

Product data sheet

Specifications



AC servo motor BSH, Lexium 05, 0.5N.m, 8000rpm, untapped shaft, with brake, IP65

BSH0551T21F2A

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

Price*: 2,508.75 USD

Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	<p>4.4 lbf.in (0.5 N.m) LXM32.U90M2 3 A, 115 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM32.U45M2 1.5 A, 230 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05CU70M2, 200...240 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05AD10F1, 110...120 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05BD10F1, 110...120 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05CD10F1, 110...120 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>4.4 lbf.in (0.5 N.m) LXM15LD13M3, 230 V, three phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>4.4 lbf.in (0.5 N.m) LXM05CD10M3X, 200...240 V, three phase</p>
Peak stall torque	<p>13.3 lbf.in (1.5 N.m) LXM32.U90M2 3 A, 115 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM32.U45M2 1.5 A, 230 V, single phase</p> <p>9.56 lbf.in (1.08 N.m) LXM05CU70M2, 200...240 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05AD10F1, 110...120 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05BD10F1, 110...120 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05CD10F1, 110...120 V, single phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>10.97 lbf.in (1.24 N.m) LXM15LD13M3, 230 V, three phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>12.4 lbf.in (1.4 N.m) LXM05CD10M3X, 200...240 V, three phase</p>
Nominal output power	<p>150 W LXM32.U90M2 3 A, 115 V, single phase</p> <p>300 W LXM32.U45M2 1.5 A, 230 V, single phase</p> <p>150 W LXM05AD10F1, 110...120 V, single phase</p> <p>150 W LXM05BD10F1, 110...120 V, single phase</p> <p>150 W LXM05CD10F1, 110...120 V, single phase</p> <p>150 W LXM05CU70M2, 200...240 V, single phase</p> <p>270 W LXM05AD10M2, 200...240 V, single phase</p> <p>270 W LXM05BD10M2, 200...240 V, single phase</p> <p>270 W LXM05CD10M2, 200...240 V, single phase</p> <p>270 W LXM05AD10M3X, 200...240 V, three phase</p> <p>270 W LXM05BD10M3X, 200...240 V, three phase</p> <p>270 W LXM05CD10M3X, 200...240 V, three phase</p> <p>340 W LXM15LD13M3, 230 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.

Nominal torque	4.34 lbf.in (0.49 N.m) LXM32.U90M2 3 A, 115 V, single phase 3.98 lbf.in (0.45 N.m) LXM32.U45M2 1.5 A, 230 V, single phase 3.81 lbf.in (0.43 N.m) LXM05AD10M2, 200...240 V, single phase 3.81 lbf.in (0.43 N.m) LXM05BD10M2, 200...240 V, single phase 3.81 lbf.in (0.43 N.m) LXM05CD10M2, 200...240 V, single phase 4.07 lbf.in (0.46 N.m) LXM05AD10F1, 110...120 V, single phase 4.07 lbf.in (0.46 N.m) LXM05BD10F1, 110...120 V, single phase 4.07 lbf.in (0.46 N.m) LXM05CD10F1, 110...120 V, single phase 4.07 lbf.in (0.46 N.m) LXM05CU70M2, 200...240 V, single phase 3.63 lbf.in (0.41 N.m) LXM15LD13M3, 230 V, three phase 3.81 lbf.in (0.43 N.m) LXM05AD10M3X, 200...240 V, three phase 3.81 lbf.in (0.43 N.m) LXM05BD10M3X, 200...240 V, three phase 3.81 lbf.in (0.43 N.m) LXM05CD10M3X, 200...240 V, three phase
Nominal speed	3000 rpm LXM32.U90M2 3 A, 115 V, single phase 6000 rpm LXM32.U45M2 1.5 A, 230 V, single phase 3000 rpm LXM05AD10F1, 110...120 V, single phase 3000 rpm LXM05BD10F1, 110...120 V, single phase 3000 rpm LXM05CD10F1, 110...120 V, single phase 3000 rpm LXM05CU70M2, 200...240 V, single phase 6000 rpm LXM05AD10M2, 200...240 V, single phase 6000 rpm LXM05BD10M2, 200...240 V, single phase 6000 rpm LXM05CD10M2, 200...240 V, single phase 6000 rpm LXM05AD10M3X, 200...240 V, three phase 6000 rpm LXM05BD10M3X, 200...240 V, three phase 6000 rpm LXM05CD10M3X, 200...240 V, three phase 8000 rpm LXM15LD13M3, 230 V, three phase
Product compatibility	LXM05AD10F1 110...120 V single phase LXM05AD10M2 200...240 V single phase LXM05BD10F1 110...120 V single phase LXM05BD10M2 200...240 V single phase LXM05CD10F1 110...120 V single phase LXM05CD10M2 200...240 V single phase LXM05CU70M2 200...240 V single phase LXM32.U90M2 115 V single phase LXM32.U45M2 230 V single phase LXM05AD10M3X 200...240 V three phase LXM05BD10M3X 200...240 V three phase LXM05CD10M3X 200...240 V three phase LXM15LD13M3 230 V three phase
Shaft end	Untapped
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	1.4 A
maximum continuous power	0.45 W

Maximum current Irms	6.2 A LXM15LD13M3 5.4 A LXM05AD10F1 5.4 A LXM05CU70M2 5.4 A LXM05AD10M2 5.4 A LXM05AD10M3X 5.4 A LXM05BD10F1 5.4 A LXM05BD10M2 5.4 A LXM05BD10M3X 5.4 A LXM05CD10F1 5.4 A LXM05CD10M2 5.4 A LXM05CD10M3X 5.4 A LXM32.U90M2 4.5 A LXM32.U45M2
Maximum permanent current	5.4 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.4 in (9 mm)
Shaft length	0.8 in (20 mm)
Feedback type	Single turn SinCos Hiperface
Holding torque	7.08 lbf.in (0.8 N.m) holding brake
Motor flange size	2.2 in (55 mm)
Number of motor stacks	1
Torque constant	0.36 N.m/A 248 °F (120 °C)
Back emf constant	22 V/krpm 248 °F (120 °C)
Number of motor poles	6
Rotor inertia	0.0803 kg.cm ²
Stator resistance	12.2 Ohm 68 °F (20 °C)
Stator inductance	20.8 mH 68 °F (20 °C)
Stator electrical time constant	1.7 ms 68 °F (20 °C)
Maximum radial force Fr	170 N 8000 rpm 180 N 7000 rpm 190 N 6000 rpm 200 N 5000 rpm 220 N 4000 rpm 240 N 3000 rpm 270 N 2000 rpm 340 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	6.3 in (159 mm)
Centring collar diameter	1.6 in (40 mm)
Centring collar depth	0.08 in (2 mm)
Number of mounting holes	4
Mounting holes diameter	0.2 in (5.5 mm)
Circle diameter of the mounting holes	2.5 in (63 mm)
Net Weight	2.9 lb(US) (1.3 kg)

Ordering and shipping details

Category	US1PC5318282
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Discount Schedule	PC53
GTIN	3389118158498
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.5 in (11.5 cm)
Package 1 Width	7.5 in (19.0 cm)
Package 1 Length	15.6 in (39.5 cm)
Package 1 Weight	33.5 oz (950.0 g)

Contractual warranty

Warranty	18 months
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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-CO₂ 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

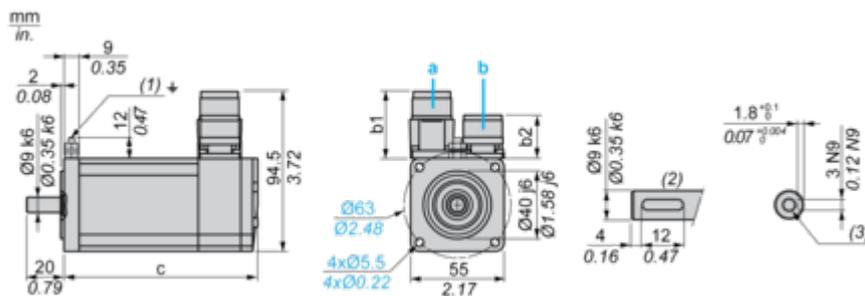
Certifications & Standards

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)
- (3) For screw M3 x 9 mm/M3 x 0.35 in.

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
39.5	25.5	39.5	39.5	132.5	159

Dimensions in in.

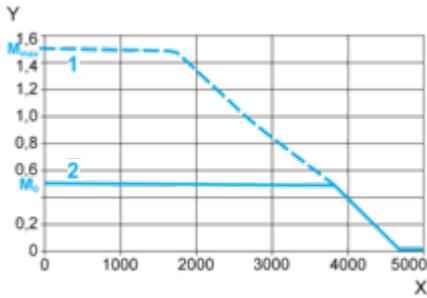
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	5.21	6.25

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32-U90M2 servo drive



X Speed in rpm

Y Torque in Nm

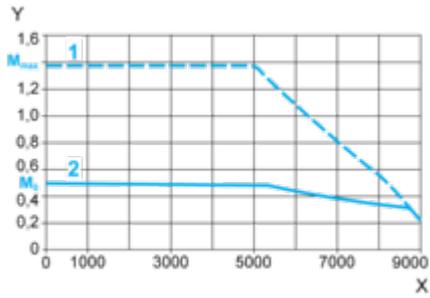
1 Peak torque

2 Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U45M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque