

# BMH1401P12F2A

servo motor BMH - 10.3 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   | 10.3 N.m for LXM32.D30M2 10 A at 230 V single phase<br>10.3 N.m for LXM32.D30N4 10 A at 400 V three phase<br>10.3 N.m for LXM32.D30N4 10 A at 480 V three phase |
| Peak stall torque         | 30.8 N.m for LXM32.D30M2 10 A at 230 V single phase<br>30.8 N.m for LXM32.D30N4 10 A at 400 V three phase<br>30.8 N.m for LXM32.D30N4 10 A at 480 V three phase |
| Nominal output power      | 1450 W for LXM32.D30M2 10 A at 230 V single phase<br>2400 W for LXM32.D30N4 10 A at 400 V three phase<br>2400 W for LXM32.D30N4 10 A at 480 V three phase       |
| Nominal torque            | 6.9 N.m for LXM32.D30M2 10 A at 230 V single phase<br>7.7 N.m for LXM32.D30N4 10 A at 400 V three phase<br>7.7 N.m for LXM32.D30N4 10 A at 480 V three phase    |
| Nominal speed             | 2000 rpm for LXM32.D30M2 10 A at 230 V single phase<br>3000 rpm for LXM32.D30N4 10 A at 400 V three phase<br>3000 rpm for LXM32.D30N4 10 A at 480 V three phase |
| Product compatibility     | LXM32.D30M2 at 230 V single phase<br>LXM32.D30N4 at 400...480 V three phase                                                                                     |
| Shaft end                 | Keyed                                                                                                                                                           |
| IP degree of protection   | IP54 (standard)                                                                                                                                                 |
| Speed feedback resolution | 131072 points/turn x 4096 turns                                                                                                                                 |
| Holding brake             | With                                                                                                                                                            |
| Mounting support          | International standard flange                                                                                                                                   |
| Electrical connection     | Rotatable right-angled connectors                                                                                                                               |

## Complementary

|                           |                                                  |
|---------------------------|--------------------------------------------------|
| Range compatibility       | Lexium 32                                        |
| [Us] rated supply voltage | 480 V                                            |
| Network number of phases  | Three phase                                      |
| Continuous stall current  | 8.58 A                                           |
| Continuous power          | 2.85 W                                           |
| Maximum current Irms      | 29.8 A for LXM32.D30M2<br>29.8 A for LXM32.D30N4 |
| Maximum permanent current | 29.8 A                                           |

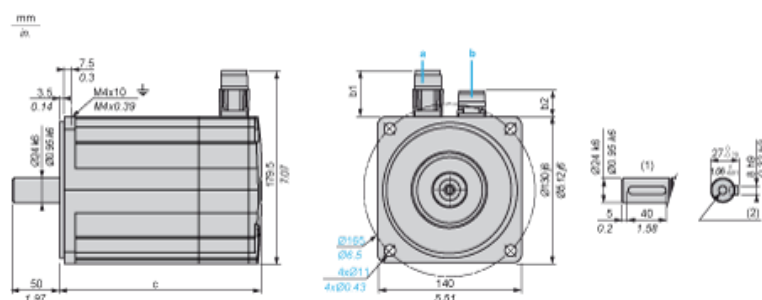
|                                       |                                                                |
|---------------------------------------|----------------------------------------------------------------|
| Second shaft                          | Without second shaft end                                       |
| Shaft diameter                        | 24 mm                                                          |
| Shaft length                          | 50 mm                                                          |
| Key width                             | 40 mm                                                          |
| Feedback type                         | Multiturn SinCos Hiperface                                     |
| Holding torque                        | 18 N.m (holding brake)                                         |
| Motor flange size                     | 140 mm                                                         |
| Number of motor stacks                | 1                                                              |
| Torque constant                       | 1.2 N.m/A at 120 °C                                            |
| Back emf constant                     | 77.4 V/krpm at 120 °C                                          |
| Number of motor poles                 | 10                                                             |
| Rotor inertia                         | 17.96 kg.cm <sup>2</sup>                                       |
| Stator resistance                     | 0.69 Ohm at 20 °C                                              |
| Stator inductance                     | 6.7 mH at 20 °C                                                |
| Stator electrical time constant       | 9.7 ms at 20 °C                                                |
| Maximum radial force Fr               | 1930 N at 1000 rpm<br>1530 N at 2000 rpm<br>1340 N at 3000 rpm |
| Maximum axial force Fa                | 0.2 x Fr                                                       |
| Brake pull-in power                   | 18 W                                                           |
| Type of cooling                       | Natural convection                                             |
| Length                                | 187 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                        | 10.3 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 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 | 152               | 187            |

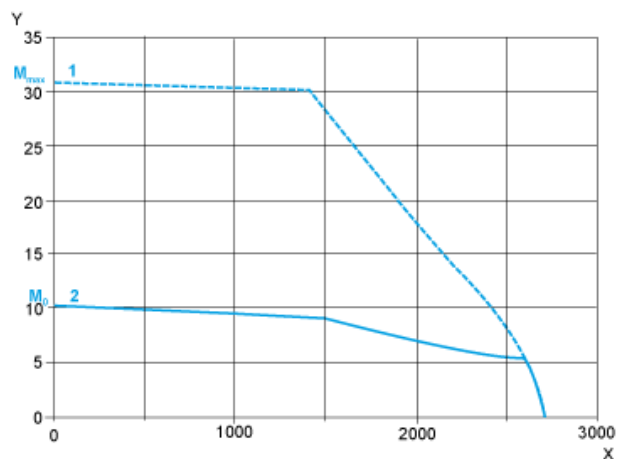
Dimensions in in.

| Straight connectors |      | Rotatable angled connectors |      | c (without brake) | c (with brake) |
|---------------------|------|-----------------------------|------|-------------------|----------------|
| b                   | b1   | b                           | b1   |                   |                |
| 1.55                | 1.00 | 1.55                        | 1.55 | 5.98              | 7.36           |

## 230 V Single-Phase Supply Voltage

### Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive

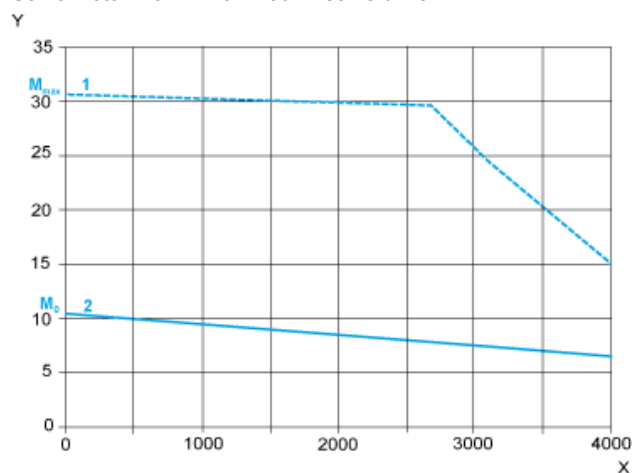


- X Speed in rpm  
Y Torque in Nm  
1 Peak torque  
2 Continuous torque

## 400 V 3-Phase Supply Voltage

### Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive

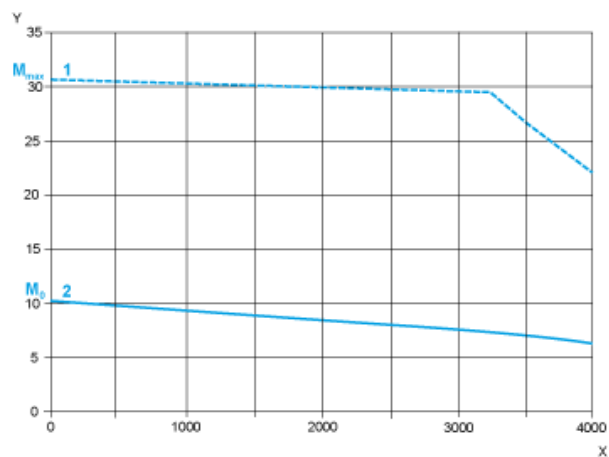


- X Speed in rpm  
Y Torque in Nm  
1 Peak torque  
2 Continuous torque

## 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