



Single Axis Electric Actuator Series **LJ1H** High Rigidity Direct Acting Guide

Series	Motor type	Guide type	Mounting orientation	Model	Lead screw lead mm			Page
					Ground ball screw	Rolled ball screw	Slide screw	
LJ1H	Standard motor	High rigidity direct acting guide	Horizontal	LJ1H10	12	12	20	2
				LJ1H20	10 20	10 20	20	8
				LJ1H30	25	25	40	18
			Vertical	LJ1H10	8 12	8 12		24
				LJ1H20	5 10	5 10		32
				LJ1H30	10	10		40
	Non-standard motor	High rigidity direct acting guide	Horizontal	LJ1H10	12	12	20	44
				LJ1H20	10 20	10 20	20	50
				LJ1H30	25	25	40	60
			Vertical	LJ1H10	8 12	8 12		66
				LJ1H20	5 10	5 10		74
				LJ1H30	10	10		82

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Part Number Designations

LJ1 H 10 G 1 1 N B - 100 - F W - X10

Guide type
H High rigidity direct acting guide

Series
10 Series 10
20 Series 20
30 Series 30

Motor specification
Nil Standard motor
G Matsushita Electric Industrial Co., Ltd.
R Mitsubishi Electric Corporation
Y Yaskawa Electric Corporation

Motor output
1 50W
2 100W
3 200W

Power supply voltage
1 100/110VAC 50/60Hz
2 200/220VAC 50/60Hz
3 200/230VAC 50/60Hz
0 Without motor

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

Stroke
H 8mm
B 12mm
C 20mm
F 5mm
A 10mm
D 25mm
E 40mm

Lead screw lead
H 8mm
B 12mm
C 20mm
F 5mm
A 10mm
D 25mm
E 40mm

Cable entry direction
F Axial
R Right
L Left
T Top
B Bottom

Limit switch
Nil None
W B contact specification 2 pcs.

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

Brake
Nil None
K With brake

X10 Non-standard motor

The tables above show the definition for each symbol only and cannot be used for actual model selection.

Non-standard Motor Horizontal Mount

Series LJ1H10

Motor Output
50W

High Rigidity
Direct Acting
Guide

Ground Ball Screw
∅12mm/12mm lead

How to Order

LJ1H10 **G** 1 **1** **PB** — Stroke — **F** **W** — X10

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

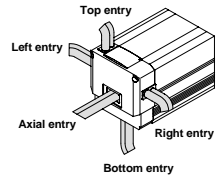
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500
Performance	Body weight (without motor)	kg		4.8	5.6	6.4	7.1	7.9
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	10					
	Maximum speed	mm/s	600					
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (50W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ∅12mm, 12mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
Switch	Model	D-Y7GL						
	Specifications	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						

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

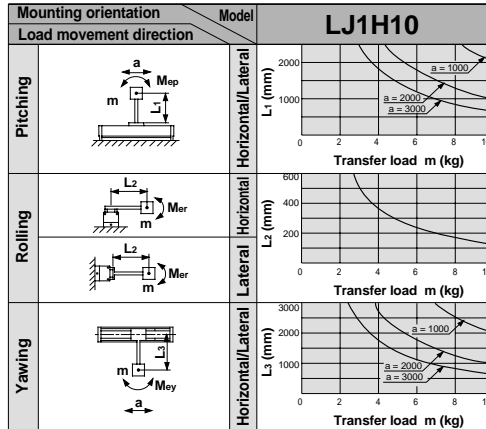
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Rolling	12.8
Yawing	10.2

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

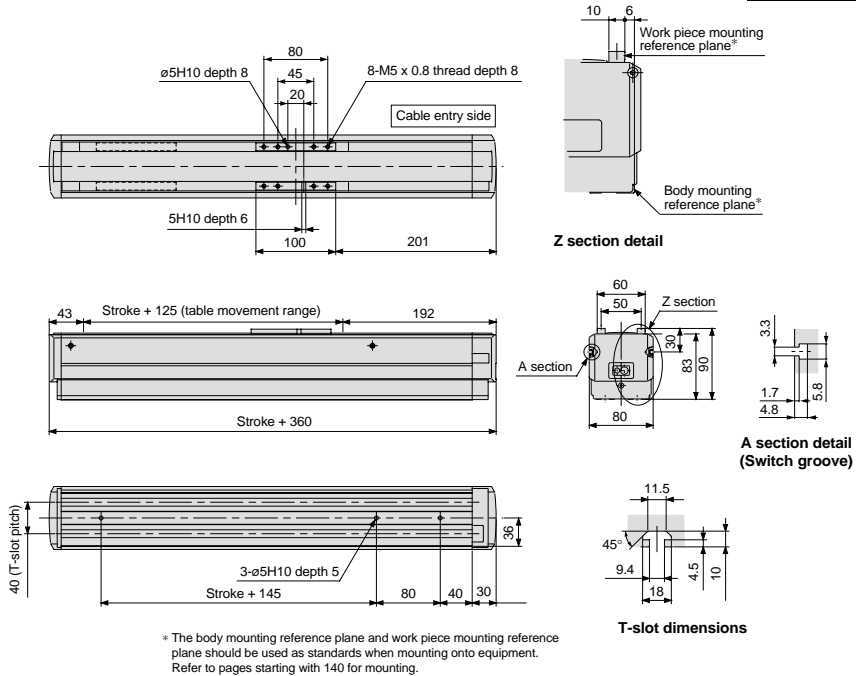
Allowable dynamic moment



Refer to page 145 for deflection data.

Dimensions/LJ1H10□1□PB(X10)

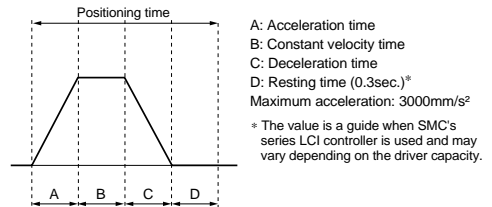
Scale: 15%



Positioning Time Guide

		Positioning time (sec.)				
Positioning distance (mm)		1	10	100	250	500
Speed (mm/s)	10	0.4	1.3	10.3	25.3	50.3
	100	0.4	0.5	1.4	2.9	5.4
	300	0.4	0.5	0.8	1.3	2.1
	600	0.4	0.5	0.7	1.0	1.4

* Values will vary slightly depending on the operating conditions.



Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	50	100/115	MSM5AZP1A	MSD5A1P1E
		200/230		MSD5A3P1E
Mitsubishi Electric Corporation	50	100/115	HC-PQ053	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	50	100/115	SGME-A5BF12	SGDE-A5BP
		200/230		SGME-A5AF12

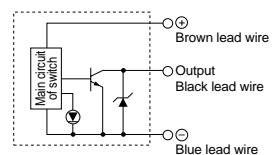
* For motor mounting dimensions, refer to the dimensions for series LJ1H10 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



Non-standard Motor

Horizontal Mount

Series LJ1H10

Motor Output
50W

High Rigidity
Direct Acting
Guide

Rolled Ball Screw
∅12mm/12mm lead

How to Order

LJ1H10 **G** 1 1 **NB** — Stroke — **F** **W** — X10

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

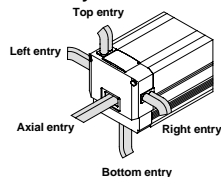
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500
Performance	Body weight (without motor)	kg		4.8	5.6	6.4	7.1	7.9
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	10					
	Maximum speed	mm/s	600					
	Positioning repeatability	mm	±0.05					
Main parts	Motor	AC servomotor (50W)						
	Encoder	Incremental system						
	Lead screw	Rolled ball screw ∅12mm, 12mm lead						
	Guide	High rigidity direct acting guide						
Switch	Motor/Screw connection	With coupling						
	Model	D-Y7GL						
Switch	Specifications	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						

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

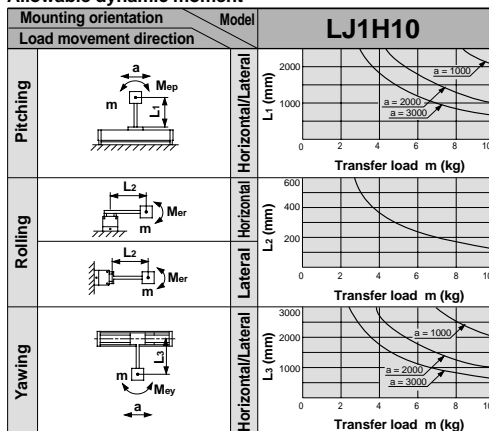
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Rolling	12.8
Yawing	10.2

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

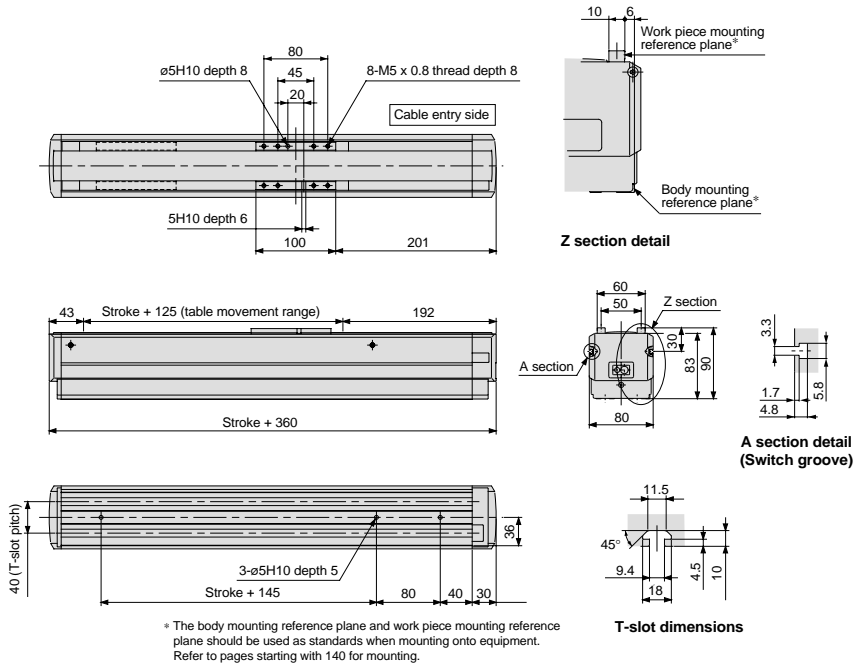
Allowable dynamic moment



Refer to page 145 for deflection data.

Dimensions/LJ1H10□1□NB(X10)

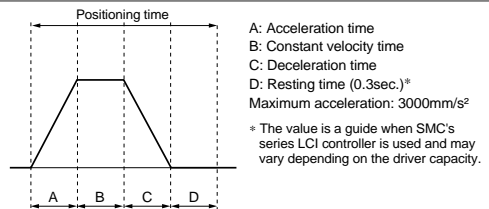
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Positioning Time Guide

Positioning distance (mm)	Positioning time (sec.)				
	1	10	100	250	500
Speed (mm/s)					
10	0.4	1.3	10.3	25.3	50.3
100	0.4	0.5	1.4	2.9	5.4
300	0.4	0.5	0.8	1.3	2.1
600	0.4	0.5	0.7	1.0	1.4

* Values will vary slightly depending on the operating conditions.



Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	50	100/115	MSM5AZP1A	MSD5A1P1E
		200/230		MSD5A3P1E
Mitsubishi Electric Corporation	50	100/115	HC-PQ053	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	50	100/115	SGME-A5BF12	SGDE-A5BP
		200/230		SGME-A5AF12

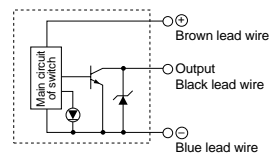
* For motor mounting dimensions, refer to the dimensions for series LJ1H10 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



Non-standard Motor Horizontal Mount

Series LJ1H10

Motor Output
50W

High Rigidity
Direct Acting
Guide

Slide Screw
∅20mm/20mm lead

How to Order

LJ1H10 **G** 1 1 **SC** — Stroke — **F** **W** — X10

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

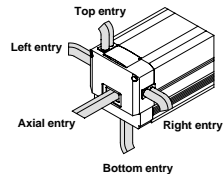
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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

Cable entry direction



Specifications

	Standard stroke	mm	100	200	300	400	500	600	700	800	900	1000
Performance	Body weight (without motor)	kg	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	10									
	Maximum speed	mm/s	500									
	Positioning repeatability	mm	±0.1									
Main parts	Motor		AC servomotor (50W)									
	Encoder		Incremental system									
	Lead screw		Slide screw ∅20mm, 20mm lead									
	Guide		High rigidity direct acting guide									
	Motor/Screw connection		With coupling									
Switch	Model		D-Y7GL									
	Specifications		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									

Intermediate strokes

Strokes other than the standard strokes above are available by special order. Consult SMC.

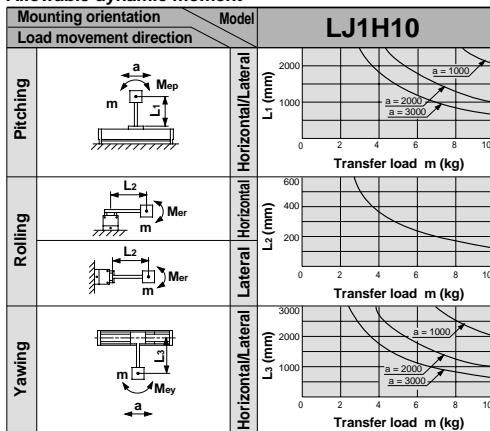
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Rolling	12.8
Yawing	10.2

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

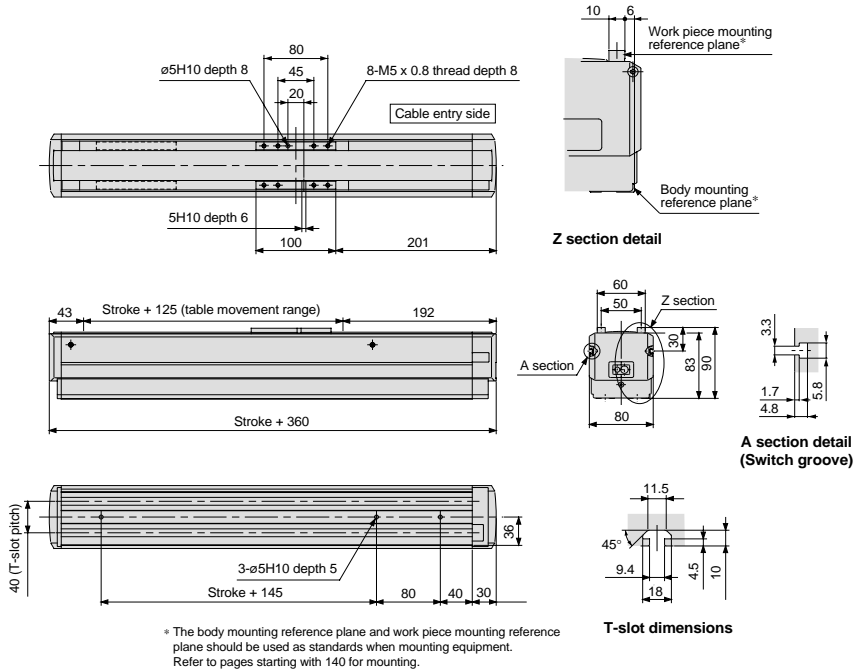
Allowable dynamic moment



Refer to page 145 for deflection data.

Dimensions/LJ1H10□1□SC(X10)

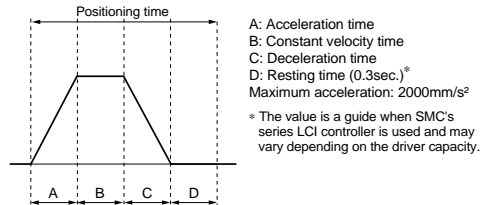
Scale: 15%



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	500	1000
Speed (mm/s)	10	0.5	1.4	10.4	50.4	100.4
	100	0.4	0.5	1.4	5.4	10.4
	250	0.4	0.5	0.9	2.5	4.5
	500	0.4	0.5	0.8	1.6	2.6

* Values will vary slightly depending on the operating conditions.



Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	50	100/115	MSM5AZP1A	MSD5A1P1E
		200/230		MSD5A3P1E
Mitsubishi Electric Corporation	50	100/115	HC-PQ053	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	50	100/115	SGME-A5BF12	SGDE-A5BP
		200/230	SGME-A5AF12	SGDE-A5AP

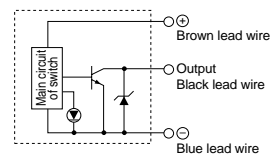
* For motor mounting dimensions, refer to the dimensions for series LJ1₅H10 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H20 **G** **2** **1** **PA** — **Stroke** — **F** **W** — **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

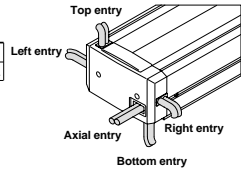
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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

Cable entry direction



Specifications

	Standard stroke	mm	100	200	300	400	500	600
Performance	Body weight (without motor)	kg	7.2	8.4	9.6	10.7	12.1	13.2
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	30					
	Maximum speed	mm/s	500					
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ∅15mm, 10mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
Switch	Model	D-Y7GL						
	Specifications	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						

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

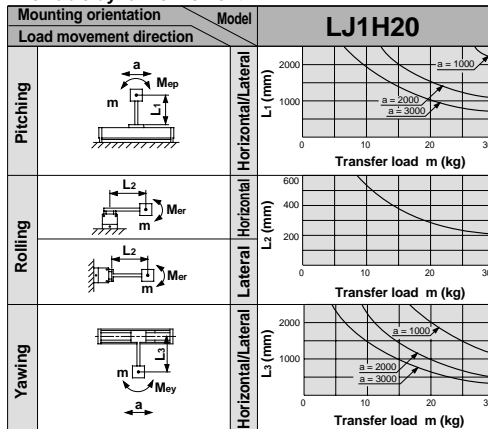
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Rolling	83
Yawing	75

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

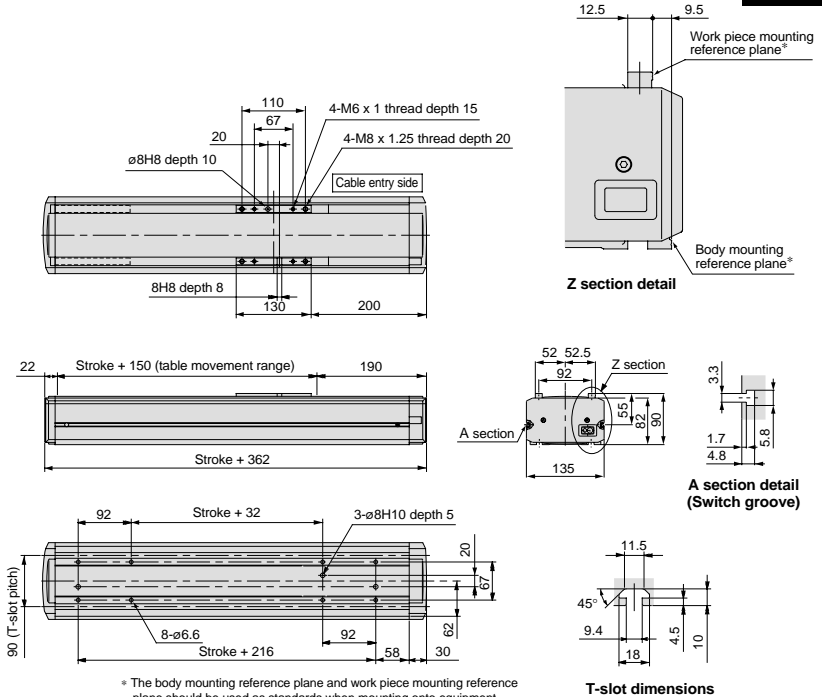
Allowable dynamic moment



Refer to page 145 for deflection data.

Dimensions/LJ1H20□2□PA(X10)

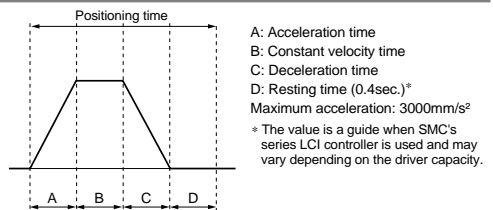
Scale: 10%



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	300	600
Speed (mm/s)	10	0.5	1.4	10.4	30.4	60.4
	100	0.5	0.6	1.5	3.5	6.5
	250	0.5	0.6	0.9	1.7	2.9
	500	0.5	0.6	0.8	1.2	1.8

* Values will vary slightly depending on the operating conditions.



Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

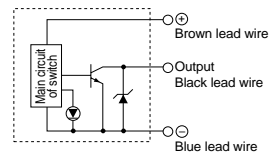
* For motor mounting dimensions, refer to the dimensions for series LJ1_{H20} on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



Non-standard Motor

Horizontal Mount

Series LJ1H20

Motor Output

100W

High Rigidity
Direct Acting
Guide

Ground Ball Screw

∅15mm/20mm lead

How to Order

LJ1H20 G 2 1 PC Stroke F W X10

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

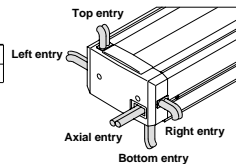
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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

Cable entry direction



Specifications

Standard stroke		mm	500	600	700	800	900	1000
Performance	Body weight (without motor)	kg	12.1	13.2	14.4	15.6	16.8	18.0
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	30					
	Maximum speed ^{Note)}	mm/s	1000	1000	930	740	600	500
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ∅15mm, 20mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
Switch	Model	D-Y7GL						
	Specifications	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						

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

Note) The speed is limited by the transfer load.

Consult each motor manufacturer regarding the maximum speed for each transfer load.

Allowable Moment (N·m)

Allowable static moment

Pitching	71
Rolling	83
Yawing	75

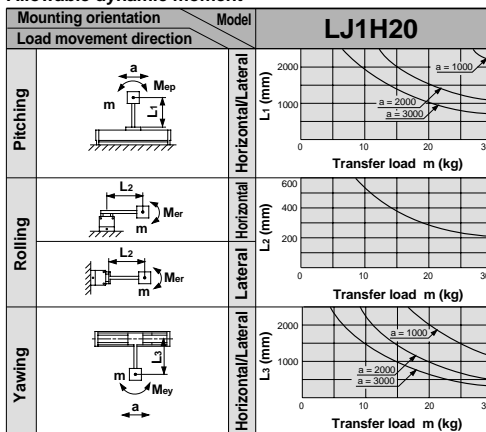
m : Transfer load (kg)

a : Work piece acceleration (mm/s²)

Me: Dynamic moment

L : Overhang to work piece center of gravity (mm)

Allowable dynamic moment

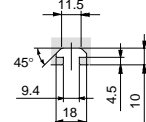
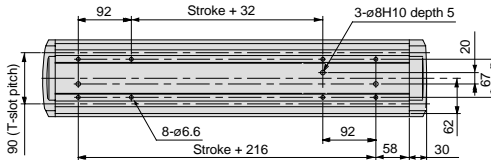
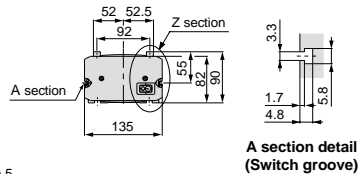
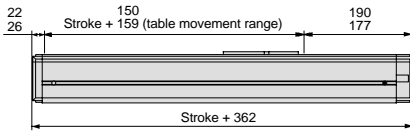
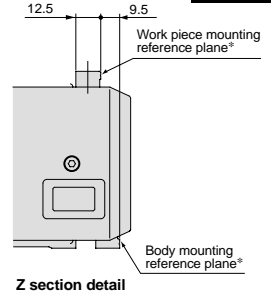
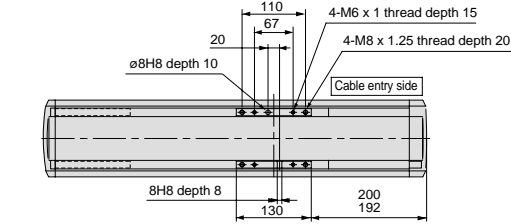


Refer to page 145 for deflection data.

Dimensions/LJ1H20□□PC(X10)

When two dimensions are shown, the top dimension is for 500 and 600mm strokes, and the bottom dimension is for 700 to 1000mm strokes.

Scale: 10%

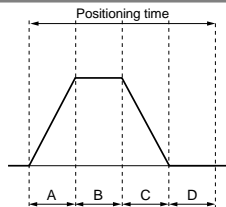


* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

T-slot dimensions

Positioning Time Guide

		Positioning time (sec.)					
Positioning distance (mm)		1	10	100	500	1000	
Speed (mm/s)	10	0.6	1.5	10.5	50.5	100.5	
	100	0.5	0.6	1.5	5.5	10.5	
	500	0.5	0.6	0.9	1.7	2.7	
	1000	0.5	0.6	0.9	1.4	1.9	



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.4sec.)*
 Maximum acceleration: 2000mm/s²
 * The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

* Values will vary slightly depending on the operating conditions.

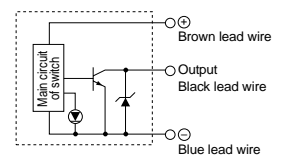
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



LJ1

LG1

LC1

LX

LC6D/LC6C

Switches

How to Order

LJ1H20 **G** 2 **1** **NA** — Stroke — **F** **W** — X10

● **Motor specification**

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

● **Power supply voltage**

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

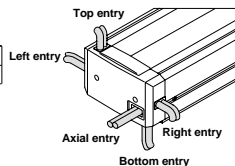
● **Cable entry direction**

F	Axial
R	Right
L	Left
T	Top
B	Bottom

● **Switch**

NII	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500	600
Performance	Body weight (without motor)	kg		7.2	8.4	9.6	10.7	12.1	13.2
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	30						
	Maximum speed	mm/s	500						
	Positioning repeatability	mm	±0.05						
Main parts	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw ∅15mm, 10mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	With coupling							
Switch	Model	D-Y7GL							
	Specifications	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							

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

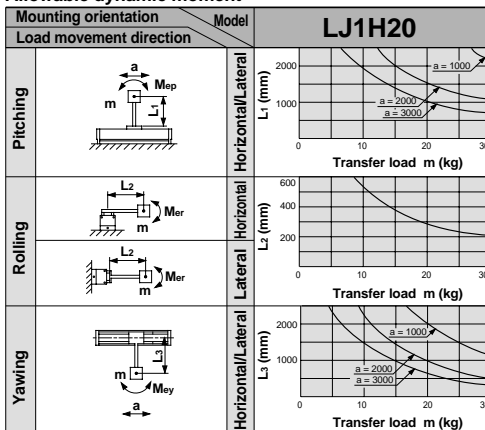
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Rolling	83
Yawing	75

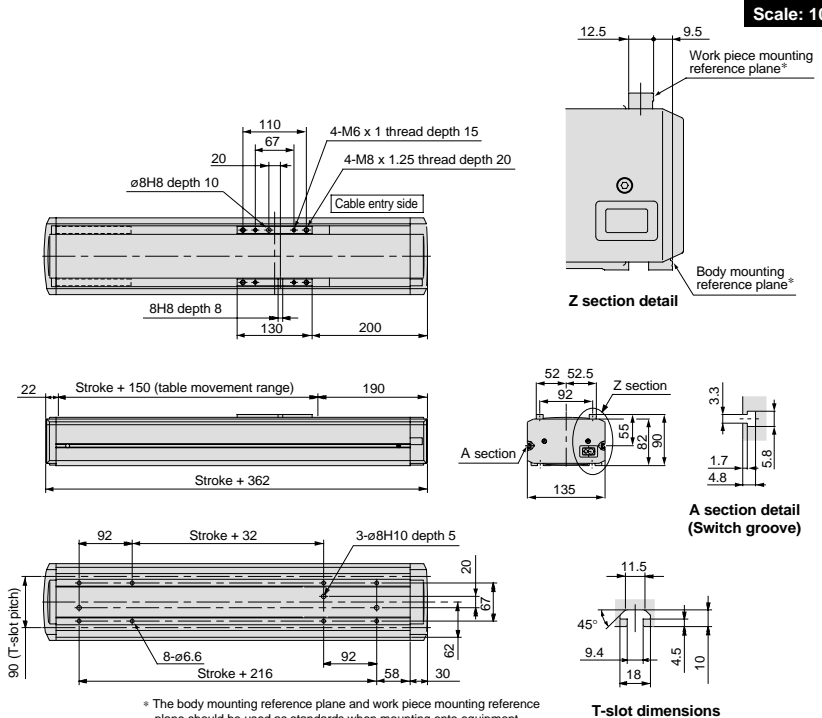
m : Transfer load (kg)
a : Work piece acceleration (mm/s²)
Me: Dynamic moment
L : Overhang to work piece center of gravity (mm)

Allowable dynamic moment



Refer to page 145 for deflection data.

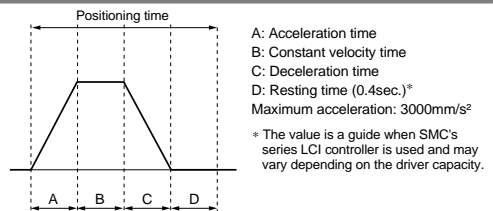
Dimensions/LJ1H20□□NA(X10)



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)					
		1	10	100	300	600	
Speed (mm/s)	10	0.5	1.4	10.4	30.4	60.4	
	100	0.5	0.6	1.5	3.5	6.5	
	250	0.5	0.6	0.9	1.7	2.9	
	500	0.5	0.6	0.8	1.2	1.8	

* Values will vary slightly depending on the operating conditions.



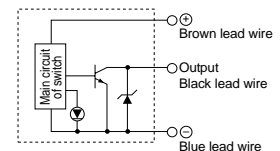
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H20 **G** **2** **1** **NC** — Stroke — **F** **W** — X10

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

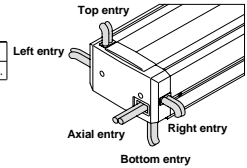
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

NII	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

Standard stroke		mm	500	600	700	800	900	1000
Performance	Body weight (without motor)	kg	12.1	13.2	14.4	15.6	16.8	18.0
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	30					
	Maximum speed ^{Note)}	mm/s	1000	1000	930	740	600	500
	Positioning repeatability	mm	±0.05					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Rolled ball screw Ø15mm, 20mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
Switch	Model	D-Y7GL						
	Specifications	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						

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

Note) The speed is limited by the transfer load.

Consult each motor manufacturer regarding the maximum speed for each transfer load.

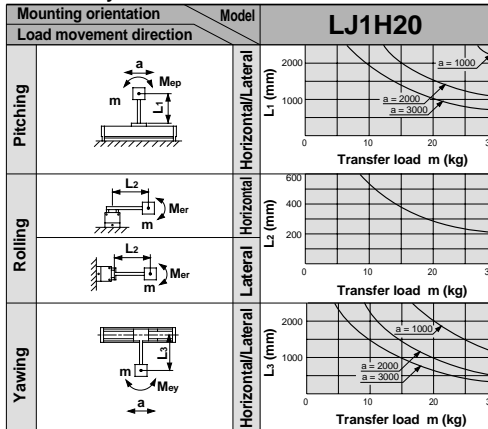
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Rolling	83
Yawing	75

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


Allowable dynamic moment

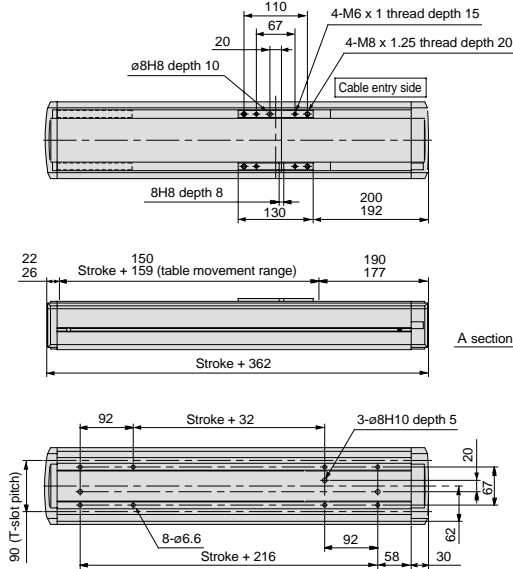


Refer to page 145 for deflection data.

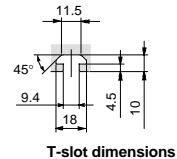
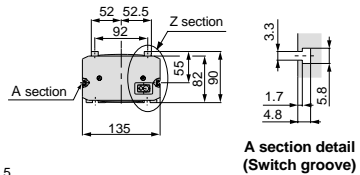
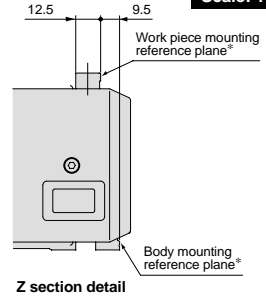
Non-standard Motor/Horizontal Mount Specification **Series LJ1H20**

Dimensions/LJ1H20□2□NC(X10)

 When two dimensions are shown, the top dimension is for 500 and 600mm strokes, and the bottom dimension is for 700 to 1000mm strokes.



Scale: 10%

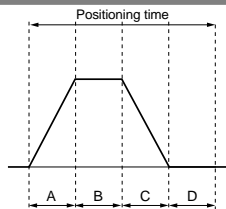


* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)					
		1	10	100	500	1000	
Speed (mm/s)	10	0.6	1.5	10.5	50.5	100.5	
	100	0.5	0.6	1.5	5.5	10.5	
	500	0.5	0.6	0.9	1.7	2.7	
	1000	0.5	0.6	0.9	1.4	1.9	

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.4sec.)*
 Maximum acceleration: 2000mm/s²
 * The value is a guide when SMC's series LCI controller is used and may vary depending on the driver capacity.

Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

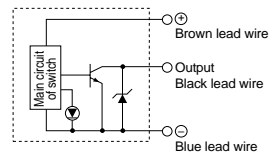
* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H20 **G** 2 **1** **SC** — Stroke — **F** **W** — X10

Motor specification

G	Matsumita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

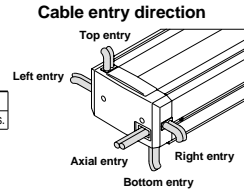
1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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



Specifications

Standard stroke		mm	100	200	300	400	500	600	700	800	900	1000	1200
Performance	Body weight (without motor)	kg	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	15										
	Maximum speed	mm/s	500										
Main parts	Positioning repeatability	mm	±0.1										
	Motor	AC servomotor (100W)											
	Encoder	Incremental system											
	Lead screw	Slide screw ø20mm, 20mm lead											
	Guide	High rigidity direct acting guide											
Switch	Motor/Screw connection	With coupling											
	Model	D-Y7GL											
	Specifications	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											

Immediate strokes

Strokes other than the standard strokes above are available by special order. Consult SMC.

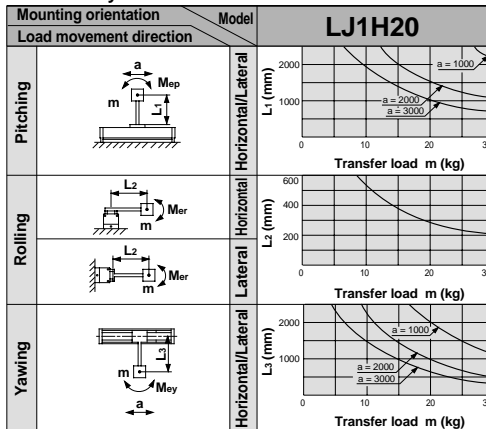
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Rolling	83
Yawing	75

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

Allowable dynamic moment

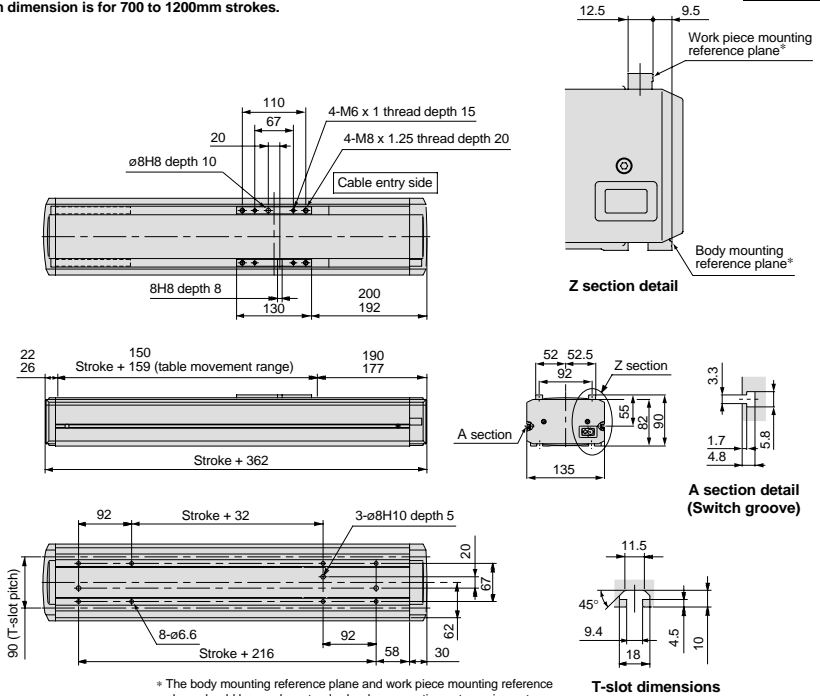


Refer to page 145 for deflection data.

Dimensions/LJ1H20□2□PC(X10)

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: 10%

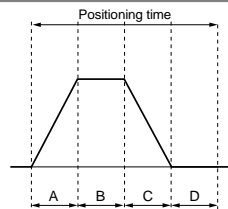


* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)					
		1	10	100	500	1000	
Speed (mm/s)	10	0.6	1.5	10.5	60.5	120.5	
	100	0.5	0.6	1.5	6.5	12.5	
	250	0.5	0.6	1.0	3.0	5.4	
	500	0.5	0.6	0.9	1.9	3.1	

* Values will vary slightly depending on the operating conditions.



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

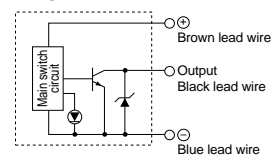
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H30 **G** **3** **1** **PD** — Stroke — **F** **W** — **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

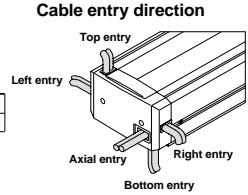
1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

NII	None
W	N.C. (B contact) 2 pcs.



Specifications

Standard stroke		mm	200	300	400	500	600	800	1000	1200	1500
Performance	Body weight (without motor)	kg	14.9	16.9	18.9	20.9	22.9	27.4	31.9	35.9	41.9
	Operating temperature range	°C	5 to 40 (with no condensation)								
	Work load	kg	60								
	Maximum speed	mm/s	1000								
Main parts	Positioning repeatability	mm	±0.02								
	Motor		AC servomotor (200W)								
	Encoder		Incremental system								
	Lead screw		Ground ball screw ø25mm, 25mm lead								
	Guide		High rigidity direct acting guide								
Switch	Motor/Screw connection		With coupling								
	Model		D-Y7GL								
	Specifications		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								

Immediate strokes

Strokes other than the standard strokes above are available by special order. Consult SMC.

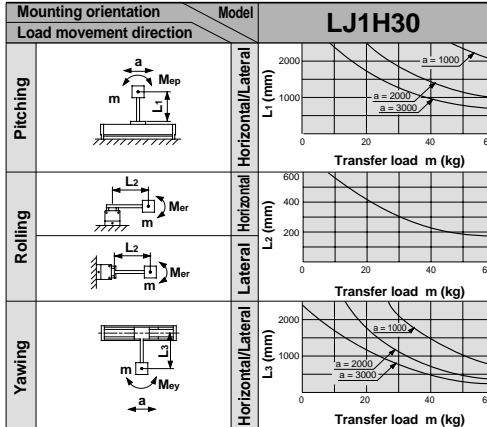
Allowable Moment (N·m)

Allowable static moment

Pitching	117
Rolling	137
Yawing	123

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

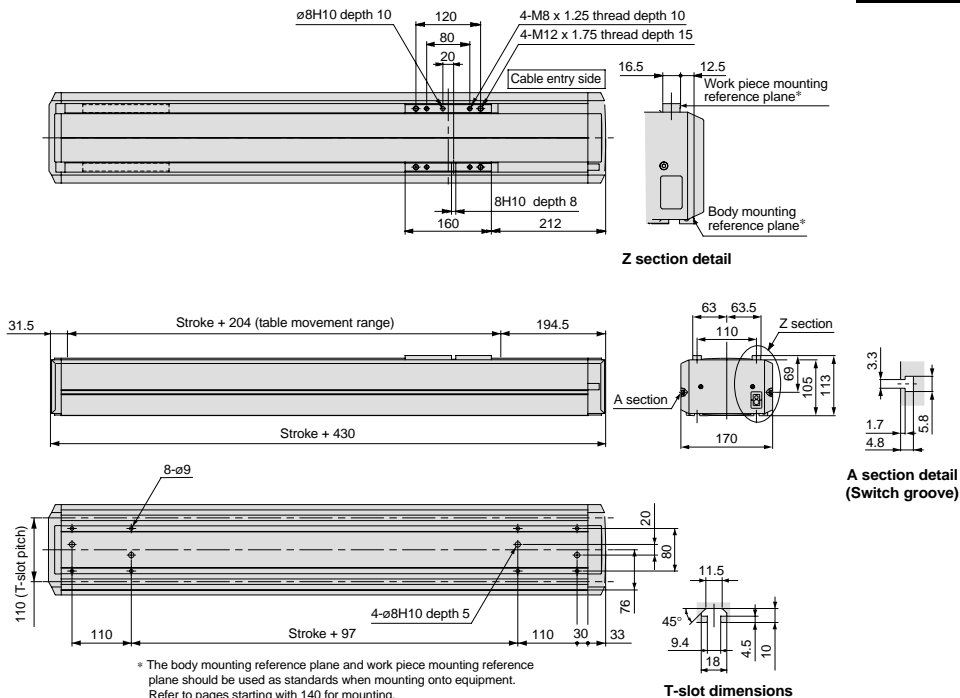
Allowable dynamic moment



Refer to page 145 for deflection data.

Dimensions/LJ1H30□3□PD(X10)

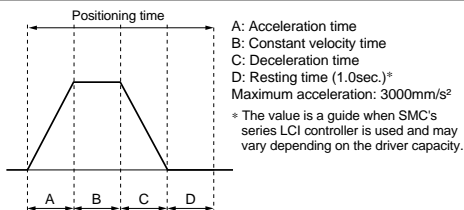
Scale: 10%



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	750	1500
Speed (mm/s)	10	1.1	2.0	11.0	76.0	151.0
	100	1.1	1.2	2.1	8.6	16.1
	500	1.1	1.2	1.4	2.7	4.2
	1000	1.1	1.2	1.4	2.1	2.9

* Values will vary slightly depending on the operating conditions.

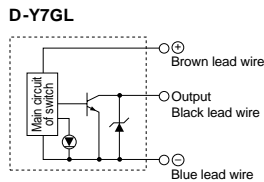


Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	200	100/115	MSM021P1A	MSD021P1E
		200/230	MSM022P1A	MSD023P1E
Mitsubishi Electric Corporation	200	100/115	HC-PQ23	MR-C20A1
		200/230		MR-C20A
Yaskawa Electric Corporation	200	100/115	SGME-02BF12	SGDE-02BP
		200/230	SGME-02AF12	SGDE-02AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H30 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit



Non-standard Motor
Horizontal Mount

Series LJ1H30

Motor Output
200W

High Rigidity
Direct Acting
Guide

Rolled Ball Screw
∅25mm/25mm lead

How to Order

LJ1H30 **G** **3** **1** **ND** — Stroke — **F** **W** — **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

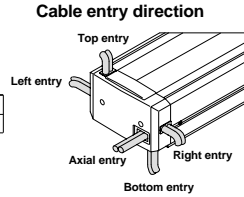
1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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



Specifications

		Standard stroke	mm	200	300	400	500	600	800	1000	1200	1500	
Performance	Body weight (without motor)	kg	14.9	16.9	18.9	20.9	22.9	27.4	31.9	35.9	41.9		
	Operating temperature range	°C	5 to 40 (with no condensation)										
	Work load	kg	60										
	Maximum speed	mm/s	1000									700	500
	Positioning repeatability	mm	±0.05										
Main parts	Motor	AC servomotor (200W)											
	Encoder	Incremental system											
	Lead screw	Rolled ball screw ∅25mm, 25mm lead											
	Guide	High rigidity direct acting guide											
	Motor/Screw connection	With coupling											
Switch	Model	D-Y7GL											
	Specifications	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											

Immediate strokes

Strokes other than the standard strokes above are available by special order. Consult SMC.

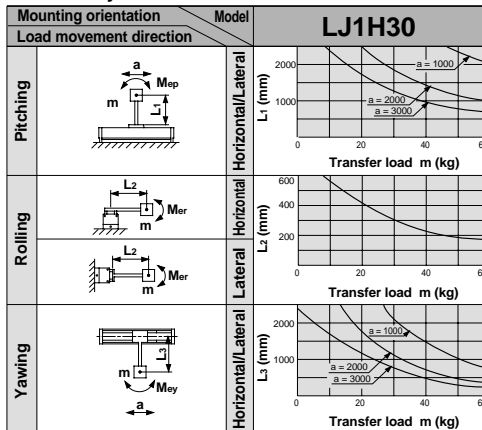
Allowable Moment (N·m)

Allowable static moment

Pitching	117
Rolling	137
Yawing	123

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

Allowable dynamic moment

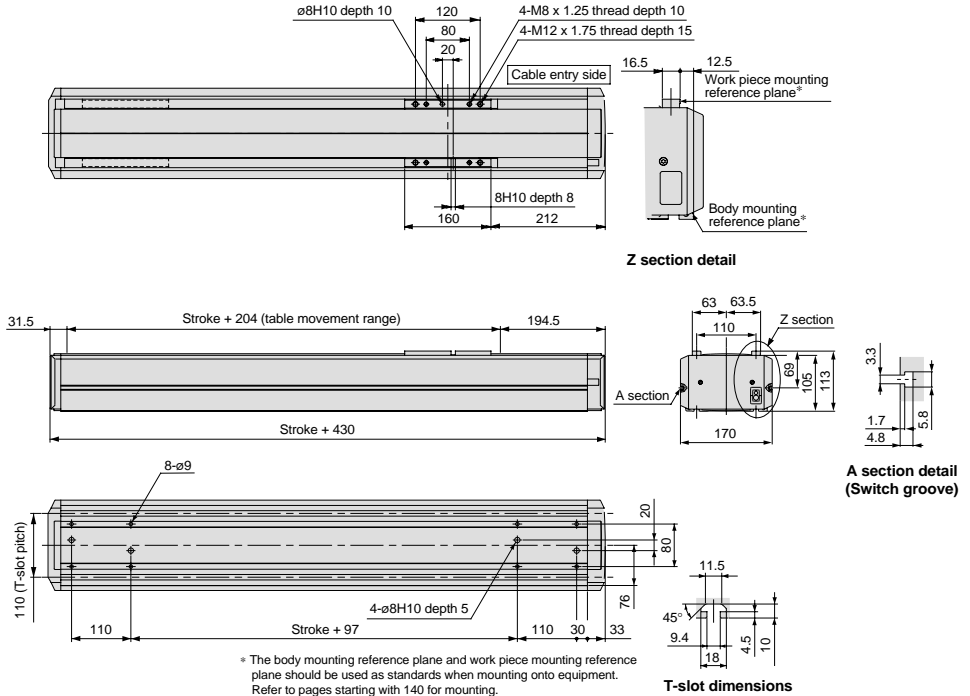


Refer to page 145 for deflection data.

Non-standard Motor/Horizontal Mount Specification **Series LJ1H30**

Dimensions/LJ1H30□3□ND(X10)

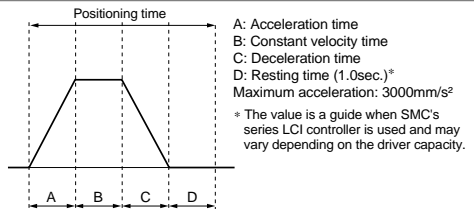
Scale: 10%



Positioning Time Guide

		Positioning time (sec.)				
Positioning distance (mm)		1	10	100	750	1500
Speed (mm/s)	10	1.1	2.0	11.0	76.0	151.0
	100	1.1	1.2	2.1	8.6	16.1
	500	1.1	1.2	1.4	2.7	4.2
	1000	1.1	1.2	1.4	2.1	2.9

* Values will vary slightly depending on the operating conditions.



Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	200	100/115	MSM021P1A	MSD021P1E
		200/230	MSM022P1A	MSD023P1E
Mitsubishi Electric Corporation	200	100/115	HC-PQ23	MR-C20A1
		200/230		MR-C20A
Yaskawa Electric Corporation	200	100/115	SGME-02BF12	SGDE-02BP
		200/230	SGME-02AF12	SGDE-02AP

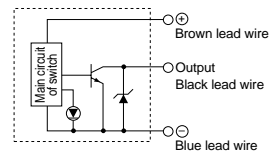
* For motor mounting dimensions, refer to the dimensions for series LJ1H30 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



Non-standard Motor

Horizontal Mount

Series LJ1H30

Motor Output

200W

High Rigidity

Direct Acting Guide

Slide Screw

∅30mm/40mm lead

How to Order

LJ1H30 **G** **3** **1** **SE** — **Stroke** — **F** **W** — **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

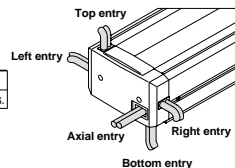
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Switch

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

Cable entry direction



Specifications

		Standard stroke	mm	200	300	400	500	600	800	1000	1200	1500
Performance	Body weight (without motor)	kg		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	30									
	Maximum speed	mm/s	500									
	Positioning repeatability	mm	±0.1									
Main parts	Motor	AC servomotor (200W)										
	Encoder	Incremental system										
	Lead screw	Slide screw ∅30mm, 40mm lead										
	Guide	High rigidity direct acting guide										
	Motor/Screw connection	With coupling										
Switch	Model	D-Y7GL										
	Specifications	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										

Immediate strokes

Strokes other than the standard strokes above are available by special order. Consult SMC.

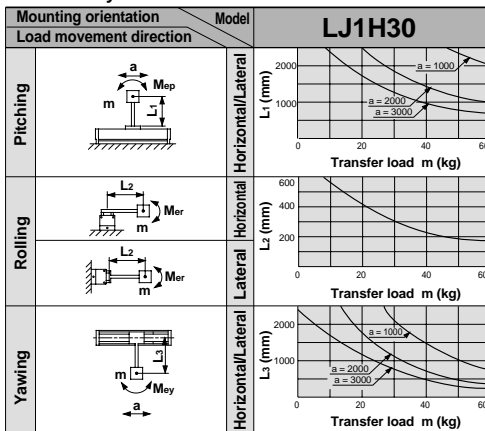
Allowable Moment (N·m)

Allowable static moment

Pitching	117
Rolling	137
Yawing	123

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

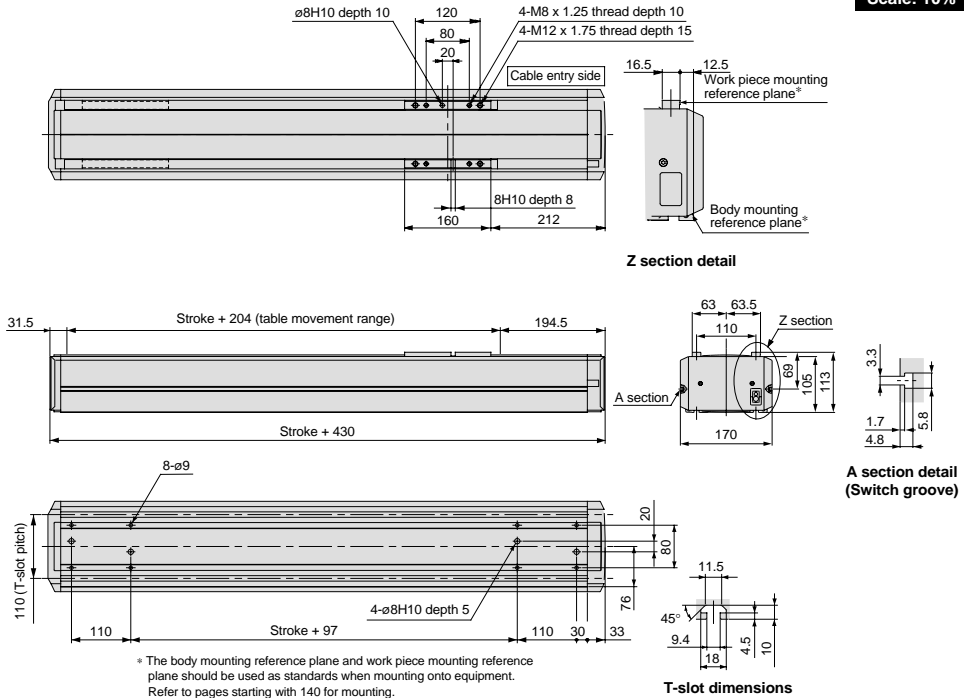
Allowable dynamic moment



Refer to page 145 for deflection data.

Dimensions/LJ1H30□3□SE(X10)

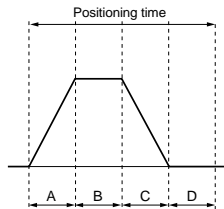
Scale: 10%



Positioning Time Guide

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	750	1500	
Speed (mm/s)	10	1.2	2.1	11.1	76.1	151.1
	100	1.1	1.2	2.1	8.6	16.1
	250	1.1	1.2	1.6	4.2	7.2
	500	1.1	1.2	1.5	2.8	4.3

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (1.0sec.)*
 * Maximum acceleration: 2000mm/s²
 * The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	200	100/115	MSM021P1A	MSD021P1E
		200/230	MSM022P1A	MSD023P1E
Mitsubishi Electric Corporation	200	100/115	HC-PQ23	MR-C20A1
		200/230		MR-C20A
Yaskawa Electric Corporation	200	100/115	SGME-02BF12	SGDE-02BP
		200/230	SGME-02AF12	SGDE-02AP

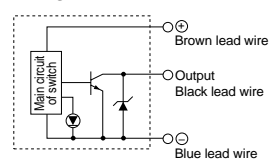
* For motor mounting dimensions, refer to the dimensions for series LJ1³⁰30 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H10 **G** 2 **1** **PH** — Stroke **K** — **F** **W** — X10

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

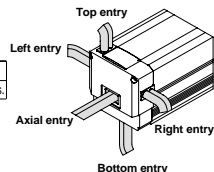
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

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

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500
Performance	Body weight (without motor)	kg		5.1	5.9	6.7	7.4	8.2
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	10					
	Rated thrust	N	225					
	Maximum speed	mm/s	400					
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ∅12mm, 8mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A					
Holding torque		0.4N·m						
Connection method		Ball screw mounting						
Switch	Model	D-Y7GL						
	Specifications	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						
Regenerative absorption unit			Refer to the selection guide below.					

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

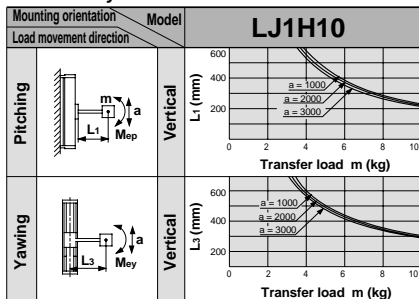
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Yawing	10.2

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mount specification. How to determine regenerative energy is shown below.

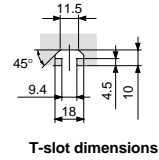
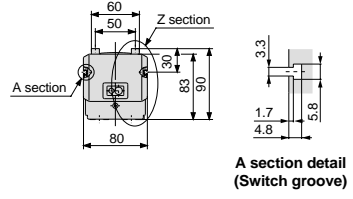
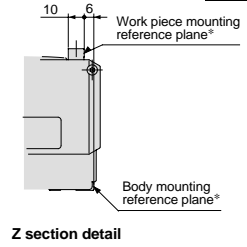
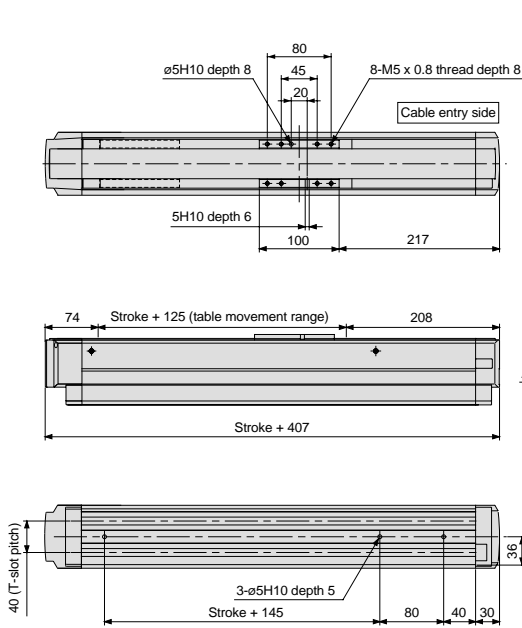
Regenerative energy = Motor coil energy consumption

- + Driver capacitor energy consumption (A)
- + Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H10□2□PH(X10)

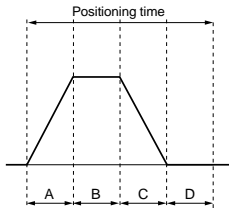
Scale: 15%



* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

		Positioning time (sec.)				
Positioning distance (mm)		1	10	100	250	500
Speed (mm/s)	10	0.4	1.3	10.3	25.3	50.3
	100	0.4	0.5	1.4	2.9	5.4
	200	0.4	0.5	0.9	1.7	2.9
	400	0.4	0.5	0.7	1.1	1.7



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.3sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LCI controller is used and may vary depending on the driver capacity.

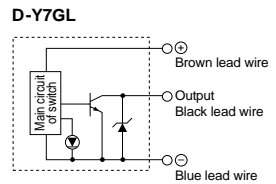
* Values will vary slightly depending on the operating conditions.

Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1₅H10 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit



LJ1
LG1
LC1
LX
LC6D/LC6C
Switches

Non-standard Motor Vertical Mount

Series LJ1H10

Motor Output
100W

High Rigidity
Direct Acting
Guide

Ground Ball Screw
∅12mm/12mm lead

How to Order

LJ1H10 **G** 2 **1** **PB** — Stroke **K** — **F** **W** — X10

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

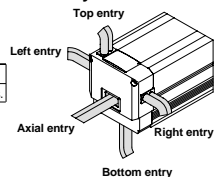
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

Nll	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500
Performance	Body weight (without motor)	kg		5.1	5.9	6.7	7.4	8.2
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	5					
	Rated thrust	N	150					
	Maximum speed	mm/s	600					
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ∅12mm, 12mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A					
Holding torque		0.4N·m						
Connection method		Ball screw mounting						
Switch	Model	D-Y7GL						
	Specifications	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						
Regenerative absorption unit			Refer to the selection guide below.					

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

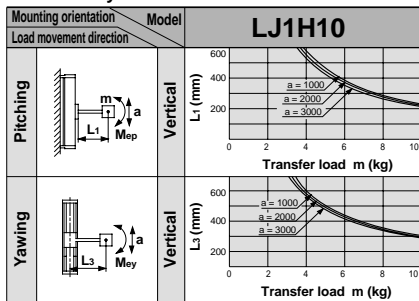
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Yawing	10.2

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mounting specification. How to determine regenerative energy is shown below.

Regenerative energy = Motor coil energy consumption

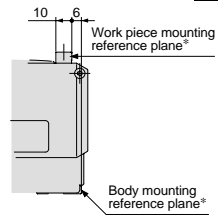
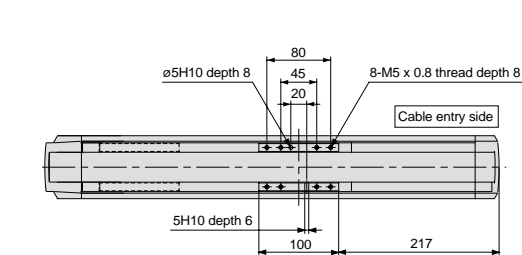
+ Driver capacitor energy consumption (A)

+ Regenerative resistor energy consumption (B)

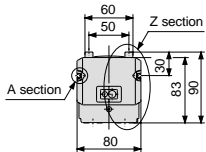
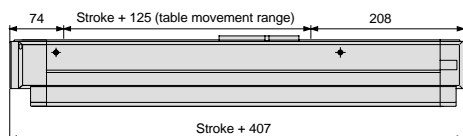
(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H10□2□PB(X10)

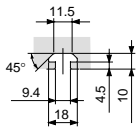
Scale: 15%



Z section detail



A section detail (Switch groove)



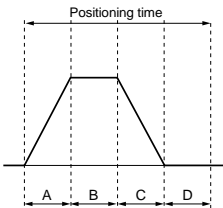
T-slot dimensions

* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

		Positioning time (sec.)				
		1	10	100	250	500
Speed (mm/s)	10	0.4	1.3	10.3	25.3	50.3
	100	0.4	0.5	1.4	2.9	5.4
	300	0.4	0.5	0.8	1.3	2.1
	600	0.4	0.5	0.7	1.0	1.4

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.3sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

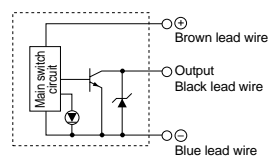
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1[□]10 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



LJ1
LG1
LC1
LX
LC6D/LC6C Switches

Non-standard Motor

Vertical Mount

Series LJ1H10

Motor Output

100W

High Rigidity

Direct Acting Guide

Rolled Ball Screw

ø12mm/8mm lead

How to Order

LJ1H10 **G** **2** **1** **NH** - Stroke **K** - **F** **W** - **X10**

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

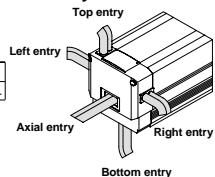
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

NH	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

Standard stroke		mm	100	200	300	400	500
Performance	Body weight (without motor)	kg	5.1	5.9	6.7	7.4	8.2
	Operating temperature range	°C	5 to 40 (with no condensation)				
	Work load	kg	10				
	Rated thrust	N	225				
	Maximum speed	mm/s	400				
	Positioning repeatability	mm	±0.05				
Main parts	Motor	AC servomotor (100W)					
	Encoder	Incremental system					
	Lead screw	Rolled ball screw ø12mm, 8mm lead					
	Guide	High rigidity direct acting guide					
	Motor/Screw connection	With coupling					
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A				
Holding torque		0.4N·m					
Connection method		Ball screw mounting					
Switch	Model	D-Y7GL					
	Specifications	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					
Regenerative absorption unit		Refer to the selection guide below.					

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

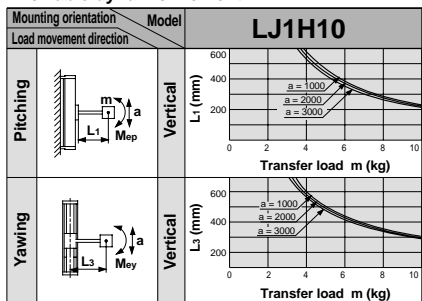
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Yawing	10.2

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

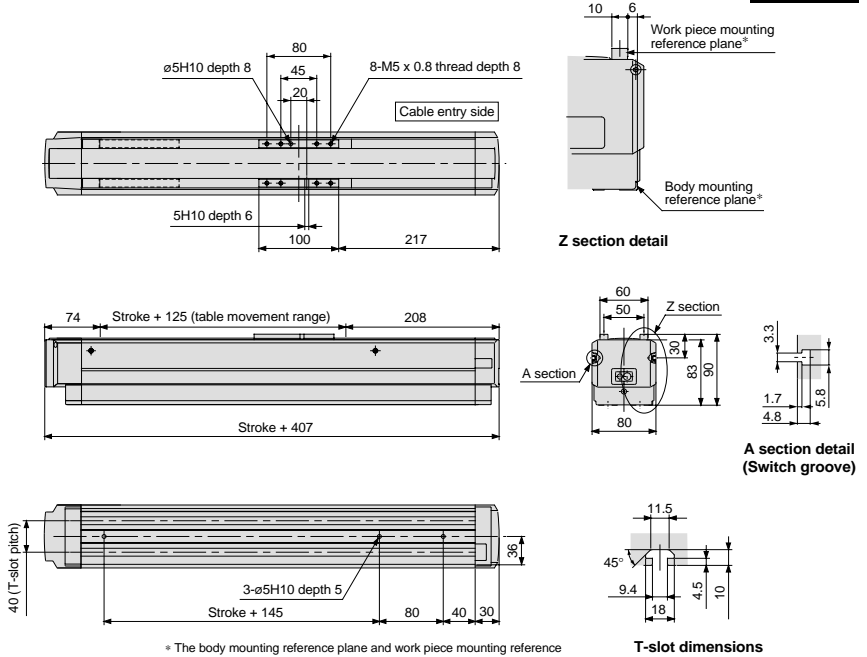
Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mounting specification. How to determine regenerative energy is shown below.

Regenerative energy = Motor coil energy consumption
+ Driver capacitor energy consumption (A)
+ Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H10□2□NH(X10)

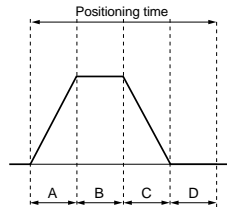
Scale: 15%



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	250	500
Speed (mm/s)	10	0.4	1.3	10.3	25.3	50.3
	100	0.4	0.5	1.4	2.9	5.4
	200	0.4	0.5	0.9	1.7	2.9
	400	0.4	0.5	0.7	1.1	1.7

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.3sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LCI controller is used and may vary depending on the driver capacity.

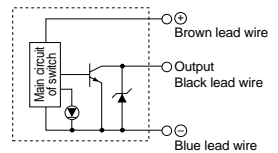
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H10 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H10 **G** **2** **1** **NB** - Stroke **K** - **F** **W** - **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

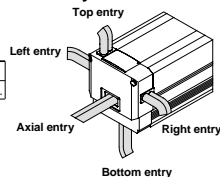
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

NII	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500	
Performance	Body weight (without motor)	kg		5.1	5.9	6.7	7.4	8.2	
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	5						
	Rated thrust	N	150						
	Maximum speed	mm/s	600						
	Positioning repeatability	mm	±0.05						
Main parts	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw ø12mm, 12mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	With coupling							
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A						
Holding torque		0.4N·m							
Connection method		Ball screw mounting							
Switch	Model	D-Y7GL							
	Specifications	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							
Regenerative absorption unit		Refer to the selection guide below.							

Intermediate strokes

Manufacture of strokes other than the standard strokes on the left will be treated as a special order. Consult SMC.

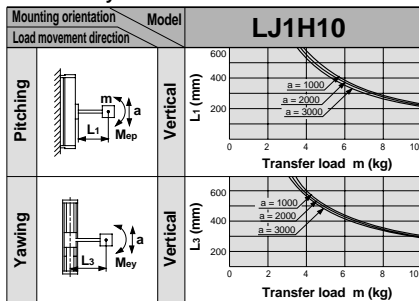
Allowable Moment (N·m)

Allowable static moment

Pitching	10.2
Yawing	10.2

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mounting specification. How to determine regenerative energy is shown below.

Regenerative energy = Motor coil energy consumption

+ Driver capacitor energy consumption (A)

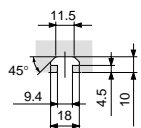
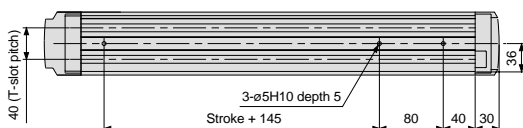
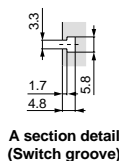
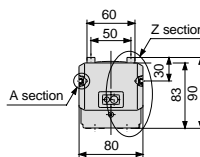
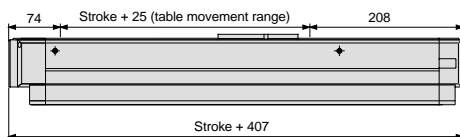
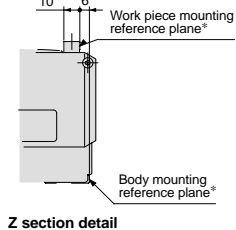
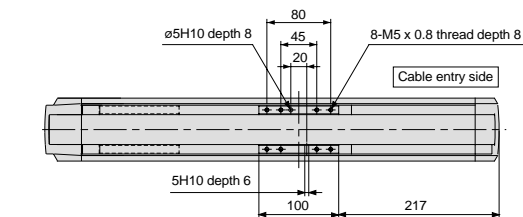
+ Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Non-standard Motor/Vertical Mount Specification **Series LJ1H10**

Dimensions/LJ1H10□2□NB(X10)

Scale: 15%

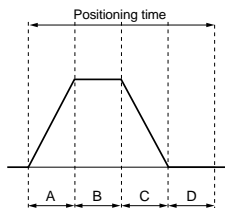


* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

		Positioning time (sec.)				
		1	10	100	250	500
Speed (mm/s)	10	0.4	1.3	10.3	25.3	50.3
	100	0.4	0.5	1.4	2.9	5.4
	300	0.4	0.5	0.8	1.3	2.1
	600	0.4	0.5	0.7	2.0	1.4

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.3sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

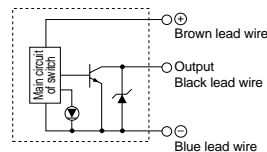
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H10 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



LJ1
LG1
LC1
LX
LC6D/LC6C
Switches

Non-standard Motor Vertical Mount

Series LJ1H20

Motor Output
100W

High Rigidity
Direct Acting
Guide

Ground Ball Screw
∅15mm/5mm lead

How to Order

LJ1H20 **G** 2 **1** **PF** — Stroke **K** — **F** **W** — X10

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

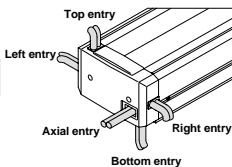
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

NH	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

Standard stroke		mm	100	200	300	400	500	600
Performance	Body weight (without motor)	kg	7.5	8.7	9.9	11.0	12.4	13.5
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	15					
	Rated thrust	N	360					
	Maximum speed	mm/s	250					
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ∅15mm, 5mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A					
Holding torque		0.4N·m						
Connection method		Ball screw mounting						
Switch	Model	D-Y7GL						
	Specifications	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						
Regenerative absorption unit		Refer to the selection guide below.						

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

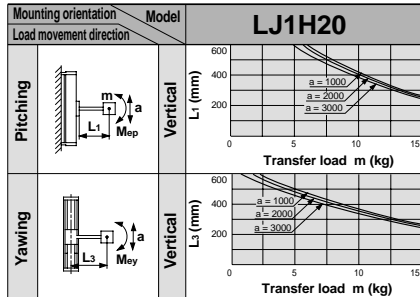
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Yawing	75

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mount specification. How to determine regenerative energy is shown below.

Regenerative energy = Motor coil energy consumption

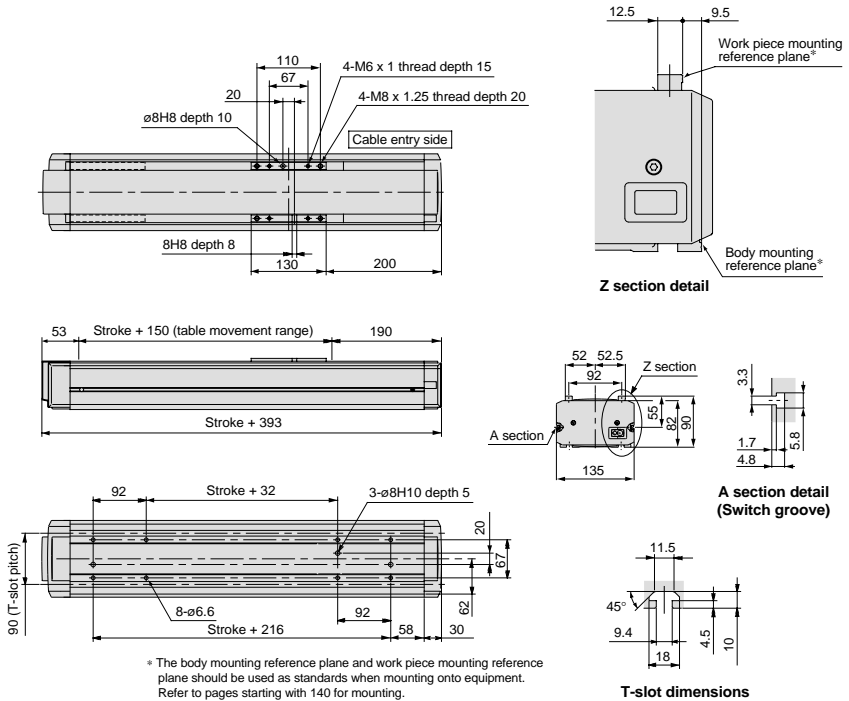
+ Driver capacitor energy consumption (A)

+ Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H20□2□PF(X10)

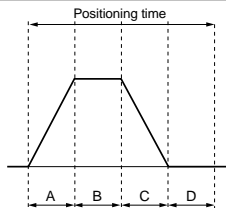
Scale: 10%



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	300	600
Speed (mm/s)	10	0.5	1.4	10.4	30.4	60.4
	100	0.5	0.6	1.5	3.5	6.5
	125	0.5	0.6	1.3	2.9	5.3
	250	0.5	0.6	0.9	1.7	2.9

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.4sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LC1 controller is used and may vary depending on the driver capacity.

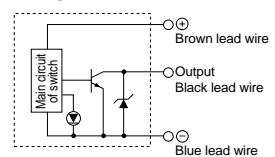
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



Non-standard Motor Vertical Mount

Series LJ1H20

Motor Output
100W

High Rigidity
Direct Acting
Guide

Ground Ball Screw
∅15mm/10mm lead

How to Order

LJ1H20 **G** 2 1 **PA** — Stroke **K** — **F** **W** — X10

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

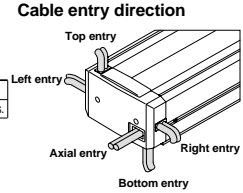
1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

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



Specifications

		Standard stroke	mm	100	200	300	400	500	600
Performance	Body weight (without motor)	kg		7.5	8.7	9.9	11.0	12.4	13.5
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	8						
	Rated thrust	N	180						
	Maximum speed	mm/s	500						
	Positioning repeatability	mm	±0.02						
Main parts	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Ground ball screw ∅15mm, 10mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	With coupling							
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A						
Holding torque		0.4N·m							
Connection method		Ball screw mounting							
Switch	Model	D-Y7GL							
	Specifications	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							
Regenerative absorption unit		Refer to the selection guide below.							

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

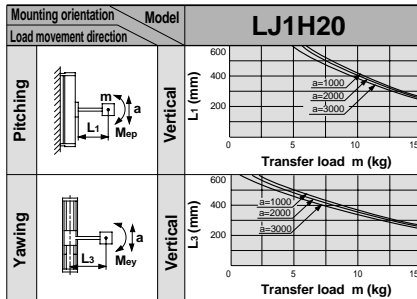
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Yawing	75

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard unit with vertical mount specification. How to determine regenerative energy is shown below.

Regenerative energy = Motor coil energy consumption

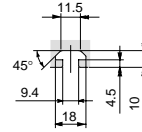
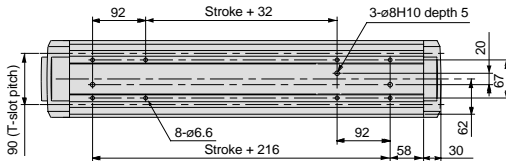
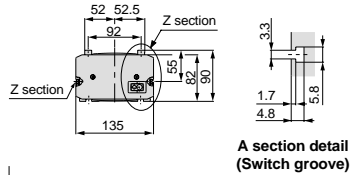
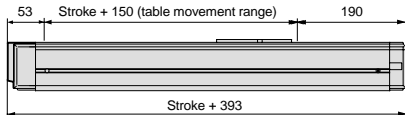
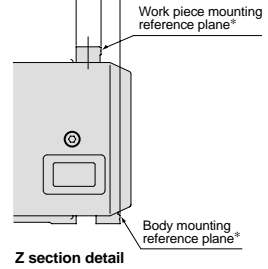
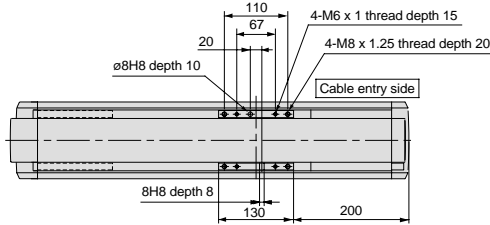
+ Driver capacitor energy consumption (A)

+ Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H20□2□PA(X10)

Scale: 10%



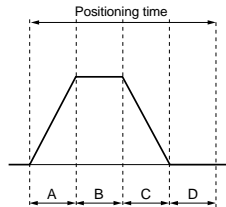
* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

T-slot dimensions

Positioning Time Guide

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	300	600	
Speed (mm/s)	10	0.5	1.4	10.4	30.4	60.4
	100	0.5	0.6	1.5	3.5	6.5
	250	0.5	0.6	0.9	1.7	2.9
	500	0.5	0.6	0.8	1.2	1.8

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
B: Constant velocity time
C: Deceleration time
D: Settling time (0.4sec.)*
Maximum acceleration: 3000mm/s²

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

Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

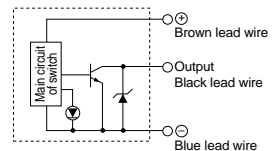
* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



Non-standard Motor

Vertical Mount

Series LJ1H20

Motor Output

100W

High Rigidity
Direct Acting
Guide

Rolled Ball Screw

∅15mm/5mm lead

How to Order

LJ1H20 **G** **2** **1** **NF** — Stroke **K** — **F** **W** — **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

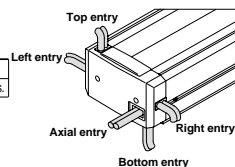
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

NH	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500	600
Performance	Body weight (without motor)	kg		7.5	8.7	9.9	11.0	12.4	13.5
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	15						
	Rated thrust	N	360						
	Maximum speed	mm/s	250						
	Positioning repeatability	mm	±0.05						
Main parts	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw ∅15mm, 5mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	With coupling							
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.4A						
Holding torque		0.4-Nm							
Connection method		Ball screw mounting							
Switch	Model	D-Y7GL							
	Specifications	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							
Regenerative absorption unit		Refer to the selection guide below.							

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

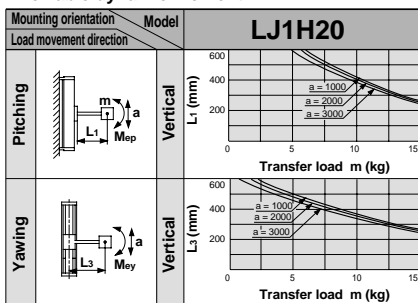
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Yawing	75

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mount specification. How to determine regenerative energy is shown below.

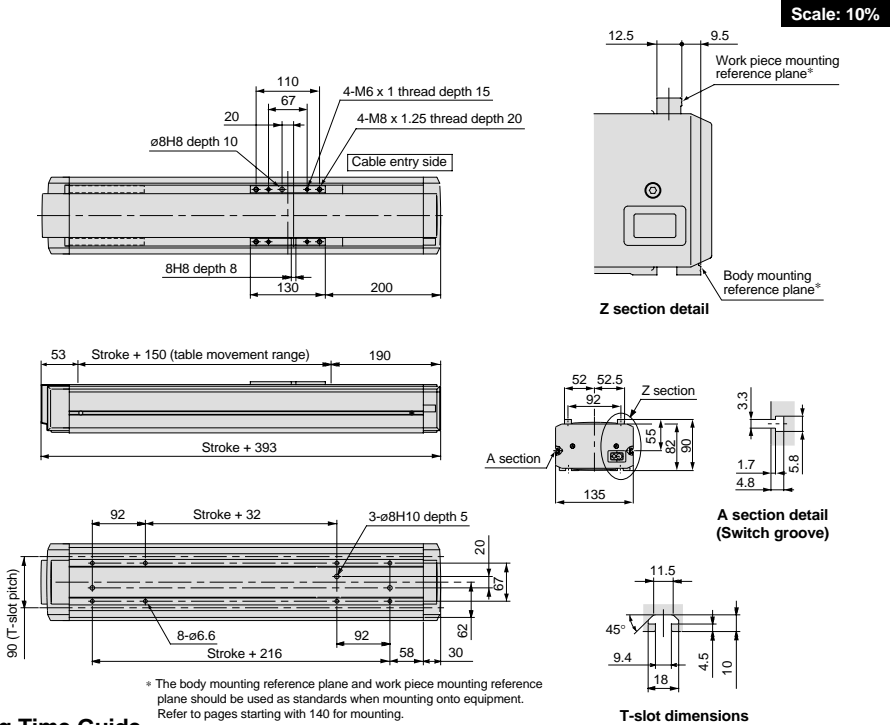
Regenerative energy = Motor coil energy consumption

+ Driver capacitor energy consumption (A)

+ Regenerative resistor energy consumption (B)

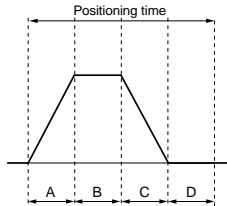
(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H20□2□NF(X10)



Positioning Time Guide

		Positioning time (sec.)				
		1	10	100	300	600
Speed (mm/s)	10	0.5	1.4	10.4	30.4	60.4
	100	0.5	0.6	1.5	3.5	6.5
	125	0.5	0.6	1.3	2.9	5.3
	250	0.5	0.6	0.9	1.7	2.9



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.4sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LCI controller is used and may vary depending on the driver capacity.

* Values will vary slightly depending on the operating conditions.

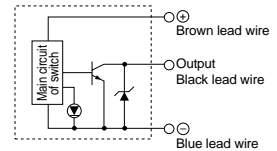
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

- * For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.
- * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
- * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



How to Order

LJ1H20 **G** 2 1 **NA** — Stroke **K** — **F** **W** — X10

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

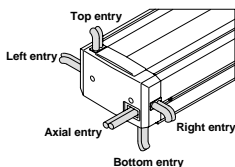
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

NH	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

		Standard stroke	mm	100	200	300	400	500	600
Performance	Body weight (without motor) kg			7.5	8.7	9.9	11.0	12.4	13.5
	Operating temperature range °C	5 to 40 (with no condensation)							
	Work load kg			8					
	Rated thrust N			180					
	Maximum speed mm/s			500					
	Positioning repeatability mm			±0.05					
Main parts	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw $\varnothing 15\text{mm}$, 10mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	With coupling							
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC $\pm 10\%$, 0.4A						
Holding torque		0.4N·m							
Connection method		Ball screw mounting							
Switch	Model	D-Y7GL							
	Specifications	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							
Regenerative absorption unit		Refer to the selection guide below.							

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

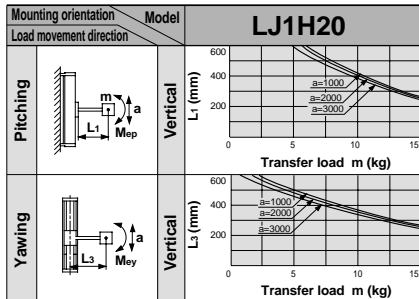
Allowable Moment (N·m)

Allowable static moment

Pitching	71
Yawing	75

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mount specification. How to determine regenerative energy is shown below.

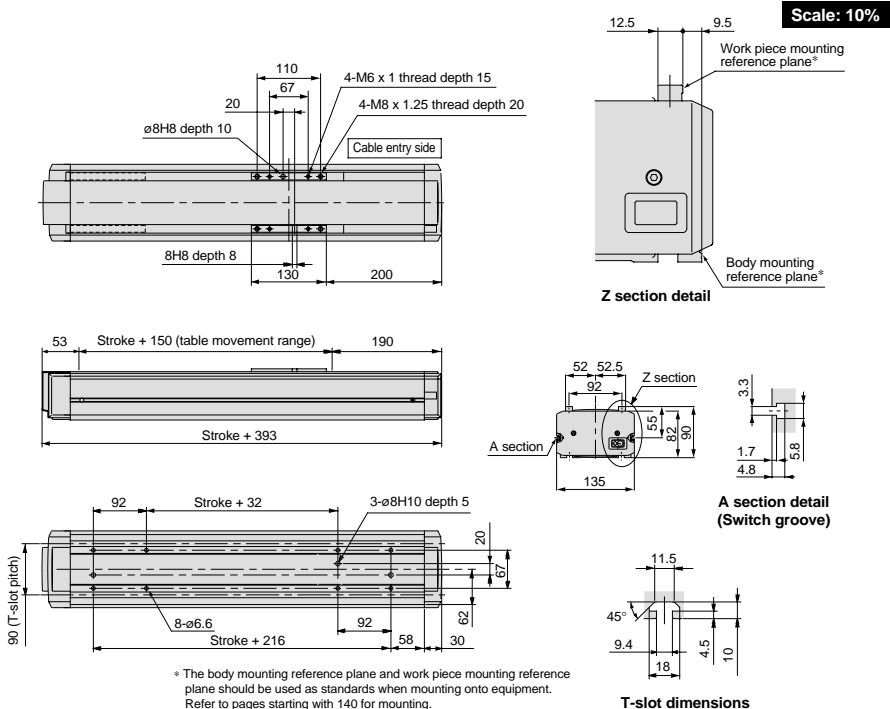
Regenerative energy = Motor coil energy consumption

+ Driver capacitor energy consumption (A)

+ Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

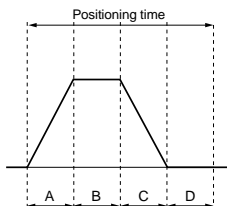
Dimensions/LJ1H20□2□NA(X10)



Positioning Time Guide

		Positioning time (sec.)				
		1	10	100	300	600
Speed (mm/s)	10	0.5	1.4	10.4	30.4	60.4
	100	0.5	0.6	1.5	3.5	6.5
	250	0.5	0.6	0.9	1.7	2.9
	500	0.5	0.6	0.8	1.2	1.8

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.4sec.)*
 Maximum acceleration: 3000mm/s²

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

Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	100	100/115	MSM011P1A	MSD011P1E
		200/230	MSM012P1A	MSD013P1E
Mitsubishi Electric Corporation	100	100/115	HC-PQ13	MR-C10A1
		200/230		MR-C10A
Yaskawa Electric Corporation	100	100/115	SGME-01BF12	SGDE-01BP
		200/230	SGME-01AF12	SGDE-01AP

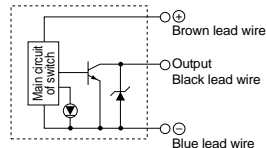
* For motor mounting dimensions, refer to the dimensions for series LJ1H20 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



LJ1
LG1
LC1
LX
LC6D/LC6C
Switches

How to Order

LJ1H30 **G** **3** **1** **PA** — Stroke **K** — **F** **W** — **X10**

Motor specification

G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

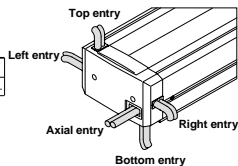
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

NII	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

Standard stroke		mm	200	300	400	500	600
Performance	Body weight (without motor)	kg	15.2	17.2	19.2	21.2	23.2
	Operating temperature range	°C	5 to 40 (with no condensation)				
	Work load	kg	20				
	Rated thrust	N	360				
	Maximum speed	mm/s	500				
	Positioning repeatability	mm	±0.02				
Main parts	Motor	AC servomotor (200W)					
	Encoder	Incremental system					
	Lead screw	Ground ball screw ø20mm, 10mm lead					
	Guide	High rigidity direct acting guide					
	Motor/Screw connection	With coupling					
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.5A				
Holding torque		1.0N·m					
Connection method		Ball screw mounting					
Switch	Model	D-Y7GL					
	Specifications	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					
Regenerative absorption unit		Refer to the selection guide below.					

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

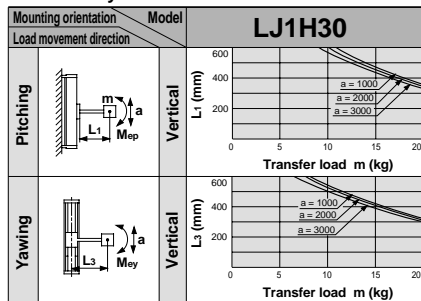
Allowable Moment (N·m)

Allowable static moment

Pitching	117
Yawing	123

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mount specification. How to determine regenerative energy is shown below.

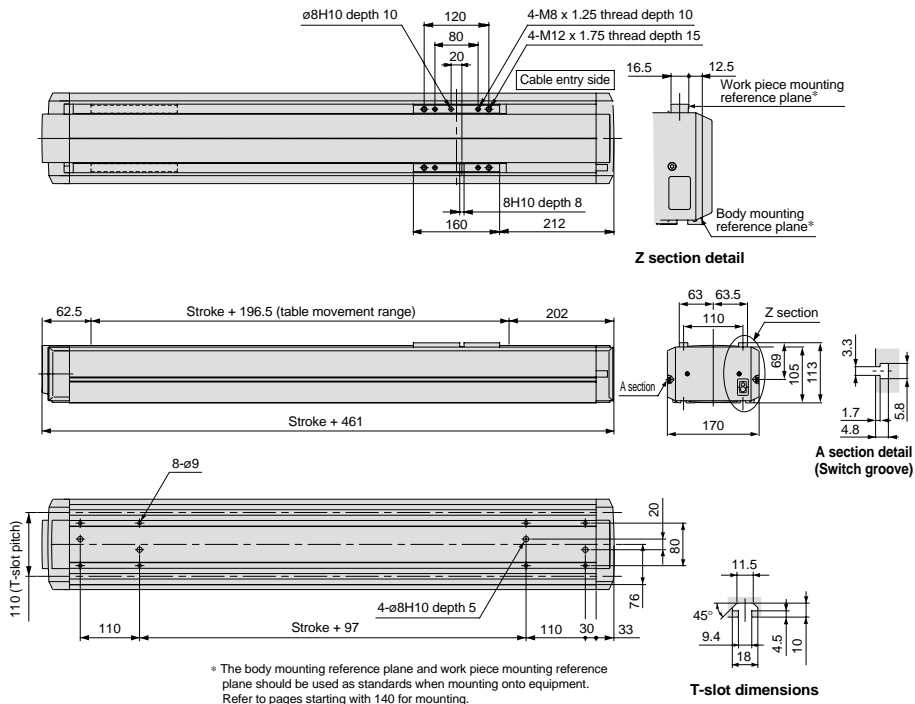
Regenerative energy = Motor coil energy consumption

- + Driver capacitor energy consumption (A)
- + Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H30□3□PA(X10)

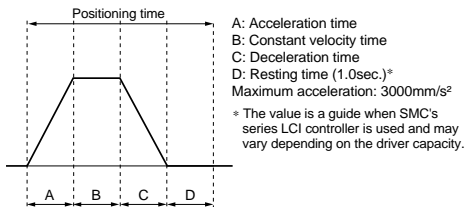
Scale: 10%



Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	300	600
Speed (mm/s)	10	1.1	2.0	11.0	31.0	61.0
	100	1.1	1.2	2.1	4.1	7.1
	250	1.1	1.2	1.5	2.3	3.5
	500	1.1	1.2	1.4	1.8	2.4

* Values will vary slightly depending on the operating conditions.



Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	200	100/115	MSM021P1A	MSD021P1E
		200/230	MSM022P1A	MSD023P1E
Mitsubishi Electric Corporation	200	100/115	HC-PQ23	MR-C20A1
		200/230		MR-C20A
Yaskawa Electric Corporation	200	100/115	SGME-02BF12	SGDE-02BP
		200/230	SGME-02AF12	SGDE-02AP

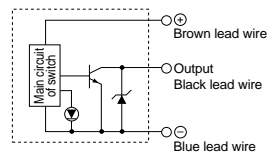
* For motor mounting dimensions, refer to the dimensions for series LJ1 $\frac{1}{2}$ 30 on page 143 as a reference for mounting and design.

* Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.

* For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



LJ1

LG1

LC1

LX

LC6D/LC6C

Switches

How to Order

LJ1H30 **G** **3** **1** **NA** — Stroke **K** — **F** **W** — **X10**

Motor specification

G	Mitsubishi Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Power supply voltage

1	100/115VAC (50/60Hz)
2	200/230VAC (50/60Hz)
0	Without motor

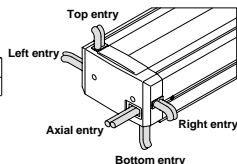
Cable entry direction

	Actuator cable	Brake cable
F	Axial	Left
R	Right	Axial
L	Left	Axial
T	Top	Axial
B	Bottom	Axial

Switch

Nll	None
W	N.C. (B contact) 2 pcs.

Cable entry direction



Specifications

		Standard stroke	mm	200	300	400	500	600
Performance	Body weight (without motor)	kg		15.2	17.2	19.2	21.2	23.2
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	20					
	Rated thrust	N	360					
	Maximum speed	mm/s	500					
	Positioning repeatability	mm	±0.05					
Main parts	Motor	AC servomotor (200W)						
	Encoder	Incremental system						
	Lead screw	Rolled ball screw ∅20mm, 10mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
	Electromagnetic brake	Specifications	De-energized operation type, Rated voltage 24VDC ±10%, 0.5A					
Holding torque		1.0N·m						
Connection method		Ball screw mounting						
Switch	Model	D-Y7GL						
	Specifications	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						
Regenerative absorption unit			Refer to the selection guide below.					

Intermediate strokes

Strokes other than the standard strokes on the left are available by special order. Consult SMC.

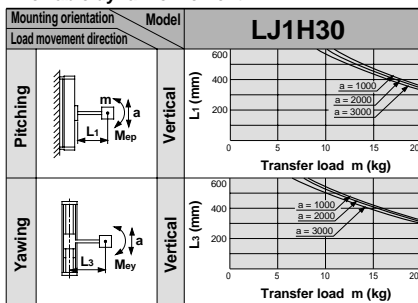
Allowable Moment (N·m)

Allowable static moment

Pitching	117
Yawing	123

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

Allowable dynamic moment



Refer to page 145 for deflection data.

Regenerative Absorption Unit/Regenerative Resistor Selection Guide

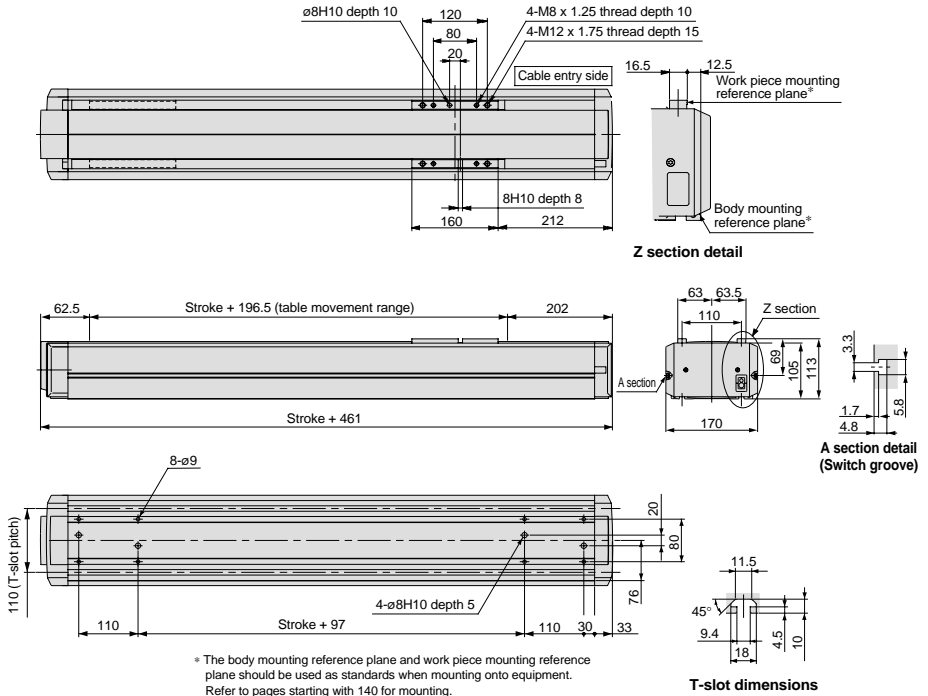
Depending on operating conditions, a regenerative absorption unit or regenerative resistor may be required for a non-standard motor with vertical mount specification. How to determine regenerative energy is shown below.

Regenerative energy = Motor coil energy consumption
+ Driver capacitor energy consumption (A)
+ Regenerative resistor energy consumption (B)

(A) and (B) vary depending on each motor and driver. Use of a regenerative absorption unit or regenerative resistor is recommended under any conditions when a vertical specification is used. Contact SMC for questions regarding selections. Regenerative absorption units and regenerative resistors are available as options, therefore, separately order a model compatible with the motor and driver selection from the options ordering procedures on page 100.

Dimensions/LJ1H30□3□NA(X10)

Scale: 10%

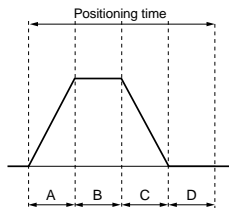


* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	300	600	
Speed (mm/s)	10	1.1	2.0	11.0	31.0	61.0
	100	1.1	1.2	2.1	4.1	7.1
	250	1.1	1.2	1.5	2.3	3.5
	500	1.1	1.2	1.4	1.8	2.4

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (1.0sec.)*
 Maximum acceleration: 3000mm/s²
 * The value is a guide when SMC's series LCI controller is used and may vary depending on the driver capacity.

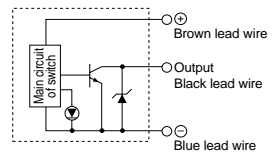
Non-standard Motors: The following motors will be mounted when a motor mounted type is specified.

	Motor output (W)	Power supply voltage (VAC)	Motor model	Compatible driver model
Matsushita Electric Industrial Co., Ltd.	200	100/115	MSM021P1A	MSD021P1E
		200/230	MSM022P1A	MSD023P1E
Mitsubishi Electric Corporation	200	100/115	HC-PQ23	MR-C20A1
		200/230		MR-C20A
Yaskawa Electric Corporation	200	100/115	SGME-02BF12	SGDE-02BP
		200/230	SGME-02AF12	SGDE-02AP

* For motor mounting dimensions, refer to the dimensions for series LJ1H30 on page 143 as a reference for mounting and design.
 * Refer to pages starting with 205 for driver dimensions, etc. Furthermore, for detailed specifications, etc., contact each motor manufacturer.
 * For a non-standard 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 100 for part numbers.

Switch Internal Circuit

D-Y7GL



LJ1

LG1

LC1

LX

LC6D/LC6C

Switches