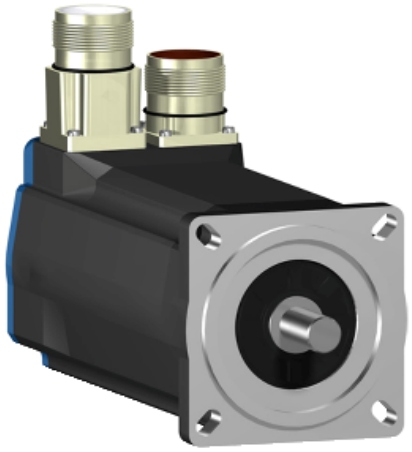
Product datasheet
Characteristics

BSH0702T22A1A
AC servo motor BSH - 2.12 N.m - 6000 rpm - untapped shaft - without brake - IP65



Main

Product or component type	Servo motor
Device short name	BSH
Maximum mechanical speed	8000 rpm
Continuous stall torque	2.2 N.m for LXM32.D30M2 at 10 A, 115 V, single phase 2.12 N.m for LXM05AD17M2, 200...240 V, single phase 2.12 N.m for LXM05BD17M2, 200...240 V, single phase 2.12 N.m for LXM05CD17M2, 200...240 V, single phase 2.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 2.12 N.m for LXM05AD17F1, 110...120 V, single phase 2.12 N.m for LXM05AD28M2, 200...240 V, single phase 2.12 N.m for LXM05BD17F1, 110...120 V, single phase 2.12 N.m for LXM05BD28M2, 200...240 V, single phase 2.12 N.m for LXM05CD17F1, 110...120 V, single phase 2.12 N.m for LXM05CD28M2, 200...240 V, single phase 2.12 N.m for LXM15LD17N4, 230 V, three phase 2.12 N.m for LXM15LD21M3, 230 V, three phase 2.12 N.m for LXM05AD42M3X, 200...240 V, three phase 2.12 N.m for LXM05BD42M3X, 200...240 V, three phase 2.12 N.m for LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	6.1 N.m for LXM32.D30M2 at 10 A, 115 V, single phase 7.2 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 4.14 N.m for LXM05AD17F1, 110...120 V, single phase 4.14 N.m for LXM05AD17M2, 200...240 V, single phase 4.14 N.m for LXM05BD17F1, 110...120 V, single phase 4.14 N.m for LXM05BD17M2, 200...240 V, single phase 4.14 N.m for LXM05CD17F1, 110...120 V, single phase 4.14 N.m for LXM05CD17M2, 200...240 V, single phase 6.8 N.m for LXM05AD28M2, 200...240 V, single phase 6.8 N.m for LXM05BD28M2, 200...240 V, single phase 6.8 N.m for LXM05CD28M2, 200...240 V, single phase 4.47 N.m for LXM15LD17N4, 230 V, three phase 5.45 N.m for LXM15LD21M3, 230 V, three phase 6.8 N.m for LXM05AD42M3X, 200...240 V, three phase 6.8 N.m for LXM05BD42M3X, 200...240 V, three phase 6.8 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal output power	550 W for LXM32.D30M2 at 10 A, 115 V, single phase 600 W for LXM05AD17M2, 200...240 V, single phase 600 W for LXM05BD17M2, 200...240 V, single phase 600 W for LXM05CD17M2, 200...240 V, single phase 570 W for LXM05AD17F1, 110...120 V, single phase 570 W for LXM05BD17F1, 110...120 V, single phase 570 W for LXM05CD17F1, 110...120 V, single phase 600 W for LXM05AD28M2, 200...240 V, single phase

	600 W for LXM05BD28M2, 200...240 V, single phase 600 W for LXM05CD28M2, 200...240 V, single phase 950 W for LXM32.D18M2 at 6 A, 230 V, single phase 1000 W for LXM15LD17N4, 230 V, three phase 1000 W for LXM15LD21M3, 230 V, three phase 600 W for LXM05AD42M3X, 200...240 V, three phase 600 W for LXM05BD42M3X, 200...240 V, three phase 600 W for LXM05CD42M3X, 200...240 V, three phase
Nominal torque	2.07 N.m for LXM32.D30M2 at 10 A, 115 V, single phase 1.9 N.m for LXM05AD17M2, 200...240 V, single phase 1.9 N.m for LXM05BD17M2, 200...240 V, single phase 1.9 N.m for LXM05CD17M2, 200...240 V, single phase 1.83 N.m for LXM05AD17F1, 110...120 V, single phase 1.83 N.m for LXM05BD17F1, 110...120 V, single phase 1.83 N.m for LXM05CD17F1, 110...120 V, single phase 1.9 N.m for LXM05AD28M2, 200...240 V, single phase 1.9 N.m for LXM05BD28M2, 200...240 V, single phase 1.9 N.m for LXM05CD28M2, 200...240 V, single phase 1.8 N.m for LXM32.D18M2 at 6 A, 230 V, single phase 1.66 N.m for LXM15LD17N4, 230 V, three phase 1.66 N.m for LXM15LD21M3, 230 V, three phase 1.9 N.m for LXM05AD42M3X, 200...240 V, three phase 1.9 N.m for LXM05BD42M3X, 200...240 V, three phase 1.9 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal speed	2500 rpm for LXM32.D30M2 at 10 A, 115 V, single phase 3000 rpm for LXM05AD17F1, 110...120 V, single phase 3000 rpm for LXM05BD17F1, 110...120 V, single phase 3000 rpm for LXM05CD17F1, 110...120 V, single phase 3000 rpm for LXM05AD17M2, 200...240 V, single phase 3000 rpm for LXM05BD17M2, 200...240 V, single phase 3000 rpm for LXM05CD17M2, 200...240 V, single phase 3000 rpm for LXM05AD28M2, 200...240 V, single phase 3000 rpm for LXM05BD28M2, 200...240 V, single phase 3000 rpm for LXM05CD28M2, 200...240 V, single phase 5000 rpm for LXM32.D18M2 at 6 A, 230 V, single phase 3000 rpm for LXM05AD42M3X, 200...240 V, three phase 3000 rpm for LXM05BD42M3X, 200...240 V, three phase 3000 rpm for LXM05CD42M3X, 200...240 V, three phase 6000 rpm for LXM15LD17N4, 230 V, three phase 6000 rpm for LXM15LD21M3, 230 V, three phase
Product compatibility	LXM05AD17F1 at 110...120 V single phase LXM05AD17M2 at 200...240 V single phase LXM05AD28M2 at 200...240 V single phase LXM05BD17F1 at 110...120 V single phase LXM05BD17M2 at 200...240 V single phase LXM05BD28M2 at 200...240 V single phase LXM05CD17F1 at 110...120 V single phase LXM05CD17M2 at 200...240 V single phase LXM05CD28M2 at 200...240 V single phase LXM32.D30M2 at 115 V single phase LXM32.D18M2 at 230 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
Shaft end	Untapped
IP degree of protection	IP65 standard IP67 with IP67 kit
Speed feedback resolution	131072 points/turn x 4096 turns
Holding brake	Without
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	4.9 A
Maximum continuous power	1.51 W
Maximum current Irms	20.6 A for LXM15LD21M3 20.6 A for LXM15LD17N4 19.9 A for LXM05AD17F1 19.9 A for LXM05AD17M2 19.9 A for LXM05AD28M2 19.9 A for LXM05AD42M3X 19.9 A for LXM05BD17F1 19.9 A for LXM05BD17M2 19.9 A for LXM05BD28M2 19.9 A for LXM05BD42M3X 19.9 A for LXM05CD17F1 19.9 A for LXM05CD17M2 19.9 A for LXM05CD28M2 19.9 A for LXM05CD42M3X 15 A for LXM32.D30M2 18 A for LXM32.D18M2
Maximum permanent current	19.9 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
Feedback type	Multiturn SinCos Hiperface
Motor flange size	70 mm
Number of motor stacks	2
Torque constant	0.45 N.m/A at 120 °C
Back emf constant	28 V/krpm at 120 °C
Number of motor poles	6
Rotor inertia	0.41 kg.cm²
Stator resistance	1.5 Ohm at 20 °C
Stator inductance	6.7 mH at 20 °C
Stator electrical time constant	4.47 ms at 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
Type of cooling	Natural convection
Length	187 mm
Centring collar diameter	60 mm
Centring collar depth	2.5 mm
Number of mounting holes	4
Mounting holes diameter	5.5 mm
Circle diameter of the mounting holes	82 mm
Product weight	2.89 kg

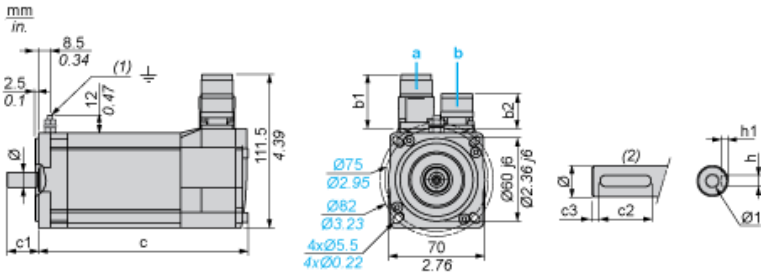
Contractual warranty

Warranty	18 months

BSH0702T22A1A

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 co		c (without brak	c (with brak	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

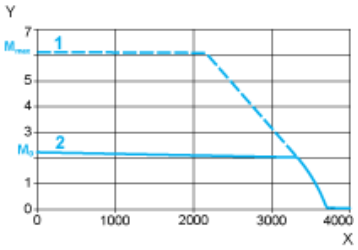
Dimensions in in.

Straight connecto		Rotatable angled		c (without bra	c (with bra	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

115 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D30M2 servo drive

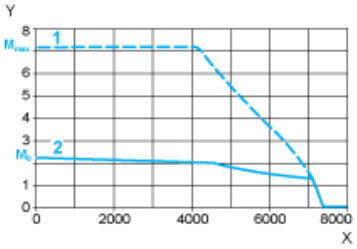


X	Speed in rpm
Y	Torque in Nm
1	Peak torque
2	Continuous torque

230 V Single-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D18M2 servo drive



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