

# Product datasheet

Specifications



servo motor BMH, Lexium 32,  
1.2Nm, 8000rpm, untapped shaft,  
with brake, IP65, IP67, 128bit  
encoder, straight

BMH0701P21F1A

! Discontinued

! Discontinued on: May 4, 2023

## Main

|                           |                                                                                                                                                                                                                              |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Device short name         | BMH                                                                                                                                                                                                                          |
| Product or component type | Servo motor                                                                                                                                                                                                                  |
| Maximum mechanical speed  | 8000 rpm                                                                                                                                                                                                                     |
| Continuous stall torque   | 1.2 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>1.2 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase<br>1.4 N.m for LXM32.D12N4 at 3 A, 400 V, three phase<br>1.4 N.m for LXM32.D12N4 at 3 A, 480 V, three phase     |
| Peak stall torque         | 4.2 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>4.2 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase<br>4.2 N.m for LXM32.D12N4 at 3 A, 400 V, three phase<br>4.2 N.m for LXM32.D12N4 at 3 A, 480 V, three phase     |
| Nominal output power      | 350 W for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>350 W for LXM32.U60N4 at 1.5 A, 480 V, three phase<br>700 W for LXM32.D12N4 at 3 A, 400 V, three phase<br>700 W for LXM32.D12N4 at 3 A, 480 V, three phase             |
| Nominal torque            | 1.1 N.m for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>1.1 N.m for LXM32.U60N4 at 1.5 A, 480 V, three phase<br>1.3 N.m for LXM32.D12N4 at 3 A, 400 V, three phase<br>1.3 N.m for LXM32.D12N4 at 3 A, 480 V, three phase     |
| Nominal speed             | 3000 rpm for LXM32.U60N4 at 1.5 A, 400 V, three phase<br>3000 rpm for LXM32.U60N4 at 1.5 A, 480 V, three phase<br>5000 rpm for LXM32.D12N4 at 3 A, 400 V, three phase<br>5000 rpm for LXM32.D12N4 at 3 A, 480 V, three phase |
| Product compatibility     | LXM32.U60N4 at 400...480 V three phase<br>LXM32.D12N4 at 400...480 V three phase                                                                                                                                             |
| Shaft end                 | Smooth shaft                                                                                                                                                                                                                 |
| IP degree of protection   | IP65 standard<br>IP67 with IP67 kit                                                                                                                                                                                          |
| Speed feedback resolution | 131072 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  | 1.78 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

|                                       |                                                                                                                            |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Continuous power                      | 1.05 W                                                                                                                     |
| Maximum current Irms                  | 6 A for LXM32.U60N4<br>6 A for LXM32.D12N4                                                                                 |
| Maximum permanent current             | 5.97 A                                                                                                                     |
| Second shaft                          | Without second shaft end                                                                                                   |
| Shaft diameter                        | 11 mm                                                                                                                      |
| Shaft length                          | 23 mm                                                                                                                      |
| Feedback type                         | Single turn SinCos Hiperface                                                                                               |
| Holding torque                        | 3 N.m holding brake                                                                                                        |
| Motor flange size                     | 70 mm                                                                                                                      |
| Number of motor stacks                | 1                                                                                                                          |
| Torque constant                       | 0.79 N.m/A at 120 °C                                                                                                       |
| Back emf constant                     | 50.72 V/krpm at 120 °C                                                                                                     |
| Number of motor poles                 | 10                                                                                                                         |
| Rotor inertia                         | 0.7 kg.cm <sup>2</sup>                                                                                                     |
| Stator resistance                     | 8.3 Ohm at 20 °C                                                                                                           |
| Stator inductance                     | 23.4 mH at 20 °C                                                                                                           |
| Stator electrical time constant       | 2.8 ms at 20 °C                                                                                                            |
| Maximum radial force Fr               | 660 N at 1000 rpm<br>520 N at 2000 rpm<br>460 N at 3000 rpm<br>410 N at 4000 rpm<br>380 N at 5000 rpm<br>360 N at 6000 rpm |
| Maximum axial force Fa                | 0.2 x Fr                                                                                                                   |
| Brake pull-in power                   | 7 W                                                                                                                        |
| Type of cooling                       | Natural convection                                                                                                         |
| Length                                | 161 mm                                                                                                                     |
| Centring collar diameter              | 60 mm                                                                                                                      |
| Centring collar depth                 | 2.5 mm                                                                                                                     |
| Number of mounting holes              | 4                                                                                                                          |
| Mounting holes diameter               | 5.5 mm                                                                                                                     |
| Circle diameter of the mounting holes | 82 mm                                                                                                                      |
| Net weight                            | 2.6 kg                                                                                                                     |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 11.0 cm |
| Package 1 Width              | 20.0 cm |
| Package 1 Length             | 40.0 cm |
| Package 1 Weight             | 1.8 kg  |

## Contractual warranty

Warranty

18 months

Sustainability



**Green Premium™ label** is Schneider Electric’s commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

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[Guide to assess a product’s sustainability >](#)



Transparency   RoHS/REACH

Well-being performance

|                                         |     |
|-----------------------------------------|-----|
| <div>✓</div> Mercury Free               |     |
| <div>✓</div> Rohs Exemption Information | Yes |
| <div>✓</div> Pvc Free                   |     |

Certifications & Standards

|                          |                                                                                                                             |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Eu Rohs Directive        | Pro-active compliance (Product out of EU RoHS legal scope)                                                                  |
| China Rohs Regulation    | <a href="#">China RoHS declaration</a>                                                                                      |
| Environmental Disclosure | <a href="#">Product Environmental Profile</a>                                                                               |
| Weee                     | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| Circularity Profile      | 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) Shaft end, keyed slot (optional)

Dimensions in mm

| Straight connectors |      | Rotatable angled connectors |      | c (without brake) | c (with brake) | c1 | c2 | c3  | h    | h1                  | Ø     | Ø1 for screws |
|---------------------|------|-----------------------------|------|-------------------|----------------|----|----|-----|------|---------------------|-------|---------------|
| b1                  | b2   | b1                          | b2   |                   |                |    |    |     |      |                     |       |               |
| 39.5                | 25.5 | 39.5                        | 39.5 | 122               | 161            | 23 | 18 | 2.5 | 4 h9 | $12.5^{+0}_{-0.13}$ | 11 k6 | M4 x 14       |

Dimensions in in.

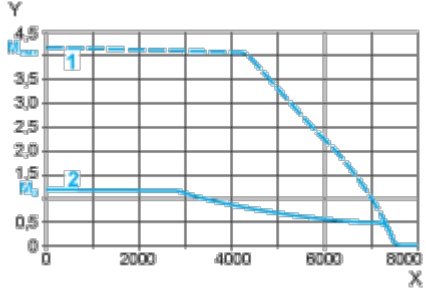
| Straight connectors |    | Rotatable angled connectors |      | c (without brake) | c (with brake) | c1   | c2   | c3   | h       | h1                    | Ø       | Ø1 for screws |
|---------------------|----|-----------------------------|------|-------------------|----------------|------|------|------|---------|-----------------------|---------|---------------|
| b1                  | b2 | b1                          | b2   |                   |                |      |      |      |         |                       |         |               |
| 1.55                | 1  | 1.55                        | 1.55 | 4.80              | 6.33           | 0.90 | 0.70 | 0.09 | 0.16 h9 | $0.49^{+0}_{-0.0051}$ | 0.43 k6 | M4 x 0.55     |

Performance Curves

400 V 3-Phase Supply Voltage

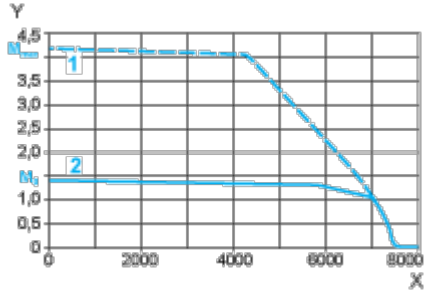
Torque/Speed Curves

Servo motor with LXM32•U60N4 servo drive



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

Servo motor with LXM32•D12N4 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•U60N4 servo drive



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

Servo motor with LXM32•D12N4 servo drive



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