

[Medium Accuracy] Single Axis Actuators LS12

Ball Screw Driven



Linear Actuators

CAD 2D 3D

RoHS 10

Accessory	Material	Surface Treatment	Qty	Note
Adapter Plate	Aluminum Alloy	Black Anodize	1	—
Hex Socket Head Cap Screw M3 x 8	Steel	Black Oxide	4	For fixing Adapter Plate

ⓘ No accessory is included with No Adapter Plate Type.
 ⓘ The Adapter Plate is not installed yet when being shipped from the factory.

In order to position the main body, apply a 2mm or lower pin or add step milling from the rail side face.

Reference Surface (Rail Side)

<p>A38 Servo 38 Sq.</p>	<p>A40 Servo 40 Sq.</p>
<p>E40 Servo 40 Sq.</p>	<p>T42 Stepping 42 Sq.</p>
<p>T56.4 Stepping 56.4 Sq.</p>	<p>T60 Stepping 60 Sq.</p>

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Ball Screw Driven, *continued*



Linear Actuators

Part Number	Lead	Stroke (mm)	Motor Adapter Plates	L	Mass (kg)	Number of Holes (N)	Number of Pitches	Base Mounting
LS12	05 10	60	Servo Motor A38 A40 E40	190	1.20	3	2	From the Bottom of Base Rail (Tapped Hole)
		100		230	1.33	4	3	
		140		270	1.47	5	4	
		220	Stepping Motor T42, T56.4, T60	350	1.73	7	6	
		300		430	2.00	9	8	
		380		550	3.82	24	11	
		460	No Adapter Plate N	630	4.20	28	13	

Accuracy Standards

Accuracy Standards	Standard Value
Positioning Repeatability (mm)	±0.02
Running Parallelism (mm)	±0.02
Starting Torque (N/cm)	7

ⓘ The standard values are measured after the rail is mounted. (It is not the value measured before the rails are bolted down.)

Stepping Motor Application Table

Part Number	Flange Size	Manufacturer	Product Number	Type	Recommended Coupling
T42	42 Sq.	Oriental Motor Motor	PK24	2-Phase	SCXW21 SCPW21 CPDW19
			RKS54 / PK54	5-Phase	
AS46 / ASC46 / AR46	α-Step				
RKS56 / PK56	5-Phase				
AS6 / ASC66 / AR66	α-Step				
PK26	20 W				
T56.4	56.4 Sq.	NEMA Standards	NEMA23	—	CPDW19

ⓘ The NEMA standard is standardized by National Electrical Manufacturers Association in U.S.

Part Number Example

Part Number: **LS1205** - Stroke: **300** - Motor Plates: **A38**

Servo Motor Application Table

Part Number	Flange Size	Manufacturer	Product Number	Wattage	Recommended Coupling
A38	38 Sq.	Panasonic	MSMD5A/MSME5A	50 W	SCXW21 SCPW21 CPDW19
			MSMD01/MSME01	100 W	
A40	40 Sq.	Yasukawa Electric Corporation	SGMJV-A5	50 W	
			SGMAH-A5	100 W	
			SGMAH-01	100 W	
		Mitsubishi Electric Corporation	HG-MR053	50 W	
			HG-MR13	100 W	
		Sanyo Denki Co., Ltd.	Q1AA04003D	30 W	
			Q1AA04005D	50 W	
			Q1AA04010D	100 W	
		Omron Corporation	R88M-K05030	50 W	
			R88M-K10030	100 W	
			MV-M05	50 W	
		Keyence Corporation	SV-M005	50 W	
MV-M10	100 W				
SV-M010	100 W				
E40	40 Sq.	SIEMENS	1FK7011-5	50 W	CPDW25
			1FK7015-5	100 W	

ⓘ Product numbers and specifications of motors are subject to change. Please check the manufacturers' information.

ⓘ Applicable motors and couplings are not limited to the above listed products. Please confirm each mounting dimension.

Part Number Alterations

Part Number: **LS1205** - Stroke: **300** - Motor Adapter Plates: **A38** - (Code): **MP3**

Photo Sensor Types – Set Part Specification

Code	Sensor Type	Sensor	Sensor Type/Qty. Configurable to turn ON or OFF when Light is blocked.	Sensor Flag Mounting		Sensor Mounting		Sensor Bracket Mounting		Note
				Sensor Flag	Sensor Flag Mounting Screw	Sensor Mounting Screw	Bracket	Bracket Mounting Screw	Bracket Mounting Nut	
MP_	Photomicro Sensor	FPMY45	-pc(s)	Dedicated	Hex Socket Head Cap Screw M3 x 6, 2 pcs.	Hex Socket Head Cap Screw M3 x 6, 2 pcs.	Dedicated	Hex Socket Head Cap Screw M3 x 6, 2 pcs.	Hex Nut, 2 pcs.	1 m Cable

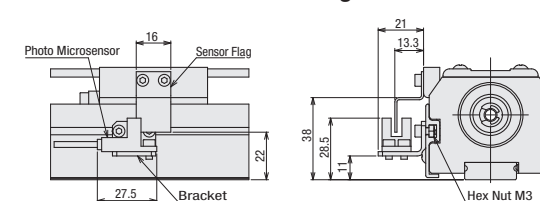
ⓘ The Sensor Qty. is inserted in the "" part (within the range of 1–3 pc(s)). When the stroke amount is 100 or less, however, the upper limit for the Sensor Qty. is 2 pcs.

Proximity Sensor Types – Set Part Specification

Code	Sensor Type	Sensor	Sensor Type/Qty.		Sensor Flag Mounting		Sensor Mounting		Note
			ON When Near	ON When Away	Sensor Flag	Sensor Flag Mounting Screw	Sensor Mounting Screw	Sensor Mounting Nut	
PR_	Proximity Sensor – Two-Wire Type	EX4-T12	-pc(s)	—	Dedicated	Hex Socket Head Cap Screw M3 x 6, 2 pcs.	Pan Head Screw M3 x 10	Hex Nut 1 pc.	1 m Cable
PRO_	Proximity Sensor – Three-Wire Type with N.O. Output	EMX4-T12	-pc(s)	—					
PRC_	Proximity Sensor – Three-Wire Type with N.C. Output	EMX4-T12C	-pc(s)	—					
PRW1	Proximity Sensor – Three-Wire, Combination Type	—	1 pc.	1 pc.	Dedicated	Hex Socket Head Cap Screw M3 x 6, 2 pcs.	Pan Head Screw M3 x 10	Hex Nut 1 pc.	1 m Cable
PRW2			1 pc.	2 pcs.					
PRW3			2 pcs.	1 pc.					

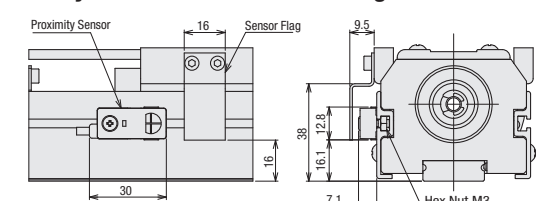
ⓘ The Sensor Qty. is inserted in the "" part (within the range of 1–3 pc(s)). When the stroke amount is 100 or less, however, the upper limit for the Sensor Qty. is 2 pcs.

Photo Sensor Installation Drawing



The sensor can be installed also on the opposite side.
 The drawing only shows an example of sensor orientation. The sensor can also be installed in the opposite direction (i.e. with the cable wiring on the right side).

Proximity Sensor Installation Drawing



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