

# Product data sheet

Specifications



## AC servo motor BSH, Lexium 05, 0.9N.m, 5000rpm, keyed shaft, with brake, IP50

BSH0552M12F2A

ⓘ Discontinued

### Main

|                           |   |
|---------------------------|---|
| Product Or Component Type | Servo motor   |
| Device Short Name         | BSH   |
| Maximum Mechanical Speed  | 8000 rpm  |
| Continuous Stall Torque   | 0.9 N.m for LXM05CU70M2, 200...240 V, single phase<br>0.9 N.m for LXM05AD10M2, 200...240 V, single phase<br>0.9 N.m for LXM05BD10M2, 200...240 V, single phase<br>0.9 N.m for LXM05CD10M2, 200...240 V, single phase<br>0.9 N.m for LXM15LU60N4, 480 V, three phase<br>0.9 N.m for LXM15LU60N4, 400 V, three phase<br>0.9 N.m for LXM05AD10M3X, 200...240 V, three phase<br>0.9 N.m for LXM05BD10M3X, 200...240 V, three phase<br>0.9 N.m for LXM05CD10M3X, 200...240 V, three phase          |
| Peak Stall Torque         | 2.3 N.m for LXM05CU70M2, 200...240 V, single phase<br>2.3 N.m for LXM05AD10M2, 200...240 V, single phase<br>2.3 N.m for LXM05BD10M2, 200...240 V, single phase<br>2.3 N.m for LXM05CD10M2, 200...240 V, single phase<br>2.25 N.m for LXM15LU60N4, 480 V, three phase<br>2.25 N.m for LXM15LU60N4, 400 V, three phase<br>2.3 N.m for LXM05AD10M3X, 200...240 V, three phase<br>2.3 N.m for LXM05BD10M3X, 200...240 V, three phase<br>2.3 N.m for LXM05CD10M3X, 200...240 V, three phase        |
| Nominal Output Power      | 130 W for LXM05AD10M2, 200...240 V, single phase<br>130 W for LXM05BD10M2, 200...240 V, single phase<br>130 W for LXM05CD10M2, 200...240 V, single phase<br>130 W for LXM05CU70M2, 200...240 V, single phase<br>130 W for LXM05AD10M3X, 200...240 V, three phase<br>130 W for LXM05BD10M3X, 200...240 V, three phase<br>130 W for LXM05CD10M3X, 200...240 V, three phase<br>320 W for LXM15LU60N4, 400 V, three phase<br>400 W for LXM15LU60N4, 480 V, three phase                            |
| Nominal Torque            | 0.85 N.m for LXM05AD10M2, 200...240 V, single phase<br>0.85 N.m for LXM05BD10M2, 200...240 V, single phase<br>0.85 N.m for LXM05CD10M2, 200...240 V, single phase<br>0.85 N.m for LXM05CU70M2, 200...240 V, single phase<br>0.77 N.m for LXM15LU60N4, 400 V, three phase<br>0.77 N.m for LXM15LU60N4, 480 V, three phase<br>0.85 N.m for LXM05AD10M3X, 200...240 V, three phase<br>0.85 N.m for LXM05BD10M3X, 200...240 V, three phase<br>0.85 N.m for LXM05CD10M3X, 200...240 V, three phase |
| Nominal Speed             | 1500 rpm for LXM05AD10M2, 200...240 V, single phase<br>1500 rpm for LXM05BD10M2, 200...240 V, single phase<br>1500 rpm for LXM05CD10M2, 200...240 V, single phase<br>1500 rpm for LXM05CU70M2, 200...240 V, single phase<br>1500 rpm for LXM05AD10M3X, 200...240 V, three phase<br>1500 rpm for LXM05BD10M3X, 200...240 V, three phase<br>1500 rpm for LXM05CD10M3X, 200...240 V, three phase<br>4000 rpm for LXM15LU60N4, 400 V, three phase<br>5000 rpm for LXM15LU60N4, 480 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

|                           |   |
|---------------------------|---|
| Product Compatibility     | LXM05AD10M2 at 200...240 V single phase<br>LXM05BD10M2 at 200...240 V single phase<br>LXM05CD10M2 at 200...240 V single phase<br>LXM05CU70M2 at 200...240 V single phase<br>LXM05AD10M3X at 200...240 V three phase<br>LXM05BD10M3X at 200...240 V three phase<br>LXM05CD10M3X at 200...240 V three phase<br>LXM15LU60N4 at 400 V three phase<br>LXM15LU60N4 at 480 V three phase |
| Shaft End                 | Keyed   |
| 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 15<br>Lexium 05  |
| Supply Voltage Max        | 480 V   |
| Network Number Of Phases  | Three phase   |
| Continuous Stall Current  | 0.6 A   |
| Maximum Continuous Power  | 0.67 W  |
| Maximum Current Irms      | 2.4 A for LXM15LU60N4<br>2.6 A for LXM05CU70M2<br>2.6 A for LXM05AD10M2<br>2.6 A for LXM05AD10M3X<br>2.6 A for LXM05BD10M2<br>2.6 A for LXM05BD10M3X<br>2.6 A for LXM05CD10M2<br>2.6 A for LXM05CD10M3X |
| Maximum Permanent Current | 2.6 A   |
| Switching Frequency       | 4 kHz   |
| Second Shaft              | Without second shaft end  |
| Shaft Diameter            | 9 mm  |
| Shaft Length              | 20 mm   |
| Key Width                 | 12 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           | 1.125 N.m/A at 120 °C   |
| Back Emf Constant         | 74 V/krpm at 120 °C   |
| Number Of Motor Poles     | 6   |
| Rotor Inertia             | 0.1613 kg.cm²   |
| Stator Resistance         | 60.2 Ohm at 20 °C<br>62 Ohm at 20 °C  |
| Stator Inductance         | 122 mH at 20 °C<br>76.8 mH at 20 °C   |

|                                       |                    |
|---------------------------------------|--------------------|
| Stator Electrical Time Constant       | 1.24 ms at 20 °C   |
|                                       | 2.03 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   |

## Contractual warranty

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