Product data sheet

Specifications



servo motor BSH, Lexium 05, 0.9N.m, 6000rpm, 55mm, keyed shaft, Sincos single turn, without brake, IP65

BSH0552T31A2A

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

Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	7.08 lbf.in (0.8 N.m) LXM32.U90M2 3 A, 115 V, single phase 7.08 lbf.in (0.8 N.m) LXM32.U90M2 3 A, 230 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD10M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05BD10M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05CD10M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD10M3X, 200...240 V, three phase 8.0 lbf.in (0.9 N.m) LXM05BD10M3X, 200...240 V, three phase 8.0 lbf.in (0.9 N.m) LXM05CD10M3X, 200...240 V, three phase 8.0 lbf.in (0.9 N.m) LXM15LD13M3, 230 V, single phase 8.0 lbf.in (0.9 N.m) LXM15LD13M3, 230 V, three phase 6.82 lbf.in (0.77 N.m) LXM05CU70M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD10F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD17F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05BD10F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05BD17F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05CD10F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05CD17F1, 110...120 V, single phase
Peak stall torque	16.8 lbf.in (1.9 N.m) LXM32.U90M2 3 A, 115 V, single phase 22.1 lbf.in (2.5 N.m) LXM32.U90M2 3 A, 230 V, single phase 13.3 lbf.in (1.5 N.m) LXM15LD13M3, 230 V, single phase 11.59 lbf.in (1.31 N.m) LXM05CU70M2, 200...240 V, single phase 15.67 lbf.in (1.77 N.m) LXM05AD10F1, 110...120 V, single phase 15.67 lbf.in (1.77 N.m) LXM05AD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05AD17F1, 110...120 V, single phase 15.67 lbf.in (1.77 N.m) LXM05BD10F1, 110...120 V, single phase 15.67 lbf.in (1.77 N.m) LXM05BD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05BD17F1, 110...120 V, single phase 15.67 lbf.in (1.77 N.m) LXM05CD10F1, 110...120 V, single phase 15.67 lbf.in (1.77 N.m) LXM05CD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05CD17F1, 110...120 V, single phase 13.3 lbf.in (1.5 N.m) LXM15LD13M3, 230 V, three phase 15.67 lbf.in (1.77 N.m) LXM05AD10M3X, 200...240 V, three phase 15.67 lbf.in (1.77 N.m) LXM05BD10M3X, 200...240 V, three phase 15.67 lbf.in (1.77 N.m) LXM05CD10M3X, 200...240 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	250 W LXM32.U90M2 3 A, 115 V, single phase 450 W LXM32.U90M2 3 A, 230 V, single phase 240 W LXM05CU70M2, 200...240 V, single phase 250 W LXM05AD10F1, 110...120 V, single phase 250 W LXM05AD17F1, 110...120 V, single phase 250 W LXM05BD10F1, 110...120 V, single phase 250 W LXM05BD17F1, 110...120 V, single phase 250 W LXM05CD10F1, 110...120 V, single phase 250 W LXM05CD17F1, 110...120 V, single phase 450 W LXM05AD10M2, 200...240 V, single phase 450 W LXM05BD10M2, 200...240 V, single phase 450 W LXM05CD10M2, 200...240 V, single phase 450 W LXM15LD13M3, 230 V, single phase 450 W LXM05AD10M3X, 200...240 V, three phase 450 W LXM05BD10M3X, 200...240 V, three phase 450 W LXM05CD10M3X, 200...240 V, three phase 570 W LXM15LD13M3, 230 V, three phase
Nominal torque	6.82 lbf.in (0.77 N.m) LXM32.U90M2 3 A, 115 V, single phase 6.55 lbf.in (0.74 N.m) LXM32.U90M2 3 A, 230 V, single phase 6.37 lbf.in (0.72 N.m) LXM15LD13M3, 230 V, single phase 6.82 lbf.in (0.77 N.m) LXM05CU70M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD10F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD10M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05AD17F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05BD10F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05BD10M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05BD17F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05CD10F1, 110...120 V, single phase 8.0 lbf.in (0.9 N.m) LXM05CD10M2, 200...240 V, single phase 8.0 lbf.in (0.9 N.m) LXM05CD17F1, 110...120 V, single phase 6.02 lbf.in (0.68 N.m) LXM15LD13M3, 230 V, three phase 8.0 lbf.in (0.9 N.m) LXM05AD10M3X, 200...240 V, three phase 8.0 lbf.in (0.9 N.m) LXM05BD10M3X, 200...240 V, three phase 8.0 lbf.in (0.9 N.m) LXM05CD10M3X, 200...240 V, three phase
Nominal speed	3000 rpm LXM32.U90M2 3 A, 115 V, single phase 6000 rpm LXM32.U90M2 3 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 3000 rpm LXM05AD17F1, 110...120 V, single phase 3000 rpm LXM05BD17F1, 110...120 V, single phase 3000 rpm LXM05CD17F1, 110...120 V, single phase 6000 rpm LXM15LD13M3, 230 V, single phase
Product compatibility	LXM05AD10F1 110...120 V single phase LXM05AD10M2 200...240 V single phase LXM05AD17F1 110...120 V single phase LXM05BD10F1 110...120 V single phase LXM05BD10M2 200...240 V single phase LXM05BD17F1 110...120 V single phase LXM05CD10F1 110...120 V single phase LXM05CD10M2 200...240 V single phase LXM05CD17F1 110...120 V single phase LXM05CU70M2 200...240 V single phase LXM15LD13M3 230 V single phase LXM32.U90M2 115 V single phase LXM32.U90M2 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	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 32 Lexium 05 Lexium 15
supply voltage max	480 V
Phase	Three phase
Continuous stall current	2.2 A
maximum continuous power	0.67 W
Maximum current Irms	6 A LXM32.U90M2 115 V 8.8 A LXM32.U90M2 230 V 10.3 A LXM15LD13M3 8.8 A LXM05AD10F1 8.8 A LXM05AD17F1 8.8 A LXM05CU70M2 8.8 A LXM05AD10M2 8.8 A LXM05AD10M3X 8.8 A LXM05BD10F1 8.8 A LXM05BD17F1 8.8 A LXM05BD10M2 8.8 A LXM05BD10M3X 8.8 A LXM05CD10F1 8.8 A LXM05CD17F1 8.8 A LXM05CD10M2 8.8 A LXM05CD10M3X
Maximum permanent current	8.8 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)
key width	0.5 in (12 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	2.2 in (55 mm)
Number of motor stacks	2
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	0.096 kg.cm²
Stator resistance	5.2 Ohm 68 °F (20 °C)
Stator inductance	10.6 mH 68 °F (20 °C)
Stator electrical time constant	2.04 ms 68 °F (20 °C)
Maximum radial force Fr	190 N 7000 rpm 190 N 8000 rpm 200 N 6000 rpm 220 N 5000 rpm 230 N 4000 rpm 260 N 3000 rpm 290 N 2000 rpm 370 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
type of cooling	Natural convection

Length	6.08 in (154.4 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	3.3 lb(US) (1.5 kg)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118159181
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.84 in (12.3 cm)
Package 1 Width	5.04 in (12.8 cm)
Package 1 Length	14.84 in (37.7 cm)
Package 1 Weight	2.4 lb(US) (1.1 kg)

Contractual warranty

Warranty	18 months

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 >

Environmental footprint

Carbon footprint (kg CO2 eq, Total Life cycle)	634
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
REACh Regulation	REACh Declaration
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
PVC free	Yes

Use Again

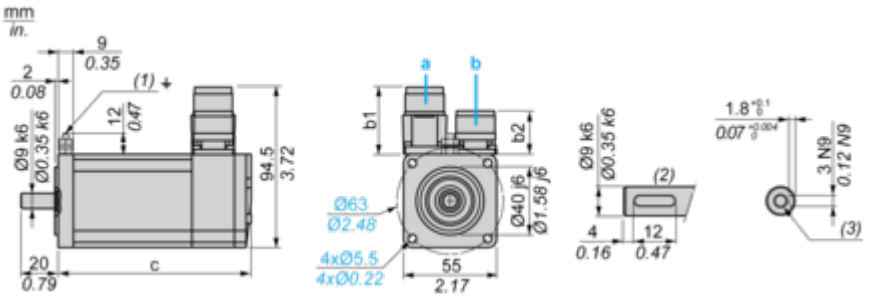
Repack and remanufacture

Circularity Profile	No need of specific recycling operations
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.
Take-back	No

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	154.5	181

Dimensions in in.

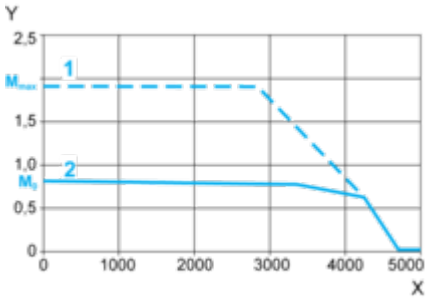
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.08	7.12

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive

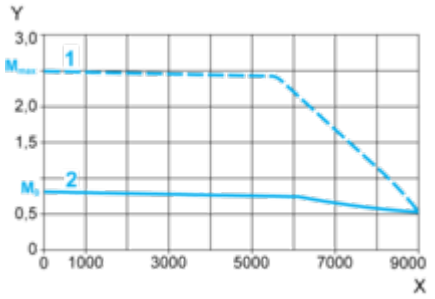


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive



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