

# Product datasheet

Specifications



## AC servo motor BSH - 3.39 N.m - 4000 rpm - keyed shaft - with brake - IP65

BSH1001T32F1A

⚠ Discontinued on: 9 Feb 2023

⚠ Discontinued

EAN Code: 3389118138759

### Main

<b>Device short name</b>	BSH
<b>Product or component type</b>	Servo motor
<b>Maximum mechanical speed</b>	6000 rpm
<b>Continuous stall torque</b>	<p>3.3 N.m for LXM32.D30M2 at 10 A, 115 V, single phase</p> <p>3.39 N.m for LXM15LD28M3, 230 V, three phase</p> <p>3.4 N.m for LXM05AD28F1, 110...120 V, single phase</p> <p>3.4 N.m for LXM05AD28M2 at 6 A, 200...240 V, single phase</p> <p>3.4 N.m for LXM05AD42M3X, 200...240 V, three phase</p> <p>3.4 N.m for LXM05BD28F1, 110...120 V, single phase</p> <p>3.4 N.m for LXM05BD28M2, 200...240 V, single phase</p> <p>3.4 N.m for LXM05BD42M3X, 200...240 V, three phase</p> <p>3.4 N.m for LXM05CD28F1, 110...120 V, single phase</p> <p>3.4 N.m for LXM05CD28M2, 200...240 V, single phase</p> <p>3.4 N.m for LXM05CD42M3X, 200...240 V, three phase</p> <p>2.7 N.m for LXM32.D18M2 at 6 A, 230 V, single phase</p>
<b>Peak stall torque</b>	<p>6.3 N.m for LXM32.D30M2 at 10 A, 115 V, single phase</p> <p>8.5 N.m for LXM05AD28F1, 110...120 V, single phase</p> <p>8.5 N.m for LXM05AD28M2, 200...240 V, single phase</p> <p>8.5 N.m for LXM05BD28F1, 110...120 V, single phase</p> <p>8.5 N.m for LXM05BD28M2, 200...240 V, single phase</p> <p>8.5 N.m for LXM05CD28F1, 110...120 V, single phase</p> <p>8.5 N.m for LXM05CD28M2, 200...240 V, single phase</p> <p>7.5 N.m for LXM32.D18M2 at 6 A, 230 V, single phase</p> <p>8.5 N.m for LXM15LD28M3, 230 V, three phase</p> <p>8.5 N.m for LXM05AD42M3X, 200...240 V, three phase</p> <p>8.5 N.m for LXM05BD42M3X at 6 A, 200...240 V, three phase</p> <p>8.5 N.m for LXM05CD42M3X, 200...240 V, three phase</p>
<b>Nominal output power</b>	<p>700 W for LXM32.D30M2 at 10 A, 115 V, single phase</p> <p>900 W for LXM32.D18M2 at 6 A, 230 V, single phase</p> <p>500 W for LXM05AD28F1, 110...120 V, single phase</p> <p>500 W for LXM05BD28F1, 110...120 V, single phase</p> <p>500 W for LXM05CD28F1 at 6 A, 110...120 V, single phase</p> <p>900 W for LXM05AD28M2, 200...240 V, single phase</p> <p>900 W for LXM05BD28M2, 200...240 V, single phase</p> <p>900 W for LXM05CD28M2, 200...240 V, single phase</p> <p>1150 W for LXM15LD28M3, 230 V, three phase</p> <p>900 W for LXM05AD42M3X, 200...240 V, three phase</p> <p>900 W for LXM05BD42M3X, 200...240 V, three phase</p> <p>900 W for LXM05CD42M3X, 200...240 V, three phase</p>
<b>Nominal torque</b>	<p>2.75 N.m for LXM32.D30M2 at 10 A, 115 V, single phase</p> <p>2.9 N.m for LXM05AD28M2, 200...240 V, single phase</p> <p>2.9 N.m for LXM05BD28M2, 200...240 V, single phase</p> <p>2.9 N.m for LXM05CD28M2, 200...240 V, single phase</p> <p>3.16 N.m for LXM05AD28F1, 110...120 V, single phase</p> <p>3.16 N.m for LXM05BD28F1, 110...120 V, single phase</p> <p>3.16 N.m for LXM05CD28F1, 110...120 V, single phase</p> <p>2.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase</p> <p>2.75 N.m for LXM15LD28M3, 230 V, three phase</p> <p>2.9 N.m for LXM05AD42M3X, 200...240 V, three phase</p> <p>2.9 N.m for LXM05BD42M3X at 6 A, 200...240 V, three phase</p> <p>2.9 N.m for LXM05CD42M3X, 200...240 V, three phase</p>

<b>Nominal speed</b>	2500 rpm for LXM32.D30M2 at 10 A, 115 V, single phase 3000 rpm for LXM05AD28M2, 200...240 V, single phase 3000 rpm for LXM05BD28M2, 200...240 V, single phase 3000 rpm for LXM05CD28M2, 200...240 V, single phase 3000 rpm for LXM05AD42M3X, 200...240 V, three phase 3000 rpm for LXM05BD42M3X, 200...240 V, three phase 3000 rpm for LXM05CD42M3X, 200...240 V, three phase 4000 rpm for LXM32.D18M2 at 6 A, 230 V, single phase 1500 rpm for LXM05AD28F1, 110...120 V, single phase 1500 rpm for LXM05BD28F1, 110...120 V, single phase 1500 rpm for LXM05CD28F1 at 6 A, 110...120 V, single phase 4000 rpm for LXM15LD28M3, 230 V, three phase
<b>Product compatibility</b>	LXM05AD28F1 at 110...120 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD28F1 at 110...120 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD28F1 at 110...120 V single phase LXM05CD28M2 at 200...240 V single phase LXM32.D30M2 at 115 V single phase LXM32.D18M2 at 230 V single phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD28M3 at 230 V three phase
<b>Shaft end</b>	Keyed
<b>IP degree of protection</b>	IP65 standard IP67 with IP67 kit
<b>Speed feedback resolution</b>	131072 points/turn x 4096 turns
<b>Holding brake</b>	With
<b>Mounting support</b>	International standard flange
<b>Electrical connection</b>	Straight connectors

## Complementary

<b>Range compatibility</b>	Lexium 15 Lexium 05 Lexium 32
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	7.3 A
<b>maximum continuous power</b>	1.6 W
<b>Maximum current Irms</b>	18 A for LXM32.D18M2 at 230 V 15 A for LXM32.D30M2 at 115 V 23 A for LXM15LD28M3 25.1 A for LXM05AD28F1 25.1 A for LXM05AD28M2 at 115 V 25.1 A for LXM05AD42M3X 25.1 A for LXM05BD28F1 25.1 A for LXM05BD28M2 25.1 A for LXM05BD42M3X 25.1 A for LXM05CD28F1 25.1 A for LXM05CD28M2 25.1 A for LXM05CD42M3X
<b>Maximum permanent current</b>	25.1 A
<b>Switching frequency</b>	8 kHz
<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>	Multiturn SinCos Hiperface

<b>Holding torque</b>	9 N.m holding brake
<b>Motor flange size</b>	100 mm
<b>Number of motor stacks</b>	1
<b>Torque constant</b>	0.45 N.m/A at 120 °C
<b>Back emf constant</b>	29 V/krpm at 120 °C
<b>Number of motor poles</b>	8
<b>Rotor inertia</b>	2.018 kg.cm <sup>2</sup>
<b>Stator resistance</b>	0.87 Ohm at 20 °C
<b>Stator inductance</b>	4 mH at 20 °C
<b>Stator electrical time constant</b>	4.6 ms at 20 °C
<b>Maximum radial force Fr</b>	530 N at 5000 rpm 570 N at 4000 rpm 630 N at 3000 rpm 720 N at 2000 rpm 900 N at 1000 rpm
<b>Maximum axial force Fa</b>	0.2 x Fr
<b>Brake pull-in power</b>	18 W
<b>Type of cooling</b>	Natural convection
<b>Length</b>	199.5 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>Net weight</b>	4.8 kg
<b>Sizing reference</b>	BSH1001T
<b>Network number of phases</b>	3
<b>Accuracy error [angular]</b>	1.4 °
<b>Temperature copper hot</b>	120 °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
<b>Package 1 Height</b>	15.4 cm
<b>Package 1 Width</b>	16.3 cm
<b>Package 1 Length</b>	40.7 cm
<b>Package 1 Weight</b>	4.95 kg

## Contractual warranty

<b>Warranty (in months)</b>	18
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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 >](#)

### Use Better



#### Materials and Substances

EU RoHS Directive

[Compliant By Exemption](#)

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

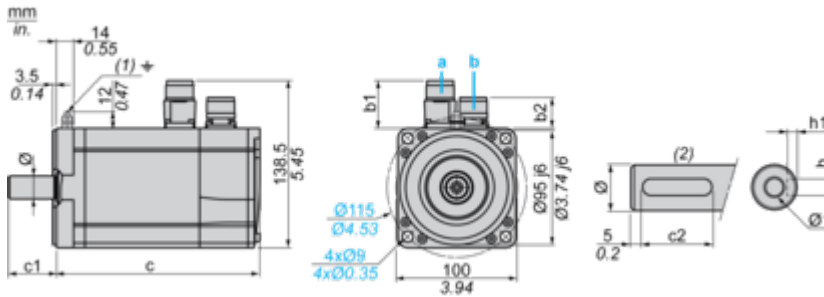
End of life manual availability

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) M4 screw
- (2) Shaft end, keyed slot (optional)

Dimensions in mm

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
39.5	25.5	39.5	39.5	169	200	40	30	6 N9	3.5 <sup>+0.1</sup> <sub>0</sub>	19 k6	M6 x 16

Dimensions in in.

Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	0.14 <sup>+0.1</sup> <sub>0</sub>	0.75 k6	M6 x 0.63

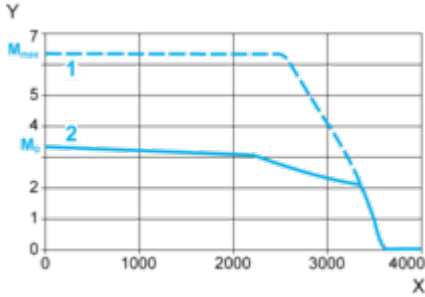
Performance Curves

115 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32-D30M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

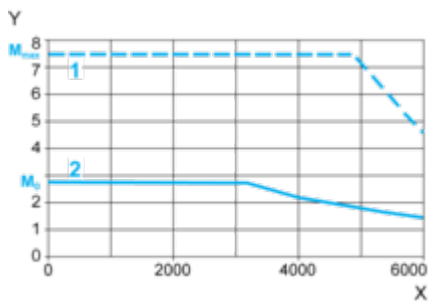
2 Continuous torque

230 V Single-Phase Supply Voltage

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Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



X Speed in rpm

Y Torque in Nm

1 Peak torque

2 Continuous torque