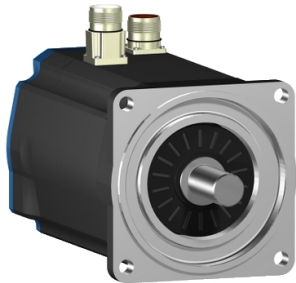


Product data sheet

Specifications



servo motor BSH, Lexium 05,
9.31N.m, 1500rpm, 100mm, keyed
shaft, Sincos single turn, with brake,
IP65, straight

BSH1004P31F1A

⚠ Discontinued

⚠ Discontinued on: Jun 30, 2023

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

Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	<p>70.8 lbf.in (8 N.m) LXM32.D30N4 10 A, 400 V, three phase</p> <p>70.8 lbf.in (8 N.m) LXM32.D30N4 10 A, 480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD40N4, 400 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD40N4, 480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD28M3, 230 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD28N4, 230 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD28N4, 400 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD28N4, 480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM15MD40N4, 230 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05AD34N4, 380...480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05AD42M3X 10 A, 200...240 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05AD57N4, 380...480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05BD34N4, 380...480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05BD42M3X, 200...240 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05BD57N4, 380...480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05CD34N4, 380...480 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05CD42M3X, 200...240 V, three phase</p> <p>82.40 lbf.in (9.31 N.m) LXM05CD57N4, 380...480 V, three phase</p>
Peak stall torque	<p>335.4 lbf.in (37.9 N.m) LXM32.D30N4 10 A, 400 V, three phase</p> <p>335.4 lbf.in (37.9 N.m) LXM32.D30N4 10 A, 480 V, three phase</p> <p>227.5 lbf.in (25.7 N.m) LXM15MD28M3, 230 V, three phase</p> <p>227.5 lbf.in (25.7 N.m) LXM15MD28N4, 230 V, three phase</p> <p>227.5 lbf.in (25.7 N.m) LXM15MD28N4, 400 V, three phase</p> <p>227.5 lbf.in (25.7 N.m) LXM15MD28N4, 480 V, three phase</p> <p>299.42 lbf.in (33.83 N.m) LXM15MD40N4, 230 V, three phase</p> <p>299.42 lbf.in (33.83 N.m) LXM15MD40N4, 400 V, three phase</p> <p>299.42 lbf.in (33.83 N.m) LXM15MD40N4, 480 V, three phase</p> <p>207.73 lbf.in (23.47 N.m) LXM05AD34N4, 380...480 V, three phase</p> <p>316.0 lbf.in (35.7 N.m) LXM05AD42M3X 10 A, 200...240 V, three phase</p> <p>316.0 lbf.in (35.7 N.m) LXM05AD57N4, 380...480 V, three phase</p> <p>207.73 lbf.in (23.47 N.m) LXM05BD34N4, 380...480 V, three phase</p> <p>316.0 lbf.in (35.7 N.m) LXM05BD42M3X, 200...240 V, three phase</p> <p>316.0 lbf.in (35.7 N.m) LXM05BD57N4, 380...480 V, three phase</p> <p>207.73 lbf.in (23.47 N.m) LXM05CD34N4, 380...480 V, three phase</p> <p>316.0 lbf.in (35.7 N.m) LXM05CD42M3X, 200...240 V, three phase</p> <p>316.0 lbf.in (35.7 N.m) LXM05CD57N4, 380...480 V, three phase</p>

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

IP Degree of Protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	With
Mounting Support	International standard flange
Electrical Connection	Straight connectors

Complementary

Range Compatibility	Lexium 32 Lexium 15 Lexium 05
supply voltage max	480 V
Phase	Three phase
Continuous stall current	6.2 A
maximum continuous power	3.64 W
Maximum current Irms	34.8 A LXM15LD28M3 34.8 A LXM15MD28N4 34.8 A LXM15MD40N4 32.3 A LXM05AD42M3X 32.3 A LXM05AD34N4 32.3 A LXM05AD57N4 32.3 A LXM05BD42M3X 32.3 A LXM05BD34N4 32.3 A LXM05BD57N4 32.3 A LXM05CD42M3X 32.3 A LXM05CD34N4 32.3 A LXM05CD57N4 30 A LXM32.D30N4
Maximum permanent current	32.3 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.9 in (24 mm)
Shaft length	2.0 in (50 mm)
Key width	1.6 in (40 mm)
Feedback type	Single turn SinCos Hiperface
Holding torque	106.2 lbf.in (12 N.m) holding brake
Motor flange size	3.9 in (100 mm)
Number of motor stacks	4
Torque constant	1.62 N.m/A 248 °F (120 °C)
Back emf constant	103 V/krpm 248 °F (120 °C)
Number of motor poles	8
Rotor inertia	5.245 kg.cm ²
Stator resistance	1.81 Ohm 68 °F (20 °C)
Stator inductance	11.8 mH 68 °F (20 °C)
Stator electrical time constant	6.52 ms 68 °F (20 °C)
Maximum radial force Fr	1070 N 1000 rpm 740 N 3000 rpm 850 N 2000 rpm
Maximum axial force Fa	0.2 x Fr

Brake pull-in power	17 W
Type of cooling	Natural convection
Length	12.1 in (307.5 mm)
Centring collar diameter	3.7 in (95 mm)
Centring collar depth	0.1 in (3.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.4 in (9 mm)
Circle diameter of the mounting holes	4.5 in (115 mm)
Net Weight	21.8 lb(US) (9.9 kg)
Sizing reference	BSH1004P
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	248 °F (120 °C)
Temperature magnet hot	212 °F (100 °C)
Temperature magnet rt	68 °F (20 °C)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118140622
Returnability	No

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	7.2 in (18.3 cm)
Package 1 Width	6.4 in (16.3 cm)
Package 1 Length	19.4 in (49.2 cm)
Package weight(Lbs)	17.97 lb(US) (8.15 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 Better

Materials and Substances

[EU RoHS Directive](#)

Pro-active compliance (Product out of EU RoHS legal scope)

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

Use Longer

Lifetime extension

Repair

No

Use Again

Repack and remanufacture

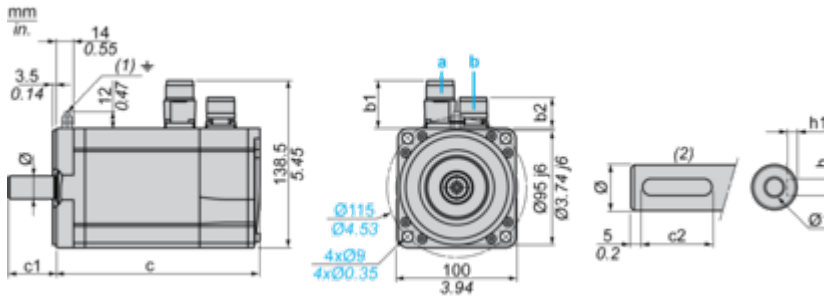
Circularity Profile

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)

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 ^{+0.1} ₀	24 k6	M8 x 19

Dimensions in in.

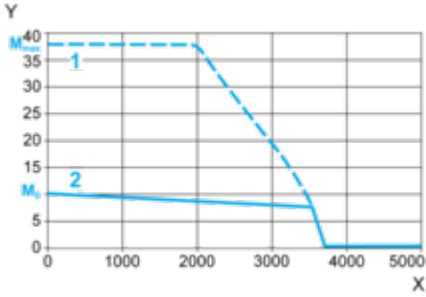
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	10.90	12.12	1.96	1.57	0.31 N9	0.16 ^{+0.1} ₀	0.94 k6	M8 x 0.75

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

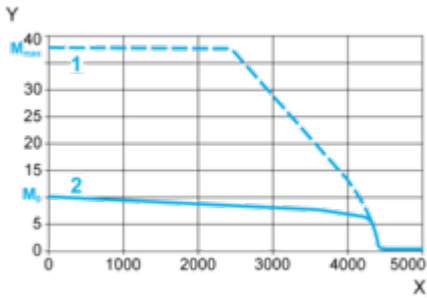
1 Peak torque

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