

Product datasheet

Specifications



servo motor BSH, Lexium 05,
7.76N.m, 2000rpm, 100mm, keyed
shaft, Sincos multi turn, without
brake, IP50, straight

BSH1003M12A1A

⚠ Discontinued on: Jan 23, 2021

⚠ Discontinued

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	7.76 N.m for LXM15LD10N4, 400 V, three phase 7.76 N.m for LXM15LD17N4, 230 V, three phase 7.76 N.m for LXM15LD17N4, 400 V, three phase 7.76 N.m for LXM15LD17N4, 480 V, three phase 7.8 N.m for LXM05AD22N4, 380...480 V, three phase 7.8 N.m for LXM05BD22N4, 380...480 V, three phase 7.8 N.m for LXM05CD22N4, 380...480 V, three phase
Peak stall torque	15.19 N.m for LXM15LD10N4, 400 V, three phase 22.95 N.m for LXM15LD17N4, 230 V, three phase 22.95 N.m for LXM15LD17N4, 400 V, three phase 22.95 N.m for LXM15LD17N4, 480 V, three phase 23.17 N.m for LXM05AD22N4, 380...480 V, three phase 23.17 N.m for LXM05BD22N4, 380...480 V, three phase 23.17 N.m for LXM05CD22N4, 380...480 V, three phase
Nominal output power	1400 W for LXM15LD17N4, 480 V, three phase 750 W for LXM15LD17N4, 230 V, three phase 1300 W for LXM15LD10N4, 400 V, three phase 1100 W for LXM05AD22N4, 380...480 V, three phase 1100 W for LXM05BD22N4, 380...480 V, three phase 1100 W for LXM05CD22N4, 380...480 V, three phase 1400 W for LXM15LD17N4, 400 V, three phase
Nominal torque	6.36 N.m for LXM15LD10N4, 400 V, three phase 6.5 N.m for LXM15LD17N4, 400 V, three phase 6.5 N.m for LXM15LD17N4, 480 V, three phase 6.73 N.m for LXM05AD22N4, 380...480 V, three phase 6.73 N.m for LXM05BD22N4, 380...480 V, three phase 6.73 N.m for LXM05CD22N4, 380...480 V, three phase 7 N.m for LXM15LD17N4, 230 V, three phase
Nominal speed	1000 rpm for LXM15LD17N4, 230 V, three phase 1500 rpm for LXM05AD22N4, 380...480 V, three phase 1500 rpm for LXM05BD22N4, 380...480 V, three phase 1500 rpm for LXM05CD22N4, 380...480 V, three phase 2000 rpm for LXM15LD10N4, 400 V, three phase 2000 rpm for LXM15LD17N4, 400 V, three phase 2000 rpm for LXM15LD17N4, 480 V, three phase
Product compatibility	LXM15LD10N4 at 400 V three phase LXM15LD17N4 at 230 V three phase LXM05AD22N4 at 380...480 V three phase LXM05BD22N4 at 380...480 V three phase LXM05CD22N4 at 380...480 V three phase LXM15LD17N4 at 400 V three phase LXM15LD17N4 at 480 V three phase
Shaft end	Keyed
IP degree of protection	IP50 standard

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

Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
Mounting support	International standard flange
Electrical connection	Straight connectors

Complementary

Range compatibility	Lexium 15 Lexium 05
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	3.4 A
maximum continuous power	3.14 W
Maximum current Irms	15.6 A for LXM15LD10N4 15.6 A for LXM15LD17N4 14.7 A for LXM05AD22N4 14.7 A for LXM05BD22N4 14.7 A for LXM05CD22N4
Maximum permanent current	14.7 A
Switching frequency	4 kHz
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Key width	30 mm
Feedback type	Multiturn SinCos Hiperface
Motor flange size	100 mm
Torque constant	2.22 N.m/A at 120 °C
Back emf constant	1.44 V/krpm at 120 °C 148 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	3.22 kg.cm²
Stator resistance	5.3 Ohm at 20 °C
Stator inductance	32.5 mH at 20 °C 33.7 mH at 20 °C
Stator electrical time constant	6.13 ms at 20 °C 6.36 ms at 20 °C
Maximum radial force Fr	1050 N at 1000 rpm 660 N at 4000 rpm 730 N at 3000 rpm 830 N at 2000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	240.5 mm
Centring collar diameter	95 mm
Centring collar depth	3.5 mm
Number of mounting holes	4
Mounting holes diameter	9 mm

Circle diameter of the mounting holes	115 mm
Product weight	7.4 kg
Sizing reference	BSH1003M
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

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 Longer

Lifetime extension	
Repair	No