Product data sheet

Specifications

AC servo motor BSH, Lexium 05, 9.31N.m, 1500rpm, keyed shaft, with brake, IP65

BSH1004P31F2A

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

Price*: 5,388.75 USD

Main

Product Or Component Type	Servo motor
Device Short Name	BSH
Maximum Mechanical Speed	6000 rpm
Continuous Stall Torque	70.81 lbf.in (8 N.m) LXM32.D30N4 10 A, 400 V, three phase 70.81 lbf.in (8 N.m) LXM32.D30N4 10 A, 480 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD40N4, 400 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD40N4, 480 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD28M3, 230 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD28N4, 230 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD28N4, 400 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD28N4, 480 V, three phase 82.40 lbf.in (9.31 N.m) LXM15MD40N4, 230 V, three phase 82.40 lbf.in (9.31 N.m) LXM05AD34N4, 380...480 V, three phase 82.40 lbf.in (9.31 N.m) LXM05AD42M3X, 200...240 V, three phase 82.40 lbf.in (9.31 N.m) LXM05AD57N4, 380...480 V, three phase 82.40 lbf.in (9.31 N.m) LXM05BD34N4, 380...480 V, three phase 82.40 lbf.in (9.31 N.m) LXM05BD42M3X, 200...240 V, three phase 82.40 lbf.in (9.31 N.m) LXM05BD57N4, 380...480 V, three phase 82.40 lbf.in (9.31 N.m) LXM05CD34N4, 380...480 V, three phase 82.40 lbf.in (9.31 N.m) LXM05CD42M3X, 200...240 V, three phase 82.40 lbf.in (9.31 N.m) LXM05CD57N4, 380...480 V, three phase
Peak Stall Torque	335.44 lbf.in (37.9 N.m) LXM32.D30N4 10 A, 400 V, three phase 335.44 lbf.in (37.9 N.m) LXM32.D30N4 10 A, 480 V, three phase 227.46 lbf.in (25.7 N.m) LXM15MD28M3, 230 V, three phase 227.46 lbf.in (25.7 N.m) LXM15MD28N4, 230 V, three phase 227.46 lbf.in (25.7 N.m) LXM15MD28N4, 400 V, three phase 227.46 lbf.in (25.7 N.m) LXM15MD28N4, 480 V, three phase 299.42 lbf.in (33.83 N.m) LXM15MD40N4, 230 V, three phase 299.42 lbf.in (33.83 N.m) LXM15MD40N4, 400 V, three phase 299.42 lbf.in (33.83 N.m) LXM15MD40N4, 480 V, three phase 207.73 lbf.in (23.47 N.m) LXM05AD34N4, 380...480 V, three phase 315.97 lbf.in (35.7 N.m) LXM05AD42M3X, 200...240 V, three phase 315.97 lbf.in (35.7 N.m) LXM05AD57N4, 380...480 V, three phase 207.73 lbf.in (23.47 N.m) LXM05BD34N4, 380...480 V, three phase 315.97 lbf.in (35.7 N.m) LXM05BD42M3X, 200...240 V, three phase 315.97 lbf.in (35.7 N.m) LXM05BD57N4, 380...480 V, three phase 207.73 lbf.in (23.47 N.m) LXM05CD34N4, 380...480 V, three phase 315.97 lbf.in (35.7 N.m) LXM05CD42M3X, 200...240 V, three phase 315.97 lbf.in (35.7 N.m) LXM05CD57N4, 380...480 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

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

Nominal Output Power	2600 W LXM32.D30N4 10 A, 480 V, three phase 2100 W LXM32.D30N4 10 A, 400 V, three phase 1300 W LXM05AD42M3X, 200...240 V, three phase 1300 W LXM05BD42M3X, 200...240 V, three phase 1300 W LXM05CD42M3X, 200...240 V, three phase 1300 W LXM15MD28M3, 230 V, three phase 1300 W LXM15MD28N4, 230 V, three phase 1300 W LXM15MD40N4, 230 V, three phase 2200 W LXM05AD34N4, 380...480 V, three phase 2200 W LXM05AD57N4, 380...480 V, three phase 2200 W LXM05BD34N4, 380...480 V, three phase 2200 W LXM05BD57N4, 380...480 V, three phase 2200 W LXM05CD34N4, 380...480 V, three phase 2200 W LXM05CD57N4, 380...480 V, three phase 2200 W LXM15MD28N4, 400 V, three phase 2300 W LXM15MD40N4, 400 V, three phase 2400 W LXM15MD40N4, 480 V, three phase 2700 W LXM15MD28N4, 480 V, three phase
Nominal Torque	73.46 lbf.in (8.3 N.m) LXM32.D30N4 10 A, 400 V, three phase 73.46 lbf.in (8.3 N.m) LXM32.D30N4 10 A, 480 V, three phase 57.53 lbf.in (6.5 N.m) LXM15MD28N4, 480 V, three phase 59.21 lbf.in (6.69 N.m) LXM15MD40N4, 480 V, three phase 61.96 lbf.in (7 N.m) LXM15MD28N4, 400 V, three phase 62.84 lbf.in (7.1 N.m) LXM05AD34N4, 380...480 V, three phase 62.84 lbf.in (7.1 N.m) LXM05AD57N4, 380...480 V, three phase 62.84 lbf.in (7.1 N.m) LXM05BD34N4, 380...480 V, three phase 62.84 lbf.in (7.1 N.m) LXM05BD57N4, 380...480 V, three phase 62.84 lbf.in (7.1 N.m) LXM05CD34N4, 380...480 V, three phase 62.84 lbf.in (7.1 N.m) LXM05CD57N4, 380...480 V, three phase 63.46 lbf.in (7.17 N.m) LXM15MD40N4, 400 V, three phase 72.40 lbf.in (8.18 N.m) LXM15MD40N4, 230 V, three phase 72.75 lbf.in (8.22 N.m) LXM05AD42M3X, 200...240 V, three phase 72.75 lbf.in (8.22 N.m) LXM05BD42M3X, 200...240 V, three phase 72.75 lbf.in (8.22 N.m) LXM05CD42M3X, 200...240 V, three phase 72.75 lbf.in (8.22 N.m) LXM15LD28M3, 230 V, three phase 72.75 lbf.in (8.22 N.m) LXM15MD28N4, 230 V, three phase
Nominal Speed	2500 rpm LXM32.D30N4 10 A, 400 V, three phase 3000 rpm LXM32.D30N4 10 A, 480 V, three phase 1500 rpm LXM05AD42M3X, 200...240 V, three phase 1500 rpm LXM05BD42M3X, 200...240 V, three phase 1500 rpm LXM05CD42M3X, 200...240 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 LXM15MD28M3, 230 V, three phase 1500 rpm LXM15MD28N4, 230 V, three phase 1500 rpm LXM15MD40N4, 230 V, three phase 3000 rpm LXM05AD57N4, 380...480 V, three phase 3000 rpm LXM05BD57N4, 380...480 V, three phase 3000 rpm LXM05CD57N4, 380...480 V, three phase 3000 rpm LXM15MD28N4, 400 V, three phase 3000 rpm LXM15MD40N4, 400 V, three phase 3500 rpm LXM15MD40N4, 480 V, three phase 4000 rpm LXM15MD28N4, 480 V, three phase
Product Compatibility	LXM05AD42M3X 200...240 V three phase LXM05BD42M3X 200...240 V three phase LXM05CD42M3X 200...240 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 LXM32.D30N4 400 V three phase LXM32.D30N4 480 V three phase LXM05AD57N4 380...480 V three phase LXM05BD57N4 380...480 V three phase LXM05CD57N4 380...480 V three phase LXM15MD28M3 230 V three phase LXM15MD28N4 230 V three phase LXM15MD40N4 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	With
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

Complementary

Range Compatibility	Lexium 15 Lexium 32 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	0.94 in (24 mm)
Shaft Length	1.97 in (50 mm)
Key Width	1.57 in (40 mm)
Feedback Type	Single turn SinCos Hiperface
Holding Torque	106.21 lbf.in (12 N.m) holding brake
Motor Flange Size	3.94 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.cm²
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	12.11 in (307.5 mm)
Centring Collar Diameter	3.74 in (95 mm)
Centring Collar Depth	0.14 in (3.5 mm)
Number Of Mounting Holes	4
Mounting Holes Diameter	0.35 in (9 mm)
Circle Diameter Of The Mounting Holes	4.53 in (115 mm)
Net Weight	21.83 lb(US) (9.9 kg)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
Gtin	3389118140639
Returnability	No
Country Of Origin	DE

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	7.20 in (18.3 cm)
Package 1 Width	6.42 in (16.3 cm)
Package 1 Length	19.37 in (49.2 cm)
Package 1 Weight	17.97 lb(US) (8.15 kg)

Contractual warranty

Warranty	18 months

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_2 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	

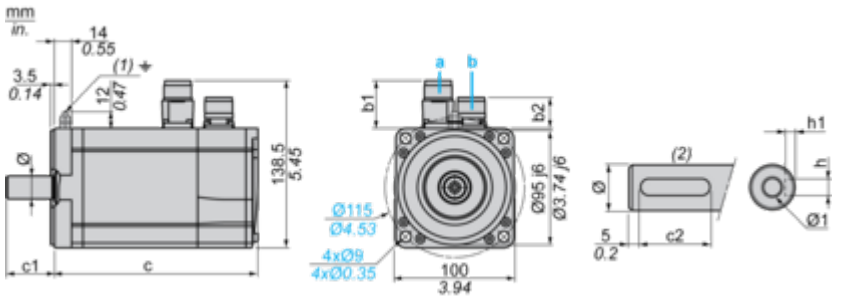
Certifications & Standards

Reach Regulation	REACh Declaration
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

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.

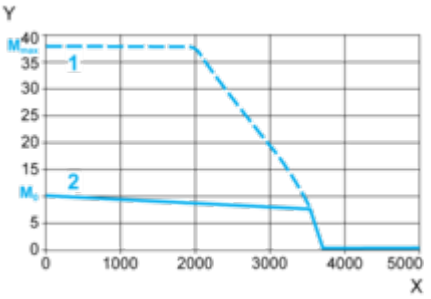
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	10.90	12.12	1.96	1.57	0.31 N9	$0.16^{+0.1}_{0}$	0.94 k6	M8 x 0.75

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive

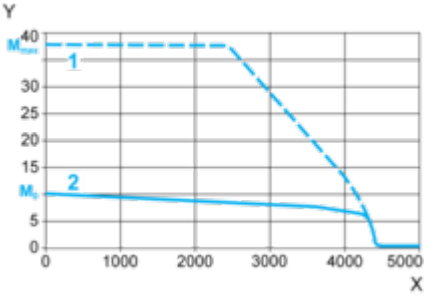


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

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