Product datasheet

Specifications

AC servo motor BSH - 5.5 N.m - 4000 rpm - untapped shaft - without brake - IP65

BSH1002T21A2A

Main

Device short name	BSH
Product or component type	Servo motor
Maximum mechanical speed	6000 rpm
Continuous stall torque	5.8 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 5.5 N.m for LXM15LD28M3, 230 V, three phase 5.5 N.m for LXM05AD42M3X, 200...240 V, three phase 5.5 N.m for LXM05BD42M3X, 200...240 V, three phase 5.5 N.m for LXM05CD42M3X, 200...240 V, three phase
Peak stall torque	16.4 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 11.59 N.m for LXM15LD28M3, 230 V, three phase 16 N.m for LXM05AD42M3X, 200...240 V, three phase 16 N.m for LXM05BD42M3X, 200...240 V, three phase 16 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal output power	1500 W for LXM32.D30M2 at 10 A, 230 V, single phase 1400 W for LXM05AD42M3X, 200...240 V, three phase 1400 W for LXM05BD42M3X, 200...240 V, three phase 1400 W for LXM05CD42M3X, 200...240 V, three phase 1700 W for LXM15LD28M3, 230 V, three phase
Nominal torque	3.7 N.m for LXM32.D30M2 at 10 A, 230 V, single phase 4 N.m for LXM15LD28M3, 230 V, three phase 4.4 N.m for LXM05AD42M3X, 200...240 V, three phase 4.4 N.m for LXM05BD42M3X, 200...240 V, three phase 4.4 N.m for LXM05CD42M3X, 200...240 V, three phase
Nominal speed	4000 rpm for LXM32.D30M2 at 10 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 4000 rpm for LXM15LD28M3, 230 V, three phase
Product compatibility	LXM32.D30M2 at 230 V single phase LXM05AD42M3X at 200...240 V three phase LXM05BD42M3X at 200...240 V three phase LXM05CD42M3X at 200...240 V three phase LXM15LD28M3 at 230 V three phase
Shaft end	Untapped
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 32 Lexium 15 Lexium 05

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 for LXM15LD28M3 35.4 A for LXM05AD42M3X 35.4 A for LXM05BD42M3X 35.4 A for LXM05CD42M3X 30 A for LXM32.D30M2
Maximum permanent current	35.4 A
Switching frequency	8 kHz
Second shaft	Without second shaft end
Shaft diameter	19 mm
Shaft length	40 mm
Feedback type	Single turn SinCos Hiperface
Motor flange size	100 mm
Number of motor stacks	2
Torque constant	0.59 N.m/A at 120 °C
Back emf constant	37 V/krpm at 120 °C
Number of motor poles	4.0
Rotor inertia	2.31 kg.cm²
Stator resistance	0.56 Ohm at 20 °C
Stator inductance	1.55 mH at 20 °C
Stator electrical time constant	5.36 ms at 20 °C
Maximum radial force Fr	620 N at 4000 rpm 690 N at 3000 rpm 790 N at 2000 rpm 990 N at 1000 rpm
Maximum axial force Fa	0.2 x Fr
Type of cooling	Natural convection
Length	204.5 mm
Centring collar diameter	95 mm
Centring collar depth	3.5 mm
Number of mounting holes	4
Mounting holes diameter	9 mm
Circle diameter of the mounting holes	115 mm
Net weight	5.9 kg
Sizing reference	BSH1002T
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
Output current 3s peak	35.4 A

Inertia	0.0 kg.cm² of brake 2.31 kg.cm² of motor

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	15.4 cm
Package 1 Width	16.3 cm
Package 1 Length	40.7 cm
Package 1 Weight	5.8 kg

Contractual warranty

Warranty (in months)	18

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

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**
EU RoHS Directive	**Pro-active compliance (Product out of EU RoHS legal scope)**
SCIP Number	**A7df881f-135f-4256-b8c2-ea55d4c9a151**
REACh Regulation	**REACh Declaration**
PVC free	**Yes**

Use Longer

Lifetime extension

Repair	**No**

Use Again

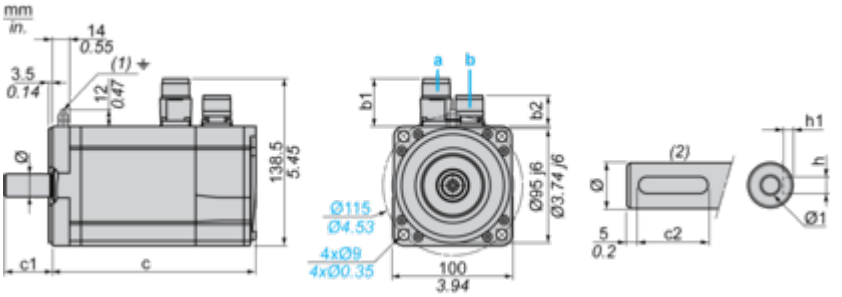
Repack and remanufacture

End of life manual availability	**No need of specific recycling operations**
Take-back	**No**

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.

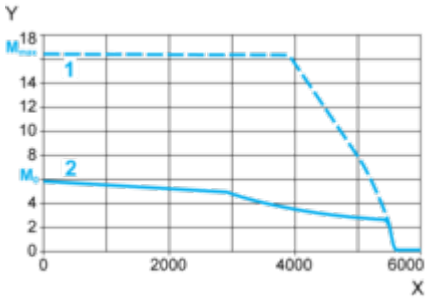
Straight connectors		Rotatable angled connectors		c (without brake)	c (with brake)	c1	c2	h	h1	Ø	Ø1 for screws
b1	b2	b1	b2								
1.55	1.00	1.55	1.55	8.07	9.29	1.57	1.18	0.24 N9	$0.14^{+0.1}_{0}$	0.75 k6	M6 x 0.63

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