

# BSH0552P02A2A

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



## Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	<p>7.08 Lbf.In (0.8 N.m) LXM32.U60N4 1.5 A, 400 V, three phase</p> <p>7.08 Lbf.In (0.8 N.m) LXM32.U60N4 1.5 A, 480 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05CU70M2, 200...240 V, single phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05CD10M3X, 200...240 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM15LD13M3, 230 V, single phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM15LD13M3, 230 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM15LU60N4, 230 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05AD14N4, 380...480 V, three phase</p> <p>8.0 Lbf.In (0.9 N.m) LXM05BD14N4, 380...480 V, three phase</p> <p>8.0 lbf.in (0.9 N.m) LXM05CD14N4, 380...480 V, three phase</p>
Peak stall torque	<p>22.1 Lbf.In (2.5 N.m) LXM32.U60N4 1.5 A, 400 V, three phase</p> <p>22.1 Lbf.In (2.5 N.m) LXM32.U60N4 1.5 A, 480 V, three phase</p> <p>22.1 Lbf.In (2.5 N.m) LXM15LD13M3, 230 V, single phase</p> <p>19.21 Lbf.In (2.17 N.m) LXM05CU70M2, 200...240 V, single phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>22.1 Lbf.In (2.5 N.m) LXM15LD13M3, 230 V, three phase</p> <p>20.003 Lbf.In (2.26 N.m) LXM15LU60N4, 230 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05AD14N4, 380...480 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05BD14N4, 380...480 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05CD10M3X, 200...240 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM05CD14N4, 380...480 V, three phase</p>

Nominal output power	<p>400 W LXM32.U60N4 1.5 A, 400 V, three phase</p> <p>400 W LXM32.U60N4 1.5 A, 480 V, three phase</p> <p>250 W LXM05AD10M2, 200...240 V, single phase</p> <p>250 W LXM05BD10M2, 200...240 V, single phase</p> <p>250 W LXM05CD10M2, 200...240 V, single phase</p> <p>250 W LXM05CU70M2, 200...240 V, single phase</p> <p>310 W LXM15LD13M3, 230 V, single phase</p> <p>250 W LXM05AD10M3X, 200...240 V, three phase</p> <p>250 W LXM05AD14N4, 380...480 V, three phase</p> <p>250 W LXM05BD10M3X, 200...240 V, three phase</p> <p>250 W LXM05BD14N4, 380...480 V, three phase</p> <p>250 W LXM05CD10M3X, 200...240 V, three phase</p> <p>250 W LXM05CD14N4, 380...480 V, three phase</p> <p>310 W LXM15LD13M3, 230 V, three phase</p> <p>310 W LXM15LU60N4, 230 V, three phase</p>
Nominal torque	<p>5.75 Lbf.In (0.65 N.m) LXM32.U60N4 1.5 A, 400 V, three phase</p> <p>5.75 Lbf.In (0.65 N.m) LXM32.U60N4 1.5 A, 480 V, three phase</p> <p>6.64 Lbf.In (0.75 N.m) LXM15LD13M3, 230 V, single phase</p> <p>19.21 Lbf.In (2.17 N.m) LXM05CU70M2, 200...240 V, single phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05AD10M2, 200...240 V, single phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05BD10M2, 200...240 V, single phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05CD10M2, 200...240 V, single phase</p> <p>6.64 Lbf.In (0.75 N.m) LXM15LD13M3, 230 V, three phase</p> <p>6.64 Lbf.In (0.75 N.m) LXM15LU60N4, 230 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05AD10M3X, 200...240 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05AD14N4, 380...480 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05BD10M3X, 200...240 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05BD14N4, 380...480 V, three phase</p> <p>23.9 Lbf.In (2.7 N.m) LXM05CD10M3X, 200...240 V, three phase</p> <p>23.9 lbf.in (2.7 N.m) LXM05CD14N4, 380...480 V, three phase</p>
Nominal speed	<p>6000 rpm LXM32.U60N4 1.5 A, 400 V, three phase</p> <p>6000 rpm LXM32.U60N4 1.5 A, 480 V, three phase</p> <p>4000 rpm LXM15LD13M3, 230 V, single phase</p> <p>4000 rpm LXM15LU60N4, 230 V, three phase</p> <p>3000 rpm LXM05CU70M2, 200...240 V, single phase</p> <p>3000 rpm LXM05AD10M2, 200...240 V, single phase</p> <p>3000 rpm LXM05BD10M2, 200...240 V, single phase</p> <p>3000 rpm LXM05CD10M2, 200...240 V, single phase</p> <p>3000 rpm LXM05AD10M3X, 200...240 V, three phase</p> <p>3000 rpm LXM05AD14N4, 380...480 V, three phase</p> <p>3000 rpm LXM05BD10M3X, 200...240 V, three phase</p> <p>3000 rpm LXM05BD14N4, 380...480 V, three phase</p> <p>3000 rpm LXM05CD10M3X, 200...240 V, three phase</p> <p>3000 rpm LXM05CD14N4, 380...480 V, three phase</p> <p>4000 rpm LXM15LD13M3, 230 V, three phase</p>

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	6
Rotor inertia	0.096 kg.cm <sup>2</sup>
Stator resistance	17.4 Ohm 68 °F (20 °C)
Stator inductance	35.3 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)

### 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
Number of Units in Package 1	1
Package 1 Height	4.3 in (11.0 cm)
Package 1 Width	7.5 in (19.0 cm)
Package 1 Length	15.6 in (39.5 cm)
Package 1 Weight	4.204 lb(US) (1.907 kg)
Unit Type of Package 2	P06
Number of Units in Package 2	6
Package 2 Height	30.3 in (77.0 cm)
Package 2 Width	31.5 in (80.0 cm)
Package 2 Length	23.6 in (60.0 cm)
Package 2 Weight	43.965 lb(US) (19.942 kg)

### Offer Sustainability

Sustainable offer status	Green Premium product
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> "
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
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.

### Contractual warranty

Warranty	18 months
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