

# Product data sheet

Specifications



servo motor BMH, Lexium 32,  
3.3Nm, 6000rpm, keyed shaft, with  
brake, IP65, IP67, 128bit encoder

BMH1001P31F2A

## Main

Device short name	BMH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	3.3 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 3.3 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 3.4 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 3.4 N.m for LXM32.D18N4 at 6 A, 480 V, three phase
Peak stall torque	10.8 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 10.8 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 10.8 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 10.8 N.m for LXM32.D18N4 at 6 A, 480 V, three phase
Nominal output power	800 W for LXM32.D12N4 at 3 A, 400 V, three phase 800 W for LXM32.D12N4 at 3 A, 480 V, three phase 1300 W for LXM32.D18N4 at 6 A, 400 V, three phase 1300 W for LXM32.D18N4 at 6 A, 480 V, three phase
Nominal torque	1.9 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 1.9 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 3.1 N.m for LXM32.D18N4 at 6 A, 400 V, three phase 3.1 N.m for LXM32.D18N4 at 6 A, 480 V, three phase
Nominal speed	4000 rpm for LXM32.D12N4 at 3 A, 400 V, three phase 4000 rpm for LXM32.D12N4 at 3 A, 480 V, three phase 4000 rpm for LXM32.D18N4 at 6 A, 400 V, three phase 4000 rpm for LXM32.D18N4 at 6 A, 480 V, three phase
Product compatibility	LXM32.D12N4 at 400...480 V three phase LXM32.D18N4 at 400...480 V three phase
Shaft end	Keyed
IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn
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	3.15 A
Continuous power	1.76 W

<b>Maximum current Irms</b>	11.2 A for LXM32.D12N4 11.9 A for LXM32.D18N4
<b>Maximum permanent current</b>	11.93 A
<b>Second shaft</b>	Without second shaft end
<b>Shaft diameter</b>	19 mm
<b>Shaft length</b>	40 mm
<b>key width</b>	30 mm
<b>Feedback type</b>	Single turn SinCos Hiperface
<b>Holding torque</b>	5.5 N.m holding brake
<b>Motor flange size</b>	100 mm
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	1.08 N.m/A at 120 °C
<b>Back emf constant</b>	70.3 V/krpm at 120 °C
<b>Number of motor poles</b>	5.0
<b>Rotor inertia</b>	3.68 kg.cm <sup>2</sup>
<b>Stator resistance</b>	3.1 Ohm at 20 °C
<b>Stator inductance</b>	7.45 mH at 20 °C
<b>Stator electrical time constant</b>	4.5 ms at 20 °C
<b>Maximum radial force Fr</b>	900 N at 1000 rpm 720 N at 2000 rpm 630 N at 3000 rpm 570 N at 4000 rpm 530 N at 5000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Brake pull-in power</b>	12 W
<b>Type of cooling</b>	Natural convection
<b>Length</b>	170.3 mm
<b>Centring collar diameter</b>	95 mm
<b>Centring collar depth</b>	3.5 mm
<b>Number of mounting holes</b>	4
<b>Mounting holes diameter</b>	9 mm
<b>Circle diameter of the mounting holes</b>	115 mm
<b>Product weight</b>	4.8 kg
<b>Sizing reference</b>	BMH1001P
<b>Network number of phases</b>	3
<b>Accuracy error [angular]</b>	1.4 °
<b>Temperature copper hot</b>	135 °C
<b>Temperature magnet hot</b>	100 °C
<b>Temperature magnet rt</b>	20 °C

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1

Package 1 Height	22.0 cm
Package 1 Width	20.0 cm
Package 1 Length	40.0 cm
Package 1 Weight	5.1 kg
Unit Type of Package 2	P06
Number of Units in Package 2	24
Package 2 Height	105.0 cm
Package 2 Width	80.000 cm
Package 2 Length	60.000 cm
Package 2 Weight	36.1 kg

## Contractual warranty

Warranty	18 months
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## 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 >](#)

### Environmental footprint

Total lifecycle Carbon footprint 1446

Environmental Disclosure [Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard Yes

Packaging without single use plastic No

[EU RoHS Directive](#) Pro-active compliance (Product out of EU RoHS legal scope)

SCIP Number A7df881f-135f-4256-b8c2-ea55d4c9a151

REACH Regulation [REACH Declaration](#)

California proposition 65 **WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

PVC free Yes

## Use Again

### Repack and remanufacture

End of life manual availability No need of specific recycling operations

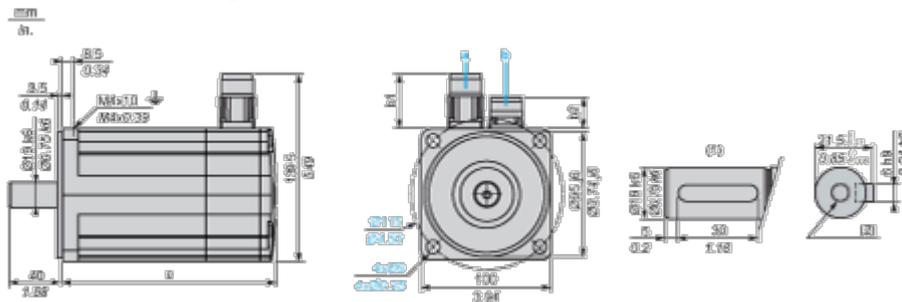
Take-back No

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) Shaft end, keyed slot (optional)
- (2) For screw M6 x 21 mm/M6 x 0.83 in.

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b1	b2	b1	b2		
39.5	25.5	39.5	39.5	128	170

Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)
b1	b2	b1	b2		
1.55	1.00	1.55	1.55	5.03	6.69

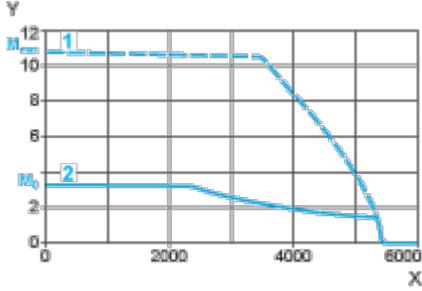
Performance Curves

400 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



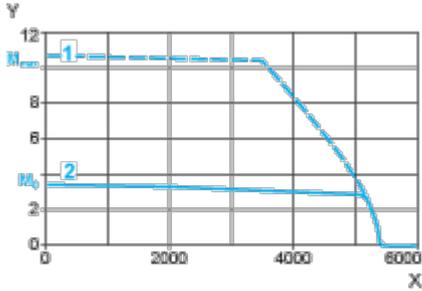
X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

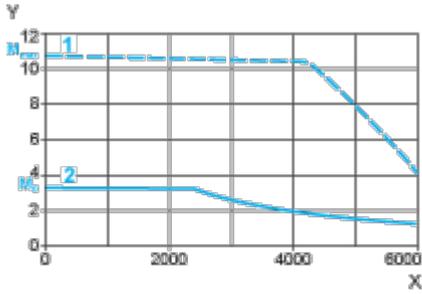
2 Continuous torque

480 V 3-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



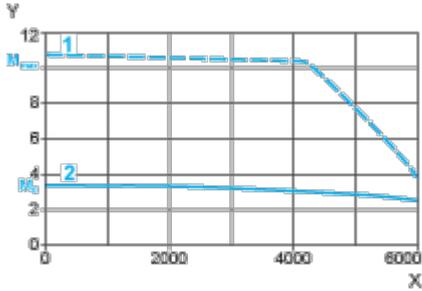
X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque

Servo motor with LXM32•D18N4 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque