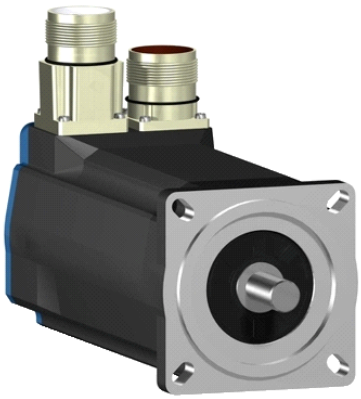
Product datasheet
Characteristics

BSH0701P31F1A



Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	12.39 lbf.in (1.4 N.m) LXM15LD13M3 at 230 V single phase 12.39 lbf.in (1.4 N.m) LXM05AD10M2 at 200...240 V single phase 12.39 lbf.in (1.4 N.m) LXM05BD10M2 at 200...240 V single phase 12.39 lbf.in (1.4 N.m) LXM05CD10M2 at 200...240 V single phase 12.39 lbf.in (1.4 N.m) LXM05AD10M3X at 200...240 V three phase 12.39 lbf.in (1.4 N.m) LXM05BD10M3X at 200...240 V three phase 12.39 lbf.in (1.4 N.m) LXM05CD10M3X at 200...240 V three phase 12.39 lbf.in (1.4 N.m) LXM15LU60N4 at 230 V three phase 12.39 lbf.in (1.4 N.m) LXM32.D12N4 3 A at 400 V three phase 12.39 lbf.in (1.4 N.m) LXM32.D12N4 3 A at 480 V three phase
Peak stall torque	23.54 lbf.in (2.66 N.m) LXM15LD13M3 at 230 V single phase 23.54 lbf.in (2.66 N.m) LXM05AD10M2 at 200...240 V single phase 23.54 lbf.in (2.66 N.m) LXM05BD10M2 at 200...240 V single phase 23.54 lbf.in (2.66 N.m) LXM05CD10M2 at 200...240 V single phase 23.54 lbf.in (2.66 N.m) LXM05AD10M3X at 200...240 V three phase 23.54 lbf.in (2.66 N.m) LXM05BD10M3X at 200...240 V three phase 23.54 lbf.in (2.66 N.m) LXM05CD10M3X at 200...240 V three phase 23.54 lbf.in (2.66 N.m) LXM15LU60N4 at 230 V three phase 30.97 lbf.in (3.5 N.m) LXM32.D12N4 3 A at 400 V three phase 30.97 lbf.in (3.5 N.m) LXM32.D12N4 3 A at 480 V three phase
Nominal output power	400 W LXM05AD10M2 at 200...240 V single phase 400 W LXM05BD10M2 at 200...240 V single phase 400 W LXM05CD10M2 at 200...240 V single phase 411 W LXM15LD13M3 at 230 V single phase 400 W LXM05AD10M3X at 200...240 V three phase 400 W LXM05BD10M3X at 200...240 V three phase 400 W LXM05CD10M3X at 200...240 V three phase 411 W LXM15LU60N4 at 230 V three phase 700 W LXM32.D12N4 3 A at 400 V three phase 700 W LXM32.D12N4 3 A at 480 V three phase
Nominal torque	11.5 lbf.in (1.3 N.m) LXM05AD10M2 at 200...240 V single phase 11.5 lbf.in (1.3 N.m) LXM05BD10M2 at 200...240 V single phase 11.5 lbf.in (1.3 N.m) LXM05CD10M2 at 200...240 V single phase 11.59 lbf.in (1.31 N.m) LXM15LD13M3 at 230 V single phase 11.59 lbf.in (1.31 N.m) LXM15LU60N4 at 230 V three phase 11.5 lbf.in (1.3 N.m) LXM05AD10M3X at 200...240

	V three phase 11.5 lbf.in (1.3 N.m) LXM05BD10M3X at 200...240 V three phase 11.5 lbf.in (1.3 N.m) LXM05CD10M3X at 200...240 V three phase 11.68 lbf.in (1.32 N.m) LXM32.D12N4 3 A at 400 V three phase 11.68 lbf.in (1.32 N.m) LXM32.D12N4 3 A at 480 V three phase
Nominal speed	3000 rpm LXM05AD10M2 at 200...240 V single phase 3000 rpm LXM05BD10M2 at 200...240 V single phase 3000 rpm LXM05CD10M2 at 200...240 V single phase 3000 rpm LXM15LD13M3 at 230 V single phase 3000 rpm LXM05AD10M3X at 200...240 V three phase 3000 rpm LXM05BD10M3X at 200...240 V three phase 3000 rpm LXM05CD10M3X at 200...240 V three phase 3000 rpm LXM15LU60N4 at 230 V three phase 5000 rpm LXM32.D12N4 3 A at 400 V three phase 5000 rpm LXM32.D12N4 3 A at 480 V three phase
Product compatibility	LXM05AD10M2 at 200...240 V single phase LXM05BD10M2 at 200...240 V single phase LXM05CD10M2 at 200...240 V single phase LXM15LD13M3 at 230 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 LXM32.D12N4 at 400 V three phase LXM32.D12N4 at 480 V three phase
Shaft end	Keyed
IP degree of protection	IP65 (standard) IP67 (with IP67 kit)
Speed feedback resolution	131072 points/turn
Holding brake	With
Mounting support	International standard flange
Electrical connection	Straight connectors

Complementary

Range compatibility	Lexium 05 Lexium 15 Lexium 32
[Us] rated supply voltage	480 V
Phase	Three phase
Continuous stall current	1.8 A
Continuous power	1.06 W
Maximum current Irms	5.3 A LXM15LD13M3 5.3 A LXM15LU60N4 5.7 A LXM05AD10M2 5.7 A LXM05AD10M3X 5.7 A LXM05BD10M2 5.7 A LXM05BD10M3X 5.7 A LXM05CD10M2 5.7 A LXM05CD10M3X 5.7 A LXM32.D12N4
Maximum permanent current	5.7 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.43 in (11 mm)
Shaft length	0.91 in (23 mm)
Key width	0.71 in (18 mm)
Feedback type	Single turn SinCos Hiperface
Holding torque	17.7 lbf.in (2 N.m) (holding brake)

Motor flange size	2.76 in (70 mm)
Number of motor stacks	1
Torque constant	0.8 N.m/A at 248 °F (120 °C)
Back emf constant	46 V/krpm at 248 °F (120 °C)
Number of motor poles	6
Rotor inertia	0.322 kg.cm²
Stator resistance	10.4 Ohm at 68 °F (20 °C)
Stator inductance	38.8 mH at 68 °F (20 °C)
Stator electrical time constant	3.73 ms at 68 °F (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
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	7.07 in (179.5 mm)
Centring collar diameter	2.36 in (60 mm)
Centring collar depth	0.1 in (2.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.22 in (5.5 mm)
Circle diameter of the mounting holes	3.23 in (82 mm)
Product weight	5.07 lb(US) (2.3 kg)

Environment

Offer Sustainability

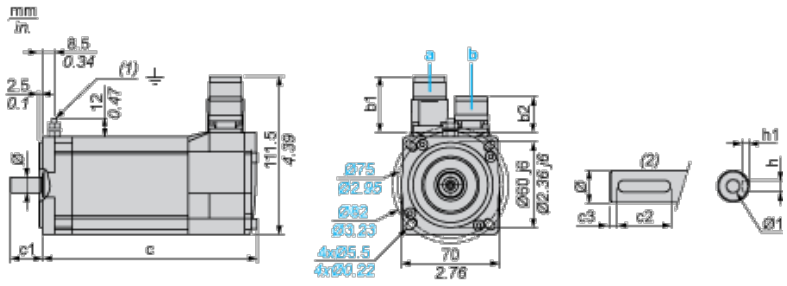
Green Premium product	Green Premium product
Compliant - since 0850 - Schneider Electric declaration of conformity	Compliant - since 0850 - Schneider Electric declaration of conformity
Reference not containing SVHC above the threshold	Reference not containing SVHC above the threshold
Available	Available
Need no specific recycling operations	Need no specific recycling operations

Contractual warranty

Warranty period	18 months

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

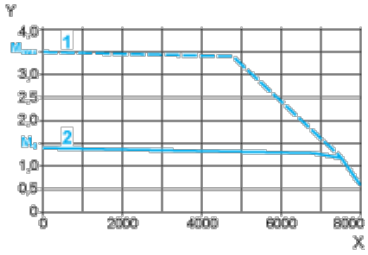
Dimensions in in.

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

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive



X Speed in rpm

Y Torque in Nm

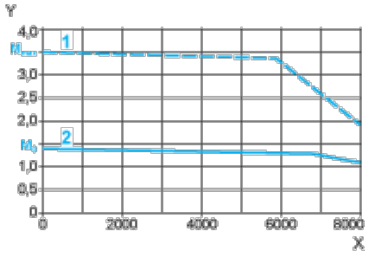
1 Peak torque

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