

# Product datasheet

Specifications



servo motor BSH, Lexium 05,  
2.83N.m, 6000rpm, 70mm,  
untapped shaft, Sincos multi turn,  
without brake, IP50, straight

BSH0703T02A1A

! Discontinued

! Discontinued on: 30 Jun 2023

## Main

<b>Device short name</b>	BSH
<b>Product or component type</b>	Servo motor
<b>Maximum mechanical speed</b>	8000 rpm
<b>Continuous stall torque</b>	2.8 N.m for LXM05AD28M2, 200...240 V, single phase 2.8 N.m for LXM05BD28M2, 200...240 V, single phase 2.8 N.m for LXM05CD28M2, 200...240 V, single phase 2.6 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 2.83 N.m for LXM15LD28M3, 230 V, three phase 2.8 N.m for LXM05AD28F1 at 6 A, 110...120 V, single phase 2.8 N.m for LXM05AD42M3X, 200...240 V, three phase 2.8 N.m for LXM05BD28F1, 110...120 V, single phase 2.8 N.m for LXM05BD42M3X, 200...240 V, three phase 2.8 N.m for LXM05CD28F1, 110...120 V, single phase 2.8 N.m for LXM05CD42M3X, 200...240 V, three phase
<b>Peak stall torque</b>	7.38 N.m for LXM05AD28F1, 110...120 V, single phase 7.38 N.m for LXM05AD28M2, 200...240 V, single phase 7.38 N.m for LXM05BD28F1, 110...120 V, single phase 7.38 N.m for LXM05BD28M2, 200...240 V, single phase 7.38 N.m for LXM05CD28F1, 110...120 V, single phase 7.38 N.m for LXM05CD28M2, 200...240 V, single phase 7.4 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 7.38 N.m for LXM15LD28M3, 230 V, three phase 10.25 N.m for LXM05AD42M3X at 6 A, 200...240 V, three phase 10.25 N.m for LXM05BD42M3X, 200...240 V, three phase 10.25 N.m for LXM05CD42M3X, 200...240 V, three phase
<b>Nominal output power</b>	750 W for LXM05AD28M2, 200...240 V, single phase 750 W for LXM05BD28M2, 200...240 V, single phase 750 W for LXM05CD28M2, 200...240 V, single phase 750 W for LXM05AD28F1, 110...120 V, single phase 750 W for LXM05BD28F1, 110...120 V, single phase 750 W for LXM05CD28F1, 110...120 V, single phase 900 W for LXM32.D18M2 at 6 A, 230 V, single phase 1250 W for LXM15LD28M3, 230 V, three phase 750 W for LXM05AD42M3X at 6 A, 200...240 V, three phase 750 W for LXM05BD42M3X, 200...240 V, three phase 750 W for LXM05CD42M3X, 200...240 V, three phase
<b>Nominal torque</b>	2.4 N.m for LXM05AD28M2, 200...240 V, single phase 2.4 N.m for LXM05BD28M2, 200...240 V, single phase 2.4 N.m for LXM05CD28M2, 200...240 V, single phase 2.4 N.m for LXM05AD28F1, 110...120 V, single phase 2.4 N.m for LXM05BD28F1, 110...120 V, single phase 2.4 N.m for LXM05CD28F1, 110...120 V, single phase 2.1 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 2 N.m for LXM15LD28M3, 230 V, three phase 2.4 N.m for LXM05AD42M3X at 6 A, 200...240 V, three phase 2.4 N.m for LXM05BD42M3X, 200...240 V, three phase 2.4 N.m for LXM05CD42M3X, 200...240 V, three phase

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

<b>Nominal speed</b>	3000 rpm for LXM05AD28M2, 200...240 V, single phase 3000 rpm for LXM05BD28M2 at 6 A, 200...240 V, single phase 3000 rpm for LXM05CD28M2, 200...240 V, single phase 3000 rpm for LXM05AD42M3X, 200...240 V, three phase 3000 rpm for LXM05BD42M3X, 200...240 V, three phase 3000 rpm for LXM05CD42M3X, 200...240 V, three phase 3000 rpm for LXM05AD28F1, 110...120 V, single phase 3000 rpm for LXM05BD28F1, 110...120 V, single phase 3000 rpm for LXM05CD28F1, 110...120 V, single phase 4000 rpm for LXM32.D18M2 at 6 A, 230 V, single phase 6000 rpm for LXM15LD28M3, 230 V, three phase
<b>Product compatibility</b>	LXM05AD28F1 at 110...120 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD28F1 at 110...120 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD28F1 at 110...120 V single phase LXM05CD28M2 at 200...240 V single phase LXM32.D18M2 at 230 V single phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD28M3 at 230 V three phase
<b>Shaft end</b>	Untapped
<b>IP degree of protection</b>	IP50 standard
<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 15 Lexium 32 Lexium 05
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	7 A
<b>maximum continuous power</b>	1.7 W
<b>Maximum current Irms</b>	18 A for LXM32.D18M2 30.9 A for LXM15LD28M3 29.2 A for LXM05AD28F1 29.2 A for LXM05AD28M2 29.2 A for LXM05AD42M3X 29.2 A for LXM05BD28F1 29.2 A for LXM05BD28M2 29.2 A for LXM05BD42M3X 29.2 A for LXM05CD28F1 29.2 A for LXM05CD28M2 29.2 A for LXM05CD42M3X
<b>Maximum permanent current</b>	29.2 A
<b>Switching frequency</b>	8 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	14 mm
<b>Shaft length</b>	30 mm
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Motor flange size</b>	70 mm
<b>Number of motor stacks</b>	3
<b>Torque constant</b>	0.44 N.m/A at 120 °C

Back emf constant	29 V/krpm at 120 °C
Number of motor poles	6
Rotor inertia	0.58 kg.cm <sup>2</sup>
Stator resistance	0.91 Ohm at 20 °C
Stator inductance	4.4 mH at 20 °C
Stator electrical time constant	4.84 ms at 20 °C
Maximum radial force Fr	400 N at 6000 rpm 430 N at 5000 rpm 460 N at 4000 rpm 510 N at 3000 rpm 580 N at 2000 rpm 730 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	220 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	3.62 kg
Sizing reference	BSH0703T
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	3.6 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](#)

PVC free

Yes

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

End of life manual availability

No need of specific recycling operations

WEEE Label



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins



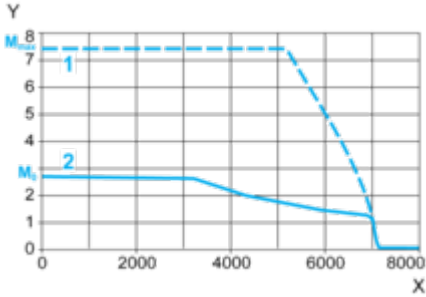
Performance Curves

230 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