

# Low Profile Single-Axis Electric Actuator

- with Mitsubishi AC Servomotor
- with Photomicrosensor

## LG1H21R-X7

### SMC CORPORATION

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

Feature 1: Fitted with Mitsubishi AC servomotor.

(Mitsubishi: Mitsubishi Electric Corp.)

(Refer to table below for applicable motors.)

Feature 2: A photomicrosensor can be installed on the outside of the actuator.

### Specifications

#### Electric Actuator

Stroke: mm			100	200	300	400	500	600	700	800	900	1000	1200
Mounting orientation			Horizontal										
Operating temperature range			5 to 40°C										
Payload : kg	Ball screw	Lead: 10mm	30										—
		Lead: 20mm	30										—
	Slide screw	Lead: 20mm	15										—
Maximum speed: mm/s	Ball screw	Lead: 10mm	500					460	370	300	250	—	
		Lead: 20mm	1000					930	740	600	500	—	
	Slide screw	Lead: 20mm	500										
Positioning repeatability : mm	Ball screw	Rolled	±0.05										—
		Ground	±0.02										—
	Slide screw	Rolled	±0.1										
Screw	Ball screw	Rolled, Ground	Ø15mm, lead 10mm										—
			Ø15mm, lead 20mm										—
	Slide screw	Rolled	Ø20mm, lead 20mm										
Guide			High rigidity direct acting guide										
Photomicrosensor			N.C. type: EE-SPX402-W2A (Manufacturer: OMRON) N.O. type: EE-SPX304-W2A (Manufacturer: OMRON)										

#### Applicable motors (\*1)

Manufacturer	Motor output	Power supply voltage	Motor specification	No.	Motor part no.	Driver part no.
Mitsubishi Electric Corp.	100W	100/115VAC	R	1	HC-PQ13	MR-C10A1
			RF	3	HC-MF13	MR-J2-10A1
		200/230VAC	R	4	HC-PQ13	MR-C10A
			RF	6	HC-MF13	MR-J2-10A

#### Photomicrosensor (Manufacturer: OMRON) (\*2)

Model	EE-SPX402-W2A	EE-SPX304-W2A
	Light enters: ON	Light blocked: ON
Output type and controlled output	NPN voltage output Load power voltage: 5 to 24VDC Load current: 80mA or less Residual voltage: 1.0V or less (load current at 80mA) Residual voltage: 0.4V or less (load current at 10mA)	
Detection distance	3.6mm (Slot width)	
Standard detection distance	1 × 0.5mm or more of opaque plate	
Indicator light	Light up when light enters (Red)	
Power supply voltage	5 to 24VDC ± 10%, ripple (p-p) 5% or less	
Response frequency	500Hz	

\*1) Refer to Mitsubishi technical data for detailed motor specifications.

\*2) Refer to OMRON catalog for detailed sensor specifications. Adjustment of a sensor position and wiring should be performed by customers.

## How to Order

### Electric Actuator

LG1H21 R 1 1 P C - 500 - F W R - X7

Motor type

R	Mitsubishi
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Photosensor mounting direction

R	Right
L	Left

Motor, driver type

0	Without motor and driver (*3)
1	With motor and driver: 100VAC type (*4)
2	With motor and driver: 200VAC type (*4)

Number of sensors and type (OMRON)

W	N.C. type 2 pcs. (EE-SPX402-W2A)
T	N.C. type 2 pcs. (EE-SPX402-W2A) N.O. type 1 pc. (EE-SPX304-W2A)

Cable entry direction

F	Axial
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Motor, driver no. (\*5)

Please select the desired motor No.  
from the applicable motor table.

Feed screw type

P	Ground ball screw
N	Rolled ball screw
S	Slide screw (*6)

Feed screw lead (\*7)

A	10mm
C	20mm

Stroke

100	100mm
200	200mm
300	300mm
400	400mm
500	500mm
600	600mm
700	700mm
800	800mm
900	900mm
1000	1000mm
1200	1200mm (*6)

\*3) Please contact your sales representative when supplying your own motors.

\*4) A driver unit will be included if the motor is already installed at the time of shipment.

The cable for connecting a motor and driver unit is optional. (Refer to "How to Order Cable".)

\*5) A data setting tool will not be included.

\*6) A stroke length of 1200mm is available only with slide screws (Symbol: S).

\*7) Slide screw type is available only with a 20mm feed screw lead.

### How to Order Cable (\*8)

LJ1-1- RF 05

Manufacturer and series of motor

RF	Mitsubishi
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Cable length

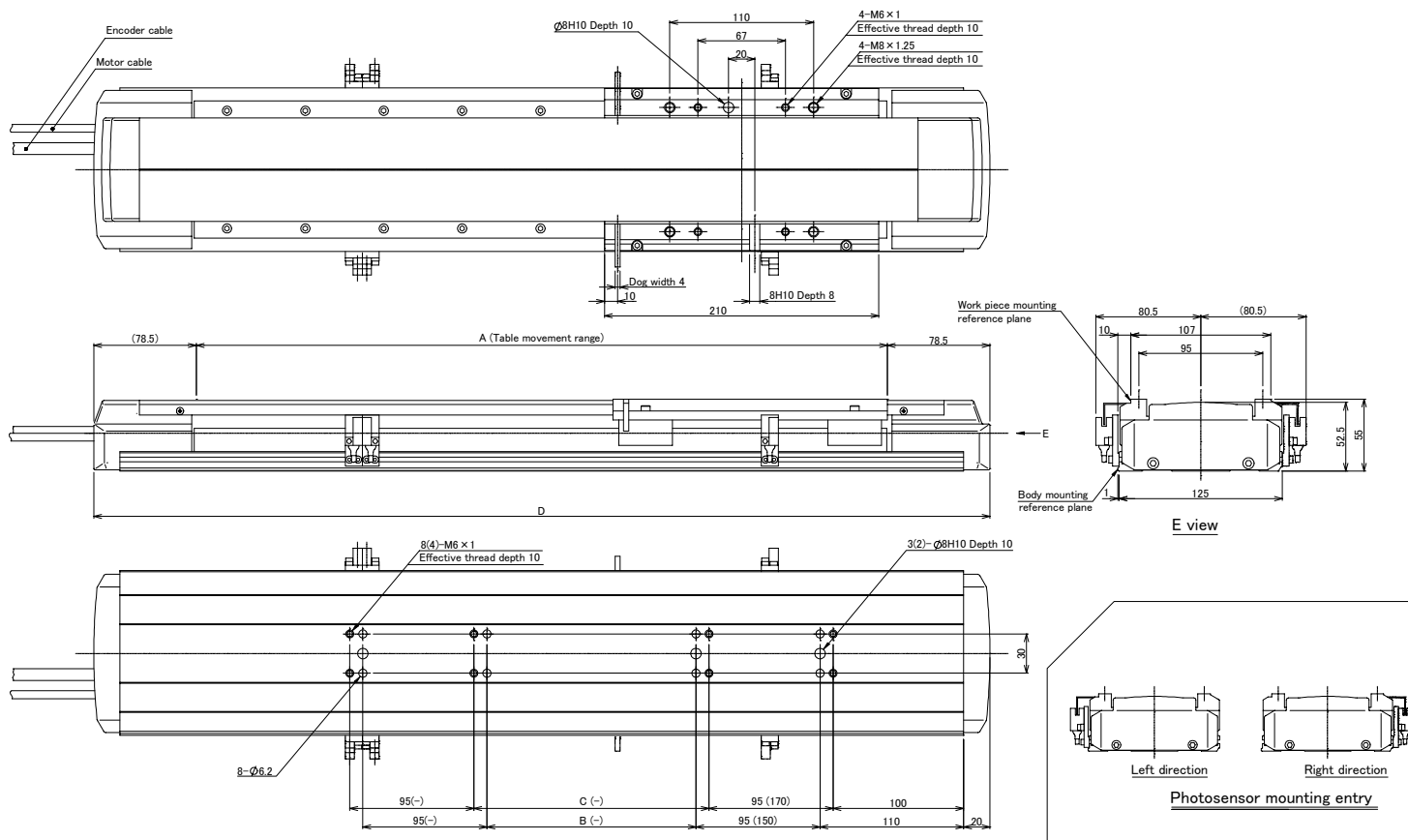
05	5m
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Applicable cables (Details)

LJ1-1-RF05	—	(for motor) (*8)
	MR-JCCBL5M-L	(for encoder)

\*8) Cable for Mitsubishi motor is not available. Use 4-core × 0.75mm<sup>2</sup> cable instead.

## Dimensions: mm



Dimensions: mm Dimensions inside ( ) in the drawings above are for 100mm stroke.

Model	Stroke	A	B	C	D
LG1H21R****-100-F**-X7	100	329	—	—	486
LG1H21R****-200-F**-X7	200	429	60	80	586
LG1H21R****-300-F**-X7	300	529	160	180	686
LG1H21R****-400-F**-X7	400	629	260	280	786
LG1H21R****-500-F**-X7	500	729	360	380	886
LG1H21R****-600-F**-X7	600	829	460	480	986
LG1H21R****-700-F**-X7	700	929	560	580	1086
LG1H21R****-800-F**-X7	800	1029	660	680	1186
LG1H21R****-900-F**-X7	900	1129	760	780	1286
LG1H21R****-1000-F**-X7	1000	1229	860	880	1386
LG1H21R**SC-1200-F**-X7	1200	1429	1060	1080	1586

Note 1: This product uses the same aluminum alloy frame and the guide as the ones for standard LG1.  
Refer to our Electric Actuator catalog (CAT.E101) for allowable moment and deflection data.



### Caution

To ensure the safe operation of this product, please read the Safety Instructions of our Electric Actuator catalog (CAT. E101) thoroughly.  
Please contact your SMC sales representative about technical details related to our other actuators.