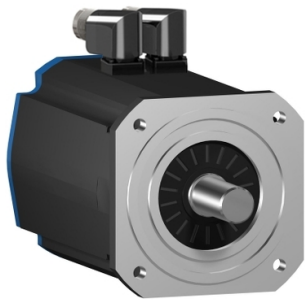


# Product data sheet

Specifications



## AC servo motor BSH, Lexium 05, 36N.m, 1500rpm, keyed shaft, with brake, IP50

BSH2051M12F2A

ⓘ Discontinued

### Main

|                           |   |
|---------------------------|---|
| Product Or Component Type | Servo motor   |
| Device Short Name         | BSH   |
| Maximum Mechanical Speed  | 3800 rpm  |
| Continuous Stall Torque   | 36 N.m for LXM15MD40N4, 400 V, three phase<br>36 N.m for LXM15MD40N4, 480 V, three phase<br>36 N.m for LXM15MD56N4, 400 V, three phase<br>36 N.m for LXM15MD56N4, 480 V, three phase<br>36 N.m for LXM15HC11N4X, 400 V, three phase<br>36 N.m for LXM15HC11N4X, 480 V, three phase<br>34.4 N.m for LXM05AD57N4, 380...480 V, three phase<br>34.4 N.m for LXM05BD57N4, 380...480 V, three phase<br>34.4 N.m for LXM05CD57N4, 380...480 V, three phase                |
| Peak Stall Torque         | 68.33 N.m for LXM15MD40N4, 400 V, three phase<br>68.33 N.m for LXM15MD40N4, 480 V, three phase<br>68.33 N.m for LXM15MD56N4, 400 V, three phase<br>68.33 N.m for LXM15MD56N4, 480 V, three phase<br>68.33 N.m for LXM15HC11N4X, 400 V, three phase<br>68.33 N.m for LXM15HC11N4X, 480 V, three phase<br>110 N.m for LXM05AD57N4, 380...480 V, three phase<br>110 N.m for LXM05BD57N4, 380...480 V, three phase<br>110 N.m for LXM05CD57N4, 380...480 V, three phase |
| Nominal Output Power      | 4500 W for LXM05AD57N4, 380...480 V, three phase<br>4500 W for LXM05BD57N4, 380...480 V, three phase<br>4500 W for LXM05CD57N4, 380...480 V, three phase<br>5000 W for LXM15HC11N4X, 400 V, three phase<br>5000 W for LXM15MD40N4, 400 V, three phase<br>5000 W for LXM15MD56N4, 400 V, three phase<br>5500 W for LXM15HC11N4X, 480 V, three phase<br>5500 W for LXM15MD40N4, 480 V, three phase<br>5500 W for LXM15MD56N4, 480 V, three phase                      |
| Nominal Torque            | 28.2 N.m for LXM05AD57N4, 380...480 V, three phase<br>28.2 N.m for LXM05BD57N4, 380...480 V, three phase<br>28.2 N.m for LXM05CD57N4, 380...480 V, three phase<br>31.2 N.m for LXM15HC11N4X, 480 V, three phase<br>31.2 N.m for LXM15MD40N4, 480 V, three phase<br>31.2 N.m for LXM15MD56N4, 480 V, three phase<br>32 N.m for LXM15HC11N4X, 400 V, three phase<br>32 N.m for LXM15MD40N4, 400 V, three phase<br>32 N.m for LXM15MD56N4, 400 V, three phase          |
| Nominal Speed             | 1500 rpm for LXM15MD40N4, 400 V, three phase<br>1500 rpm for LXM05AD57N4, 380...480 V, three phase<br>1500 rpm for LXM05BD57N4, 380...480 V, three phase<br>1500 rpm for LXM05CD57N4, 380...480 V, three phase<br>1500 rpm for LXM15HC11N4X, 400 V, three phase<br>1500 rpm for LXM15MD56N4, 400 V, three phase<br>1700 rpm for LXM15HC11N4X, 480 V, three phase<br>1700 rpm for LXM15MD40N4, 480 V, three phase<br>1700 rpm for LXM15MD56N4, 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     | LXM15MD40N4 at 400 V three phase<br>LXM15MD40N4 at 480 V three phase<br>LXM05AD57N4 at 380...480 V three phase<br>LXM05BD57N4 at 380...480 V three phase<br>LXM05CD57N4 at 380...480 V three phase<br>LXM15MD56N4 at 400 V three phase<br>LXM15MD56N4 at 480 V three phase<br>LXM15HC11N4X at 400 V three phase<br>LXM15HC11N4X 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        | 11.1 A  |
| Maximum Continuous Power        | 7.44 W  |
| Maximum Current Irms            | 40.4 A for LXM15MD40N4<br>40.4 A for LXM15MD56N4<br>40.4 A for LXM15HC11N4X<br>40.4 A for LXM05AD57N4<br>40.4 A for LXM05BD57N4<br>40.4 A for LXM05CD57N4 |
| Maximum Permanent Current       | 45.2 A  |
| Switching Frequency             | 4 kHz   |
| Second Shaft                    | Without second shaft end  |
| Shaft Diameter                  | 38 mm   |
| Shaft Length                    | 80 mm   |
| Key Width                       | 70 mm   |
| Feedback Type                   | Multiturn SinCos Hiperface  |
| Holding Torque                  | 80 N.m holding brake  |
| Motor Flange Size               | 205 mm  |
| Number Of Motor Stacks          | 1   |
| Torque Constant                 | 3.3 N.m/A at 120 °C   |
| Back Emf Constant               | 208 V/krpm at 120 °C  |
| Number Of Motor Poles           | 10  |
| Rotor Inertia                   | 93 kg.cm²   |
| Stator Resistance               | 1.1 Ohm at 20 °C  |
| Stator Inductance               | 21.3 mH at 20 °C  |
| Stator Electrical Time Constant | 19.36 ms at 20 °C<br>19.4 ms at 20 °C   |

|                                       |  |
|---------------------------------------|--|
| Maximum Radial Force Fr               | 2580 N at 3000 rpm<br>2960 N at 2000 rpm<br>3730 N at 1000 rpm |
| Maximum Axial Force Fa                | 0.2 x Fr   |
| Brake Pull-In Power                   | 40 W   |
| Type Of Cooling                       | Natural convection   |
| Length                                | 370.5 mm   |
| Centring Collar Diameter              | 180 mm   |
| Centring Collar Depth                 | 4 mm   |
| Number Of Mounting Holes              | 4  |
| Mounting Holes Diameter               | 14 mm  |
| Circle Diameter Of The Mounting Holes | 215 mm   |
| Net Weight                            | 38.6 kg  |

## Packing Units

|                              |     |
|------------------------------|-----|
| Unit Type Of Package 1       | PCE |
| Number Of Units In Package 1 | 1   |

## Contractual warranty

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