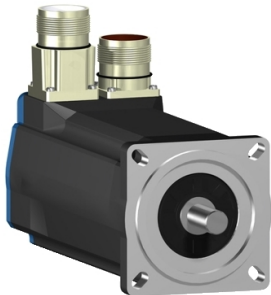


Product datasheet

Specifications



AC servo motor BSH - 2.12 N.m - 6000 rpm - keyed shaft - without brake - IP50

BSH0702T12A1A

⚠ Discontinued on: 18 Apr 2024

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

⚠ Discontinued

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	2.2 N.m for LXM32.D30M2 at 10 A, 115 V, single phase 2.12 N.m for LXM05AD17M2, 200...240 V, single phase 2.12 N.m for LXM05BD17M2, 200...240 V, single phase 2.12 N.m for LXM05CD17M2, 200...240 V, single phase 2.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 2.12 N.m for LXM05AD17F1, 110...120 V, single phase 2.12 N.m for LXM05AD28M2, 200...240 V, single phase 2.12 N.m for LXM05BD17F1, 110...120 V, single phase 2.12 N.m for LXM05BD28M2, 200...240 V, single phase 2.12 N.m for LXM05CD17F1, 110...120 V, single phase 2.12 N.m for LXM05CD28M2, 200...240 V, single phase 2.12 N.m for LXM15LD17N4, 230 V, three phase 2.12 N.m for LXM15LD21M3, 230 V, three phase 2.12 N.m for LXM05AD42M3X, 200...240 V, three phase 2.12 N.m for LXM05BD42M3X, 200...240 V, three phase 2.12 N.m for LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	6.1 N.m for LXM32.D30M2 at 10 A, 115 V, single phase 7.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 4.14 N.m for LXM05AD17F1, 110...120 V, single phase 4.14 N.m for LXM05AD17M2, 200...240 V, single phase 4.14 N.m for LXM05BD17F1, 110...120 V, single phase 4.14 N.m for LXM05BD17M2, 200...240 V, single phase 4.14 N.m for LXM05CD17F1, 110...120 V, single phase 4.14 N.m for LXM05CD17M2, 200...240 V, single phase 6.8 N.m for LXM05AD28M2, 200...240 V, single phase 6.8 N.m for LXM05BD28M2, 200...240 V, single phase 6.8 N.m for LXM05CD28M2, 200...240 V, single phase 4.47 N.m for LXM15LD17N4, 230 V, three phase 5.45 N.m for LXM15LD21M3, 230 V, three phase 6.8 N.m for LXM05AD42M3X, 200...240 V, three phase 6.8 N.m for LXM05BD42M3X, 200...240 V, three phase 6.8 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal output power	550 W for LXM32.D30M2 at 10 A, 115 V, single phase 600 W for LXM05AD17M2, 200...240 V, single phase 600 W for LXM05BD17M2, 200...240 V, single phase 600 W for LXM05CD17M2, 200...240 V, single phase 570 W for LXM05AD17F1, 110...120 V, single phase 570 W for LXM05BD17F1, 110...120 V, single phase 570 W for LXM05CD17F1, 110...120 V, single phase 600 W for LXM05AD28M2, 200...240 V, single phase 600 W for LXM05BD28M2, 200...240 V, single phase 600 W for LXM05CD28M2, 200...240 V, single phase 950 W for LXM32.D18M2 at 6 A, 230 V, single phase 1000 W for LXM15LD17N4, 230 V, three phase 1000 W for LXM15LD21M3, 230 V, three phase 600 W for LXM05AD42M3X, 200...240 V, three phase 600 W for LXM05BD42M3X, 200...240 V, three phase 600 W for LXM05CD42M3X, 200...240 V, three phase

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

Nominal torque	2.07 N.m for LXM32.D30M2 at 10 A, 115 V, single phase 1.9 N.m for LXM05AD17M2, 200...240 V, single phase 1.9 N.m for LXM05BD17M2, 200...240 V, single phase 1.9 N.m for LXM05CD17M2, 200...240 V, single phase 1.83 N.m for LXM05AD17F1, 110...120 V, single phase 1.83 N.m for LXM05BD17F1, 110...120 V, single phase 1.83 N.m for LXM05CD17F1, 110...120 V, single phase 1.9 N.m for LXM05AD28M2, 200...240 V, single phase 1.9 N.m for LXM05BD28M2, 200...240 V, single phase 1.9 N.m for LXM05CD28M2, 200...240 V, single phase 1.8 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 1.66 N.m for LXM15LD17N4, 230 V, three phase 1.66 N.m for LXM15LD21M3, 230 V, three phase 1.9 N.m for LXM05AD42M3X, 200...240 V, three phase 1.9 N.m for LXM05BD42M3X, 200...240 V, three phase 1.9 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 LXM05AD17F1, 110...120 V, single phase 3000 rpm for LXM05BD17F1, 110...120 V, single phase 3000 rpm for LXM05CD17F1, 110...120 V, single phase 3000 rpm for LXM05AD17M2, 200...240 V, single phase 3000 rpm for LXM05BD17M2, 200...240 V, single phase 3000 rpm for LXM05CD17M2, 200...240 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 5000 rpm for LXM32.D18M2 at 6 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 6000 rpm for LXM15LD17N4, 230 V, three phase 6000 rpm for LXM15LD21M3, 230 V, three phase
Product compatibility	LXM05AD17F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM05CD28M2 at 200...240 V single phase LXM32.D30M2 at 115 V single phase LXM32.D18M2 at 230 V single phase LXM15LD21M3 at 230 V three phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD17N4 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 05 Lexium 32
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	4.9 A
maximum continuous power	1.51 W

Maximum current Irms	20.6 A for LXM15LD21M3 20.6 A for LXM15LD17N4 19.9 A for LXM05AD17F1 19.9 A for LXM05AD17M2 19.9 A for LXM05AD28M2 19.9 A for LXM05AD42M3X 19.9 A for LXM05BD17F1 19.9 A for LXM05BD17M2 19.9 A for LXM05BD28M2 19.9 A for LXM05BD42M3X 19.9 A for LXM05CD17F1 19.9 A for LXM05CD17M2 19.9 A for LXM05CD28M2 19.9 A for LXM05CD42M3X 15 A for LXM32.D30M2 18 A for LXM32.D18M2
Maximum permanent current	19.9 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
Key width	18 mm
Feedback type	Multiturn SinCos Hiperface
Motor flange size	70 mm
Number of motor stacks	2
Torque constant	0.45 N.m/A at 120 °C
Back emf constant	28 V/krpm at 120 °C
Number of motor poles	6
Rotor inertia	0.41 kg.cm²
Stator resistance	1.5 Ohm at 20 °C
Stator inductance	6.7 mH at 20 °C
Stator electrical time constant	4.47 ms at 20 °C
Maximum radial force Fr	390 N at 6000 rpm 410 N at 5000 rpm 450 N at 4000 rpm 490 N at 3000 rpm 560 N at 2000 rpm 710 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	187 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	2.89 kg

Packing Units

Unit Type of Package 1	PCE
------------------------	-----

Number of Units in Package 1	1
Package 1 Height	12.3 cm
Package 1 Width	12.8 cm
Package 1 Length	37.7 cm
Package 1 Weight	2.8 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-CO₂ products.

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

[Learn more about Green Premium >](#)

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



Transparency RoHS/REACH

Well-being performance

 Mercury Free	
 Rohs Exemption Information	Yes
 Pvc Free	

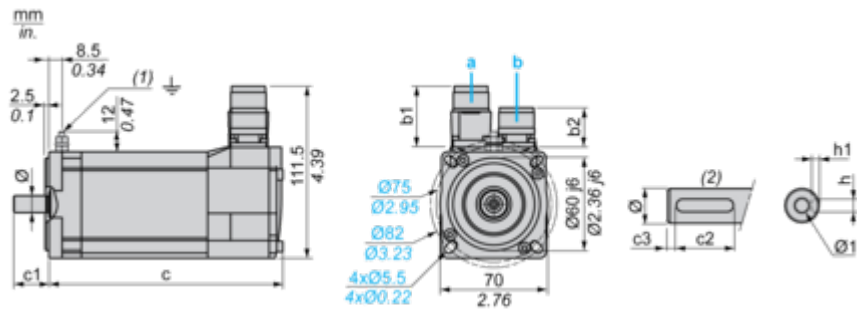
Certifications & Standards

Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
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) M4 screw
(2) Shaft end, keyed slot (optional)

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	187	213	23	18	2.5	4 N9	2.5 ^{+0.1} ₀	11 k6	M4 x 10

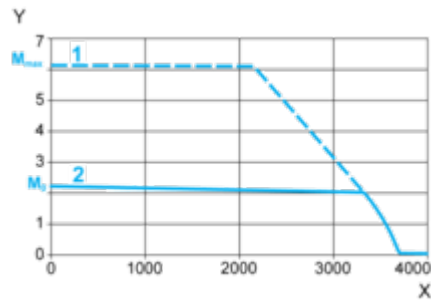
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	7.36	8.38	0.90	0.70	0.09	0.16 N9	0.01 ^{+0.004} ₀	0.43 k6	M4 x 0.39

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive

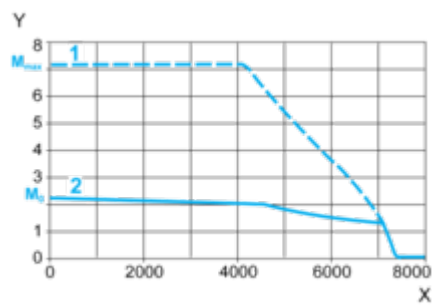


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

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