

# BMH2051P16F1A

servo motor BMH - 34.4 Nm - 3800 rpm -  
keyed shaft - with brake - IP54



## Main

|                           |                                                                                                            |
|---------------------------|------------------------------------------------------------------------------------------------------------|
| Product or component type | Servo motor                                                                                                |
| Device short name         | BMH                                                                                                        |
| Maximum mechanical speed  | 3800 rpm                                                                                                   |
| Continuous stall torque   | 34.4 N.m for LXM32.D72N4 24 A at 400 V three phase<br>34.4 N.m for LXM32.D72N4 24 A at 480 V three phase   |
| Peak stall torque         | 103.4 N.m for LXM32.D72N4 24 A at 400 V three phase<br>103.4 N.m for LXM32.D72N4 24 A at 480 V three phase |
| Nominal output power      | 5400 W for LXM32.D72N4 24 A at 400 V three phase<br>5400 W for LXM32.D72N4 24 A at 480 V three phase       |
| Nominal torque            | 25.8 N.m for LXM32.D72N4 24 A at 400 V three phase<br>25.8 N.m for LXM32.D72N4 24 A at 480 V three phase   |
| Nominal speed             | 2000 rpm for LXM32.D72N4 24 A at 400 V three phase<br>2000 rpm for LXM32.D72N4 24 A at 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                                                                                          |
| 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  | 21.5 A                       |
| Continuous power          | 6.8 W                        |
| Maximum current Irms      | 72 A for LXM32.D72N4         |
| Maximum permanent current | 78.1 A                       |
| Second shaft              | Without second shaft end     |
| Shaft diameter            | 38 mm                        |
| Shaft length              | 80 mm                        |
| Key width                 | 70 mm                        |
| Feedback type             | Single turn SinCos Hiperface |
| Holding torque            | 80 N.m (holding brake)       |
| Motor flange size         | 205 mm                       |
| Number of motor stacks    | 1                            |

|                                       |                                                                |
|---------------------------------------|----------------------------------------------------------------|
| Back emf constant                     | 104 V/krpm at 120 °C                                           |
| Number of motor poles                 | 10                                                             |
| Rotor inertia                         | 87.4 kg.cm <sup>2</sup>                                        |
| Stator resistance                     | 0.3 Ohm at 20 °C                                               |
| Stator inductance                     | 5.9 mH at 20 °C                                                |
| Stator electrical time constant       | 19.7 ms at 20 °C                                               |
| Maximum radial force Fr               | 3730 N at 1000 rpm<br>2960 N at 2000 rpm<br>2580 N at 3000 rpm |
| Maximum axial force Fa                | 0.2 x Fr                                                       |
| Brake pull-in power                   | 40 W                                                           |
| Type of cooling                       | Natural convection                                             |
| Length                                | 370.5 mm                                                       |
| Centring collar diameter              | 180 mm                                                         |
| Centring collar depth                 | 4 mm                                                           |
| Number of mounting holes              | 4                                                              |
| Mounting holes diameter               | 14 mm                                                          |
| Circle diameter of the mounting holes | 215 mm                                                         |
| Product weight                        | 37.9 kg                                                        |

### Offer Sustainability

|                                  |                                                                                       |
|----------------------------------|---------------------------------------------------------------------------------------|
| Sustainable offer status         | Green Premium product                                                                 |
| RoHS (date code: YYWW)           | Compliant - since 0936 - <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                            | Reference not containing SVHC above the threshold                                     |
| Product environmental profile    | Available <a href="#">Download Product Environmental</a>                              |
| Product end of life instructions | Need no specific recycling operations                                                 |

## 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 M12 x 28 mm/M12 x 1.10 in.

Dimensions in mm

| Straight connectors |    |      | Rotatable angled connectors |    |      | c (without brake) | c (with brake) |
|---------------------|----|------|-----------------------------|----|------|-------------------|----------------|
| b                   | b1 | b2   | b                           | b1 | b2   |                   |                |
| 259                 | 54 | 25.5 | 265                         | 60 | 39.5 | 312               | 370.5          |

Dimensions in in.

| Straight connectors |      |      | Rotatable angled connectors |      |      | c (without brake) | c (with brake) |
|---------------------|------|------|-----------------------------|------|------|-------------------|----------------|
| b                   | b1   | b2   | b                           | b1   | b2   |                   |                |
| 10.19               | 2.12 | 1.00 | 10.43                       | 2.36 | 1.55 | 12.28             | 14.58          |

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