

# Product datasheet

Specifications



servo motor BSH, Lexium 05,  
0.7N.m, 8000rpm, 70mm, keyed  
shaft, Sincos multi turn, without  
brake, IP65, straight

BSH0701T32A1A

! Discontinued

! Discontinued on: 30 Jun 2023

EAN Code: 3389118136144

## Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	8000 rpm

Continuous stall torque	<p>1.3 N.m for LXM32.U90M2 at 3 A, 230 V, single phase</p> <p>1.4 N.m for LXM05AD10M3X, 200...240 V, three phase</p> <p>1.4 N.m for LXM05BD10M3X, 200...240 V, three phase</p> <p>1.4 N.m for LXM05CD10M3X at 6 A, 200...240 V, three phase</p> <p>1.4 N.m for LXM15LD13M3, 230 V, single phase</p> <p>1.4 N.m for LXM05AD10F1, 110...120 V, single phase</p> <p>1.4 N.m for LXM05AD17M2, 200...240 V, single phase</p> <p>1.4 N.m for LXM05BD10F1, 110...120 V, single phase</p> <p>1.4 N.m for LXM05BD17M2, 200...240 V, single phase</p> <p>1.4 N.m for LXM05CD10F1, 110...120 V, single phase</p> <p>1.4 N.m for LXM05CD17M2, 200...240 V, single phase</p> <p>1.4 N.m for LXM32.D18M2 at 6 A, 115 V, single phase</p> <p>0.7 N.m for LXM15LU60N4, 400 V, three phase</p> <p>0.7 N.m for LXM15LU60N4, 480 V, three phase</p> <p>0.91 N.m for LXM15LU60N4, 230 V, three phase</p> <p>1.4 N.m for LXM15LD10N4, 230 V, three phase</p> <p>1.4 N.m for LXM15LD10N4, 400 V, three phase</p> <p>1.4 N.m for LXM15LD10N4, 480 V, three phase</p> <p>1.4 N.m for LXM15LD13M3, 230 V, three phase</p> <p>1.4 N.m for LXM15LD21M3, 230 V, three phase</p> <p>1.4 N.m for LXM05AD17M3X, 200...240 V, three phase</p> <p>1.4 N.m for LXM05BD17M3X, 200...240 V, three phase</p> <p>1.4 N.m for LXM05CD17M3X, 200...240 V, three phase</p>
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Peak stall torque	<p>3.5 N.m for LXM32.U90M2 at 3 A, 230 V, single phase</p> <p>3.19 N.m for LXM15LD13M3, 230 V, single phase</p> <p>2.42 N.m for LXM05AD10F1, 110...120 V, single phase</p> <p>3.19 N.m for LXM05AD17M2, 200...240 V, single phase</p> <p>2.42 N.m for LXM05BD10F1, 110...120 V, single phase</p> <p>3.19 N.m for LXM05BD17M2, 200...240 V, single phase</p> <p>2.42 N.m for LXM05CD10F1, 110...120 V, single phase</p> <p>3.19 N.m for LXM05CD17M2, 200...240 V, single phase</p> <p>3.5 N.m for LXM32.D18M2 at 6 A, 115 V, single phase</p> <p>1.9 N.m for LXM15LU60N4, 400 V, three phase</p> <p>1.9 N.m for LXM15LU60N4, 480 V, three phase</p> <p>1.9 N.m for LXM15LU60N4, 230 V, three phase</p> <p>2.91 N.m for LXM15LD10N4, 230 V, three phase</p> <p>2.91 N.m for LXM15LD10N4, 400 V, three phase</p> <p>2.91 N.m for LXM15LD10N4, 480 V, three phase</p> <p>3.19 N.m for LXM15LD13M3, 230 V, three phase</p> <p>3.19 N.m for LXM15LD21M3, 230 V, three phase</p> <p>2.42 N.m for LXM05AD10M3X, 200...240 V, three phase</p> <p>3.19 N.m for LXM05AD17M3X, 200...240 V, three phase</p> <p>2.42 N.m for LXM05BD10M3X, 200...240 V, three phase</p> <p>3.19 N.m for LXM05BD17M3X, 200...240 V, three phase</p> <p>2.42 N.m for LXM05CD10M3X, 200...240 V, three phase</p> <p>3.19 N.m for LXM05CD17M3X at 6 A, 200...240 V, three phase</p>
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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

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<b>Nominal output power</b>	<p>500 W for LXM32.U90M2 at 3 A, 230 V, single phase  350 W for LXM32.D18M2 at 6 A, 115 V, single phase  400 W for LXM05AD10M3X, 200...240 V, three phase  400 W for LXM05BD10M3X, 200...240 V, three phase  400 W for LXM05CD10M3X, 200...240 V, three phase  380 W for LXM05AD10F1, 110...120 V, single phase  380 W for LXM05BD10F1, 110...120 V, single phase  380 W for LXM05CD10F1, 110...120 V, single phase  400 W for LXM05AD17M2, 200...240 V, single phase  400 W for LXM05BD17M2, 200...240 V, single phase  400 W for LXM05CD17M2, 200...240 V, single phase  654 W for LXM15LD13M3 at 6 A, 230 V, single phase  1000 W for LXM15LD10N4, 400 V, three phase  1000 W for LXM15LD10N4, 480 V, three phase  400 W for LXM05AD17M3X, 200...240 V, three phase  400 W for LXM05BD17M3X, 200...240 V, three phase  400 W for LXM05CD17M3X, 200...240 V, three phase  440 W for LXM15LU60N4, 230 V, three phase  564 W for LXM15LD10N4, 230 V, three phase  586 W for LXM15LU60N4, 400 V, three phase  586 W for LXM15LU60N4, 480 V, three phase  654 W for LXM15LD13M3, 230 V, three phase  654 W for LXM15LD21M3, 230 V, three phase</p>
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<b>Nominal torque</b>	<p>0.94 N.m for LXM32.U90M2 at 3 A, 230 V, single phase  1.25 N.m for LXM15LD13M3, 230 V, single phase  1.36 N.m for LXM32.D18M2 at 6 A, 115 V, single phase  0.7 N.m for LXM15LU60N4, 230 V, three phase  0.7 N.m for LXM15LU60N4 at 6 A, 400 V, three phase  0.7 N.m for LXM15LU60N4, 480 V, three phase  1.23 N.m for LXM15LD10N4, 400 V, three phase  1.23 N.m for LXM15LD10N4, 480 V, three phase  1.25 N.m for LXM15LD10N4, 230 V, three phase  1.25 N.m for LXM15LD13M3, 230 V, three phase  1.25 N.m for LXM15LD21M3, 230 V, three phase</p>
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<b>Nominal speed</b>	<p>5000 rpm for LXM32.U90M2 at 3 A, 230 V, single phase  3000 rpm for LXM05AD10F1, 110...120 V, single phase  3000 rpm for LXM05BD10F1, 110...120 V, single phase  3000 rpm for LXM05CD10F1, 110...120 V, single phase  3000 rpm for LXM05AD10M3X, 200...240 V, three phase  3000 rpm for LXM05BD10M3X, 200...240 V, three phase  3000 rpm for LXM05CD10M3X, 200...240 V, three phase  8000 rpm for LXM15LD10N4 at 6 A, 400 V, three phase  3000 rpm for LXM05AD17M2, 200...240 V, single phase  3000 rpm for LXM05BD17M2, 200...240 V, single phase  3000 rpm for LXM05CD17M2, 200...240 V, single phase  3000 rpm for LXM05AD17M3X, 200...240 V, three phase  3000 rpm for LXM05BD17M3X, 200...240 V, three phase  3000 rpm for LXM05CD17M3X, 200...240 V, three phase  5000 rpm for LXM15LD13M3, 230 V, single phase  2500 rpm for LXM32.D18M2 at 6 A, 115 V, single phase  5000 rpm for LXM15LD10N4, 230 V, three phase  5000 rpm for LXM15LD13M3, 230 V, three phase  5000 rpm for LXM15LD21M3, 230 V, three phase  6000 rpm for LXM15LU60N4, 230 V, three phase  8000 rpm for LXM15LD10N4, 480 V, three phase  8000 rpm for LXM15LU60N4, 400 V, three phase  8000 rpm for LXM15LU60N4, 480 V, three phase</p>
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<b>Product compatibility</b>	LXM05AD10F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD10F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD10F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM15LD13M3 at 230 V single phase LXM32.U90M2 at 230 V single phase LXM32.D18M2 at 115 V single phase LXM15LU60N4 at 230 V three phase LXM05AD10M3X at 200...240 V three phase LXM05BD10M3X at 200...240 V three phase LXM05CD10M3X at 200...240 V three phase LXM15LD13M3 at 230 V three phase LXM15LU60N4 at 400 V three phase LXM15LU60N4 at 480 V three phase LXM15LD10N4 at 400 V three phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase LXM15LD21M3 at 230 V three phase
<b>Shaft end</b>	Keyed
<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>	Straight connectors

## Complementary

<b>Range compatibility</b>	Lexium 32 Lexium 15 Lexium 05
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	3.2 A
<b>maximum continuous power</b>	1.06 W
<b>Maximum current Irms</b>	10 A for LXM32.D18M2 9 A for LXM32.U90M2 9.9 A for LXM15LD13M3 9.9 A for LXM15LD21M3 9.9 A for LXM15LU60N4 9.9 A for LXM15LD10N4
<b>Maximum permanent current</b>	10.1 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	11 mm
<b>Shaft length</b>	23 mm
<b>Key width</b>	18 mm
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Motor flange size</b>	70 mm
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	0.44 N.m/A at 120 °C
<b>Back emf constant</b>	26 V/krpm at 120 °C

Rotor inertia	0.25 kg.cm <sup>2</sup>
Stator resistance	3.3 Ohm at 20 °C
Stator inductance	12.3 mH at 20 °C
Stator electrical time constant	3.73 ms at 20 °C
Maximum radial force Fr	360 N at 6000 rpm 380 N at 5000 rpm 410 N at 4000 rpm 460 N at 3000 rpm 520 N at 2000 rpm 660 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	154 mm
Centring collar diameter	60 mm
Centring collar depth	2.5 mm
Number of mounting holes	4
Mounting holes diameter	5.5 mm
Circle diameter of the mounting holes	82 mm
Net weight	2.2 kg
Sizing reference	BSH0701T
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C

## Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	12.3 cm
Package 1 Width	12.8 cm
Package 1 Length	37.7 cm
Package 1 Weight	2.1 kg

## Contractual warranty

Warranty (in months)	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 >](#)

### Use Better



#### Materials and Substances

EU RoHS Directive

[Compliant By Exemption](#)

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

End of life manual availability

No need of specific recycling operations



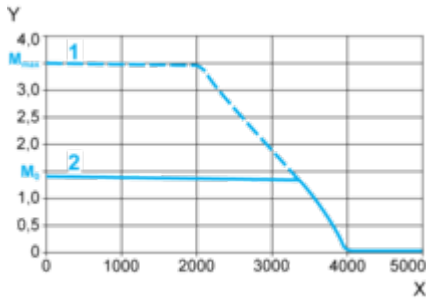
Performance Curves

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

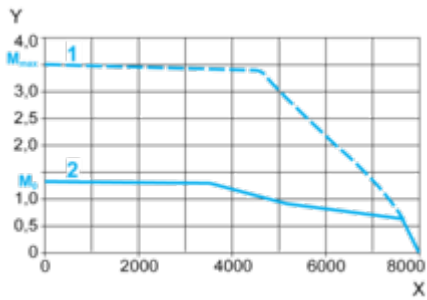
2 Continuous torque

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