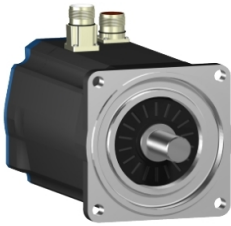


Product datasheet

Specifications



AC servo motor BSH - 11.1 N.m - 1500 rpm - untapped shaft - with brake - IP50

BSH1401P02F1A

⚠ Discontinued on: 9 Feb 2023

⚠ Discontinued

EAN Code: 3389118140806

Main

| | |
|---------------------------|--|
| Device short name | BSH |
| Product or component type | Servo motor |
| Maximum mechanical speed | 4000 rpm |
| Continuous stall torque | 11.1 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 11.1 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 11.1 N.m for LXM15MD28N4, 400 V, three phase 11.1 N.m for LXM15MD28N4 at 10 A, 480 V, three phase 11.1 N.m for LXM15MD28N4, 230 V, three phase 11.1 N.m for LXM15MD40N4, 400 V, three phase 11.1 N.m for LXM15MD40N4, 480 V, three phase 11.1 N.m for LXM15LD28M3, 230 V, three phase 11.4 N.m for LXM05AD34N4, 380...480 V, three phase 11.4 N.m for LXM05BD34N4, 380...480 V, three phase 11.4 N.m for LXM05CD34N4, 380...480 V, three phase |
| Peak stall torque | 27 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 27 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 23.33 N.m for LXM15MD28N4, 230 V, three phase 23.33 N.m for LXM15MD28N4 at 10 A, 400 V, three phase 23.33 N.m for LXM15MD28N4, 480 V, three phase 23.33 N.m for LXM15MD40N4, 400 V, three phase 23.33 N.m for LXM15MD40N4, 480 V, three phase 23.8 N.m for LXM15LD28M3, 230 V, three phase 23.33 N.m for LXM05AD34N4, 380...480 V, three phase 23.33 N.m for LXM05BD34N4, 380...480 V, three phase 23.33 N.m for LXM05CD34N4, 380...480 V, three phase |
| Nominal output power | 2500 W for LXM32.D30N4 at 10 A, 400 V, three phase 3000 W for LXM32.D30N4 at 10 A, 480 V, three phase 2000 W for LXM15MD28N4, 400 V, three phase 2000 W for LXM15MD40N4 at 10 A, 400 V, three phase 2200 W for LXM05AD34N4, 380...480 V, three phase 2200 W for LXM05BD34N4, 380...480 V, three phase 2200 W for LXM05CD34N4, 380...480 V, three phase 1400 W for LXM15LD28M3, 230 V, three phase 1400 W for LXM15MD28N4, 230 V, three phase 2150 W for LXM15MD28N4, 480 V, three phase 2150 W for LXM15MD40N4, 480 V, three phase |
| Nominal torque | 9.5 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 9.5 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 6.8 N.m for LXM15MD28N4, 480 V, three phase 6.8 N.m for LXM15MD40N4 at 10 A, 480 V, three phase 6.9 N.m for LXM05AD34N4, 380...480 V, three phase 6.9 N.m for LXM05BD34N4, 380...480 V, three phase 6.9 N.m for LXM05CD34N4, 380...480 V, three phase 7.63 N.m for LXM15MD28N4, 400 V, three phase 7.63 N.m for LXM15MD40N4, 400 V, three phase 9.1 N.m for LXM15LD28M3, 230 V, three phase 9.1 N.m for LXM15MD28N4, 230 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

| | |
|----------------------------------|--|
| Nominal speed | 2500 rpm for LXM32.D30N4 at 10 A, 400 V, three phase 3000 rpm for LXM32.D30N4 at 10 A, 480 V, three phase 3000 rpm for LXM05AD34N4, 380...480 V, three phase 3000 rpm for LXM05BD34N4 at 10 A, 380...480 V, three phase 3000 rpm for LXM05CD34N4, 380...480 V, three phase 1500 rpm for LXM15MD28N4, 230 V, three phase 1500 rpm for LXM15LD28M3, 230 V, three phase 2500 rpm for LXM15MD28N4, 400 V, three phase 2500 rpm for LXM15MD40N4, 400 V, three phase 3000 rpm for LXM15MD28N4, 480 V, three phase 3000 rpm for LXM15MD40N4, 480 V, three phase |
| Product compatibility | LXM15LD28M3 at 230 V three phase LXM05AD34N4 at 380...480 V three phase LXM05BD34N4 at 380...480 V three phase LXM05CD34N4 at 380...480 V three phase LXM15MD28N4 at 400 V three phase LXM15MD28N4 at 480 V three phase LXM15MD40N4 at 400 V three phase LXM15MD40N4 at 480 V three phase LXM15MD28N4 at 230 V three phase |
| Shaft end | Untapped |
| 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 | Straight connectors |

Complementary

| | |
|----------------------------------|--|
| Range compatibility | Lexium 32 Lexium 15 Lexium 05 |
| supply voltage max | 480 V |
| Network number of phases | Three phase |
| Continuous stall current | 7.8 A |
| maximum continuous power | 3.6 W |
| Maximum current Irms | 20.8 A for LXM15LD28M3 20.8 A for LXM15MD28N4 20.8 A for LXM15MD40N4 20.8 A for LXM05AD34N4 20.8 A for LXM05BD34N4 20.8 A for LXM05CD34N4 20.8 A for LXM32.D30N4 |
| Maximum permanent current | 20.8 A |
| Switching frequency | 8 kHz |
| Second shaft | Without second shaft end |
| Shaft diameter | 24 mm |
| Shaft length | 50 mm |
| Feedback type | Multiturn SinCos Hiperface |
| Holding torque | 23 N.m holding brake |
| Motor flange size | 140 mm |
| Number of motor stacks | 1 |
| Torque constant | 1.43 N.m/A at 120 °C |
| Back emf constant | 100 V/krpm at 120 °C |
| Number of motor poles | 10 |

| | |
|--|--|
| Rotor inertia | 9.21 kg.cm ² |
| Stator resistance | 1.41 Ohm at 20 °C |
| Stator inductance | 15.6 mH at 20 °C |
| Stator electrical time constant | 11.06 ms at 20 °C |
| Maximum radial force Fr | 1530 N at 3000 rpm 1760 N at 2000 rpm 2210 N at 1000 rpm |
| Maximum axial force Fa | 0.2 x Fr |
| Brake pull-in power | 24 W |
| Type of cooling | Natural convection |
| Length | 255.5 mm |
| Centring collar diameter | 130 mm |
| Centring collar depth | 3.5 mm |
| Number of mounting holes | 4 |
| Mounting holes diameter | 11 mm |
| Circle diameter of the mounting holes | 165 mm |
| Net weight | 13 kg |
| Sizing reference | BSH1401P |
| Network number of phases | 3 |
| Accuracy error [angular] | 1.4 ° |
| Temperature copper hot | 120 °C |
| Temperature magnet hot | 100 °C |
| Temperature magnet rt | 20 °C |

Packing Units

| | |
|-------------------------------------|---------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 27.0 cm |
| Package 1 Width | 27.0 cm |
| Package 1 Length | 48.2 cm |
| Package 1 Weight | 9.79 kg |

Contractual warranty

| | |
|-----------------------------|----|
| Warranty (in months) | 18 |
|-----------------------------|----|



Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Use Better



Materials and Substances

EU RoHS Directive

[Compliant By Exemption](#)

Use Longer



Lifetime extension

Repair

No

Use Again



Repack and remanufacture

End of life manual availability

No need of specific recycling operations

Dimensions Drawings

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)
- (3) For screws M8 x 19 mm/M8 x 0.75 in.

Dimensions in mm

| Straight connectors | | | Rotatable angled connectors | | | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b | b1 | b2 | b | b1 | b2 | | |
| 178 | 39.5 | 25.5 | 178 | 39.5 | 39.5 | 218 | 256 |

Dimensions in in.

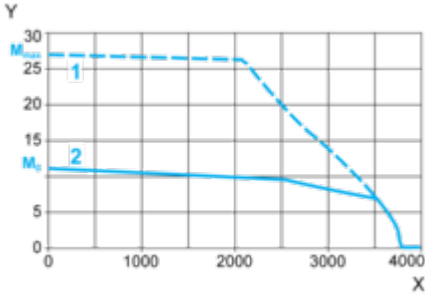
| Straight connectors | | | Rotatable angled connectors | | | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b | b1 | b2 | b | b1 | b2 | | |
| 7.00 | 1.55 | 1.00 | 7.00 | 1.55 | 1.55 | 8.58 | 10.07 |

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

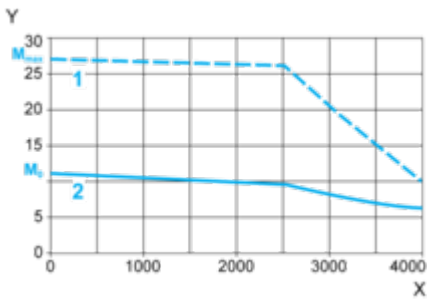
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque