Product data sheet

Specifications



servo motor BSH, Lexium 05, 0.9N.m, 4000rpm, 55mm, untapped shaft, Sincos multi turn, without brake, IP50

BSH0552P02A2A

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.U60N4 1.5 A, 400 V, three phase 7.08 lbf.in (0.8 N.m) LXM32.U60N4 1.5 A, 480 V, three phase 8.0 lbf.in (0.9 N.m) LXM05CU70M2, 200...240 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 1.5 A, 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 8.0 lbf.in (0.9 N.m) LXM15LU60N4, 230 V, three phase 8.0 lbf.in (0.9 N.m) LXM05AD14N4, 380...480 V, three phase 8.0 lbf.in (0.9 N.m) LXM05BD14N4, 380...480 V, three phase 8.0 lbf.in (0.9 N.m) LXM05CD14N4, 380...480 V, three phase
Peak stall torque	22.1 lbf.in (2.5 N.m) LXM32.U60N4 1.5 A, 400 V, three phase 22.1 lbf.in (2.5 N.m) LXM32.U60N4 1.5 A, 480 V, three phase 22.1 lbf.in (2.5 N.m) LXM15LD13M3, 230 V, single phase 19.21 lbf.in (2.17 N.m) LXM05CU70M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05AD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05BD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05CD10M2, 200...240 V, single phase 22.1 lbf.in (2.5 N.m) LXM15LD13M3 1.5 A, 230 V, three phase 20.003 lbf.in (2.26 N.m) LXM15LU60N4, 230 V, three phase 23.9 lbf.in (2.7 N.m) LXM05AD10M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM05AD14N4, 380...480 V, three phase 23.9 lbf.in (2.7 N.m) LXM05BD10M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM05BD14N4, 380...480 V, three phase 23.9 lbf.in (2.7 N.m) LXM05CD10M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM05CD14N4, 380...480 V, three phase
Nominal output power	400 W LXM32.U60N4 1.5 A, 400 V, three phase 400 W LXM32.U60N4 1.5 A, 480 V, three phase 250 W LXM05AD10M2, 200...240 V, single phase 250 W LXM05BD10M2, 200...240 V, single phase 250 W LXM05CD10M2, 200...240 V, single phase 250 W LXM05CU70M2, 200...240 V, single phase 310 W LXM15LD13M3, 230 V, single phase 250 W LXM05AD10M3X 1.5 A, 200...240 V, three phase 250 W LXM05AD14N4, 380...480 V, three phase 250 W LXM05BD10M3X, 200...240 V, three phase 250 W LXM05BD14N4, 380...480 V, three phase 250 W LXM05CD10M3X, 200...240 V, three phase 250 W LXM05CD14N4, 380...480 V, three phase 310 W LXM15LD13M3, 230 V, three phase 310 W LXM15LU60N4, 230 V, three phase

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

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

Nominal torque	5.75 lbf.in (0.65 N.m) LXM32.U60N4 1.5 A, 400 V, three phase 5.75 lbf.in (0.65 N.m) LXM32.U60N4 1.5 A, 480 V, three phase 6.64 lbf.in (0.75 N.m) LXM15LD13M3, 230 V, single phase 19.21 lbf.in (2.17 N.m) LXM05CU70M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05AD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05BD10M2, 200...240 V, single phase 23.9 lbf.in (2.7 N.m) LXM05CD10M2, 200...240 V, single phase 6.64 lbf.in (0.75 N.m) LXM15LD13M3 1.5 A, 230 V, three phase 6.64 lbf.in (0.75 N.m) LXM15LU60N4, 230 V, three phase 23.9 lbf.in (2.7 N.m) LXM05AD10M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM05AD14N4, 380...480 V, three phase 23.9 lbf.in (2.7 N.m) LXM05BD10M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM05BD14N4, 380...480 V, three phase 23.9 lbf.in (2.7 N.m) LXM05CD10M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM05CD14N4, 380...480 V, three phase
Nominal speed	6000 rpm LXM32.U60N4 1.5 A, 400 V, three phase 6000 rpm LXM32.U60N4 1.5 A, 480 V, three phase 4000 rpm LXM15LD13M3, 230 V, single phase 4000 rpm LXM15LU60N4, 230 V, three phase 3000 rpm LXM05CU70M2, 200...240 V, single phase 3000 rpm LXM05AD10M2, 200...240 V, single phase 3000 rpm LXM05BD10M2, 200...240 V, single phase 3000 rpm LXM05CD10M2 1.5 A, 200...240 V, single phase 3000 rpm LXM05AD10M3X, 200...240 V, three phase 3000 rpm LXM05AD14N4, 380...480 V, three phase 3000 rpm LXM05BD10M3X, 200...240 V, three phase 3000 rpm LXM05BD14N4, 380...480 V, three phase 3000 rpm LXM05CD10M3X, 200...240 V, three phase 3000 rpm LXM05CD14N4, 380...480 V, three phase 4000 rpm LXM15LD13M3, 230 V, three phase
Product compatibility	LXM05AD10M2 200...240 V single phase LXM05BD10M2 200...240 V single phase LXM05CD10M2 200...240 V single phase LXM05CU70M2 200...240 V single phase LXM15LD13M3 230 V single phase LXM15LU60N4 230 V three phase LXM32.U60N4 400 V three phase LXM32.U60N4 480 V three phase LXM05AD10M3X 200...240 V three phase LXM05BD10M3X 200...240 V three phase LXM05CD10M3X 200...240 V three phase LXM15LD13M3 230 V three phase LXM05AD14N4 380...480 V three phase LXM05BD14N4 380...480 V three phase LXM05CD14N4 380...480 V three phase
Shaft end	Untapped
IP Degree of Protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
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
Phase	Three phase
Continuous stall current	1.2 A
maximum continuous power	0.67 W

Maximum current Irms	5.9 A LXM15LD13M3 5.9 A LXM15LU60N4 4.8 A LXM05CU70M2 4.8 A LXM05AD10M2 4.8 A LXM05AD10M3X 4.8 A LXM05AD14N4 4.8 A LXM05BD10M2 4.8 A LXM05BD10M3X 4.8 A LXM05BD14N4 4.8 A LXM05CD10M2 4.8 A LXM05CD10M3X 4.8 A LXM05CD14N4 4.8 A LXM32.U60N4
Maximum permanent current	4.8 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)
Feedback type	Multiturn SinCos Hiperface
Motor flange size	2.2 in (55 mm)
Number of motor stacks	2
Torque constant	0.7 N.m/A 248 °F (120 °C)
Back emf constant	40 V/krpm 248 °F (120 °C)
Number of motor poles	3.0
Rotor inertia	0.096 kg.cm²
Stator resistance	17.4 Ohm 68 °F (20 °C)
Stator inductance	18.2 mH 68 °F (20 °C)
Stator electrical time constant	2.03 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)
Sizing reference	BSH0552P
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	3389118158726
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.331 in (11.000 cm)
Package 1 Width	7.480 in (19.000 cm)
Package 1 Length	15.551 in (39.500 cm)
Package weight(Lbs)	4.237 lb(US) (1.922 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	4
Package 2 Height	11.8 in (30 cm)
Package 2 Width	15.7 in (40 cm)
Package 2 Length	23.6 in (60 cm)
Package 2 Weight	18.353 lb(US) (8.325 kg)
Unit Type of Package 3	P12
Number of Units in Package 3	16
Package 3 Height	17.717 in (45.000 cm)
Package 3 Width	31.496 in (80.000 cm)
Package 3 Length	47.244 in (120.000 cm)
Package 3 Weight	99.869 lb(US) (45.300 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)	455
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	8c11b0c9-e501-4810-83eb-05fc6605ede4
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

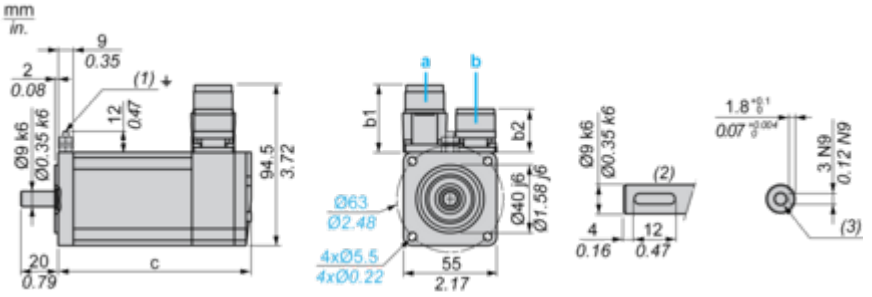
Repack and remanufacture

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

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.

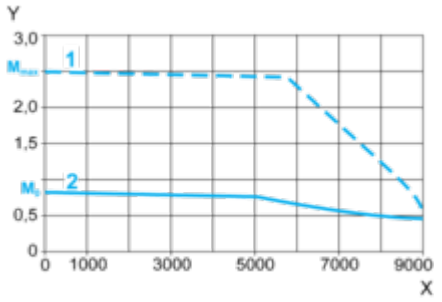
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.08	7.12

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U60N4 servo drive

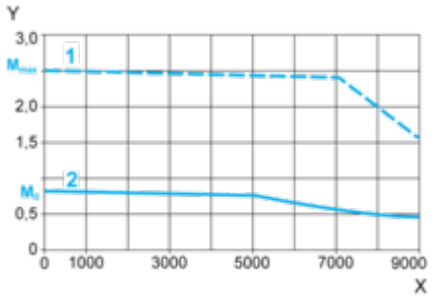


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U60N4 servo drive



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