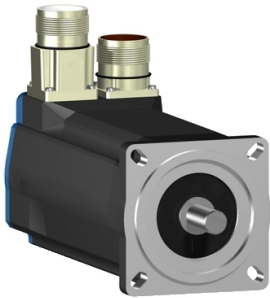


Product datasheet

Specifications



AC servo motor BSH - 1.4 N.m - 3000 rpm - keyed shaft - without brake - IP65

BSH0701P31A2A

EAN Code: 3389118135796

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	8000 rpm
Continuous stall torque	1.4 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 1.4 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 1.4 N.m for LXM05AD10M3X at 3 A, 200...240 V, three phase 1.4 N.m for LXM05BD10M3X, 200...240 V, three phase 1.4 N.m for LXM05CD10M3X, 200...240 V, three phase 1.4 N.m for LXM15LD13M3, 230 V, single phase 1.4 N.m for LXM05AD10M2, 200...240 V, single phase 1.4 N.m for LXM05BD10M2, 200...240 V, single phase 1.4 N.m for LXM05CD10M2, 200...240 V, single phase 1.4 N.m for LXM15LU60N4, 230 V, three phase
Peak stall torque	3.5 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 3.5 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 2.66 N.m for LXM05AD10M3X at 3 A, 200...240 V, three phase 2.66 N.m for LXM05BD10M3X, 200...240 V, three phase 2.66 N.m for LXM05CD10M3X, 200...240 V, three phase 2.66 N.m for LXM15LD13M3, 230 V, single phase 2.66 N.m for LXM05AD10M2, 200...240 V, single phase 2.66 N.m for LXM05BD10M2, 200...240 V, single phase 2.66 N.m for LXM05CD10M2, 200...240 V, single phase 2.66 N.m for LXM15LU60N4, 230 V, three phase
Nominal output power	700 W for LXM32.D12N4 at 3 A, 400 V, three phase 700 W for LXM32.D12N4 at 3 A, 480 V, three phase 400 W for LXM05AD10M2 at 3 A, 200...240 V, single phase 400 W for LXM05BD10M2, 200...240 V, single phase 400 W for LXM05CD10M2, 200...240 V, single phase 411 W for LXM15LD13M3, 230 V, single phase 400 W for LXM05AD10M3X, 200...240 V, three phase 400 W for LXM05BD10M3X, 200...240 V, three phase 400 W for LXM05CD10M3X, 200...240 V, three phase 411 W for LXM15LU60N4, 230 V, three phase
Nominal torque	1.32 N.m for LXM32.D12N4 at 3 A, 400 V, three phase 1.32 N.m for LXM32.D12N4 at 3 A, 480 V, three phase 1.3 N.m for LXM05AD10M2 at 3 A, 200...240 V, single phase 1.3 N.m for LXM05BD10M2, 200...240 V, single phase 1.3 N.m for LXM05CD10M2, 200...240 V, single phase 1.31 N.m for LXM15LD13M3, 230 V, single phase 1.3 N.m for LXM05AD10M3X, 200...240 V, three phase 1.3 N.m for LXM05BD10M3X, 200...240 V, three phase 1.3 N.m for LXM05CD10M3X, 200...240 V, three phase 1.31 N.m for LXM15LU60N4, 230 V, three phase
Nominal speed	5000 rpm for LXM32.D12N4 at 3 A, 400 V, three phase 5000 rpm for LXM32.D12N4 at 3 A, 480 V, three phase 3000 rpm for LXM05AD10M2 at 3 A, 200...240 V, single phase 3000 rpm for LXM05BD10M2, 200...240 V, single phase 3000 rpm for LXM05CD10M2, 200...240 V, single phase 3000 rpm for LXM05AD10M3X, 200...240 V, three phase 3000 rpm for LXM05BD10M3X, 200...240 V, three phase 3000 rpm for LXM05CD10M3X, 200...240 V, three phase 3000 rpm for LXM15LD13M3, 230 V, single phase 3000 rpm for LXM15LU60N4, 230 V, three phase

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

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	Without
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors

Complementary

Range compatibility	Lexium 05 Lexium 32 Lexium 15
supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	1.8 A
maximum continuous power	1.06 W
Maximum current I _{rms}	5.7 A for LXM05AD10M3X 5.7 A for LXM05BD10M2 5.7 A for LXM05BD10M3X 5.7 A for LXM05CD10M2 5.7 A for LXM05CD10M3X 5.3 A for LXM15LD13M3 5.3 A for LXM15LU60N4 5.7 A for LXM05AD10M2 5.7 A for LXM32.D12N4
Maximum permanent current	5.7 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	11 mm
Shaft length	23 mm
key width	18 mm
Feedback type	Single turn SinCos Hiperface
Motor flange size	70 mm
Number of motor stacks	1
Torque constant	0.8 N.m/A at 120 °C
Back emf constant	46 V/krpm at 120 °C
Number of motor poles	3.0
Rotor inertia	0.25 kg.cm²
Stator resistance	10.4 Ohm at 20 °C
Stator inductance	21.3 mH at 20 °C
Stator electrical time constant	3.73 ms at 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
type of cooling	Natural convection
Length	154 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
Net weight	2.2 kg
Sizing reference	BSH0701P
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	17.000 cm
Package 1 Width	16.000 cm
Package 1 Length	45.500 cm
Package 1 Weight	2.645 kg
Unit Type of Package 2	S04
Number of Units in Package 2	2
Package 2 Height	30.000 cm
Package 2 Width	40.000 cm
Package 2 Length	60.000 cm
Package 2 Weight	5.940 kg
Unit Type of Package 3	P06
Number of Units in Package 3	8
Package 3 Height	75.000 cm
Package 3 Width	60.000 cm
Package 3 Length	80.000 cm
Package 3 Weight	31.760 kg

Logistical informations

Country of origin	DE
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Contractual warranty

Warranty	18 months
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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 >](#)

Environmental footprint	
Carbon footprint (kg.eq.CO2 per CR, Total Life cycle)	780
Environmental Disclosure	Product Environmental Profile

Use Better

Materials and Substances	
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope)
SCIP Number	8c11b0c9-e501-4810-83eb-05fc6605ede4
REACH Regulation	REACH Declaration
PVC free	Yes

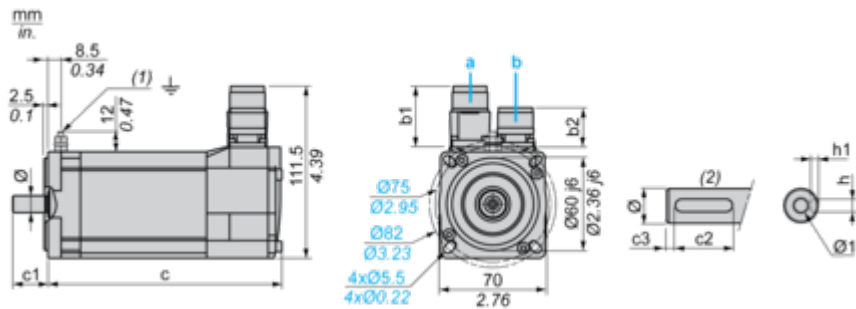
Use Again

Repack and remanufacture	
Circularity Profile	No need of specific recycling operations
Take-back	No
WEEE	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

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	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.

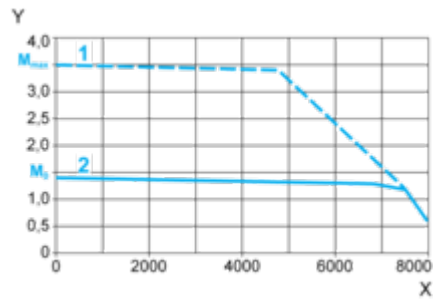
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	c3	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2									
1.55	1.00	1.55	1.55	6.06	7.08	0.90	0.70	0.09	0.16 N9	0.01 ^{+0.004} ₀	0.43 k6	M4 x 0.39

Performance Curves

400 V 3-Phase Supply Voltage

Torque/Speed Curves

Servo motor with LXM32•D12N4 servo drive

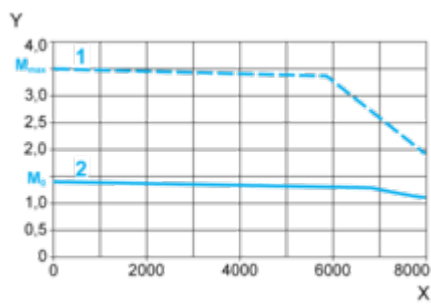


- X Speed in rpm
- Y Torque in Nm
- 1 Peak torque
- 2 Continuous torque

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