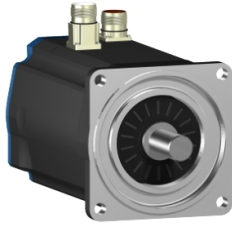


# Product data sheet

Specifications



servo motor BSH, Lexium 05,  
11.1N.m, 1500rpm, 140mm, keyed  
shaft, Sincos single turn, with  
brake, IP65, straight

BSH1401P31F1A

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

**Price\*: 5,388.75 USD**

## Main

<b>Device short name</b>	BSH
<b>Product or Component Type</b>	Servo motor
<b>Maximum mechanical speed</b>	4000 rpm
<b>Continuous stall torque</b>	98.2 lbf.in (11.1 N.m) LXM32.D30N4 10 A, 400 V, three phase 98.2 lbf.in (11.1 N.m) LXM32.D30N4 10 A, 480 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD28N4, 400 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD28N4, 480 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD28N4, 230 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD40N4, 400 V, three phase 98.2 lbf.in (11.1 N.m) LXM15MD40N4, 480 V, three phase 98.2 lbf.in (11.1 N.m) LXM15LD28M3, 230 V, three phase 100.9 lbf.in (11.4 N.m) LXM05AD34N4, 380...480 V, three phase 100.9 lbf.in (11.4 N.m) LXM05BD34N4, 380...480 V, three phase 100.9 lbf.in (11.4 N.m) LXM05CD34N4, 380...480 V, three phase
<b>Peak stall torque</b>	239.0 lbf.in (27 N.m) LXM32.D30N4 10 A, 400 V, three phase 239.0 lbf.in (27 N.m) LXM32.D30N4 10 A, 480 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD28N4, 230 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD28N4, 400 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD28N4, 480 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD40N4, 400 V, three phase 206.49 lbf.in (23.33 N.m) LXM15MD40N4, 480 V, three phase 210.6 lbf.in (23.8 N.m) LXM15LD28M3, 230 V, three phase 206.49 lbf.in (23.33 N.m) LXM05AD34N4, 380...480 V, three phase 206.49 lbf.in (23.33 N.m) LXM05BD34N4, 380...480 V, three phase 206.49 lbf.in (23.33 N.m) LXM05CD34N4, 380...480 V, three phase
<b>Nominal output power</b>	2500 W LXM32.D30N4 10 A, 400 V, three phase 3000 W LXM32.D30N4 10 A, 480 V, three phase 2000 W LXM15MD28N4, 400 V, three phase 2000 W LXM15MD40N4, 400 V, three phase 2200 W LXM05AD34N4, 380...480 V, three phase 2200 W LXM05BD34N4, 380...480 V, three phase 2200 W LXM05CD34N4, 380...480 V, three phase 1400 W LXM15LD28M3, 230 V, three phase 1400 W LXM15MD28N4, 230 V, three phase 2150 W LXM15MD28N4, 480 V, three phase 2150 W LXM15MD40N4, 480 V, three phase
<b>Nominal torque</b>	84.08 lbf.in (9.5 N.m) LXM32.D30N4 10 A, 400 V, three phase 84.08 lbf.in (9.5 N.m) LXM32.D30N4 10 A, 480 V, three phase 60.2 lbf.in (6.8 N.m) LXM15MD28N4, 480 V, three phase 60.2 lbf.in (6.8 N.m) LXM15MD40N4, 480 V, three phase 61.07 lbf.in (6.9 N.m) LXM05AD34N4, 380...480 V, three phase 61.07 lbf.in (6.9 N.m) LXM05BD34N4, 380...480 V, three phase 61.07 lbf.in (6.9 N.m) LXM05CD34N4, 380...480 V, three phase 67.53 lbf.in (7.63 N.m) LXM15MD28N4, 400 V, three phase 67.53 lbf.in (7.63 N.m) LXM15MD40N4, 400 V, three phase 80.5 lbf.in (9.1 N.m) LXM15LD28M3, 230 V, three phase 80.5 lbf.in (9.1 N.m) LXM15MD28N4, 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 speed</b>	2500 rpm LXM32.D30N4 10 A, 400 V, three phase 3000 rpm LXM32.D30N4 10 A, 480 V, three phase 3000 rpm LXM05AD34N4, 380...480 V, three phase 3000 rpm LXM05BD34N4, 380...480 V, three phase 3000 rpm LXM05CD34N4, 380...480 V, three phase 1500 rpm LXM15MD28N4, 230 V, three phase 1500 rpm LXM15LD28M3, 230 V, three phase 2500 rpm LXM15MD28N4, 400 V, three phase 2500 rpm LXM15MD40N4, 400 V, three phase 3000 rpm LXM15MD28N4, 480 V, three phase 3000 rpm LXM15MD40N4, 480 V, three phase
<b>Product compatibility</b>	LXM15LD28M3 230 V three phase LXM05AD34N4 380...480 V three phase LXM05BD34N4 380...480 V three phase LXM05CD34N4 380...480 V three phase LXM15MD28N4 400 V three phase LXM15MD28N4 480 V three phase LXM15MD40N4 400 V three phase LXM15MD40N4 480 V three phase LXM15MD28N4 230 V three phase
<b>Shaft end</b>	Keyed
<b>IP Degree of Protection</b>	IP65 standard IP67 with IP67 kit
<b>Speed feedback resolution</b>	131072 points/turn
<b>Holding brake</b>	With
<b>Mounting Support</b>	International standard flange
<b>Electrical Connection</b>	Straight connectors

## Complementary

<b>Range Compatibility</b>	Lexium 32 Lexium 15 Lexium 05
<b>supply voltage max</b>	480 V
<b>Phase</b>	Three phase
<b>Continuous stall current</b>	7.8 A
<b>maximum continuous power</b>	3.6 W
<b>Maximum current Irms</b>	20.8 A LXM15LD28M3 20.8 A LXM15MD28N4 20.8 A LXM15MD40N4 20.8 A LXM05AD34N4 20.8 A LXM05BD34N4 20.8 A LXM05CD34N4 20.8 A LXM32.D30N4
<b>Maximum permanent current</b>	20.8 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	0.9 in (24 mm)
<b>Shaft length</b>	2.0 in (50 mm)
<b>Key width</b>	1.6 in (40 mm)
<b>Feedback type</b>	Single turn SinCos Hiperface
<b>Holding torque</b>	203.6 lbf.in (23 N.m) holding brake
<b>Motor flange size</b>	5.5 in (140 mm)
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	1.43 N.m/A 248.000000000 °F (120 °C)

<b>Back emf constant</b>	100 V/krpm 248.0000000000 °F (120 °C)
<b>Number of motor poles</b>	10
<b>Rotor inertia</b>	9.21 kg.cm <sup>2</sup>
<b>Stator resistance</b>	1.41 Ohm 68.0000000000 °F (20 °C)
<b>Stator inductance</b>	15.6 mH 68.0000000000 °F (20 °C)
<b>Stator electrical time constant</b>	11.06 ms 68.0000000000 °F (20 °C)
<b>Maximum radial force Fr</b>	1530 N 3000 rpm 1760 N 2000 rpm 2210 N 1000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Brake pull-in power</b>	24 W
<b>Type of cooling</b>	Natural convection
<b>Length</b>	10.06 in (255.5 mm)
<b>Centring collar diameter</b>	5.1 in (130 mm)
<b>Centring collar depth</b>	0.1 in (3.5 mm)
<b>Number of mounting holes</b>	4
<b>Mounting holes diameter</b>	0.4 in (11 mm)
<b>Circle diameter of the mounting holes</b>	6.5 in (165 mm)
<b>Net Weight</b>	28.7 lb(US) (13 kg)

## Ordering and shipping details

<b>Category</b>	US1PC5318282
<b>Discount Schedule</b>	PC53
<b>GTIN</b>	3389118141001
<b>Returnability</b>	No
<b>Country of origin</b>	DE

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	10.6 in (27.0 cm)
<b>Package 1 Width</b>	10.6 in (27.0 cm)
<b>Package 1 Length</b>	19.0 in (48.2 cm)
<b>Package 1 Weight</b>	21.58 lb(US) (9.79 kg)

## Contractual warranty

<b>Warranty</b>	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

**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.

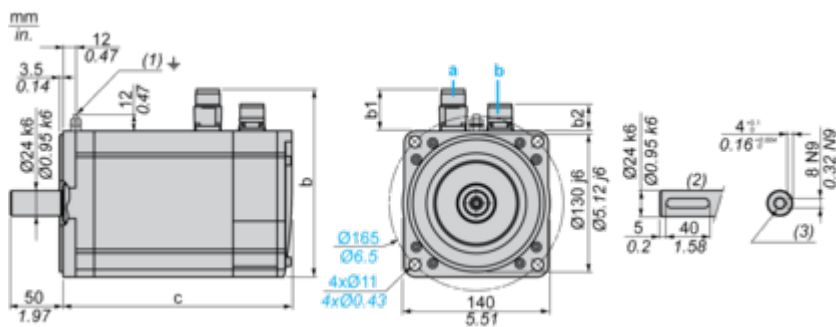
**Circularity Profile** No need of specific recycling operations

**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)
- (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

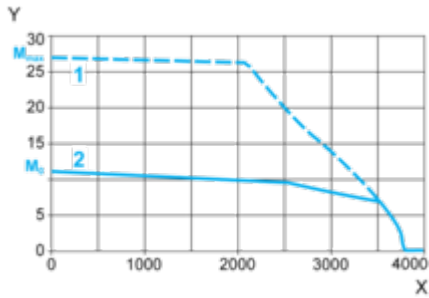
Performance Curves

400 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

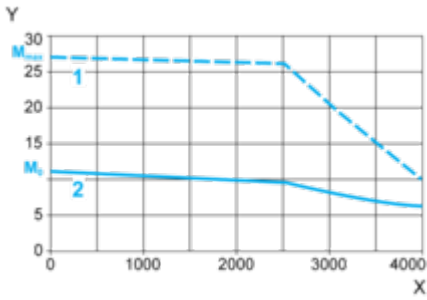
2 Continuous torque

480 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque