

# Product datasheet

Specifications



servo motor BSH, Lexium 05,  
0.9N.m, 4000rpm, 55mm, keyed  
shaft, Sincos multi turn, without  
brake, IP65, straight

BSH0552P32A1A

! Discontinued

! Discontinued on: 30 Jun 2023

## Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	0.8 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase 0.8 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase 0.9 N.m for LXM05CU70M2, 200...240 V, single phase 0.9 N.m for LXM05AD10M2, 200...240 V, single phase 0.9 N.m for LXM05BD10M2, 200...240 V, single phase 0.9 N.m for LXM05CD10M2, 200...240 V, single phase 0.9 N.m for LXM05AD10M3X, 200...240 V, three phase 0.9 N.m for LXM05BD10M3X at 1.5 A, 200...240 V, three phase 0.9 N.m for LXM05CD10M3X, 200...240 V, three phase 0.9 N.m for LXM15LD13M3, 230 V, single phase 0.9 N.m for LXM15LD13M3, 230 V, three phase 0.9 N.m for LXM15LU60N4, 230 V, three phase 0.9 N.m for LXM05AD14N4, 380...480 V, three phase 0.9 N.m for LXM05BD14N4, 380...480 V, three phase 0.9 N.m for LXM05CD14N4, 380...480 V, three phase
Peak stall torque	2.5 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase 2.5 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase 2.5 N.m for LXM15LD13M3, 230 V, single phase 2.17 N.m for LXM05CU70M2, 200...240 V, single phase 2.7 N.m for LXM05AD10M2, 200...240 V, single phase 2.7 N.m for LXM05BD10M2, 200...240 V, single phase 2.7 N.m for LXM05CD10M2, 200...240 V, single phase 2.5 N.m for LXM15LD13M3 at 1.5 A, 230 V, three phase 2.26 N.m for LXM15LU60N4, 230 V, three phase 2.7 N.m for LXM05AD10M3X, 200...240 V, three phase 2.7 N.m for LXM05AD14N4, 380...480 V, three phase 2.7 N.m for LXM05BD10M3X, 200...240 V, three phase 2.7 N.m for LXM05BD14N4, 380...480 V, three phase 2.7 N.m for LXM05CD10M3X, 200...240 V, three phase 2.7 N.m for LXM05CD14N4, 380...480 V, three phase
Nominal output power	400 W for LXM32.U60N4 at 1.5 A, 400 V, three phase 400 W for LXM32.U60N4 at 1.5 A, 480 V, three phase 250 W for LXM05AD10M2, 200...240 V, single phase 250 W for LXM05BD10M2, 200...240 V, single phase 250 W for LXM05CD10M2, 200...240 V, single phase 250 W for LXM05CU70M2, 200...240 V, single phase 310 W for LXM15LD13M3, 230 V, single phase 250 W for LXM05AD10M3X at 1.5 A, 200...240 V, three phase 250 W for LXM05AD14N4, 380...480 V, three phase 250 W for LXM05BD10M3X, 200...240 V, three phase 250 W for LXM05BD14N4, 380...480 V, three phase 250 W for LXM05CD10M3X, 200...240 V, three phase 250 W for LXM05CD14N4, 380...480 V, three phase 310 W for LXM15LD13M3, 230 V, three phase 310 W for LXM15LU60N4, 230 V, three phase

<b>Nominal torque</b>	<p>0.65 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase  0.65 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase  0.75 N.m for LXM15LD13M3, 230 V, single phase  2.17 N.m for LXM05CU70M2, 200...240 V, single phase  2.7 N.m for LXM05AD10M2, 200...240 V, single phase  2.7 N.m for LXM05BD10M2, 200...240 V, single phase  2.7 N.m for LXM05CD10M2, 200...240 V, single phase  0.75 N.m for LXM15LD13M3 at 1.5 A, 230 V, three phase  0.75 N.m for LXM15LU60N4, 230 V, three phase  2.7 N.m for LXM05AD10M3X, 200...240 V, three phase  2.7 N.m for LXM05AD14N4, 380...480 V, three phase  2.7 N.m for LXM05BD10M3X, 200...240 V, three phase  2.7 N.m for LXM05BD14N4, 380...480 V, three phase  2.7 N.m for LXM05CD10M3X, 200...240 V, three phase  2.7 N.m for LXM05CD14N4, 380...480 V, three phase</p>
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<b>Nominal speed</b>	<p>6000 rpm for LXM32.U60N4 at 1.5 A, 400 V, three phase  6000 rpm for LXM32.U60N4 at 1.5 A, 480 V, three phase  4000 rpm for LXM15LD13M3, 230 V, single phase  4000 rpm for LXM15LU60N4, 230 V, three phase  3000 rpm for LXM05CU70M2, 200...240 V, single phase  3000 rpm for LXM05AD10M2, 200...240 V, single phase  3000 rpm for LXM05BD10M2, 200...240 V, single phase  3000 rpm for LXM05CD10M2 at 1.5 A, 200...240 V, single phase  3000 rpm for LXM05AD10M3X, 200...240 V, three phase  3000 rpm for LXM05AD14N4, 380...480 V, three phase  3000 rpm for LXM05BD10M3X, 200...240 V, three phase  3000 rpm for LXM05BD14N4, 380...480 V, three phase  3000 rpm for LXM05CD10M3X, 200...240 V, three phase  3000 rpm for LXM05CD14N4, 380...480 V, three phase  4000 rpm for LXM15LD13M3, 230 V, three phase</p>
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<b>Product compatibility</b>	<p>LXM05AD10M2 at 200...240 V single phase  LXM05BD10M2 at 200...240 V single phase  LXM05CD10M2 at 200...240 V single phase  LXM05CU70M2 at 200...240 V single phase  LXM15LD13M3 at 230 V single phase  LXM15LU60N4 at 230 V three phase  LXM32.U60N4 at 400 V three phase  LXM32.U60N4 at 480 V three phase  LXM05AD10M3X at 200...240 V three phase  LXM05BD10M3X at 200...240 V three phase  LXM05CD10M3X at 200...240 V three phase  LXM15LD13M3 at 230 V three phase  LXM05AD14N4 at 380...480 V three phase  LXM05BD14N4 at 380...480 V three phase  LXM05CD14N4 at 380...480 V three phase</p>
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<b>Shaft end</b>	Keyed
<b>IP degree of protection</b>	<p>IP65 standard  IP67 with IP67 kit</p>
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	Without
<b>Mounting support</b>	International standard flange
<b>Electrical connection</b>	Straight connectors

## Complementary

<b>Range compatibility</b>	<p>Lexium 32  Lexium 05  Lexium 15</p>
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	1.2 A
<b>maximum continuous power</b>	0.67 W

<b>Maximum current Irms</b>	5.9 A for LXM15LD13M3 5.9 A for LXM15LU60N4 4.8 A for LXM05CU70M2 4.8 A for LXM05AD10M2 4.8 A for LXM05AD10M3X 4.8 A for LXM05AD14N4 4.8 A for LXM05BD10M2 4.8 A for LXM05BD10M3X 4.8 A for LXM05BD14N4 4.8 A for LXM05CD10M2 4.8 A for LXM05CD10M3X 4.8 A for LXM05CD14N4 4.8 A for LXM32.U60N4
<b>Maximum permanent current</b>	4.8 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	9 mm
<b>Shaft length</b>	20 mm
<b>Key width</b>	12 mm
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Motor flange size</b>	55 mm
<b>Number of motor stacks</b>	2
<b>Torque constant</b>	0.7 N.m/A at 120 °C
<b>Back emf constant</b>	40 V/krpm at 120 °C
<b>Rotor inertia</b>	0.096 kg.cm <sup>2</sup>
<b>Stator resistance</b>	17.4 Ohm at 20 °C
<b>Stator inductance</b>	35.3 mH at 20 °C
<b>Stator electrical time constant</b>	2.03 ms at 20 °C
<b>Maximum radial force Fr</b>	190 N at 7000 rpm 190 N at 8000 rpm 200 N at 6000 rpm 220 N at 5000 rpm 230 N at 4000 rpm 260 N at 3000 rpm 290 N at 2000 rpm 370 N at 1000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Type of cooling</b>	Natural convection
<b>Length</b>	154.4 mm
<b>Centring collar diameter</b>	40 mm
<b>Centring collar depth</b>	2 mm
<b>Number of mounting holes</b>	4
<b>Mounting holes diameter</b>	5.5 mm
<b>Circle diameter of the mounting holes</b>	63 mm
<b>Net weight</b>	1.5 kg
<b>Sizing reference</b>	BSH0552P
<b>Network number of phases</b>	3
<b>Accuracy error [angular]</b>	1.4 °
<b>Temperature copper hot</b>	120 °C
<b>Temperature magnet hot</b>	100 °C

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Temperature magnet rt	20 °C
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## Packing Units

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Unit Type of Package 1	PCE
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Number of Units in Package 1	1
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Package 1 Height	12.3 cm
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Package 1 Width	12.8 cm
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Package 1 Length	37.7 cm
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Package 1 Weight	1.1 kg
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## Contractual warranty

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Warranty (in months)	18
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## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Use Better



#### Materials and Substances

EU RoHS Directive

[Compliant By Exemption](#)

PVC free

Yes

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

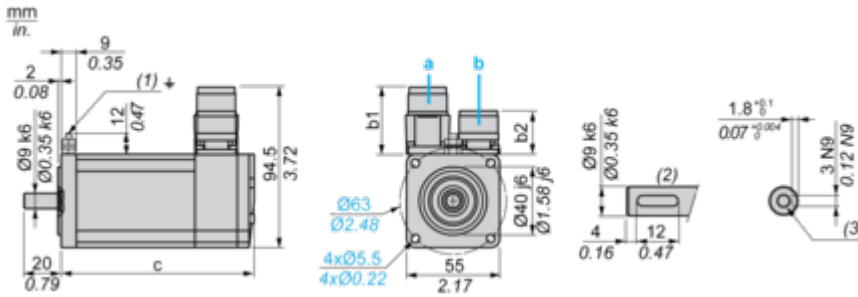
End of life manual availability

No need of specific recycling operations

Dimensions Drawings

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)
- (3) For screw M3 x 9 mm/M3 x 0.35 in.

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
39.5	25.5	39.5	39.5	154.5	181

Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.08	7.12

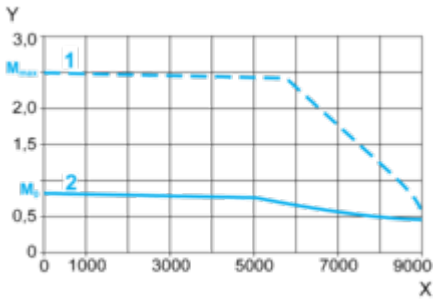
Performance Curves

400 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•U60N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

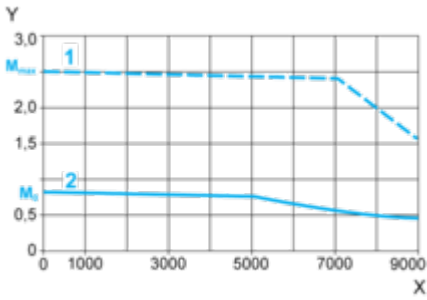
2 Continuous torque

480 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•U60N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque