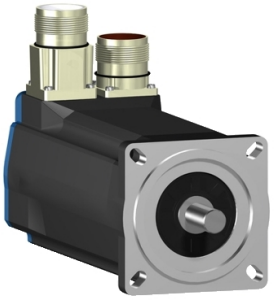
Product data sheet

Specifications



Discontinued

AC servo motor BSH, Lexium 05, 0.7N.m, 8000rpm, keyed shaft, without brake, IP50

BSH0701T12A1A

Discontinued on: Jun 30, 2023

Main

Product Or Component Type	Servo motor
Device Short Name	BSH
Maximum Mechanical Speed	8000 rpm
Continuous Stall Torque	1.3 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.4 N.m for LXM05AD10M3X, 200...240 V, three phase 1.4 N.m for LXM05BD10M3X, 200...240 V, three phase 1.4 N.m for LXM05CD10M3X, 200...240 V, three phase 1.4 N.m for LXM15LD13M3, 230 V, single phase 1.4 N.m for LXM05AD10F1, 110...120 V, single phase 1.4 N.m for LXM05AD17M2, 200...240 V, single phase 1.4 N.m for LXM05BD10F1, 110...120 V, single phase 1.4 N.m for LXM05BD17M2, 200...240 V, single phase 1.4 N.m for LXM05CD10F1, 110...120 V, single phase 1.4 N.m for LXM05CD17M2, 200...240 V, single phase 1.4 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 0.7 N.m for LXM15LU60N4, 400 V, three phase 0.7 N.m for LXM15LU60N4, 480 V, three phase 0.91 N.m for LXM15LU60N4, 230 V, three phase 1.4 N.m for LXM15LD10N4, 230 V, three phase 1.4 N.m for LXM15LD10N4, 400 V, three phase 1.4 N.m for LXM15LD10N4, 480 V, three phase 1.4 N.m for LXM15LD13M3, 230 V, three phase 1.4 N.m for LXM15LD21M3, 230 V, three phase 1.4 N.m for LXM05AD17M3X, 200...240 V, three phase 1.4 N.m for LXM05BD17M3X, 200...240 V, three phase 1.4 N.m for LXM05CD17M3X, 200...240 V, three phase
Peak Stall Torque	3.5 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 3.19 N.m for LXM15LD13M3, 230 V, single phase 2.42 N.m for LXM05AD10F1, 110...120 V, single phase 3.19 N.m for LXM05AD17M2, 200...240 V, single phase 2.42 N.m for LXM05BD10F1, 110...120 V, single phase 3.19 N.m for LXM05BD17M2, 200...240 V, single phase 2.42 N.m for LXM05CD10F1, 110...120 V, single phase 3.19 N.m for LXM05CD17M2, 200...240 V, single phase 3.5 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 1.9 N.m for LXM15LU60N4, 400 V, three phase 1.9 N.m for LXM15LU60N4, 480 V, three phase 1.9 N.m for LXM15LU60N4, 230 V, three phase 2.91 N.m for LXM15LD10N4, 230 V, three phase 2.91 N.m for LXM15LD10N4, 400 V, three phase 2.91 N.m for LXM15LD10N4, 480 V, three phase 3.19 N.m for LXM15LD13M3, 230 V, three phase 3.19 N.m for LXM15LD21M3, 230 V, three phase 2.42 N.m for LXM05AD10M3X, 200...240 V, three phase 3.19 N.m for LXM05AD17M3X, 200...240 V, three phase 2.42 N.m for LXM05BD10M3X, 200...240 V, three phase 3.19 N.m for LXM05BD17M3X, 200...240 V, three phase 2.42 N.m for LXM05CD10M3X, 200...240 V, three phase 3.19 N.m for LXM05CD17M3X, 200...240 V, three phase

Nominal Output Power	500 W for LXM32.U90M2 at 3 A, 230 V, single phase 350 W for LXM32.D18M2 at 6 A, 115 V, single phase 400 W for LXM05AD10M3X, 200...240 V, three phase 400 W for LXM05BD10M3X, 200...240 V, three phase 400 W for LXM05CD10M3X, 200...240 V, three phase 380 W for LXM05AD10F1, 110...120 V, single phase 380 W for LXM05BD10F1, 110...120 V, single phase 380 W for LXM05CD10F1, 110...120 V, single phase 400 W for LXM05AD17M2, 200...240 V, single phase 400 W for LXM05BD17M2, 200...240 V, single phase 400 W for LXM05CD17M2, 200...240 V, single phase 654 W for LXM15LD13M3, 230 V, single phase 1000 W for LXM15LD10N4, 400 V, three phase 1000 W for LXM15LD10N4, 480 V, three phase 400 W for LXM05AD17M3X, 200...240 V, three phase 400 W for LXM05BD17M3X, 200...240 V, three phase 400 W for LXM05CD17M3X, 200...240 V, three phase 440 W for LXM15LU60N4, 230 V, three phase 564 W for LXM15LD10N4, 230 V, three phase 586 W for LXM15LU60N4, 400 V, three phase 586 W for LXM15LU60N4, 480 V, three phase 654 W for LXM15LD13M3, 230 V, three phase 654 W for LXM15LD21M3, 230 V, three phase
Nominal Torque	0.94 N.m for LXM32.U90M2 at 3 A, 230 V, single phase 1.25 N.m for LXM15LD13M3, 230 V, single phase 1.36 N.m for LXM32.D18M2 at 6 A, 115 V, single phase 0.7 N.m for LXM15LU60N4, 230 V, three phase 0.7 N.m for LXM15LU60N4, 400 V, three phase 0.7 N.m for LXM15LU60N4, 480 V, three phase 1.23 N.m for LXM15LD10N4, 400 V, three phase 1.23 N.m for LXM15LD10N4, 480 V, three phase 1.25 N.m for LXM15LD10N4, 230 V, three phase 1.25 N.m for LXM15LD13M3, 230 V, three phase 1.25 N.m for LXM15LD21M3, 230 V, three phase
Nominal Speed	5000 rpm for LXM32.U90M2 at 3 A, 230 V, single phase 3000 rpm for LXM05AD10F1, 110...120 V, single phase 3000 rpm for LXM05BD10F1, 110...120 V, single phase 3000 rpm for LXM05CD10F1, 110...120 V, single phase 3000 rpm for LXM05AD10M3X, 200...240 V, three phase 3000 rpm for LXM05BD10M3X, 200...240 V, three phase 3000 rpm for LXM05CD10M3X, 200...240 V, three phase 8000 rpm for LXM15LD10N4, 400 V, three 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 LXM05AD17M3X, 200...240 V, three phase 3000 rpm for LXM05BD17M3X, 200...240 V, three phase 3000 rpm for LXM05CD17M3X, 200...240 V, three phase 5000 rpm for LXM15LD13M3, 230 V, single phase 2500 rpm for LXM32.D18M2 at 6 A, 115 V, single phase 5000 rpm for LXM15LD10N4, 230 V, three phase 5000 rpm for LXM15LD13M3, 230 V, three phase 5000 rpm for LXM15LD21M3, 230 V, three phase 6000 rpm for LXM15LU60N4, 230 V, three phase 8000 rpm for LXM15LD10N4, 480 V, three phase 8000 rpm for LXM15LU60N4, 400 V, three phase 8000 rpm for LXM15LU60N4, 480 V, three phase

Product Compatibility	LXM05AD10F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD10F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD10F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM15LD13M3 at 230 V single phase LXM32.U90M2 at 230 V single phase LXM32.D18M2 at 115 V single phase LXM15LU60N4 at 230 V three phase LXM05AD10M3X at 200...240 V three phase LXM05BD10M3X at 200...240 V three phase LXM05CD10M3X at 200...240 V three phase LXM15LD13M3 at 230 V three phase LXM15LU60N4 at 400 V three phase LXM15LU60N4 at 480 V three phase LXM15LD10N4 at 400 V three phase LXM05AD17M3X at 200...240 V three phase LXM05BD17M3X at 200...240 V three phase LXM05CD17M3X at 200...240 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase LXM15LD21M3 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 32 Lexium 15 Lexium 05
Supply Voltage Max	480 V
Network Number Of Phases	Three phase
Continuous Stall Current	3.2 A
Maximum Continuous Power	1.06 W
Maximum Current Irms	10 A for LXM32.D18M2 9 A for LXM32.U90M2 9.9 A for LXM15LD13M3 9.9 A for LXM15LD21M3 9.9 A for LXM15LU60N4 9.9 A for LXM15LD10N4
Maximum Permanent Current	10.1 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	1
Torque Constant	0.44 N.m/A at 120 °C
Back Emf Constant	26 V/krpm at 120 °C

Number Of Motor Poles	6
Rotor Inertia	0.25 kg.cm²
Stator Resistance	3.3 Ohm at 20 °C
Stator Inductance	12.3 mH at 20 °C
Stator Electrical Time Constant	3.73 ms at 20 °C
Maximum Radial Force Fr	360 N at 6000 rpm 380 N at 5000 rpm 410 N at 4000 rpm 460 N at 3000 rpm 520 N at 2000 rpm 660 N at 1000 rpm
Maximum Axial Force Fa	0.2 x Fr
Type Of Cooling	Natural convection
Length	154 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	2.2 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	2.1 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-CO_2 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	

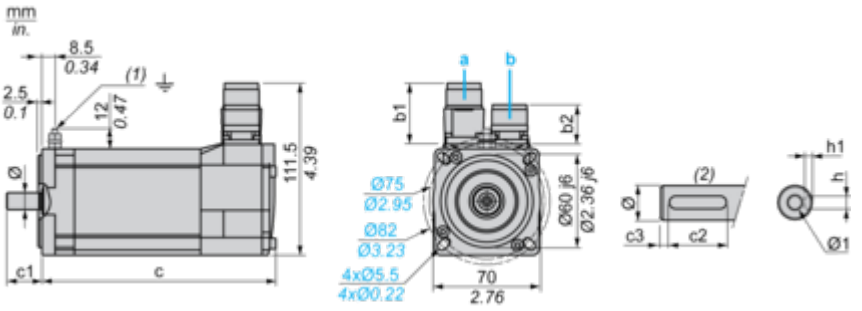
Certifications & Standards

Reach Regulation	REACh Declaration
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
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

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	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
39.5	25.5	39.5	39.5	154	180	23	18	2.5	4 N9	$2.5^{+0.1}_{0}$	11 k6	M4 x 10

Dimensions in in.

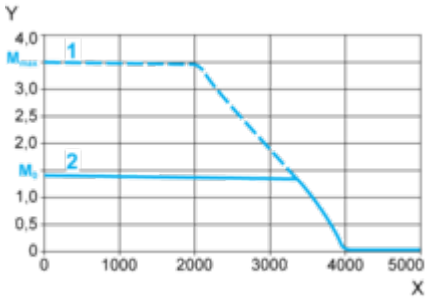
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	6.06	7.08	0.90	0.70	0.09	0.16 N9	$0.01^{+0.004}_{0}$	0.43 k6	M4 x 0.39

Performance Curves

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive

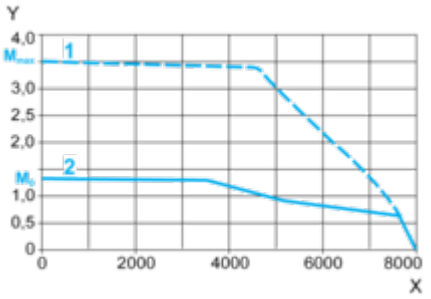


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•U90M2 servo drive



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