

Product data sheet

Specifications



servo motor BSH, Lexium 05,
5.5N.m, 4000rpm, 100mm,
untapped shaft, Sincos single turn,
without brake, IP50

BSH1002T01A2A

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	51.3 lbf.in (5.8 N.m) LXM32.D30M2 10 A, 230 V, single phase 48.7 lbf.in (5.5 N.m) LXM15LD28M3, 230 V, three phase 48.7 lbf.in (5.5 N.m) LXM05AD42M3X, 200...240 V, three phase 48.7 lbf.in (5.5 N.m) LXM05BD42M3X, 200...240 V, three phase 48.7 lbf.in (5.5 N.m) LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	145.2 lbf.in (16.4 N.m) LXM32.D30M2 10 A, 230 V, single phase 102.58 lbf.in (11.59 N.m) LXM15LD28M3, 230 V, three phase 141.6 lbf.in (16 N.m) LXM05AD42M3X, 200...240 V, three phase 141.6 lbf.in (16 N.m) LXM05BD42M3X, 200...240 V, three phase 141.6 lbf.in (16 N.m) LXM05CD42M3X, 200...240 V, three phase
Nominal output power	1500 W LXM32.D30M2 10 A, 230 V, single phase 1400 W LXM05AD42M3X, 200...240 V, three phase 1400 W LXM05BD42M3X, 200...240 V, three phase 1400 W LXM05CD42M3X, 200...240 V, three phase 1700 W LXM15LD28M3, 230 V, three phase
Nominal torque	32.7 lbf.in (3.7 N.m) LXM32.D30M2 10 A, 230 V, single phase 35.4 lbf.in (4 N.m) LXM15LD28M3, 230 V, three phase 38.9 lbf.in (4.4 N.m) LXM05AD42M3X, 200...240 V, three phase 38.9 lbf.in (4.4 N.m) LXM05BD42M3X, 200...240 V, three phase 38.9 lbf.in (4.4 N.m) LXM05CD42M3X, 200...240 V, three phase
Nominal speed	4000 rpm LXM32.D30M2 10 A, 230 V, single phase 3000 rpm LXM05AD42M3X, 200...240 V, three phase 3000 rpm LXM05BD42M3X, 200...240 V, three phase 3000 rpm LXM05CD42M3X, 200...240 V, three phase 4000 rpm LXM15LD28M3, 230 V, three phase
Product compatibility	LXM32.D30M2 230 V single phase LXM05AD42M3X 200...240 V three phase LXM05BD42M3X 200...240 V three phase LXM05CD42M3X 200...240 V three phase LXM15LD28M3 230 V three phase
Shaft end	Untapped
IP degree of protection	IP50 standard
Speed feedback resolution	131072 points/turn
Holding brake	Without
Mounting support	International standard flange
Electrical connection	Rotatable right-angled connectors

Complementary

Range compatibility	Lexium 32 Lexium 05 Lexium 15
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supply voltage max	480 V
Network number of phases	Three phase
Continuous stall current	9.9 A
maximum continuous power	2.51 W
Maximum current Irms	31.2 A LXM15LD28M3 35.4 A LXM05AD42M3X 35.4 A LXM05BD42M3X 35.4 A LXM05CD42M3X 30 A LXM32.D30M2
Maximum permanent current	35.4 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	0.7 in (19 mm)
Shaft length	1.6 in (40 mm)
Feedback type	Single turn SinCos Hiperface
Motor flange size	3.9 in (100 mm)
Number of motor stacks	2
Torque constant	0.59 N.m/A 248 °F (120 °C)
Back emf constant	37 V/krpm 248 °F (120 °C)
Number of motor poles	4.0
Rotor inertia	2.31 kg.cm ²
Stator resistance	0.56 Ohm 68 °F (20 °C)
Stator inductance	1.55 mH 68 °F (20 °C)
Stator electrical time constant	5.36 ms 68 °F (20 °C)
Maximum radial force Fr	620 N 4000 rpm 690 N 3000 rpm 790 N 2000 rpm 990 N 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	8.05 in (204.5 mm)
Centring collar diameter	3.7 in (95 mm)
Centring collar depth	0.1 in (3.5 mm)
Number of mounting holes	4
Mounting holes diameter	0.4 in (9 mm)
Circle diameter of the mounting holes	4.5 in (115 mm)
Net weight	13.007 lb(US) (5.9 kg)
Sizing reference	BSH1002T
Network number of phases	3
Accuracy error [angular]	1.4 °
Temperature copper hot	248 °F (120 °C)
Temperature magnet hot	212 °F (100 °C)
Temperature magnet rt	68 °F (20 °C)
Output current 3s peak	35.4 A

Inertia	0.0 kg.cm ² of brake 2.31 kg.cm ² of motor
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Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	6.063 in (15.400 cm)
Package 1 Width	6.417 in (16.300 cm)
Package 1 Length	16.024 in (40.700 cm)
Package 1 Weight	12.787 lb(US) (5.800 kg)
Unit Type of Package 2	S04
Number of Units in Package 2	2
Package 2 Height	11.8 in (30 cm)
Package 2 Width	15.7 in (40 cm)
Package 2 Length	23.6 in (60 cm)
Package 2 Weight	27.007 lb(US) (12.250 kg)
Unit Type of Package 3	P06
Number of Units in Package 3	8
Package 3 Height	29.528 in (75.000 cm)
Package 3 Width	31.496 in (80.000 cm)
Package 3 Length	23.622 in (60.000 cm)
Package 3 Weight	125.664 lb(US) (57.000 kg)

Contractual warranty

Warranty (in months)	18
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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

Total lifecycle Carbon footprint	1 868 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	25 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.7 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	1 841 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	0.5 kg CO2 eq.

Use Better

Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	A7df881f-135f-4256-b8c2-ea55d4c9a151
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold
PVC free	Yes

Use Longer

Lifetime extension

Repair	No
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Use Again

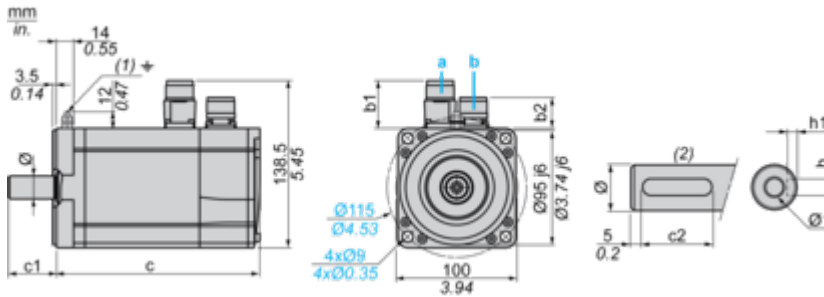
Repack and remanufacture

Circularity Profile	No need of specific recycling operations
Take-back	No
WEEE Label	 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	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
39.5	25.5	39.5	39.5	205	236	40	30	6 N9	3.5 ^{+0.1} ₀	19 k6	M6 x 16

Dimensions in in.

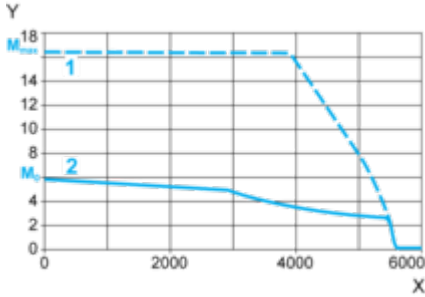
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	8.07	9.29	1.57	1.18	0.24 N9	0.14 ^{+0.1} ₀	0.75 k6	M6 x 0.63

Performance Curves

230 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