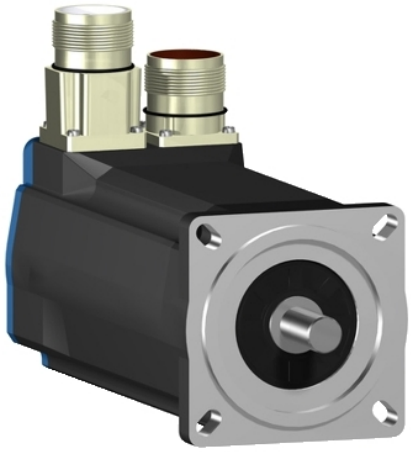
Product data sheet
Characteristics

BSH0702P22F1A
AC servo motor BSH - 2.2 N.m - 3000 rpm - untapped shaft - with brake - IP65



Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	19.47 lbf.in (2.2 N.m) LXM32.D12N4 3 A at 400 V three phase 19.47 lbf.in (2.2 N.m) LXM32.D12N4 3 A at 480 V three phase 18.76 lbf.in (2.12 N.m) LXM05AD10M2 at 200...240 V single phase 18.76 lbf.in (2.12 N.m) LXM05BD10M2 at 200...240 V single phase 18.76 lbf.in (2.12 N.m) LXM05CD10M2 at 200...240 V single phase 19.47 lbf.in (2.2 N.m) LXM15LD13M3 at 230 V single phase 18.76 lbf.in (2.12 N.m) LXM05AD17M2 at 200...240 V single phase 18.76 lbf.in (2.12 N.m) LXM05BD17M2 at 200...240 V single phase 18.76 lbf.in (2.12 N.m) LXM05CD17M2 at 200...240 V single phase 18.76 lbf.in (2.12 N.m) LXM05AD10M3X at 200...240 V three phase 18.76 lbf.in (2.12 N.m) LXM05BD10M3X at 200...240 V three phase 18.76 lbf.in (2.12 N.m) LXM05CD10M3X at 200...240 V three phase 19.47 lbf.in (2.2 N.m) LXM15LD10N4 at 480 V three phase 18.76 lbf.in (2.12 N.m) LXM05AD17M3X at 200...240 V three phase 18.76 lbf.in (2.12 N.m) LXM05AD14N4 at 380...480 V three phase 18.76 lbf.in (2.12 N.m) LXM05BD17M3X at 200...240 V three phase 18.76 lbf.in (2.12 N.m) LXM05BD14N4 at 380...480 V three phase 18.76 lbf.in (2.12 N.m) LXM05CD17M3X at 200...240 V three phase 18.76 lbf.in (2.12 N.m) LXM05CD14N4 at 380...480 V three phase 19.47 lbf.in (2.2 N.m) LXM15LD10N4 at 230 V three phase 19.47 lbf.in (2.2 N.m) LXM15LD10N4 at 400 V three phase

Peak stall torque	67.26 lbf.in (7.6 N.m) LXM32.D12N4 3 A at 400 V three phase 67.26 lbf.in (7.6 N.m) LXM32.D12N4 3 A at 480 V three phase 49.82 lbf.in (5.63 N.m) LXM15LD13M3 at 230 V single phase 40.44 lbf.in (4.57 N.m) LXM05AD10M2 at 200...240 V single phase 49.82 lbf.in (5.63 N.m) LXM05AD17M2 at 200...240 V single phase 40.44 lbf.in (4.57 N.m) LXM05BD10M2 at 200...240 V single phase 49.82 lbf.in (5.63 N.m) LXM05BD17M2 at 200...240 V single phase 40.44 lbf.in (4.57 N.m) LXM05CD10M2 at 200...240 V single phase 49.82 lbf.in (5.63 N.m) LXM05CD17M2 at 200...240 V single phase 42.92 lbf.in (4.85 N.m) LXM15LD10N4 at 230 V three phase 42.92 lbf.in (4.85 N.m) LXM15LD10N4 at 400 V three phase 42.92 lbf.in (4.85 N.m) LXM15LD10N4 at 480 V three phase 40.44 lbf.in (4.57 N.m) LXM05AD10M3X at 200...240 V three phase 49.82 lbf.in (5.63 N.m) LXM05AD17M3X at 200...240 V three phase 49.82 lbf.in (5.63 N.m) LXM05AD14N4 at 380...480 V three phase 40.44 lbf.in (4.57 N.m) LXM05BD10M3X at 200...240 V three phase 49.82 lbf.in (5.63 N.m) LXM05BD17M3X at 200...240 V three phase 49.82 lbf.in (5.63 N.m) LXM05BD14N4 at 380...480 V three phase 40.44 lbf.in (4.57 N.m) LXM05CD10M3X at 200...240 V three phase 49.82 lbf.in (5.63 N.m) LXM05CD17M3X at 200...240 V three phase 49.82 lbf.in (5.63 N.m) LXM05CD14N4 at 380...480 V three phase
Nominal output power	850 W LXM32.D12N4 3 A at 400 V three phase 850 W LXM32.D12N4 3 A at 480 V three phase 597 W LXM15LD13M3 at 230 V single phase 600 W LXM05AD10M2 at 200...240 V single phase 600 W LXM05AD17M2 at 200...240 V single phase 600 W LXM05BD10M2 at 200...240 V single phase 600 W LXM05BD17M2 at 200...240 V single phase 600 W LXM05CD10M2 at 200...240 V single phase 600 W LXM05CD17M2 at 200...240 V single phase 1000 W LXM15LD10N4 at 400 V three phase 1300 W LXM15LD10N4 at 480 V three phase 597 W LXM15LD10N4 at 230 V three phase 600 W LXM05AD10M3X at 200...240 V three phase 600 W LXM05AD14N4 at 380...480 V three phase 600 W LXM05AD17M3X at 200...240 V three phase 600 W LXM05BD10M3X at 200...240 V three phase 600 W LXM05BD14N4 at 380...480 V three phase 600 W LXM05BD17M3X at 200...240 V three phase 600 W LXM05CD10M3X at 200...240 V three phase 600 W LXM05CD14N4 at 380...480 V three phase 600 W LXM05CD17M3X at 200...240 V three phase

Nominal torque	14.51 lbf.in (1.64 N.m) LXM32.D12N4 3 A at 400 V three phase 14.51 lbf.in (1.64 N.m) LXM32.D12N4 3 A at 480 V three phase 16.81 lbf.in (1.9 N.m) LXM05AD10M2 at 200...240 V single phase 16.81 lbf.in (1.9 N.m) LXM05AD17M2 at 200...240 V single phase 16.81 lbf.in (1.9 N.m) LXM05BD10M2 at 200...240 V single phase 16.81 lbf.in (1.9 N.m) LXM05BD17M2 at 200...240 V single phase 16.81 lbf.in (1.9 N.m) LXM05CD10M2 at 200...240 V single phase 16.81 lbf.in (1.9 N.m) LXM05CD17M2 at 200...240 V single phase 16.81 lbf.in (1.9 N.m) LXM15LD13M3 at 230 V single phase 13.72 lbf.in (1.55 N.m) LXM15LD10N4 at 480 V three phase 14.6 lbf.in (1.65 N.m) LXM15LD10N4 at 400 V three phase 16.81 lbf.in (1.9 N.m) LXM05AD10M3X at 200...240 V three phase 16.81 lbf.in (1.9 N.m) LXM05AD14N4 at 380...480 V three phase 16.81 lbf.in (1.9 N.m) LXM05AD17M3X at 200...240 V three phase 16.81 lbf.in (1.9 N.m) LXM05BD10M3X at 200...240 V three phase 16.81 lbf.in (1.9 N.m) LXM05BD14N4 at 380...480 V three phase 16.81 lbf.in (1.9 N.m) LXM05BD17M3X at 200...240 V three phase 16.81 lbf.in (1.9 N.m) LXM05CD10M3X at 200...240 V three phase 16.81 lbf.in (1.9 N.m) LXM05CD14N4 at 380...480 V three phase 16.81 lbf.in (1.9 N.m) LXM05CD17M3X at 200...240 V three phase 16.81 lbf.in (1.9 N.m) LXM15LD10N4 at 230 V three phase
Nominal speed	5000 rpm LXM32.D12N4 3 A at 400 V three phase 5000 rpm LXM32.D12N4 3 A at 480 V three phase 3000 rpm LXM05AD10M2 at 200...240 V single phase 3000 rpm LXM05AD17M2 at 200...240 V single phase 3000 rpm LXM05BD10M2 at 200...240 V single phase 3000 rpm LXM05BD17M2 at 200...240 V single phase 3000 rpm LXM05CD10M2 at 200...240 V single phase 3000 rpm LXM05CD17M2 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 LXM05AD14N4 at 380...480 V three phase 3000 rpm LXM05BD10M3X at 200...240 V three phase 3000 rpm LXM05BD14N4 at 380...480 V three phase 3000 rpm LXM05CD10M3X at 200...240 V three phase 3000 rpm LXM05CD14N4 at 380...480 V three phase 3000 rpm LXM05AD17M3X at 200...240 V three phase 3000 rpm LXM05BD17M3X at 200...240 V three phase 3000 rpm LXM05CD17M3X at 200...240 V three phase 8000 rpm LXM15LD10N4 at 480 V three phase 3000 rpm LXM15LD10N4 at 230 V three phase 6000 rpm LXM15LD10N4 at 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	Untapped
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 05 Lexium 15 Lexium 32
Supply voltage max	480 V
Phase	Three phase
Continuous stall current	2.9 A
Maximum continuous power	1.51 W
Maximum current Irms	11.8 A LXM05AD10M2 11.8 A LXM05AD10M3X 11.8 A LXM05AD14N4 11.8 A LXM05AD17M2 11.8 A LXM05AD17M3X 11.8 A LXM05BD10M2 11.8 A LXM05BD10M3X 11.8 A LXM05BD14N4 11.8 A LXM05BD17M2 11.8 A LXM05BD17M3X 11.8 A LXM05CD10M2 11.8 A LXM05CD10M3X 11.8 A LXM05CD14N4 11.8 A LXM05CD17M2 11.8 A LXM05CD17M3X 11.8 A LXM15LD10N4 11.8 A LXM15LD13M3 11.8 A LXM32.D12N4
Maximum permanent current	11.8 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)
Feedback type	Multiturn 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	2
Torque constant	0.77 N.m/A at 248 °F (120 °C)
Back emf constant	48 V/krpm at 248 °F (120 °C)
Number of motor poles	6

Rotor inertia	0.482 kg.cm²
Stator resistance	4.2 Ohm at 68 °F (20 °C)
Stator inductance	19 mH at 68 °F (20 °C)
Stator electrical time constant	4.52 ms at 68 °F (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
Brake pull-in power	10 W
Type of cooling	Natural convection
Length	8.37 in (212.5 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	6.61 lb(US) (3 kg)

Ordering and shipping details

Category	18282 - LEXIUM 32 MOTORS
Discount Schedule	PC53
GTIN	003389118136403
Nbr. of units in pkg.	1
Package weight(Lbs)	7.2000000000000002
Returnability	N
Country of origin	DE

Offer Sustainability

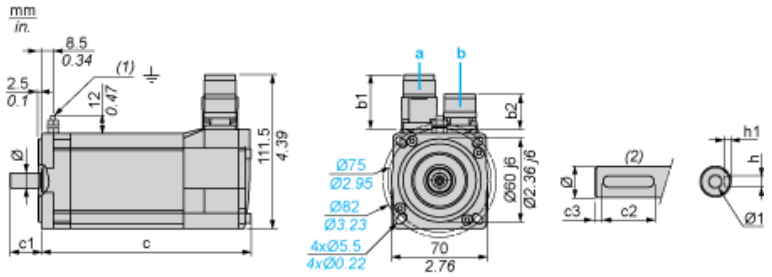
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0850 - Schneider Electric declaration of conformity Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	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	187	213	23	18	2.5	4 N9	$2.5^{+0.1}{}_{0}$	11 k6	M4 x 10

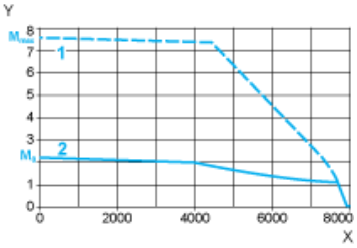
Dimensions in in.

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

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive

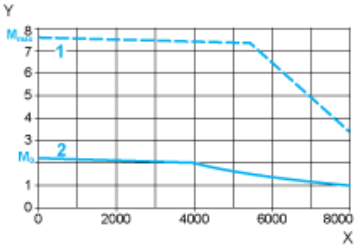


X Speed in rpm
Y Torque in Nm
1 Peak torque
2 Continuous torque

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