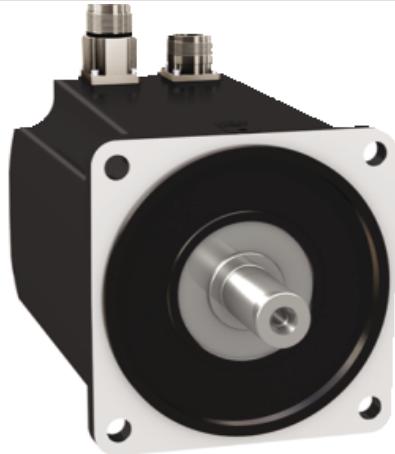


# Product datasheet

## Characteristics

# BMH1403P17F1A

servo motor BMH - 24 Nm - 4000 rpm - keyed shaft - with brake - IP54



### Main

|                           |  |
|---------------------------|--|
| Product or component type | Servo motor  |
| Device short name         | BMH  |
| Maximum mechanical speed  | 4000 rpm   |
| Continuous stall torque   | 24 N.m for LXM32.D72N4 at 24 A, 400 V, three phase<br>24 N.m for LXM32.D72N4 at 24 A, 480 V, three phase     |
| Peak stall torque         | 71.8 N.m for LXM32.D72N4 at 24 A, 400 V, three phase<br>71.8 N.m for LXM32.D72N4 at 24 A, 480 V, three phase |
| Nominal output power      | 4700 W for LXM32.D72N4 at 24 A, 400 V, three phase<br>4700 W for LXM32.D72N4 at 24 A, 480 V, three phase     |
| Nominal torque            | 14.3 N.m for LXM32.D72N4 at 24 A, 400 V, three phase<br>14.3 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<br>3000 rpm for LXM32.D72N4 at 24 A, 480 V, three phase |
| Product compatibility     | LXM32.D72N4 at 400...480 V three phase   |
| Shaft end                 | Keyed  |
| IP degree of protection   | IP54 standard  |
| Speed feedback resolution | 32768 points/turn x 4096 turns   |
| Holding brake             | With   |
| Mounting support          | International standard flange  |
| Electrical connection     | Straight connectors  |

### Complementary

|                           |                        |
|---------------------------|------------------------|
| Range compatibility       | Lexium 32              |
| [Us] rated supply voltage | 480 V                  |
| Network number of phases  | Three phase            |
| Continuous stall current  | 18 A                   |
| Continuous power          | 4.8 W                  |
| Maximum current Irms      | 62.3 A for LXM32.D72N4 |
| Maximum permanent current | 62.3 A                 |

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

|                                       |  |
|---------------------------------------|--|
| Second shaft                          | Without second shaft end                                       |
| Shaft diameter                        | 24 mm  |
| Shaft length                          | 50 mm  |
| Key width                             | 40 mm  |
| Feedback type                         | Multiturn SinCos Hiperface                                     |
| Holding torque                        | 23 N.m holding brake   |
| Motor flange size                     | 140 mm   |
| Number of motor stacks                | 3  |
| Torque constant                       | 1.34 N.m/A at 120 °C   |
| Back emf constant                     | 85.9 V/krpm at 120 °C  |
| Number of motor poles                 | 10   |
| Rotor inertia                         | 50.27 kg.cm²   |
| Stator resistance                     | 0.22 Ohm at 20 °C  |
| Stator inductance                     | 3 mH at 20 °C  |
| Stator electrical time constant       | 13.6 ms at 20 °C   |
| Maximum radial force Fr               | 2420 N at 1000 rpm<br>1920 N at 2000 rpm<br>1680 N at 3000 rpm |
| Maximum axial force Fa                | 0.2 x Fr   |
| Brake pull-in power                   | 19 W   |
| Type of cooling                       | Natural convection   |
| Length                                | 267 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   |
| Product weight                        | 18.5 kg  |

### Offer Sustainability

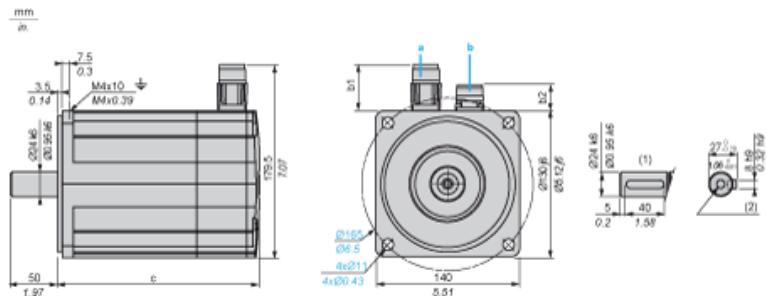
|                            |   |
|----------------------------|---|
| Sustainable offer status   | Green Premium product   |
| REACH Regulation           | <a href="#">REACH Declaration</a>   |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a>                           |
| Mercury free               | Yes   |
| RoHS exemption information | <a href="#">Yes</a>   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>  |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a>   |
| 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) Shaft end, keyed slot (optional)  
 (2) For screw M8 x 25 mm/M8 x 0.98 in.

Dimensions in mm

| Straight connectors |      | Rotatable angled connectors |      | c (without brake) | c (with brake) |
|---------------------|------|-----------------------------|------|-------------------|----------------|
| b                   | b1   | b                           | b1   |                   |                |
| 39.5                | 25.5 | 39.5                        | 39.5 | 232               | 267            |

Dimensions in in.

| Straight connectors |      | Rotatable angled connectors |      | c (without brake) | c (with brake) |
|---------------------|------|-----------------------------|------|-------------------|----------------|
| b                   | b1   | b                           | b1   |                   |                |
| 1.55                | 1.00 | 1.55                        | 1.55 | 9.13              | 10.51          |

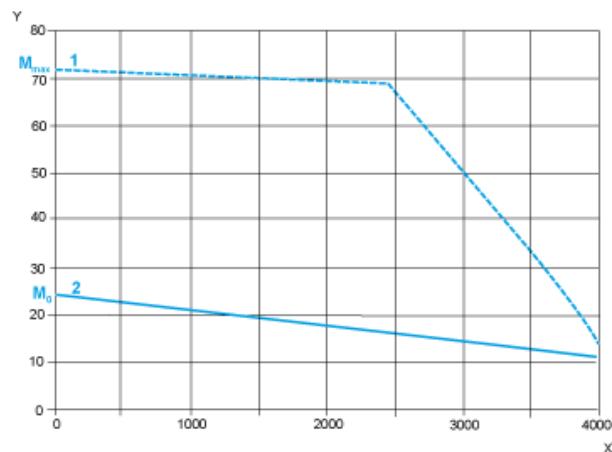
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400 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D72N4 servo drive



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

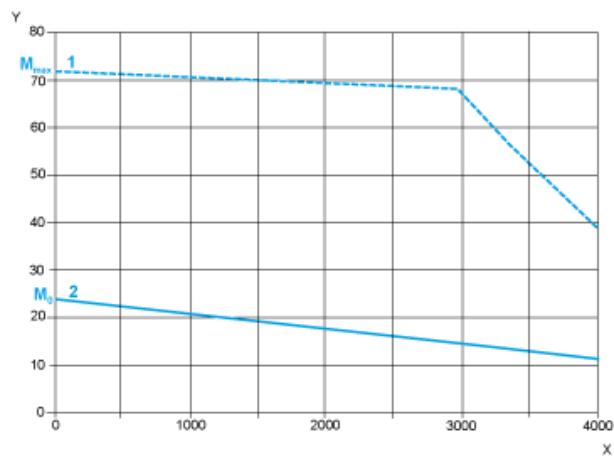
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480 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D72N4 servo drive



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