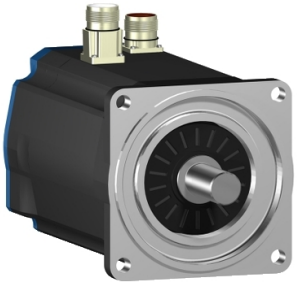
Product data sheet

Specifications



Discontinued

servo motor BSH, Lexium 05, 2.7N.m, 3000rpm, 100mm, keyed shaft, Sincos multi turn, with brake, IP65, straight

BSH1001P32F1A

Discontinued on: Jun 30, 2023

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	30.004 lbf.in (3.39 N.m) LXM15LD21M3, 230 V, single phase 23.9 lbf.in (2.7 N.m) LXM15LD10N4, 230 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD10N4, 400 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD10N4, 480 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD21M3, 230 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD17N4, 230 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD17N4 6 A, 400 V, three phase 30.004 lbf.in (3.39 N.m) LXM15LD17N4 6 A, 480 V, three phase 30.09 lbf.in (3.4 N.m) LXM05AD17M3X, 200...240 V, three phase 30.09 lbf.in (3.4 N.m) LXM05AD22N4, 380...480 V, three phase 30.09 lbf.in (3.4 N.m) LXM05BD17M3X, 200...240 V, three phase 30.09 lbf.in (3.4 N.m) LXM05BD22N4, 380...480 V, three phase 30.09 lbf.in (3.4 N.m) LXM05CD17M3X, 200...240 V, three phase 30.09 lbf.in (3.4 N.m) LXM05CD22N4, 380...480 V, three phase 29.2 lbf.in (3.3 N.m) LXM32.D18N4 6 A, 400 V, three phase 29.2 lbf.in (3.3 N.m) LXM32.D18N4 6 A, 480 V, three phase
Peak stall torque	62.66 lbf.in (7.08 N.m) LXM15LD21M3, 230 V, single phase 54.79 lbf.in (6.19 N.m) LXM15LD10N4, 230 V, three phase 54.79 lbf.in (6.19 N.m) LXM15LD10N4, 400 V, three phase 54.79 lbf.in (6.19 N.m) LXM15LD10N4, 480 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD21M3, 230 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD17N4, 230 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD17N4 6 A, 400 V, three phase 62.66 lbf.in (7.08 N.m) LXM15LD17N4 6 A, 480 V, three phase 62.8 lbf.in (7.1 N.m) LXM05AD17M3X, 200...240 V, three phase 62.8 lbf.in (7.1 N.m) LXM05AD22N4, 380...480 V, three phase 62.8 lbf.in (7.1 N.m) LXM05BD17M3X, 200...240 V, three phase 62.8 lbf.in (7.1 N.m) LXM05BD22N4, 380...480 V, three phase 62.8 lbf.in (7.1 N.m) LXM05CD17M3X, 200...240 V, three phase 62.8 lbf.in (7.1 N.m) LXM05CD22N4, 380...480 V, three phase 85.0 lbf.in (9.6 N.m) LXM32.D18N4 6 A, 400 V, three phase 85.0 lbf.in (9.6 N.m) LXM32.D18N4 6 A, 480 V, three phase
Nominal output power	1300 W LXM15LD17N4, 400 V, three phase 1500 W LXM15LD10N4, 480 V, three phase 950 W LXM15LD21M3, 230 V, single phase 1300 W LXM15LD10N4, 400 V, three phase 1500 W LXM15LD17N4, 480 V, three phase 500 W LXM05AD17M3X, 200...240 V, three phase 500 W LXM05BD17M3X 6 A, 200...240 V, three phase 500 W LXM05CD17M3X 6 A, 200...240 V, three phase 850 W LXM15LD10N4, 230 V, three phase 900 W LXM05AD22N4, 380...480 V, three phase 900 W LXM05BD22N4, 380...480 V, three phase 900 W LXM05CD22N4, 380...480 V, three phase 950 W LXM15LD17N4, 230 V, three phase 950 W LXM15LD21M3, 230 V, three phase 1100 W LXM32.D18N4 6 A, 400 V, three phase 1100 W LXM32.D18N4 6 A, 480 V, three phase

Nominal torque	26.6 lbf.in (3 N.m) LXM15LD21M3, 230 V, single phase 22.1 lbf.in (2.5 N.m) LXM15LD10N4, 480 V, three phase 22.1 lbf.in (2.5 N.m) LXM15LD17N4, 480 V, three phase 23.9 lbf.in (2.7 N.m) LXM15LD10N4, 230 V, three phase 23.9 lbf.in (2.7 N.m) LXM15LD10N4, 400 V, three phase 23.9 lbf.in (2.7 N.m) LXM15LD17N4, 400 V, three phase 25.84 lbf.in (2.92 N.m) LXM05AD22N4 6 A, 380...480 V, three phase 25.84 lbf.in (2.92 N.m) LXM05BD22N4 6 A, 380...480 V, three phase 25.84 lbf.in (2.92 N.m) LXM05CD22N4, 380...480 V, three phase 26.6 lbf.in (3 N.m) LXM15LD17N4, 230 V, three phase 26.6 lbf.in (3 N.m) LXM15LD21M3, 230 V, three phase 27.97 lbf.in (3.16 N.m) LXM05AD17M3X, 200...240 V, three phase 27.97 lbf.in (3.16 N.m) LXM05BD17M3X, 200...240 V, three phase 27.97 lbf.in (3.16 N.m) LXM05CD17M3X, 200...240 V, three phase 23.9 lbf.in (2.7 N.m) LXM32.D18N4 6 A, 400 V, three phase 23.9 lbf.in (2.7 N.m) LXM32.D18N4 6 A, 480 V, three phase
Nominal speed	3000 rpm LXM15LD10N4, 230 V, three phase 3000 rpm LXM15LD21M3, 230 V, single phase 3000 rpm LXM05AD22N4, 380...480 V, three phase 3000 rpm LXM05BD22N4, 380...480 V, three phase 3000 rpm LXM05CD22N4, 380...480 V, three phase 3000 rpm LXM15LD17N4, 230 V, three phase 3000 rpm LXM15LD21M3 6 A, 230 V, three phase 1500 rpm LXM05AD17M3X 6 A, 200...240 V, three phase 1500 rpm LXM05BD17M3X, 200...240 V, three phase 1500 rpm LXM05CD17M3X, 200...240 V, three phase 4500 rpm LXM15LD10N4, 400 V, three phase 4500 rpm LXM15LD17N4, 400 V, three phase 6000 rpm LXM15LD10N4, 480 V, three phase 6000 rpm LXM15LD17N4, 480 V, three phase 4000 rpm LXM32.D18N4 6 A, 400 V, three phase 4000 rpm LXM32.D18N4 6 A, 480 V, three phase
Product compatibility	LXM15LD21M3 230 V single phase LXM15LD10N4 400 V three phase LXM05AD17M3X 200...240 V three phase LXM05BD17M3X 200...240 V three phase LXM05CD17M3X 200...240 V three phase LXM15LD10N4 230 V three phase LXM15LD10N4 480 V three phase LXM15LD21M3 230 V three phase LXM15LD17N4 230 V three phase LXM05AD22N4 380...480 V three phase LXM05BD22N4 380...480 V three phase LXM05CD22N4 380...480 V three phase LXM15LD17N4 400 V three phase LXM15LD17N4 480 V three phase LXM32.D18N4 400 V three phase LXM32.D18N4 480 V three phase
Shaft end	Keyed
IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	With
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	3.5 A
maximum continuous power	1.6 W

Maximum current Irms	12 A LXM15LD21M3 12 A LXM15LD10N4 12 A LXM15LD17N4 12 A LXM05AD17M3X 12 A LXM05AD22N4 12 A LXM05BD17M3X 12 A LXM05BD22N4 12 A LXM05CD17M3X 12 A LXM05CD22N4 12 A LXM32.D18N4
Maximum permanent current	12 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.7 in (19 mm)
Shaft length	1.6 in (40 mm)
Key width	1.2 in (30 mm)
Feedback type	Multiturn SinCos Hiperface
Holding torque	79.7 lbf.in (9 N.m) holding brake
Motor flange size	3.9 in (100 mm)
Number of motor stacks	1
Torque constant	0.89 N.m/A 248 °F (120 °C)
Back emf constant	60 V/krpm 248 °F (120 °C)
Number of motor poles	8
Rotor inertia	2.018 kg.cm²
Stator resistance	3.8 Ohm 68 °F (20 °C)
Stator inductance	17.6 mH 68 °F (20 °C)
Stator electrical time constant	4.63 ms 68 °F (20 °C)
Maximum radial force Fr	530 N 5000 rpm 570 N 4000 rpm 630 N 3000 rpm 720 N 2000 rpm 900 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	18 W
Type of cooling	Natural convection
Length	7.9 in (199.5 mm)
Centring collar diameter	3.7 in (95 mm)
Centring collar depth	0.1 in (3.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.4 in (9 mm)
Circle diameter of the mounting holes	4.5 in (115 mm)
Net weight	10.6 lb(US) (4.8 kg)
Sizing reference	BSH1001P
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)

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.06 in (15.4 cm)
Package 1 Width	6.4 in (16.3 cm)
Package 1 Length	16.02 in (40.7 cm)
Package 1 Weight	10.91 lb(US) (4.95 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

EU RoHS Directive	Compliant By Exemption
PVC free	Yes

Use Longer

Lifetime extension

Repair	No

Use Again

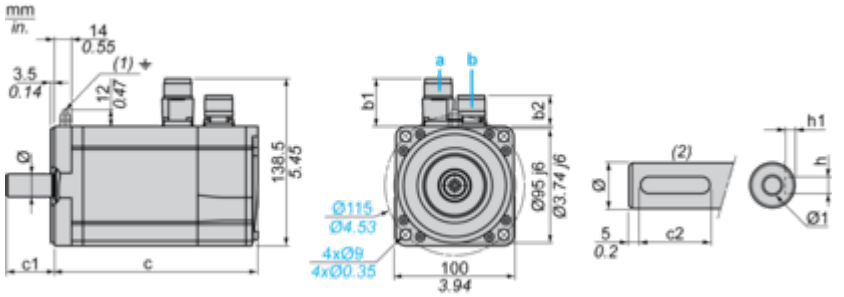
Repack and remanufacture

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)
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.

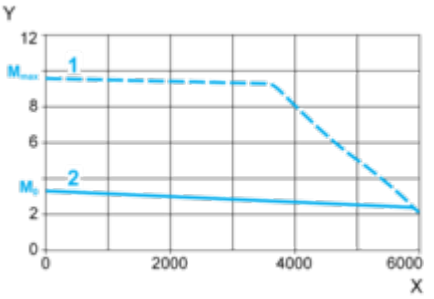
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	6.65	7.87	1.57	1.18	0.24 N9	$0.14^{+0.1}_{0}$	0.75 k6	M6 x 0.63

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive

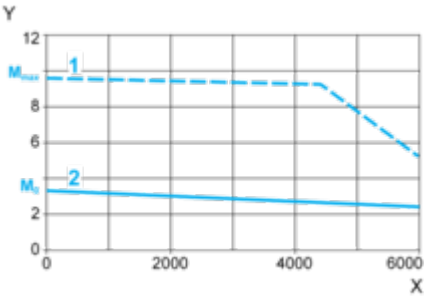


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18N4 servo drive



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