

BSH1001T31F2A

AC servo motor BSH, Lexium 05, 3.39N.m,
4000rpm, keyed shaft, with brake, IP65





Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	6000 rpm
Continuous stall torque	3.3 N.M for LXM32.D30M2 at 10 A, 115 V, single phase 3.39 N.M for LXM15LD28M3, 230 V, three phase 3.4 N.M for LXM05AD28F1, 110...120 V, single phase 3.4 N.M for LXM05AD28M2, 200...240 V, single phase 3.4 N.M for LXM05AD42M3X, 200...240 V, three phase 3.4 N.M for LXM05BD28F1, 110...120 V, single phase 3.4 N.M for LXM05BD28M2, 200...240 V, single phase 3.4 N.M for LXM05BD42M3X, 200...240 V, three phase 3.4 N.M for LXM05CD28F1, 110...120 V, single phase 3.4 N.M for LXM05CD28M2, 200...240 V, single phase 3.4 N.M for LXM05CD42M3X, 200...240 V, three phase 2.7 N.m for LXM32.D18M2 at 6 A, 230 V, single phase
Peak stall torque	6.3 N.M for LXM32.D30M2 at 10 A, 115 V, single phase 8.5 N.M for LXM05AD28F1, 110...120 V, single phase 8.5 N.M for LXM05AD28M2, 200...240 V, single phase 8.5 N.M for LXM05BD28F1, 110...120 V, single phase 8.5 N.M for LXM05BD28M2, 200...240 V, single phase 8.5 N.M for LXM05CD28F1, 110...120 V, single phase 8.5 N.M for LXM05CD28M2, 200...240 V, single phase 7.5 N.M for LXM32.D18M2 at 6 A, 230 V, single phase 8.5 N.M for LXM15LD28M3, 230 V, three phase 8.5 N.M for LXM05AD42M3X, 200...240 V, three phase 8.5 N.M for LXM05BD42M3X, 200...240 V, three phase 8.5 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal output power	700 W for LXM32.D30M2 at 10 A, 115 V, single phase 900 W for LXM32.D18M2 at 6 A, 230 V, single phase 500 W for LXM05AD28F1, 110...120 V, single phase 500 W for LXM05BD28F1, 110...120 V, single phase 500 W for LXM05CD28F1, 110...120 V, single phase 900 W for LXM05AD28M2, 200...240 V, single phase 900 W for LXM05BD28M2, 200...240 V, single phase 900 W for LXM05CD28M2, 200...240 V, single phase 1150 W for LXM15LD28M3, 230 V, three phase 900 W for LXM05AD42M3X, 200...240 V, three phase 900 W for LXM05BD42M3X, 200...240 V, three phase 900 W for LXM05CD42M3X, 200...240 V, three phase

Nominal torque	2.75 N.M for LXM32.D30M2 at 10 A, 115 V, single phase 2.9 N.M for LXM05AD28M2, 200...240 V, single phase 2.9 N.M for LXM05BD28M2, 200...240 V, single phase 2.9 N.M for LXM05CD28M2, 200...240 V, single phase 3.16 N.M for LXM05AD28F1, 110...120 V, single phase 3.16 N.M for LXM05BD28F1, 110...120 V, single phase 3.16 N.M for LXM05CD28F1, 110...120 V, single phase 2.2 N.M for LXM32.D18M2 at 6 A, 230 V, single phase 2.75 N.M for LXM15LD28M3, 230 V, three phase 2.9 N.M for LXM05AD42M3X, 200...240 V, three phase 2.9 N.M for LXM05BD42M3X, 200...240 V, three phase 2.9 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal speed	2500 rpm for LXM32.D30M2 at 10 A, 115 V, single phase 3000 rpm for LXM05AD28M2, 200...240 V, single phase 3000 rpm for LXM05BD28M2, 200...240 V, single phase 3000 rpm for LXM05CD28M2, 200...240 V, single phase 3000 rpm for LXM05AD42M3X, 200...240 V, three phase 3000 rpm for LXM05BD42M3X, 200...240 V, three phase 3000 rpm for LXM05CD42M3X, 200...240 V, three phase 4000 rpm for LXM32.D18M2 at 6 A, 230 V, single phase 1500 rpm for LXM05AD28F1, 110...120 V, single phase 1500 rpm for LXM05BD28F1, 110...120 V, single phase 1500 rpm for LXM05CD28F1, 110...120 V, single phase 4000 rpm for LXM15LD28M3, 230 V, three phase
Product compatibility	LXM05AD28F1 at 110...120 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD28F1 at 110...120 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD28F1 at 110...120 V single phase LXM05CD28M2 at 200...240 V single phase LXM32.D30M2 at 115 V single phase LXM32.D18M2 at 230 V single phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD28M3 at 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	With
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors

Complementary

Range compatibility	Lexium 15 Lexium 05 Lexium 32
Supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	7.3 A
Maximum continuous power	1.6 W
Maximum current Irms	18 A for LXM32.D18M2 at 230 V 15 A for LXM32.D30M2 at 115 V 23 A for LXM15LD28M3 25.1 A for LXM05AD28F1 25.1 A for LXM05AD28M2 25.1 A for LXM05AD42M3X 25.1 A for LXM05BD28F1 25.1 A for LXM05BD28M2 25.1 A for LXM05BD42M3X 25.1 A for LXM05CD28F1 25.1 A for LXM05CD28M2 25.1 A for LXM05CD42M3X
Maximum permanent current	25.1 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Key width	30 mm
Feedback type	Single turn SinCos Hiperface
Holding torque	9 N.m holding brake
Motor flange size	100 mm
Number of motor stacks	1
Torque constant	0.45 N.m/A at 120 °C
Back emf constant	29 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	2.018 kg.cm ²
Stator resistance	0.87 Ohm at 20 °C
Stator inductance	4 mH at 20 °C
Stator electrical time constant	4.6 ms at 20 °C
Maximum radial force Fr	530 N at 5000 rpm 570 N at 4000 rpm 630 N at 3000 rpm 720 N at 2000 rpm 900 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	18 W
Type of cooling	Natural convection
Length	199.5 mm
Centring collar diameter	95 mm
Centring collar depth	3.5 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	115 mm
Net weight	4.8 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	15.4 cm
Package 1 Width	16.3 cm
Package 1 Length	40.7 cm
Package 1 Weight	4.95 kg

Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	 REACH Declaration
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

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

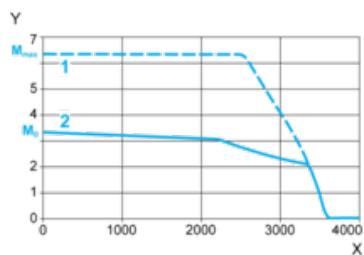
Dimensions in in.

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