

Product data sheet

Specifications



servo motor BSH, Lexium 05,
1.3N.m, 3000rpm, 55mm, untapped
shaft, Sincos multi turn, with brake,
IP50

BSH0553T02F2A

Main

| | |
|---------------------------|---|
| Product Or Component Type | Servo motor |
| Device Short Name | BSH |
| Maximum Mechanical Speed | 9000 rpm |
| Continuous Stall Torque | 1.2 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.3 N.m for LXM05AD17F1, 110...120 V, single phase 1.3 N.m for LXM05AD17M2, 200...240 V, single phase 1.3 N.m for LXM05BD17F1, 110...120 V, single phase 1.3 N.m for LXM05BD17M2, 200...240 V, single phase 1.3 N.m for LXM05CD17F1, 110...120 V, single phase 1.3 N.m for LXM05CD17M2, 200...240 V, single phase 1.2 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 1.3 N.m for LXM05AD17M3X, 200...240 V, three phase 1.3 N.m for LXM05BD17M3X, 200...240 V, three phase 1.3 N.m for LXM05CD17M3X, 200...240 V, three phase |
| Peak Stall Torque | 3 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 3.31 N.m for LXM05AD17F1, 110...120 V, single phase 3.31 N.m for LXM05AD17M2, 200...240 V, single phase 3.31 N.m for LXM05BD17F1, 110...120 V, single phase 3.31 N.m for LXM05BD17M2, 200...240 V, single phase 3.31 N.m for LXM05CD17F1, 110...120 V, single phase 3.31 N.m for LXM05CD17M2, 200...240 V, single phase 3.3 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 3.31 N.m for LXM05AD17M3X, 200...240 V, three phase 3.31 N.m for LXM05BD17M3X, 200...240 V, three phase 3.31 N.m for LXM05CD17M3X, 200...240 V, three phase |
| Nominal Output Power | 550 W for LXM32.U90M2 at 3 A, 230 V, single phase 350 W for LXM05AD17F1, 110...120 V, single phase 350 W for LXM05AD17M2, 200...240 V, single phase 350 W for LXM05BD17F1, 110...120 V, single phase 350 W for LXM05BD17M2, 200...240 V, single phase 350 W for LXM05CD17F1, 110...120 V, single phase 350 W for LXM05CD17M2, 200...240 V, single phase 350 W for LXM32.D18M2 at 6 A, 115 V, single phase 350 W for LXM05AD17M3X, 200...240 V, three phase 350 W for LXM05BD17M3X, 200...240 V, three phase 350 W for LXM05CD17M3X, 200...240 V, three phase |
| Nominal Torque | 0.84 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.1 N.m for LXM05AD17F1, 110...120 V, single phase 1.1 N.m for LXM05AD17M2, 200...240 V, single phase 1.1 N.m for LXM05BD17F1, 110...120 V, single phase 1.1 N.m for LXM05BD17M2, 200...240 V, single phase 1.1 N.m for LXM05CD17F1, 110...120 V, single phase 1.1 N.m for LXM05CD17M2, 200...240 V, single phase 1.14 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 1.1 N.m for LXM05AD17M3X, 200...240 V, three phase 1.1 N.m for LXM05BD17M3X, 200...240 V, three phase 1.1 N.m for LXM05CD17M3X, 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 | 6000 rpm for LXM32.U90M2 at 3 A, 230 V, single 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 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 LXM32.D18M2 at 6 A, 115 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 |
| Product Compatibility | LXM05AD17F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM32.U90M2 at 230 V single phase LXM32.D18M2 at 115 V single phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 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 | Rotatable right-angled connectors |

Complementary

| | |
|---------------------------|--|
| Range Compatibility | Lexium 32 Lexium 05 |
| Supply Voltage Max | 480 V |
| Network Number Of Phases | Three phase |
| Continuous Stall Current | 3.1 A |
| Maximum Continuous Power | 0.97 W |
| Maximum Current Irms | 11.9 A for LXM05AD17F1 11.9 A for LXM05AD17M2 11.9 A for LXM05AD17M3X 11.9 A for LXM05BD17F1 11.9 A for LXM05BD17M2 11.9 A for LXM05BD17M3X 11.9 A for LXM05CD17F1 11.9 A for LXM05CD17M2 11.9 A for LXM05CD17M3X 10 A for LXM32.D18M2 9 A for LXM32.U90M2 |
| Maximum Permanent Current | 11.9 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 | 3 |

| | |
|---------------------------------------|--|
| Torque Constant | 0.39 N.m/A at 120 °C |
| Back Emf Constant | 22 V/krpm at 120 °C |
| Number Of Motor Poles | 6 |
| Rotor Inertia | 0.1553 kg.cm ² |
| Stator Resistance | 3.1 Ohm at 20 °C |
| Stator Inductance | 7.4 mH at 20 °C |
| Stator Electrical Time Constant | 2.39 ms at 20 °C |
| Maximum Radial Force Fr | 190 N at 8000 rpm 200 N at 7000 rpm 210 N at 6000 rpm 230 N at 5000 rpm 240 N at 4000 rpm 270 N at 3000 rpm 310 N at 2000 rpm 390 N at 1000 rpm |
| Maximum Axial Force Fa | 0.2 x Fr |
| Brake Pull-In Power | 10 W |
| Type Of Cooling | Natural convection |
| Length | 203 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 | 1.9 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 | 1.55 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

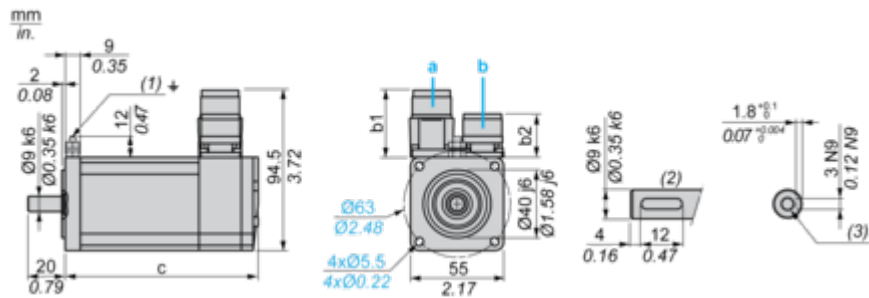
Certifications & Standards

| | |
|---------------------------|---|
| 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 | 176.5 | 203 |

Dimensions in in.

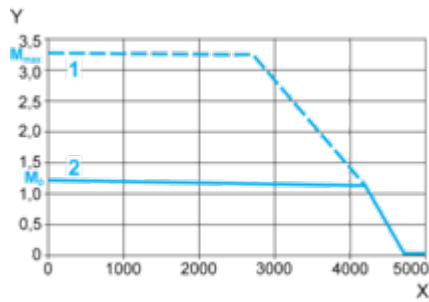
| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) |
|---------------------|------|-----------------------------|------|-------------------|----------------|
| b | b1 | b | b1 | | |
| 1.55 | 1.00 | 1.55 | 1.55 | 6.94 | 7.99 |

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

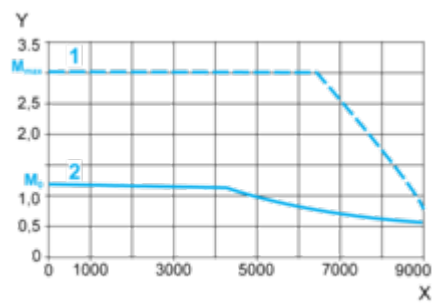


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

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