

# Product data sheet

Specifications



servo motor BSH, Lexium 05,  
3.4N.m, 2500rpm, 100mm,  
untapped shaft, Sincos multi turn,  
without brake, IP65

BSH1002P22A2A

## Main

<b>Product Or Component Type</b>	Servo motor
<b>Device Short Name</b>	BSH
<b>Maximum Mechanical Speed</b>	6000 rpm
<b>Continuous Stall Torque</b>	4.5 N.m for LXM15LD21M3, 230 V, single phase 3.4 N.m for LXM15LD13M3, 230 V, three phase 3.4 N.m for LXM15LD10N4, 230 V, three phase 3.4 N.m for LXM15LD10N4, 400 V, three phase 3.4 N.m for LXM15LD10N4, 480 V, three phase 5.8 N.m for LXM15LD17N4, 400 V, three phase 5.8 N.m for LXM15LD17N4, 480 V, three phase 5.8 N.m for LXM15LD21M3, 230 V, three phase 5.5 N.m for LXM05AD17M3X, 200...240 V, three phase 5.5 N.m for LXM05AD22N4, 380...480 V, three phase 5.5 N.m for LXM05AD28M2, 200...240 V, single phase 5.5 N.m for LXM05BD17M3X, 200...240 V, three phase 5.5 N.m for LXM05BD22N4, 380...480 V, three phase 5.5 N.m for LXM05BD28M2, 200...240 V, single phase 5.5 N.m for LXM05CD17M3X, 200...240 V, three phase 5.5 N.m for LXM05CD22N4, 380...480 V, three phase 5.5 N.m for LXM05CD28M2, 200...240 V, single phase 5.8 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 5.8 N.m for LXM32.D18N4 at 6 A, 480 V, three phase
<b>Peak Stall Torque</b>	9.39 N.m for LXM15LD21M3, 230 V, single phase 5.6 N.m for LXM15LD13M3, 230 V, three phase 8 N.m for LXM15LD10N4, 230 V, three phase 8 N.m for LXM15LD10N4, 400 V, three phase 8 N.m for LXM15LD10N4, 480 V, three phase 12.13 N.m for LXM15LD17N4, 400 V, three phase 12.13 N.m for LXM15LD17N4, 480 V, three phase 14.79 N.m for LXM15LD21M3, 230 V, three phase 11.23 N.m for LXM05AD17M3X, 200...240 V, three phase 13.92 N.m for LXM05AD22N4, 380...480 V, three phase 16 N.m for LXM05AD28M2, 200...240 V, single phase 11.23 N.m for LXM05BD17M3X, 200...240 V, three phase 13.92 N.m for LXM05BD22N4, 380...480 V, three phase 16 N.m for LXM05BD28M2, 200...240 V, single phase 11.23 N.m for LXM05CD17M3X, 200...240 V, three phase 13.92 N.m for LXM05CD22N4, 380...480 V, three phase 16 N.m for LXM05CD28M2, 200...240 V, single phase 18.3 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 18.3 N.m for LXM32.D18N4 at 6 A, 480 V, three phase

<b>Nominal Output Power</b>	<p>950 W for LXM15LD21M3, 230 V, single phase  950 W for LXM15LD21M3, 230 V, three phase  780 W for LXM05AD28M2, 200...240 V, single phase  780 W for LXM05BD28M2, 200...240 V, single phase  780 W for LXM05CD28M2, 200...240 V, single phase  1400 W for LXM05AD22N4, 380...480 V, three phase  1400 W for LXM05BD22N4, 380...480 V, three phase  1400 W for LXM05CD22N4, 380...480 V, three phase  1600 W for LXM15LD10N4, 400 V, three phase  1700 W for LXM15LD17N4, 400 V, three phase  1950 W for LXM15LD17N4, 480 V, three phase  2150 W for LXM15LD10N4, 480 V, three phase  780 W for LXM05AD17M3X, 200...240 V, three phase  780 W for LXM05BD17M3X, 200...240 V, three phase  780 W for LXM05CD17M3X, 200...240 V, three phase  840 W for LXM15LD13M3, 230 V, three phase  890 W for LXM15LD10N4, 230 V, three phase  1700 W for LXM32.D18N4 at 6 A, 400 V, three phase  1700 W for LXM32.D18N4 at 6 A, 480 V, three phase</p>
<b>Nominal Torque</b>	<p>4.5 N.m for LXM15LD21M3, 230 V, single phase  4.96 N.m for LXM05AD28M2, 200...240 V, single phase  4.96 N.m for LXM05BD28M2, 200...240 V, single phase  4.96 N.m for LXM05CD28M2, 200...240 V, single phase  3.4 N.m for LXM15LD10N4, 230 V, three phase  3.4 N.m for LXM15LD10N4, 400 V, three phase  3.4 N.m for LXM15LD10N4, 480 V, three phase  3.4 N.m for LXM15LD13M3, 230 V, three phase  3.7 N.m for LXM15LD17N4, 480 V, three phase  4 N.m for LXM15LD17N4, 400 V, three phase  4.4 N.m for LXM05AD22N4, 380...480 V, three phase  4.4 N.m for LXM05BD22N4, 380...480 V, three phase  4.4 N.m for LXM05CD22N4, 380...480 V, three phase  4.96 N.m for LXM05AD17M3X, 200...240 V, three phase  4.96 N.m for LXM05BD17M3X, 200...240 V, three phase  4.96 N.m for LXM05CD17M3X, 200...240 V, three phase  5.8 N.m for LXM15LD21M3, 230 V, three phase  4 N.m for LXM32.D18N4 at 6 A, 400 V, three phase  4 N.m for LXM32.D18N4 at 6 A, 480 V, three phase</p>
<b>Nominal Speed</b>	<p>3000 rpm for LXM05AD22N4, 380...480 V, three phase  3000 rpm for LXM05BD22N4, 380...480 V, three phase  3000 rpm for LXM05CD22N4, 380...480 V, three phase  1500 rpm for LXM05AD17M3X, 200...240 V, three phase  1500 rpm for LXM05BD17M3X, 200...240 V, three phase  1500 rpm for LXM05CD17M3X, 200...240 V, three phase  4500 rpm for LXM15LD10N4, 400 V, three phase  6000 rpm for LXM15LD10N4, 480 V, three phase  4000 rpm for LXM32.D18N4 at 6 A, 400 V, three phase  4000 rpm for LXM32.D18N4 at 6 A, 480 V, three phase  1500 rpm for LXM05AD28M2, 200...240 V, single phase  1500 rpm for LXM05BD28M2, 200...240 V, single phase  1500 rpm for LXM05CD28M2, 200...240 V, single phase  2000 rpm for LXM15LD21M3, 230 V, single phase  2000 rpm for LXM15LD21M3, 230 V, three phase  2500 rpm for LXM15LD10N4, 230 V, three phase  2500 rpm for LXM15LD13M3, 230 V, three phase  4000 rpm for LXM15LD17N4, 400 V, three phase  5000 rpm for LXM15LD17N4, 480 V, three phase</p>
<b>Product Compatibility</b>	<p>LXM05AD28M2 at 200...240 V single phase  LXM05BD28M2 at 200...240 V single phase  LXM05CD28M2 at 200...240 V single phase  LXM15LD21M3 at 230 V single phase  LXM15LD13M3 at 230 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  LXM15LD10N4 at 230 V three phase  LXM15LD10N4 at 480 V three phase  LXM15LD21M3 at 230 V three phase  LXM05AD22N4 at 380...480 V three phase  LXM05BD22N4 at 380...480 V three phase  LXM05CD22N4 at 380...480 V three phase  LXM15LD17N4 at 400 V three phase  LXM15LD17N4 at 480 V three phase  LXM32.D18N4 at 400 V three phase  LXM32.D18N4 at 480 V three phase</p>

Shaft End	Untapped
Ip Degree Of Protection	IP65 standard IP67 with IP67 kit
Speed Feedback Resolution	131072 points/turn x 4096 turns
Holding Brake	Without
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

## Complementary

Range Compatibility	Lexium 32 Lexium 05 Lexium 15
Supply Voltage Max	480 V
Network Number Of Phases	Three phase
Continuous Stall Current	4.8 A
Maximum Continuous Power	2.51 W
Maximum Current Irms	17.1 A for LXM15LD13M3 17.1 A for LXM15LD21M3 17.1 A for LXM15LD10N4 17.1 A for LXM15LD17N4 17.1 A for LXM05AD28M2 17.1 A for LXM05AD17M3X 17.1 A for LXM05AD22N4 17.1 A for LXM05BD28M2 17.1 A for LXM05BD17M3X 17.1 A for LXM05BD22N4 17.1 A for LXM05CD28M2 17.1 A for LXM05CD17M3X 17.1 A for LXM05CD22N4 17.1 A for LXM32.D18N4
Maximum Permanent Current	17.1 A
Switching Frequency	8 kHz
Second Shaft	Without second shaft end
Shaft Diameter	19 mm
Shaft Length	40 mm
Feedback Type	Multiturn SinCos Hiperface
Motor Flange Size	100 mm
Number Of Motor Stacks	2
Torque Constant	1.21 N.m/A at 120 °C
Back Emf Constant	77 V/krpm at 120 °C
Number Of Motor Poles	8
Rotor Inertia	2.31 kg.cm <sup>2</sup>
Stator Resistance	2.4 Ohm at 20 °C
Stator Inductance	12.7 mH at 20 °C
Stator Electrical Time Constant	5.29 ms at 20 °C
Maximum Radial Force Fr	620 N at 4000 rpm 690 N at 3000 rpm 790 N at 2000 rpm 990 N at 1000 rpm
Maximum Axial Force Fa	0.2 x Fr

Type Of Cooling	Natural convection
Length	204.5 mm
Centring Collar Diameter	95 mm
Centring Collar Depth	3.5 mm
Number Of Mounting Holes	4
Mounting Holes Diameter	9 mm
Circle Diameter Of The Mounting Holes	115 mm
Net Weight	5.9 kg

## Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	15.4 cm
Package 1 Width	16.3 cm
Package 1 Length	40.7 cm
Package 1 Weight	5.8 kg
Unit Type Of Package 2	P06
Number Of Units In Package 2	6
Package 2 Height	77.0 cm
Package 2 Width	80.0 cm
Package 2 Length	60.0 cm
Package 2 Weight	49.648 kg

## Contractual warranty

Warranty	18 months
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## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

## Well-being performance

✓ Mercury Free

✓ Rohs Exemption Information [Yes](#)

✓ Pvc Free

## Certifications & Standards

Reach Regulation

[REACH Declaration](#)

Eu Rohs Directive

Pro-active compliance (Product out of EU RoHS legal scope)

China Rohs Regulation

[China RoHS declaration](#)

Environmental Disclosure

[Product Environmental Profile](#)

Weee

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Circularity Profile

No need of specific recycling operations

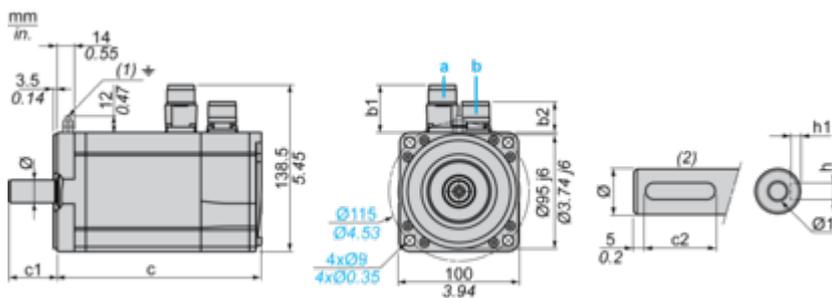
California Proposition 65

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)

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	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
39.5	25.5	39.5	39.5	205	236	40	30	6 N9	3.5 <sup>+0.1</sup> <sub>0</sub>	19 k6	M6 x 16

Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	8.07	9.29	1.57	1.18	0.24 N9	0.14 <sup>+0.1</sup> <sub>0</sub>	0.75 k6	M6 x 0.63

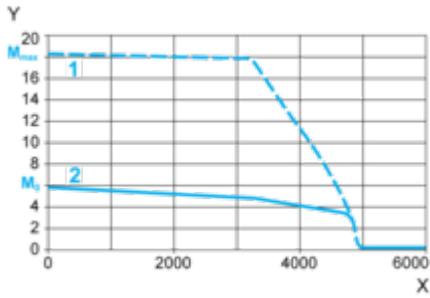
Performance Curves

400 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

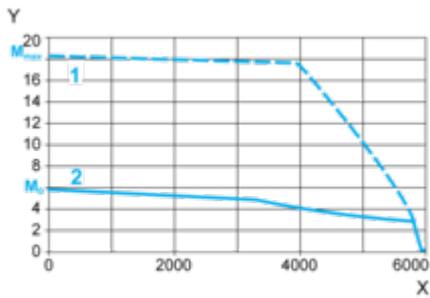
2 Continuous torque

480 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque