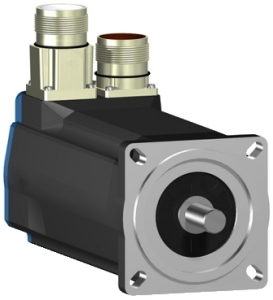
Product data sheet

Specifications



servo motor BSH, Lexium 05, 2.2N.m, 3000rpm, 70mm, keyed shaft, Sincos single turn, without brake, IP50, straight

BSH0702P11A1A

Main

Product Or Component Type	Servo motor
Device Short Name	BSH
Maximum Mechanical Speed	8000 rpm
Continuous Stall Torque	2.2 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 2.2 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 2.12 N.m for LXM05AD10M2, 200...240 V, single phase 2.12 N.m for LXM05AD10M3X, 200...240 V, three phase 2.12 N.m for LXM05BD10M2, 200...240 V, single phase 2.12 N.m for LXM05BD10M3X, 200...240 V, three phase 2.12 N.m for LXM05CD10M2, 200...240 V, single phase 2.12 N.m for LXM05CD10M3X, 200...240 V, three phase 2.2 N.m for LXM15LD13M3, 230 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 LXM15LD10N4, 480 V, three phase 2.12 N.m for LXM05AD17M3X, 200...240 V, three phase 2.12 N.m for LXM05AD14N4, 380...480 V, three phase 2.12 N.m for LXM05BD17M3X, 200...240 V, three phase 2.12 N.m for LXM05BD14N4, 380...480 V, three phase 2.12 N.m for LXM05CD17M3X, 200...240 V, three phase 2.12 N.m for LXM05CD14N4, 380...480 V, three phase 2.2 N.m for LXM15LD10N4, 230 V, three phase 2.2 N.m for LXM15LD10N4, 400 V, three phase
Peak Stall Torque	7.6 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 7.6 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 5.63 N.m for LXM15LD13M3, 230 V, single phase 4.57 N.m for LXM05AD10M2, 200...240 V, single phase 5.63 N.m for LXM05AD17M2, 200...240 V, single phase 4.57 N.m for LXM05BD10M2, 200...240 V, single phase 5.63 N.m for LXM05BD17M2, 200...240 V, single phase 4.57 N.m for LXM05CD10M2, 200...240 V, single phase 5.63 N.m for LXM05CD17M2, 200...240 V, single phase 4.85 N.m for LXM15LD10N4, 230 V, three phase 4.85 N.m for LXM15LD10N4, 400 V, three phase 4.85 N.m for LXM15LD10N4, 480 V, three phase 4.57 N.m for LXM05AD10M3X, 200...240 V, three phase 5.63 N.m for LXM05AD17M3X, 200...240 V, three phase 5.63 N.m for LXM05AD14N4, 380...480 V, three phase 4.57 N.m for LXM05BD10M3X, 200...240 V, three phase 5.63 N.m for LXM05BD17M3X, 200...240 V, three phase 5.63 N.m for LXM05BD14N4, 380...480 V, three phase 4.57 N.m for LXM05CD10M3X, 200...240 V, three phase 5.63 N.m for LXM05CD17M3X, 200...240 V, three phase 5.63 N.m for LXM05CD14N4, 380...480 V, three phase

Nominal Output Power	850 W for LXM32.D12N4 at 3 A, 400 V, three phase 850 W for LXM32.D12N4 at 3 A, 480 V, three phase 1000 W for LXM15LD10N4, 400 V, three phase 597 W for LXM15LD13M3, 230 V, single phase 600 W for LXM05AD10M2, 200...240 V, single phase 600 W for LXM05AD17M2, 200...240 V, single phase 600 W for LXM05BD10M2, 200...240 V, single phase 600 W for LXM05BD17M2, 200...240 V, single phase 600 W for LXM05CD10M2, 200...240 V, single phase 600 W for LXM05CD17M2, 200...240 V, single phase 1300 W for LXM15LD10N4, 480 V, three phase 597 W for LXM15LD10N4, 230 V, three phase 600 W for LXM05AD10M3X, 200...240 V, three phase 600 W for LXM05AD14N4, 380...480 V, three phase 600 W for LXM05AD17M3X, 200...240 V, three phase 600 W for LXM05BD10M3X, 200...240 V, three phase 600 W for LXM05BD14N4, 380...480 V, three phase 600 W for LXM05BD17M3X, 200...240 V, three phase 600 W for LXM05CD10M3X, 200...240 V, three phase 600 W for LXM05CD14N4, 380...480 V, three phase 600 W for LXM05CD17M3X, 200...240 V, three phase
Nominal Torque	1.64 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 1.64 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 1.9 N.m for LXM05AD10M2, 200...240 V, single phase 1.9 N.m for LXM05AD17M2, 200...240 V, single phase 1.9 N.m for LXM05BD10M2, 200...240 V, single phase 1.9 N.m for LXM05BD17M2, 200...240 V, single phase 1.9 N.m for LXM05CD10M2, 200...240 V, single phase 1.9 N.m for LXM05CD17M2, 200...240 V, single phase 1.9 N.m for LXM15LD13M3, 230 V, single phase 1.55 N.m for LXM15LD10N4, 480 V, three phase 1.65 N.m for LXM15LD10N4, 400 V, three phase 1.9 N.m for LXM05AD10M3X, 200...240 V, three phase 1.9 N.m for LXM05AD14N4, 380...480 V, three phase 1.9 N.m for LXM05AD17M3X, 200...240 V, three phase 1.9 N.m for LXM05BD10M3X, 200...240 V, three phase 1.9 N.m for LXM05BD14N4, 380...480 V, three phase 1.9 N.m for LXM05BD17M3X, 200...240 V, three phase 1.9 N.m for LXM05CD10M3X, 200...240 V, three phase 1.9 N.m for LXM05CD14N4, 380...480 V, three phase 1.9 N.m for LXM05CD17M3X, 200...240 V, three phase 1.9 N.m for LXM15LD10N4, 230 V, three phase
Nominal Speed	5000 rpm for LXM32.D12N4 at 3 A, 400 V, three phase 5000 rpm for LXM32.D12N4 at 3 A, 480 V, three phase 3000 rpm for LXM05AD10M2, 200...240 V, single phase 3000 rpm for LXM05BD10M2, 200...240 V, single phase 3000 rpm for LXM05CD10M2, 200...240 V, single phase 3000 rpm for LXM05AD10M3X, 200...240 V, three phase 3000 rpm for LXM05AD14N4, 380...480 V, three phase 3000 rpm for LXM05BD10M3X, 200...240 V, three phase 3000 rpm for LXM05BD14N4, 380...480 V, three phase 3000 rpm for LXM05CD10M3X, 200...240 V, three phase 3000 rpm for LXM05CD14N4, 380...480 V, three phase 3000 rpm for LXM15LD13M3, 230 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 LXM05AD17M3X, 200...240 V, three phase 3000 rpm for LXM05BD17M3X, 200...240 V, three phase 3000 rpm for LXM05CD17M3X, 200...240 V, three phase 8000 rpm for LXM15LD10N4, 480 V, three phase 3000 rpm for LXM15LD10N4, 230 V, three phase 6000 rpm for LXM15LD10N4, 400 V, three phase

Product Compatibility	LXM05AD10M2 at 200...240 V single phase LXM05AD17M2 at 200...240 V single phase LXM05BD10M2 at 200...240 V single phase LXM05BD17M2 at 200...240 V single phase LXM05CD10M2 at 200...240 V single phase LXM05CD17M2 at 200...240 V single phase LXM15LD13M3 at 230 V single phase LXM05AD10M3X at 200...240 V three phase LXM05BD10M3X at 200...240 V three phase LXM05CD10M3X at 200...240 V three phase LXM05AD14N4 at 380...480 V three phase LXM05BD14N4 at 380...480 V three phase LXM05CD14N4 at 380...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 LXM32.D12N4 at 400 V three phase LXM32.D12N4 at 480 V three phase LXM15LD10N4 at 230 V three phase LXM15LD10N4 at 480 V three phase
Shaft End	Keyed
Ip Degree Of Protection	IP50 standard
Speed Feedback Resolution	131072 points/turn
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	2.9 A
Maximum Continuous Power	1.51 W
Maximum Current Irms	11.8 A for LXM15LD13M3 11.8 A for LXM15LD10N4 11.8 A for LXM05AD10M2 11.8 A for LXM05AD17M2 11.8 A for LXM05AD10M3X 11.8 A for LXM05AD17M3X 11.8 A for LXM05AD14N4 11.8 A for LXM05BD10M2 11.8 A for LXM05BD17M2 11.8 A for LXM05BD10M3X 11.8 A for LXM05BD17M3X 11.8 A for LXM05BD14N4 11.8 A for LXM05CD10M2 11.8 A for LXM05CD17M2 11.8 A for LXM05CD10M3X 11.8 A for LXM05CD17M3X 11.8 A for LXM05CD14N4 11.8 A for LXM32.D12N4
Maximum Permanent Current	11.8 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	Single turn SinCos Hiperface
Motor Flange Size	70 mm
Number Of Motor Stacks	2
Torque Constant	0.77 N.m/A at 120 °C
Back Emf Constant	48 V/krpm at 120 °C
Number Of Motor Poles	6
Rotor Inertia	0.41 kg.cm²
Stator Resistance	4.2 Ohm at 20 °C
Stator Inductance	19 mH at 20 °C
Stator Electrical Time Constant	4.52 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	11 cm
Package 1 Width	19 cm
Package 1 Length	39.5 cm
Package 1 Weight	3.144 kg
Unit Type Of Package 2	S04
Number Of Units In Package 2	4
Package 2 Height	30 cm
Package 2 Width	40 cm
Package 2 Length	60 cm
Package 2 Weight	13.828 kg
Unit Type Of Package 3	P06
Number Of Units In Package 3	24
Package 3 Height	77 cm
Package 3 Width	80 cm

Package 3 Length	60 cm
Package 3 Weight	83.812 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	

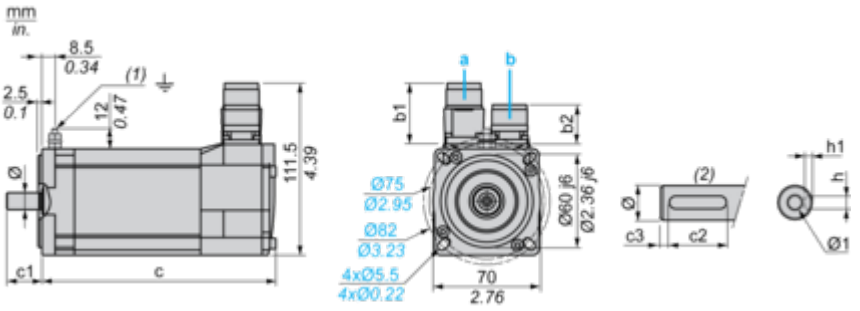
Certifications & Standards

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

Dimensions in in.

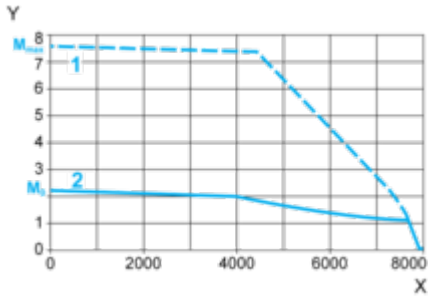
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	7.36	8.38	0.90	0.70	0.09	0.16 N9	$0.01^{+0.004}_{0}$	0.43 k6	M4 x 0.39

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive

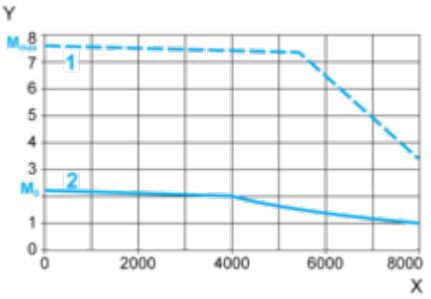


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



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