

Product datasheet

Specifications



servo motor BSH, Lexium 05,
2.2N.m, 3000rpm, 70mm, untapped
shaft, Sincos multi turn, without
brake, IP65, straight

BSH0702P22A1A

! Discontinued

! Discontinued on: 30 Jun 2023

EAN Code: 3389118136380

Main

| | |
|---------------------------|---|
| Device short name | BSH |
| Product or component type | Servo motor |
| Maximum mechanical speed | 8000 rpm |
| Continuous stall torque | <p>2.2 N.m for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>2.2 N.m for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>2.12 N.m for LXM05AD10M2, 200...240 V, single phase</p> <p>2.12 N.m for LXM05AD10M3X, 200...240 V, three phase</p> <p>2.12 N.m for LXM05BD10M2, 200...240 V, single phase</p> <p>2.12 N.m for LXM05BD10M3X, 200...240 V, three phase</p> <p>2.12 N.m for LXM05CD10M2, 200...240 V, single phase</p> <p>2.12 N.m for LXM05CD10M3X, 200...240 V, three phase</p> <p>2.2 N.m for LXM15LD13M3, 230 V, single phase</p> <p>2.12 N.m for LXM05AD17M2, 200...240 V, single phase</p> <p>2.12 N.m for LXM05BD17M2, 200...240 V, single phase</p> <p>2.12 N.m for LXM05CD17M2 at 3 A, 200...240 V, single phase</p> <p>2.2 N.m for LXM15LD10N4, 480 V, three phase</p> <p>2.12 N.m for LXM05AD17M3X, 200...240 V, three phase</p> <p>2.12 N.m for LXM05AD14N4, 380...480 V, three phase</p> <p>2.12 N.m for LXM05BD17M3X, 200...240 V, three phase</p> <p>2.12 N.m for LXM05BD14N4, 380...480 V, three phase</p> <p>2.12 N.m for LXM05CD17M3X, 200...240 V, three phase</p> <p>2.12 N.m for LXM05CD14N4, 380...480 V, three phase</p> <p>2.2 N.m for LXM15LD10N4, 230 V, three phase</p> <p>2.2 N.m for LXM15LD10N4, 400 V, three phase</p> |
| Peak stall torque | <p>7.6 N.m for LXM32.D12N4 at 3 A, 400 V, three phase</p> <p>7.6 N.m for LXM32.D12N4 at 3 A, 480 V, three phase</p> <p>5.63 N.m for LXM15LD13M3, 230 V, single phase</p> <p>4.57 N.m for LXM05AD10M2, 200...240 V, single phase</p> <p>5.63 N.m for LXM05AD17M2, 200...240 V, single phase</p> <p>4.57 N.m for LXM05BD10M2, 200...240 V, single phase</p> <p>5.63 N.m for LXM05BD17M2, 200...240 V, single phase</p> <p>4.57 N.m for LXM05CD10M2, 200...240 V, single phase</p> <p>5.63 N.m for LXM05CD17M2, 200...240 V, single phase</p> <p>4.85 N.m for LXM15LD10N4, 230 V, three phase</p> <p>4.85 N.m for LXM15LD10N4, 400 V, three phase</p> <p>4.85 N.m for LXM15LD10N4 at 3 A, 480 V, three phase</p> <p>4.57 N.m for LXM05AD10M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05AD17M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05AD14N4, 380...480 V, three phase</p> <p>4.57 N.m for LXM05BD10M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05BD17M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05BD14N4, 380...480 V, three phase</p> <p>4.57 N.m for LXM05CD10M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05CD17M3X, 200...240 V, three phase</p> <p>5.63 N.m for LXM05CD14N4, 380...480 V, three phase</p> |

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 output power

850 W for LXM32.D12N4 at 3 A, 400 V, three phase
850 W for LXM32.D12N4 at 3 A, 480 V, three phase
1000 W for LXM15LD10N4, 400 V, three phase
597 W for LXM15LD13M3, 230 V, single phase
600 W for LXM05AD10M2, 200...240 V, single phase
600 W for LXM05AD17M2, 200...240 V, single phase
600 W for LXM05BD10M2, 200...240 V, single phase
600 W for LXM05BD17M2, 200...240 V, single phase
600 W for LXM05CD10M2, 200...240 V, single phase
600 W for LXM05CD17M2, 200...240 V, single phase
1300 W for LXM15LD10N4, 480 V, three phase
597 W for LXM15LD10N4 at 3 A, 230 V, three phase
600 W for LXM05AD10M3X, 200...240 V, three phase
600 W for LXM05AD14N4, 380...480 V, three phase
600 W for LXM05AD17M3X, 200...240 V, three phase
600 W for LXM05BD10M3X, 200...240 V, three phase
600 W for LXM05BD14N4, 380...480 V, three phase
600 W for LXM05BD17M3X, 200...240 V, three phase
600 W for LXM05CD10M3X, 200...240 V, three phase
600 W for LXM05CD14N4, 380...480 V, three phase
600 W for LXM05CD17M3X, 200...240 V, three phase

Nominal torque

1.64 N.m for LXM32.D12N4 at 3 A, 400 V, three phase
1.64 N.m for LXM32.D12N4 at 3 A, 480 V, three phase
1.9 N.m for LXM05AD10M2, 200...240 V, single phase
1.9 N.m for LXM05AD17M2, 200...240 V, single phase
1.9 N.m for LXM05BD10M2, 200...240 V, single phase
1.9 N.m for LXM05BD17M2, 200...240 V, single phase
1.9 N.m for LXM05CD10M2, 200...240 V, single phase
1.9 N.m for LXM05CD17M2, 200...240 V, single phase
1.9 N.m for LXM15LD13M3, 230 V, single phase
1.55 N.m for LXM15LD10N4, 480 V, three phase
1.65 N.m for LXM15LD10N4, 400 V, three phase
1.9 N.m for LXM05AD10M3X at 3 A, 200...240 V, three phase
1.9 N.m for LXM05AD14N4, 380...480 V, three phase
1.9 N.m for LXM05AD17M3X, 200...240 V, three phase
1.9 N.m for LXM05BD10M3X, 200...240 V, three phase
1.9 N.m for LXM05BD14N4, 380...480 V, three phase
1.9 N.m for LXM05BD17M3X, 200...240 V, three phase
1.9 N.m for LXM05CD10M3X, 200...240 V, three phase
1.9 N.m for LXM05CD14N4, 380...480 V, three phase
1.9 N.m for LXM05CD17M3X, 200...240 V, three phase
1.9 N.m for LXM15LD10N4, 230 V, three phase

Nominal speed

5000 rpm for LXM32.D12N4 at 3 A, 400 V, three phase
5000 rpm for LXM32.D12N4 at 3 A, 480 V, three phase
3000 rpm for LXM05AD10M2, 200...240 V, single phase
3000 rpm for LXM05BD10M2, 200...240 V, single phase
3000 rpm for LXM05CD10M2, 200...240 V, single phase
3000 rpm for LXM05AD10M3X, 200...240 V, three phase
3000 rpm for LXM05AD14N4, 380...480 V, three phase
3000 rpm for LXM05BD10M3X, 200...240 V, three phase
3000 rpm for LXM05BD14N4, 380...480 V, three phase
3000 rpm for LXM05CD10M3X, 200...240 V, three phase
3000 rpm for LXM05CD14N4, 380...480 V, three phase
3000 rpm for LXM15LD13M3 at 3 A, 230 V, single 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
8000 rpm for LXM15LD10N4, 480 V, three phase
3000 rpm for LXM15LD10N4, 230 V, three phase
6000 rpm for LXM15LD10N4, 400 V, three phase

| | |
|----------------------------------|---|
| Product compatibility | LXM05AD10M2 at 200...240 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD10M2 at 200...240 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD10M2 at 200...240 V single phase LXM05CD17M2 at 200...240 V single phase LXM15LD13M3 at 230 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 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 LXM32.D12N4 at 400 V three phase LXM32.D12N4 at 480 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase |
| Shaft end | Untapped |
| IP degree of protection | IP65 standard IP67 with IP67 kit |
| 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 32 Lexium 05 Lexium 15 |
| supply voltage max | 480 V |
| Network number of phases | Three phase |
| Continuous stall current | 2.9 A |
| maximum continuous power | 1.51 W |
| Maximum current Irms | 11.8 A for LXM15LD13M3 11.8 A for LXM15LD10N4 11.8 A for LXM05AD10M2 11.8 A for LXM05AD17M2 11.8 A for LXM05AD10M3X 11.8 A for LXM05AD17M3X 11.8 A for LXM05AD14N4 11.8 A for LXM05BD10M2 11.8 A for LXM05BD17M2 11.8 A for LXM05BD10M3X 11.8 A for LXM05BD17M3X 11.8 A for LXM05BD14N4 11.8 A for LXM05CD10M2 11.8 A for LXM05CD17M2 11.8 A for LXM05CD10M3X 11.8 A for LXM05CD17M3X 11.8 A for LXM05CD14N4 11.8 A for LXM32.D12N4 |
| Maximum permanent current | 11.8 A |
| Switching frequency | 8 kHz |
| Second shaft | Without second shaft end |
| Shaft diameter | 11 mm |
| Shaft length | 23 mm |
| Feedback type | Multiturn SinCos Hiperface |

| | |
|---------------------------------------|--|
| Motor flange size | 70 mm |
| Number of motor stacks | 2 |
| Torque constant | 0.77 N.m/A at 120 °C |
| Back emf constant | 48 V/krpm at 120 °C |
| Rotor inertia | 0.41 kg.cm ² |
| Stator resistance | 4.2 Ohm at 20 °C |
| Stator inductance | 19 mH at 20 °C |
| Stator electrical time constant | 4.52 ms at 20 °C |
| Maximum radial force Fr | 390 N at 6000 rpm 410 N at 5000 rpm 450 N at 4000 rpm 490 N at 3000 rpm 560 N at 2000 rpm 710 N at 1000 rpm |
| Maximum axial force Fa | 0.2 x Fr |
| Type of cooling | Natural convection |
| Length | 187 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 | 2.89 kg |
| Sizing reference | BSH0702P |
| 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 | 2.8 kg |

Contractual warranty

| | |
|----------------------|----|
| Warranty (in months) | 18 |
|----------------------|----|



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

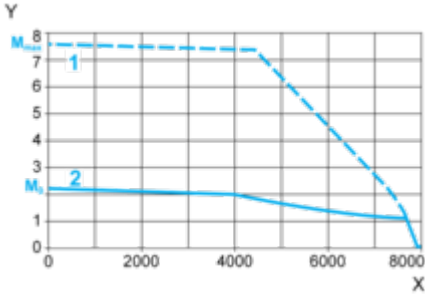
No need of specific recycling operations

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



X Speed in rpm

Y Torque in Nm

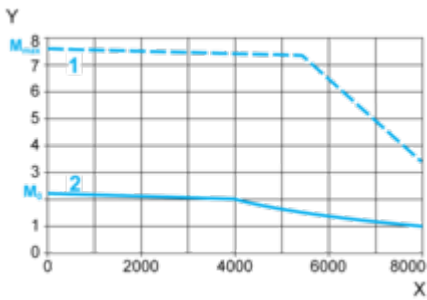
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque