

# Product datasheet

Specifications



servo motor BSH, Lexium 05,  
5.5N.m, 4000rpm, 100mm,  
untapped shaft, Sincos multi turn,  
with brake, IP65, straight

BSH1002T22F1A

! Discontinued

! Discontinued on: 9 Feb 2023

## Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	5.8 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 5.5 N.m for LXM15LD28M3, 230 V, three phase 5.5 N.m for LXM05AD42M3X, 200...240 V, three phase 5.5 N.m for LXM05BD42M3X, 200...240 V, three phase 5.5 N.m for LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	16.4 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 11.59 N.m for LXM15LD28M3, 230 V, three phase 16 N.m for LXM05AD42M3X, 200...240 V, three phase 16 N.m for LXM05BD42M3X, 200...240 V, three phase 16 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal output power	1500 W for LXM32.D30M2 at 10 A, 230 V, single phase 1400 W for LXM05AD42M3X, 200...240 V, three phase 1400 W for LXM05BD42M3X, 200...240 V, three phase 1400 W for LXM05CD42M3X, 200...240 V, three phase 1700 W for LXM15LD28M3, 230 V, three phase
Nominal torque	3.7 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 4 N.m for LXM15LD28M3, 230 V, three phase 4.4 N.m for LXM05AD42M3X, 200...240 V, three phase 4.4 N.m for LXM05BD42M3X, 200...240 V, three phase 4.4 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal speed	4000 rpm for LXM32.D30M2 at 10 A, 230 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 LXM15LD28M3, 230 V, three phase
Product compatibility	LXM32.D30M2 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
Shaft end	Untapped
IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors

## Complementary

<b>Range compatibility</b>	Lexium 32 Lexium 05 Lexium 15
<b>supply voltage max</b>	480 V
<b>Network number of phases</b>	Three phase
<b>Continuous stall current</b>	9.9 A
<b>maximum continuous power</b>	2.51 W
<b>Maximum current Irms</b>	31.2 A for LXM15LD28M3 35.4 A for LXM05AD42M3X 35.4 A for LXM05BD42M3X 35.4 A for LXM05CD42M3X 30 A for LXM32.D30M2
<b>Maximum permanent current</b>	35.4 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>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>	2
<b>Torque constant</b>	0.59 N.m/A at 120 °C
<b>Back emf constant</b>	37 V/krpm at 120 °C
<b>Number of motor poles</b>	8
<b>Rotor inertia</b>	2.928 kg.cm <sup>2</sup>
<b>Stator resistance</b>	0.56 Ohm at 20 °C
<b>Stator inductance</b>	3 mH at 20 °C
<b>Stator electrical time constant</b>	5.36 ms at 20 °C
<b>Maximum radial force Fr</b>	620 N at 4000 rpm 690 N at 3000 rpm 790 N at 2000 rpm 990 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>	235.5 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>	6.3 kg
<b>Sizing reference</b>	BSH1002T
<b>Network number of phases</b>	3
<b>Accuracy error [angular]</b>	1.4 °

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Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C

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## Packing Units

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Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	15.4 cm
Package 1 Width	16.3 cm
Package 1 Length	40.7 cm
Package 1 Weight	6.45 kg

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## Contractual warranty

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Warranty (in months)	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](#)

PVC free

Yes

### Use Longer



#### Lifetime extension

Repair

No

### Use Again



#### Repack and remanufacture

End of life manual availability

No need of specific recycling operations

WEEE Label

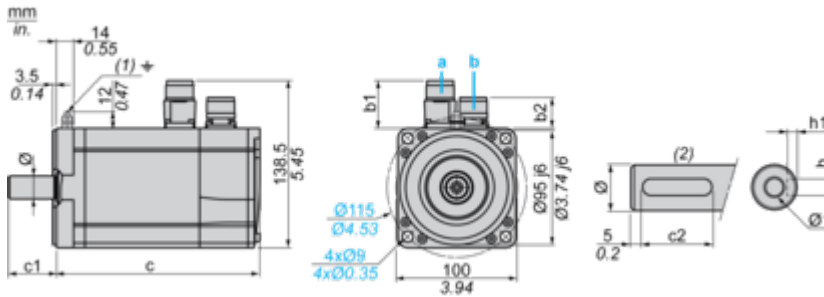


The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

Dimensions Drawings

Servo Motors Dimensions

Example with Straight Connectors



- a: Power supply for servo motor brake
- b: Power supply for servo motor encoder
- (1) 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	205	236	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	8.07	9.29	1.57	1.18	0.24 N9	0.14 <sup>+0.1</sup> <sub>0</sub>	0.75 k6	M6 x 0.63

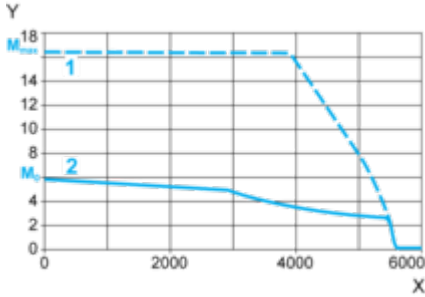
Performance Curves

230 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