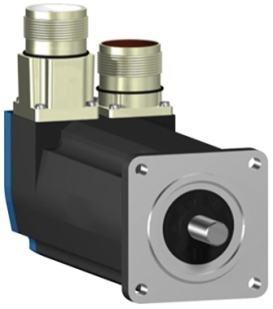
Product data sheet

Specifications



AC servo motor BSH, Lexium 05, 1.3N.m, 3000rpm, untapped shaft, without brake, IP65

BSH0553T21A1A

Product availability: Non-Stock - Not normally stocked in distribution facility

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, 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, 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 9.7 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, 200...240 V, three phase 9.7 lbf.in (1.1 N.m) LXM05CD17M3X, 200...240 V, three phase

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

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	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	Without
Mounting Support	International standard flange
Electrical Connection	Straight 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	0.4 in (9 mm)
Shaft length	0.8 in (20 mm)
Feedback type	Single turn SinCos Hiperface
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)
Number of motor poles	6
Rotor inertia	0.134 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
type of cooling	Natural convection
Length	6.9 in (176.5 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	3.88 lb(US) (1.76 kg)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118159747
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	3.086 lb(US) (1.400 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	4
Package 2 Height	11.81 in (30.000 cm)
Package 2 Width	15.75 in (40.000 cm)
Package 2 Length	23.62 in (60.000 cm)
Package 2 Weight	19.229 lb(US) (8.722 kg)

Unit Type of Package 3	P06
Number of Units in Package 3	16
Package 3 Height	29.53 in (75.000 cm)
Package 3 Width	23.62 in (60.000 cm)
Package 3 Length	31.50 in (80.000 cm)
Package 3 Weight	94.552 lb(US) (42.888 kg)

Contractual warranty

Warranty	18 months

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 >

Environmental footprint

Carbon footprint (kg CO2 eq, Total Life cycle)	614
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
China RoHS Regulation	China RoHS declaration
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
PVC free	Yes

Use Again

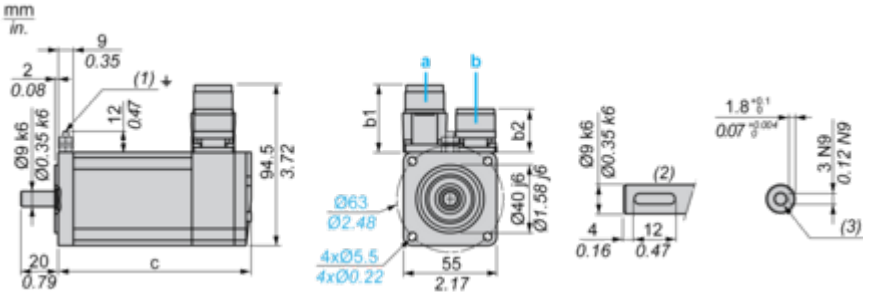
Repack and remanufacture

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.
Take-back	No

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.

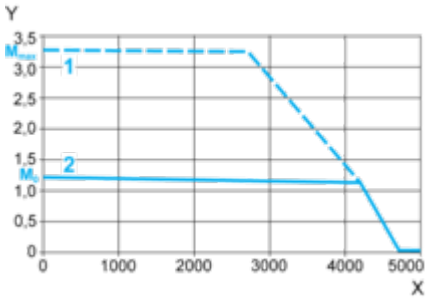
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b	b1	b	b1		
1.55	1.00	1.55	1.55	6.94	7.99

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

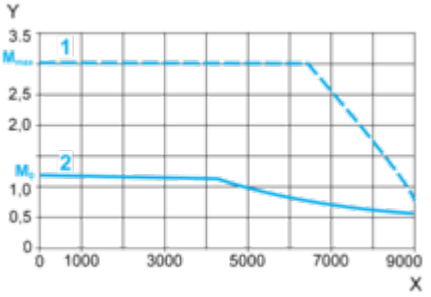


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

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