

BSH0702T21F2A

AC servo motor BSH, Lexium 05, 2.12N.m,
6000rpm, untapped shaft, with brake, IP65





Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	2.2 N.M for LXM32.D30M2 at 10 A, 115 V, single phase 2.12 N.M for LXM05AD17M2, 200...240 V, single phase 2.12 N.M for LXM05BD17M2, 200...240 V, single phase 2.12 N.M for LXM05CD17M2, 200...240 V, single phase 2.2 N.M for LXM32.D18M2 at 6 A, 230 V, single phase 2.12 N.M for LXM05AD17F1, 110...120 V, single phase 2.12 N.M for LXM05AD28M2, 200...240 V, single phase 2.12 N.M for LXM05BD17F1, 110...120 V, single phase 2.12 N.M for LXM05BD28M2, 200...240 V, single phase 2.12 N.M for LXM05CD17F1, 110...120 V, single phase 2.12 N.M for LXM05CD28M2, 200...240 V, single phase 2.12 N.M for LXM15LD17N4, 230 V, three phase 2.12 N.M for LXM15LD21M3, 230 V, three phase 2.12 N.M for LXM05AD42M3X, 200...240 V, three phase 2.12 N.M for LXM05BD42M3X, 200...240 V, three phase 2.12 N.M for LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	6.1 N.M for LXM32.D30M2 at 10 A, 115 V, single phase 7.2 N.M for LXM32.D18M2 at 6 A, 230 V, single phase 4.14 N.M for LXM05AD17F1, 110...120 V, single phase 4.14 N.M for LXM05AD17M2, 200...240 V, single phase 4.14 N.M for LXM05BD17F1, 110...120 V, single phase 4.14 N.M for LXM05BD17M2, 200...240 V, single phase 4.14 N.M for LXM05CD17F1, 110...120 V, single phase 4.14 N.M for LXM05CD17M2, 200...240 V, single phase 6.8 N.M for LXM05AD28M2, 200...240 V, single phase 6.8 N.M for LXM05BD28M2, 200...240 V, single phase 6.8 N.M for LXM05CD28M2, 200...240 V, single phase 4.47 N.M for LXM15LD17N4, 230 V, three phase 5.45 N.M for LXM15LD21M3, 230 V, three phase 6.8 N.M for LXM05AD42M3X, 200...240 V, three phase 6.8 N.M for LXM05BD42M3X, 200...240 V, three phase 6.8 N.M for LXM05CD42M3X, 200...240 V, three phase

Nominal output power	<p>550 W for LXM32.D30M2 at 10 A, 115 V, single phase</p> <p>600 W for LXM05AD17M2, 200...240 V, single phase</p> <p>600 W for LXM05BD17M2, 200...240 V, single phase</p> <p>600 W for LXM05CD17M2, 200...240 V, single phase</p> <p>570 W for LXM05AD17F1, 110...120 V, single phase</p> <p>570 W for LXM05BD17F1, 110...120 V, single phase</p> <p>570 W for LXM05CD17F1, 110...120 V, single phase</p> <p>600 W for LXM05AD28M2, 200...240 V, single phase</p> <p>600 W for LXM05BD28M2, 200...240 V, single phase</p> <p>600 W for LXM05CD28M2, 200...240 V, single phase</p> <p>950 W for LXM32.D18M2 at 6 A, 230 V, single phase</p> <p>1000 W for LXM15LD17N4, 230 V, three phase</p> <p>1000 W for LXM15LD21M3, 230 V, three phase</p> <p>600 W for LXM05AD42M3X, 200...240 V, three phase</p> <p>600 W for LXM05BD42M3X, 200...240 V, three phase</p> <p>600 W for LXM05CD42M3X, 200...240 V, three phase</p>
Nominal torque	<p>2.07 N.M for LXM32.D30M2 at 10 A, 115 V, single phase</p> <p>1.9 N.M for LXM05AD17M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05BD17M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05CD17M2, 200...240 V, single phase</p> <p>1.83 N.M for LXM05AD17F1, 110...120 V, single phase</p> <p>1.83 N.M for LXM05BD17F1, 110...120 V, single phase</p> <p>1.83 N.M for LXM05CD17F1, 110...120 V, single phase</p> <p>1.9 N.M for LXM05AD28M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05BD28M2, 200...240 V, single phase</p> <p>1.9 N.M for LXM05CD28M2, 200...240 V, single phase</p> <p>1.8 N.M for LXM32.D18M2 at 6 A, 230 V, single phase</p> <p>1.66 N.M for LXM15LD17N4, 230 V, three phase</p> <p>1.66 N.M for LXM15LD21M3, 230 V, three phase</p> <p>1.9 N.M for LXM05AD42M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05BD42M3X, 200...240 V, three phase</p> <p>1.9 N.M for LXM05CD42M3X, 200...240 V, three phase</p>

Nominal speed	2500 rpm for LXM32.D30M2 at 10 A, 115 V, single phase 3000 rpm for LXM05AD17F1, 110...120 V, single phase 3000 rpm for LXM05BD17F1, 110...120 V, single phase 3000 rpm for LXM05CD17F1, 110...120 V, single phase 3000 rpm for LXM05AD17M2, 200...240 V, single phase 3000 rpm for LXM05BD17M2, 200...240 V, single phase 3000 rpm for LXM05CD17M2, 200...240 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 5000 rpm for LXM32.D18M2 at 6 A, 230 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 6000 rpm for LXM15LD17N4, 230 V, three phase 6000 rpm for LXM15LD21M3, 230 V, three phase
Product compatibility	LXM05AD17F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM05CD28M2 at 200...240 V single phase LXM32.D30M2 at 115 V single phase LXM32.D18M2 at 230 V single phase LXM15LD21M3 at 230 V three phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD17N4 at 230 V three phase
Shaft end	Untapped
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 05 Lexium 32 Lexium 15
Supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	4.9 A
Maximum continuous power	1.51 W

Maximum current Irms	20.6 A for LXM15LD21M3 20.6 A for LXM15LD17N4 19.9 A for LXM05AD17F1 19.9 A for LXM05AD17M2 19.9 A for LXM05AD28M2 19.9 A for LXM05AD42M3X 19.9 A for LXM05BD17F1 19.9 A for LXM05BD17M2 19.9 A for LXM05BD28M2 19.9 A for LXM05BD42M3X 19.9 A for LXM05CD17F1 19.9 A for LXM05CD17M2 19.9 A for LXM05CD28M2 19.9 A for LXM05CD42M3X 15 A for LXM32.D30M2 18 A for LXM32.D18M2
Maximum permanent current	19.9 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
Feedback type	Single turn SinCos Hiperface
Holding torque	2 N.m holding brake
Motor flange size	70 mm
Number of motor stacks	2
Torque constant	0.45 N.m/A at 120 °C
Back emf constant	28 V/krpm at 120 °C
Number of motor poles	6
Rotor inertia	0.482 kg.cm ²
Stator resistance	1.5 Ohm at 20 °C
Stator inductance	6.7 mH at 20 °C
Stator electrical time constant	4.47 ms at 20 °C
Maximum radial force Fr	390 N at 6000 rpm 410 N at 5000 rpm 450 N at 4000 rpm 490 N at 3000 rpm 560 N at 2000 rpm 710 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	212.5 mm
Centring collar diameter	60 mm
Centring collar depth	2.5 mm
Number of mounting holes	4
Mounting holes diameter	5.5 mm
Circle diameter of the mounting holes	82 mm
Net weight	3 kg

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	12.3 cm
Package 1 Width	12.8 cm
Package 1 Length	37.7 cm
Package 1 Weight	3.25 kg

Offer Sustainability

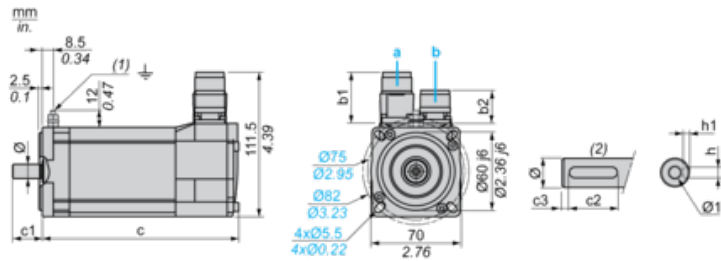
Sustainable offer status	Green Premium product
REACH Regulation	REACH Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
Mercury free	Yes
China RoHS Regulation	China RoHS Declaration
RoHS exemption information	Yes
Environmental Disclosure	Product Environmental Profile
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
----------	-----------

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	187	213	23	18	2.5	4 N9	$2.5^{+0.1}_0$	11 k6	M4 x 10

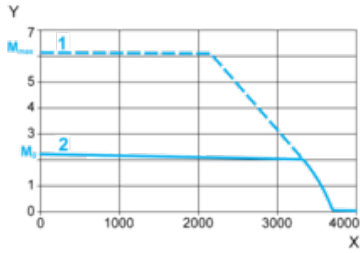
Dimensions in in.

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	7.36	8.38	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•D30M2 servo drive



X Speed in rpm

Y Torque in Nm

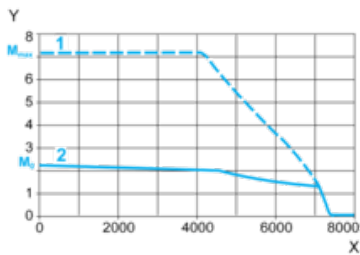
1 Peak torque

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