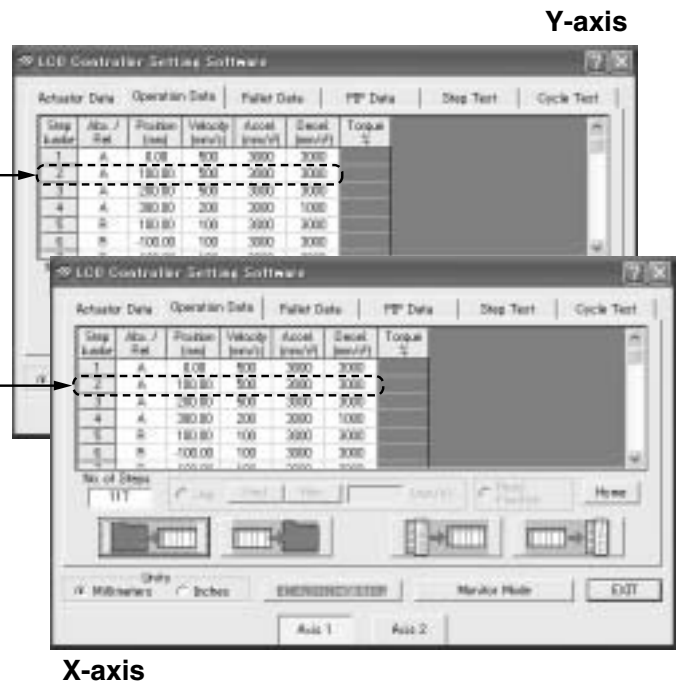
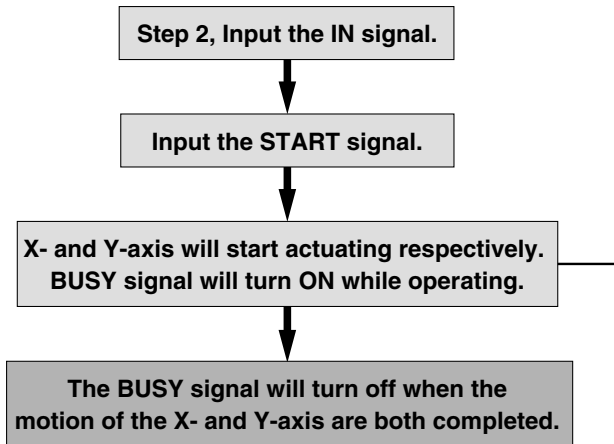
Operate the step data input communicated with the signal of a PLC.

Example) In case of operating the motion of step 1.



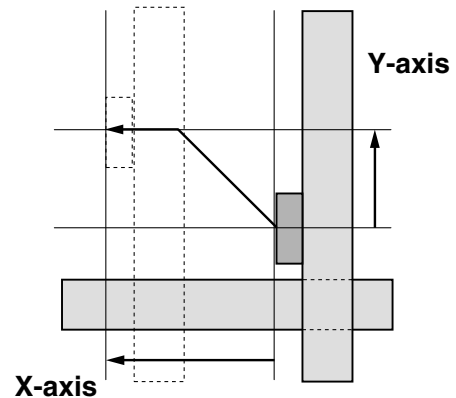
2-Axis Step Operation

Example: In case of operating the motion of step 2.



In case of using by 2-axis, if the step number is indicated, and START signal is input, motion of transfer will get started in line with the step data for X- and Y-axis respectively.

Although Y-axis motion is first completed, BUSY won't turn OFF until X-axis will complete its motion. Only when X- and Y-axis will be completed, BUSY signal will turn OFF.



Precautions on Connecting 2-Axis

⚠ Caution

1. Motion for returning to home position starts 2-axis simultaneously. When returning to home position, please design the equipment so that the components inside the equipment should not interfere with each other.
2. In the case of entering step data for "Motion for 1-axis only", enter step data by means of setting the "Relative coordinates to the 0 mm position" for the step data of the stopped axis.

How to Input the Pallet Data (For details, refer to "Instruction Manual".)

How to Input the Pallet Data

Able to input the pallet data by attached programming software for controller.

① Program the axis number to be used.

② Input the off-set distance of the home position

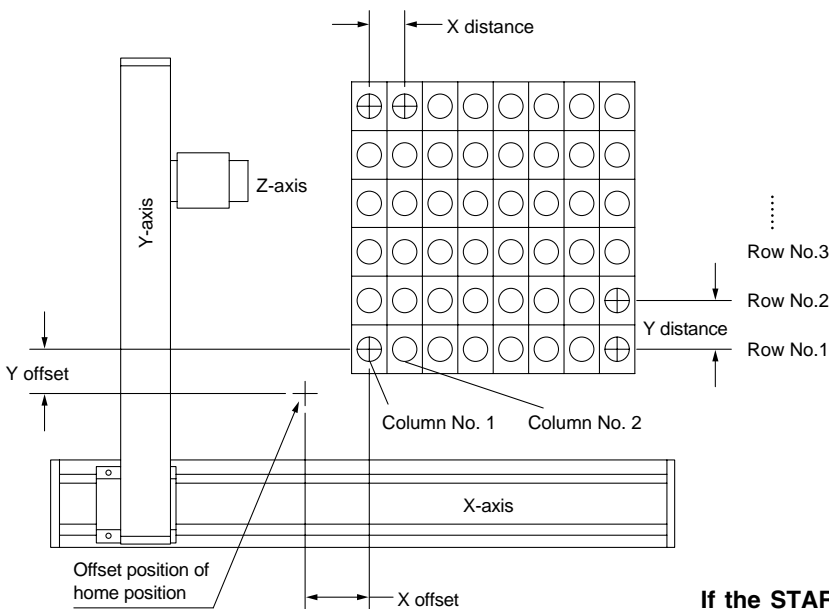
③ Input the distance (pitch) of the pallet

④ Input the traveling velocity

⑤ Input the acceleration and deceleration when traveling

⑥ Input the number of line and row for X-axis and Y-axis.

⑦ Write to the LC8 after input is completed.



If the START signal is inputted after the step number of the palletizing data has been inputted, it will move to the 1st row/1st column of the pallet.

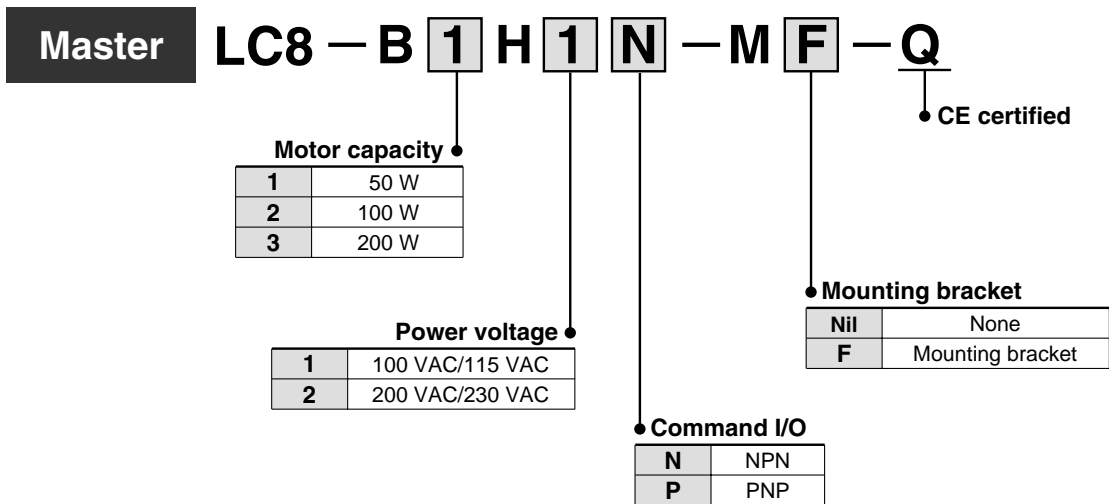
On every input of the START signal by using the same step number, it will move to the 2nd row/1st column, 3rd row/1st column...1st row/2nd column on the pallet. Each respective move is completed when BUSY signal is turned OFF.

Positioning Driver/For AC Servomotor

Series LC8

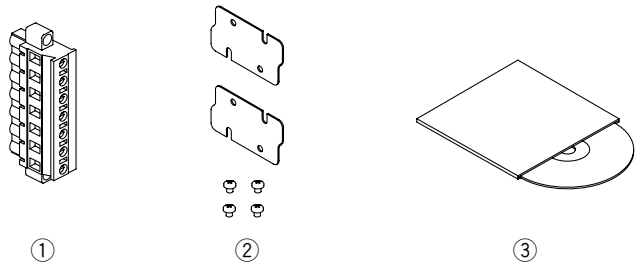
Compliant actuators/Series LJ1, Series LG1, Series LTF

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

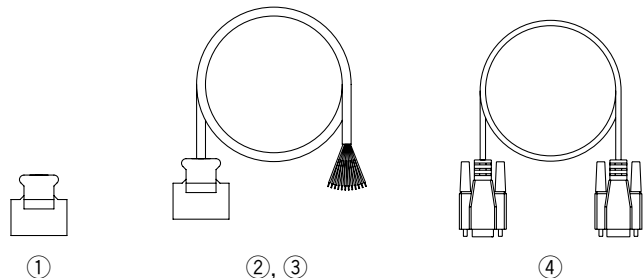


Option Note) Purchase separately.

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 (CAT. 150) catalog.



Precautions on Using Master

⚠ Caution

1. In case of using in 1-axis, use a master. (Slave alone cannot be used.)

How to Order

Slave **LC8 – B 1 H 1 – V F – Q**

• Motor capacity

1	50 W
2	100 W
3	200 W

• Power voltage

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

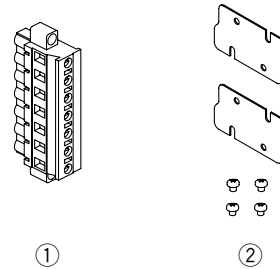
• CE certified

• Mounting bracket

Nil	None
F	Mounting bracket

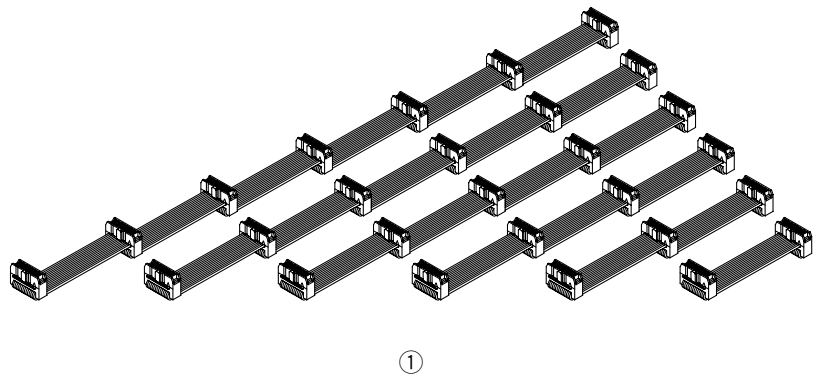
Accessory

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

1. 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.
2. 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".

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

⚠ Caution

In the case of using more than 2 axis. Please consider that each axis moves independently. Take care with the programming to avoid the axis colliding and causing damage.

Series LC8



Specifications

Model	LC8-B□□□1□-□□-Q	LC8-B□□□2□-□□-Q
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 □-□□-Q	LC8-B2□1 □-□□-Q	LC8-B3□1 □-□□-Q	LC8-B1□2 □-□□-Q	LC8-B2□2 □-□□-Q	LC8-B3□2 □-□□-Q
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)

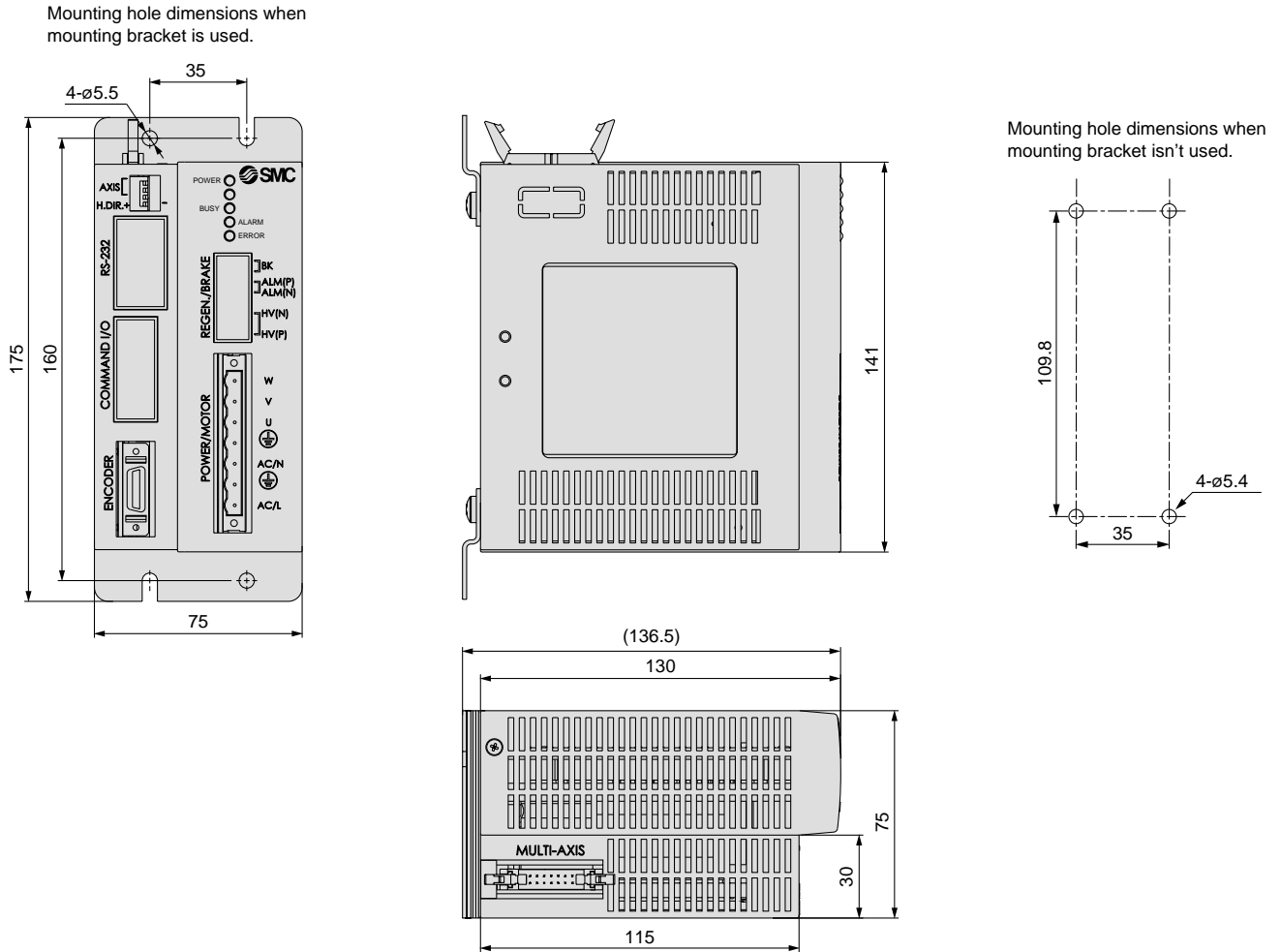
Command I/O Specifications

Model	LC8-B□□□N-□□-Q	LC8-B□□□P-□□-Q
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

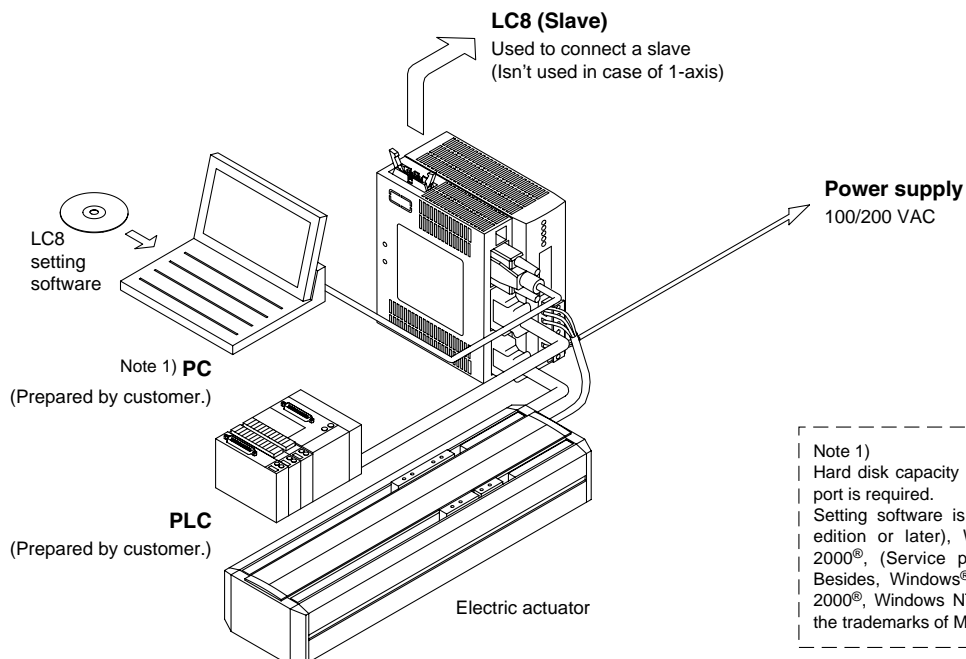
Item	Performance/Specifications
Alarming function	Over voltage/Low voltage, FWD/RVS limit switch, Overload, Motor drive circuit, Encoder connection, Forward soft stroke limit, Absolute home position stroke limit, Regenerative absorption unit, Communications, Non-returning to home position, Over current, 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.)

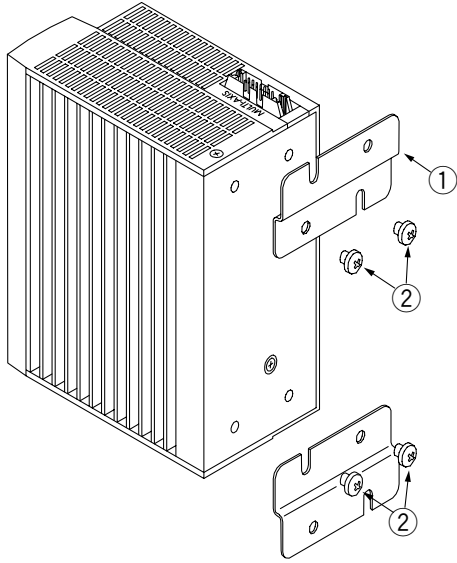


Note 1)
Hard disk capacity 12 MB, RAM 4 MB or more, and RS232C port is required.
Setting software is compliant to Microsoft Windows 95® (B edition or later), Windows 98®, Windows NT®, Windows 2000®, (Service pack 6), Windows Me®, Windows XP®. Besides, Windows®, Windows 95®, Windows 98®, Windows 2000®, Windows NT®, Windows Me® and Windows XP® are the trademarks of Microsoft Corporation.

Series LC8

Mounting Method

LC8-B□□□□-□F-Q (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.).

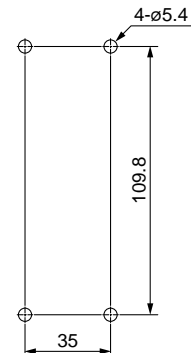
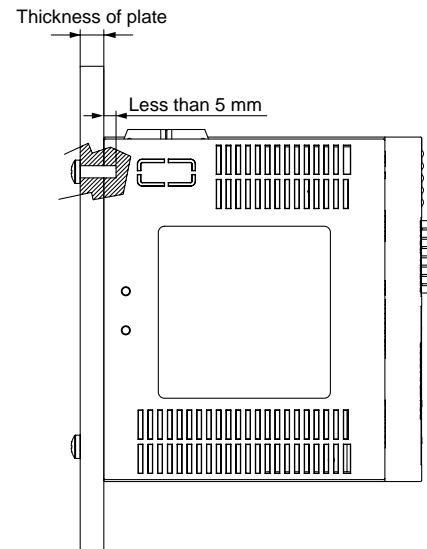
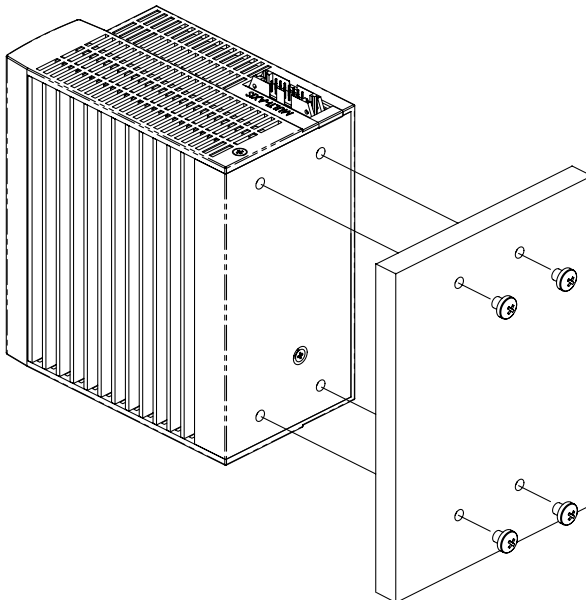
Accessory Contents

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

LC8-B□□□□-□-Q (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

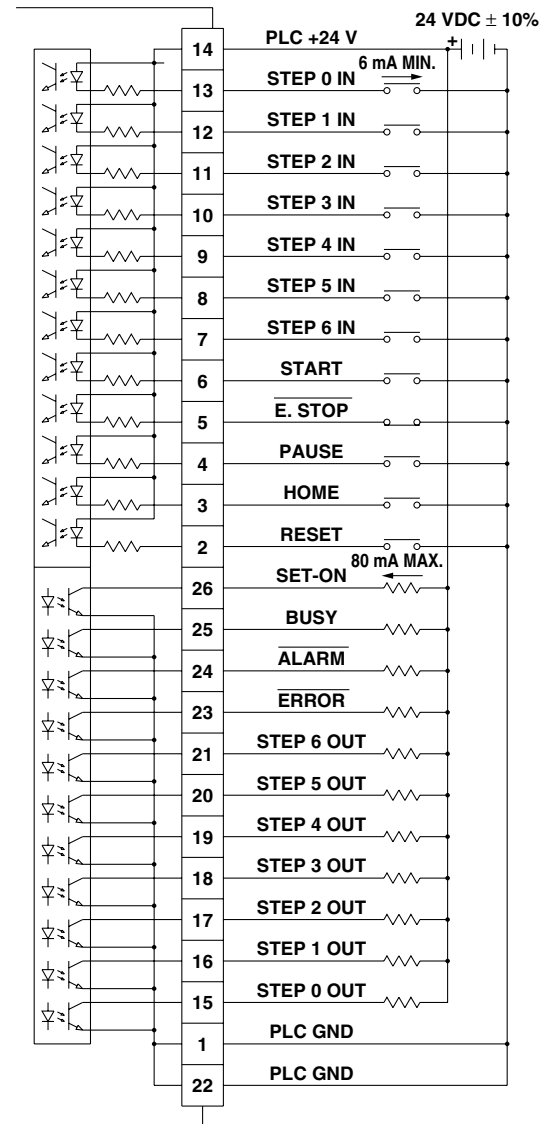
⚠ Caution

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.

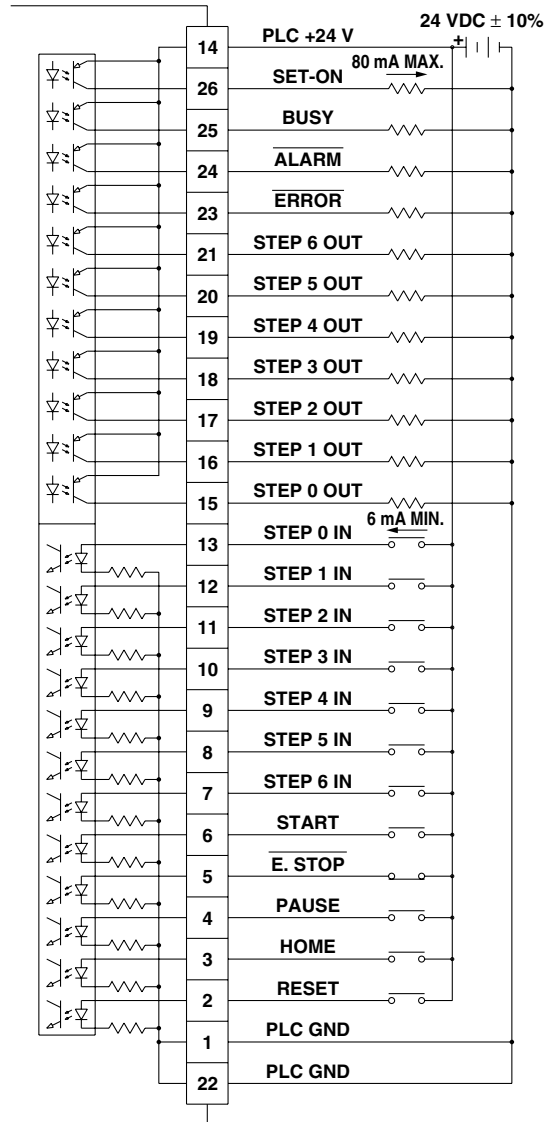
Command I/O Connector's Wiring

Wiring diagram

LC8-B□□□N-M□-Q (NPN specification)



LC8-B□□□P-M□-Q (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	
6	START	Operate the step number.
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.

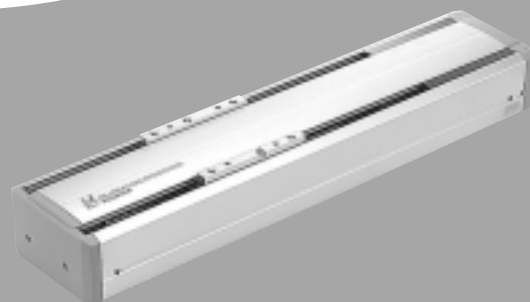
No.	Name of signals	Contents
26	SET-ON	Output Turn ON when returning to home position is completed.
25	BUSY	Output Turn ON while an actuator is traveling.
24	ALARM	Output Turn OFF when alarming
23	ERROR	Output Turn OFF when an error occurs.
21	STEP 6 OUT	Output the step number in motion
20	STEP 5 OUT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

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

Electric Actuators

Series LJ1

Page 11



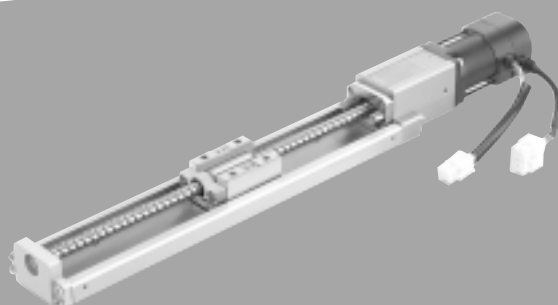
Series LG1

Page 76






Series LTF

Page 85



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			to 300					
		500	±0.1	to 500							
		600	±0.02	Ground ball screw	High rigidity, direct acting guide	to 600					
		600	±0.05			to 600					
	15	500	±0.1	Slide screw	Slide guide	to 500					
	20	300	±0.1	to 500							
	30	500	±0.02	Ground ball screw	High rigidity, direct acting guide	to 500					
		500	±0.05	Rolled ball screw		to 500					
		500	±0.1	Slide screw		to 500					
		1000	±0.02	Ground ball screw		to 1000					
		1000	±0.05	Rolled ball screw		to 1000					
	60	1000	±0.02	Ground ball screw	to 1000						
		1000	±0.05	Rolled ball screw	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			
±0.05				Rolled ball screw	to 500						
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						
			±0.05	Rolled ball screw	to 300						
50		500	±0.02	Ground ball screw	to 500						
			±0.05	Rolled ball screw	to 500						

Standard stroke (mm) and Speed (mm/s)						Standard motor		Non-standard motor
700	800	900	1000	1200	1500	Actuator model	Driver model	Actuator model
		to 300				LJ1S1081□SC-Q	LC8-B1H□□-□□-Q	LJ1S10□1□SC-X10-Q
		to 300				LJ1S2082□SC-Q	LC8-B2H□□-□□-Q	LJ1S20□2□SC-X10-Q
		to 500				LJ1H1081□SC-Q	LC8-B1H□□-□□-Q	LJ1H10□1□SC-X10-Q
						LJ1H1081□PB-Q	LC8-B1H□□-□□-Q	LJ1H10□1□PB-X10-Q
						LJ1H1081□NB-Q	LC8-B1H□□-□□-Q	LJ1H10□1□NB-X10-Q
		to 500				LJ1H2082□SC-Q	LC8-B2H□□-□□-Q	LJ1H20□2□SC-X10-Q
	500			to 500		LJ1S3083□SC-Q	LC8-B3H□□-□□-Q	LJ1S30□3□SC-X10-Q
						LJ1H2082□PA-Q	LC8-B2H□□-□□-Q	LJ1H20□2□PA-X10-Q
						LJ1H2082□NA-Q	LC8-B2H□□-□□-Q	LJ1H20□2□NA-X10-Q
	500			to 500		LJ1H3083□SE-Q	LC8-B3H□□-□□-Q	LJ1H30□3□SE-X10-Q
930	740	600	500			LJ1H2082□PC-Q	LC8-B2H□□-□□-Q	LJ1H20□2□PC-X10-Q
930	740	600	500			LJ1H2082□NC-Q	LC8-B2H□□-□□-Q	LJ1H20□2□NC-X10-Q
	1000		1000	700	500	LJ1H3083□PD-Q	LC8-B3H□□-□□-Q	LJ1H30□3□PD-X10-Q
	1000		1000	700	500	LJ1H3083□ND-Q	LC8-B3H□□-□□-Q	LJ1H30□3□ND-X10-Q
		to 500				LG1□H2□82□SC-Q	LC8-B2H□□-□□-Q	LG1□H2□□2□SC-X10-Q
						LG1□H2□82□PA-Q	LC8-B2H□□-□□-Q	LG1□H2□□2□PA-X10-Q
						LG1□H2□82□NA-Q	LC8-B2H□□-□□-Q	LG1□H2□□2□NA-X10-Q
930	740	600	500			LG1□H2□82□PC-Q	LC8-B2H□□-□□-Q	LG1□H2□□2□PC-X10-Q
930	740	600	500			LG1□H2□82□NC-Q	LC8-B2H□□-□□-Q	LG1□H2□□2□NC-X10-Q
						LTF68E□PH-Q	LC8-B2H□□-□□-Q	LTF6□E□PH-X10-Q
						LTF68E□NH-Q	LC8-B2H□□-□□-Q	LTF6□E□NH-X10-Q
890	710	580	480			LTF88E□PL-Q	LC8-B3H□□-□□-Q	LTF8□E□PL-X10-Q
890	710	580	480			LTF88E□NL-Q	LC8-B3H□□-□□-Q	LTF8□E□NL-X10-Q
						LTF68E□PF-Q	LC8-B2H□□-□□-Q	LTF6□E□PF-X10-Q
						LTF68E□NF-Q	LC8-B2H□□-□□-Q	LTF6□E□NF-X10-Q
440	350	290	240			LTF88E□PH-Q	LC8-B3H□□-□□-Q	LTF8□E□PH-X10-Q
440	350	290	240			LTF88E□NH-Q	LC8-B3H□□-□□-Q	LTF8□E□NH-X10-Q

High Rigidity Direct Acting Guide

Series LJ1H10

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1H10 R11 N B 100 F H X10 Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
811	SMC standard motor		50W	—	110/115VAC	
812					200/230VAC	
R11	Mitsubishi Electric Corporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC	
R12		HC-PQ053		MR-C10A-UE	200/230VAC	
R19		HC-PQ053	—	—		
R10 (Note 1)		—	—	—		
RM11		Note 2)	HC-MFS053	50W	MR-J2S-10A1	110/115VAC
RM12			HC-MFS053		MR-J2S-10A	200/230VAC
RM19			HC-MFS053	—	—	
RM10 (Note 1)			—	—	—	
RK11			HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12			HC-KFS053		MR-J2S-10A	200/230VAC
RK19		HC-KFS053	—		—	
RK10 (Note 1)		—	—	—		
RP11		Note 2)	HF-KP053	50W	MR-J3-10A1	110/115VAC
RP12			HF-KP053		MR-J3-10A	200/230VAC
RP19	HF-KP053		—	—		
RP10 (Note 1)	—		—	—		
G10 (Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y10 (Note 1)	Yaskawa Electric Corporation	—	—	—	—	

Note 1)
Motor and driver are not supplied.
Motor mounting holes and coupling are supplied for the selected motor type.
Refer to the motor compatibility table on page 70.
For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)
Non-standard motor (from general servomotor manufacturer)
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.
* The LC8 driver for SMC standard motor needs to be ordered separately.
* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

CE certified

Motor type

Nil	Standard motor
X10	Nonstandard motor

Standard motor

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.
Please specify the cable length.
For Non-standard motors: The cable is optional, and may be supplied by the customer, or the

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) PNP 2pcs.

cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

Screw lead

(Refer to Table 1 below for combinations).

B	12mm
C	20mm

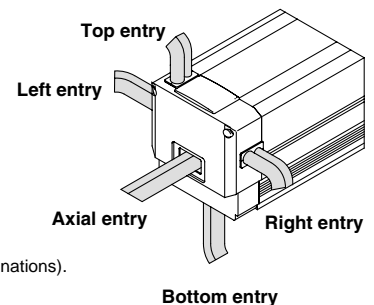


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)									
	100	200	300	400	500	600	700	800	900	1000
LJ1H10 □ PB-Stroke	●	●	●	●	●					
LJ1H10 □ NB-Stroke	●	●	●	●	●					
LJ1H10 □ SC-Stroke	●	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.
Refer to page 13 for dimensions.

Specifications

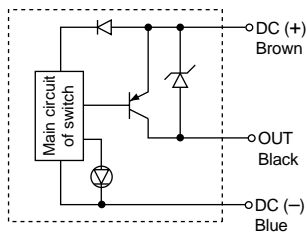
Stroke (mm)				100	200	300	400	500	600	700	800	900	1000
Weight (without motor) (kg)	Ball screw			4.8	5.6	6.4	7.1	7.9	-				
	Slide screw			4.9	5.8	6.8	7.6	8.4	9.3	10.1	10.9	11.8	12.6
Operating temperature range (°C)				5 to 40 (with no condensation)									
Maximum work load (kg)	Ball screw	12mm lead	50W	10					-				
	Slide screw	20mm lead		10									
Maximum speed (mm/s)	Ball screw	12mm lead	50W	600					-				
	Slide screw	20mm lead		500									
Lead screw	Ball screw	Rolled	ø12mm, 12mm lead					-					
		Ground						-					
	Slide screw	Rolled	ø20mm 20mm lead										
Guide				High rigidity direct acting guide									
Limit switch for non-standard motors ^{Note)}				Power supply voltage: 4.5 to 28VDC, Current consumption: 12mA or less, Control output: Open collector, Maximum load current 150mA									

⚠ Caution

Note) Refer to the drawing below for the internal circuitry of the limit switch.
2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only

Limit Switch Internal Circuit

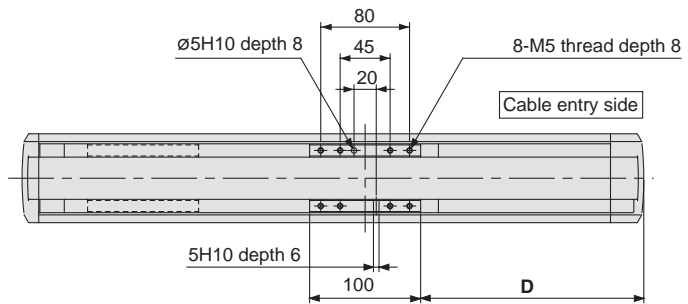
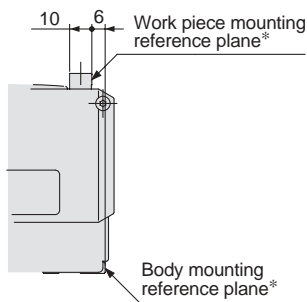
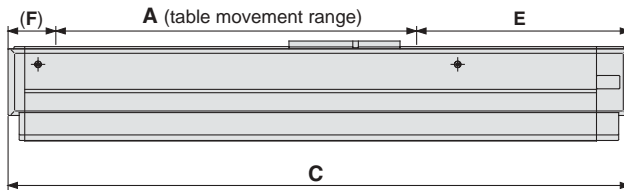
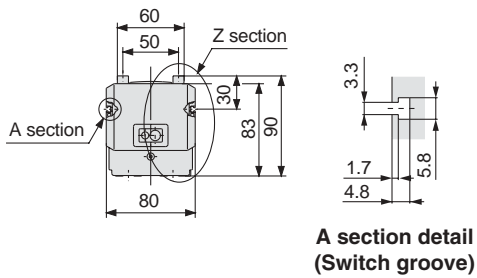
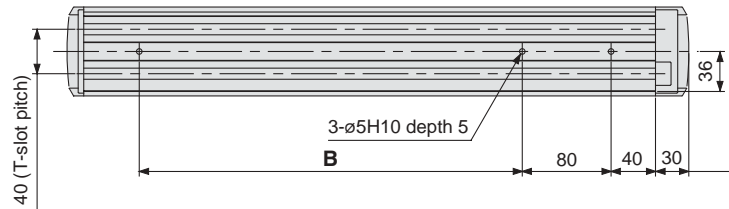
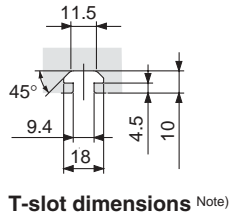
D-Y7HL



Series LJ1H10

Dimensions

Scale: 15%



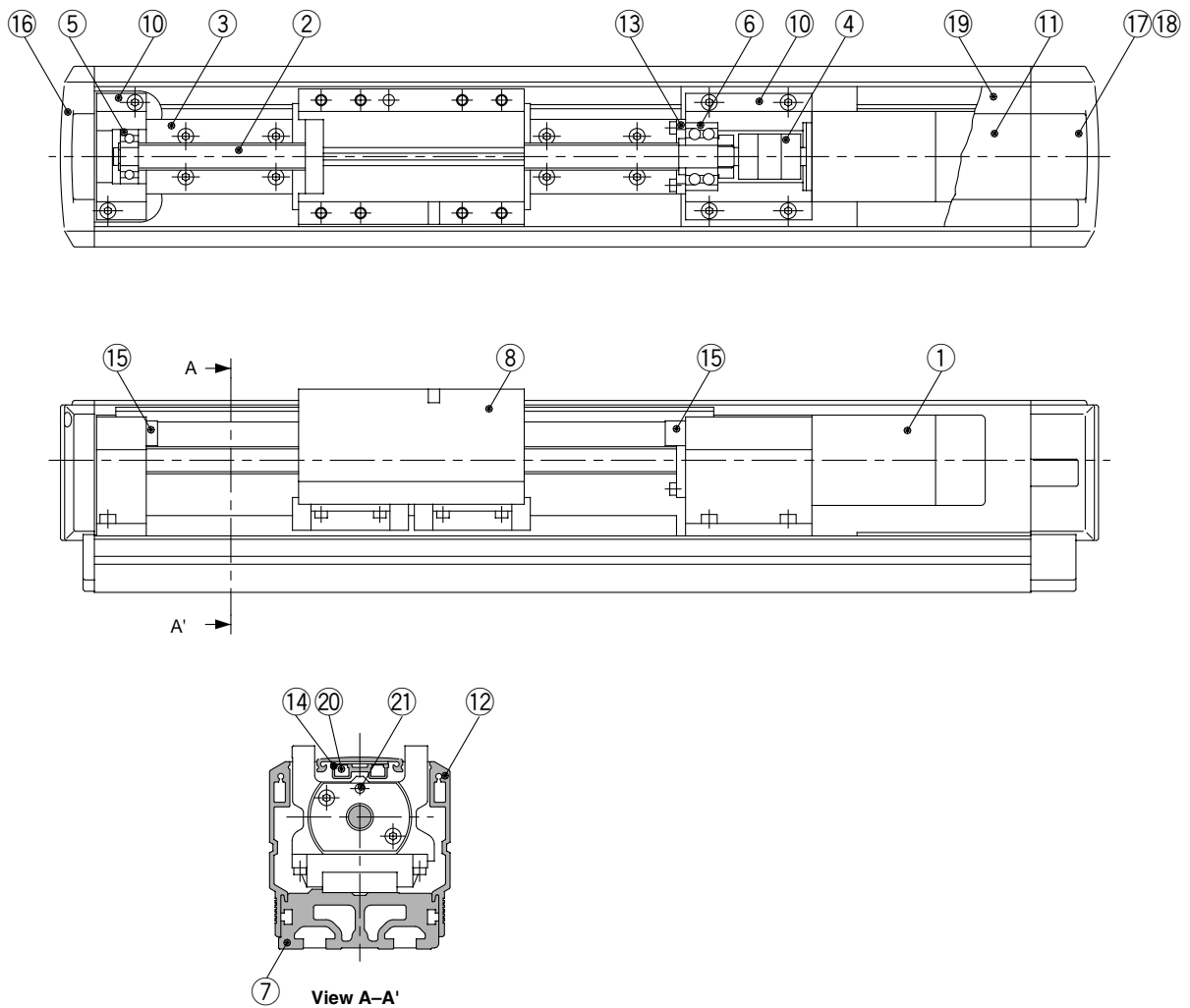
Dimension table/without brake

(mm)

Model	Stroke	A	B	C	D	E	F
LJ1H10□□□- 100-□□	100	225	245	460	201	192	43
LJ1H10□□□- 200-□□	200	325	345	560	201	192	43
LJ1H10□□□- 300-□□	300	425	445	660	201	192	43
LJ1H10□□□- 400-□□	400	525	545	760	201	192	43
LJ1H10□□□- 500-□□	500	625	645	860	201	192	43
LJ1H10□□SC- 600-□□	600	725	745	960	201	192	43
LJ1H10□□SC- 700-□□	700	825	845	1060	201	192	43
LJ1H10□□SC- 800-□□	800	925	945	1160	201	192	43
LJ1H10□□SC- 900-□□	900	1025	1045	1260	201	192	43
LJ1H10□□SC-1000-□□	1000	1125	1145	1360	201	192	43

Note) Special T-nuts are required to secure the body. The special T-nuts are included with the body unit.
Refer to "Options" on page 67 regarding the quantity of T-nuts.
The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting equipment.

Construction



Parts list/Main parts

No.	Description	Material	Note
1	AC servomotor	-	50W/100W
2	Feed screw	-	Ball screw/Slide screw
3	High rigidity direct acting guide	-	
4	Coupling	-	
5	Bearing R	-	
6	Bearing F	-	
7	Frame A	Aluminum alloy	
8	Table	Aluminum alloy	
9	Housing A	Aluminum alloy	
10	Housing B	Aluminum alloy	
11	Top cover	Aluminum alloy	

Parts list/Main parts

No.	Description	Material	Note
12	Side cover	Aluminum alloy	
13	Housing cover	Aluminum alloy	
14	Sensor rail	Aluminum alloy	
15	Bumper	IIR	
16	End cover A	PC	
17	End cover B	PC	
18	Inner cover	PC	
19	Motor cover	PC	
20	Auto switch	-	
21	Magnet	Rare earth magnet	

High Rigidity Direct Acting Guide

Series LJ1H20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1H20 R21 N A 300 F H X10 Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor Model	Output	Driver model	
821	SMC standard motor		100W	—	110/115VAC
822					200/230VAC
R21	Mitsubishi Electric Corporation	HC-PQ13	100W	MR-C10A1-UE	110/115VAC
R22		HC-PQ13		MR-C10A-UE	200/230VAC
R29		HC-PQ13	—	—	
R20 (Note 1)		—	—	—	
RM21		HC-MFS13	100W	MR-J2S-10A1	110/115VAC
RM22		HC-MFS13		MR-J2S-10A	200/230VAC
RM29		HC-MFS13		—	—
RM20 (Note 1)		—	—	—	
RK21		HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RK22		HC-KFS13		MR-J2S-10A	200/230VAC
RK29		HC-KFS13		—	—
RK20 (Note 1)		—	—	—	
RP21		HF-KP13	100W	MR-J3-10A1	110/115VAC
RP22		HF-KP13		MR-J3-10A	200/230VAC
RP29	HF-KP13	—		—	
RP20 (Note 1)	—	—	—		
G20 (Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y20 (Note 1)	Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor and driver are not supplied.
 Motor mounting holes and coupling are supplied for the selected motor type.
 Refer to the motor compatibility table on page 70.
 For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2) Non-standard motor (from general servomotor manufacturer)
 * The motor and driver of Mitsubishi Electric Corporation can be included when specified.
 * The LC8 driver for SMC standard motor needs to be ordered separately.
 * For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Lead screw type
 (Refer to Table 1 below for combinations).

P	Ground ball screw
N	Roller ball screw
S	Slide screw

CE certified

Motor type

Nil	Standard motor
X10	Nonstandard motor

Standard motor (Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.
 Please specify the cable length.
 For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Limit switches for Non-standard motors

Nil	None
H	N.C. (B contact) PNP 2pcs.

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm

Screw lead

(Refer to Table 1 below for combinations).

A	10mm
C	20mm

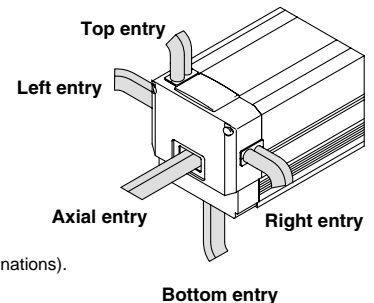


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)										
	100	200	300	400	500	600	700	800	900	1000	1200
LJ1H20 PA-Stroke	●	●	●	●	●	●					
LJ1H20 NA-Stroke	●	●	●	●	●	●					
LJ1H20 PC-Stroke					●	●	●	●	●	●	
LJ1H20 NC-Stroke					●	●	●	●	●	●	
LJ1H20 SC-Stroke	●	●	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.
 Refer to page 17 for dimensions.



Specifications

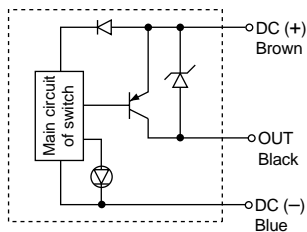
Stroke (mm)		100	200	300	400	500	600	700	800	900	1000	1200
Weight (without motor) (kg)	Ball screw	7.2	8.4	9.6	10.7	12.1	13.2	14.4	15.6	16.8	18.0	–
	Slide screw	7.5	8.5	9.6	10.8	12.3	13.8	16.3	16.8	18.6	20.4	24.2
Operating temperature range (°C)		5 to 40 (with no condensation)										
Maximum work load (kg)	Ball screw	10mm lead	30					–				
		20mm lead	–		30			–				
	Slide screw	20mm lead	15									
Maximum speed (mm/s)	Ball screw	10mm lead	500					–				
		20mm lead	–		1000	930	740	600	500	–		
	Slide screw	20mm lead	500									
Lead screw	Ball screw	Rolled/Ground	ø15mm, 10mm lead					–				
		–	ø15mm, 20mm lead			–						
	Slide screw	Rolled	ø20mm, 20mm lead									
Guide		High rigidity direct acting guide										
Limit switch for non-standard motors ^{Note)}		Power supply voltage: 4.5 to 28VDC, Current consumption: 12mA or less, Control output: Open collector, Maximum load current 150mA										

⚠ Caution

Note) Refer to the drawing below for the internal circuitry of the limit switch.
2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Limit Switch Internal Circuit

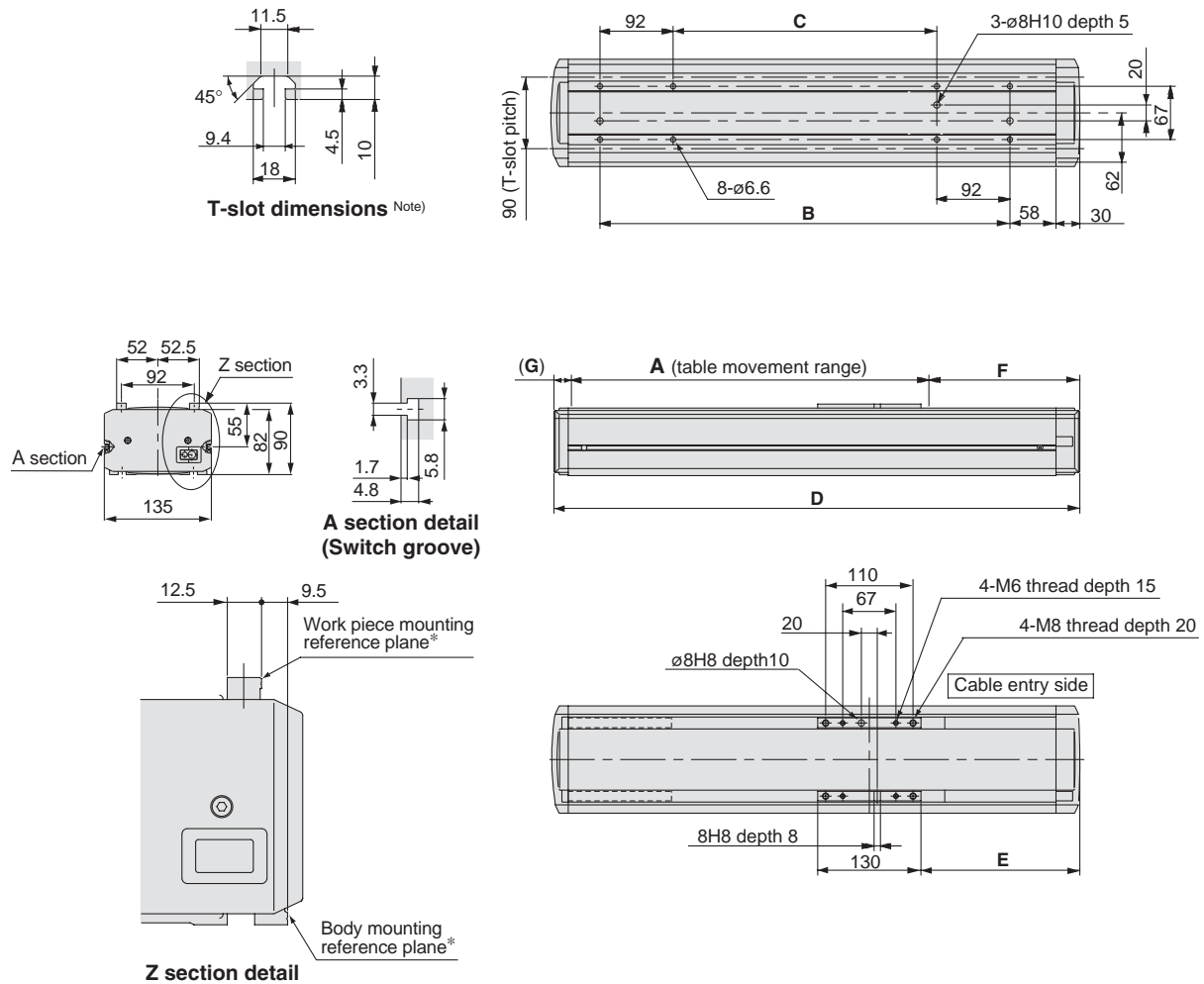
D-Y7HL



Series LJ1H20

Dimensions

Scale: 10%



Dimension table/without brake

(mm)

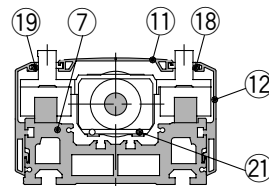
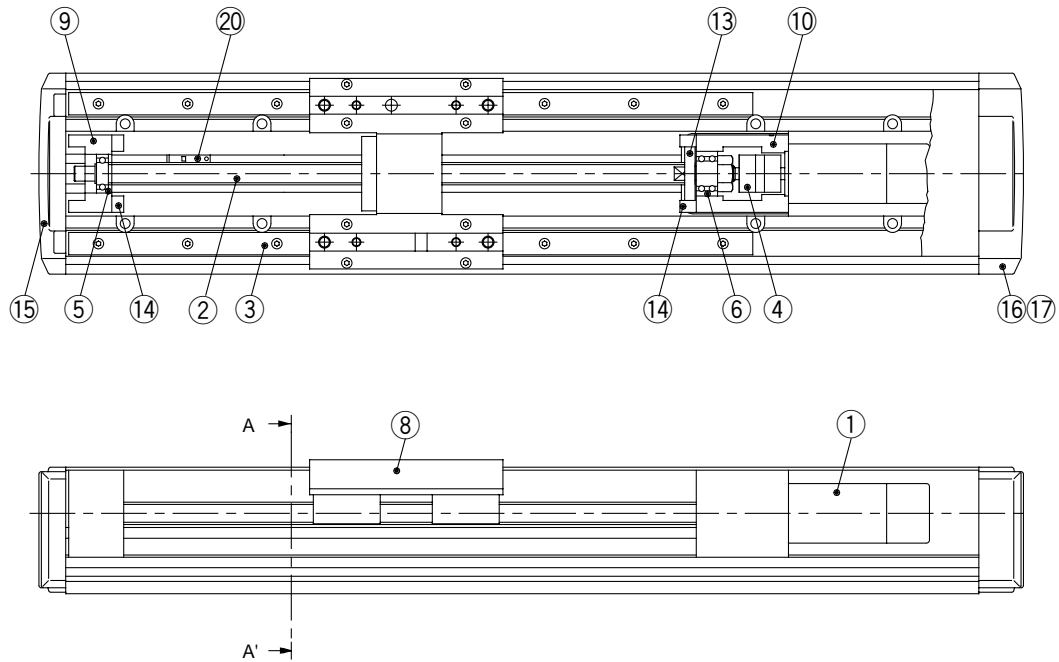
Model	Stroke	A	B	C	D	E	F	G
LJ1H20□□□- 100-□□	100	250	316	132	462	200	190	22
LJ1H20□□□- 200-□□	200	350	416	232	562	200	190	22
LJ1H20□□□- 300-□□	300	450	516	332	662	200	190	22
LJ1H20□□□- 400-□□	400	550	616	432	762	200	190	22
LJ1H20□□□- 500-□□	500	650	716	532	862	200	190	22
LJ1H20□□□- 600-□□	600	750	816	632	962	200	190	22
LJ1H20□□□C- 700-□□	700	859	916	732	1062	192	177	26
LJ1H20□□□C- 800-□□	800	959	1016	832	1162	192	177	26
LJ1H20□□□C- 900-□□	900	1059	1116	932	1262	192	177	26
LJ1H20□□□C-1000-□□	1000	1159	1216	1032	1362	192	177	26
LJ1H20□□□SC-1200-□□	1200	1359	1416	1232	1562	192	177	26

Note) The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting equipment.

When mounting the body unit, M6 x (33+α, α: effective thread length of the actuator mounting platform) bolts are required.

When mounting using the T-slots on the actuator, special T-nuts are required. Refer to "Options" on page 67.

Construction



View A-A'

Parts list/Main parts

No.	Description	Material	Note
1	AC servomotor	-	100W
2	Feed screw	-	Ball screw/Slide screw
3	High rigidity direct acting guide	-	
4	Coupling	-	
5	Bearing R	-	
6	Bearing F	-	
7	Body A	Aluminum alloy	
8	Table	Aluminum alloy	
9	Housing A	Aluminum alloy	
10	Housing B	Aluminum alloy	
11	Body cover A	Aluminum alloy	

Parts list/Main parts

No.	Description	Material	Note
12	Side cover	Aluminum alloy	
13	Bearing retainer	Aluminum alloy	
14	Bumper	IIR	
15	End cover A	PC	
16	End cover B	PC	
17	Inner cover	PC	
18	Motor cover R	PC	
19	Motor cover L	PC	
20	Auto switch	-	
21	Magnet	Rare earth magnet	

High Rigidity Direct Acting Guide

Series LJ1H30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1H30 **R31** **N** **D** - **600** - **F** **H** - **X10** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage		
	Manufacturer	Motor Model	Output	Driver model			
831	SMC standard motor		200W	—	110/115VAC		
832	SMC standard motor		200W	—	200/230VAC		
R31	Mitsubishi Electric Corporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC		
R32		HC-PQ23		MR-C20A-UE	200/230VAC		
R39		HC-PQ23	—	—			
R30 (Note 1)		—	—	—			
RM31		Note 2)	HC-MFS23	200W	MR-J2S-20A1	110/115VAC	
RM32			HC-MFS23		MR-J2S-20A	200/230VAC	
RM39			HC-MFS23	—	—		
RM30 (Note 1)			—	—	—		
RK31			Note 2)	HC-KFS23	200W	MR-J2S-20A1	110/115VAC
RK32				HC-KFS23		MR-J2S-20A	200/230VAC
RK39				HC-KFS23	—	—	
RK30 (Note 1)				—	—	—	
RP31			Note 2)	HF-KP23	200W	MR-J3-20A1	110/115VAC
RP32				HF-KP23		MR-J3-20A	200/230VAC
RP39	HF-KP23	—		—			
RP30 (Note 1)	—	—		—			
G30 (Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—		
Y30 (Note 1)	Yaskawa Electric Corporation	—	—	—	—		

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rollled ball screw
S	Slide screw

CE certified

Motor type

Nil	Standard motor
X10	Nonstandard motor

Standard motor (Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.

Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) PNP 2pcs.

cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Stroke

(Refer to Table 1 below for combinations).

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
1000	1000mm
1200	1200mm
1500	1500mm

Screw lead

(Refer to Table 1 below for combinations).

D	25mm
E	40mm

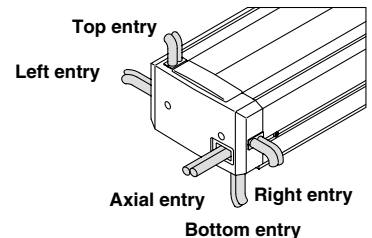


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)								
	200	300	400	500	600	800	1000	1200	1500
LJ1H30 □ PD-Stroke	●	●	●	●	●	●	●	●	●
LJ1H30 □ ND-Stroke	●	●	●	●	●	●	●	●	●
LJ1H30 □ SE-Stroke	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Refer to page 21 for dimensions.

Specifications

Stroke (mm)		200	300	400	500	600	800	1000	1200	1500		
Weight (without motor) (kg)	Ball screw	14.9	16.9	18.9	20.9	22.9	27.4	31.9	35.9	41.9		
	Slide screw	13.8	15.9	17.9	20	22.1	26.2	30.4	34.5	40.8		
Operating temperature range (°C)		5 to 40 (with no condensation)										
Maximum work load (kg)	Ball screw	25mm lead	200W								60	
	Slide screw	40mm lead									30	
Maximum speed (mm/s)	Ball screw	25mm lead	1000					700	500			
	Slide screw	40mm lead	500									
Motor output		AC servomotor (200W)										
Encoder		Incremental system										
Lead screw	Ball screw	Rolled	ø25mm, 25mm lead									
		Ground										
	Slide screw	Rolled	ø30mm, 40mm lead									
Guide		High rigidity direct acting guide										
Limit switch for non-standard motors ^{Note)}		Power supply voltage: 4.5 to 28VDC, Current consumption: 12mA or less, Control output: Open collector, Maximum load current 150mA										

⚠ Caution

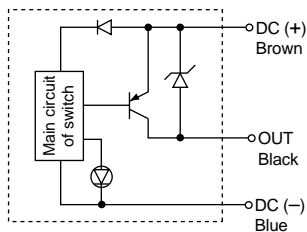
Note 1) Since the maximum speed may be limited by the work load, a separate inquiry should be made.

Note 2) Refer to the drawing below for the internal circuitry of the limit switch.

2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only

Limit Switch Internal Circuit

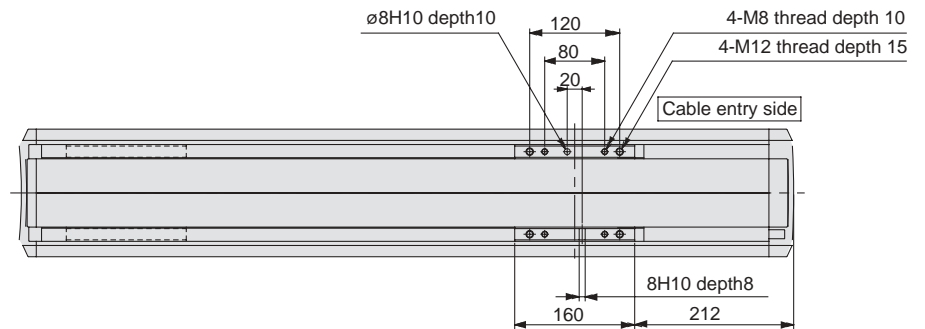
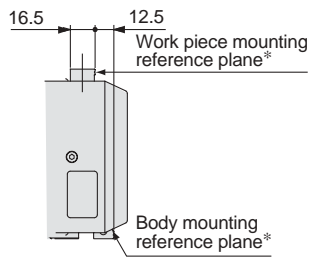
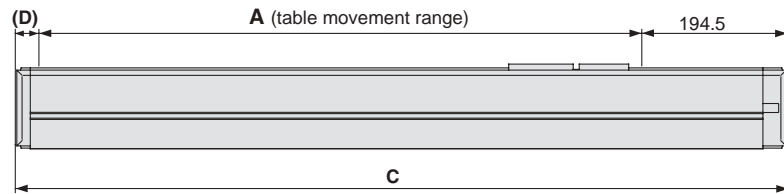
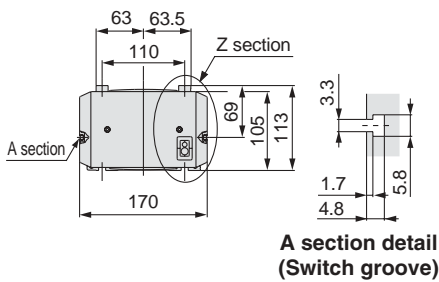
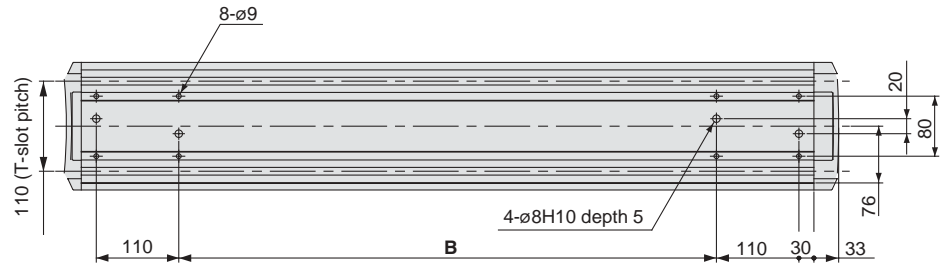
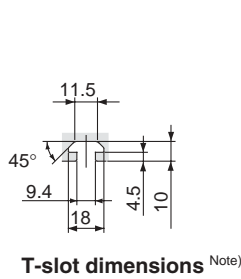
D-Y7HL



Series LJ1H30

Dimensions

Scale: 10%



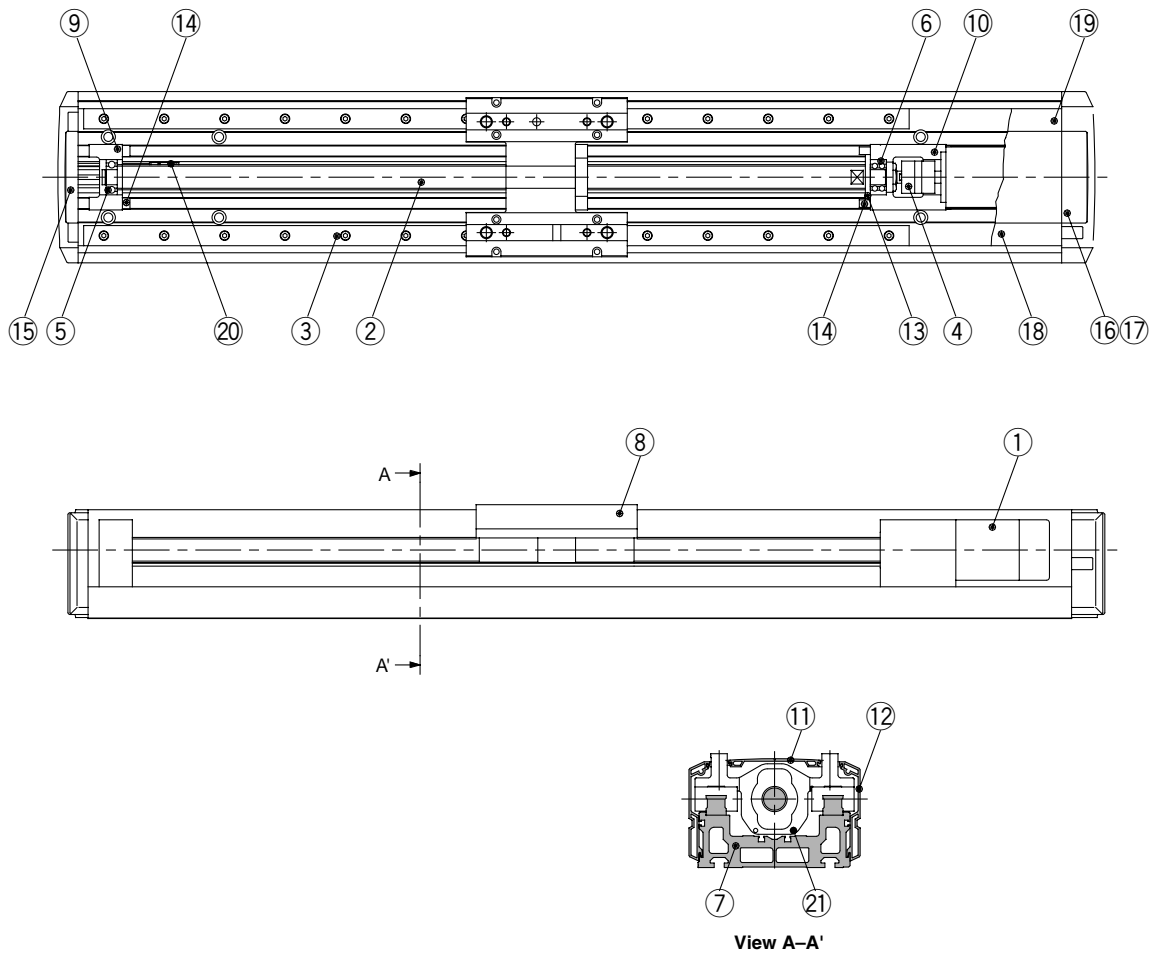
Dimension table/without brake

(mm)

Model	Stroke	A	B	C	D
LJ1H30□□□-200-□□	200	404	297	630	31.5
LJ1H30□□□-300-□□	300	504	397	730	31.5
LJ1H30□□□-400-□□	400	604	497	830	31.5
LJ1H30□□□-500-□□	500	704	597	930	31.5
LJ1H30□□□-600-□□	600	804	697	1030	31.5
LJ1H30□□□-800-□□	800	1004	897	1230	31.5
LJ1H30□□□-1000-□□	1000	1204	1097	1430	31.5
LJ1H30□□□-1200-□□	1200	1404	1297	1630	31.5
LJ1H30□□□-1500-□□	1500	1704	1597	1930	31.5

Note) The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting equipment.
 When mounting the body unit, M8 x (30+α, α: effective thread length of the actuator mounting platform) bolts are required.
 When mounting using the T-slots on the actuator, special T-nuts are required. Refer to "Options" on page 67.

Construction



Parts list/Main parts

No.	Description	Material	Note
1	AC servomotor	—	200W
2	Feed screw	—	Ball screw/Slide screw
3	High rigidity direct acting guide	—	
4	Coupling	—	
5	Bearing R	—	
6	Bearing F	—	
7	Body A	Aluminum alloy	
8	Table	Aluminum alloy	
9	Housing A	Aluminum alloy	
10	Housing B	Aluminum alloy	
11	Top cover	Aluminum alloy	

Parts list/Main parts

No.	Description	Material	Note
12	Side cover	Aluminum alloy	
13	Bearing retainer	Carbon steel	
14	Bumper	IIR	
15	End cover A	PC	
16	End cover B	PC	
17	Inner cover	PC	
18	Motor cover A	PC	
19	Motor cover B	PC	
20	Auto switch	—	
21	Magnet	Rare earth magnet	

Slider Guide

Series LJ1S10

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1S10 **R11** **S** **C** - **100** - **F** **H** - **X10** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
811	SMC standard motor		50W	—	110/115VAC	
812					200/230VAC	
R11	Mitsubishi Electric Corporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC	
R12		HC-PQ053		MR-C10A-UE	200/230VAC	
R19		HC-PQ053	—	—		
R10 (Note 1)		—	—	—		
RM11		Note 2)	HC-MFS053	50W	MR-J2S-10A1	110/115VAC
RM12			HC-MFS053		MR-J2S-10A	200/230VAC
RM19			HC-MFS053	—	—	
RM10 (Note 1)		—	—	—		
RK11		Note 2)	HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12			HC-KFS053		MR-J2S-10A	200/230VAC
RK19			HC-KFS053	—	—	
RK10 (Note 1)		—	—	—		
RP11		Note 2)	HF-KP053	50W	MR-J3-10A1	110/115VAC
RP12			HF-KP053		MR-J3-10A	200/230VAC
RP19	HF-KP053		—	—		
RP10 (Note 1)	—	—	—			
G10 (Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y10 (Note 1)	Yaskawa Electric Corporation	—	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Lead screw type

S	Slide screw
----------	-------------

Screw lead

C	20mm
----------	------

• CE certified

• Motor type

Nil	Standard motor
X10	Nonstandard motor

• Standard motor (Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.

Please specify the cable length

For Non-standard motors: The cable is optional, and may be

supplied by the customer, or the

cable corresponding to the

selected motor may be

ordered separately by

referring to the section

on how to order cables

on page 67.

• Limit switches for non-standard motors

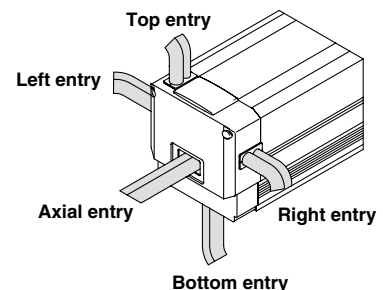
Nil	None
H	N.C. (B contact) PNP 2pcs.

• Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

• Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm



Refer to page 25 for dimensions

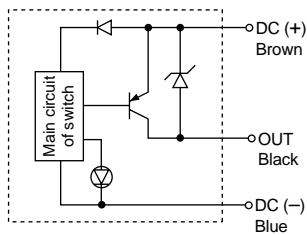
Specifications

Stroke (mm)	100	200	300	400	500	600	700	800	900	1000
Weight (without motor) (kg)	5.0	5.7	6.5	7.3	8.1	8.9	9.6	10.4	11.2	12.0
Operating temperature range (°C)	5 to 40 (with no condensation)									
Maximum work load (kg)	5									
Maximum speed (mm/s)	300									
Positioning repeatability	±0.1									
Lead screw	Rolled slide screw		ø20mm, 20mm lead							
Guide	Slider guide									
Limit switch for non-standard motors ^{Note)}	Power supply voltage: 4.5 to 28VDC, Current consumption: 12mA or less, Control output: Open collector, Maximum load current 150mA									

Note) Refer to the drawing below for the internal circuitry of the limit switch.
 2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only.

Limit Switch Internal Circuit

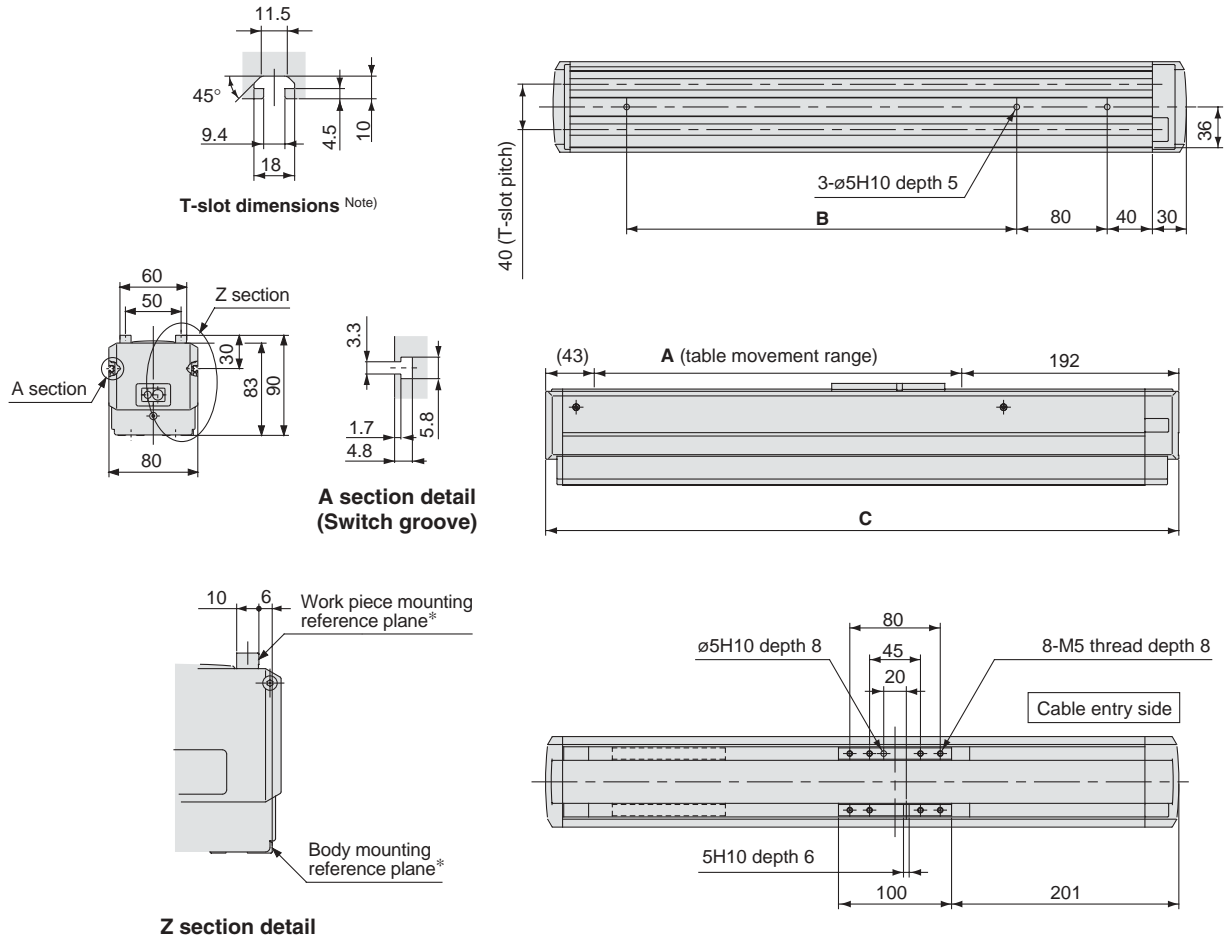
D-Y7HL



Series LJ1S10

Dimensions

Scale: 15%



Dimension table

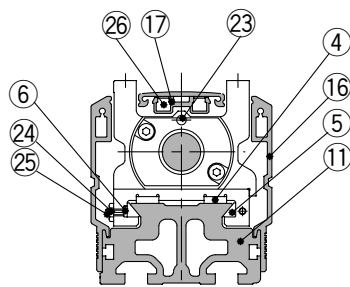
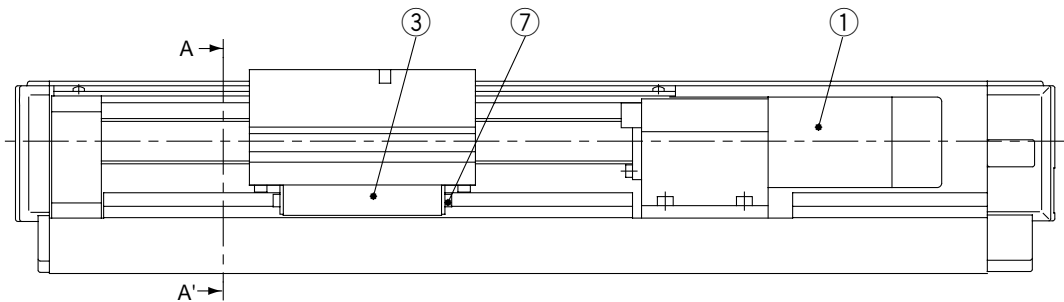
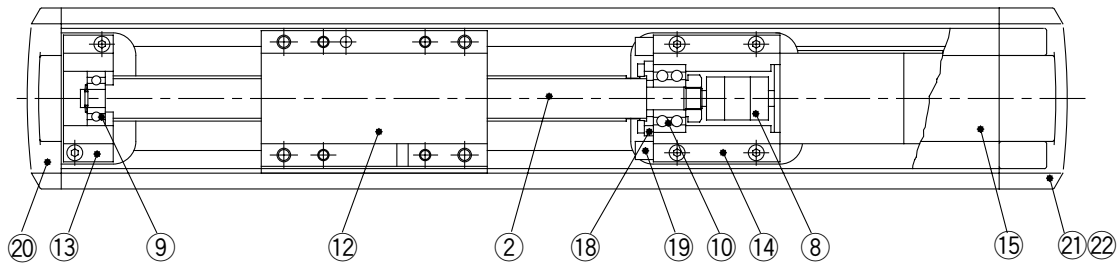
Model	Stroke	A	B	C
LJ1S10 <input type="checkbox"/> SC- 100- <input type="checkbox"/>	100	225	245	460
LJ1S10 <input type="checkbox"/> SC- 200- <input type="checkbox"/>	200	325	345	560
LJ1S10 <input type="checkbox"/> SC- 300- <input type="checkbox"/>	300	425	445	660
LJ1S10 <input type="checkbox"/> SC- 400- <input type="checkbox"/>	400	525	545	760
LJ1S10 <input type="checkbox"/> SC- 500- <input type="checkbox"/>	500	625	645	860
LJ1S10 <input type="checkbox"/> SC- 600- <input type="checkbox"/>	600	725	745	960
LJ1S10 <input type="checkbox"/> SC- 700- <input type="checkbox"/>	700	825	845	1060
LJ1S10 <input type="checkbox"/> SC- 800- <input type="checkbox"/>	800	925	945	1160
LJ1S10 <input type="checkbox"/> SC- 900- <input type="checkbox"/>	900	1025	1045	1260
LJ1S10 <input type="checkbox"/> SC-1000- <input type="checkbox"/>	1000	1125	1145	1360

Note) Special T-nuts are required to secure the body. The special T-nuts are included with the body unit.

Refer to "Options" on page 67 regarding the quantity of T-nuts, etc.

The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting equipment.

Construction



View A-A'

Parts list/Main parts

No.	Description	Material	Note
1	AC servomotor	-	50W
2	Feed screw	-	Slide screw
3	Guide frame	Aluminum alloy	
4	Guide plate A	Special resin	
5	Guide plate B	Special resin	
6	Push bar	Carbon steel	
7	Frame cover	Stainless steel	
8	Coupling	-	
9	Bearing R	-	
10	Bearing F	-	
11	Frame A	Aluminum alloy	
12	Table	Aluminum alloy	
13	Housing B	Aluminum alloy	

Parts list/Main parts

No.	Description	Material	Note
14	Housing A	Aluminum alloy	
15	Top cover A	Aluminum alloy	
16	Side cover	Aluminum alloy	
17	Sensor rail	Aluminum alloy	
18	Bearing retainer	Aluminum alloy	
19	Bumper	IIR	
20	End cover A	PC	
21	End cover B	PC	
22	Inner cover	PC	
23	Magnet	Rare earth magnet	
24	Hexagon socket set screw	Chrome molybdenum steel	M3 x 8
25	Nut	Mild steel	M3
26	Auto switch	-	

Slider Guide

Series LJ1S20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1S20 **R21** **S** **C** - **300** - **F** **H** - **X10** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification			Power supply voltage	
	Manufacturer	Motor Model	Driver model		
821	SMC standard motor	100W	—	110/115VAC	
822			—	200/230VAC	
R21	Mitsubishi Electric Corporation	HC-PQ13	MR-C10A1-UE	110/115VAC	
R22		HC-PQ13	MR-C10A-UE	200/230VAC	
R29		HC-PQ13	—	—	
R20 Note 1)		—	—	—	
RM21		100W	HC-MFS13	MR-J2S-10A1	110/115VAC
RM22			HC-MFS13	MR-J2S-10A	200/230VAC
RM29		HC-MFS13	—	—	
RM20 Note 1)		—	—	—	
RK21		100W	HC-KFS13	MR-J2S-10A1	110/115VAC
RK22			HC-KFS13	MR-J2S-10A	200/230VAC
RK29		HC-KFS13	—	—	
RK20 Note 1)		—	—	—	
RP21		100W	HF-KP13	MR-J3-10A1	110/115VAC
RP22			HF-KP13	MR-J3-10A	200/230VAC
RP29	HF-KP13	—	—		
RP20 Note 1)	—	—	—		
G20 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	
Y20 Note 1)	Yaskawa Electric Corporation	—	—	—	

Note 1)
Motor and driver are not supplied.
Motor mounting holes and coupling are supplied for the selected motor type.
Refer to the motor compatibility table on page 70.
For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)
Non-standard motor (from general servomotor manufacturer)
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.
* The LC8 driver for SMC standard motor needs to be ordered separately.
* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Lead screw type

S	Slide screw
----------	-------------

Screw lead

C	20mm
----------	------

• CE certified

• Motor type

Nil	Standard motor
X10	Nonstandard motor

• Standard motor Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.
Please specify the cable length
For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the

• Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) PNP 2pcs.

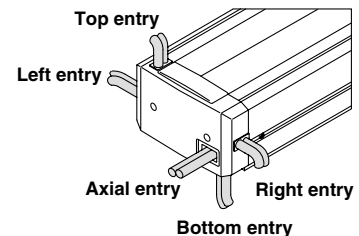
selected motor may be ordered separately by referring to the section on how to order cables on page 67.

• Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

• Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm



Refer to page 29 for dimensions.

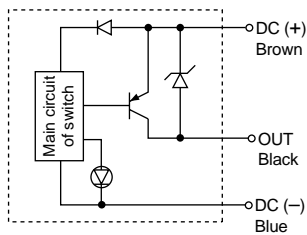
Specifications

Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1200
Weight (without motor) (kg)	6.3	7.4	8.5	9.6	10.6	11.7	12.8	13.8	14.9	15.9	18.1
Operating temperature range (°C)	5 to 40 (with no condensation)										
Maximum work load (kg)	10										
Maximum speed (mm/s)	300										
Positioning repeatability (mm)	±0.1										
Lead screw	Rolled slide screw		ø20mm, 20mm lead								
Guide	Slider guide										
Limit switch for non-standard motors ^{Note)}	Power supply voltage: 4.5 to 28VDC, Current consumption: 12mA or less, Control output: Open collector, Maximum load current 150mA										

Note) Refer to the drawing below for the internal circuitry of the limit switch.
 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Limit Switch Internal Circuit

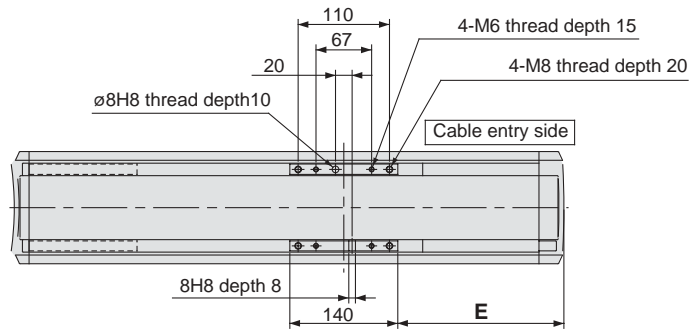
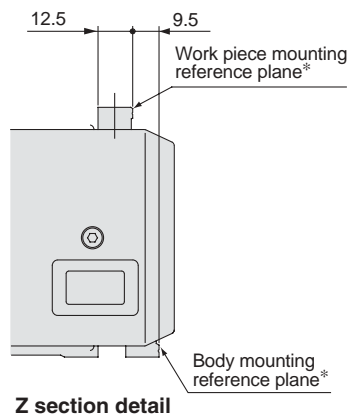
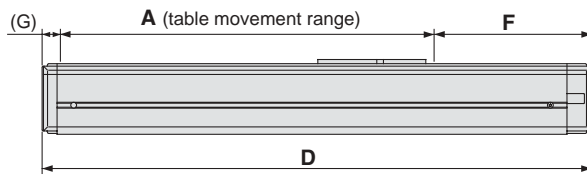
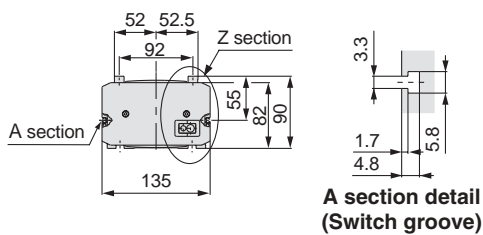
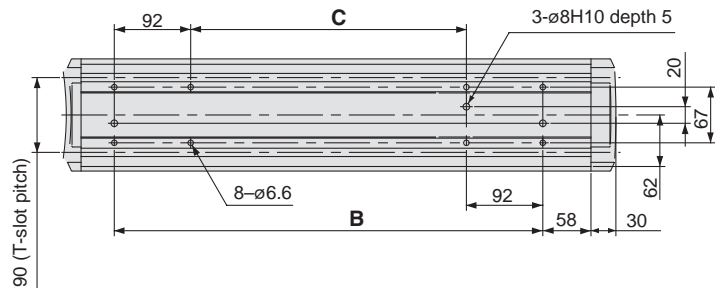
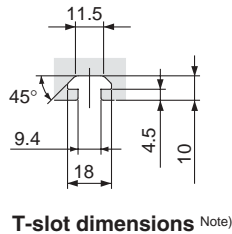
D-Y7HL



Series LJ1S20

Dimensions

Scale: 10%

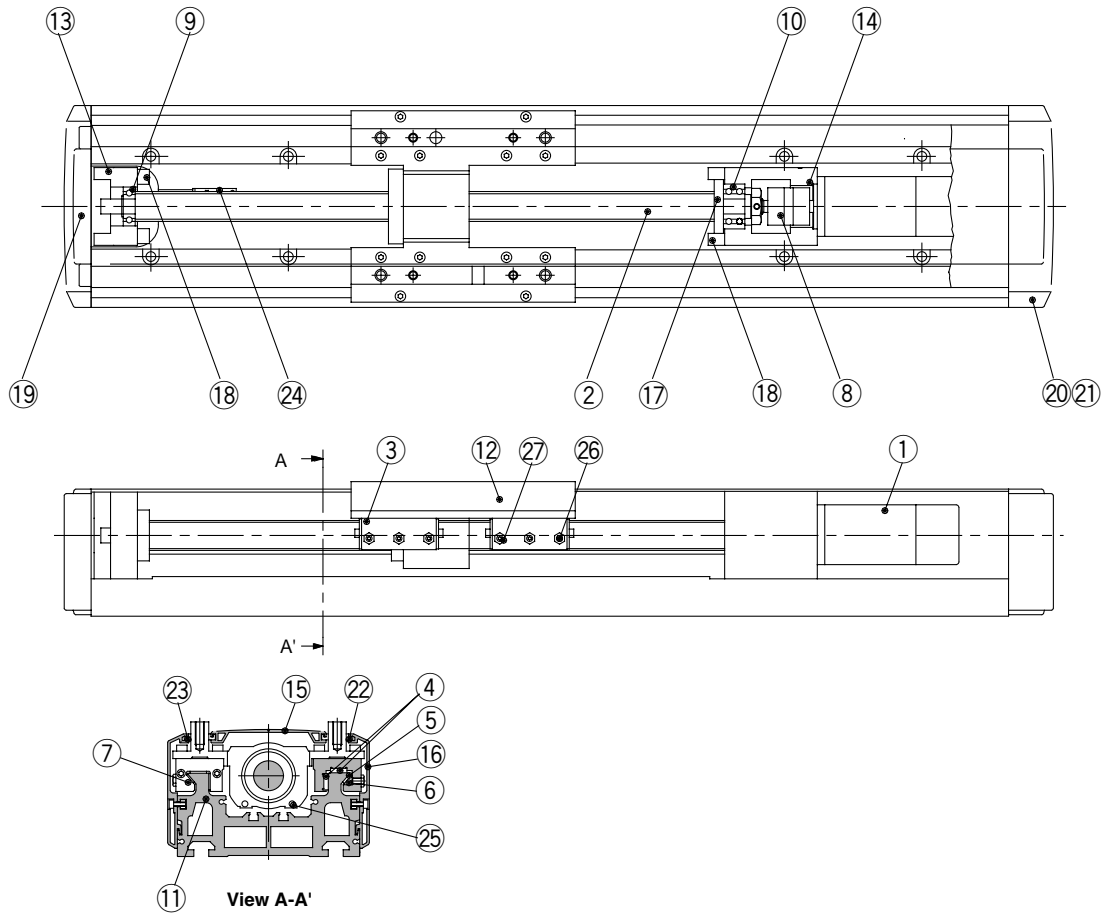


Dimension table/without brake

Model	Stroke	A	B	C	D	E	F	G
LJ1S20-□-SC-100-□□	100	269	316	132	462	184	175	18
LJ1S20-□-SC-200-□□	200	369	416	232	562	184	175	18
LJ1S20-□-SC-300-□□	300	469	516	332	662	184	175	18
LJ1S20-□-SC-400-□□	400	569	616	432	762	184	175	18
LJ1S20-□-SC-500-□□	500	669	716	532	862	184	175	18
LJ1S20-□-SC-600-□□	600	769	816	632	962	184	175	18
LJ1S20-□-SC-700-□□	700	878	916	732	1062	176	162	22
LJ1S20-□-SC-800-□□	800	978	1016	832	1162	176	162	22
LJ1S20-□-SC-900-□□	900	1078	1116	932	1262	176	162	22
LJ1S20-□-SC-1000-□□	1000	1178	1216	1032	1362	176	162	22
LJ1S20-□-SC-1200-□□	1200	1378	1416	1232	1562	176	162	22

Note) The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting equipment.
 When mounting the body unit, M6 x (33+α, α: effective thread length of the actuator mounting platform) bolts are required.
 When mounting using the T-slots on the actuator, special T-nuts are required. Refer to "Options" on page 67.

Construction



Parts list/Main parts

No.	Description	Material	Note
1	AC servomotor	-	100W
2	Feed screw	-	Slide screw
3	Guide frame	Aluminum alloy	
4	Guide plate A	Special resin	
5	Guide plate B	Special resin	
6	Push bar	Carbon steel	
7	Frame cover	Stainless steel	
8	Coupling	-	
9	Bearing R	-	
10	Bearing F	-	
11	Body A	Aluminum alloy	
12	Table	Aluminum alloy	
13	Housing A	Aluminum alloy	

Parts list/Main parts

No.	Description	Material	Note
14	Housing B	Aluminum alloy	
15	Body cover A	Aluminum alloy	
16	Side cover	Aluminum alloy	
17	Bearing retainer	Aluminum alloy	
18	Bumper	IIR	
19	End cover A	PC	
20	End cover B	PC	
21	Inner cover	PC	
22	Motor cover R	PC	
23	Motor cover L	PC	
24	Auto switch	-	
25	Magnet	Rare earth magnet	
26	Hexagon socket set screw	Chrome molybdenum steel	M4 x 8
27	Nut	Mild steel	M4

Slider Guide

Series LJ1S30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1S30 **R31** **S** **C** - **600** - **F** **H** - **X10** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification			Power supply voltage	
	Manufacturer	Motor Model	Driver model		
831	SMC standard motor	200W	—	110/115VAC	
832				200/230VAC	
R31	Mitsubishi Electric Corporation	HC-PQ23	MR-C20A1-UE	110/115VAC	
R32		HC-PQ23	MR-C20A-UE	200/230VAC	
R39		HC-PQ23	—	—	
R30 <small>Note 1)</small>		—	—	—	
RM31		200W	HC-MFS23	MR-J2S-20A1	110/115VAC
RM32			HC-MFS23	MR-J2S-20A	200/230VAC
RM39		HC-MFS23	—	—	
RM30 <small>Note 1)</small>		—	—	—	
RK31		200W	HC-KFS23	MR-J2S-20A1	110/115VAC
RK32			HC-KFS23	MR-J2S-20A	200/230VAC
RK39		HC-KFS23	—	—	
RK30 <small>Note 1)</small>		—	—	—	
RP31		200W	HF-KP23	MR-J3-20A1	110/115VAC
RP32			HF-KP23	MR-J3-20A	200/230VAC
RP39	HF-KP23	—	—		
RP30 <small>Note 1)</small>	—	—	—		
G30 <small>Note 1)</small>	Matsushita Electric Industrial Co.,Ltd.	—	—	—	
Y30 <small>Note 1)</small>	Yaskawa Electric Corporation	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Lead screw type

S	Slide screw
---	-------------

Screw lead

C	20mm
---	------

• CE certified

• Motor type

Nil	Standard motor
X10	Nonstandard motor

• Standard motor Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.

Please specify the cable length

For Non-standard motors: The cable is optional, and may be

supplied by the customer, or the cable corresponding to the

selected motor may be

ordered separately by

referring to the section

on how to order cables on

page 67.

• Limit switches for non-standard motors

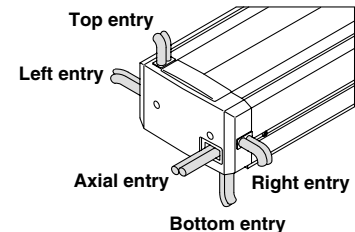
Nil	None
H	N.C. (B contact) PNP 2pcs.

• Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

• Stroke

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
1000	1000mm
1200	1200mm
1500	1500mm



Refer to page 33 for dimensions.

Specifications

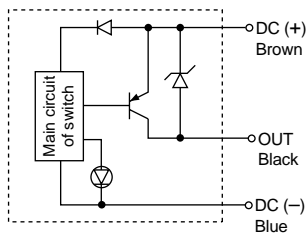
Stroke (mm)	200	300	400	500	600	800	1000	1200	1500
Weight (without motor) (kg)	13.3	15.1	16.9	18.7	20.4	24.6	28.6	32.2	37.6
Operating temperature range (°C)	5 to 40 (with no condensation)								
Maximum work load (kg)	20								
Maximum speed (mm/s)	300								
Lead screw	Rolled slide screw		ø25mm, 20mm lead						
Guide	Slider guide								
Limit switch for non-standard motors ^{Note)}	Power supply voltage: 4.5 to 28VDC, Current consumption: 12mA or less, Control output: Open collector, Maximum load current 150mA								

Note) Refer to the drawing below for the internal circuitry of the limit switch.

2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Limit Switch Internal Circuit

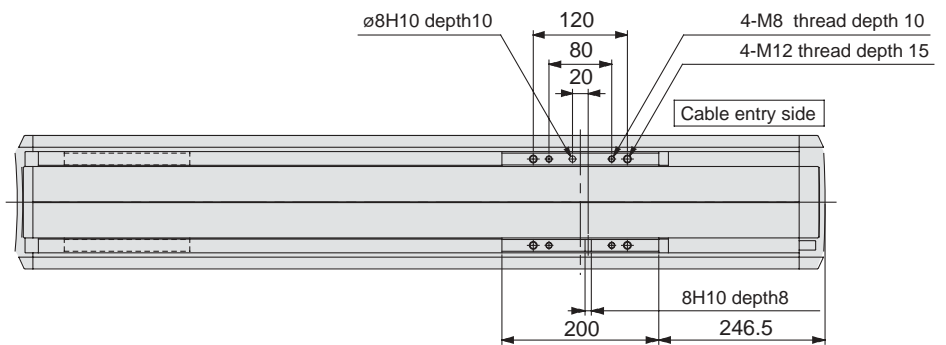
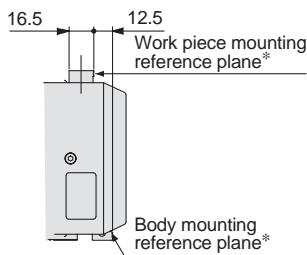
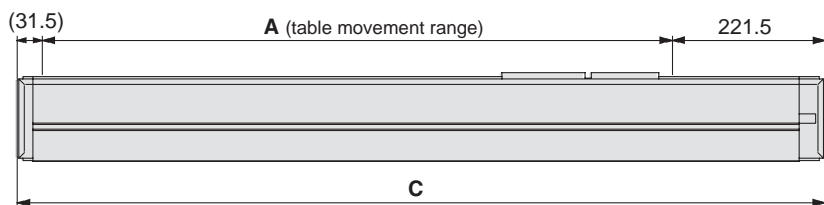
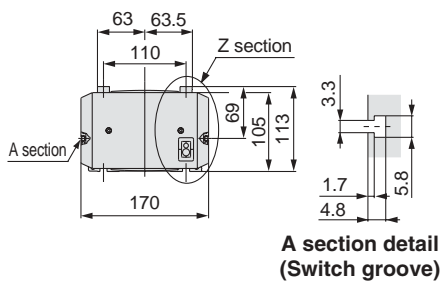
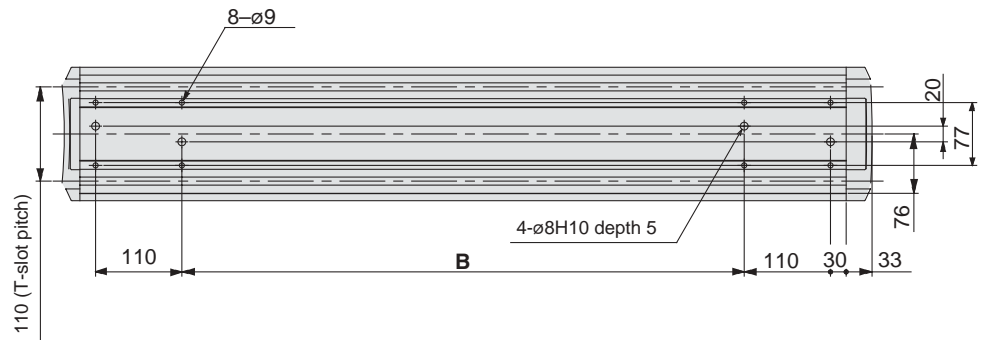
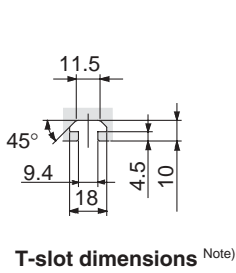
D-Y7HL



Series LJ1S30

Dimensions

Scale: 10%

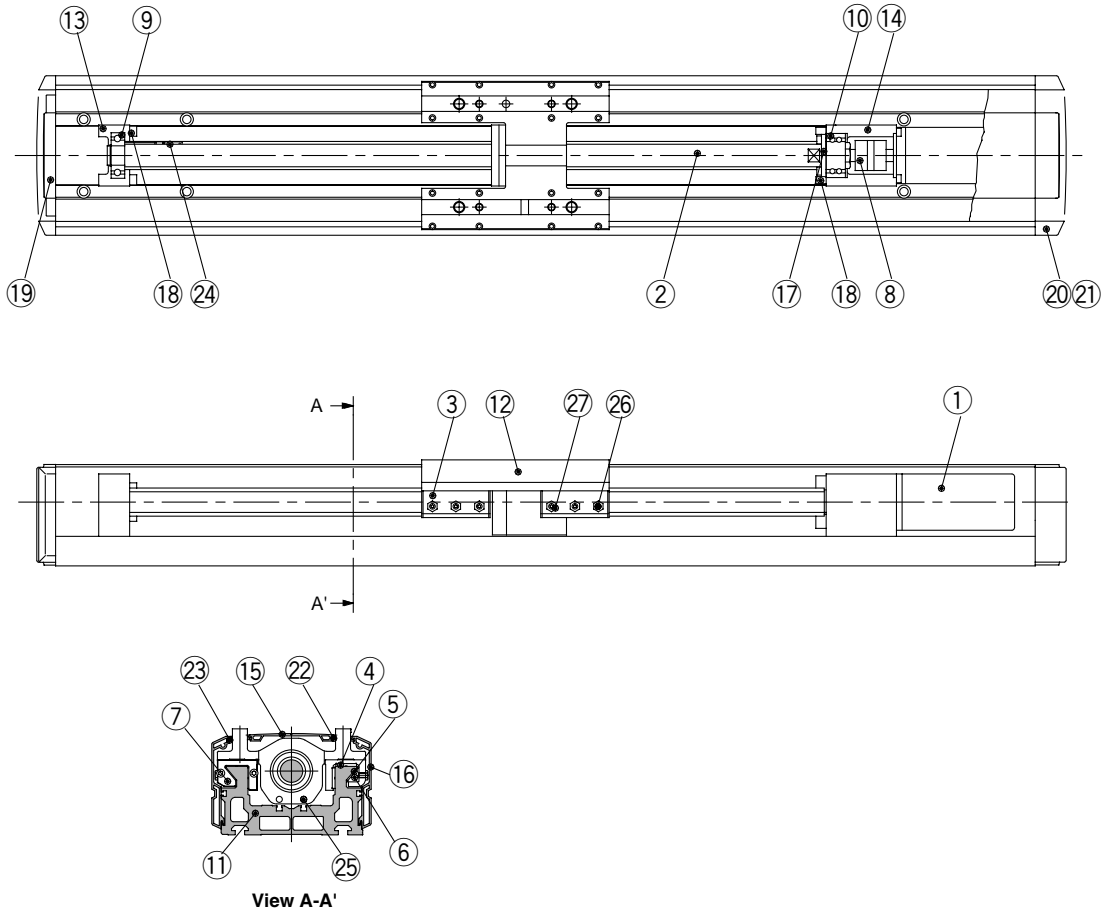


Dimension table/without brake

Model	Stroke	A	B	C
LJ1S30-□-SC- 200-□□	200	445	365	698
LJ1S30-□-SC- 300-□□	300	545	465	798
LJ1S30-□-SC- 400-□□	400	645	565	898
LJ1S30-□-SC- 500-□□	500	745	665	998
LJ1S30-□-SC- 600-□□	600	845	765	1098
LJ1S30-□-SC- 800-□□	800	1045	965	1298
LJ1S30-□-SC-1000-□□	1000	1245	1165	1498
LJ1S30-□-SC-1200-□□	1200	1445	1365	1698
LJ1S30-□-SC-1500-□□	1500	1745	1665	1998

Note) The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting equipment.
 When mounting the body unit, M8 x (30+α, α: effective thread length of the actuator mounting platform) bolts are required.
 When mounting using the T-slots on the actuator, special T-nuts are required. Refer to "Options" on page 67.

Construction



Parts list/Main parts

No.	Description	Material	Note
1	AC servomotor	-	200W
2	Feed screw	-	Slide screw
3	Guide frame	Aluminum alloy	
4	Guide plate A	Special resin	
5	Guide plate B	Special resin	
6	Push bar	Carbon steel	
7	Frame cover	Stainless steel	
8	Coupling	-	
9	Bearing R	-	
10	Bearing F	-	
11	Body A	Aluminum alloy	
12	Table	Aluminum alloy	
13	Housing A	Aluminum alloy	

Parts list/Main parts

No.	Description	Material	Note
14	Housing B	Aluminum alloy	
15	Body cover A	Aluminum alloy	
16	Side cover	Aluminum alloy	
17	Bearing retainer	Carbon steel	
18	Bumper	IIR	
19	End cover A	PC	
20	End cover B	PC	
21	Inner cover	PC	
22	Motor cover R	PC	
23	Motor cover L	PC	
24	Auto switch	-	
25	Magnet	Rare earth magnet	
26	Hexagon socket set screw	Chrome molybdenum steel	M5 x 8
27	Nut	Mild steel	M5

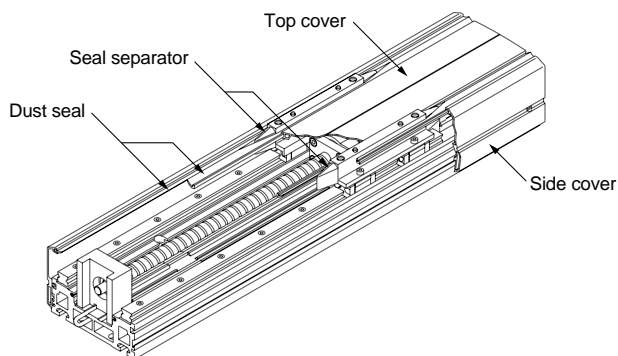
Series LJ1H/LJ1S

Made to Order Specifications

Contact SMC for detailed dimensions, specifications and delivery.

Clean Room Specification (-X60)

Change of materials, anti-corrosive treatment, use of a special grease, and vacuum cleaning of the inside of the actuator allow operation in a clean room.



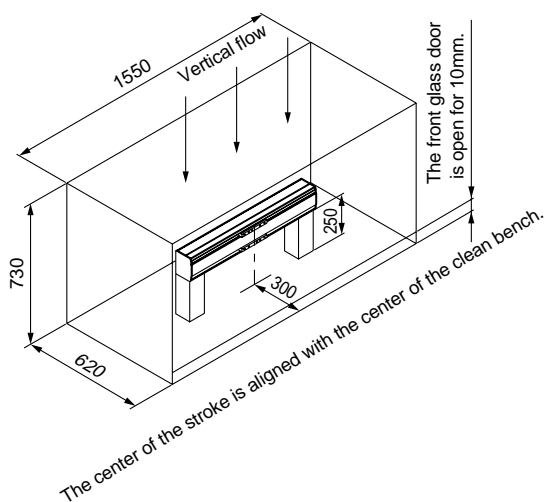
Particulate Generation Performance

Test method

An actuator was placed inside a clean bench and particle concentration was measured at each neighbouring point.

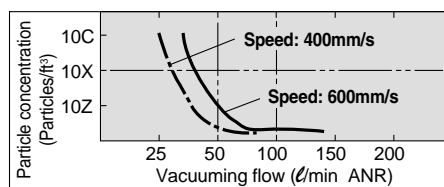
<p>Test environment: <Clean bench> Nippon Airtek: VS-1603L <Size> W x L x H = 620mm x 1550mm x 730mm <Clean level> Fed-st class 10 <Down flow velocity> Approx. 0.3m/s</p>
<p>Test equipment: <Test equipment> Laser particle counter Hitachi Electric Engineering: TS-3500 <Target particle size> 0.17µm or larger <Sampling flow rate> 28ℓ/min (ANR) <Sampling time> 1min <Holding time> 2min <Number of tests> 6</p>

Actuator placement and test points

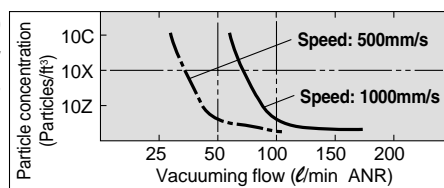


Vacuumping Graphs

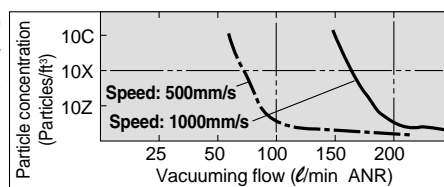
LJ1H10 Vacuumping flow characteristics



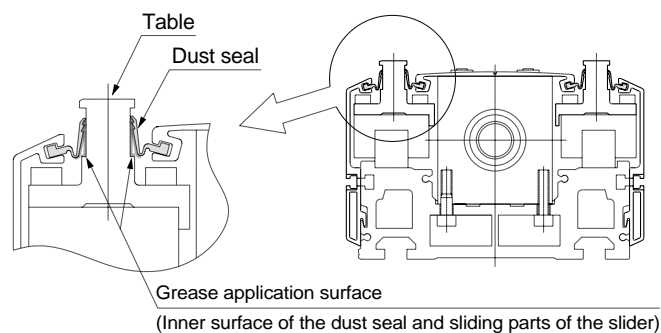
LJ1H20 Vacuumping flow characteristics



LJ1H30 Vacuumping flow characteristics



Grease Application Areas



⚠ Caution

① Maintenance of the greased parts of the dust seal is necessary.

With this specification, a vacuum grease is applied to the sliding parts of the dust seal in order to prevent particulate generation. Maintenance should be performed at 4000km, 4 million reciprocations or within 6 months, whichever occurs first.

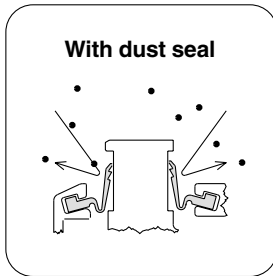
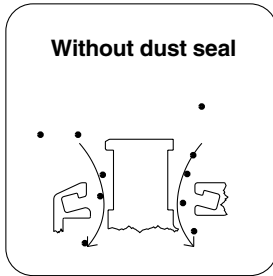
Specified grease: Barrierta IEL/V [fluorine grease (70g) for vacuum equipment manufactured by NOK Kluber]

② A down flow environment with a flow velocity of 0.3m/s or more is required.

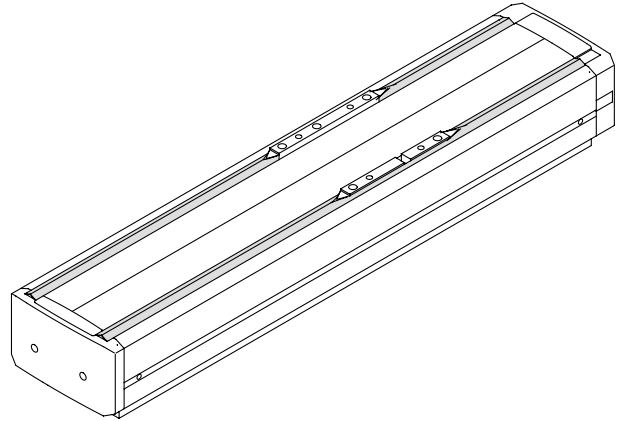
The particulate generation performance of this specification has been tested in the environment shown on the left.

Dust Seal Specification (-X70)

The dust seal (dust cover) prevents the entry of dust, paper dust and scraps, etc.



Dust Cover



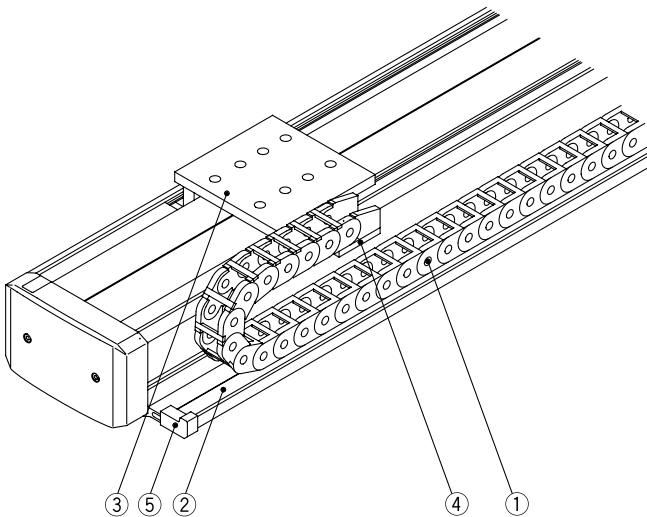
Note 1) Dust seal material: Polyurethane
Consult SMC for details.

Note 2) Measures for use in a mist environment are not provided.
Also, depending on the environment, it may not be possible to use the dust seal. Consult SMC.

CABLEVEYOR Specification (-X40)

Able to compactly arrange supporting guides for cables and hoses.

Construction



Parts list

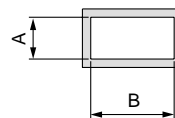
No.	Description	Material	Note
1	CABLEVEYOR	—	—
2	Cable side cover	Aluminum alloy	—
3	Mounting plate	Aluminum alloy	—
4	Cable flange	Aluminum alloy	—
5	End cap	EP	—

Precautions on handling of the CABLEVEYOR

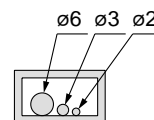
- When handling, connecting or disconnecting the CABLEVEYOR:
 - Wear suitable clothing and appropriate protective gear (safety glasses, gloves, safety shoes, etc.).
 - Use suitable tools.
 - Provide support so that the CABLEVEYOR and parts do not move freely.
- Implement protective measures (safety cover, etc.).
- Be sure to turn off the power and ensure that it cannot be turned on accidentally before installation, removal or maintenance of the equipment.
- In order to prevent secondary accidents, put the surrounding area in good order and operate under safe conditions.
- The total cross-sectional area of the cable inserted into the CABLEVEYOR should be no more than 60% of the CABLEVEYOR cross-sectional area.
- The minimum clearance between the cable and CABLEVEYOR internal width should be "the larger of 10% of the cable O.D. or 2mm".

CABLEVEYOR cross-sectional dimensions (mm)

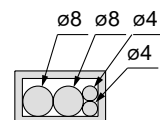
Series	A	B
LJ1 ^H _S 10	10	20
LJ1 ^H _S 20	10	20
LJ1 ^H _S 30	14	40



Example) For LJ1^H_S10



Correct: 60% or less



Incorrect: More than 60%

Made to Order: Clean Room Specification High Rigidity Direct Acting Guide

Series LJ1H10

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1H10 **R11** **P** **B** - **100** - **F** **H** - **X60** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage		
	Manufacturer	Motor Model	Output	Driver model			
811	SMC standard motor		50W	—	110/115VAC		
812	SMC standard motor		50W	—	200/230VAC		
R11	Mitsubishi Electric Corporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC		
R12		HC-PQ053		MR-C10A-UE	200/230VAC		
R19		HC-PQ053	—	—			
R10 Note 1)		—	—	—			
RM11		Note 2)	HC-MFS053	50W	MR-J2S-10A1	110/115VAC	
RM12			HC-MFS053		MR-J2S-10A	200/230VAC	
RM19			HC-MFS053	—	—		
RM10 Note 1)			—	—	—		
RK11			Note 2)	HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12				HC-KFS053		MR-J2S-10A	200/230VAC
RK19				HC-KFS053	—	—	
RK10 Note 1)				—	—	—	
RP11		Note 2)	HF-KP053	50W	MR-J3-10A1	110/115VAC	
RP12			HF-KP053		MR-J3-10A	200/230VAC	
RP19	HF-KP053		—	—			
RP10 Note 1)	—		—	—			
G10 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—		
Y10 Note 1)	Yaskawa Electric Corporation	—	—	—	—		

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

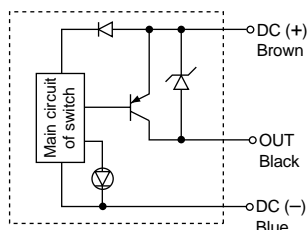
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Limit Switch Internal Circuit

D-Y7HL



- CE certified
- Clean room specification

Standard motor Cable length

Cable length	Stroke
2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Limit switches for non-standard motors

Limit switch	Specification
Nil	None
H	N.C. (B contact) 2pcs.

Cable entry direction

Cable entry direction	Specification
F	Axial

Stroke

(Refer to Table 1 below for combinations).

Stroke	Specification
100	100mm
200	200mm
300	300mm
400	400mm
500	500mm

Screw lead

(Refer to Table 1 below for combinations).

Screw lead	Specification
B	12mm

Lead screw type

(Refer to Table 1 below for combinations).

Lead screw type	Specification
P	Ground ball screw
N	Rolled ball screw

Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)				
	100	200	300	400	500
LJ1H10 □ PB - Stroke - F □ - X60	●	●	●	●	●
LJ1H10 □ NB - Stroke - F □ - X60	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

Spare parts	Order Number	Note
Dust seal	LJ1-DS1-2000	for LJ1 □ 10/2000mm x 4
Dust seal grease	LJ1-IEL	

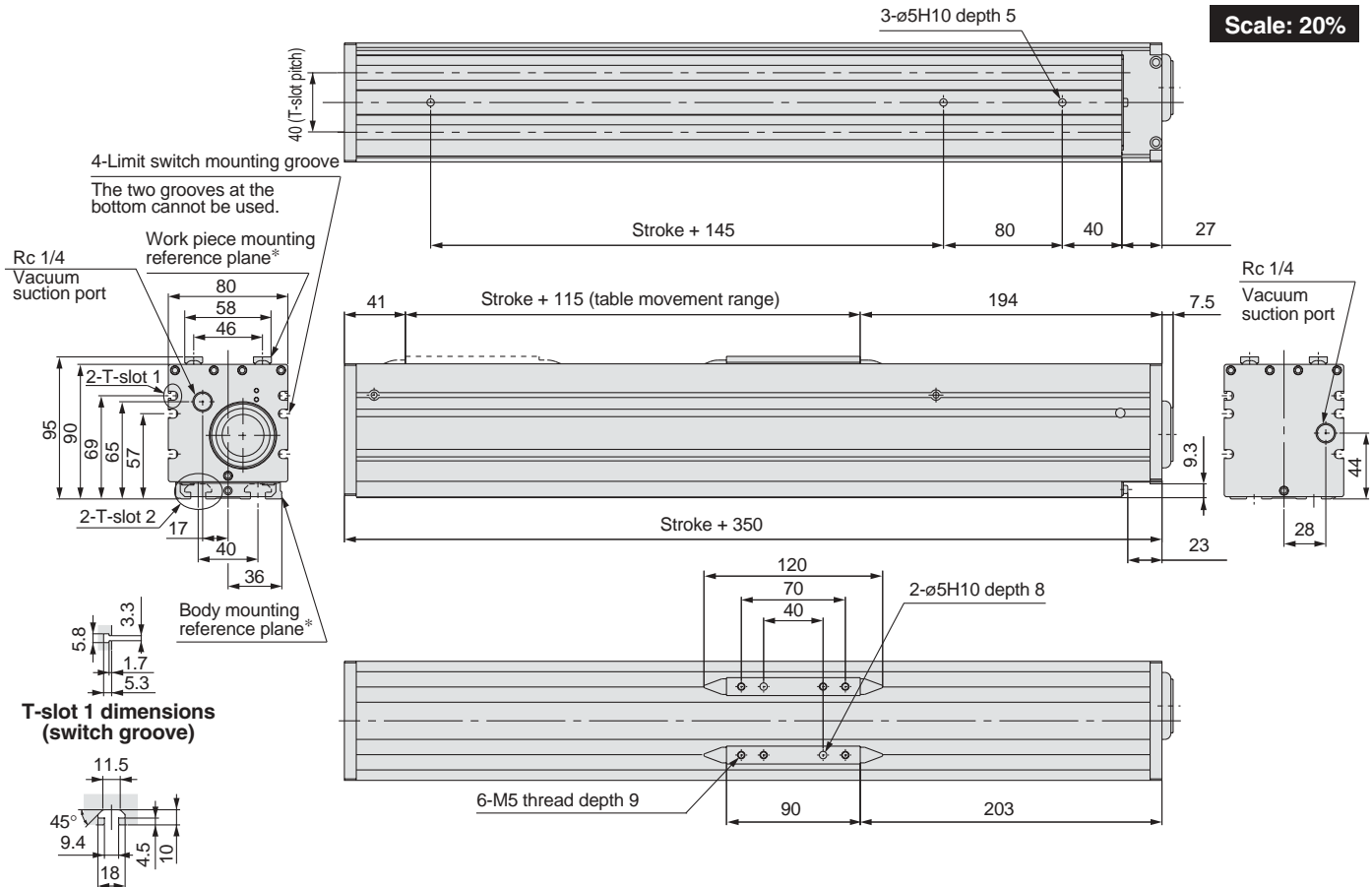
Specifications

Stroke (mm)		100	200	300	400	500
Weight (kg)	With motor (standard)	5.4	6.2	7.0	7.7	8.5
	Without motor (nonstandard)	5.0	5.8	6.6	7.3	8.1
Operating temperature range (°C)		5 to 40 (with no condensation)				
Work load (kg)	12mm lead	50W		10		
Maximum speed (mm/s)	12mm lead	50W		600		
Positioning repeatability (mm)	Rolled ball screw		±0.05			
	Ground ball screw		±0.02			
Motor output		AC servomotor (50W)				
Lead screw	Black chroming + Special fluoro resin coating and grease application	Rolled ball screw		ø12mm, 12mm lead		
		Ground ball screw		ø12mm, 12mm lead		
Guide		High rigidity direct acting guide, Stainless steel rail, AFE grease (made by THK) applied				
Limit switches for non-standard motors ^{Note)}		Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less				
Table specification		With dust seal				
Grease for dust seal application		Fluorine grease for vacuum equipment made by NOK Kluber				
Grease maintenance schedule		Traveling distance of 4000km, 4 million reciprocations, or operation period of 6 months, whichever comes first				
Vacuum suction port		Rc 1/4, one each on both axial surfaces Seal the unused port with a plug.				
Suction flow rate		50ℓ/min (ANR)				

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only

Dimensions/LJ1H10□₂¹ (X60)



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Clean Room Specification High Rigidity Direct Acting Guide

Series LJ1H20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1H20 R21 P A 100 F H X60 Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage		
	Manufacturer	Motor Model	Output	Driver model			
821	SMC standard motor		100W	—	110/115VAC		
822	SMC standard motor		100W	—	200/230VAC		
R21	Mitsubishi Electric Corporation	HC-PQ13	100W	MR-C10A1-UE	110/115VAC		
R22		HC-PQ13		MR-C10A-UE	200/230VAC		
R29		HC-PQ13	—	—			
R20 Note 1)		—	—	—			
RM21		Note 2)	HC-MFS13	100W	MR-J2S-10A1	110/115VAC	
RM22			HC-MFS13		MR-J2S-10A	200/230VAC	
RM29			HC-MFS13	—	—		
RM20 Note 1)			—	—	—		
RK21			Note 2)	HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RK22				HC-KFS13		MR-J2S-10A	200/230VAC
RK29				HC-KFS13	—	—	
RK20 Note 1)				—	—	—	
RP21		Note 2)	HF-KP13	100W	MR-J3-10A1	110/115VAC	
RP22			HF-KP13		MR-J3-10A	200/230VAC	
RP29	HF-KP13		—	—			
RP20 Note 1)	—		—	—			
G20 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—		
Y20 Note 1)	Yaskawa Electric Corporation	—	—	—	—		

Note 1) Motor and driver are not supplied. Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

- CE certified
- Clean room specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
---	-------

Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

Screw lead

(Refer to Table 1 below for combinations).

A	10mm
C	20mm

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw

Limit Switch Internal Circuit

D-Y7HL

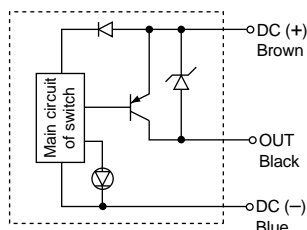


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)									
	100	200	300	400	500	600	700	800	900	1000
LJ1H20 □ PA-Stroke -F□-X60	●	●	●	●	●	●				
LJ1H20 □ NA-Stroke -F□-X60	●	●	●	●	●	●				
LJ1H20 □ PC-Stroke -F□-X60					●	●	●	●	●	●
LJ1H20 □ NC-Stroke -F□-X60					●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS2-2000	for LJ1□20/2000mm x 4
Dust seal grease	LJ1-IEL	

Specifications

Stroke (mm)		100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor	7.9	9.1	10.3	11.4	12.8	13.9	15.1	16.3	17.5	18.7
	Without motor	7.4	8.6	9.8	10.9	12.3	13.4	14.6	15.8	17.0	18.2
Operating temperature range (°C)		5 to 40 (with no condensation)									
Work load (kg)	10mm lead	30					—				
	20mm lead	—					15				
Maximum speed (mm/s)	10mm lead	500					—				
	20mm lead	—					1000	930	740	600	500
Positioning repeatability (mm)	Rolled ball screw	±0.05									
	Ground ball screw	±0.02									
Motor output		AC servomotor (100W)									
Lead screw	Black chroming + Special fluoro resin coating and grease application	Rolled ball screw		ø15mm, 10mm lead				—			
		Ground ball screw		—				ø15mm, 20mm lead			
Guide		High rigidity direct acting guide, Stainless steel rail, AFE grease (made by THK) applied									
Limit switches for non standard motors ^{Note)}		Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
Table specification		With dust seal									
Grease for dust seal application		Fluorine grease for vacuum equipment made by NOK Kluber									
Grease maintenance schedule		Traveling distance of 4000km, 4 million reciprocations, or operation period of 6 months, whichever comes first									
Vacuum suction port	Stroke: 500mm or less	Rc 1/4, one each on both axial surfaces Seal the unused port with a plug.									
	Stroke: 500mm or more	Suction at either end or both ends.									
Suction flow rate	Speed: 500mm/s or less	Suction at both ends.									
	Speed: 500mm/s or more	50ℓ/min (ANR) 100ℓ/min (ANR)									

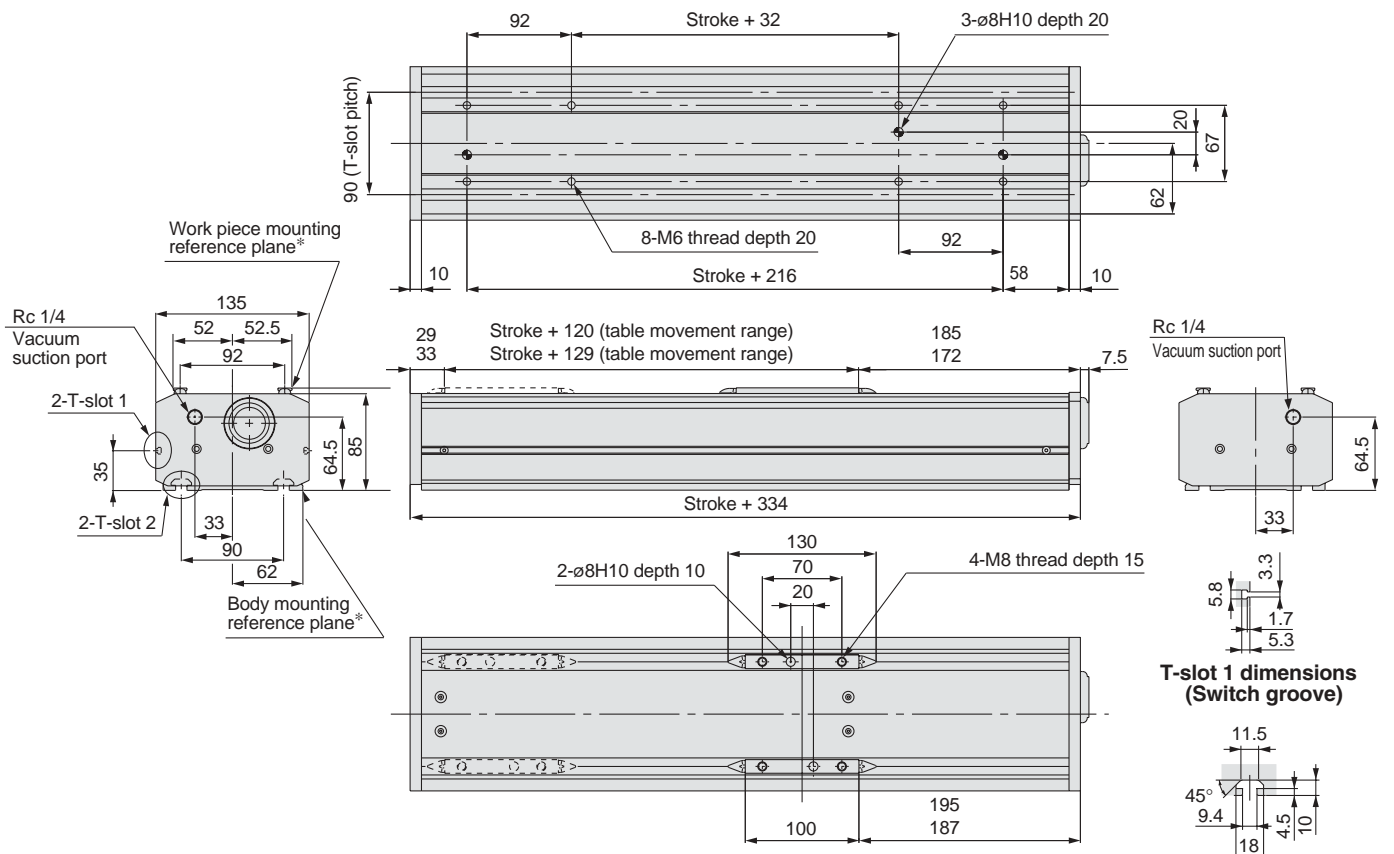
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only

Dimensions/LJ1H20□2 (X60)

When two dimensions are shown, the top dimension is for 100 to 600mm strokes, and the bottom dimension is for 700 to 1200mm strokes.

Scale: 15%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Clean Room Specification High Rigidity Direct Acting Guide

Series LJ1H30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1H30 **R31** **P** **D** - **200** - **F** **H** - **X60** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor Model	Output	Driver model	
831	SMC standard motor	—	200W	—	110/115VAC
832					200/230VAC
R31	Mitsubishi Electric Corporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC
R32		HC-PQ23		MR-C20A-UE	200/230VAC
R39		HC-PQ23	—	—	
R30 ^{Note 1)}		—	—	—	
RM31		HC-MFS23	200W	MR-J2S-20A1	110/115VAC
RM32		HC-MFS23		MR-J2S-20A	200/230VAC
RM39		HC-MFS23		—	—
RM30 ^{Note 1)}		—	—	—	
RK31		HC-KFS23	200W	MR-J2S-20A1	110/115VAC
RK32		HC-KFS23		MR-J2S-20A	200/230VAC
RK39		HC-KFS23		—	—
RK30 ^{Note 1)}		—	—	—	
RP31		HF-KP23	200W	MR-J3-20A1	110/115VAC
RP32		HF-KP23		MR-J3-20A	200/230VAC
RP39	HF-KP23	—		—	
RP30 ^{Note 1)}	—	—	—		
G30 ^{Note 1)}	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y30 ^{Note 1)}	Yaskawa Electric Corporation	—	—	—	—

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

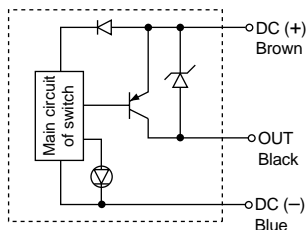
* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation,

please contact the manufacturer directly for information such as specifications, model number, etc...

Limit Switch Internal Circuit

D-Y7HL



- CE certified
- Clean room specification

Standard motor ^{Note 3)} Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
---	-------

Stroke

(Refer to Table 1 below for combinations).

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
1000	1000mm
1200	1200mm
1500	1500mm

Screw lead: 25mm

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw

Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)								
	200	300	400	500	600	800	1000	1200	1500
LJ1H30 <input type="checkbox"/> PD-Stroke -F <input type="checkbox"/> X60	●	●	●	●	●	●	●	●	●
LJ1H30 <input type="checkbox"/> ND-Stroke -F <input type="checkbox"/> X60	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS3-2000	for LJ1 <input type="checkbox"/> 30/2000mm x 4
Dust seal grease	LJ1-IEL	

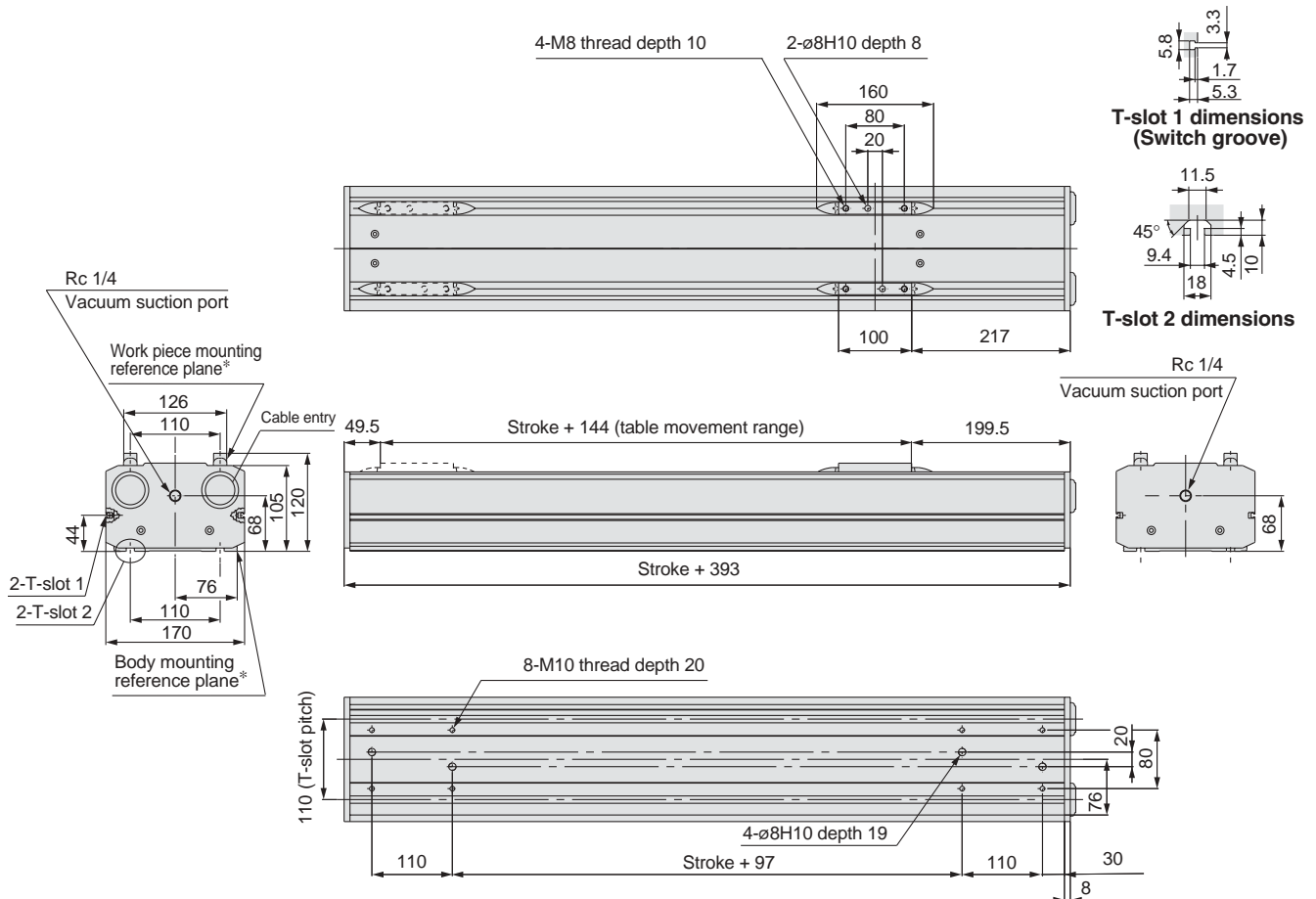
Specifications

Stroke (mm)			200	300	400	500	600	800	1000	1200	1500	
Weight (kg)	With motor		16.2	18.2	20.2	22.2	24.2	28.7	33.2	37.2	43.2	
	Without motor		15.1	17.1	19.1	21.1	23.1	27.6	32.1	36.1	42.1	
Operating temperature range (°C)			5 to 40 (with no condensation)									
Work load (kg)	25mm lead	200W	60									
Maximum speed (mm/s)	25mm lead	200W	1000						700	500		
Positioning repeatability (mm)	Rolled ball screw		±0.05									
	Ground ball screw		±0.02									
Motor output			AC servomotor (200W)									
Lead screw	Black chroming + Special fluoro resin coating and grease application	Rolled ball screw	ø25mm, 25mm lead									
		Ground ball screw	ø25mm, 25mm lead									
Guide			High rigidity direct acting guide, Stainless steel rail, AFE grease (made by THK) applied									
Limit switches for non-standard motors <small>Note)</small>			Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
Table specification			With dust seal									
Grease for dust seal application			Fluorine grease for vacuum equipment made by NOK Kluber									
Grease maintenance schedule			Traveling distance of 4000km, 4 million reciprocations, or operation period of 6 months, whichever comes first									
Vacuum suction port			Rc 1/4, one each on both axial surfaces Seal the unused port with a plug, suction at both ends									
Suction flow rate	Speed: 500mm/s or less		100ℓ/min (ANR)									
	Speed: 500mm/ or more		200ℓ/min (ANR)									

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1H30□3 (X60)



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Dust Seal Specification High Rigidity Direct Acting Guide

Series LJ1H10

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1H10 **R11** **P** **B** - **100** - **F** **H** - **X70** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor Model	Output	Driver model	
811	SMC standard motor		50W	—	110/115VAC
812					200/230VAC
R11	Mitsubishi Electric Corporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC
R12		HC-PQ053		MR-C10A-UE	200/230VAC
R19		HC-PQ053	—	—	
R10 ^{Note 1)}		—	—	—	
RM11		HC-MFS053	50W	MR-J2S-10A1	110/115VAC
RM12		HC-MFS053		MR-J2S-10A	200/230VAC
RM19		HC-MFS053		—	—
RM10 ^{Note 1)}		—	—	—	
RK11		HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12		HC-KFS053		MR-J2S-10A	200/230VAC
RK19		HC-KFS053		—	—
RK10 ^{Note 1)}		—	—	—	
RP11		HF-KP053	50W	MR-J3-10A1	110/115VAC
RP12		HF-KP053		MR-J3-10A	200/230VAC
RP19	HF-KP053	—		—	
RP10 ^{Note 1)}	—	—	—		
G10 ^{Note 1)}	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 ^{Note 1)}	Yaskawa Electric Corporation	—	—	—	—

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

- CE certified
- Dust seal specification

- Standard motor ^{Note 3)}
Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

- Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

- Cable entry direction

F	Axial
---	-------

- Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

- Screw lead

(Refer to Table 1 below for combinations).

B	12mm
C	20mm

- Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Limit Switch Internal Circuit

D-Y7HL

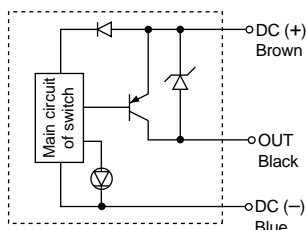


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)									
	100	200	300	400	500	600	700	800	900	1000
LJ1H10 □ PB-Stroke -F□-X70	●	●	●	●	●					
LJ1H10 □ NB-Stroke -F□-X70	●	●	●	●	●					
LJ1H10 □ SC-Stroke -F□-X70	●	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS1-2000	for LJ1□10/2000mm x 4
Dust seal grease	LJ1-L101	

Specifications

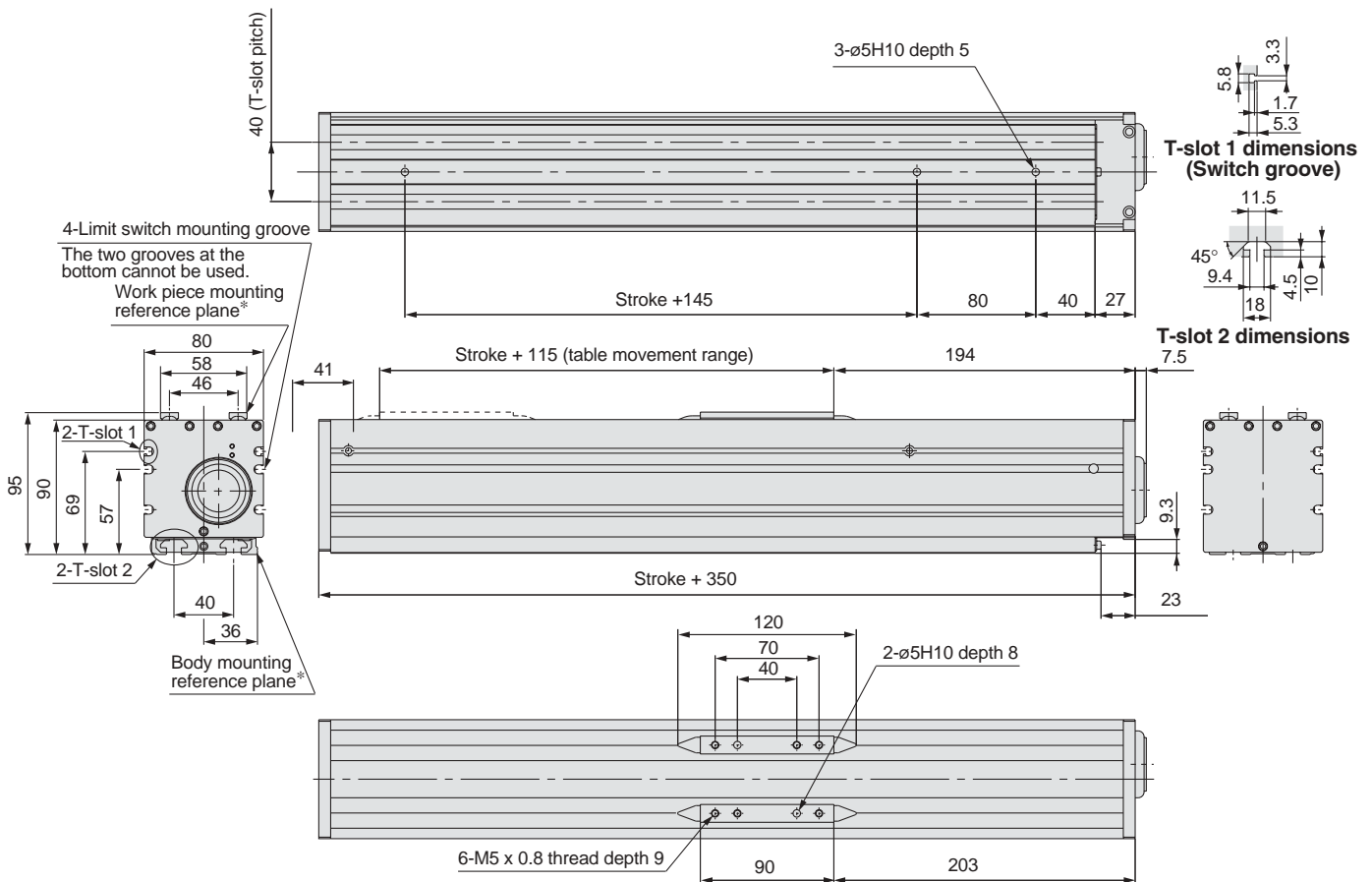
Stroke (mm)			100	200	300	400	500	600	700	800	900	1000
Weight (kg)	Ball screw	With motor	5.4	6.2	7.0	7.7	8.5	—	—	—	—	—
		Without motor	5.0	5.8	6.6	7.3	8.1	—	—	—	—	—
	Slide screw	With motor	5.3	6.2	7.2	8.0	8.8	9.7	10.5	11.3	12.2	13.0
		Without motor	4.9	5.8	6.8	7.6	8.4	9.3	10.1	10.9	11.8	12.6
Operating temperature range (°C)			5 to 40 (with no condensation)									
Work load (kg)	12mm lead	50W	10									
	20mm lead		10									
Maximum speed (mm/s)	12mm lead	50W	600									
	20mm lead		500									
Positioning repeatability (mm)	Rolled ball screw		±0.05									
	Ground ball screw		±0.02									
	Slide screw		±0.1									
Motor output			AC servomotor (50W)									
Lead screw	Rolled ball screw		ø12mm, 12mm lead									
	Ground ball screw		ø12mm, 12mm lead									
	Slide screw		ø20mm, 20mm lead									
Guide			High rigidity direct acting guide									
Limit switches for non-standard motors <small>Note)</small>			Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
Table specification			With dust seal									
Grease for dust seal application			Special lubricant									

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1H10□₂¹ (X70)

Scale: 20%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Dust Seal Specification High Rigidity Direct Acting Guide

Series LJ1H20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1H20 R21 P A 100 F H X70 Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
821	SMC standard motor		100W	—	110/115VAC	
822					200/230VAC	
R21	Mitsubishi Electric Corporation	HC-PQ13	100W	MR-C10A1-UE	110/115VAC	
R22		HC-PQ13		MR-C10A-UE	200/230VAC	
R29		HC-PQ13	—	—		
R20 <small>Note 1)</small>		—	—	—		
RM21		Note 2)	HC-MFS13	100W	MR-J2S-10A1	110/115VAC
RM22			HC-MFS13		MR-J2S-10A	200/230VAC
RM29			HC-MFS13	—	—	
RM20 <small>Note 1)</small>			—	—	—	
RK21			HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RK22			HC-KFS13		MR-J2S-10A	200/230VAC
RK29		HC-KFS13	—		—	
RK20 <small>Note 1)</small>		—	—	—		
RP21	Note 2)	HF-KP13	100W	MR-J3-10A1	110/115VAC	
RP22		HF-KP13		MR-J3-10A	200/230VAC	
RP29		HF-KP13	—	—		
RP20 <small>Note 1)</small>		—	—	—		
G20 <small>Note 1)</small>	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y20 <small>Note 1)</small>	Yaskawa Electric Corporation	—	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

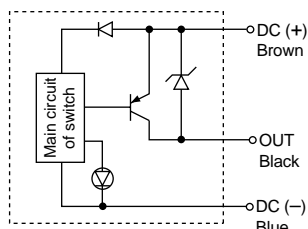
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Limit Switch Internal Circuit

D-Y7HL



- CE certified
- Dust seal specification

- Standard motor Note 3)
- Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

- Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

- Cable entry direction

F	Axial
---	-------

- Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm

- Screw lead

(Refer to Table 1 below for combinations).

A	10mm
C	20mm

- Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)										
	100	200	300	400	500	600	700	800	900	1000	1200
LJ1H20□□PA-Stroke-F□-X70	●	●	●	●	●	●					
LJ1H20□□NA-Stroke-F□-X70	●	●	●	●	●	●					
LJ1H20□□PC-Stroke-F□-X70					●	●	●	●	●	●	
LJ1H20□□NC-Stroke-F□-X70					●	●	●	●	●	●	
LJ1H20□□SC-Stroke-F□-X70	●	●	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS2-2000	for LJ1□□20/2000mm x 4
Dust seal grease	LJ1-L101	

Specifications

Stroke (mm)		100	200	300	400	500	600	700	800	900	1000	1200	
Weight (kg)	Ball screw	With motor	7.9	9.1	10.3	11.4	12.8	13.9	15.1	16.3	17.5	18.7	—
		Without motor	7.4	8.6	9.8	10.9	12.3	13.4	14.6	15.8	17.0	18.2	—
	Slide screw	With motor	9.0	10.0	11.1	12.2	13.3	14.3	15.3	17.2	19.1	20.6	24.7
		Without motor	7.5	8.5	9.6	10.8	12.3	13.8	16.3	16.8	18.6	20.4	24.2
Operating temperature range (°C)		5 to 40 (with no condensation)											
Work load (kg)	Ball screw	10mm lead	30						—				
		20mm lead	—						15				
	Slide screw	20mm lead	15										
Maximum speed (mm/s)	Ball screw	10mm lead	500						—				
		20mm lead	—						1000	930	740	600	500
	Slide screw	10mm lead	500										
Positioning repeatability (mm)	Rolled ball screw		±0.05										—
	Ground ball screw		±0.02										—
	Slide screw		±0.1										
Motor output		AC servomotor (100W)											
Lead screw	Rolled/Ground ball screw		ø15mm, 10mm lead						—				
	Slide screw		—						ø15mm, 20mm lead				
Guide		ø20mm, 20mm lead											
Limit switches for non-standard motors ^{Note)}		High rigidity direct acting guide											
Table specification		Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less											
Grease for dust seal application		With dust seal											
		Special lubricant											

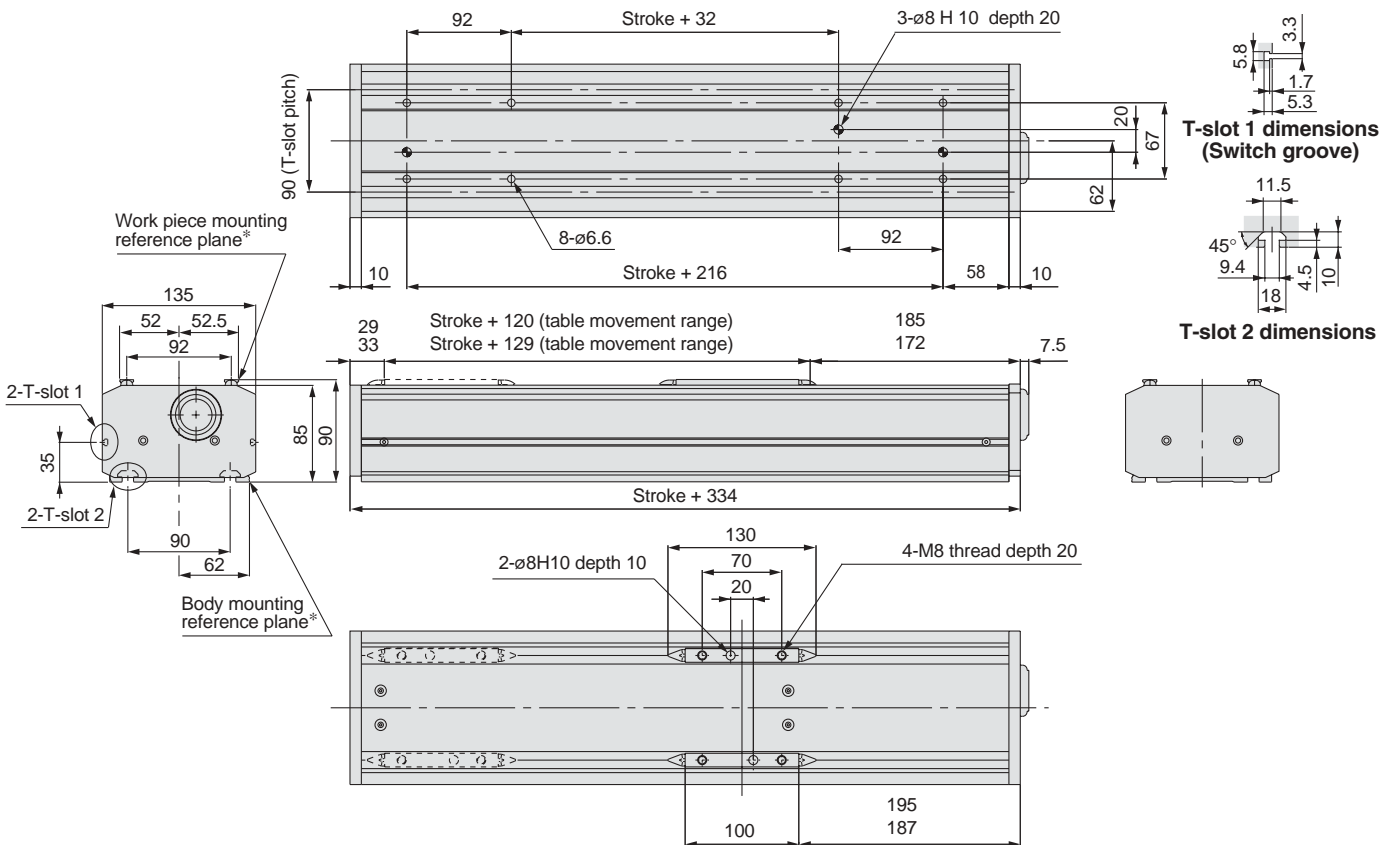
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1H20□2 (X70)

When two dimensions are shown, the top dimension is for 100 to 600mm strokes, and the bottom dimension is for 700 to 1200mm strokes.

Scale: 15%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Dust Seal Specification High Rigidity Direct Acting Guide

Series LJ1H30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1H30 **R31** **P** **D** - **200** - **F** **H** - **X70** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
831	SMC standard motor		200W	—	110/115VAC	
832					200/230VAC	
R31	Mitsubishi Electric Corporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC	
R32		HC-PQ23		MR-C20A-UE	200/230VAC	
R39		HC-PQ23	—	—		
R30 <small>Note 1)</small>		—	—	—		
RM31		Note 2)	HC-MFS23	200W	MR-J2S-20A1	110/115VAC
RM32			HC-MFS23		MR-J2S-20A	200/230VAC
RM39			HC-MFS23	—	—	
RM30 <small>Note 1)</small>			—	—	—	
RK31			HC-KFS23	200W	MR-J2S-20A1	110/115VAC
RK32			HC-KFS23		MR-J2S-20A	200/230VAC
RK39		HC-KFS23	—		—	
RK30 <small>Note 1)</small>		—	—	—		
RP31		Note 2)	HF-KP23	200W	MR-J3-20A1	110/115VAC
RP32			HF-KP23		MR-J3-20A	200/230VAC
RP39	HF-KP23		—	—		
RP30 <small>Note 1)</small>	—		—	—		
G30 <small>Note 1)</small>	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y30 <small>Note 1)</small>	Yaskawa Electric Corporation	—	—	—	—	

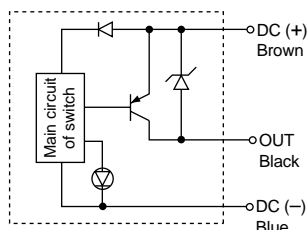
Note 1)
Motor and driver are not supplied.
Motor mounting holes and coupling are supplied for the selected motor type.
Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)
Non-standard motor (from general servomotor manufacturer)
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.
* The LC8 driver for SMC standard motor needs to be ordered separately.
* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Limit Switch Internal Circuit

D-Y7HL



- CE certified
- Dust seal specification

Standard motor Note 3) Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

Cable entry direction

F	Axial
---	-------

Stroke

(Refer to Table 1 below for combinations).

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
1000	1000mm
1200	1200mm
1500	1500mm

Screw lead

(Refer to Table 1 below for combinations).

D	25mm
E	40mm

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)								
	200	300	400	500	600	800	1000	1200	1500
LJ1H30 □ PD-Stroke -F□-X70	●	●	●	●	●	●	●	●	●
LJ1H30 □ ND-Stroke -F□-X70	●	●	●	●	●	●	●	●	●
LJ1H30 □ SE-Stroke -F□-X70	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS3-2000	for LJ1□30/2000mm x 4
Dust seal grease	LJ1-L101	

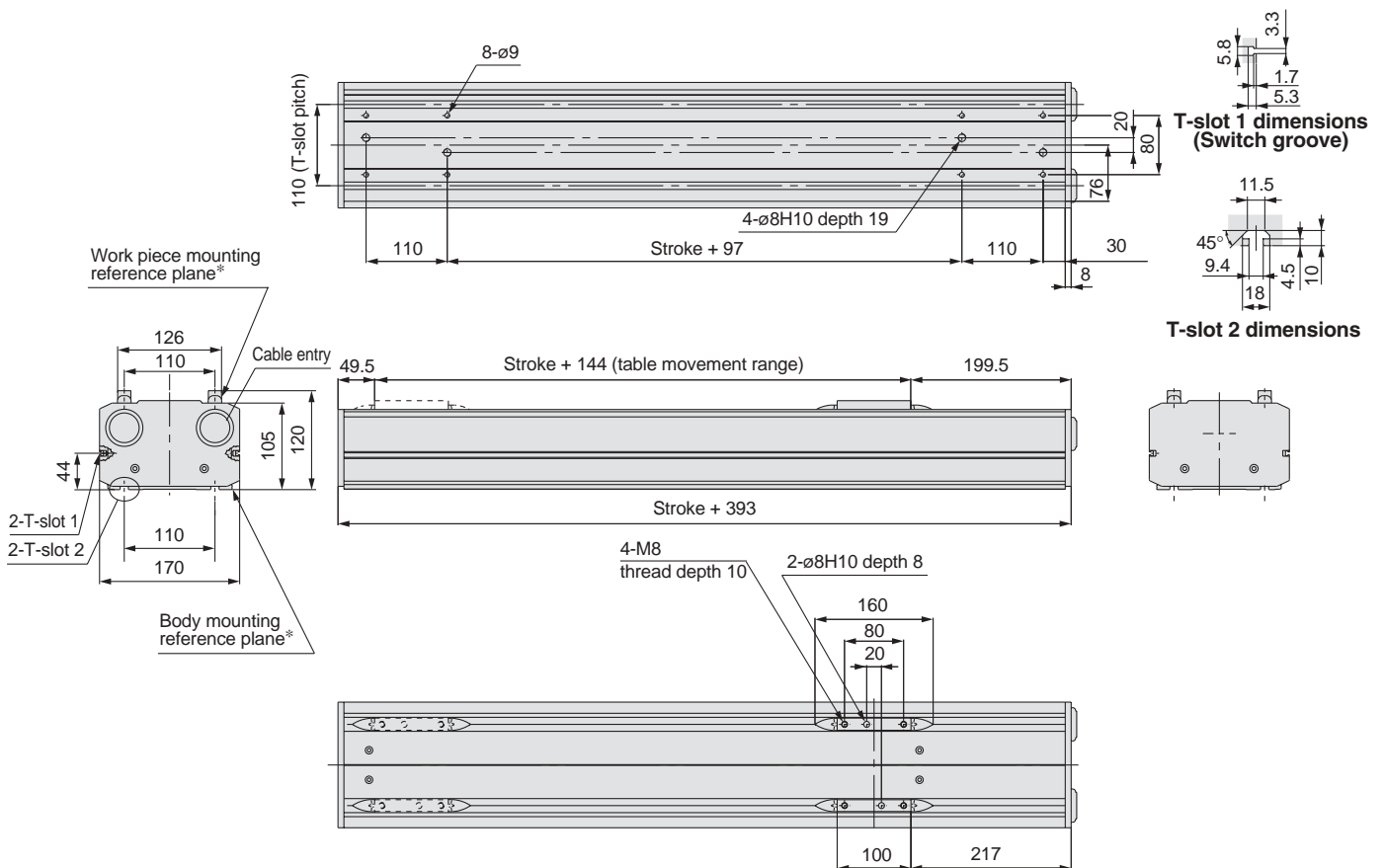
Specifications

Stroke (mm)				200	300	400	500	600	800	1000	1200	1500
Weight (kg)	Ball screw	With motor		16.2	18.2	20.2	22.2	24.2	28.7	33.2	37.2	43.2
		Without motor		15.1	17.1	19.1	21.1	23.1	27.6	32.1	36.1	42.1
	Slide screw	With motor		14.9	17.0	19.0	21.1	23.2	27.3	31.5	35.6	41.9
		Without motor		13.8	15.9	17.9	20.0	22.1	26.2	30.4	34.5	40.8
Operating temperature range (°C)				5 to 40 (with no condensation)								
Work load (kg)	Ball screw	25mm lead	200W	60								
	Slide screw	40mm lead		30								
Maximum speed (mm/s)	Ball screw	25mm lead	200W	1000						700	500	
	Slide screw	40mm lead		500								
Positioning repeatability (mm)	Rolled ball screw			±0.05								
	Ground ball screw			±0.02								
	Slide screw			±0.1								
Motor output				AC servomotor (200W)								
Lead screw	Rolled/Ground ball screw			ø25mm, 25mm lead								
	Slide screw			ø30mm, 40mm lead								
Guide				High rigidity direct acting guide								
Limit switches for non-standard motors <small>Note)</small>				Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less								
Table specification				With dust seal								
Grease for dust seal application				Special lubricant								

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.
 Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1H30□3 (X70)

Scale: 15%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Dust Seal Specification Slider Guide

Series LJ1S10

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1S10 **R11** **S** **C** - **100** - **F** **H** - **X70** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
811	SMC standard motor		50W	—	110/115VAC	
812					200/230VAC	
R11	Mitsubishi Electric Corporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC	
R12		HC-PQ053		MR-C10A-UE	200/230VAC	
R19		HC-PQ053	—	—		
R10 <small>Note 1)</small>		—	—	—		
RM11		Note 2)	HC-MFS053	50W	MR-J2S-10A1	110/115VAC
RM12			HC-MFS053		MR-J2S-10A	200/230VAC
RM19			HC-MFS053	—	—	
RM10 <small>Note 1)</small>			—	—	—	
RK11			HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12			HC-KFS053		MR-J2S-10A	200/230VAC
RK19		HC-KFS053	—		—	
RK10 <small>Note 1)</small>		—	—	—		
RP11		Note 2)	HF-KP053	50W	MR-J3-10A1	110/115VAC
RP12			HF-KP053		MR-J3-10A	200/230VAC
RP19	HF-KP053		—	—		
RP10 <small>Note 1)</small>	—		—	—		
G10 <small>Note 1)</small>	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y10 <small>Note 1)</small>	Yaskawa Electric Corporation	—	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

• CE certified

• Dust seal specification

• Standard motor Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

• Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

• Cable entry direction

F	Axial
---	-------

• Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

• Screw lead

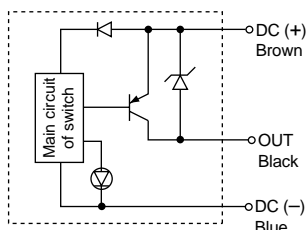
C	20mm
---	------

• Lead screw type

S	Slide screw
---	-------------

Limit Switch Internal Circuit

D-Y7HL



Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS1-2000	for LJ1□10/2000mm x 4
Dust seal grease	LJ1-L101	

Specifications

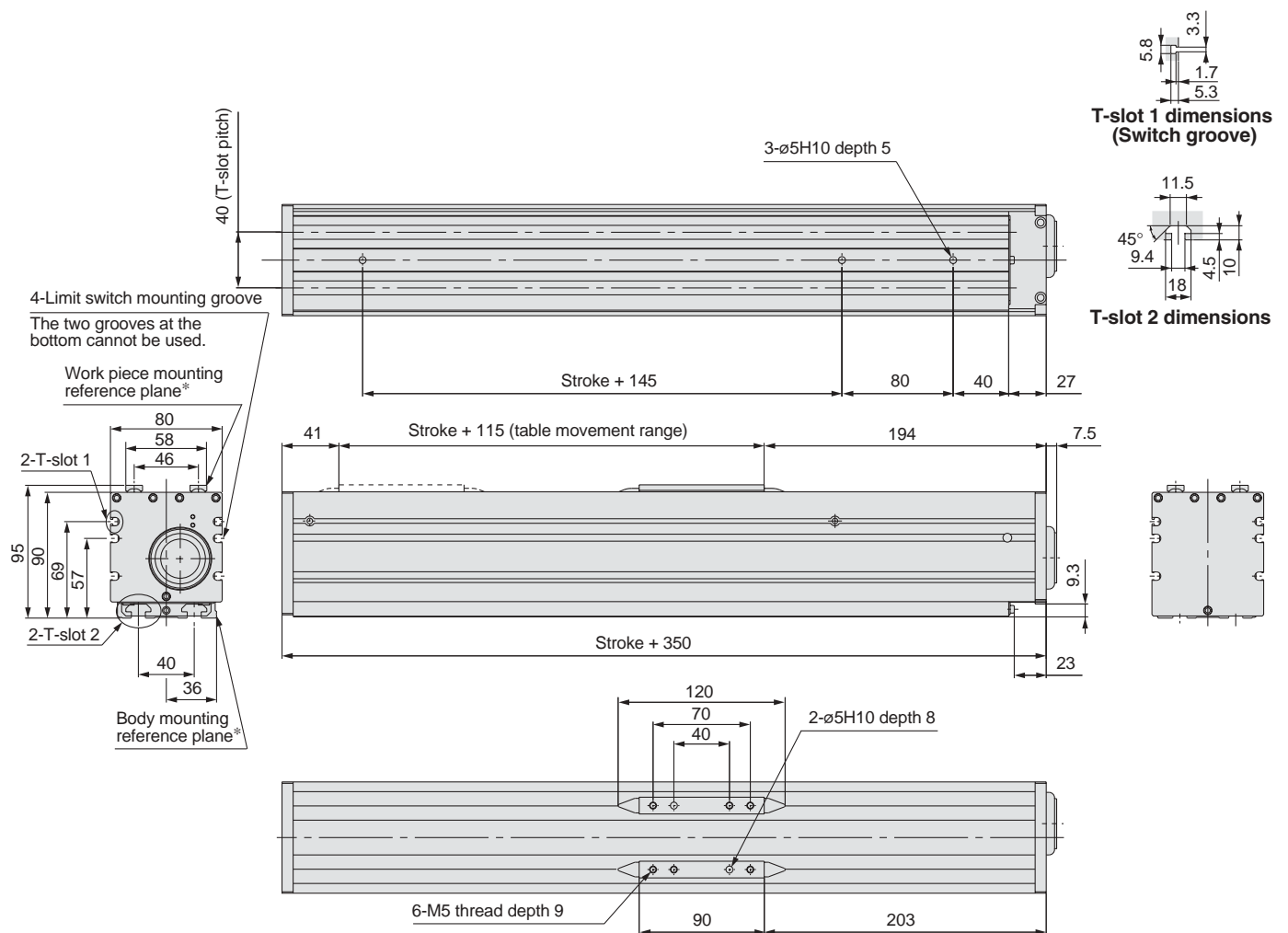
Stroke (mm)		100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor (standard)	5.4	6.1	6.9	7.7	8.5	9.3	10.0	10.8	11.6	12.4
	Without motor (nonstandard)	5.0	5.7	6.5	7.3	8.1	8.9	9.6	10.4	11.2	12.0
Operating temperature range (°C)		5 to 40 (with no condensation)									
Work load (kg)		5									
Maximum speed (mm/s)		300									
Positioning repeatability (mm)		±0.1									
Motor output		AC servomotor (50W)									
Lead screw		Slide screw ø20mm, 20mm lead									
Guide		Slider guide									
Limit switches for non-standard motors ^{Note)}		Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
Table specification		With dust seal									
Grease for dust seal application		Special lubricant									

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1S10□1SC (X70)

Scale: 15%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Dust Seal Specification Slider Guide

Series LJ1S20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1S20 **R21** **S** **C** - **100** - **F** **H** - **X70** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
821	SMC standard motor		100W	—	110/115VAC	
822					200/230VAC	
R21	Mitsubishi Electric Corporation	HC-PQ13	100W	MR-C10A1-UE	110/115VAC	
R22		HC-PQ13		MR-C10A-UE	200/230VAC	
R29		HC-PQ13	—	—		
R20 Note 1)		—	—	—		
RM21		Note 2)	HC-MFS13	100W	MR-J2S-10A1	110/115VAC
RM22			HC-MFS13		MR-J2S-10A	200/230VAC
RM29			HC-MFS13	—	—	
RM20 Note 1)			—	—	—	
RK21			HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RK22			HC-KFS13		MR-J2S-10A	200/230VAC
RK29		HC-KFS13	—		—	
RK20 Note 1)		—	—	—		
RP21		Note 2)	HF-KP13	100W	MR-J3-10A1	110/115VAC
RP22			HF-KP13		MR-J3-10A	200/230VAC
RP29	HF-KP13		—	—		
RP20 Note 1)	—		—	—		
G20 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y20 Note 1)	Yaskawa Electric Corporation	—	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

- CE certified
- Dust seal specification

- Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

- Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

- Cable entry direction

F	Axial
---	-------

- Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm

- Screw lead

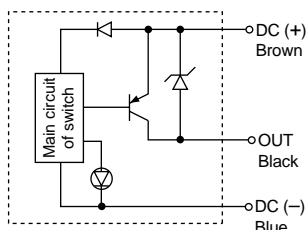
C	20mm
---	------

- Lead screw type

S	Slide screw
---	-------------

Limit Switch Internal Circuit

D-Y7HL



Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS2-2000	for LJ1□20/2000mm x 4
Dust seal grease	LJ1-L101	

Specifications

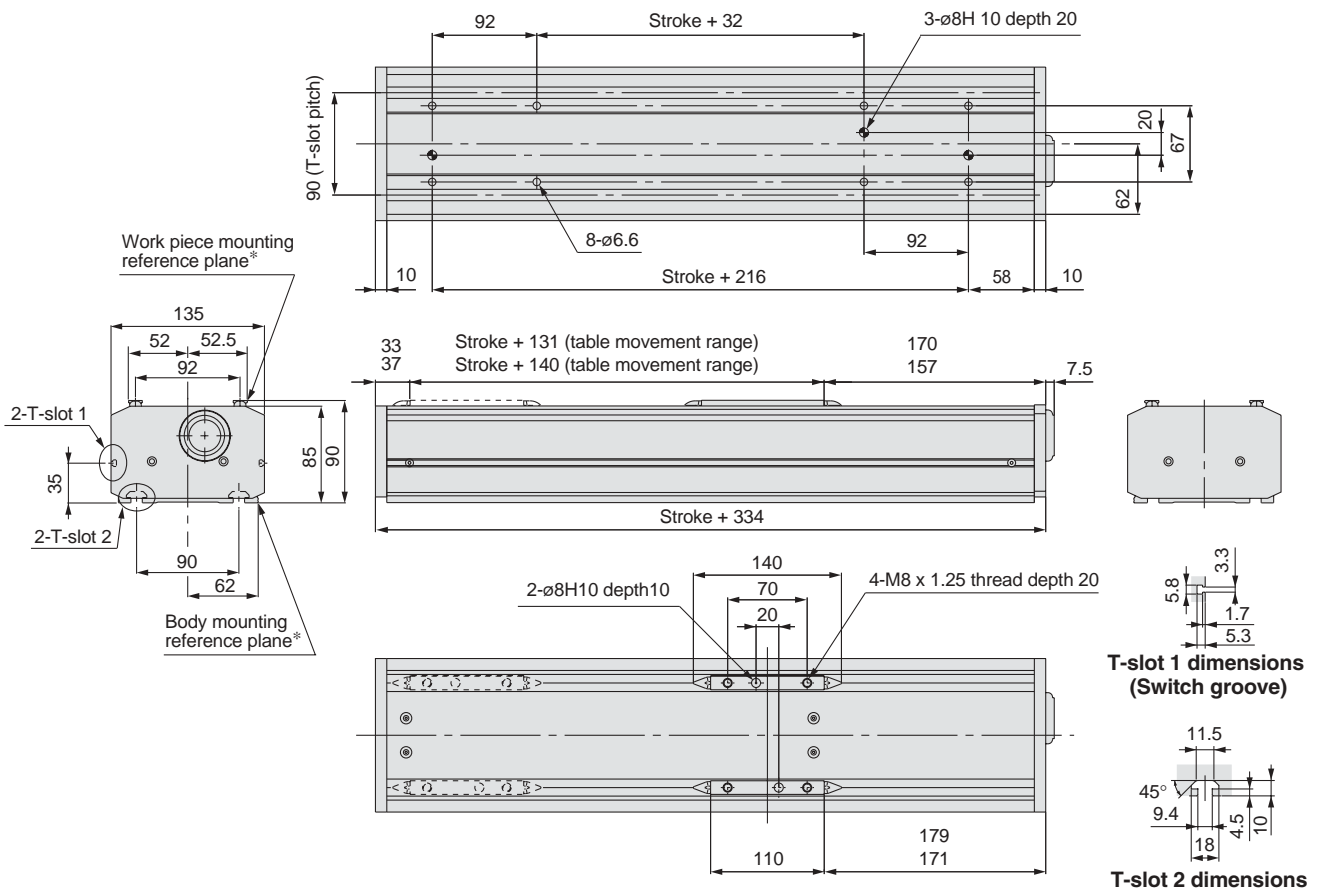
Stroke (mm)		100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	With motor (standard)	6.8	7.9	9.0	10.1	11.1	12.2	13.3	14.3	15.4	16.4	18.6
	Without motor (nonstandard)	6.3	7.4	8.5	9.6	10.7	11.7	12.8	13.8	14.9	15.9	18.1
Operating temperature range (°C)		5 to 40 (with no condensation)										
Work load (kg)		10										
Maximum speed (mm/s)		300										
Positioning repeatability (mm)		±0.1										
Motor output		AC servomotor (100W)										
Lead screw		Slide screw ø20mm, 20mm lead										
Guide		Slider guide										
Limit switches for non-standard motors <small>Note)</small>		Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less										
Table specification		With dust seal										
Grease for dust seal application		Special lubricant										

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.
 Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1S20□2□SC (X70)

When two dimensions are shown, the top dimension is for 100 to 600mm strokes, and the bottom dimension is for 700 to 1200mm strokes.

Scale: 15%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: Dust Seal Specification Slider Guide

Series LJ1S30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1S30 **R31** **S** **C** - **200** - **F** **H** - **X70** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
831	SMC standard motor	—	200W	—	110/115VAC	
832					200/230VAC	
R31	Mitsubishi Electric Corporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC	
R32		HC-PQ23		MR-C20A-UE	200/230VAC	
R39		HC-PQ23	—	—		
R30 Note 1)		—	—	—		
RM31		Note 2)	HC-MFS23	200W	MR-J2S-20A1	110/115VAC
RM32			HC-MFS23		MR-J2S-20A	200/230VAC
RM39			HC-MFS23	—	—	
RM30 Note 1)			—	—	—	
RK31			HC-KFS23	200W	MR-J2S-20A1	110/115VAC
RK32			HC-KFS23		MR-J2S-20A	200/230VAC
RK39		HC-KFS23	—		—	
RK30 Note 1)		—	—	—		
RP31		Note 2)	HF-KP23	200W	MR-J3-20A1	110/115VAC
RP32			HF-KP23		MR-J3-20A	200/230VAC
RP39	HF-KP23		—	—		
RP30 Note 1)	—		—	—		
G30 Note 1)	Matsushita Electric Industrial Co., Ltd.	—	—	—	—	
Y30 Note 1)	Yaskawa Electric Corporation	—	—	—	—	

Note 1)
Motor and driver are not supplied.
Motor mounting holes and coupling are supplied for the selected motor type.
Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)
Non-standard motor (from general servomotor manufacturer)
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.
* The LC8 driver for SMC standard motor needs to be ordered separately.
* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

• CE certified
• Dust seal specification

• Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

• Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

• Cable entry direction

F	Axial
---	-------

• Stroke

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
1000	1000mm
1200	1200mm
1500	1500mm

• Screw lead

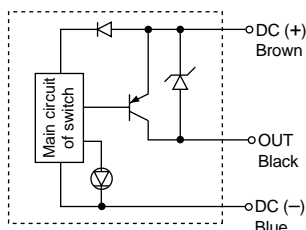
C	20mm
---	------

• Lead screw type

S	Slide screw
---	-------------

Limit Switch Internal Circuit

D-Y7HL



Spare parts (Dust seal)

	Order Number	Note
Dust seal	LJ1-DS3-2000	for LJ1□30/2000mm x 4
Dust seal grease	LJ1-L101	

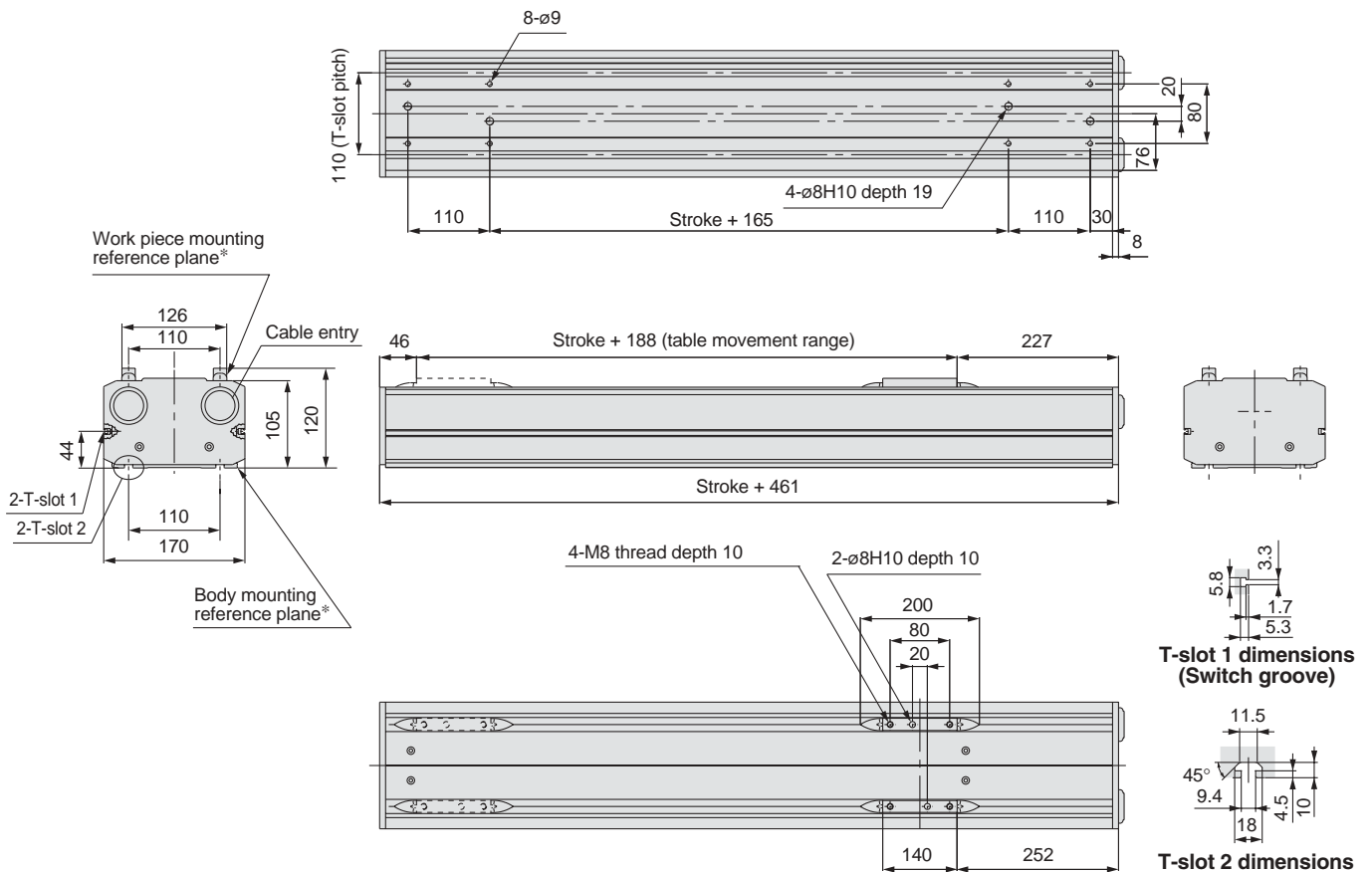
Specifications

Stroke (mm)		200	300	400	500	600	800	1000	1200	1500
Weight (kg)	With motor (standard)	14.4	16.2	18.0	19.8	21.5	25.7	29.7	33.3	38.7
	Without motor (nonstandard)	13.3	15.1	16.9	18.7	20.4	24.6	28.6	32.2	37.6
Operating temperature range (°C)		5 to 40 (with no condensation)								
Work load (kg)		20								
Maximum speed (mm/s)		300								
Positioning repeatability (mm)		±0.1								
Motor output		AC servomotor (200W)								
Lead screw		Slide screw ø25mm, 20mm lead								
Guide		Slider guide								
Limit switches for non-standard motors <small>Note)</small>		Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less								
Table specification		With dust seal								
Grease for dust seal application		Special lubricant								

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.
 Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/LJ1S30□3□SC (X70)

Scale: 15%



* The body mounting reference plane should be used as a standard when mounting onto equipment.

Made to Order: CABLEVEYOR Specification High Rigidity Direct Acting Guide

Series **LJ1H10**

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1H10 R11 P B 100 F H X40 L Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor Model	Output	Driver model	
811	SMC standard motor		50W	—	110/115VAC
812					200/230VAC
R11	Mitsubishi Electric Coporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC
R12		HC-PQ053		MR-C10A-UE	200/230VAC
R19		HC-PQ053		—	—
R10 (Note 1)		—	—	—	—
RM11		HC-MFS053	50W	MR-J2S-10A1	110/115VAC
RM12		HC-MFS053		MR-J2S-10A	200/230VAC
RM19		HC-MFS053		—	—
RM10 (Note 1)		—	—	—	—
RK11		HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12		HC-KFS053		MR-J2S-10A	200/230VAC
RK19		HC-KFS053		—	—
RK10 (Note 1)		—	—	—	—
RP11		HF-KP053	50W	MR-J3-10A1	110/115VAC
RP12		HF-KP053		MR-J3-10A	200/230VAC
RP19	HF-KP053		—	—	
RP10 (Note 1)	—	—	—	—	
G10 (Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 (Note 1)	Yaskawa Electric Corporation	—	—	—	—

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Coporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

CABLEVEYOR specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

CE certified

CABLEVEYOR entry direction

L	Left
R	Right

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

Screw lead

(Refer to Table 1 below for combinations).

B	12mm
C	20mm

Lead screw type

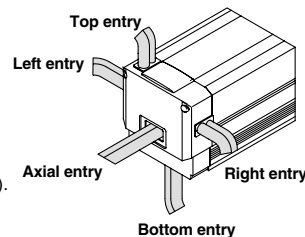
(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable entry direction



Limit Switch Internal Circuit

D-Y7HL

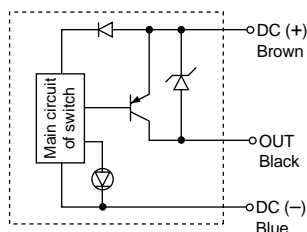


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)									
	100	200	300	400	500	600	700	800	900	1000
LJ1H10 □ PB - Stroke - □ □ - X40 □	●	●	●	●	●					
LJ1H10 □ NB - Stroke - □ □ - X40 □	●	●	●	●	●					
LJ1H10 □ SC - Stroke - □ □ - X40 □	●	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

CABLEVEYOR is made by **TSUBAKIMOTO CHAIN CO.**

Specifications

Stroke (mm)			100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor (standard)	Ball screw	6.0	6.9	7.9	8.7	9.6	—	—	—	—	—
		Slide screw	6.1	7.1	8.3	9.2	10.1	11.1	12.0	13.0	14.0	14.9
	Without motor (nonstandard)	Ball screw	5.6	6.5	7.5	8.3	9.2	—	—	—	—	—
		Slide screw	5.7	6.7	7.9	8.8	9.7	10.7	11.6	12.6	13.6	14.5
Mounting orientation			Horizontal									
Operating temperature range (°C)			5 to 40 (with no condensation)									
Work load (kg)	Ball screw	12mm lead	10					—				
	Slide screw	20mm lead	—					10				
Maximum speed (mm/s)	Ball screw	12mm lead	600					—				
	Slide screw	20mm lead	—					500				
Positioning repeatability (mm)	Rolled ball screw		±0.05					—				
	Ground ball screw		±0.02					—				
	Slide screw		—					±0.1				
Motor output			AC servomotor (50W)									
Lead screw	Rolled ball screw		ø12mm, 12mm lead					—				
	Ground ball screw		—					—				
	Slide screw		—					ø20mm, 20mm lead				
Guide			High rigidity direct acting guide									
Limit switches for non-standard motors ^{Note)}			Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
CABLEVEYOR			TKP0130-2BR18 made by TSUBAKIMOTO CHAIN CO.									
Side cover			Cover with switch groove									

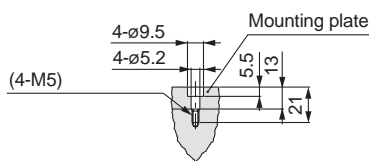
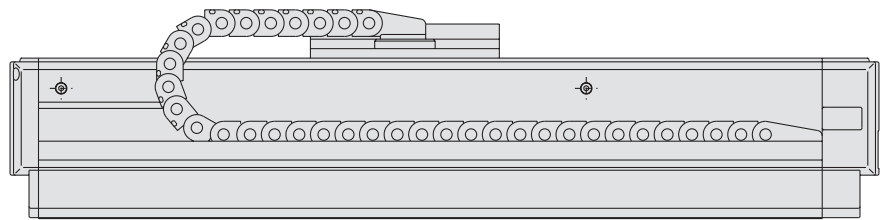
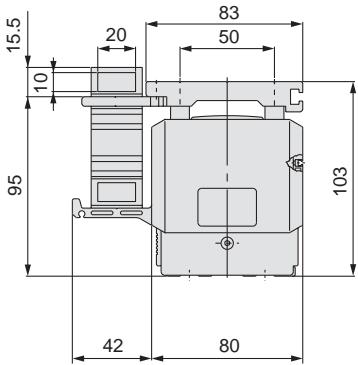
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only.

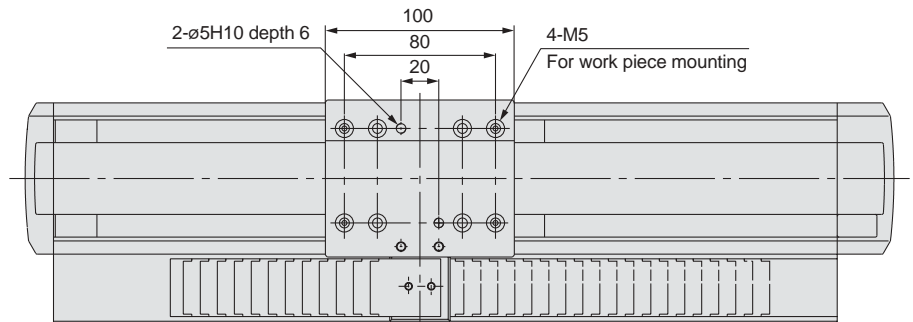
Dimensions/LJ1H10□1 (X40)

 Dimensions other than those shown in the drawing are the same as standard.

Scale: 25%



Work piece mounting dimensions



* This drawing shows the CABLEVEYOR with left hand entry.

Made to Order: CABLEVEYOR Specification High Rigidity Direct Acting Guide

Series LJ1H20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1H20 R21 P A 100 F H X40 L Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
821	SMC standard motor		100W	—	110/115VAC	
822					200/230VAC	
R21	Mitsubishi Electric Coporation	HC-PQ13	100W	MR-C10A1-UE	110/115VAC	
R22		HC-PQ13		MR-C10A-UE	200/230VAC	
R29		HC-PQ13	—	—		
R20 Note 1)		—	—	—		
RM21		Note 2)	HC-MFS13	100W	MR-J2S-10A1	110/115VAC
RM22			HC-MFS13		MR-J2S-10A	200/230VAC
RM29			HC-MFS13	—	—	
RM20 Note 1)			—	—	—	
RK21			HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RK22			HC-KFS13		MR-J2S-10A	200/230VAC
RK29		HC-KFS13	—	—		
RK20 Note 1)		—	—	—		
RP21		Note 2)	HF-KP13	100W	MR-J3-10A1	110/115VAC
RP22			HF-KP13		MR-J3-10A	200/230VAC
RP29			HF-KP13	—	—	
RP20 Note 1)	—		—	—		
G20 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y20 Note 1)	Yaskawa Electric Corporation	—	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

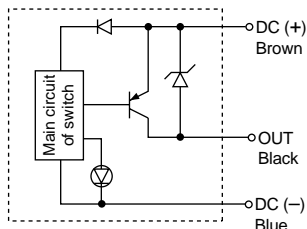
* The motor and driver of Mitsubishi Electric Coporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

CE certified

CABLEVEYOR entry direction

L	Left
R	Right

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately be referring to the section on how to order cables on page 67.

Stroke

(Refer to Table 1 below for combinations).

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm

Screw lead

(Refer to Table 1 below for combinations).

A	10mm
C	20mm

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable entry direction

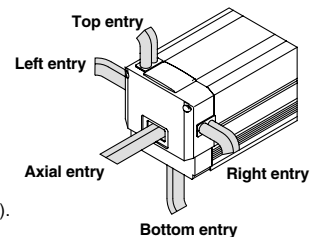


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)											
	100	200	300	400	500	600	700	800	900	1000	1200	
LJ1H20□□PA-Stroke-□□-X40□	●	●	●	●	●	●						
LJ1H20□□NA-Stroke-□□-X40□	●	●	●	●	●	●						
LJ1H20□□PC-Stroke-□□-X40□					●	●	●	●	●	●		
LJ1H20□□NC-Stroke-□□-X40□					●	●	●	●	●	●		
LJ1H20□□SC-Stroke-□□-X40□	●	●	●	●	●	●	●	●	●	●	●	

Combinations other than those shown above cannot be produced.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

Specifications

Stroke (mm)			100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	With motor (standard)	Ball screw	8.7	9.9	11.1	12.3	13.5	14.7	15.9	17.1	18.3	19.5	—
		Slide screw	10.0	11.2	12.4	13.6	14.8	16.0	17.2	18.4	19.6	20.8	23.2
	Without motor (nonstandard)	Ball screw	8.2	9.4	10.6	11.8	13.0	14.2	15.4	16.6	17.8	19.0	—
		Slide screw	9.5	10.7	11.9	13.1	14.3	15.5	16.7	17.9	19.1	20.3	22.7
Mounting orientation			Horizontal										
Operating temperature range (°C)			5 to 40 (with no condensation)										
Work load (kg)	Ball screw	10mm lead	30						—				
		20mm lead	—			15						—	
	Slide screw	20mm lead	15										
Maximum speed (mm/s)	Ball screw	10mm lead	500						—				
		20mm lead	—			1000			930	740	600	500	—
	Slide screw	20mm lead	500										
Positioning repeatability (mm)	Rolled ball screw		±0.05										—
	Ground ball screw		±0.02										—
	Slide screw		±0.1										
Motor output			AC servomotor (100W)										
Lead screw	Rolled ball screw		ø15mm, 10mm lead						—				
	Ground ball screw		—			ø15mm, 20mm lead						—	
	Slide screw		ø20mm, 20mm lead										
Guide			High rigidity direct acting guide										
Limit switches for non-standard motors			Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less										
CABLEVEYOR			TKP0130-2BR28 made by TSUBAKIMOTO CHAIN CO.										
Side cover			Cover with switch groove										

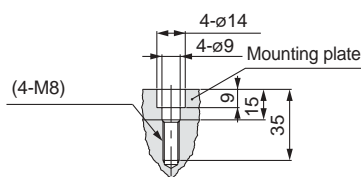
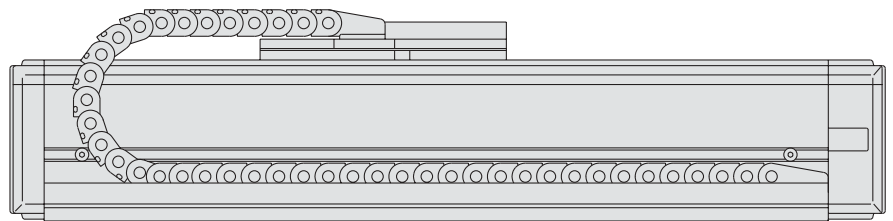
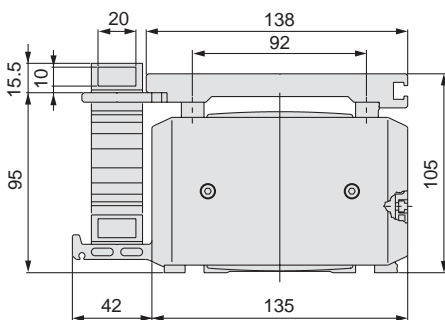
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

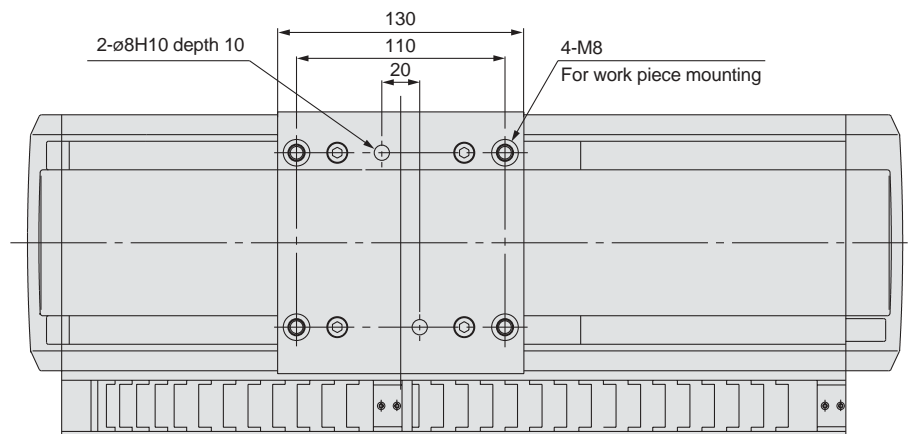
Dimensions/LJ1H20□2 (X40)

 Dimensions other than those shown in the drawing are the same as standard.

Scale: 25%



Work piece mounting dimensions



* This drawing shows the CABLEVEYOR with left hand entry.

Made to Order: CABLEVEYOR Specification High Rigidity Direct Acting Guide

Series LJ1H30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1H30 R31 P D 200 F H X40 L Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage		
	Manufacturer	Motor Model	Output	Driver model			
831	SMC standard motor		200W	—	110/115VAC		
832					200/230VAC		
R31	Mitsubishi Electric Coporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC		
R32		HC-PQ23		MR-C20A-UE	200/230VAC		
R39		HC-PQ23	—	—			
R30 Note 1)		—	—	—			
RM31		Note 2)	HC-MFS23	200W	MR-J2S-20A1	110/115VAC	
RM32			HC-MFS23		MR-J2S-20A	200/230VAC	
RM39			HC-MFS23	—	—		
RM30 Note 1)			—	—	—		
RK31			HC-KFS23	200W	MR-J2S-20A1	110/115VAC	
RK32			HC-KFS23		MR-J2S-20A	200/230VAC	
RK39			HC-KFS23	—	—		
RK30 Note 1)			—	—	—		
RP31			Note 2)	HF-KP23	200W	MR-J3-20A1	110/115VAC
RP32				HF-KP23		MR-J3-20A	200/230VAC
RP39	HF-KP23	—		—			
RP30 Note 1)	—	—		—			
G30 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—		
Y30 Note 1)	Yaskawa Electric Corporation	—	—	—	—		

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

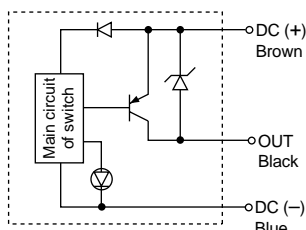
* The motor and driver of Mitsubishi Electric Coporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

CE certified

CABLEVEYOR entry direction

L	Left
R	Right

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Stroke

(Refer to Table 1 below for combinations).

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm
1500	1500mm

Screw lead

(Refer to Table 1 below for combinations).

D	25mm
E	40mm

Lead screw type

(Refer to Table 1 below for combinations).

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable entry direction

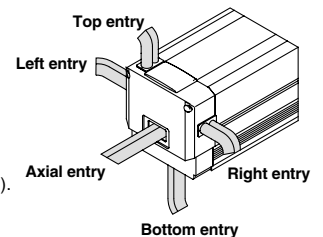


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)								
	200	300	400	500	600	800	1000	1200	1500
LJ1H30 PD-Stroke-□□-X40□	●	●	●	●	●	●	●	●	●
LJ1H30 ND-Stroke-□□-X40□	●	●	●	●	●	●	●	●	●
LJ1H30 SE-Stroke-□□-X40□	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Specifications

Stroke (mm)			200	300	400	500	600	800	1000	1200	1500	
Weight (kg)	With motor (standard)	Ball screw	17.5	19.7	21.9	24.1	26.2	31.1	36.0	40.3	46.9	
		Slide screw	16.4	18.7	20.9	23.2	25.4	29.9	34.5	39.0	45.8	
	Without motor (nonstandard)	Ball screw	16.4	18.6	20.8	23.0	25.1	30.0	34.9	39.2	45.8	
		Slide screw	15.3	17.6	19.8	22.1	24.3	28.8	33.4	37.8	44.7	
Mounting orientation			Horizontal									
Operating temperature range (°C)			5 to 40 (with no condensation)									
Work load (kg)	Ball screw	25mm lead	60									
	Slide screw	40mm lead	30									
Maximum speed (mm/s)	Ball screw	10mm lead	1000						700	500		
	Slide screw	20mm lead	500									
Positioning repeatability (mm)	Rolled ball screw		±0.05									
	Ground ball screw		±0.02									
	Slide screw		±0.1									
Motor output			AC servomotor (200W)									
Lead screw	Rolled ball screw		ø25mm, 25mm lead									
	Ground ball screw											
	Slide screw		ø30mm, 40mm lead									
Guide			High rigidity direct acting guide									
Limit switches for non-standard motors <small>Note)</small>			Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
CABLEVEYOR			TKP0180-2BR28 made by TSUBAKIMOTO CHAIN CO.									
Side cover			Cover with switch groove									

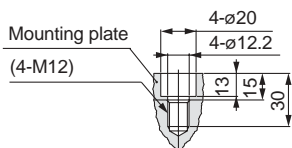
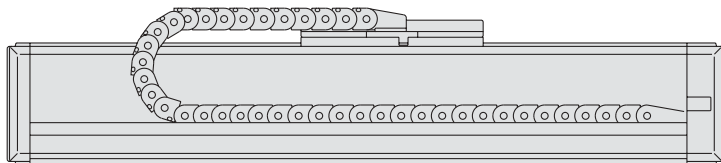
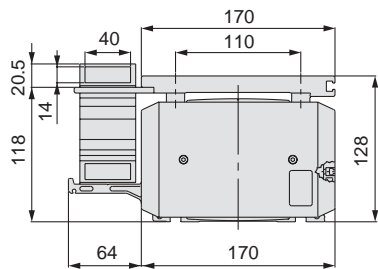
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

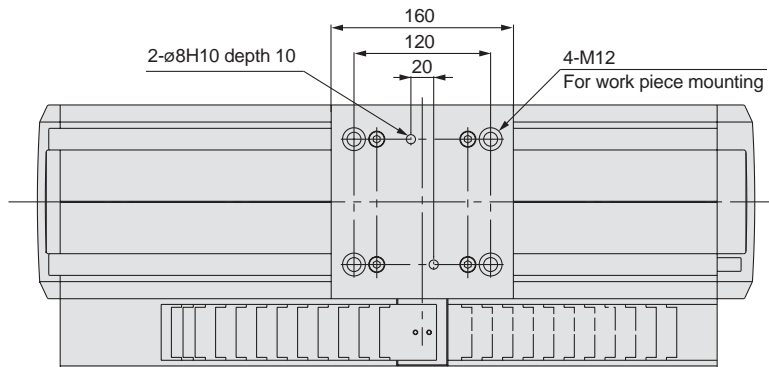
Dimensions/LJ1H30□3 (X40)

 Dimensions other than those shown in the drawing are the same as standard.

Scale: 20%



Work piece mounting dimensions



* This drawing shows the CABLEVEYOR with left hand entry.

CABLEVEYOR is made by **TSUBAKIMOTO CHAIN CO.**

Made to Order: CABLEVEYOR Specification Slider Guide

Series LJ1S10

Horizontal Mount Type Motor Output: 50 W

How to Order

LJ1S10 R11 S C-100 F H-X40 L-Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor Model	Output	Driver model	
811	SMC standard motor		50W	—	110/115VAC
812					200/230VAC
R11	Mitsubishi Electric Coporation	HC-PQ053	50W	MR-C10A1-UE	110/115VAC
R12		HC-PQ053		MR-C10A-UE	200/230VAC
R19		HC-PQ053	—	—	
R10 Note 1)		—	—	—	
RM11		HC-MFS053	50W	MR-J2S-10A1	110/115VAC
RM12				MR-J2S-10A	200/230VAC
RM19		HC-MFS053	—	—	
RM10 Note 1)		—	—	—	
RK11		HC-KFS053	50W	MR-J2S-10A1	110/115VAC
RK12				MR-J2S-10A	200/230VAC
RK19		HC-KFS053	—	—	
RK10 Note 1)		—	—	—	
RP11		HF-KP053	50W	MR-J3-10A1	110/115VAC
RP12				MR-J3-10A	200/230VAC
RP19	HF-KP053	—	—		
RP10 Note 1)	—	—	—		
G10 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	
Y10 Note 1)	Yaskawa Electric Corporation	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Coporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

CABLEVEYOR specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

CE certified

CABLEVEYOR entry direction

L	Left
R	Right

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length.

For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately be referring to the section on how to order cables on page 67.

Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

Screw lead

C	20mm
---	------

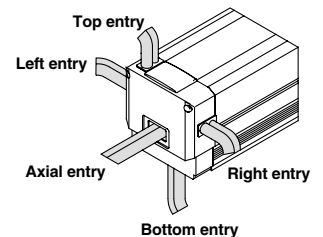
Lead screw type

S	Slide screw
---	-------------

Cable entry direction

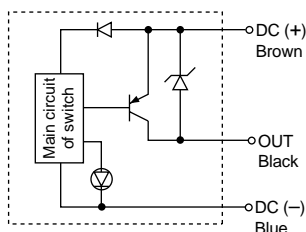
F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable entry direction



Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR is made by **TSUBAKIMOTO CHAIN CO.**

Specifications

Stroke (mm)		100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor (standard)	6.2	7.0	8.0	8.9	9.8	10.7	11.5	12.5	13.4	14.3
	Without motor (nonstandard)	5.8	6.6	7.6	8.5	9.4	10.3	11.1	12.1	13.0	13.9
Mounting orientation	Horizontal										
Operating temperature range (°C)	5 to 40 (with no condensation)										
Work load (kg)	5										
Maximum speed (mm/s)	300										
Positioning repeatability (mm)	±0.1										
Motor output	AC servomotor (50W)										
Lead screw	ø20mm, 20mm lead										
Guide	Slider guide										
Limit switches for non-standard motors ^{Note)}	Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less										
CABLEVEYOR	TKP0130-2BR18 made by TSUBAKIMOTO CHAIN CO.										
Side cover	Cover with switch groove										

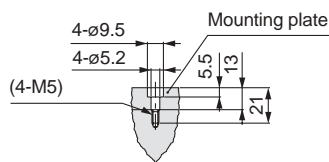
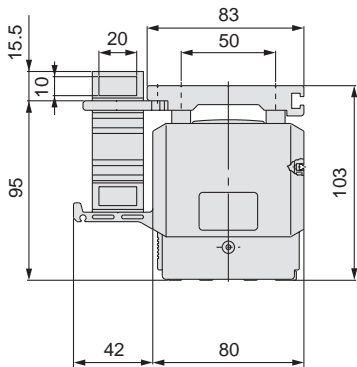
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Y59A(L) are attached for the SMC standard motors for connection to LC8 only.

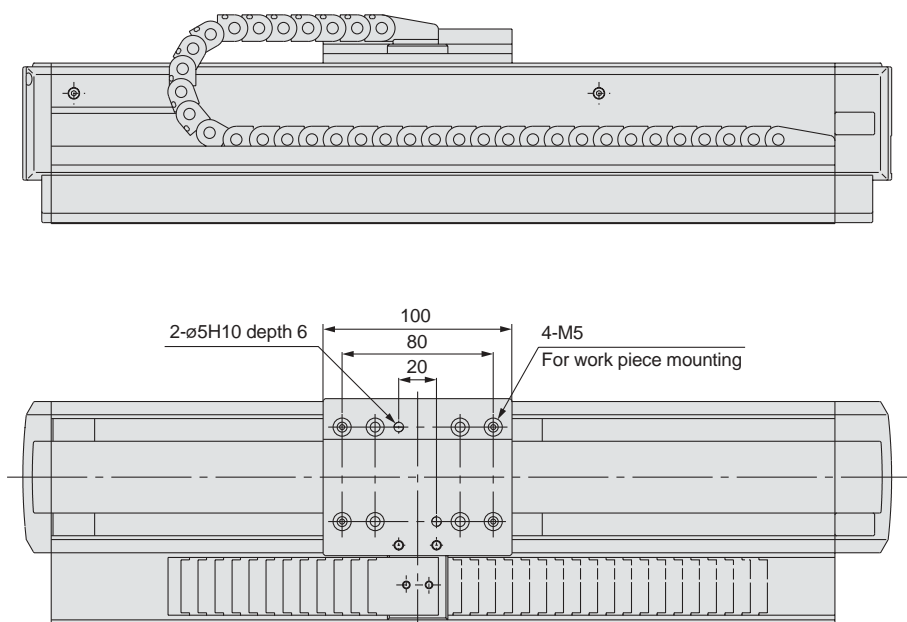
Dimensions/LJ1S10□1□SC (X40)

 Dimensions other than those shown in the drawing are the same as standard.

Scale: 20%



Work piece mounting dimensions



* This drawing shows the CABLEVEYOR with left hand entry.

Made to Order: CABLEVEYOR Specification Slider Guide

Series LJ1S20

Horizontal Mount Type Motor Output: 100 W

How to Order

LJ1S20 R21 S C-200 F H-X40 L-Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
821	SMC standard motor	—	100W	—	110/115VAC	
822					200/230VAC	
R21	Mitsubishi Electric Coporation	HC-PQ13	100W	MR-C10A1-UE	110/115VAC	
R22		HC-PQ13		MR-C10A-UE	200/230VAC	
R29		HC-PQ13	—	—		
R20 Note 1)		—	—	—		
RM21		Note 2)	HC-MFS13	100W	MR-J2S-10A1	110/115VAC
RM22			HC-MFS13		MR-J2S-10A	200/230VAC
RM29			HC-MFS13	—	—	
RM20 Note 1)			—	—	—	
RK21			HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RK22			HC-KFS13		MR-J2S-10A	200/230VAC
RK29		HC-KFS13	—	—		
RK20 Note 1)		—	—	—		
RP21		Note 2)	HF-KP13	100W	MR-J3-10A1	110/115VAC
RP22			HF-KP13		MR-J3-10A	200/230VAC
RP29	HF-KP13		—	—		
RP20 Note 1)	—		—	—		
G20 Note 1)	Matsushita Electric Industrial Co.,Ltd.	—	—	—	—	
Y20 Note 1)	Yaskawa Electric Corporation	—	—	—	—	

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Coporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

CABLEVEYOR specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

CE certified

CABLEVEYOR entry direction

L	Left
R	Right

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length.

For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately be referring to the section on how to order cables on page 67.

Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm

Screw lead

C	20mm
---	------

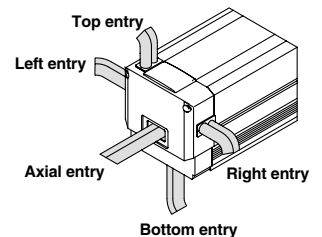
Lead screw type

S	Slide screw
---	-------------

Cable entry direction

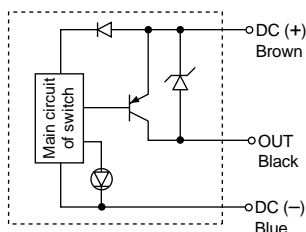
F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable entry direction



Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR is made by **TSUBAKIMOTO CHAIN CO.**

Specifications

Stroke (mm)		100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	With motor (standard)	7.8	9.0	10.3	11.5	12.6	13.8	15.0	16.2	17.4	18.5	20.9
	Without motor (nonstandard)	7.3	8.5	9.8	11.0	12.1	13.3	14.5	15.7	16.9	18.0	20.4
Mounting orientation	Horizontal											
Operating temperature range (°C)	5 to 40 (with no condensation)											
Work load (kg)	10											
Maximum speed (mm/s)	300											
Positioning repeatability (mm)	±0.1											
Motor output	AC servomotor (100W)											
Lead screw	ø20mm, 20mm lead											
Guide	Slider guide											
Limit switches for non-standard motors ^{Note)}	Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less											
CABLEVEYOR	TKP0130-2BR28 made by TSUBAKIMOTO CHAIN CO.											
Side cover	Cover with switch groove											

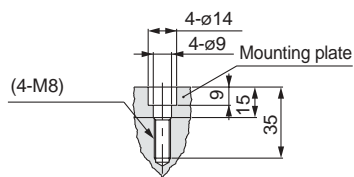
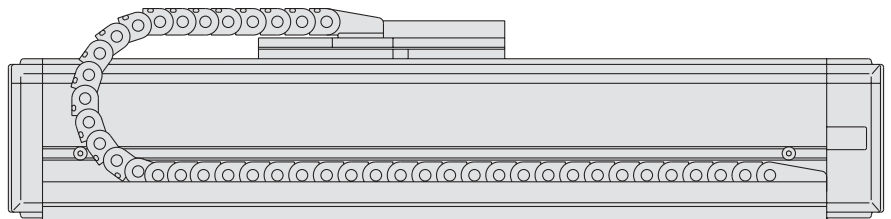
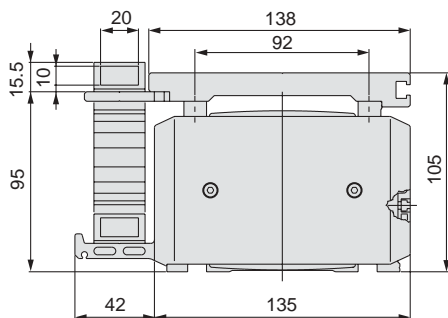
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

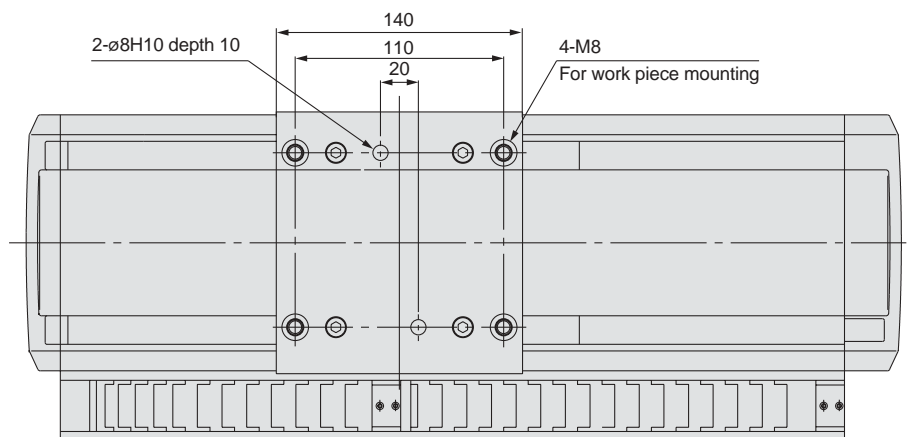
Dimensions/LJ1S20□2□SC (X40)

 Dimensions other than those shown in the drawing are the same as standard.

Scale: 20%



Work piece mounting dimensions



* This drawing shows the CABLEVEYOR with left hand entry.

Made to Order: CABLEVEYOR Specification Slider Guide

Series LJ1S30

Horizontal Mount Type Motor Output: 200 W

How to Order

LJ1S30 **R31** **S** **C** - **200** - **F** **H** - **X40** **L** - **Q**

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage	
	Manufacturer	Motor Model	Output	Driver model		
831	SMC standard motor		200W	—	110/115VAC	
832					200/230VAC	
R31	Mitsubishi Electric Coporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC	
R32		HC-PQ23		MR-C20A-UE	200/230VAC	
R39		HC-PQ23	—	—		
R30 <small>Note 1)</small>		—	—	—		
RM31		<small>Note 2)</small>	HC-MFS23	200W	MR-J2S-20A1	110/115VAC
RM32			HC-MFS23		MR-J2S-20A	200/230VAC
RM39			HC-MFS23	—	—	
RM30 <small>Note 1)</small>			—	—	—	
RK31			HC-KFS23	200W	MR-J2S-20A1	110/115VAC
RK32			HC-KFS23		MR-J2S-20A	200/230VAC
RK39			HC-KFS23	—	—	
RK30 <small>Note 1)</small>			—	—	—	
RP31			HF-KP23	200W	MR-J3-20A1	110/115VAC
RP32			HF-KP23		MR-J3-20A	200/230VAC
RP39	HF-KP23		—	—		
RP30 <small>Note 1)</small>	—		—	—		
G30 <small>Note 1)</small>	<small>Note 2)</small> Matsushita Electric Industrial Co.,Ltd.		—	—	—	—
Y30 <small>Note 1)</small>	<small>Note 2)</small> Yaskawa Electric Corporation		—	—	—	—

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type. Refer to the motor compatibility table on page 70.

For the dimensions of the motor mounting area, refer to the dimensions on pages 71 and 72.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

CABLEVEYOR specification

Standard motor Cable length

2	2m
3	3m
4	4m
5	5m

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) 2pcs.

CE certified

CABLEVEYOR entry direction

L	Left
R	Right

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length.

For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Stroke

200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
800	800mm
1000	1000mm
1200	1200mm
1500	1500mm

Screw lead

C	20mm
---	------

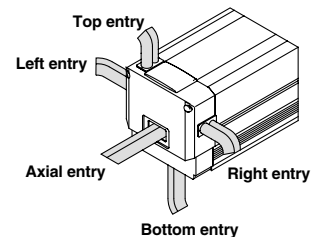
Lead screw type

S	Slide screw
---	-------------

Cable entry direction

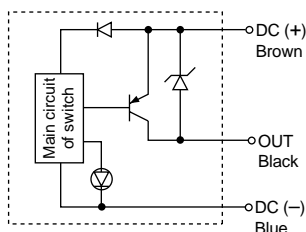
F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable entry direction



Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR is made by **TSUBAKIMOTO CHAIN CO.**

Specifications

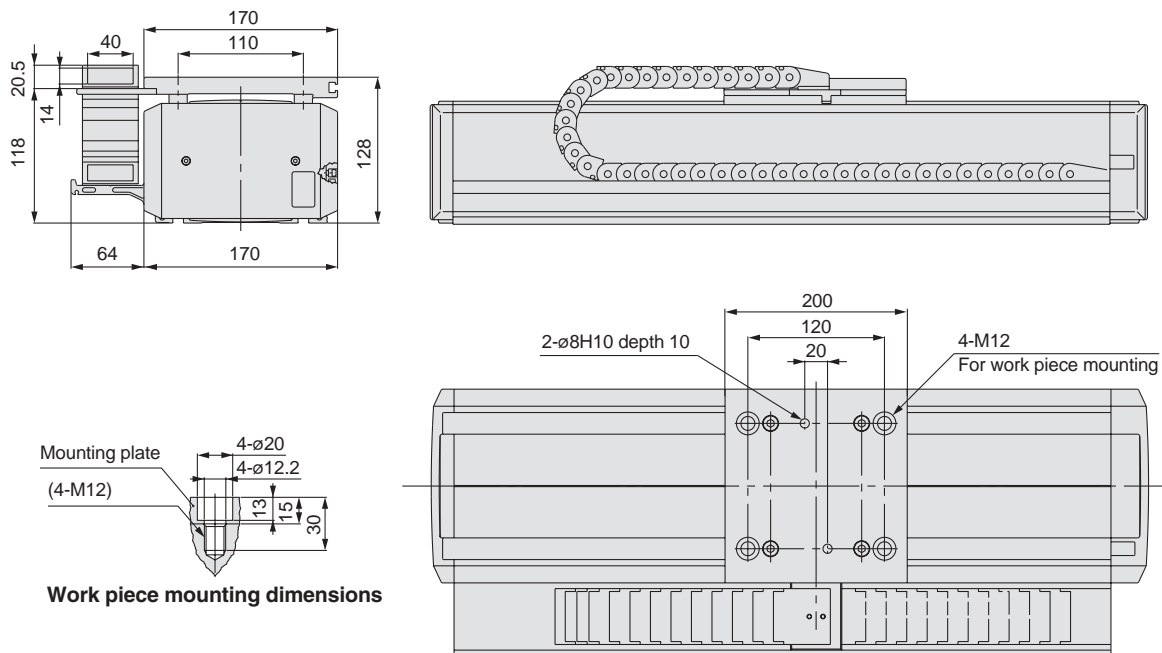
Stroke (mm)		200	300	400	500	600	800	1000	1200	1500
Weight (kg)	With motor (standard)	15.9	17.9	19.9	21.9	23.8	28.3	32.7	36.6	42.6
	Without motor (nonstandard)	14.8	16.8	18.8	20.8	22.7	27.2	31.6	35.5	41.5
Mounting orientation	Horizontal									
Operating temperature range (°C)	5 to 40 (with no condensation)									
Work load (kg)	20									
Maximum speed (mm/s)	300									
Positioning repeatability (mm)	±0.1									
Motor output	AC servomotor (200W)									
Lead screw	ø25mm, 20mm lead									
Guide	Slider guide									
Limit switches for non-standard motors ^{Note)}	Power supply voltage: 4.5 to 28VDC, Current consumption: 10mA or less, Control output: Open collector, Load current: 40mA or less, Internal voltage drop: 1.5V or less									
CABLEVEYOR	TKP0180-2BR28 made by TSUBAKIMOTO CHAIN CO.									
Side cover	Cover with switch groove									

For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.
 Note) 2 pcs of D-Z76(L) are attached for the SMC standard motors for connection to LC8 only.

Dimensions/ LJ1S30□3□SC (X40)

 Dimensions other than those shown in the drawing are the same as standards.

Scale: 20%



* This drawing shows the CABLEVEYOR with left hand entry.

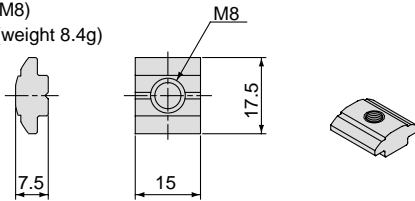
Series LJ1

Option Specifications

T-nuts for Mounting Electric Actuator

T-nuts are used when mounting an actuator using its T-slots. When mounting by means of T-nuts alone, the quantity of nuts indicated below should be used as a minimum.

T-nut (nut size M8)
Type **LJ1-T8** (weight 8.4g)



T-nut quantities for mounting

Model	Quantity
LJ1_s10	200mm stroke or less 6 pcs.
	300mm stroke or more 8 pcs.
LJ1_s20	8 pcs.
LJ1_s30	8 pcs.

* T-nuts are built into the body unit for Series LJ1_s10 only.

Standard Motor Cables (Spare parts)

Cables for connecting actuators and LC8.

How to Order

LJ1 – 8 – B 05

● Cable length

02	2m
03	3m
04	4m
05	5m

Note) This cable is included for the actuator with SMC standard motor.
This is the order code for the same cable as a spare part.

Nonstandard Motor Cables

Cables for connecting nonstandard motors and drivers.
Cable lengths other than those shown below should be arranged by the customer.

How to Order

LJ1 – 1 – R 05

● Cable length

5	5m
----------	----

● Compatible model

R	R, RK, RM type cable
RP	RP type cable

Cable compatibility table

Model	Manufacturer part no.
LJ1-1-R05	(for motor) ^{Note)} MR-JCCBL5M-L (for encoder)
	MR-PWS1CBL5M-A2-L (for motor) MR-J3ENCBL5M-A2-L (for encoder)
LJ1-1-RP05	MR-PWS1CBL5M-A2-L (for motor) MR-J3ENCBL5M-A2-L (for encoder)
	MR-J3ENCBL5M-A2-L (for encoder)

Note) A cable is not provided for the Mitsubishi Electric Corporation, and therefore the customer should arrange a 4 wire 0.75mm² electric cable.

Please refer to the technical literature of each manufacturer for further details.

CABLEVEYOR Unit for Electric Actuator

Able to compactly arrange supporting guides for cables and hoses.

How to Order

LJ1 - C 1 - 100

Compatible model

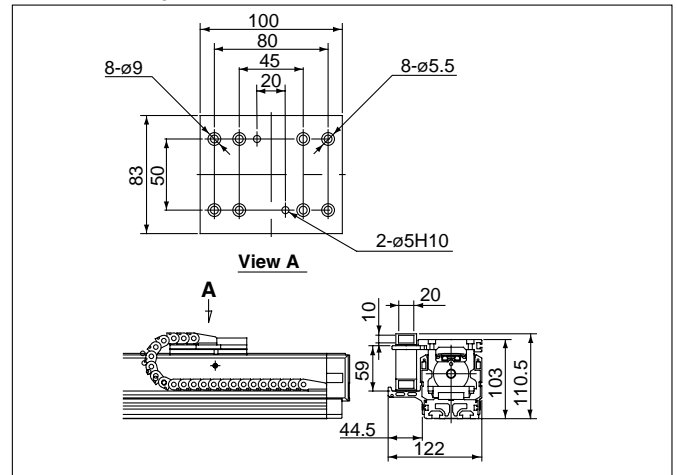
1	LJ1 _S 10
2	LJ1 _S 20
3	LJ1 _S 30

Stroke

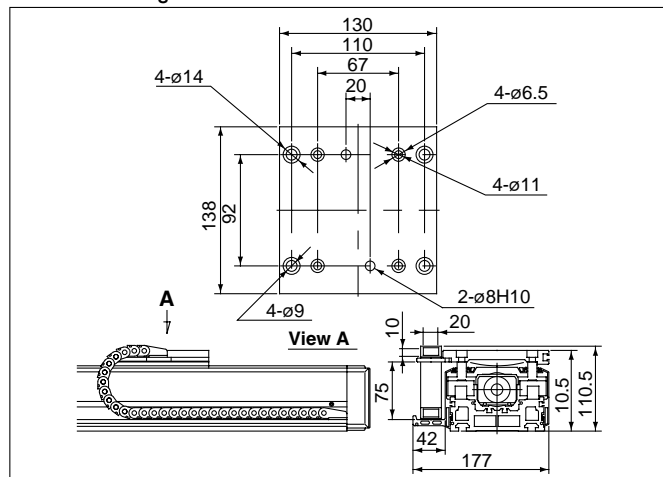
100	100mm	700	700mm
200	200mm	800	800mm
300	300mm	900	900mm
400	400mm	1000	1000mm
500	500mm	1200	1200mm
600	600mm	1500	1500mm

* Refer to "Series Variations" on Feature page 3 for correspondence of models and strokes

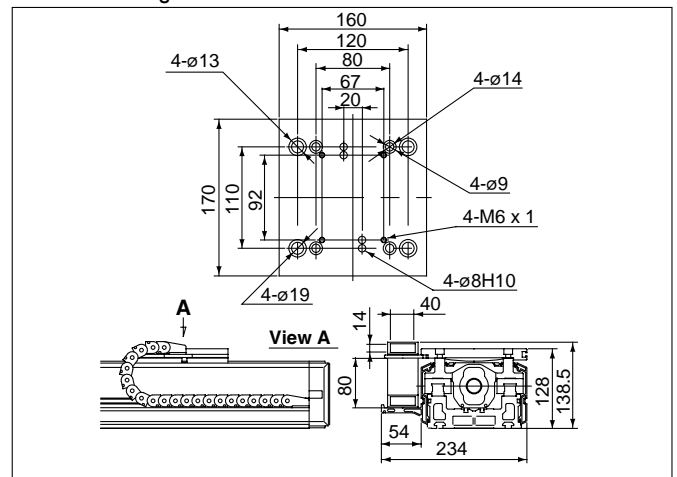
Series LJ1_S10



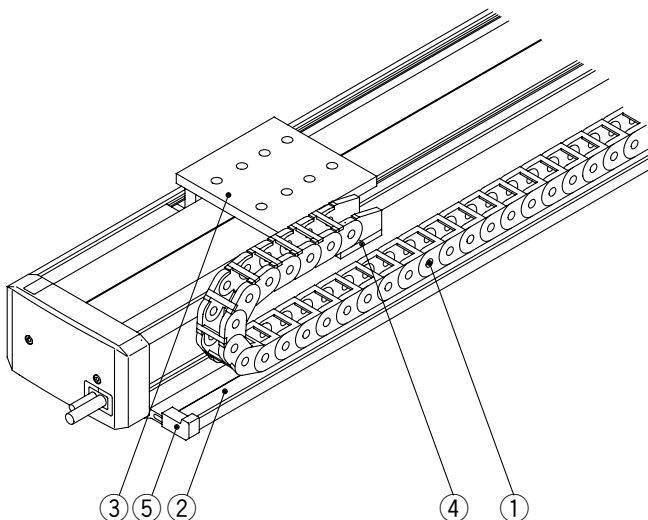
Series LJ1_S20



Series LJ1_S30



Construction/Parts list



Parts list

No.	Description	Material	Note
1	CABLEVEYOR	-	-
2	Cable side cover	Aluminum alloy	-
3	Mounting plate	Aluminum alloy	-
4	Cable flange	Aluminum alloy	-
5	End cap	EP	-

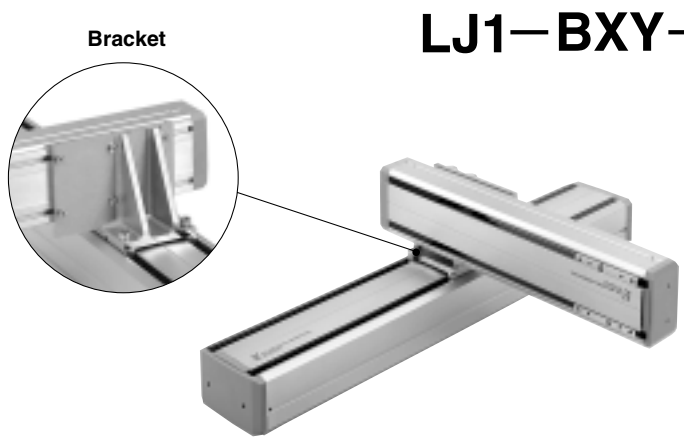
Precautions on handling of the CABLEVEYOR

- When handling, connecting and disconnecting the CABLEVEYOR
 - Wear suitable clothing and appropriate protective gear (safety glasses, gloves, safety shoes, etc.).
 - Use suitable tools.
 - Provide support so that the CABLEVEYOR and parts do not move freely.
- Implement protective measures (safety cover, etc.).
- Be sure to turn off the power and ensure that it cannot be turned on accidentally before installation, removal or maintenance of the equipment.
- In order to prevent secondary accidents, put the surrounding area in good order and operate under safe conditions.

Series L J1

X-Y Bracket

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



LJ1-BXY-J2J1 LS

• 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.

Series LJ1

Reference Data

Installation motor list

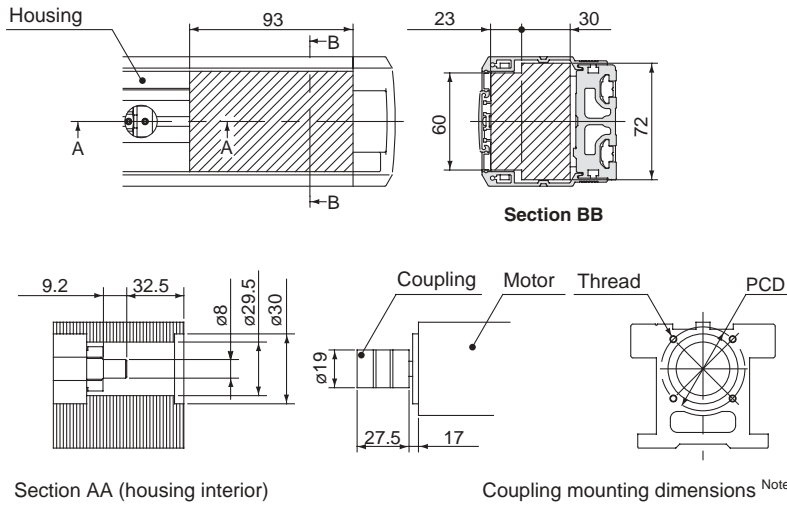
	Motor output (W)	Motor model		Coupling order code for spare parts
LJ1□10G1□□□	50W	MSM5AZA1A	Matsushita Electric Industrial Co.,LTD	LJ1-SFC-010WD-8B-8B
LJ1□20G2□□□	100W	MSM011A1A MSM012A1A		LJ1-SFC-020WD-8B-8B
LJ1□30G3□□□	200W	MSM021A1A MSM022A1A		LJ1-SFC-030WD-11B-12B LJ1-SFC-030WD-11B-14B (for LJ1□30□3□S□)
LJ1□10R1□□□ LJ1□10RM1□□□ LJ1□10RK1□□□ LJ1□10RP1□□□	50W	HC-PQ053 HC-MFS053 HC-KFS053 HF-KP053	Mitsubishi Electric Corporation	LJ1-SFC-010WD-8B-8B
LJ1□20R1□□□ LJ1□20RM1□□□ LJ1□20RK1□□□ LJ1□20RP1□□□	100W	HC-PQ13 HC-MFS13 HC-KFS13 HF-KP13		LJ1-SFC-020WD-8B-8B
LJ1□30R1□□□ LJ1□30RM1□□□ LJ1□30RK1□□□ LJ1□30RP1□□□	200W	HC-PQ23 HC-MFS23 HC-KFS23 HF-KP23		LJ1-SFC-030WD-12B-14B LJ1-SFC-030WD-14B-14B (for LJ1□30□3□S□)
LJ1□10Y1□□□	50W	SGM-A5B312 SGM-A5A312	Yaskawa Electric Corporation	LJ1-SFC-010WD-6B-8B
		R88M-W05030L-S1 R88M-W05030H-S1	OMRON Corporation	
LJ1□20Y2□□□	100W	SGM-01B312 SGM-01A312	Yaskawa Electric Corporation	LJ1-SFC-020WD-8B-8B
		R88M-W10030L-S1 R88M-W10030H-S1	OMRON Corporation	
LJ1□30Y3□□□	200W	SGM-02B312 SGM-02A312	Yaskawa Electric Corporation	LJ1-SFC-030WD-12B-14B LJ1-SFC-030WD-14B-14B (for LJ1□30□3□S□)
		R88M-W20030L-S1 R88M-W20030H-S1	OMRON Corporation	

Note) The suitable coupling is included when order actuator without motor.

Series LJ1

Nonstandard Motor Mounting Dimensions

Series LJ1 H/S 10



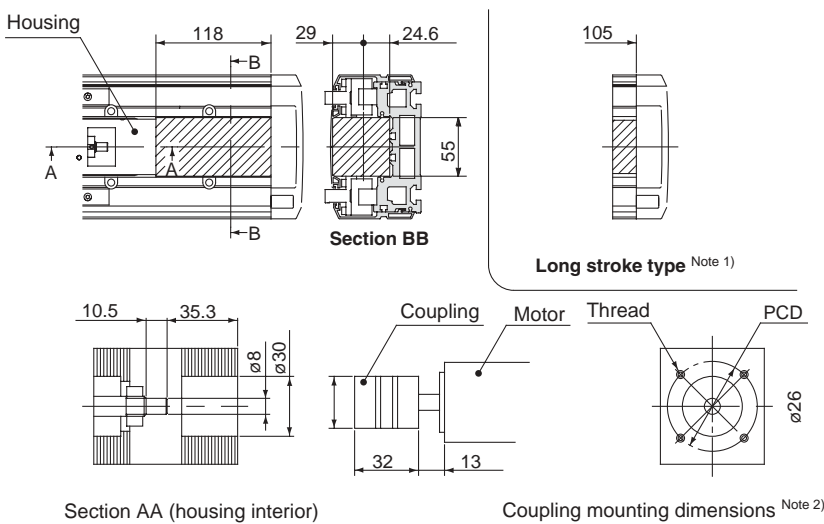
Motor mounting dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M4	M3
Effective thread length (mm)	8	6
Quantity	2	4
PCD	46	45

Motor mounting area

Note) When mounting the coupling to the motor, mount within the range of the dimensions shown to the left.

Series LJ1 H/S 20



Motor mounting dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M4	M3
Effective thread length (mm)	8	6
Quantity	2	4
PCD	46	45

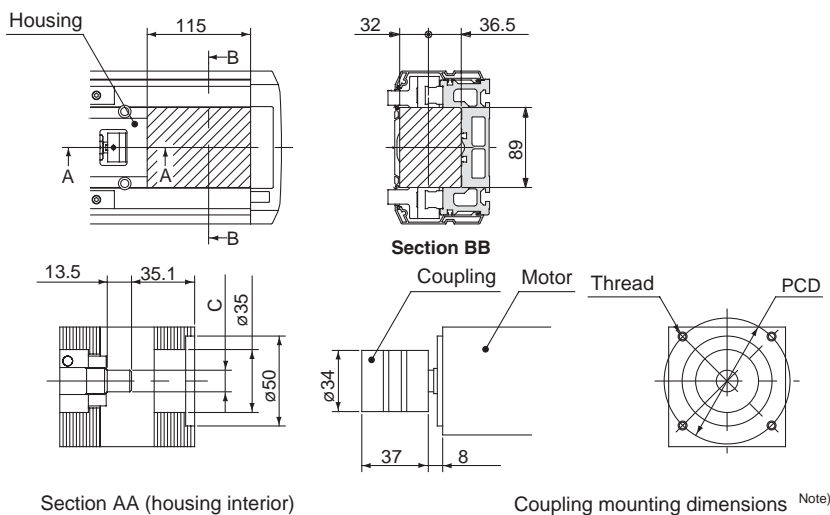
Motor mounting area

Note 1) For the motor mounting area dimensions of the models below, refer to the long stroke type dimensions.

LJ1H20□□□NC	500 to 1000 stroke
LJ1H20□□□SC	700 to 1200 stroke
LJ1S20□□□SC	700 to 1200 stroke

Note 2) When mounting the coupling to the motor, mount within the range of the dimensions shown to the left.

Series LJ1 H/S 30



Motor mounting dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M5	M4
Effective thread length (mm)	6	6
Quantity	4	4
PCD	70	70

Motor mounting area

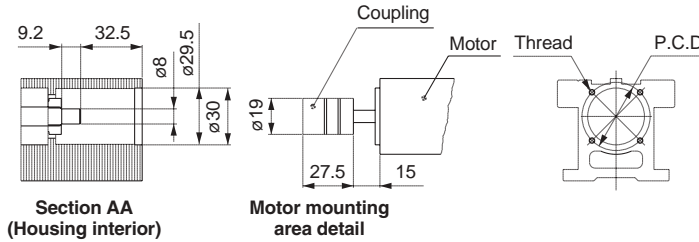
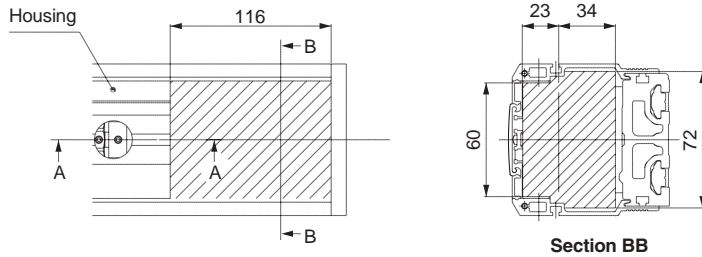
Note) When mounting the coupling to the motor, mount within the range of the dimensions shown to the left.

Dimensions

	C
LJ1□30□3□S□	14
LJ1□30□3□P□	12
LJ1□30□3□N□	12

Clean Room Specification/Dust Seal Specification

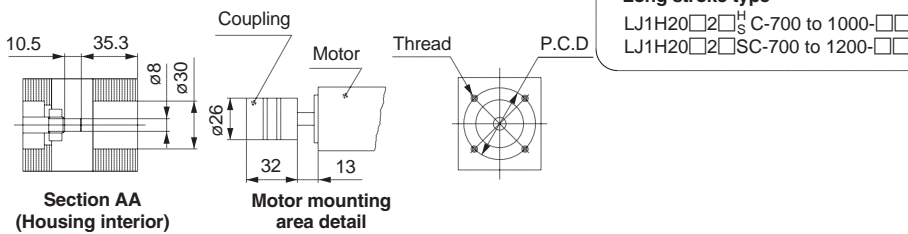
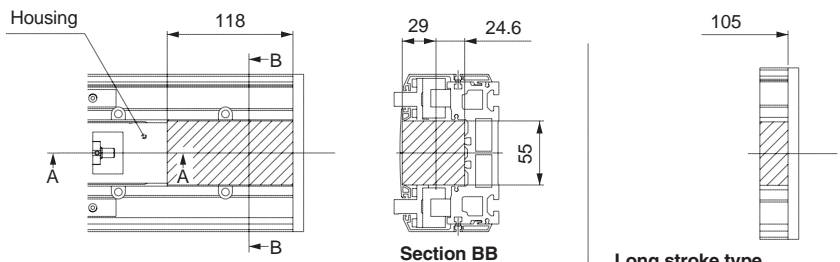
Series LJ1_SH10



Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
Thread size	M4	M3
Effective thread length (mm)	8	6
Quantity	2	4
P.C.D.	46	45

Series LJ1_SH20



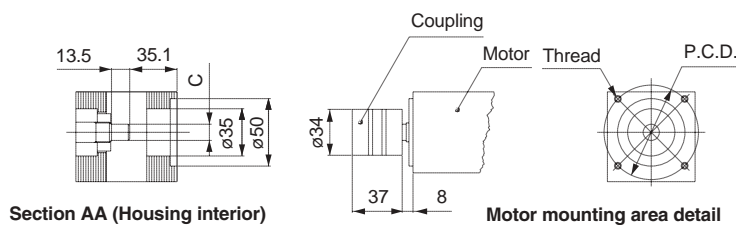
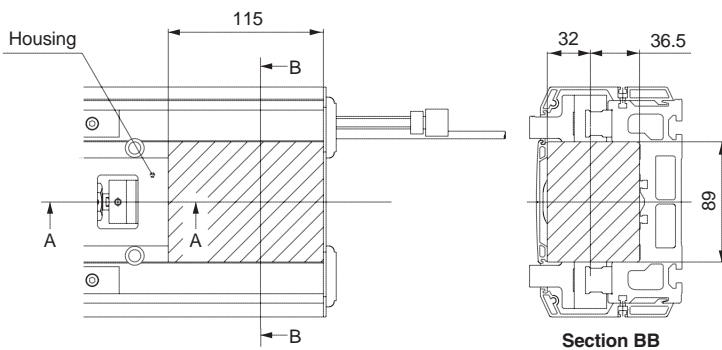
Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
Thread size	M4	M3
Effective thread length (mm)	8	6
Quantity	2	4
P.C.D.	46	45

Long stroke type

LJ1H20□2□_SC-700 to 1000-□□
LJ1H20□2□SC-700 to 1200-□□

Series LJ1_SH30



Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
Thread size	M5	M4
Effective thread length (mm)	6	6
Quantity	4	4
P.C.D.	70	70

Dimensions

	C
LJ1□30□3□S□	14
LJ1□30□3□P□	12
LJ1□30□3□N□	12

Series LJ1 Electric Actuator

Allowable Dynamic Moment

The table is subjected to moment in various directions, depending on the work piece load point. Design should be such that the amount of work piece overhang stays within the ranges shown in the graphs below.

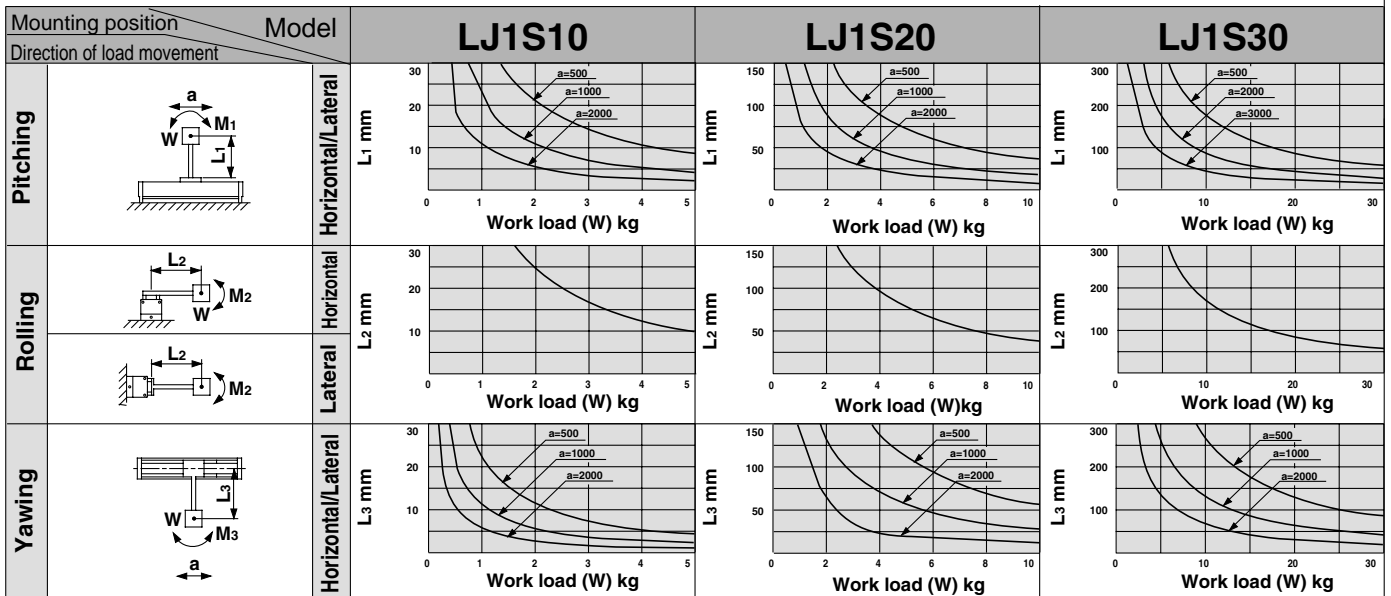
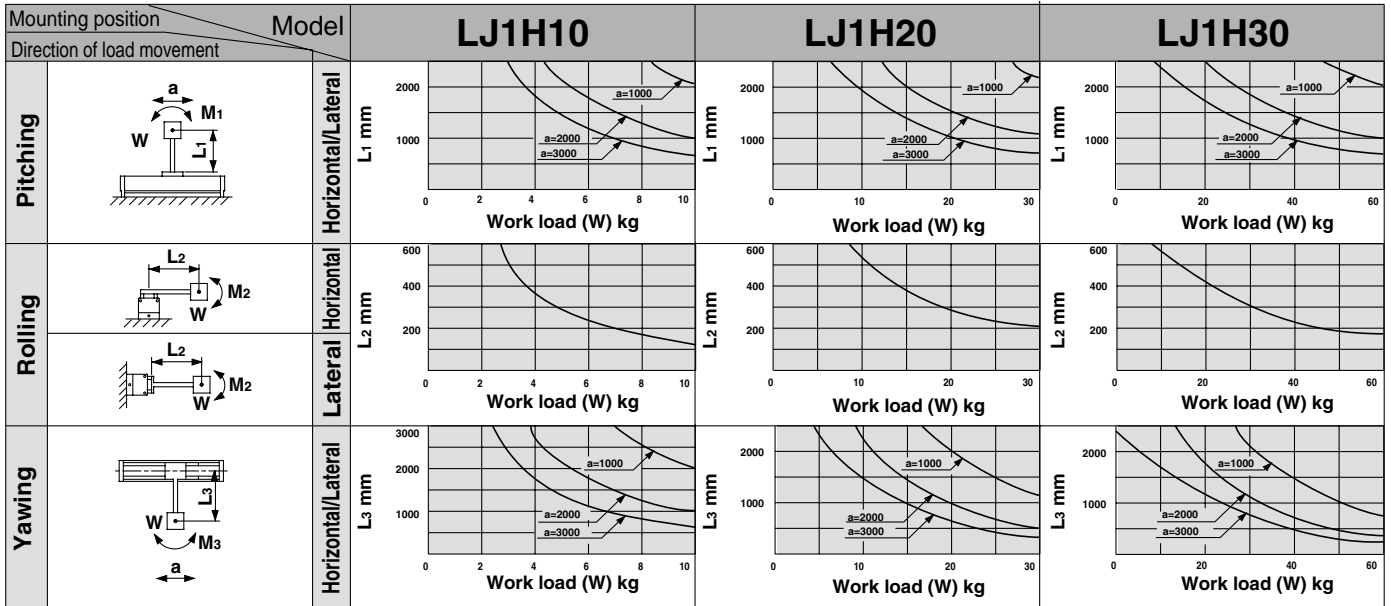
W: Work load (N)

L₁, L₂, L₃: Amount of overhang to work piece center of gravity (mm)

a: Table acceleration (mm/s²)

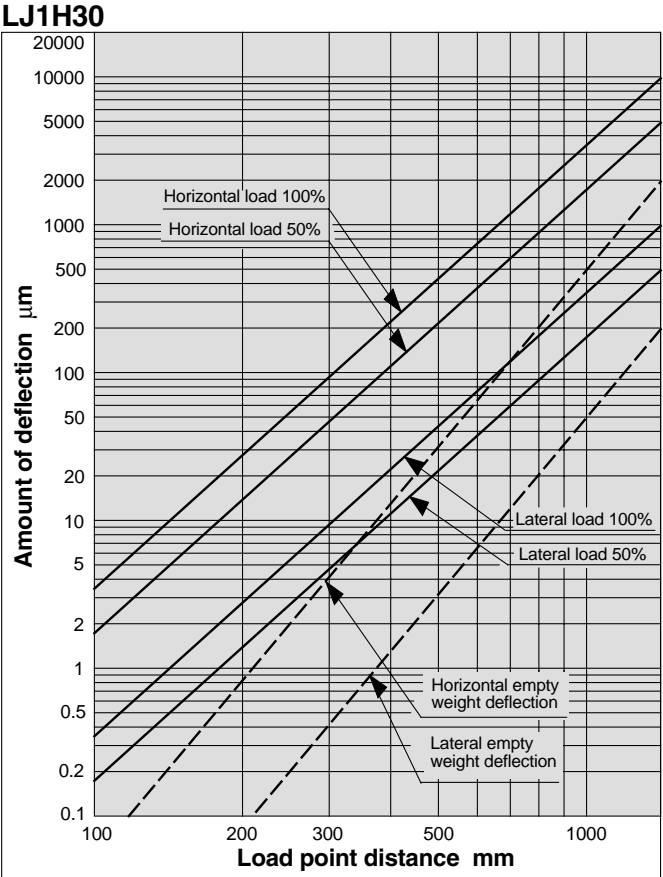
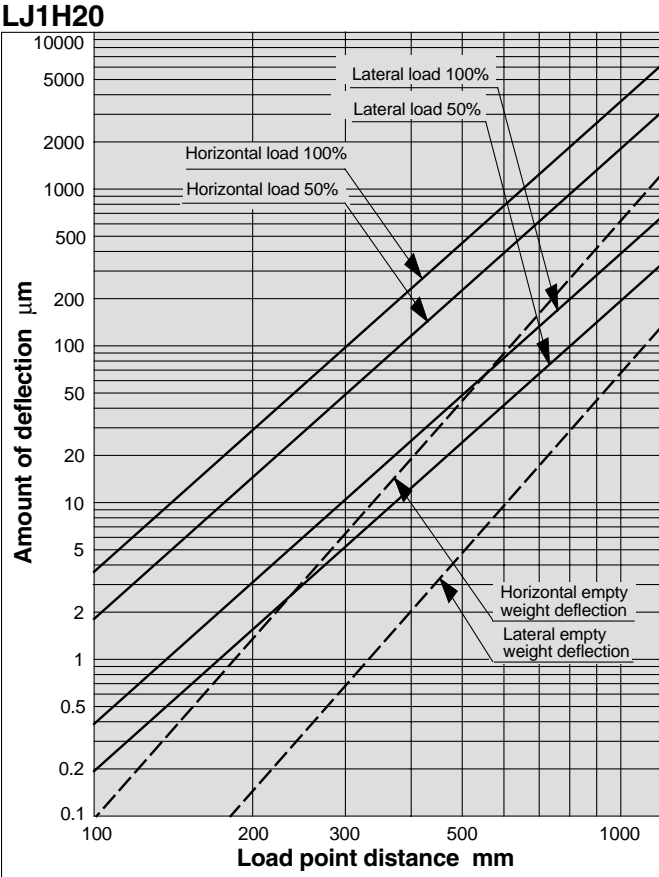
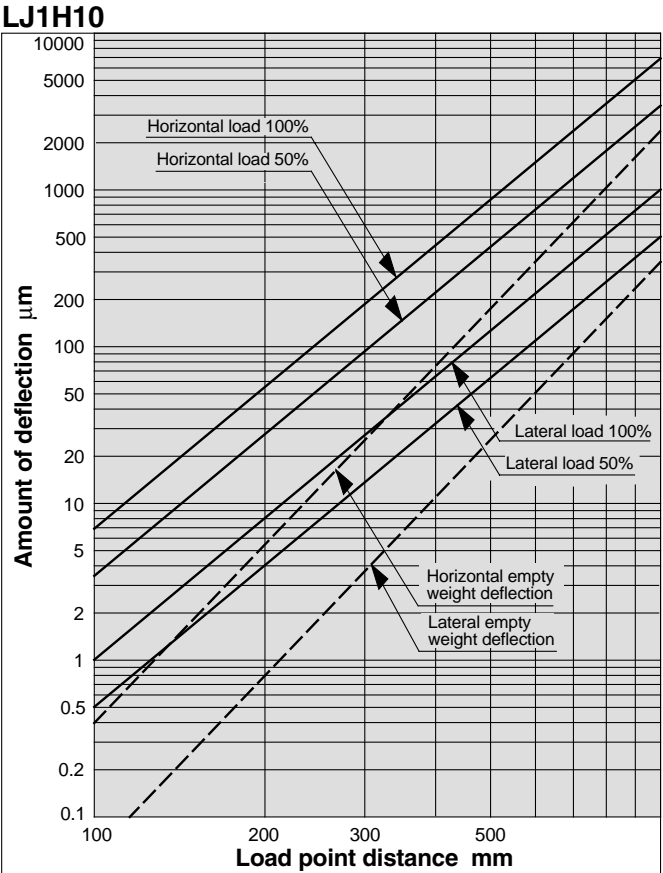
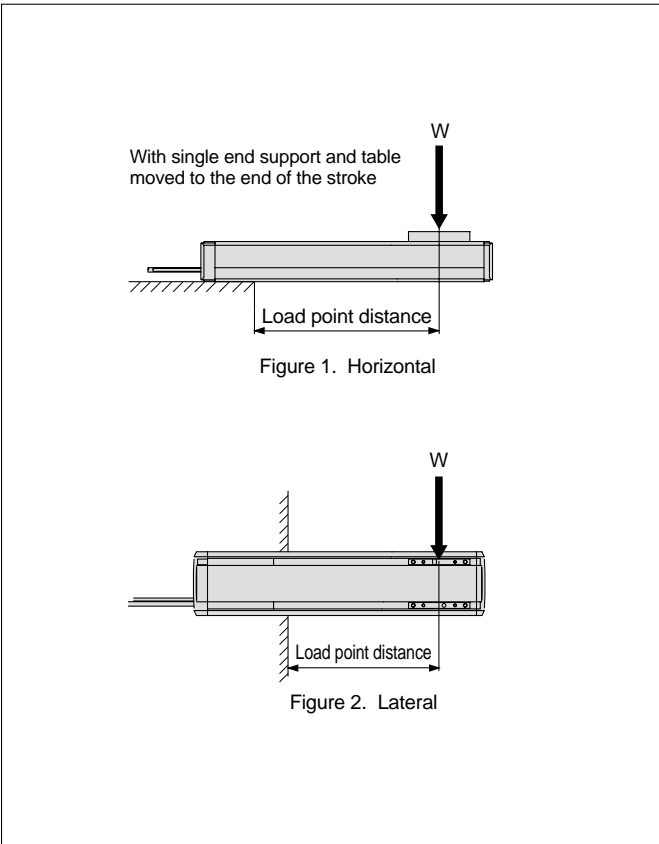
Use of graphs

- 1) Determine the model.
- 2) Determine the mounting position.
Confirm whether mounting is horizontal or lateral (LJ1H only).
- 3) Confirm the amount of overhang.
Operating conditions should be such that the work load and amount of overhang for each component of moment (pitching, yawing, rolling) fall within the ranges shown in the graphs.



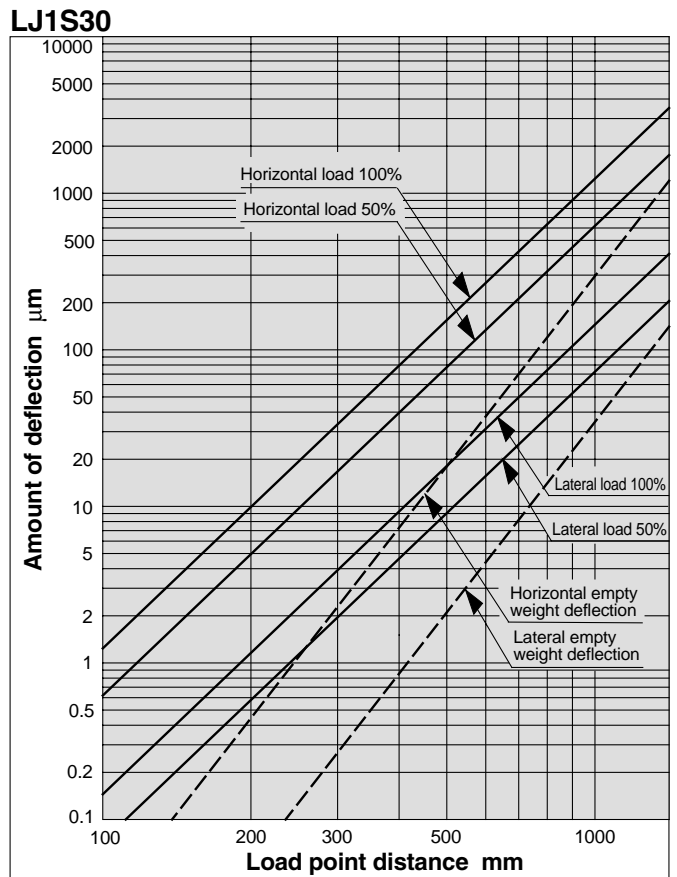
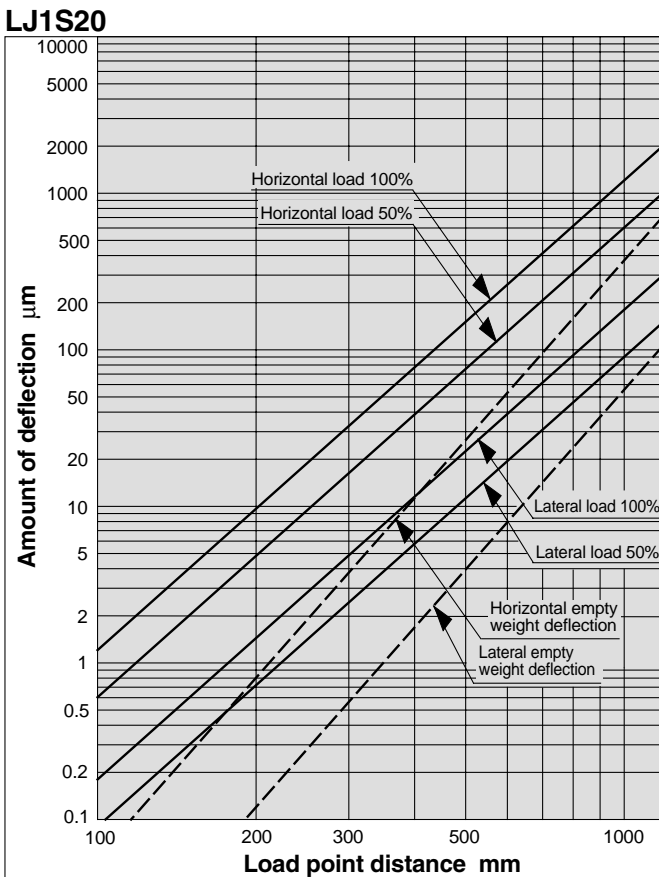
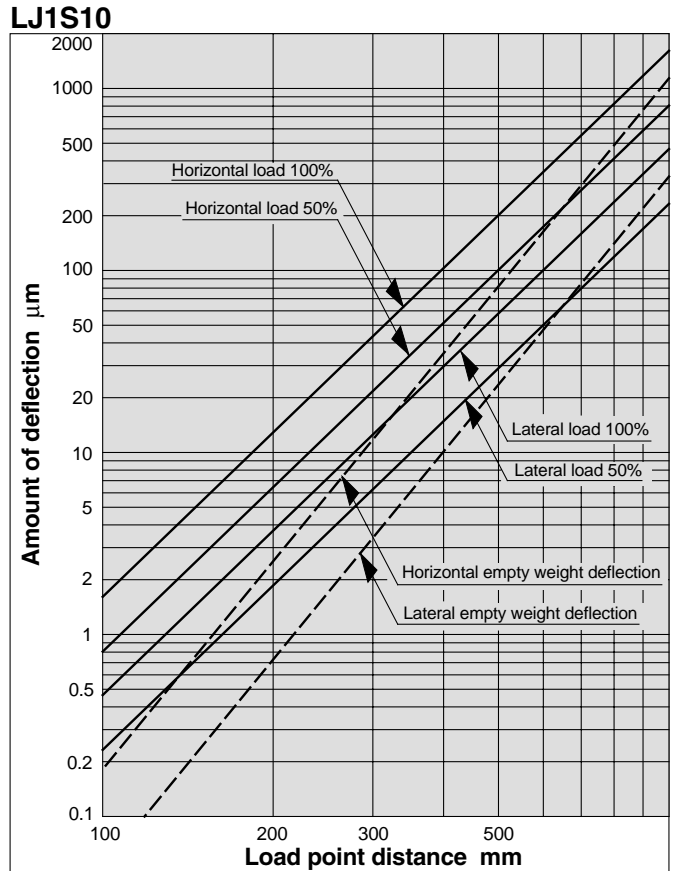
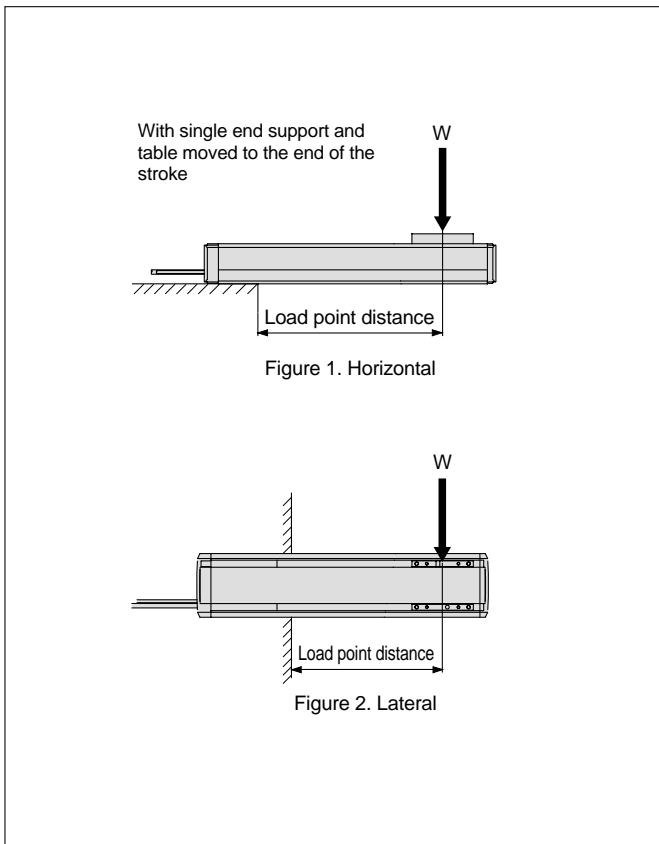
Deflection Data/LJ1H

The load and the amount of deflection at load point W are shown in the graphs below for each series.



Deflection Data/LJ1S

The load and the amount of deflection at load point W are shown in the graphs below for each series.



High Rigidity Direct Acting Guide

Series LG1H

Horizontal Mount Type Motor Output: 100 W

How to Order

LG1 H21 R21 P A-100-F H-X10-Q

Frame material

Nil	Aluminum alloy
T	Stainless steel

Series

21	With coupling
----	---------------

Motor/Driver specifications

Symbol	Motor and Driver Specification			Power supply voltage	
	Manufacturer	Motor Model	Driver model		
821	SMC standard motor	100W	—	110/115VAC	
822			—	200/230VAC	
R21	Mitsubishi Electric Corporation	HC-PQ13	MR-C10A1-UE	110/115VAC	
R22		HC-PQ13	MR-C10A-UE	200/230VAC	
R29		HC-PQ13	—	—	
R20 <small>Note 1)</small>		—	—	—	
RM21		100W	HC-MFS13	MR-J2S-10A1	110/115VAC
RM22			HC-MFS13	MR-J2S-10A	200/230VAC
RM29		HC-MFS13	—	—	
RM20 <small>Note 1)</small>		—	—	—	
RK21		100W	HC-KFS13	MR-J2S-10A1	110/115VAC
RK22			HC-KFS13	MR-J2S-10A	200/230VAC
RK29			HC-KFS13	—	—
RK20 <small>Note 1)</small>		—	—	—	
RP21		100W	HF-KP13	MR-J3-10A1	110/115VAC
RP22			HF-KP13	MR-J3-10A	200/230VAC
RP29	HF-KP13		—	—	
RP20 <small>Note 1)</small>	—		—	—	
G20 <small>Note 1)</small>	Matsushita Electric Industrial Co.,Ltd.	—	—	—	
Y20 <small>Note 1)</small>	Yaskawa Electric Corporation	—	—	—	

Note 1)
Motor and driver are not supplied.
Motor mounting holes and coupling are supplied for the selected motor type.
Refer to the motor compatibility table on page 81.
For the dimensions of the motor mounting area, refer to the dimensions on pages 81.

Note 2)
Non-standard motor (from general servomotor manufacturer)
* The motor and driver of Mitsubishi Electric Corporation can be included when specified.
* The LC8 driver for SMC standard motor needs to be ordered separately.
* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

CE certified

Motor type Note 3)

Nil	Standard motor
X10	Nonstandard motor

Standard motor Note 3)
Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 80.

Limit switches for non-standard motors

Nil	None
H	N.C. (B contact) PNP 2pcs.

Cable entry direction

F	Axial
---	-------

Stroke

(Refer to Table 1 below for combinations.)

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm

Screw lead

(Refer to Table 1 below for combinations.)

A	10mm
C	20mm

Lead screw type

(Refer to Table 1 below for combinations.)

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)											
	100	200	300	400	500	600	700	800	900	1000	1200	
LG1 <input type="checkbox"/> H21 <input type="checkbox"/> PA-Stroke	●	●	●	●								
LG1 <input type="checkbox"/> H21 <input type="checkbox"/> NA-Stroke	●	●	●	●								
LG1 <input type="checkbox"/> H21 <input type="checkbox"/> PC-Stroke					●	●	●	●	●	●		
LG1 <input type="checkbox"/> H21 <input type="checkbox"/> NC-Stroke					●	●	●	●	●	●		
LG1 <input type="checkbox"/> H21 <input type="checkbox"/> SC-Stroke	●	●	●	●	●	●	●	●	●	●	●	

Combinations other than those shown above cannot be produced. Refer to dimensions on page 78.

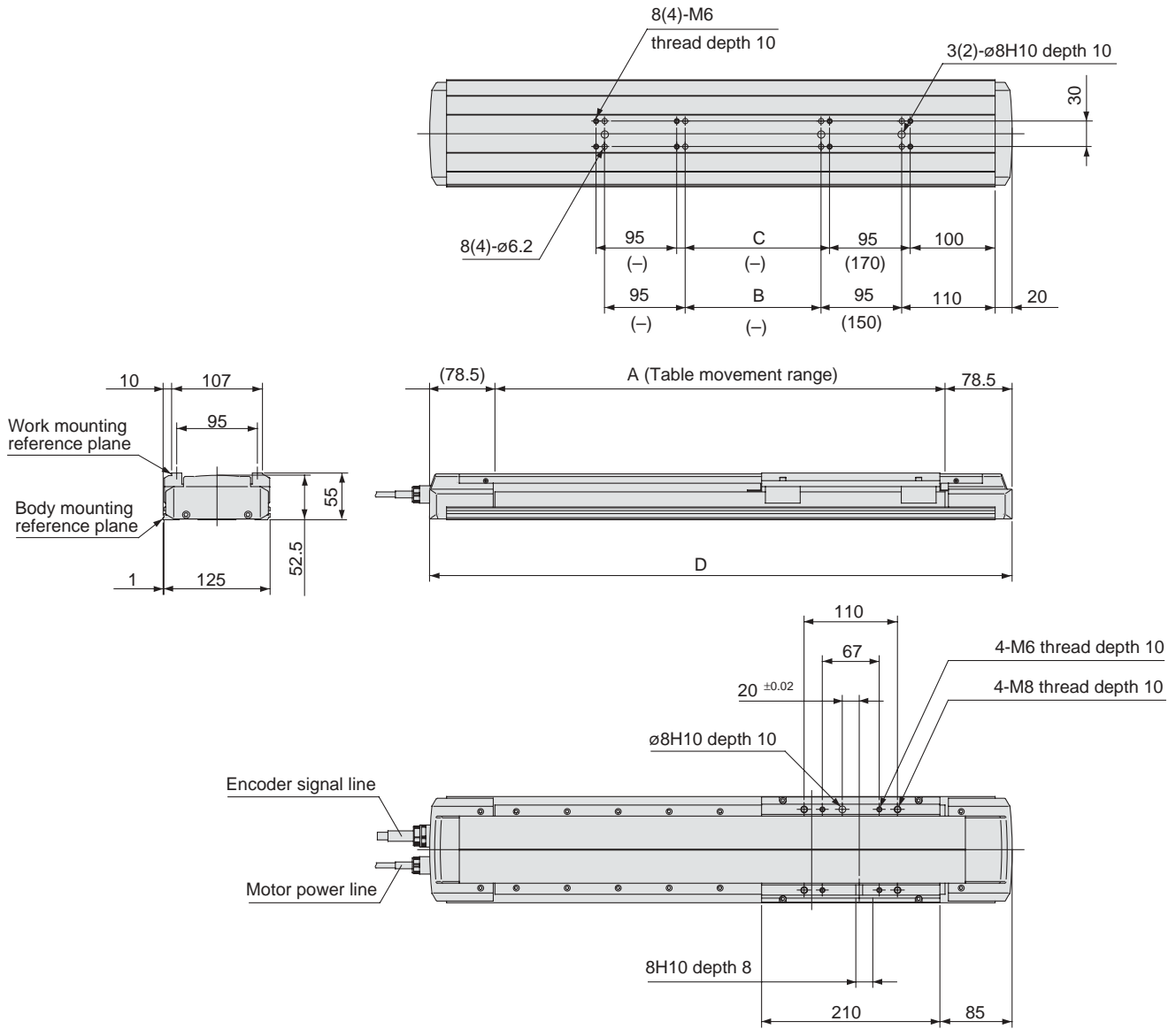
Series LG1H

LG1H21: With Coupling

Specifications

Stroke (mm)				100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	Ball screw	Aluminum alloy frame		5.2	6.0	6.8	7.6	8.4	9.2	10.0	10.8	11.6	12.4	–
		Stainless steel frame		8.4	9.7	10.9	12.2	13.4	14.7	15.9	17.2	18.4	19.7	–
	Slide screw	Aluminum alloy frame		5.8	6.7	7.5	8.4	9.3	10.2	11.1	11.9	12.8	13.7	15.9
		Stainless steel frame		9.3	10.7	12.0	13.5	14.8	16.2	17.5	19.0	20.3	21.7	25.2
Operating temperature range (°C)				5 to 40 (with no condensation)										
Maximum work load (kg)	Ball screw	10mm lead	100W	30				–						
		20mm lead		–			30				–			
	Slide screw	20mm lead	15											
Maximum speed (mm/s)	Ball screw	10mm lead	100W	500				–						
		20mm lead		–			1000	930	740	600	500	–		
	Slide screw	20mm lead	500											
Lead screw	Ball screw	Rolled/Ground		ø15mm, 10mm lead				–						
			–			ø15mm, 20mm lead				–				
	Slide screw	Rolled		ø20mm, 20mm lead										
Guide				High rigidity direct acting guide										

LG1H21: With Coupling/Construction



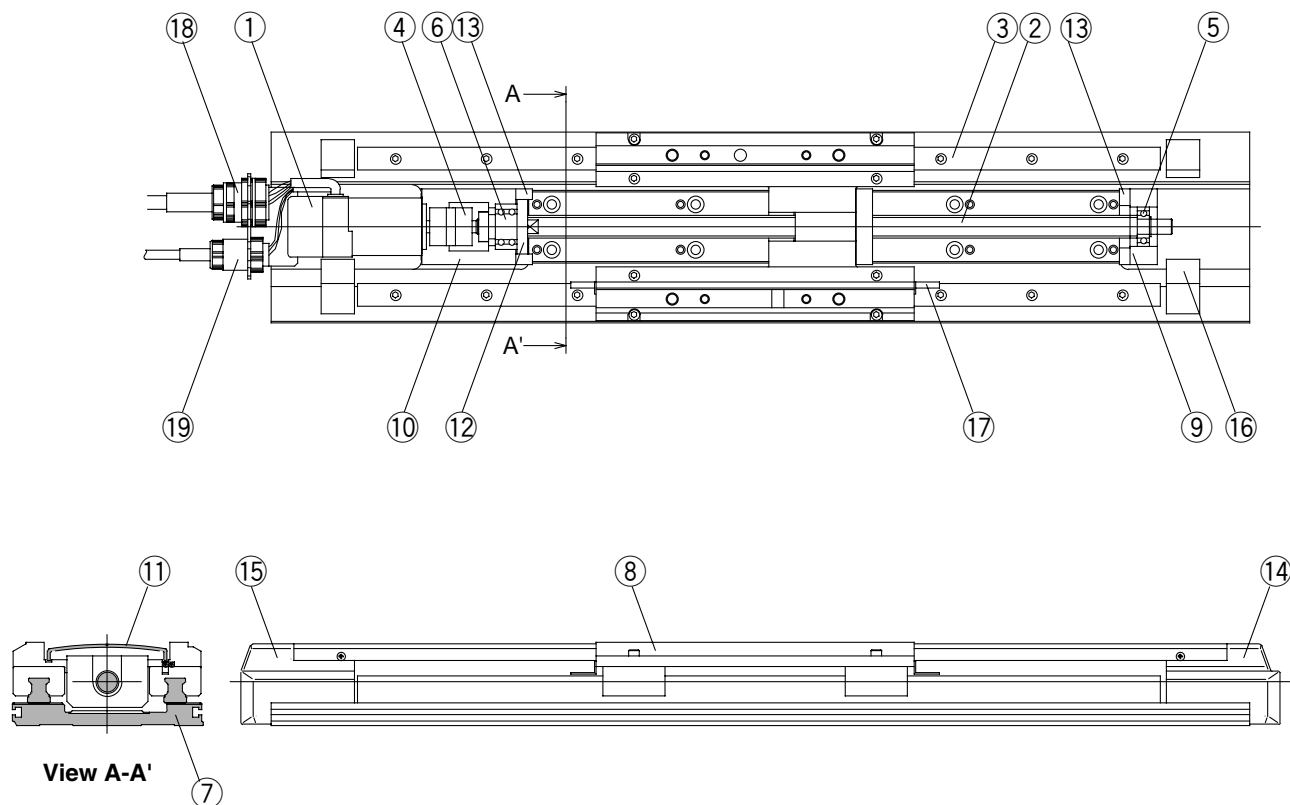
Dimensions

Model	Stroke	A	B	C	D
LG1□H21□□□- 100-F□ (Note)	100	329	-	-	486
LG1□H21□□□- 200-F□	200	429	60	80	586
LG1□H21□□□- 300-F□	300	529	160	180	686
LG1□H21□□□- 400-F□	400	629	260	280	786
LG1□H21□□□- 500-F□	500	729	360	380	886
LG1□H21□□□- 600-F□	600	829	460	480	986
LG1□H21□□□- 700-F□	700	929	560	580	1086
LG1□H21□□□- 800-F□	800	1029	660	680	1186
LG1□H21□□□- 900-F□	900	1129	760	780	1286
LG1□H21□□□-1000-F□	1000	1229	860	880	1386
LG1□H21□□□-1200-F□	1200	1429	1060	1080	1586

Note) Dimensions inside () are for a 100mm stroke.

Series LG1H

LG1H21: With Coupling/Construction



Parts list

No.	Description	Material	Note
1	AC servomotor	—	100W
2	Feed screw	—	Ball screw/Slide screw
3	High rigidity direct acting guide	—	
4	Coupling	—	
5	Bearing R	—	
6	Bearing F	—	
7	Frame	Aluminum alloy/Stainless steel	
8	Table	Aluminum alloy	
9	Housing A	Aluminum alloy	
10	Housing B	Aluminum alloy	

Parts list

No.	Description	Material	Note
11	Body cover	Aluminum alloy	
12	Bearing cap	Aluminum alloy	
13	Bumper	IIR	
14	End cover A	PC	
15	End cover B	PC	
16	Photomicrosensor	—	
17	Sensor plate	—	
18	Connector A	—	
19	Connector B	—	

Series LG1H

Option Specifications

Actuator Cables (Spare parts)

Cables for connecting actuators and LC8.

How to Order

LG1 – 8 – B **02**

● Cable length

02	2m
03	3m
04	4m
05	5m

Note) This cable is included for the actuator with SMC standard motor.
This is the order code for the same cable as a spare part.

Nonstandard Motor Cables

Cables for connecting nonstandard motors and drivers.
Cable lengths other than those shown below should be arranged by the customer.

How to Order

LJ1 – 1 – **R** 05

● Cable length

5	5m
---	----

● Compatible model

R	R, RK, RM type cable
RP	RP type cable

Cable compatibility table

Model	Manufacturer part no.
LJ1-1-R05	(for motor) ^{Note)} MR-JCCBL5M-L (for encoder)
LJ1-1-RP05	MR-PWS1CBL5M-A2-L (for motor) MR-J3ENCBL5M-A2-L (for encoder)

Note) A cable is not provided for the Mitsubishi Electric Corporation, and therefore the customer should arrange a 4 wire 0.75mm² electric cable.

Please refer to the technical literature of each manufacturer for further details.

Series LG1H

Reference Data

Motor Options 1

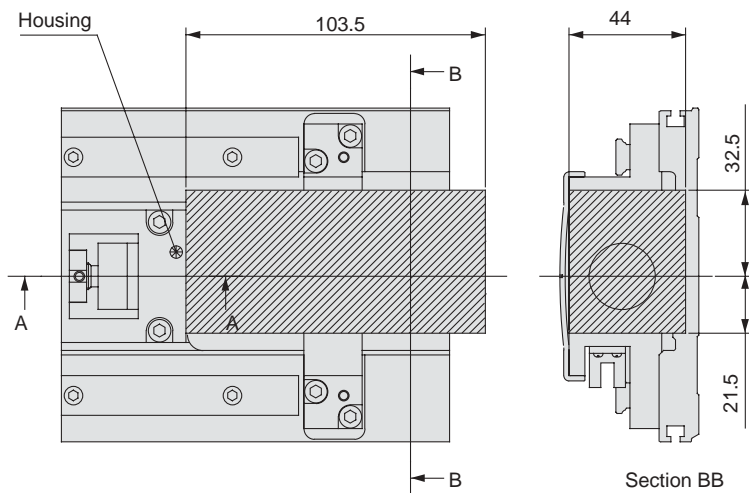
The following motors can be mounted when specified without motor.

Installation motor list

	Motor output (W)	Motor model		Coupling order code as spare parts
LG1□H21G2□□□	100W	MSM011A1A MSM012A1A	Matsushita Electric Industrial Co.,LTD	LJ1-SFC-020WD-8B-8B
LG1□H21R2□□□ LG1□H21RM2□□□ LG1□H21RK2□□□ LG1□H21RP2□□□	100W	HC-PQ13 HC-MFS13 HC-KFS13 HF-KP13	Mitsubishi Electric Corporation	LJ1-SFC-020WD-8B-8B
LG1□H21Y2□□□	100W	SGM-01B312 SGM-01A312	Yaskawa Electric Corporation	LJ1-SFC-020WD-8B-8B
		R88M-W10030L-S1 R88M-W10030H-S1	OMRON Corporation	

Note) The suitable coupling is included when order actuator without motor.

Nonstandard Motor Mounting Dimensions / LG1H21(with Coupling)

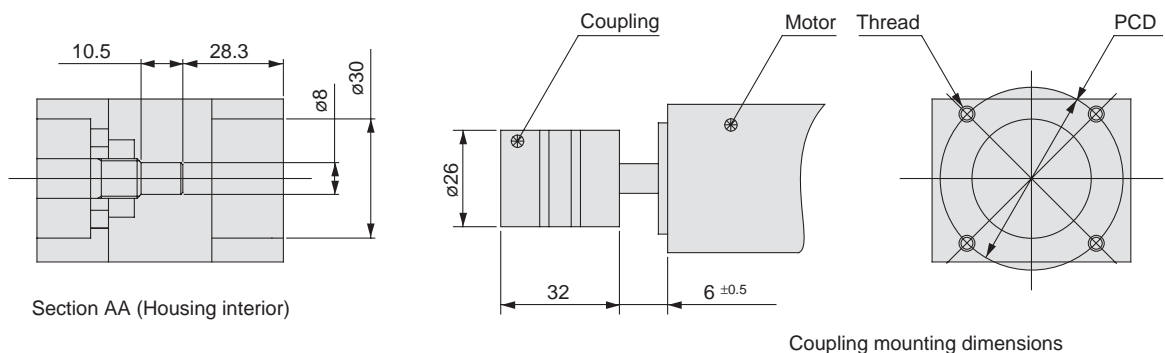


Motor mounting area dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M4	M3
Effective thread length (mm)	8	6
Quantity	2	4
PCD	46	45

Motor mounting area

Note) When mounting the coupling to the motor, mount within the limits of the dimensions shown to the left.



Coupling mounting dimensions

Series LG1 Electric Actuator

Allowable Dynamic Moment

The table is subjected to moment in various directions, depending on the work load point. Design should be such that the amount of work overhang stays within the ranges shown in the graphs below.

W: Work load (kg)

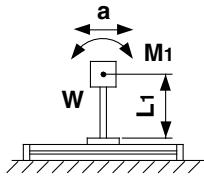
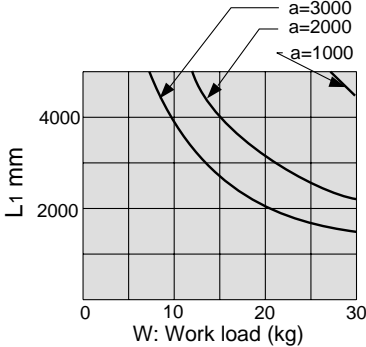
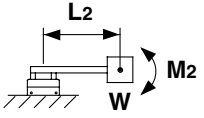
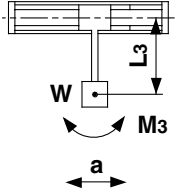
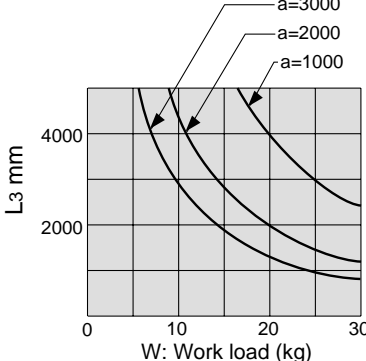
L₁, L₂: Amount of overhang to work center of gravity (mm)

a: Table acceleration (mm/s²)

Use of graphs

- 1) Determine the model
- 2) Determine the mounting position
Confirm horizontal mounting or side mounting.
- 3) Confirm amount of overhang.

Operating conditions should be such that the work load and amount of overhang for each component of moment (pitching, yawing, rolling) fall within the ranges shown in the graphs.

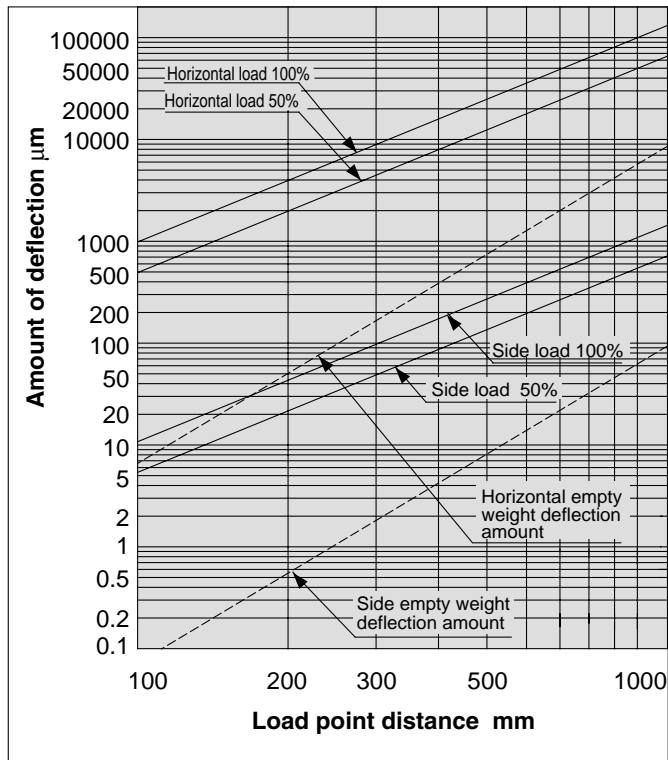
Mounting position		Model	LG1H21
Direction of load movement			
Pitching		Horizontal Side	
		Horizontal Side	
Yawing		Horizontal Side	

Series LG1 Electric Actuator Deflection Data

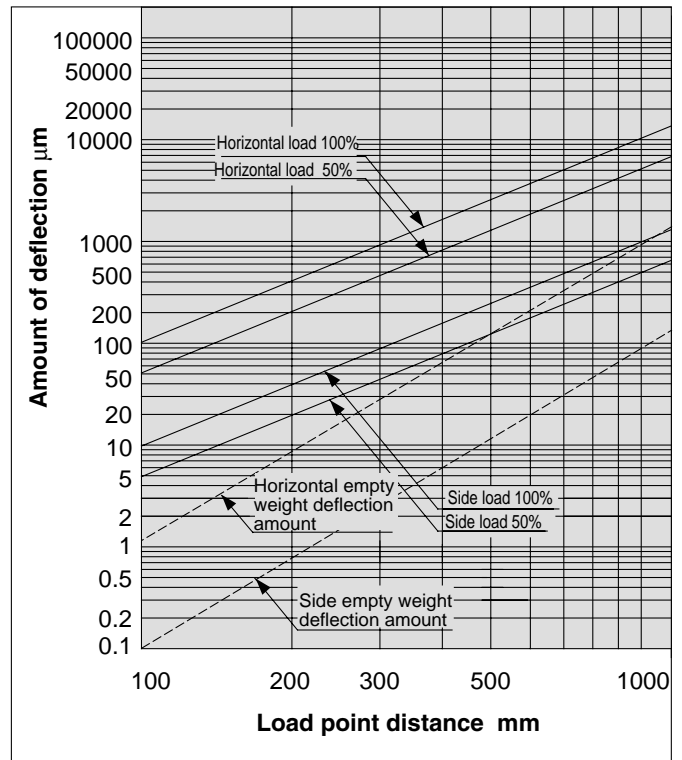
Deflection Data

The load and the amount of deflection at load point W are shown in the graphs below.

LG1H



LG1TH



With single end support and table moved to the end of the stroke

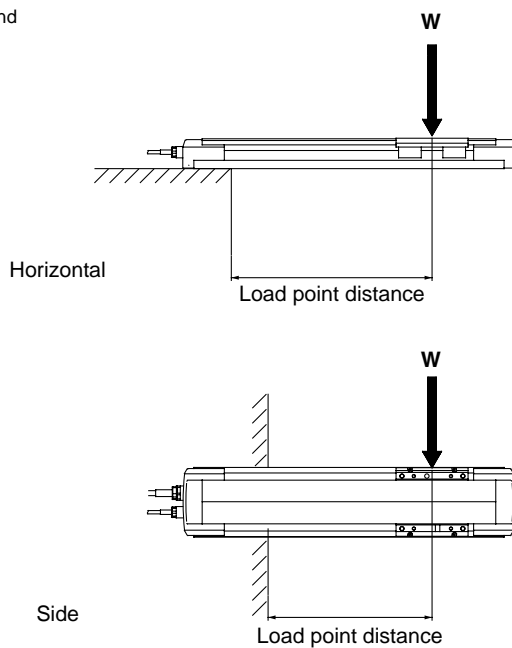


Photo Micro Sensor (OMRON Corporation)

Ratings

Power supply voltage	5 to 24VAC $\pm 10\%$, ripple (p-p)10% or less
Current consumption	35mA or less
Control output	5 to 24VAC, Load current (1c)100mA, Residual voltage 0.8V or less Load current (1c) 40mA, Residual voltage 0.4V or less
Ambient operating temperature	Operation: -25 to 55°C (Storage: -30 to 80°C)
Ambient operating humidity	Operation: 5 to 85%RH (Storage: 5 to 95%RH)



Note) This sensor is a normally ON when shaded type, however, it can be used as an ON when lighted type by shorting the L and (+) terminals.

Sensor spare part numbers

	SMC Order Number	Note	OMRON Part. no.
Photo micro sensor ^{Note 1)}	LTF-SSSX-1	NPN ^{Note 2)}	EE-SX674
	LTF-SSSXP-1	PNP ^{Note 3)}	EE-SX674P
Photo micro sensor cable	LJ1-EE-1010	2m ^{Note 4)}	EE-1010

Note 1) The bolt and bracket for mounting with SMC order number.

Note 2) The sensors are included with the SMC standard motor.

Note 3) These sensors are for use with non-standard motor only.

Note 4) This cable is included with the SMC order number for the photo micro sensor.

Output section circuit

Operating state of output transistor	ON when lighted	ON when shaded
Output circuit	<p>NPN</p> <p>Note 2) When used with voltage output, be certain to install a resistor at RL and use Load 2. To determine a standard for the resistor, refer to the correct usage on page 36.</p>	
	<p>PNP</p>	
Timing chart	<p>(With L and (+) shorted)</p>	<p>(With L and (+) disconnected)</p>

Frame-type Linear Guide

Series LTF6

Horizontal Mount Type Motor Output: 100 W

How to Order

LTF6 RE1 P F 100 X10 Q

• CE certified

• Motor type ^{Note 3)}

Nil	Standard motor
X10	Nonstandard motor

• Standard motor ^{Note 3)}

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included. Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 91.

• Limit switches for non-standard motors

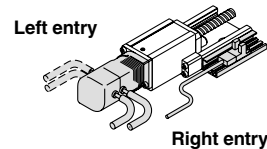
Nil	Without switch and switch rail
A	Photo micro sensor rail 1 pc.
B	Proximity switch switch rail 1 pc.

Dog fittings for switch are attached to all types except type "Nil". Switches need to be ordered separately. See pages 97 to 99 for details.

• Motor/switch entry direction

Nil	Without motor, switch and switch rail
R	Motor straight, motor cable, switch and switch rail located on the right
L	Motor straight, motor cable, switch and switch rail located on the left

Motor/switch entry direction



• Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm

• Screw lead

F	6mm
H	10mm

• Lead screw type

P	Ground ball screw
N	Rolled ball screw

Motor/Driver specifications

Symbol	Motor and Driver Specification			Power supply voltage
	Manufacturer	Motor Model	Driver model	
8E1	SMC standard motor	100W	—	110/115VAC
8E2			—	200/230VAC
RE1	Mitsubishi Electric Corporation ^{Note 2)}	HC-PQ13	MR-C10A1-UE	110/115VAC
RE2		HC-PQ13	MR-C10A-UE	200/230VAC
RE9		HC-PQ13	—	—
RE0 ^{Note 1)}		—	—	—
RME1		HC-MFS13	MR-J2S-10A1	110/115VAC
RME2		HC-MFS13	MR-J2S-10A	200/230VAC
RME9		HC-MFS13	—	—
RME0 ^{Note 1)}		—	—	—
RKE1		HC-KFS13	MR-J2S-10A1	110/115VAC
RKE2	HC-KFS13	MR-J2S-10A	200/230VAC	
RKE9	HC-KFS13	—	—	
RKE0 ^{Note 1)}	—	—	—	
RPE1	HF-KP13	MR-J3-10A1	110/115VAC	
RPE2	HF-KP13	MR-J3-10A	200/230VAC	
RPE9	HF-KP13	—	—	
RPE0 ^{Note 1)}	—	—	—	
GE0 ^{Note 1)}	Matsushita Electric Industrial Co., Ltd. ^{Note 2)}	—	—	—
YE0 ^{Note 1)}	Yaskawa Electric Corporation ^{Note 2)}	—	—	—

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on pages 94 and 95.

For the dimensions of the motor mounting area, refer to the dimensions on pages 94 and 95.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

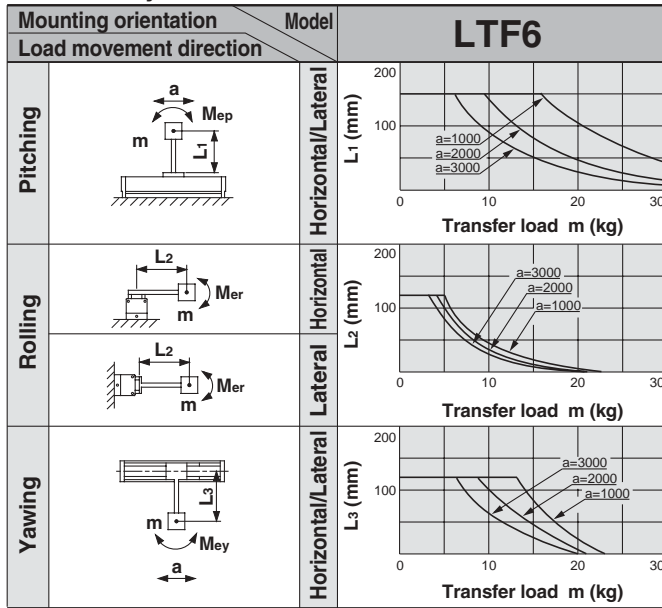
* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Specifications

Stroke (mm)	100	200	300	400	500	600
Weight (without motor) (kg)	1.7	2.1	2.6	3.1	3.6	4.1
Operating temperature range (°C)	5 to 40 (with no condensation)					
Maximum work load (kg)	Ball screw	6mm	30			
		10mm	15			
Maximum speed (mm/s)	Ball screw	6mm	300			230
		10mm	500			390
Repeatable positioning accuracy (mm)	Ball screw	Rolled	±0.05			
		Ground	±0.02			
Motor output	AC servomotor (100W)					
Lead screw	Ball screw	Rolled	ø10mm, 6mm lead, 10mm lead			
		Ground	ø10mm, 6mm lead, 10mm lead			

Allowable Moment (N·m)

Allowable dynamic moment



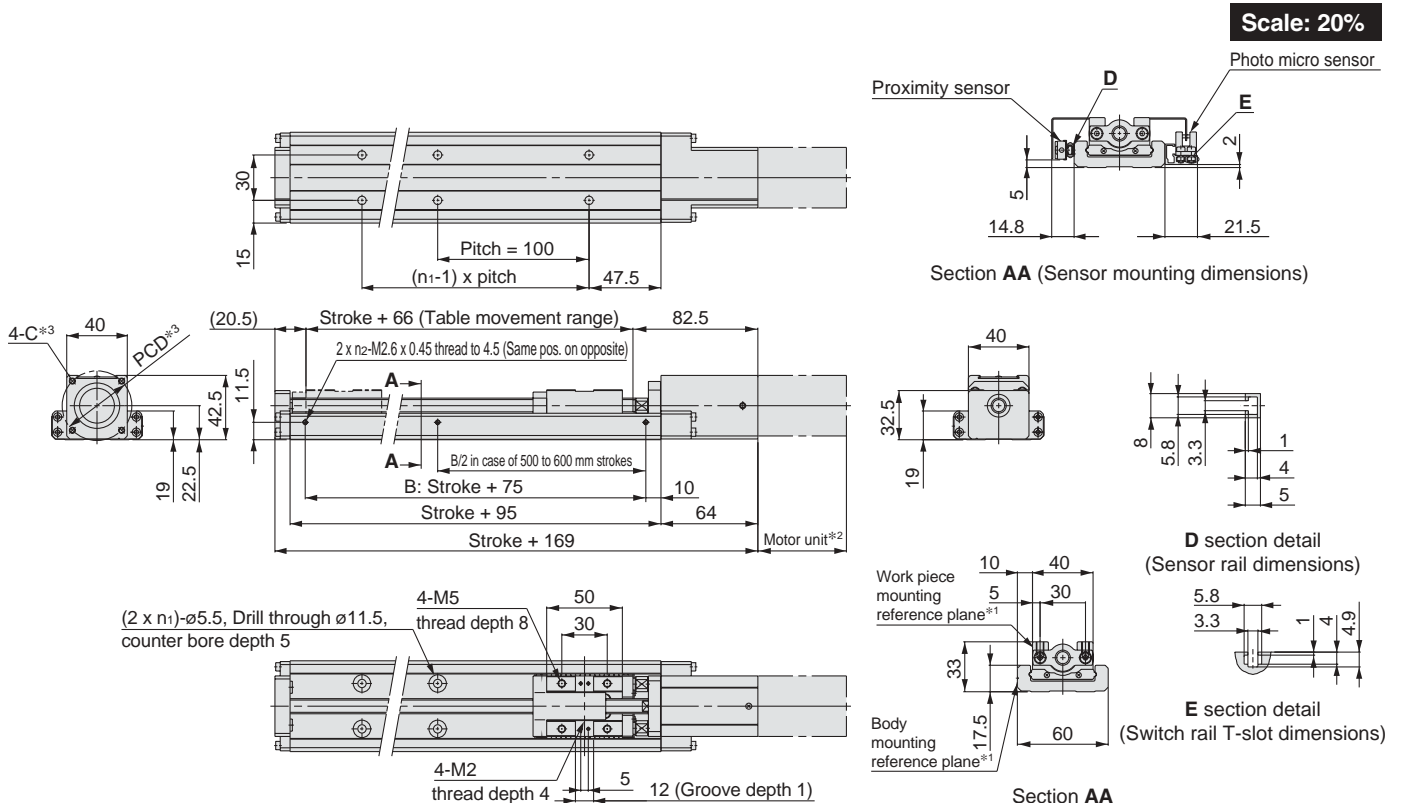
m : Transfer load (kg)
a : Work piece acceleration (mm/s²)
Me : Allowable dynamic moment
L : Overhang to work piece center of gravity (mm)

Motor length (mm)

SMC standard motor	89.5
HC-PQ13	86.5
HC-MFS13/KFS13	96.5
HF-KP13	82.4

Refer to page 96 for deflection data.

Dimensions/LTF6□E□PF(X10)



Model	Stroke	n ₁	n ₂
LTF6□□□-100-□□-□□-Q	100	2	1
LTF6□□□-200-□□-□□-Q	200	3	1
LTF6□□□-300-□□-□□-Q	300	4	1
LTF6□□□-400-□□-□□-Q	400	5	1
LTF6□□□-500-□□-□□-Q	500	6	2
LTF6□□□-600-□□-□□-Q	600	7	2

*1. The body and work piece mounting reference planes are to be used as guidelines for equipment mounting. Refer to page 93 for the mounting procedure.

*2. For the motor length, see table above.

*3. For the dimensions of the motor mounting position, refer to the dimensions on page 94 for the guidelines for assembly and designing.

Frame-type Linear Guide

Series LTF8

Horizontal Mount Type Motor Output: 200 W

How to Order

LTF8 RF1 P H 100 X10 Q

Motor/Driver specifications

Symbol	Motor and Driver Specification			Power supply voltage
	Manufacturer	Motor Model	Driver model	
8F1	SMC standard motor	200W	—	110/115VAC
8F2			—	200/230VAC
RF1	Mitsubishi Electric Corporation	HC-PQ23	MR-C20A1-UE	110/115VAC
RF2		HC-PQ23	MR-C20A-UE	200/230VAC
RF9		HC-PQ23	—	—
RF0 (Note 1)		—	—	—
RMF1		HC-MFS23	MR-J2S-20A1	110/115VAC
RMF2		HC-MFS23	MR-J2S-20A	200/230VAC
RMF9		HC-MFS23	—	—
RMF0 (Note 1)		—	—	—
RKF1		HC-KFS23	MR-J2S-20A1	110/115VAC
RKF2	HC-KFS23	MR-J2S-20A	200/230VAC	
RKF9	HC-KFS23	—	—	
RKF0 (Note 1)	—	—	—	
RPF1	HF-KP23	MR-J3-20A1	110/115VAC	
RPF2	HF-KP23	MR-J3-20A	200/230VAC	
RPF9	HF-KP23	—	—	
RPF0 (Note 1)	—	—	—	
GF0 (Note 1)	Matsushita Electric Industrial Co., Ltd.	—	—	—
YF0 (Note 1)	Yaskawa Electric Corporation	—	—	—

Note 1)

Motor and driver are not supplied.

Motor mounting holes and coupling are supplied for the selected motor type.

Refer to the motor compatibility table on page 94 and 95.

For the dimensions of the motor mounting area, refer to the dimensions on pages 94 and 95.

Note 2)

Non-standard motor (from general servomotor manufacturer)

* The motor and driver of Mitsubishi Electric Corporation can be included when specified.

* The LC8 driver for SMC standard motor needs to be ordered separately.

* For motors of Matsushita Electrical Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc...

Specifications

Stroke (mm)	100	200	300	400	500	600	700	800	900	1000
Weight (without motor) (kg)	3.4	4.3	5.1	6.0	6.8	7.7	8.5	9.4	10.2	11.1
Operating temperature range (°C)	5 to 40 (with no condensation)									
Maximum work load (kg)	Ball screw	10mm	50							
		20mm	25							
Maximum speed (mm/s)	Ball screw	10mm	500				440	350	290	240
		20mm	1000				890	710	580	480
Repeatable positioning accuracy (mm)	Ball screw	Rolled	±0.05							
		Ground	±0.02							
Motor output	AC servomotor (200W)									
Lead screw	Ball screw	Rolled	ø15mm, 10mm lead, 20mm lead							
		Ground	ø15mm, 10mm lead, 20mm lead							

• CE certified

• Motor type (Note 3)

Nil	Standard motor
X10	Nonstandard motor

• Standard motor (Note 3)

Cable length

2	2m
3	3m
4	4m
5	5m

Note 3) For SMC standard motors: The cable to connect the motor and driver is included.

Please specify the cable length. For Non-standard motors: The cable is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 91.

• Limit switches for non-standard motors

Nil	Without switch and switch rail
A	Photo micro sensor rail 1 pc.
B	Proximity switch switch rail 1 pc.

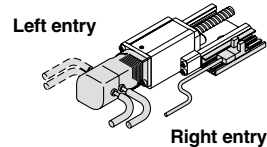
Dog fittings for switch are attached to all types except type "Nil".

Switches need to be ordered separately. See pages 97 to 99 for details

• Motor/switch entry direction

Nil	Without motor, switch and switch rail
R	Motor straight, motor cable, switch and switch rail located on the right
L	Motor straight, motor cable, switch and switch rail located on the left

Motor/switch entry direction



• Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

• Screw lead

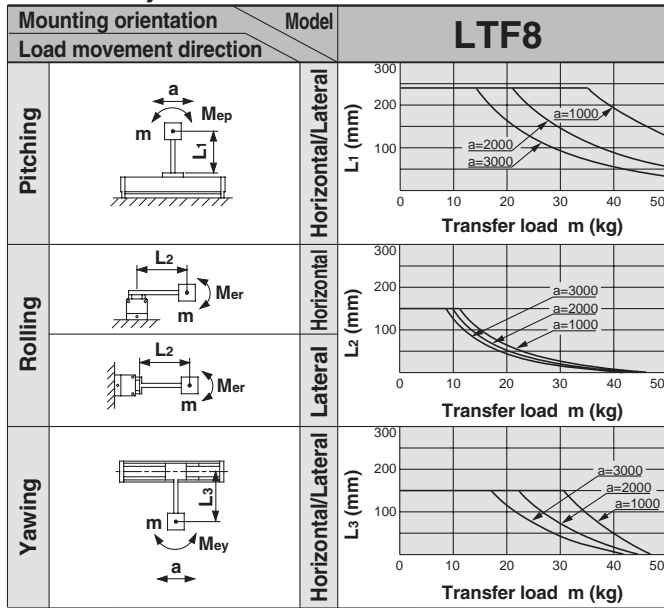
H	10mm
L	20mm

• Lead screw type

P	Ground ball screw
N	Rolled ball screw

Allowable Moment (N·m)

Allowable dynamic moment



m : Transfer load (kg)
 a : Work piece acceleration (mm/s²)
 M_e : Allowable dynamic moment
 L : Overhang to work piece center of gravity (mm)

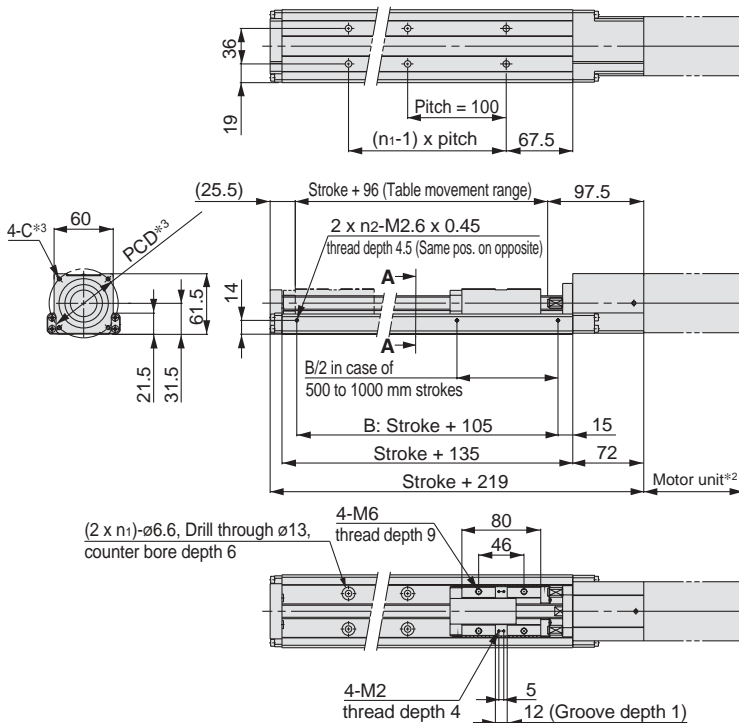
Motor Length (mm)

Motor Model	Motor Length (mm)
SMC standard motor	97
HC-PQ23	89
HC-MFS23/KFS23	99.5
HF-KP23	76.6

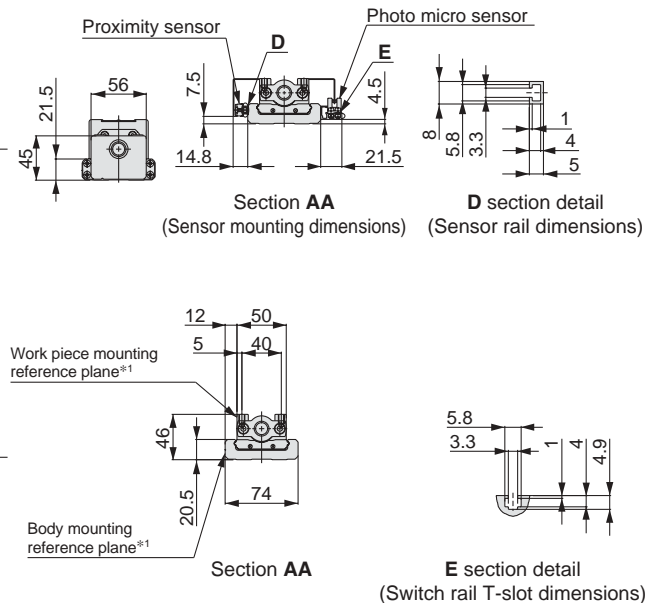
Refer to page 96 for deflection data.

Dimensions/LTF8□F□PH(X10)

Scale: 13%



- *1. The body and work piece mounting reference planes are to be used as guidelines for equipment mounting. Refer to page 93 for the mounting procedure.
- *2. For the motor length, see table above.
- *3. For the dimensions of the motor mounting position, refer to the dimensions on page 95 for the guidelines for assembly and designing.



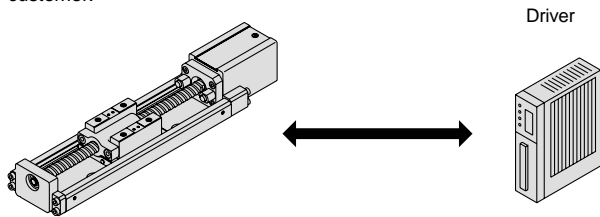
Model	Stroke	n ₁	n ₂
LTF8□□□-100-□□-□□-Q	100	2	1
LTF8□□□-200-□□-□□-Q	200	3	1
LTF8□□□-300-□□-□□-Q	300	4	1
LTF8□□□-400-□□-□□-Q	400	5	1
LTF8□□□-500-□□-□□-Q	500	6	2

Model	Stroke	n ₁	n ₂
LTF8□□□-600-□□-□□-Q	600	7	2
LTF8□□□-700-□□-□□-Q	700	8	2
LTF8□□□-800-□□-□□-Q	800	9	2
LTF8□□□-900-□□-□□-Q	900	10	2
LTF8□□□-1000-□□-□□-Q	1000	11	2

Series LTF

Nonstandard Motor Cables

These are cables for connecting non-standard motors and drivers. Cable lengths other than those shown below should be arranged by the customer.



How to order

LJ1 - 1 - R 05

Compatible model

R	R, RK, RM type cable
RP	RP type cable

Cable length

5	5m
----------	----

Applicable cables

LTF (non-standard motor)

Model	Manufacturer part no.
LJ1-1-R05	(for motor) ^{Note} MR-JCCBL5M-L (for encoder)
LJ1-1-RP05	MR-PWS1CBL5M-A2-L (for motor) MR-J3ENCBL5M-A2-L (for encoder)

Note) A cable is not provided for the Mitsubishi Electric Corporation, and therefore the customer should arrange a 4 wire 0.75mm² electric cable.

Please refer to the technical literature of each manufacturer for further details.

Standard Motor Cables (Spare parts)

Cables for connecting actuators and LC8.

How to Order

LJ1 - 8 - B 05

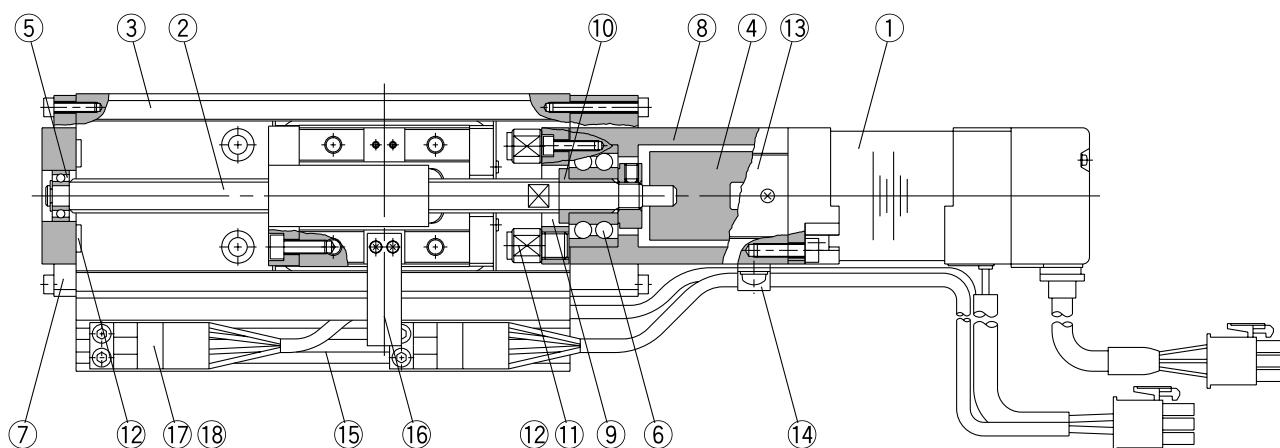
Cable length

02	2m
03	3m
04	4m
05	5m

Note) This cable is included for the actuator with SMC standard motor. This is the order code for the same cable as a spare part.

Construction

LTF6/LTF8



Parts list

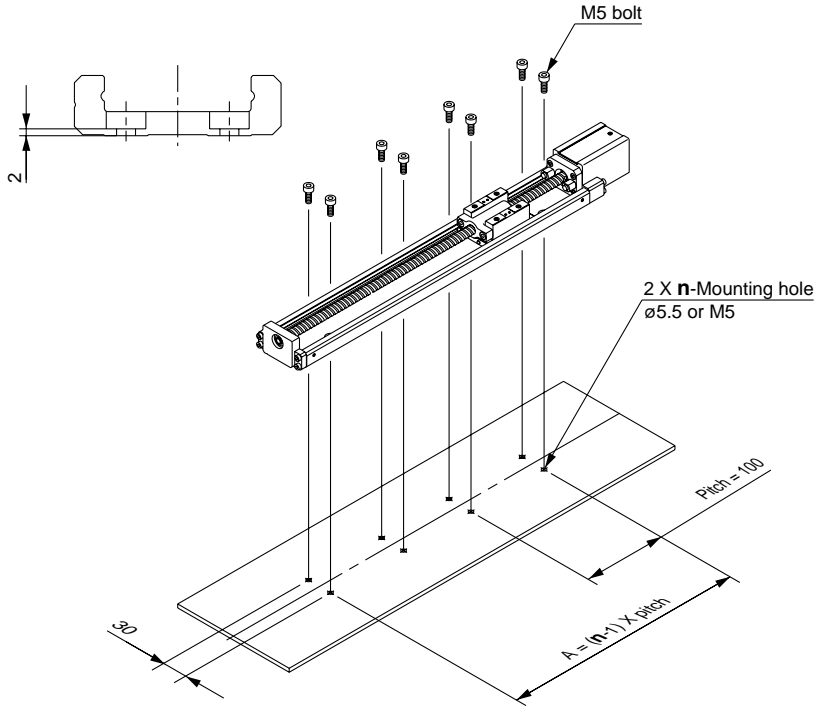
No.	Description	Material	Note
1	AC servomotor	—	100W/200W
2	Lead screw	—	Ball screw
3	Frame-type linear guide	—	
4	Coupling	—	
5	Bearing R	—	
6	Bearing F	—	
7	Housing A	Aluminum alloy	
8	Housing B	Aluminum alloy	
9	Bearing retainer	Carbon steel	

No.	Description	Material	Note
10	Spacer	Stainless steel	
11	Bumper bolt	Alloy steel	
12	Bumper	Resin	
13	Housing plate	Mild steel	
14	Cable clip	Resin	
15	Photo micro sensor rail	Aluminum alloy	
16	Dog fitting for switch	Mild steel	
17	Photo micro sensor		
18	Connector cable for sensor		

Series LTF

Top Mount

LTF6

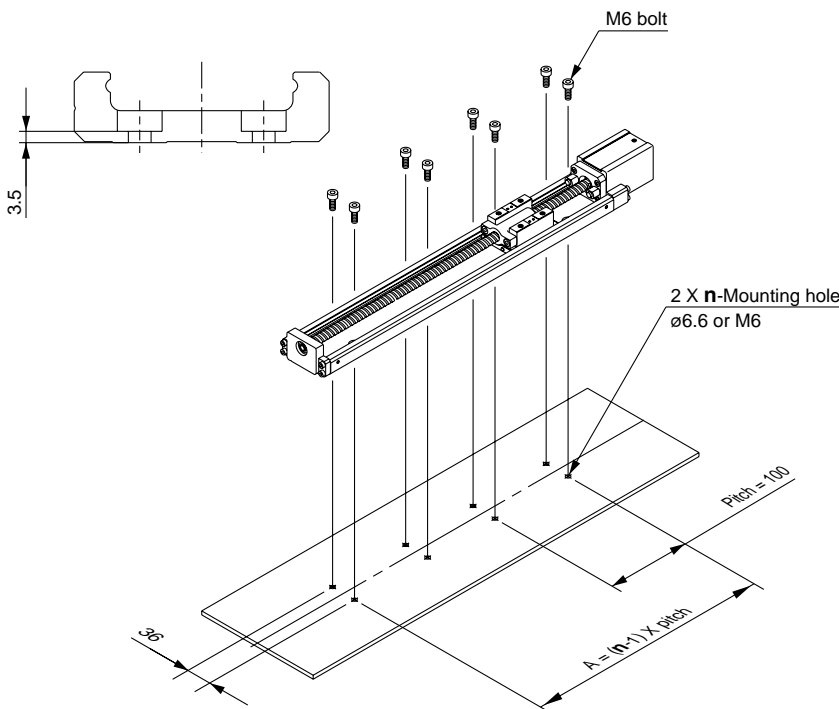


Mounting hole quantity

Stroke	n	Quantity
100	2	4
200	3	6
300	4	8
400	5	10
500	6	12
600	7	14

Note) When designing equipment, be sure not to interfere the motor with a mounting surface because the motor section may stick out of the bottom surface for mounting the product.

LTF8



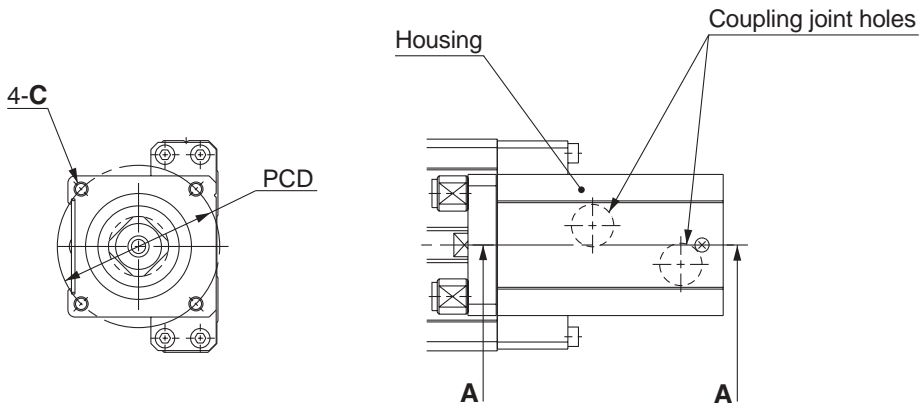
Mounting hole quantity

Stroke	n	Quantity	Stroke	n	Quantity
100	2	4	600	7	14
200	3	6	700	8	16
300	4	8	800	9	18
400	5	10	900	10	20
500	6	12	1000	11	22

Note) When designing equipment, be sure not to interfere the motor with a mounting surface because the motor section may stick out of the bottom surface for mounting the product.

Nonstandard Motor Mounting Dimensions

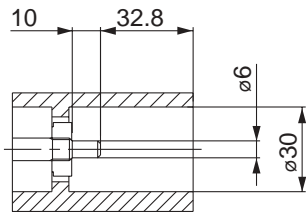
LTF6



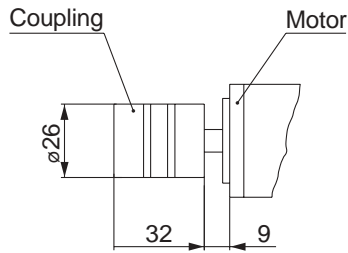
Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
C (Thread size)	M4	M3
Effective thread length (mm)	8	6
Quantity	2	4
P.C.D.	46	45

* When mounting a coupling on the motor, mount it within the dimensional range shown on the left.



Section AA (Housing interior)

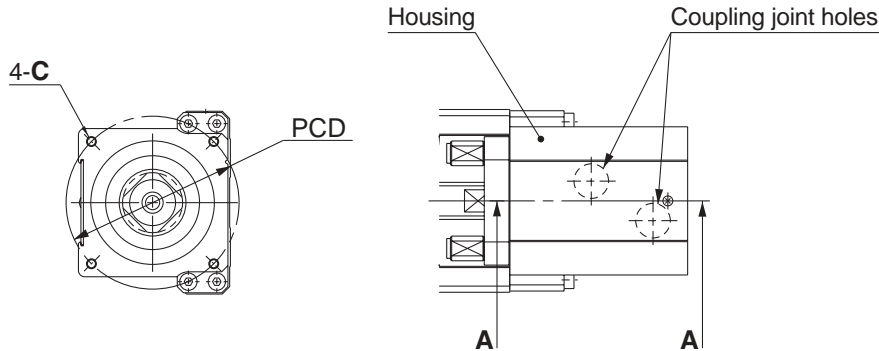


Coupling mounting dimensions*

Series LTF

Nonstandard Motor Mounting Dimensions

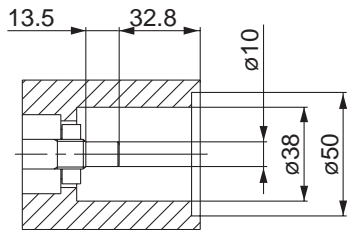
LTF8



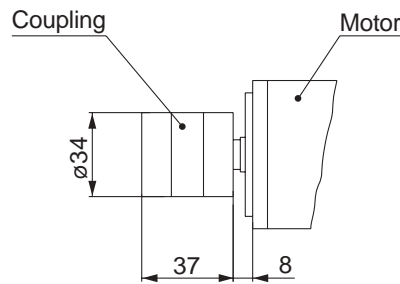
Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
C (Thread size)	M5	M4
Effective thread length (mm)	10	8
Quantity	4	4
P.C.D.	70	70

* When mounting a coupling on the motor, mount it within the dimensional range shown on the left.



Section AA (Housing interior)



Coupling mounting dimensions*

Installation motor list

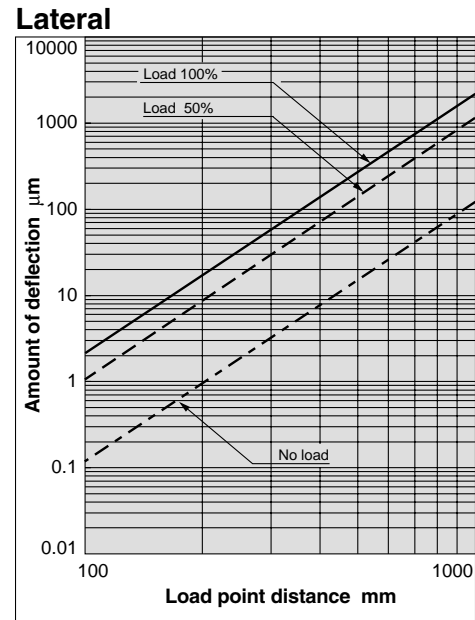
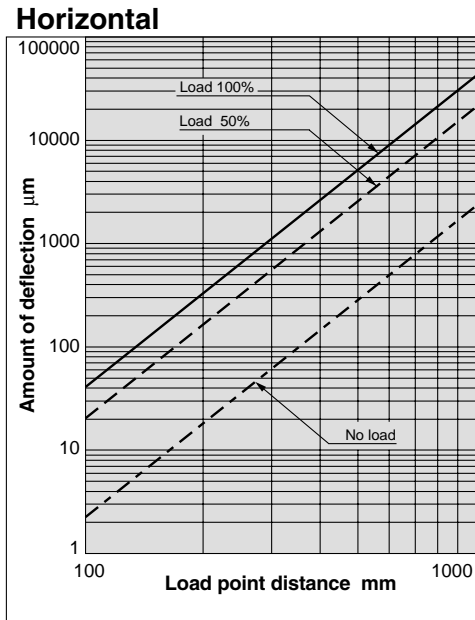
	Motor output (W)	Motor model		Coupling order code for spare parts	
LTF6GE□□□	100W	MSM011A1A MSM012A1A	Matsushita Electric Industrial Co.,LTD	LJ1-SFC-020WD-6B-8B	
LTF8GE□□□	200W	MSM021A1A MSM022A1A		LJ1-SFC-030WD-10B-11B	
LTF6RE□□□ LTF6RME□□□ LTF6RKE□□□ LTF6RPE□□□	100W	HC-PQ13 HC-MFS13 HC-KFS13 HF-KP13	Mitsubishi Electric Corporation	LJ1-SFC-020WD-6B-8B	
LTF8RE□□□ LTF8RME□□□ LTF8RKE□□□ LTF8RPE□□□	200W	HC-PQ23 HC-MFS23 HC-KFS23 HF-KP23			LJ1-SFC-030WD-10B-14B
LTF6YE□□□	100W	SGM-01B312 SGM-01A312		Yaskawa Electric Corporation	LJ1-SFC-020WD-6B-8B
		R88M-W10030L-S1 R88M-W10030H-S1		OMRON Corporation	
LTF8YE□□□	200W	SGM-02B312 SGM-02A312	Yaskawa Electric Corporation	LJ1-SFC-030WD-10B-14B	
		R88M-W20030L-S1 R88M-W20030H-S1	OMRON Corporation		

Note) The suitable coupling is included when order actuator without motor.

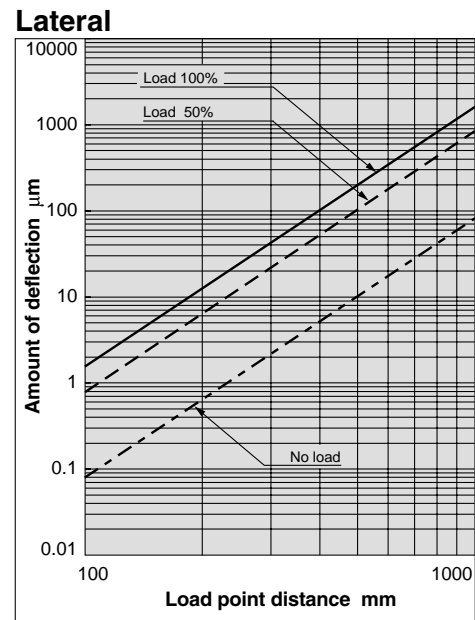
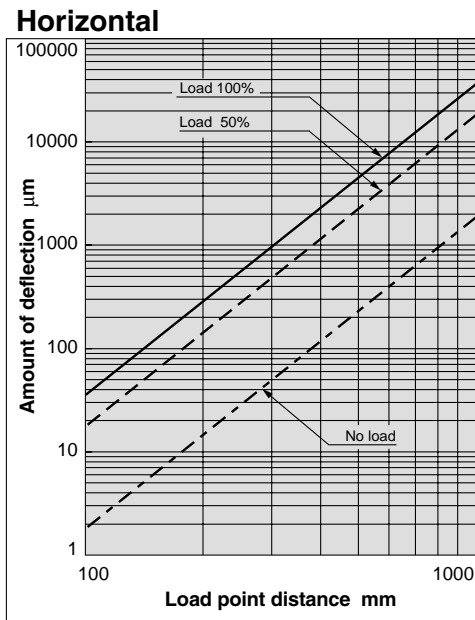
Deflection Data

The load and the amount of deflection at load point W are shown in the graphs below for each series.

LTF6



LTF8



With single end support and table moved to the end of the stroke

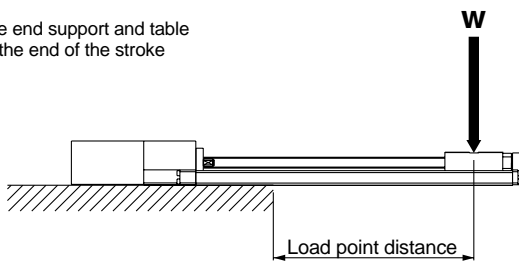


Figure 1. Horizontal

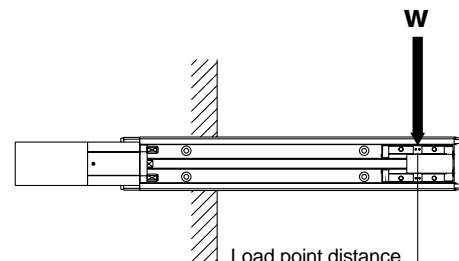


Figure 2. Lateral

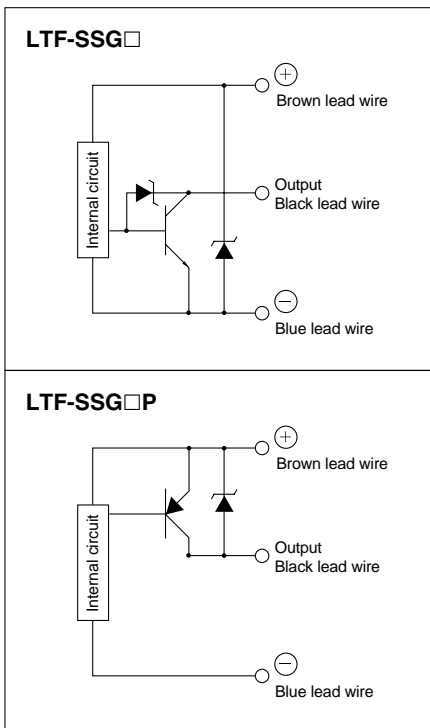
Series LTF

Proximity Switches

Switch specifications (SUNX Corporation)

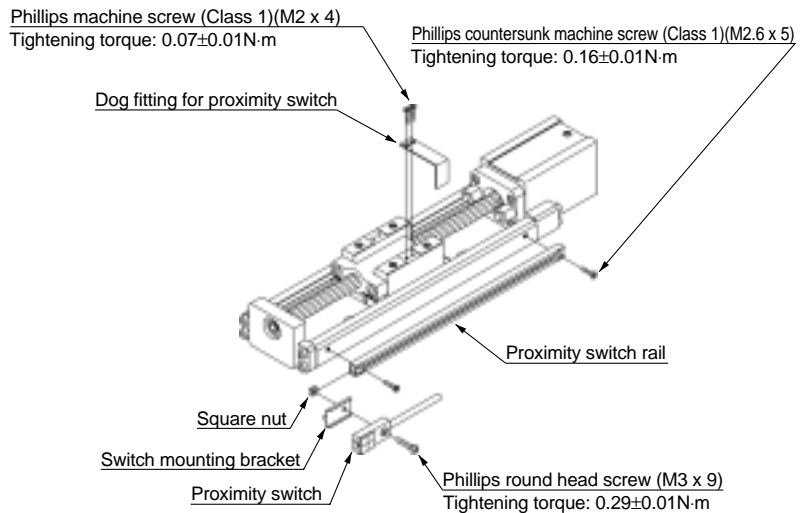
Part no.		LTF-SSG□	LTF-SSG□P
Repeatability		Direction of detecting axis, Perpendicular to detecting axis: 0.04mm or less	
Power supply voltage		12 to 24V DC ±10%, Ripple P-P 10% or less	
Current consumption		15mA	
Output		NPN Maximum load current: 100mA Maximum applied voltage: 30V DC Residual voltage: 1V or less (At 100 mA inrush current) 0.4V or less (At 16 mA inrush current)	PNP Maximum load current: 100mA Maximum applied voltage: 30V DC Residual voltage: 1V or less (At 100 mA inrush current) 0.4V or less (At 16 mA inrush current)
Maximum response frequency		500Hz	
Indicator light		Red LED (lights up when ON)	
Environmental resistance	Ambient temperature	-10° to 55°C	
	Ambient humidity	45 to 85% RH	
	Noise resistance	Power line: 240Vp, pulse width of 0.5μs	
Detecting distance fluctuation	Temperature characteristics	Within +15/-10% of detecting distance at 20°C within ambient temperature range	
	Voltage characteristics	Within ±2% with ±10% fluctuation of operating voltage	

Internal circuit



Be sure to use the mounting screws included, and mount the proximity switch as shown in the drawing to the right. Mount the dog fitting for proximity switch as illustrated to the right. Always use the proper tightening torque and use a thread locking agent on screws to prevent loosening.

Dog fitting for proximity switch mounting



Switch part numbers (Proximity switch)

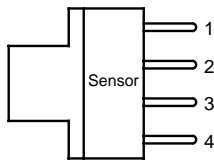
	Order Number	Note	Sunx Part N°
Proximity switch ^{Note 1)}	LTF-SSGA	N.O.(A contact) NPN	GXL-N12FT
	LTF-SSGB	N.C.(B contact) NPN	GXL-N12FTB
	LTF-SSGAP	N.O.(A contact) PNP	GXL-N12FT-P
	LTF-SSGBP	N.C.(B contact) PNP	GXL-N12FTB-P
Proximity switch rail ^{Note 1)}	LTF-SR6-100	for LTF6 Stroke:100	-
	LTF-SR6-200	for LTF6 Stroke:200	-
	LTF-SR6-300	for LTF6 Stroke:300	-
	LTF-SR6-400	for LTF6 Stroke:400	-
	LTF-SR6-500	for LTF6 Stroke:500	-
	LTF-SR6-600	for LTF6 Stroke:600	-
	LTF-SR8-100	for LTF8 Stroke:100	-
	LTF-SR8-200	for LTF8 Stroke:200	-
	LTF-SR8-300	for LTF8 Stroke:300	-
	LTF-SR8-400	for LTF8 Stroke:400	-
	LTF-SR8-500	for LTF8 Stroke:500	-
	LTF-SR8-600	for LTF8 Stroke:600	-
LTF-SR8-700	for LTF8 Stroke:700	-	
LTF-SR8-800	for LTF8 Stroke:800	-	
LTF-SR8-900	for LTF8 Stroke:900	-	
LTF-SR8-1000	for LTF8 Stroke:1000	-	
Dog fitting for proximity switch ^{Note 1)}	LTF-DG6-GX	for LTF6	-
	LTF-DG8-GX	for LTF8	-

Note 1) The bolt and bracket for mounting are included.

Photo Micro Sensor (OMRON Corporation)

Ratings

Power supply voltage	5 to 24VAC $\pm 10\%$, ripple (p-p)10% or less
Current consumption	35mA or less
Control output	5 to 24VAC, Load current (Ic)100mA, Residual voltage 0.8V or less Load current (Ic) 40mA, Residual voltage 0.4V or less
Ambient operating temperature	Operation: -25 to 55°C (Storage: -30 to 80°C)
Ambient operating humidity	Operation: 5 to 85%RH (Storage: 5 to 95%RH)



Terminal layout

1	Brown	Vcc (+)
2	White	L (Note)
3	Black	OUTPUT
4	Blue	GND(0V) (-)

Note) This sensor is a normally ON when shaded type, however, it can be used as an ON when lighted type by shorting the L and (+) terminals.

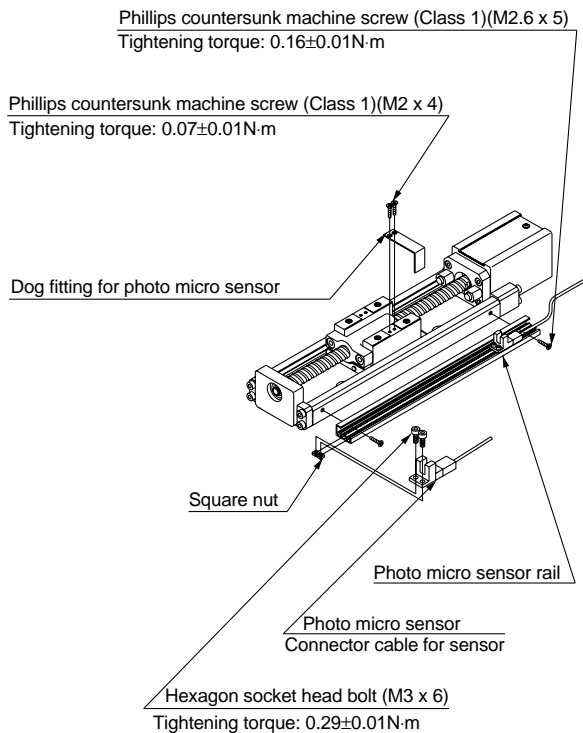
Output section circuit

Operating state of output transistor	ON when lighted	ON when shaded
Output circuit	<p>NPN</p> <p>Note 2) When used with voltage output, be certain to install a resistor at RL and use Load 2. To determine a standard for the resistor, refer to the correct usage on page 36.</p>	
	<p>PNP</p>	
Timing chart	<p>(With L and (+) shorted)</p>	<p>(With L and (+) disconnected)</p>

Series LTF

Photo Micro Sensor

Dog Fitting for Photo Micro Sensor Mounting



Sensor part numbers (Photo micro sensor)

	SMC Order Number	Note	OMRON Part no.
Photo micro sensor ^{Note 1)}	LTF-SSSX-1	NPN ^{Note 2)}	EE-SX674
	LTF-SSSXP-1	PNP ^{Note 3)}	EE-SX674P
Photo micro sensor cable	LJ1-EE-1010	2m ^{Note 4)}	EE-1010
Photo micro sensor rail ^{Note 1)}	LTF-FR6-100	for LTF6 Stroke:100	-
	LTF-FR6-200	for LTF6 Stroke:200	-
	LTF-FR6-300	for LTF6 Stroke:300	-
	LTF-FR6-400	for LTF6 Stroke:400	-
	LTF-FR6-500	for LTF6 Stroke:500	-
	LTF-FR6-600	for LTF6 Stroke:600	-
	LTF-FR8-100	for LTF8 Stroke:100	-
	LTF-FR8-200	for LTF8 Stroke:200	-
	LTF-FR8-300	for LTF8 Stroke:300	-
	LTF-FR8-400	for LTF8 Stroke:400	-
	LTF-FR8-500	for LTF8 Stroke:500	-
	LTF-FR8-600	for LTF8 Stroke:600	-
	LTF-FR8-700	for LTF8 Stroke:700	-
	LTF-FR8-800	for LTF8 Stroke:800	-
LTF-FR8-900	for LTF8 Stroke:900	-	
LTF-FR8-1000	for LTF8 Stroke:1000	-	
Dog fitting for photo micro sensor ^{Note 1)}	LTF-DG6-SX	for LTF6	-
	LTF-DG8-SX	for LTF8	-

Note 1) The bolt and bracket for mounting are included with SMC order number.

Note 2) The sensors are included with the SMC standard motor.


Note 3) These sensors are for use with non-standard motor only.


Note 4) This cable is included with the SMC order number for the photo micro sensor.




Electric Actuator/Controller/Driver Safety Instructions

These safety instructions are intended to prevent a hazardous situation and/or equipment damage. These instructions indicate the level of potential hazard by a label of "**Caution**", "**Warning**" or "**Danger**". To ensure safety, be sure to observe ISO 10218 Note 1), JISB 8433 Note 2) and other safety practices.

 **Caution:** Operator error could result in injury or equipment damage.

 **Warning:** Operator error could result in serious injury or loss of life.

 **Danger:** In extreme conditions, there is a possible result of serious injury or loss of life.

Note 1) ISO 10218: Manipulating industrial robots - Safety

Note 2) JISB 8433: General Rules for Robot Safety

Warning

1. The compatibility of electric actuators is the responsibility of the person who designs the system or decides its specifications.

Since the products specified here are used in various operating conditions, their compatibility for the specific system must be based on specifications or after analysis and/or tests to meet your specific requirements. The expected performance and safety assurance will be the responsibility of the person who has determined the compatibility of the system. This person should continuously review the suitability of all items specified, referring to the latest catalog information with a view to giving due consideration to any possibility of equipment failure when configuring a system.

2. Only trained personnel should operate this equipment.

Electric actuators can be dangerous if an operator is unfamiliar with them. Assembly, handling or repair of systems using electric actuators should be performed by trained and experienced operators.

3. Do not service machinery/equipment or attempt to remove components until safety is confirmed.

1. Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
2. When equipment is to be removed, confirm the safety process as mentioned above, and shut off the power supply for this equipment.
3. Before machinery/equipment is restarted, confirm that safety measures are in effect.

4. Contact SMC if the product is to be used in any of the following conditions:

1. Conditions and environments beyond the given specifications, or if product is used outdoors.
2. Installation on equipment in conjunction with atomic energy, medical equipment, food and beverages, or safety equipment.
3. An application which has the possibility of having negative effects on people, property or animals, requiring special safety analysis.

5. Prior to use, thoroughly read the "Instruction Manual" and use the product appropriately after first confirming the product's operation with the distributor or SMC.

6. Before using, carefully read the handling cautions described in this catalog.

7. Some products listed in this catalog have limitations to the operating usage and locations. Please confirm the limitations with the distributor or SMC.



Electric Actuator/Precautions 1

Be sure to read before handling.

General

Caution on Handling

Caution

1. In order to ensure proper operation, be certain to read the instruction manual carefully. As a rule, handling or usage/operation other than those contained in the instruction manual are prohibited.
2. If the actuator will be used in an environment where it will be exposed to chips, dust, cutting oil (water, liquids), etc., a cover or other protection should be provided.
3. Operate with cables secured. Avoid bending cables at sharp angles where they enter the actuator, and also be sure that cables do not move easily.

Caution on Design

Warning

1. In cases where dangerous conditions may result from power failure or malfunction of the product, install safety equipment to prevent damage to machinery and human injury. Consideration must also be given to drop prevention with regard to suspension equipment and lifting mechanisms.
2. Consider possible loss of power sources.
Take measures to protect against human injury and machine damage in the event that there is a loss of air pressure, electricity or hydraulic power.
3. Consider emergency stops.
Design so that human injury and/or damage to machinery and equipment will not be caused when machinery is stopped by a safety device under abnormal conditions such as a power outage or a manual emergency stop.
4. Consider the action when operation is restarted after an emergency stop or abnormal stop.
Design the machinery so that human injury or equipment damage will not occur upon restart of operation.

Selection

Warning

1. Confirm the specifications.
The products in this catalog should not be used outside of the range of specifications, since this may cause damage malfunction, etc. (Refer to specifications.)
2. In case of using in 3-axis or more, please contact us for how-to-use and operating conditions prior to selection.

Mounting

Caution

1. Please make sure that cables are not caught by actuator movement.
2. Do not use in locations where there is vibration or impact shock. Contact SMC before using in this kind of environment, as damage may result.
3. Give adequate consideration to the arrangement of wiring, etc., when mounting. If wiring is forced into inappropriate arrangement, this may lead to breaks in the wiring and result in malfunction.

Operating Environment

Caution

1. Avoid use in the following environments.
 1. Locations with a lot of debris or dust, or where chips may enter.
 2. Locations where the ambient temperature exceeds a range of 5 to 40°C.
 3. Locations where the ambient humidity exceeds a range of 10 to 90%.
 4. Locations where corrosive or combustible gases are generated.
 5. Locations where strong magnetic or electric fields are generated.
 6. Locations where direct vibration or impact shock, etc., will be applied to the actuator unit.
 7. Locations where a lot of dusts, water drops and oil drops are applied to a product.

Maintenance

Warning

1. Perform maintenance according to the procedures indicated in the instruction manual.
If handled improperly, malfunction and damage of machinery or equipment may occur.
2. Removal of equipment
When equipment is removed, first confirm that measures are in place to prevent dropping or runaway of driven objects, etc., and then proceed after shutting off the electric power. When starting up again, proceed with caution after confirming that conditions are safe.



Electric Actuator/Precautions 2

Be sure to read before handling.

Actuator

Caution on Design

⚠ Warning

1. There is a possibility of dangerous sudden action by actuators if sliding parts of machinery are twisted due to external forces, etc.

In such cases, human injury may occur, e.g., by catching hands or feet in the machinery, or damage to the machinery itself may occur. Therefore, the machine should be adjusted for smooth operation and designed to avoid such dangers.

2. A protective cover is recommended to minimize the risk of human injury.

If a driven object and moving parts of an actuator pose a danger of human injury, design the structure to avoid contact with the human body.

3. Securely tighten all stationary parts and connected parts of electric actuators so that they will not become loose.

Avoid use in locations where direct vibration or impact shock, etc., will be applied to the body of the actuator.

Operation

⚠ Caution

1. Conduct the following inspection before actuator/controller is operated.

- a) Confirm that the power supply line or each signal line for actuator/driver is not broken.
- b) Confirm that the power supply line or each signal line for actuator/driver is not loosened.
- c) Confirm that the actuator/driver is not mounted loosely.
- d) Confirm that the actuator/driver is operated correctly.
- e) Confirm the function of the emergency stop.

2. Take measures such as installing a fence, etc., to prevent any person from entering the operational area of the actuator/controller and related equipment.

3. If a person should enter an area as previously mentioned 2), take measures to ensure that the emergency stop is controlled by a sensor, etc.

4. In case the actuator/controller is stopped by abnormalities, take necessary measures to prevent danger from related equipment.

5. In case of abnormalities of related equipment, take the necessary measures to prevent danger from an actuator/controller.

6. Take necessary measures to prevent broken or cut power lines or signal lines by pinching, shearing, curling, scratching and grazing.

7. In case there is abnormal heat, fume and flame, etc., cut off the power supply immediately.

8. In the event of an installation, adjustment, inspection or maintenance of an actuator/controller, as well as related equipment, be sure to cut off the power supply and take measures such as locking or safety-lock, etc., so that persons other than workers are not able to restart the operation again. Furthermore, display the information for doing those jobs at the places where anyone can see easily.

Operation

⚠ Caution

9. In case several persons are doing the job, determine the procedure, signs, measures against abnormality and restarting measures in advance. Then let the person who isn't doing the job supervise that job.

Caution on Handling

⚠ Caution

1. The actuator can be used with a load directly applied to it, as long as it is within the allowable range. However, it is necessary to design an appropriate connecting method and use careful alignment when a load with external support and guide mechanisms is connected. Please note that the reference plane for the actuator body mounting should only be used as a guideline to install the body. Never use it as a reference plane to align the entire equipment with external support and guide mechanisms. The longer the stroke is, the larger the variation in the axial center becomes. Therefore, devise a connection method to absorb the variation.
2. Since the bearing parts and parts surrounding the lead screw are adjusted at the time of shipment, do not change the setting of the adjusted parts.
3. The product can be used without lubrication. In case the product is lubricated, special grease is required. Please contact the distributor or SMC.
4. If the electric actuator is repeatedly operated with the short stroke cycles (20 mm for LJ, 10 mm for LX), loss of grease may occur. Therefore, operate the actuator with a full stroke once every scores of cycles.

Mounting

⚠ Caution

1. Do not use until you verify that the equipment can operate properly.
2. The product should be mounted and operated after thoroughly reading the instruction manual and understanding its contents.
3. Do not dent, scratch or cause other damage to the body and table mounting surfaces.
4. When attaching a workpiece, do not apply strong impact shock or a large moment.

This may cause a loss of parallelism in the mounting surfaces, looseness in the guide unit, an increase in operating resistance or other problems.

If an outside force exceeding the allowable moment is applied, this may cause looseness in the guide unit, an increase in sliding resistance or other problems.

5. When connecting a load having an external support or guide mechanism, be sure to select a suitable connection method and perform careful alignment.



Electric Actuator/Precautions 3

Be sure to read before handling.

Driver/Positioning Driver

Caution on Handling

Warning

1. Never touch the driver inside. It will likely lead to an electrical shock or other trouble.
2. Use only the designated combination between motor and controller driver.

Caution

1. Do not disassemble and modify. It may result in the trouble, malfunction, fire, etc.
2. Do not touch for a while when being energized or after cut off the power source because it is high temperature.
3. If a fire or danger against the human being is expected by abnormal heat generation of the product, emitting fume and catching on fire, etc., cut off the power supply for the main body and the system immediately.

Power Supply

Caution

1. In cases where voltage fluctuations greatly exceed the required voltage, a constant voltage transformer, etc., should be used to allow operation within the required range.
2. Use a power supply that has low noise between lines and between power and ground. In cases where noise is high, an isolation transformer should be used.
3. The power supply line to the driver and the interface power supply line to general input/output and control terminals (24 VDC) must be wired separately in different systems.
4. The wire must not be bundled with or arranged in close proximity to the input/output lines of control terminals or encoder signal lines.
5. To prevent surges from lightning, connect a varistor for lightning. Ground the surge absorber for lightning separately from the grounding of the driver.

Grounding

Caution

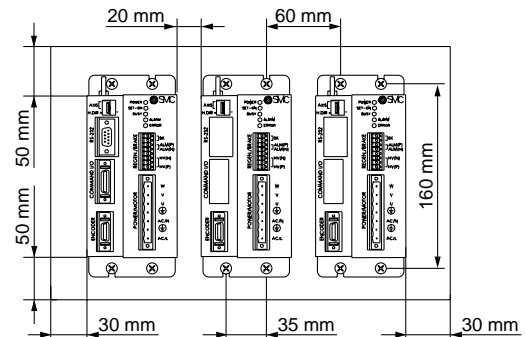
1. Be sure to carry out grounding in order to ensure the noise tolerance of the driver.
2. Dedicated grounding should be used as much as possible. Grounding should be to a type 3 ground. (Ground resistance of 100 Ω or less.)
3. Use a wire with a sectional area of 2 mm² or larger for grounding. Grounding should be as close as possible to the driver, and the ground wires should be as short as possible.
4. In the unlikely event that malfunction is caused by the ground, it may be disconnected.

Back page 4

Mounting

Caution

1. Mount the driver on incombustible materials. Mounting on combustible materials directly or mounting closely to it may lead to a fire.
2. Consider the cooling period, so that the operating temperature of main body should be within the range of specifications. Also, allow enough distance from each side of the main body, construction and the parts.



3. Avoid placing with large-sized solenoid contact apparatus or vibrating source such as no fuse insulator and then make a separate panel or mount in the distance.
4. The construction of this product enables the connectors to be inserted or removed after installation.
5. If there are concave or convex or distorted parts on the mounting face, an unreasonable force can be applied to the frame or case, which can cause trouble. Mount on the flat face.

Wiring

Danger

1. Adjustment, installation, or wiring changes should be conducted after power supply to this product is turned off. Otherwise, there is a possibility of an electrical shock.

Caution

1. Wiring should be done correctly.
For each terminal, voltages other than stipulated in the operation manual should not be applied. Otherwise, the product may break.
2. Connect the connector securely.
3. Treat the noise securely.
If the noise is at the same wavelength as the signal lines, it will lead to malfunction. As a countermeasure, separate the high and low electrical lines and shorten the length of wiring, etc.
4. In the event of connecting the electric actuator's motor power line and encoder signal line, use adequate care in identifying the lines and the connector's direction.



Electric Actuator/Precautions 4

Be sure to read before handling.

Controller/Driver

Wiring

Caution

5. Never disassemble the motor power lines for the electric actuator and the encoder signal lines. Also, in the event of using a cable prepared by customer (user), use it only after confirming the cable size can provide enough electricity as stipulated in the instruction manual and that there is no noise effect.
6. The motor power lines for the electric actuators and the encoder signal lines, AC lines, as well as other high voltage lines, should not be bundled together. They should be placed as far away as possible.
7. Terminals for controlling, for general-purpose input/output, motor power lines and encoder signal lines should never be inserted or pulled out while the main power supply for the controller is ON.


EUROPEAN SUBSIDIARIES:

Austria

SMC Pneumatik GmbH (Austria).
Girakstrasse 8, A-2100 Korneuburg
Phone: +43 2262-62280, Fax: +43 2262-62285
E-mail: office@smc.at
http://www.smc.at


France

SMC Pneumatique, S.A.
1, Boulevard de Strasbourg, Parc Gustave Eiffel
Bussy Saint Georges F-77607 Marne La Vallée Cedex 3
Phone: +33 (0)1-6476 1000, Fax: +33 (0)1-6476 1010
E-mail: contact@smc-france.fr
http://www.smc-france.fr


Netherlands

SMC Pneumatics BV
De Ruyterkade 120, NL-1011 AB Amsterdam
Phone: +31 (0)20-5318888, Fax: +31 (0)20-5318880
E-mail: info@smcpneumatics.nl
http://www.smcpneumatics.nl


Spain

SMC España, S.A.
Zuazobidea 14, 01015 Vitoria
Phone: +34 945-184 100, Fax: +34 945-184 124
E-mail: post@smc.smces.es
http://www.smces.es


Belgium

SMC Pneumatics N.V./S.A.
Nijverheidsstraat 20, B-2160 Wommelgem
Phone: +32 (0)3-355-1464, Fax: +32 (0)3-355-1466
E-mail: post@smcpneumatics.be
http://www.smcpneumatics.be


Germany

SMC Pneumatik GmbH
Boschring 13-15, D-63329 Egelsbach
Phone: +49 (0)6103-4020, Fax: +49 (0)6103-402139
E-mail: info@smc-pneumatik.de
http://www.smc-pneumatik.de


Norway

SMC Pneumatics Norway A/S
Vollsveien 13 C, Granfos Næringspark N-1366 Lysaker
Tel: +47 67 12 90 20, Fax: +47 67 12 90 21
E-mail: post@smc-norge.no
http://www.smc-norge.no


Sweden

SMC Pneumatics Sweden AB
Ekhagsvägen 29-31, S-141 71 Huddinge
Phone: +46 (0)8-603 12 00, Fax: +46 (0)8-603 12 90
E-mail: post@smcpneumatics.se
http://www.smc.nu


Bulgaria

SMC Industrial Automation Bulgaria EOOD
16 Kliment Ohridski Blvd., fl.13 BG-1756 Sofia
Phone: +359 2 9744492, Fax: +359 2 9744519
E-mail: office@smc.bg
http://www.smc.bg


Greece

S. Parianosopoulos S.A.
7, Konstantinoupoleos Street, GR-11855 Athens
Phone: +30 (0)1-3426076, Fax: +30 (0)1-3455578
E-mail: parianos@hol.gr
http://www.smceu.com


Poland

SMC Industrial Automation Polska Sp.z o.o.
ul. Konstruktorska 11A, PL-02-673 Warszawa,
Phone: +48 22 548 5085, Fax: +48 22 548 5087
E-mail: office@smc.pl
http://www.smc.pl


Switzerland

SMC Pneumatik AG
Dorfstrasse 7, CH-8484 Weisslingen
Phone: +41 (0)52-396-3131, Fax: +41 (0)52-396-3191
E-mail: info@smc.ch
http://www.smc.ch


Croatia

SMC Industrijska automatika d.o.o.
Cromerec 12, 10000 ZAGREB
Phone: +385 1 377 66 74, Fax: +385 1 377 66 74
E-mail: office@smc.hr
http://www.smceu.com


Hungary

SMC Hungary Ipari Automatizálási Kft.
Budafoki ut 107-113, H-1117 Budapest
Phone: +36 1 371 1343, Fax: +36 1 371 1344
E-mail: office@smc-automation.hu
http://www.smc-automation.hu


Portugal

SMC Sucursal Portugal, S.A.
Rua de Engº Ferreira Dias 452, 4100-246 Porto
Phone: +351 22-610-89-22, Fax: +351 22-610-89-36
E-mail: postpt@smc.smces.es
http://www.smces.es


Turkey

Entek Pnömatik San. ve Tic Ltd. Sti.
Perpa Tic. Merkezi Kat: 11 No: 1625, TR-80270 Okmeydanı Istanbul
Phone: +90 (0)212-221-1512, Fax: +90 (0)212-221-1519
E-mail: smc-entek@entek.com.tr
http://www.entek.com.tr


Czech Republic

SMC Industrial Automation CZ s.r.o.
Hudcova 78a, CZ-61200 Brno
Phone: +420 5 414 24611, Fax: +420 5 412 18034
E-mail: office@smc.cz
http://www.smc.cz


Ireland

SMC Pneumatics (Ireland) Ltd.
2002 Citywest Business Campus, Naas Road, Saggart, Co. Dublin
Phone: +353 (0)1-403 9000, Fax: +353 (0)1-464-0500
E-mail: sales@smcpneumatics.ie
http://www.smcpneumatics.ie


Romania

SMC Romania srl
Str. Frunzei 29, Sector 2, Bucharest
Phone: +40 213205111, Fax: +40 213261489
E-mail: smcromania@smcromania.ro
http://www.smcromania.ro


UK

SMC Pneumatics (UK) Ltd
Vincent Avenue, Crownhill, Milton Keynes, MK8 0AN
Phone: +44 (0)800 1382930 Fax: +44 (0)1908-555064
E-mail: sales@smcpneumatics.co.uk
http://www.smcpneumatics.co.uk


Denmark

SMC Pneumatik A/S
Knudsminde 4B, DK-8300 Odder
Phone: +45 70252900, Fax: +45 70252901
E-mail: smc@smc-pneumatik.com
http://www.smc-pneumatik.com


Italy

SMC Italia S.p.A
Via Garibaldi 62, I-20061 Carugate, (Milano)
Phone: +39 (0)2-92711, Fax: +39 (0)2-9271365
E-mail: mailbox@smcitalia.it
http://www.smcitalia.it


Russia

SMC Pneumatik LLC.
Sredny pr. 36/40, St. Petersburg 199004
Phone: +812 118 5445, Fax: +812 118 5449
E-mail: marketing@smc-pneumatik.ru
http://www.smc-pneumatik.ru


Estonia

SMC Pneumatics Estonia OÜ
Laki 12-101, 106 21 Tallinn
Phone: +372 (0)6 593540, Fax: +372 (0)6 593541
E-mail: smc@smcpneumatics.ee
http://www.smcpneumatics.ee


Latvia

SMC Pneumatics Latvia SIA
Smerla 1-705, Riga LV-1006, Latvia
Phone: +371 (0)777-94-74, Fax: +371 (0)777-94-75
E-mail: info@smclv.lv
http://www.smclv.lv


Slovakia

SMC Priemyselna Automatizacia, s.r.o.
Námestie Martina Benku 10, SK-81107 Bratislava
Phone: +421 2 444 56725, Fax: +421 2 444 56028
E-mail: office@smc.sk
http://www.smc.sk


Finland

SMC Pneumatics Finland OY
PL72, Tiistinnityntie 4, SF-02031 ESPOO
Phone: +358 207 513513, Fax: +358 207 513595
E-mail: smcfi@smc.fi http://www.smc.fi


Lithuania

UAB Ottensten Lietuva
Savanoriu pr. 180, LT-2600 Vilnius, Lithuania
Phone/Fax: +370-2651602


Slovenia

SMC industrijska Avtomatika d.o.o.
Grajski trg 15, SLO-8360 Zuzemberk
Phone: +386 738 85240 Fax: +386 738 85249
E-mail: office@smc-ind-avtom.si
http://www.smc-ind-avtom.si


OTHER SUBSIDIARIES WORLDWIDE:

ARGENTINA, AUSTRALIA, BOLIVIA, BRASIL, CANADA, CHILE,
CHINA, HONG KONG, INDIA, INDONESIA, MALAYSIA, MEXICO,
NEW ZEALAND, PHILIPPINES, SINGAPORE, SOUTH KOREA,
TAIWAN, THAILAND, USA, VENEZUELA

<http://www.smceu.com>
<http://www.smcworld.com>