

Product data sheet

Specifications



servo motor BSH, Lexium 05,
1.1N.m, 3000rpm, 70mm, keyed
shaft, Sincos single turn, without
brake, IP65

BSH0703P31A2A

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

Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	<p>25.05 lbf.in (2.83 N.m) LXM15LD21M3, 230 V, single phase</p> <p>9.7 lbf.in (1.1 N.m) LXM15LU60N4, 480 V, three phase</p> <p>9.7 lbf.in (1.1 N.m) LXM15LU60N4, 400 V, three phase</p> <p>13.3 lbf.in (1.5 N.m) LXM15LU60N4, 230 V, three phase</p> <p>19.74 lbf.in (2.23 N.m) LXM15LD13M3, 230 V, three phase</p> <p>21.2 lbf.in (2.4 N.m) LXM15LD10N4, 230 V, three phase</p> <p>21.2 lbf.in (2.4 N.m) LXM15LD10N4, 400 V, three phase</p> <p>21.2 lbf.in (2.4 N.m) LXM15LD10N4, 480 V, three phase</p> <p>25.05 lbf.in (2.83 N.m) LXM15LD17N4, 230 V, three phase</p> <p>25.05 lbf.in (2.83 N.m) LXM15LD17N4, 400 V, three phase</p> <p>25.05 lbf.in (2.83 N.m) LXM15LD17N4, 480 V, three phase</p> <p>25.05 lbf.in (2.83 N.m) LXM15LD21M3, 230 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05AD17M2, 200...240 V, single phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05AD17M3X, 200...240 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05AD22N4, 380...480 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05AD28M2, 200...240 V, single phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05BD17M2, 200...240 V, single phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05BD17M3X 6 A, 200...240 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05BD22N4 6 A, 380...480 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05BD28M2, 200...240 V, single phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05CD17M2, 200...240 V, single phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05CD17M3X, 200...240 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05CD22N4, 380...480 V, three phase</p> <p>24.8 lbf.in (2.8 N.m) LXM05CD28M2, 200...240 V, single phase</p> <p>27.4 lbf.in (3.1 N.m) LXM32.D18N4 6 A, 400 V, three phase</p> <p>27.4 lbf.in (3.1 N.m) LXM32.D18N4 6 A, 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.

Peak stall torque

53.02 lbf.in (5.99 N.m) LXM15LD21M3, 230 V, single phase
63.37 lbf.in (7.16 N.m) LXM05AD17M2, 200...240 V, single phase
91.2 lbf.in (10.3 N.m) LXM05AD28M2, 200...240 V, single phase
63.37 lbf.in (7.16 N.m) LXM05BD17M2, 200...240 V, single phase
91.2 lbf.in (10.3 N.m) LXM05BD28M2, 200...240 V, single phase
63.37 lbf.in (7.16 N.m) LXM05CD17M2, 200...240 V, single phase
91.2 lbf.in (10.3 N.m) LXM05CD28M2, 200...240 V, single phase
29.2 lbf.in (3.3 N.m) LXM15LU60N4, 480 V, three phase
29.2 lbf.in (3.3 N.m) LXM15LU60N4, 400 V, three phase
29.2 lbf.in (3.3 N.m) LXM15LU60N4, 230 V, three phase
53.1 lbf.in (6 N.m) LXM15LD13M3, 230 V, three phase
46.9 lbf.in (5.3 N.m) LXM15LD10N4, 230 V, three phase
46.9 lbf.in (5.3 N.m) LXM15LD10N4, 400 V, three phase
46.9 lbf.in (5.3 N.m) LXM15LD10N4, 480 V, three phase
68.24 lbf.in (7.71 N.m) LXM15LD17N4, 230 V, three phase
68.24 lbf.in (7.71 N.m) LXM15LD17N4, 400 V, three phase
68.24 lbf.in (7.71 N.m) LXM15LD17N4, 480 V, three phase
82.13 lbf.in (9.28 N.m) LXM15LD21M3 6 A, 230 V, three phase
63.37 lbf.in (7.16 N.m) LXM05AD17M3X 6 A, 200...240 V, three phase
77.44 lbf.in (8.75 N.m) LXM05AD22N4, 380...480 V, three phase
63.37 lbf.in (7.16 N.m) LXM05BD17M3X, 200...240 V, three phase
77.44 lbf.in (8.75 N.m) LXM05BD22N4, 380...480 V, three phase
63.37 lbf.in (7.16 N.m) LXM05CD17M3X, 200...240 V, three phase
77.44 lbf.in (8.75 N.m) LXM05CD22N4, 380...480 V, three phase
100.01 lbf.in (11.3 N.m) LXM32.D18N4 6 A, 400 V, three phase
100.01 lbf.in (11.3 N.m) LXM32.D18N4 6 A, 480 V, three phase

Nominal output power

750 W LXM05AD17M2, 200...240 V, single phase
750 W LXM05AD28M2, 200...240 V, single phase
750 W LXM05BD17M2, 200...240 V, single phase
750 W LXM05BD28M2, 200...240 V, single phase
750 W LXM05CD17M2, 200...240 V, single phase
750 W LXM05CD28M2, 200...240 V, single phase
750 W LXM15LD21M3, 230 V, single phase
1250 W LXM15LD10N4, 400 V, three phase
1300 W LXM15LD17N4, 400 V, three phase
1400 W LXM15LD17N4, 480 V, three phase
1500 W LXM15LD10N4, 480 V, three phase
350 W LXM15LU60N4, 230 V, three phase
700 W LXM15LD13M3, 230 V, three phase
700 W LXM15LU60N4, 400 V, three phase
750 W LXM05AD17M3X, 200...240 V, three phase
750 W LXM05AD22N4, 380...480 V, three phase
750 W LXM05BD17M3X, 200...240 V, three phase
750 W LXM05BD22N4 6 A, 380...480 V, three phase
750 W LXM05CD17M3X 6 A, 200...240 V, three phase
750 W LXM05CD22N4, 380...480 V, three phase
750 W LXM15LD10N4, 230 V, three phase
750 W LXM15LD17N4, 230 V, three phase
750 W LXM15LD21M3, 230 V, three phase
950 W LXM15LU60N4, 480 V, three phase
1300 W LXM32.D18N4 6 A, 400 V, three phase
1300 W LXM32.D18N4 6 A, 480 V, three phase

Nominal torque

21.2 lbf.in (2.4 N.m) LXM05AD17M2, 200...240 V, single phase
21.2 lbf.in (2.4 N.m) LXM05AD28M2, 200...240 V, single phase
21.2 lbf.in (2.4 N.m) LXM05BD17M2, 200...240 V, single phase
21.2 lbf.in (2.4 N.m) LXM05BD28M2, 200...240 V, single phase
21.2 lbf.in (2.4 N.m) LXM05CD17M2, 200...240 V, single phase
21.2 lbf.in (2.4 N.m) LXM05CD28M2, 200...240 V, single phase
15.9 lbf.in (2.4 N.m) LXM15LD21M3, 230 V, single phase
9.91 lbf.in (1.12 N.m) LXM15LU60N4, 230 V, three phase
9.91 lbf.in (1.12 N.m) LXM15LU60N4, 400 V, three phase
9.91 lbf.in (1.12 N.m) LXM15LU60N4, 480 V, three phase
15.9 lbf.in (1.8 N.m) LXM15LD10N4, 480 V, three phase
17.35 lbf.in (1.96 N.m) LXM15LD17N4, 480 V, three phase
17.7 lbf.in (2 N.m) LXM15LD10N4, 400 V, three phase
17.7 lbf.in (2 N.m) LXM15LD17N4, 400 V, three phase
19.74 lbf.in (2.23 N.m) LXM15LD13M3, 230 V, three phase
21.2 lbf.in (2.4 N.m) LXM05AD17M3X, 200...240 V, three phase
21.2 lbf.in (2.4 N.m) LXM05AD22N4, 380...480 V, three phase
21.2 lbf.in (2.4 N.m) LXM05BD17M3X 6 A, 200...240 V, three phase
21.2 lbf.in (2.4 N.m) LXM05BD22N4 6 A, 380...480 V, three phase
21.2 lbf.in (2.4 N.m) LXM05CD17M3X, 200...240 V, three phase
21.2 lbf.in (2.4 N.m) LXM05CD22N4, 380...480 V, three phase
21.2 lbf.in (2.4 N.m) LXM15LD10N4, 230 V, three phase
21.2 lbf.in (2.4 N.m) LXM15LD17N4, 230 V, three phase
21.2 lbf.in (2.4 N.m) LXM15LD21M3, 230 V, three phase
21.60 lbf.in (2.44 N.m) LXM32.D18N4 6 A, 400 V, three phase
21.60 lbf.in (2.44 N.m) LXM32.D18N4 6 A, 480 V, three phase

Nominal speed

3000 rpm LXM15LD13M3, 230 V, three 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
3000 rpm LXM15LU60N4, 230 V, three phase
8000 rpm LXM15LD10N4, 480 V, three phase
8000 rpm LXM15LU60N4, 480 V, three phase
3000 rpm LXM15LD10N4, 230 V, three phase
6000 rpm LXM15LD10N4, 400 V, three phase
3000 rpm LXM05AD28M2, 200...240 V, single phase
3000 rpm LXM05BD28M2, 200...240 V, single phase
3000 rpm LXM05CD28M2, 200...240 V, single phase
3000 rpm LXM15LD21M3, 230 V, single phase
3000 rpm LXM05AD22N4, 380...480 V, three phase
3000 rpm LXM05BD22N4 6 A, 380...480 V, three phase
3000 rpm LXM05CD22N4 6 A, 380...480 V, three phase
3000 rpm LXM15LD17N4, 230 V, three phase
3000 rpm LXM15LD21M3, 230 V, three phase
6000 rpm LXM15LD17N4, 400 V, three phase
6000 rpm LXM15LU60N4, 400 V, three phase
7000 rpm LXM15LD17N4, 480 V, three phase
5000 rpm LXM32.D18N4 6 A, 400 V, three phase
5000 rpm LXM32.D18N4 6 A, 480 V, three phase

Product compatibility	LXM05AD17M2 200...240 V single phase LXM05AD28M2 200...240 V single phase LXM05BD17M2 200...240 V single phase LXM05BD28M2 200...240 V single phase LXM05CD17M2 200...240 V single phase LXM05CD28M2 200...240 V single phase LXM15LD21M3 230 V single phase LXM15LU60N4 230 V three phase LXM15LD13M3 230 V three phase LXM15LU60N4 400 V three phase LXM15LU60N4 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 LXM15LD10N4 230 V three phase LXM15LD10N4 480 V three phase LXM15LD21M3 230 V three phase LXM15LD17N4 230 V three phase LXM05AD22N4 380...480 V three phase LXM05BD22N4 380...480 V three phase LXM05CD22N4 380...480 V three phase LXM15LD17N4 400 V three phase LXM15LD17N4 480 V three phase LXM32.D18N4 400 V three phase LXM32.D18N4 480 V three phase
------------------------------	--

Shaft end	Keyed
IP Degree of Protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	Without
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

Complementary

Range Compatibility	Lexium 05 Lexium 15 Lexium 32
supply voltage max	480 V
Phase	Three phase
Continuous stall current	4.1 A
maximum continuous power	1.7 W
Maximum current Irms	15.2 A LXM15LD13M3 15.2 A LXM15LD21M3 15.2 A LXM15LD17N4 15.2 A LXM15LU60N4 15.2 A LXM15LD10N4 17 A LXM05AD17M2 17 A LXM05AD28M2 17 A LXM05AD17M3X 17 A LXM05AD22N4 17 A LXM05BD17M2 17 A LXM05BD28M2 17 A LXM05BD17M3X 17 A LXM05BD22N4 17 A LXM05CD17M2 17 A LXM05CD28M2 17 A LXM05CD17M3X 17 A LXM05CD22N4 17 A LXM32.D18N4
Maximum permanent current	17 A
Switching frequency	8 kHz
Second shaft	Without second shaft end

Shaft diameter	0.6 in (14 mm)
Shaft length	1.2 in (30 mm)
key width	0.8 in (20 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	2.8 in (70 mm)
Number of motor stacks	3
Torque constant	0.78 N.m/A 248 °F (120 °C)
Back emf constant	49 V/krpm 248 °F (120 °C)
Number of motor poles	3.0
Rotor inertia	0.58 kg.cm ²
Stator resistance	2.7 Ohm 68 °F (20 °C)
Stator inductance	7.3 mH 68 °F (20 °C)
Stator electrical time constant	4.82 ms 68 °F (20 °C)
Maximum radial force Fr	400 N 6000 rpm 430 N 5000 rpm 460 N 4000 rpm 510 N 3000 rpm 580 N 2000 rpm 730 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
type of cooling	Natural convection
Length	8.7 in (220 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	7.98 lb(US) (3.62 kg)
Sizing reference	BSH0703P
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	3389118137370
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.84 in (12.300 cm)
Package 1 Width	5.04 in (12.800 cm)
Package 1 Length	14.84 in (37.700 cm)
Package weight(Lbs)	7.937 lb(US) (3.600 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	2
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	15.75 in (40.000 cm)
Package 2 Length	23.62 in (60.000 cm)
Package 2 Weight	17.306 lb(US) (7.850 kg)
Unit Type of Package 3	P12
Number of Units in Package 3	8
Package 3 Height	17.72 in (45.000 cm)
Package 3 Width	31.50 in (80.000 cm)
Package 3 Length	47.24 in (120.000 cm)
Package 3 Weight	95.681 lb(US) (43.400 kg)

Contractual warranty

Warranty	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) **1643**

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**

PVC free **Yes**

Use Again

Repack and remanufacture

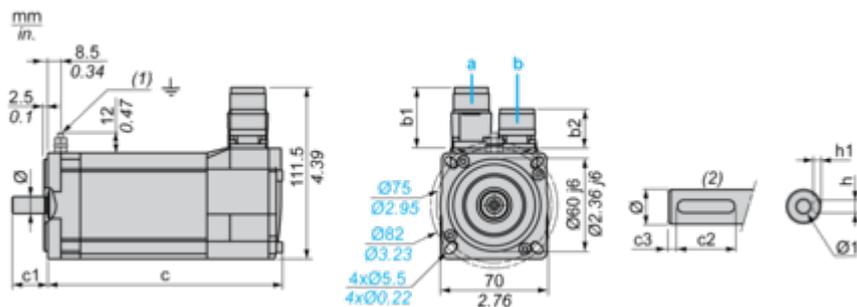
Circularity Profile **No need of specific recycling operations**

Take-back **No**

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	220	254	30	20	5	5 N9	3 ^{+0.1} ₀	14 k6	M5 x 12.5

Dimensions in in.

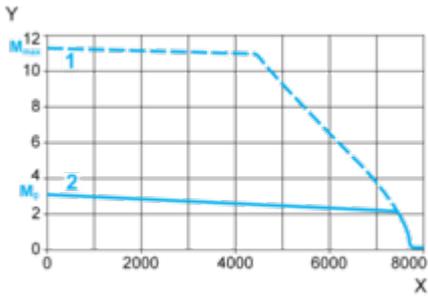
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	8.66	10.00	1.18	0.78	0.19	0.20 N9	0.12 ^{+0.004} ₀	0.55 k6	M5 x 0.49

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32-D18N4 servo drive



X Speed in rpm

Y Torque in Nm

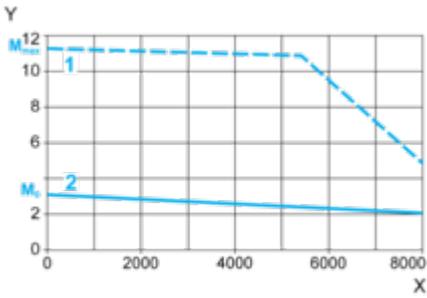
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque