

Product datasheet

Specifications



servo motor BSH, Lexium 32,
27.8N.m, 3000rpm, 140mm,
untapped shaft, Sincos multi turn,
with brake, IP50

BSH1403T02F2P

! Discontinued

! Discontinued on: 9 Feb 2023

Main

| | |
|---------------------------|--|
| Device short name | BSH |
| Product or component type | Servo motor |
| Maximum mechanical speed | 4800 rpm |
| Continuous stall torque | 27.8 N.m for LXM32.D72N4 at 24 A, 400 V, three phase 27.8 N.m for LXM32.D72N4 at 24 A, 480 V, three phase |
| Peak stall torque | 90.2 N.m for LXM32.D72N4 at 24 A, 400 V, three phase 90.2 N.m for LXM32.D72N4 at 24 A, 480 V, three phase |
| Nominal output power | 4100 W for LXM32.D72N4 at 24 A, 400 V, three phase 4100 W for LXM32.D72N4 at 24 A, 480 V, three phase |
| Nominal torque | 12.9 N.m for LXM32.D72N4 at 24 A, 400 V, three phase 12.9 N.m for LXM32.D72N4 at 24 A, 480 V, three phase |
| Nominal speed | 3000 rpm for LXM32.D72N4 at 24 A, 400 V, three phase 3000 rpm for LXM32.D72N4 at 24 A, 480 V, three phase |
| Product compatibility | LXM32.D72N4 at 400 V three phase LXM32.D72N4 at 480 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 |
| Electrical connection | Rotatable right-angled connectors |

Complementary

| | |
|---------------------------|--------------------------|
| Range compatibility | Lexium 32 |
| supply voltage max | 480 V |
| Network number of phases | Three phase |
| Continuous stall current | 22.3 A |
| maximum continuous power | 3.3 W |
| Maximum current Irms | 72 A for LXM32.D72N4 |
| Maximum permanent current | 81.3 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 | 36 N.m holding brake |
| Motor flange size | 140 mm |
| Number of motor stacks | 3 |
| Torque constant | 1.25 N.m/A at 120 °C |
| Back emf constant | 105 V/krpm at 120 °C |
| Rotor inertia | 14.48 kg.cm ² |
| Stator resistance | 0.4 Ohm at 20 °C |
| Stator inductance | 5.1 mH at 20 °C |
| Stator electrical time constant | 12.75 ms at 20 °C |
| Maximum radial force Fr | 1780 N at 3000 rpm 2030 N at 2000 rpm 2560 N at 1000 rpm |
| Maximum axial force Fa | 0.2 x Fr |
| Brake pull-in power | 26 W |
| Type of cooling | Natural convection |
| Length | 365.5 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 | 23 kg |
| Sizing reference | BSH1403T |
| 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 | 13.29 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](#)

PVC free

Yes

Use Longer



Lifetime extension

Repair

No

Use Again



Repack and remanufacture

End of life manual availability

No need of specific recycling operations

WEEE Label

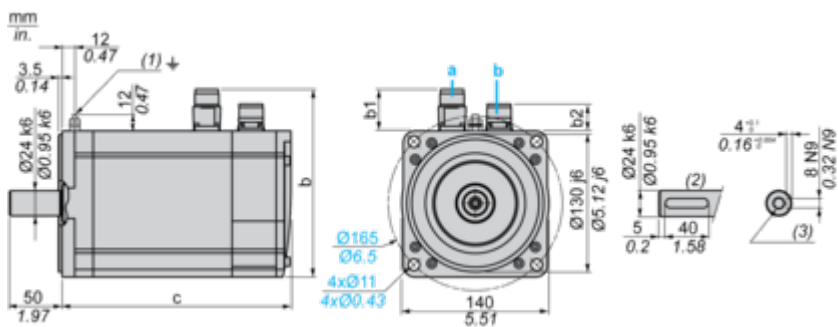


The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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 | | |
| 192.5 | 54 | 25.5 | 198.5 | 60 | 39.5 | 328 | 366 |

Dimensions in in.

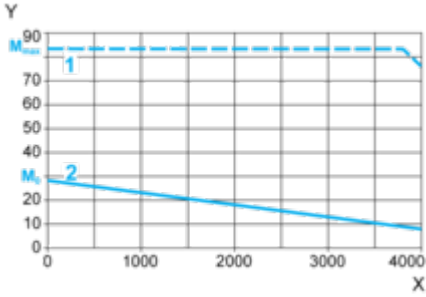
| Straight connectors | | | Rotatable angled connectors | | | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b | b1 | b2 | b | b1 | b2 | | |
| 7.57 | 2.12 | 1.00 | 7.81 | 2.36 | 1.55 | 12.91 | 14.40 |

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32-D72N4 servo drive



X Speed in rpm

Y Torque in Nm

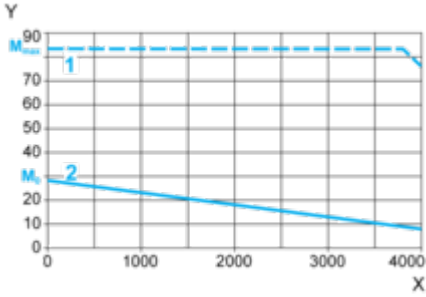
1 Peak torque

2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D72N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque