

# Product datasheet

Specifications



servo motor BSH, Lexium 05,  
2.8N.m, 1500rpm, 70mm, keyed  
shaft, Sincos multi turn, with brake,  
IP50, straight

BSH0703M12F1A

! Discontinued

! Discontinued on: 18 Apr 2024

! To be end-of-service on: 18 Apr 2026

## Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	2.8 N.m for LXM05AD10M2, 200...240 V, single phase 2.8 N.m for LXM05BD10M2, 200...240 V, single phase 2.8 N.m for LXM05CD10M2, 200...240 V, single phase 2.8 N.m for LXM05AD10M3X, 200...240 V, three phase 2.8 N.m for LXM05AD14N4, 380...480 V, three phase 2.8 N.m for LXM05BD10M3X, 200...240 V, three phase 2.8 N.m for LXM05BD14N4, 380...480 V, three phase 2.8 N.m for LXM05CD10M3X, 200...240 V, three phase 2.8 N.m for LXM05CD14N4, 380...480 V, three phase
Peak stall torque	8.6 N.m for LXM05AD10M2, 200...240 V, single phase 8.6 N.m for LXM05BD10M2, 200...240 V, single phase 8.6 N.m for LXM05CD10M2, 200...240 V, single phase 8.6 N.m for LXM05AD10M3X, 200...240 V, three phase 8.6 N.m for LXM05AD14N4, 380...480 V, three phase 8.6 N.m for LXM05BD10M3X, 200...240 V, three phase 8.6 N.m for LXM05BD14N4, 380...480 V, three phase 8.6 N.m for LXM05CD10M3X, 200...240 V, three phase 8.6 N.m for LXM05CD14N4, 380...480 V, three phase
Nominal output power	400 W for LXM05AD10M2, 200...240 V, single phase 400 W for LXM05BD10M2, 200...240 V, single phase 400 W for LXM05CD10M2, 200...240 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 750 W for LXM05AD14N4, 380...480 V, three phase 750 W for LXM05BD14N4, 380...480 V, three phase 750 W for LXM05CD14N4, 380...480 V, three phase
Nominal torque	2.63 N.m for LXM05AD10M2, 200...240 V, single phase 2.63 N.m for LXM05BD10M2, 200...240 V, single phase 2.63 N.m for LXM05CD10M2, 200...240 V, single phase 2.4 N.m for LXM05AD14N4, 380...480 V, three phase 2.4 N.m for LXM05BD14N4, 380...480 V, three phase 2.4 N.m for LXM05CD14N4, 380...480 V, three phase 2.63 N.m for LXM05AD10M3X, 200...240 V, three phase 2.63 N.m for LXM05BD10M3X, 200...240 V, three phase 2.63 N.m for LXM05CD10M3X, 200...240 V, three phase
Nominal speed	1500 rpm for LXM05AD10M2, 200...240 V, single phase 1500 rpm for LXM05BD10M2, 200...240 V, single phase 1500 rpm for LXM05CD10M2, 200...240 V, single phase 1500 rpm for LXM05AD10M3X, 200...240 V, three phase 1500 rpm for LXM05BD10M3X, 200...240 V, three phase 1500 rpm for LXM05CD10M3X, 200...240 V, three phase 3000 rpm for LXM05AD14N4, 380...480 V, three phase 3000 rpm for LXM05BD14N4, 380...480 V, three phase 3000 rpm for LXM05CD14N4, 380...480 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>Product compatibility</b>	LXM05AD10M2 at 200...240 V single phase LXM05BD10M2 at 200...240 V single phase LXM05CD10M2 at 200...240 V single phase LXM05AD10M3X at 200...240 V three phase LXM05BD10M3X at 200...240 V three phase LXM05CD10M3X at 200...240 V three phase LXM05AD14N4 at 380...480 V three phase LXM05BD14N4 at 380...480 V three phase LXM05CD14N4 at 380...480 V three phase
<b>Shaft end</b>	Keyed
<b>IP degree of protection</b>	IP50 standard
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	With
<b>Mounting support</b>	International standard flange
<b>Electrical connection</b>	Straight connectors

## Complementary

<b>Range compatibility</b>	Lexium 05
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	2.1 A
<b>maximum continuous power</b>	1.7 W
<b>Maximum current Irms</b>	8.7 A for LXM05AD10M2 8.7 A for LXM05AD10M3X 8.7 A for LXM05AD14N4 8.7 A for LXM05BD10M2 8.7 A for LXM05BD10M3X 8.7 A for LXM05BD14N4 8.7 A for LXM05CD10M2 8.7 A for LXM05CD10M3X 8.7 A for LXM05CD14N4
<b>Maximum permanent current</b>	8.7 A
<b>Switching frequency</b>	4 kHz
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	14 mm
<b>Shaft length</b>	30 mm
<b>Key width</b>	20 mm
<b>Feedback type</b>	Multiturn SinCos Hiperface
<b>Holding torque</b>	3 N.m holding brake
<b>Motor flange size</b>	70 mm
<b>Torque constant</b>	1.48 N.m/A at 120 °C
<b>Back emf constant</b>	95 V/krpm at 120 °C
<b>Number of motor poles</b>	6
<b>Rotor inertia</b>	0.81 kg.cm <sup>2</sup>
<b>Stator resistance</b>	10.2 Ohm at 20 °C
<b>Stator inductance</b>	49.2 mH at 20 °C
<b>Stator electrical time constant</b>	4.82 ms at 20 °C

<b>Maximum radial force Fr</b>	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
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Brake pull-in power</b>	12 W
<b>Type of cooling</b>	Natural convection
<b>Length</b>	254 mm
<b>Centring collar diameter</b>	60 mm
<b>Centring collar depth</b>	2.5 mm
<b>Number of mounting holes</b>	4
<b>Mounting holes diameter</b>	5.5 mm
<b>Circle diameter of the mounting holes</b>	82 mm
<b>Net weight</b>	3.8 kg
<b>Sizing reference</b>	BSH0703M
<b>Network number of phases</b>	3
<b>Accuracy error [angular]</b>	1.4 °
<b>Temperature copper hot</b>	120 °C
<b>Temperature magnet hot</b>	100 °C
<b>Temperature magnet rt</b>	20 °C

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1

## Contractual warranty

<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 >](#)

### Use Longer



#### Lifetime extension

Repair

No