

# Product data sheet

Specifications



servo motor BSH, Lexium 05,  
1.3N.m, 3000rpm, 55mm, untapped  
shaft, Sincos multi turn, without  
brake, IP65

BSH0553T22A2A

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

## Main

<b>Device short name</b>	BSH
<b>Product or Component Type</b>	Servo motor
<b>Maximum mechanical speed</b>	9000 rpm
<b>Continuous stall torque</b>	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
<b>Peak stall torque</b>	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
<b>Nominal output power</b>	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
<b>Nominal torque</b>	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

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

<b>Nominal speed</b>	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
<b>Product compatibility</b>	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
<b>Shaft end</b>	Untapped
<b>IP Degree of Protection</b>	IP65 standard IP67 with IP67 kit
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	Without
<b>Mounting Support</b>	International standard flange
<b>Electrical Connection</b>	Rotatable right-angled connectors

## Complementary

<b>Range Compatibility</b>	Lexium 32 Lexium 05
<b>supply voltage max</b>	480 V
<b>Phase</b>	Three phase
<b>Continuous stall current</b>	3.1 A
<b>maximum continuous power</b>	0.97 W
<b>Maximum current Irms</b>	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
<b>Maximum permanent current</b>	11.9 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	0.4 in (9 mm)
<b>Shaft length</b>	0.8 in (20 mm)
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Motor flange size</b>	2.2 in (55 mm)
<b>Number of motor stacks</b>	3
<b>Torque constant</b>	0.39 N.m/A 248 °F (120 °C)

Back emf constant	22 V/krpm 248 °F (120 °C)
Number of motor poles	3.0
Rotor inertia	0.134 kg.cm <sup>2</sup>
Stator resistance	3.1 Ohm 68 °F (20 °C)
Stator inductance	3.9 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)
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)
Output current 3s peak	11.9 A
Inertia	0.0 kg.cm <sup>2</sup> of brake 0.134 kg.cm <sup>2</sup> of motor

## Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118159785
Returnability	No
Country of origin	DE

## Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.8 in (12.3 cm)
Package 1 Width	5.04 in (12.8 cm)

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<b>Package 1 Length</b>	14.8 in (37.7 cm)
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<b>Package weight(Lbs)</b>	3.09 lb(US) (1.4 kg)
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## **Contractual warranty**

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<b>Warranty (in months)</b>	18
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## 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

Total lifecycle Carbon footprint	614 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	6 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	607 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.1 kg CO2 eq.

## Use Better



### Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
<a href="#">EU RoHS Directive</a>	Pro-active compliance (Product out of EU RoHS legal scope)
REACH Regulation	<a href="#">REACH Declaration</a>
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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
PVC free	Yes

## Use Longer



### Lifetime extension

Repair	No
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## Use Again



### Repack and remanufacture

Circularity Profile	No need of specific recycling operations
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

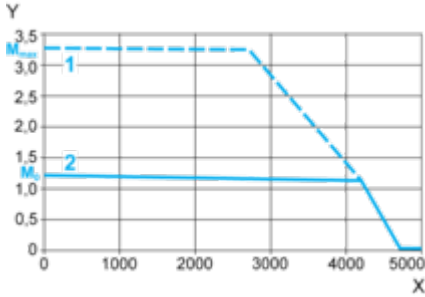
Performance Curves

115 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

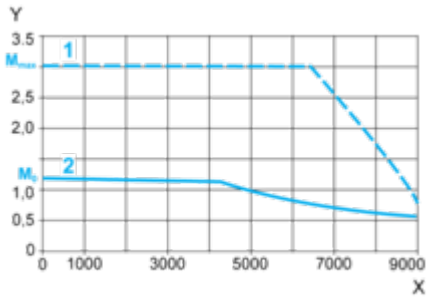
2 Continuous torque

230 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque