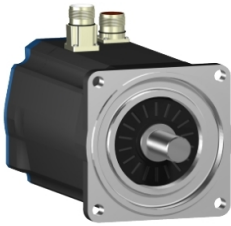


# Product datasheet

Specifications



servo motor BSH, Lexium 05,  
11.1N.m, 1500rpm, 140mm,  
untapped shaft, Sincos multi turn,  
without brake, IP50, straight

BSH1401P02A1A

! Discontinued

! Discontinued on: 30 Jun 2023

## Main

Device short name	BSH
Product or component type	Servo motor
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 at 10 A, 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 at 10 A, 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 at 10 A, 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 at 10 A, 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

<b>Nominal speed</b>	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 at 10 A, 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
<b>Product compatibility</b>	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
<b>Shaft end</b>	Untapped
<b>IP degree of protection</b>	IP50 standard
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	Without
<b>Mounting support</b>	International standard flange
<b>Electrical connection</b>	Straight connectors

## Complementary

<b>Range compatibility</b>	Lexium 32 Lexium 05 Lexium 15
<b>supply voltage max</b>	480 V
<b>Network number of phases</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 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
<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>	24 mm
<b>Shaft length</b>	50 mm
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Motor flange size</b>	140 mm
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	1.43 N.m/A at 120 °C
<b>Back emf constant</b>	100 V/krpm at 120 °C
<b>Number of motor poles</b>	10
<b>Rotor inertia</b>	7.41 kg.cm <sup>2</sup>

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
Sizing reference	BSH1401P
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C

## 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 (in months)	18
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## 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 >](#)

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

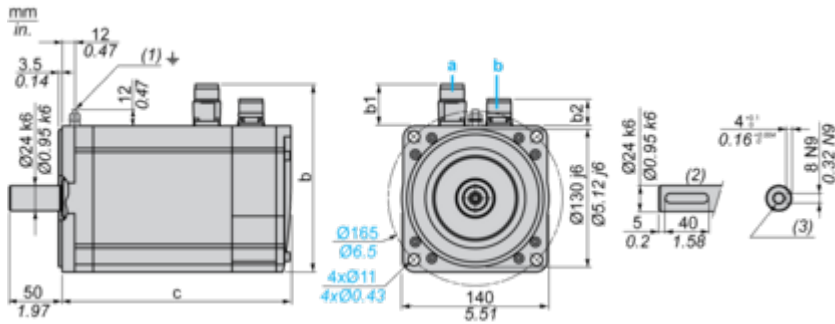
End of life manual availability

No need of specific recycling operations

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

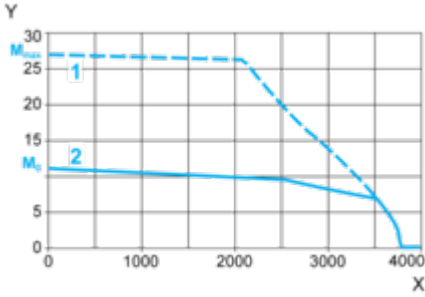
Performance Curves

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

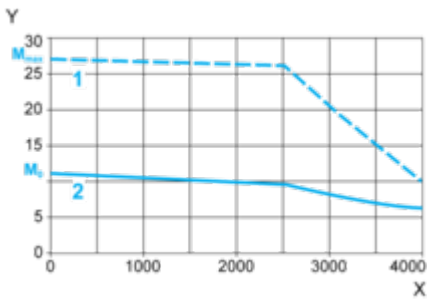
2 Continuous torque

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