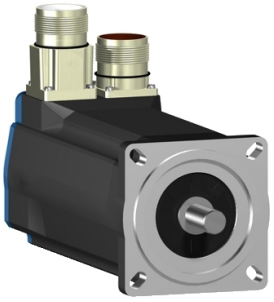
Product data sheet

Specifications



servo motor BSH, Lexium 05, 1.4N.m, 3000rpm, 70mm, untapped shaft, Sincos multi turn, with brake, IP50

BSH0701P02F2A

Product availability: Non-Stock - Not normally stocked in distribution facility

Main

Device short name	BSH
Product or Component Type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	12.4 lbf.in (1.4 N.m) LXM32.D12N4 3 A, 400 V, three phase 12.4 lbf.in (1.4 N.m) LXM32.D12N4 3 A, 480 V, three phase 12.4 lbf.in (1.4 N.m) LXM05AD10M3X 3 A, 200...240 V, three phase 12.4 lbf.in (1.4 N.m) LXM05BD10M3X, 200...240 V, three phase 12.4 lbf.in (1.4 N.m) LXM05CD10M3X, 200...240 V, three phase 12.4 lbf.in (1.4 N.m) LXM15LD13M3, 230 V, single phase 12.4 lbf.in (1.4 N.m) LXM05AD10M2, 200...240 V, single phase 12.4 lbf.in (1.4 N.m) LXM05BD10M2, 200...240 V, single phase 12.4 lbf.in (1.4 N.m) LXM05CD10M2, 200...240 V, single phase 12.4 lbf.in (1.4 N.m) LXM15LU60N4, 230 V, three phase
Peak stall torque	31.0 lbf.in (3.5 N.m) LXM32.D12N4 3 A, 400 V, three phase 31.0 lbf.in (3.5 N.m) LXM32.D12N4 3 A, 480 V, three phase 23.54 lbf.in (2.66 N.m) LXM05AD10M3X 3 A, 200...240 V, three phase 23.54 lbf.in (2.66 N.m) LXM05BD10M3X, 200...240 V, three phase 23.54 lbf.in (2.66 N.m) LXM05CD10M3X, 200...240 V, three phase 23.54 lbf.in (2.66 N.m) LXM15LD13M3, 230 V, single phase 23.54 lbf.in (2.66 N.m) LXM05AD10M2, 200...240 V, single phase 23.54 lbf.in (2.66 N.m) LXM05BD10M2, 200...240 V, single phase 23.54 lbf.in (2.66 N.m) LXM05CD10M2, 200...240 V, single phase 23.54 lbf.in (2.66 N.m) LXM15LU60N4, 230 V, three phase
Nominal output power	700 W LXM32.D12N4 3 A, 400 V, three phase 700 W LXM32.D12N4 3 A, 480 V, three phase 400 W LXM05AD10M2 3 A, 200...240 V, single phase 400 W LXM05BD10M2, 200...240 V, single phase 400 W LXM05CD10M2, 200...240 V, single phase 411 W LXM15LD13M3, 230 V, single phase 400 W LXM05AD10M3X, 200...240 V, three phase 400 W LXM05BD10M3X, 200...240 V, three phase 400 W LXM05CD10M3X, 200...240 V, three phase 411 W LXM15LU60N4, 230 V, three phase
Nominal torque	11.68 lbf.in (1.32 N.m) LXM32.D12N4 3 A, 400 V, three phase 11.68 lbf.in (1.32 N.m) LXM32.D12N4 3 A, 480 V, three phase 11.5 lbf.in (1.3 N.m) LXM05AD10M2 3 A, 200...240 V, single phase 11.5 lbf.in (1.3 N.m) LXM05BD10M2, 200...240 V, single phase 11.5 lbf.in (1.3 N.m) LXM05CD10M2, 200...240 V, single phase 11.59 lbf.in (1.31 N.m) LXM15LD13M3, 230 V, single phase 11.5 lbf.in (1.3 N.m) LXM05AD10M3X, 200...240 V, three phase 11.5 lbf.in (1.3 N.m) LXM05BD10M3X, 200...240 V, three phase 11.5 lbf.in (1.3 N.m) LXM05CD10M3X, 200...240 V, three phase 11.59 lbf.in (1.31 N.m) LXM15LU60N4, 230 V, three phase

Price is “List Price” and may be subject to a trade discount – check with your local distributor or retailer for actual price.

Nominal speed	5000 rpm LXM32.D12N4 3 A, 400 V, three phase 5000 rpm LXM32.D12N4 3 A, 480 V, three phase 3000 rpm LXM05AD10M2 3 A, 200...240 V, single phase 3000 rpm LXM05BD10M2, 200...240 V, single phase 3000 rpm LXM05CD10M2, 200...240 V, single phase 3000 rpm LXM05AD10M3X, 200...240 V, three phase 3000 rpm LXM05BD10M3X, 200...240 V, three phase 3000 rpm LXM05CD10M3X, 200...240 V, three phase 3000 rpm LXM15LD13M3, 230 V, single phase 3000 rpm LXM15LU60N4, 230 V, three phase
Product compatibility	LXM05AD10M2 200...240 V single phase LXM05BD10M2 200...240 V single phase LXM05CD10M2 200...240 V single phase LXM15LD13M3 230 V single phase LXM15LU60N4 230 V three phase LXM05AD10M3X 200...240 V three phase LXM05BD10M3X 200...240 V three phase LXM05CD10M3X 200...240 V three phase LXM32.D12N4 400 V three phase LXM32.D12N4 480 V three phase
Shaft end	Untapped
IP Degree of Protection	IP50 standard
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
Mounting Support	International standard flange
Electrical Connection	Rotatable right-angled connectors

Complementary

Range Compatibility	Lexium 15 Lexium 05 Lexium 32
supply voltage max	480 V
Phase	Three phase
Continuous stall current	1.8 A
maximum continuous power	1.06 W
Maximum current Irms	5.7 A LXM05AD10M3X 5.7 A LXM05BD10M2 5.7 A LXM05BD10M3X 5.7 A LXM05CD10M2 5.7 A LXM05CD10M3X 5.3 A LXM15LD13M3 5.3 A LXM15LU60N4 5.7 A LXM05AD10M2 5.7 A LXM32.D12N4
Maximum permanent current	5.7 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.4 in (11 mm)
Shaft length	0.9 in (23 mm)
Feedback type	Multiturn SinCos Hiperface
Holding torque	17.7 lbf.in (2 N.m) holding brake
Motor flange size	2.8 in (70 mm)
Number of motor stacks	1
Torque constant	0.8 N.m/A 248 °F (120 °C)
Back emf constant	46 V/krpm 248 °F (120 °C)

Number of motor poles	3.0
Rotor inertia	0.322 kg.cm²
Stator resistance	10.4 Ohm 68 °F (20 °C)
Stator inductance	21.3 mH 68 °F (20 °C)
Stator electrical time constant	3.73 ms 68 °F (20 °C)
Maximum radial force Fr	360 N 6000 rpm 380 N 5000 rpm 410 N 4000 rpm 460 N 3000 rpm 520 N 2000 rpm 660 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	7.07 in (179.5 mm)
Centring collar diameter	2.4 in (60 mm)
Centring collar depth	0.10 in (2.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.2 in (5.5 mm)
Circle diameter of the mounting holes	3.2 in (82 mm)
Product Weight	5.07 lb(US) (2.3 kg)
Sizing reference	BSH0701P
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	248 °F (120 °C)
Temperature magnet hot	212 °F (100 °C)
Temperature magnet rt	68 °F (20 °C)

Ordering and shipping details

Category	US1PC5318282
Discount Schedule	PC53
GTIN	3389118135611
Returnability	No
Country of origin	DE

Packing Units

Unit Type of Package 1	PCE
Nbr. of units in pkg.	1
Package 1 Height	4.84 in (12.3 cm)
Package 1 Width	5.04 in (12.8 cm)
Package 1 Length	14.84 in (37.7 cm)
Package weight(Lbs)	5.62 lb(US) (2.55 kg)

Contractual warranty

Warranty	18 months

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 >

Environmental footprint

Carbon footprint (kg CO2 eq, Total Life cycle)	780
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	8c11b0c9-e501-4810-83eb-05fc6605ede4
REACh Regulation	REACh Declaration
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
PVC free	Yes

Use Again

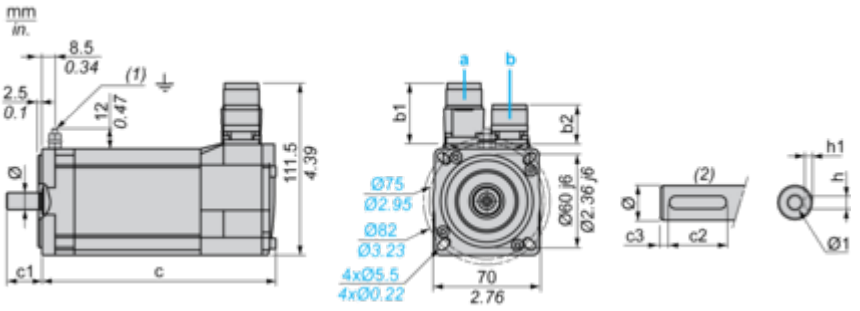
Repack and remanufacture

Circularity Profile	No need of specific recycling operations
Take-back	No
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	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.

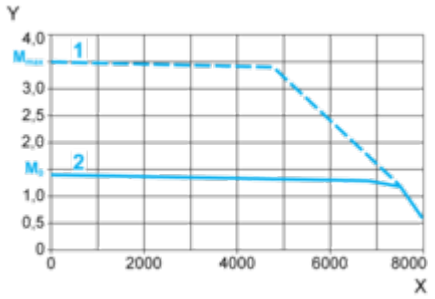
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	6.06	7.08	0.90	0.70	0.09	0.16 N9	$0.01^{+0.004}_{0}$	0.43 k6	M4 x 0.39

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive

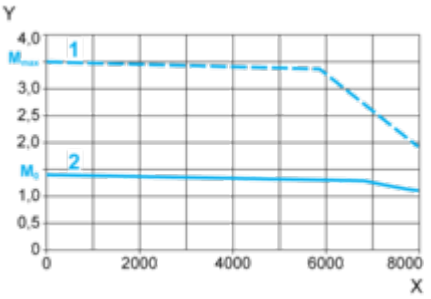


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

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