Product data sheet
Characteristics

BSH0553T02F2A
AC servo motor BSH - 1.3 N.m - 3000 rpm - untapped shaft - with brake - IP50

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Main

Product or Component Type	Servo motor
Device short name	BSH
Maximum mechanical speed	9000 rpm
Continuous stall torque	10.62 Lbf.In (1.2 N.m) LXM32.U90M2 3 A, 230 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05AD17F1, 110...120 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05AD17M2, 200...240 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05BD17F1, 110...120 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05BD17M2, 200...240 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05CD17F1, 110...120 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05CD17M2, 200...240 V, single phase 10.62 Lbf.In (1.2 N.m) LXM32.D18M2 6 A, 115 V, single phase 11.51 Lbf.In (1.3 N.m) LXM05AD17M3X, 200...240 V, three phase 11.51 Lbf.In (1.3 N.m) LXM05BD17M3X, 200...240 V, three phase 11.51 lbf.in (1.3 N.m) LXM05CD17M3X, 200...240 V, three phase
Peak stall torque	26.55 Lbf.In (3 N.m) LXM32.U90M2 3 A, 230 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05AD17F1, 110...120 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05AD17M2, 200...240 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05BD17F1, 110...120 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05BD17M2, 200...240 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05CD17F1, 110...120 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05CD17M2, 200...240 V, single phase 29.21 Lbf.In (3.3 N.m) LXM32.D18M2 6 A, 115 V, single phase 29.30 Lbf.In (3.31 N.m) LXM05AD17M3X, 200...240 V, three phase 29.30 Lbf.In (3.31 N.m) LXM05BD17M3X, 200...240 V, three phase 29.30 lbf.in (3.31 N.m) LXM05CD17M3X, 200...240 V, three phase
Nominal output power	550 W LXM32.U90M2 3 A, 230 V, single phase 350 W LXM05AD17F1, 110...120 V, single phase 350 W LXM05AD17M2, 200...240 V, single phase 350 W LXM05BD17F1, 110...120 V, single phase 350 W LXM05BD17M2, 200...240 V, single phase 350 W LXM05CD17F1, 110...120 V, single phase 350 W LXM05CD17M2, 200...240 V, single phase 350 W LXM32.D18M2 6 A, 115 V, single phase 350 W LXM05AD17M3X, 200...240 V, three phase 350 W LXM05BD17M3X, 200...240 V, three phase 350 W LXM05CD17M3X, 200...240 V, three phase

Nominal torque	7.43 Lbf.In (0.84 N.m) LXM32.U90M2 3 A, 230 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05AD17F1, 110...120 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05AD17M2, 200...240 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05BD17F1, 110...120 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05BD17M2, 200...240 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05CD17F1, 110...120 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05CD17M2, 200...240 V, single phase 10.09 Lbf.In (1.14 N.m) LXM32.D18M2 6 A, 115 V, single phase 9.74 Lbf.In (1.1 N.m) LXM05AD17M3X, 200...240 V, three phase 9.74 Lbf.In (1.1 N.m) LXM05BD17M3X, 200...240 V, three phase 9.74 lbf.in (1.1 N.m) LXM05CD17M3X, 200...240 V, three phase
Nominal speed	6000 rpm LXM32.U90M2 3 A, 230 V, single phase 3000 rpm LXM05AD17F1, 110...120 V, single phase 3000 rpm LXM05BD17F1, 110...120 V, single phase 3000 rpm LXM05CD17F1, 110...120 V, single 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 LXM32.D18M2 6 A, 115 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
Product compatibility	LXM05AD17F1 110...120 V single phase LXM05AD17M2 200...240 V single phase LXM05BD17F1 110...120 V single phase LXM05BD17M2 200...240 V single phase LXM05CD17F1 110...120 V single phase LXM05CD17M2 200...240 V single phase LXM32.U90M2 230 V single phase LXM32.D18M2 115 V single phase LXM05AD17M3X 200...240 V three phase LXM05BD17M3X 200...240 V three phase LXM05CD17M3X 200...240 V three phase
Shaft end	Untapped
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 32 Lexium 05
Supply voltage max	480 V
Phase	Three phase
Continuous stall current	3.1 A
Maximum continuous power	0.97 W

Maximum current Irms	11.9 A LXM05AD17F1 11.9 A LXM05AD17M2 11.9 A LXM05AD17M3X 11.9 A LXM05BD17F1 11.9 A LXM05BD17M2 11.9 A LXM05BD17M3X 11.9 A LXM05CD17F1 11.9 A LXM05CD17M2 11.9 A LXM05CD17M3X 10 A LXM32.D18M2 9 A LXM32.U90M2
Maximum permanent current	11.9 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.35 in (9 mm)
Shaft length	0.79 in (20 mm)
Feedback type	Multiturn SinCos Hiperface
Holding torque	7.08 lbf.in (0.8 N.m) holding brake
Motor flange size	2.17 in (55 mm)
Number of motor stacks	3
Torque constant	0.39 N.m/A 248 °F (120 °C)
Back emf constant	22 V/krpm 248 °F (120 °C)
Number of motor poles	6
Rotor inertia	0.1553 kg.cm²
Stator resistance	3.1 Ohm 68 °F (20 °C)
Stator inductance	7.4 mH 68 °F (20 °C)
Stator electrical time constant	2.39 ms 68 °F (20 °C)
Maximum radial force Fr	190 N 8000 rpm 200 N 7000 rpm 210 N 6000 rpm 230 N 5000 rpm 240 N 4000 rpm 270 N 3000 rpm 310 N 2000 rpm 390 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	7.99 in (203 mm)
Centring collar diameter	1.57 in (40 mm)
Centring collar depth	0.08 in (2 mm)
Number of mounting holes	4
Mounting holes diameter	0.22 in (5.5 mm)
Circle diameter of the mounting holes	2.48 in (63 mm)
Net Weight	4.19 lb(US) (1.9 kg)

Ordering and shipping details

Category	18282-LEXIUM 32 MOTORS
Discount Schedule	PC53
GTIN	3389118159679
Nbr. of units in pkg.	1
Package weight(Lbs)	3.42 lb(US) (1.55 kg)
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Package 1 Height	4.84 in (12.3 cm)
Package 1 width	5.04 in (12.8 cm)
Package 1 Length	14.84 in (37.7 cm)

Offer Sustainability

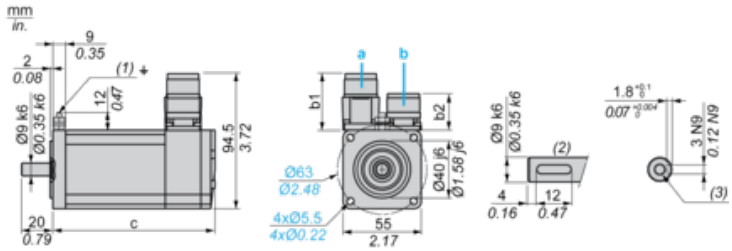
Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
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

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)

(3) For screw M3 x 9 mm/M3 x 0.35 in.

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
39.5	25.5	39.5	39.5	176.5	203

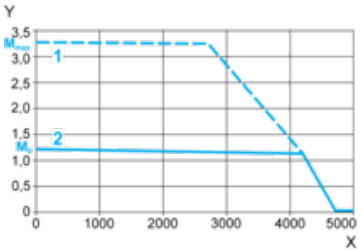
Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.94	7.99

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



X Speed in rpm

Y Torque in Nm

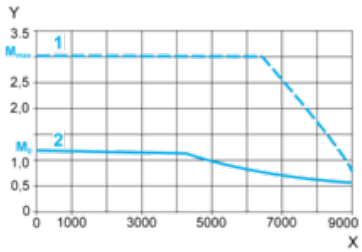
1 Peak torque

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