

# BSH1004P31A2A

AC servo motor BSH - 9.31 N.m - 1500 rpm -  
keyed shaft - without brake - IP65



## Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	6000 rpm
Continuous stall torque	<p>8 N.m for LXM32.D30N4 10 A at 400 V three phase</p> <p>8 N.m for LXM32.D30N4 10 A at 480 V three phase</p> <p>9.31 N.m for LXM15MD40N4 at 400 V three phase</p> <p>9.31 N.m for LXM15MD40N4 at 480 V three phase</p> <p>9.31 N.m for LXM15MD28M3 at 230 V three phase</p> <p>9.31 N.m for LXM15MD28N4 at 230 V three phase</p> <p>9.31 N.m for LXM15MD28N4 at 400 V three phase</p> <p>9.31 N.m for LXM15MD28N4 at 480 V three phase</p> <p>9.31 N.m for LXM15MD40N4 at 230 V three phase</p> <p>9.31 N.m for LXM05AD34N4 at 380...480 V three phase</p> <p>9.31 N.m for LXM05AD42M3X at 200...240 V three phase</p> <p>9.31 N.m for LXM05AD57N4 at 380...480 V three phase</p> <p>9.31 N.m for LXM05BD34N4 at 380...480 V three phase</p> <p>9.31 N.m for LXM05BD42M3X at 200...240 V three phase</p> <p>9.31 N.m for LXM05BD57N4 at 380...480 V three phase</p> <p>9.31 N.m for LXM05CD34N4 at 380...480 V three phase</p> <p>9.31 N.m for LXM05CD42M3X at 200...240 V three phase</p> <p>9.31 N.m for LXM05CD57N4 at 380...480 V three phase</p>
Peak stall torque	<p>37.9 N.m for LXM32.D30N4 10 A at 480 V three phase</p> <p>37.9 N.m for LXM32.D30N4 10 A at 400 V three phase</p> <p>25.7 N.m for LXM15MD28M3 at 230 V three phase</p> <p>25.7 N.m for LXM15MD28N4 at 230 V three phase</p> <p>25.7 N.m for LXM15MD28N4 at 400 V three phase</p> <p>25.7 N.m for LXM15MD28N4 at 480 V three phase</p> <p>33.83 N.m for LXM15MD40N4 at 230 V three phase</p> <p>33.83 N.m for LXM15MD40N4 at 400 V three phase</p> <p>33.83 N.m for LXM15MD40N4 at 480 V three phase</p> <p>23.47 N.m for LXM05AD34N4 at 380...480 V three phase</p> <p>35.7 N.m for LXM05AD42M3X at 200...240 V three phase</p> <p>35.7 N.m for LXM05AD57N4 at 380...480 V three phase</p> <p>23.47 N.m for LXM05BD34N4 at 380...480 V three phase</p> <p>35.7 N.m for LXM05BD42M3X at 200...240 V three phase</p> <p>35.7 N.m for LXM05BD57N4 at 380...480 V three phase</p> <p>23.47 N.m for LXM05CD34N4 at 380...480 V three phase</p> <p>35.7 N.m for LXM05CD42M3X at 200...240 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

35.7 N.m for LXM05CD57N4 at 380...480 V three phase

Nominal output power

2600 W for LXM32.D30N4 10 A at 480 V three phase  
2100 W for LXM32.D30N4 10 A at 400 V three phase  
1300 W for LXM05AD42M3X at 200...240 V three phase  
1300 W for LXM05BD42M3X at 200...240 V three phase  
1300 W for LXM05CD42M3X at 200...240 V three phase  
1300 W for LXM15MD28M3 at 230 V three phase  
1300 W for LXM15MD28N4 at 230 V three phase  
1300 W for LXM15MD40N4 at 230 V three phase  
2200 W for LXM05AD34N4 at 380...480 V three phase  
2200 W for LXM05AD57N4 at 380...480 V three phase  
2200 W for LXM05BD34N4 at 380...480 V three phase  
2200 W for LXM05BD57N4 at 380...480 V three phase  
2200 W for LXM05CD34N4 at 380...480 V three phase  
2200 W for LXM05CD57N4 at 380...480 V three phase  
2200 W for LXM15MD28N4 at 400 V three phase  
2300 W for LXM15MD40N4 at 400 V three phase  
2400 W for LXM15MD40N4 at 480 V three phase  
2700 W for LXM15MD28N4 at 480 V three phase

Nominal torque

8.3 N.m for LXM32.D30N4 10 A at 400 V three phase  
8.3 N.m for LXM32.D30N4 10 A at 480 V three phase  
6.5 N.m for LXM15MD28N4 at 480 V three phase  
6.69 N.m for LXM15MD40N4 at 480 V three phase  
7 N.m for LXM15MD28N4 at 400 V three phase  
7.1 N.m for LXM05AD34N4 at 380...480 V three phase  
7.1 N.m for LXM05AD57N4 at 380...480 V three phase  
7.1 N.m for LXM05BD34N4 at 380...480 V three phase  
7.1 N.m for LXM05BD57N4 at 380...480 V three phase  
7.1 N.m for LXM05CD34N4 at 380...480 V three phase  
7.1 N.m for LXM05CD57N4 at 380...480 V three phase  
7.17 N.m for LXM15MD40N4 at 400 V three phase  
8.18 N.m for LXM15MD40N4 at 230 V three phase  
8.22 N.m for LXM05AD42M3X at 200...240 V three phase  
8.22 N.m for LXM05BD42M3X at 200...240 V three phase  
8.22 N.m for LXM05CD42M3X at 200...240 V three phase  
8.22 N.m for LXM15LD28M3 at 230 V three phase  
8.22 N.m for LXM15MD28N4 at 230 V three phase

Nominal speed

3000 rpm for LXM32.D30N4 10 A at 480 V three phase  
2500 rpm for LXM32.D30N4 10 A at 400 V three phase  
1500 rpm for LXM05AD42M3X at 200...240 V three phase  
1500 rpm for LXM05BD42M3X at 200...240 V three phase  
1500 rpm for LXM05CD42M3X at 200...240 V three phase  
3000 rpm for LXM05AD34N4 at 380...480 V three phase  
3000 rpm for LXM05BD34N4 at 380...480 V three phase  
3000 rpm for LXM05CD34N4 at 380...480 V three phase  
1500 rpm for LXM15MD28M3 at 230 V three phase  
1500 rpm for LXM15MD28N4 at 230 V three phase  
1500 rpm for LXM15MD40N4 at 230 V three phase  
3000 rpm for LXM05AD57N4 at 380...480 V three phase  
3000 rpm for LXM05BD57N4 at 380...480 V three phase  
3000 rpm for LXM05CD57N4 at 380...480 V three phase  
3000 rpm for LXM15MD28N4 at 400 V three phase  
3000 rpm for LXM15MD40N4 at 400 V three phase  
3500 rpm for LXM15MD40N4 at 480 V three phase  
4000 rpm for LXM15MD28N4 at 480 V three phase

Product compatibility

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

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 05 Lexium 15 Lexium 32
Supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	6.2 A
Maximum continuous power	3.64 W
Maximum current Irms	32.3 A for LXM05AD34N4 32.3 A for LXM05AD42M3X 32.3 A for LXM05AD57N4 32.3 A for LXM05BD34N4 32.3 A for LXM05BD42M3X 32.3 A for LXM05BD57N4 32.3 A for LXM05CD34N4 32.3 A for LXM05CD42M3X 32.3 A for LXM05CD57N4 34.8 A for LXM15LD28M3 34.8 A for LXM15MD28N4 34.8 A for LXM15MD40N4 30 A for LXM32.D30N4
Maximum permanent current	32.3 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	100 mm
Number of motor stacks	4
Torque constant	1.62 N.m/A at 120 °C
Back emf constant	103 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	4.22 kg.cm <sup>2</sup>
Stator resistance	1.81 Ohm at 20 °C
Stator inductance	11.8 mH at 20 °C
Stator electrical time constant	6.52 ms at 20 °C
Maximum radial force Fr	1070 N at 1000 rpm 740 N at 3000 rpm 850 N at 2000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	276.5 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
Product weight	9.5 kg

## Offer Sustainability

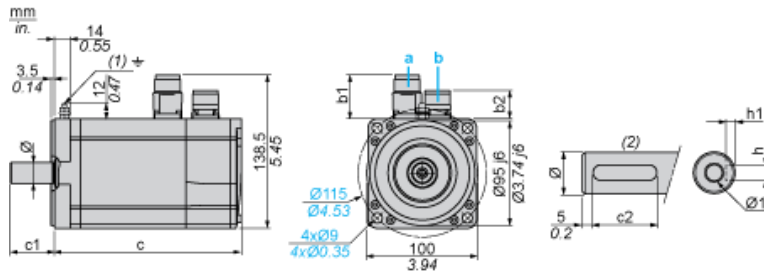
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold <a href="#">Reference not containing SVHC above the threshold</a>
Product environmental profile	Available
Product end of life instructions	Need no specific recycling operations

## Contractual warranty

Warranty period	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 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	277	308	50	40	8 N9	4 <sup>+0.1</sup> <sub>0</sub>	24 k6	M8 x 19		

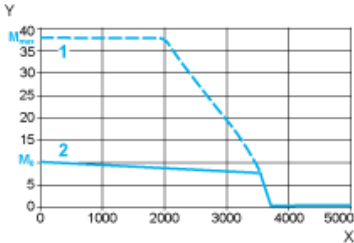
Dimensions in in.

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	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

Torque/Speed Curves

Servo motor with LXM32-D30N4 servo drive



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

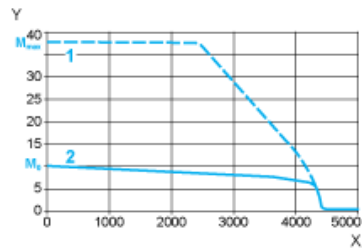
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480 V 3-Phase Supply Voltage

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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