CAT.ES100-53A-UK

SMC

Positioning Driver (for AC servomotor) and Electric Actuators

Positioning Driver (for AC servomotor) Series LC8

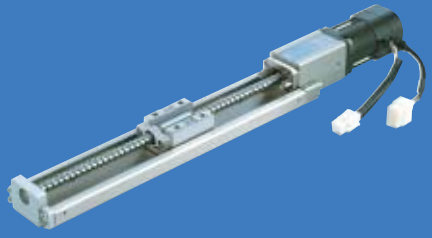
Single Axis Electric Actuator Series LJ1

- High rigidity linear guide
- Slider guide

Low Profile Electric Actuator Series LG1

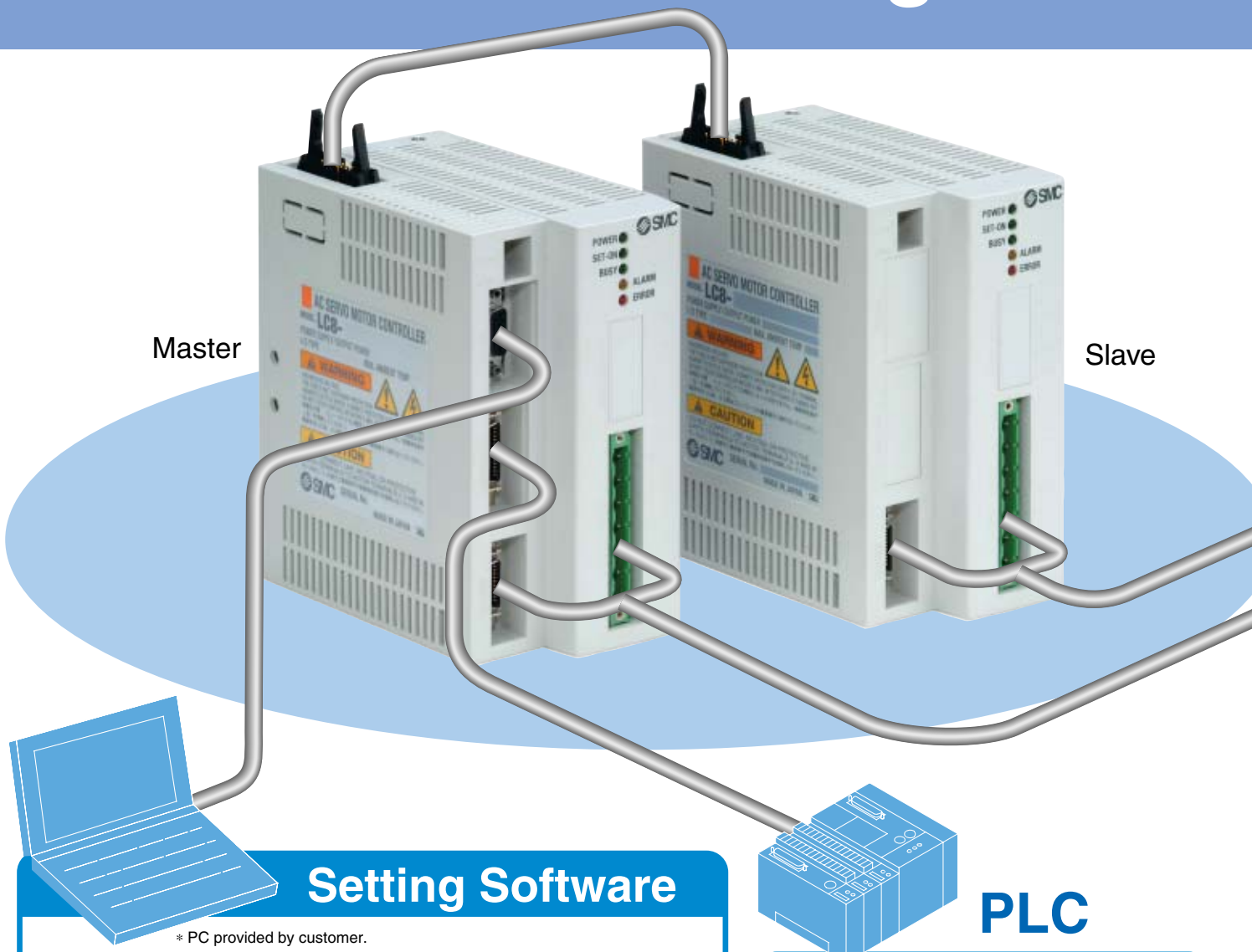
- Low profile: 55 mm

Electric Actuator with Integrated Guide Series LTF



- Incorporating recirculating ball frame-type linear guide

Positioning Driver /



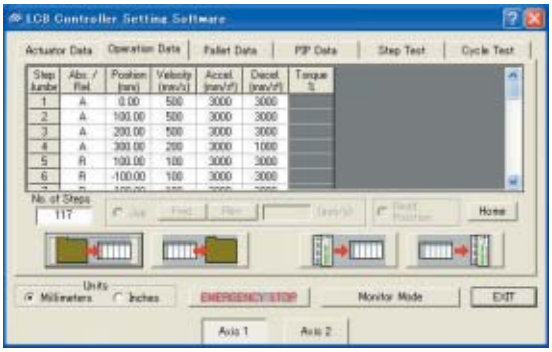
Setting Software

∗ PC provided by customer.

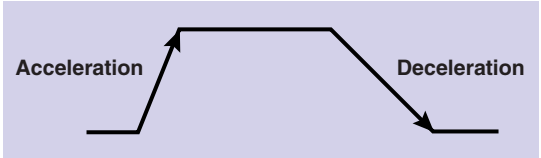
Input positioning data from controller setting software.

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.



The acceleration and the deceleration can be set individually.



PLC

PLC

Manipulation panel

24 VDC voltage

∗ Provided by customer

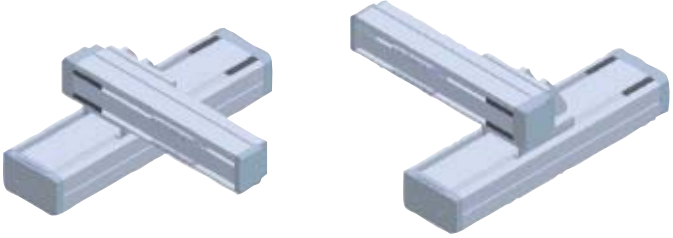
Stepping Operation

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

Electric Actuator

Standardized X-Y bracket

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



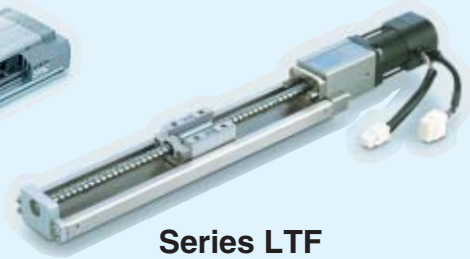
⚠ Caution

In case of using 3-axis or more, be sure to contact us for operating usage and its condition.

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

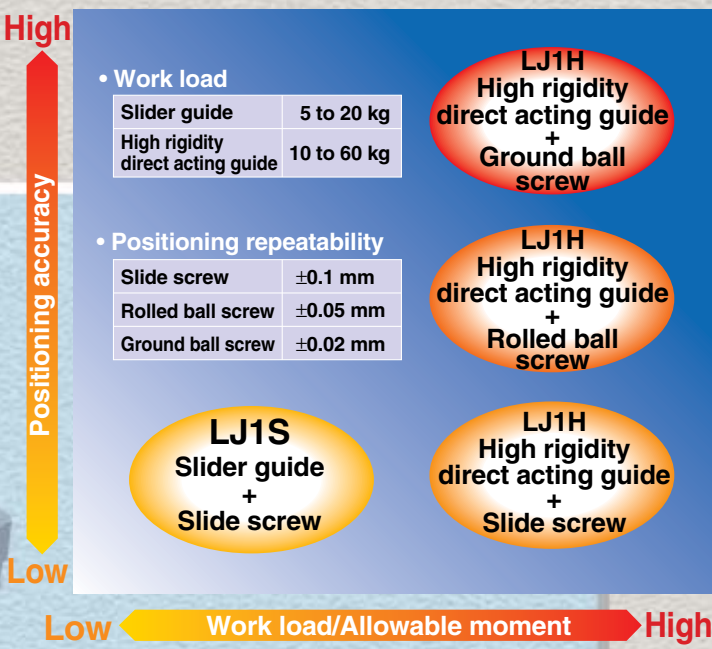
∗ For detailed information, please refer to each series.

Single Axis Electric Actuator

Series LJ1

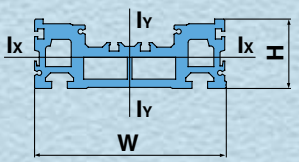
Two Types of Guide and Three Types of Lead Screw

LJ1H/High Rigidity Direct Acting Guide
LJ1S/Slider Guide



High rigidity

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



Model		Sectional secondary moment Ix	Sectional secondary moment Iy	W	H
Linear guide	LJ1H10□□	7	48	70	24.7
	LJ1H20□□	40	374	122	44.8
	LJ1H30□□	84	836	151	55
Slider guide	LJ1S10□□	15	52	70	36
	LJ1S20□□	60	402	122	56.3
	LJ1S30□□	177	1000	151	73.3

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

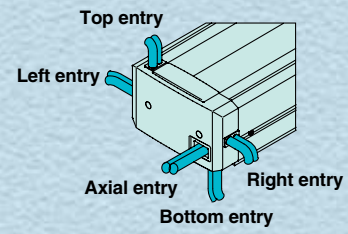
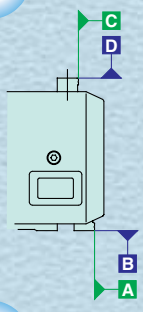
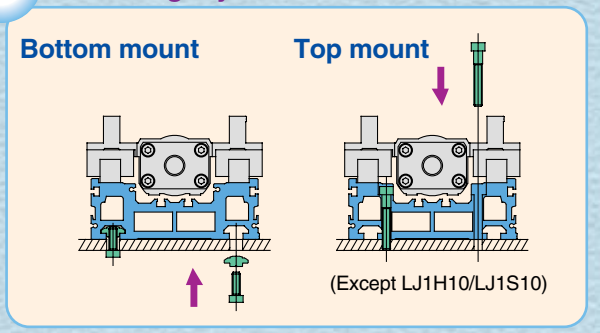


Table traveling accuracy



Model	Traveling accuracy C side against A side	Traveling accuracy 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.



Variations

Series	Motor type	Guide type	Mounting orientation	Lead screw type	Made to order
LJ1H10 LJ1H20 LJ1H30	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	Clean room Dust cover CABLEVEYOR
LJ1S10 LJ1S20 LJ1S30		Slider guide	Horizontal	Slide screw	Dust cover CABLEVEYOR

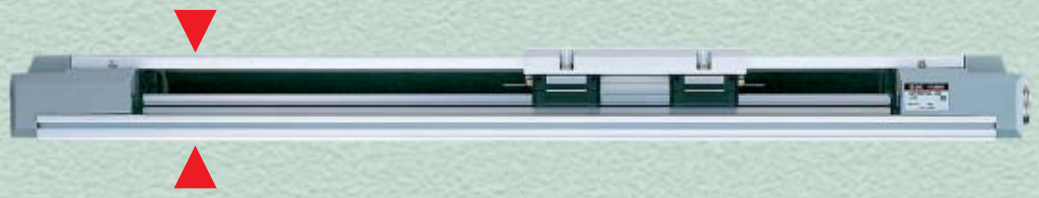
CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

Low Profile Electric Actuator

Series LG1

Low Profile/Non-coupling Type with Reduced Height and Length

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



Reduced length (62 mm shorter than LJ1H20 with coupling and 300 mm stroke)

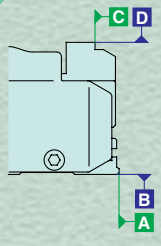
Series with coupling available

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.

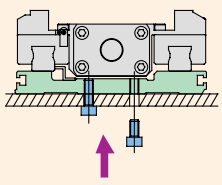
Table traveling accuracy



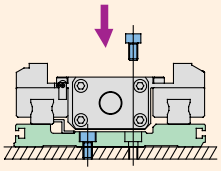
Model	Traveling accuracy	
	C side against A side	D side against B side
LG1H	0.1 or less	0.1 or less

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	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

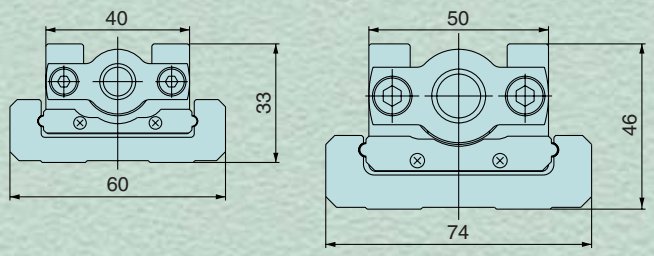
Series LTF

Space saving and lightweight design

The linear guide is built into the actuator body

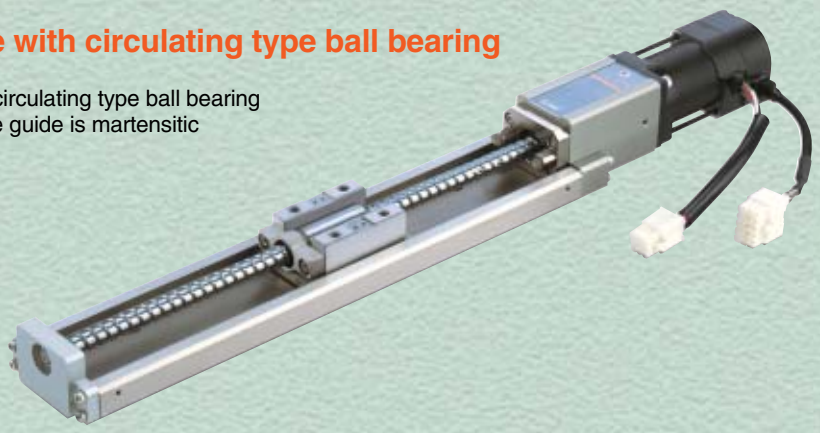
	Cross section dimensions for LTF6	Cross section dimensions for LTF8
Overall length *	357.5 mm	412 mm
Weight *	2.2 kg	4.6 kg
Max.stroke	600 mm	1000 mm

* Value in standard motor and with 100 mm stroke

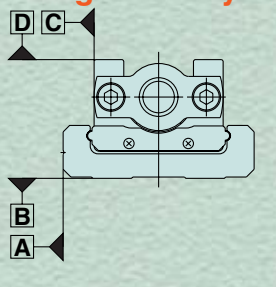


Linear guide with circulating type ball bearing

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	• Standard motor Make: TAMAGAWA SEIKI CO., LTD. • Non-standard motor Make: Matsushita Electric Industrial Co., LTD. Make: Mitsubishi Electric Corporation Make: Yaskawa Electric Corporation	Actuator body with built-in linear guide	Horizontal	Rolled ball screw
LTF8				Ground ball screw

SMC's Proposals for Assembly Equipment

Factors supplied for simplified cell assembly

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

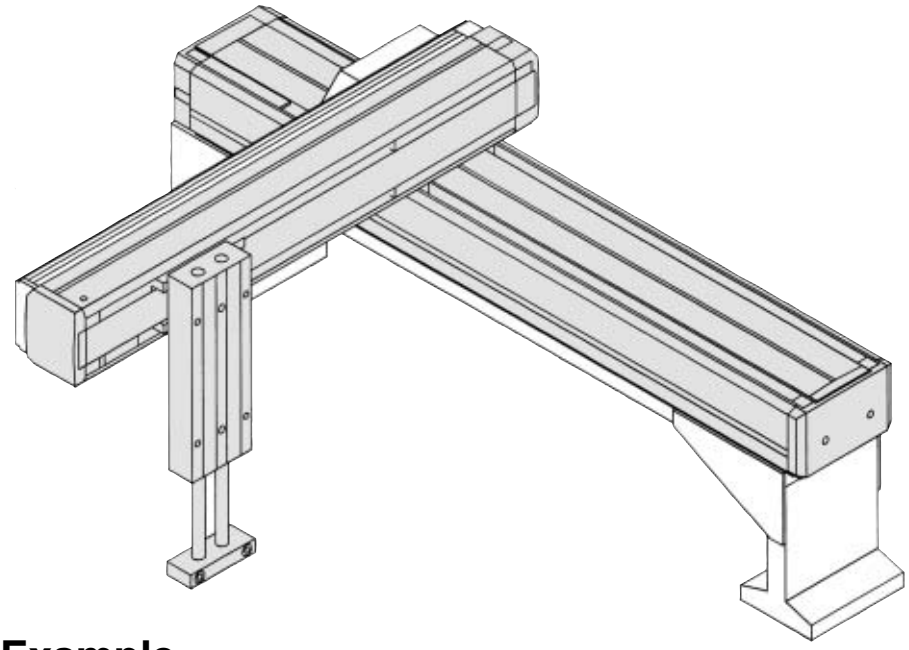
1. **Positioning conducts the horizontal (X-Y) positioning.**

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.



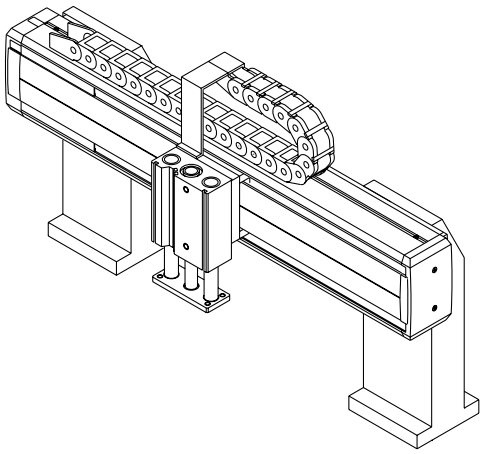
Application Example

	Hardware	Control device	Interface
(X-Y)	 **LJ1 LG1 LTF**	**LC8**	ON/OFF command by I/O of PLC
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**	

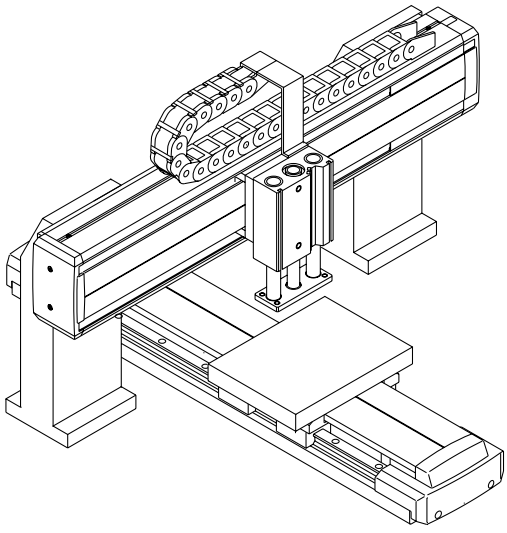
Application Example Using LC8

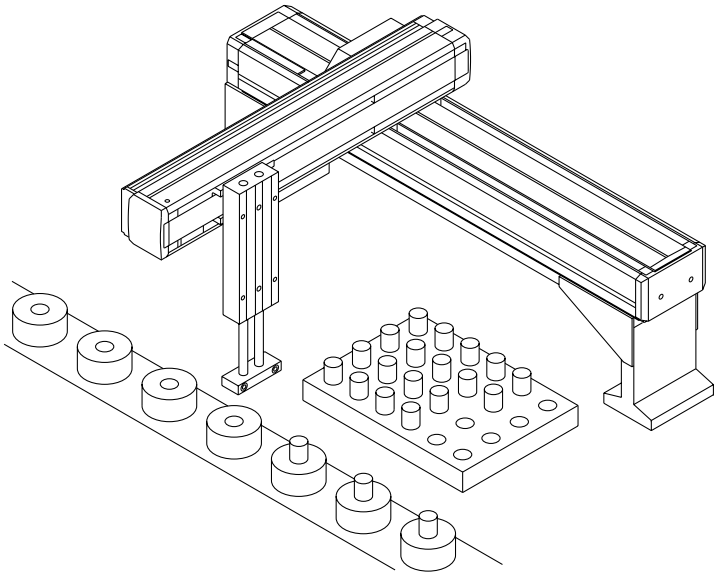
Pick & Place

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.

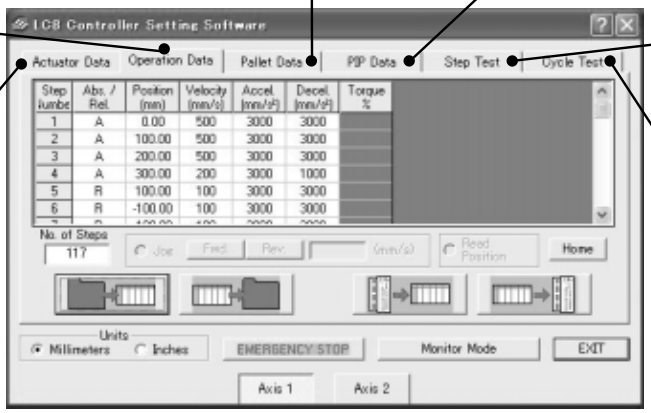
PIP data
Used for manually tuning the actuator gain.

Operation data
Data used during the step operation.

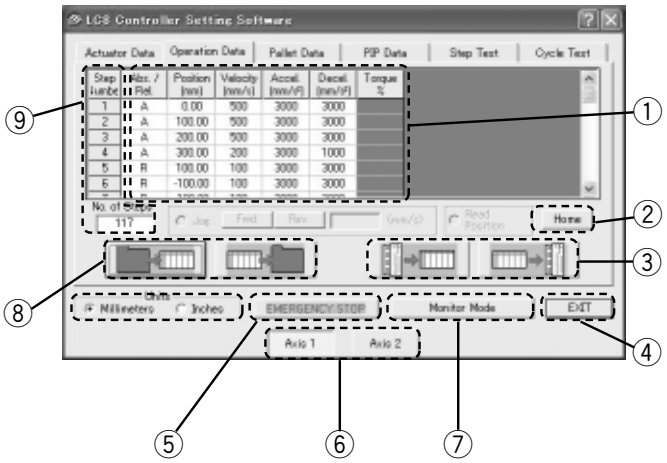
Step test
Used to conduct a test run with the data programmed.

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

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



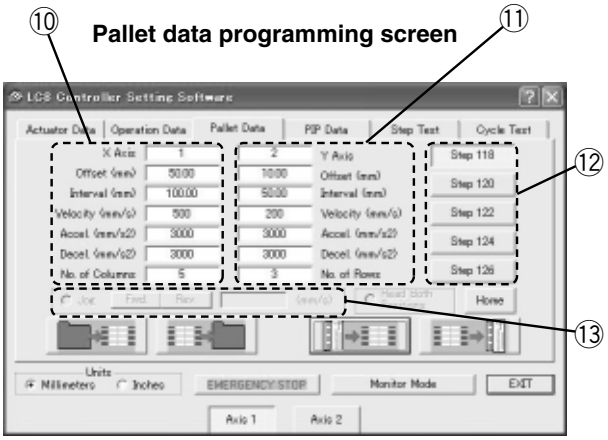
Operation data programming screen



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



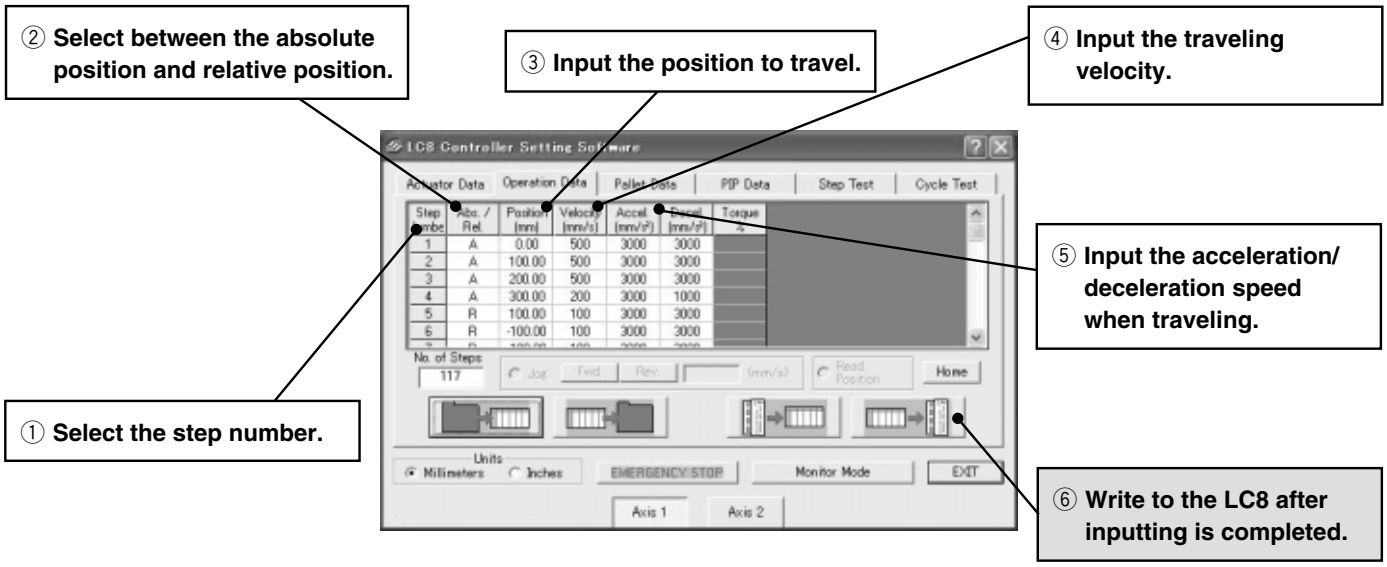
Explanation of pallet data programming screen

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.



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.

Step 1, Input the IN signal.

↓

Input the START signal.

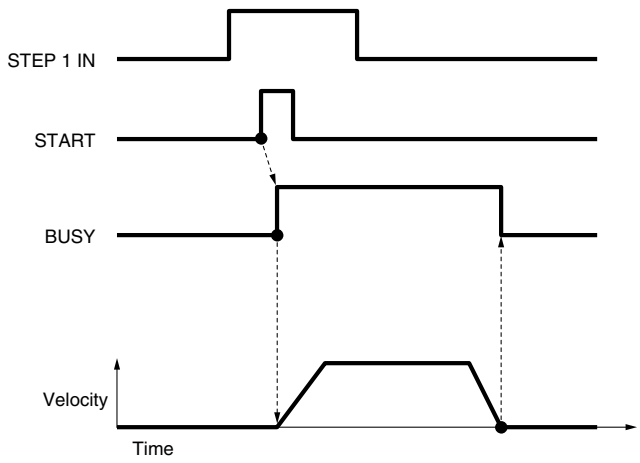
↓

Motion starts.
BUSY signal will turn ON while operating.

↓

If the motion is completed,
BUSY signal will turn OFF.

Timing Chart



2-Axis Step Operation

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

Step 2, Input the IN signal.

↓

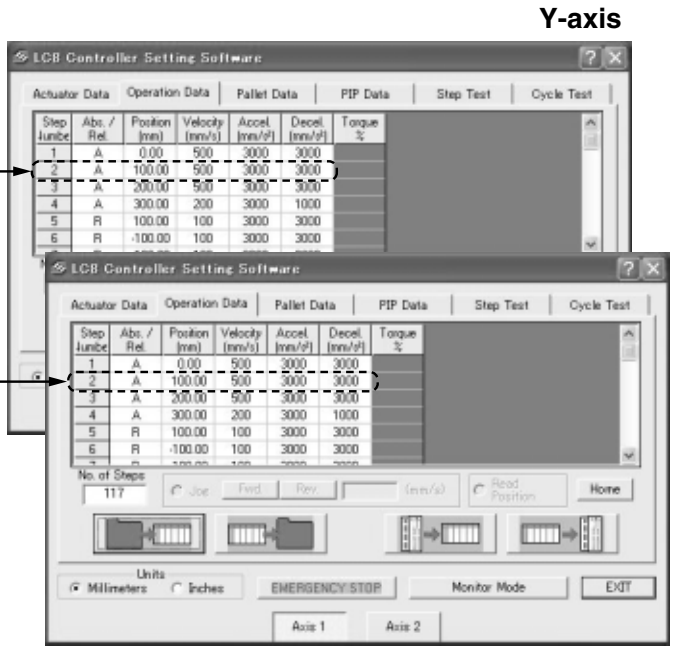
Input the START signal.

↓

X- and Y-axis will start actuating respectively. BUSY signal will turn ON while operating.

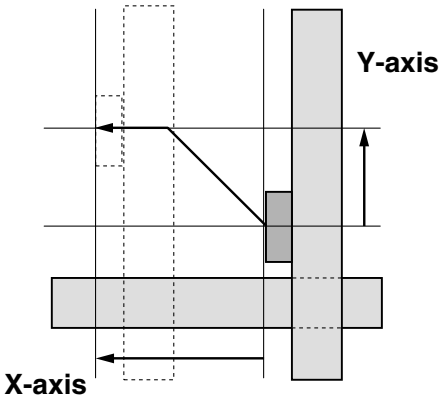
↓

The BUSY signal will turn off when the motion of the X- and Y-axis are both completed.



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

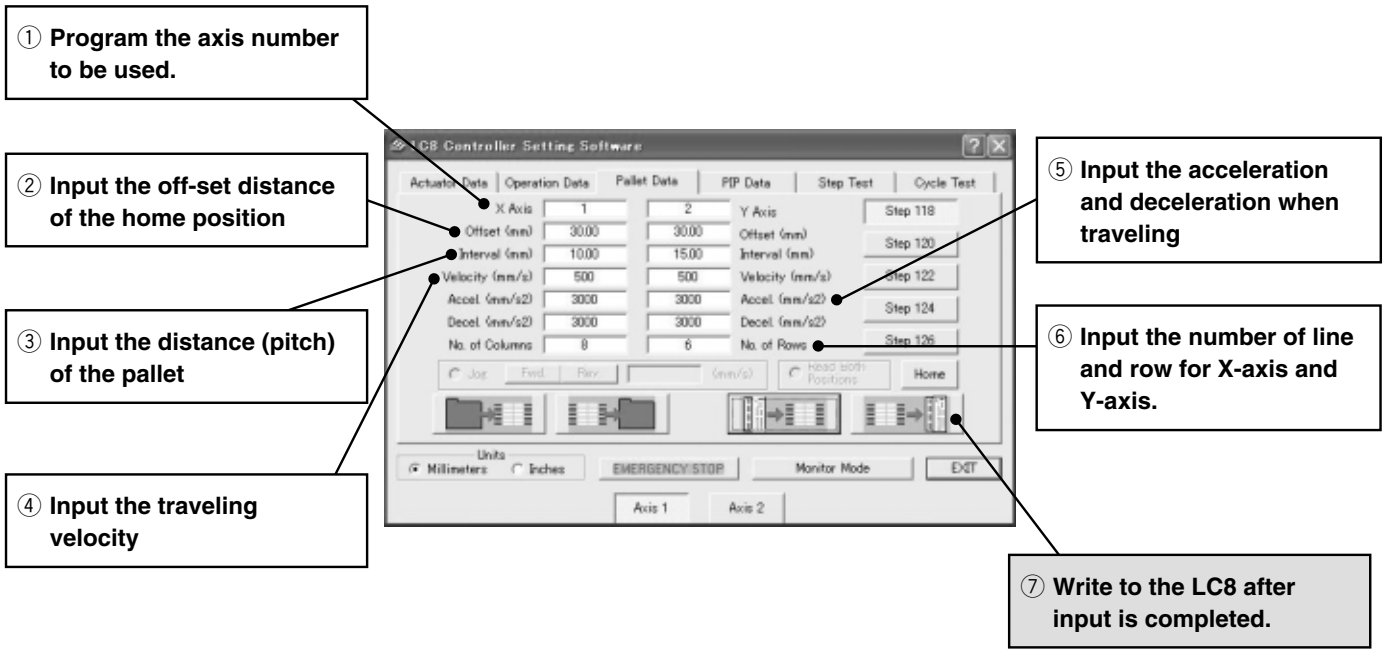
⚠ Caution

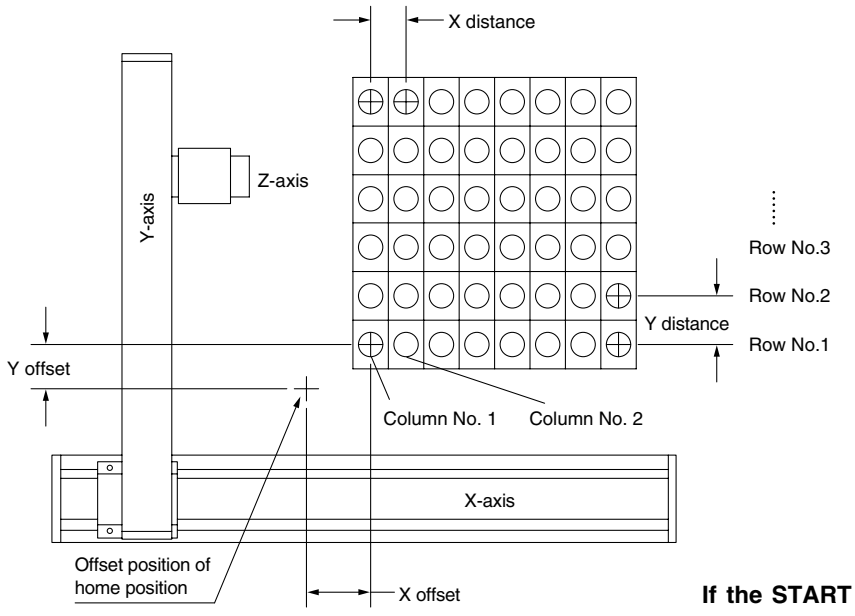
1. **Motion for returning to home position starts 2-axis simultaneously. When returning to home position, please design the equipment so that the components inside the equipment should not interfere with each other.**
2. **In the case of entering step data for "Motion for 1-axis only", enter step data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





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

Master **LC8 − B [1] H [1] [N] − M [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

Command I/O

N	NPN
P	PNP

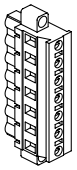
Mounting bracket

Nil	None
F	Mounting bracket

CE certified

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



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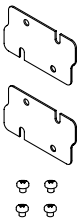

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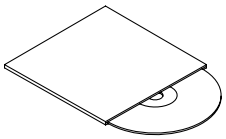


③

Option Note) Purchase separately.

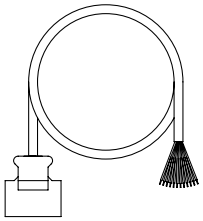
①	**LC8-1-CN**	Command I/O connector
②	**LC8-1-1050**	Connector with command I/O cable (0.5 m)
③	**LC8-1-1050P**	With connector stick terminals with command I/O cable (0.5 m)
④	**LC8-1-R03C**	RS-232C communications cable (3 m)

① Made by Sumitomo 3M Connector: 10126-3000VE
Shell: 10326-52-A0-008 (or equivalent)

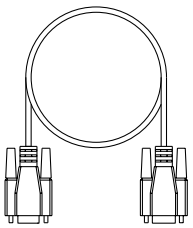
② Cable terminal: Individual wires

③ Cable terminal: Stick terminals (compliant with PC wiring system) Note 2)

①



②, ③



④

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.)

2. Regarding the use of 3-axis or more, be sure to contact us for how-to-use and operating conditions.

How to Order

Slave **LC8 − B [1] H [1] − V [F] − [Q]**

Q: CE certified

Motor capacity

1	50 W
2	100 W
3	200 W

Power voltage

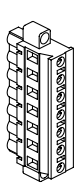
1	100 VAC/115 VAC
2	200 VAC/230 VAC

Mounting bracket

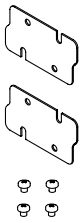
Nil	None
F	Mounting bracket

Accessory

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



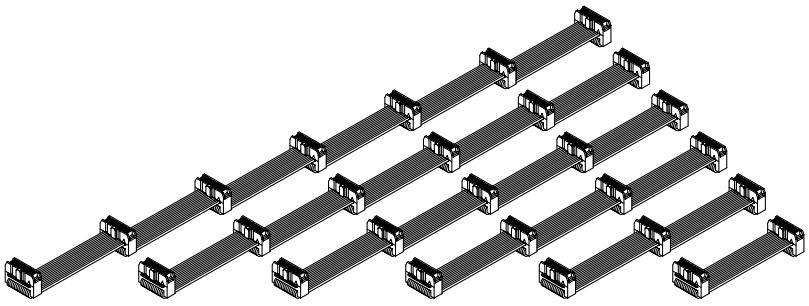
①



②

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



①

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.**

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

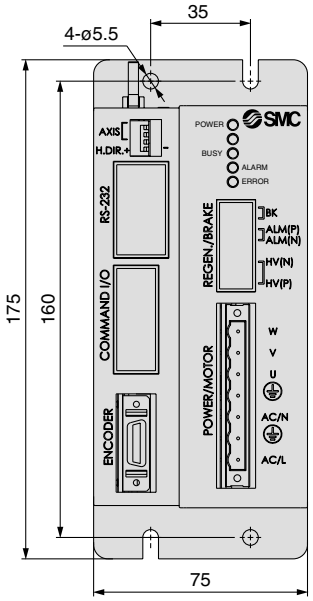
Model	LC8-B□□□N-□□-Q	LC8-B□□□P-□□-Q
Command I/O input	+24 V common, 24 VDC ± 10%, Minimum 6 mA	PLC GND common, 24 VDC ± 10%, Minimum 6 mA
Command I/O output	NPN open collector (sink type), 24 VDC ± 10%, Maximum 80 mA	PNP open collector (source type), 24 VDC ± 10%, Maximum 80 mA
Minimum input pulse width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

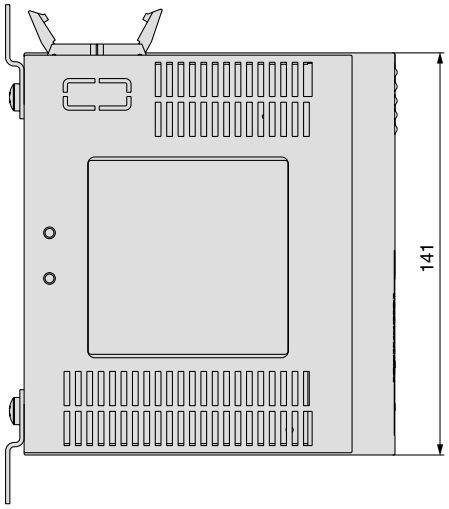
Safety Items

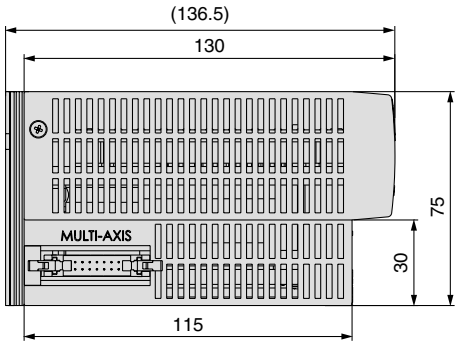
Item	Performance/Specifications
Alarming function	Over voltage/Low voltage, FWD/RVS limit switch, Overload, Motor drive circuit, Encoder connection, Forward soft stroke limit, Absolute home position stroke limit, Regenerative absorption unit, Communications, Non-returning to home position, Over current,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

External Dimensions

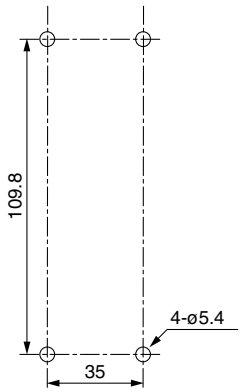
Mounting hole dimensions when mounting bracket is used.





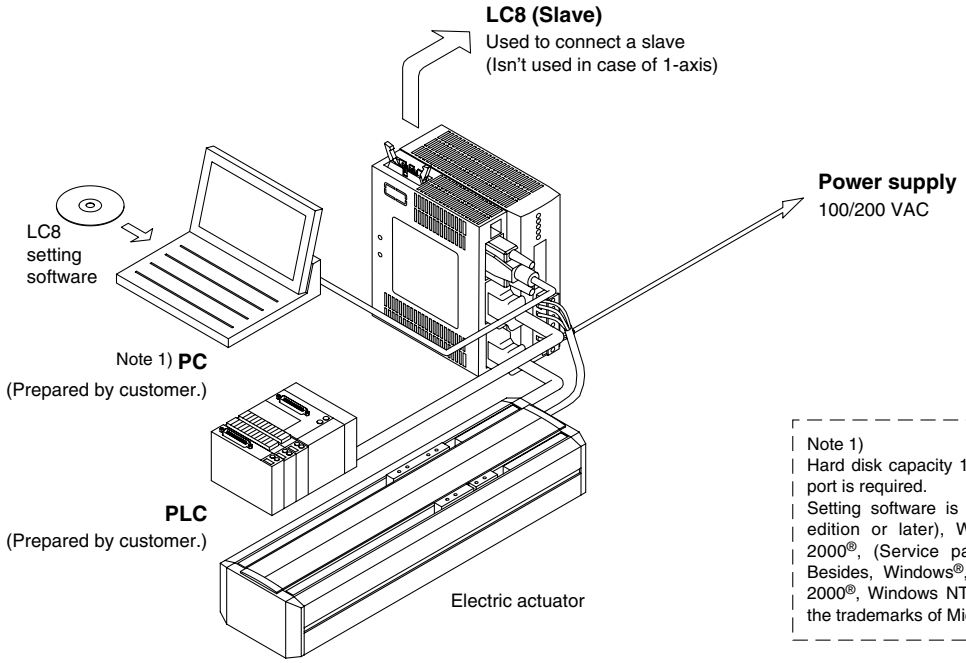


Mounting hole dimensions when mounting bracket isn't used.



System Composition

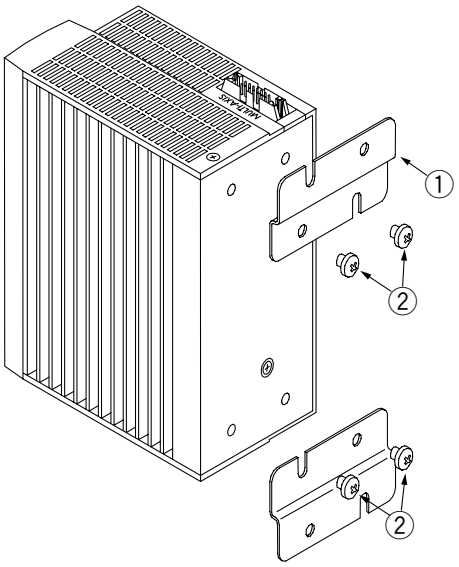
Example of using with 1-axis step operation (In case of using with X-Y, a master and a slave is required.)



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®, Wndows 95®, Windows 98®, Windows 2000®, Windows NT®, Windows Me® and Windows XP® are the trademarks of Microsoft Corporation.

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.).

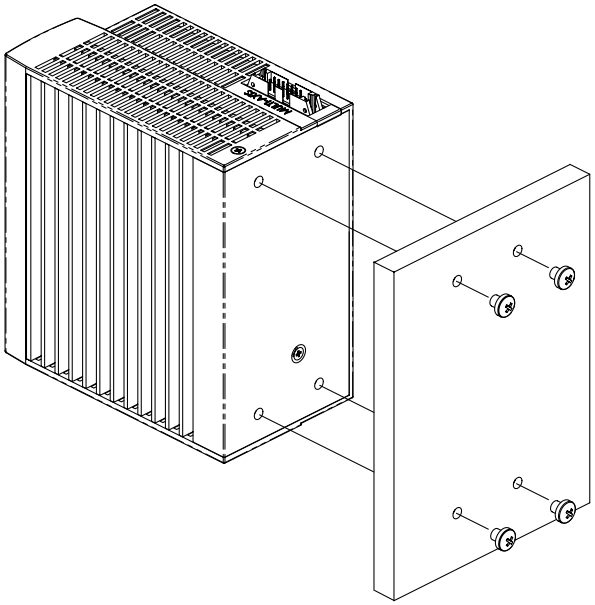
Accessory Contents

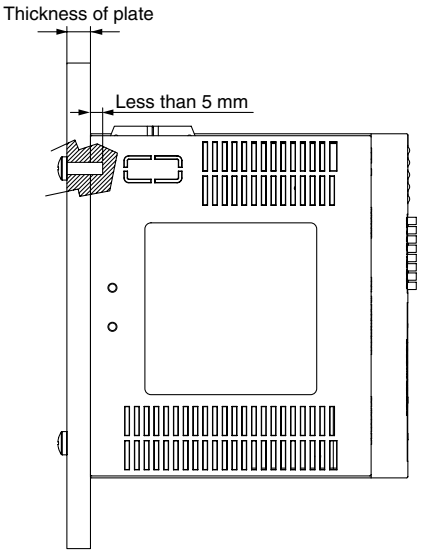
①	Mounting bracket	2 pcs.
②	Mounting screw	4 pcs.

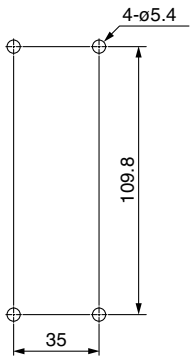
LC8-B□□□□-□-Q (In case that there is not bracket option.)

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

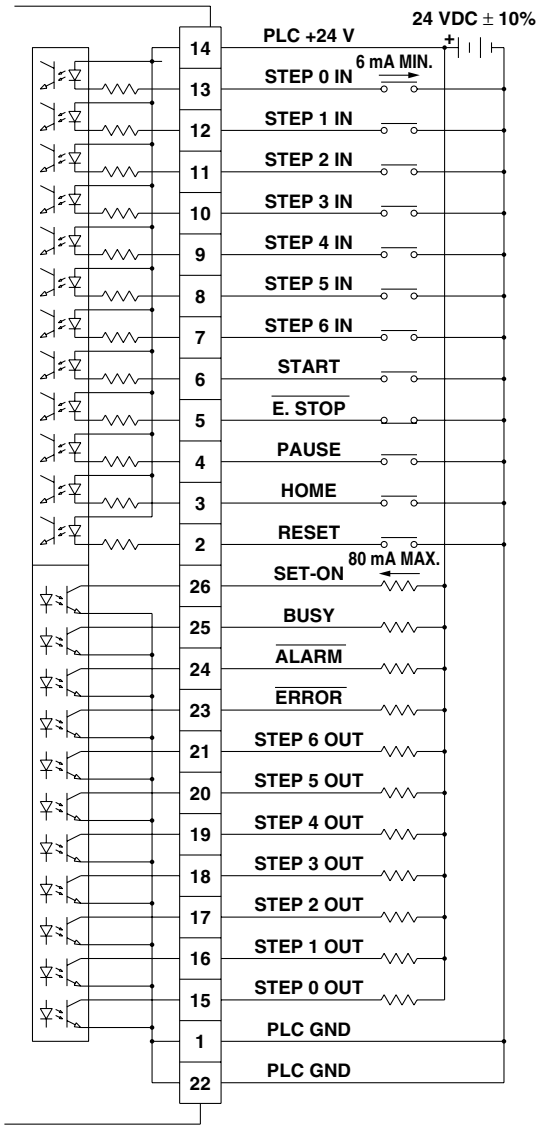
⚠ Caution

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.

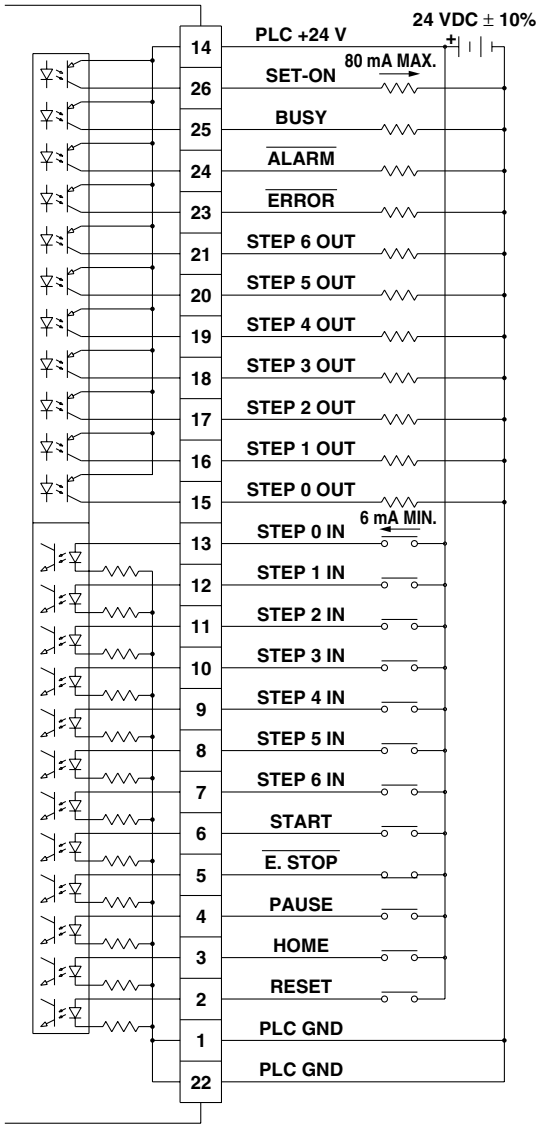
Command I/O Connector's Wiring

Wiring diagram

LC8-B□□□N-M□-Q (NPN specification)



LC8-B□□□P-M□-Q (PNP specification)

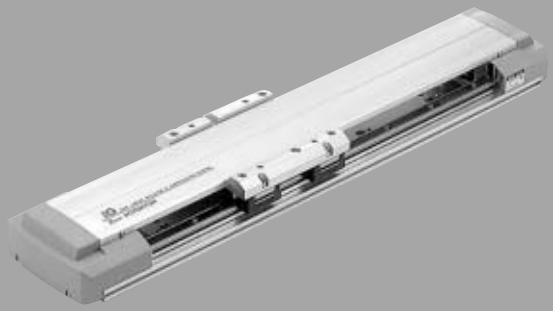


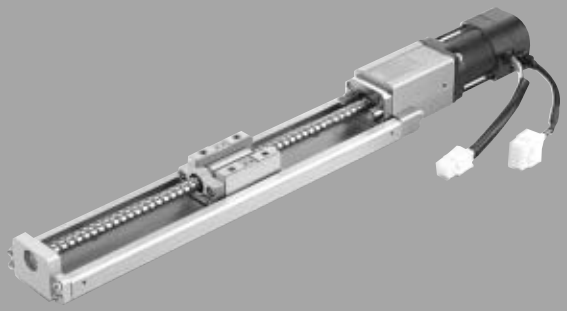
No.	Name of signals		Contents
14	PLC +24V	—	Connect + 24 V for power supply for signal.
1	PLC GND	—	Connect 0V for power supply for signal.
22	PLC GND	—	
13	STEP 0 IN	Input	Input the step number.
12	STEP 1 IN	Input	
11	STEP 2 IN	Input	
10	STEP 3 IN	Input	
9	STEP 4 IN	Input	
8	STEP 5 IN	Input	
7	STEP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

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

Electric Actuators





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		High rigidity, direct acting guide	to 500					
		600	±0.02	Ground ball screw		to 600					
		600	±0.05	Rolled ball screw		to 600					
	15	500	±0.1	Slide screw		to 500					
	20	300	±0.1		Slide guide		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					390
			±0.05	Rolled ball screw		to 500					390
	25	1000	±0.02	Ground ball screw		to 1000					
			±0.05	Rolled ball screw		to 1000					
	30	300	±0.02	Ground ball screw		to 300					230
			±0.05	Rolled ball screw		to 300					230
	50	500	±0.02	Ground ball screw		to 500					
			±0.05	Rolled ball screw		to 500					

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

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		Driver model	
		Model	Output		
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y10 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.

CE certified

Motor type

Nil	Standard motor
X10	Nonstandard motor

Standard motor Note 3)
Cable length

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

Nonstandard Note 3)
Motor switch

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

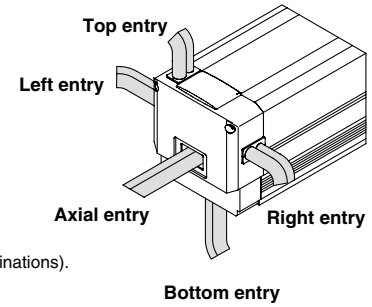
Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
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



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

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

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

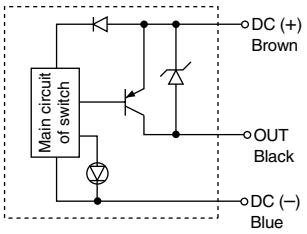
Stroke (mm)					100	200	300	400	500	600	700	800	900	1000
Weight (without motor) (kg)	Ball screw				4.8	5.6	6.4	7.1	7.9	–				
	Slide screw				4.9	5.8	6.8	7.6	8.4	9.3	10.1	10.9	11.8	12.6
Operating temperature range (°C)					5 to 40 (with no condensation)									
Maximum work load (kg)	Ball screw	12mm 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 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.

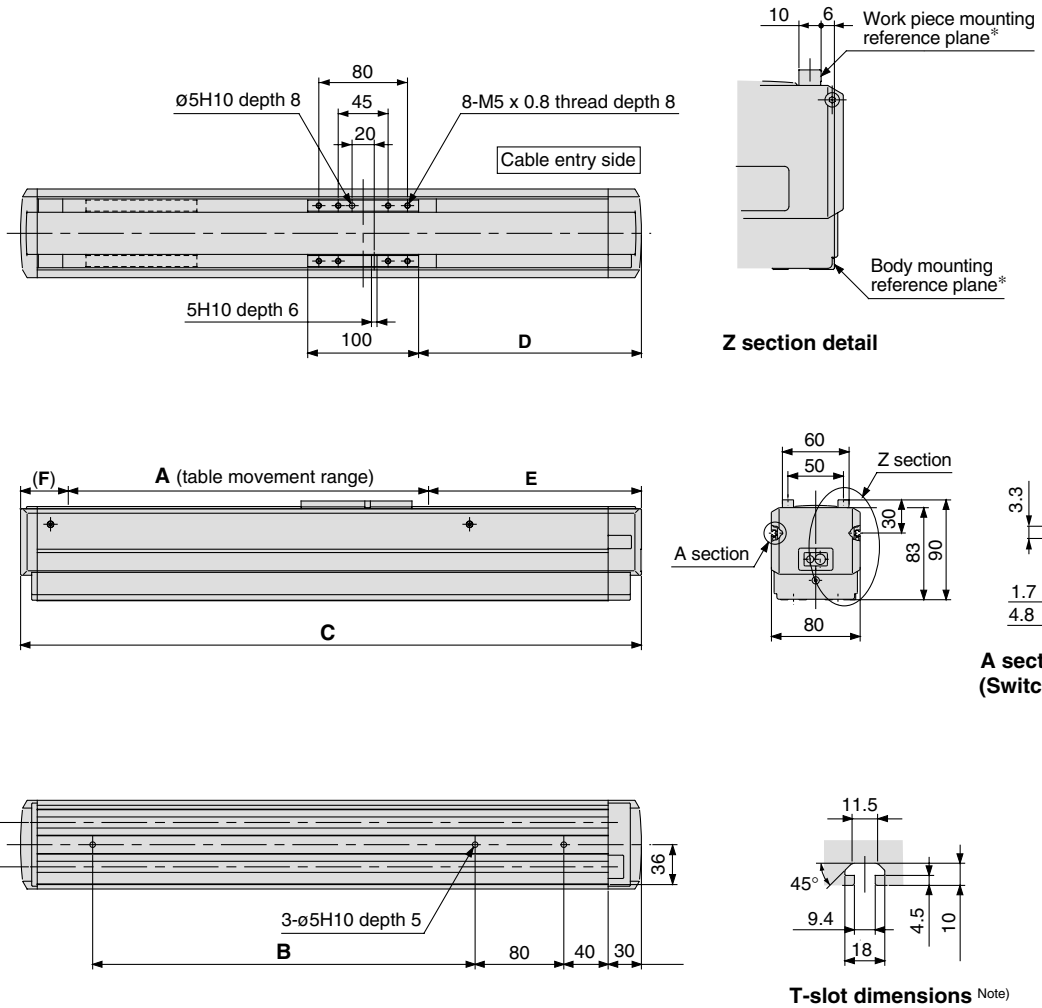
Limit Switch Internal Circuit

D-Y7HL



Dimensions

Scale: 15%



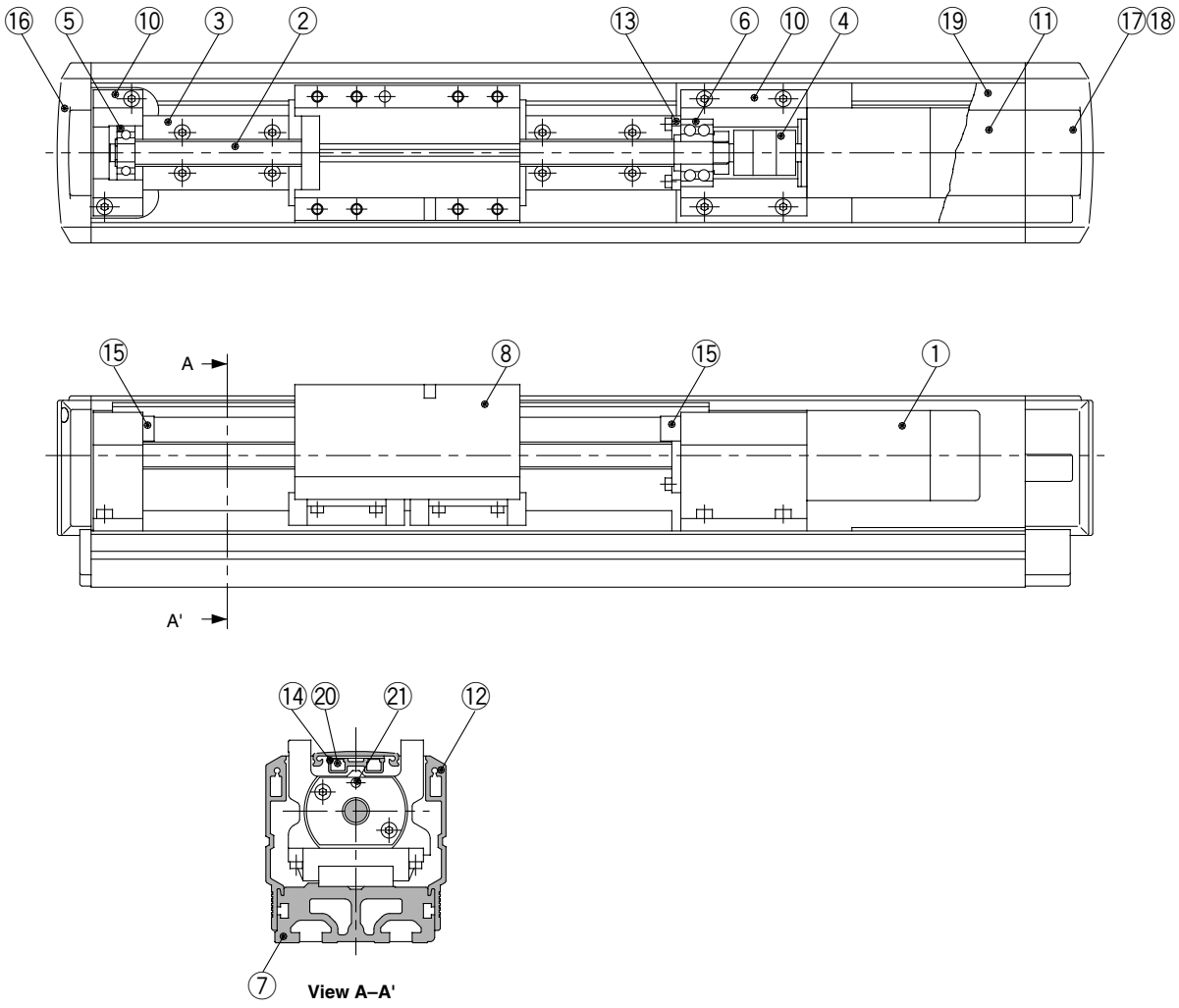
Dimension table/without brake

(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

CE certified

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y20 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.

Motor type

Nil	Standard motor
X10	Nonstandard motor

Standard motor Cable length Note 3)

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

Nonstandard Motor switch Note 3)

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

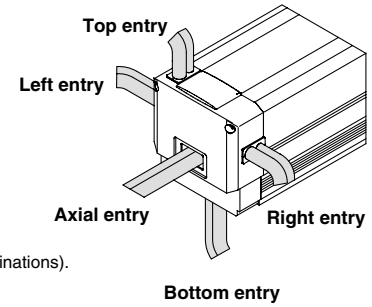
Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
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



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

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

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**	**2000**
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

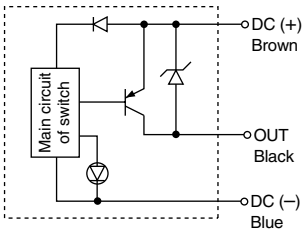
Stroke (mm)				100	200	300	400	500	600	700	800	900	1000	1200
Weight (without motor) (kg)	Ball screw			7.2	8.4	9.6	10.7	12.1	13.2	14.4	15.6	16.8	18.0	–
	Slide screw			7.5	8.5	9.6	10.8	12.3	13.8	16.3	16.8	18.6	20.4	24.2
Operating temperature range (°C)				5 to 40 (with no condensation)										
Maximum work load (kg)	Ball screw	10mm lead	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										
Limit switch 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.

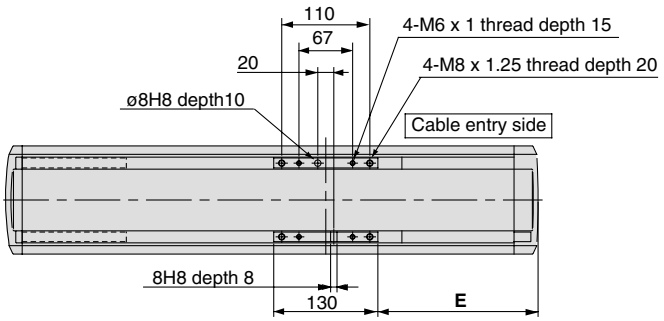
Limit Switch Internal Circuit

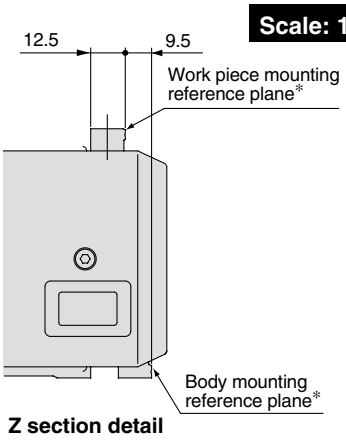
D-Y7HL



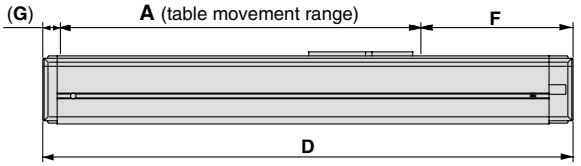
Dimensions

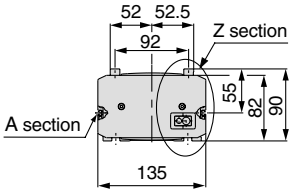
Scale: 10%

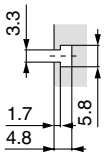




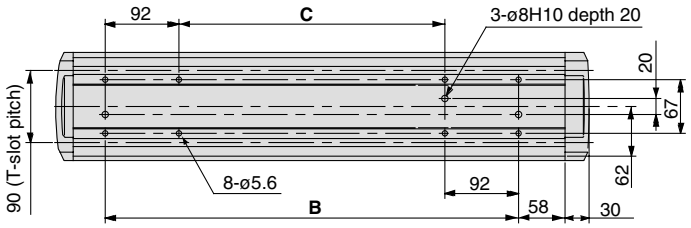
Z section detail

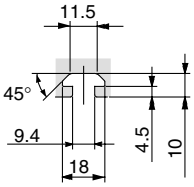






A section detail (Switch groove)





T-slot dimensions Note)

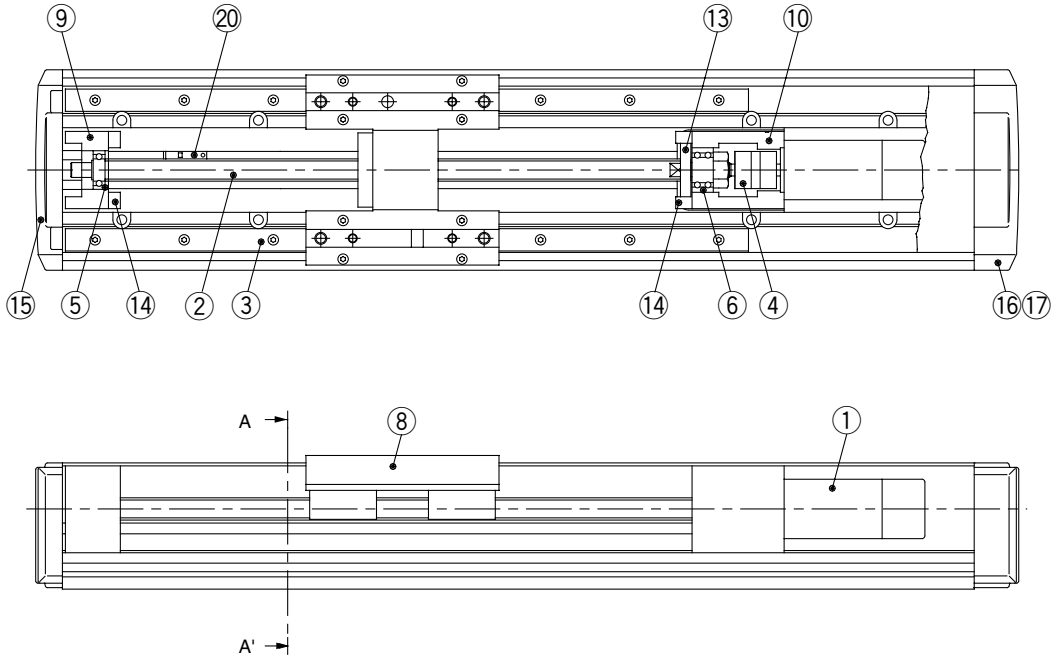
Dimension table/without brake

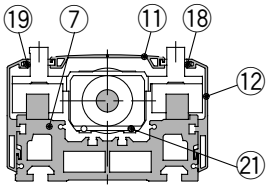
(mm)

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 (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





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

CE certified

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y30 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.

Motor type

Nil	Standard motor
X10	Nonstandard motor

Standard motor Note 3)
Cable length

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

Nonstandard Note 3)
Motor switch

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

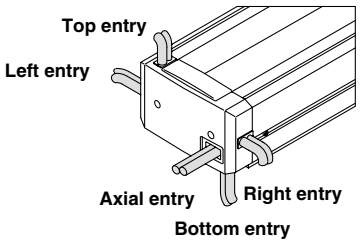
Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Cable entry direction

F	Axial
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



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

P	Ground ball screw
N	Rolled ball screw
S	Slide screw

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

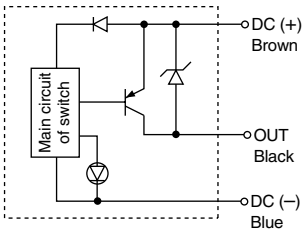
Stroke (mm)					200	300	400	500	600	800	1000	1200	1500
Weight (without motor) (kg)	Ball screw				14.9	16.9	18.9	20.9	22.9	27.4	31.9	35.9	41.9
	Slide screw				13.8	15.9	17.9	20	22.1	26.2	30.4	34.5	40.8
Operating temperature range (°C)					5 to 40 (with no condensation)								
Maximum work load (kg)	Ball screw	25mm lead	200W		60								
	Slide screw	40mm lead			30								
Maximum speed (mm/s)	Ball screw	25mm lead	200W		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 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.

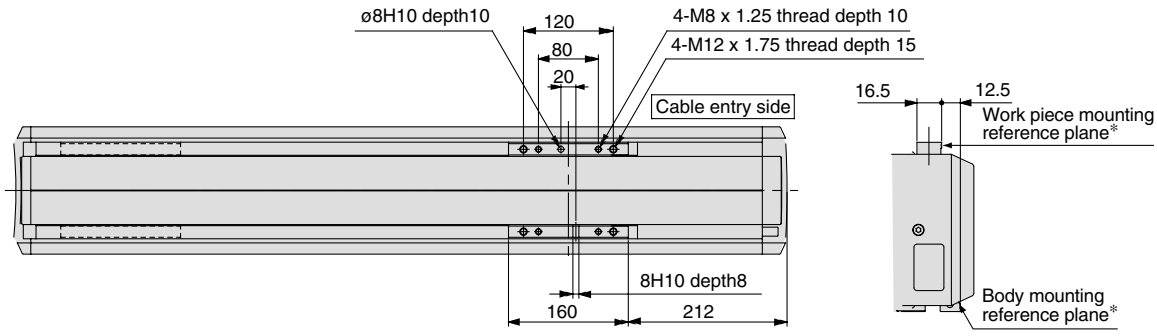
Limit Switch Internal Circuit

D-Y7HL

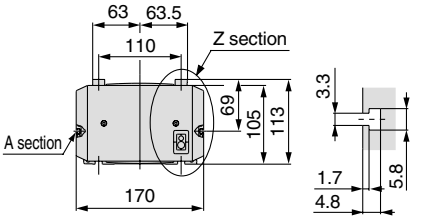


Dimensions

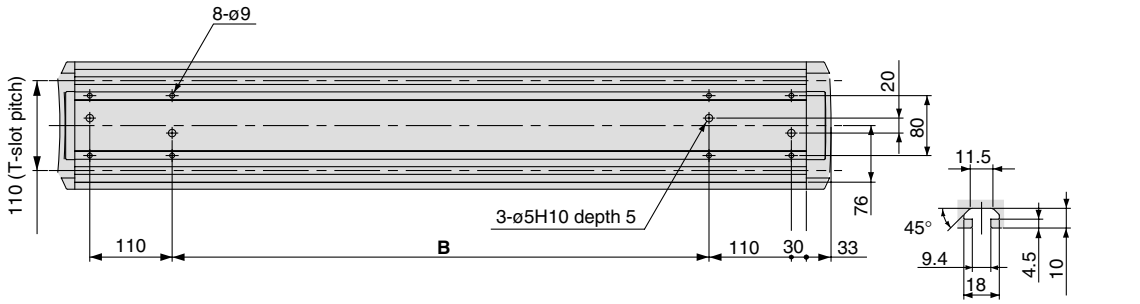
Scale: 10%



Z section detail



A section detail (Switch groove)



T-slot dimensions Note)

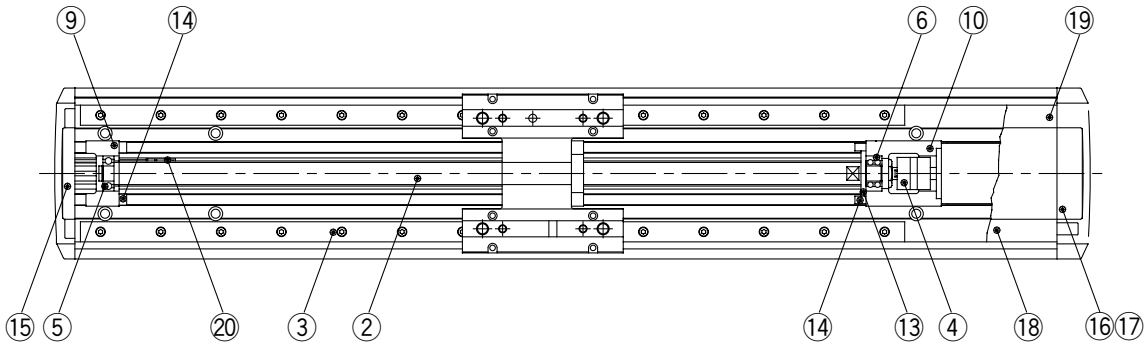
Dimension table/without brake

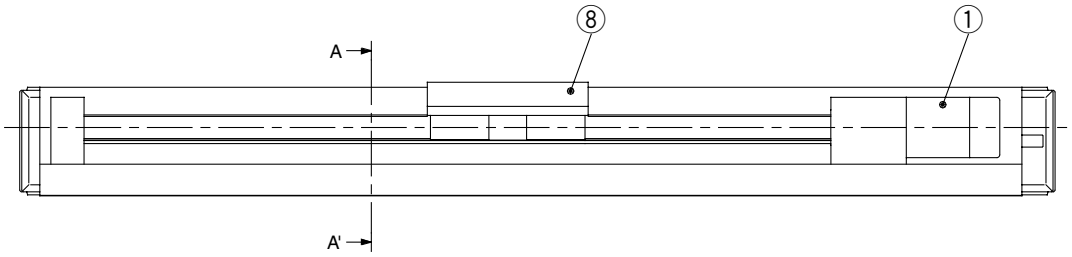
(mm)

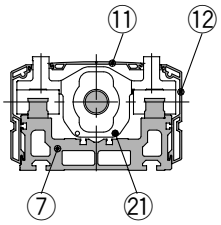
Model	Stroke	A	B	C	D
LJ1H30□□□- 200-□□	200	404	297	630	31.5
LJ1H30□□□- 300-□□	300	504	397	730	31.5
LJ1H30□□□- 400-□□	400	604	497	830	31.5
LJ1H30□□□- 500-□□	500	704	597	930	31.5
LJ1H30□□□- 600-□□	600	804	697	1030	31.5
LJ1H30□□□- 800-□□	800	1004	897	1230	31.5
LJ1H30□□□-1000-□□	1000	1204	1097	1430	31.5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







View A–A'

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		Driver model	
		Model	Output		
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Note 2) 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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric 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

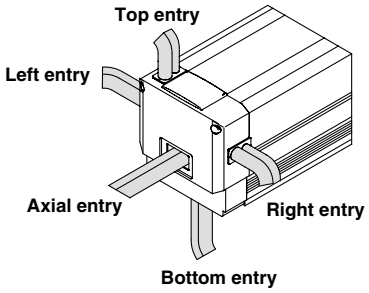
C	20mm

Stroke

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

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom



Nonstandard Motor switch Note 3)

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

Standard motor Cable length Note 3)

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Motor type

Nil	Standard motor
X10	Nonstandard motor

CE certified

Please make separate inquiry regarding combinations with ball screw and a special slider guide, which can be arranged in addition to the above. Refer to page 25 for dimensions.

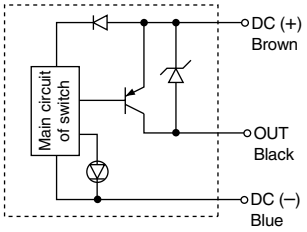
Specifications

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 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.

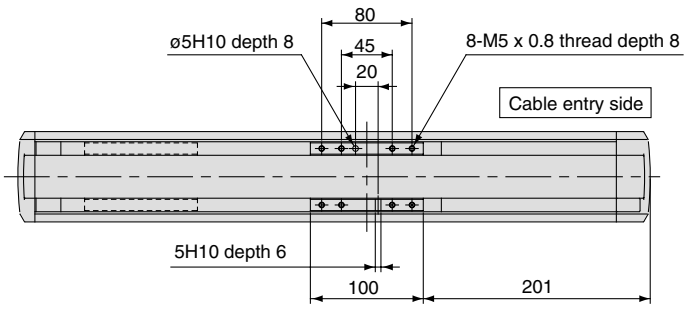
Limit Switch Internal Circuit

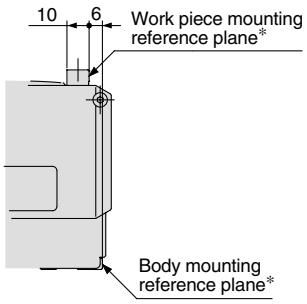
D-Y7HL



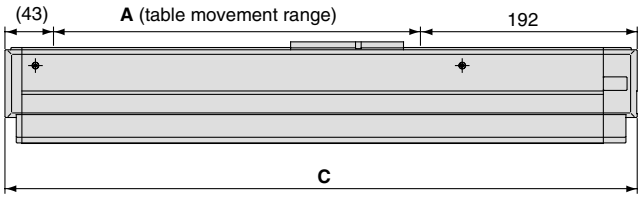
Dimensions

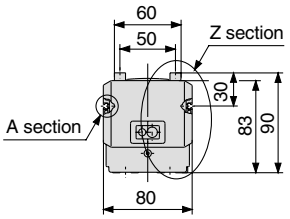
Scale: 15%

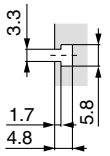




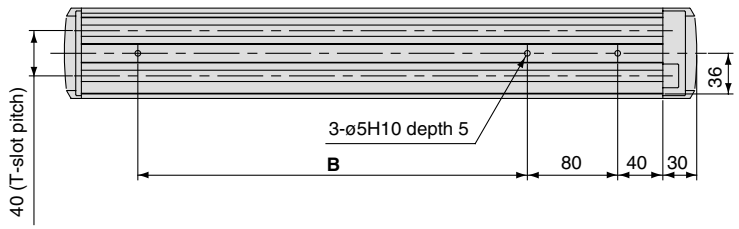
Z section detail

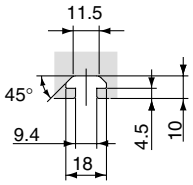






A section detail (Switch groove)





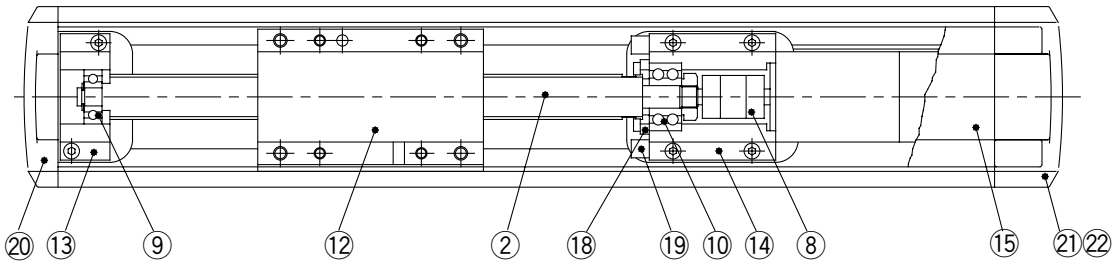
T-slot dimensions Note)

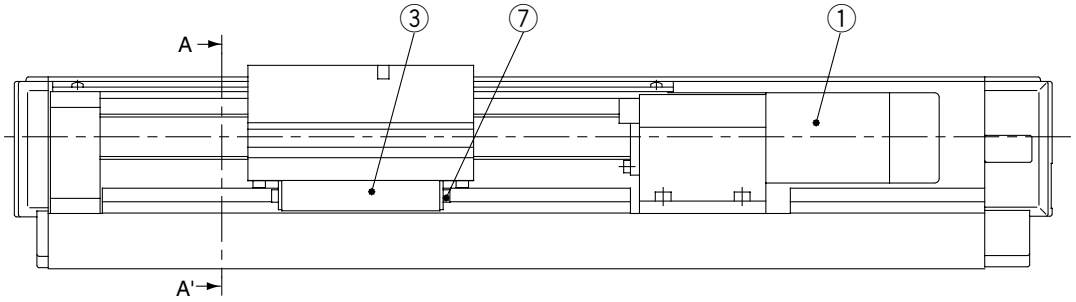
Dimension table

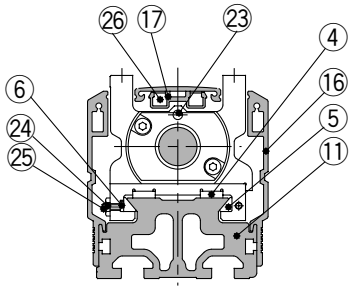
Model	Stroke	A	B	C
LJ1S10□SC- 100-□□	100	225	245	460
LJ1S10□SC- 200-□□	200	325	345	560
LJ1S10□SC- 300-□□	300	425	445	660
LJ1S10□SC- 400-□□	400	525	545	760
LJ1S10□SC- 500-□□	500	625	645	860
LJ1S10□SC- 600-□□	600	725	745	960
LJ1S10□SC- 700-□□	700	825	845	1060
LJ1S10□SC- 800-□□	800	925	945	1160
LJ1S10□SC- 900-□□	900	1025	1045	1260
LJ1S10□SC-1000-□□	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		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y20 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric 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

Stroke

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

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Nonstandard Motor switch Note 3)

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

Standard motor Cable length Note 3)

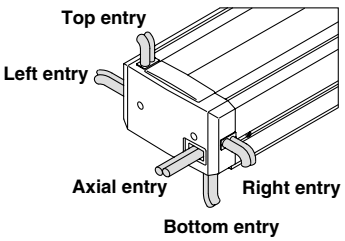
2	2m
3	3m
4	4m
5	5m

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Motor type

Nil	Standard motor
X10	Nonstandard motor

CE certified



Please make separate inquiry regarding combinations with ball screw and a special slider guide, which can be arranged in addition to the above.
Refer to page 29 for dimensions.

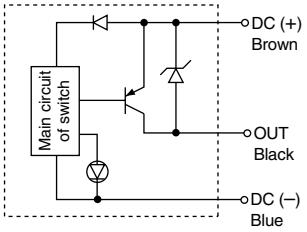
Specifications

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)		5										
Maximum speed (mm/s)		300										
Positioning repeatability (mm)		±0.1										
Lead screw	Rolled slide screw	ø20mm, 20mm lead										
Guide		Slider guide										
Limit switch 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.

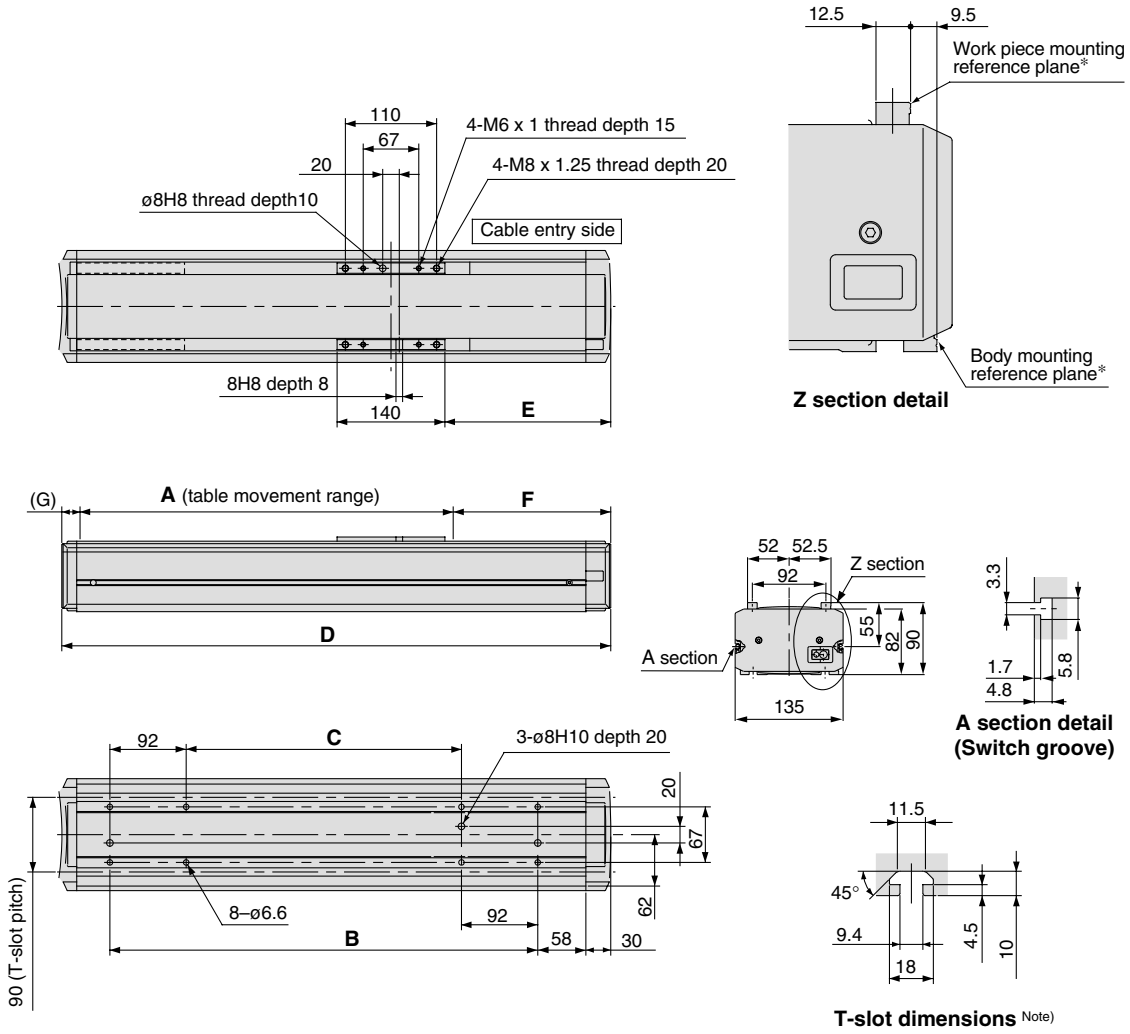
Limit Switch Internal Circuit

D-Y7HL



Dimensions

Scale: 10%

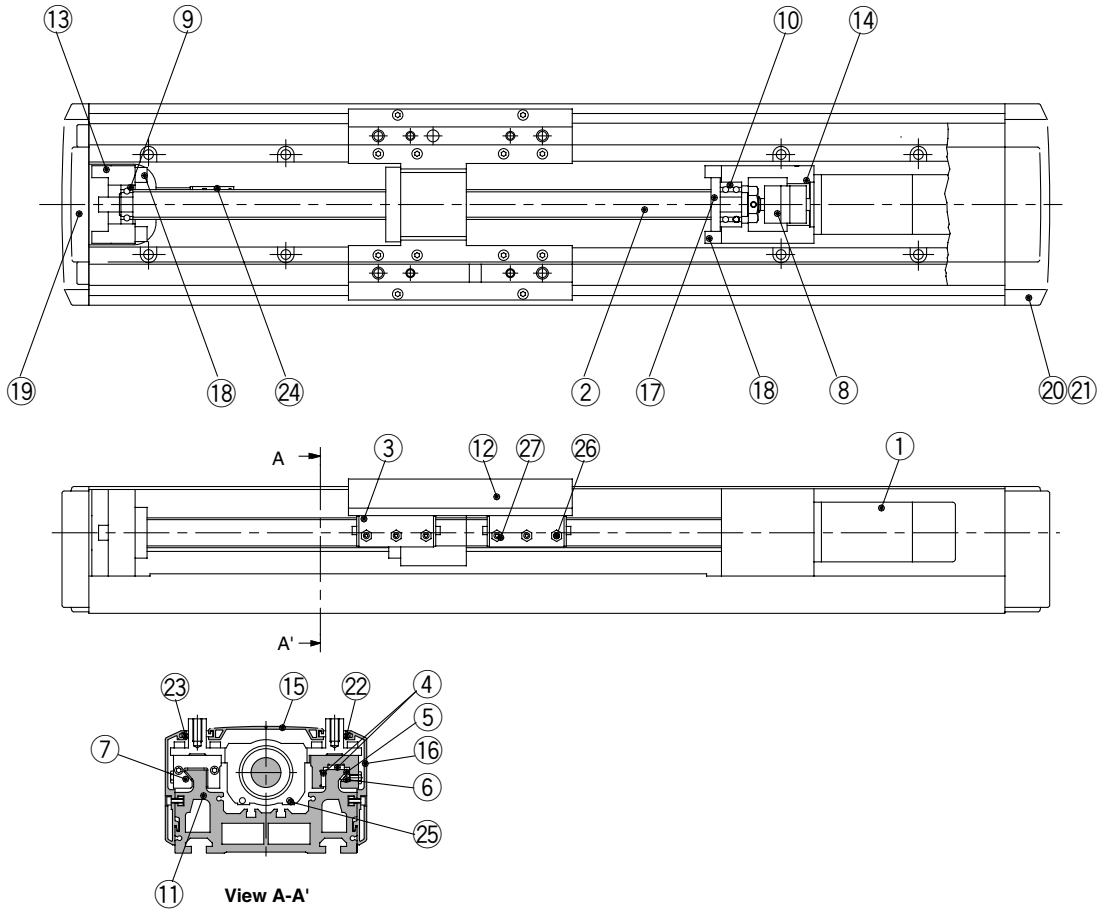


Dimension table/without brake

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		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y30 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric 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

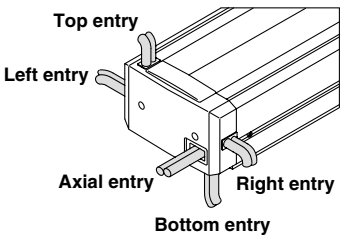
C	20mm

Stroke

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

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom



Nonstandard Motor switch Note 3)

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

Standard motor Cable length Note 3)

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Motor type

Nil	Standard motor
X10	Nonstandard motor

CE certified

Please make separate inquiry regarding combinations with ball screw and a special slider guide, which can be arranged in addition to the above. Refer to page 33 for dimensions.

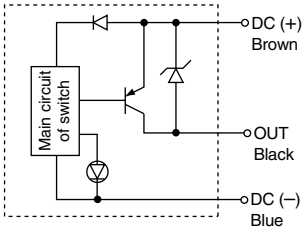
Specifications

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)		500								
Lead screw	Rolled slide screw	ø25mm, 20mm lead								
Guide		Slider guide								
Limit switch 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.

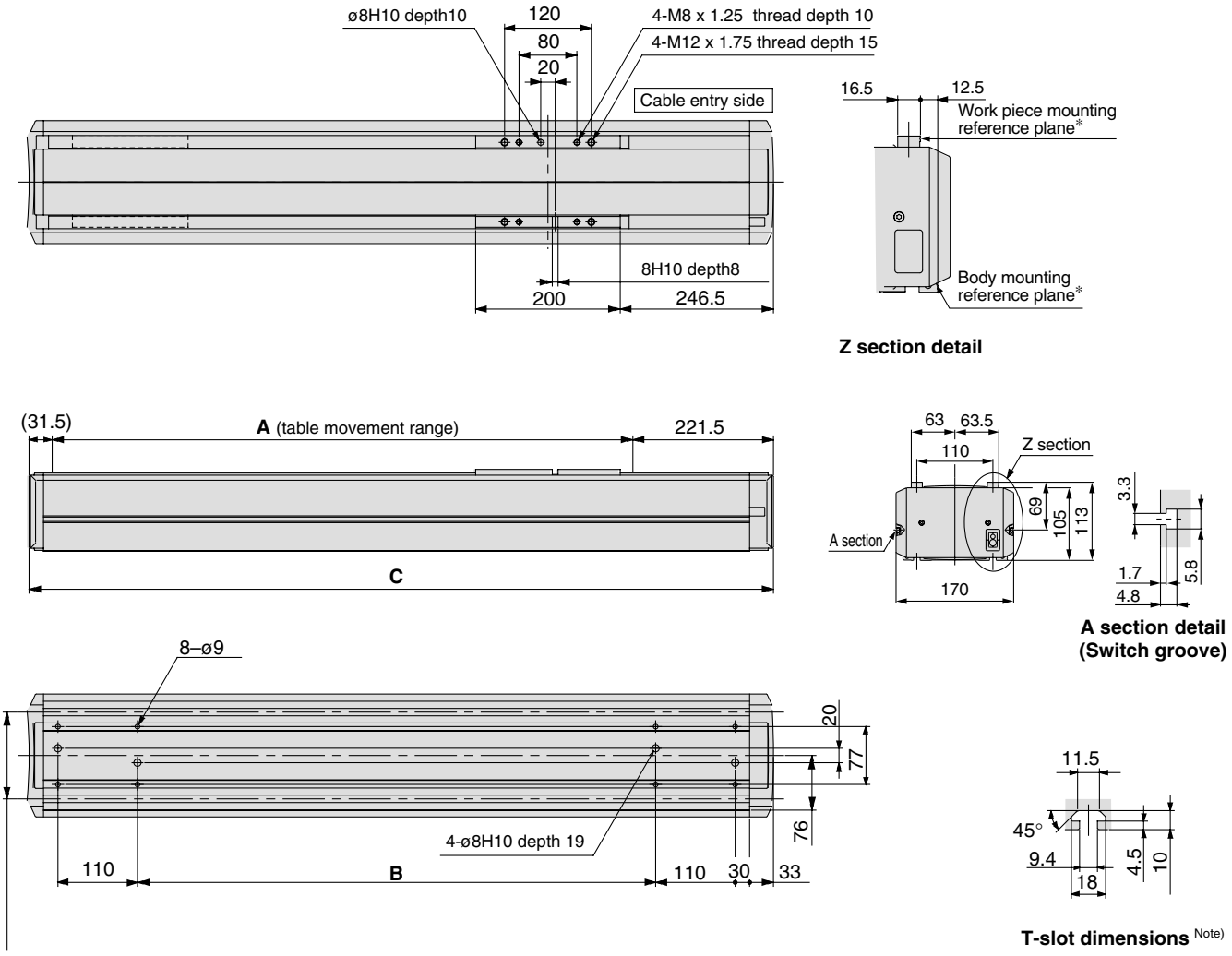
Limit Switch Internal Circuit

D-Y7HL



Dimensions

Scale: 10%

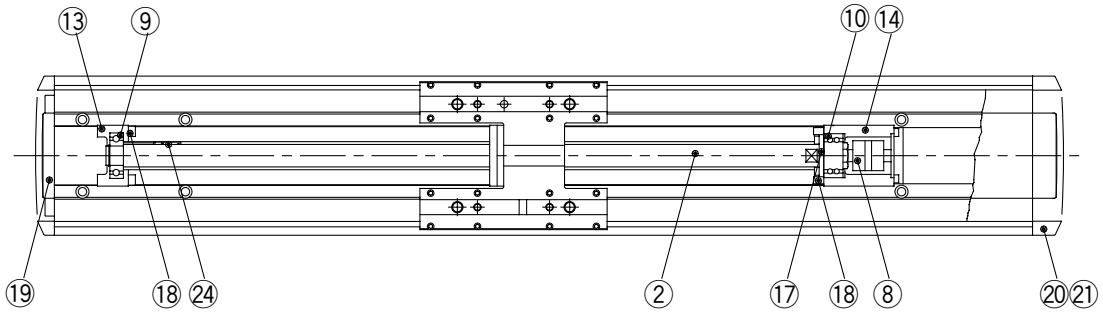


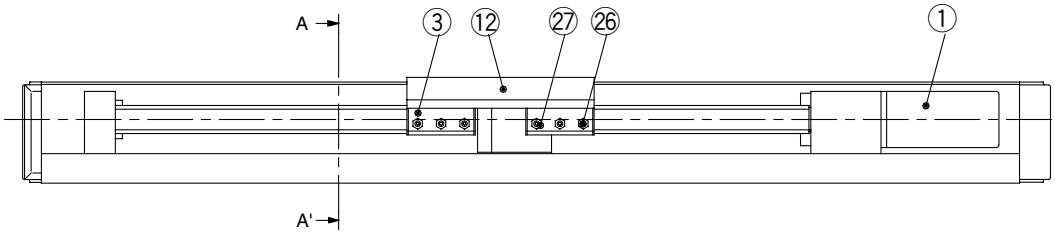
Dimension table/without brake

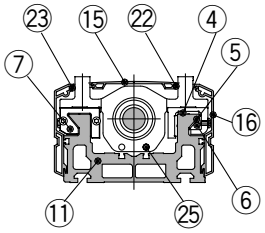
Model	Stroke	A	B	C
LJ1S30□SC- 200-□□	200	445	365	698
LJ1S30□SC- 300-□□	300	545	465	798
LJ1S30□SC- 400-□□	400	645	565	898
LJ1S30□SC- 500-□□	500	745	665	998
LJ1S30□SC- 600-□□	600	845	765	1098
LJ1S30□SC- 800-□□	800	1045	965	1298
LJ1S30□SC-1000-□□	1000	1245	1165	1498
LJ1S30□SC-1200-□□	1200	1445	1365	1698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







View A-A'

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

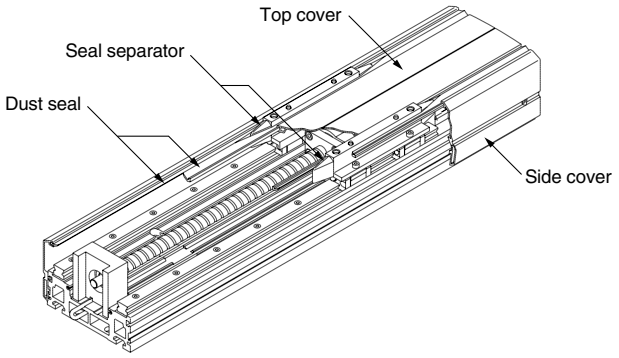
No.	Description	Material	Note
14	**Housing B**	Aluminum alloy	
15	**Body cover A**	Aluminum alloy	
16	**Side cover**	Aluminum alloy	
17	**Bearing retainer**	Carbon steel	
18	**Bumper**	IIR	
19	**End cover A**	PC	
20	**End cover B**	PC	
21	**Inner cover**	PC	
22	**Motor cover R**	PC	
23	**Motor cover 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

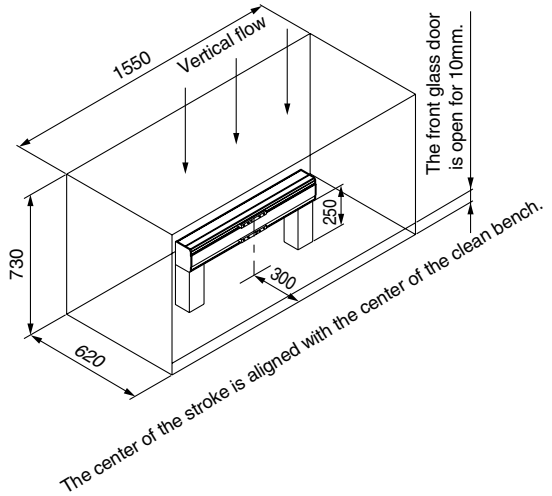
Test method

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

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

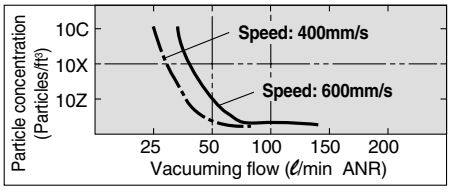
Test equipment: <Test equipment> Laser particle counter
Hitachi Electric Engineering: TS-3500
<Target particle size> 0.17μm or larger
<Sampling flow rate> 28ℓ/min (ANR)
<Sampling time> 1min
<Holding time> 2min
<Number of tests> 6

Actuator placement and test points

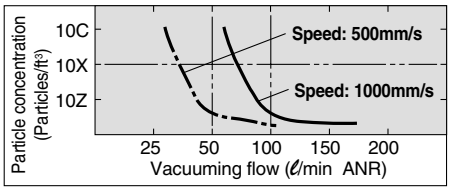


Vacuuming Graphs

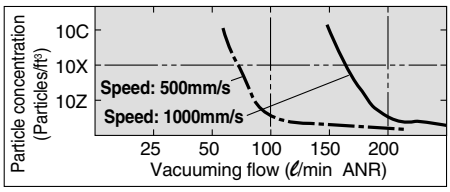
LJ1H10 Vacuuming flow characteristics



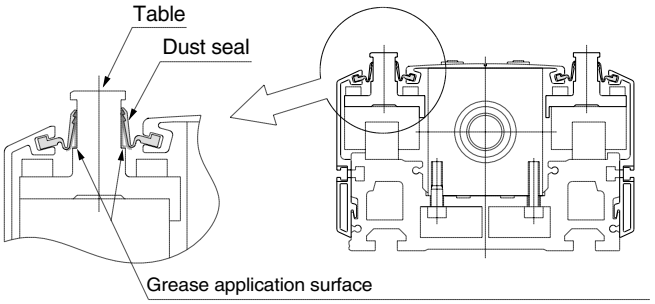
LJ1H20 Vacuuming flow characteristics



LJ1H30 Vacuuming flow characteristics



Grease Application Areas



(Inner surface of the dust seal and sliding parts of the slider)

⚠ 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.

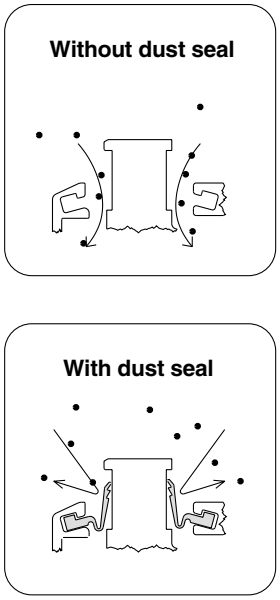
Specified grease: Barrierta IEL/V [fluorine grease (70g) for vacuum equipment manufactured by NOK Kluber]

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

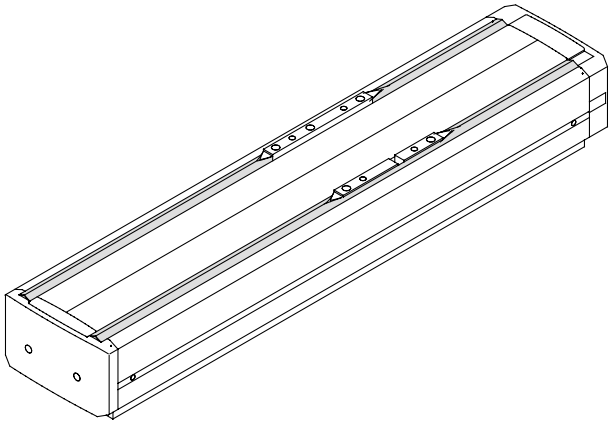
The particulate generation performance of this specification has been tested in the environment shown on the left.

Dust Seal Specification (-X70)

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



Dust Cover

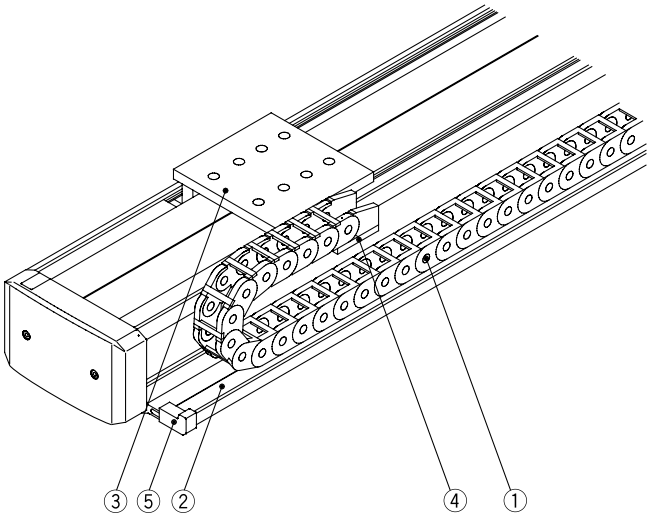


Note 1) Dust seal material: Polyurethane
Consult SMC for details.
Note 2) Measures for use in an mist environment are not provided.
Also, depending on the environment, it may not be possible to use the dust seal. Consult SMC.

CABLEVEYOR Specification (-X40)

Able to compactly arrange supporting guides for cables and hoses.

Construction

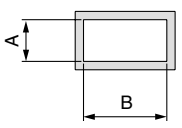


Parts list

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

1. 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.
2. Implement protective measures (safety cover, etc.).
3. Be sure to turn off the power and ensure that it cannot be turned on accidentally before installation, removal or maintenance of the equipment.
4. In order to prevent secondary accidents, put the surrounding area in good order and operate under safe conditions.
5. The total cross-sectional area of the cable inserted into the CABLEVEYOR should be no more than 60% of the CABLEVEYOR cross-sectional area.
6. The minimum clearance between the cable and CABLEVEYOR internal width should be "the larger of 10% of the cable O.D. or 2mm".

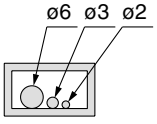


CABLEVEYOR cross-sectional dimensions

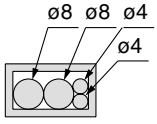
(mm)

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}_{S}$10



Correct: 60% or less



Incorrect: More than 60%

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

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**
- **Lead screw type** (Refer to Table 1 below for combinations.)
- **Screw lead** (Refer to Table 1 below for combinations.)
- **Stroke** (Refer to Table 1 below for combinations.)
- **Cable entry direction**
- **Nonstandard Motor switch** Note 3)
- **Standard motor** Note 3) **Cable length**
- **Clean room specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Note 2) 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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

- The motors can be mounted when specified.
- Refer to the motor compatibility table on page 69 when specified without motor.
- For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
- For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
- For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

P	Ground ball screw
N	Rolled ball scre

Screw lead (Refer to Table 1 below for combinations.)

B	12mm

Stroke (Refer to Table 1 below for combinations.)

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

Cable entry direction

F	Axial

Nonstandard Motor switch Note 3)

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

Standard motor Note 3) **Cable length**

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Clean room specification

CE certified

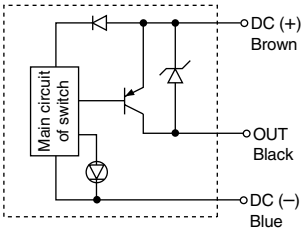
Table 1: Lead screw, lead and stroke combinations

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.

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-IEL	

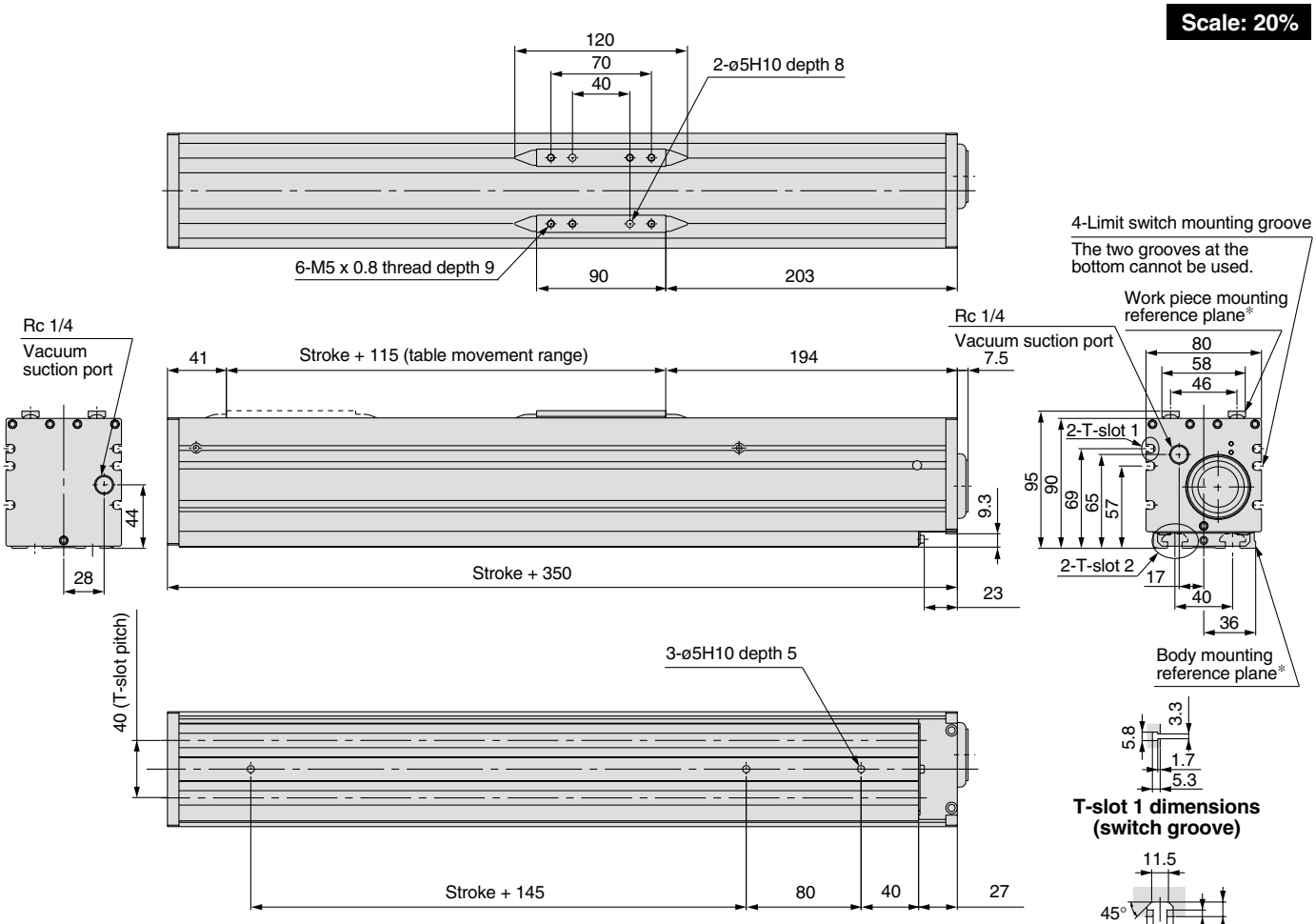
Specifications

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				
Switch				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.

Dimensions/LJ1H10□$^{1}_{2}$ (X60)

Scale: 20%



* 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**
- **Lead screw type** (Refer to Table 1 below for combinations.)
- **Screw lead** (Refer to Table 1 below for combinations.)
- **Stroke** (Refer to Table 1 below for combinations.)
- **Cable entry direction**
- **Standard motor** Note 3) **Cable length**
- **Nonstandard** Note 3) **Motor switch**
- **Clean room specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y20 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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 scre

Cable entry direction

F	Axial

Standard motor Note 3) **Cable length**

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

Nonstandard Note 3) **Motor switch**

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Clean room specification

CE certified

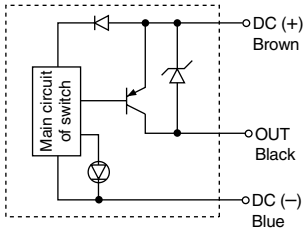
Table 1: Lead screw, lead and stroke combinations

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.

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-IEL	

Specifications

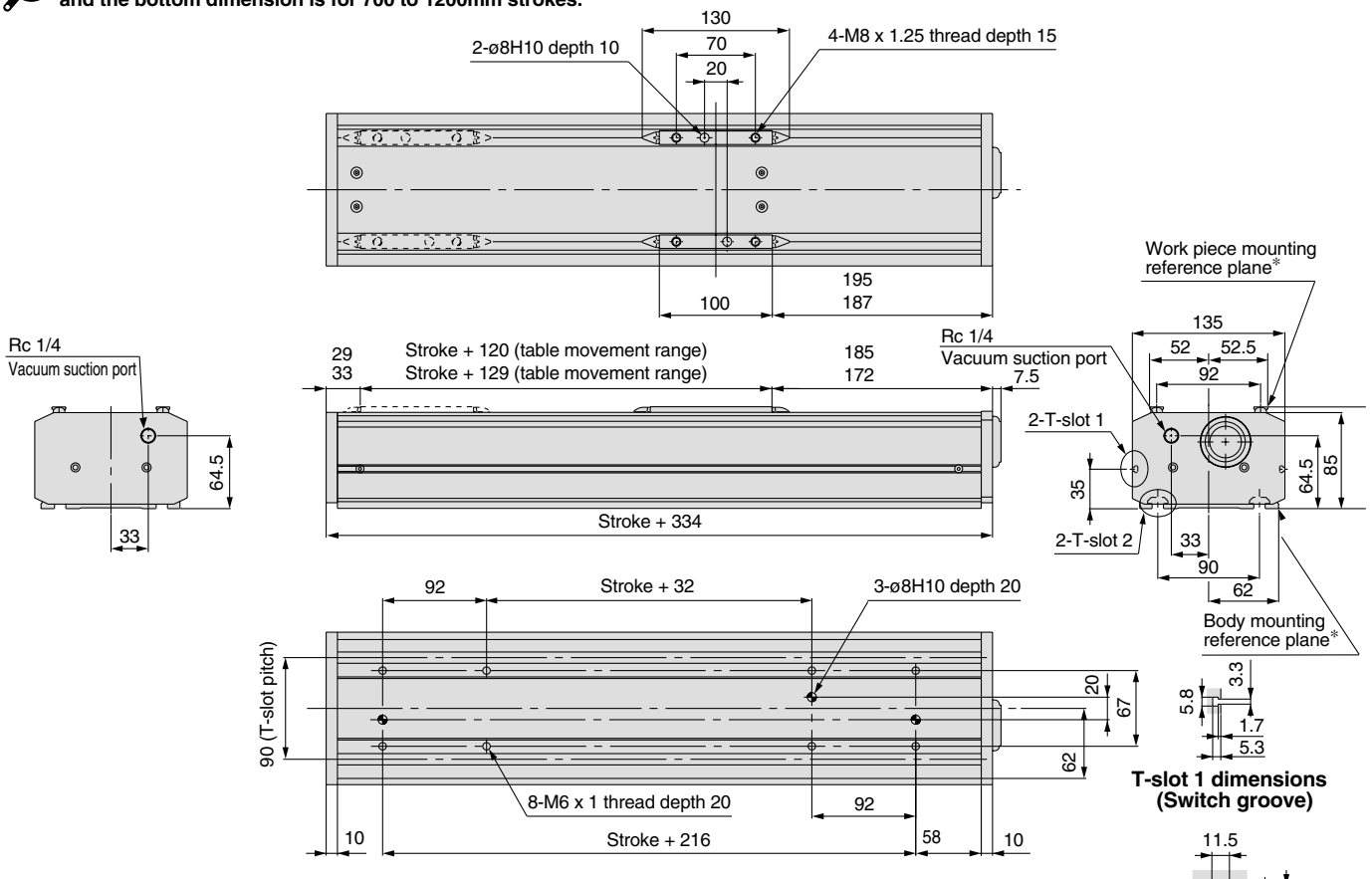
Stroke (mm)				100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor			7.9	9.1	10.3	11.4	12.8	13.9	15.1	16.3	17.5	18.7
	Without motor			7.4	8.6	9.8	10.9	12.3	13.4	14.6	15.8	17.0	18.2
Operating temperature range (°C)				5 to 40 (with no condensation)									
Work load (kg)	10mm lead		100W	30						—			
	20mm lead			—				15					
Maximum speed (mm/s)	10mm lead		100W	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									
Switch				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.									
		Stroke: 500mm or less		Suction at either end or both ends.									
		Stroke: 500mm or more		Suction at both ends.									
Suction flow rate		Speed: 500mm/s or less		50ℓ/min (ANR)									
		Speed: 500mm/s or more		100ℓ/min (ANR)									

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

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**
- **Stroke** (Refer to Table 1 below for combinations).
- **Screw lead: 25mm**
- **Lead screw type** (Refer to Table 1 below for combinations).
- **Cable entry direction**
- **Standard motor** Note 3) **Cable length**
- **Nonstandard** Note 3) **Motor switch**
- **Clean room specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y30 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

- The motors can be mounted when specified.
- Refer to the motor compatibility table on page 69 when specified without motor.
- For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
- For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
- For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

Lead screw type	
P	Ground ball screw
N	Rolled ball scre

Cable entry direction	
F	Axial

Standard motor Cable length	
2	2m
3	3m
4	4m
5	5m

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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 Switch Internal Circuit

D-Y7HL

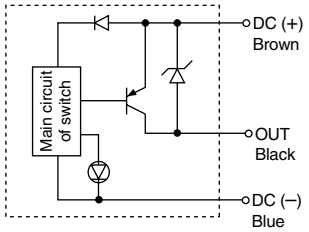


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)								
	200	**300**	**400**	**500**	**600**	**800**	**1000**	**1200**	**1500**
LJ1H30□PD-Stroke-F□-X60	●	●	●	●	●	●	●	●	●
LJ1H30□ND-Stroke-F□-X60	●	●	●	●	●	●	●	●	●

Combinations other than those shown above cannot be produced.

Spare parts (Dust seal)

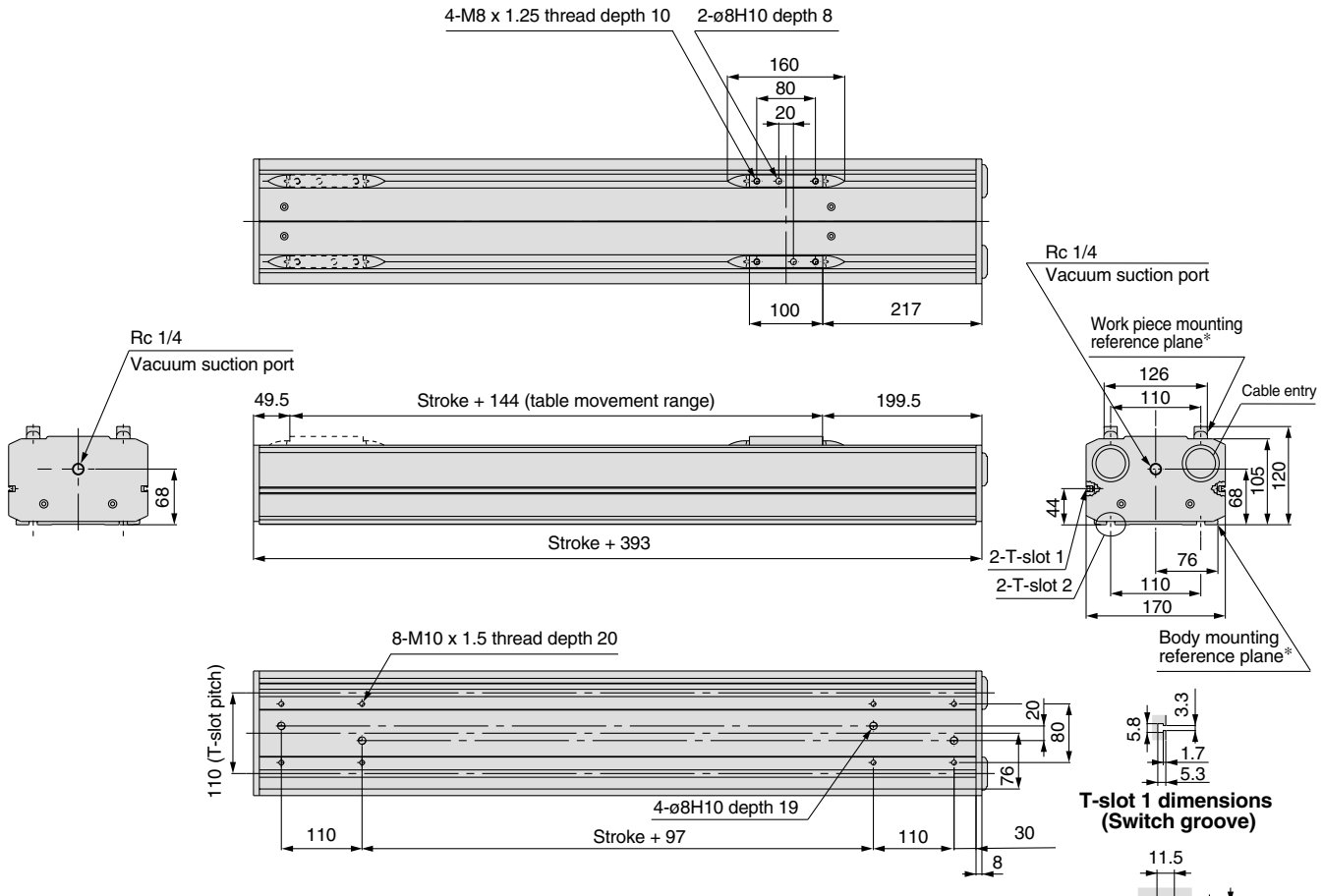
	Order Number	Note
Dust seal	LJ1-DS3-2000	for LJ1□30/2000mm x 4
Dust seal grease	LJ1-IEL	

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								
Switch			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.

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**
- **Lead screw type** (Refer to Table 1 below for combinations.)
- **Screw lead** (Refer to Table 1 below for combinations.)
- **Stroke** (Refer to Table 1 below for combinations.)
- **Cable entry direction**
- **Standard motor** Note 3) **Cable length**
- **Nonstandard** Note 3) **Motor switch**
- **Dust seal specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Note 2) 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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

P	Ground ball screw
N	Rolled ball scre
S	Slide screw

Screw lead (Refer to Table 1 below for combinations.)

B	12mm
C	20mm

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

Cable entry direction

F	Axial

Standard motor Note 3) **Cable length**

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

Nonstandard Note 3) **Motor switch**

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Dust seal specification

CE certified

Limit Switch Internal Circuit

D-Y7HL

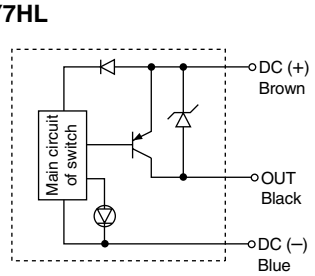


Table 1: Lead screw, lead and stroke combinations

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	

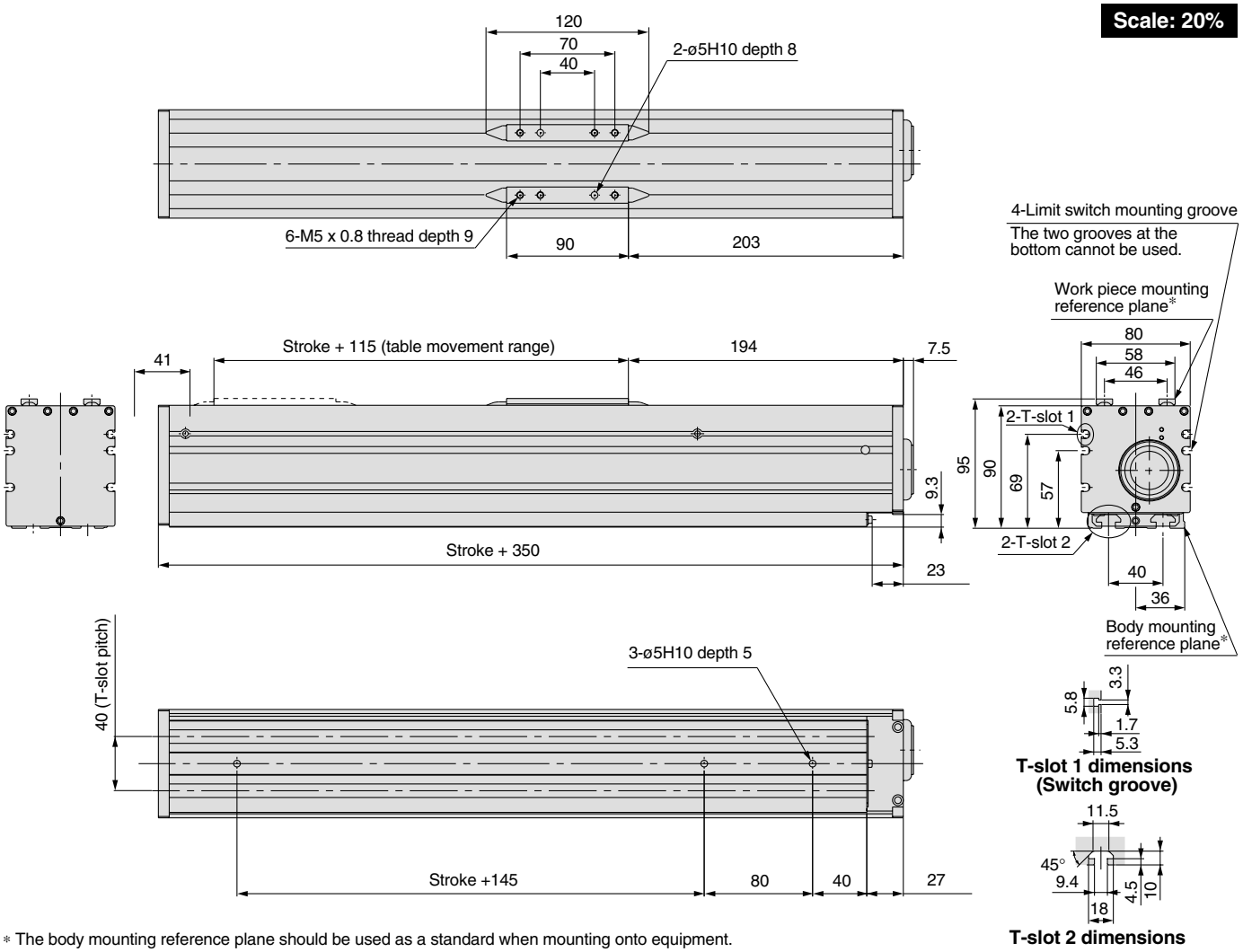
Specifications

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									
Switch				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.

Dimensions/LJ1H10□$\frac{1}{2}$ (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**
- **Stroke** (Refer to Table 1 below for combinations).
- **Screw lead** (Refer to Table 1 below for combinations).
- **Lead screw type** (Refer to Table 1 below for combinations).
- **Cable entry direction**
- **Standard motor** Note 3) **Cable length**
- **Nonstandard** Note 3) **Motor switch**
- **Dust seal specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y20 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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
A 10mm
C 20mm

Lead screw type
P Ground ball screw
N Rolled ball scre
S Slide screw

Cable entry direction
F Axial

Standard motor Cable length
2 2m
3 3m
4 4m
5 5m

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Dust seal specification

CE certified

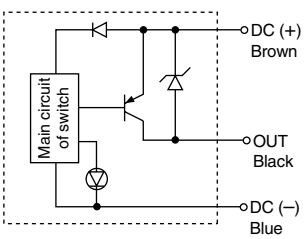
Table 1: Lead screw, lead and stroke combinations

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.

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

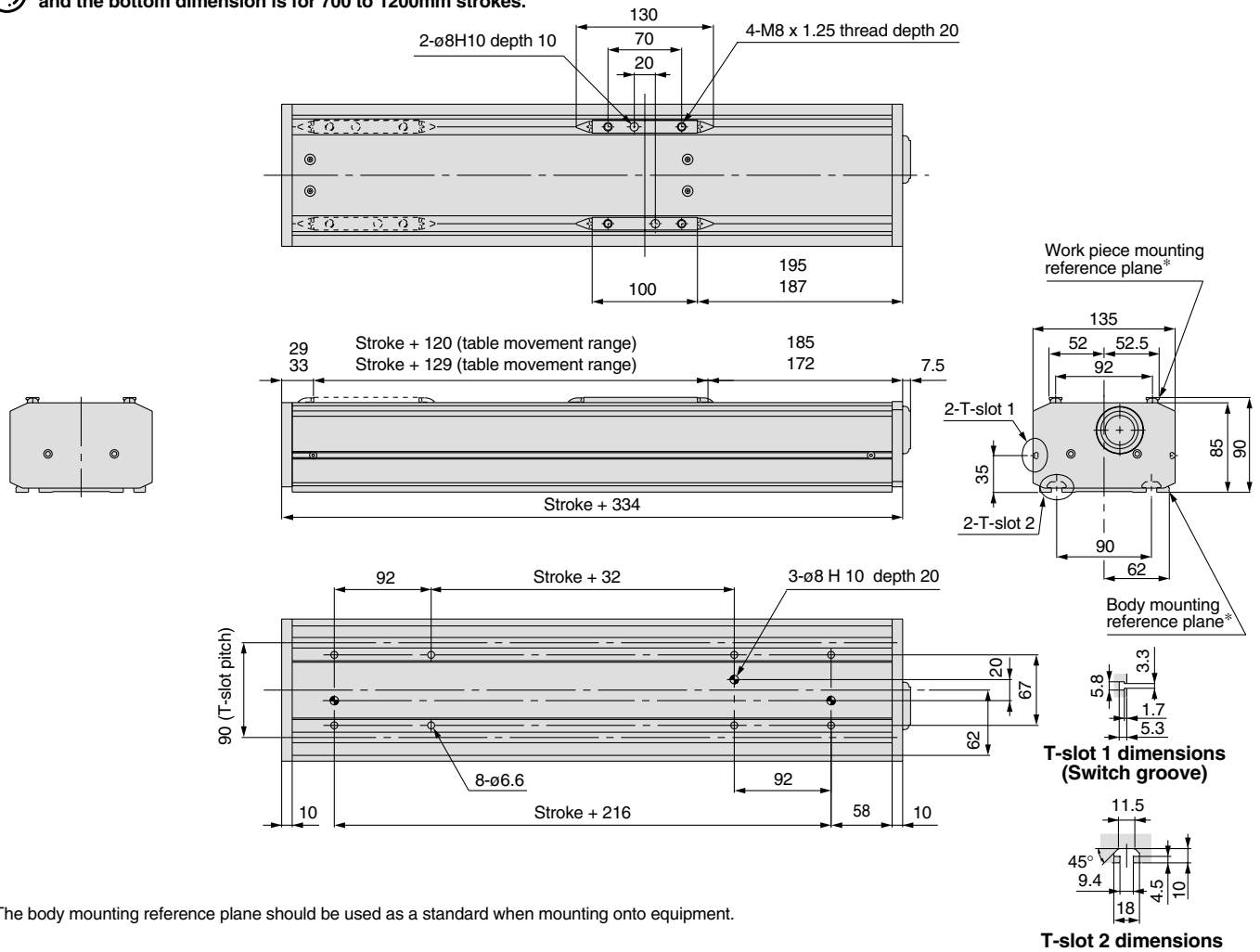
Stroke (mm)					100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	Ball screw	With motor			7.9	9.1	10.3	11.4	12.8	13.9	15.1	16.3	17.5	18.7	—
		Without motor			7.4	8.6	9.8	10.9	12.3	13.4	14.6	15.8	17.0	18.2	—
	Slide screw	With motor			9.0	10.0	11.1	12.2	13.3	14.3	15.3	17.2	19.1	20.6	24.7
		Without 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	100W		—				15						—
	Slide screw	20mm lead			15										
Maximum speed (mm/s)	Ball screw	10mm lead			500						—				
		20mm lead	100W		—				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						—				
					—				ø15mm, 20mm lead						—
	Slide screw				ø20mm, 20mm lead										
Guide					High rigidity direct acting guide										
Switch					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.

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**
- **Stroke** (Refer to Table 1 below for combinations).
- **Screw lead** (Refer to Table 1 below for combinations).
- **Lead screw type** (Refer to Table 1 below for combinations).
- **Cable entry direction**
- **Standard motor** Note 3) **Cable length**
- **Nonstandard** Note 3) **Motor switch**
- **Dust seal specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y30 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

F	Axial

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

B	25mm
E	40mm

P	Ground ball screw
N	Rolled ball scre
S	Slide screw

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

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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 Switch Internal Circuit

D-Y7HL

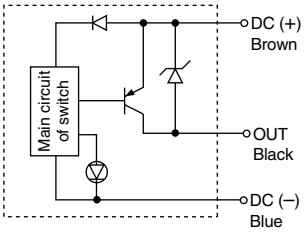


Table 1: Lead screw, lead and stroke combinations

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	

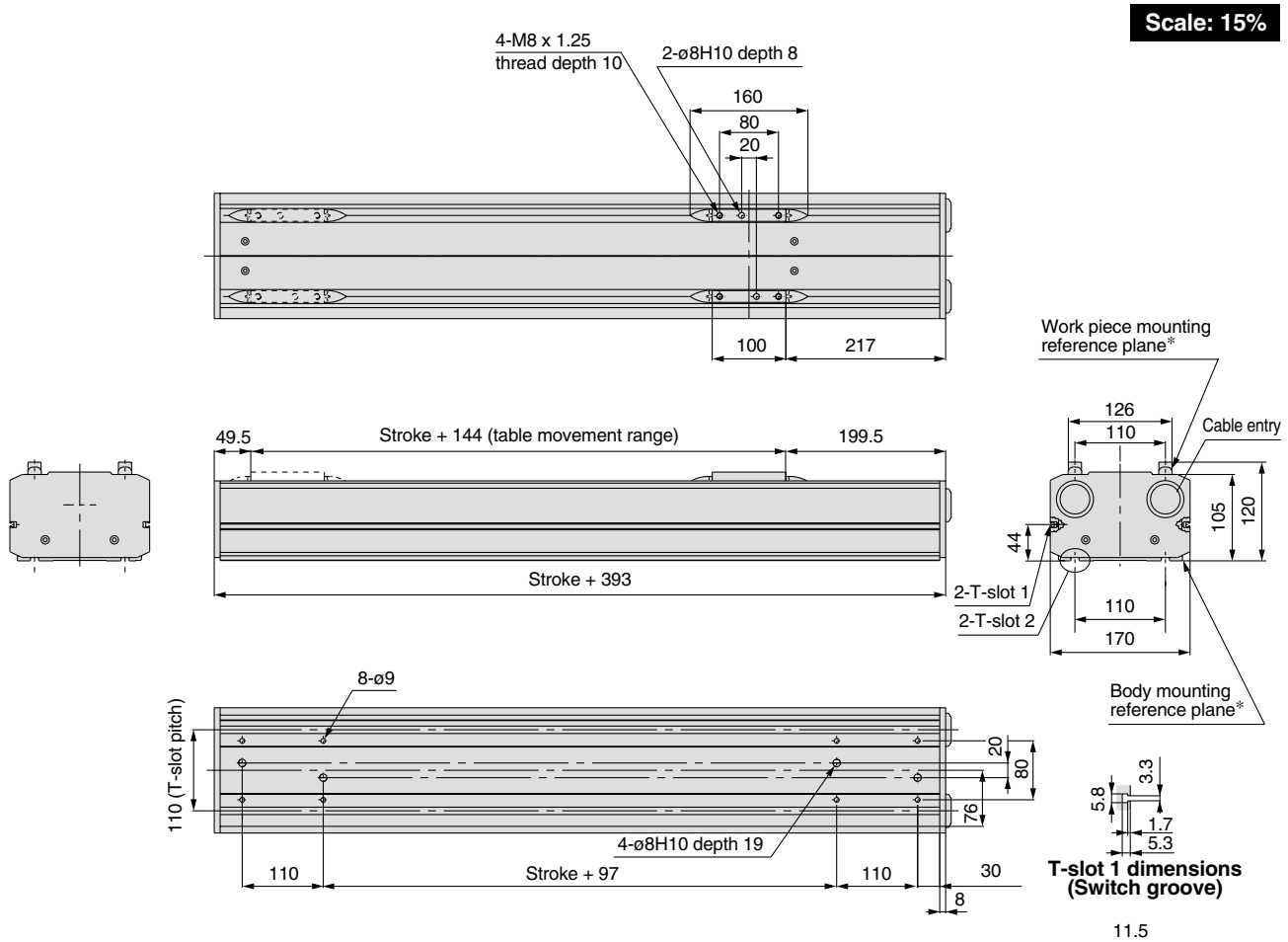
Specifications

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								
Switch					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.

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

- **R11**: Motor/Driver specifications
- **S**: Lead screw type
- **C**: Screw lead
- **100**: Stroke
- **F**: Cable entry direction
- **H**: Standard motor / Nonstandard motor switch
- **X70**: Dust seal specification
- **Q**: CE certified

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y10 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

Standard motor Note 3)
Cable length

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

Nonstandard Note 3)
Motor switch

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

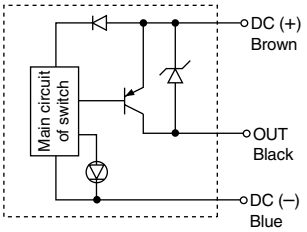
Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Dust seal specification

CE certified

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	

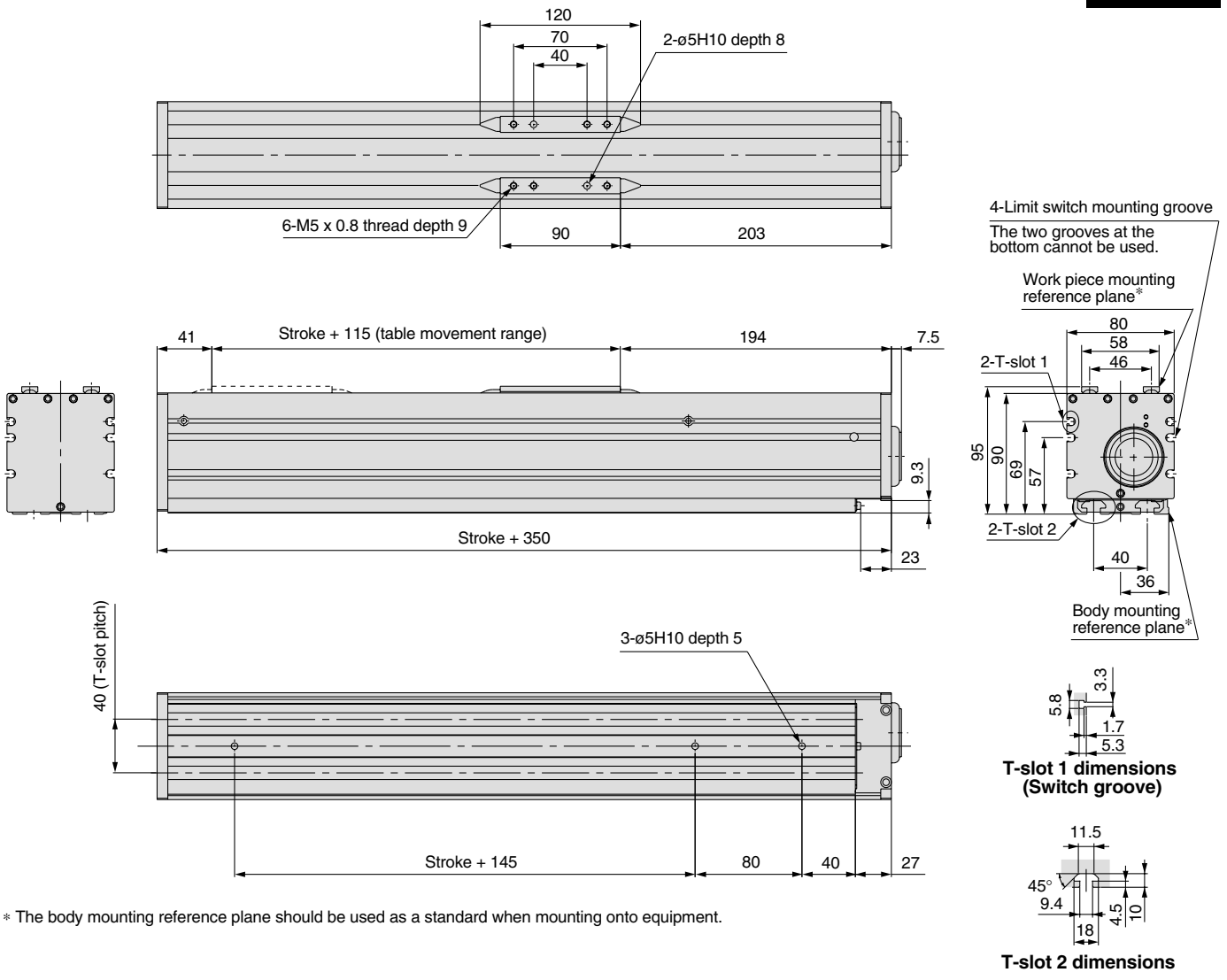
Specifications

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									
Switch		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.

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**
- **Stroke**
- **Screw lead**
- **Lead screw type**
- **Cable entry direction**
- **Standard motor** Note 3) **Cable length**
- **Nonstandard** Note 3) **Motor switch**
- **Dust seal specification**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y20 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

- The motors can be mounted when specified.
- Refer to the motor compatibility table on page 69 when specified without motor.
- For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
- For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
- For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

Standard motor Note 3) **Cable length**

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

Nonstandard Note 3) **Motor switch**

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

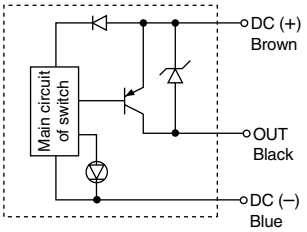
Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver is optional, and may be supplied by the customer, or the cable corresponding to the selected motor may be ordered separately by referring to the section on how to order cables on page 67.

Dust seal specification

CE certified

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

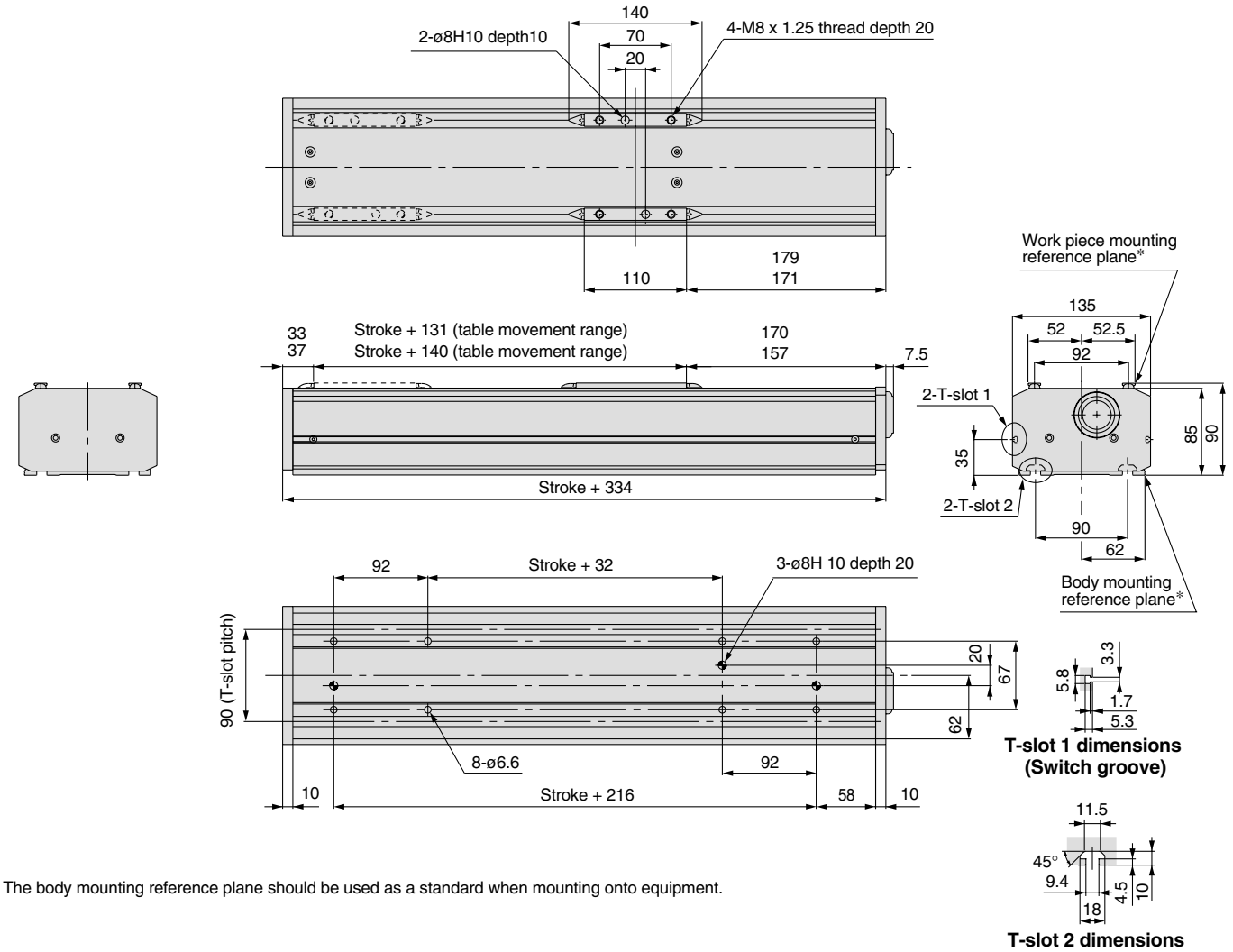
Stroke (mm)		100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	With motor (standard)	6.8	7.9	9.0	10.1	11.1	12.2	13.3	14.3	15.4	16.4	18.6
	Without motor (nonstandard)	6.3	7.4	8.5	9.6	10.7	11.7	12.8	13.8	14.9	15.9	18.1
Operating temperature range (°C)		5 to 40 (with no condensation)										
Work 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										
Switch		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.

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

- **Q** — CE certified
- **X70** — Dust seal specification
- **H** — Standard motor Note 3) Cable length / Nonstandard Note 3) Motor switch
- **F** — Cable entry direction
- **200** — Stroke
- **C** — Screw lead
- **S** — Lead screw type
- **R31** — Motor/Driver specifications

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Note 2) 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		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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y30 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

Standard motor Note 3) Cable length

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

Nonstandard Note 3) Motor switch

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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

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

Screw lead

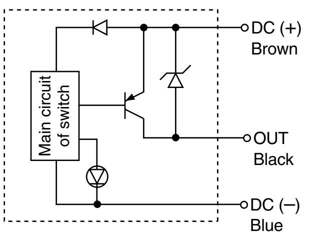
C	20mm

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	

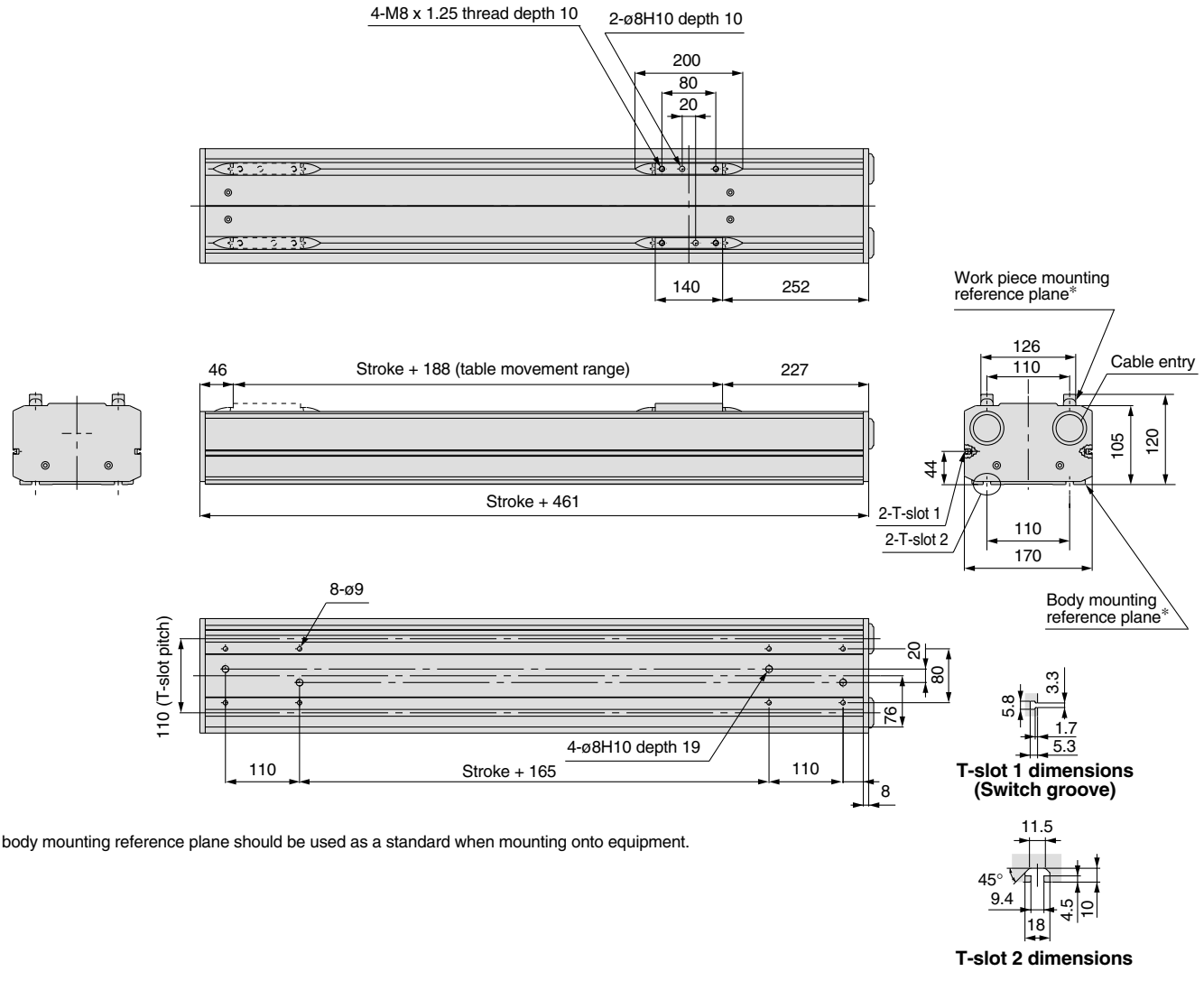
Specifications

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								
Switch		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.

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** (R11)
- **Lead screw type** (P)
- **Screw lead** (B)
- **Stroke** (100)
- **Cable entry direction** (F)
- **Standard motor Cable length** (H) Note 3)
- **Nonstandard Motor switch** (H)
- **CABLEVEYOR specification** (X40)
- **CABLEVEYOR entry direction** (L)
- **CE certified** (Q)

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor Model	Motor Output	Driver model	
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Note 2) 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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 69 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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 scre
S	Slide screw

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Standard motor Cable length Note 3)

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

Nonstandard Motor switch Note 3)

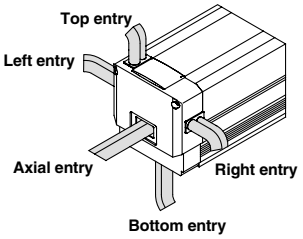
Nil	None
H	N.C. (B contact) 2pcs.

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

CABLEVEYOR entry direction

L	Left
R	Right

Cable/CABLEVEYOR entry direction



Limit Switch Internal Circuit

D-Y7HL

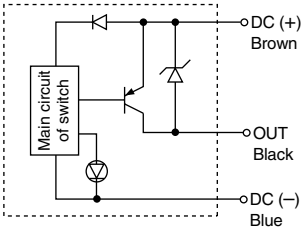


Table 1: Lead screw, lead and stroke combinations

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

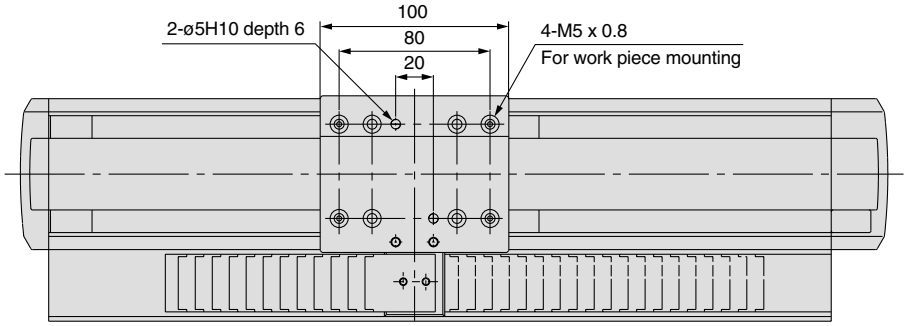
Stroke (mm)			100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor (standard)	Ball screw	6.0	6.9	7.9	8.7	9.6	—	—	—	—	—
		Slide screw	6.1	7.1	8.3	9.2	10.1	11.1	12.0	13.0	14.0	14.9
	Without motor (nonstandard)	Ball screw	5.6	6.5	7.5	8.3	9.2	—	—	—	—	—
		Slide screw	5.7	6.7	7.9	8.8	9.7	10.7	11.6	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									
Switch			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									

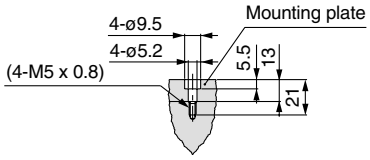
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Dimensions/LJ1H10□1 (X40)

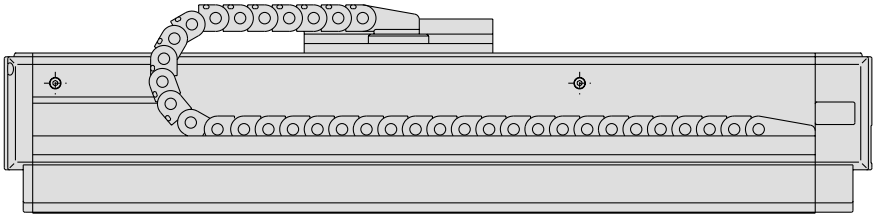
Dimensions other than those shown in the drawing are the same as standard.

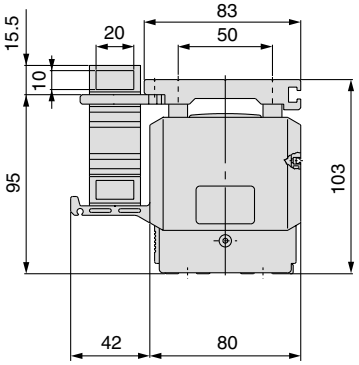
Scale: 25%





Work piece mounting dimensions





∗ This drawing shows the CABLEVEYOR with left hand entry.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

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		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y20 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
* For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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 scre
S	Slide screw

CABLEVEYOR specification

Standard motor Cable length Note 3)

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

Nonstandard Motor switch Note 3)

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

CABLEVEYOR entry direction

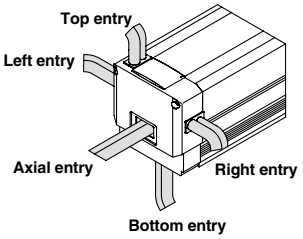
L	Left
R	Right

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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
R	Right
L	Left
T	Top
B	Bottom

Cable/CABLEVEYOR entry direction



CE certified

Limit Switch Internal Circuit

D-Y7HL

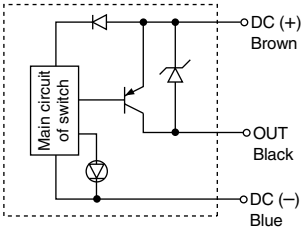


Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)										
	100	200	300	400	500	600	700	800	900	1000	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

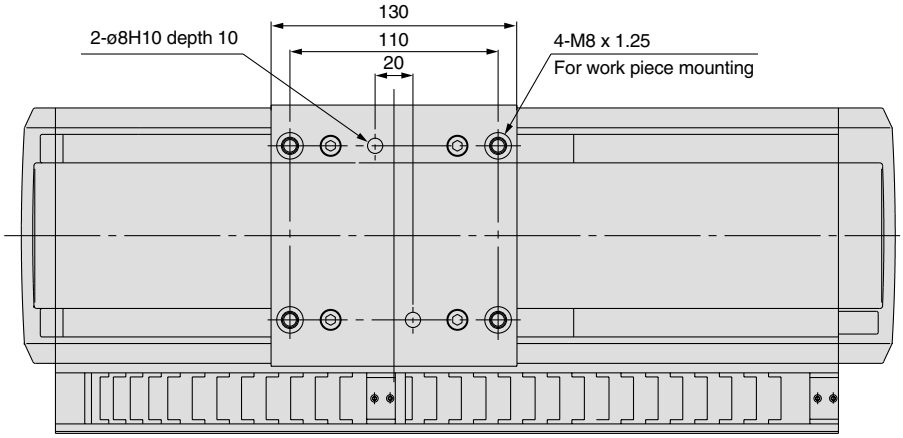
Stroke (mm)			100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	With motor (standard)	Ball screw	8.7	9.9	11.1	12.3	13.5	14.7	15.9	17.1	18.3	19.5	—
		Slide screw	10.0	11.2	12.4	13.6	14.8	16.0	17.2	18.4	19.6	20.8	23.2
	Without motor (nonstandard)	Ball screw	8.2	9.4	10.6	11.8	13.0	14.2	15.4	16.6	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										
Switch			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										

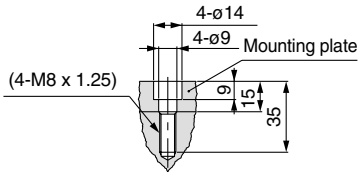
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Dimensions/LJ1H20□2 (X40)

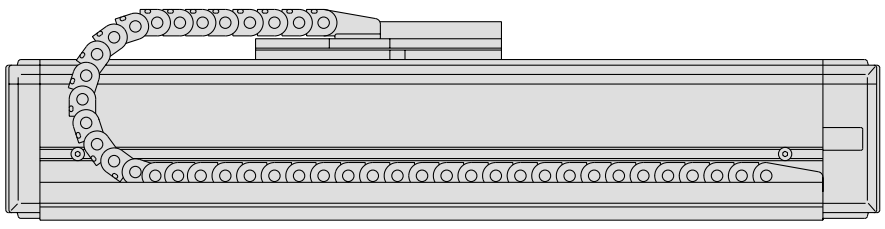
Dimensions other than those shown in the drawing are the same as standard.

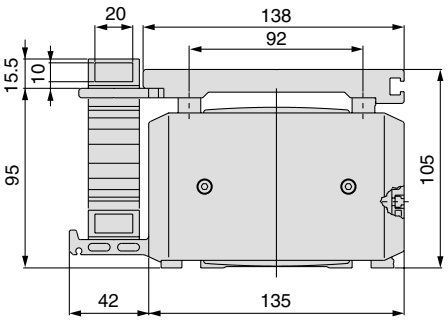
Scale: 25%





Work piece mounting dimensions





∗ This drawing shows the CABLEVEYOR with left hand entry.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

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**
- **Lead screw type** (Refer to Table 1 below for combinations.)
- **Screw lead** (Refer to Table 1 below for combinations.)
- **Stroke** (Refer to Table 1 below for combinations.)
- **Cable entry direction**
- **Nonstandard Motor switch** Note 3)
- **Standard motor Cable length** Note 3)
- **CABLEVEYOR specification**
- **CABLEVEYOR entry direction**
- **CE certified**

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y30 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

- The motors can be mounted when specified.
- Refer to the motor compatibility table on page 69 when specified without motor.
- For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
- For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
- For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

P	Ground ball screw
N	Rolled ball scre
S	Slide screw

Screw lead (Refer to Table 1 below for combinations.)

D	25mm
E	40mm

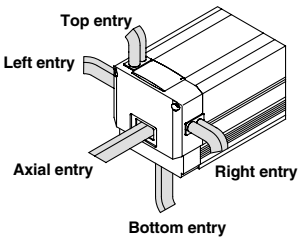
Stroke (Refer to Table 1 below for combinations.)

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

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable/CABLEVEYOR entry direction



Nonstandard Motor switch Note 3)

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

Standard motor Cable length Note 3)

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

CABLEVEYOR specification

CABLEVEYOR entry direction

L	Left
R	Right

CE certified

Limit Switch Internal Circuit

D-Y7HL

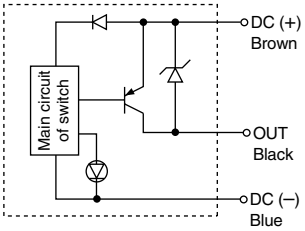


Table 1: Lead screw, lead and stroke combinations

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.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

Specifications

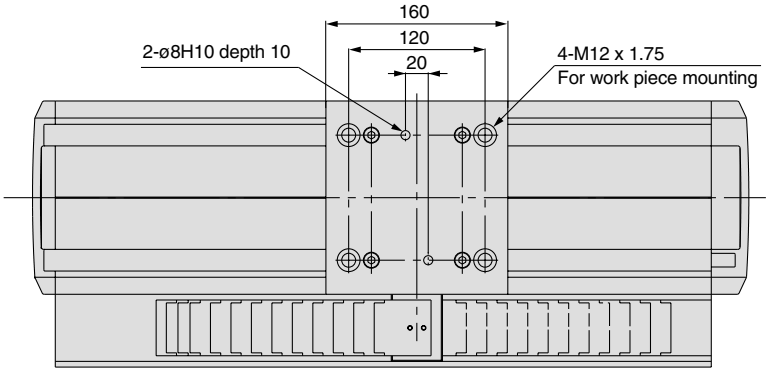
Stroke (mm)			200	300	400	500	600	800	1000	1200	1500
Weight (kg)	With motor (standard)	Ball screw	17.5	19.7	21.9	24.1	26.2	31.1	36.0	40.3	46.9
		Slide screw	16.4	18.7	20.9	23.2	25.4	29.9	34.5	39.0	45.8
	Without motor (nonstandard)	Ball screw	16.4	18.6	20.8	23.0	25.1	30.0	34.9	39.2	45.8
		Slide screw	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 (100W)								
Lead screw	Rolled ball screw		ø25mm, 25mm lead								
	Ground ball screw										
	Slide screw		ø30mm, 40mm lead								
Guide			High rigidity direct acting guide								
Switch			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								

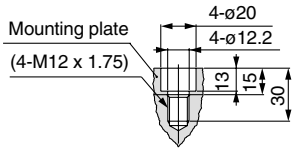
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Dimensions/LJ1H30□3 (X40)

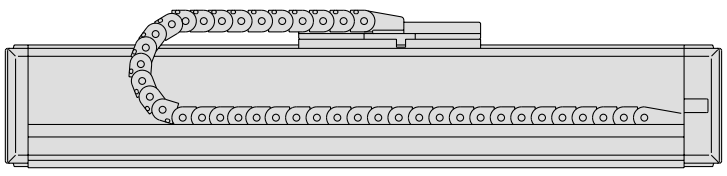
Dimensions other than those shown in the drawing are the same as standard.

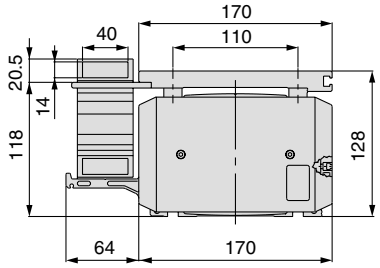
Scale: 20%





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** (R11)
- **Lead screw type** (S)
- **Screw lead** (C)
- **Stroke** (100)
- **Cable entry direction** (F)
- **Standard motor Cable length** (H) Note 3)
- **Nonstandard Motor switch** (H)
- **CABLEVEYOR specification** (X40)
- **CABLEVEYOR entry direction** (L)
- **CE certified** (Q)

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
811	SMC standard motor		50W	LC8-B1H**-M	110/115VAC
812					200/230VAC
R11	Note 2) 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)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y10 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

- The motors can be mounted when specified.
- Refer to the motor compatibility table on page 69 when specified without motor.
- For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$10 on page 70. These may be used for reference during design and assembly.
- For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
- For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

Lead screw type

S	Slide screw

Screw lead

C	20mm

Stroke

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

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Standard motor Cable length Note 3)

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

Nonstandard Motor switch Note 3)

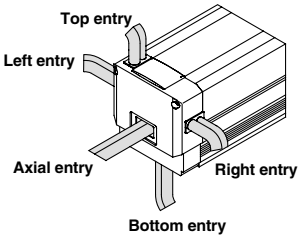
Nil	None
H	N.C. (B contact) 2pcs.

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

CABLEVEYOR entry direction

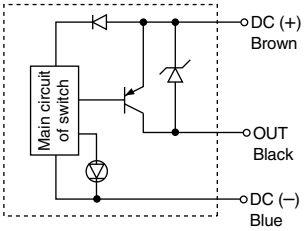
L	Left
R	Right

Cable/CABLEVEYOR entry direction



Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

SMC

Specifications

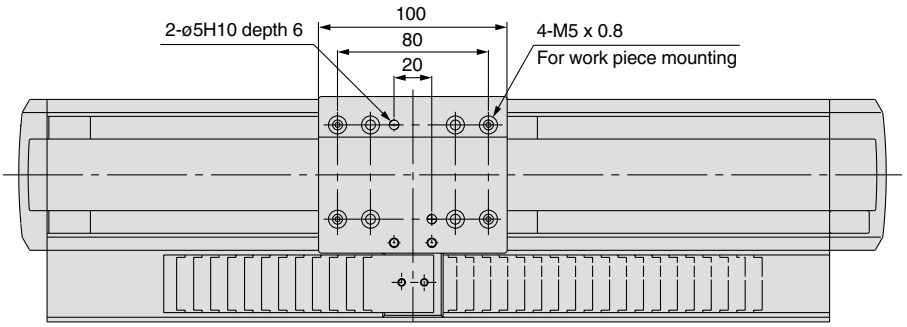
Stroke (mm)		100	200	300	400	500	600	700	800	900	1000
Weight (kg)	With motor (standard)	6.2	7.0	8.0	8.9	9.8	10.7	11.5	12.5	13.4	14.3
	Without motor (nonstandard)	5.8	6.6	7.6	8.5	9.4	10.3	11.1	12.1	13.0	13.9
Mounting orientation		Horizontal									
Operating temperature range (°C)		5 to 40 (with no condensation)									
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									
Switch		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									

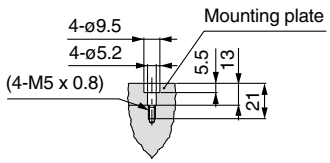
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Dimensions/LJ1S10□1□SC (X40)

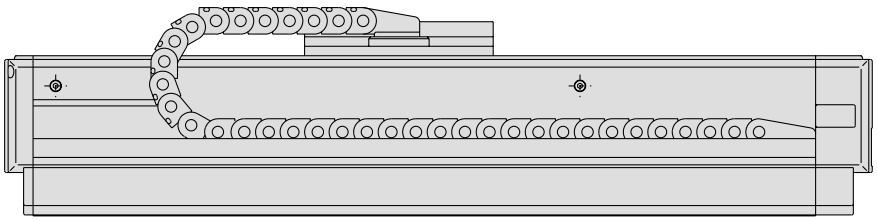
Dimensions other than those shown in the drawing are the same as standard.

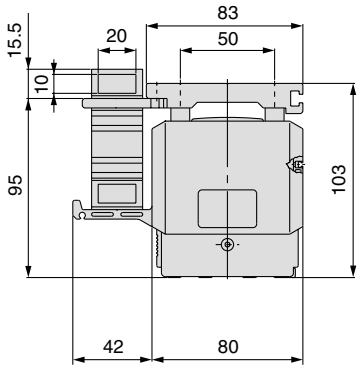
Scale: 20%





Work piece mounting dimensions





∗ This drawing shows the CABLEVEYOR with left hand entry.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

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

- **R21** → Motor/Driver specifications
- **S** → Lead screw type
- **C** → Screw lead
- **200** → Stroke
- **F** → Cable entry direction
- **H** → Nonstandard Motor switch
- **X40** → CABLEVEYOR specification
- **L** → CABLEVEYOR entry direction
- **Q** → CE certified

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
821	SMC standard motor		100W	LC8-B2H**-M	110/115VAC
822					200/230VAC
R21	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y20 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

- The motors can be mounted when specified.
- Refer to the motor compatibility table on page 69 when specified without motor.
- For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$20 on page 70. These may be used for reference during design and assembly.
- For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
- For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

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

CABLEVEYOR specification

Standard motor Cable length Note 3)

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

Nonstandard Motor switch Note 3)

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

CABLEVEYOR entry direction

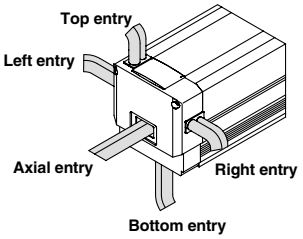
L	Left
R	Right

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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

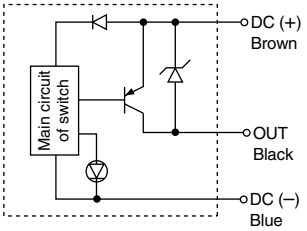
F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable/CABLEVEYOR entry direction



Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

Specifications

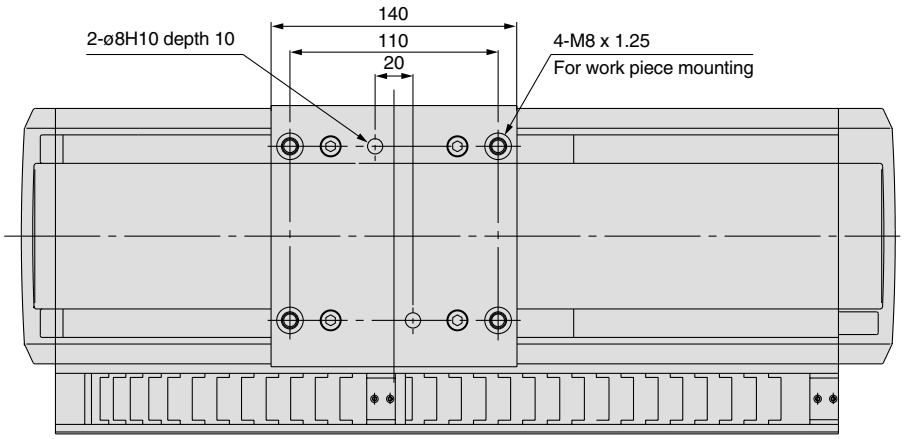
Stroke (mm)		100	200	300	400	500	600	700	800	900	1000	1200
Weight (kg)	With motor (standard)	7.8	9.0	10.3	11.5	12.6	13.8	15.0	16.2	17.4	18.5	20.9
	Without motor (nonstandard)	7.3	8.5	9.8	11.0	12.1	13.3	14.5	15.7	16.9	18.0	20.4
Mounting orientation		Horizontal										
Operating temperature range (°C)		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										
Switch		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										

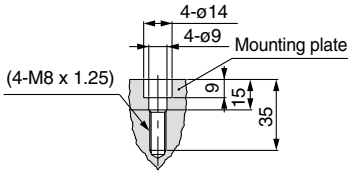
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Dimensions/LJ1S20□2□SC (X40)

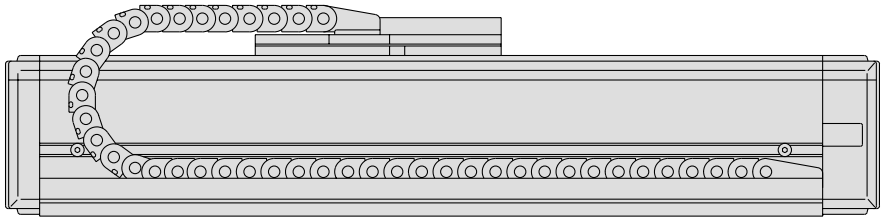
Dimensions other than those shown in the drawing are the same as standard.

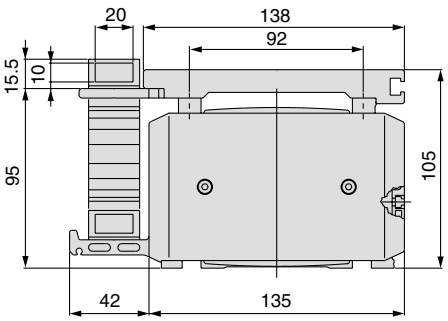
Scale: 20%





Work piece mounting dimensions





∗ This drawing shows the CABLEVEYOR with left hand entry.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

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		Driver model	
		Model	Output		
831	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
832					200/230VAC
R31	Mitsubishi Electric Coporation Note 2)	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. Note 2)	—	—	—	—
Y30 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* Refer to the motor compatibility table on page 69 when specified without motor.
* For the dimensions of the motor mounting area, refer to the dimensions for Series LJ1$^{H}_{S}$30 on page 70. These may be used for reference during design and assembly.
* For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
* For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 67 for part numbers.

Lead screw type

S	Slide screw

Screw lead

C	20mm

Stroke

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

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Standard motor Note 3) **Cable length**

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

Nonstandard Note 3) **Motor switch**

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

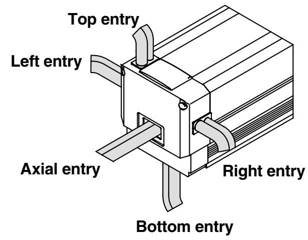
CABLEVEYOR specification

CABLEVEYOR entry direction

L	Left
R	Right

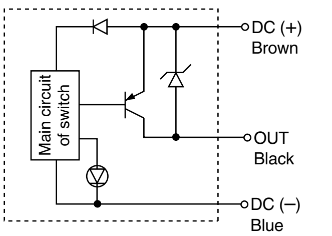
CE certified

Cable/CABLEVEYOR entry direction



Limit Switch Internal Circuit

D-Y7HL



CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

Specifications

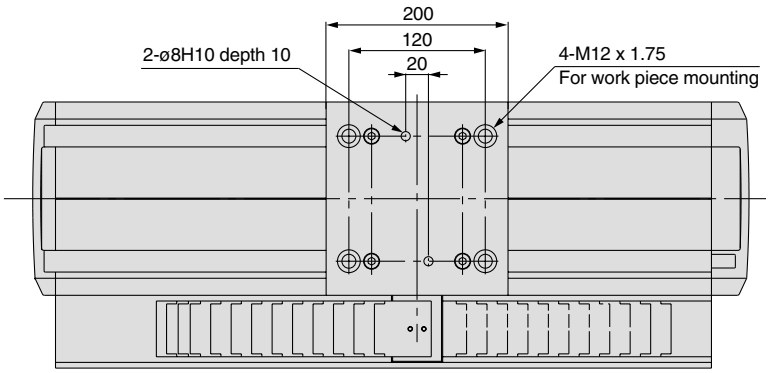
Stroke (mm)		200	300	400	500	600	800	1000	1200	1500
Weight (kg)	With motor (standard)	15.9	17.9	19.9	21.9	23.8	28.3	32.7	36.6	42.6
	Without motor (nonstandard)	14.8	16.8	18.8	20.8	22.7	27.2	31.6	35.5	41.5
Mounting orientation		Horizontal								
Operating temperature range (°C)		5 to 40 (with no condensation)								
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								
Switch		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								

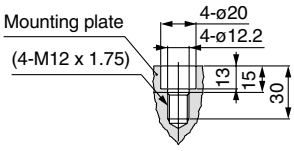
For basic specifications such as allowable moment, refer to the "Standard motor" pages for equivalent products.

Dimensions/ LJ1S30□3□SC (X40)

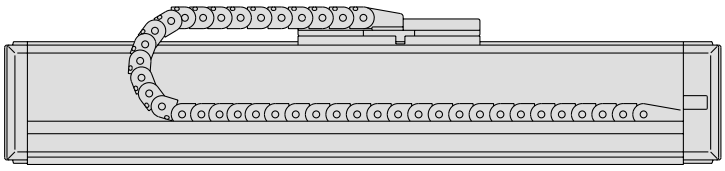
Dimensions other than those shown in the drawing are the same as standards.

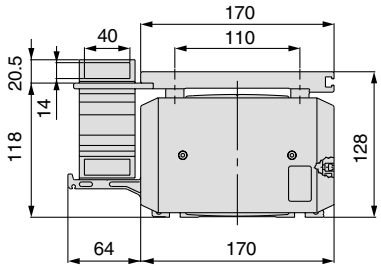
Scale: 20%





Work piece mounting dimensions





∗ This drawing shows the CABLEVEYOR with left hand entry.

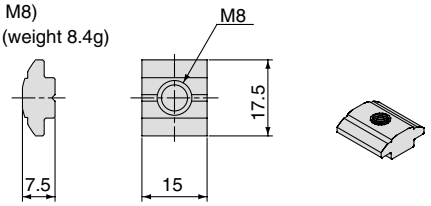
CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

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$^{H}_{S}$10	200mm stroke or less 6 pcs.
	300mm stroke or more 8 pcs.
LJ1$^{H}_{S}$20	8 pcs.
LJ1$^{H}_{S}$30	8 pcs.

∗ T-nuts are built into the body unit for Series LJ1$^{H}_{S}$10 only.

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 0.75mm^2 electric cable.

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

Standard Motor Cables

Cables for connecting actuators and controllers.

How to Order

LJ1 — 8 — B 05

Cable length

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

CABLEVEYOR Unit for Electric Actuator

Able to compactly arrange supporting guides for cables and hoses.

How to Order

LJ1 – C [1] – [100]

Compatible model

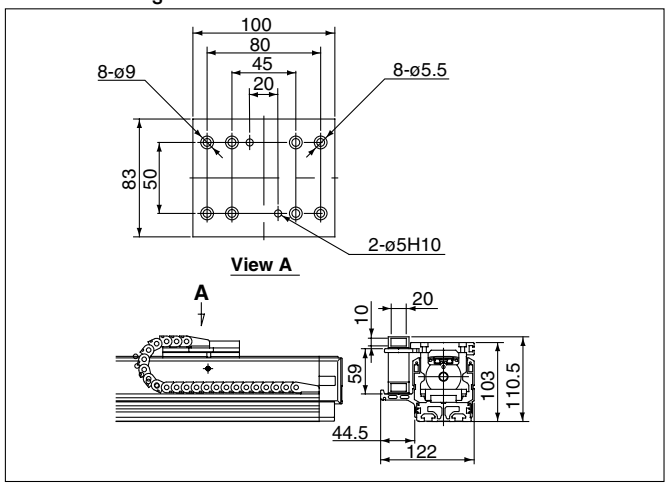
1	LJ1$^{H}_{S}$10
2	LJ1$^{H}_{S}$20
3	LJ1$^{H}_{S}$30

Stroke

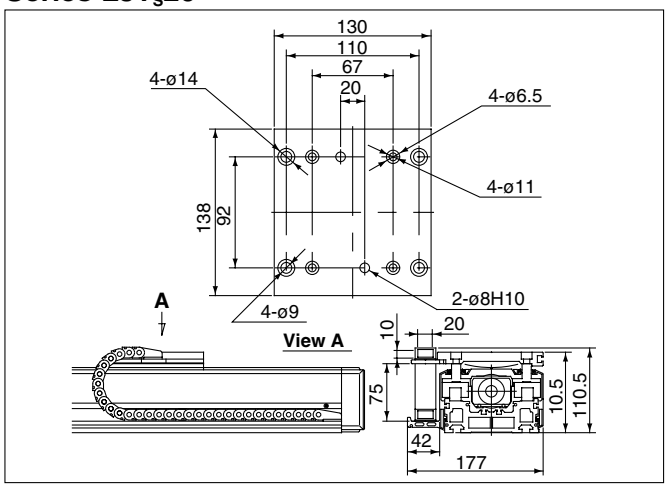
100	100mm	**700**	700mm
200	200mm	**800**	800mm
300	300mm	**900**	900mm
400	400mm	**1000**	1000mm
500	500mm	**1200**	1200mm
600	600mm	**1500**	1500mm

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

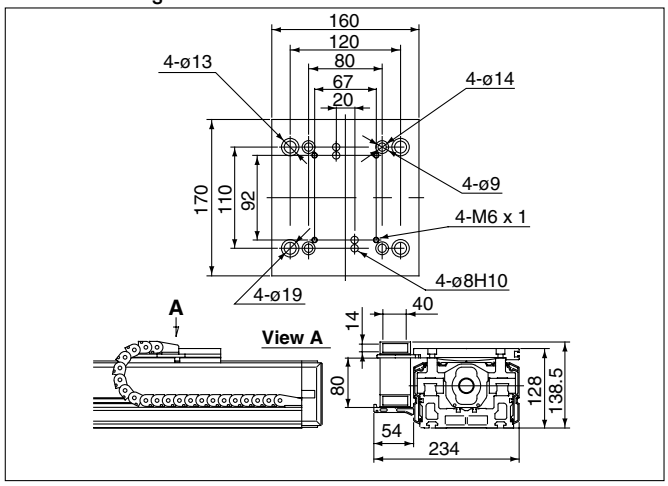
Series LJ1$^{H}_{S}$10



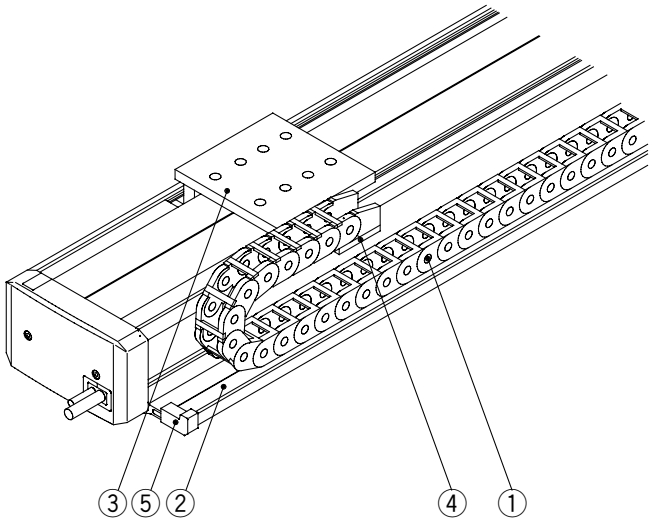
Series LJ1$^{H}_{S}$20



Series LJ1$^{H}_{S}$30



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

1. 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.
2. Implement protective measures (safety cover, etc.).
3. Be sure to turn off the power and ensure that it cannot be turned on accidently before installation, removal or maintenance of the equipment.
4. In order to prevent secondary accidents, put the surrounding area in good order and operate under safe conditions.

CABLEVEYOR is made by TSUBAKIMOTO CHAIN CO.

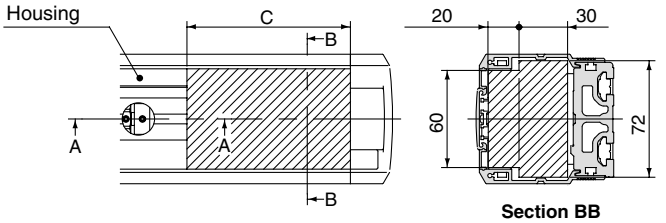
Reference Data

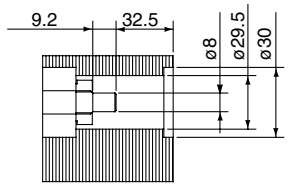
Installation motor list

	Motor output (W)	Motor model		Spare parts (Coupling)
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	

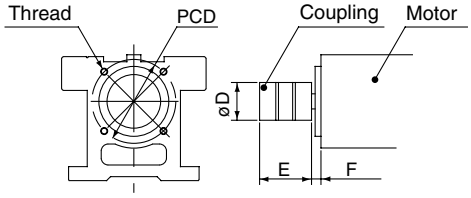
Nonstandard Motor Mounting Dimensions

Series LJ1 H/S 10





Section AA (housing interior)



Coupling mounting dimensions Note)

Motor mounting dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M4 x 0.7	M3 x 0.5
Effective thread length (mm)	8	6
Quantity	2	4
PCD	46	45

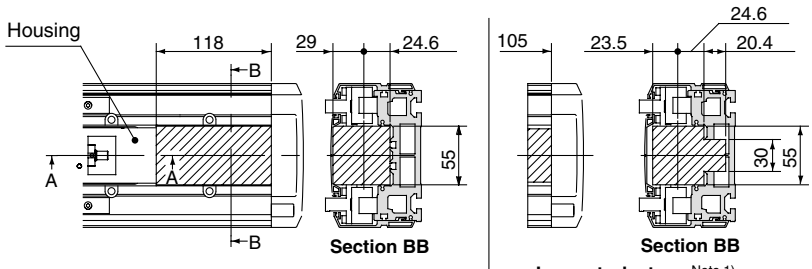
Motor mounting area

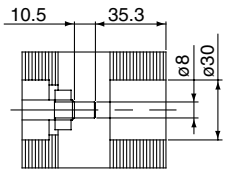
Note) When mounting the coupling to the motor, mount within the range of the dimensions shown to the left.

Dimensions

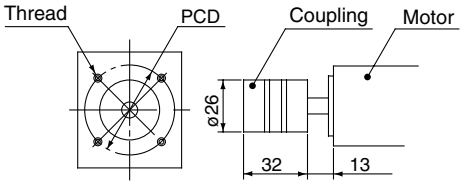
	C	D	E	F
With brake (mm)	101	26	32	8.5
Without brake (mm)	93	19	27.5	17

Series LJ1 H/S 20





Section AA (housing interior)



Coupling mounting dimensions Note 2)

Motor mounting dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M4 x 0.7	M3 x 0.5
Effective thread length (mm)	8	6
Quantity	2	4
PCD	46	45

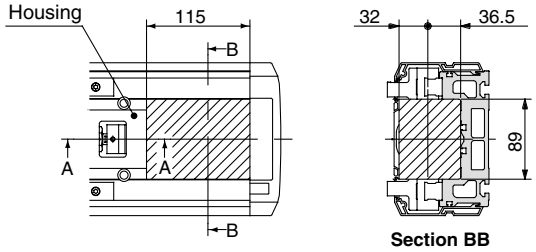
Motor mounting area

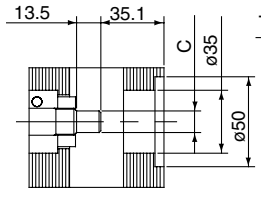
Note 1) When mounting the coupling to the motor, mount within the limits of the dimensions shown to the left.

LJ1H20□□□ N P C	500 to 1000 stroke
LJ1H20□□□SC	700 to 1200 stroke
LJ1S20□□□SC	700 to 1200 stroke

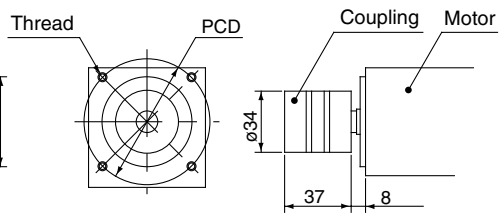
Note 2) When mounting the coupling to the motor, mount within the range of the dimensions shown to the left.

Series LJ1 H/S 30





Section AA (housing interior)



Coupling mounting dimensions Note)

Motor mounting dimensions

Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M5 x 0.8	M4 x 0.7
Effective thread length (mm)	6	6
Quantity	4	4
PCD	70	70

Motor mounting area

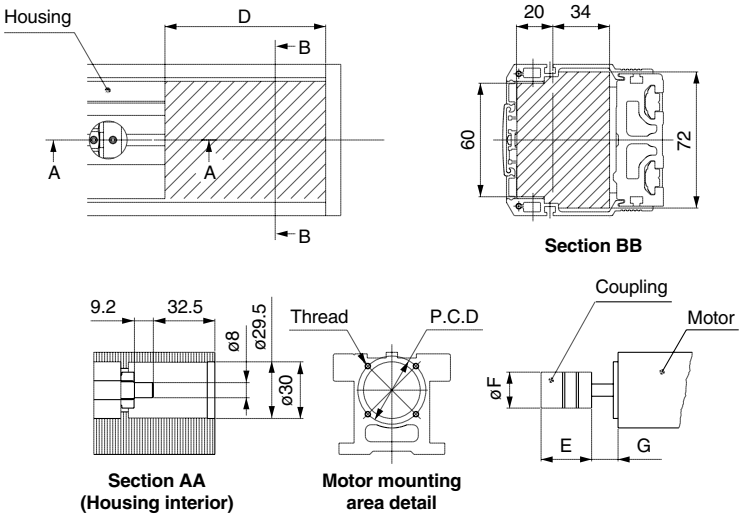
Note) When mounting the coupling to the motor, mount within the range of the dimensions shown to the left.

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$^{H}_{S}$10



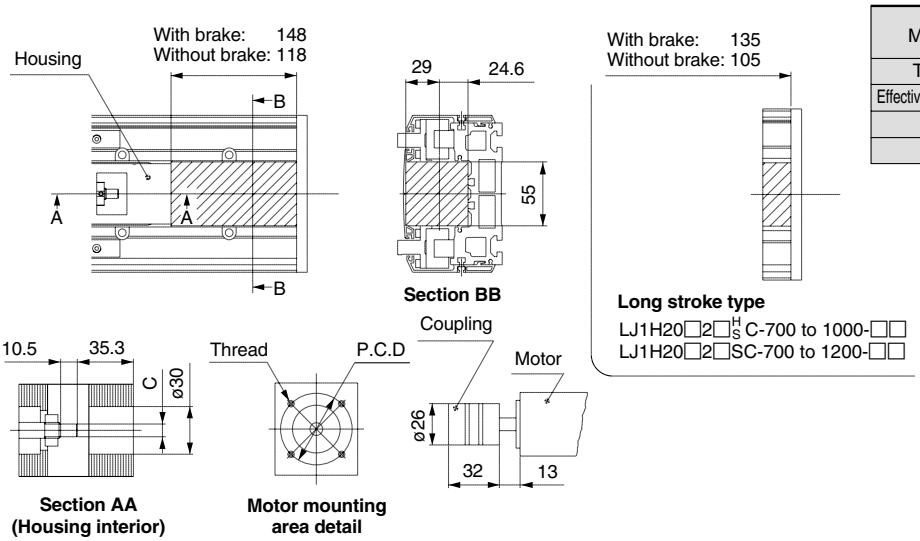
Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
Thread size	M4 x 0.7	M3 x 0.5
Effective thread length (mm)	8	6
Quantity	2	4
P.C.D.	46	45

Dimensions

	D	E	F	G
With brake (mm)	171	32	26	9.5
Without brake (mm)	116	27.5	19	15

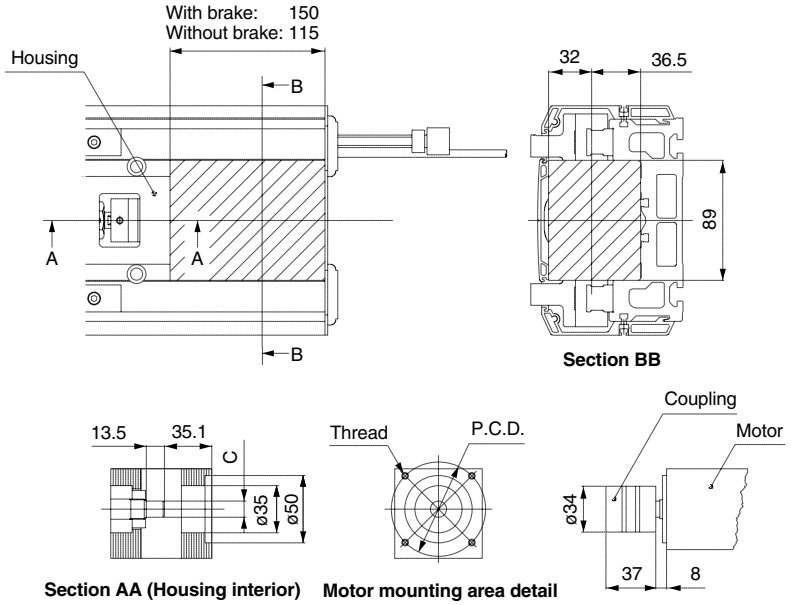
Series LJ1$^{H}_{S}$20



Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
Thread size	M4 x 0.7	M3 x 0.5
Effective thread length (mm)	8	6
Quantity	2	4
P.C.D.	46	45

Series LJ1$^{H}_{S}$30



Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yaskawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
Thread size	M5 x 0.8	M4 x 0.7
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)

L_1, L_2, L_3: Amount of overhang to work piece center of gravity (mm)

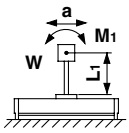
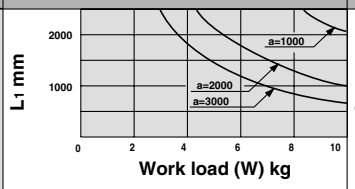
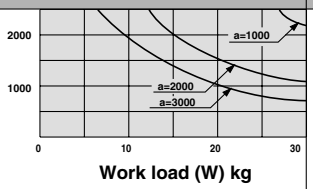
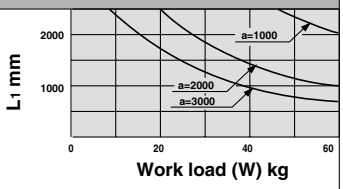
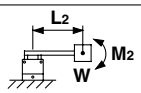
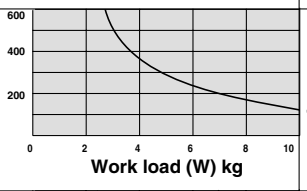
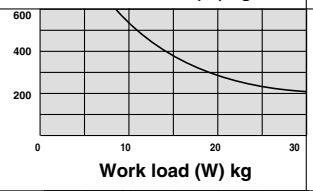
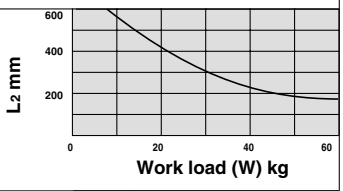
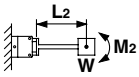
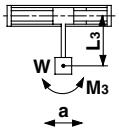
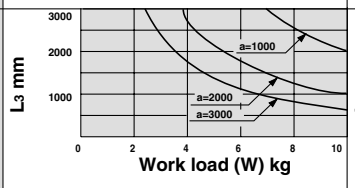
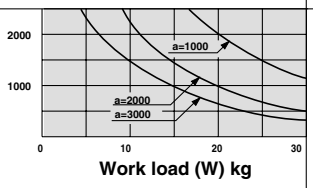
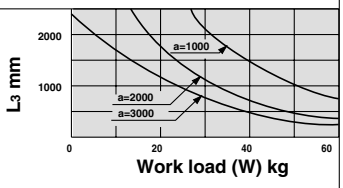
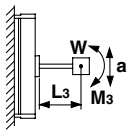
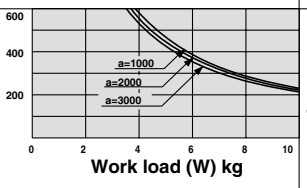
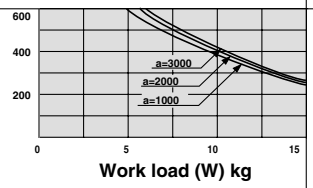
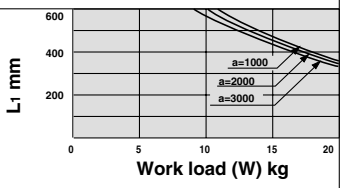
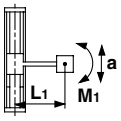
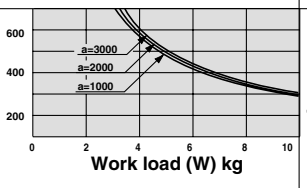
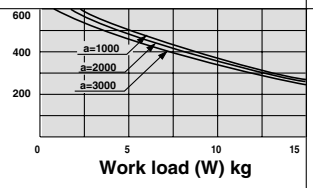
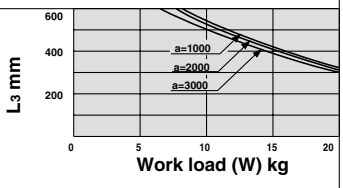
a: Table acceleration (mm/sX)

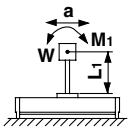
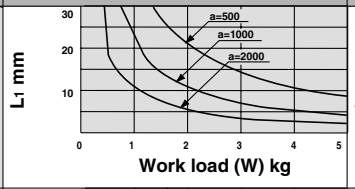
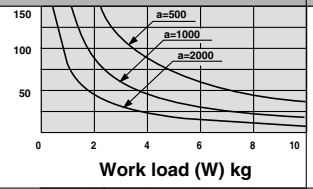
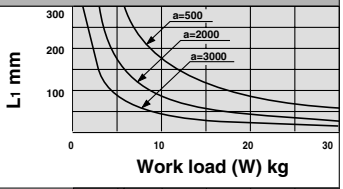
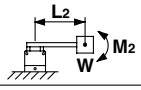
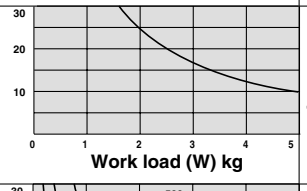
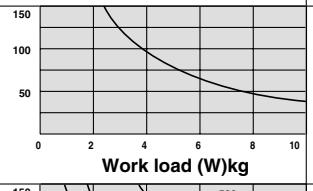
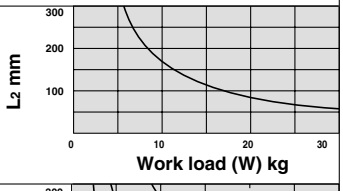
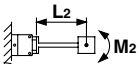
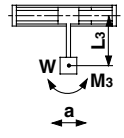
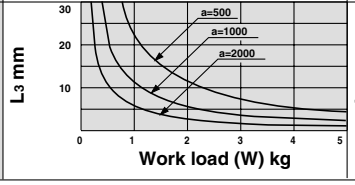
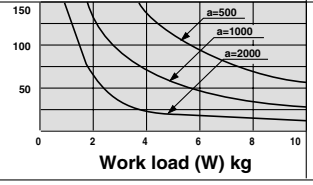
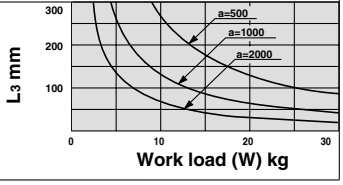
Use of graphs

1) Determine the model.

2) Determine the mounting position.
Confirm whether mounting is horizontal, lateral or vertical (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.

Mounting position / Direction of load movement \ Model			LJ1H10	LJ1H20	LJ1H30
Pitching		Horizontal/Lateral			
Rolling		Horizontal			
		Lateral			
Yawing		Horizontal/Lateral			
Pitching		Vertical			
Yawing		Vertical			

Mounting position / Direction of load movement \ Model			LJ1S10	LJ1S20	LJ1S30
Pitching		Horizontal/Lateral			
Rolling		Horizontal			
		Lateral			
Yawing		Horizontal/Lateral			

Deflection Data/LJ1H

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

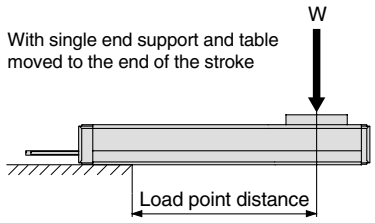


Figure 1. Horizontal

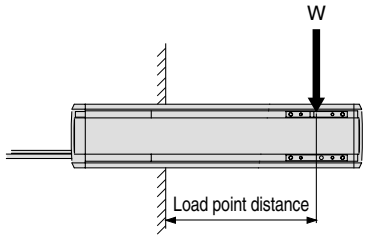
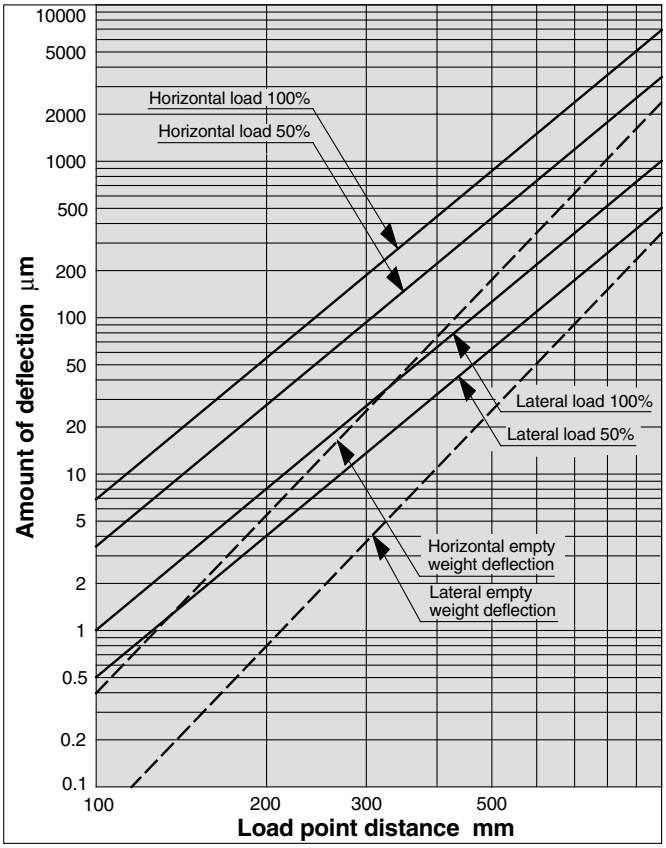
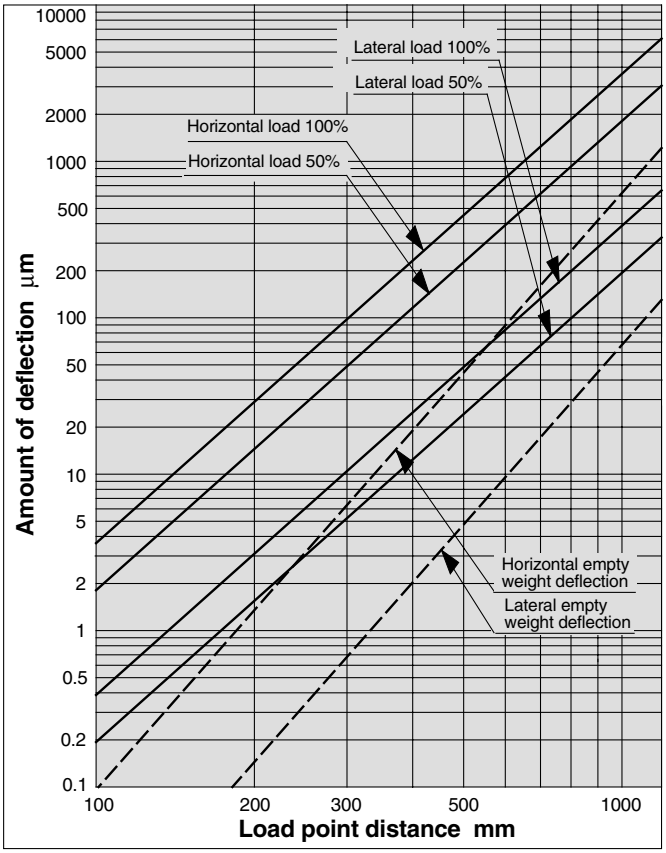


Figure 2. Lateral

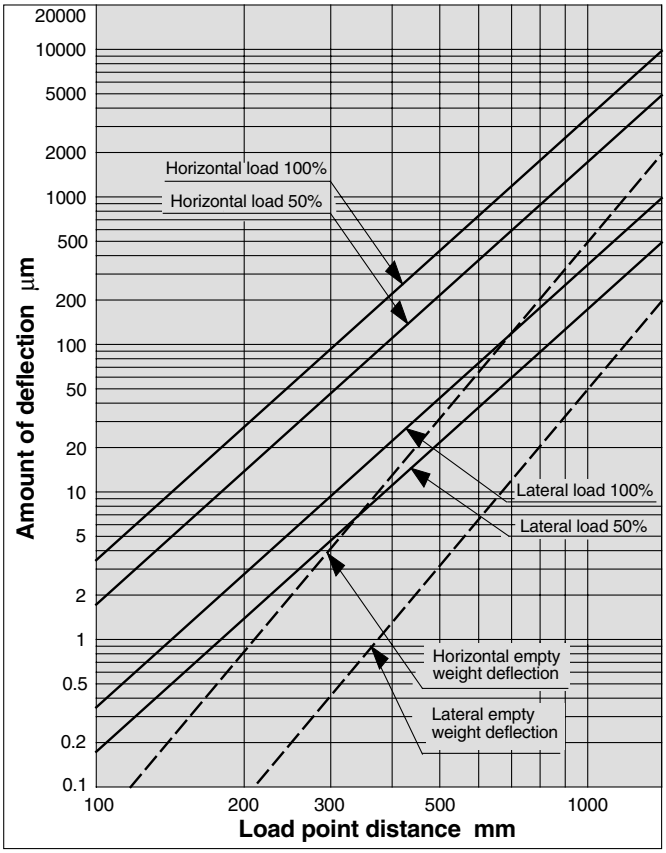
LJ1H10



LJ1H20



LJ1H30



Deflection Data/LJ1S

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

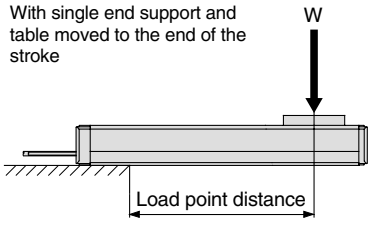


Figure 1. Horizontal

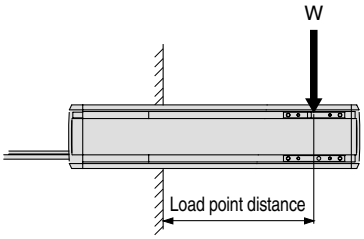
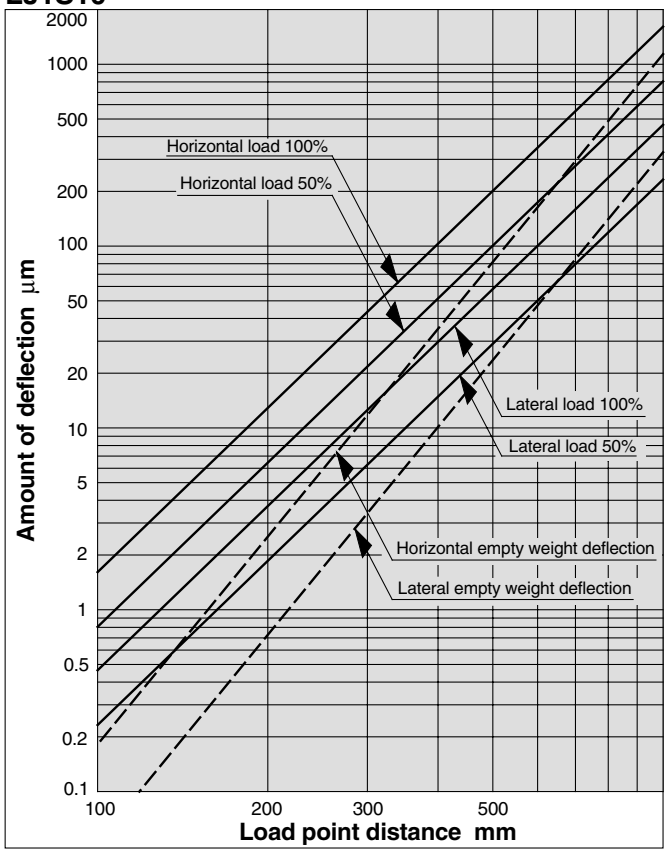
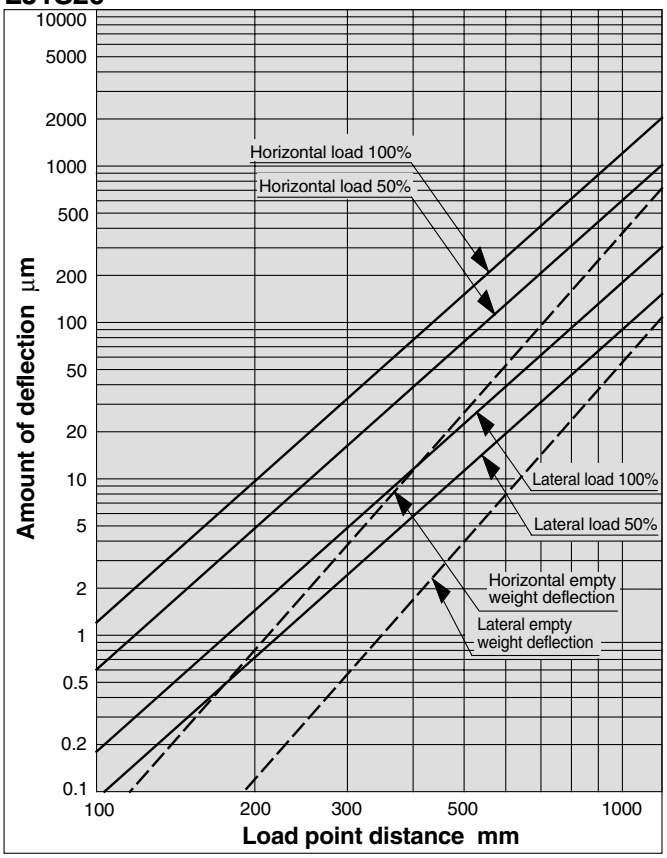


Figure 2. Lateral

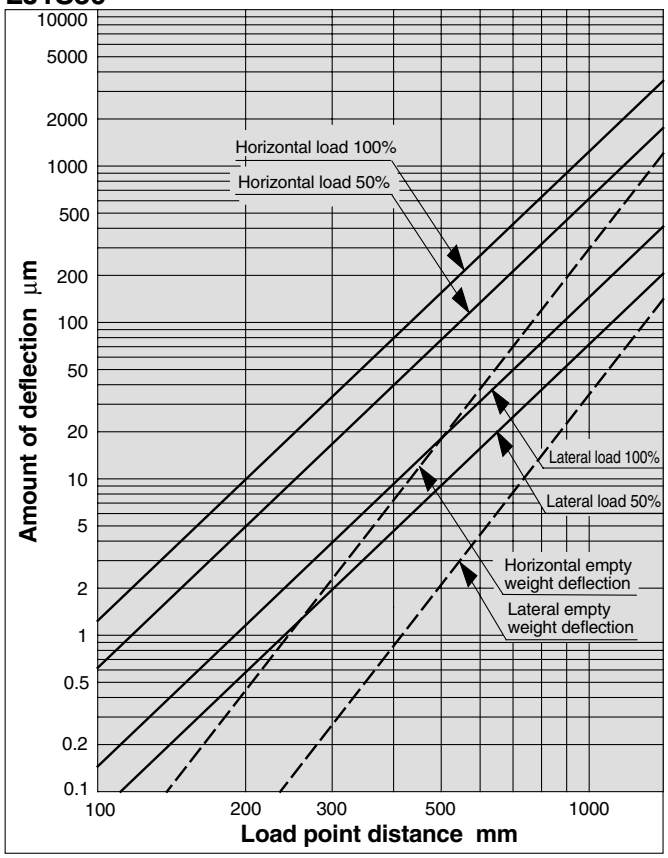
LJ1S10



LJ1S20



LJ1S30



High Rigidity Direct Acting Guide
Series LG1H
Horizontal Mount Type Motor Output: 100 W

How to Order

LG1 ☐ 21 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		Driver model	
		Model	Output		
821	SMC standard motor		200W	LC8-B3H**-M	110/115VAC
822					200/230VAC
R21	Note 2) Mitsubishi Electric Coporation	HC-PQ23	200W	MR-C20A1-UE	110/115VAC
R22		HC-PQ23		MR-C20A-UE	200/230VAC
R29		HC-PQ23		—	—
R20 Note 1)		—	—	—	—
RM21		HC-MFS23	200W	MR-J2S-20A1	110/115VAC
RM22		HC-MFS23		MR-J2S-20A	200/230VAC
RM29		HC-MFS23		—	—
RM20 Note 1)		—	—	—	—
RK21		HC-KFS23	200W	MR-J2S-20A1	110/115VAC
RK22		HC-KFS23		MR-J2S-20A	200/230VAC
RK29		HC-KFS23		—	—
RK20 Note 1)		—	—	—	—
RP21		HF-KP23	200W	MR-J3-20A1	110/115VAC
RP22		HF-KP23		MR-J3-20A	200/230VAC
RP29		HF-KP23		—	—
RP20 Note 1)		—	—	—	—
G20 Note 1)	Note 2) Matsushita Electric Industrial Co.,Ltd.	—	—	—	—
Y20 Note 1)	Note 2) Yaskawa Electric Corporation	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ Refer to the motor compatibility table on page 80 when specified without motor.
∗ For the dimensions of the motor mounting area, refer to the dimensions on page 80. These may be used for reference during design and assembly.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.

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 scre
S	Slide screw

Cable entry direction

F	Axial

Nonstandard Motor switch Note 3)

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

Standard motor Cable length Note 3)

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

Motor type Note 3)

Nil	Standard motor
X10	Nonstandard motor

CE certified

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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 79.

Table 1: Lead screw, lead and stroke combinations

Model	Stroke (mm)										
	100	200	300	400	500	600	700	800	900	1000	2000
LG1☐21☐PA-Stroke	●	●	●	●							
LG1☐21☐NA-Stroke	●	●	●	●							
LG1☐21☐PC-Stroke					●	●	●	●	●	●	
LG1☐21☐NC-Stroke					●	●	●	●	●	●	
LG1☐21☐SC-Stroke	●	●	●	●	●	●	●	●	●	●	●

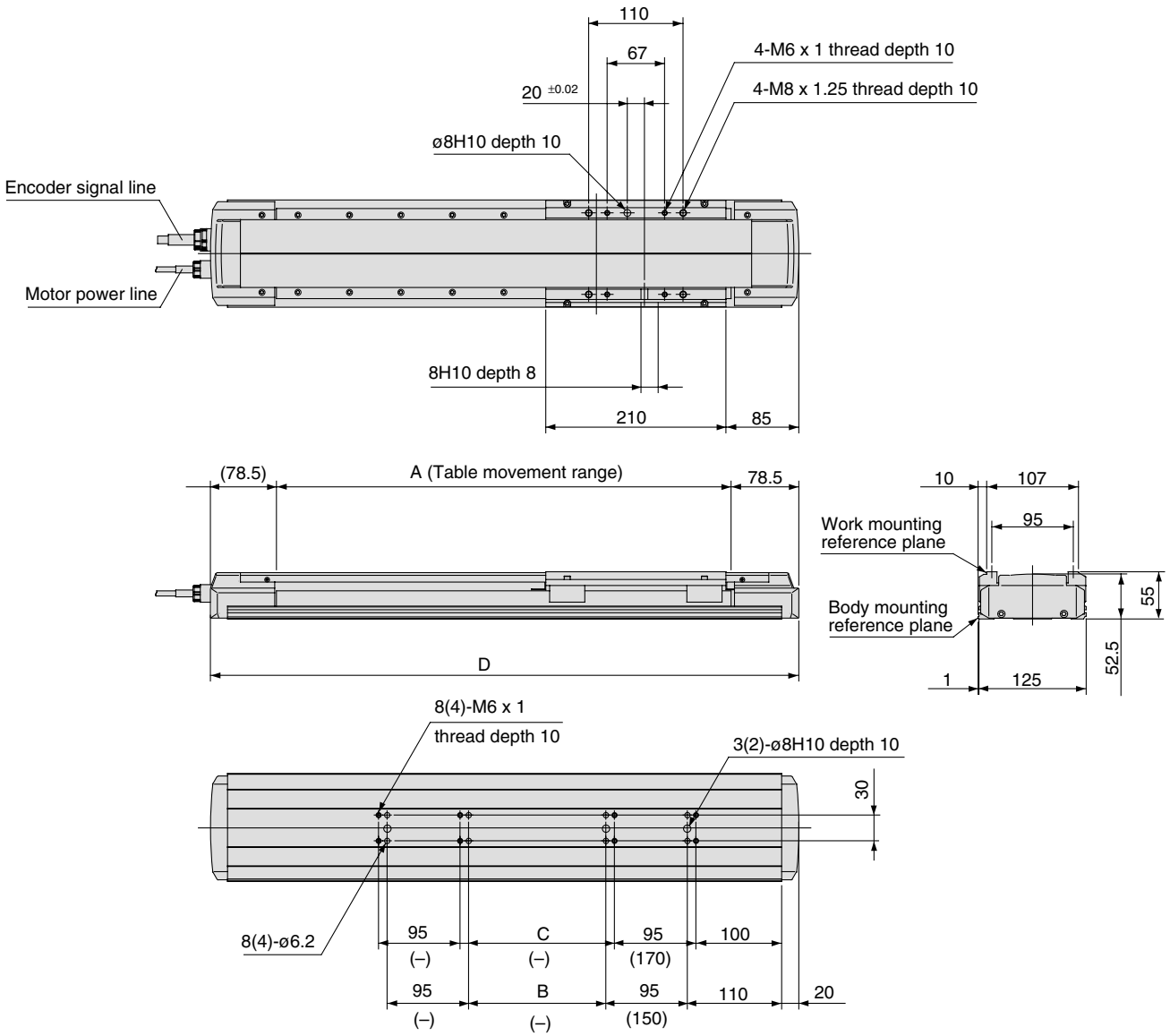
Combinations other than those shown above cannot be produced. Refer to dimensions on page 77.

LG1H21: With Coupling

Specifications

<table>
<tr><td colspan="5">Stroke (mm)</td><td>100</td><td>200</td><td>300</td><td>400</td><td>500</td><td>600</td><td>700</td><td>800</td><td>900</td><td>1000</td><td>1200</td></tr>
<tr><td rowspan="4">Weight (kg)</td><td rowspan="2">Ball screw</td><td colspan="2">Aluminum alloy frame</td><td></td><td>5.7</td><td>6.5</td><td>7.3</td><td>8.1</td><td>8.9</td><td>9.7</td><td>10.5</td><td>11.3</td><td>12.1</td><td>12.9</td><td>–</td></tr>
<tr><td colspan="2">Stainless steel frame</td><td></td><td>8.9</td><td>10.2</td><td>11.4</td><td>12.7</td><td>13.9</td><td>15.2</td><td>16.4</td><td>17.7</td><td>18.9</td><td>20.2</td><td>–</td></tr>
<tr><td rowspan="2">Slide screw</td><td colspan="2">Aluminum alloy frame</td><td></td><td>6.3</td><td>7.2</td><td>8.0</td><td>8.9</td><td>9.8</td><td>10.7</td><td>11.6</td><td>12.4</td><td>13.3</td><td>14.2</td><td>16.4</td></tr>
<tr><td colspan="2">Stainless steel frame</td><td></td><td>9.8</td><td>11.2</td><td>12.5</td><td>14.0</td><td>15.3</td><td>16.7</td><td>18.0</td><td>19.5</td><td>20.8</td><td>22.2</td><td>25.7</td></tr>
<tr><td colspan="5">Operating temperature range (°C)</td><td colspan="11">5 to 40 (with no condensation)</td></tr>
<tr><td rowspan="3">Maximum work load (kg)</td><td rowspan="2">Ball screw</td><td>10mm lead</td><td rowspan="3">200W</td><td colspan="5">30</td><td colspan="6">–</td></tr>
<tr><td>20mm lead</td><td colspan="5">–</td><td colspan="5">30</td><td>–</td></tr>
<tr><td>Slide screw</td><td>20mm lead</td><td colspan="11">15</td></tr>
<tr><td rowspan="3">Maximum speed (mm/s)</td><td rowspan="2">Ball screw</td><td>10mm lead</td><td rowspan="3">200W</td><td colspan="5">500</td><td colspan="6">–</td></tr>
<tr><td>20mm lead</td><td colspan="5">–</td><td>1000</td><td>930</td><td>740</td><td>600</td><td>500</td><td>–</td></tr>
<tr><td>Slide screw</td><td>20mm lead</td><td colspan="11">500</td></tr>
<tr><td rowspan="3">Lead screw</td><td rowspan="2">Ball screw</td><td colspan="2" rowspan="2">Rolled/Ground</td><td colspan="5">ø15mm, 10mm lead</td><td colspan="6">–</td></tr>
<tr><td colspan="5">–</td><td colspan="5">ø15mm, 20mm lead</td><td>–</td></tr>
<tr><td>Slide screw</td><td colspan="2">Rolled</td><td colspan="11">ø20mm, 20mm lead</td></tr>
<tr><td colspan="5">Guide</td><td colspan="11">High rigidity direct acting guide</td></tr>
</table>

LG1H21: With Coupling/Construction

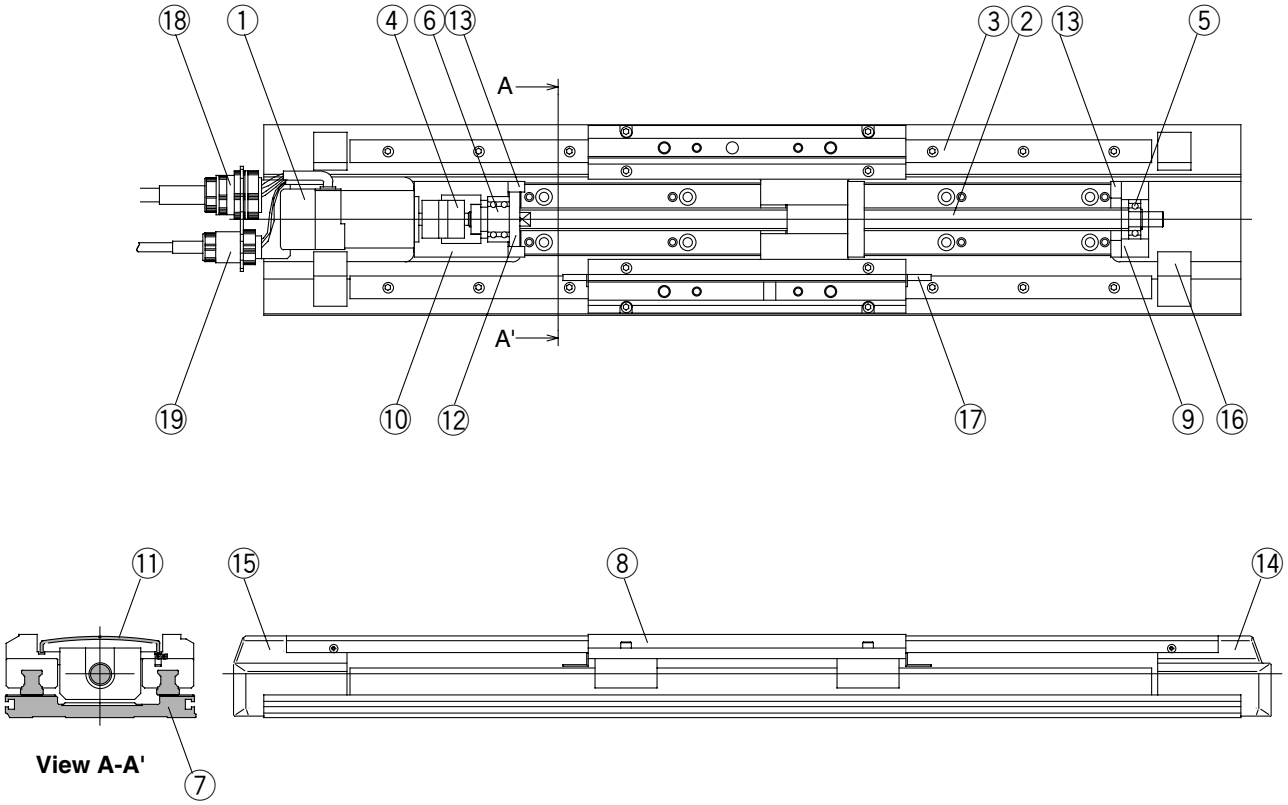


Dimensions

Model	Stroke	A	B	C	D
LG1□21□□- 100-F□ Note)	100	329	–	–	486
LG1□21□□- 200-F□	200	429	60	80	586
LG1□21□□- 300-F□	300	529	160	180	686
LG1□21□□- 400-F□	400	629	260	280	786
LG1□21□□- 500-F□	500	729	360	380	886
LG1□21□□- 600-F□	600	829	460	480	986
LG1□21□□- 700-F□	700	929	560	580	1086
LG1□21□□- 800-F□	800	1029	660	680	1186
LG1□21□□- 900-F□	900	1129	760	780	1286
LG1□21□□-1000-F□	1000	1229	860	880	1386
LG1□21□□-1200-F□	1200	1429	1060	1080	1586

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

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

Cables for connecting actuators and controllers.

How to Order

LG1 — 8 — B 02

Cable length

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

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 0.75mm^2 electric cable.

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

Reference Data

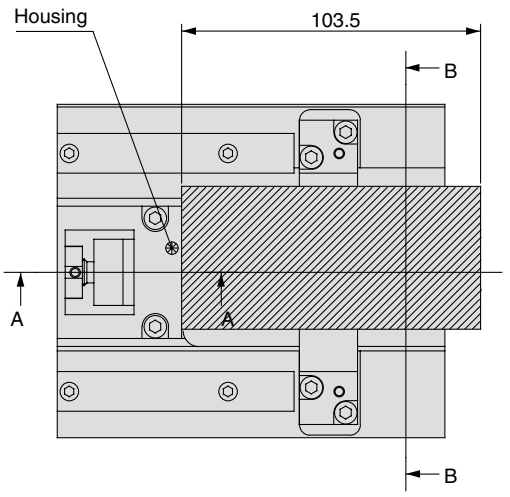
Motor Options 1

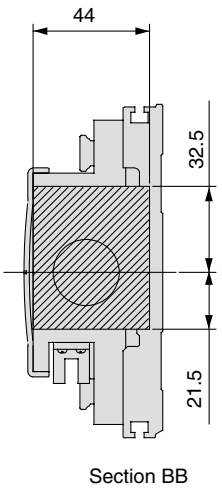
The following motors can be mounted when specified without motor.

Installation motor list

	Motor output (W)	Motor model		Spare parts (Coupling)
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	

Nonstandard Motor Mounting Dimensions / LG1H21(with Coupling)





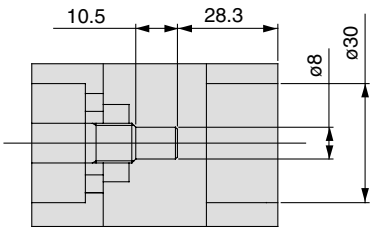
Section BB

Motor mounting area dimensions

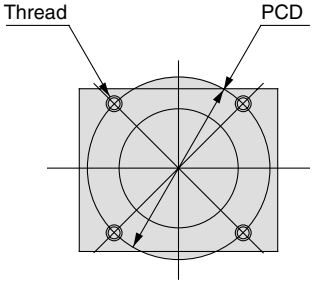
Manufacturer	Mitsubishi Yaskawa	Matsushita
Thread size	M4 x 0.7	M3 x 0.5
Effective thread length (mm)	8	6
Quantity	2	4
PCD	46	45

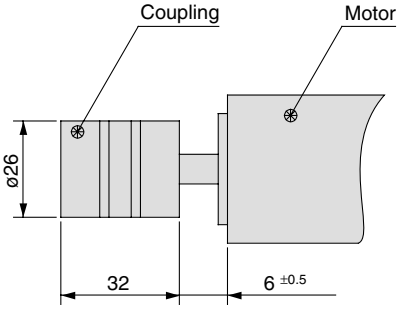
Motor mounting area

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



Section AA (Housing interior)





Coupling mounting dimensions

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.

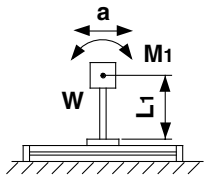
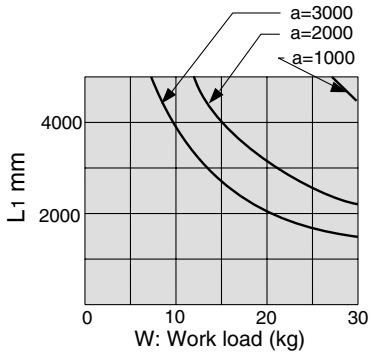
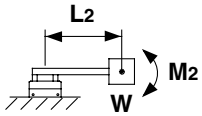
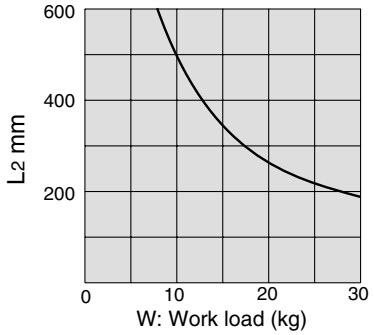
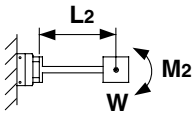
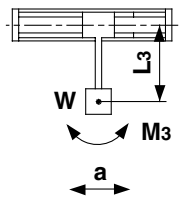
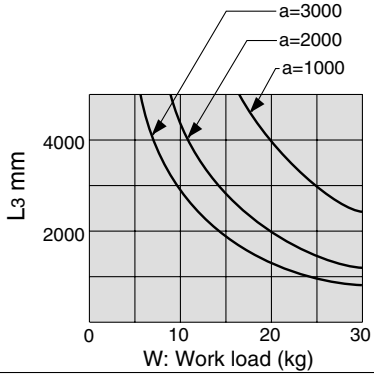
W: Work load (kg)
L_1, L_2: Amount of overhang to work center of gravity (mm)
a: Table acceleration (mm/s²)

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.

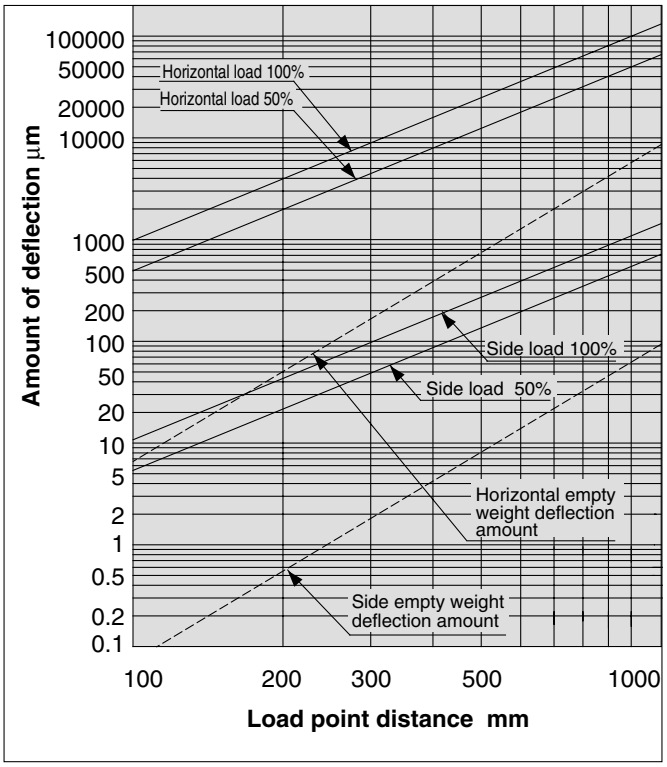
Mounting position / Direction of load movement / Model			LG1H21
Pitching		Horizontal . Side	
Rolling		Horizontal	
		Side	
Yawing		Horizontal . Side	

Deflection Data

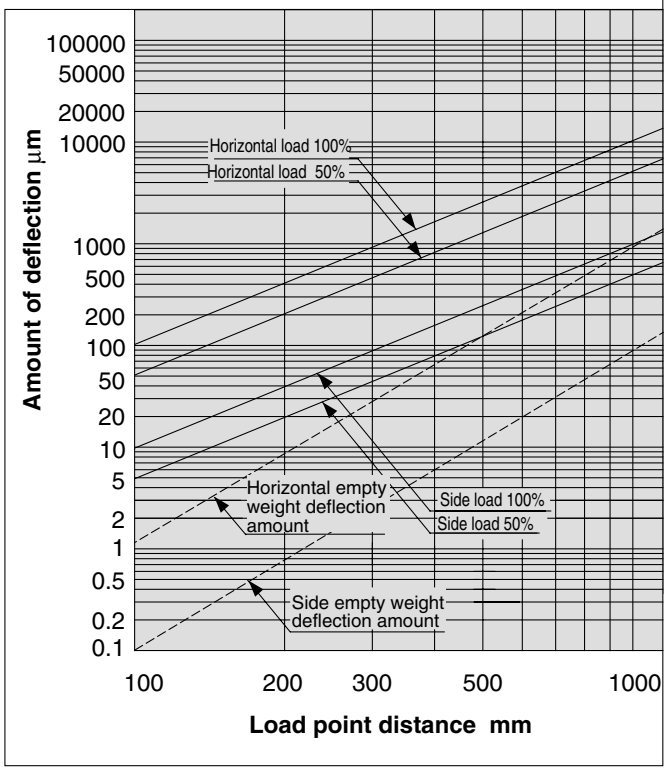
Deflection Data

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

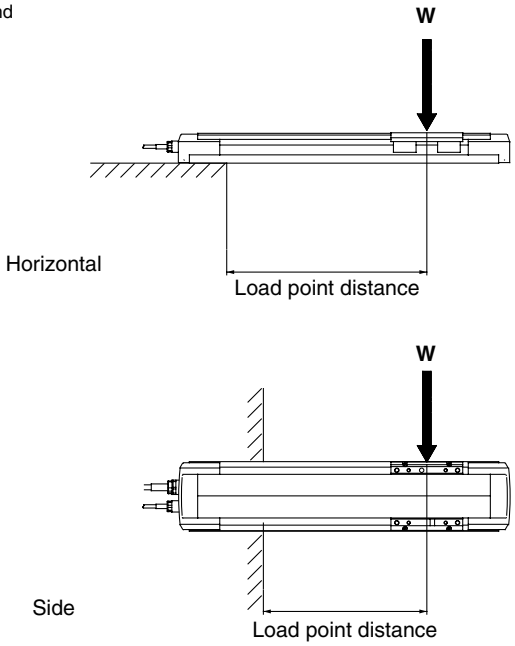
LG1H



LG1TH



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



Frame-type Linear Guide

Series LTF6

Horizontal Mount Type Motor Output: 100 W

How to Order

LTF6 RE1 P F — 100 — □ □ — X10 — Q

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
8E1	SMC standard motor		100W	LC8-B1H**-M	110/115VAC
8E2					200/230VAC
RE1	Mitsubishi Electric Coporation Note 2)	HC-PQ13	100W	MR-C10A1-UE	110/115VAC
RE2		HC-PQ13		MR-C10A-UE	200/230VAC
RE9		HC-PQ13		—	—
RE0 Note 1)		—	—	—	—
RME1		HC-MFS13	100W	MR-J2S-10A1	110/115VAC
RME2		HC-MFS13		MR-J2S-10A	200/230VAC
RME9		HC-MFS13		—	—
RME0 Note 1)		—	—	—	—
RKE1		HC-KFS13	100W	MR-J2S-10A1	110/115VAC
RKE2		HC-KFS13		MR-J2S-10A	200/230VAC
RKE9		HC-KFS13		—	—
RKE0 Note 1)		—	—	—	—
RPE1		HF-KP13	100W	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 holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

∗ The motors can be mounted when specified.
∗ For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
∗ For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 91 for part numbers.

CE certified

Motor type Note 3)

Nil	Standard motor
X10	Nonstandard motor

Standard motor Cable length Note 3)

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

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

Nonstandard Motor switch Note 3)

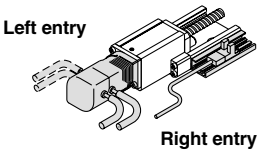
Nil	Without switch and switch rail
A	Photo micro sensor rail 1 pc.
B	Proximlty switch switch rail 1 pc.

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

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

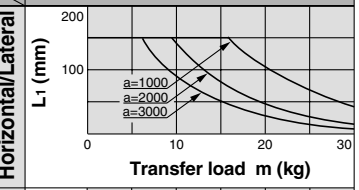
Specifications

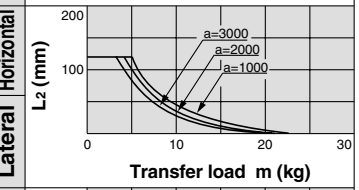
Stroke (mm)				100	200	300	400	500	600
Weight (without motor) (kg)				1.7	2.1	2.6	3.1	3.6	4.1
Operating temperature range (℃)				5 to 40 (with no condensation)					
Maximum work load (kg)	Ball screw	6mm	100W	30					
		10mm		15					
Maximum speed (mm/s)	Ball screw	6mm	100W	300					230
		10mm		500					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					

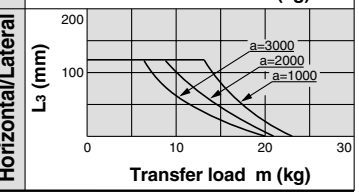
Allowable Moment (N·m)

Allowable dynamic moment

Mounting orientation / Load movement direction		Model	LTF6
Pitching	a, Mep, m, L1	Horizontal/Lateral	L1 (mm)
Rolling	L2, Mer, m	Horizontal	L2 (mm)
Rolling	L2, Mer, m	Lateral	L2 (mm)
Yawing	L3, m, Mey, a	Horizontal/Lateral	L3 (mm)





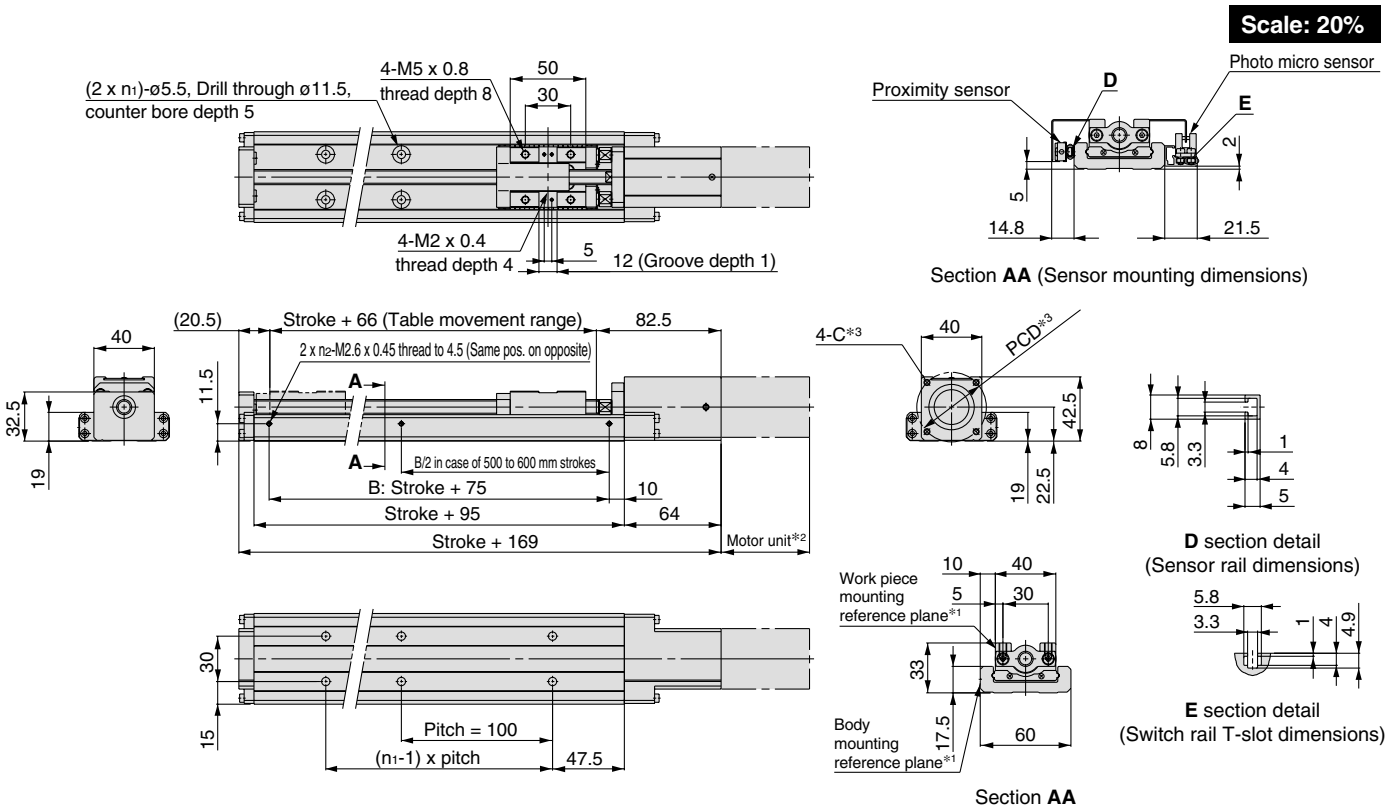


m : Transfer load (kg)
a : Work piece acceleration (mm/s²)
Me: Allowable dynamic moment
L : Overhang to work piece center of gravity (mm)

Refer to page 96 for deflection data.

Dimensions/LTF6□E□PF(X10)

Scale: 20%



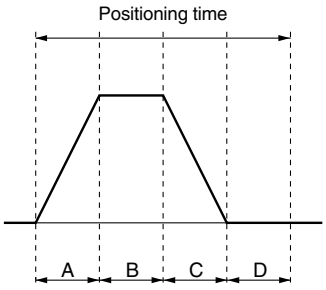
Model	Stroke	n_1	n_2
LTF6□□□- 100-□□-□-Q	100	2	2
LTF6□□□- 200-□□-□-Q	200	3	2
LTF6□□□- 300-□□-□-Q	300	4	2
LTF6□□□- 400-□□-□-Q	400	5	2
LTF6□□□- 500-□□-□-Q	500	6	3
LTF6□□□- 600-□□-□-Q	600	7	3

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

Positioning Time Guide

		Positioning time (sec.)				
Positioning distance (mm)		1	10	100	300	600
Speed (mm/s)	10	0.5	1.5	10.5	30.5	60.5
	100	0.5	0.6	1.5	3.5	6.5
	150	0.5	0.6	1.2	2.5	4.5
	300	0.5	0.6	0.9	1.6	2.6

∗ Values will vary slightly depending on the operating conditions.



A: Acceleration time
B: Constant velocity time
C: Deceleration time
D: Resting time (0.4 sec.)∗
Maximum acceleration: 3000mm/s^2

∗ The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

Frame-type Linear Guide

Series LTF8

Horizontal Mount Type Motor Output: 200 W

How to Order

LTF8 RF1 P H — 100 — □ □ — X10 — Q

CE certified

Motor/Driver specifications

Symbol	Motor and Driver Specification				Power supply voltage
	Manufacturer	Motor		Driver model	
		Model	Output		
8F1	SMC standard motor		50W	LC8-B2H**-M	110/115VAC
8F2					200/230VAC
RF1	Mitsubishi Electric Coporation Note 2)	HC-PQ23	50W	MR-C20A1-UE	110/115VAC
RF2		HC-PQ23		MR-C20A-UE	200/230VAC
RF9		HC-PQ23		—	—
RF0 Note 1)		—	—	—	—
RMF1		HC-MFS23	50W	MR-J2S-20A1	110/115VAC
RMF2		HC-MFS23		MR-J2S-20A	200/230VAC
RMF9		HC-MFS23		—	—
RMF0 Note 1)		—	—	—	—
RKF1		HC-KFS23	50W	MR-J2S-20A1	110/115VAC
RKF2		HC-KFS23		MR-J2S-20A	200/230VAC
RKF9		HC-KFS23		—	—
RKF0 Note 1)		—	—	—	—
RPF1		HF-KP23	50W	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. Note 2)	—	—	—	—
YF0 Note 1)	Yaskawa Electric Corporation Note 2)	—	—	—	—

Note 1) Motor holes are provided for the selected motor type.
Note 2) Nonstandard motor (for general servomotor)

* The motors can be mounted when specified.
* For motors from Matsushita Electric Industrial and Yaskawa Electric Corporation, please contact the manufacturer directly for information such as specifications, model number, etc.
* For a nonstandard motor specification when the motor is mounted before shipping, the driver is included but the cable that connects the motor and driver is optional. Refer to page 91 for part numbers.

Motor type Note 3)

Nil	Standard motor
X10	Nonstandard motor

Standard motor Cable length Note 3)

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

Nonstandard Motor switch Note 3)

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

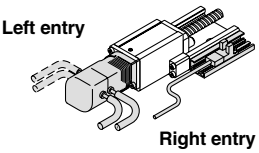
Dog fittings for switch are attached to all types except type "Nil".

Note 3) A driver is included when shipped with a nonstandard motor installed. The cable to connect the motor and driver 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.

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



Lead screw type

P	Ground ball screw
N	Rolled ball screw

Screw lead

H	10mm
L	20mm

Stroke

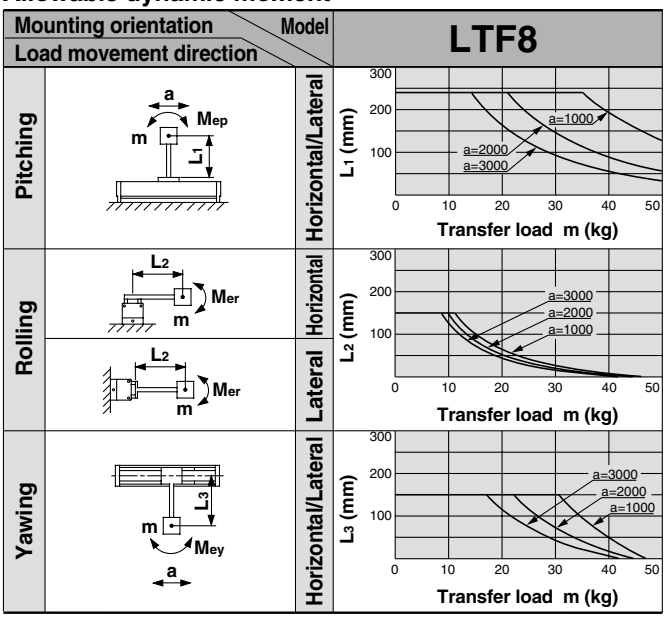
100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm

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	50W	50									
		20mm		25									
Maximum speed (mm/s)	Ball screw	10mm	50W	500						440	350	290	240
		20mm		500						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									

Allowable Moment (N·m)

Allowable dynamic moment

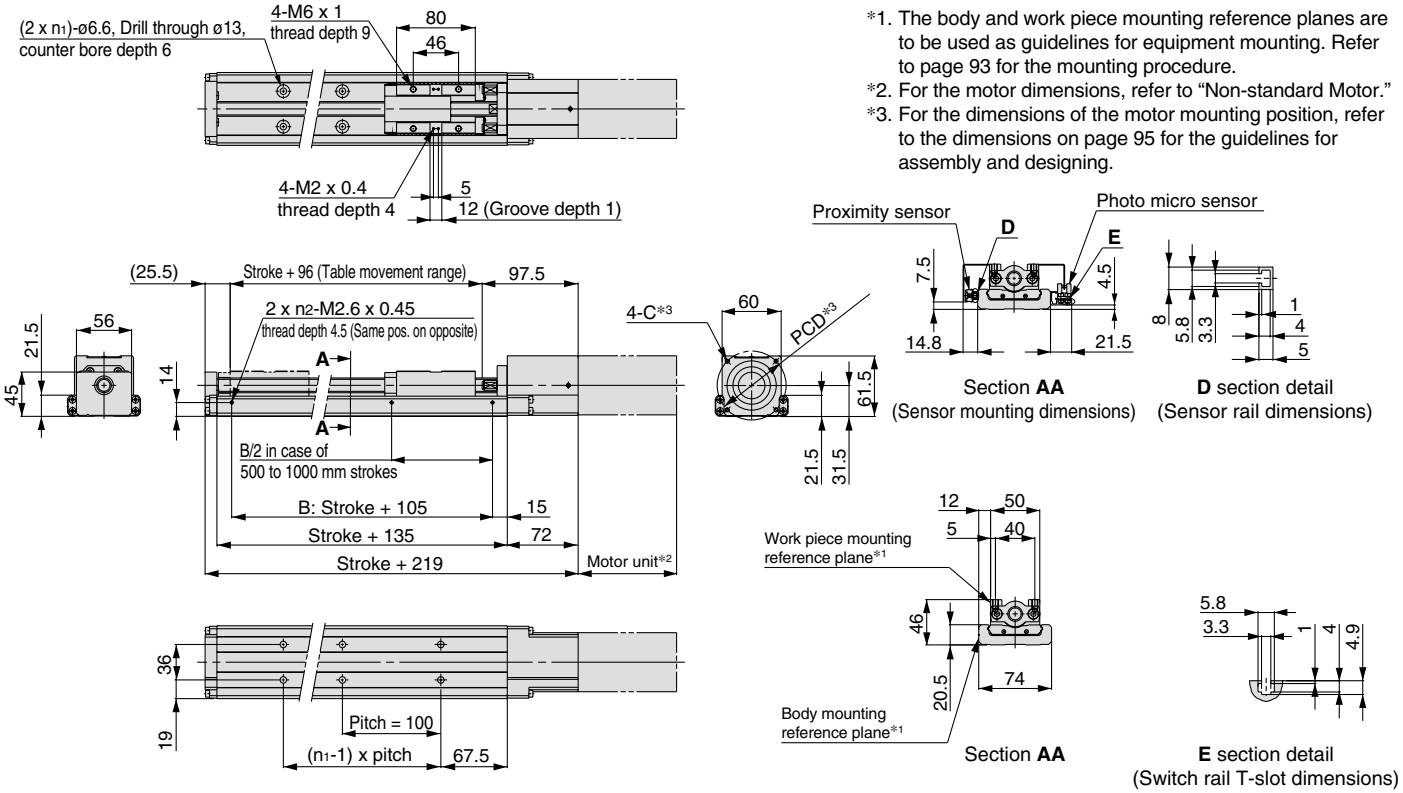


m : Transfer load (kg)
a : Work piece acceleration (mm/s²)
Me: Allowable dynamic moment
L : Overhang to work piece center of gravity (mm)

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 dimensions, refer to "Non-standard Motor."
*3. For the dimensions of the motor mounting position, refer to the dimensions on page 95 for the guidelines for assembly and designing.

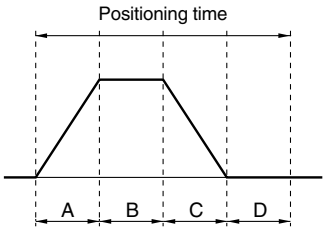
Model	Stroke	n1	n2
LTF8□□□- 100-□□-□□-Q	100	2	2
LTF8□□□- 200-□□-□□-Q	200	3	2
LTF8□□□- 300-□□-□□-Q	300	4	2
LTF8□□□- 400-□□-□□-Q	400	5	2
LTF8□□□- 500-□□-□□-Q	500	6	3

Model	Stroke	n1	n2
LTF8□□□- 600-□□-□□-Q	600	7	3
LTF8□□□- 700-□□-□□-Q	700	8	3
LTF8□□□- 800-□□-□□-Q	800	9	3
LTF8□□□- 900-□□-□□-Q	900	10	3
LTF8□□□-1000-□□-□□-Q	1000	11	3

Positioning Time Guide

		Positioning time (sec.)				
Positioning distance (mm)		1	10	100	500	1000
Speed (mm/s)	10	0.6	1.6	10.6	50.6	100.6
	100	0.6	0.7	1.6	5.6	10.6
	250	0.6	0.7	1.0	2.6	4.6
	500	0.6	0.7	0.9	1.7	2.7

∗ Values will vary slightly depending on the operating conditions.

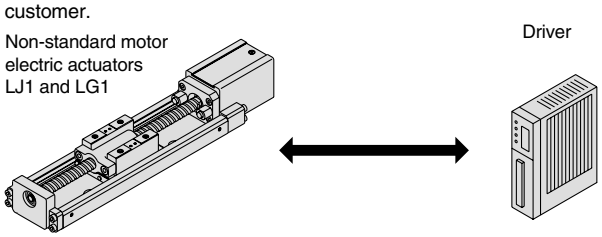


A: Acceleration time
B: Constant velocity time
C: Deceleration time
D: Resting time (0.5 sec.)∗
Maximum acceleration: 3000mm/s^2

∗ The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

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 cabe

Cable length

5	5m

Applicable cables

LTF (non-standard motor)

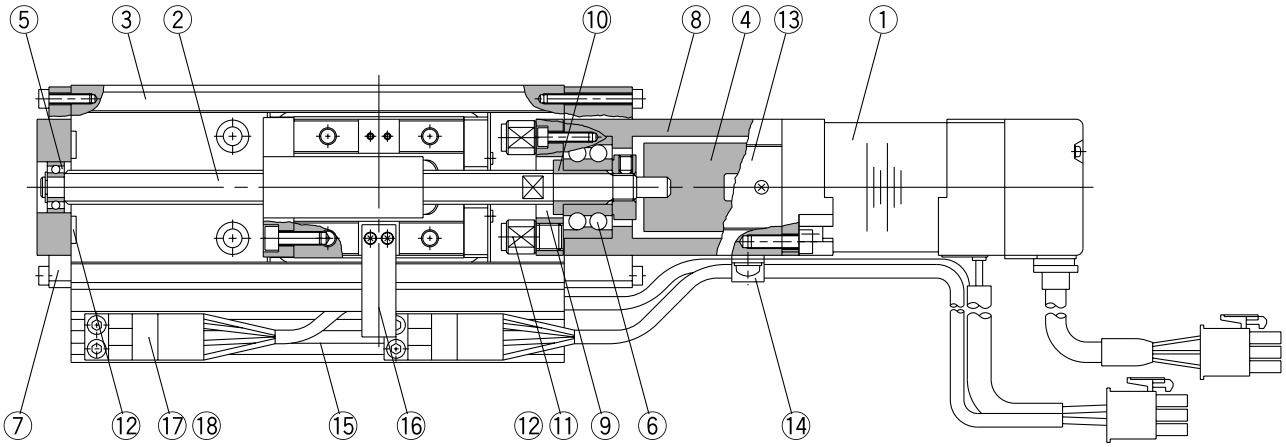
Model	Manufacturer part no.
LJ1-1-R05	(for motor) Note) MR-JCCBL5M-L (for encoder)
LJ1-1-RP05	MR-PWS1CBL5M-A2-L (for motor) MR-J3ENCBL5M-A2-L (for encoder)

Note) A cable is not provided for the Mitsubishi Electric Corporation, and therefore the customer should arrange a 4 wire 0.75mm^2 electric cable.

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

Construction

LTF6/LTF8



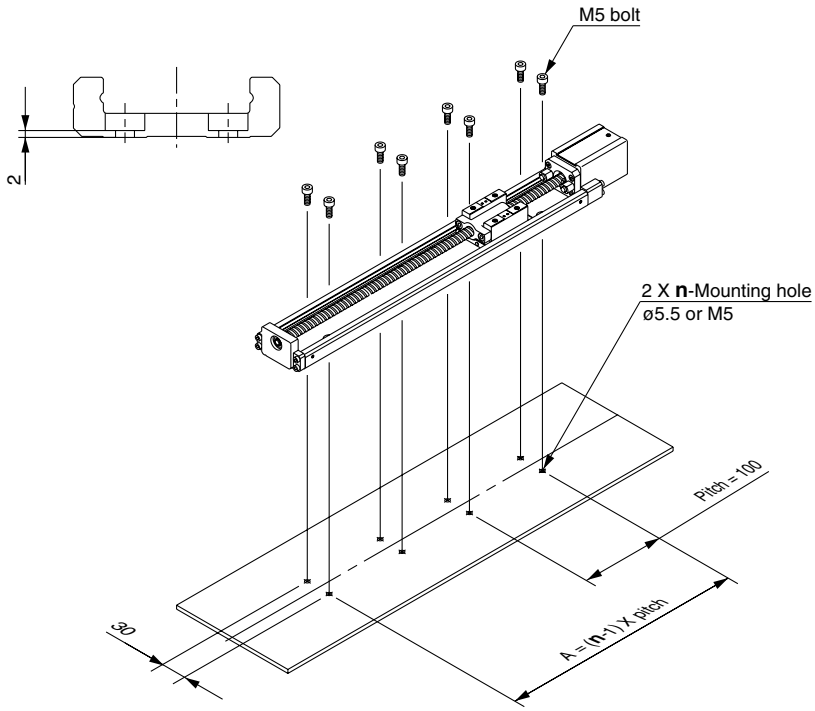
Parts list

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**		

Top Mount

LTF6

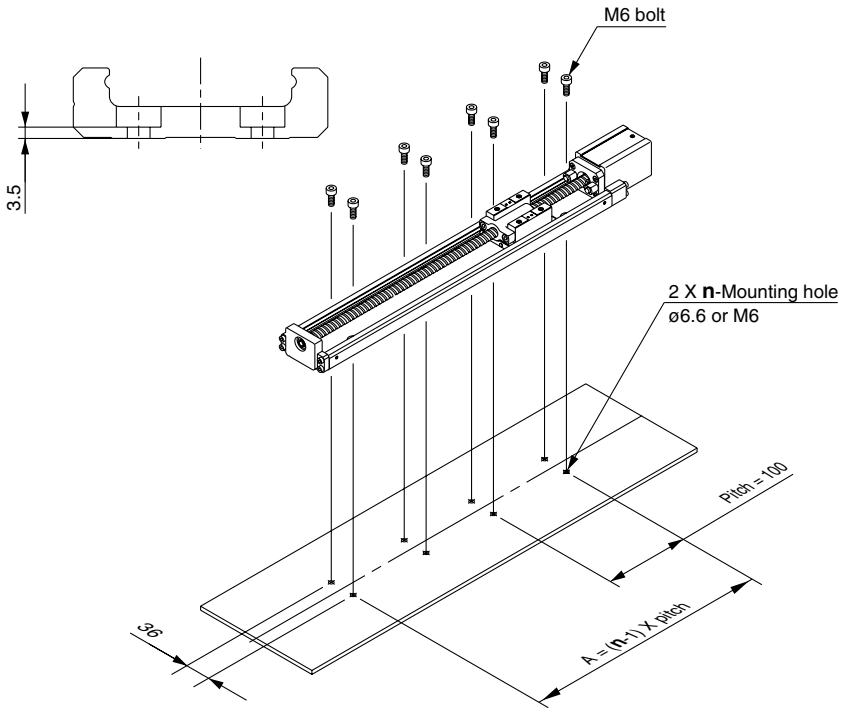


Mounting hole quantity

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



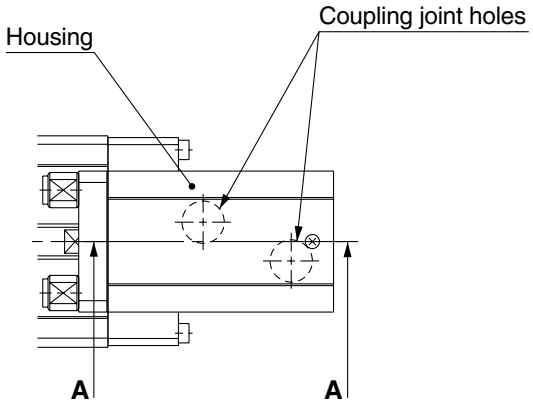
Mounting hole quantity

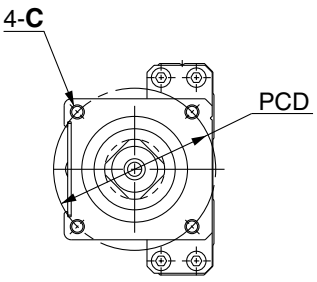
Stroke	n	Quantity	Stroke	n	Quantity
100	2	4	600	7	14
200	3	6	700	8	16
300	4	8	800	9	18
400	5	10	900	10	20
500	6	12	1000	11	22

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

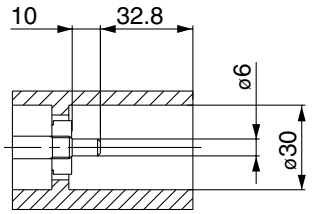




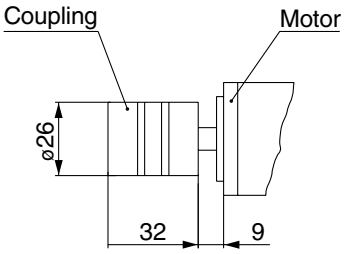
Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yasukawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
C (Thread size)	M4 x 0.7	M3 x 0.5
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.



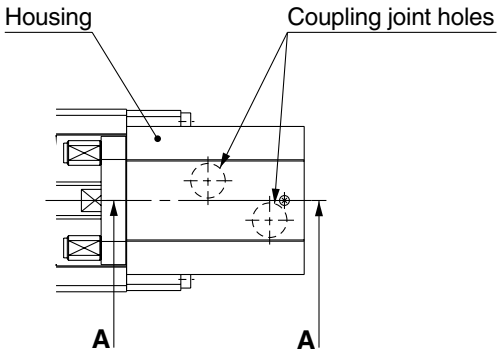
Section AA (Housing interior)

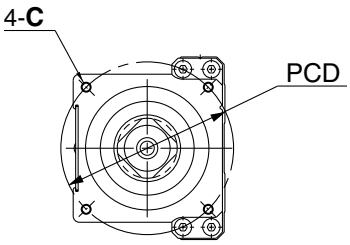


Coupling mounting dimensions∗

Nonstandard Motor Mounting Dimensions

LTF8

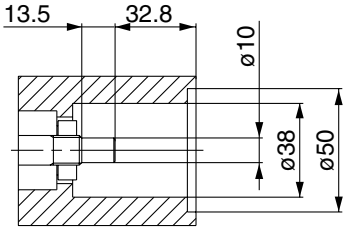




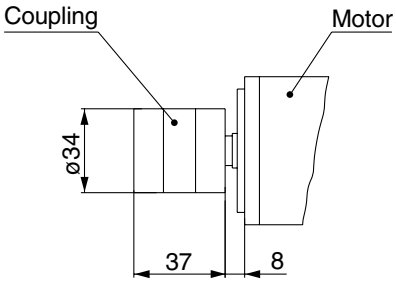
Motor mounting area dimensions

Manufacturer	Mitsubishi Electric Corporation Yasukawa Electric Corporation	Matsushita Electric Industrial Co., Ltd.
C (Thread size)	M5 x 0.8	M4 x 0.7
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

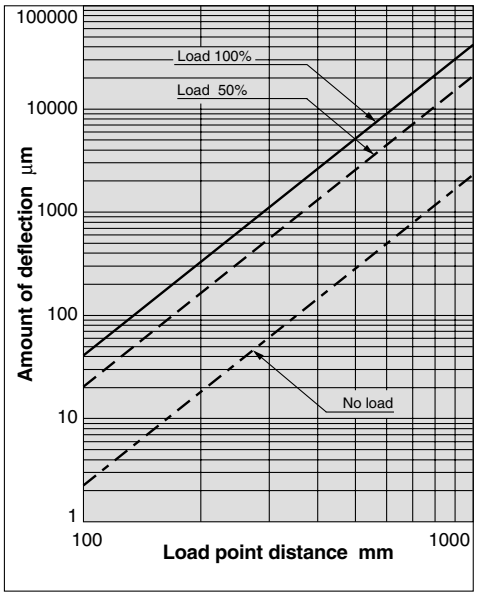
	Motor output (W)	Motor model		Spare parts (Coupling)
LTF6GE□□□	100W	MSM011A1A MSM012A1A	Matsushita Electric Industrial Co.,LTD	LJ1-SFC-020WD-6B-8B
LTF8GE□□□	200W	MSM021A1A MSM022A1A		LJ1-SFC-030WD-10B-11B
LTF6RE□□□ **LTF6RME□□□** **LTF6RKE□□□** **LTF6RPE□□□**	100W	HC-PQ13 HC-MFS13 HC-KFS13 HF-KP13	Mitsubishi 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	

Deflection Data

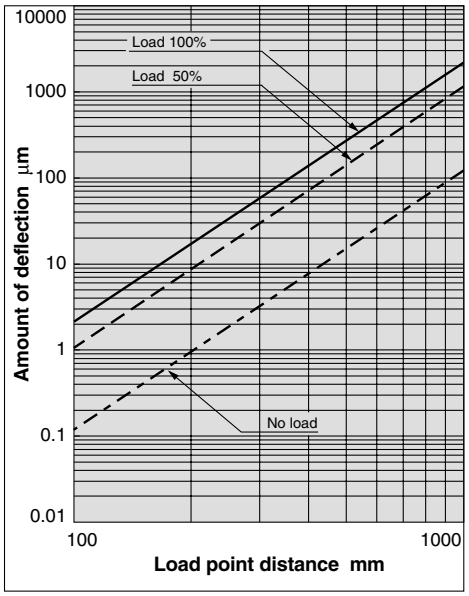
The load and the amount of deflection at load point W are shown in the graphs below for each series.

LTF6

Horizontal

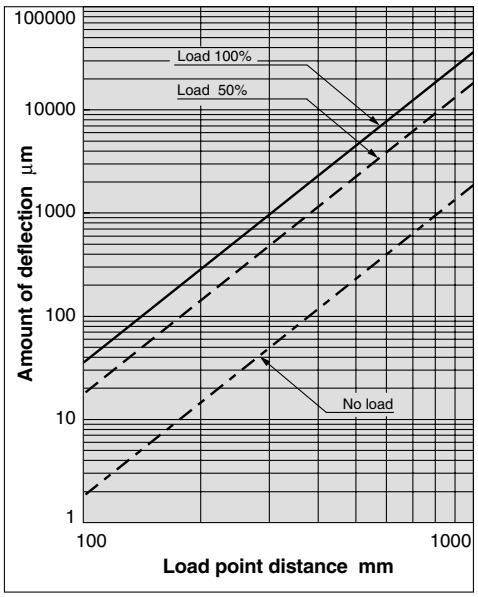


Lateral

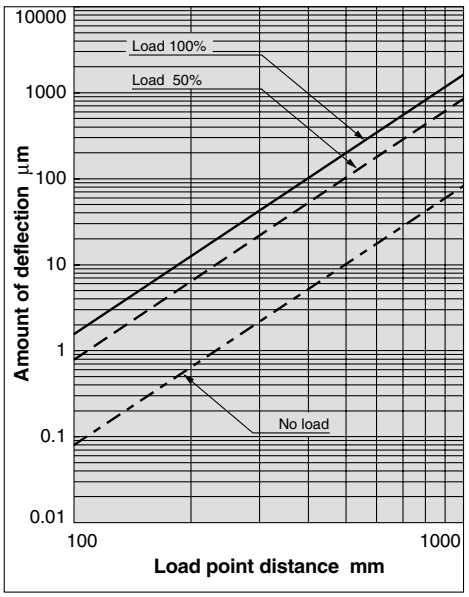


LTF8

Horizontal



Lateral



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

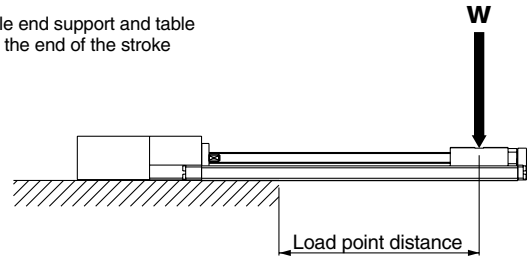


Figure 1. Horizontal

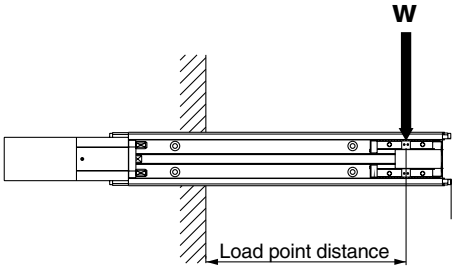


Figure 2. Lateral

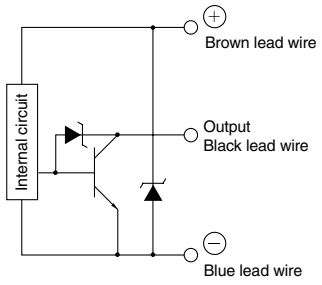
Proximity Switches

Switch specifications (SUNX Corporation)

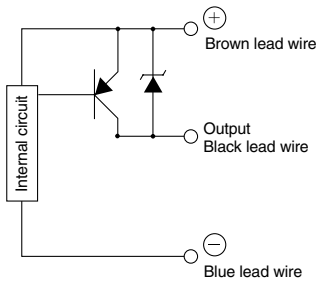
Part no.		LTF-SSG□	LTF-SSG□P
Repeatability		Direction of detecting axis, Perpendicular to detecting axis: 0.04mm or less	
Power supply voltage		12 to 24V DC ±10%, Ripple P-P 10% or less	
Current consumption		15mA	
Output		NPN Maximum load current: 100mA Maximum applied voltage: 30V DC Residual voltage: 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	
Cable		CN-13-C3 (□3.8mm 3 wire heavy duty cable 3m)	

Internal circuit

LTF-SSG□

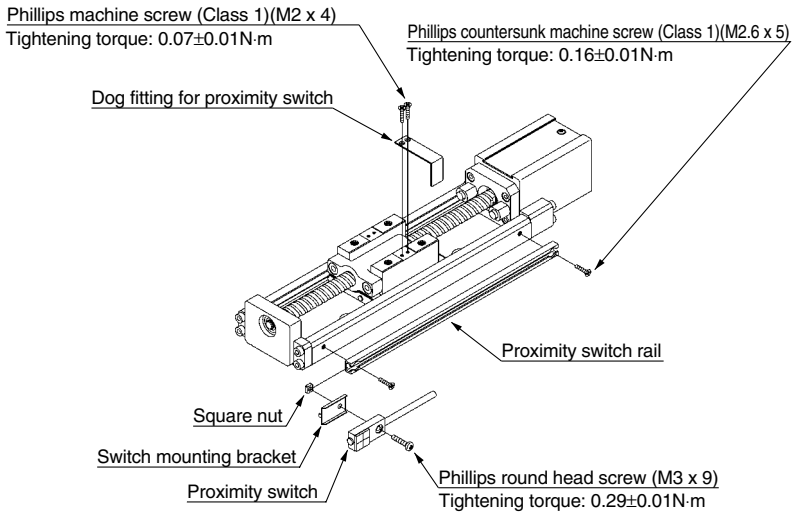


LTF-SSG□P



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



Spare parts (Proximity switch)

	Order Number	Note
Proximity switch Note 1)	LTF-SSGA	N.O.(A contact) NPN
	LTF-SSGB	N.C.(B contact) NPN
	LTF-SSGAP	N.O.(A contact) PNP
	LTF-SSGBP	N.C.(B contact) PNP
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

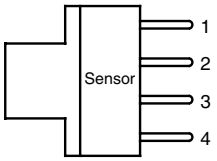
Note 1) The bolt and bracket for mounting are included.

Photo Micro Sensor

Photomicrosensor for Home Position

Ratings

Power supply voltage	5 to 24VAC ±10%, ripple (p-p)10% or less
Current consumption	35mA or less
Control output	5 to 24VAC, Load current (1c)100mA, Residual voltage 0.8Vor 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)



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

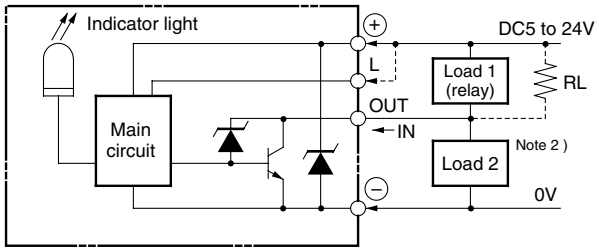
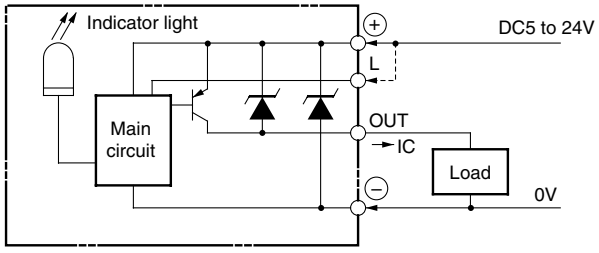
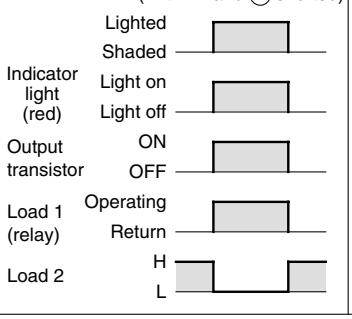
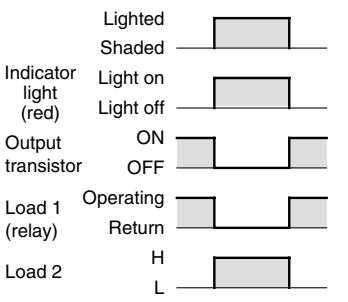
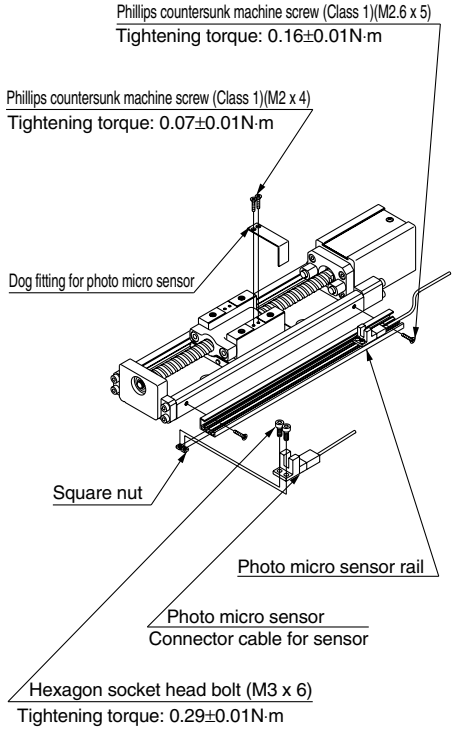
Operating state of output transistor	ON when lighted	ON when shaded
Output circuit	**NPN**  Note 2) When used with voltage output, be certain to install a resistor at RL and use Load 2. To determine a standard for the resistor, refer to the correct useage on page 36.	
	PNP  	
Timing chart	(With L and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

Photo Micro Sensor

Dog Fitting for Photo Micro Sensor Mounting



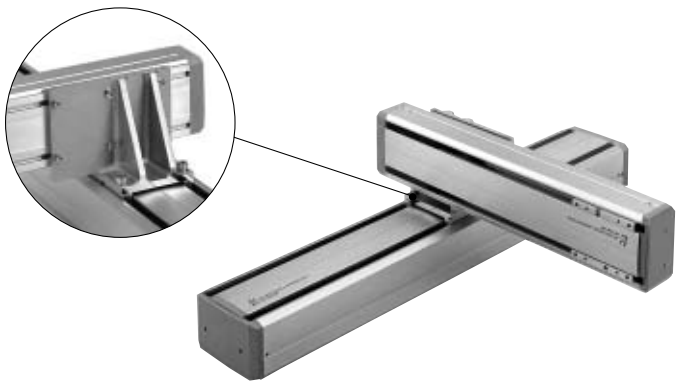
Spare parts (Sensor)

	Order Number	Note
Photo micro sensor Note)	LTF-SSSX-1	NPN
	LTF-SSSXP-1	PNP
Photo micro sensor cable	LJ1-EE-1010	2m
Photo micro sensor rail Note)	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)	LTF-DG6-SX	for LTF6
	LTF-DG8-SX	for LTF8

Note) The bolt and bracket for mounting are included.

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.

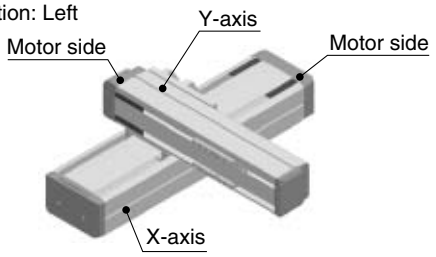
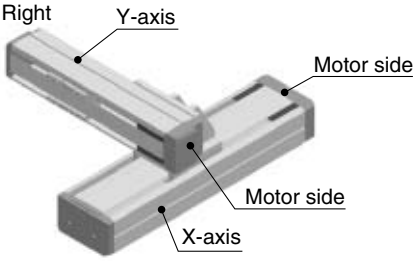
Applicable actuators

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	Extended direction: Left 
RS	Extended direction: Right 

When selecting X-Y bracket, please contact SMC.

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), JIS 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) JIS 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.

Back page 2

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/controller is not broken.
b) Confirm that the power supply line or each signal line for actuator/controller is not loosened.
c) Confirm that the actuator/controller is not mounted loosely.
d) Confirm that the actuator/controller 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.

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

4. When attaching a workpiece, do not apply strong impact shock or a large moment.

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.

Controller/Driver/Positioning Driver/Regenerative Absorption Unit

Caution on Handling

⚠ Warning

1. Never touch the controller or 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 controller 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 controller.

Grounding

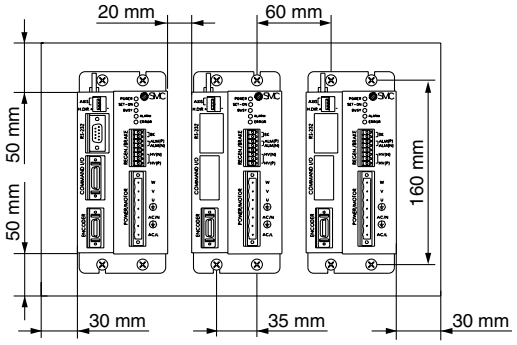
⚠ Caution

1. Be sure to carry out grounding in order to ensure the noise tolerance of the controller.
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 controller, 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.

Mounting

⚠ Caution

1. Mount the controller 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.

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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, 100 VAC 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.

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