

# Product datasheet

Specifications



## AC servo motor BSH - 9.31 N.m - 1500 rpm - keyed shaft - without brake - IP50

BSH1004P11A2A

### 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>	<p>8 N.m for LXM32.D30N4 at 10 A, 400 V, three phase</p> <p>8 N.m for LXM32.D30N4 at 10 A, 480 V, three phase</p> <p>9.31 N.m for LXM15MD40N4, 400 V, three phase</p> <p>9.31 N.m for LXM15MD40N4, 480 V, three phase</p> <p>9.31 N.m for LXM15MD28M3, 230 V, three phase</p> <p>9.31 N.m for LXM15MD28N4, 230 V, three phase</p> <p>9.31 N.m for LXM15MD28N4, 400 V, three phase</p> <p>9.31 N.m for LXM15MD28N4, 480 V, three phase</p> <p>9.31 N.m for LXM15MD40N4, 230 V, three phase</p> <p>9.31 N.m for LXM05AD34N4, 380...480 V, three phase</p> <p>9.31 N.m for LXM05AD42M3X, 200...240 V, three phase</p> <p>9.31 N.m for LXM05AD57N4, 380...480 V, three phase</p> <p>9.31 N.m for LXM05BD34N4, 380...480 V, three phase</p> <p>9.31 N.m for LXM05BD42M3X, 200...240 V, three phase</p> <p>9.31 N.m for LXM05BD57N4, 380...480 V, three phase</p> <p>9.31 N.m for LXM05CD34N4, 380...480 V, three phase</p> <p>9.31 N.m for LXM05CD42M3X, 200...240 V, three phase</p> <p>9.31 N.m for LXM05CD57N4, 380...480 V, three phase</p>
<b>Peak stall torque</b>	<p>37.9 N.m for LXM32.D30N4 at 10 A, 400 V, three phase</p> <p>37.9 N.m for LXM32.D30N4 at 10 A, 480 V, three phase</p> <p>25.7 N.m for LXM15MD28M3, 230 V, three phase</p> <p>25.7 N.m for LXM15MD28N4, 230 V, three phase</p> <p>25.7 N.m for LXM15MD28N4, 400 V, three phase</p> <p>25.7 N.m for LXM15MD28N4, 480 V, three phase</p> <p>33.83 N.m for LXM15MD40N4, 230 V, three phase</p> <p>33.83 N.m for LXM15MD40N4, 400 V, three phase</p> <p>33.83 N.m for LXM15MD40N4, 480 V, three phase</p> <p>23.47 N.m for LXM05AD34N4, 380...480 V, three phase</p> <p>35.7 N.m for LXM05AD42M3X, 200...240 V, three phase</p> <p>35.7 N.m for LXM05AD57N4, 380...480 V, three phase</p> <p>23.47 N.m for LXM05BD34N4, 380...480 V, three phase</p> <p>35.7 N.m for LXM05BD42M3X, 200...240 V, three phase</p> <p>35.7 N.m for LXM05BD57N4, 380...480 V, three phase</p> <p>23.47 N.m for LXM05CD34N4, 380...480 V, three phase</p> <p>35.7 N.m for LXM05CD42M3X, 200...240 V, three phase</p> <p>35.7 N.m for LXM05CD57N4, 380...480 V, three phase</p>
<b>Nominal output power</b>	<p>2600 W for LXM32.D30N4 at 10 A, 480 V, three phase</p> <p>2100 W for LXM32.D30N4 at 10 A, 400 V, three phase</p> <p>1300 W for LXM05AD42M3X, 200...240 V, three phase</p> <p>1300 W for LXM05BD42M3X, 200...240 V, three phase</p> <p>1300 W for LXM05CD42M3X, 200...240 V, three phase</p> <p>1300 W for LXM15MD28M3, 230 V, three phase</p> <p>1300 W for LXM15MD28N4, 230 V, three phase</p> <p>1300 W for LXM15MD40N4, 230 V, three phase</p> <p>2200 W for LXM05AD34N4, 380...480 V, three phase</p> <p>2200 W for LXM05AD57N4, 380...480 V, three phase</p> <p>2200 W for LXM05BD34N4, 380...480 V, three phase</p> <p>2200 W for LXM05BD57N4, 380...480 V, three phase</p> <p>2200 W for LXM05CD34N4, 380...480 V, three phase</p> <p>2200 W for LXM05CD57N4, 380...480 V, three phase</p> <p>2200 W for LXM15MD28N4, 400 V, three phase</p> <p>2300 W for LXM15MD40N4, 400 V, three phase</p> <p>2400 W for LXM15MD40N4, 480 V, three phase</p>

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 torque</b>	8.3 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 8.3 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 6.5 N.m for LXM15MD28N4, 480 V, three phase 6.69 N.m for LXM15MD40N4, 480 V, three phase 7 N.m for LXM15MD28N4, 400 V, three phase 7.1 N.m for LXM05AD34N4, 380...480 V, three phase 7.1 N.m for LXM05AD57N4, 380...480 V, three phase 7.1 N.m for LXM05BD34N4, 380...480 V, three phase 7.1 N.m for LXM05BD57N4, 380...480 V, three phase 7.1 N.m for LXM05CD34N4, 380...480 V, three phase 7.1 N.m for LXM05CD57N4, 380...480 V, three phase 7.17 N.m for LXM15MD40N4, 400 V, three phase 8.18 N.m for LXM15MD40N4, 230 V, three phase 8.22 N.m for LXM05AD42M3X, 200...240 V, three phase 8.22 N.m for LXM05BD42M3X, 200...240 V, three phase 8.22 N.m for LXM05CD42M3X, 200...240 V, three phase 8.22 N.m for LXM15LD28M3, 230 V, three phase 8.22 N.m for LXM15MD28N4, 230 V, three phase
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<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 1500 rpm for LXM05AD42M3X, 200...240 V, three phase 1500 rpm for LXM05BD42M3X, 200...240 V, three phase 1500 rpm for LXM05CD42M3X, 200...240 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 LXM15MD28M3, 230 V, three phase 1500 rpm for LXM15MD28N4, 230 V, three phase 1500 rpm for LXM15MD40N4, 230 V, three phase 3000 rpm for LXM05AD57N4, 380...480 V, three phase 3000 rpm for LXM05BD57N4, 380...480 V, three phase 3000 rpm for LXM05CD57N4, 380...480 V, three phase 3000 rpm for LXM15MD28N4, 400 V, three phase 3000 rpm for LXM15MD40N4, 400 V, three phase 3500 rpm for LXM15MD40N4, 480 V, three phase 4000 rpm for LXM15MD28N4, 480 V, three phase
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<b>Product compatibility</b>	LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 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 LXM32.D30N4 at 400 V three phase LXM32.D30N4 at 480 V three phase LXM05AD57N4 at 380...480 V three phase LXM05BD57N4 at 380...480 V three phase LXM05CD57N4 at 380...480 V three phase LXM15MD28M3 at 230 V three phase LXM15MD28N4 at 230 V three phase LXM15MD40N4 at 230 V three phase
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<b>Shaft end</b>	Keyed
<b>IP degree of protection</b>	IP50 standard
<b>Speed feedback resolution</b>	131072 points/turn
<b>Holding brake</b>	Without
<b>Mounting support</b>	International standard flange
<b>Electrical connection</b>	Rotatable right-angled connectors

## Complementary

<b>Range compatibility</b>	Lexium 15 Lexium 32 Lexium 05
<b>Supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	6.2 A
<b>Maximum continuous power</b>	3.64 W
<b>Maximum current Irms</b>	34.8 A for LXM15LD28M3 34.8 A for LXM15MD28N4 34.8 A for LXM15MD40N4 32.3 A for LXM05AD42M3X

32.3 A for LXM05AD34N4  
 32.3 A for LXM05AD57N4  
 32.3 A for LXM05BD42M3X  
 32.3 A for LXM05BD34N4  
 32.3 A for LXM05BD57N4  
 32.3 A for LXM05CD42M3X  
 32.3 A for LXM05CD34N4  
 32.3 A for LXM05CD57N4  
 30 A for LXM32.D30N4

<b>Maximum permanent current</b>	32.3 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>Key width</b>	40 mm
<b>Feedback type</b>	Single turn SinCos Hiperface
<b>Motor flange size</b>	100 mm
<b>Number of motor stacks</b>	4
<b>Torque constant</b>	1.62 N.m/A at 120 °C
<b>Back emf constant</b>	103 V/krpm at 120 °C
<b>Number of motor poles</b>	8
<b>Rotor inertia</b>	4.22 kg.cm <sup>2</sup>
<b>Stator resistance</b>	1.81 Ohm at 20 °C
<b>Stator inductance</b>	11.8 mH at 20 °C
<b>Stator electrical time constant</b>	6.52 ms at 20 °C
<b>Maximum radial force Fr</b>	1070 N at 1000 rpm 740 N at 3000 rpm 850 N at 2000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Type of cooling</b>	Natural convection
<b>Length</b>	276.5 mm
<b>Centring collar diameter</b>	95 mm
<b>Centring collar depth</b>	3.5 mm
<b>Number of mounting holes</b>	4
<b>Mounting holes diameter</b>	9 mm
<b>Circle diameter of the mounting holes</b>	115 mm
<b>Net weight</b>	9.5 kg

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	20.0 cm
<b>Package 1 Width</b>	26.0 cm
<b>Package 1 Length</b>	59.0 cm
<b>Package 1 Weight</b>	10.779 kg
<b>Unit Type of Package 2</b>	P06
<b>Number of Units in Package 2</b>	8
<b>Package 2 Height</b>	77.0 cm

Package 2 Width	60.0 cm
Package 2 Length	80.0 cm
Package 2 Weight	94.732 kg

## Offer Sustainability

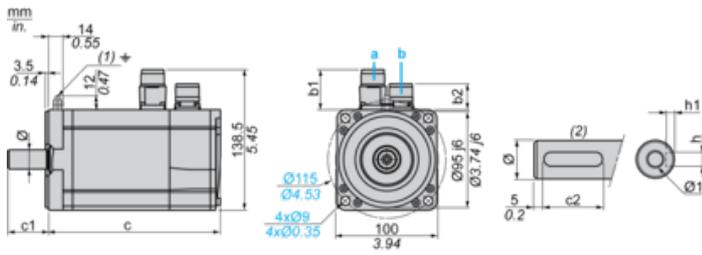
Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
China RoHS Regulation	<a href="#">China RoHS declaration</a>
RoHS exemption information	<a href="#">Yes</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
PVC free	Yes

## Contractual warranty

Warranty	18 months
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**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 cc		c (without bra	c (with bra	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
39.5	25.5	39.5	39.5	277	308	50	40	8 N9	4 <sup>+0.1</sup> <sub>0</sub>	24 k6	M8 x 19

Dimensions in in.

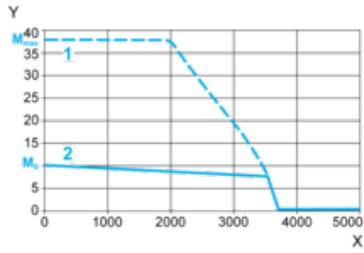
Straight connector		Rotatable angled cc		c (without bra	c (with bra	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	10.90	12.12	1.96	1.57	0.31 N9	0.16 <sup>+0.1</sup> <sub>0</sub>	0.94 k6	M8 x 0.75

**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

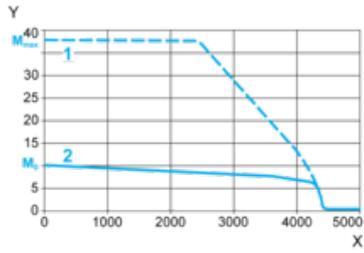
2 Continuous torque

**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

**Recommended replacement(s)**