

## BSH0703P32A2A

AC servo motor BSH - 1.1 Nm - 8000 rpm - key  
shaft - without brake - IP65

---

## Main

| Product or component type | AC servo motors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Component name            | BSH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Continuous stall torque   | 1.1 N.m for LXM15LU60N4 at 480 V 3 phases<br>1.1 N.m for LXM15LU60N4 at 400 V 3 phases<br>1.5 N.m for LXM15LU60N4 at 230 V 3 phases<br>2.23 N.m for LXM15LD13M3 at 230 V 3 phases<br>2.4 N.m for LXM15LD10N4 at 230 V 3 phases<br>2.4 N.m for LXM15LD10N4 at 400 V 3 phases<br>2.4 N.m for LXM15LD10N4 at 480 V 3 phases<br>2.8 N.m for LXM05AD17M2 at 200...240 V single phase<br>2.8 N.m for LXM05AD17M3X at 200...240 V 3 phases<br>2.8 N.m for LXM05AD22N4 at 380...480 V 3 phases<br>2.8 N.m for LXM05AD28M2 at 200...240 V single phase<br>2.8 N.m for LXM05BD17M2 at 200...240 V single phase<br>2.8 N.m for LXM05BD17M3X at 200...240 V 3 phases<br>2.8 N.m for LXM05BD22N4 at 380...480 V 3 phases<br>2.8 N.m for LXM05BD28M2 at 200...240 V single phase<br>2.8 N.m for LXM05CD17M2 at 200...240 V single phase<br>2.8 N.m for LXM05CD17M3X at 200...240 V 3 phases<br>2.8 N.m for LXM05CD22N4 at 380...480 V 3 phases<br>2.8 N.m for LXM05CD28M2 at 200...240 V single phase<br>2.83 N.m for LXM15LD21M3 at 230 V single phase<br>2.83 N.m for LXM15LD17N4 at 230 V 3 phases<br>2.83 N.m for LXM15LD17N4 at 400 V 3 phases<br>2.83 N.m for LXM15LD17N4 at 480 V 3 phases<br>2.83 N.m for LXM15LD21M3 at 230 V 3 phases          |
| Peak stall torque         | 3.3 N.m for LXM15LU60N4 at 480 V 3 phases<br>3.3 N.m for LXM15LU60N4 at 400 V 3 phases<br>3.3 N.m for LXM15LU60N4 at 230 V 3 phases<br>5.3 N.m for LXM15LD10N4 at 230 V 3 phases<br>5.3 N.m for LXM15LD10N4 at 400 V 3 phases<br>5.3 N.m for LXM15LD10N4 at 480 V 3 phases<br>5.99 N.m for LXM15LD21M3 at 230 V single phase<br>6 N.m for LXM15LD13M3 at 230 V 3 phases<br>7.16 N.m for LXM05AD17M2 at 200...240 V single phase<br>7.16 N.m for LXM05AD17M3X at 200...240 V 3 phases<br>7.16 N.m for LXM05BD17M2 at 200...240 V single phase<br>7.16 N.m for LXM05BD17M3X at 200...240 V 3 phases<br>7.16 N.m for LXM05CD17M2 at 200...240 V single phase<br>7.16 N.m for LXM05CD17M3X at 200...240 V 3 phases<br>7.71 N.m for LXM15LD17N4 at 230 V 3 phases<br>7.71 N.m for LXM15LD17N4 at 400 V 3 phases<br>7.71 N.m for LXM15LD17N4 at 480 V 3 phases<br>8.75 N.m for LXM05AD22N4 at 380...480 V 3 phases<br>8.75 N.m for LXM05BD22N4 at 380...480 V 3 phases<br>8.75 N.m for LXM05CD22N4 at 380...480 V 3 phases<br>9.28 N.m for LXM15LD21M3 at 230 V 3 phases<br>10.3 N.m for LXM05AD28M2 at 200...240 V single phase<br>10.3 N.m for LXM05BD28M2 at 200...240 V single phase<br>10.3 N.m for LXM05CD28M2 at 200...240 V single phase |

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal output power     | 350 W for LXM15LU60N4 at 230 V 3 phases<br>700 W for LXM15LU60N4 at 400 V 3 phases<br>700 W for LXM15LD13M3 at 230 V 3 phases<br>750 W for LXM15LD10N4 at 230 V 3 phases<br>750 W for LXM15LD21M3 at 230 V single phase<br>750 W for LXM15LD17N4 at 230 V 3 phases<br>750 W for LXM15LD21M3 at 230 V 3 phases<br>750 W for LXM05AD17M2 at 200...240 V single phase<br>750 W for LXM05AD17M3X at 200...240 V 3 phases<br>750 W for LXM05AD22N4 at 380...480 V 3 phases<br>750 W for LXM05AD28M2 at 200...240 V single phase<br>750 W for LXM05BD17M2 at 200...240 V single phase<br>750 W for LXM05BD17M3X at 200...240 V 3 phases<br>750 W for LXM05BD22N4 at 380...480 V 3 phases<br>750 W for LXM05BD28M2 at 200...240 V single phase<br>750 W for LXM05CD17M2 at 200...240 V single phase<br>750 W for LXM05CD17M3X at 200...240 V 3 phases<br>750 W for LXM05CD22N4 at 380...480 V 3 phases<br>750 W for LXM05CD28M2 at 200...240 V single phase<br>950 W for LXM15LU60N4 at 480 V 3 phases<br>1250 W for LXM15LD10N4 at 400 V 3 phases<br>1300 W for LXM15LD17N4 at 400 V 3 phases<br>1400 W for LXM15LD17N4 at 480 V 3 phases<br>1500 W for LXM15LD10N4 at 480 V 3 phases                                                                     |
| Nominal speed            | 3000 rpm for LXM15LD21M3 at 230 V 3 phases<br>3000 rpm for LXM05AD17M2 at 200...240 V single phase<br>3000 rpm for LXM05AD17M3X at 200...240 V 3 phases<br>3000 rpm for LXM05AD22N4 at 380...480 V 3 phases<br>3000 rpm for LXM05AD28M2 at 200...240 V single phase<br>3000 rpm for LXM05BD17M2 at 200...240 V single phase<br>3000 rpm for LXM05BD17M3X at 200...240 V 3 phases<br>3000 rpm for LXM05BD22N4 at 380...480 V 3 phases<br>3000 rpm for LXM05BD28M2 at 200...240 V single phase<br>3000 rpm for LXM05CD17M2 at 200...240 V single phase<br>3000 rpm for LXM05CD17M3X at 200...240 V 3 phases<br>3000 rpm for LXM05CD22N4 at 380...480 V 3 phases<br>3000 rpm for LXM05CD28M2 at 200...240 V single phase<br>3000 rpm for LXM15LU60N4 at 230 V 3 phases<br>3000 rpm for LXM15LD13M3 at 230 V 3 phases<br>3000 rpm for LXM15LD10N4 at 230 V 3 phases<br>3000 rpm for LXM15LD21M3 at 230 V single phase<br>3000 rpm for LXM15LD17N4 at 230 V 3 phases<br>6000 rpm for LXM15LU60N4 at 400 V 3 phases<br>6000 rpm for LXM15LD10N4 at 400 V 3 phases<br>6000 rpm for LXM15LD17N4 at 400 V 3 phases<br>7000 rpm for LXM15LD17N4 at 480 V 3 phases<br>8000 rpm for LXM15LU60N4 at 480 V 3 phases<br>8000 rpm for LXM15LD10N4 at 480 V 3 phases |
| Maximum mechanical speed | 8000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product compatibility       | LXM05AD17M2 at 200...240 V single phase<br>LXM05AD17M3X at 200...240 V 3 phases<br>LXM05AD22N4 at 380...480 V 3 phases<br>LXM05AD28M2 at 200...240 V single phase<br>LXM05BD17M2 at 200...240 V single phase<br>LXM05BD17M3X at 200...240 V 3 phases<br>LXM05BD22N4 at 380...480 V 3 phases<br>LXM05BD28M2 at 200...240 V single phase<br>LXM05CD17M2 at 200...240 V single phase<br>LXM05CD17M3X at 200...240 V 3 phases<br>LXM05CD22N4 at 380...480 V 3 phases<br>LXM05CD28M2 at 200...240 V single phase<br>LXM15LD10N4 at 230 V 3 phases<br>LXM15LD10N4 at 400 V 3 phases<br>LXM15LD10N4 at 480 V 3 phases<br>LXM15LD13M3 at 230 V 3 phases<br>LXM15LD17N4 at 230 V 3 phases<br>LXM15LD17N4 at 400 V 3 phases<br>LXM15LD17N4 at 480 V 3 phases<br>LXM15LD21M3 at 230 V single phase<br>LXM15LD21M3 at 230 V 3 phases<br>LXM15LU60N4 at 480 V 3 phases<br>LXM15LU60N4 at 400 V 3 phases<br>LXM15LU60N4 at 230 V 3 phases |
| Shaft end                   | Keyed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| IP degree of protection     | IP65                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Encoder type                | Absolute multiturn SinCos Hiperface                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Encoder feedback resolution | 131072 points/turn x 4096 turns                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 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                              | 1.12 N.m for LXM15LU60N4 at 230 V 3 phases<br>1.12 N.m for LXM15LU60N4 at 400 V 3 phases<br>1.12 N.m for LXM15LU60N4 at 480 V 3 phases<br>1.8 N.m for LXM15LD10N4 at 480 V 3 phases<br>1.96 N.m for LXM15LD17N4 at 480 V 3 phases<br>2 N.m for LXM15LD17N4 at 400 V 3 phases<br>2 N.m for LXM15LD10N4 at 400 V 3 phases<br>2.23 N.m for LXM15LD13M3 at 230 V 3 phases<br>2.4 N.m for LXM15LD21M3 at 230 V single phase<br>2.4 N.m for LXM15LD21M3 at 230 V 3 phases<br>2.4 N.m for LXM15LD17N4 at 230 V 3 phases<br>2.4 N.m for LXM15LD10N4 at 230 V 3 phases<br>2.4 N.m for LXM05AD17M2 at 200...240 V single phase<br>2.4 N.m for LXM05AD28M2 at 200...240 V single phase<br>2.4 N.m for LXM05AD17M3X at 200...240 V 3 phases<br>2.4 N.m for LXM05AD22N4 at 380...480 V 3 phases<br>2.4 N.m for LXM05BD17M2 at 200...240 V single phase<br>2.4 N.m for LXM05BD28M2 at 200...240 V single phase<br>2.4 N.m for LXM05BD17M3X at 200...240 V 3 phases<br>2.4 N.m for LXM05BD22N4 at 380...480 V 3 phases<br>2.4 N.m for LXM05CD17M2 at 200...240 V single phase<br>2.4 N.m for LXM05CD28M2 at 200...240 V single phase<br>2.4 N.m for LXM05CD17M3X at 200...240 V 3 phases<br>2.4 N.m for LXM05CD22N4 at 380...480 V 3 phases |
| Maximum current Irms                        | 15.2 A for LXM15LD13M3<br>15.2 A for LXM15LD21M3<br>15.2 A for LXM15LD17N4<br>15.2 A for LXM15LU60N4<br>15.2 A for LXM15LD10N4<br>17 A for LXM05AD17M2<br>17 A for LXM05AD28M2<br>17 A for LXM05AD17M3X<br>17 A for LXM05AD22N4<br>17 A for LXM05BD17M2<br>17 A for LXM05BD28M2<br>17 A for LXM05BD17M3X<br>17 A for LXM05BD22N4<br>17 A for LXM05CD17M2<br>17 A for LXM05CD28M2<br>17 A for LXM05CD17M3X<br>17 A for LXM05CD22N4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Switching frequency                         | 8 kHz for LEX05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Torque constant                             | 0.78 N.m/A rms at 120 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Back electromagnetical force (emf) constant | 49 V rms/krpm at 120 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Rotor inertia                               | 0.58 kg.cm <sup>2</sup> without brake                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Stator resistance                           | 2.7 Ohm at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Stator inductance                           | 13 mH at 20 °C<br>14.6 mH at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Stator electrical time constant             | 4.81 ms at 20 °C<br>5.41 ms at 20 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Maximum radial force Fr                     | 400 N at 6000 rpm<br>430 N at 5000 rpm<br>460 N at 4000 rpm<br>510 N at 3000 rpm<br>580 N at 2000 rpm<br>730 N at 1000 rpm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Maximum axial force Fa                      | 0.2 x Fr                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Product weight                              | 3.62 kg                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## Environment

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