

# Product data sheet

Specifications



servo motor BSH, Lexium 05,  
11.1N.m, 1500rpm, 140mm, keyed  
shaft, Sincos single turn, without  
brake, IP65

BSH1401P31A2A

## Main

Product Or Component Type	Servo motor
Device Short Name	BSH
Maximum Mechanical Speed	4000 rpm
Continuous Stall Torque	11.1 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 11.1 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 11.1 N.m for LXM15MD28N4, 400 V, three phase 11.1 N.m for LXM15MD28N4, 480 V, three phase 11.1 N.m for LXM15MD28N4, 230 V, three phase 11.1 N.m for LXM15MD40N4, 400 V, three phase 11.1 N.m for LXM15MD40N4, 480 V, three phase 11.1 N.m for LXM15LD28M3, 230 V, three phase 11.4 N.m for LXM05AD34N4, 380...480 V, three phase 11.4 N.m for LXM05BD34N4, 380...480 V, three phase 11.4 N.m for LXM05CD34N4, 380...480 V, three phase
Peak Stall Torque	27 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 27 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 23.33 N.m for LXM15MD28N4, 230 V, three phase 23.33 N.m for LXM15MD28N4, 400 V, three phase 23.33 N.m for LXM15MD28N4, 480 V, three phase 23.33 N.m for LXM15MD40N4, 400 V, three phase 23.33 N.m for LXM15MD40N4, 480 V, three phase 23.8 N.m for LXM15LD28M3, 230 V, three phase 23.33 N.m for LXM05AD34N4, 380...480 V, three phase 23.33 N.m for LXM05BD34N4, 380...480 V, three phase 23.33 N.m for LXM05CD34N4, 380...480 V, three phase
Nominal Output Power	2500 W for LXM32.D30N4 at 10 A, 400 V, three phase 3000 W for LXM32.D30N4 at 10 A, 480 V, three phase 2000 W for LXM15MD28N4, 400 V, three phase 2000 W for LXM15MD40N4, 400 V, three phase 2200 W for LXM05AD34N4, 380...480 V, three phase 2200 W for LXM05BD34N4, 380...480 V, three phase 2200 W for LXM05CD34N4, 380...480 V, three phase 1400 W for LXM15LD28M3, 230 V, three phase 1400 W for LXM15MD28N4, 230 V, three phase 2150 W for LXM15MD28N4, 480 V, three phase 2150 W for LXM15MD40N4, 480 V, three phase
Nominal Torque	9.5 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 9.5 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 6.8 N.m for LXM15MD28N4, 480 V, three phase 6.8 N.m for LXM15MD40N4, 480 V, three phase 6.9 N.m for LXM05AD34N4, 380...480 V, three phase 6.9 N.m for LXM05BD34N4, 380...480 V, three phase 6.9 N.m for LXM05CD34N4, 380...480 V, three phase 7.63 N.m for LXM15MD28N4, 400 V, three phase 7.63 N.m for LXM15MD40N4, 400 V, three phase 9.1 N.m for LXM15LD28M3, 230 V, three phase 9.1 N.m for LXM15MD28N4, 230 V, three phase

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Nominal Speed	2500 rpm for LXM32.D30N4 at 10 A, 400 V, three phase 3000 rpm for LXM32.D30N4 at 10 A, 480 V, three phase 3000 rpm for LXM05AD34N4, 380...480 V, three phase 3000 rpm for LXM05BD34N4, 380...480 V, three phase 3000 rpm for LXM05CD34N4, 380...480 V, three phase 1500 rpm for LXM15MD28N4, 230 V, three phase 1500 rpm for LXM15LD28M3, 230 V, three phase 2500 rpm for LXM15MD28N4, 400 V, three phase 2500 rpm for LXM15MD40N4, 400 V, three phase 3000 rpm for LXM15MD28N4, 480 V, three phase 3000 rpm for LXM15MD40N4, 480 V, three phase
Product Compatibility	LXM15LD28M3 at 230 V three phase LXM05AD34N4 at 380...480 V three phase LXM05BD34N4 at 380...480 V three phase LXM05CD34N4 at 380...480 V three phase LXM15MD28N4 at 400 V three phase LXM15MD28N4 at 480 V three phase LXM15MD40N4 at 400 V three phase LXM15MD40N4 at 480 V three phase LXM15MD28N4 at 230 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 32 Lexium 05 Lexium 15
Supply Voltage Max	480 V
Network Number Of Phases	Three phase
Continuous Stall Current	7.8 A
Maximum Continuous Power	3.6 W
Maximum Current Irms	20.8 A for LXM15LD28M3 20.8 A for LXM15MD28N4 20.8 A for LXM15MD40N4 20.8 A for LXM05AD34N4 20.8 A for LXM05BD34N4 20.8 A for LXM05CD34N4 20.8 A for LXM32.D30N4
Maximum Permanent Current	20.8 A
Switching Frequency	8 kHz
Second Shaft	Without second shaft end
Shaft Diameter	24 mm
Shaft Length	50 mm
Key Width	40 mm
Feedback Type	Single turn SinCos Hiperface
Motor Flange Size	140 mm
Number Of Motor Stacks	1
Torque Constant	1.43 N.m/A at 120 °C
Back Emf Constant	100 V/krpm at 120 °C

Number Of Motor Poles	10
Rotor Inertia	7.41 kg.cm²
Stator Resistance	1.41 Ohm at 20 °C
Stator Inductance	15.6 mH at 20 °C
Stator Electrical Time Constant	11.06 ms at 20 °C
Maximum Radial Force Fr	1530 N at 3000 rpm 1760 N at 2000 rpm 2210 N at 1000 rpm
Maximum Axial Force Fa	0.2 x Fr
Type Of Cooling	Natural convection
Length	217.5 mm
Centring Collar Diameter	130 mm
Centring Collar Depth	3.5 mm
Number Of Mounting Holes	4
Mounting Holes Diameter	11 mm
Circle Diameter Of The Mounting Holes	165 mm
Net Weight	11.9 kg

## Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	27.0 cm
Package 1 Width	27.0 cm
Package 1 Length	48.2 cm
Package 1 Weight	8.0 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

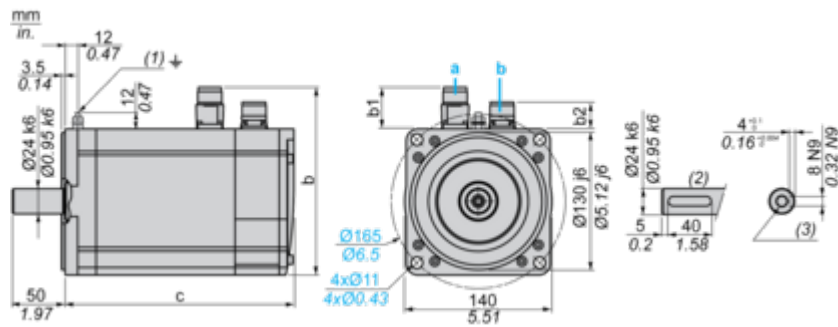
## Certifications & Standards

Reach Regulation	<a href="#">REACH Declaration</a>
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	<a href="#">China RoHS declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>

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 screws M8 x 19 mm/M8 x 0.75 in.

Dimensions in mm

Straight connectors			Rotatable angled connectors			c (without brake)	c (with brake)
b	b1	b2	b	b1	b2		
178	39.5	25.5	178	39.5	39.5	218	256

Dimensions in in.

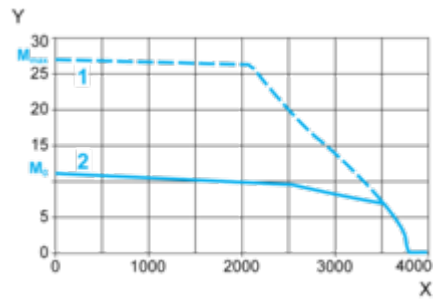
Straight connectors			Rotatable angled connectors			c (without brake)	c (with brake)
b	b1	b2	b	b1	b2		
7.00	1.55	1.00	7.00	1.55	1.55	8.58	10.07

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive

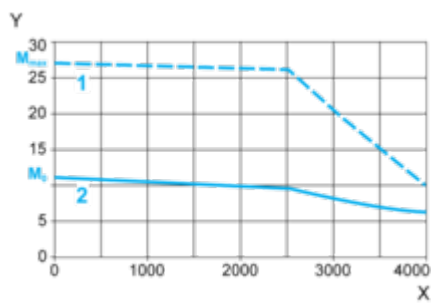


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque