

# Single Axis Actuator LX45

With Motor, Standard Type



### Oriental Motor Specification

**Components**  
Actuator, Amplifier, Driver, Cable  
Accessories: Instruction manual for driver

**Actuator**

	Base	Block
<b>Material</b>	Carbon Steel	SCM Material
<b>Surface Treatment</b>	Low Temperature Black Chrome Plating	
<b>Hardness</b>	Induction Hardened 58-64 HRC	58-62 HRC

Specification of Driver **P.557-558**  
Cable Specifications **P.559**

**Actuator (with Motor)**

### LXM4510 LXM4520

### LXM4510C LXM4520C

**Cover Type**

**Standard Type**

Note: When F dimensions are minus, the motor falls below the bottom of the base rail.

⊕ For hole dimension details, P.538. Avoid interference with Sensor Flag.

### Standard Specifications

Part Number	Lead (mm)	Ball Screw Diameter (mm)	Positioning Repeatability (mm)	Positioning	Parallelism (mm)	Backlash (mm)	Allowable Static Moment (N · m)		
							Ma	Mb	Mc
LXM4510C	10	Ø15	±0.003	0.025	0.015	0.003	291	291	972
LXM4520C	20	(Ground)	±0.003	0.025	0.015	0.003	291	291	972

\*For description of allowable static moment, see P.520.

### Control Functions

Manufacturer	Motor						Driver Type			Motor Driver Set Part Number	
	Selection	Motor	Manufacturer Part Number	Output / Type	Brake (Note 1)	Mass (kg)	Selection	Power Supply	Manufacturer Part Number		
Oriental Motors	T3E	Stepping	ARM66AC	α-Step	None	0.9	D3E	Single-Phase AC100V	ARD-A	AR66AA	
	T5E		PKE566AC	5-Phase		0.9			RKSD507-A	RKS566AA	
	T3BE		ARM66MC	α-Step	Included	1.2			D3E	ARD-A	AR66MA
	T5BE		PKE566MC	5-Phase		1.2			D7E	RKSD507M-A	RKS566MA

# Single Axis Actuator LX45

With Motor, Standard Type, *continued*



### Load Capacity / Max. Velocity Correlation Table

Part Number	Manufacturer	Motor Type	Load Capacity (kg)		Maximum Speed (mm/sec)	
			Horizontal	Vertical	Horizontal	Vertical
LXM4510 LXM4510C	Oriental Motors	T3(B)E	40	16	200	175
		T5(B)E			165	25
LXM4520 LXM4520C	Oriental Motors	T3(B)E	24	16	300	200
		T5(B)E			255	10

\* Load capacity and max. speed are reference values and may vary depending on operating conditions.  
\* Horizontal load capacity is for motor without brake and vertical load is for motor with brake.  
\* Distance for Acceleration/Deceleration: 25 mm for LXM4510, 50 mm for LXM4520

### Motor Dimensions Table

Manufacturer Name	Motor Type	Width B (mm)	Width C (mm)	Length D (mm)	Height E (mm)	Bottom Height F (mm)
Oriental Motors	T3E	30	30	73.6	60.5	0.5
	T3BE	30	30	109.5	60.5	0.5
	T5E	30	30	69.5	60.5	0.5
	T5BE	30	30	104.5	60.5	0.5

### Cable Configuration List

Cables come with terminal plug that directly connects to motor amplifier and driver.

Manufacturer Name	Motor Type	Motor Power Cable	Brake Cable	Encoder Cable
Oriental Motors	T3E	1 pc. CC030VAR	---	---
	T5E	1 pc. CC030VPF	---	---
	T3BE	1 pc. CC030VARB (Cable Set for Motor With Electromagnetic Brake)	---	---
	T5BE	1 pc. CC030VPFB (Cable Set for Motor With Electromagnetic Brake)	---	---

### Dimension / Actuator Body Weight

Part Number	Item	Base Length L (mm)					
		340	390	440	490	540	590
LXM4510 LXM4520 LXM4510C LXM4520C	Effective Stroke (St)	200	250	300	350	400	450
	A	70	70	70	70	70	70
	P <sub>1</sub>	100	100	100	100	100	100
	P <sub>2</sub>	100	50	100	50	100	50
	Number of Pitches	2	3	3	4	4	5
	Number of Holes N	6	8	8	10	10	12
<b>Standard Type</b>	Body Mass (kg)	6.06	6.68	7.29	7.91	8.54	9.17

\* Mass shown includes actuator, coupling, sensor rail, 3 sensors and sensor flag. For motor mass, see the control function table.  
(Note 1) Choose motor with brake when unit is used in vertical position.  
(Note 2) When ordering "Without Driver" Type, driver is not included.  
(Note 3-1) When ordering "with cables" type, cables indicated in cable configuration list will be included with unit. Specifications, P.559.  
(Note 3-2) To use cables with length other than 3 m, choose "without cable" type and order cable separately from the selection on P.559.  
(Note 4-1) Sensor rail comes with the unit even when no. of sensor is specified as "none"; sensor flag will not be included.  
(Note 4-2) Terminals for sensor cables is not provided.  
(Note 4-3) The sensor provided with LXM series actuators went through a model change. FPML24 was discontinued and replaced by the next-generation FPML25 in April 2017.

Part Number	Selection					
	Motor	Driver Type	Cable (Note 3)	Number of Sensors (Note 4)	Sensor & Rail Location	Base Length L (mm)
LXM4510 LXM4520 LXM4510C LXM4520C	Control Functions Select from control function table.	Control Functions Select from control function table.	Included (3 m): 3 None: N	2 Units: 2 3 Units: 3 None: N	Right: R Left: L	340-590 (50 Pitch)

Part Number Example: **LXM4510** - **T3E** - **D3E** - **3** - **3** - **R** - **590**