

Product data sheet

Specifications



servo motor BSH, Lexium 05,
0.9N.m, 6000rpm, 55mm, untapped
shaft, Sincos multi turn, with brake,
IP50, straight

BSH0552T02F1A

Main

| | |
|---------------------------|---|
| Product Or Component Type | Servo motor |
| Device Short Name | BSH |
| Maximum Mechanical Speed | 9000 rpm |
| Continuous Stall Torque | 0.8 N.m for LXM32.U90M2 at 3 A, 115 V, single phase 0.8 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 0.9 N.m for LXM05AD10M2, 200...240 V, single phase 0.9 N.m for LXM05BD10M2, 200...240 V, single phase 0.9 N.m for LXM05CD10M2, 200...240 V, single phase 0.9 N.m for LXM05AD10M3X, 200...240 V, three phase 0.9 N.m for LXM05BD10M3X, 200...240 V, three phase 0.9 N.m for LXM05CD10M3X, 200...240 V, three phase 0.9 N.m for LXM15LD13M3, 230 V, single phase 0.9 N.m for LXM15LD13M3, 230 V, three phase 0.77 N.m for LXM05CU70M2, 200...240 V, single phase 0.9 N.m for LXM05AD10F1, 110...120 V, single phase 0.9 N.m for LXM05AD17F1, 110...120 V, single phase 0.9 N.m for LXM05BD10F1, 110...120 V, single phase 0.9 N.m for LXM05BD17F1, 110...120 V, single phase 0.9 N.m for LXM05CD10F1, 110...120 V, single phase 0.9 N.m for LXM05CD17F1, 110...120 V, single phase |
| Peak Stall Torque | 1.9 N.m for LXM32.U90M2 at 3 A, 115 V, single phase 2.5 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.5 N.m for LXM15LD13M3, 230 V, single phase 1.31 N.m for LXM05CU70M2, 200...240 V, single phase 1.77 N.m for LXM05AD10F1, 110...120 V, single phase 1.77 N.m for LXM05AD10M2, 200...240 V, single phase 2.7 N.m for LXM05AD17F1, 110...120 V, single phase 1.77 N.m for LXM05BD10F1, 110...120 V, single phase 1.77 N.m for LXM05BD10M2, 200...240 V, single phase 2.7 N.m for LXM05BD17F1, 110...120 V, single phase 1.77 N.m for LXM05CD10F1, 110...120 V, single phase 1.77 N.m for LXM05CD10M2, 200...240 V, single phase 2.7 N.m for LXM05CD17F1, 110...120 V, single phase 1.5 N.m for LXM15LD13M3, 230 V, three phase 1.77 N.m for LXM05AD10M3X, 200...240 V, three phase 1.77 N.m for LXM05BD10M3X, 200...240 V, three phase 1.77 N.m for LXM05CD10M3X, 200...240 V, three phase |
| Nominal Output Power | 250 W for LXM32.U90M2 at 3 A, 115 V, single phase 450 W for LXM32.U90M2 at 3 A, 230 V, single phase 240 W for LXM05CU70M2, 200...240 V, single phase 250 W for LXM05AD10F1, 110...120 V, single phase 250 W for LXM05AD17F1, 110...120 V, single phase 250 W for LXM05BD10F1, 110...120 V, single phase 250 W for LXM05BD17F1, 110...120 V, single phase 250 W for LXM05CD10F1, 110...120 V, single phase 250 W for LXM05CD17F1, 110...120 V, single phase 450 W for LXM05AD10M2, 200...240 V, single phase 450 W for LXM05BD10M2, 200...240 V, single phase 450 W for LXM05CD10M2, 200...240 V, single phase 450 W for LXM15LD13M3, 230 V, single phase 450 W for LXM05AD10M3X, 200...240 V, three phase 450 W for LXM05BD10M3X, 200...240 V, three phase 450 W for LXM05CD10M3X, 200...240 V, three phase 570 W for LXM15LD13M3, 230 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 Torque | 0.77 N.m for LXM32.U90M2 at 3 A, 115 V, single phase 0.74 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 0.72 N.m for LXM15LD13M3, 230 V, single phase 0.77 N.m for LXM05CU70M2, 200...240 V, single phase 0.9 N.m for LXM05AD10F1, 110...120 V, single phase 0.9 N.m for LXM05AD10M2, 200...240 V, single phase 0.9 N.m for LXM05AD17F1, 110...120 V, single phase 0.9 N.m for LXM05BD10F1, 110...120 V, single phase 0.9 N.m for LXM05BD10M2, 200...240 V, single phase 0.9 N.m for LXM05BD17F1, 110...120 V, single phase 0.9 N.m for LXM05CD10F1, 110...120 V, single phase 0.9 N.m for LXM05CD10M2, 200...240 V, single phase 0.9 N.m for LXM05CD17F1, 110...120 V, single phase 0.68 N.m for LXM15LD13M3, 230 V, three phase 0.9 N.m for LXM05AD10M3X, 200...240 V, three phase 0.9 N.m for LXM05BD10M3X, 200...240 V, three phase 0.9 N.m for LXM05CD10M3X, 200...240 V, three phase |
| Nominal Speed | 3000 rpm for LXM32.U90M2 at 3 A, 115 V, single phase 6000 rpm for LXM32.U90M2 at 3 A, 230 V, single phase 3000 rpm for LXM05AD10F1, 110...120 V, single phase 3000 rpm for LXM05BD10F1, 110...120 V, single phase 3000 rpm for LXM05CD10F1, 110...120 V, single phase 3000 rpm for LXM05CU70M2, 200...240 V, single phase 6000 rpm for LXM05AD10M2, 200...240 V, single phase 6000 rpm for LXM05BD10M2, 200...240 V, single phase 6000 rpm for LXM05CD10M2, 200...240 V, single phase 6000 rpm for LXM05AD10M3X, 200...240 V, three phase 6000 rpm for LXM05BD10M3X, 200...240 V, three phase 6000 rpm for LXM05CD10M3X, 200...240 V, three phase 8000 rpm for LXM15LD13M3, 230 V, three phase 3000 rpm for LXM05AD17F1, 110...120 V, single phase 3000 rpm for LXM05BD17F1, 110...120 V, single phase 3000 rpm for LXM05CD17F1, 110...120 V, single phase 6000 rpm for LXM15LD13M3, 230 V, single phase |
| Product Compatibility | LXM05AD10F1 at 110...120 V single phase LXM05AD10M2 at 200...240 V single phase LXM05AD17F1 at 110...120 V single phase LXM05BD10F1 at 110...120 V single phase LXM05BD10M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05CD10F1 at 110...120 V single phase LXM05CD10M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CU70M2 at 200...240 V single phase LXM15LD13M3 at 230 V single phase LXM32.U90M2 at 115 V single phase LXM32.U90M2 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 LXM15LD13M3 at 230 V three phase |
| Shaft End | Untapped |
| Ip Degree Of Protection | IP50 standard |
| Speed Feedback Resolution | 131072 points/turn x 4096 turns |
| Holding Brake | With |
| 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 | 2.2 A |

| | |
|---------------------------------------|--|
| Maximum Continuous Power | 0.67 W |
| Maximum Current I _{rms} | 6 A for LXM32.U90M2 at 115 V 8.8 A for LXM32.U90M2 at 230 V 10.3 A for LXM15LD13M3 8.8 A for LXM05AD10F1 8.8 A for LXM05AD17F1 8.8 A for LXM05CU70M2 8.8 A for LXM05AD10M2 8.8 A for LXM05AD10M3X 8.8 A for LXM05BD10F1 8.8 A for LXM05BD17F1 8.8 A for LXM05BD10M2 8.8 A for LXM05BD10M3X 8.8 A for LXM05CD10F1 8.8 A for LXM05CD17F1 8.8 A for LXM05CD10M2 8.8 A for LXM05CD10M3X |
| Maximum Permanent Current | 8.8 A |
| Switching Frequency | 8 kHz |
| Second Shaft | Without second shaft end |
| Shaft Diameter | 9 mm |
| Shaft Length | 20 mm |
| Feedback Type | Multiturn SinCos Hiperface |
| Holding Torque | 0.8 N.m holding brake |
| Motor Flange Size | 55 mm |
| Number Of Motor Stacks | 2 |
| Torque Constant | 0.36 N.m/A at 120 °C |
| Back Emf Constant | 22 V/krpm at 120 °C |
| Number Of Motor Poles | 6 |
| Rotor Inertia | 0.1173 kg.cm ² |
| Stator Resistance | 5.2 Ohm at 20 °C |
| Stator Inductance | 10.6 mH at 20 °C |
| Stator Electrical Time Constant | 2.04 ms at 20 °C |
| Maximum Radial Force Fr | 190 N at 7000 rpm 190 N at 8000 rpm 200 N at 6000 rpm 220 N at 5000 rpm 230 N at 4000 rpm 260 N at 3000 rpm 290 N at 2000 rpm 370 N at 1000 rpm |
| Maximum Axial Force Fa | 0.2 x Fr |
| Brake Pull-In Power | 10 W |
| Type Of Cooling | Natural convection |
| Length | 181 mm |
| Centring Collar Diameter | 40 mm |
| Centring Collar Depth | 2 mm |
| Number Of Mounting Holes | 4 |
| Mounting Holes Diameter | 5.5 mm |
| Circle Diameter Of The Mounting Holes | 63 mm |
| Net Weight | 1.6 kg |

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 | 1.25 kg |

Contractual warranty

| | |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Sustainability

Green Premium™ label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

Well-being performance

✓ Mercury Free

✓ Rohs Exemption Information [Yes](#)

✓ Pvc Free

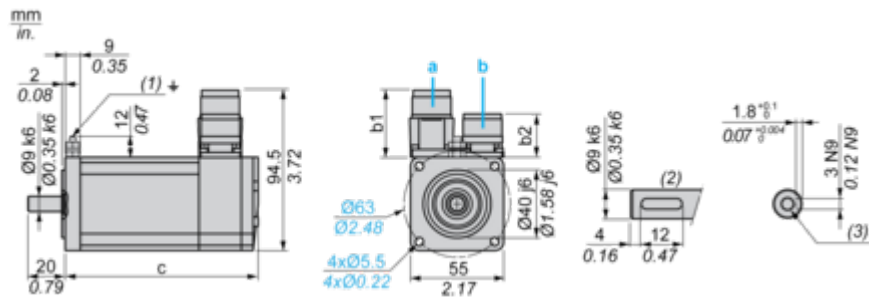
Certifications & Standards

| | |
|---------------------------|---|
| Reach Regulation | REACH Declaration |
| Eu Rohs Directive | Pro-active compliance (Product out of EU RoHS legal scope) |
| China Rohs Regulation | China RoHS declaration |
| Environmental Disclosure | Product Environmental Profile |
| Weee | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile | No need of specific recycling operations |
| California Proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |

Dimensions Drawings

Servo Motors Dimensions

Example with Straight Connectors



- a: Power supply for servo motor brake
b: Power supply for servo motor encoder
(1) M4 screw
(2) Shaft end, keyed slot (optional)
(3) For screw M3 x 9 mm/M3 x 0.35 in.

| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) |
|---------------------|------|-----------------------------|------|-------------------|----------------|
| b | b1 | b | b1 | | |
| 39.5 | 25.5 | 39.5 | 39.5 | 154.5 | 181 |

Dimensions in in.

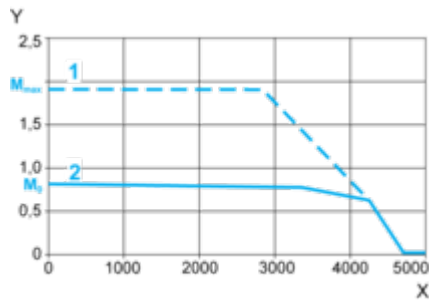
| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) |
|---------------------|------|-----------------------------|------|-------------------|----------------|
| b | b1 | b | b1 | | |
| 1.55 | 1.00 | 1.55 | 1.55 | 6.08 | 7.12 |

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive

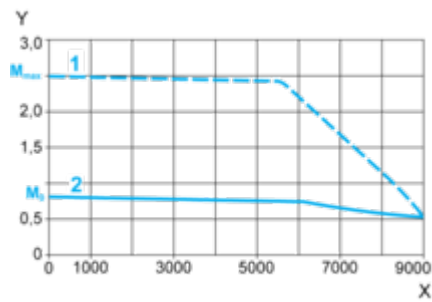


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive



- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque