



For Single Axis Actuator LX Series selections, please use our 2D and 3D CAD data and Technical Calculation Software (free of charge).
http://download.misumi.jp/mol/fa_soft.html

Single Axis Actuators LX20 Standard / Cover Type

Convenient Sensor Sets are also available. P420

Design/Utility Model Registered

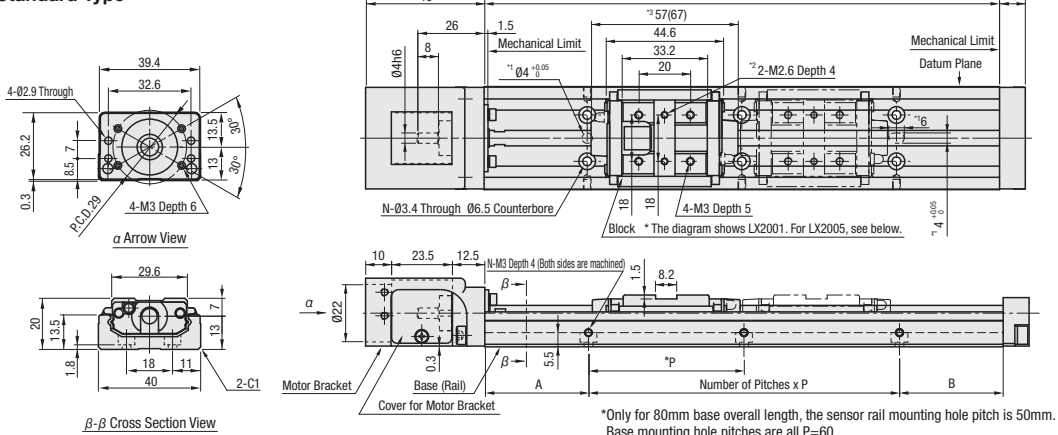


| Specifications | |
|--|------------------------------|
| LX20 | |
| Standard / Cover | |
| Screw Shaft Dia. (mm) | 6 |
| Lead (mm) | 1, 5 |
| Accuracy | High Grade / Precision Grade |
| Accessory | |
| ① Motor Adapter Plate | |
| ② A5052 ③ Black Anodize | |
| ④ Adapter Plate Screw 4 pcs ⑤ SUSXM7 | |
| ⑥ No accessory is included with No Motor Bracket Type. | |
| ⑦ For Material table, see P.411 | |

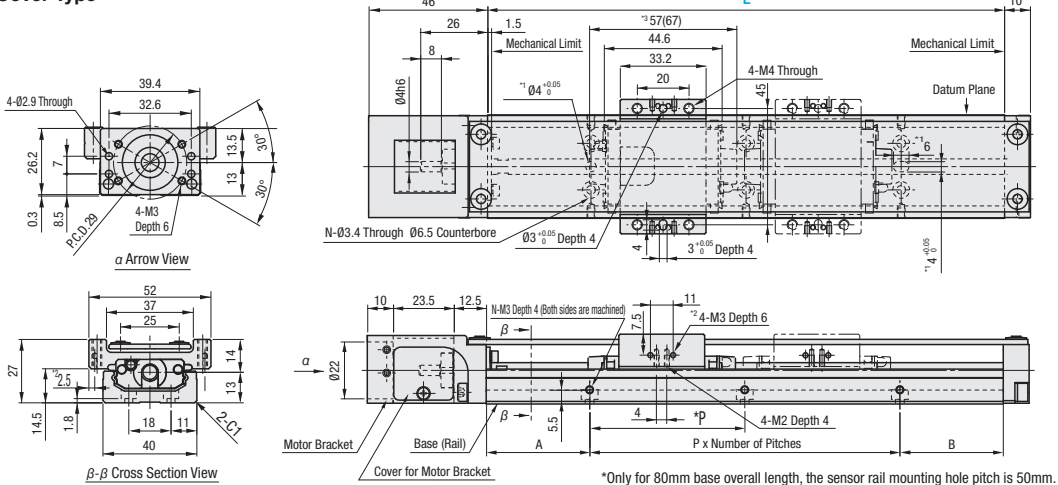
| Part Number | Standard Grease | | Low Dust Generation Grease | | Lubrication Unit MX-equipped (Standard Grease) | |
|-------------|-----------------|-----------------|----------------------------|-----------------|--|-----------------|
| | High Grade | Precision Grade | High Grade | Precision Grade | High Grade | Precision Grade |
| Lead 1 | LX2001 (C) | LX2001 (C) P | LX2001 (C) G | LX2001 (C) PG | LX2001 (C) -MX | LX2001 (C) P-MX |
| Lead 5 | LX2005 (C) | LX2005 (C) P | LX2005 (C) G | LX2005 (C) PG | LX2005 (C) -MX | LX2005 (C) P-MX |

①(C) is for Cover Type. ② Low Dust Generation Grease Information P.414 ③ Lubrication Unit MX Information P.408

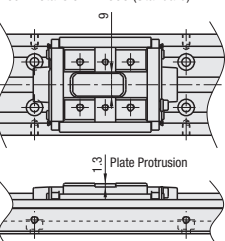
Standard Type



Cover Type



Block Details of LX2005 (Standard)



When using LX20 No Motor Bracket Type as per the folding specifications given on P.433 to P.436, shaft may get damaged by the belt tension. Refrain from using it.

For Double Block Type, double-dashed lined blocks are not connected with the ball screw.
 Precision specification value is the value achieved after fixing rails. (It is not a value before tightening the rail screws.) For values, see P.413

| Part Number | | Block Qty. | Motor Adapter Plates | Base Length (L) | * Effective Stroke | | | Total Mass (kg) | | | | Mounting Hole Dimensions | | | |
|---|---|---|--|----------------------|--------------------|-------|-----------------|-----------------|------|------|------|--------------------------|----|---|---------------------------------------|
| High Grade | * Precision Grade | | | | B1 | B2 | MX-equipped (B) | B1 | B2 | B1 | B2 | A | P | B | Number of Pitches/Number of Holes (N) |
| (Standard Grease) LX2001 (C) LX2005 (C) | (Standard Grease) LX2001 (C) P LX2005 (C) P | (1 pc.) B1 | (Servo Motor) A2025 A2028 A2038 A2040 E2040 | 80 (Lead 1 only) | 16.5 | - | - | 0.40 | 0.51 | - | 10 | 10 | 1 | 4 | |
| (Low Dust Generation Grease) LX2001 (C) G LX2005 (C) G | (Low Dust Generation Grease) LX2001 (C) PG LX2005 (C) PG | * MX-equipped types are available in B1 only. | (Stepping Motor) T2028 T2042 T2056.4 | 150 | 86.5 | - | 76.5 | 0.58 | 0.69 | - | 15 | 15 | 2 | 6 | |
| (Lubrication Unit MX-equipped, Standard Grease) LX2001 (C) -MX LX2005 (C) -MX | (Lubrication Unit MX-equipped, Standard Grease) LX2001 (C) P-MX LX2005 (C) P-MX | (2 pcs.) B2 | (No Adapter Plate) N (No Motor Bracket) F | 200 | 136.5 | 79.5 | 126.5 | 0.71 | 0.79 | 0.81 | 0.97 | 40 | 40 | 3 | 8 |
| | | | | 250 (Lead 5 only) | 186.5 | 129.5 | 176.5 | 0.83 | 0.92 | 0.94 | 1.10 | 35 | 35 | 3 | 8 |
| | | | | 300 (Lead 5 only) | 236.5 | 179.5 | 226.5 | 0.96 | 1.05 | 1.07 | 1.23 | 30 | 30 | 4 | 10 |

* Precision Certificate is enclosed with precision grade products.
 * Motor adapter plate and mounting screws are not included with No Adapter Plate Type.
 * Effective stroke is indicated in dimensions with a margin of 2.5mm each from the ends.
 * (C) is for Cover Type.
 * For Max. Velocity, see P413
 * For Moment of Inertia, see P412
 * 0.004kg will be added to MX-equipped types.

Servo Motor Application Table

| Part Number | Flange Size | Manufacturer | Wattage |
|-------------|-------------|---|----------------|
| A2025 | 25 | Yasukawa / Mitsubishi Electric Corporation | 10W/20W/30W |
| A2028 | 28 | Mitsubishi Electric Corporation | |
| A2038 | 38 | Panasonic | 30W/50W/100W |
| E2040 | 40 | SIEMENS | 50W/100W |
| A2040 | 40 | Yasukawa Electric Corporation Mitsubishi Electric Corporation Keyence Corporation Omron Corporation Sanyo Denki Co., Ltd. | 50W 30W/50W |

For details on supported motor types and detailed diagram of Motor Adapter Plates, see P419

Stepping Motor Application Table

| Part Number | Flange Size | Manufacturer | Type |
|-------------|-------------|----------------|------------------------------------|
| T2028 | 28 | Oriental Motor | 2-phase / 5-phase / α -Step |
| T2042 | 42 | | |
| T2056.4 | 56.4 | NEMA standards | - |

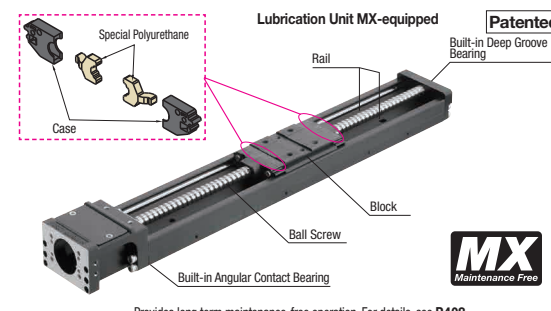
NEMA standards are a set of standards stipulated by National Electrical Manufacturers Association of United States.
 For details on supported motor types and detailed diagram of Motor Adapter Plates, see P419

Ordering Example

| | | | | | | |
|-------------|---|------------|---|----------------------|---|-----------------|
| Part Number | - | Block Qty. | - | Motor Adapter Plates | - | Base Length (L) |
| LX2001C | - | B1 | - | A2025 | - | 200 |
| LX2005-MX | - | B1 | - | A2028 | - | 150 |

Accuracy Standards

| Accuracy Standards | High Grade | Precision Grade |
|--------------------------------|-------------|-----------------|
| Positioning (mm) | 0.06 | 0.02 |
| Backlash (mm) | 0.01 | 0.003 |
| Positioning Repeatability (mm) | ± 0.005 | ± 0.003 |
| Running Parallelism (mm) | 0.025 | 0.01 |
| Starting Torque (N-cm) | 1.2 | 1.2 |



Provides long term maintenance-free operation. For details, see P408

Unit Price for Precision Grade / Low Particle Generation Grease Option / Lubrication Unit MX-equipped

| Specifications | Unit Price |
|---|------------|
| Precision Grade | |
| Low Dust Generation Grease | |
| Lubrication Unit MX-equipped | |
| * Listed Price + Unit Price = Product Price | |
| * Volume Discount Rate is applicable. | |

| High Grade Unit Price | | | | | | | | | | |
|-----------------------|-----------------------|-------|-------|-------|------------------------|------------------------|------------------------------------|------------|------------------|------|
| Part Number | L=80 (Lead 1 only) | L=100 | L=150 | L=200 | L=250 (Lead 5 only) | L=300 (Lead 5 only) | Motor Adapter Plates | Block Qty. | Screw Shaft Dia. | Lead |
| LX20□□-B1-□ | | | | | | | Servo Stepping No Adapter Plate | 1 | 6 | 1 |
| LX20□□-B2-□ | | | | | | | | 2 | | |
| LX20□□-B1-F | | | | | | | No Bracket | 1 | 6 | 5 |
| LX20□□-B2-F | | | | | | | | 2 | | |
| LX20□□C-B1-□ | | | | | | | Servo Stepping No Adapter Plate | 1 | 6 | 1 |
| LX20□□C-B2-□ | | | | | | | | 2 | | |
| LX20□□C-B1-F | | | | | | | No Bracket | 1 | 6 | 5 |
| LX20□□C-B2-F | | | | | | | | 2 | | |

LX20□□(C) Series sensor set can be specified as an alteration. For Detailed alteration diagram, see P420



Motor Adapter Plate Dimensional Drawing

Note: Note that the Motor Adapter protrudes beyond the rail at * marked area.

A2025 Servo
□25

A2028 Servo
□28

A2038 Servo
□38

A2040 Servo
□40

E2040 Servo
□40

T2042 Stepping
□42

T2028 Stepping
□28

T2056.4 Stepping
□56.4

F No Motor Bracket Type

Stepping Motor Application Table

| Part Number | Flange Size | Manufacturer | Product Number | Type | Recommended Coupling |
|-------------|-------------|----------------|----------------|---------|----------------------|
| T2028 | □28 | Oriental Motor | CSK22 | 2-phase | SCPW16 (P.1076) |
| | | | CSK52 | 5-phase | |
| | | | ASC3* | αStep | |
| | | | AR2 (ARM) | | |
| | | | PK24* | 2-phase | |
| T2042 | □42 | Oriental Motor | CSK24 | 2-phase | SCPW16 (P.1076) |
| | | | RK54 | 5-phase | |
| | | | RKS54*/PK54* | αStep | |
| T2056.4 | □56.4 | NEMA standards | NEMA23 | - | CPDW19 (P.1075) |

Servo Motor Application Table

| Part Number | Flange Size | Manufacturer | Product Number | Wattage | Recommended Coupling |
|-------------|-------------|---------------------------------|----------------|---------|----------------------|
| A2025 | □25 | Yasukawa Electric Corporation | SGMMJ-A1 | 10W | SCPW16 (P.1076) |
| | | | SGMMJ-A2 | 20W | |
| | | | SGMMJ-A3 | 30W | |
| A2028 | □28 | Mitsubishi Electric Corporation | HG-AK0136 | 10W | SCPW16 (P.1076) |
| | | | HG-AK0236 | 20W | |
| | | | HG-AK0336 | 30W | |
| A2038 | □38 | Panasonic | MSMD5A | 50W | CPDT19 (P.1075) |
| | | | MSME5A | | |
| | | | MSMD01* | 100W | |
| | | | MSME01* | | |
| A2040 | □40 | Oriental Motor | SGMJV-A5 | 50W | SCPW16 (P.1076) |
| | | | SGMAH-A5 | | |
| | | | SGMAS-A5 | | |
| | | | HG-MR053 | | |
| | | | HG-KR053 | | |
| | | | HF-KP053 | | |
| | | | Q1AA04003D | | |
| Q1AA04005D | | | | | |
| E2040 | □40 | SIEMENS | 1FK7011-5 | 100W | CPDW19 (P.1075) |
| | | | 1FK7015-5 | | |
| | | | 1FK7015-5 | | |

*NEMA standards is a set of standards stipulated by National Electrical Manufacturers Association of United States.
 *Not compatible with geared motors made by Oriental Motor.

*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.

Motor Adapter Centering Tools

JIGLX20

Material: A5056
 Surface Treatment: Clear Anodize

Motor Mounting Example

Secure included Motor Adapter to the motor.
 *Motor, coupling and motor mounting screws are not included.

| Part Number | D | Applicable Adapter Plate | d | D1 | d1 | L | T | ℓ | Unit Price (1-5 pcs.) |
|-------------|----|--------------------------|---|----|----|----|----|----|-----------------------|
| JIGLX20 | 20 | A2028 | 8 | 15 | 4 | 43 | 17 | 10 | |
| | 30 | A2038/A2040 | 8 | 15 | 4 | 47 | 13 | 10 | |

Ordering Example: Part Number - D
 JIGLX20 - 20

Proximity Sensor (SUNX) - Set Part Specification

| LX Part Number | Code (□ is Sensor Qty.) *For Ls100, Max. 2 For Ls150, Max. 3 | Sensor Type/Qty. | | Sensor Rail | | Sensor (* Qty per Sensor Included) | | | Sensor Flag | | Unit Price (L≤150) | | | Unit Price (L≥200) | | |
|----------------|--|-----------------------|-----------------------|--------------|-------------------------------|------------------------------------|----------------------------|-----------------------|--|---------------------|----------------------------|-------|--------|--------------------|-------|--------|
| | | GX-F8A (ON when near) | GX-F8B (ON when away) | Rail (1 pc.) | Mounting Screw (Pitch +1 pc.) | Sensor Bracket | Bracket Mounting Screw Nut | Sensor Mounting Screw | Sensor Mounting Washer | Sensor Flag (1 pc.) | Sensor Flag Mounting Screw | 1 pc. | 2 pcs. | 3 pcs. | 1 pc. | 2 pcs. |
| LX20□□ | XA | □ pc(s). | - | SENAT3□H | SCB3-6 | CBSST3-10 | LBNR3 | Dedicated | Flat Head Machine Screw M2.6-4 (1 pc.) | SCB3-6 (2 pcs.) | | | | | | |
| LX20□□C | XB | □ pc(s). | - | | | | | | | | | | | | | |
| LX20□□ | FA | □ pc(s). | - | SENAT3□H | SCB3-6 | CBSST3-10 | LBNR3 | Dedicated | Flat Head Machine Screw M2.6-4 (1 pc.) | SCB3-6 (2 pcs.) | | | | | | |
| LX20□□ | FB | □ pc(s). | - | | | | | | | | | | | | | |
| LX20□□ | XW1 | 1 pc. | 2 pcs. | SENAT3□H | SCB3-6 | CBSST3-10 | LBNR3 | Dedicated | Flat Head Machine Screw M2.6-4 (1 pc.) | SCB3-6 (2 pcs.) | | | | | | |
| LX20□□ | XW2 | 2 pcs. | 1 pc. | | | | | | | | | | | | | |
| LX20□□ | XW3 | 2 pcs. | 1 pc. | SENAT3□H | SCB3-6 | CBSST3-10 | LBNR3 | Dedicated | Flat Head Machine Screw M2.6-4 (1 pc.) | SCB3-6 (2 pcs.) | | | | | | |
| LX20□□C | FW1 | 1 pc. | 2 pcs. | | | | | | | | | | | | | |
| LX20□□C | FW2 | 2 pcs. | 1 pc. | | | | | | | | | | | | | |

Photo Sensor (SUNX) - Set Part Specification

| LX Part Number | Code (□ is Sensor Qty.) *For Ls100, Max. 2 For Ls150, Max. 3 | Photo Sensor | Sensor Rail | | Sensor (* Qty per Sensor Included) | | | Sensor Flag | | Unit Price (L≤150) | | | Unit Price (L≥200) | | | |
|----------------|--|--------------|--------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------|-------------------------------|---------------------|--|-------|--------|--------------------|-------|--------|--------|
| | | | Rail (1 pc.) | Mounting Screw (Pitch +1 pc.) | Sensor Bracket | Bracket Mounting Screw Nut | Sensor Mounting Screw | Sensor Mounting Washer | Sensor Flag (1 pc.) | Sensor Flag Mounting Screw | 1 pc. | 2 pcs. | 3 pcs. | 1 pc. | 2 pcs. | 3 pcs. |
| LX20□□ | SP | PM-L25 | SENAT3□H | SCB3-6 | Dedicated | SCB3-5 (2 pcs.) LBNR3 (2 pcs.) | SCB3-6 (2 pcs.) | M2 Small Flat Washer (2 pcs.) | Dedicated | Flat Head Machine Screw M2.6-4 (1 pc.) | | | | | | |
| LX20□□C | MP | | | | | | | | | SCB3-6 (2 pcs.) | | | | | | |

*The Photo Sensor PM-L24 is to be discontinued and replaced by the next-generation product PM-L25 in April 2017.

Photo Sensor (Omron) - Set Part Specification

| LX Part Number | Code (□ is Sensor Qty.) *For Ls100, Max. 2 For Ls150, Max. 3 | Photo Sensor | Sensor Rail | | Sensor (* Qty per Sensor Included) | | | Sensor Flag | | Unit Price (L≤150) | | | Unit Price (L≥200) | | | |
|----------------|--|--------------|--------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------|-------------------------------|---------------------|--|-------|--------|--------------------|-------|--------|--------|
| | | | Rail (1 pc.) | Mounting Screw (Pitch +1 pc.) | Sensor Bracket | Bracket Mounting Screw Nut | Sensor Mounting Screw | Sensor Mounting Washer | Sensor Flag (1 pc.) | Sensor Flag Mounting Screw | 1 pc. | 2 pcs. | 3 pcs. | 1 pc. | 2 pcs. | 3 pcs. |
| LX20□□ | OP | EE-SX911-R1M | SENAT3□H | SCB3-6 | Dedicated | SCB3-5 (2 pcs.) LBNR3 (2 pcs.) | SCB3-6 (2 pcs.) | M3 Small Flat Washer (2 pcs.) | Dedicated | Flat Head Machine Screw M2.6-4 (1 pc.) | | | | | | |
| LX20□□C | EP | | | | | | | | | SCB3-6 (2 pcs.) | | | | | | |

*Sensors are not sold separately.
 *EE-SX911-R1M is scheduled to change to EE-SX951-R1M from April 2015.

Alterations

Part Number - Block Qty. - Motor Adapter Plates - Base Length (L) - (Code)

LX2001 - B1 - A2025 - 200 - XW1
 LX2005C - B1 - A2028 - 200 - EP3

Proximity Sensor Type Installation Drawings - SUNX

Sensor Flag
 Material: SUS304, Plate Thickness: 1mm

Photo Sensor Type Installation Drawings - SUNX / Omron

Sensor Flag
 Material: SUS304, Plate Thickness: 1mm

Cautions

- Sensor set is shipped with LX Actuator. Assembly required.
- Please check for all included parts immediately after unpacking. Some small parts can be lost.
- Please handle the products with great care.

- Please access each sensor manufacturer's website for the specifications of sensors in use.
- The sensor can also be installed on the opposite side.
- The drawing 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).