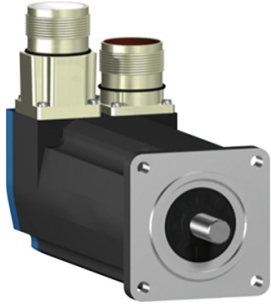


# Product data sheet

Specifications



servo motor BSH, Lexium 05,  
0.5N.m, 8000rpm, 55mm, untapped  
shaft, Sincos multi turn, with brake,  
IP50, straight

BSH0551T02F1A

⚠ Discontinued

⚠ Discontinued on: Jun 30, 2023

**Product availability: Non-Stock - Not normally stocked in distribution facility**

## Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	4.4 lbf.in (0.5 N.m) LXM32.U90M2 3 A, 115 V, single phase 4.4 lbf.in (0.5 N.m) LXM32.U45M2 1.5 A, 230 V, single phase 4.4 lbf.in (0.5 N.m) LXM05CU70M2, 200...240 V, single phase 4.4 lbf.in (0.5 N.m) LXM05AD10F1, 110...120 V, single phase 4.4 lbf.in (0.5 N.m) LXM05AD10M2, 200...240 V, single phase 4.4 lbf.in (0.5 N.m) LXM05BD10F1 1.5 A, 110...120 V, single phase 4.4 lbf.in (0.5 N.m) LXM05BD10M2, 200...240 V, single phase 4.4 lbf.in (0.5 N.m) LXM05CD10F1, 110...120 V, single phase 4.4 lbf.in (0.5 N.m) LXM05CD10M2, 200...240 V, single phase 4.4 lbf.in (0.5 N.m) LXM15LD13M3, 230 V, three phase 4.4 lbf.in (0.5 N.m) LXM05AD10M3X, 200...240 V, three phase 4.4 lbf.in (0.5 N.m) LXM05BD10M3X, 200...240 V, three phase 4.4 lbf.in (0.5 N.m) LXM05CD10M3X, 200...240 V, three phase
Peak stall torque	13.3 lbf.in (1.5 N.m) LXM32.U90M2 3 A, 115 V, single phase 12.4 lbf.in (1.4 N.m) LXM32.U45M2 1.5 A, 230 V, single phase 9.56 lbf.in (1.08 N.m) LXM05CU70M2, 200...240 V, single phase 12.4 lbf.in (1.4 N.m) LXM05AD10F1, 110...120 V, single phase 12.4 lbf.in (1.4 N.m) LXM05AD10M2, 200...240 V, single phase 12.4 lbf.in (1.4 N.m) LXM05BD10F1 1.5 A, 110...120 V, single phase 12.4 lbf.in (1.4 N.m) LXM05BD10M2, 200...240 V, single phase 12.4 lbf.in (1.4 N.m) LXM05CD10F1, 110...120 V, single phase 12.4 lbf.in (1.4 N.m) LXM05CD10M2, 200...240 V, single phase 10.97 lbf.in (1.24 N.m) LXM15LD13M3, 230 V, three phase 12.4 lbf.in (1.4 N.m) LXM05AD10M3X, 200...240 V, three phase 12.4 lbf.in (1.4 N.m) LXM05BD10M3X, 200...240 V, three phase 12.4 lbf.in (1.4 N.m) LXM05CD10M3X, 200...240 V, three phase
Nominal output power	150 W LXM32.U90M2 3 A, 115 V, single phase 300 W LXM32.U45M2 1.5 A, 230 V, single phase 150 W LXM05AD10F1, 110...120 V, single phase 150 W LXM05BD10F1, 110...120 V, single phase 150 W LXM05CD10F1, 110...120 V, single phase 150 W LXM05CU70M2 1.5 A, 200...240 V, single phase 270 W LXM05AD10M2, 200...240 V, single phase 270 W LXM05BD10M2, 200...240 V, single phase 270 W LXM05CD10M2, 200...240 V, single phase 270 W LXM05AD10M3X, 200...240 V, three phase 270 W LXM05BD10M3X, 200...240 V, three phase 270 W LXM05CD10M3X, 200...240 V, three phase 340 W LXM15LD13M3, 230 V, three phase

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

<b>Nominal torque</b>	4.34 lbf.in (0.49 N.m) LXM32.U90M2 3 A, 115 V, single phase 3.98 lbf.in (0.45 N.m) LXM32.U45M2 1.5 A, 230 V, single phase 3.81 lbf.in (0.43 N.m) LXM05AD10M2, 200...240 V, single phase 3.81 lbf.in (0.43 N.m) LXM05BD10M2, 200...240 V, single phase 3.81 lbf.in (0.43 N.m) LXM05CD10M2, 200...240 V, single phase 4.07 lbf.in (0.46 N.m) LXM05AD10F1 1.5 A, 110...120 V, single phase 4.07 lbf.in (0.46 N.m) LXM05BD10F1, 110...120 V, single phase 4.07 lbf.in (0.46 N.m) LXM05CD10F1, 110...120 V, single phase 4.07 lbf.in (0.46 N.m) LXM05CU70M2, 200...240 V, single phase 3.63 lbf.in (0.41 N.m) LXM15LD13M3, 230 V, three phase 3.81 lbf.in (0.43 N.m) LXM05AD10M3X, 200...240 V, three phase 3.81 lbf.in (0.43 N.m) LXM05BD10M3X, 200...240 V, three phase 3.81 lbf.in (0.43 N.m) LXM05CD10M3X, 200...240 V, three phase
<b>Nominal speed</b>	3000 rpm LXM32.U90M2 3 A, 115 V, single phase 6000 rpm LXM32.U45M2 1.5 A, 230 V, single phase 3000 rpm LXM05AD10F1, 110...120 V, single phase 3000 rpm LXM05BD10F1, 110...120 V, single phase 3000 rpm LXM05CD10F1, 110...120 V, single phase 3000 rpm LXM05CU70M2 1.5 A, 200...240 V, single phase 6000 rpm LXM05AD10M2, 200...240 V, single phase 6000 rpm LXM05BD10M2, 200...240 V, single phase 6000 rpm LXM05CD10M2, 200...240 V, single phase 6000 rpm LXM05AD10M3X, 200...240 V, three phase 6000 rpm LXM05BD10M3X, 200...240 V, three phase 6000 rpm LXM05CD10M3X, 200...240 V, three phase 8000 rpm LXM15LD13M3, 230 V, three phase
<b>Product compatibility</b>	LXM05AD10F1 110...120 V single phase LXM05AD10M2 200...240 V single phase LXM05BD10F1 110...120 V single phase LXM05BD10M2 200...240 V single phase LXM05CD10F1 110...120 V single phase LXM05CD10M2 200...240 V single phase LXM05CU70M2 200...240 V single phase LXM32.U90M2 115 V single phase LXM32.U45M2 230 V single phase LXM05AD10M3X 200...240 V three phase LXM05BD10M3X 200...240 V three phase LXM05CD10M3X 200...240 V three phase LXM15LD13M3 230 V three phase
<b>Shaft end</b>	Untapped
<b>IP Degree of Protection</b>	IP50 standard
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	With
<b>Mounting Support</b>	International standard flange
<b>Electrical Connection</b>	Straight connectors

## Complementary

<b>Range Compatibility</b>	Lexium 15 Lexium 32 Lexium 05
<b>supply voltage max</b>	480 V
<b>Phase</b>	Three phase
<b>Continuous stall current</b>	1.4 A
<b>maximum continuous power</b>	0.45 W

<b>Maximum current Irms</b>	6.2 A LXM15LD13M3 5.4 A LXM05AD10F1 5.4 A LXM05CU70M2 5.4 A LXM05AD10M2 5.4 A LXM05AD10M3X 5.4 A LXM05BD10F1 5.4 A LXM05BD10M2 5.4 A LXM05BD10M3X 5.4 A LXM05CD10F1 5.4 A LXM05CD10M2 5.4 A LXM05CD10M3X 5.4 A LXM32.U90M2 4.5 A LXM32.U45M2
<b>Maximum permanent current</b>	5.4 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	0.4 in (9 mm)
<b>Shaft length</b>	0.8 in (20 mm)
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Holding torque</b>	7.08 lbf.in (0.8 N.m) holding brake
<b>Motor flange size</b>	2.2 in (55 mm)
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	0.36 N.m/A 248 °F (120 °C)
<b>Back emf constant</b>	22 V/krpm 248 °F (120 °C)
<b>Rotor inertia</b>	0.0803 kg.cm <sup>2</sup>
<b>Stator resistance</b>	12.2 Ohm 68 °F (20 °C)
<b>Stator inductance</b>	20.8 mH 68 °F (20 °C)
<b>Stator electrical time constant</b>	1.7 ms 68 °F (20 °C)
<b>Maximum radial force Fr</b>	170 N 8000 rpm 180 N 7000 rpm 190 N 6000 rpm 200 N 5000 rpm 220 N 4000 rpm 240 N 3000 rpm 270 N 2000 rpm 340 N 1000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Brake pull-in power</b>	10 W
<b>Type of cooling</b>	Natural convection
<b>Length</b>	6.3 in (159 mm)
<b>Centring collar diameter</b>	1.6 in (40 mm)
<b>Centring collar depth</b>	0.08 in (2 mm)
<b>Number of mounting holes</b>	4
<b>Mounting holes diameter</b>	0.2 in (5.5 mm)
<b>Circle diameter of the mounting holes</b>	2.5 in (63 mm)
<b>Net Weight</b>	2.9 lb(US) (1.3 kg)
<b>Sizing reference</b>	BSH0551T
<b>Network number of phases</b>	3
<b>Accuracy error [angular]</b>	1.4 °
<b>Temperature copper hot</b>	248 °F (120 °C)

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Temperature magnet hot	212 °F (100 °C)
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Temperature magnet rt	68 °F (20 °C)
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## Ordering and shipping details

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Category	US1PC5318282
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Discount Schedule	PC53
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GTIN	3389118158405
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Returnability	No
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## Packing Units

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Unit Type of Package 1	PCE
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Nbr. of units in pkg.	1
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Package 1 Height	4.5 in (11.5 cm)
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Package 1 Width	7.5 in (19.0 cm)
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Package 1 Length	15.6 in (39.5 cm)
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Package weight(Lbs)	33.5 oz (950.0 g)
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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 >](#)



### Environmental footprint

Total lifecycle Carbon footprint	368 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	5 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.5 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.4 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	361 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	1 kg CO2 eq.

## Use Better



### Materials and Substances

<a href="#">EU RoHS Directive</a>	Pro-active compliance (Product out of EU RoHS legal scope)
California proposition 65	<b>WARNING:</b> This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
PVC free	Yes

## Use Longer




### Lifetime extension

Repair	No
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## Use Again



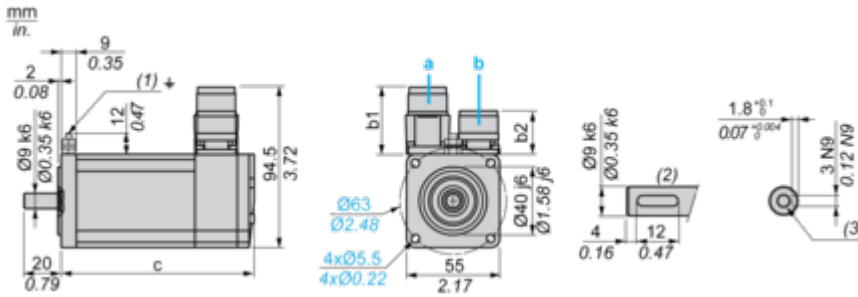
### Repack and remanufacture

Circularity Profile	No need of specific recycling operations
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

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	132.5	159

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	5.21	6.25

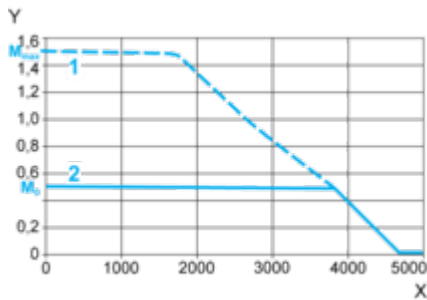
Performance Curves

115 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-U90M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

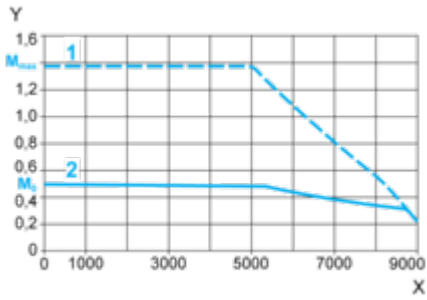
2 Continuous torque

230 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•U45M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque