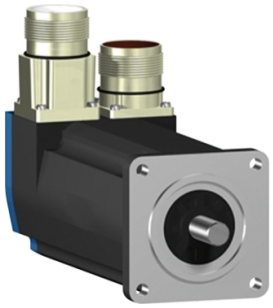
Product data sheet

Specifications



Discontinued

servo motor BSH, Lexium 05, 1.3N.m, 3000rpm, 55mm, untapped shaft, Sincos single turn, with brake, IP65, straight

BSH0553T21F1A

Discontinued on: Jun 30, 2023

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	9000 rpm
Continuous stall torque	10.6 lbf.in (1.2 N.m) LXM32.U90M2 3 A, 230 V, single phase 11.5 lbf.in (1.3 N.m) LXM05AD17F1, 110...120 V, single phase 11.5 lbf.in (1.3 N.m) LXM05AD17M2, 200...240 V, single phase 11.5 lbf.in (1.3 N.m) LXM05BD17F1, 110...120 V, single phase 11.5 lbf.in (1.3 N.m) LXM05BD17M2, 200...240 V, single phase 11.5 lbf.in (1.3 N.m) LXM05CD17F1, 110...120 V, single phase 11.5 lbf.in (1.3 N.m) LXM05CD17M2, 200...240 V, single phase 10.6 lbf.in (1.2 N.m) LXM32.D18M2 6 A, 115 V, single phase 11.5 lbf.in (1.3 N.m) LXM05AD17M3X, 200...240 V, three phase 11.5 lbf.in (1.3 N.m) LXM05BD17M3X 6 A, 200...240 V, three phase 11.5 lbf.in (1.3 N.m) LXM05CD17M3X, 200...240 V, three phase
Peak stall torque	26.6 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 29.2 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 6 A, 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 6 A, 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 9.7 lbf.in (1.1 N.m) LXM05AD17F1, 110...120 V, single phase 9.7 lbf.in (1.1 N.m) LXM05AD17M2, 200...240 V, single phase 9.7 lbf.in (1.1 N.m) LXM05BD17F1, 110...120 V, single phase 9.7 lbf.in (1.1 N.m) LXM05BD17M2, 200...240 V, single phase 9.7 lbf.in (1.1 N.m) LXM05CD17F1, 110...120 V, single phase 9.7 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 9.7 lbf.in (1.1 N.m) LXM05AD17M3X, 200...240 V, three phase 9.7 lbf.in (1.1 N.m) LXM05BD17M3X 6 A, 200...240 V, three phase 9.7 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 6 A, 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	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors

Complementary

Range compatibility	Lexium 32 Lexium 05
supply voltage max	480 V
Network number of phases	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	0.4 in (9 mm)
Shaft length	0.8 in (20 mm)
Feedback type	Single turn SinCos Hiperface
Holding torque	7.08 lbf.in (0.8 N.m) holding brake
Motor flange size	2.2 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)
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	8.0 in (203 mm)
Centring collar diameter	1.6 in (40 mm)
Centring collar depth	0.08 in (2 mm)
Number of mounting holes	4
Mounting holes diameter	0.2 in (5.5 mm)
Circle diameter of the mounting holes	2.5 in (63 mm)
Net weight	4.2 lb(US) (1.9 kg)
Sizing reference	BSH0553T
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	248 °F (120 °C)
Temperature magnet hot	212 °F (100 °C)
Temperature magnet rt	68 °F (20 °C)

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	4.8 in (12.3 cm)
Package 1 Width	5.04 in (12.8 cm)
Package 1 Length	14.8 in (37.7 cm)
Package 1 Weight	3.42 lb(US) (1.55 kg)

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Use Better

Materials and Substances

EU RoHS Directive	Compliant By Exemption

Use Longer

Lifetime extension

Repair	No

Use Again

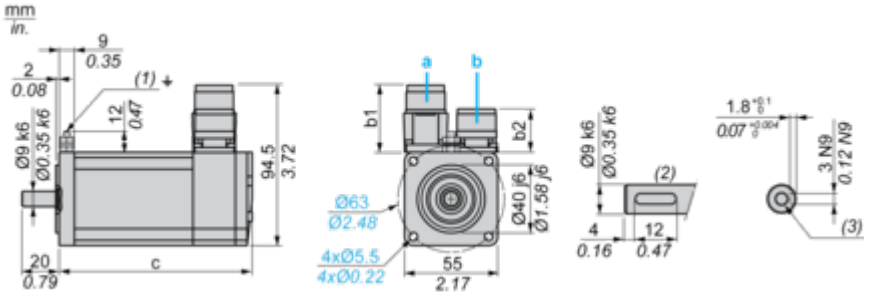
Repack and remanufacture

Circularity Profile	No need of specific recycling operations

Dimensions Drawings

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.

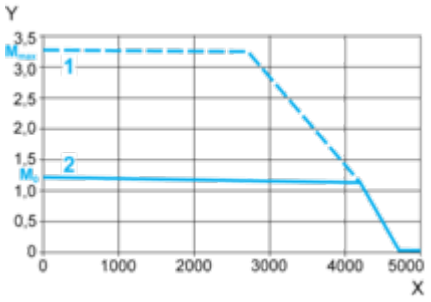
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.94	7.99

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

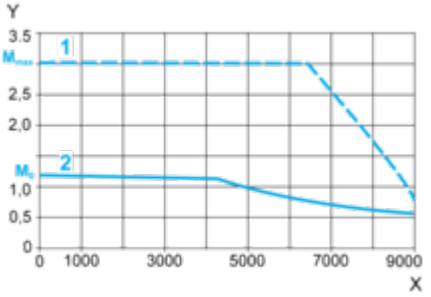


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

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