

BSH0701T31A2A

AC servo motor BSH, Lexium 05, 0.7N.m,
8000rpm, keyed shaft, without brake, IP65





Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	11.5 Lbf.In (1.3 N.m) LXM32.U90M2 3 A, 230 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05AD10M3X, 200...240 V, three phase 12.4 Lbf.In (1.4 N.m) LXM05BD10M3X, 200...240 V, three phase 12.4 Lbf.In (1.4 N.m) LXM05CD10M3X, 200...240 V, three phase 12.4 Lbf.In (1.4 N.m) LXM15LD13M3, 230 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05AD10F1, 110...120 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05AD17M2, 200...240 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05BD10F1, 110...120 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05BD17M2, 200...240 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05CD10F1, 110...120 V, single phase 12.4 Lbf.In (1.4 N.m) LXM05CD17M2, 200...240 V, single phase 12.4 Lbf.In (1.4 N.m) LXM32.D18M2 6 A, 115 V, single phase 6.2 Lbf.In (0.7 N.m) LXM15LU60N4, 400 V, three phase 6.2 Lbf.In (0.7 N.m) LXM15LU60N4, 480 V, three phase 8.05 Lbf.In (0.91 N.m) LXM15LU60N4, 230 V, three phase 12.4 Lbf.In (1.4 N.m) LXM15LD10N4, 230 V, three phase 12.4 Lbf.In (1.4 N.m) LXM15LD10N4, 400 V, three phase 12.4 Lbf.In (1.4 N.m) LXM15LD10N4, 480 V, three phase 12.4 Lbf.In (1.4 N.m) LXM15LD13M3, 230 V, three phase 12.4 Lbf.In (1.4 N.m) LXM15LD21M3, 230 V, three phase 12.4 Lbf.In (1.4 N.m) LXM05AD17M3X, 200...240 V, three phase 12.4 Lbf.In (1.4 N.m) LXM05BD17M3X, 200...240 V, three phase 12.4 lbf.in (1.4 N.m) LXM05CD17M3X, 200...240 V, three phase

Peak stall torque	31.0 Lbf.In (3.5 N.m) LXM32.U90M2 3 A, 230 V, single phase 28.23 Lbf.In (3.19 N.m) LXM15LD13M3, 230 V, single phase 21.42 Lbf.In (2.42 N.m) LXM05AD10F1, 110...120 V, single phase 28.23 Lbf.In (3.19 N.m) LXM05AD17M2, 200...240 V, single phase 21.42 Lbf.In (2.42 N.m) LXM05BD10F1, 110...120 V, single phase 28.23 Lbf.In (3.19 N.m) LXM05BD17M2, 200...240 V, single phase 21.42 Lbf.In (2.42 N.m) LXM05CD10F1, 110...120 V, single phase 28.23 Lbf.In (3.19 N.m) LXM05CD17M2, 200...240 V, single phase 31.0 Lbf.In (3.5 N.m) LXM32.D18M2 6 A, 115 V, single phase 16.8 Lbf.In (1.9 N.m) LXM15LU60N4, 400 V, three phase 16.8 Lbf.In (1.9 N.m) LXM15LU60N4, 480 V, three phase 16.8 Lbf.In (1.9 N.m) LXM15LU60N4, 230 V, three phase 25.76 Lbf.In (2.91 N.m) LXM15LD10N4, 230 V, three phase 25.76 Lbf.In (2.91 N.m) LXM15LD10N4, 400 V, three phase 25.76 Lbf.In (2.91 N.m) LXM15LD10N4, 480 V, three phase 28.23 Lbf.In (3.19 N.m) LXM15LD13M3, 230 V, three phase 28.23 Lbf.In (3.19 N.m) LXM15LD21M3, 230 V, three phase 21.42 Lbf.In (2.42 N.m) LXM05AD10M3X, 200...240 V, three phase 28.23 Lbf.In (3.19 N.m) LXM05AD17M3X, 200...240 V, three phase 21.42 Lbf.In (2.42 N.m) LXM05BD10M3X, 200...240 V, three phase 28.23 Lbf.In (3.19 N.m) LXM05BD17M3X, 200...240 V, three phase 21.42 Lbf.In (2.42 N.m) LXM05CD10M3X, 200...240 V, three phase 28.23 Lbf.in (3.19 N.m) LXM05CD17M3X, 200...240 V, three phase
Nominal output power	500 W LXM32.U90M2 3 A, 230 V, single phase 350 W LXM32.D18M2 6 A, 115 V, single phase 400 W LXM05AD10M3X, 200...240 V, three phase 400 W LXM05BD10M3X, 200...240 V, three phase 400 W LXM05CD10M3X, 200...240 V, three phase 380 W LXM05AD10F1, 110...120 V, single phase 380 W LXM05BD10F1, 110...120 V, single phase 380 W LXM05CD10F1, 110...120 V, single phase 400 W LXM05AD17M2, 200...240 V, single phase 400 W LXM05BD17M2, 200...240 V, single phase 400 W LXM05CD17M2, 200...240 V, single phase 654 W LXM15LD13M3, 230 V, single phase 1000 W LXM15LD10N4, 400 V, three phase 1000 W LXM15LD10N4, 480 V, three phase 400 W LXM05AD17M3X, 200...240 V, three phase 400 W LXM05BD17M3X, 200...240 V, three phase 400 W LXM05CD17M3X, 200...240 V, three phase 440 W LXM15LU60N4, 230 V, three phase 564 W LXM15LD10N4, 230 V, three phase 586 W LXM15LU60N4, 400 V, three phase 586 W LXM15LU60N4, 480 V, three phase 654 W LXM15LD13M3, 230 V, three phase 654 W LXM15LD21M3, 230 V, three phase

Nominal torque	8.32 Lbf.In (0.94 N.m) LXM32.U90M2 3 A, 230 V, single phase 11.06 Lbf.In (1.25 N.m) LXM15LD13M3, 230 V, single phase 12.04 Lbf.In (1.36 N.m) LXM32.D18M2 6 A, 115 V, single phase 6.2 Lbf.In (0.7 N.m) LXM15LU60N4, 230 V, three phase 6.2 Lbf.In (0.7 N.m) LXM15LU60N4, 400 V, three phase 6.2 Lbf.In (0.7 N.m) LXM15LU60N4, 480 V, three phase 10.89 Lbf.In (1.23 N.m) LXM15LD10N4, 400 V, three phase 10.89 Lbf.In (1.23 N.m) LXM15LD10N4, 480 V, three phase 11.06 Lbf.In (1.25 N.m) LXM15LD10N4, 230 V, three phase 11.06 Lbf.In (1.25 N.m) LXM15LD13M3, 230 V, three phase 11.06 lbf.in (1.25 N.m) LXM15LD21M3, 230 V, three phase
Nominal speed	5000 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 LXM05AD10M3X, 200...240 V, three phase 3000 rpm LXM05BD10M3X, 200...240 V, three phase 3000 rpm LXM05CD10M3X, 200...240 V, three phase 8000 rpm LXM15LD10N4, 400 V, three phase 3000 rpm LXM05AD17M2, 200...240 V, single phase 3000 rpm LXM05BD17M2, 200...240 V, single phase 3000 rpm LXM05CD17M2, 200...240 V, single phase 3000 rpm LXM05AD17M3X, 200...240 V, three phase 3000 rpm LXM05BD17M3X, 200...240 V, three phase 3000 rpm LXM05CD17M3X, 200...240 V, three phase 5000 rpm LXM15LD13M3, 230 V, single phase 2500 rpm LXM32.D18M2 6 A, 115 V, single phase 5000 rpm LXM15LD10N4, 230 V, three phase 5000 rpm LXM15LD13M3, 230 V, three phase 5000 rpm LXM15LD21M3, 230 V, three phase 6000 rpm LXM15LU60N4, 230 V, three phase 8000 rpm LXM15LD10N4, 480 V, three phase 8000 rpm LXM15LU60N4, 400 V, three phase 8000 rpm LXM15LU60N4, 480 V, three phase
Product compatibility	LXM05AD10F1 110...120 V single phase LXM05AD17M2 200...240 V single phase LXM05BD10F1 110...120 V single phase LXM05BD17M2 200...240 V single phase LXM05CD10F1 110...120 V single phase LXM05CD17M2 200...240 V single phase LXM15LD13M3 230 V single phase LXM32.U90M2 230 V single phase LXM32.D18M2 115 V single phase LXM15LU60N4 230 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 LXM15LU60N4 400 V three phase LXM15LU60N4 480 V three phase LXM15LD10N4 400 V three phase LXM05AD17M3X 200...240 V three phase LXM05BD17M3X 200...240 V three phase LXM05CD17M3X 200...240 V three phase LXM15LD10N4 230 V three phase LXM15LD10N4 480 V three phase LXM15LD21M3 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	3.2 A
Maximum continuous power	1.06 W
Maximum current Irms	10 A LXM32.D18M2 9 A LXM32.U90M2 9.9 A LXM15LD13M3 9.9 A LXM15LD21M3 9.9 A LXM15LU60N4 9.9 A LXM15LD10N4
Maximum permanent current	10.1 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.4 in (11 mm)
Shaft length	0.9 in (23 mm)
Key width	0.7 in (18 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	2.8 in (70 mm)
Number of motor stacks	1
Torque constant	0.44 N.m/A 248.0000000000 °F (120 °C)
Back emf constant	26 V/krpm 248.0000000000 °F (120 °C)
Number of motor poles	6
Rotor inertia	0.25 kg.cm²
Stator resistance	3.3 Ohm 68.0000000000 °F (20 °C)
Stator inductance	12.3 mH 68.0000000000 °F (20 °C)
Stator electrical time constant	3.73 ms 68.0000000000 °F (20 °C)
Maximum radial force Fr	360 N 6000 rpm 380 N 5000 rpm 410 N 4000 rpm 460 N 3000 rpm 520 N 2000 rpm 660 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	6.06 in (154 mm)
Centring collar diameter	2.4 in (60 mm)
Centring collar depth	0.10 in (2.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.2 in (5.5 mm)
Circle diameter of the mounting holes	3.2 in (82 mm)
Net Weight	4.9 lb(US) (2.2 kg)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118136113
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	5.827 in (14.800 cm)
Package 1 Width	15.630 in (39.700 cm)
Package 1 Length	23.425 in (59.500 cm)
Package 1 Weight	6.316 lb(US) (2.865 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	2
Package 2 Height	11.811 in (30.000 cm)
Package 2 Width	15.748 in (40.000 cm)
Package 2 Length	23.622 in (60.000 cm)
Package 2 Weight	14.066 lb(US) (6.380 kg)
Unit Type of Package 3	P12
Number of Units in Package 3	8
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	82.718 lb(US) (37.520 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 www.P65Warnings.ca.gov
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	 China RoHS Declaration
RoHS exemption information	 Yes
Environmental Disclosure	 Product Environmental Profile
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.
PVC free	Yes

Contractual warranty

Warranty	18 months
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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	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
39.5	25.5	39.5	39.5	154	180	23	18	2.5	4 N9	2.5 ^{+0.1} ₀	11 k6	M4 x 10

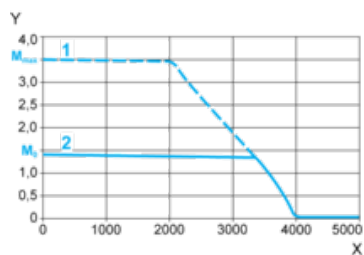
Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	6.06	7.08	0.90	0.70	0.09	0.16 N9	0.01 ^{+0.004} ₀	0.43 k6	M4 x 0.39

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



X Speed in rpm

Y Torque in Nm

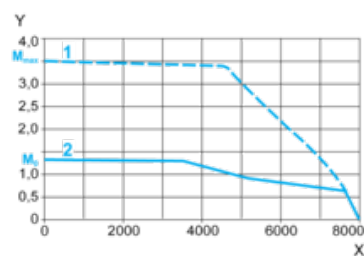
1 Peak torque

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