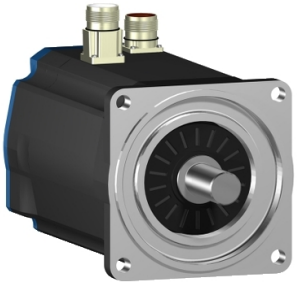
Product datasheet

Specifications



Discontinued

servo motor BSH, Lexium 05, 7.8N.m, 2500rpm, 100mm, untapped shaft, Sincos multi turn, with brake, IP50, straight

BSH1003P02F1A

Discontinued on: 9 Feb 2023

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	8 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 8 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 7.8 N.m for LXM05CD28M2, 200...240 V, single phase 7.8 N.m for LXM05AD28M2, 200...240 V, single phase 7.8 N.m for LXM05BD28M2, 200...240 V, single phase 7.8 N.m for LXM05BD34N4, 380...480 V, three phase 7.8 N.m for LXM05BD42M3X, 200...240 V, three phase 7.8 N.m for LXM05CD34N4, 380...480 V, three phase 7.8 N.m for LXM05CD42M3X, 200...240 V, three phase 6.7 N.m for LXM15LD21M3, 230 V, three phase 6.7 N.m for LXM15LD17N4, 230 V, three phase 6.7 N.m for LXM15LD17N4 at 10 A, 400 V, three phase 6.7 N.m for LXM15LD17N4, 480 V, three phase 7.8 N.m for LXM15LD28M3, 230 V, three phase 7.8 N.m for LXM15MD28N4, 400 V, three phase 7.8 N.m for LXM15MD28N4, 480 V, three phase 7.8 N.m for LXM15MD40N4, 400 V, three phase 7.8 N.m for LXM15MD40N4, 480 V, three phase 7.8 N.m for LXM05AD34N4, 380...480 V, three phase 7.8 N.m for LXM05AD42M3X, 200...240 V, three phase
Peak stall torque	28.3 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 28.3 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 19.69 N.m for LXM05AD28M2, 200...240 V, single phase 19.69 N.m for LXM05BD28M2, 200...240 V, single phase 19.69 N.m for LXM05CD28M2, 200...240 V, single phase 15.5 N.m for LXM15LD21M3, 230 V, three phase 12.5 N.m for LXM15LD17N4, 230 V, three phase 12.5 N.m for LXM15LD17N4, 400 V, three phase 12.5 N.m for LXM15LD17N4, 480 V, three phase 19.69 N.m for LXM15LD28M3, 230 V, three phase 19.69 N.m for LXM15MD28N4, 400 V, three phase 19.69 N.m for LXM15MD28N4 at 10 A, 480 V, three phase 23.17 N.m for LXM15MD40N4, 400 V, three phase 23.17 N.m for LXM15MD40N4, 480 V, three phase 23.01 N.m for LXM05AD34N4, 380...480 V, three phase 23.17 N.m for LXM05AD42M3X, 200...240 V, three phase 23.01 N.m for LXM05BD34N4, 380...480 V, three phase 23.17 N.m for LXM05BD42M3X, 200...240 V, three phase 23.01 N.m for LXM05CD34N4, 380...480 V, three phase 23.17 N.m for LXM05CD42M3X, 200...240 V, three phase

Nominal output power	2000 W for LXM32.D30N4 at 10 A, 400 V, three phase 2600 W for LXM32.D30N4 at 10 A, 480 V, three phase 1100 W for LXM05AD28M2, 200...240 V, single phase 1100 W for LXM05BD28M2, 200...240 V, single phase 1100 W for LXM05CD28M2, 200...240 V, single phase 1100 W for LXM05AD42M3X, 200...240 V, three phase 1100 W for LXM05BD42M3X, 200...240 V, three phase 1100 W for LXM05CD42M3X, 200...240 V, three phase 1300 W for LXM15LD28M3, 230 V, three phase 1700 W for LXM15LD17N4, 230 V, three phase 1700 W for LXM15LD21M3, 230 V, three phase 1800 W for LXM05AD34N4 at 10 A, 380...480 V, three phase 1800 W for LXM05BD34N4, 380...480 V, three phase 1800 W for LXM05CD34N4, 380...480 V, three phase 2000 W for LXM15MD28N4, 400 V, three phase 2000 W for LXM15MD40N4, 400 V, three phase 2200 W for LXM15LD17N4, 400 V, three phase 2200 W for LXM15MD28N4, 480 V, three phase 2200 W for LXM15MD40N4, 480 V, three phase 2300 W for LXM15LD17N4, 480 V, three phase
Nominal torque	6.3 N.m for LXM32.D30N4 at 10 A, 400 V, three phase 6.3 N.m for LXM32.D30N4 at 10 A, 480 V, three phase 3.7 N.m for LXM15LD17N4, 480 V, three phase 6.73 N.m for LXM05AD28M2, 200...240 V, single phase 6.73 N.m for LXM05BD28M2, 200...240 V, single phase 6.73 N.m for LXM05CD28M2, 200...240 V, single phase 4.6 N.m for LXM15MD28N4, 480 V, three phase 4.6 N.m for LXM15MD40N4, 480 V, three phase 4.7 N.m for LXM15LD17N4, 400 V, three phase 5 N.m for LXM15MD28N4, 400 V, three phase 5 N.m for LXM15MD40N4, 400 V, three phase 5.7 N.m for LXM05AD34N4 at 10 A, 380...480 V, three phase 5.7 N.m for LXM05BD34N4, 380...480 V, three phase 5.7 N.m for LXM05CD34N4, 380...480 V, three phase 6 N.m for LXM15LD17N4, 230 V, three phase 6 N.m for LXM15LD21M3, 230 V, three phase 6.3 N.m for LXM15LD28M3, 230 V, three phase 6.73 N.m for LXM05AD42M3X, 200...240 V, three phase 6.73 N.m for LXM05BD42M3X, 200...240 V, three phase 6.73 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal speed	3000 rpm for LXM32.D30N4 at 10 A, 400 V, three phase 4000 rpm for LXM32.D30N4 at 10 A, 480 V, three phase 4500 rpm for LXM15LD17N4, 400 V, three phase 6000 rpm for LXM15LD17N4, 480 V, three phase 1500 rpm for LXM05AD28M2, 200...240 V, single phase 1500 rpm for LXM05BD28M2, 200...240 V, single phase 1500 rpm for LXM05CD28M2, 200...240 V, single phase 1500 rpm for LXM05AD42M3X, 200...240 V, three phase 1500 rpm for LXM05BD42M3X, 200...240 V, three phase 1500 rpm for LXM05CD42M3X, 200...240 V, three phase 2000 rpm for LXM15LD28M3, 230 V, three phase 2500 rpm for LXM15LD17N4 at 10 A, 230 V, three phase 2500 rpm for LXM15LD21M3, 230 V, three phase 3000 rpm for LXM05AD34N4, 380...480 V, three phase 3000 rpm for LXM05BD34N4, 380...480 V, three phase 3000 rpm for LXM05CD34N4, 380...480 V, three phase 4000 rpm for LXM15MD28N4, 400 V, three phase 4000 rpm for LXM15MD40N4, 400 V, three phase 4500 rpm for LXM15MD28N4, 480 V, three phase 4500 rpm for LXM15MD40N4, 480 V, three phase

Product compatibility	LXM05AD28M2 at 200...240 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD28M2 at 200...240 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 LXM15LD17N4 at 400 V three phase LXM15LD17N4 at 480 V three phase LXM15LD28M3 at 230 V three phase LXM05AD34N4 at 380...480 V three phase LXM05BD34N4 at 380...480 V three phase LXM05CD34N4 at 380...480 V three phase LXM15MD28N4 at 400 V three phase LXM15MD28N4 at 480 V three phase LXM15MD40N4 at 400 V three phase LXM15MD40N4 at 480 V three phase LXM32.D30N4 at 400 V three phase LXM32.D30N4 at 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	Straight connectors

Complementary

Range compatibility	Lexium 32 Lexium 05 Lexium 15
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	6.6 A
maximum continuous power	3.14 W
Maximum current Irms	28.3 A for LXM15LD21M3 28.3 A for LXM15LD28M3 28.3 A for LXM15LD17N4 28.3 A for LXM15MD28N4 28.3 A for LXM15MD40N4 28.3 A for LXM05AD28M2 28.3 A for LXM05AD42M3X 28.3 A for LXM05AD34N4 28.3 A for LXM05BD28M2 28.3 A for LXM05BD42M3X 28.3 A for LXM05BD34N4 28.3 A for LXM05CD28M2 28.3 A for LXM05CD42M3X 28.3 A for LXM05CD34N4 28.3 A for LXM32.D30N4
Maximum permanent current	28.3 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Feedback type	Multiturn SinCos Hiperface
Holding torque	9 N.m holding brake
Motor flange size	100 mm

Number of motor stacks	3
Torque constant	1.22 N.m/A at 120 °C
Back emf constant	77 V/krpm at 120 °C
Number of motor poles	8
Rotor inertia	3.838 kg.cm²
Stator resistance	1.43 Ohm at 20 °C
Stator inductance	8.8 mH at 20 °C
Stator electrical time constant	6.15 ms at 20 °C
Maximum radial force Fr	1050 N at 1000 rpm 660 N at 4000 rpm 730 N at 3000 rpm 830 N at 2000 rpm
Maximum axial force Fa	0.2 x Fr
Brake pull-in power	18 W
Type of cooling	Natural convection
Length	271.5 mm
Centring collar diameter	95 mm
Centring collar depth	3.5 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	115 mm
Net weight	8 kg
Sizing reference	BSH1003P
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	120 °C
Temperature magnet hot	100 °C
Temperature magnet rt	20 °C

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	21.0 cm
Package 1 Width	18.0 cm
Package 1 Length	58.5 cm
Package 1 Weight	8.15 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

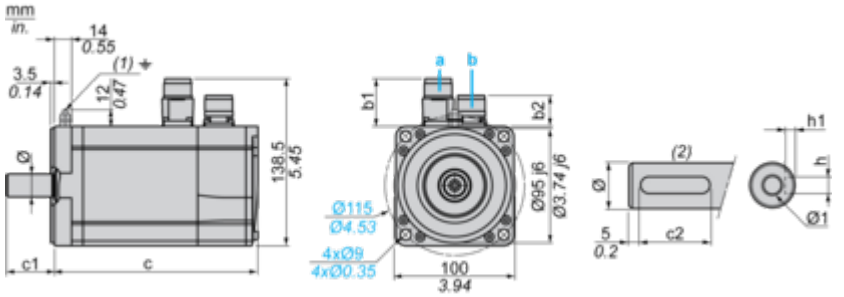
Repack and remanufacture

End of life manual availability	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	241	272	40	30	6 N9	$3.5^{+0.1}_{0}$	19 k6	M6 x 16

Dimensions in in.

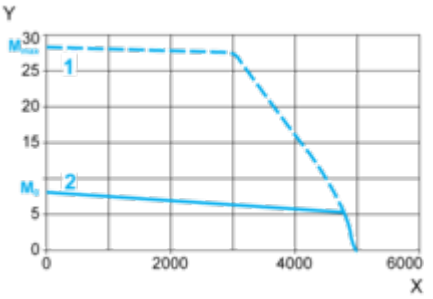
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	9.48	10.70	1.57	1.18	0.24 N9	$0.14^{+0.1}_{0}$	0.75 k6	M6 x 0.63

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive

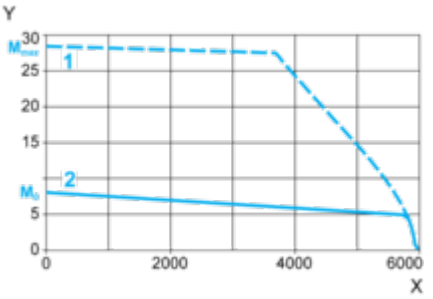


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

480 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30N4 servo drive



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