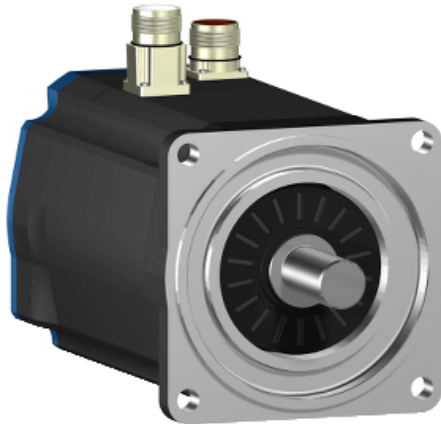


BSH1002P22F1A

AC servo motor BSH - 3.4 N.m - 2500 rpm -
untapped shaft - with brake - IP65



Main

| | |
|---------------------------|---|
| Product or component type | Servo motor |
| Device short name | BSH |
| Maximum mechanical speed | 6000 rpm |
| Continuous stall torque | <p>4.5 N.m for LXM15LD21M3, 230 V, single phase</p> <p>3.4 N.m for LXM15LD13M3, 230 V, three phase</p> <p>3.4 N.m for LXM15LD10N4, 230 V, three phase</p> <p>3.4 N.m for LXM15LD10N4, 400 V, three phase</p> <p>3.4 N.m for LXM15LD10N4, 480 V, three phase</p> <p>5.8 N.m for LXM15LD17N4, 400 V, three phase</p> <p>5.8 N.m for LXM15LD17N4, 480 V, three phase</p> <p>5.8 N.m for LXM15LD21M3, 230 V, three phase</p> <p>5.5 N.m for LXM05AD17M3X, 200...240 V, three phase</p> <p>5.5 N.m for LXM05AD22N4, 380...480 V, three phase</p> <p>5.5 N.m for LXM05AD28M2, 200...240 V, single phase</p> <p>5.5 N.m for LXM05BD17M3X, 200...240 V, three phase</p> <p>5.5 N.m for LXM05BD22N4, 380...480 V, three phase</p> <p>5.5 N.m for LXM05BD28M2, 200...240 V, single phase</p> <p>5.5 N.m for LXM05CD17M3X, 200...240 V, three phase</p> <p>5.5 N.m for LXM05CD22N4, 380...480 V, three phase</p> <p>5.5 N.m for LXM05CD28M2, 200...240 V, single phase</p> <p>5.8 N.m for LXM32.D18N4 at 6 A, 400 V, three phase</p> <p>5.8 N.m for LXM32.D18N4 at 6 A, 480 V, three phase</p> |
| Peak stall torque | <p>9.39 N.m for LXM15LD21M3, 230 V, single phase</p> <p>5.6 N.m for LXM15LD13M3, 230 V, three phase</p> <p>8 N.m for LXM15LD10N4, 230 V, three phase</p> <p>8 N.m for LXM15LD10N4, 400 V, three phase</p> <p>8 N.m for LXM15LD10N4, 480 V, three phase</p> <p>12.13 N.m for LXM15LD17N4, 400 V, three phase</p> <p>12.13 N.m for LXM15LD17N4, 480 V, three phase</p> <p>14.79 N.m for LXM15LD21M3, 230 V, three phase</p> <p>11.23 N.m for LXM05AD17M3X, 200...240 V, three phase</p> <p>13.92 N.m for LXM05AD22N4, 380...480 V, three phase</p> <p>16 N.m for LXM05AD28M2, 200...240 V, single phase</p> <p>11.23 N.m for LXM05BD17M3X, 200...240 V, three phase</p> <p>13.92 N.m for LXM05BD22N4, 380...480 V, three phase</p> <p>16 N.m for LXM05BD28M2, 200...240 V, single phase</p> <p>11.23 N.m for LXM05CD17M3X, 200...240 V, three phase</p> <p>13.92 N.m for LXM05CD22N4, 380...480 V, three phase</p> |

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

| | |
|-----------------------|--|
| | <p>16 N.m for LXM05CD28M2, 200...240 V, single phase 18.3 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 18.3 N.m for LXM32.D18N4 at 6 A, 480 V, three phase</p> |
| Nominal output power | <p>950 W for LXM15LD21M3, 230 V, single phase 950 W for LXM15LD21M3, 230 V, three phase 780 W for LXM05AD28M2, 200...240 V, single phase 780 W for LXM05BD28M2, 200...240 V, single phase 780 W for LXM05CD28M2, 200...240 V, single phase 1400 W for LXM05AD22N4, 380...480 V, three phase 1400 W for LXM05BD22N4, 380...480 V, three phase 1400 W for LXM05CD22N4, 380...480 V, three phase 1600 W for LXM15LD10N4, 400 V, three phase 1700 W for LXM15LD17N4, 400 V, three phase 1950 W for LXM15LD17N4, 480 V, three phase 2150 W for LXM15LD10N4, 480 V, three phase 780 W for LXM05AD17M3X, 200...240 V, three phase 780 W for LXM05BD17M3X, 200...240 V, three phase 780 W for LXM05CD17M3X, 200...240 V, three phase 840 W for LXM15LD13M3, 230 V, three phase 890 W for LXM15LD10N4, 230 V, three phase 1700 W for LXM32.D18N4 at 6 A, 400 V, three phase 1700 W for LXM32.D18N4 at 6 A, 480 V, three phase</p> |
| Nominal torque | <p>4.5 N.m for LXM15LD21M3, 230 V, single phase 4.96 N.m for LXM05AD28M2, 200...240 V, single phase 4.96 N.m for LXM05BD28M2, 200...240 V, single phase 4.96 N.m for LXM05CD28M2, 200...240 V, single phase 3.4 N.m for LXM15LD10N4, 230 V, three phase 3.4 N.m for LXM15LD10N4, 400 V, three phase 3.4 N.m for LXM15LD10N4, 480 V, three phase 3.4 N.m for LXM15LD13M3, 230 V, three phase 3.7 N.m for LXM15LD17N4, 480 V, three phase 4 N.m for LXM15LD17N4, 400 V, three phase 4.4 N.m for LXM05AD22N4, 380...480 V, three phase 4.4 N.m for LXM05BD22N4, 380...480 V, three phase 4.4 N.m for LXM05CD22N4, 380...480 V, three phase 4.96 N.m for LXM05AD17M3X, 200...240 V, three phase 4.96 N.m for LXM05BD17M3X, 200...240 V, three phase 4.96 N.m for LXM05CD17M3X, 200...240 V, three phase 5.8 N.m for LXM15LD21M3, 230 V, three phase 4 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 4 N.m for LXM32.D18N4 at 6 A, 480 V, three phase</p> |
| Nominal speed | <p>3000 rpm for LXM05AD22N4, 380...480 V, three phase 3000 rpm for LXM05BD22N4, 380...480 V, three phase 3000 rpm for LXM05CD22N4, 380...480 V, three phase 1500 rpm for LXM05AD17M3X, 200...240 V, three phase 1500 rpm for LXM05BD17M3X, 200...240 V, three phase 1500 rpm for LXM05CD17M3X, 200...240 V, three phase 4500 rpm for LXM15LD10N4, 400 V, three phase 6000 rpm for LXM15LD10N4, 480 V, three phase 4000 rpm for LXM32.D18N4 at 6 A, 400 V, three phase 4000 rpm for LXM32.D18N4 at 6 A, 480 V, three phase 1500 rpm for LXM05AD28M2, 200...240 V, single phase 1500 rpm for LXM05BD28M2, 200...240 V, single phase 1500 rpm for LXM05CD28M2, 200...240 V, single phase 2000 rpm for LXM15LD21M3, 230 V, single phase 2000 rpm for LXM15LD21M3, 230 V, three phase 2500 rpm for LXM15LD10N4, 230 V, three phase 2500 rpm for LXM15LD13M3, 230 V, three phase 4000 rpm for LXM15LD17N4, 400 V, three phase 5000 rpm for LXM15LD17N4, 480 V, three phase</p> |
| Product compatibility | <p>LXM05AD28M2 at 200...240 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD28M2 at 200...240 V single phase LXM15LD21M3 at 230 V single phase LXM15LD13M3 at 230 V three phase LXM15LD10N4 at 400 V three phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase LXM15LD21M3 at 230 V three phase LXM05AD22N4 at 380...480 V three phase LXM05BD22N4 at 380...480 V three phase</p> |

LXM05CD22N4 at 380...480 V three phase
 LXM15LD17N4 at 400 V three phase
 LXM15LD17N4 at 480 V three phase
 LXM32.D18N4 at 400 V three phase
 LXM32.D18N4 at 480 V three phase

| | |
|---------------------------|-------------------------------------|
| Shaft end | Untapped |
| IP degree of protection | IP65 standard IP67 with IP67 kit |
| Speed feedback resolution | 131072 points/turn x 4096 turns |
| Holding brake | With |
| Mounting support | International standard flange |
| Electrical connection | Straight connectors |

Complementary

| | |
|---------------------------------|---|
| Range compatibility | Lexium 05 Lexium 15 Lexium 32 |
| Supply voltage max | 480 V |
| Network number of phases | Three phase |
| Continuous stall current | 4.8 A |
| Maximum continuous power | 2.51 W |
| Maximum current Irms | 17.1 A for LXM15LD13M3 17.1 A for LXM15LD21M3 17.1 A for LXM15LD10N4 17.1 A for LXM15LD17N4 17.1 A for LXM05AD28M2 17.1 A for LXM05AD17M3X 17.1 A for LXM05AD22N4 17.1 A for LXM05BD28M2 17.1 A for LXM05BD17M3X 17.1 A for LXM05BD22N4 17.1 A for LXM05CD28M2 17.1 A for LXM05CD17M3X 17.1 A for LXM05CD22N4 17.1 A for LXM32.D18N4 |
| Maximum permanent current | 17.1 A |
| Switching frequency | 8 kHz |
| Second shaft | Without second shaft end |
| Shaft diameter | 19 mm |
| Shaft length | 40 mm |
| Feedback type | Multiturn SinCos Hiperface |
| Holding torque | 9 N.m holding brake |
| Motor flange size | 100 mm |
| Number of motor stacks | 2 |
| Torque constant | 1.21 N.m/A at 120 °C |
| Back emf constant | 77 V/krpm at 120 °C |
| Number of motor poles | 8 |
| Rotor inertia | 2.928 kg.cm ² |
| Stator resistance | 2.4 Ohm at 20 °C |
| Stator inductance | 12.7 mH at 20 °C |
| Stator electrical time constant | 5.29 ms at 20 °C |
| Maximum radial force Fr | 620 N at 4000 rpm 690 N at 3000 rpm 790 N at 2000 rpm 990 N at 1000 rpm |
| Maximum axial force Fa | 0.2 x Fr |
| Brake pull-in power | 18 W |
| Type of cooling | Natural convection |
| Length | 235.5 mm |

| | |
|---------------------------------------|--------|
| Centring collar diameter | 95 mm |
| Centring collar depth | 3.5 mm |
| Number of mounting holes | 4 |
| Mounting holes diameter | 9 mm |
| Circle diameter of the mounting holes | 115 mm |
| Product weight | 6.3 kg |

Offer Sustainability

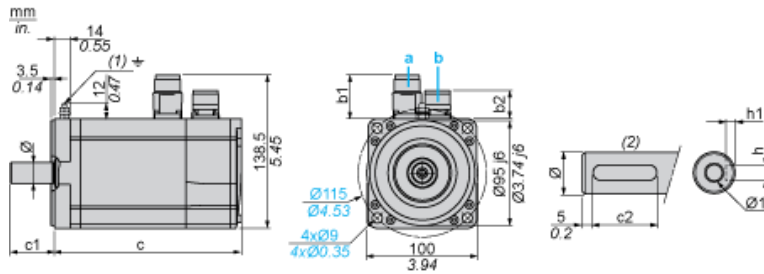
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| China RoHS Regulation | China RoHS declaration |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | No need of specific recycling operations |
| WEEE | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |

Contractual warranty

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

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)

Dimensions in mm

| Straight connectors | | Rotatable angled connectors | | c (without brake) | c (with brake) | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|---------------------|------|-----------------------------|------|-------------------|----------------|----|----|------|----------------------------------|-------|---------------|
| b1 | b2 | b1 | b2 | | | | | | | | |
| 39.5 | 25.5 | 39.5 | 39.5 | 205 | 236 | 40 | 30 | 6 N9 | 3.5 ^{+0.1} ₀ | 19 k6 | M6 x 16 |

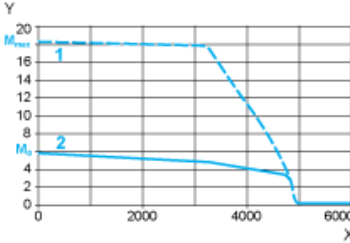
Dimensions in in.

| Straight connector | | Rotatable angled connectors | | c (without brake) | c (with brake) | c1 | c2 | h | h1 | Ø | Ø1 for screws |
|--------------------|------|-----------------------------|------|-------------------|----------------|------|------|---------|-----------------------------------|---------|---------------|
| b1 | b2 | b1 | b2 | | | | | | | | |
| 1.55 | 1.00 | 1.55 | 1.55 | 8.07 | 9.29 | 1.57 | 1.18 | 0.24 N9 | 0.14 ^{+0.1} ₀ | 0.75 k6 | M6 x 0.63 |

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32-D18N4 servo drive

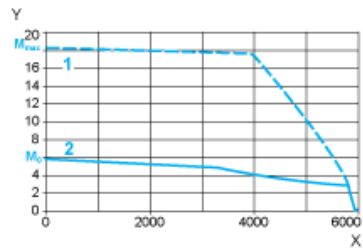


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



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