Product datasheet
Characteristics

BSH0553T31A2A

Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	9000 rpm
Continuous stall torque	11.5 lbf.in (1.3 N.m) LXM05AD17F1 at 110...120 V single phase 11.5 lbf.in (1.3 N.m) LXM05AD17M2 at 200...240 V single phase 11.5 lbf.in (1.3 N.m) LXM05BD17F1 at 110...120 V single phase 11.5 lbf.in (1.3 N.m) LXM05BD17M2 at 200...240 V single phase 11.5 lbf.in (1.3 N.m) LXM05CD17F1 at 110...120 V single phase 11.5 lbf.in (1.3 N.m) LXM05CD17M2 at 200...240 V single phase 11.5 lbf.in (1.3 N.m) LXM05AD17M3X at 200...240 V three phase 11.5 lbf.in (1.3 N.m) LXM05BD17M3X at 200...240 V three phase 11.5 lbf.in (1.3 N.m) LXM05CD17M3X at 200...240 V three phase 10.62 lbf.in (1.2 N.m) for LXM32.D18M2 6 A at 115 V single phase 10.62 lbf.in (1.2 N.m) LXM32.U90M2 3 A at 230 V single phase
Peak stall torque	29.29 lbf.in (3.31 N.m) LXM05AD17F1 at 110...120 V single phase 29.29 lbf.in (3.31 N.m) LXM05AD17M2 at 200...240 V single phase 29.29 lbf.in (3.31 N.m) LXM05BD17F1 at 110...120 V single phase 29.29 lbf.in (3.31 N.m) LXM05BD17M2 at 200...240 V single phase 29.29 lbf.in (3.31 N.m) LXM05CD17F1 at 110...120 V single phase 29.29 lbf.in (3.31 N.m) LXM05CD17M2 at 200...240 V single phase 29.29 lbf.in (3.31 N.m) LXM05AD17M3X at 200...240 V three phase 29.29 lbf.in (3.31 N.m) LXM05BD17M3X at 200...240 V three phase 29.29 lbf.in (3.31 N.m) LXM05CD17M3X at 200...240 V three phase 29.2 lbf.in (3.3 N.m) for LXM32.D18M2 6 A at 115 V single phase 26.55 lbf.in (3 N.m) LXM32.U90M2 3 A at 230 V single phase
Nominal output power	350 W LXM05AD17F1 at 110...120 V single phase 350 W LXM05AD17M2 at 200...240 V single phase 350 W LXM05BD17F1 at 110...120 V single phase 350 W LXM05BD17M2 at 200...240 V single phase 350 W LXM05CD17F1 at 110...120 V single phase 350 W LXM05CD17M2 at 200...240 V single phase 350 W LXM05AD17M3X at 200...240 V three phase 350 W LXM05BD17M3X at 200...240 V three phase 350 W LXM05CD17M3X at 200...240 V three phase 350 W for LXM32.D18M2 6 A at 115 V single phase 550 W LXM32.U90M2 3 A at 230 V single phase
Nominal torque	9.73 lbf.in (1.1 N.m) LXM05AD17F1 at 110...120 V single phase 9.73 lbf.in (1.1 N.m) LXM05AD17M2 at 200...240 V single phase 9.73 lbf.in (1.1 N.m) LXM05BD17F1 at 110...120 V

	single phase 9.73 lbf.in (1.1 N.m) LXM05BD17M2 at 200...240 V single phase 9.73 lbf.in (1.1 N.m) LXM05CD17F1 at 110...120 V single phase 9.73 lbf.in (1.1 N.m) LXM05CD17M2 at 200...240 V single phase 9.73 lbf.in (1.1 N.m) LXM05AD17M3X at 200...240 V three phase 9.73 lbf.in (1.1 N.m) LXM05BD17M3X at 200...240 V three phase 9.73 lbf.in (1.1 N.m) LXM05CD17M3X at 200...240 V three phase 10.09 lbf.in (1.14 N.m) for LXM32.D18M2 6 A at 115 V single phase 7.43 lbf.in (0.84 N.m) LXM32.U90M2 3 A at 230 V single phase
Nominal speed	3000 rpm LXM05AD17F1 at 110...120 V single phase 3000 rpm LXM05AD17M2 at 200...240 V single phase 3000 rpm LXM05BD17F1 at 110...120 V single phase 3000 rpm LXM05BD17M2 at 200...240 V single phase 3000 rpm LXM05CD17F1 at 110...120 V single phase 3000 rpm LXM05CD17M2 at 200...240 V single phase 3000 rpm LXM05AD17M3X at 200...240 V three phase 3000 rpm LXM05BD17M3X at 200...240 V three phase 3000 rpm LXM05CD17M3X at 200...240 V three phase 3000 rpm for LXM32.D18M2 6 A at 115 V single phase 6000 rpm LXM32.U90M2 3 A at 230 V single phase
Product compatibility	LXM05AD17F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM32.U90M2 at 230 V single phase LXM32.D18M2 at 115 V single phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 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 32
[Us] rated supply voltage	480 V
Phase	Three phase
Continuous stall current	3.1 A
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)
Key width	0.47 in (12 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	2.17 in (55 mm)
Number of motor stacks	3
Torque constant	0.39 N.m/A at 248 °F (120 °C)
Back emf constant	22 V/krpm at 248 °F (120 °C)
Number of motor poles	6
Rotor inertia	0.134 kg.cm²
Stator resistance	3.1 Ohm at 68 °F (20 °C)
Stator inductance	7.4 mH at 68 °F (20 °C)
Stator electrical time constant	2.39 ms at 68 °F (20 °C)
Maximum radial force Fr	190 N at 8000 rpm 200 N at 7000 rpm 210 N at 6000 rpm 230 N at 5000 rpm 240 N at 4000 rpm 270 N at 3000 rpm 310 N at 2000 rpm 390 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	6.95 in (176.5 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)
Product weight	3.88 lb(US) (1.76 kg)

Environment

Offer Sustainability

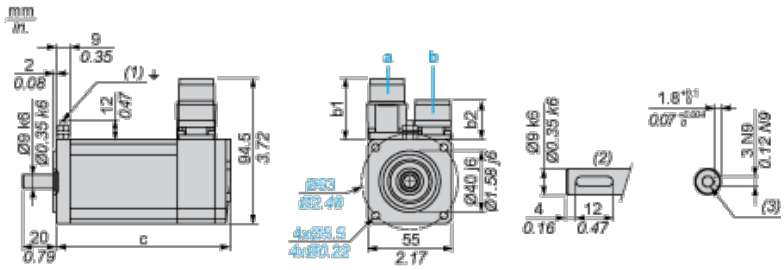
Green Premium product	Green Premium product
Compliant - since 0850 - Schneider Electric declaration of conformity	Compliant - since 0850 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
Available	Available
Need no specific recycling operations	Need no specific recycling operations
WARNING: This product can expose you to chemicals including:	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.	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	For more information go to www.p65warnings.ca.gov

Contractual warranty

Warranty period	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

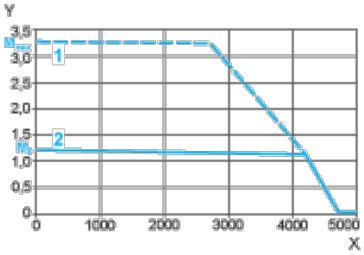
Dimensions in in.

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

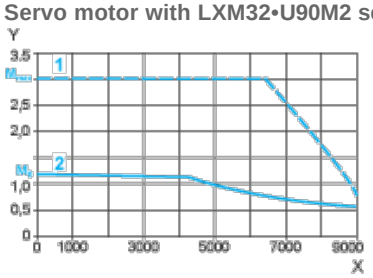
1 Peak torque

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