

Product datasheet

Specifications



servo motor BSH, Lexium 05,
2.83N.m, 6000rpm, 70mm, keyed
shaft, Sincos single turn, with brake,
IP65, straight

BSH0703T31F1A

! Discontinued

! Discontinued on: 9 Feb 2023

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	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
Peak stall torque	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
Nominal output power	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
Nominal torque	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

Nominal speed	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
Product compatibility	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
Shaft end	Keyed
IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors

Complementary

Range compatibility	Lexium 32 Lexium 15 Lexium 05
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	7 A
maximum continuous power	1.7 W
Maximum current Irms	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
Maximum permanent current	29.2 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	14 mm
Shaft length	30 mm
Key width	20 mm
Feedback type	Single turn SinCos Hiperface
Holding torque	3 N.m holding brake

Motor flange size	70 mm
Number of motor stacks	3
Torque constant	0.44 N.m/A at 120 °C
Back emf constant	29 V/krpm at 120 °C
Number of motor poles	6
Rotor inertia	0.81 kg.cm ²
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
Brake pull-in power	12 W
Type of cooling	Natural convection
Length	254 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	3.8 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	4.05 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

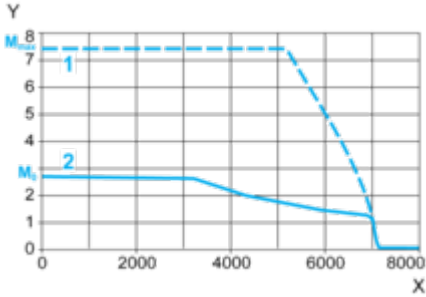
No need of specific recycling operations

Performance Curves

230 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