

# BSH0552M31A2A

AC servo motor BSH - 0.9 Nm - 8000 rpm - key  
shaft - without brake - IP65

## Main

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| Product or component type | AC servo motors                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Component name            | BSH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Continuous stall torque   | 0.9 N.m for LXM15LU60N4 at 480 V 3 phases<br>0.9 N.m for LXM15LU60N4 at 400 V 3 phases<br>0.9 N.m for LXM05CU70M2 at 200...240 V single phase<br>0.9 N.m for LXM05AD10M2 at 200...240 V single phase<br>0.9 N.m for LXM05AD10M3X at 200...240 V 3 phases<br>0.9 N.m for LXM05BD10M2 at 200...240 V single phase<br>0.9 N.m for LXM05BD10M3X at 200...240 V 3 phases<br>0.9 N.m for LXM05CD10M2 at 200...240 V single phase<br>0.9 N.m for LXM05CD10M3X at 200...240 V 3 phases          |
| Peak stall torque         | 2.25 N.m for LXM15LU60N4 at 480 V 3 phases<br>2.25 N.m for LXM15LU60N4 at 400 V 3 phases<br>2.3 N.m for LXM05CU70M2 at 200...240 V single phase<br>2.3 N.m for LXM05AD10M2 at 200...240 V single phase<br>2.3 N.m for LXM05AD10M3X at 200...240 V 3 phases<br>2.3 N.m for LXM05BD10M2 at 200...240 V single phase<br>2.3 N.m for LXM05BD10M3X at 200...240 V 3 phases<br>2.3 N.m for LXM05CD10M2 at 200...240 V single phase<br>2.3 N.m for LXM05CD10M3X at 200...240 V 3 phases        |
| Nominal output power      | 130 W for LXM05CU70M2 at 200...240 V single phase<br>130 W for LXM05AD10M2 at 200...240 V single phase<br>130 W for LXM05AD10M3X at 200...240 V 3 phases<br>130 W for LXM05BD10M2 at 200...240 V single phase<br>130 W for LXM05BD10M3X at 200...240 V 3 phases<br>130 W for LXM05CD10M2 at 200...240 V single phase<br>130 W for LXM05CD10M3X at 200...240 V 3 phases<br>320 W for LXM15LU60N4 at 400 V 3 phases<br>400 W for LXM15LU60N4 at 480 V 3 phases                            |
| Nominal speed             | 1500 rpm for LXM05CU70M2 at 200...240 V single phase<br>1500 rpm for LXM05AD10M2 at 200...240 V single phase<br>1500 rpm for LXM05AD10M3X at 200...240 V 3 phases<br>1500 rpm for LXM05BD10M2 at 200...240 V single phase<br>1500 rpm for LXM05BD10M3X at 200...240 V 3 phases<br>1500 rpm for LXM05CD10M2 at 200...240 V single phase<br>1500 rpm for LXM05CD10M3X at 200...240 V 3 phases<br>4000 rpm for LXM15LU60N4 at 400 V 3 phases<br>5000 rpm for LXM15LU60N4 at 480 V 3 phases |
| Maximum mechanical speed  | 8000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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| Product compatibility       | LXM05AD10M2 at 200...240 V single phase<br>LXM05AD10M3X at 200...240 V 3 phases<br>LXM05BD10M2 at 200...240 V single phase<br>LXM05BD10M3X at 200...240 V 3 phases<br>LXM05CD10M2 at 200...240 V single phase<br>LXM05CD10M3X at 200...240 V 3 phases<br>LXM05CU70M2 at 200...240 V single phase<br>LXM15LU60N4 at 480 V 3 phases<br>LXM15LU60N4 at 400 V 3 phases |
| Shaft end                   | Keyed                                                                                                                                                                                                                                                                                                                                                              |
| IP degree of protection     | IP65                                                                                                                                                                                                                                                                                                                                                               |
| Encoder type                | Absolute single turn SinCos Hiperface                                                                                                                                                                                                                                                                                                                              |
| Encoder feedback resolution | 131072 points/turn                                                                                                                                                                                                                                                                                                                                                 |
| Holding brake               | Without                                                                                                                                                                                                                                                                                                                                                            |
| Mounting support            | International standard flange                                                                                                                                                                                                                                                                                                                                      |
| Electrical connection       | Rotatable right-angled connectors                                                                                                                                                                                                                                                                                                                                  |
| Number of poles             | 6                                                                                                                                                                                                                                                                                                                                                                  |

## Complementary

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range compatibility                         | Lexium 05<br>Lexium 15                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Nominal torque                              | 0.77 N.m for LXM15LU60N4 at 400 V 3 phases<br>0.77 N.m for LXM15LU60N4 at 480 V 3 phases<br>0.85 N.m for LXM05CU70M2 at 200...240 V single phase<br>0.85 N.m for LXM05AD10M2 at 200...240 V single phase<br>0.85 N.m for LXM05AD10M3X at 200...240 V 3 phases<br>0.85 N.m for LXM05BD10M2 at 200...240 V single phase<br>0.85 N.m for LXM05BD10M3X at 200...240 V 3 phases<br>0.85 N.m for LXM05CD10M2 at 200...240 V single phase<br>0.85 N.m for LXM05CD10M3X at 200...240 V 3 phases |
| Maximum current I <sub>rms</sub>            | 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                                                                                                                                                                                                                                                                                 |
| Switching frequency                         | 4 kHz for LEX05                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Torque constant                             | 1.125 N.m/A rms at 120 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Back electromagnetical force (emf) constant | 74 V rms/krpm at 120 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Rotor inertia                               | 0.14 kg.cm <sup>2</sup> without brake                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Stator resistance                           | 60.2 Ohm at 20 °C<br>62 Ohm at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Stator inductance                           | 76.8 mH at 20 °C<br>122 mH at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Stator electrical time constant             | 1.24 ms at 20 °C<br>2.03 ms at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Maximum radial force Fr                     | 190 N at 7000 rpm<br>190 N at 8000 rpm<br>200 N at 6000 rpm<br>220 N at 5000 rpm<br>230 N at 4000 rpm<br>260 N at 3000 rpm<br>290 N at 2000 rpm<br>370 N at 1000 rpm                                                                                                                                                                                                                                                                                                                    |
| Maximum axial force Fa                      | 0.2 x Fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Product weight                              | 1.47 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Environment

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|--------------------------|-----------|
| RoHS EUR conformity date | 0850      |
| RoHS EUR status          | Compliant |