

BSH1001T31A2A

servo motor BSH, Lexium 05, 3.39N.m,
4000rpm, 100mm, keyed shaft, Sincos single
turn, without brake, IP65





Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	29.2 Lbf.In (3.3 N.m) LXM32.D30M2 10 A, 115 V, single phase 30.004 Lbf.In (3.39 N.m) LXM15LD28M3, 230 V, three phase 30.09 Lbf.In (3.4 N.m) LXM05AD28F1, 110...120 V, single phase 30.09 Lbf.In (3.4 N.m) LXM05AD28M2, 200...240 V, single phase 30.09 Lbf.In (3.4 N.m) LXM05AD42M3X, 200...240 V, three phase 30.09 Lbf.In (3.4 N.m) LXM05BD28F1, 110...120 V, single phase 30.09 Lbf.In (3.4 N.m) LXM05BD28M2, 200...240 V, single phase 30.09 Lbf.In (3.4 N.m) LXM05BD42M3X, 200...240 V, three phase 30.09 Lbf.In (3.4 N.m) LXM05CD28F1, 110...120 V, single phase 30.09 Lbf.In (3.4 N.m) LXM05CD28M2, 200...240 V, single phase 30.09 Lbf.In (3.4 N.m) LXM05CD42M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM32.D18M2 6 A, 230 V, single phase
Peak stall torque	55.8 Lbf.In (6.3 N.m) LXM32.D30M2 10 A, 115 V, single phase 75.2 Lbf.In (8.5 N.m) LXM05AD28F1, 110...120 V, single phase 75.2 Lbf.In (8.5 N.m) LXM05AD28M2, 200...240 V, single phase 75.2 Lbf.In (8.5 N.m) LXM05BD28F1, 110...120 V, single phase 75.2 Lbf.In (8.5 N.m) LXM05BD28M2, 200...240 V, single phase 75.2 Lbf.In (8.5 N.m) LXM05CD28F1, 110...120 V, single phase 75.2 Lbf.In (8.5 N.m) LXM05CD28M2, 200...240 V, single phase 66.4 Lbf.In (7.5 N.m) LXM32.D18M2 6 A, 230 V, single phase 75.2 Lbf.In (8.5 N.m) LXM15LD28M3, 230 V, three phase 75.2 Lbf.In (8.5 N.m) LXM05AD42M3X, 200...240 V, three phase 75.2 Lbf.In (8.5 N.m) LXM05BD42M3X, 200...240 V, three phase 75.2 lbf.in (8.5 N.m) LXM05CD42M3X, 200...240 V, three phase
Nominal output power	700 W LXM32.D30M2 10 A, 115 V, single phase 900 W LXM32.D18M2 6 A, 230 V, single phase 500 W LXM05AD28F1, 110...120 V, single phase 500 W LXM05BD28F1, 110...120 V, single phase 500 W LXM05CD28F1, 110...120 V, single phase 900 W LXM05AD28M2, 200...240 V, single phase 900 W LXM05BD28M2, 200...240 V, single phase 900 W LXM05CD28M2, 200...240 V, single phase 1150 W LXM15LD28M3, 230 V, three phase 900 W LXM05AD42M3X, 200...240 V, three phase 900 W LXM05BD42M3X, 200...240 V, three phase 900 W LXM05CD42M3X, 200...240 V, three phase

Nominal torque	24.34 Lbf.In (2.75 N.m) LXM32.D30M2 10 A, 115 V, single phase 25.7 Lbf.In (2.9 N.m) LXM05AD28M2, 200...240 V, single phase 25.7 Lbf.In (2.9 N.m) LXM05BD28M2, 200...240 V, single phase 25.7 Lbf.In (2.9 N.m) LXM05CD28M2, 200...240 V, single phase 27.97 Lbf.In (3.16 N.m) LXM05AD28F1, 110...120 V, single phase 27.97 Lbf.In (3.16 N.m) LXM05BD28F1, 110...120 V, single phase 27.97 Lbf.In (3.16 N.m) LXM05CD28F1, 110...120 V, single phase 19.5 Lbf.In (2.2 N.m) LXM32.D18M2 6 A, 230 V, single phase 24.34 Lbf.In (2.75 N.m) LXM15LD28M3, 230 V, three phase 25.7 Lbf.In (2.9 N.m) LXM05AD42M3X, 200...240 V, three phase 25.7 Lbf.In (2.9 N.m) LXM05BD42M3X, 200...240 V, three phase 25.7 Lbf.in (2.9 N.m) LXM05CD42M3X, 200...240 V, three phase
Nominal speed	2500 rpm LXM32.D30M2 10 A, 115 V, single phase 3000 rpm LXM05AD28M2, 200...240 V, single phase 3000 rpm LXM05BD28M2, 200...240 V, single phase 3000 rpm LXM05CD28M2, 200...240 V, single phase 3000 rpm LXM05AD42M3X, 200...240 V, three phase 3000 rpm LXM05BD42M3X, 200...240 V, three phase 3000 rpm LXM05CD42M3X, 200...240 V, three phase 4000 rpm LXM32.D18M2 6 A, 230 V, single phase 1500 rpm LXM05AD28F1, 110...120 V, single phase 1500 rpm LXM05BD28F1, 110...120 V, single phase 1500 rpm LXM05CD28F1, 110...120 V, single phase 4000 rpm LXM15LD28M3, 230 V, three phase
Product compatibility	LXM05AD28F1 110...120 V single phase LXM05AD28M2 200...240 V single phase LXM05BD28F1 110...120 V single phase LXM05BD28M2 200...240 V single phase LXM05CD28F1 110...120 V single phase LXM05CD28M2 200...240 V single phase LXM32.D30M2 115 V single phase LXM32.D18M2 230 V single phase LXM05AD42M3X 200...240 V three phase LXM05BD42M3X 200...240 V three phase LXM05CD42M3X 200...240 V three phase LXM15LD28M3 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 05 Lexium 15 Lexium 32
Supply voltage max	480 V
Phase	Three phase
Continuous stall current	7.3 A
Maximum continuous power	1.6 W

Maximum current Irms	18 A LXM32.D18M2 230 V 15 A LXM32.D30M2 115 V 23 A LXM15LD28M3 25.1 A LXM05AD28F1 25.1 A LXM05AD28M2 25.1 A LXM05AD42M3X 25.1 A LXM05BD28F1 25.1 A LXM05BD28M2 25.1 A LXM05BD42M3X 25.1 A LXM05CD28F1 25.1 A LXM05CD28M2 25.1 A LXM05CD42M3X
Maximum permanent current	25.1 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.7 in (19 mm)
Shaft length	1.6 in (40 mm)
Key width	1.2 in (30 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	3.9 in (100 mm)
Number of motor stacks	1
Torque constant	0.45 N.m/A 248.0000000000 °F (120 °C)
Back emf constant	29 V/krpm 248.0000000000 °F (120 °C)
Number of motor poles	8
Rotor inertia	1.4 kg.cm ²
Stator resistance	0.87 Ohm 68.0000000000 °F (20 °C)
Stator inductance	4 mH 68.0000000000 °F (20 °C)
Stator electrical time constant	4.6 ms 68.0000000000 °F (20 °C)
Maximum radial force Fr	530 N 5000 rpm 570 N 4000 rpm 630 N 3000 rpm 720 N 2000 rpm 900 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	6.6 in (168.5 mm)
Centring collar diameter	3.7 in (95 mm)
Centring collar depth	0.1 in (3.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.4 in (9 mm)
Circle diameter of the mounting holes	4.5 in (115 mm)
Net Weight	9.3 lb(US) (4.2 kg)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118138667
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.06 in (15.4 cm)
Package 1 Width	6.4 in (16.3 cm)
Package 1 Length	16.02 in (40.7 cm)
Package 1 Weight	9.5 lb(US) (4.3 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	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
39.5	25.5	39.5	39.5	169	200	40	30	6 N9	3.5 ^{+0.1} ₀	19 k6	M6 x 16

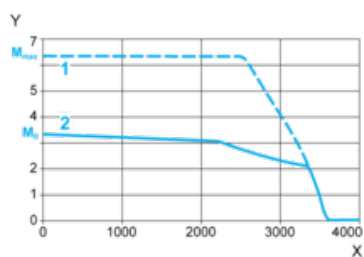
Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	0.14 ^{+0.1} ₀	0.75 k6	M6 x 0.63

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 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•D18M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque