

BSH0701P12F2A

AC servo motor BSH, Lexium 05, 1.4N.m,
3000rpm, keyed shaft, with brake, IP50





Main

Product or Component Type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	12.39 Lbf.In (1.4 N.m) LXM32.D12N4 3 A, 400 V, three phase 12.39 Lbf.In (1.4 N.m) LXM32.D12N4 3 A, 480 V, three phase 12.39 Lbf.In (1.4 N.m) LXM05AD10M3X, 200...240 V, three phase 12.39 Lbf.In (1.4 N.m) LXM05BD10M3X, 200...240 V, three phase 12.39 Lbf.In (1.4 N.m) LXM05CD10M3X, 200...240 V, three phase 12.39 Lbf.In (1.4 N.m) LXM15LD13M3, 230 V, single phase 12.39 Lbf.In (1.4 N.m) LXM05AD10M2, 200...240 V, single phase 12.39 Lbf.In (1.4 N.m) LXM05BD10M2, 200...240 V, single phase 12.39 Lbf.In (1.4 N.m) LXM05CD10M2, 200...240 V, single phase 12.39 lbf.in (1.4 N.m) LXM15LU60N4, 230 V, three phase
Peak stall torque	30.98 Lbf.In (3.5 N.m) LXM32.D12N4 3 A, 400 V, three phase 30.98 Lbf.In (3.5 N.m) LXM32.D12N4 3 A, 480 V, three phase 23.54 Lbf.In (2.66 N.m) LXM05AD10M3X, 200...240 V, three phase 23.54 Lbf.In (2.66 N.m) LXM05BD10M3X, 200...240 V, three phase 23.54 Lbf.In (2.66 N.m) LXM05CD10M3X, 200...240 V, three phase 23.54 Lbf.In (2.66 N.m) LXM15LD13M3, 230 V, single phase 23.54 Lbf.In (2.66 N.m) LXM05AD10M2, 200...240 V, single phase 23.54 Lbf.In (2.66 N.m) LXM05BD10M2, 200...240 V, single phase 23.54 Lbf.In (2.66 N.m) LXM05CD10M2, 200...240 V, single phase 23.54 lbf.in (2.66 N.m) LXM15LU60N4, 230 V, three phase
Nominal output power	700 W LXM32.D12N4 3 A, 400 V, three phase 700 W LXM32.D12N4 3 A, 480 V, three phase 400 W LXM05AD10M2, 200...240 V, single phase 400 W LXM05BD10M2, 200...240 V, single phase 400 W LXM05CD10M2, 200...240 V, single phase 411 W LXM15LD13M3, 230 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 411 W LXM15LU60N4, 230 V, three phase

Nominal torque	11.68 Lbf.In (1.32 N.m) LXM32.D12N4 3 A, 400 V, three phase 11.68 Lbf.In (1.32 N.m) LXM32.D12N4 3 A, 480 V, three phase 11.51 Lbf.In (1.3 N.m) LXM05AD10M2, 200...240 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05BD10M2, 200...240 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05CD10M2, 200...240 V, single phase 11.59 Lbf.In (1.31 N.m) LXM15LD13M3, 230 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05AD10M3X, 200...240 V, three phase 11.51 Lbf.In (1.3 N.m) LXM05BD10M3X, 200...240 V, three phase 11.51 Lbf.In (1.3 N.m) LXM05CD10M3X, 200...240 V, three phase 11.59 lbf.in (1.31 N.m) LXM15LU60N4, 230 V, three phase
Nominal speed	5000 rpm LXM32.D12N4 3 A, 400 V, three phase 5000 rpm LXM32.D12N4 3 A, 480 V, three phase 3000 rpm LXM05AD10M2, 200...240 V, single phase 3000 rpm LXM05BD10M2, 200...240 V, single phase 3000 rpm LXM05CD10M2, 200...240 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 3000 rpm LXM15LD13M3, 230 V, single phase 3000 rpm LXM15LU60N4, 230 V, three phase
Product compatibility	LXM05AD10M2 200...240 V single phase LXM05BD10M2 200...240 V single phase LXM05CD10M2 200...240 V single phase LXM15LD13M3 230 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 LXM32.D12N4 400 V three phase LXM32.D12N4 480 V three phase
Shaft end	Keyed
IP Degree of Protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

Complementary

Range Compatibility	Lexium 05 Lexium 32 Lexium 15
Supply voltage max	480 V
Phase	Three phase
Continuous stall current	1.8 A
Maximum continuous power	1.06 W
Maximum current Irms	5.7 A LXM05AD10M3X 5.7 A LXM05BD10M2 5.7 A LXM05BD10M3X 5.7 A LXM05CD10M2 5.7 A LXM05CD10M3X 5.3 A LXM15LD13M3 5.3 A LXM15LU60N4 5.7 A LXM05AD10M2 5.7 A LXM32.D12N4
Maximum permanent current	5.7 A

Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.43 in (11 mm)
Shaft length	0.91 in (23 mm)
Key width	0.71 in (18 mm)
Feedback type	Multiturn SinCos Hiperface
Holding torque	17.70 lbf.in (2 N.m) holding brake
Motor flange size	2.76 in (70 mm)
Number of motor stacks	1
Torque constant	0.8 N.m/A 248 °F (120 °C)
Back emf constant	46 V/krpm 248 °F (120 °C)
Number of motor poles	6
Rotor inertia	0.322 kg.cm ²
Stator resistance	10.4 Ohm 68 °F (20 °C)
Stator inductance	38.8 mH 68 °F (20 °C)
Stator electrical time constant	3.73 ms 68 °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
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	7.07 in (179.5 mm)
Centring collar diameter	2.36 in (60 mm)
Centring collar depth	0.10 in (2.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.22 in (5.5 mm)
Circle diameter of the mounting holes	3.23 in (82 mm)
Net Weight	5.07 lb(US) (2.3 kg)

Ordering and shipping details

Category	18282-LEXIUM 32 MOTORS
Discount Schedule	PC53
GTIN	3389118135697
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.84 in (12.300 cm)
Package 1 Width	5.04 in (12.800 cm)
Package 1 Length	14.84 in (37.700 cm)
Package 1 Weight	5.62 lb(US) (2.550 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	6
Package 2 Height	11.81 in (30 cm)
Package 2 Width	15.75 in (40 cm)
Package 2 Length	23.62 in (60 cm)
Package 2 Weight	35.16 lb(US) (15.950 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	24
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	31.50 in (80.000 cm)

Package 3 Length	23.62 in (60.000 cm)
Package 3 Weight	158.29 lb(US) (71.800 kg)

Offer Sustainability

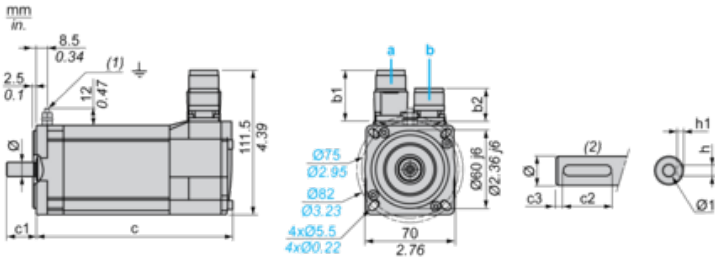
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
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.
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

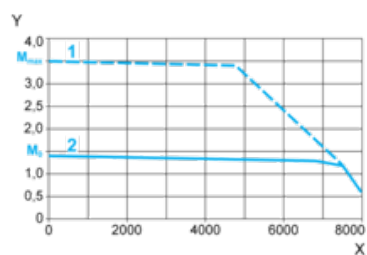
Dimensions in in.

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

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



X Speed in rpm

Y Torque in Nm

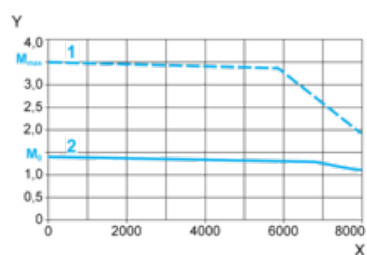
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque