

# Product data sheet

Specifications



servo motor BSH, Lexium 05,  
2.2N.m, 3000rpm, 70mm, keyed  
shaft, Sincos single turn, without  
brake, IP50

BSH0702P11A2A

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

## Main

<b>Device short name</b>	BSH
<b>Product or Component Type</b>	Servo motor
<b>Maximum mechanical speed</b>	8000 rpm
<b>Continuous stall torque</b>	<p>19.5 lbf.in (2.2 N.m) LXM32.D12N4 3 A, 400 V, three phase</p> <p>19.5 lbf.in (2.2 N.m) LXM32.D12N4 3 A, 480 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05CD10M3X, 200...240 V, three phase</p> <p>19.5 lbf.in (2.2 N.m) LXM15LD13M3, 230 V, single phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05AD17M2, 200...240 V, single phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05BD17M2, 200...240 V, single phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05CD17M2 3 A, 200...240 V, single phase</p> <p>19.5 lbf.in (2.2 N.m) LXM15LD10N4, 480 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05AD17M3X, 200...240 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05AD14N4, 380...480 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05BD17M3X, 200...240 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05BD14N4, 380...480 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05CD17M3X, 200...240 V, three phase</p> <p>18.76 lbf.in (2.12 N.m) LXM05CD14N4, 380...480 V, three phase</p> <p>19.5 lbf.in (2.2 N.m) LXM15LD10N4, 230 V, three phase</p> <p>19.5 lbf.in (2.2 N.m) LXM15LD10N4, 400 V, three phase</p>
<b>Peak stall torque</b>	<p>67.3 lbf.in (7.6 N.m) LXM32.D12N4 3 A, 400 V, three phase</p> <p>67.3 lbf.in (7.6 N.m) LXM32.D12N4 3 A, 480 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM15LD13M3, 230 V, single phase</p> <p>40.45 lbf.in (4.57 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05AD17M2, 200...240 V, single phase</p> <p>40.45 lbf.in (4.57 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05BD17M2, 200...240 V, single phase</p> <p>40.45 lbf.in (4.57 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05CD17M2, 200...240 V, single phase</p> <p>42.93 lbf.in (4.85 N.m) LXM15LD10N4, 230 V, three phase</p> <p>42.93 lbf.in (4.85 N.m) LXM15LD10N4, 400 V, three phase</p> <p>42.93 lbf.in (4.85 N.m) LXM15LD10N4 3 A, 480 V, three phase</p> <p>40.45 lbf.in (4.57 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05AD17M3X, 200...240 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05AD14N4, 380...480 V, three phase</p> <p>40.45 lbf.in (4.57 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05BD17M3X, 200...240 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05BD14N4, 380...480 V, three phase</p> <p>40.45 lbf.in (4.57 N.m) LXM05CD10M3X, 200...240 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05CD17M3X, 200...240 V, three phase</p> <p>49.83 lbf.in (5.63 N.m) LXM05CD14N4, 380...480 V, three phase</p>

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

<b>Nominal output power</b>	<p>850 W LXM32.D12N4 3 A, 400 V, three phase  850 W LXM32.D12N4 3 A, 480 V, three phase  1000 W LXM15LD10N4, 400 V, three phase  597 W LXM15LD13M3, 230 V, single phase  600 W LXM05AD10M2, 200...240 V, single phase  600 W LXM05AD17M2, 200...240 V, single phase  600 W LXM05BD10M2, 200...240 V, single phase  600 W LXM05BD17M2, 200...240 V, single phase  600 W LXM05CD10M2, 200...240 V, single phase  600 W LXM05CD17M2, 200...240 V, single phase  1300 W LXM15LD10N4, 480 V, three phase  597 W LXM15LD10N4 3 A, 230 V, three phase  600 W LXM05AD10M3X, 200...240 V, three phase  600 W LXM05AD14N4, 380...480 V, three phase  600 W LXM05AD17M3X, 200...240 V, three phase  600 W LXM05BD10M3X, 200...240 V, three phase  600 W LXM05BD14N4, 380...480 V, three phase  600 W LXM05BD17M3X, 200...240 V, three phase  600 W LXM05CD10M3X, 200...240 V, three phase  600 W LXM05CD14N4, 380...480 V, three phase  600 W LXM05CD17M3X, 200...240 V, three phase</p>
<b>Nominal torque</b>	<p>14.52 lbf.in (1.64 N.m) LXM32.D12N4 3 A, 400 V, three phase  14.52 lbf.in (1.64 N.m) LXM32.D12N4 3 A, 480 V, three phase  16.8 lbf.in (1.9 N.m) LXM05AD10M2, 200...240 V, single phase  16.8 lbf.in (1.9 N.m) LXM05AD17M2, 200...240 V, single phase  16.8 lbf.in (1.9 N.m) LXM05BD10M2, 200...240 V, single phase  16.8 lbf.in (1.9 N.m) LXM05BD17M2, 200...240 V, single phase  16.8 lbf.in (1.9 N.m) LXM05CD10M2, 200...240 V, single phase  16.8 lbf.in (1.9 N.m) LXM05CD17M2, 200...240 V, single phase  16.8 lbf.in (1.9 N.m) LXM15LD13M3, 230 V, single phase  13.72 lbf.in (1.55 N.m) LXM15LD10N4, 480 V, three phase  14.60 lbf.in (1.65 N.m) LXM15LD10N4, 400 V, three phase  16.8 lbf.in (1.9 N.m) LXM05AD10M3X 3 A, 200...240 V, three phase  16.8 lbf.in (1.9 N.m) LXM05AD14N4, 380...480 V, three phase  16.8 lbf.in (1.9 N.m) LXM05AD17M3X, 200...240 V, three phase  16.8 lbf.in (1.9 N.m) LXM05BD10M3X, 200...240 V, three phase  16.8 lbf.in (1.9 N.m) LXM05BD14N4, 380...480 V, three phase  16.8 lbf.in (1.9 N.m) LXM05BD17M3X, 200...240 V, three phase  16.8 lbf.in (1.9 N.m) LXM05CD10M3X, 200...240 V, three phase  16.8 lbf.in (1.9 N.m) LXM05CD14N4, 380...480 V, three phase  16.8 lbf.in (1.9 N.m) LXM05CD17M3X, 200...240 V, three phase  16.8 lbf.in (1.9 N.m) LXM15LD10N4, 230 V, three phase</p>
<b>Nominal speed</b>	<p>5000 rpm LXM32.D12N4 3 A, 400 V, three phase  5000 rpm LXM32.D12N4 3 A, 480 V, three phase  3000 rpm LXM05AD10M2, 200...240 V, single phase  3000 rpm LXM05BD10M2, 200...240 V, single phase  3000 rpm LXM05CD10M2, 200...240 V, single phase  3000 rpm LXM05AD10M3X, 200...240 V, three phase  3000 rpm LXM05AD14N4, 380...480 V, three phase  3000 rpm LXM05BD10M3X, 200...240 V, three phase  3000 rpm LXM05BD14N4, 380...480 V, three phase  3000 rpm LXM05CD10M3X, 200...240 V, three phase  3000 rpm LXM05CD14N4, 380...480 V, three phase  3000 rpm LXM15LD13M3 3 A, 230 V, single phase  3000 rpm LXM05AD17M2, 200...240 V, single phase  3000 rpm LXM05BD17M2, 200...240 V, single phase  3000 rpm LXM05CD17M2, 200...240 V, single phase  3000 rpm LXM05AD17M3X, 200...240 V, three phase  3000 rpm LXM05BD17M3X, 200...240 V, three phase  3000 rpm LXM05CD17M3X, 200...240 V, three phase  8000 rpm LXM15LD10N4, 480 V, three phase  3000 rpm LXM15LD10N4, 230 V, three phase  6000 rpm LXM15LD10N4, 400 V, three phase</p>

<b>Product compatibility</b>	LXM05AD10M2 200...240 V single phase LXM05AD17M2 200...240 V single phase LXM05BD10M2 200...240 V single phase LXM05BD17M2 200...240 V single phase LXM05CD10M2 200...240 V single phase LXM05CD17M2 200...240 V single phase LXM15LD13M3 230 V single phase LXM05AD10M3X 200...240 V three phase LXM05BD10M3X 200...240 V three phase LXM05CD10M3X 200...240 V three phase LXM05AD14N4 380...480 V three phase LXM05BD14N4 380...480 V three phase LXM05CD14N4 380...480 V three phase LXM15LD10N4 400 V three phase LXM05AD17M3X 200...240 V three phase LXM05BD17M3X 200...240 V three phase LXM05CD17M3X 200...240 V three phase LXM32.D12N4 400 V three phase LXM32.D12N4 480 V three phase LXM15LD10N4 230 V three phase LXM15LD10N4 480 V three phase
------------------------------	--

<b>Shaft end</b>	Keyed
<b>IP Degree of Protection</b>	IP50 standard
<b>Speed feedback resolution</b>	131072 points/turn
<b>Holding brake</b>	Without
<b>Mounting Support</b>	International standard flange
<b>Electrical Connection</b>	Rotatable right-angled connectors

## Complementary

<b>Range Compatibility</b>	Lexium 32 Lexium 05 Lexium 15
<b>supply voltage max</b>	480 V
<b>Phase</b>	Three phase
<b>Continuous stall current</b>	2.9 A
<b>maximum continuous power</b>	1.51 W
<b>Maximum current Irms</b>	11.8 A LXM15LD13M3 11.8 A LXM15LD10N4 11.8 A LXM05AD10M2 11.8 A LXM05AD17M2 11.8 A LXM05AD10M3X 11.8 A LXM05AD17M3X 11.8 A LXM05AD14N4 11.8 A LXM05BD10M2 11.8 A LXM05BD17M2 11.8 A LXM05BD10M3X 11.8 A LXM05BD17M3X 11.8 A LXM05BD14N4 11.8 A LXM05CD10M2 11.8 A LXM05CD17M2 11.8 A LXM05CD10M3X 11.8 A LXM05CD17M3X 11.8 A LXM05CD14N4 11.8 A LXM32.D12N4
<b>Maximum permanent current</b>	11.8 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	0.4 in (11 mm)
<b>Shaft length</b>	0.9 in (23 mm)
<b>Key width</b>	0.7 in (18 mm)

Feedback type	Single turn SinCos Hiperface
Motor flange size	2.8 in (70 mm)
Number of motor stacks	2
Torque constant	0.77 N.m/A 248 °F (120 °C)
Back emf constant	48 V/krpm 248 °F (120 °C)
Number of motor poles	3.0
Rotor inertia	0.41 kg.cm <sup>2</sup>
Stator resistance	4.2 Ohm 68 °F (20 °C)
Stator inductance	10.65 mH 68 °F (20 °C)
Stator electrical time constant	4.52 ms 68 °F (20 °C)
Maximum radial force Fr	390 N 6000 rpm 410 N 5000 rpm 450 N 4000 rpm 490 N 3000 rpm 560 N 2000 rpm 710 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	7.4 in (187 mm)
Centring collar diameter	2.4 in (60 mm)
Centring collar depth	0.10 in (2.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.2 in (5.5 mm)
Circle diameter of the mounting holes	3.2 in (82 mm)
Net Weight	6.37 lb(US) (2.89 kg)
Sizing reference	BSH0702P
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	248 °F (120 °C)
Temperature magnet hot	212 °F (100 °C)
Temperature magnet rt	68 °F (20 °C)

## Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118136274
Returnability	No
Country of origin	DE

## Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.331 in (11.000 cm)

<b>Package 1 Width</b>	7.480 in (19.000 cm)
<b>Package 1 Length</b>	15.551 in (39.500 cm)
<b>Package weight(Lbs)</b>	7.194 lb(US) (3.263 kg)
<b>Unit Type of Package 2</b>	S04
<b>Number of Units in Package 2</b>	2
<b>Package 2 Height</b>	11.811 in (30.000 cm)
<b>Package 2 Width</b>	15.748 in (40.000 cm)
<b>Package 2 Length</b>	23.622 in (60.000 cm)
<b>Package 2 Weight</b>	15.820 lb(US) (7.176 kg)
<b>Unit Type of Package 3</b>	P12
<b>Number of Units in Package 3</b>	8
<b>Package 3 Height</b>	17.717 in (45.000 cm)
<b>Package 3 Width</b>	31.496 in (80.000 cm)
<b>Package 3 Length</b>	47.244 in (120.000 cm)
<b>Package 3 Weight</b>	92.047 lb(US) (41.752 kg)

## Contractual warranty

<b>Warranty</b>	18 months
-----------------	-----------

## 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

Carbon footprint (kg CO2 eq, Total Life cycle) 1428

Environmental Disclosure [Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard Yes

Packaging without single use plastic No

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

SCIP Number 8c11b0c9-e501-4810-83eb-05fc6605ede4

REACH Regulation [REACH Declaration](#)

California proposition 65 **WARNING:** 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 [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

PVC free Yes

## Use Again

### Repack and remanufacture

Circularity Profile No need of specific recycling operations

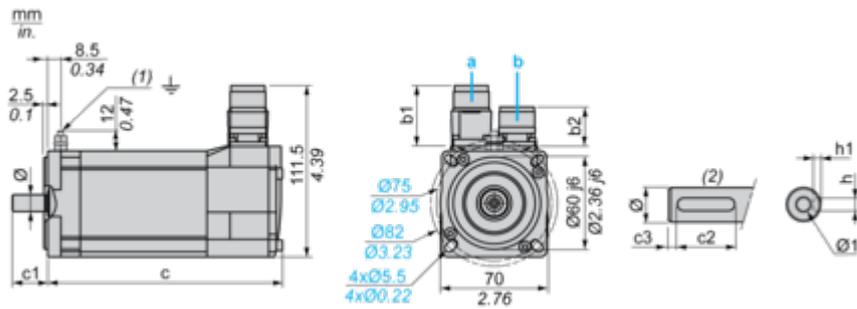
Take-back No

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)

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

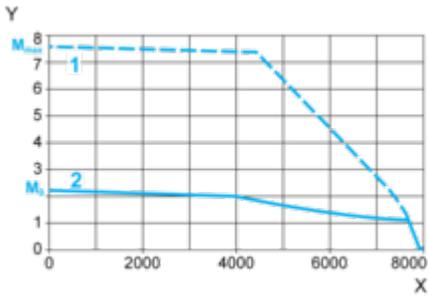
Performance Curves

400 V 3-Phase Supply Voltage

---

Torque/Speed Curves

Servo motor with LXM32-D12N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

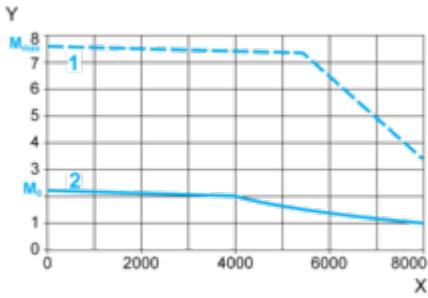
2 Continuous torque

480 V 3-Phase Supply Voltage

---

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque