

## Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	<p>2.2 N.M for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>2.2 N.M for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>2.12 N.M for LXM05AD10M2, 200...240 V, single phase</p> <p>2.12 N.M for LXM05AD10M3X, 200...240 V, three phase</p> <p>2.12 N.M for LXM05BD10M2, 200...240 V, single phase</p> <p>2.12 N.M for LXM05BD10M3X, 200...240 V, three phase</p> <p>2.12 N.M for LXM05CD10M2, 200...240 V, single phase</p> <p>2.12 N.M for LXM05CD10M3X, 200...240 V, three phase</p> <p>2.2 N.M for LXM15LD13M3, 230 V, single phase</p> <p>2.12 N.M for LXM05AD17M2, 200...240 V, single phase</p> <p>2.12 N.M for LXM05BD17M2, 200...240 V, single phase</p> <p>2.12 N.M for LXM05CD17M2, 200...240 V, single phase</p> <p>2.2 N.M for LXM15LD10N4, 480 V, three phase</p> <p>2.12 N.M for LXM05AD17M3X, 200...240 V, three phase</p> <p>2.12 N.M for LXM05AD14N4, 380...480 V, three phase</p> <p>2.12 N.M for LXM05BD17M3X, 200...240 V, three phase</p> <p>2.12 N.M for LXM05BD14N4, 380...480 V, three phase</p> <p>2.12 N.M for LXM05CD17M3X, 200...240 V, three phase</p> <p>2.12 N.M for LXM05CD14N4, 380...480 V, three phase</p> <p>2.2 N.M for LXM15LD10N4, 230 V, three phase</p> <p>2.2 N.M for LXM15LD10N4, 400 V, three phase</p>

Peak stall torque	<p>7.6 N.M for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>7.6 N.M for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>5.63 N.M for LXM15LD13M3, 230 V, single phase</p> <p>4.57 N.M for LXM05AD10M2, 200...240 V, single phase</p> <p>5.63 N.M for LXM05AD17M2, 200...240 V, single phase</p> <p>4.57 N.M for LXM05BD10M2, 200...240 V, single phase</p> <p>5.63 N.M for LXM05BD17M2, 200...240 V, single phase</p> <p>4.57 N.M for LXM05CD10M2, 200...240 V, single phase</p> <p>5.63 N.M for LXM05CD17M2, 200...240 V, single phase</p> <p>4.85 N.M for LXM15LD10N4, 230 V, three phase</p> <p>4.85 N.M for LXM15LD10N4, 400 V, three phase</p> <p>4.85 N.M for LXM15LD10N4, 480 V, three phase</p> <p>4.57 N.M for LXM05AD10M3X, 200...240 V, three phase</p> <p>5.63 N.M for LXM05AD17M3X, 200...240 V, three phase</p> <p>5.63 N.M for LXM05AD14N4, 380...480 V, three phase</p> <p>4.57 N.M for LXM05BD10M3X, 200...240 V, three phase</p> <p>5.63 N.M for LXM05BD17M3X, 200...240 V, three phase</p> <p>5.63 N.M for LXM05BD14N4, 380...480 V, three phase</p> <p>4.57 N.M for LXM05CD10M3X, 200...240 V, three phase</p> <p>5.63 N.M for LXM05CD17M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05CD14N4, 380...480 V, three phase</p>
Nominal output power	<p>850 W for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>850 W for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>1000 W for LXM15LD10N4, 400 V, three phase</p> <p>597 W for LXM15LD13M3, 230 V, single phase</p> <p>600 W for LXM05AD10M2, 200...240 V, single phase</p> <p>600 W for LXM05AD17M2, 200...240 V, single phase</p> <p>600 W for LXM05BD10M2, 200...240 V, single phase</p> <p>600 W for LXM05BD17M2, 200...240 V, single phase</p> <p>600 W for LXM05CD10M2, 200...240 V, single phase</p> <p>600 W for LXM05CD17M2, 200...240 V, single phase</p> <p>1300 W for LXM15LD10N4, 480 V, three phase</p> <p>597 W for LXM15LD10N4, 230 V, three phase</p> <p>600 W for LXM05AD10M3X, 200...240 V, three phase</p> <p>600 W for LXM05AD14N4, 380...480 V, three phase</p> <p>600 W for LXM05AD17M3X, 200...240 V, three phase</p> <p>600 W for LXM05BD10M3X, 200...240 V, three phase</p> <p>600 W for LXM05BD14N4, 380...480 V, three phase</p> <p>600 W for LXM05BD17M3X, 200...240 V, three phase</p> <p>600 W for LXM05CD10M3X, 200...240 V, three phase</p> <p>600 W for LXM05CD14N4, 380...480 V, three phase</p> <p>600 W for LXM05CD17M3X, 200...240 V, three phase</p>

Nominal torque	<p>1.64 N.M for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>1.64 N.M for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>1.9 N.M for LXM05AD10M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05AD17M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05BD10M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05BD17M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05CD10M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05CD17M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM15LD13M3, 230 V, single phase</p> <p>1.55 N.M for LXM15LD10N4, 480 V, three phase</p> <p>1.65 N.M for LXM15LD10N4, 400 V, three phase</p> <p>1.9 N.M for LXM05AD10M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05AD14N4, 380...480 V, three phase</p> <p>1.9 N.M for LXM05AD17M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05BD10M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05BD14N4, 380...480 V, three phase</p> <p>1.9 N.M for LXM05BD17M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05CD10M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05CD14N4, 380...480 V, three phase</p> <p>1.9 N.M for LXM05CD17M3X, 200...240 V, three phase</p> <p>1.9 N.m for LXM15LD10N4, 230 V, three phase</p>
Nominal speed	<p>5000 rpm for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>5000 rpm for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>3000 rpm for LXM05AD10M2, 200...240 V, single phase</p> <p>3000 rpm for LXM05BD10M2, 200...240 V, single phase</p> <p>3000 rpm for LXM05CD10M2, 200...240 V, single phase</p> <p>3000 rpm for LXM05AD10M3X, 200...240 V, three phase</p> <p>3000 rpm for LXM05AD14N4, 380...480 V, three phase</p> <p>3000 rpm for LXM05BD10M3X, 200...240 V, three phase</p> <p>3000 rpm for LXM05BD14N4, 380...480 V, three phase</p> <p>3000 rpm for LXM05CD10M3X, 200...240 V, three phase</p> <p>3000 rpm for LXM05CD14N4, 380...480 V, three phase</p> <p>3000 rpm for LXM15LD13M3, 230 V, single phase</p> <p>3000 rpm for LXM05AD17M2, 200...240 V, single phase</p> <p>3000 rpm for LXM05BD17M2, 200...240 V, single phase</p> <p>3000 rpm for LXM05CD17M2, 200...240 V, single phase</p> <p>3000 rpm for LXM05AD17M3X, 200...240 V, three phase</p> <p>3000 rpm for LXM05BD17M3X, 200...240 V, three phase</p> <p>3000 rpm for LXM05CD17M3X, 200...240 V, three phase</p> <p>8000 rpm for LXM15LD10N4, 480 V, three phase</p> <p>3000 rpm for LXM15LD10N4, 230 V, three phase</p> <p>6000 rpm for LXM15LD10N4, 400 V, three phase</p>

Product compatibility	LXM05AD10M2 at 200...240 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD10M2 at 200...240 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD10M2 at 200...240 V single phase LXM05CD17M2 at 200...240 V single phase LXM15LD13M3 at 230 V single phase LXM05AD10M3X at 200...240 V three phase LXM05BD10M3X at 200...240 V three phase LXM05CD10M3X at 200...240 V three phase LXM05AD14N4 at 380...480 V three phase LXM05BD14N4 at 380...480 V three phase LXM05CD14N4 at 380...480 V three phase LXM15LD10N4 at 400 V three phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 V three phase LXM32.D12N4 at 400 V three phase LXM32.D12N4 at 480 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase
Shaft end	Keyed
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors

## Complementary

Range compatibility	Lexium 15 Lexium 32 Lexium 05
Supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	2.9 A
Maximum continuous power	1.51 W
Maximum current Irms	11.8 A for LXM15LD13M3 11.8 A for LXM15LD10N4 11.8 A for LXM05AD10M2 11.8 A for LXM05AD17M2 11.8 A for LXM05AD10M3X 11.8 A for LXM05AD17M3X 11.8 A for LXM05AD14N4 11.8 A for LXM05BD10M2 11.8 A for LXM05BD17M2 11.8 A for LXM05BD10M3X 11.8 A for LXM05BD17M3X 11.8 A for LXM05BD14N4 11.8 A for LXM05CD10M2 11.8 A for LXM05CD17M2 11.8 A for LXM05CD10M3X 11.8 A for LXM05CD17M3X 11.8 A for LXM05CD14N4 11.8 A for LXM32.D12N4
Maximum permanent current	11.8 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
Key width	18 mm
Feedback type	Multiturn SinCos Hiperface
Holding torque	2 N.m holding brake
Motor flange size	70 mm
Number of motor stacks	2
Torque constant	0.77 N.m/A at 120 °C
Back emf constant	48 V/krpm at 120 °C
Number of motor poles	6

Rotor inertia	0.482 kg.cm <sup>2</sup>
Stator resistance	4.2 Ohm at 20 °C
Stator inductance	19 mH at 20 °C
Stator electrical time constant	4.52 ms at 20 °C
Maximum radial force Fr	390 N at 6000 rpm 410 N at 5000 rpm 450 N at 4000 rpm 490 N at 3000 rpm 560 N at 2000 rpm 710 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	212.5 mm
Centring collar diameter	60 mm
Centring collar depth	2.5 mm
Number of mounting holes	4
Mounting holes diameter	5.5 mm
Circle diameter of the mounting holes	82 mm
Net weight	3 kg

### Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Weight	3.25 kg
Package 1 Height	12.3 cm
Package 1 width	12.8 cm
Package 1 Length	37.7 cm

### Offer Sustainability

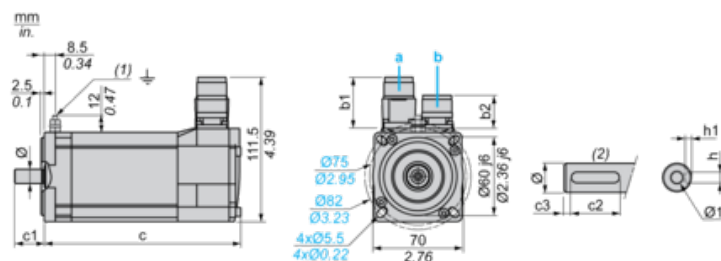
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
PVC free	Yes

### Contractual warranty

Warranty	18 months
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Servo Motors Dimensions

Example with Straight Connectors



- a: Power supply for servo motor brake
- b: Power supply for servo motor encoder
- (1) M4 screw
- (2) Shaft end, keyed slot (optional)

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
39.5	25.5	39.5	39.5	187	213	23	18	2.5	4 N9	2.5 <sup>+0.1</sup> <sub>0</sub>	11 k6	M4 x 10

Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	7.36	8.38	0.90	0.70	0.09	0.16 N9	0.01 <sup>+0.004</sup> <sub>0</sub>	0.43 k6	M4 x 0.39



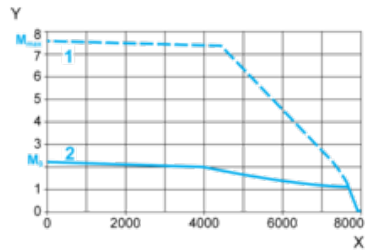
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400 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D12N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque

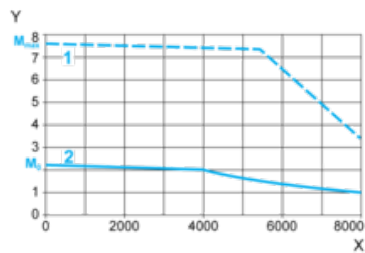
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480 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D12N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque