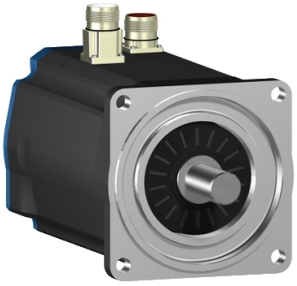
Product datasheet

Specifications



Discontinued

AC servo motor BSH - 3.39 N.m - 4000 rpm - keyed shaft - without brake - IP50

BSH1001T12A1A

Discontinued on: 18 Apr 2024

To be end-of-service on: 18 Apr 2026

Main

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

Nominal speed	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
Product compatibility	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
Shaft end	Keyed
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
Mounting support	International standard flange
Electrical connection	Straight connectors

Complementary

Range compatibility	Lexium 15 Lexium 32 Lexium 05
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	7.3 A
maximum continuous power	1.6 W
Maximum current Irms	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
Maximum permanent current	25.1 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Key width	30 mm
Feedback type	Multiturn SinCos Hiperface

Motor flange size	100 mm
Number of motor stacks	1
Torque constant	0.45 N.m/A at 120 °C
Back emf constant	29 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	1.4 kg.cm²
Stator resistance	0.87 Ohm at 20 °C
Stator inductance	4 mH at 20 °C
Stator electrical time constant	4.6 ms at 20 °C
Maximum radial force Fr	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
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	168.5 mm
Centring collar diameter	95 mm
Centring collar depth	3.5 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	115 mm
Net weight	4.2 kg
Sizing reference	BSH1001T
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C

Packing Units

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	4.3 kg

Contractual warranty

Warranty (in months)	18

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

PVC free	**Yes**

Use Longer

Lifetime extension

Repair	**No**

Use Again

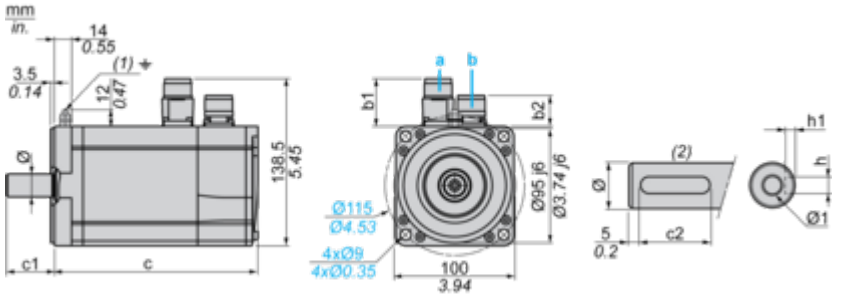
Repack and remanufacture

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	169	200	40	30	6 N9	$3.5^{+0.1}_{0}$	19 k6	M6 x 16

Dimensions in in.

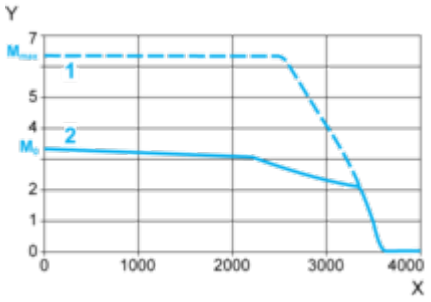
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	$0.14^{+0.1}_{0}$	0.75 k6	M6 x 0.63

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive

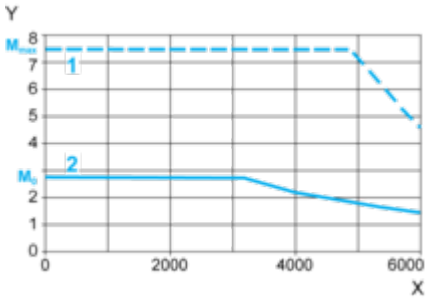


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



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